THE INDUSTRIAL ARTS INDEX

1947

List of Periodicals Indexed

A S M E Trans—Transactions of the American Society of Mechanical Engineers
Acoustical Soc Am J—Journal of the Acoustical Society of America
Adv & Sell—Advertising and Selling
Advanced Management—Advanced Management
Aero Digest—Aero Digest
Aeronautical Eng R—Aeronautical Engineering Review
Air Transport—Air Transport
Am Assn Pet Geologists Bul—Bulletin of the American Association of Petroleum Geologists
Am Bld—American Builder and Building Age
Am Bsns—American Business
Am Cer Soc Bul—Bulletin of the American Ceramic Society
Am Cer Soc J—Journal of the American Ceramic Society
Am Chem Soc J—Journal of the American Chemical Society
Am Concrete Inst J—Journal of the American Concrete Institute
Am Dyestuff Rep—American Dyestuff Reporter
Am Gas Assn Mo—American Gas Association Monthly
Am Gas Assn Proc—American Gas Association Proceedings
Am Gas J—American Gas Journal
Am Inst Banking Bul—Bulletin of the American Institute of Banking
Am Inst Chem Eng Trans—American Institute of Chemical Engineers. Transactions
Am J Sci—American Journal of Science
Am Mach—American Machinist
Am Pet Inst Proc—American Petroleum Institute Proceedings
Am Soc C E Proc—Proceedings of the American Society of Civil Engineers
Am Soc for Metals Trans—Transactions of the American Society for Metals
Am Soc T M Proc—American Society for Testing Materials. Proceedings
Am Stat Assn J—Journal of the American Statistical Association
Am Water Works Assn J—Journal of the American Water Works Association
Anal Chem—Analytical Chemistry
Ann Am Acad—Annals of the American Academy of Political and Social Science
Arch Forum—Architectural Forum
Arch Rec—Architectural Record
Assn of Sp Lib & Inf Bur Proc—Association of Special Libraries and Information Bureaux Proceedings
Automobile Eng—Automobile Engineer
Automotive & Aviation Ind—Automotive and Aviation Industries
Resumed former name Automotive Industries, July 1, 1947
Automotive Ind—Automotive Industries
Aviation. See Aviation W
Aviation N—Aviation News
Merged with Aviation as Aviation Week, July 7, 1947
Aviation W—Aviation Week
Merger of Aviation and Aviation News, July 7, 1947

Bankers Mo—Bankers Monthly
Banking—Banking; Journal of the American Bankers Association
Banking Law J—Banking Law Journal (combined with the Bankers Magazine)
Barron's—Barron's
Bell System Tech J—Bell System Technical Journal
Blast F & Steel Pl—Blast Furnace and Steel Plant
Boston Soc C E J—Journal of the Boston Society of Civil Engineers
Brick & Clay Rec—Brick and Clay Record
Bsns W—Business Week
Burroughs Clearing House—Burroughs Clearing House
Bus Transportation—Bus Transportation

CAA J—Civil Aeronautics Administration Journal
Can Chem & Process Ind—Canadian Chemistry and Process Industries
Can Min J—Canadian Mining Journal
Cer Ind—Ceramic Industry
Chem Age (Lond)—The Chemical Age
Chem & Eng N—Chemical and Engineering News
Chem & Ind—Chemistry and Industry
Chem & Met Eng—Chemical and Metallurgical Engineering (now Chemical Engineering)
Chem Eng—Chemical Engineering (formerly Chemical and Metallurgical Engineering)
Chem Eng Prog—Chemical Engineering Progress
Chem Ind—Chemical Industries
Chem R—Chemical Reviews
Chem Soc J—Journal of the Chemical Society
Chimie & Ind—Chimie & Industrie
Civil Eng—Civil Engineering
Coal Age—Coal Age
Comm & Fin Chr—Commercial & Financial Chronicle
Comp Air Mag—Compressed Air Magazine
Concrete—Concrete
Consumers Res Bul—Consumers' Research Bulletin (Not Confidential)
Credit & Fin Management—Credit and Financial Management

Diesel Power—Diesel Power and Diesel Transportation
Dom Comm—Domestic Commerce
Dom Eng—Domestic Engineering
Dun's R—Dun's Review
Dun's Stat R—Dun's Statistical Review

East Underw—Eastern Underwriter
Econ Geol—Economic Geology
Economist—Economist
Edison Elec Inst Bul—Edison Electric Institute Bulletin
Elec Eng—Electrical Engineering
Elec R (Lond)—Electrical Review
Elec West—Electrical West
Elec World—Electrical World
Electrician—Electrician
Electrochem Soc Trans—The Electrochemical Society. Preprints
Electronics—Electronics
Eng & Min J—Engineering and Mining Journal
Eng N—Engineering News-Record
Engineer—Engineer
Engineering—Engineering
Explosives Eng—The Explosives Engineer

Factory Management—Factory Management and Maintenance
Fed Res Bul—Federal Reserve Bulletin
Food Ind—Food Industries
For Comm W—Foreign Commerce Weekly
Fortune—Fortune
Foundry—Foundry
Franklin Inst J—Journal of the Franklin Institute

Gas Age—Gas Age
Gas J (Lond)—Gas Journal
Gen Elec R—General Electric Review
Génie Civil—Génie Civil
Geol Soc Bul—Bulletin of the Geological Society of America
Glass Ind—Glass Industry

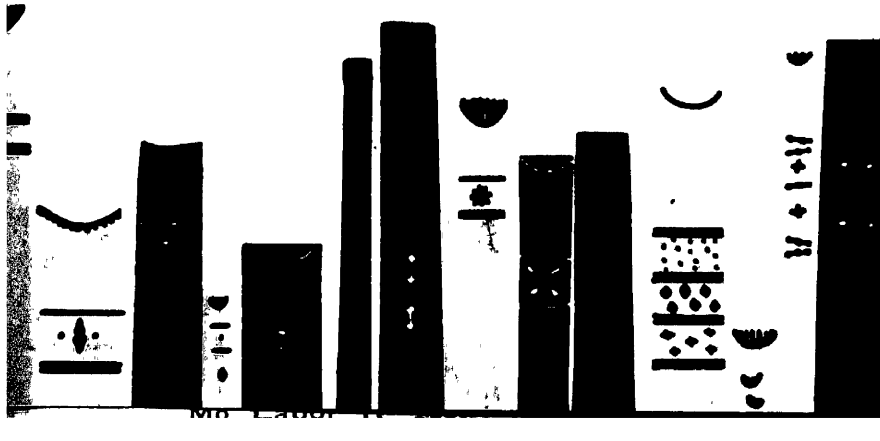
Harvard Bsns R—Harvard Business Review
Heat & Ven—Heating and Ventilating
Heating-Piping—Heating, Piping and Air Conditioning

Ill U Eng Exp Sta Bul—Illinois University Engineering Experiment Station. Bulletin
Ill U Eng Exp Sta Circ—Illinois University Engineering Experiment Station. Circular
Illum Eng—Illuminating Engineering including Transactions of the Illuminating Engineering Society

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reference collection book

kansas city
public library
kansas city,
missouri



Key to General Abbreviations

+	continued on later pages of the issue	Je	June
abr	abridged	Jl	July
Ag	August	Mr	March
Ap	April	My	May
arch	architect	n s	new series
bibliog	bibliography	N	November
comp	compiled or compiler	no	number
cond	condensed	O	October
cont	continued	p	page
D	December	pl	plate
diag	diagram	por	portrait
ed	edited or edition or editor	pseud	pseudonym
F	February	pt	part
i	index	rev	revised
il	illustrations	S	September
inc	incorporated	sup	supplement
Ja	January	tr	translated or translation or translator
		v	volume

Sample entry: Hydrogen peroxide; structural materials, manufacture and uses. J. S. Reichert and R. H. Peter il Chem Eng 54:213-14+ Ap '47

Explanation: An illustrated article with the title given above will be found in Chemical Engineering, volume 54, pages 213 to 214 (continued on later pages of the same issue) the April 1947 number

THE
INDUSTRIAL ARTS INDEX

THIRTY-FIFTH ANNUAL VOLUME

1947

SUBJECT INDEX TO A SELECTED LIST OF ENGINEERING, TRADE AND BUSINESS PERIODICALS

EDITED BY
MARION E. POTTER, LEONE BAKER,
LUCILLE CRAUMER

MANAGING EDITOR
CHARLOTTE TRILLING

NEW YORK
THE H. W. WILSON COMPANY
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PREFACE

This volume, completing the thirty-fifth year of the Industrial Arts Index, cumulates the monthly issues published from December, 1946, thru November, 1947.

Industrial changes during the war and the consequent shift of interest in technical periodicals would of itself require a new vote on the periodicals to be indexed. But the vote of many new subscribers was also needed in order to give the best indexing service. The questionnaire sent out to all subscribers last fall resulted in the dropping of the following magazines indexed thru 1947 but not to be indexed in 1948: American Institute of Banking, Bulletin; Banking Law Journal; Boston Society of Civil Engineers, Journal; Chimie & Industrie; Dun's Statistical Review; Gas Journal (London); Génie Civil; Institute of Chemical Engineers, Transactions; Light and Lighting; Locomotive; Mass Transportation; Mechanical Handling; New England Water Works Association, Journal. It was voted also that the indexing of the German magazines interrupted by the war should not be resumed. These are: Angewandte Chemie, Stahl und Eisen, and Zeitschrift des Vereines Deutscher Ingenieure.

The new periodicals, not previously indexed but to be indexed in 1948, are: Air Affairs; Communications; Construction Methods; Editor & Publisher; Electrical Communication; Instruments; Iron and Steel Engineer; Journal of Marketing; Journal of Scientific Instruments; Light Metal Age; Metallurgia; Metals Technology; Mill & Factory; Modern Industry; Personnel; Plastics; Q S T; Sewage Works Journal; Tele-Tech; Textile Research Journal; Tool Engineer; United States Naval Institute, Proceedings; Westinghouse Engineer; World Oil. Domestic Commerce discontinued publication in 1947, the only change to be noted in the indexing for this volume.

Louise Teich (Mrs. Wiles) whose name was on the title page of the Industrial Arts Index annual volumes from the first volume in 1913, thru 1945, when she retired, was good enuf to return to see this volume thru the press. Miss Charlotte Trilling has returned to become managing editor. Acknowledgement should be made also to Ruth Ward and Jessie Van Strander for many years of faithful service.

M. E. P.

6125436

Magazine Notes

Compiled with the aid of Johanna Kramm and Jessie Van Strander

(Reprinted from monthly issues of 1947) *

Acta Crystallographica, announced in the May number of the Industrial Arts Index, will begin in January. The journal will be published by the Cambridge University Press under the editorship of Professor P. P. Ewald, a former editor of the *Zeitschrift für Kristallographie,* and a panel of regional co-editors. It will have six issues a year. Subscription $10 or £2 10s. By courtesy of the American Institute of Physics, 57 East 55th Street, New York 22, arrangements have been made for subscribers in the United States, its possessions, and Canada to subscribe thru that body. Others should order directly from the Cambridge University Press, Bentley House, Euston Road, London, N.W.1, England.

Agenda, a quarterly for women's club program planners, beginning with a Spring, 1947 number, supplements its numerous articles with a collection of club programs ready for presentation, sponsored by various commercial associations and corporations. Published by Printers' Ink Publishing Company, 205 East 42d Street, New York 17. The magazine will be distributed to program leaders of representative local groups. Publishing costs will be met by its advertisers.

Ahora, el Resumen del Mes, began its second volume with a November number. It is a Spanish language monthly published at Calle Bouret, 10, San Juan, Puerto Rico. New York representative is Raimundo Gonzales, 1480 Madison Avenue, New York. Subscription $1 a year.

Air News is to be absorbed by *Skyways* with no change in the latter publication's editorial formula. Published by Henry Publishing Company, 444 Madison Avenue, New York 22.

Alphabet and Image, a quarterly, making its first appearance last year, replacing the prewar *Typography,* is primarily concerned with typography and the graphic arts. The articles are illustrated, some in color. Published by Shenval Press, 58 Frith Street, Soho, London W. 1. Subscription 25s a year; single copies 7s 6d.

American Fabrics is a new large-size quarterly, with articles on fabrics and fabric design, ancient and modern. It is profusely illustrated, mostly in color. Pasted-on swatches accompany a number of articles. Published by Reporter Publications, Empire State Building, New York 1. Subscription $10 a year; single copies $2.50.

The American Herb Grower, a bimonthly "for gardeners and gourmets," is published by Laurel Hill Herb Farm, Falls Village, Connecticut, beginning April, 1947. Subscription $2 a year; single copy 35 cents.

American Institute of Architects Bulletin, a bimonthly, is devoted to Institute affairs, public and professional relations, and education and research. Volume 1, no. 2, May 1947, contains a ten page bibliography on Hospitalization and public health. Published by the Institute at the Octagon, 1741 New York Avenue, NW, Washington 6. Subscriptions $2 a year in the United States, elsewhere $3; single copies 50 cents; $1 a year to corporate members and to architectural student associates.

The *American Institute of Chemical Engineers Transactions,* indexed in the Industrial Arts Index since 1921, is published now as a section in a new monthly, *Chemical Engineering Progress,* that began publication in January 1947 as volume one, number one, and contains abstracts of reader interest as well as news of the Institute, formerly published in a quarterly bulletin. With the March issue the volume number changed to 43, continuing that of the *Transactions.* The subscription of the new monthly is $6 a year. Editorial and business office is at 50 East 41st Street, New York 17.

The American Journal of Occupational Therapy is published bimonthly for the American Occupational Therapy Association by AJOT Publishing Company, 739 Boylston Street, Boston 16. Its first issue is dated February 1947. Subscription $5 a year; single copy $1.

American Journal of Psychotherapy, is the official organ of the Association for the Advancement of Psychotherapy, edited by Emil A. Gutheil, M.D., 16 West 77th Street, New York 24. It is a quarterly, beginning publication with a January number. Subscription $8 a year, foreign $8.50, Canada $8.25; single copies $2.50.

American Perspective is a new publication of the Foundation for Foreign Affairs, 1136 18th Street, NW, Washington 6, issued monthly from September thru June. It began with an April number from which the following statement is taken. "The analyses contained in the following pages are presented in the belief that the problems currently confronting the United States will be better understood

* These notes have been reprinted by request, and with few revisions.

and better evaluated by Americans if they are studied against their historical background and in their general diplomatic and political context, and if the political and economic forces at work in the countries with which the United States is dealing are examined. While scholarly methods have been used in gathering and analyzing materials, their presentation is not designed for the specialist alone." Subscription $2.50 a year; single copy 25 cents.

American Practitioner, a medical illustrated monthly, began with a September, 1946, issue. It is edited by John B. Youmans, Professor of medicine, Vanderbilt University, and published by J. B. Lippincott Company, 227-231 South Sixth Street, Philadelphia. Subscription $10 a year; foreign subscriptions $11.

American Psychologist is the professional journal of the American Psychological Association, published monthly by the Association at 1515 Massachusetts Avenue, NW, Washington 5, since January 1946. Subscription $7 a year; single copy 75 cents.

American Repertory Theatre, the Art Magazine; News of the Theatre in American Life, is published monthly, beginning August, 1946, by the American Repertory Theatre, Box 886, Hollywood 28, California. Subscription $3 a year.

American Society of Chartered Life Underwriters Journal is a new quarterly, published by the Society, Hamilton Court, 39th and Chestnut Streets, Philadelphia 4. Editorial offices are at 1616 Walnut Street, Philadelphia 3. This periodical has been found useful by one of our insurance library subscribers. Subscription $4 a year; single copies $1.25.

American-Soviet Music Review is a new quarterly, published by American-Soviet Music Society, 114 East 32d Street, New York 16. Its object is to promote closer contact and understanding among musicians of the two countries. Subscription $3 a year to nonmembers.

American Statistician, successor to the *A.S.A. Bulletin*, "will attempt to implement the growth of American statisticians. It will not be a substitute for any of the Association's technical publications. It will present the story of the actual uses—successes and failures—of statisical methods in many fields. It will carry regularly the official and unofficial announcements of the American Statistical Association concerning new projects, meetings, and activities of the Association's sections." It was introduced in August, 1947. Published monthly by the Association, 1603 K Street, NW, Washington 6. Subscription $1.50 a year; 25 cents a copy.

Americana; Revista para la Mujer de Hoy, a Spanish language illustrated monthly for the women of Latin America, is published by Ultramar Publications, Inc, 22 East 29th Street, New York. Subscription $2.50; single copies 20 cents.

Analytica Chimica Acta, a monthly publication devoted to all branches of analytical chemistry, has been announced by Elsevier Publishing Company. It is under the editorship of Paul E. Wenger, 8 rue St. Victor, Geneva, Switzerland. Annual subscription $9.50 (postage free).

Analytical Chemistry is the new name of *Industrial and Engineering Chemistry Analytical Edition*. It has a new format and two new departments, Aids for the analyst and The analyst's column. Subscription rates are unchanged and it is sold as a unit with *Industrial and Engineering Chemistry* at $4 a year.

Angewandte Chemie resumed publication with the January 1947 number. The periodical is now published in two parts. Section A: Science (volume 59), resembles in character the former *Angewandte Chemie*. Section B: Techniques and economics (volume 19), can be compared to the former *Die Chemische Fabrik*, dealing with techniques and methods, instruments, laboratory works, raw materials and economic problems, especially of medium and smaller concerns. Subscription rate for Section A, RM 10; for Section B, RM 9; both issues RM 18 a year. Prices for foreign subscribers are not yet given. The new offices of the Verlag Chemie are in Berlin-Neutempelhof, Attilastrasse 16, and Heidelberg.

Antique Dealer and Collectors' Guide began publishing in a completely new form in August, 1946, new series volume 1, no. 1. It is an illustrated monthly, published at 92 Fleet Street, London, E.C.4. Subscription 15s a year; single copies one shilling.

The Antiquer, now in its second volume, is a pocket-size monthly of interest to antique dealers and collectors. Among its features is a dealers' directory. Published by Art-Lyle Publishers, Inc., 97 East Colorado Street, Pasadena 1, California. Subscription $2.50 a year; single numbers 25 cents.

Applied Scientific Research will be published by Martinus Nijhoff, The Hague, The Netherlands, beginning in September. The two sections, (A) Mechanics, Heat and (B) Electrophysics, Acoustics, Optics, will provide a medium of publication for original technical-scientific investigations in these fields.—*Science.*

Asia Calling, published nine times a year by the American-Oriental Friendship Association, 531 Santa Monica Boulevard, Santa Monica, California, is intended to help build friendship between boys and girls of the Orient and America. Subscriptions $2 a year; single copies 25 cents.

Audio Engineering is the new name of *Radio*, published since 1917. The new title began with the May, 1947, number. The monthly presents articles, charts and news concerning developments in sound engineering as it relates to broadcasting, transmitter and receiver manufacturing, sound-on-film, disc, wire

and tape recording, public address systems, etc. Published by Radio Magazines, Inc., Boston Post Road, Orange, Connecticut. Subscription $3 a year; single copies 35 cents.

The Australian Artist is the illustrated quarterly journal of the Victorian Artists Society, published under a new name and in a new format as volume 1. Price 3s 6d. The Society's address is 430 Albert Street, Melbourne.

Aviation Week, ties together the research, design, engineering and production content of *Aviation* with the news presentation of *Aviation News.* The date of the merger was July 7.

Beginner Teacher, a quarterly for Sunday School teachers, containing graded Bible lessons prepared by Mildred Speakes Edwards, began publication with an October-November-December, 1946 issue. Published by the Nazarene Publishing House, Box 527, Kansas City, Missouri. Subscription $1 a year; 25 cents a single issue.

Berichte der Deutschen Chemischen Gesellschaft, one of the German chemical journals, which ceased publication after 1944, has now been revived under the name *Chemische Berichte.* The new journal is edited by Clemens Schoepf, Darmstadt, and is published by Verlag Chemie, Heidelberg.

The Bible Archaeological Digest, a quarterly devoted to the archeology of all Bible lands, completes its first volume with an October-December, 1946 number. Published by Bureau of Bible Research, 461 East Seaside Boulevard, Long Beach 2, California. Subscription $1 a year in the United States; $1.25 in Alaska, Canada and foreign countries.

Book Merchandising, a monthly for the bookseller, began publication with a February issue. Published at 20 East 35th Street, New York 16. Subscription $4 a year; single numbers 40 cents.

The British Medical Students' Journal is published near the beginning of each term by the British Medical Students' Association, B.M.A. House, Tavistock Square, London, W.C. 1. Price 1s a copy. Number 2 is dated Autumn 1946.

Business Bulletin, published by the Economic Society of the School of Business and Civic Administration of The City College, 17 Lexington Avenue, New York 10, has resumed publication, having been discontinued during the war. The first post war issue is volume 16, number 1, May 1947, marking the centennial of the College. Subscription $1 a year.

Business Round-up, a monthly digest of business news and opinion selected from current trade publications, and government and private reports, offers sixteen pages of condensation from a diversified list of thirty-nine magazines. It is published at 165 Broadway, New York 6. Subscription $15 a year.

Buy Right Magazine is a small-size monthly that began in November, 1946, and is intended to tell the consumer how and where to get more for his money. It is published at 11 West 42d Street, Suite 1302, New York 18. Sold on New York newsstands for 15 cents a copy.

Byzantina Metabyzantina, a Journal of Byzantine and Modern Greek Studies, edited by N. G. Mavris, is dedicated to the Belgian School of Byzantinology and published by Society for the Promotion of Byzantine and Modern Greek Studies. Volume 1, Part 1, 1946, contains complete bibliographies of Henri Gregoire and Ernest Honigmann. Address is Room 1835, 30 Rockefeller Plaza, New York.

Cahiers Internationaux de Sociologie, is a French periodical, volume 1, Cahier double, published in October 1946. It is open to discussion by sociologists of whatever nation or school of thought, but will give first place to researches of the Centre d'Études Sociologiques, recently opened in Paris, and researches in the United States. Rédaction et Administration, Aux Éditions du Seuil, 27, rue Jacob, Paris VIe. Subscription, two semi-annual numbers 300 fr in France, 400 fr in other countries; single numbers 175 fr.

California Fashion Trends, McKellar Publications, aims to provide up-to-the-minute, complete, authentic information for retailers, merchandisers and buyers thruout the country. The new publication's present 10,000 circulation is controlled, with paid circulation at $3 a year, 35 cents a copy, to be built up thru promotion. Offices are in Los Angeles at 416 Wall Street and in San Francisco at 50 Post Street.

Census Publications Subject Guide is a quarterly cumulative guide to publications of the Bureau of the Census arranged alphabetically by subject. The second number covers the publications of the Bureau from January thru June 30, 1946.

The Chaparral Writer is the membership publication for the Federation of Chaparral Writers, 43 Fairview Avenue, Newark 3, New Jersey. Volume 1, number 2, dated Summer 1947, is a four page leaflet. Subscription is included in dues for active writers $2; for associate membership $5.

Chemical Abstracts, with the cooperation of the United States War Department and a Japanese abstractor located in Japan, T. Katsurai, has just succeeded in getting approximately 800 abstracts of Japanese papers published during the war period or thereafter. These will appear in *Chemical Abstracts* soon.

Chimia is the monthly publication of the Swiss Chemists Association. It is published in German by H. R. Sauerländer and Company, Aarau. Subscriptions 18 fr. a year; single copies 2 fr. 50 centimes.

China Trade Monthly, first issue January, 1947, will keep businessmen in China informed of trade conditions and prospects in foreign countries, and traders and manufacturers abroad fully advised of conditions in China. Communications may be addressed to the Foreign Trade Association of China, 338 Hamilton House, 170 Kiangse Road, Shanghai, China.

Christian Frontiers, a Journal of Baptist Life and Thought, is published monthly except July and August by the Baptist Book Club, a non-profit fellowship of ministers and laymen, Box 508, Chapel Hill, North Carolina. Circulation office: 324 South Blount Street, Raleigh. Subscription $2 a year; 25 cents a copy.

The Christian Magazine, a Quarterly Journal for the Home, containing religious articles, verse, home notes, book notes and reviews, is published by the Christian Press, 214 East Main Street, Murfreesboro, Tennessee. The spring number completes volume one. Subscription $1 a year.

Chronica Botanica has recently issued its first monthly newsletter supplement, *Biologia,* designed to report quickly on biological developments of professional and international interest. The newsletter will be sent to subscribers of *Chronica Botanica* free and is available to others at the rate of $4 for two years.

Chronicle of the World Health Organization aims to present a "readable summary of the activities of the Organization, including the views and recommendations of its governing body and of its expert committees, and thus to mark the stages in the attempt to implement, through international action, the declaration contained in the preamble to its Constitution, that 'the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being.'" It is published in English, French, Spanish, Russian, and Chinese. Subscriptions for 1947 $2; numbers 1-2, 3-4, 5-6, 40 cents a copy; numbers 7-12, 20 cents a copy. Published by World Health Organization, 350 Fifth Avenue, New York; Palais des Nations, Geneva.

Chymia, an annual, will be published by The University of Pennsylvania Press. Each volume will consist of about a dozen articles in the field of the history of chemistry. Papers on a variety of subjects will be included, and publication may be in French, German, Spanish, Portuguese, Italian, and English. Further information may be obtained from Eva V. Armstrong, Secretary of the Board of Editors, Edgar F. Smith Collection, Harrison Laboratory, University of Pennsylvania, Philadelphia 4.

Cinema, the Magazine for Discriminating Movie-Goers, is an illustrated monthly, beginning in June. Altho published in Hollywood it is international in interest. Published by Avant Film Publications, 8066 Beverly Boulevard, Hollywood 36, California. Subscription $2.50 a year; single number 25 cents.

Columbia Journal of International Affairs, an organ of the School of International Affairs of Columbia University, is edited entirely by students of the School. The first number, Spring 1947, is devoted to Higher education in international affairs, (price 50 cents). It is to be published twice a year. Editorial and business address is Box 25, Room 111, Low Library, Columbia University, New York 27.

Commission for International Educational Reconstruction Bulletin, a monthly, beginning October 30, 1946, purposes to inform the American people of the educational needs in war devastated countries, to assist American organizations in developing programs of educational rehabilitation, and to effect working relationships and coordinated planning between voluntary agencies in the United States and other countries. Published at 744 Jackson Place, NW, Washington 6.

Common Cause, a Monthly Report of the Committee to Frame a World Constitution, began with a July number. The Committee officers are: Richard P. McKeon, Chairman; Robert M. Hutchins, President; G. A. Borgese, Secretary. Jeremy Ingalls is editor. Published at 975 East 66th Street, Chicago 37. Subscription $4 a year; single issues 35 cents.

Commonwealth, the Magazine for Pennsylvania, is published monthly at 119 South Frazier Street, State College, Pennsylvania, by the Pennograph Publishing Company, 1521 North Third Street, Harrisburg. Yearly subscription $3; single copies 25 cents.

The Composer's News Record, published by The National Composers Committee of the League of Composers, 130 West 56th Street, New York 19, is intended primarily for composers of music in all parts of the world. The first number, February, is a four-page bulletin.

La Conjoncture, Économie Mondiale, is a monthly of the Institut National de la Statistique et des Études Économiques pour la Métropole et la France d'Outre-Mer. A companion publication is *Études et Conjoncture, Union Française.* Subscription to the former 1800 fr a year; single issue 160 fr. Subscription to *Études* 1500 fr a year; single number 160 fr. Published by Presses Universitaires de France, 108, Boulevard Saint-Germain, Paris-6.

Contemporary, a quarterly, begins with a winter number. Its purpose is to introduce new literary voices, to assist in stimulating new ideas. It will contain essays, short stories, verse, book reviews. Subscription $1 a year. Published by Mel Jerome Ravitz, 3100 Eaton Tower, Detroit 26.

Convention, the magazine of conventions, trade shows, expositions, includes a calendar of events, a series on civic auditoriums, and articles on registration methods, travel, use of motion pictures, hotels as convention centers, boosting buyer-interest in trade shows, etc.

Subscription $3 a year; single copies 35 cents. Offices are at 712 Professional Arts Building, 1616 Pacific Avenue, Atlantic City, New Jersey.

Corvina, Hungarian Digest, is a periodical of Hungarian cultural life, edited by O. E. Landy, and illustrated with drawings, photographs and colored plates. The first issue is a Christmas number, 1946. It is in the English language. A similar publication in French is announced. Address: O. E. Landy, Officina Press, 26 Nagymezö-u, Budapest.

The Critic, a Quarterly Review of Criticism, started with a Spring 1947, number. Its stated policy "is to publish and encourage criticism based upon a detailed examination of the work considered." Published by The Critic Press, The Heath, Mistley, Essex, England. Subscription 10s a year, $3 in the U.S.; single copy 2s 6d.

Curriculum and Materials, is a quarterly of the Curriculum Council and Curriculum Development Division, Board of Education, City of New York. The first number, June, 1947, consists of eight pages. Distributed free to New York teachers. Address, Room 1024, 110 Livingston Street, Brooklyn 2, New York.

Death, a Literary Quarterly, edited and published by Harry Herschkowitz, 503 East 11th Street, New York, is dedicated to Michael Fraenkel, whose "death theme has inspired the founding and editorial views of *Death.*" 50 cents a copy.

Design News made its debut last November as a product type magazine in the design and engineering field. It is issued monthly in a novel 11¼ by 11¼ inch square shape on a controlled basis to 19,000 designers and engineers. Publisher of *Design News* is Thomas A. Rogers Publishing Company, Detroit.—*Sales Management*

Dialectica, International Review of Philosophy of Knowledge, is a quarterly, with contributions in French and German, published in Neuchâtel, Switzerland. Subscription fr 18; single issue fr 4.80. Stechert-Hafner, 31 East 10th Street, New York 3, receives subscriptions.

Domestic Commerce, monthly magazine of the United States Department of Commerce, was discontinued with the September issue.

Earth Science Digest, a monthly devoted to the geological sciences, combines its September-October issue, volume 2, number 2. Subscrip- $2 a year; single numbers 25 cents. Published by Earth Science Publishing Company, Box 581, Ann Arbor, Michigan.

Ebony, a national picture magazine published for Negroes by Negroes, circulation more than 300,000 an issue, has become the first Negro magazine to be admitted to membership in the Audit Bureau of Circulations.

Economic Botany, Devoted to Applied Botany and Plant Utilization, is founded, managed, and published by Edmund H. Fulling, New York Botanical Garden, New York 58. Published quarterly, beginning January-March, 1947. Subscription $5 a year; single copy $1.50.

The Editorial Digest; the Nation's Best Editorials, beginning in December 1946, is a monthly, published by R. K. Hess, 43 East Ohio Street, Chicago 11. It selects outstanding editorials of general interest and reprints them complete. Subscription $2 a year.

El Detallista Internacional, to be published by Post Exchange Publishing Company, 292 Madison Avenue, New York, is a new type of export magazine designed to provide United States manufacturers of consumer goods with a medium which aims to stimulate the sale of United States products abroad by acquainting foreign retailers with American methods of advertising, selling and merchandising. Initial circulation of 10,000 will be to better rated department stores thruout Latin America.—*Advertising and Selling*

Electrical Engineering makes the following announcement in its December number: In the new publication plan, the *Transactions* section will be eliminated from *Electrical Engineering* and in its stead will be established a new series of publications to be known as "AIEE Proceedings," which will consist principally of all technical papers with their discussions, and which also may contain other appropriate material from national and district meetings.

Electricity, a pocket-size Hutchinson monthly, began with a May issue. Subscription 18s 6d a year; 1s 6d a single issue. Published by Hutchinson Periodical Company, 10 Gt. Queen Street, London, W.C.2.

Electronic Industries is published by Caldwell-Clements, Inc, 480 Lexington Avenue, New York 17. The note about the magazine in the November issue of Industrial Arts Index gave only the address of the Chicago office.

Electronics Forum, (formerly Electronics section of *Science Forum*) is the official organ of The Institution of Electronics. It adopted its present title in 1946. *Science Forum,* discontinued during the war, will resume publication in October. *Electronics Forum* will continue as a separate quarterly publication. Forum Publishing Company, 24 Buckingham Street, Strand, London, W.C. 2. Single issues 1s 6d.

Endocrinology (Experimental and Clinical), being Section III of Excerpta Medica, began with an August issue. Published by Excerpta Medica, Ltd. 111 Kalverstraat, Amsterdam-C, The Netherlands. Subscription $15 a year.

Epocas; Ayer, Hoy, Mañana, a Panama journal devoted to the service of national culture, is published biweekly by Imprenta de la

Academia, Calle Juan B Sosa no. 8, Panama. New York office is at 516 Fifth Avenue. 25 cents a copy.

Evergreen, Washington's Own Monthly Magazine, began publication in August. It contains articles of general interest, fiction, and a home economics section. Edited and published by Wilbur J. Granberg, Second and Cherry Building, Seattle 4. Manuscripts are accepted from Washington writers only. Subscription $2 a year; single copies 20 cents.

Evolution; International Journal of Organic Evolution, is a quarterly published by The Society for the Study of Evolution, beginning with a March-June, 1947, issue. Ernst Mayr is editor. Free to members of the Society. Subscription $6 a year; single copies $1.50. Order thru the Business Manager, Mr. K. P. Schmidt, Chicago Natural History Museum, Chicago 5.

Excerpta Medica, a monthly abstracting the world's medical literature, comprises fifteen sections and covers the field of theoretical and clinical medicine. It is printed in English under the general editorship of three members of the faculty of the University of Amsterdam, M. W. Woerdeman, chairman. The editors will endeavor to have all sections in publication by July, 1948. Section thirteen, Dermatology and Venereology, began in April, 1947. Subscription for this section $25 or £6 4s a year. For information on other sections, address Excerpta Medica, Ltd., 111 Kalverstraat, Amsterdam C., The Netherlands. Other sections are noted under Ophthalmology and under Surgery.

Export Buyer, the Working Tool of the Export Trade, a monthly publication of the Commodity Research Bureau, 82 Beaver Street, New York 5, began with a March 1947 number. It lists by industry "offerings to the export trade" and commodities "wanted by export buyers." Subscription $6 a year; 50 cents a copy.

Expression, a Quarterly of Contemporary Art and Culture, is a 1947 newcomer, published by the Group Collective Studio 108, 2520 West 7th Street, Los Angeles 5. Subscription $4 a year; single copy 75 cents.

Federal Science Progress, introduced by the Department of Commerce in February, 1947, was discontinued after the June issue. Private publishers have criticized the publication on grounds that the magazine represented potential competition and overlapped the field of private publications.

Financial Group Bulletin, Special Libraries Association, began its tenth volume with a fall issue, October-November, under the editorship of its Vice-Chairman, Laura Marquis, Librarian of Mellon National Bank and Trust Company, Pittsburgh. Subscription $1 a year.

Five Pillars, now in its second volume, is the organ of the International Union of Islamic Service, published quarterly by Makki Publications, 98 Brickfield Road, Durban, South Africa. Inclusive subscriptions for all Makki publications £1/1 a year.

Folia is a publication of the Catholic Classical Association of Greater New York. Sister Mary Liguori, R.D.C, Good Counsel College, White Plains, New York, is editor. It is published in January, May, and October. Subscription $1 a year; single copies 50 cents. Subscription and business correspondence should be addressed to Mr. Daniel Woods, 136 West 13th Street, New York.

Food Drug Cosmetic Law Quarterly presents articles on legal problems involved in the preparation, packaging, labeling, storage and distribution of these commodities. Published by Commerce Clearing House, Inc., 214 N. Michigan Avenue, Chicago 1. Subscription $10 a year; single copies $2.50.

Food Technology, official bimonthly publication of The Institute of Food Technologists, made its appearance January, 1947. It will include information heretofore included in the Institute's Proceedings and News Letters and that proposed for the *Transactions.* Published by the Institute at Geneva, New York. Subscription free to members; to others $10 a volume.

Fortnight, the Magazine of California, began with a November 4 issue. It is a news magazine of California and a critical guide to the entertainment, artistic and outdoor life of the State. Published by O. D. Keep Associates, 68 Post Street, San Francisco 4. Subscription $3 a year; single copies 15 cents.

'47, the Magazine of the Year, is a small size monthly, owned and controlled by leading writers, artists and photographers. Only in rare instances will it contain reprints or condensations, nor will its material appear in reprint magazines. The first issue is dated March. Published by Associated Magazine Contributors, 68 West 45th Street, New York 19. Subscription $4 a year; single issues 35 cents.

French Studies, a Quarterly Review, began with a January, 1947, number. Its purpose is "to extend and deepen the knowledge and appreciation of French culture among English-speaking peoples." Articles and reviews are in English and French. Published by Basil Blackwell & Mott, 49 Broad Street, Oxford, England. Subscription 25s a year; single numbers 7s 6d.

Future, a quarterly, covering the field of industry, government, science and art, worldwide in scope but British in viewpoint, began publication with the July, 1946 number, titled "Ouverture." Its second number, "The Stage is Set," appeared in September. Beginning with the fifth number it will be issued bimonthly. It contains many illustrations in color and is

printed in Great Britain. Cloth bound. Published by Chantecleer Press, Inc., 347 Madison Avenue, New York 17. Subscription $4 a year, twelve issues $10; single number $1.

The Gate, International Review of Literature and Art, in English and German, a pocket-size quarterly, began with a January-March 1947 number. Gilbert Murray in the foreword says: "If the material world is in ruins, there is a world of the mind, a world of music, art, letters, and philosophy, which has never been the property of one nation alone but is the right meeting place for men of thought and good will, irrespective of nationality." Published at 25, Holland Park Avenue, London, W.11. Subscription 10s a year; single copy 2s.

The Grape Grower, published by Wine Publications, 717 Market Street, San Francisco 3, began with a March-April number. The schedule for 1947 is May, July, August, September, November. Monthly publication is planned for 1948. Subscription $2 a year; single copies 25 cents. Eastern representative, Walter C. Elly, 70 East 45th Street, New York 17.

Guidance Chronicle, correlating vocational and educational developments and trends for school administrator and counselor, began with a January, 1947, number and will be published monthly, September thru June, by Chronicle Press, Moravia, New York. Subscription $6 a year; 60 cets a copy.

Handicap, an illustrated monthly for the handicapped and those who want to help in their rehabilitation, began publication in July at 1017 15th Street, NW, Washington, D.C. Subscription $3 a year; single copies 25 cents.

Harvard Business Review will be published six times a year rather than quarterly as at present, beginning with the January 1948 issue. Effective October 1, 1947, subscription rates are raised from $5 to $6 for one year, from $8 to $9.50 for two years, and from $10 to $12 for three years; $1 a single copy. The size of issues will be maintained as at present. An index for Volumes XVI to XXV, inclusive, is printed in the Autumn 1947 issue.

Harvard Library Bulletin, announced for January, 1947, is a revival of the *Bulletin* which appeared with varying titles and scope from 1876 to 1894. "The revived periodical, to be published three times a year, will differ considerably in appearance and contents from its predecessor. It will not list new accessions except in special cases, it will not include routine descriptions of collections, and it will not cover general University material. On the other hand, as a publication of the University Library, it will represent all the Harvard libraries, eighty-two in number, and its content will deal primarily with these libraries, with the results of research based upon their holdings, and with more general library problems in the light of Harvard theory and experience. Its contributors will be drawn both from within and from without the University." Subscription $4 a year; single numbers $1.50.

Heredity, an International Journal of Genetics, edited by Cyril D. Darlington and Ronold A. Fisher, began publication in July. It will be issued three times a year on dates corresponding to university terms. Published by Oliver and Boyd, Tweeddale Court, High Street, Edinburgh; 98 Great Russell Street, W.C., London. Subscription 40s or $8.50; single number 14s or $3.

Home Fashions Reporter has been purchased by Haire Publishing Company and will be incorporated into *Home Furnishings.*

Home Life, a Christian Family Magazine, a large size illustrated monthly, beginning January 1947, is published by the Sunday School Board of the Southern Baptist Convention, 161 Eighth Avenue, North, Nashville 3, Tennessee. Subscription $1.25 a year.

Houille, Minerais, Pétrole is a bimonthly illustrated review of economic geology, that began with a January-February 1946 number. Published by J. B. Baillière et Fils, 19 rue Hautefeuille, Paris 6. Subscription, France 300 fr., foreign 400 fr.; single copies 60 fr.

Huddle, Inner Sanctum of Sports, now in its second volume, is an illustrated monthly, published by Colonial Press, 405 Penn Avenue, Pittsburgh. Subscription $1.50 a year; single issues 15 cents.

Human Relations, Studies Towards the Integration of the Social Sciences, is a quarterly of the Tavistock Institute of Human Relations, London. Subscriptions for the United Kingdom, the British Commonwealth of Nations (except Canada), Europe, Middle East and the Far East: 35s a volume and 10s an issue, including postage. Subscriptions should be addressed to the Managing Editor, Human Relations, The Tavistock Institute of Human Relations, 2, Beaumont Street, London, W.1., England. For the United States, Canada, and Latin America: $7 a volume and $2 an issue. Subscriptions should be addressed to Human Relations, The Research Center for Group Dynamics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.

Humanities Review is a small size monthly that began publishing in January at 4701 Broadway, San Antonio 2, Texas. Editor is Gertrude M. Horgan. It contains both original contributions and reprint articles. Among the latter, in the February issue, is one from the Wilson Library Bulletin for December, School bells ring at the People's University. Subscription $3.50 a year.

Humor Business, Trade Journal of the Comedy World, a new monthly, the first issue dated October, states that it is the first journal in its field. It contains information and humor and cartoon ideas of interest to comedians, gagwriters, cartoonists and humor editors. Published at 347 Madison Avenue, New York. Subscription $2.50 a year.

Hutchinson's Motor Magazine, a pocket-size monthly automobile journal, is published by Hutchinson Periodical Company, 10 Gt. Queen Street, London, W.C.2. Subscription 18s 6d a year; single issues 1s 6d.

Imprimatur, a Literary Quarterly for Bibliophiles, began publication with a January number. Among the contributions to this first issue is Book collectors and public libraries in the Caribbean countries, by Fermín Peraza. A regular feature is a section Easy chair bibliographer, by Lawrence S. Thompson. Published by Lloyd Emerson Siberell, Box 51, Evanston Station, Cincinnati 7. Subscription $2 a year; 50 cents a copy.

The Indian Ecologist began publication April, 1946. It will appear twice a year at present, becoming a quarterly when paper supplies increase. Published on behalf of the Indian Ecological Society by F. R. Bharucha, Royal Institute of Science, Bombay, India. Subscription to non-members, 15 rupees a volume.

Industrial and Labor Relations Review, a quarterly of the New York State School of Industrial and Labor Relations, Cornell University, Ithaca, began with an October number. It contains seven articles, two discussions, three documents and six book reviews. Milton R. Konvitz is editor. Subscription $3 a year; single issues $1.

Industrial Diamond Information Bureau, Industrial Distributors (1946) Ltd., St Andrew's House, 32-34, Holborn Viaduct, London, E.C. 1, publishes monthly a bulletin containing abstracts of articles dealing with properties and industrial applications of diamonds; together with notices of patents and patent applications in many countries. A copy of this bulletin may be obtained, free of charge, on application to the Bureau.

Industrial Training Abstracts, a quarterly (processed), began publishing September, 1946. Roger M. Bellows, Wayne University, is editor. This abstract service is a project of Wayne University, School of Business Administration, under the cooperative and financial sponsorship of the Michigan Industrial Training Council. Subscription $2 a year. Published by Institute in Personnel Methods, Wayne University, Detroit 1.

Informaciones Culturales Bibliotecas, is a publication of the Dirección de Cultura, Ministerio de Educación, Habana, Cuba. It is concerned with various cultural institutions, maintained in whole or in part by the state. The first issue is dated January-February.

Institute of Petroleum Review, a monthly, issued by the Institute of Petroleum, 26 Portland Place, London W.1, made its appearance January, 1947. Its contents will supplement those of the Institute's *Journal* by providing information outside the latter's scientific and technical scope. It will be circulated free to members. To non-members, subscription £1 1s a year; single copies 2s.

Instrument Practice, an illustrated British monthly, covers the whole field of instrument technology and instrumentation. It is edited by H. B. Cronshaw and published by United Trade Press, Limited, 24, Bride Lane, Fleet Street, London, E.C. 4. Subscription 30s post free to any part of the world.

Inter-American Economic Affairs, edited by Simon G. Hanson, is a new quarterly of the Institute of Inter-American Studies, Washington, D.C. Subscription $6 a year. Communications should be addressed to the editor, P.O. Box 181, Benjamin Franklin Station, Washington 4.

International Bulletin of Industrial Property (IBIP) is a periodical covering the field of patents, trade marks, designs, copyrights, unfair competition, etc. thruout the world. Published nine times a year at 15 Park Row, New York 7. Subscription $6.

International Journal of Opinion and Attitude Research, a new quarterly publication beginning March, 1947, is edited by Laszlo Radvanyi, Professor of the National University of Mexico, and Lena Jaeck. It purposes to serve as a forum in which specialists in this field from all countries can publish the results of their work. Published at Donata Guerra 1, Desp. 207, Mexico, D. F. Subscription $4 a year; single copies $1.25.

International Organization is an imposing looking quarterly, published by the World Peace Foundation, 40 Mt. Vernon Street, Boston, "to disseminate accurate information and informed comment on problems of international organization for teachers, students, and specialists." The first number, February, contains three contributed articles, a summary of activities of international organizations, documents of the United nations and other documents, and a selected bibliography, pages 257-278. Subscription $3.50 a year.

Iowa Business is published monthly at 1000 Fleming Building, Des Moines 9, by Business Magazines, Inc. It is devoted to the promotion of private enterprise in Iowa. It began with an October, 1946, number. Subscription $3 a year; single copies 35 cents.

Irish Bookman is a pocket-size monthly, depicting the Irish scene in fiction, verse, articles, book reviews and notes. Published at 2-3 Yarnhall Street, Dublin. Subscription 14s a year; single copies 1s.

Irish Writing, the Magazine of Contemporary Irish Literature, edited by David Marcus and Terence Smith, includes not only writing done in Ireland but also the work of Irish authors living in Britain and the United States. Subscription 6/6 a year, $1.50 in the United States and Canada; single copies 1/6. Address is 15 Adelaide Street, Cork, Eire.

Items, of which March, 1947, is the first number, reports current activities of the Social Science Research Council. It will be issued quarterly, or oftener if it is found to fulfill a need. Published by the Council at 230 Park Avenue, New York 17.

Journal of Child Psychiatry is to be issued at intervals three or four times a year. Volume 1, section 1, is dated 1947. Published by Child Care Publications, 30 W. 58th Street, New York 19. Subscription $5 a volume.

The Journal of General Education is published quarterly by the State University of Iowa, Iowa City. Earl James McGrath is editor. "It is intended to serve instructors and administrative officers in liberal arts colleges, professional schools, teachers colleges, junior colleges, and the secondary schools. More specifically, it is designed to provide an outlet for thoughtful discussions of the issues and experiments of general education." The first number is dated October, 1946. Subscription $2 a year. Editorial Office is at 108 Schaeffer Hall, Iowa City.

The Journal of Glaciology issued in 1947 by the British Glaciological Society, founded in 1945, is designed to publish not only scientific transactions of the Society, but discussions of problems relating to snow and ice in all modes of occurrence. The editorial committee is headed by Gerald Seligman, under whose leadership the Society was originally organized in 1936 as the Association for the Study of Snow and Ice. Offices are at the Royal Geographical Society, Kensington Gore, London, S.W. 7.

Journal of Renaissance and Baroque Music, edited by Armen Carapetyan and Leo Schrade, began with a March issue. Published quarterly by the Institute of Renaissance and Baroque Music, 1430 Massachusetts Avenue (Harvard Square) Cambridge, Massachusetts. Subscription $4 a year; $1.25 a single copy.

Journal of the American Medical Women's Association, is the official monthly organ of the Association. The first issue appeared in March, 1946. Address communications regarding subscriptions and advertising to the Association, Apt. 406, 3300 West End Avenue, Nashville 5, Tennessee. Subscription $3 a year; single copies 35 cents.

Journal of the British Grassland Society, Agricultural Research Building, Penglais, Aberystwyth, Wales, published two numbers in 1946. It becomes a quarterly with its second volume, 1947. Subscription 20s; 1946 issues 10s.

Journal of the Iron and Steel Institute, 4 Grosvenor Gardens, London, S.W.1, begins volume 155 as a monthly publication with a page size of 11 by 8½ inches. Subscription £5 a year; single copies 10s.

Jr. Language and Arts, the Modern Magazine for Boys and Girls, is a large-size illustrated monthly that appeared October, 1946. It is for children from six to twelve years old. It contains stories, science and nature articles, songs, things to make and things to do. Published by Progressive Educators, Incorporated, 3420 West Capitol Drive, Milwaukee 9. Subscription $5 a year.

Kiplinger Magazine, a new monthly for business readers, to make its first appearance January 1, 1947, is announced by the Kiplinger Washington Agency, National Press Building, Washington, D.C. W. M. Kiplinger is editor of the new magazine. The publication will carry no advertising, will derive its sole income from the subscription fees of $6 a year. It will be sold by subscription only.

Kirkeby Hotels Magazine is owned and published monthly by Hotel Publications, Inc, 65 West 54th Street, New York 19, Edward A. Pool, president and publisher. It is a picture magazine carrying considerable advertising.

Knickerbocker Weekly is publishing monthly and will be known as *The Knickerbocker.* Subscription price is reduced from $5 to $3. Published at 30 Rockefeller Plaza, New York.

Korean Chamber of Commerce Bulletin is the official monthly publication of the Korean Chamber of Commerce in America, 408 San Fernando Bldg, Los Angeles. Vol. 1, No. 1 is a two-page bulletin.

Das Kunstwerk, eine Monatsschrift über Alle Gebiete der Bildenden Kunst, is a new art magazine with many illustrations, some of them in color, published by Verlag Woldemar Klein, Baden-Baden, Germany.

Kyklos; International Review for Social Sciences, will publish, in the main, contributions on all the various aspects of the theory of economics, including economic policy and finance, and aims to create an international forum for scientific discussion between scholars and peoples of different nationalities. The first number of the new quarterly contains two English and two German articles and one French article. Published by A. Francke A.G. Verlag, Bubenbergplace, Berne. Subscription 36 fr a year.

The Lawyer and Law Notes is a journal for lawyers, published jointly by the American Law Book Company and Edward Thompson Company. The second issue is dated Spring, 1947. Editor is August A. Cordes, 272 Flatbush Avenue Extension, Brooklyn 1, New York.

Letter to Airmen, the weekly news and outlook report of *Aero Digest,* beginning in October, is a four-page summary of events and trends in all phases of aviation. The *Letter* is published under the editorship of Kendall K. Hoyt. Subscription, air mail $11; first class class $10; slow mail $5. Business address, 515 Madison Avenue, New York 22; Editorial office, National Press Building, Washington 4.

Link, Woochefee Bulletin for Cultural Cooperation, is a small quarterly of the Woochefee Institute of New York, 86 Riverside Drive.

The Los Angeles County Museum, Art Division, introduces its new quarterly *Bulletin* with the Spring, 1947 number. It is illustrated with reproductions from the Museum's

collection. New installations will be recorded and new acquisitions described in articles which can temporarily serve as a guide while the Art division is being rearranged. The *Bulletin* will be published in between issues of the Museum's regular *Quarterly.*

Mademoiselle's Living, a new quarterly magazine to be published by Street & Smith Publications, will be on the newsstands October 1, designed for young home-makers in the 18-35 age group. 50 cents a copy.—*Advertising and Selling.*

Magazine Intelligence is a new and unique editorial service. Regular issues, every two weeks, will abstract all the non-fiction contents of some 117 leading U.S., British, and Canadian periodicals. In 50 to 100 word summaries the new publication gives the gist of each article. Intended primarily for magazine and newspaper editors, publicity and public relations experts, columnists, commentators, research directors, librarians, and key executives in business and government. Editorial offices: 33 West 42d Street, New York. Price $1.25 per copy, $26 a year.—*Special Libraries*

Magazine of Wall Street, Index to volume 77, was not printed, due to an editorial oversight, and the publisher does not expect to issue one. It is indexed rather closely in Industrial Arts Index.

Mainstream, a Literary Quarterly, began with a winter, 1947, issue. Samuel Sillen is Editor-in-Chief. Published by Mainstream Associates, 832 Broadway, New York 3. Subscription $2 a year; single copies 50 cents.

Mercury Stamp Journal, "published periodically" by the Mercury Stamp Company, 522 Fifth Avenue, New York 18, is sent free to friends and customers of the Company. Subscription to others $1 for four numbers. Three numbers have been issued, February, May, September, 1947.

Miami Law Quarterly began publication last March, sponsored by the School of Law, University of Miami, and the Dade County Bar Association. It is announced in the June number that the September 1947 issue will be volume two number one. Subscription $3 a year; single issues 75 cents. Address is Coral Gables 34, Florida.

Middle East Journal, a quarterly, beginning with a January number, is published by The Middle East Institute and aims to present informative materials on Middle East problems without emotional bias. Harvey P. Hall is editor. It contains a rather extensive book review section and a bibliography of periodical literature. Subscription $6 a year; single copies $1.50. Address the editor, 1906 Florida Avenue, NW, Washington 9.

Modern Distribution, published by Magazines of Industry, Inc., 347 Madison Avenue, New York, which has been for three years a $25-a-year weekly newsletter with 10,000 circulation in the hardgoods distribution field, becomes a tabloid size newspaper September 15 and accepts advertising for the first time. Parker James, former vice-president of Standard Outdoor Advertising, Inc., is editor.—*Sales Management.*

Modern Knitting, a quarterly, began with a Winter, 1947, number. It contains instructions for knitting and crocheting wearing apparel, gifts, etc. All articles are illustrated. Published by Knitting Bureau, Inc., 247 Park Avenue, New York 17. Subscription $1.40 a year; single copies 35 cents.

Modern Railroads is an illustrated monthly published at 326 West Madison Street, Chicago 6. The New York office is at 415 Lexington Avenue. It is intended as a clearing house of new developments and applications of products used in all phases of railroading. Subscription $3 a year in the United States; elsewhere $4.

Modern Review, a monthly, is published by the American Labor Conference on International Affairs at 7 East 15th Street, New York 3. First number March 1947. Subscription $5 a year; single copy 60 cents.

Monthly Bulletin of Statistics, a publication of the United Nations Statistical Office, gives social and economic statistics of most of the countries of the world. The United States sales agent is International Documents Service, Columbia University Press, 2960 Broadway, New York 27. Subscription $5 a year.

Mothers Occult Digest, the bimonthly organ of the Mothers Research Group of the Theosophical Society in America, began with a September-October number. Obtainable from Mrs. Muriel Lauder Lewis, Route 2, Box 586, Ojai, California. Subscription $1 a year.

Music Dealer, the Business Magazine for Music Merchants, is an illustrated monthly published by Metronome Corporation, 26 West 58th Street, New York 19. Subscriptions $2 a year; single copies 25 cents.

New Jersey Compass, a privately and independently owned monthly, is directed mainly to residents of the state "for the purpose of disseminating interesting and constructive information, past and present, about New Jersey." Original print order was 20,000, with distribution thru subscription and newsstands. Published by Compass at 32 Nassau St., Princeton, N.J. (25 cents)

New Meridian Magazine, a new bimonthly, states that one of its aims is "an open-minded, fair appraisal of the international scene." Articles, fiction and poetry are included. Published by Alan Neame Publications, 8 Garrick Street, London, W.C. 2. Subscription 8s for six issues; single copy 1s 4d.

New Quarterly of Poetry began publication in the fall of 1946, and offers poets of whatever school—or of no school—an additional medium of expression. Published by the League to Support Poetry, 327 West 18th Street, New York 11. Subscription $1.50 a year; single copy 40 cents.

The New York Board of Trade is planning a monthly official publication, to be called *New York Business*, which is expected to make the Board's work more effective and aid business executives.

New York State Commerce Review is a digest of business developments in the Empire state, published quarterly by the New York State Department of Commerce, Division of Economic Development. Sent free of charge on request.

Nucleonics, McGraw-Hill Magazine of Nuclear Technology, began with a September issue. It is a small size monthly, with which has been consolidated *Atomic Power* and *Atomic Engineering*. Its subject matter is nuclear technology, "embracing all methods and results of applying nuclear particles to useful ends." Keith Henney is editor; Walter M. DeCew is technical editor. Subscription $15 a year. Published by McGraw-Hill Publishing Company, 330 West 42d Street, New York 18.

The Oil and Gas Journal index for 1946, owing to the continued shortage of paper, will not be published in a regular issue. The complete index, enlarged and improved and with more cross-references, bound separately, will be sent without charge to all subscribers requesting a copy. Address requests to Circulation Department, P.O. Box 1260, Tulsa.

One World, the Review of World Unity, a quarterly, beginning with a spring, 1946, number, has for its object "to make the common people of one country familiar with the life of the common people of other countries, with their wishes, their ideals and hopes" and to provide a medium in which ordinary folks may convey their ideas to others. It is published by William MacLellan, 240 Hope Street, Glasgow, C.2. 2s 6d a copy.

Operating Engineer, an outgrowth of *Power's* magazine section of the same name, is announced by McGraw-Hill to begin January, 1948. It will offer practical service to the engineers "directly responsible for the operation and maintenance of all power services in thousands of medium and smaller industrial plants as well as institutions and service establishments." The November issue of *Power*, page 737, explains that the new monthly will affect *Power* very little.

Ophthalmology, section twelve of *Excerpta Medica*, began monthly publication in May, 1947. As in the other sections it covers the field of theoretical and clinical medical literature in the form of short abstracts. Published by Excerpta Medica, Ltd, 111 Kalverstraat, Amsterdam C. The Netherlands. Local agent for Canada, Central America and the United States, Williams and Wilkins Co., Mount Royal and Guilford Avenues, Baltimore 2. Subscription for this section $15 or £3 15s a year.

Outreach (formerly *Women and Missions*) is published monthly, except June to September, inclusive, when issued bimonthly, by the Women's Committee of the Boards of Missions and Christian Education of the Presbyterian Church in the U.S.A. Publication office, 24 Johnson Street, Brooklyn 1, N.Y. Editorial and executive offices at 156 Fifth Avenue, New York 10. Price $1 a year; single copies 15 cents. Postage to Canada and foreign countries extra.

The Overseas Post-Graduate Medical Journal, a quarterly, began October, 1946, with the object of "giving progressive medical men all over the world an epitome of medical knowledge and teaching on all matters of practical importance in their daily lives." Published by the Fellowship of Post-Graduate Medicine, 1 Wimpole Street, London, W.1. Subscription £1 10s a year; single copies 7s 6d.

Pacific Science, a Quarterly Devoted to the Biological and Physical Sciences of the Pacific Region, began publication with the January, 1947, number. It is published by the University of Hawaii, Honolulu 10. Subscription $3 a year; single copies $1.

The Pacific Spectator, a Journal of Interpretation, a quarterly, beginning with a winter 1947 number, is published for The Pacific Coast Committee for the Humanities of the American Council of Learned Societies by Stanford University Press, Stanford University, California. Subscription $3.50 a year; single copies $1. The New York office is at 440 Fourth Avenue, New York 16.

Palestine Affairs is a monthly information bulletin on Palestine and the Middle East, distributed by American Zionist Emergency Council, 342 Madison Avenue, New York 17.

Philately, the News Magazine of Stamp Collecting, published weekly by Comfort Press, 200 South Seventh Street, St Louis 2, is in its second volume. Subscription $3 a year; single copies 10 cents.

The Philippine Educator, organ of the Philippine Public School Teachers' Association, is published monthly at 878 Rizal Avenue, Manila. Subscription P 7; single issue 60 centavos.

Philosophic Abstracts has been acquired by The Russell F. Moore Company, 475 Fifth Avenue, New York, from the former publishers, The Philosophical Library, Inc., New York. The editorial management will continue under the direction of Dr. Ralph B. Winn, of Monmouth College and the standing board of editorial contributors here and abroad.

Phoenix Quarterly, a journal directed towards the recovery of unity in religion, politics and art, edited by Maurice Cranston, "will take as its articles of faith that mankind is in a large measure the master of his destiny; that Reason is a guide to truth; that freedom is a proper goal of endeavour; and that moral principles must be the basis of politics as of personal

conduct." It began with an Autumn 1946 issue. Published by Jason Press, 21 Brownlow Mews, London, W.C.1. Subscriptions 7s 6d a year, $2 in the United States and Canada; 2s a copy.

Photography, a new illustrated quarterly, began with a fall number. "It aims to be the meeting place where technical and creative minds in the field of camera work can greet on intimate terms the vast audiences of serious camera owners who want to express themselves better through the same medium." Published by Ziff-Davis Publishing Company, 185 North Wabash Avenue, Chicago 1. Subscription $4 for 12 issues; single copy 35 cents. With the Spring issue the name will be changed to *Photo Arts*.

Planning is a small illustrated magazine, published at irregular intervals by School of Architecture, University College, Auckland, New Zealand. First three issues 7s 6d; 2s 6d a copy.

Plant Engineering, is announced by Kingsley L. Rice, president of Technical Publishing Company, publishers of *Power Plant Engineering* for more than 50 years. According to Mr. Rice, *Plant Engineering* will be the first publication edited exclusively for persons engaged in the application and use of electric power and in plant maintenance.—*Sales Management*

Plastic and Reconstructive Surgery, bimonthly journal of the American Society of Plastic and Reconstructive Surgery, began publication in July, 1946. The editor is Warren B. Davis. Published by the Williams and Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2. Subscription $6 a year.

Poets of America is "a magazine of verse for those who make writing verse their hobby," edited by George Scheftel. Published quarterly by the Poets of America Publishing Company, 50 East 9th Street, New York. Subscription $3 a year; single copies 35 cents.

Point of View, a quarterly, will concentrate on the fields of corporate public relations and company literature. First issue (September) is still considered experimental. There is no price on the magazine at present. Published by Geffen, Dunn & Company, 76 9th Avenue, New York.—*Advertising and Selling.*

Polibiblon, Bibliografia Acumulativa Argentina e Hispanoamericana, began publication with an April number. The bibliography is in two parts; the first is an author and subject list in one alphabet of Argentine books; the second is a list of other Hispanic American books divided by country. Full bibliographical details and prices are given. It is published fortnightly, with annual cumulations. Editorial and administrative offices at Avenida de Mayo 847, Buenos Aires. Subscription including annual volume $7.

Postgraduate Medicine, the official journal of the Interstate Postgraduate Medical Association of North America, an illustrated monthly, began publication in January. Published by the IPMA Publishing Company, 512 Essex Building, Minneapolis 2. Subscription $8 a year.

Practical Home Economics has purchased *Better Food*, formerly *American Cookery*, and is consolidating these two ABC publications with the June issue. As only the professional circulation of *Better Food* will be absorbed, *Practical Home Economics* will continue to be a strictly professional home economics magazine. The combined magazine will have more than 20,000 paid circulation.—*Advertising and Selling*

Prevention of Deterioration Abstracts, including journal articles, patents, specifications, unpublished reports, are now available on a yearly subscription basis. The price, including a binder and index guides, will be $35 for the fiscal year July 1-June 30, back issues being supplied since the Abstracts started in April 1946. Subscriptions may be obtained from Prevention of Deterioration Center, Room 204, 2101 Constitution Avenue, Washington, D.C.—*Science*

"Print Survey; Review of Recent Fine Prints"; edited by Alfred Fowler, is a small quarterly, beginning with a spring, 1947, number. It supplies information on new prints. Published at 1244 Martha Custis Drive, Alexandria, Va. Subscription $2.

Progressive World is a Free Thought monthly, published by Progressive World Association, 325 Prospect Avenue, Clinton, New Jersey. 25 cents a copy.

Public Domain, the Weekly Magazine of Expiring Patents, which suspended publication in 1946, reappeared in May, 1947. Expiring patents are grouped according to subject and printed three months in advance of expiration date. Published by Scientific Publishing Corporation, 49 West 45th Street, New York 19. Subscription $50 a year; to libraries $30.

Public Libraries, at present a four-page bulletin, is a channel of communication for members of the Public Libraries Division of the American Library Association. It is hoped later to develop it into a periodical of general help to the public library administrators and their staffs. The first number is dated January. Editor is Ruth W. Gregory, Waukegan, Illinois.

Quarterly Review of Allergy and Applied Immunology began with a March, 1947, number. This is an addition to the various quarterlies published by Washington Institute of Medicine, 1720 M Street, Washington 6. Subscription $9 a year.

Quarterly Review of Medicine and *Quarterly Review of Surgery*, complying with requests from librarians, will begin new volumes with the first quarter as do the nine other quarterlies

of the Washington Institute of Medicine. A large combined issue will be published in October, designated Volume 4, Number 4. To compensate for this combined issue all subscriptions will be extended one quarter year.

Questions and Answers, volume one, number one, January 1947, is an eight page bulletin of the Foundation for Economic Education. It is to be published not periodically but as often as good questions warrant. Single copies may be obtained by students free of charge. Ten copies $1. The Foundation's address is Irvington-on-Hudson, New York.

Radio Best is a large-size illustrated bimonthly published at 452 Fifth Avenue, New York 18. Volume 1, number 1 is dated November 1947. Subscription, 12 issues $3; single copy 25 cents.

Revista del Instituto Nacional de Pedagogia is a Mexican quarterly that began publication with a January number. Address Ignacio Ramirez, Mexico, D. F.

Rivista delle Biblioteche is a new quarterly library journal published by Istituto Italiano di Bibliografia, Rome. Its aim is not only to present information and studies of the libraries and bibliography of Italy but to become also a channel of relations and exchanges among librarians of all countries. Subscription in Italy 1000 l a year; foreign 1600 l; single issues 300 l and 500 l. Address Largo S Lucia dei Filippini 5, Rome.

Revista Mexicana de Higiene Mental, is a Spanish language monthly, published at Gómez Farías no. 56, Mexico, D.F. Subscription $10 a year.

Revista Rádio-Técnica, a monthly in Portuguese, devoted to radio and electricity, began publication January, 1946. Its offices are at Av. Celso Garcia, 2598 São Paulo, Brazil. Subscription, cr. 35.

Royal Institute of British Architects began November, 1946, the publication of a quarterly *Library Bulletin.* The second number, February 1947, contains an index to the periodicals received in the Library, covering the period July 8 to November 9, 1946. A list of book accessions is also included. The Universal Decimal Classification used in the Library is followed with some adaptation. Subscription 10s a year. The Institute is at 66 Portland Place, London W.1.

Salute is published monthly by Vet Publishers, Inc., 19 Park Place, New York 7, and is sponsored by the former editors and writers of *Yank* and *Stars and Stripes.* It began its second volume in January 1947. Subscription $3 a year in the United States; elsewhere $3.50; single copies 25 cents.

Science To-Day, an eight-page weekly publication of pocket-size, issued its first number October 10, 1946. Its announced purpose is to keep those in schools, universities and Service camps abreast of the main trends in contemporary science by means of news paragraphs and short, not too technical, articles. Edited for Weekly Science Newsletter, Ltd., by A. W. Haslett, 104 Clifton Hill, London, N.W. 8. Subscription 30s a year.

Sélection; Sélection des Travaux Médicaux et Scientifiques de Langue Française, is a new medical bimonthly, published by Masson & Cie., Boulevard Saint-Germain 120, Paris 6e.

Self Government News Letter is a four-page bulletin published by National Self Government Committee, Inc, 80 Broadway, New York 5. The first number is dated November.

Selling Aids, is a new monthly devoted to sales promotional products used in the selling field, for sales managers and advertising managers associated with business and industrial concerns. It began with a November issue. Published by Selling Aids Publishing Company, 1276 West Third Street, Cleveland 13. Subscription $3.50 a year; single copies 35 cents.

16-mil Film User, with which is incorporated *Higher Education Gazette,* is a monthly publication for all engaged in the screening of information, education and entertainment, using this size film. Published by Current Affairs, Ltd., 19 Charing Cross Road, London, W.C.2. Subscription 10s a year; single number 1s.

The Slavic American, a Quarterly, beginning with a fall issue, is published by the American Slav Congress, 205 East 42d Street, New York 17. It will contain articles, stories and features explaining domestic and foreign issues, and describing the cultural contributions to America by the twelve Slavic national groups. It will support organized labor and liberal groups in America. Subscription $1 a year.

The Slovak Review, an American quarterly devoted to Slovak culture, began with an autumn number. It includes history, poetry, fiction, book reviews. Published by the Slovak League of America, Box 208, Scranton 1, Pennsylvania. Subscription $2 a year; single numbers 50 cents.

The Smart Traveler, a new illustrated monthly, launched July, 1947, tells everything about travel: where to go, how to get there, what to do after getting there, and what it will cost. Published by The Smart Traveler, Inc., 90 West Street, New York 6. Subscription $3 a year; single copy 25 cents.

The Social Sciences in Mexico and News about the Social Sciences in South and Central America is published quarterly, beginning May, 1947. It is edited by Dr Laszlo Radvanyi, professor of the National School of Economics of the National University of Mexico. Published at Donato Guerra 1, desp. 207, Mexico, D.F. Subscription $3.50 a year; single copies $1.

Sociatry, Journal of Group and Intergroup Therapy, a quarterly, beginning March, 1947, contains articles on group therapy methods for administrators, teachers, adult educators, community, group, social and recreational workers and others. Published by Beacon House, Inc., Beacon, New York. Subscription $5 a year; first single issue $2.

Soundings, formerly *Free Europe,* proposes to give month by month accounts of the current economic fortunes of contemporary mankind in all the continents, and to review the interaction of politics and economics. Published at 9 Upper Grosvenor Street, London W.1. Subscription 30s a year in the U.K. Foreign subscription $6; single copy 2s 6d.

South African Library, Quarterly Bulletin, published at Capetown, has for its object making better known, in the Union and elsewhere, the national treasures contained in the Library. The first issue is dated September. Subscription £5; single copies 1s 6d.

Soviet Book News, Literature, Art, Science, a four-page bulletin, is published occasionally by Earl Browder, Incorporated, Soviet Publishers Representatives, 55 West 42d Street, New York 18. Two numbers have been issued in 1947.

Spectrochimica Acta, the publication of which was begun in 1939 by Julius Springer, Berlin, and interrupted shortly afterward by the war, has been re-established as an international organ for spectroscopists and spectrochemists, and is being published in the Vatican under the editorship of Alois Gatterer, assisted by a group of co-workers from other countries, as follows: R. Breckpot (Belgium), H. Kaiser (Germany), E. Van Someren (England), and Lester W. Strock (United States).—*Science.*

Sponsor is an illustrated monthly for buyers of broadcasting, published by Sponsor Publications, Inc., 40 West 52d Street, New York 19. The first issue appeared November, 1946. Subscription $5 a year; single copies 50 cents.

Style en France, a new art magazine from Paris, with many illustrations in color, has begun its second volume with a January-February-March number. Subscription 1400 fr; single numbers 350 fr. Published by Imprimerie de l'Édition Artistique, 34 Avenue de Saint-Ouen, Paris 18.

Success Today, the Magazine of Personal Achievement, is a quarterly, of digest size, but except for a book digest the articles are original contributions. It began with a summer number. Published by Basic Publications, Concord, New Hampshire. Subscription $1 a year; single copies 25 cents.

Sundial, a Quarterly of Verse, made its first appearance with the Autumn number, 1946. Its aim is to become a "paragon of contemporary verse". Its call is to all poets who have mastered the craft. Published by Pemkraft Press, P.O. Box 25, Plattsburg, New York. Subscription $2 a year; sample copy 50 cents.

Surgery, being Section 9 of Excerpta Medica, a monthly abstracting service of the world medical literature, began publication with a September number. Subscription $25 or £6 4s a year. Published by Excerpta Medica Ltd. 111, Kalverstraat, Amsterdam-C, The Netherlands.

Symposium will be published semi-annually by the Department of Romance Languages of Syracuse University. The first number was issued November, 1946. It will publish scholarly articles dealing with all modern foreign languages and literatures. Subscription $3 a year; single copies $2. For volume 1, consisting of three numbers, November, 1946, May and November, 1947, $4.50.

Syndicate Selling, according to an announcement by Dell Publishing Company, 149 Madison Avenue, New York, will be developed into a complete and full-fledged magazine for the variety store salesgirl and will accept advertising beginning with the January 1948 issue. It is distributed to all 4,614 stores of the ten major variety store chains.

Systems for Government Administrators is a quarterly publication presenting methods that have made good government more effective by improved procedures. Published by Remington Rand, 315 Fourth Avenue, New York 10.

Tell, the Idea Magazine of Marketing, begins regular monthly publication with the April 1947 number. It will be distributed to those in industry and business responsible for selling, advertising, sales promotion, market research, public relations and packaging. Published by Marketing Publications, Inc., 130 West 42d Street, New York 18.

This Month in American Medicine is an abstract journal, now in its second volume, published monthly by Professional Digests, Inc., 665 Lexington Avenue, New York 22. It abstracts over 100 of the important medical journals published in the United States. Subscription $7 a year.

The Times (London) Trade & Engineering, beginning with the February, 1947, issue, appears in a new form, and the title changes to *The Times Review of Industry.* Rate of subscription will be increased to $3.05. All existing subscriptions will be filled at the old rate.—*Bulletin of Bibliography.*

Traveltime, The Nation's Vacation and Travel Magazine, is a February newcomer, published monthly by Traveltime Publishing Company, 330 West 42d Street, New York 18. Subscription $1.50 a year; single copies 15 cents.

Unasylva, an illustrated bimonthly, published by the Food and Agriculture Organization of the United Nations, Division of Forestry and Forest Products, is devoted to fostering world-wide interest in forest management and utilization. Volume one, number one is dated July-August, 1947. It is now published in English and French editions, with a Spanish edition planned for the near future. For the present,

orders for subscriptions or individual copies are taken by the Documents Office, FAO, 2000 Massachusetts Avenue, NW, Washington 6. Subscription $3.50 a year; single copies 65 cents.

UBEA Forum is published monthly except June, July, August and September by the United Business Education Association, 1201 Sixteenth Street, NW, Washington 6. The first number is dated March 1947. Subscription is included in the $2 a year membership fee of the Association.

UNESCO Bulletin for Libraries, in its second issue, May, makes an appeal to librarians to send in the name of any library that should receive the *Bulletin* and to pass on their own copies if not needed. The *Bulletin* should be helpful in effecting the exchange and distribution of publications and spreading library information from every country. All future issues of the *Bulletin* will be published fully in French and English. Address United Nations Educational Scientific and Cultural Organisation, Paris.

UNESCO Monitor is the official publication of the United Nations Educational, Scientific and Cultural Organization, Unesco House, Paris.

United Nations Educational Scientific and Cultural Organization began in January the publication of *Reconstruction and Rehabilitation Newsletter.* It will be published monthly in English, French, and Spanish versions and may be obtained from the Editor, 19, Avenue Kléber, Paris XVIe.

United Nations World was announced in the January Index. The first issue is dated February. It is not an official publication but an independent journal, a merger of *Asia,* the *Inter-American,* and *Free World.* It aims to give support to the United Nations by helping to create an internationally educated public opinion. It plans publication in many countries. All human activities of international interest are within its scope. Editorial Board: Richard J. Walsh, Chairman; Louis Dolivet, International Editor; Pearl S. Buck, William L. Shirer, Fred Smith. Published by Egbert White, 385 Madison Avenue, New York 17. Subscription $4 a year. Foreign postage, $1; single copies 35 cents. It is indexed in *Readers' Guide.*

Universidad de México; Organo de la Universidad Nacional Autonoma de México, a monthly, began publishing last October. Address Universidad Nacional de México, Justo Sierra 16, Mexico, D.F. Subscription $3 a year; single copies 30 cents.

Universities Quarterly published a second number in February, in an edition of 2,200 copies, most of which were needed to fill annual subscription in fifty different countries. The first number is out of print. Sir Ernest Simon, chairman of the Council, University of Manchester, is chairman of the editorial board. Published at 10 Great Turnstile, London, W.C.1. Five shillings an issue.

University Observer, a Journal of Politics Published at the University of Chicago, is a new quarterly, the first number dated Winter, 1947. Offices, 1005 East 60th Street, Chicago 37. Subscription $2 a year; single copies 50 cents.

Die Unternehmung; Zeitschrift für Betriebswirtschaft und Organisation is a new quarterly, beginning March, 1947, published by Verlag Paul Haupt, Falkenplatz, 14, Berne. The first number is in the German language with the exception of one article in French. Subscription 16 fr; single copies fr 3.50.

Utah Humanities Review, a Regional Quarterly, began with a January number. Its purpose will be "to report the surveys of a hundred years of community life in and around Utah." It is published at the University of Utah by the Utah Humanities Research Foundation, which was inaugurated by a grant to the University from The Rockefeller Foundation. Subscription $2 a year; single copies 75 cents. Address, 309 Library Building, University of Utah, Salt Lake City.

Vanguard, published periodically by the Herbert D. Hall Foundation, for furthering industrial education, began with a February 1947 number. The April issue devotes its eight pages to articles on visual methods of instruction. Published at 99 Lincoln Park, Newark, New Jersey.

Varsity, the Young Man's Magazine, will be published every other month beginning June, 1947, by The Parents' Institute, Inc., 4600 Diversey Avenue, Chicago. Subscription $3 for twelve issues; single copies 25 cents.

Vend is the new trade paper of the "automatic merchandizing" industry. It began with a November number. It is an illustrated monthly published by The Billboard Publishing Company, 155 N. Clark Street, Chicago 1. New York branch office is at 1564 Broadway. The magazine is devoted exclusively to promoting the sale of products and services thru vending machines. Subscription $2 a year; single copies 25 cents.

"Verre et Silicates Industriels," which suspended operations during World War II, has resumed publication and becomes the official organ of the Institut National du Verre, recently organized at Charleroi, Belgium.

Veterans Magazine is owned, staffed, and written by and for former and present members of the United States armed forces, and serves as a medium of expression for the veterans of both world wars. The magazine is of large size and profusely illustrated. Published monthly beginning August, 1946, by John Ralph Evans. Editorial and business offices, 624 S. Michigan Avenue, Chicago 5. Subscription $5 a year; single copies 50 cents.

Veterans Voice is a quarterly publication of the Kings County Council, Jewish War Veterans of the United States. Its second number is dated Fall, 1947. Published at 38 Park Row, New York. Subscription $3 a year.

Video, a television newsletter, is published weekly by United Video, 516 Fifth Avenue, New York 18. First issue September 15.

Vogue plans to publish twenty issues each year in place of the present twenty-four. The issues of December 15, 1947, and January, June and July 15, 1948, will be combined with the issues appearing on the first of those months. The newsstand price of *Vogue* has been advanced from 35 cents to 50 cents a copy.

Weather, a Monthly Magazine for All Interested in Meteorology, is published by the authority of the Royal Meteorological Society. The first number was issued in May, 1946. The Society's offices are at 28 Deanhill Court, East Sheen, London, S.W.14. Subscription 18s, post free; single numbers 1s 6d.

Weight Engineering has been discontinued with the 1946 Winter issue.

Western Finishing, devoted to the service of the industrial coatings industry of the Pacific West, began in September, 1947. Published monthly by The Linley Publishing Company, 1872 West 54th Street, Los Angeles, California. Subscription $2.50; single copies 25 cents.

Western Printer & Lithographer, the News Magazine of Western Graphic Arts, an illustrated monthly, began with a September, 1947 number. Publisher, C. J. Ver Halen; Editors, Robert Black and Roby Wentz. Address is 450 N. Robertson Blvd., Los Angeles 36. Subscription $3 a year.

Wisconsin Idea Theatre Quarterly is devoted to the idea of a people's theater for Wisconsin. Junius Eddy is editor. Published by the Extension Division's Department of Debating and Public Discussion, and distributed to the statewide mailing list of the Wisconsin Idea Theatre. Address all communications to: The Wisconsin Idea Theatre, Science Hall, The University of Wisconsin, Madison 6.

Wood, an illustrated monthly magazine of the wood industry, began with a September issue, published by Vance Publishing Corporation, 139 North Clark Street, Chicago 2. Subscription $4; single copies 50 cents.

Working Together, a Present-Day Journal for Labour and Capital, was launched as a pocket-size bimonthly publication with the January-February, 1947, number. Its theme is copartnership. Published by the Employee Partnership Institute, 81 River Road, Hamilton, New Zealand. Subscription 5s a year; single copy 1s.

World Affairs, a quarterly published under the auspices of The London Institute of World Affairs, began publication of volume one (new series) January, 1947. The object of the Institute is the "promotion of education in world problems." Published by Stevens & Sons, Ltd, 119-120 Chancery Lane, London W.C. 2. Subscription free to members; to others 10s a year; single copies 2s 6d.

World Affairs Bulletin is successor to the popular *APS Bulletin,* published during the war-years by the American Peace Society. It will be edited by Franklin Dunham, Executive Secretary of the Society, as a monthly publication. The first issue, processed, ten pages, is dated February, 1947. Publication office 734 Jackson Place, Washington 6.

World Markets, a Weekly Review of Raw Materials and Commodities, began publication September 9 and is issued every Monday. The Review has a staff of reporters and correspondents in important market centers thruout the world who report every week by airmail and cable existing trade and market conditions in their respective countries. These reports include current market prices, the status of supply and demand, sales and purchases consummated, changes in government regulations as they affect imports and exports, and other important business news pertaining to raw materials and commodities. A special Review Section printed in Spanish and French presents reviews of important trade developments of the week. Published by Atlas Publishing Company, 425 West 25th Street, New York 1. Subscription $10 a year; $17.50 by air express.

World Oil will be published monthly, effective October, after thirty-one years of continuous publication as a weekly. Known as *The Oil Weekly,* prior to July 7, 1947.

Xochiquetzal, Ilustrador Indo-Latino-Americano de Cultura y Turismo, now in its second volume, is a monthly published at Consulado 314, Dept. 39, Habana, Cuba. Subscriptions $2.40 a year; single numbers 20 cents.

Your Business, published by Liberty Distributors, an eleven-year-old hardware wholesalers' buying group, is for distribution to the 80,000 retail customers of its twenty-six members. It is a small-size monthly, a merchandizing aid to hardware dealers. Subscription $1 a year. Published at 14 North 5th Street, Philadelphia 5. The first issue was July, 1946.

Zane Grey's Western Magazine, a small-size monthly, containing short stories, fact features, verse and novel abridgment, is published by Dell Publishing Company, 149 Madison Avenue, New York 16. Subscriptions $3 a year; single copies 25 cents.

List of Periodicals Indexed

A S M E Trans—Transactions of the American Society of Mechanical Engineers. $12; single numbers $1.50. m (except Mr, Je, S, D) American Society of Mechanical Engineers, 29 W 39th St, New York 18 (1v:Ja v69;i-l)
$7.50 to members and affiliates

Acoustical Soc Am J—Journal of the Acoustical Society of America. $8; single numbers $1.80. bi-m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v19;i-s)
Indexing began July 1940 v 12, no 1
Changed to bi-monthly beginning January, 1947

Adv & Sell—Advertising and Selling. $4; single numbers 35c. m Moore-Robbins Pub. co, Inc, 9 E 38th St, New York 16 (1v:Ja v40;i-none)
Annual advertising awards issue $1

Advanced Management—Advanced Management, $6; single numbers $1.50. q Society for the Advancement of Management, Inc, 84 William St, New York 7 (1v:Mr v12;i-l)
Formerly Society for the Advancement of Management Journal, a bi-monthly

Aero Digest—Aero Digest. $3; single numbers 50c. m Aeronautical Digest Pub. Corp, 515 Madison Av, New York 22 (2v:Ja,Jl v54-55; i-l)
Published semi-monthly beginning January 1944. Changed to monthly beginning January 1946

Aeronautical Eng R—Aeronautical Engineering Review. $3; single numbers 30c. m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21 (1v:Ja v6;i-s)
Formerly Journal of the Aeronautical Sciences, Aeronautical Review Section

Air Transport—Air Transport. $3; single numbers 35c. m McGraw-Hill Pub. co, Inc, 330 W 42d St, New York 18 (1v:Ja v5;i-none)
Began publication September, 1943

Am Assn of Textile Chemists and Colorists. Proceedings. Published in American Dyestuff Reporter

Am Assn Pet Geologists Bul—Bulletin of the American Association of Petroleum Geologists. $15; single numbers $1.50. m American Association of Petroleum Geologists, Inc, Box 979, Tulsa 1, Oklahoma (1v:Ja v31;i-s)

Am Bankers Assn J. See Banking

Am Bld—American Builder and Building Age. $3; single numbers 35c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v69;i-none)

Am Bsns—American Business combined with System. $4; single numbers 35c. m Dartnell Publications, Inc, 4660 Ravenswood Av, Chicago 40 (1v:Ja v17;i-none)

Am Cer Soc Bul—Bulletin of the American Ceramic Society. $4; single numbers 50c. m American Ceramic Society, 2525 N High St, Columbus 2, Ohio (1v:Ja v26;i-s)
Ceramic Abstracts, formerly published as part of the Bulletin, is included in American Ceramic Society Journal beginning January 1946

Am Cer Soc J—Journal of the American Ceramic Society; Ceramic Abstracts. $15; single numbers $1.50. m American Ceramic Society, 2525 N High St, Columbus 2, Ohio (1v:Ja v30;i-s)

Am Chem Soc J—Journal of the American Chemical Society. $8.50; single numbers 75c. m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v69;i-s)

Am Concrete Inst J—Journal of the American Concrete Institute. $10; single numbers $1.25. m (except Jl and Ag) American Concrete Institute, 742 New Center Bldg, Detroit 2, Mich. (1v:S v19;i-l)

Am Dyestuff Rep—American Dyestuff Reporter. $5. bi-w Howes Pub. Co, 1 Madison Av, New York 10 (1v:Ja v36;i-s)
Includes Proceedings of American association of textile chemists and colorists

Am Gas Assn Mo—American Gas Association Monthly. $3. m (bi-m Jl-Ag) American Gas Assn, Inc, 420 Lexington Av, New York 17 (1v:Ja v29;i-l)

Am Gas Assn Proc—American Gas Association Proceedings. Annual convention proceedings. American Gas Association, Inc, 420 Lexington Av. New York (28th annual convention, 1946)

Am Gas J—American Gas Journal. $2; single numbers 25c. m American Gas Journal, Inc, 53 Park Pl, New York 7 (2v:Ja,Jl v166-167; i-l)

Am Inst Banking Bul—Bulletin of the American Institute of Banking. $1; single numbers 25c. q American Bankers Assn, American Institute of Banking Section, 12 E. 36th St, New York 16 (1v:Ja v29;i-l)
Indexing discontinued with the October issue, 1947

Am Inst Chem Eng Trans—American Institute of Chemical Engineers. Transactions. $10; single numbers $2. bi-m American Institute of Chemical Engineers, 50 E 41st St, New York 17 (1v:F v42;i-s)
Published as section of Chemical Engineering Progress beginning January, 1947

Am Inst E E J. See Elec Eng

Am Inst of Mining and Metallurgical Engineers. See Min & Met

Am J Sci—American Journal of Science. $6; single numbers 60c. m American Journal of Science, New Haven, Conn. (1v:Ja v245;i-s)

Am Mach—American Machinist. $5; single numbers 35c. bi-w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v91;i-r)

Am Pet Inst Proc—American Petroleum Institute Proceedings. 50 W 50th St, New York

Am Soc C E Proc—Proceedings of American Society of Civil Engineers. $8; single numbers $1. m (except Jl and Ag) American Society of Civil Engineers, 33 W 39th St, New York 18 (1v:Ja v73;i-s)

Am Soc for Metals Trans—Transactions of the American Society for Metals, 3v v35 '45, v36, v37 '46 American Society for Metals, 7301 Euclid Av, Cleveland 3, Ohio
Published in 2 volumes soon after annual meeting
Formerly Transactions of American Society for Steel Treating

Am Soc Heat & V E J. See Heating-Piping

Am Soc M E J. See Mech Eng

Am Soc M E Trans. See A S M E Trans

Am Soc Steel Tr Trans. See Am Soc for Metals Trans

Am Soc T M Proc—American Society for Testing Materials. Proceedings. annual American Society for Testing Materials, 1916 Race St, Philadelphia 3 (1v:v46)

Publications of societies, institutions, etc. are listed under the names of the organizations.
i-l=index sent loose; i-r=index sent upon request; i-s=index stitched in volume.
Month abbreviation followed by volume number=Month in which new volume begins and the number of the new volume beginning in 1947.

Am Stat Assn J—Journal of the American Statistical Association. $6; single numbers $1.50. q American Statistical Association, 1603 K. St, N.W, Washington 6, D.C. (1v: Mr v42;i-s)

Am Water Works Assn J—Journal of the American Water Works Association. $7; single numbers 75c, to members 50c. m American Water Works Assn, 500 Fifth Av, New York 18 (1v:Ja v39;i-s)

Anal Chem—Analytical Chemistry. $3; single numbers 50c. m American Chemical Society, 1155 16th st, N.W, Washington 6, D.C. (1v:Ja v19;i-s)
Formerly Industrial and Engineering Chemistry Analytical Edition
Not sold separately thru 1947. Combination rate, 1948, $6

Ann Am Acad—Annals of the American Academy of Political and Social Science. $5; single numbers $2. bi-m American Academy of Political and Social Science, 3457 Walnut St, Philadelphia 4 (6v:Ja,Mr,My,Jl,S,N v249-254; i-s)
Published also in cloth $7.50; single numbers $2.50

Arch Forum—Architectural Forum. $5.50; single numbers $1. m Time, Inc, 540 North Michigan Av, Chicago 11 (2v:Ja,Jl v86-87;i-r)

Arch Rec—Architectural Record. $4.50; single numbers $1. m F. W. Dodge Corp, 119 W 40th St, New York 18 (2v:Ja,Jl v101-102;i-s)

Assn of Sp Lib & Inf Bur Proc—Association of Special Libraries and Information Bureaux Proceedings. 7s 6d. annual Association of Special Libraries and Information Bureaux, 52, Bloomsbury St, London, W.C. 1
Not published in 1940 or 1941
1946 indexed in this volume

Automobile Eng—The Automobile Engineer. £1 17s 6d; single numbers 2s 6d. m Iliffe & Sons, Ltd, Dorset House, Stamford St, London, S.E. 1 (1v:Ja v37;i-r;cost 6d)
Annual extra number published in November

Automotive & Aviation Ind—Automotive and Aviation Industries. $2; single numbers 25c. s-m Chilton Co, Chestnut & 56th Sts, Philadelphia 39 (2v:Ja,Jl v96-97;i-none)
Former title Automotive Industries resumed July 1, 1947
Price of March 15 issue is 50c

Automotive Ind—Automotive Industries. $2; single numbers 25c. s-m Chilton Company, Chestnut & 56th Sts, Philadelphia 39 (2v:Ja,Jl v96-97;i-none)
Title was Automotive & Aviation Industries from February 1, 1942 thru June 15, 1947

Aviation—Aviation $5; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v46;i-none)

Aviation N—Aviation News. $5; single numbers 50c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (2v:Ja,Jl v7-8;i-none)
Began publication August 2, 1943

Aviation W—Aviation Week. $5; single numbers 50c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Jl v47;i-none)
Merger of Aviation and Aviation News beginning July 7, 1947

Bankers Mo—Bankers Monthly. $5; single numbers 50c. m Rand McNally & Co, 536 South Clark St, Chicago 5 (1v:Ja v64;i-none)
Formerly Rand McNally Bankers Monthly

Banking—Banking; Journal of the American Bankers Association. $4; single numbers 35c. m American Bankers Association, 12 E 36th St, New York 16 (1v:Jl v40;i-r)
Formerly American Bankers Association Journal

Banking Law J—Banking Law Journal (combined with the Bankers Magazine) $8; single numbers 75c. m Bankers Publishing Co, 465 Main St, Cambridge 42, Mass. (1v:Ja v64;i-s)
Combined with Bankers Magazine, July 1943
Indexing discontinued with the December issue, 1947

Barron's—Barron's. $10; single numbers 25c. w Barron's Pub. Co, Inc, 40 New St, New York 4 (1v:Ja v27;i-r)

Bell System Tech J—Bell System Technical Journal. $1.50; single numbers 50c. q American Telephone and Telegraph Co, 195 Broadway, New York (1v:Ja v26;i-r)

Blast F & Steel Pl—Blast Furnace and Steel Plant. $2.50; single numbers 50c. January and August numbers $1 ea. m Steel Publications, Inc, Thaw Bldg, 108 Smithfield St, Pittsburgh 30, Pa. (1v:Ja v35;i-s)

Boston Soc C E J—Journal of the Boston Society of Civil Engineers. $4; single numbers $1. q Boston Society of Civil Engineers, 715 Tremont Temple, Boston (1v:Ja v34;i-s)
Indexing discontinued with the October issue, 1947

Brick & Clay Rec—Brick and Clay Record. $5; single numbers 50c. m Industrial Publications, Inc, 5 S Wabash Av, Chicago 3 (2v: Ja,Jl v110-111;i-s)

Bsns W—Business Week. $5; single numbers 20c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (without v no;i-r)

Burroughs Clearing House—Burroughs Clearing House. m Burroughs Adding Machine Co, Second Blvd. and Burroughs Av, Detroit 32, Mich. (1v:O v32;i-none)

Bus Transportation—Bus Transportation. $5; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v26; i-r)
Price of January issue is $1

CAA J—Civil Aeronautics Administration Journal; issued monthly by the Civil Aeronautics Administration. 75c. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v8;i-s)
Formerly Civil Aeronautics Journal; name changed with April 15, 1945 number

Can Chem & Process Ind—Canadian Chemistry and Process Industries. $4; single numbers 40c. m Westman Publications, Ltd, 137 Wellington St, West, Toronto, Ont. 1 (1v:Ja v31; i-r)
Formerly Canadian Chemistry and Metallurgy

Can Min J—Canadian Mining Journal. $3; single numbers 25c. m National Business Publications, Ltd, Gardenvale, Que. (1v:Ja v68;i-s)

Cer Ind—Ceramic Industry. $4; single numbers 50c. m Industrial Publications, Inc, 59 E Van Buren St, Chicago 5 (2v:Ja,Jl v48-49;i-s)
Price of January issue $2

Chem Age (Lond)—The Chemical Age. 26s; single numbers 10d. w Benn Brothers, Ltd, Bouverie House, 154 Fleet St, London, E.C. 4 (2v:Ja,Jl v56-57;i-r)

Chem & Eng N—Chemical and Engineering News. $4; single numbers 15c. w American Chemical Society, 1155 16th St, N.W. Washington 6, D.C. (1v:Ja v25;i-s)

Chem & Ind—Chemistry and Industry. £3; single numbers 2s. w Society of Chemical Industry, 56 Victoria St, London, S.W.1 (without v no;i-s)
Published as section of Journal of the Society of Chemical Industry until 1937
Combined number, February 22, March 1 and March 8

Chem & Met Eng—Chemical and Metallurgical Engineering. $3; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v53;i-r)
Name changed to Chemical Engineering August, 1946

Chem Eng—Chemical Engineering with Chemical and Metallurgical Engineering. $5; single numbers 50c. m McGraw-Hill Pub. Co. Inc, 330 W 42d St, New York 18 (1v:Ja v54;i-s)

Chem Eng Prog—Chemical Engineering Progress. $6; single numbers 75c. m American Institute of Chemical Engineers, 50 E 41st St, New York 17 (1v:Ja v43;i-s)

Chem Ind—Chemical Industries. $5; single numbers 60c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6 (2v:Ja,Jl v60-61;i-l)
Published twice in November; second issue, Buyer's Guidebook number $2

Chem R—Chemical Reviews. $9 ($7 to members of American Chemical Society) bi-m Williams & Wilkins Co, Mount Royal and Guilford Avs, Baltimore 2, Md. (2v:F,Ag v40-41;i-s)

Chem Soc J—Journal of the Chemical Society. £3 15s. m The Chemical Society, Burlington House, Piccadilly, London, W. 1 (without v no;i-l)

Chimie & Ind—Chimie & Industrie. m Société de Chimie Industrielle, 28 Rue Saint-Dominique, Paris, France (7e)
Indexing interrupted by war. Ja-Mr; 1946 indexed in 1946 annual. Regular indexing resumed, volumes 57 and 58, 1947, but discontinued with the December 1947 issue

Civil Aero J—Civil Aeronautics Journal. See CAA J

Civil Eng—Civil Engineering. $5; single numbers 50c. m American Society of Civil Engineers, 33 W 39th St, New York 18 (1v:Ja v17; i-r)

Coal Age—Coal Age. $5; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v52;i-r)

Comm & Fin Chr—Commercial & Financial Chronicle. $35; single numbers Monday ed. 75c, Thursday ed. 30c. s-w William B. Dana Co, 25 Park Pl, New York 8 (2v:Ja,Jl v165-166;i-l)

Comp Air Mag—Compressed Air Magazine. $3; single numbers 35c. m Compressed Air Magazine Co, Phillipsburg, New Jersey (1v:Ja v52; i-r)

Concrete—Concrete. $3; single numbers 40c. m Concrete Pub. Corp, Daily News Plaza, 400 W Madison St, Chicago 6 (1v:Ja v55;i-s)

Consumers Res Bul—Consumers' Research Bulletin (Not Confidential). $3; single numbers 30c. m Consumers' Research, Inc, Washington, New Jersey (2v:Ja,Jl v19-20;i-s)

Credit & Fin Management—Credit and Financial Management. $3; single numbers 25c. m National Association of Credit Men, 1309 Noble St, Philadelphia 23, Pa.; 1 Park Av New York 16 (1v:Ja v49;i-s)

Diesel Power—Diesel Power and Diesel Transportation. $3; single numbers 35c. m Diesel Publications, Inc, 192 Lexington Av, New York 16 (1v:Ja v25;i-none)

Dom Comm—Domestic Commerce. Issued by U.S. Department of Commerce. $2; single numbers 20c. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v35;i-none)
Publication discontinued with the September 1947 issue

Dom Eng—Domestic Engineering. $3; single numbers 30c. m Domestic Engineering Co, 1900 Prairie Av, Chicago 16 (2v:Ja,Jl v169-170; i-none)

Dun's R—Dun's Review. $4; single numbers 35c. m Dun & Bradstreet, Inc, 290 Broadway, New York 8 (1v:Ja v55;i-r)
Formerly Dun & Bradstreet Monthly Review

Dun's Stat R—Dun's Statistical Review. $2. m Dun & Bradstreet, Inc, 290 Broadway, New York 8 (1v:Ja v11;i-none)
Indexing discontinued with the December issue, 1947

East Underw—Eastern Underwriter. $5; single numbers 25c. w Eastern Underwriter Co, 41 Maiden Lane, New York 7 (1v:Ja v48;i-none)

Econ Geol—Economic Geology. $5; single numbers $1. s-q Economic Geology Pub. Co, M. M. Leighton, Business Mgr, Urbana, Ill. (1v:Ja v42;i-s)

Economist—Economist. £3; single numbers 1s. w Economist Newspaper, Ltd, 22 Ryder St, St James's, London, S.W.1 (2v:Ja,Jl v152-153;i-l)

Edison Elec Inst Bul—Edison Electric Institute Bulletin. $2; single numbers 25c. m Edison Electric Institute, 420 Lexington Av, New York 17 (1v:Ja v15;i-l)

Elec Eng—Electrical Engineering. $12; single numbers $1.50. m American Institute of Electrical Engineers, 500 5th Av, New York 18 (1v:Ja v66;i-l)

Elec R (Lond)—Electrical Review. £2 7s 8d; Canadian subs £2 3s 4d; single numbers 9d. w Electrical Review, Dorset House, Stamford St, London S.E. 1 (2v:Ja,Jl v140-141;i-r)

Elec West—Electrical West. $2; single numbers 25c. m McGraw-Hill Co. of California, 68 Post St, San Francisco 4, Calif. (2v:Ja,Jl v98-99;i-r)

Elec World—Electrical World. $6; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (2v:Ja,Jl v127-128;i-l)
Regular issue alternates with a News Edition

Electrician—Electrician. 30s; single numbers 6d. w Benn Bros, Ltd, Bouverie House, 154 Fleet St, London, E.C. 4 (2v:Ja,Jl v138-139; i-l)

Electrochem Soc Trans—The Electrochemical Society. Preprints. The Electrochemical Society, 235 W 102d St, New York 25
Formerly American Electrochemical Society Preprints replaced by Journal (monthly) January 1948, volume 93

Electronics—Electronics. $6; single numbers 75c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v20;i-s)
Price of Directory issue $2

Eng & Min J—Engineering and Mining Journal. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v: Ja v148;i-s)

Eng Educ. See J Eng Educ

Eng N—Engineering News-Record $6; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (2v:Ja,Jl v138-139; i-r)
Regular issue alternates with a News Edition

Engineer—Engineer. £4 10s; Canadian subs £4 5s; single numbers 1s 9d. w Engineer, 28, Essex St, Strand, London, W.C. 2 (2v:Ja, Jl v183-184;i-l)

Engineering—Engineering. £4 10s; Canadian subs £4 5s; single numbers 1s 6d. w Engineering, Ltd, 35 and 36 Bedford St, Strand, London, W.C. 2 (2v:Ja,Jl v163-164;i-r)

Explosives Eng—The Explosives Engineer. $1; single numbers 25c. bi-m Explosives Engineer, 848 Delaware Trust Bldg, Wilmington, Delaware (1v:Ja v25;i-l)
Changed to a bi-monthly beginning January 1943

Factory Management—Factory Management and Maintenance. $3; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v105;i-r)
April number published in two parts, Industrial Plant Buildings

Fed Res Bul—Federal Reserve Bulletin. $2; single numbers 20c (to non-members). m Board of Governors of the Federal Reserve System, Constitution Av at 20th St, Washington 25, D.C. (1v:Ja v33;i-s)

Food Ind—Food Industries. $3; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v19;i-s)

For Comm W—Foreign Commerce Weekly. Issued by U.S. Department of Commerce. $6; single numbers 15c. w Superintendent of Documents, Washington 25, D.C. (4v: 13 issues in each v26-29;i-none)
Replaces Commerce Reports and Comparative Law Series

Fortune—Fortune. $10; single numbers $1. m Time, Inc, 540 North Michigan Av, Chicago 11 (2v:Ja,Jl v35-36;i-r)

Foundry—Foundry. $3; single numbers 35c. m Penton Pub. Co, Penton Bldg, Cleveland 13, O. (1v:Ja v75;i-r)

Franklin Inst J—Journal of the Franklin Institute. $8; single numbers $1. m Franklin Institute, Benjamin Franklin Parkway at 20th St, Philadelphia 3 (2v:Ja,Jl v243-244;i-s)

Gas Age—Gas Age combining Natural Gas, Gas Age, Gas Record. $4; single numbers 25c. bi-w Moore-Robbins Pub. Co, Inc, 9 E 38th St, New York 16 (2v:Ja,Jl v99-100;i-l)

Gas J (Lond)—Gas Journal. 52s; single numbers 1s. w Walter King, Ltd, 11, Bolt Court, Fleet St, London, E.C. 4 (4v:Ja,Ap,Jl,O v249-252;i-l)
Indexing discontinued with the December issue, 1947

Gen Elec R—General Electric Review. $3.50; single numbers 35c. m General Electric Co, Schenectady 5, N.Y. (1v:Ja v50;i-l)

Génie Civil—Génie Civil. 600 fr; single numbers 50fr. s-m Génie Civil, 5 Rue Jules-Lefebvre, Paris (9e), France (1v:Ja v124;i-l)
Indexing resumed January 1946
Indexing discontinued with the December issue, 1947

Geol Soc Bul—Bulletin of the Geological Society of America. $10. m Geological Society of America, H. R. Aldrich, sec, 419 W 117th St, New York 27 (1v:Ja v58;i-l)

Geol Soc Proc—Proceedings volume of Geological Society of America for 1946. Geological Society of America, H. R. Aldrich, sec, 419 W 117th St, New York 27

Glass Ind—Glass Industry. $3; single numbers 25c. m Ogden Pub. Co, 55 W 42d St, New York 18 (1v:Ja v28;i-s)

Harvard Bsns R—Harvard Business Review. $6; single numbers $1.50. bi-m Harvard Business Review, Soldiers Field, Boston 63 (1v:Ja v26;i-s)
Changed from quarterly to bi-monthly beginning January 1948

Heat & Ven—Heating and Ventilating. $3; single numbers 30c. m Industrial Press, 148 Lafayette St, New York 13 [1v:Ja v44;i-r)

Heating-Piping—Heating, Piping and Air Conditioning. $3; single numbers 35c. m Keeney Pub. Co, 6 N Michigan Av, Chicago 2 (1v:Ja v19;i-s)
Includes American Society of Heating and Ventilating Engineers Journal section

Ill U Eng Exp Sta Bul—Illinois University Engineering Experiment Station. Bulletin. irr Univ. of Ill, Urbana

Ill U Eng Exp Sta Circ—Illinois University Engineering Experiment Station. Circular. irr Univ. of Ill, Urbana

Illum Eng—Illuminating Engineering including Transactions of the Illuminating Engineering Society. $10; single numbers $1.50. m (except Ag and O) Illuminating Engineering Society, 51 Madison Av, New York 10 (1v:Ja v42;i-s)

Ind & Eng Chem—Industrial and Engineering Chemistry. $4; single numbers 75c. m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v39;i-s)
Analytical Edition now Analytical Chemistry sold only as a unit with Industrial and Engineering Chemistry thru 1947
Combination rate, 1948, $6

Ind & Eng Chem Anal ed—Industrial and Engineering Chemistry Analytical Edition, single numbers 50c. m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v13;i-s)
Name changed to Analytical Chemistry January, 1947

Ind Marketing—Industrial Marketing. $2; single numbers 20c. m (s-m during O) Advertising Publications, Inc, 100 East Ohio St, Chicago 11 (1v:Ja v32;i-none)
October 25th issue not sold separately

Ind Med—Industrial Medicine. $5; single numbers 75c. m Industrial Medicine Pub. Co, 605 North Michigan Av, Chicago 11 (1v:Ja v16;i-s)

Ind Stand—Industrial Standardization. $4; single numbers 35c. bi-m American Standards Association, 70 E 45th St, New York 17 (1v:Ja v18;i-l)
Changed from monthly to bi-monthly beginning November 1947

Index—Index. q New York Trust Company, 100 Broadway, New York (1v:[Mr] v27;i-s)

India Rubber World—India Rubber World Natural & Synthetic. $3; single numbers 35c. m Bill Brothers Publishing Corporation, 386 4th Av, New York 16 (2v:Ap,O v116-117;i-s)

Inland Ptr—Inland Printer. $4; single numbers 40c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6; 522 5th Av, New York 18 (2v:Ap,O v119-120;i-none)

Inst Chem Eng Trans—Transactions of the Institution of Chemical Engineers. annual Institution of Chemical Engineers, 56 Victoria St, Westminster, London, S.W. 1 (1v:v21 1943)
Indexing discontinued with volume 21, 1943 [published 1947]

Inst E E J—Journal of the Institution of Electrical Engineers. single numbers pt1 6s; pt2 7s 6d; pt3 7s 6d m The Institution, Savoy Place, Victoria Embankment, London, W.C. 2 (1v:Ja v94;i-l)
Beginning with volume 88 published in three parts: pt 1, General, m (Ja); pt 2, Power Engineering, bi-m (F); pt 3, Radio and Communication Engineering, bi-m (Ja)

Inst Mech Eng J & Proc—Institution of Mechanical Engineers. Journal and Proceedings. Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W. 1
Four numbers published in 1947 (v 154, no 4, March, v 156, nos 1-3, June, Sept., Dec.) Journal published separately in other months (Ja, F, Ap, My, O, N)

Inst Pet J—Journal of the Institute of Petroleum. £3 13s 6d; single numbers 7s 6d. m Institute of Petroleum, 26 Portland Pl, London, W. 1 (1v:Ja v33;i-s)
Formerly Journal of the Institution of Petroleum Technologists

Inst Radio Eng Proc—Proceedings of the Institute of Radio Engineers and Waves and Electrons. $12; single numbers $1.50. m Institute of Radio Engineers, Inc, 1 East 79th St, New York 21 (1v:Ja v35;i-s)
Includes, beginning volume 34, January 1946, a section, Waves and Electrons, with separate volume number [1] and pagination thru April 1946. Paging continuous beginning with May number

Int Labour R—International Labour Review. $5; single numbers 50c. m International Labour Office, 734 Jackson Pl, Washington 6, D.C. (2v:Ja,Jl v55-56;i-s)
Two numbers in one issue thru 1946

Iron Age—Iron Age. $8; single numbers 35c. w Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39; 100 E 42d St, New York 17 (2v:Ja,Jl v159-160;i-r)

Iron & Steel Inst J—Journal of the Iron and Steel Institute, s-annual Iron and Steel Institute, 4, Grosvenor Gardens, London, S.W. 1 (2v:152 1945 no2)
Publication of volumes 153 and 154 (1946, numbers 1 & 2) delayed. Will be indexed in 1948. Monthly publication began with volume 155, January, 1947, 3 volumes a year. Indexed in 1947. Annual price £5; single numbers 10s

J Account—Journal of Accountancy. $5; single numbers 50c. m American Institute Pub. Co, Inc, 13 E 41st St, New York 17 (2v:Ja,Jl v83-84;i-s)

J Aeronautical Sci—Journal of the Aeronautical Sciences. $7; single numbers 70c. m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21 (1v:Ja v14;i-s)
Review section now published as Aeronautical Engineering Review
Changed from monthly to quarterly July, 1943. Monthly publication resumed January, 1946

J Ap Phys—Journal of Applied Physics. $8; single numbers $1. m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v18;i-s)
$6 to members of scientific societies

J Bsns—Journal of Business of the University of Chicago. $4; single numbers $1.25. q University of Chicago Press, 5750 Ellis Av, Chicago (1v:Ja v20;i-s)

J Chem Educ—Journal of Chemical Education. $3; single numbers 50c. m Journal of Chemical Education, 20th and Northampton Sts, Easton, Pa. (1v:Ja v24;i-s)

J Chem Phys—Journal of Chemical Physics. $10; single numbers $1. m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v15;i-s)

J Doc—Journal of Documentation. 25s or $6; single numbers 7s 6d or $1.75. q Association of Special Libraries and Information Bureaux, 52 Bloomsbury St, London, W.C. 1 (1v:Je v3; i-l)

J Eng Educ—Journal of Engineering Education. $3; single numbers 50c. m except (Jl and Ag) American Society for Engineering Education, F. L. Bishop, Ed, University of Pittsburgh, Pittsburgh 13, Pa. (1v:S v38;i-s)

J Fr Inst—See Franklin Inst J

J Ind Hygiene—The Journal of Industrial Hygiene and Toxicology. $8; single numbers $1.50. bi-m Williams & Wilkins Co, Mt Royal & Guilford Avs, Baltimore 2, Md. (1v:Ja v29; i-l)

J Land & Pub Util Econ—Journal of Land and Public Utility Economics. $5; single numbers $1.50. q University of Wisconsin, Madison 6, Wis. (1v:F v23;i-l)

J Phys & Colloid Chem—The Journal of Physical and Colloid Chemistry. $10; single numbers $1.25. m (except Jl, Ag and S) Williams & Wilkins Co, Mt. Royal & Guilford Avs, Baltimore 2, Md. (1v:Ja v51;i-s)
Changed to a bi-monthly beginning January, 1944
Changed from bi-monthly to monthly beginning January 1948

J Res Nat Bur Stand—Journal of Research of the National Bureau of Standards. $4.50. m Superintendent of Documents, Washington 25, D.C. (2v:Ja,Jl v38-39;i-s)

J Retailing—Journal of Retailing. $1.50; single numbers 40c. q New York University School of Retailing, 100 Washington Square, New York 3 (1v:F v23;i-r)
Index published every two years

Life Ins Courant—Life Insurance Courant. $4; single numbers 50c. m Flitcraft, Inc, 613 Maple Av, Oak Park, Illinois (1v:Ja v52;i-l)

Light & Lighting—Light and Lighting. 10s 6d; single numbers 9d. m Light and Lighting, 32 Victoria St, London, S.W. 1 (1v:Ja v40;i-l)
Indexing discontinued with the December issue, 1947

Locomotive—Locomotive. 50c; single numbers gratis; bound volumes [8 nos in a volume] issued every 2 years $1. q Hartford Steam Boiler Inspection & Insurance Co, 56 Prospect St, Hartford 2, Conn. (1v:Ja v46;i-r)
Indexing discontinued with the December issue, 1947

Mach—Machinery. $4; single numbers 40c. m Industrial Press, 148 Lafayette St, New York 13 (1v:S v54;i-r)

Machine Design—Machine Design. $10; single numbers $1. m Penton Pub. Co, Penton Bldg, Cleveland 13, O. (1v:Ja v19;i-s)

Mag of Wall St—Magazine of Wall Street and Business Analyst. $12.50; single numbers 50c. bi-w Ticker Pub. Co, Inc, 90 Broad St, New York 4 (2v:Ap,O v80-81;i-s)

Management R—Management Review. $5; single numbers 50c. m American Management Association, 330 W 42d St, New York 18 (1v:Ja v36;i-s)
Formerly American Management Review

Manuf Rec—Manufacturers Record. $3; single numbers 35c. m Manufacturers Record Publishing Co, 109 Market Place, Baltimore 3, Md. (1v:Ja v116;i-none)

Marine Eng—Marine Engineering and Shipping Review. $3; single numbers 35c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v52;i-r)

Mass Transportation—Mass Transportation. $2; single numbers 25c. m Kenfield-Davis Pub. Co, 222 West Adams St, Chicago 6 (1v:Ja v43;i-s)
Indexing discontinued with the December issue, 1947

Materials & Methods—Materials and Methods. $4; single numbers 50c. m Reinhold Pub. Corp, 330 W 42d St, New York 18 (2v:Ja,Jl v25-26;i-s)
Formerly Metals and Alloys; name changed October, 1945

Mech Eng—Mechanical Engineering. $6; single numbers 75c. m American Society of Mechanical Engineers, 29 W 39th St, New York 18 (1v:Ja v69;i-r)

Mech Handling—Mechanical Handling. 14s; single numbers 1s m Louis Cassier Co, Ltd, Dorset House, Stamford St, London S.E. 1 (1v:Ja v34;i-l)
Indexing discontinued with the December issue, 1947

Metal Finishing—Metal Finishing. $3; single numbers 35c. m Metal Industry Pub. Co. Inc, 11 W 42d St, New York 18 (1v:Ja v45;i-s)
Formerly Metal Industry

Metal Prog—Metal Progress. $7.50; single numbers $1.50. m American Society for Metals, 7301 Euclid Av, Cleveland 3, O. (2v:Ja,Jl v51-52;i-s)

Metals & Alloys. See Materials & Methods

Min & Met—Mining and Metallurgy. $4; single numbers 50c. m American Institute of Mining and Metallurgical Engineers, Inc, 29 W 39th St, New York 18 (1v:Ja v28;i-l)
Back numbers and special issues $1

Min Cong J—Mining Congress Journal. $3; single numbers 30c. m American Mining Congress, 1102 Ring Bldg, Washington 6, D.C. (1v:Ja v33;i-r)

Mo Labor R—Monthly Labor Review. $4.50; single numbers 40c. m Superintendent of Documents, Washington 25, D.C. (2v:Ja,Jl v64-65;i-l)
Free to labor departments and bureaus and other offices connected with the administration of labor laws

Mo U Sch Mines & Met Bul tech ser—Bulletin of the University of Missouri, School of Mines and Metallurgy. Technical Series. irr Univ. of Mo. Rolla

Mod Packaging—Modern Packaging. $5; single numbers 50c. m Modern Packaging Corp, 122 E 42d St, New York 17 (1v:S v21;i-l)
Indexing began September 1940, v 14 no 1

Mod Plastics—Modern Plastics. $5; single numbers 50c. m Modern Plastics Inc, 122 E 42d St, New York 17 (1v:S v25;i-l)
Formerly Plastic Products

N A C A Bul—N.A.C.A. Bulletin. $10 s-m National Association of Cost Accountants, 385 Madison Av, New York 17 (1v:S v29;i-r)

N E Water Works Assn J—Journal of the New England Water Works Association. $4; single numbers $1.25. q New England Water Works Association, 609 Statler Bldg, Boston (1v:Mr v61;i-s)
Indexing discontinued with the December issue, 1947

Nat City Bank—National City Bank of New York. m 55 Wall St, New York (without v no; i-none)

Nat Pet N—National Petroleum News. $5; single numbers 20c. w National Petroleum Pub. Co, 1213 W 3d St, Cleveland 13, O. (1v: Ja v39;i-none)
Monthly technical section beginning July 29, 1942, published separately as pt 2 of the regular issue with subtitle Refinery Management and Petroleum Chemical Technology thru August, 1946; name changed to Petroleum Processing, September, 1946

Nat Res Council Bul—National Research Council Bulletin. irr National Research Council, 2101 Constitution Av, Washington 25, D.C.
Individual numbers variously priced. Price-list sent on request

Nat Safety N—National Safety News. $6.75; single numbers 67c. m National Safety Council, Inc, 20 N Wacker Drive, Chicago 6 (2v: Ja,Jl v55-56;i-r)

Nat Underw—National Underwriter. $5; single numbers 20c. w National Underwriter Co, 175 W Jackson Blvd, Chicago (1v:Ja v51;i-none)
Includes 50th anniversary number

Nat Underw (Life ed)—National Underwriter Life Insurance Edition. $5; single numbers 20c. w National Underwriter Co, 175 W Jackson Blvd, Chicago (1v:Ja v51;i-none)

New England Water Works Assn. See N E Water Works Assn J

N Y Pub Lib Bul—New York Public Library. Bulletin. $1; single numbers 10c. m New York Public Library, 5th Av & 42d St, New York 18 (1v:Ja v51,i-s)
Bibliographies of interest to special libraries are indexed

Oil & Gas J—Oil and Gas Journal. $3; single numbers 20c. w Petroleum Pub. Co, 211 South Cheyenne St, Tulsa 1, Oklahoma (1v:My v46; i-r)

Oil Paint & Drug Rep—Oil, Paint and Drug Reporter. $5; single numbers 25c. w Schnell Pub. Co, Inc, 59 John St, New York 7 (2v:Ja, Jl v151-152;i-r)

Opt Soc Am J—Journal of the Optical Society of America. $7; single numbers $1. m American Institute of Physics, Inc, 57 E 55th St, New York 22 (1v:Ja v37;i-s)

Paint Oil & Chem R—Paint, Oil and Chemical Review. $3; single numbers 20c. bi-w Trade Review Co, 537 S Dearborn St, Chicago 5 (1v:Ja v110;i-none)

Paper Ind—Paper Industry and Paper World. $2. m Fritz Publications, Inc, 59 E. Van Buren St, Chicago 5 (1v:Ap v29;i-l)

Paper Tr J—Paper Trade Journal. $5; single numbers 15c. w Lockwood Trade Journal Co, Inc, 15 W 47th St, New York 19 (2v:Ja,Jl v124-125;i-s)

Personnel J—Personnel Journal. $5; single numbers 75c. m (except Jl and Ag) Personnel Journal, Inc, Swarthmore, Pa. (1v:My v26;i-s)

Pet Eng—Petroleum Engineer. $2; single numbers 25c. m Petroleum Engineer Pub. Co, Irwin-Keasler Bldg, Dallas 1, Texas (1v:O v19;i-l)
Extra number [Ref annual] published July 1

Pet Processing—Petroleum Processing. $3; single numbers 35c. m National Petroleum Pub. Co, 1213 W 3d St, Cleveland 13 (1v:Ja v2; i-none)
Formerly monthly technical section of National Petroleum News

Pet Refiner—Petroleum Refiner. $2; single numbers 35c. m Gulf Pub. Co, 3301 Buffalo Drive, Houston, Texas (1v:Ja v26;i-s)
Process Handbook section published with April number

Phys R—The Physical Review. Second Series. $15; single numbers $1. s-m American Institute of Physics, Inc, 57 E 55th St, New York 22 (2v:Ja,Jl v71-72;i-s)

Power—Power. $5; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v91;i-r)
Extra number published in Mid-December

Power Pl Eng—Power Plant Engineering. $10; single numbers $1. m Technical Pub. Co, 53 West Jackson Blvd, Chicago 4 (1v:Ja v51;i-s)
Name changed to Power Generation beginning January, 1948

Product Eng—Product Engineering. $6; single numbers 75c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v18;i-s)

Ptr Ink—Printers' Ink. $4; single numbers 25c. w Printers' Ink Pub. Co, Inc, 205 E 42d St, New York 17 (4v:Ja,Ap,Jl,O v218-221;i-none)

Pub Health Rep—Public Health Reports. $4; single numbers 10c. w Superintendent of Documents, Washington 25, D.C. (1v:Ja v62;i-r)
Distributed gratuitously to state and municipal health officers, etc., by the Surgeon general of the United States public health service, Washington, D.C.

Pub Roads—Public Roads. 50c; single numbers 15c. q Superintendent of Documents, Washington 25, D.C. (1v [12 nos] Jl v25 '47;i-r)

Pub Util—Public Utilities Fortnightly. $15; single numbers $1. bi-w Public Utilities Reports, Inc, Munsey Bldg, Washington 4, D.C. (2v:Ja,Jl v39-40;i-s)

Pub Works—Public Works Magazine. $3; single numbers 35c. m Public Works Journal Corp, 310 E 45th St, New York 17 (1v:Ja v78;i-r)

Pulp & Pa of Can—Pulp and Paper Magazine of Canada. $5; single numbers 50c. m National Business Publications, Ltd, Gardenvale, Que. (1v:Ja v48;i-s)
Extra convention number published in February

RCA R—RCA Review. $2; single numbers 75c. q Radio Corporation of America, RCA Laboratories Division, Princeton, New Jersey (1v:Mr v8;i-s)

R Econ Stat—Review of Economic Statistics. $5. q Harvard University Press, Cambridge 38, Mass. (1v:F v29;i-s)

R Sci Instr—Review of Scientific Instruments. $6; single numbers $1. m American Institute of Physics, 57 E 55th St, New York 22 (1v: Ja v18;i-s)
$4 to members of scientific societies

Radio N—Radio News. $4; single numbers 35c. m Ziff-Davis Pub. Co, 185 N Wabash Av, Chicago 1 (2v:Ja,Jl v37-38;i-s)

Rayon—Rayon Textile Monthly. $5; single numbers 60c. m Rayon Pub. Corp, 303 Fifth Av, New York 16 (1v:Ja v28;i-s)

Ref Shelf—The Reference Shelf. irr The H. W. Wilson Co, 958 University Av, New York 52

Refrig Eng—Refrigerating Engineering. $3; single numbers 35c. m American Society of Refrigerating Engineers, 40 W 40th St, New York 18 (2v:Ja,Jl v53-54;i-s)

Review of Economic Statistics. See R Econ Stat

Roads & Bridges—Roads and Bridges. $2; $5 in U.S; single numbers 25c; 50c in U.S. m Monetary Times Printing Co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v85;i-none)

Roads & Sts—Roads and Streets. $5. m Gillette Pub. Co, 22 West Maple St, Chicago 10 (1v: Ja v90;i-r)

Rock Prod—Rock Products. $2; single numbers 25c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6 (1v:Ja v50;i-none)

Rough Notes—Rough Notes. $2.50; single numbers 25c. m Rough Notes Co, Inc, 1142 N. Meridian St, Indianapolis 6, Ind. (1v:Ja v90; i-s)

Roy Aeronautical Soc J—Journal of the Royal Aeronautical Society. £4 13s; single numbers 7s 9d. m Royal Aeronautical Society, 4 Hamilton Place, Piccadilly, London, W. 1 (1v:Ja v51;i-s)

Rs Mod Phys—Reviews of Modern Physics. $4; single numbers $1.50. q American Institute of Physics, Inc, 57 E 55th St, New York 22 (1v:Ja v19;i-none)

Rubber Age—Rubber Age. $3; single numbers 35c. m Palmerton Pub. Co, Inc, 250 W 57th St, New York 19 (2v:Ap,O v61-62;i-s)

Ry Age—Railway Age. $6; single numbers 50c. w Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (2v:Ja,Jl v122-123;i-r)
Annual statistical and outlook number, January 4, price $1
Freight progress annual, May 17 number, price $1

Ry Mech Eng—Railway Mechanical Engineer with which is incorporated the Railway Electrical Engineer. $3; single numbers 50c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v121;i-r)

S A E J—S.A.E. Journal. $10; single numbers $1. m Society of Automotive Engineers, Inc, 29 W 39th St, New York 18 (1v:Ja v55;i-r)

Safety Eng—Safety Engineering. $4; single numbers 50c. m Alfred M. Best Co, Inc, 75 Fulton St, New York 7 (2v:Ja,Jl v93-94;i-s)

Sales Management—Sales Management. $6; single numbers 25c. s-m Sales Management, Inc, 386 4th Av, New York 16 (2v:Ja,Jl v58-59;i-none)
Published semi-monthly except in May and November when it is published three times a month
Survey of buying power, May 10 number, price $2

Sci Am—Scientific American. $5; single numbers 50c. m Scientific American, Inc, 24 W 40th St, New York 18 (2v:Ja,Jl v176-177;i-s)

Science—Science. $7.50; single numbers 25c. w American Association for the Advancement of Science, 1515 Massachusetts Av, N.W., Washington 5 (2v:Ja,Jl v105-106;i-s)

Sheet Metal Worker—Sheet Metal Worker. $3; single numbers 25c. m Edwin A. Scott Pub. Co, 45 W. 45th St, New York 19 (1v:Ja v38; i-s)

Soap & San Chem—Soap and Sanitary Chemicals. $4. m MacNair-Dorland Co, Inc, 254 W 31st St, New York 1 (1v:Ja v23)
Annual index appears in Soap Blue Book which is sent to all subscribers

Soc Chem Ind J—Journal of the Society of Chemical Industry. £1 15s. m Society of Chemical Industry, 56 Victoria St, London, S.W. 1 (1v:Ja v66;i-s)
Formerly two separately paged sections; Transactions and British Chemical Abstracts. British Chemical and Physiological Abstracts published separate beginning January 1941.

Soc Dyers & Col J—Journal of the Society of Dyers and Colourists. 60s; single numbers 5s. m Society of Dyers and Colourists, Ocean Chambers, 32-34 Piccadilly, Bradford, Yorkshire, England (1v:Ja v63;i-l)

Soc for Advan of Management J. See Advanced Management

Soc Motion Picture Eng J—Journal of the Society of Motion Picture Engineers. $10; single numbers $1.25. m Society of Motion Picture Engineers, 342 Madison Av, New York 17 (2v:Ja,Jl v48-49;i-s)

Society of Automotive Engineers Journal. See S A E J

Special Lib—Special Libraries. $7; single numbers 75c. m (S-Ap) bi-m (My-Ag) Special Libraries Association, 31 E 10th St, New York 3 (1v:Ja v38;i-l)

Spectator (Life ed)—Spectator; Life Insurance in Action. $5; single numbers 50c. m Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39 (1v:Jl v155;i-s)
Extra number [Endorsement no] published in November

Spectator (Property ed)—Spectator; Property Insurance Review. $2; single numbers 25c. bi-w Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39 (1v:Jl v13;i-s)

Stahl & Eisen—Stahl und Eisen. Düsseldorf, Germany
Indexing discontinued

Steel—Steel. $10; single numbers 35c. w Penton Pub. Co, Penton Bldg, Cleveland 13, O. (2v: Ja,Jl v120-121;i-r)

Survey of Cur Bsns—Survey of Current Business. U.S. Bureau of Foreign and Domestic Commerce, Division of Business Review. $3; single numbers 25c. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v27; i-none)

Tech R—Technology Review. $3.50; single numbers 50c. m except (Ag, S, O) Massachusetts Institute of Technology, room 7-203, Cambridge 39, Mass. (1v:N v50;i-r)

Textile Col—Textile Colorist and Converter. $5. m Howes Pub. Co, 1 Madison Av, New York 10 (1v:Ja v69;i-s)

Textile Inst J—Journal of the Textile Institute. 48s; single numbers 4s. m Textile Institute, 16 St Mary's Parsonage, Manchester 3, England (1v:Ja v38;i-l)

Textile World—Textile World. $2; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v97;i-r)

Transactions of the American Society of Mechanical Engineers. See A S M E Trans

Trust Companies. See Trusts & Estates

Trusts & Estates—Trusts and Estates, The Fiduciary Journal. $5; single numbers 60c. m Fiduciary Publishers, Inc, 50 E 42d St, New York 17 (2v:Ja,Jl v84-85;i-s)
Formerly Trust Companies

U S Agric—Publications. U.S. Dept. of Agriculture, Division of Publications, Washington, D.C.
Selected contributions on technical subjects are indexed

U S Bur For & Dom Com Economic Ser—U.S. * Bureau of Foreign and Domestic Commerce Washington, D.C.

U S Bur Labor Statistics Bul—United States Bureau of Labor Statistics. Bulletin. Distributed free of charge. U.S. Bureau of Labor Statistics, Washington, D.C.

U S Bur Mines Bul—United States. Bureau of † Mines, Bulletin. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Information Circ—United † States. Bureau of Mines. Information Circular. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Rep of Invest—United States. † Bureau of Mines. Reports of Investigations. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Tech Pa—United States. Bu- † reau of mines. Technical Paper. U.S. Bureau of Mines, Washington, D.C.

U S Geol S Bul—United States Geological Survey. Bulletin. U.S. Geological Survey, Washington, D.C.

U S Geol S Professional Pa—United States Geological Survey. Professional Paper. U.S. Geological Survey, Washington, D.C.

U S Nat Advisory Com for Aeronautics—United States National Advisory Committee for Aeronautics, Washington, D.C. Annual reports.
Twenty-eighth annual report, 1942, including Technical reports nos. 727-751

U S Nat Bur Stand—United States National ‡ Bureau of Standards. Circular. U.S. National Bureau of Standards, Washington, D.C.

U S Women's Bur Bul—United States. Women's Bureau. Bulletin. U.S. Women's Bureau, Washington, D.C.

V D I—Zeitschrift des Vereines Deutscher Ingenieure. Berlin, Germany
Indexing discontinued

Water & Sewage—Water and Sewage. $2; $5 in U.S; single numbers 25c; 50c. in U.S. m Monetary Times Printing Co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v85;i-none)

Water & Sewage Works—Water & Sewage Works. $2; single numbers 25c. m Gillette Pub. Co, 22 West Maple St, Chicago 10 (1v: Ja v94;i-l)
Formerly Water Works & Sewerage; name changed January 1946

Water Works & Sewerage. See Water & Sewage Works

Waves and Electrons. See Inst Radio Eng Proc

Weekly Underw—Weekly Underwriter. $5; single numbers 25c. w Underwriter Printing and Publishing Co, 116 John St, New York 7 (2v:Ja,Jl v156-157;i-l)

Welding J—Welding Journal. $5; single numbers 75c. October and December numbers $1 ea. m American Welding Society, 33 W 39th St, New York 18 (1v:Ja v26;i-s)

Western Soc E J—Journal of the Western Society of Engineers. $3; single numbers 75c. q Western Society of Engineers, 205 W Wacker Drive, Chicago 6 (1v:Mr v52;i-s)

Wireless Eng—Wireless Engineer. 32s; single numbers 2s 6d. m Iliffe & Sons, Ltd, Dorset House, Stamford St, London, S.E. 1 (1v:Ja v24;i-s)
Formerly Experimental Wireless and The Wireless Engineer

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† United States Bureau of Mines Publications for sale by Superintendent of Documents, Government Printing Office, Washington, D.C. Reports of Investigations and Information Circulars distributed by Bureau.

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Key to General Abbreviations

+	continued on later pages of the issue	Je	June
abr	abridged	Jl	July
Ag	August	Mr	March
Ap	April	My	May
arch	architect	n s	new series
bibliog	bibliography	N	November
comp	compiled or compiler	no	number
cond	condensed	O	October
cont	continued	p	page
D	December	pl	plate
diag	diagram	por	portrait
ed	edited or edition or editor	pseud	pseudonym
F	February	pt	part
i	index	rev	revised
il	illustrations	S	September
inc	incorporated	sup	supplement
Ja	January	tr	translated or translation or translator
		v	volume

Sample entry: Hydrogen peroxide; structural materials, manufacture and uses. J. S. Reichert and R. H. Pete. il Chem Eng 54:213-14+ Ap '47

Explanation: An illustrated article with the title given above will be found in Chemical Engineering, volume 54, pages 213 to 214 (continued on later pages of the same issue) the April 1947 number

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A Cumulative Subject Index to Engineering, Trade and Business Periodicals

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A and P. See Great Atlantic and Pacific tea company

ABACA. See Manila hemp

ABBINK, John, 1890-
1947 Dollar award winner. por Bsns W p 105 My 24 '47

ABBOTT laboratories
New pharmacology building. il Chem & Eng N 25:1340 My 12 '47

ABBREVIATIONS
Abbreviations standardized for 2,000 terms for use on drawings. W. J. Kunz. Ind Stand 18:84-7 Ap '47
Wartime words and their meanings; definitions of nearly six hundred code names, abbreviations, slang, and technical terms added to language of electronics during war years. C. DeVore. Electronics 20:108-13 (Buyers' guide) Mid-Je '47
See also
Chemical symbols

ABC vending corporation
Common stock offered. Comm & Fin Chr 166:1249 S 29 '47

ABERRATION, Chromatic and spherical. See Lenses

ABILITY
See also
Skill

ABILITY tests
Aptitude tester for garment workers; photo electric device. E. C. Halliday and others. il diags Electronics 20:90-2 S '47
Aptitudes and engineering careers. J. Mills. Min & Met 28:317-20 Jl '47
Can tests help to pick capable sales managers? D. C. Humm. Sales Management 59:94+ Ag 15 '47
Cost-utility as a measure of the efficiency of a test. J. Berkson. bibliog Am Stat Assn J 42:246-55 Je '47
Discovery of aptitude and achievement variables. J. P. Guilford. bibliog Science 106: 279-82 S 26 '47
Graphic arts group takes aptitude tests. il Inland Ptr 118:39 Mr '47
How efficient are your hiring methods? R. N. McMurry. Personnel J 26:45-53 Je '47
How it feels to take 4-A's aptitude tests. P. Gilbert. Adv & Sell 40:50+ Ag '47
Human engineering. R. L. Demmerle. Chem & Eng N 25:14-18+ Ja 6 '47
In the agency business; research man becomes art director. J. Barnetson. Ptr Ink 220:37 Jl 4 '47
New aptitude testing weighed by 4-A's on basis of Philadelphia pilot exam. B. Tolk. Ptr Ink 217:107 D 13 '46
Predictions of average class achievement by means of aptitude tests. W. C. Krathwohl. J Eng Educ 37:234-42 N '46
Psychological tests aid personnel selection in the chemical industry. D. W. Cook. diag Chem Ind 59:997-1000 D '46
Removal of boloney. Fortune 36:124 S '47
Research-tested tests aid in selecting efficient printing industry apprentices. D. L. Ekberg. Inland Ptr 119:42-4 Jl '47
Scientific development of the use of human resources; progress in the army air forces. J. C. Flanagan. Science 105:57-60 Ja 17 '47
Selection and placement of technical personnel. R. A. Fear. Chem Eng Prog 43:sup 12-14 Ag '47
Selection and training of personnel. M. S. Viteles. Edison Elec Inst Bul 15:74-80 Mr '47
Survey of personnel testing practices; abstract. F. Routt, jr. Management R 36:81-2 F '47
Testing aptitude for simple tasks is just as important as determining the ability of new employees to carry out more specialized jobs. W. von Pechmann. il Ind & Eng Chem 39:sup91A-2A Jl '47
Testing as applied to office workers. Management R 36:461-2 S '47
Which driver for the job? A. E. Neyhart. bibliog il diags S A E J 54:21-7+ N '46
See also
Personality tests

ABITIBI power and paper company
Little town that became an industrial empire; origin and growth of Abitibi power & paper company at Iroquois Falls. il Pulp & Pa of Can 48:45-7 Mr '47

ABRASION
Abrasion resistance of white cast iron improved by suitable alloying. K. A. DeLonge. Steel 121:184+ O 6 '47
Correlation of laboratory and service abrasion tests. A. E. Juve and others. India Rubber World 116:208-10 My '47
Recent advances in abrasion testing of textiles. F. R. Dean. bibliog Textile Inst J 37:P380-9; Discussion. P389-91 Jl '46
Reducing metal wear with abrasion-resisting castings. J. S. Vanick. il Am Cer Soc Bul 26:109-16 Ap 15 '47
Solution of problem of producing uniform abrasion and its application to the testing of textiles. H. F. Schiefer. bibliog il diags J Res Nat Bur Stand 39:1-10 Jl '47
Solution to the problem of uniform abrasion. Rubber Age 61:328 Je '47
Testing resistance of enameled surfaces to scratching, gouging, and abrasion. F. A. Petersen. bibliog il Am Cer Soc J 30:94-104 Mr 1 '47

ABRASIVE wheels
Rubber wheel cuts short springs. C. E. Lambert. diags Am Mach 91:107 Jl 31 '47

ABRASIVES
Abrasive finishing of plastics; tabulation; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 25:119 Mr '47
Abrasive grains produced without crushing; 38 Alundum. R. R. Ridgway. il Am Mach 90:110-11 D 19 '46
Exolon polishing wheel grain. il Metal Finishing 45:84-5 My '47
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Toward longer-lived abrasives; Norton 32 Alundum. L. E. Browne. il Steel 119:104-5+ D 2 '46
Using abrasive belts for buffing and polishing. J. E. Hyler. il Steel 120:84-5+ Ja 13 '47
Wet belt machining. W. T. Schleicher. Materials & Methods 24:1532 D '46
See also
Polishing materials
Pulpstones

Manufacture
Factory and cottage production of abrasives, India. For Comm W 27:25 My 10 '47
Fine-grained abrasive for polishing and lapping. Mach 54:288 S '47
Lung changes associated with the manufacture of alumina abrasives. C. G. Shaver and A. R. Riddell. bibliog il J Ind Hygiene 29:145-57 My '47
New abrasive made by unique electric furnace process; 32 Alundum. Materials & Methods 24:1566 D '46

ABSENTEEISM (labor)
Absence makes job grow harder; A.G.A. report. Am Gas Assn Mo 29:65-7 F '47
Absenteeism and separation in relation to length of employment. K. Brodman and L. P. Hellman. bibliog Ind Med 16:219-22 My '47
Control of absenteeism in the textile industry. W. Schweisheimer. Rayon 28:147-8 Mr '47
Minor illness, short medical absenteeism, lateness and separation in a mail order firm. L. P. Hellman and others. Ind Med 16:14-17 Ja '47
Sickness absenteeism among industrial workers, first quarter of 1946. W. M. Gafafer. Pub Health Rep 61:1664-6 N 15 '46
Sickness absenteeism among industrial workers, second and third quarters of 1946. W. M. Gafafer. Pub Health Rep 62:272-6 F 21 '47
Sickness absenteeism among industrial workers, fourth quarter of 1946. W. M. Gafafer. Pub Health Rep 62:1095-7 Jl 25 '47
Sickness absenteeism among male and female industrial workers during 1945, with a note on the respiratory epidemic of 1945-46. W. M. Gafafer. bibliog Pub Health Rep 61:1620-30 N 8 '46
Silent values in industrial health. J. S. Felton. Ind Med 15:638-9 N '46
Study of absenteeism during a five-month period following influenza A and B vaccination. M. N. Newquist and R. C. Page. Ind Med 15:676-7 D '46
35+5=42 ½, a new wage plan; Guardian electric manufacturing company, Chicago. R. H. Scobell. il Factory Management 105: 102-3 My '47

ABSORBENTS
Selective absorbents by hydrothermal methods; treatment methods and products from Barrer method; patent. Pet Processing 2:186 Mr '47

ABSORPTIOMETER
Constant temperature cell bath for use with the Spekker photoelectric absorptiometer. B. R. Ingle Finch and C. A. Parker. il Chem & Ind p257 My 10 '47

ABSORPTION
Absorption and humidification. H. C. Carlson. bibliog Ind & Eng Chem 39:14-15 Ja '47
Absorption and purification of hydrogen chloride from chlorination of hydrocarbons. C. F. Oldershaw and others. flow sheet il diag Chem Eng Prog 43:371-7; Discussion. 378 Jl '47
Absorption isotherm for direct dyes. J. Crank. bibliog Soc Dyers & Col J 63:293-6 S '47
Absorption of water by films of cellophane and polyvinyl alcohol. E. Creutz and R. R. Wilson. J Chem Phys 14:725-8 D '46
Calculated theoretical increase in propane absorption by lowering lean oil molecular weight. R. M. Stewart and A. M. Hegwer. il Pet Refiner 26:104-6 Jl '47
Hydrocarbon absorption and fractionation process design methods. W. C. Edmister. bibliog flow diag diags Pet Eng 18:156+ My; 57+ Je; 39-44+ Jl; 49-54+ Ag; 130+ S; 19:200+ O '47
Kinetics of absorption of gases from an air stream by granular reagents. C. J. Danby and others. Chem Soc J p918-34 O '46
Kinetics of nitrous gas absorption in aqueous nitric acid. K. G. Denbigh and A. J. Prince. diag Chem Soc J p790-801 Je '47
Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47
Multistage separation processes. M. Benedict. bibliog diags Chem Eng Prog 43: 41-60 F '47
Sorbents regulate humidity by soaking up the moisture in air. J. Everetts, jr. flow diag il diag Power 91:748-51 N '47
Studies of the physical properties of hardened portland cement paste; permeability and absorptivity. T. C. Power and T. L. Brownyard. Am Concrete Inst J 18:873-80 bibliog(p880) Mr '47
Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47
See also
Adsorption
Silica gel

ABSORPTION, Dielectric. See Dielectric constants

ABSORPTION apparatus
Absorption and purification of hydrogen chloride from chlorination of hydrocarbons. C. F. Oldershaw and others. flow sheet il diag Chem Eng Prog 43:371-7; Discussion. 378 Jl '47
Absorption oil purifying system; Petroleum engineering, inc. diag Pet Refiner (Process Handbook sec) 26:98-9 Ap '47
Bateman field cycling operation more than doubled by new plant facilities. N. Williams. il map Oil & Gas J 45:72-5+ N 30 '46
Capillary absorption cells in spectrophotometry. P. L. Kirk. R. S. Rosenfels and D. J. Hanahan. bibliog diags Anal Chem 19:355-7 My '47
Carthage gasoline and dehydration plant. F. H. Love. flow diag il Pet Eng 18:158+ D '46
Coles Levee cycling plant. C. C. Pryor. il Pet Refiner 26:121-6 Ja '47
Cycling operations at Lake St John. F. H. Love. flow diag il Pet Eng 19:244+ O '47
Determination of allowable vapor loads in tray towers. S. M. Walas. Chem Ind 61: 684+ O '47
Ethylene purification by absorption process; Monsanto chemical co.'s plant at Texas City. L. Kniel and W. H. Slager. flow sheets il Chem Eng Prog 43:335-42 Jl '47; Same cond. Pet Processing 2:769-72+ O '47
Evaluation of absorber operating efficiency. E. G. Ragatz and J. A. Richardson. Oil & Gas J 45:89+ N 23 '46; Same. Pet Refiner 25:148-52 N '46; Same. Pet Eng 18:53-6+ D '46; 110+ Ja '47
Fat-oil deethanization. A. M. Whistler. flow diags Oil & Gas J 45:105-6+ O 26 '46; Same. Pet Refiner 25:135-8 D '46
Gas absorption and humidification in cyclone spray towers. H. F. Johnstone and H. E. Silcox. bibliog il diags Ind & Eng Chem 39:808-17 Jl '47
Gas absorption-dehydration plant processes 150,000,000 cubic feet daily. C. C. Pryor. flow diags il Pet Refiner 26:91-8 Ap '47
High recovery, low steam use in improved absorption unit; patent. flow diag Pet Processing 2:382 My '47
Plate efficiency of fractionating columns and absorbers. H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42:741-55 Ag '46; Same. Pet Eng (Ref annual) 18:200+ Jl 1 '47
Pressure maintenance and gasoline absorption plant, Santa Barbara field, Venezuela. H. M. Russell and E. Moncrief. flow diags il Oil & Gas J 45:164-8 D 28 '46

ABSORPTION apparatus—*Continued*
Removal of carbon dioxide from atmospheric air. N. A. Spector and B. F. Dodge. flow sheet flow diag Am Inst Chem Eng Trans 42:827-48 O-D '46
Tulsa type absorption process; Tulsa boiler and machinery company. flow diag il Pet Refiner (Process Handbook sec) 26:276-7 Ap '47
Warren gasoline plant designed for operation without steam. C. C. Pryor. flow diag il Pet Refiner 26:109-12 F '47

ABSORPTION of neutrons. See Neutrons

ABSORPTION of rays
Absorption of microwaves by oxygen. J. H. Van Vleck. Phys R 71:413-24 Ap 1 '47
Absorption of microwaves by uncondensed water vapor. J. H. Van Vleck. bibliog Phys R 71:425-33 Ap 1 '47
Colour and constitution; the absorption of light by chemical compounds; the fourth John Mercer lecture. E. J. Bowen. diags Soc Dyers & Col J 63:281-7 S '47
Correcting for the absorption of weak beta-particles in thick samples; general method for use in tracer work; data presented for samples of $BaC^{14}O_3$. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47
Determination of extinction corrections in infrared analysis of gaseous hydrocarbon mixtures. J. H. Lee. bibliog Ind & Eng Chem Anal ed 18:659-61 N '46
Expected microwave absorption coefficients of water and related molecules. G. W. King and others. bibliog Phys R 71:433-43 Ap 1 '47
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47
Pressure broadening in the infra-red and optical collision diameters. N. D. Coggeshall and E. L. Saier. bibliog J Chem Phys 15:65-71 Ja '47
Simplified method of calculating absorbed intensity in photometric experiments. R. E. Hunt and T. L. Hill. J Chem Phys 15:111 F '47
Stability and light absorption of the complex ion $FeSCN^{++}$. H. S. Frank and R. L. Oswalt. bibliog Am Chem Soc J 69:1321-5 Je '47

See also
Black body
Light filters
Sound—Absorption
Spectrum—Absorption spectra
X-rays—Absorption

ABSORPTION spectra. See Spectrum—Absorption spectra

ACADEMIC dissertations. See Dissertations, Academic

ACADEMY of time
First annual report. Science 106:340 O 10 '47

ACARICIDES. See Insecticides

ACCELERATION
Kinematics of uniformly accelerated motions and classical electromagnetic theory. E. L. Hill. bibliog Phys R 72:143-9 Jl 15 '47
Limiting effect of centripetal acceleration on man's ability to move; effect of spinning airplane. C. F. Code and others. il J Aeronautical Sci 14:117-23 F '47
Relativistic clock problem. E. L. Hill. bibliog Phys R 72:236-40 Ag 1 '47
Vacuum-tube acceleration pickup; measures changing accelerations of airplane parts and pilots in flight. il Electronics 20:152+ Ja '47

See also
Airplanes—Acceleration

ACCELERATION of machinery. See Machinery, Kinematics of

ACCELEROMETERS
Vacuum-tube acceleration pickup. W. Ramberg. 4pls diags J Res Nat Bur Stand 37: 391-8 D '46; Abstract. R Sci Instr 18:67-8 Ja '47

ACCEPTANCES
Commercial paper and bankers' acceptances outstanding, Aug. 1945-Nov. 1946. Fed Res Bul 33:62 Ja '47 [cont monthly]

ACCIDENT and health underwriters, Bureau of. See Bureau of accident and health underwriters

ACCIDENT insurance. See Insurance, Accident

ACCIDENT law

See also
Employers' liability
Negligence
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ACCIDENT prevention. See Safety devices and measures and other headings beginning Safety

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Grade crossing accidents
Insurance, Accident
Motor bus lines—Accidents
Negligence
Railroads—Accidents
Safety devices and measures
Safety in the home
Safety movement

Statistics
Accidents up 4% in 1946, National safety council finds. Nat Underw 51:20 F 6 '47; Weekly Underw 156:377+ F 8 '47
Looking back on 1946. W. C. James. map Nat Safety N 56:20-1+ Ag '47

ACCIDENTS, Automobile. See Automobile accidents

ACCIDENTS, Industrial
Accident process. P. Pigors. Nat Safety N 55:34-5+ Ap '47
Accidents are symptoms. L. G. Giberson. Nat Safety N 56:20-1+ S '47
Army air forces rewarded by results of safety program. Safety Eng 92:28 D '46
Death in the engine room; engineer killed by feed pump. diag Marine Eng 52:96 Ap '47
Disabled workers have good safety records. Nat Safety N 55:36 Ja '47
Discovering the accident-prone employee. W. H. Hollis. Management R 36:551-2 O '47
Find the facts! accident investigation. E. R. Granniss. il Safety Eng 94:21+ O '47
Finds upturn in industrial accidents. B. H. Self. East Underw 47:37 N 22 '46
Hand tools involved in many accidents. Nat Safety N 55:61-2 Mr '47
How California has modernized its accident prevention program. P. Scharrenberg. Ind Stand 18:246-7 O '47
Human factors in accident liability, with special reference to accident repeaters in industry. P. J. Moorad. Ind Med 16:494-8 O '47
Is your next watchman a has-been? industry makes mistake in placing responsibilities of plant watchman in hands of aging or disabled employee. R. K. Anderson. Safety Eng 93:11+ Je '47
Let's keep the employee on his feet! J. M. Valenza. Safety Eng 94:38-9 Jl '47
Narcolepsy as cause of accident. Coal Age 51:102 D '46
Old man accident using old tricks to trip up new victims! J. G. Reynolds. Power Pl Eng 51:91-2 Ap '47
Other fellow has the accidents. J. G. Reynolds. Power Pl Eng 51:97-8 F '47
Ring injuries continue despite warnings. Safety Eng 94:44 Ag '47
Safe future, or no future. C. Luckman. il Nat Safety N 56:80-1+ O '47
Safety and work; 1945 report of the Chief inspector of factories. Economist 152:29-31 Ja 4 '47
Safety in Japan; accident prevention in program of industrial development. J. S. Felton. il Nat Safety N 56:86-7 O '47
Tong accidents. Safety Eng 93:56 Mr '47
What do the injured think about? F. Kennedy. Nat Safety N 54:30-1+ N '46
Who are your accident-prones, and why. W. F. Hubbard. il Safety Eng 93:14-15+ F '47

See also
Boiler explosions
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ACCIDENTS, Industrial—See also—*Continued*
Disabled—Rehabilitation
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Workmen's compensation
also subdivision Accidents under special subjects, e.g.
Coal mines and mining
Cotton mills
Electric utilities
Lumbering
Shipyards

Cost

Indirect costs incurred by accidents. G. E. Rogers. Safety Eng 93:14-15+ Je '47
Systematic records and follow-up in accident-prevention work; Brandon corp. A. C. Phelps. Textile World 96:129+ N '46
What accident costs mean to industry. F. G. Yelton. il Safety Eng 94:12-13+ Ag '47

Records

Are we slipping; recording conditions contributing to slips and falls. F. C. Narber. il Safety Eng 93:14-15+ Ja '47
Headaches in record keeping. H. E. Dato. il Nat Safety N 56:46 S '47
Systematizing accident investigation. R. R. Bresler. Ind Med 16:172-3 Ap '47

Statistics

Accident toll of 1946 reaches 100,000. Nat Safety N 55:13 Mr '47
Fatal accidents in 1945 in electric light and power industry; review and classification with statistics, 1941-1945. D. C. Stewart. Edison Elec Inst Bul 14:415-17 D '46
How judges ruled on injury rate cases; first 20 decisions handed down by committee of judges on methods of compiling injury rates. Ind Stand 18:143-4 Je '47
Industrial injuries to women. U S Women's Bur Bul 212:1-17 '47
Injuries and accident causes in the brewing industry, 1944. U S Bur Labor Statistics Bul 884:1-70; pa 15c Supt. of doc. '46
New York industrial mishaps put at 718,333 in 1946. M. Donlon. Weekly Underw 156:166 Ja 11 '47
Reports first quarter 1947 injury-frequency rate lowest since '43. Iron Age 159:136-7 Je 26 '47
Shall we throw out frequency rates? N. A. Zeiger. Safety Eng 93:20+ F '47
Statistical control of accidents. J. M. Howell and L. Johnson. Iron Age 158:56-9 Jl 18 '46; Same. Ind Stand 18:116-19 My '47
Two million workers injured on the job in 1946. Safety Eng 93:36 Mr '47
Work injuries in manufacturing, third quarter 1946. Mo Labor R 64:74-7 Ja '47
Work injuries in manufacturing, fourth quarter 1946. Mo Labor R 64:830-3 My '47
Work injuries in manufacturing, first quarter 1947. Mo Labor R 65:67-70 Jl '47
Work injuries in 1946; preliminary estimates. M. D. Kossoris and F. S. McElroy. Mo Labor R 64:469-71 Mr '47
Work injuries in the United States during 1945. U S Bur Labor Statistics Bul 889:1-23; pa 10c Supt. of doc. '46
Work injuries in the United States, 1946. M. D. Kossoris. Mo Labor R 65:442-6 O '47
Work injuries up 2% in 1946. Nat Underw 51:19 Ja 30 '47

ACCORDION
Nine plastics improve new accordions. il Mod Plastics 24:98-100 Ag '47

ACCOUNTANTS
Accounting profession enters its second half century. T. D. Williams. J Account 82: 470-2 D '46
Color-blindness as a handicap in an accounting career. J Account 83:71 Ja '47
Common errors in the use of English by accountants. H. C. Hasbrouck. J Account 83: 135-8 F '47
Do accountants die too young? J Account 84:269-70 O '47
Job sheets; supervisor. J Account 84:340 O '47
Post war future of the cost accountant. F. E. Wood. Pulp & Pa of Can 48:68-9 S '47
Sales manager and the industrial accountant. M. W. Cresap, jr. N A C A Bul 28:1128-37 My 15 '47
Salesmanship as an accounting tool. J. A. Handy, jr. N A C A Bul 28:419-25 D 1 '46
What an accountant should know about setting up employee benefit plans. M. M. Goldstein. J Account 84:118-25 Ag '47
What operating management needs from accountants. T. M. Chalmers. N A C A Bul 28:489-99 D 15 '46

Working papers

Indexing working papers. J Account 83:62 Ja '47

ACCOUNTANTS, Public
Coordination between public accountants and internal auditors. W. Rankin. J Account 83:26-30 Ja '47
Developing a public accounting practice in a smaller community. R. C. Rea. J Account 83:31-4 Ja '47; Discussion. 83:333-4 Ap '47
Field of the public accountant. J. L. Bennett. J Account 83:139-42 F '47
Independence of the certified public accountant; statement by executive committee of American institute of accountants. J Account 84:51-3 Jl '47
Investigation of internal control. J. H. Stewart. J Account 82:477-81 D '46
Plague on both their houses; the accountant-lawyer differences over tax practice. L. S. Goldberg. bibliog J Account 84:188-95 S '47
Problems of a medium-sized public accounting office. R. B. Mayo. J Account 82:490-3 D '46
SEC issues rules on accountants opinion on summary earnings statements. J Account 84:167-9 Ag '47
Suspension of accountants from practice before SEC. O. L. DuBois. J Account 83: 269-71 Mr '47

Fees

Professional fees. W. Brooke. J Account 83: 530 Je '47

Law

CPA may give tax advice; New York county lawyers association, petitioner, to punish for contempt and to enjoin the unlawful practice of the law by Bernard Bercu. J Account 83:342-8 Ap '47
Implications of New York's Oliver bill toward accountants' professional status. L. B. Prosnitz. J Account 84:46-8 Jl '47
Practice before government agencies; American institute of accountants statement urging amendment of HR 2657. J Account 83:533-5 Je '47
Ruling that only licensed accountant may prepare tax return. J Account 84:347 O '47
Summary of state legislation during the 1946-1947 season affecting accountants. J. A. Phillips. J Account 84:131-7 Ag '47
Uniform act for the certified public accountant. E. S. Lowenstern. J Bsns 20:14-20 Ja '47

Service

Accountant shows the road to industrial peace. M. H. Stans. J Account 84:19-28 Jl '47
Is there a field for accountants in the future of labor negotiations? management's side. F. E. King. J Account 84:10-12 Jl '47
Role of accountancy in prosperity and peace. E. B. Wilcox. J Account 84:274-81 O '47
Role of the certified public accountant in industrial accounting. G. D. McCarthy. J Account 83:120-3 F '47
Stewardship; social contribution of the accountant to labor-management relations; labor viewpoint. M. H. Hedges. J Account 84:13-18 Jl '47

ACCOUNTANTS' reports
Auditor's report. J Account 83:68-9 Ja '47
Expansion of scope of audit reports for small business. J Account 83:250 Mr '47
Reporting events occurring subsequent to close of fiscal period. C. G. Blough. J Account 83:229-34 Mr '47

ACCOUNTING
Accountancy in credit work; auditing experience is a basic factor. A. S. Burton. Credit & Fin Management 49:7+ My '47
Accounting and industrial peace. V. Z. Brink. J Account 83:385-93 My '47; Discussion. E. S. Feldman. 84:151-3 Ag '47
Accounting during inflation and deflation. P. Mason. N A C A Bul 28:933-40 Ap 1 '47
Accounting for contingency reserves. C. O. Wellington. J Account 84:102-5 Ag '47
Accounting treatment of general purpose contingency reserves; Accounting research bulletin no. 28. J Account 84:113-15 Ag '47
Does your accounting make cents? R. J. Barber, jr. N A C A Bul 29:26-35 S 1 '47
Fund theory of accounting and its implications for financial reports. W. J. Vatter. J Bsns 20 pt2:1-123 Jl '47
Industrial research and its relation to accounting. M. Smith. N A C A Bul 28:795-806 Mr 1 '47
Management and the accountant. O. E. Mount. N A C A Bul 28:608-16 Ja 15 '47
Navy accounting; a lesson in adaptation. L. A. Schmidt. Harvard Bsns R 25 no2:243-54 [Ja] '47
Outline of the functions of accounting in industrial management. E. A. Camman. J Account 84:29-31 Jl '47
Securities and exchange commission twelfth annual report; text of section entitled Activities of the Commission in accounting and auditing. J Account 83:348-53 Ap '47
Technical papers of the twenty-first annual Michigan accounting conference, Nov. 2, 1946, Ann Arbor. (Michigan business papers no. 18) 22p pa $1 Univ. of Mich. School of business administration, Bur. of business research, Ann Arbor '47
Use of accounting in the interpretation of economic data. F. Eakin. J Account 84:126-30 Ag '47

See also
Accountants, Public
Auditing
Bank accounting
Billing
Budget, Business
Consolidated statements
Cost accounting
Depreciation
Farm accounting
Financial ratios
Financial statements
also subdivision Accounting under special subjects, e.g.
Airlines
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Vouchers
Paper mills
Payrolls
Petroleum—Well drilling
Petroleum industry and trade
Petroleum pipe lines
Power plants
Public utilities
Railroads
Sales costs
Telephone companies
United nations
Waterworks

Bibliography

Current books and articles. Published in monthly numbers of Journal of accountancy

History

Accounting profession enters its second half century. T. D. Williams. J Account 82:470-2 D '46

Laws and regulations

Accounting implications of the New York telephone company decision. G. O. May. J Account 82:456-9 D '46
State legislation questionnaire. J Account 83:77-8 Ja '47

See also
Accountants, Public —Law

Mechanical aids

Keeps a/c ledger current; machine posting system speeds monthly statements; J. H. Kimball, inc, New York. il Credit & Fin Management 48:22-3+ D '46
Lone Star changes over to district billing. W. R. Stephens. il Gas Age 100:69-70+ O 2 '47
Machine accounting for small offices; Business control, inc. offers custom-built service. M. G. Hawkins. il Am Bsns 17:28+ F '47
Mechanized accountancy and statistical work as applied to the North Middlesex gas company. J. D. Thomas. Gas J (Lond) 250:336-8; Discussion. 338+ My 14 '47
Mechanized accounting streamlines pipe line concern's paper work. Pet Processing 2:49-50 Ja '47
Modern accounting on the New Haven. G. T. Carmichael. il Ry Age 122:690-3, 751-3 Ap 5-12 '47
Property records and depreciation accounting on punched cards. J. G. Sidak. il N A C A Bul 28:1352-8 Jl 1 '47

See also
Microfilm records
Punched card system

Study and teaching

Accounting course for technical and non-technical students. D. Lipsky and E. R. Young. J Account 82:494-500 D '46
Auditors are not well trained; an indictment of educational methods. C. A. Smith. J Account 84:214-15 S '47

Terminology

Current assets and current liabilities; working capital; Accounting research bulletin. J Account 84:282-5 O '47
Financial reports can be written so people can understand them. J. M. Lambie, jr. J Account 84:40-5 Jl '47
Trends in accounting terminology and form revealed by 1946 corporate reports. A. Williams. J Account 84:310-17 O '47
What does the apparent profit of a business operation mean? M. E. Peloubet. J Account 84:490-2 Je '47

ACCOUNTING, Industrial. See Factories—Accounting

ACCOUNTING ethics
Accountancy and law. W. P. Jordan. J Account 83:161-2 F '47
Accountants and insurance; should they be held responsible for opinions on coverage? J. Getz. Credit & Fin Management 49:8+ F '47
Accountants and lawyers; three questions concerning professional relationships. J Account 83:171-7 F '47
Independence of the certified public accountant; statement by executive committee of American institute of accountants. J Account 84:51-3 Jl '47
Labor's interest in accounting; excerpt from letter addressed to the research director of District 50. J Account 83:78-80 Ja '47
Role of accountancy in prosperity and peace. E. B. Wilcox. J Account 84:274-81 O '47

ACCOUNTING research
Research; the key to improved industrial accounting. R. P. Marple. N A C A Bul 28:531-9 Ja 2 '47

ACCOUNTS, Statements of
Streamlining credit work; do statements really achieve anything worth while? A. Pauly. Credit & Fin Management 49:22+ O '47

ACCOUNTS payable
Simplified accounts payable procedure. L. P. Bullat. N A C A Bul 28:673-6 F 1 '47

ACCOUNTS receivable
Bookless bookkeeping system speeds accounts receivable at Hudson manufacturing company. J. Turner. il Am Bsns 17:12-13+ Mr '47
Keeps a/c ledger current; machine posting system speeds monthly statements; J. H. Kimball, inc, New York. il Credit & Fin Management 48:22-3+ D '46

See also
Assignment of book accounts

ACCRA, Gold Coast

Water supply

Purification of a tropical water supply; the Weija waterworks of Accra water supply; abstract. J. S. Dunn. Am Water Works Assn J 39:491 My '47

ACCUMULATORS, Electric. See Storage batteries

ACCUMULATORS, Hydraulic. See Hydraulic accumulators

ACENAPHTHENE
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47
Synthesis of acenaphthene. A. Schönberg, R. Moubasher and A. Mostafa. Chem Soc J p966-7 O '46

ACENAPHTHYLENE
Acenaphthylene and its polymerization products. R. G. Flowers and H. F. Miller. bibliog Am Chem Soc J 69:1388-9 Je '47
Photochemical dimerisation of acenaphthylene. E. J. Bowen and J. D. F. Marsh. Chem Soc J p 109-10 Ja '47

ACETALDEHYDE
Chemicals from petroleum. J. E. Bludworth. flow sheet il Oil & Gas J 45:76-7+ Ap 12 '47; Same. Pet Refiner 26:120-4 Ap '47
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69: 593-9 Mr '47
2,3-Dimethylbutanal and 2-ethyl-3-methylbutanal. R. A. Barnes and W. M. Budde. bibliog Am Chem Soc J 68:2339-41 N '46
New method for testing catalysts. J. A. Hinckley, jr. and H. R. Sheppard, jr. il diags Anal Chem 19:771-3 O '47
Specific heats of acetaldehyde and acetaldehyde dibutyl acetal. A. Z. Conner, P. J. Elving and S. Steingiser. Am Chem Soc J 69:1532 Je '47
Thermodynamic properties of acetaldehyde from spectroscopic data. J. M. Smith. bibliog Am Inst Chem Eng Trans 42:983-8 O-D '46

ACETALS
Acetals of nitro alcohols and corresponding amino acetals. M. Senkus. Am Chem Soc J 69:1380-1 Je '47
Cyanoacetal, a correction. W. H. Hartung and H. Adkins. Am Chem Soc J 69:1535 Je '47
Diethyl acetals of α-formyl esters. N. C. Deno. Am Chem Soc J 69:2233-4 S '47
Dihydropyrane addition products. G. F. Woods and D. N. Kramer. Am Chem Soc J 69:2246 S '47
Some methylene acetals of D-talitol. R. M. Hann, W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:624-9 Mr '47

Analysis

Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47

ACETAMIDOBENZENE sulfinic acid
Preparation of 4-aminophenyl sulphones; reaction between 4-acetamidobenzenesulphinic acid and aromatic nitroso-compounds. S. Pickholz. Chem Soc J p 1058-62 N '46

ACETAMIDOBENZENE sulfonyl azide
Some products formed in the reaction of *p*-acetamidobenzene-sulphonyl azide with pyridine. J. N. Ashley, G. L. Buchanan and A. P. T. Easson Chem Soc J p60-7 Ja '47

ACETAMIDO thiophene
Replacement of halogen by the nitro group in halogenated acetothiophenamides. H. M. Priestley and C. D. Hurd. Am Chem Soc J 69:1173-5 My '47

ACETATES
Conversion of certain mercaptans into acetates and sulfides. T. P. Dawson. Am Chem Soc J 69:1211-12 My '47
See also
Calcium acetate
Cellulose acetate
Vinyl acetate

ACETIC acid
Acetic acid and chlorine vs. materials of chemical plant construction. Chem Eng 54: 241-2+ My '47
Acetic acid from alcohol process; E. B. Badger & sons company. flow diag Pet Refiner (Process Handbook sec) 26:100-1 Ap '47
Acetic acid output process described. Oil Paint & Drug Rep 150:36 D 30 '46
Acetic acid vs. materials of chemical plant construction. flow sheet il Chem Eng 53: 253-4+ N; 205-6+ D '46
Chemical plant in miniature; distillation and solvent extraction. il Chem Age (Lond) 56: 739 Je 7 '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 120-2 N '46; Correction. 54:228 Ap '47
High pressure hydrogenations with Adams catalyst. R. H. Baker and R. D. Schuetz. bibliog Am Chem Soc J 69:1250-2 Je '47
Maceration of woody tissue with acetic acid and sodium chlorite. W. E. Spearin and I. H. Isenberg. Science 105:214 F 21 '47
Mechanism of the oxidation of anthracene with lead tetraacetate. L. F. Fieser and S. T. Putnam. bibliog Am Chem Soc J 69:1038-41 My '47
Modern developments in acetylene chemistry; German electro-thermal cracking of hydrocarbons. G. G. S. Dutton. Chem Age (Lond) 56:11-13 Ja 4 '47
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Rate of oxidation of aromatic hydrocarbons by lead tetraacetate. L. F. Fieser and S. T. Putnam. bibliog Am Chem Soc J 69:1041-6 My '47
Source of acetic acid obtained by oxidation of coal. C. R. Kinney. bibliog Am Chem Soc J 69:284-9 F '47
See also
Mercaptoacetic acid

Analysis

Elementary isotopic analysis; determination of carbon. A. V. Grosse and others. Science 105:100-1 Ja 24 '47

ACETIC anhydride
Modern developments in acetylene chemistry; German electro-thermal cracking of hydrocarbons. G. G. S. Dutton. Chem Age (Lond) 56:11-13 Ja 4 '47
Rearrangement of 2-benzenesulphenamidothiazoles; thiazole compounds not substituted in position 4. E. Hoggarth. Chem Soc J p 110-14 Ja '47

ACETOBENZOIC acid
o-Acetobenzoic acid, its preparation and lactonization; novel application of the Doebner synthesis. H. L. Yale. Am Chem Soc J 69: 1547-8 Je '47

ACETOGLYOXYLIC acid
Arsenicals of the 5-pyrazolone, 5-isoxazolone and α-acetoglyoxylic acid series. R. F. Coles and C. S. Hamilton. Am Chem Soc J 68: 2588 D '46

ACETOIN
Vapor pressure and heat of vaporization of acetylmethylcarbinol. A. Efron and R. H. Blom. J Phys & Colloid Chem 51:480-3 Mr '47

ACETONE
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47
Condensation of acetylene with acetone and other ketones. C. D. Hurd and W. D. McPhee. bibliog Am Chem Soc J 69:239-41 F '47
Conductivity of some salts in moist acetone. K. J. Mysels. J Phys & Colloid Chem 51: 708-10 My '47
Electrolytic reduction of acetone to pinacol. O. C. Slotterbeck. bibliog diag Electrochem Soc Trans 92 (preprint 10):123-35 '47
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47

ACETONE—*Continued*
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 64:51-3; 66:48-50 F '45, F '47

Investigation of errors arising in iodometric determination of free sulphurous acid by the acetone procedure. M. Ingram. bibliog Soc Chem Ind J 66:105-15 Ap '47

Measurements of ultrasonic absorption and velocity in liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47

Modern developments in acetylene chemistry; German electro-thermal cracking of hydrocarbons. G. G. S. Dutton. Chem Age (Lond) 56:11-13 Ja 4 '47

New process for acrylic resins; manufacture of methyl methacrylate monomer, molding powder and transparent sheet. R. W. Porter. flow sheets Chem Eng 54:102-6 Ap '47

Photochemical studies; further study of the photochemistry of methyl *n*-butyl ketone. W. Davis, jr. and W. A. Noyes, jr. bibliog diag Am Chem Soc J 69:2153-8 S '47

Purification of acetone by the Shipsey-Werner method. R. Livingston. bibliog Am Chem Soc J 69:1220-1 My '47

Reaction between acetone and ammonia; formation of pyrimidine compounds analogous to the aldoxanes of Späth; abstract. R. P. Bradbury, N. C. Hancox and H. H. Hatt. Chem & Ind p196 Ap 12 '47

Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S. Nutting and L. H. Horsley. Anal Chem 19:601-2 Ag '47

Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51: 58-70 Ja '47

ACETONITRILE
Chromium complexes of azo dyes derived from acylacetonitriles. R. S. Long. bibliog Am Chem Soc J 69:990-5 My '47

Composition of vapors from boiling binary solutions; acetonitrile-water system. D. F. Othmer and S. Josefowitz. bibliog Ind & Eng Chem 39:1175-7 S '47

Continuous purification and azeotropic distillation of acetonitrile. H. R. C. Pratt. Chem Age (Lond) 56:433 Ap 12 '47

Dielectric studies; dipole moment of acetonitrile in solvents of unknown molecular weights. N. C. C. Li and T. Chu. bibliog Am Chem Soc J 69:558-9 Mr '47

ACETOPHENETIDIN. See Phenacetin

ACETOPHENONE
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47

Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S. Johnson, J. W. Petersen and W. P. Schneider. bibliog Am Chem Soc J 69:74-9 Ja '47

Intermolecular dehydrations by means of phosphorus pentoxide; preparation of substituted acetophenones. G. M. Kosolapoff. Am Chem Soc J 69:1651-2 Jl '47

Structure of clavatol, a metabolic product of aspergillus clavatus. C. H. Hassall and A. R. Todd. Chem Soc J p611-13 My '47

Studies on the Willgerodt reaction; preparation of nuclear-substituted phenylacetic acids and some further extensions of the reaction. J. A. King and F. H. McMillan. bibliog Am Chem Soc J 68:2335-9 N '46

ACETOPROPANOL
Preparation of acetopropyl alcohol and 1,4-pentanediol from methylfuran. L. E. Schniepp, H. H. Geller and R. W. Von Korff. bibliog Am Chem Soc J 69:672-4 Mr '47

ACETOPROPYL alcohol. See Acetopropanol

ACETOTHIOPHENAMIDE. See Acetamido thiophene

ACETOXY silicane
Preparation of substituted acetoxy silanes. H. A. Schuyten, J. W. Weaver and J. D. Reid. bibliog Am Chem Soc J 69:2110-12 S '47

ACETYLACETONE
New synthesis with maleic anhydride. E. Berner. Chem Soc J p 1052-8 N '46

Analysis
Determination of beta-dicarbonyl compounds. W. Seaman, J. T. Jones and E. A. Massad. bibliog Anal Chem 19:250-1 Ap '47

ACETYLACRYLIC acid
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68:2510-13 D '46

ACETYLCHOLINE
Reduction of excess acetylcholine in the serum of pernicious anemia patients by treatment with pteroyl glutamic acid, liver extract, or ventriculin. J. E. Davis. Science 104:605-6 D 20 '46

ACETYLEPHEDRINE
Constitution of acetylephedrine and acetyl-ψ-ephedrine. L. H. Welsh. bibliog Am Chem Soc J 69:128-36 Ja '47

ACETYLFURAN
Acylation studies in the thiophene and furan series. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1012-16 My '47

Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46

ACETYL glucopyranose
1,2,3,4-Tetraacetyl-α-D-glucopyranose. H. A. Lardy. bibliog Am Chem Soc J 69:518 Mr '47

ACETYLHYDRAZONE
Reactions of semicarbazones. R. A. Turner. bibliog Am Chem Soc J 69:875-7 Ap '47

ACETYLMELAMINE
Nitration of melamine and of triacetylmelamine. J. Cason. Am Chem Soc J 69:495-8 Mr '47

ACETYLMETHYLCARBINOL. See Acetoin

ACETYLNITROBENZOIC acid
Preparation of 3,3-dimethylphthalide and several of its derivatives. C. H. Wang and others. bibliog Am Chem Soc J 69:1909-11 Ag '47

ACETYL number
Determination of acetyl number of fats and oils; modification of the method of Roberts and Schuette. K. Helrich and W. Rieman 3d. bibliog Anal Chem 19:691 S '47

ACETYLPHENYLACETATE
Anomalous orientation in a Friedel-Crafts ketone synthesis. D. Papa, E. Schwenk and A. Klingsberg. bibliog Am Chem Soc J 68: 2133-4 N '46

ACETYLTHIOPHENE
Acylation studies in the thiophene and furan series. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1012-16 My '47

Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46

Physical properties of 2-acetylthiophene. G. C. Johnson. bibliog Am Chem Soc J 69: 150-2 Ja '47

ACETYLATION
Absorption spectra of some N-acetyl derivatives of *p,p'*-diaminotriphenylmethane dyes. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1978-85 Ag '47

Acetylation of *o*-, *m*- and *p*-nitroacetophenones by the boron trifluoride method. H. G. Walker, jr. and C. R. Hauser. bibliog Am Chem Soc J 68:2742-3 D '46

Carbohydrate C-nitroalcohols; the acetylated nitroölefins. J. C. Sowden and H. O. L. Fischer. bibliog Am Chem Soc J 69:1048-50 My '47

Chemistry of the pyrrocolines; reduction of acyl derivatives. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1083-9 N '46

ACETYLATION—*Continued*
Constitution of acetylephedrine and acetyl-ψ-ephedrine. L. H. Welsh. bibliog Am Chem Soc J 69:128-36 Ja '47
Determination of 1,2,3,4-tetrahydro-2-naphthol in impregnated clothing. J. Goldenson and S. Sass. bibliog Anal Chem 19:322-4 My '47
Dimensional stabilization of wood. A. J. Stamm and H. Tarkow. bibliog J Phys & Colloid Chem 51:493-505 Mr '47
Intermolecular dehydrations by means of phosphorus pentoxide; preparation of substituted acetophenones. G. M. Kosolapoff. Am Chem Soc J 69:1651-2 Jl '47
Reductive acetolysis of nitrate esters. D. O. Hoffman, R. S. Bower and M. L. Wolfrom. bibliog Am Chem Soc J 69:249-50 F '47

ACETYLENE
Accidents with acetylene. Chem Age (Lond) 57:492 O 11 '47
Acetylene chemistry; abstract. E. R. H. Jones. Chem Age (Lond) 57:47 Jl 12 '47
Acetylene developments; new applications in Germany. Chem Age (Lond) 56:408 Ap 5 '47
Acetylene from carbon dioxide; abstract. W. J. Arrol and R. Glascock. Chem Age (Lond) 56:799 Je 21 '47
Acetylene to vinyl resins; abstract. F. K. Schoenfield. Chem Eng 54:244+ O '47
Apparatus for determining the reactivity of calcium carbide and acetylene-water vapor mixtures. G. W. Jones and others. 14 pls U S Bur Mines Rep of Invest 4067:1-15 '47
Condensation of acetylene with acetone and other ketones. C. D. Hurd and W. D. McPhee. bibliog Am Chem Soc J 69:239-41 F '47
Electric heat safer in acetylene production. K. P. Allen. il Elec World 128:96+ Ag 16 '47
Hi-octane acetylene. H. Mark. Chem Ind 60: 590 Ap '47
Modern developments in acetylene chemistry; German electro-thermal cracking of hydrocarbons. G. G. S. Dutton. Chem Age (Lond) 56:11-13 Ja 4 '47
New process for acrylic resins; manufacture of methyl methacrylate monomer, molding powder and transparent sheet. R. W. Porter. flow sheets Chem Eng 54:102-6 Ap '47
Polymerization of unsaturated hydrocarbons by ionizing radiations. W. M. Garrison. J Chem Phys 15:78 Ja '47
Reaction products of phenyldichloroarsine and acetylene. C. K. Banks, F. H. Kahler and C. S. Hamilton. Am Chem Soc J 69:933 Ap '47
Reppe's acetylene chemistry. M. H. Bigelow. Chem & Eng N 25:1038-42 Ap 14 '47
Storing compressed gas cylinders. il Safety Eng 92:16+ N '46
Vinyl resins as consumers of C_2H_2 and C_2H_4. H. H. Atlas and R. S. Aries. flow sheet Chem Eng 54:101-3+ Mr '47; Abstract. Pet Processing 2:333 My '47

See also
Oxyacetylene cutting
Oxyacetylene flame
Oxyacetylene welding

Analysis

Determination of mono- and dialkylacetylenes. C. D. Wagner, T. Goldstein and E. D. Peters. bibliog Anal Chem 19:103-5 F '47

ACETYLENE compounds
Action of sodium, lithium and potassium phenylacetylene on acid derivatives. D. Nightingale and F. T. Wadsworth. bibliog Am Chem Soc J 69:1181-3 My '47
Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69:633-4 Mr '47
Concerning aromatic acetylenic carbinols. P. Rutan and C. E. May. bibliog Am Chem Soc J 69:2017-18 Ag '47
Diaryl acetylenic ketones. C. L. Bickel. bibliog Am Chem Soc J 69:2134-6 S '47
New acetylene silver nitrate complex. J. A. Shaw and E. Fisher. Am Chem Soc J 68:2745 D '46
Non-degenerate vibrations of dimethylacetylene, diacetylene, and dimethyldiacetylene. A. G. Meister and F. F. Cleveland. bibliog diags J Chem Phys 15:349-57 Je '47
Researches on acetylenic compounds; acetylenic hydroxy-acids and their reactions; abstract. L. J. Haynes and others. Chem & Ind p423 N 23 '46
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Researches on acetylenic compounds; heterocyclic compounds derived from ethynyl ketones. K. Bowden and E. R. H. Jones. Chem Soc J p953-4 O '46
Researches on acetylenic compounds; miscellaneous addition reactions of ethynyl ketones. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p945-8 O '46
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46
Unsaturated lactones; researches on acetylenic compounds; new route to growth-inhibitory αβ-ethylenic γ- and δ-lactones. L. J. Haynes and E. R. H. Jones. Chem Soc J p954-7 O '46

See also
Cuprene

ACETYLENEDICARBOXYLIC acid
Crystal and molecular structure of certain dicarboxylic acids; acetylenedicarboxylic acid dihydrate. J. D. Dunitz and J. M. Robertson. diags Chem Soc J p 148-54 F '47

ACETYLENE tetrachloride. See Tetrachloroethane

ACF-BRILL motors company
Annual report. Comm & Fin Chr 165:2265 Ap 28 '47

ACHELIS, Johnfritz, 1890-
Portrait. Fortune 36:91 S '47

ACID handling
Automatic valves for control of small flows of acids or other corrosive materials. K. E. Kunkel. diags Chem Eng 54:120-1 Jl '47
Liquid piston pump simplifies handling of corrosive gases and liquids. G. E. Haddeland. diags Chem Eng 54:136-7 S '47

ACID resisting materials
Acetic acid vs. materials of chemical plant construction. flow sheet il Chem Eng 53:253-4+ N; 205-6+ D '46
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48:71-4 Ag '47
Chemical resistance of constructional metals and non-metals; table showing resistance of materials to 24 common and troublesome chemicals. Chem Eng 53:120-50 N '46
Chemical resistance of phenolic laminates. W. R. Tyrie. A S M E Trans 69:795-7 O '47
Construction materials in Mannheim HCl plant; non-metallics meet demand for good heat transfer plus resistance to acids; Ethyl corp., Baton Rouge plant. W. F. Armstrong. il diag Chem Eng 54:96-8 Ag '47
Microstructure of commercial acid-resisting silicon-iron alloys. J. E. Hurst and R. V. Riley. bibliog 3pls Iron & Steel Inst J 155: 172-8 F '47
New resistant glass withstands hydrofluoric acid. Chem Age (Lond) 57:539 O 18 '47
Sulphur dioxide vs. materials of chemical plant construction; symposium. il Chem Eng 54:221-2+ Jl; 209-10+ Ag; 209-10+ S '47

See also
Cement
Corrosion resisting materials
Enamel and enameling

ACID waste
Acid-disposal barge Sayreville. il Marine Eng 52:93-4 Ag '47
Acid neutralization. H. L. Jacobs. diags Chem Eng Prog 43:247-53; Discussion. 253-4 My '47
Lime treatment of waste pickle liquor. R. D. Hoak and others. bibliog Ind & Eng Chem 39:131-5 F '47
Limestone used to neutralize acid wastes. A. L. Reidl. diag Chem Eng 54:100-1 Jl '47

ACIDATION of oil wells. See Petroleum—Acidation of wells

ACIDITY
Spontaneous combustion of hay; the composition of the acidity. J. B. Firth and R. E. Stuckey. Soc Chem Ind J 65:275-7 S '46

See also
Hydrogen ion concentration

ACIDS
Acid-cleaning of boilers and auxiliary equipment. S. T. Powell. il A S M E Trans 68: 905-11; Discussion. 911-17 N '46
Mechanism of corrosion fatigue of steel in acid solution. M. T. Simnad and U. R. Evans. bibliog diag Iron & Steel Inst J 156:531-9 Ag '47
On the theory of acids and bases. A. W. Devor. Science 104:492 N 22 '46
Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47
Reactivity of hydrous alumina toward acids. R. P. Graham and A. W. Thomas. bibliog Am Chem Soc J 69:816-21 Ap '47

See also
Acidity
also names of acids, e.g.
Hydrochloric acid
Hydrofluoric acid
Nitric acid
Phosphoric acid
Sulfuric acid

Analysis

Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19: 675-7 S '47

ACIDS, Fatty
Black soap films of fatty acids in sulfuric acid. L. McCulloch. il Am Chem Soc J 68: 2735-6 D '46
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 133-5 N '46
Chemicals from fats. A. W. Ralston. Chem & Eng N 25:836-8 Mr 24 '47
Component acids and glycerides of Australian lumbang oil. F. D. Gunstone and T. P. Hilditch. bibliog Soc Chem Ind J 66:205-8 Jl '47
Component acids of West Indian ben and mango seed oils. H. C. Dunn and T. P. Hilditch. Soc Chem Ind J 66:209-11 Jl '47
Fatty acid selection; review of manner in which physical chemistry of fatty acids affects soaps. J. W. McCutcheon. diags Soap & San Chem 22:43-5+ D '46
Fatty acids in tall oil; literature review. B. L. Browning and J. B. Calkin. bibliog Paper Tr J 123:45-7 D 26 '46
Formation of conjugated double linkage systems by dehydration of hydroxyl compounds. Paint Oil & Chem R 110:40-1 Mr 20 '47
Free fatty acids of human hair fat. A. W. Weitkamp, A. M. Smiljanic and S. Rothman. bibliog Am Chem Soc J 69:1936-9 Ag '47
Germination and free fatty acid in individual cotton seeds. C. L. Hoffpauir and others. Science 106:344-5 O 10 '47
Higher fatty acid derivatives of proteins. W. G. Gordon, A. E. Brown and R. W. Jackson. bibliog Ind & Eng Chem 38:1239-42 D '46
Industrial soaps. J. W. McCutcheon. Soap & San Chem 23:40-2 Ja '47
Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46
Separation of cis-trans isomers by adsorption; abstract. H. P. Kaufmann and W. Wolf. Paint Oil & Chem R 110:27 Mr 6 '47
Series of ω-alkylmercapto and ω-alkylsulfonyl acids. L. Rapoport, A. Smith and M. S. Newman. bibliog Am Chem Soc J 69:693-4 Mr '47
Sodium reduction of fatty acid esters. V. L. Hansley. bibliog(68 ref) diags Ind & Eng Chem 39:55-62 Ja '47
Synthetic fats. P. N. Williams. bibliog Chem & Ind p251-5 My 10 '47
Use of fatty acids and their soaps in the manufacture of butadiene synthetic rubber. W. L. Semon. bibliog India Rubber World 116:63-5+ Ap '47

See also
Linolenic acid
Oleic acid
Stearic acid

Analysis

Mixed unsaturated glycerides of liquid fats; low-temperature crystallisation of rape oil. T. P. Hilditch, P. A. Laurent and M. L. Meara. Soc Chem Ind J 66:19-22 Ja '47

Manufacture

Continuous hydrolysis of fats. H. D. Allen and others. flow diag diags Chem Eng Prog 43:459-66 S '47
Continuous separation of fatty acids; Emersol process; flow sheet. il Chem Eng 53: 168-71 N '46
Emersol process; staff report. R. L. Demmerle. bibliog flow sheet il diags Ind & Eng Chem 39:126-31 F '47
Fatty acid processing. C. J. Marsel and H. D. Allen. bibliog flow sheet il Chem Eng 54:104-8 Je '47
Fatty acid trends. il Soap & San Chem 23: 41-3+ My '47
Fatty acids. R. H. Manley. il Paint Oil & Chem R 110:31-4 Mr 6 '47
Good by Twichell? new process for producing fatty acids; abstract. H. D. Allen. flow diag Chem Ind 60:592 Ap '47
Processing vegetable oils; Woburn chemical corp., Kearny, N.J. il Chem Eng 54:108-9 Ag '47
Production of fatty acids by air oxidation of paraffin wax. diag Chem Ind 60:64 Ja '47

ACIDS, Organic
Electrometric titrations of weak acids and bases in aqueous solution. D. O. Jordan and H. F. W. Taylor. Chem Soc J p994-7 N '46
Fluorinated acids. A. L. Henne and W. J. Zimmerschied. Am Chem Soc J 69:281-3 F '47
Improved method of nitrating aromatic *o*-hydroxy-carboxylic acids and their esters. H. C. Barany and M. Pianka. Chem Soc J p965-6 O '46
Ionization constants of some weak acids in aqueous tertiary butyl alcohol. W. H. Fletcher. bibliog Am Chem Soc J 68:2726-8 D '46
Perfluoro dibasic acids and derivatives. E. T. McBee, P. A. Wiseman and G. B. Bachman. Ind & Eng Chem 39:415-17 Mr '47
Precise method for the determination of the ionization constants of some weak organic acids. R. S. Stearns and G. W. Wheland. bibliog Am Chem Soc J 69:2025-9 Ag '47

See also
Acetic acid
Acids, Fatty
Amino acids
Carboxylic acids
Glucuronic acid
Pectinic acids
Resin acids

ACME electric corporation
Stock offered. Comm & Fin Chr 166:1249-50 S 29 '47

ACONITATES

Analysis

Quantitative method for aconitic acid and aconitates. E. J. Roberts and J. A. Ambler. bibliog Anal Chem 19:118-20 F '47

ACONITE alkaloids. See Alkaloids

ACONITIC acid

Analysis

Quantitative method of aconitic acid and aconitates. E. J. Roberts and J. A. Ambler. bibliog Anal Chem 19:118-20 F '47

ACOUSTIC impedance
Acoustical impedance of enclosures; a sphere, a cylinder, and a narrow rectangular box. F. B. Daniels. Acoustical Soc Am J 19: 569-71 Jl '47
Acoustical properties of homogeneous, isotropic rigid tiles and flexible blankets. L. L. Beranek. bibliog Acoustical Soc Am J 19:556-68 Jl '47
Continuously variable acoustic impedance. J. E. White. Acoustical Soc Am J 19:846-9 S '47

ACOUSTIC impedance—*Continued*
Measurement of acoustic impedance. L. L. Beranek. bibliog il diags Acoustical Soc Am J 19:420-7 My '47
Measurement of acoustic impedances of surfaces in water. R. D. Fay and others. bibliog diags Acoustical Soc Am J 19:850-6 S '47
Propagation of an acoustic wave along a boundary. I. Rudnick. bibliog Acoustical Soc Am J 19:348-56 Mr '47
Short-tube method for measurement of impedance. R. K. Cook. diag Acoustical Soc Am J 19:922-3 S '47
Sound absorption and impedance of acoustical materials. H. J. Sabine. diags Soc Motion Picture Eng J 49:262-78 S '47
Sound apparatus co. impedance recorder. il R Sci Instr 18:528-9 Jl '47

ACOUSTIC patents
Review of acoustical patents. R. W. Young. il diags Acoustical Soc Am J 19:277-82 Ja '47 [cont bi-monthly]

ACOUSTICAL society of America
Officers, by-laws, history, and membership list. Acoustical Soc Am J 19:739-69 pt 2 Jl '47
Program of the 32d meeting, Chicago, Nov. 14-16; with abstracts of papers. Acoustical Soc Am J 19:283-93 Ja '47
Program of the 33d meeting, New York, May 8-10; with abstracts of papers. Acoustical Soc Am J 19:722-37 Jl '47

ACOUSTICS, Architectural
Acoustic constant of enclosed spaces correlatable with their apparent liveness. J. P. Maxfield and W. J. Albersheim. bibliog Acoustical Soc Am J 19:71-9 Ja '47
Acoustical tests in the Scala theater of Milan. E. Paolini. plan Acoustical Soc Am J 19:346-7 Mr '47
Acoustics of churches. C. M. Swan. il Arch Rec 102:113-15 S '47
Functional sound absorbers. H. F. Olson. il diags RCA R 7:503-21 D '46
Normal frequency spacing statistics. R. H. Bolt. bibliog Acoustical Soc Am J 19:79-90 Ja '47
Recording studio acoustics. L. Green, jr. and J. Y. Dunbar. il Acoustical Soc Am J 19:412-14 My '47
Recording studio 3A; acoustical design problems. G. M. Nixon. il RCA R 7:634-40 D '46
Reverberation time nomographs. R. C. Coile. Electronics 20:142+ Ap '47
Review of criteria for broadcast studio design. H. M. Gurin and G. M. Nixon. bibliog il diag Acoustical Soc Am J 19:404-11 My '47
Sound diffraction by rigid spheres and circular cylinders. F. M. Wiener. bibliog Acoustical Soc Am J 19:444-51 My '47
Space acoustics. J. Y. Dunbar. il Soc Motion Picture Eng J 49:372-82; Discussion. 383-8 O '47
Subtle sound-reinforcement; Centenary Methodist church, Winston-Salem, N.C. il Arch Rec 102:116 S '47

See also
Sound absorbent materials
Soundproofing

ACOUSTICS of music. See Music—Acoustics and physics

ACRALDEHYDE. See Acrolein

ACRIDINE
Acridine syntheses and reactions; synthesis of amino-acridines from formic acid and amines. A. Albert. Chem Soc J p244-50 F '47
Ionisation of acridine bases. A. Albert and R. Goldacre. bibliog Chem Soc J p706-13 Ag '46
2-Methoxy-6-chloro-9-(dialkylaminoalkylamino)-acridines. G. B. Bachman and D. E. Welton. Am Chem Soc J 68:2725 D '46

ACROLEIN
Skraup reaction with acrolein and its derivatives; the preparation of 6-methoxy-8-nitroquinoline. H. L. Yale. bibliog Am Chem Soc J 69:1230 My '47
Thermal decomposition of 2 : 3-dihydro-γ-pyran; new preparation of acraldehyde. J G. M. Bremner, D. G. Jones and S. Beaumont. Chem Soc J p 1018-22 N '46

ACRYLAMIDE
Preparation of N,N-dimethylacrylamide by pyrolysis of N,N-dimethyl-α-acetoxypropionamide. W. P. Ratchford and C. H. Fisher. bibliog Am Chem Soc J 69:1911-14 Ag '47

ACRYLATES
Britain produces acrylic kitchen and bathroom fixtures. il Mod Plastics 24:116-19 Je '47
Brush backs of fabricated acrylic. E. A. Neugass. il Mod Plastics 24:134-5 Ap '47

ACRYLIC acid
Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; the stabilities of acrylic acid derivatives from sodium 1-arylazo-β-naphthaquinone-1-sulphonate and its derivatives, and an investigation of derived *iso*indolinones. F. M. Rowe, W. T. McFayden and A. T. Peters. Chem Soc J p468-73 Ap '47
Some αββ-triarylacrylonitriles, αββ-triarylacrylic acids, and their derivatives. Buu-Hoï and J. Lecocq. Chem Soc J p641-4 My '47

ACRYLONITRILE
Acrylonitrile moves into plastics. il Mod Plastics 25:91-6 O '47
Acrylonitriles; new class of synthetic fibers. J. V. Sherman. patent list(p 102) Textile World 97:101-2+ Mr '47
Action of acrylonitrile on viscose; carboxylated rayons. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:929-30 Jl '47
Action of acrylonitrile on viscose; effect on the normal aging process. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:222-4 F '47
Copolymerization; mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce and E. C. Chapin. bibliog Am Chem Soc J 69:581-3 Mr '47
Copolymerization; the mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce. Am Chem Soc J 69:1903-4 Ag '47
Cyano-ethylation of arsines, and the preparation of amidino-alkyl-arsines and carboxy-alkyl-arsines. R. C. Cookson and F. G. Mann. Chem Soc J p618-24 My '47
How to use nitrile rubber-vinyl resin. J. E. Pittenger and G. F. Cohan. il Mod Plastics 25:81-6 S '47
Improved synthesis of β-alanine; the addition of ammonia to acrylonitrile at 50-150°. J. H. Ford, S. R. Buc and J. W. Greiner. bibliog Am Chem Soc J 69:844-6 Ap '47
Reaction of hydrogen sulfide with acrylonitrile, acrylic ester and crotonaldehyde. L. L. Gershbein and C. D. Hurd. bibliog Am Chem Soc J 69:241-2 F '47
Series of ω-alkylmercapto and ω-alkylsulfonyl acids. L. Rapoport, A. Smith and M. S. Newman. bibliog Am Chem Soc J 69:693-4 Mr '47
Some αββ-triarylacrylonitriles, αββ-triarylacrylic acids, and their derivatives. Buu-Hoï and J. Lecocq. Chem Soc J p641-4 My '47

ACRYSOL
Investigation of aqueous acrysol, Geon and saran dispersion. Paint Oil & Chem R 109: 50-6 N 14 '46

ACTIVATED carbon. See Carbon, Activated

ACTIVATED sludge method. See Sewage disposal—Activated sludge method

ACTIVATION
Activation energies and entropies of activation in the rearrangement of allyl groups in three carbon systems. E. G. Foster, A. C. Cope and F. Daniels. Am Chem Soc J 69:1893-6 Ag '47
Activation in unimolecular reactions. O. K. Rice. bibliog J Chem Phys 15:689-90 S '47
Calculation of the energy of activation for the racemization of 2,2'-dibromo-4,4'-dicarboxydiphenyl. F. H. Westheimer. bibliog J Chem Phys 15:252-60 My '47

ACTIVITY coefficients
Activity coefficients and activity product of potassium metaperiodate. J. H. Jones and N. Heckman. bibliog Am Chem Soc J 69: 536-8 Mr '47
Activity of orthophosphoric acid in aqueous solution at 25° from vapor pressure measurements. K. L. Elmore, C. M. Mason and J. H. Christensen. bibliog Am Chem Soc J 68:2528-32 D '46
Activity of orthophosphoric acid in aqueous solutions at 25° from e.m.f. measurements with the lead amalgam-lead phosphate electrode. C. M. Mason and W. M. Blum. bibliog il Am Chem Soc J 69:1246-50 Je '47
Conductances of lead chloride in ethylene glycol-water mixtures. J. W. Norman and A. B. Garrett. bibliog Am Chem Soc J 69: 110-13 Ja '47
Influence of charge and configuration on the solvent power of benzene carboxylic acid ions. C. F. Failey. bibliog Am Chem Soc J 68:2619-24 D '46
Isotonic solutions: activity coefficients of potassium bromate at 25°. J. H. Jones. Am Chem Soc J 69:2066-7 A '47
Isotonic solutions; osmotic and activity coefficients of lithium and sodium perchlorates at 25° C. J. H. Jones. bibliog J Phys & Colloid Chem 51:516-21 Mr '47
Osmotic and activity coefficients of lithium bromide and calcium bromide solutions. R. A. Robinson and H. J. McCoach. Am Chem Soc J 69:2244 S '47
Some e.m.f. and conductance measurements in concentrated solutions of zinc and calcium chlorides. R. A. Robinson and R. O. Farrelly. bibliog J Phys & Colloid Chem 51:704-8 My '47

ACTORS and actresses
See also
Actors' equity association

Biography
Who's who in the theatre; a biographical record of the contemporary stage. J. Parker, comp. 10th ed rev 2014p $15 Pitman pub. corp, 2 W. 45th st, New York 19 '47

ACTORS' equity association
Boycott threat; Actors' Equity demands lifting of theatre ban on Negro patrons. Bsns W p86-7 My 3 '47

ACTUARIAL society of America
Annual meeting, New York, May 8-9. East Underw 48:5+ My 16 '47; Nat Underw (Life ed) 51:1+ My 16 '47; Weekly Underw 156: 1376 My 17 '47
Joint meeting with American institute of actuaries, Cincinnati. Nat Underw (Life ed) 50:1+ N 15 '46
Joint meeting with American institute of actuaries, Quebec, Oct. 1-3. East Underw 48:10-11 O 10 '47; Nat Underw (Life ed) 51:1+ O 10 '47

ACTUARIES. See Insurance actuaries

ACYLATION
Acylation studies in the thiophene and furan series. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1012-16 My '47
Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46
Acylations of esters with esters to form β-keto esters using sodium amide. J. C. Shivers, M. L. Dillon and C. R. Hauser. bibliog Am Chem Soc J 69:119-23 Ja '47
Higher fatty acid derivatives of proteins. W. G. Gordon, A. E. Brown and R. W. Jackson. bibliog Ind & Eng Chem 38:1239-42 D '46
Organic fungicides; preparation of some α-bromoacetamides. W. E. Weaver and W. M. Whaley. bibliog Am Chem Soc J 69:515-16 Mr '47
Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46
Studies in the imidazolone series; synthesis of a lower and a higher homolog of desthiobiotin and of related substances. R. Duschinsky and L. A. Dolan. bibliog Am Chem Soc J 68:2350-5 N '46

ADDER'S tongue. See Erythronium americanum

ADDES, George F. 1910-
Portrait. Bsns W p94 O 11 '47

ADDITION compounds
Addition of dinitrogen tetroxide to olefins. N. Levy, C. W. Scaife and A. E. W. Smith. diag Chem Soc J p 1093-104 D '46
Addition reactions in phospho-organic syntheses; addition of phosphorus pentachloride to olefins. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 68:2540-1 D '46
2-Butyne-1 : 4-diol; reactions involving the triple bond. A. W. Johnson. Chem Soc J p 1014-17 N '46
Dissociation of the addition compounds of trimethylboron with the ethylamines; configuration of the ethylamines. H. C. Brown and M. D. Taylor. bibliog il diags Am Chem Soc J 69:1332-6 Je '47
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H. Sisler and J. C. Cory. Am Chem Soc J 69:1515-19 Je '47
Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47
Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A. Morton, M. L. Brown and E. Magat. bibliog Am Chem Soc J 69:161-7 Ja '47
Polymerization; reaction of organosodium reagents with styrene and 1,1-diphenylethylene. A. A. Morton and H. C. Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47
Reactions of atoms and free radicals in solution; addition of bromotrichloromethane to olefins. M. S. Kharasch, O. Reinmuth and W. H. Urry. bibliog Am Chem Soc J 69:1105-10 My '47
Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47
Researches on acetylenic compounds; miscellaneous addition reactions of ethynyl ketones. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p945-8 O '46
Stability of multiply-bonded molecular addition compounds. R. K. Iler. Am Chem Soc J 69:724-5 Mr '47

ADENINE
New potential chemotherapeutic agents; experiments on the synthesis of 8-aminopurines. F. E. King and T. J. King. Chem Soc J p943-8 Jl '47
Production of experimental pellagra by adenine. S. B. Raska. Science 105:126-7 Ja 31 '47

ADENOSINE
Experiments on the synthesis of purine nucleosides; 9-β-*d*-mannopyranosidoadenine; a proof of the location of the sugar residue in adenosine. B. Lythgoe, H. Smith and A. R. Todd. Chem Soc J p355-7 Mr '47

ADENOSINE phosphates
Nucleotides; muscle adenylic acid and adenosine diphosphate. J. Baddiley and A. R. Todd. Chem Soc J p648-51 My '47
Structure of adenosine triphosphate. G. Fawaz and K. Seraidarian. bibliog Am Chem Soc J 69:966-7 Ap '47

ADENOSINE triphosphatase
Adenosinetriphosphatase activity of human serum. A. Meister. bibliog Science 106: 167-8 Ag 22 '47
Myosin and adenosinetriphosphatase in muscular activity. W. F. H. M. Mommaerts. Science 104:605 D 20 '46

ADENYLIC acid
Nucleotides; muscle adenylic acid and adenosine diphosphate. J. Baddiley and A. R. Todd. Chem Soc J p648-51 My '47

ADHESION
Adhesion between binders and individual rock-forming minerals. J. F. Douglas. bibliog Soc Chem Ind J 65:377-9 D '46
Adhesion tester for organic coatings. R. J. Phair. il Mech Eng 69:236 Mr '47

ADHESION—*Continued*
Adhesion testing of organic coatings; engineering file facts. G. Black. Materials & Methods 26:115 S '47
Improving the adhesion property of molded sponge rubber parts by grit blasting. L. J. Wieschhaus. il Rubber Age 61:443-4 Jl '47
Influence of composition on the adhesion of tin-base bearing alloys to steel. P. G. Forrester and L. T. Greenfield. il diags Engineering 163:322-4 Ap 18 '47

ADHESIVES
Adhesives and their part in building. il Am Bld 69:144-5 Ap '47
Adhesives used in plywood. Mod Plastics 24: 96 Ja '47
Bonding rubber to metal with Ty-Ply. R. Shattuck. il Rubber Age 61:451-4 Jl '47
Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
DuPont no. 5118 Fairprene adhesive cement. Chem Ind 59:858 N '46
Effect of the adhesive on the quality of paperboard. R. E. Green and others. bibliog il diag Paper Tr J 125:57-60 Jl 24 '47
Flexible organic adhesives as structural elements; Plastilock 500. D. L. Loughborough and F. D. Snyder. bibliog India Rubber World 115:84-7 O '46; Same. Mech Eng 68: 1053-5 D '46
Fundamentals of tackiness and adhesion; abstract. J. J. Bikerman. Mod Plastics 24: 152 Ag '47
German synthetic adhesives substitute for natural rubber. Product Eng 18:167-8 S '47
Handbag assembly requires a strong adhesive. il Mod Plastics 24:104-6 N '46
Laminating adhesives and their applications. A. Biddle. Paper Ind 28:1499-504 Ja '47
Loxite industrial adhesive compounds. Rubber Age 61:62 Ap '47
New adhesive requires no catalyst for use; developed by E. I. du Pont de Nemours & co. Materials & Methods 24:1568 D '46
New German adhesive; no. 319-J. Chem Ind 60:43 Ja '47
New specialties exploit chemical research; industrial adhesives. J. Delmonte. Chem Ind 61:401 S '47
Protein adhesives; growing industry based on plentiful raw materials. A. Frieden. il Chem Ind 59:835-7 N '46
La récente industrie de l'amidon adhésif aux États-Unis. Génie Civil 124:16-17 Ja 1 '47
Stored heat gluing method facilitates fabrication, reduces bonding time. Arch Forum 85:150 D '46
Thermal-expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Abstract. Product Eng 18:159 Ja '47
Two new adhesives announced by du Pont. Chem Eng 53:175 N '46
Water-resistant label adhesive. Chem Ind 61:250+ Ag '47
Wood-to-metal adhesives. T. D. Perry. bibliog il diags Mech Eng 68:1035-40 D '46

See also
Binding materials
Glue
Plywood
Resinous products—Adhesives

Manufacture

Synthetic resin adhesives do many jobs better and cheaper. A. Frieden. il Chem Ind 59:1002-4 D '46

Testing

Aminoplastic adhesives. J. Hofton. bibliog (22 patents) Chem & Ind p410-12 N 16 '46

ADIPIC acid
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47

ADIPONITRILE
Furfural is basis of new nylon process; abstracts. O. W. Cass. Oil Paint & Drug Rep 151:5+ Mr 31 '47; Mod Plastics 24:222-5 Ap '47
Nylon from corncobs; du Pont's electrochemicals department develops adiponitrile from furfural. S. D. Kirkpatrick. il Chem Eng 54:100-1 Ap '47
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47

ADJECTIVES
Word finder. J. I. Rodale, comp. 1317p $6.50 Rodale press, Allentown, Pa. '47

ADMINISTRATION
Ultimate science. R. E. Gillmor. Advanced Management 12:53-9 Je '47

See also
Management

ADMINISTRATION, Public
Arrangement of public administration materials? classification scheme and a list of subject headings for books and materials on public personnel administration, compiled by Library of United States Civil service commission. R. B. Rankin. Special Lib 37:330-1 D '46
Dangers of centralized big government. D. E. Lilienthal. Comm & Fin Chr 164:2897+ D 5 '46
Federal field service; an analysis with suggestions for research. E. Latham. 70p bibliog(p65-70) pa $1.50 Public administration service, Chicago '47
Manpower for public office. Economist 153:4-5 Jl 5 '47

See also
Highway administration
Public health administration

ADMINISTRATION of estates. See Executors and administrators

ADMINISTRATIVE procedure act, 1946
New law helps business deal with government agencies. D. L. Wilkins. Paper Ind 28:1148-9 N '46

ADMINISTRATORS and executors. See Executors and administrators

ADMIRALTY
Argue British ship carries British jurisdiction although in port of another country; injury to seaman. Weekly Underw 157:380 Ag 16 '47
Commissioner and District court on amount recoverable when ship value is under repair costs. East Underw 48:30 Je 20 '47
U.S. circuit court rules on valuation of constructive total losses of vessels in war. East Underw 48:33+ Ap 11 '47

ADRENAL bodies
Structure of adreno-cortical metabolites; $\Delta^{9:11}$-androstene-3 : 17-dione. C. W. Shoppee. Chem Soc J p 1134-7 D '46

ADRENAL cortical hormones. See Hormones

ADRENALINE carboxylic acid
Synthesis of β-(3 : 4-dihydroxyphenyl)-*N*-methylserine (adrenalinecarboxylic acid). C. E. Dalgliesh and F. G. Mann. Chem Soc J p658-62 My '47

ADSORBENTS
Dehumidification methods and applications. J. Everetts, jr. flow diag Heating-Piping 18:121-4 D '46
Purification of aqueous solutions. D. Ramondt. Chem & Ind p543-5 S 6 '47
Separation by adsorption, its current status and applications; Union Oil's new hypersorption process. il diags Chem Ind 61:625-31 O '47
Standardization of chromatographic adsorbents; rate of flow of developing solvent. A. L. LeRosen. bibliog Anal Chem 19:189-90 Mr '47

ADSORPTION
Active magnesia; adsorption of fluoride from aqueous solution. A. C. Zettlemoyer, E. A. Zettlemoyer and W. C. Walker. bibliog Am Chem Soc J 69:1312-15 Je '47
Active magnesia; surface areas and pore structures from nitrogen adsorption. A. C. Zettlemoyer and W. C. Walker. bibliog il Ind & Eng Chem 39:69-74 Ja '47
Active magnesia; X-ray versus nitrogen adsorption surface areas. A. C. Zettlemoyer and W. C. Walker. bibliog J Phys & Colloid Chem 51:763-7 My '47
Adsorption. A. B. Ray. bibliog(114 ref) Ind & Eng Chem 39:12-13+ Ja '47

ADSORPTION—*Continued*
Adsorption-desorption isotherm studies of catalysts; comparison of low temperature isotherms of ammonia and nitrogen. H. E. Ries, jr., R. A. Van Nordstrand and W. E. Kreger. bibliog Am Chem Soc J 69:35-40 Ja '47
Adsorption equilibria of liquid mixtures of carbon tetrachloride-methanol with charcoal. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1172-81 S '47
Adsorption from a fluid stream flowing through a stationary granular bed. O. A. Hougen and W. R. Marshall, jr. bibliog Chem Eng Prog 43:197-208 Ap '47
Adsorption isotherm for determination of barium in quantities as low as 10^{-10} gram atom. M. H. Kurbatov and J. D. Kurbatov. Am Chem Soc J 69:438-41 F '47
Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25°C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1154-71 S '47
Adsorption mechanism hypothesis. W. C. Pierce. Chem & Eng N 25:1942 Jl 7 '47
Adsorption of butadiene on activated charcoal. H. N. Taylor and C. F. Bonilla. bibliog diag Ind & Eng Chem 39:871-6 Jl '47
Adsorption of hydrogen and nitrogen on chromium oxide gel. P. H. Emmett and M. Cines. bibliog Am Chem Soc J 68:2535-6 D '46
Adsorption of hydrogen on tungsten powders. G. Halsey and H. S. Taylor. J Chem Phys 15:624-30 S '47
Adsorption of water vapor by untanned hide and various leathers at 100° F. J. R. Kanagy. bibliog il diag J Res Nat Bur Stand 38:119-28 Ja '47
L'alumine activée; sa préparation, ses propriétés, sa nature. H. Thibon and others. Chimie & Ind 57:117-25 F '47
Chemisorption of gases. S. Weller. J Chem Phys 15:336 My '47
Chromatographic and spectral characteristics of some polythienyls. J. W. Sease and L. Zechmeister. bibliog Am Chem Soc J 69: 270-3 F '47
Decolorization of petroleum waxes by adsorbent percolation. W. A. Johnson. bibliog diags Pet Processing 2:673-4+ S '47
Design and use of adsorptive drying units. R. C. Amero, J. W. Moore and R. G. Capell. bibliog(126 ref) diags Chem Eng Prog 43:349-65; Discussion. 365-70 Jl '47
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Effect of heat-treatment on the sorption-desorption hysteresis characteristics of silica gel. W. O. Milligan and H. H. Rachford, jr. bibliog J Phys & Colloid Chem 51:333-59 Ja '47
Effect of physical adsorption on the electrical resistance of activated carbon. R. McIntosh and others. bibliog diag J Chem Phys 15: 17-27 Ja '47
Ethylene adsorption isotherms at -183°. R. L. Burwell, jr, P. A. Smudski and T. P. May. bibliog diag Am Chem Soc J 69: 1525-9 Je '47
Experimental arguments against the concept of chrome tanning as an adsorption process. K. H. Gustavson. bibliog J Phys & Colloid Chem 51:1181-8 S '47
Heterogeneity of catalyst surfaces for chemisorption; zinc oxide. H. S. Taylor and S. C. Liang. bibliog Am Chem Soc J 69:1306-12 Je '47
Hypersorption, new fractionating process. C. Berg and W. E. Bradley. il diags Pet Eng 18:115-16+ My '47
Hypersorption process for separation of light gases. C. Berg. il diags Pet Processing 2: 300-1+ Ap '47
Length changes of activated carbon rods caused by adsorption of vapors. R. S. Haines and R. McIntosh. diags J Chem Phys 15:28-38 Ja '47
Limitation of the determination of surface area by the point *B* method. L. White, jr. J Phys & Colloid Chem 51:644-7 My '47
Magnitude of the experimental error in the adsorption of nitrogen at 78°K on various surfaces. W. V. Loebenstein and V. R. Deitz. J Chem Phys 15:687-8 S '47
Multilayer gas adsorption on composite surfaces. W. G. McMillan. bibliog J Chem Phys 15:390-7 Je '47
Nitrogen-containing organic inhibitors of corrosion. S. Ch'iao and C. A. Mann. bibliog diags Ind & Eng Chem 39:910-19 Jl '47
Photosensitive adsorption of water vapour on wool. N. F. H. Bright and T. Carson. Soc Chem Ind J 65:258 S '46
Purification of streptomycin salts by means of alumina. G. P. Mueller. bibliog Am Chem Soc J 69:195-200 F '47
Radial chromatography in industry. P. P. Hopf. diag Ind & Eng Chem 39:938-40 Ag '47
Rate of adsorption of phosgene and chloropicrin on charcoal. M. Dole. bibliog J Chem Phys 15:447-54 Jl '47
Redistribution and desorption of adsorbed gases. R. F. Barrow and others. Chem Soc J p401-16 Mr '47; Abstract. Chem & Ind p391 O 26 '46
Relationship between the Brunauer-Emmett-Teller adsorption isotherm and the new isotherm of Jura and Harkins. H. K. Livingston. bibliog J Chem Phys 15:617-24 S '47
Separation by adsorption, its current status and applications; Union Oil's new hypersorption process. il diags Chem Ind 61:625-31 O '47
Separation of cis-trans isomers by adsorption; abstract. H. P. Kaufmann and W. Wolf. Paint Oil & Chem R 110:27 Mr 6 '47
Solubility and melting point as functions of particle size; induction period of crystallization. L. Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47
Some properties of the radiation from radiomanganese 54 and the adsorption of manganous manganese on hydrous ferric oxide. D. H. Anderson. J Phys & Colloid Chem 51:956-62 Jl '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46
Sorption of hydrogen on alumina. A. S. Russell and J. J. Stokes, jr. bibliog Am Chem Soc J 69:1316-19 Je '47
Sorption of water vapor by high-polymers. S. E. Smith. bibliog Am Chem Soc J 69:646-51 Mr '47
Studies of the physical properties of hardened portland cement paste. T. G. Powers and T. L. Brownyard. bibliog il diags Am Concrete Inst J 18:101-32, 249-336, 469-504, 549-602 O '46-Ja '47
Vapor-phase sorption study of iodine and active magnesium oxide utilizing the McBain-Bakr sorption balance. R. C. Dunn and H. H. Pomeroy. bibliog J Phys & Colloid Chem 51:981-4 Jl '47

See also
Absorption
Chromatographic analysis

ADSORPTION, Heat of
Adsorption from fluid stream flowing through a stationary granular bed. O. A. Hougen and W. R. Marshall, jr. bibliog Chem Eng Prog 43:197-208 Ap '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Heats of adsorption on carbon black. R. A. Beebe and others. bibliog diag Am Chem Soc J 69:95-101 Ja '47

ADSORPTION apparatus
Adsorption; new equipment. C. Berg. il Chem Ind 61:410-11 S '47
Assembly and testing of 52-foot laboratory adsorption column; separation of hydrocarbons by adsorption. B. J. Mair, A. L. Gaboriault and F. D. Rossini. bibliog plans diags Ind & Eng Chem 39:1072-81 S '47
Radial chromatography in industry. P. P. Hopf. diag Ind & Eng Chem 39:938-40 Ag '47

ADULT education. See Education of adults

ADVERBS
Word finder. J. I. Rodale, comp. 1317p $6.50 Rodale press, Allentown, Pa. '47

ADVERTISEMENTS
Ad that has lived for 18 years; ὁ οἰκονομικὸς E. E. Calkins. Adv & Sell 39:60 D '46
Annual advertising awards, 1946. il Adv & Sell 40:4-40 Mr '47
Choosing the format. M. Wiseman. il Adv & Sell 39:94+ N '46
Exhibit based on folder for salesmen. il Ptr Ink 220:120 S 19 '47
New high; Associated Seed Growers ad. Aesop Glim. Ptr Ink 218:44 Ja 17 '47
Prophecy, 1922; International correspondence schools aviation copy. P. V. Barrett. Ptr Ink 219:47 Ap 11 '47

See also
Calendars
Package inserts

Books and booklets

Cannon's man-hunt for 60,000 industrial prospects for connectors. Sales Management 59: 100 Jl 15 '47
Consider booklets for your public relations. C. Judson. il Ptr Ink 219:40-2 Je 6 '47
Delta uses sales promotion booklet to describe versatility of tools. il Ind Marketing 31: 72+ D '46
Industrial advertiser publishes textbook about its product; Moore special tool co.'s text about metal-working industry. R. H. Ganly. il Ptr Ink 220:38-9 Jl 4 '47
Laundry tips booklet is sell-out for Silex steam iron. il Sales Management 58:140 F 15 '47
Manufacturers can be educators. E. Booth. bibliog J Retailing 23:89-90+ O '47
Merchandising a company-sponsored textbook; Cincinnati milling and grinding machine. H. J. Dods. Ptr Ink 219:62 Je 20 '47
Merchandising ready mixed concrete; booklet issued by Whitney ready mixed concrete. il Concrete 55:9+ O '47
Story behind a trademark; New Jersey zinc company's booklet. R. Davison. il Ind Marketing 32:41-2+ Je '47
Ten ways to put prestige into your printed salesmanship. D. Ross. Ptr Ink 220:73 S 19 '47
Transparency printing solves technical sales problem; Eaton axles. R. H. Gale. il Ptr Ink 217:56+ N 15 '46
Two promotions gets distributors for new appliance line; Cafex kitchen appliances uses page in trade journal and direct mail booklets. Ptr Ink 219:52 Je 6 '47
What's new in booklets. il Sales Management 59:40-1 O 15 '47
When it takes a book to tell all, write it! machine tool builder wrote technical best-seller. F. Wittner. il Ind Marketing 32:51-2+ Ag '47

Collections

Advertising illustrations in Drepperd collection date back to 18th century. il Ptr Ink 217:147 N 15 '46

Copyright

See Copyright—Advertisements

Coupons

How coupon returns help us locate markets; reveal facts about media; Mullins manufacturing co. advertising of Youngstown kitchen. M. Adams. Ptr Ink 219:40-1 Je 20 '47
How news affects coupon returns. M. Adams. Ptr Ink 219:116-17 Ap 18 '47
Packaged savings make attractive offer for bank; Bowery savings bank. H. L. Stephen. Ptr Ink 220:60+ Jl 25 '47
There is a relation between readership and sales; readership studies can be used to increase coupon response. W. E. Weintz. Ptr Ink 219:33-5 My '47

Design

Design replaces art work; advertising men's apparel in spring campaign of F. Jacobson & sons. il Ptr Ink 218:82 Mr 28 '47
Elongated space. il Ptr Ink 218:42-3 F 28 '47
Flowery advertising design flourished fifty years ago. G. J. Church. il Inland Ptr 119: 32 My '47
For hanging in our gallery. il Ind Marketing 32:82+ S '47
Grafika; modern design for advertising and printing. I. Reiner. 120p $8.50 Paul A. Struck, 415 Lexington av, New York 17 '47
There are two different ways to look at it. G. J. Church. il Inland Ptr 119:40 My '47

Headlines

See Advertising copy—Headlines

Keying

Who is BHG-12? C. Rondomanski. Ptr Ink 219:82 My 23 '47

Layout

Ad layouts are best when design is clear and simple. D. E. Lathrop. il Ptr Ink 218:44-5 Mr 21 '47
How to copy advertising layouts and artwork honestly. F. Howley. il Inland Ptr 118: 79-80 D '46
Layout of heading is an important part of the ad. D. E. Lathrop. il Ptr Ink 219:38-9 Je 6 '47
Modern vs. fashionable layout in advertising. D. E. Lathrop. il Ptr Ink 221:40-2 O 24 '47
Technique of advertising layout. F. H. Young. rev ed 185p $5 Crown publishers, 419 Fourth av, New York 16 '46

Measurement

How N.A.E.A. standard meets mat shrinkage problem; newspapers to bill the exact space ordered by agencies in width by columns, depth by lines. K. T. Finn. Adv & Sell 40: 77+ Ap '47

Position

Advertisers seek positions by pressure and price; 18-point guide; P.I. jury of marketing opinion. C. J. Swan. Ptr Ink 220:37-9 S 12 '47
Another study shows copy more important than position; Progressive Grocer ads. R. Manville. il Ptr Ink 219:53 Ap 11 '47
Appropriate position ups sales, cuts costs for MacLevy. A. C. Kaye-Martin. Ptr Ink 218: 55-6 Mr 28 '47
How does position affect readership of ads? D. Starch. il Adv & Sell 40:35 Je '47
Ladies home journal reports results of no-position policy. Ptr Ink 218:34-6 F 28 '47
Old favorites win in position preference poll of advertisers; P.I. jury of marketing opinion sticks to formula, right-hand page, well forward. C. J. Swan. Ptr Ink 220: 32-4+ S 5 '47
Position and near-by editorial matter; 50-year records of ICS. P. V. Barrett. Ptr Ink 218:48-9 Mr 14 '47
Position in advertising is not everything, but it helps; P.I. jury of marketing opinion reports. C. J. Swan. Ptr Ink 220:27-9+ Ag 29 '47
What we know and don't know about the value of position. C. J. Swan. Ptr Ink 218: 32-3+ F 28 '47

Preprints

Preprint promotion to salesmen boosts sales, brings copy clues. K. B. Hopkins. il Ptr Ink 220:32-4 S 26 '47

Printing

Get those business-paper ad plates in on time! Ptr Ink 221:38-9 O 24 '47
Hints on selecting, preparing engraving copy. A. P. Salisbury. Ind Marketing 32: 138+ S '47
How copy writers can save their clients' money. R. E. Marsh. Adv & Sell 40:37 Jl '47
How Kodak gets superior engravings for its advertisements. Ptr Ink 220:62 Ag 15 '47
Just how good are plastic plates? experience for newspaper reproduction shows that they have advantages over both electros and mats. J. M. Secrest. il Ptr Ink 218:61+ Ja 3 '47

ADVERTISEMENTS—Printing—*Continued*
Use of photostats in advertising production. R. M. Hogan. il Ind Marketing 32:41-2 Ap '47

See also
Advertising, Mail—Printing

Rating

Can you pick the copy that clicked? R. Manville. Ptr Ink 217:48 D 20 '46
Credibility; judge an advertisement as salesman is judged; abstract. W. Weir. Adv & Sell 40:65 Jl '47
Factors that create attention and reading of advertisements; analysis of 2,500 advertisements. H. J. Rudolph. il Ptr Ink 221:33-5+ O 24 '47
Hog crossing America vs. the kid in upper four. C. E. Parks. Ptr Ink 218:100 Ja 24 '47
How to pre-value an ad before it appears in print. R. Manville. il Ptr Ink 217:40-3 N 29; 60+ D 6; 54+ D 13; 64+ D 20; 45-6+ D 27 '46; 218:41-2+ Ja 3; 48+ Ja 10; 46-8+ Ja 17; 51-2+ Ja 24; 48-9 Ja 31; 54+ F 7; 54+ F 14 '47
Which ad pulled best? P. V. Barrett. il Ptr Ink 218:42-3 Mr 28 '47
Which ads stopped women readers? J. Caples. Adv & Sell 39:46 D '46

Readership

Ad readership growing. Bsns W p57 D 7 '46
Ad research foundation reports on 100 studies. A. W. Lehman. il Ptr Ink 217:42-5 D 6 '46
ARF reports initial survey of farm publications; readership of the Ohio farmer. Ptr Ink 218:102 Mr 14 '47
Another study shows copy more important than position; Progressive Grocer ads. R. Manville. il Ptr Ink 219:53 Ap 11 '47
Best-read ads in the latest newspaper survey; Niagara Falls gazette. J. Caples. il Adv & Sell 40:42+ S '47
Cooperative readership surveys can help manufacturers get more efficient advertising. J. C. Spurr. Ind Marketing 32:41+ F '47
Do respondents tell the truth? media surveys. A. Politz. Adv & Sell 40:36-7+ My '47
Does publication size affect advertising readership? J. F. Arndt. Adv & Sell 40:42 Ag '47
Factors that create attention and reading of advertisements; analysis of 2,500 advertisements. H. J. Rudolph. il Ptr Ink 221:33-5+ O 24 '47
Farm men and women rate some ads tops. Ptr Ink 219:70+ Je 20 '47
Food ads win top places in latest readership study. Ptr Ink 218:84 Mr 28 '47
Good Housekeeping analysis of circulation and reader audience. Sales Management 58: 164 Mr 15 '47; Adv & Sell 40:78 Ap '47
Here's a new technique for testing readership; test of Progressive Grocer ads. R. Manville. Adv & Sell 40:46+ My '47
How does position affect readership of ads? D. Starch. il Adv & Sell 40:35 Je '47
How to write copy that will be read; short sentences, concreteness, personal style. R. Flesch. il Adv & Sell 40:113+ Mr '47
Informative ads outsell others by 3 to 1; analysis of 583 advertisements. D. Starch. il Adv & Sell 39:52+ D '46
Quiz on newspaper reading habits. J. Caples. Adv & Sell 40:35 My '47
Sword with many edges. Aesop Glim. Ptr Ink 220:80 S 12 '47
There is a relation between readership and sales; readership studies can be used to increase coupon response. W. E. Weintz. Ptr Ink 219:33-5 My '47
Think of circulation in terms of people, not numbers. D. D. Patterson. Ptr Ink 219: 78+ My 16 '47
Use of incremental analysis in the selection of advertising media. S. Banks. J Bsns 19: 232-43 O '46
What do farmers read? J. Caples. Adv & Sell 40:40-1 Jl '47

Repetition

Advertising copy; variegation or reiteration. H. Halsell. Adv & Sell 39:42 D '46
Does it pay to repeat an ad? tests say yes! Sales Management 59:120+ Jl 15 '47
Effectiveness of repeated advertisements. Ind Marketing 32:36-8+ S; 50-1+ O '47 (to be cont)
How often can you repeat an ad for maximum effectiveness? J. H. Thomson and others. Ind Marketing 32:48-50+ Jl '47
How radio spots led to newspaper spots; small-space advertiser calls repetition key to success; Monarch foods. Ptr Ink 218:42 F 21 '47
Never underestimate the power of repetition! B. E. Tacks. Sales Management 59:160+ S 15 '47
Repetitive or informative copy? A. H. Peron. Adv & Sell 40:34 F '47

Reprints

Direct-mail package of ad reprints and calendar blotters builds business for Penn Mutual's 360 agents. Ptr Ink 219:64+ Je 20 '47
More sales power from your advertising. D. Ross. Adv & Sell 40:56+ Je '47

Signatures

Era of restraint? small name displays. Aesop Glim. il Ptr Ink 217:117 D 6 '46

Size

See also
Advertisements, Small space

Testing

Agency personnel become guinea pigs again with new accounts and new products to test. B. Tolk. Ptr Ink 220:107 S 5 '47
Copy research experts weigh test methods, offer evaluation in new pamphlet. C. J. Swan. Ptr Ink 220:88 Jl 4 '47
Copy-testing technique for a small rural store. H. G. Bierer. J Retailing 23:38-42 Ap '47
How to avoid tricky factors in pre-evaluating an ad program. R. Manville. il Ptr Ink 218:54+ F 14 '47
Sample hounds can be prevented from upsetting split-run research. F. B. Satterthwaite. Ptr Ink 220:70 Ag 22 '47
There is a relation between readership and sales; readership studies can be used to increase coupon response. W. E. Weintz. Ptr Ink 219:33-5 My '47
Which ad pulled best? P. V. Barrett. il Ptr Ink 218:42-3 Mr 28 '47

See also
Advertisements—Readership
Advertising, Mail—Testing

Typography

Logotype goes to work; Independent pneumatic tool company. J. F. Corkery. il Ind Marketing 31:53+ D '46
Nine little foxes that eat up the profits. A. R. Hopper. il Ind Marketing 32:64-5+ Jl '47
Orchestration of type. A. R. Hopper. il Ind Marketing 32:34-8 Mr '47
Personalities in type designs. J. M. Secrest. il Ptr Ink 218:52-3 F 14 '47
Type for books and advertising. E. M. Ettenberg. 160p $6 D. Van Nostrand co, 250 4th av, New York 3 '47

ADVERTISEMENTS, Classified
Classified ads work if used properly. B. Wyckoff. Ptr Ink 217:39 D 27 '46

Want ads

Every copy writer should write a classified ad. S. D. Cowan, jr. Ptr Ink 219:128 My 30 '47

ADVERTISEMENTS, Humorous
Humor highlighted in delicatessen advertising. C. B. Jellinghaus. il Adv & Sell 40:67 S '47

ADVERTISEMENTS, Pictorial
Advertisers get ideas from Metropolitan museum of art. C. J. Swan. il Ptr Ink 219: 35-7 My 2 '47
American bazaar; gallery of art of American salesmanship. il Fortune 36:108-21 N '47
Art stirs desire to travel; copy sells travel by air. il Ptr Ink 217:117 N 15 '46
54 ways to combat rising production costs. H. Bauer. il Ptr Ink 218:37-9 Mr 7 '47

ADVERTISEMENTS, Pictorial—*Continued*

How to save money on art work and electrotypes; 14 hints on relations with artists; ordering electrotypes. H. Bauer. il Ptr Ink 218:40-1 Mr 14 '47

Illustrations. M. Wiseman. Adv & Sell 40: 74+ F; 126+ Mr '47

Peeling campaign; zippers. G. Conover. il Ptr Ink 218:39 Mr 14 '47

Research heads off historical anachronisms for Hollywood; technique might well be applied by advertisers. il Sales Management 59:118+ O 1 '47

Transparency printing solves technical sales problem; Eaton axles. R. H. Gale. il Ptr Ink 217:56+ N 15 '46

Women vs. horses. Ptr Ink 218:58 Ja 17 '47

See also
Advertising art
Posters

Cartoons

Egg carton promotion, ad medium to sell eggs and many other products. il Mod Packaging 20:108-9+ Ag '47

Introduces new soap by kidding soap advertising; with not much of product available for sale, manufacturer chose this way to keep name before the public. L. F. Thomann. Ptr Ink 218:57 Ja 10 '47

Drawings

Farmers resent poor or ridiculous illustrations. J. D. Andrews. il Ptr Ink 220:61-2 Jl 4 '47

Paintings

Full-color art: $30,000; space: $40,000; results: fine; Electronic laboratories, Indianapolis. H. E. Green. il Ptr Ink 217:46-7 D 6 '46

Greenfield marks 75th anniversary by changing from kodachromes to historical full color paintings. il Ind Marketing 32:42+ Mr '47

Photographs

How Kodak gets superior engravings for its advertisements. Ptr Ink 220:62 Ag 15 '47

LeTourneau tells how its ad campaign is tailored to reach export markets. J. G. Van De Loo. il Ind Marketing 32:132+ O '47

Preparation of food for illustration. A. Given. Am Gas Assn Proc 1946:200-1

Sometimes the best models aren't models. C. Rondomanski. Ptr Ink 218:125 Mr 28 '47

Safety aspects

Hazards in the ads; many national advertisers check illustrations for compliance with safety standards. N. Burch. Nat Safety N 56:20-1 Jl '47

ADVERTISEMENTS, Small space

How radio spots led to newspaper spots; small-space advertiser calls repetition key to success; Monarch foods. Ptr Ink 218:42 F 21 '47

Making a midget ad budget do the work of a giant; Acme fishing tool co. small-space campaign. J. H. Warburton. il Ptr Ink 220:62+ S 5 '47

$1,000 test campaign sold hard-to-get buyers; small newspaper space created enough demand to sway department stores to stock Black Magic perfume. K. Rader. il Ptr Ink 217:54+ D 6 '46

Plus uses for small space. C. Judson. il Ptr Ink 218:42-3 F 14 '47

ADVERTISERS

G-E, Westinghouse, General Motors top buyers of business space; 250 leading advertisers. Ind Marketing 32:27-30+ F '47

It takes all kinds; cartoons. B. Owen. Ptr Ink 219:40 My 30 '47

Leading advertisers of 1946 and their expenditures; 777 companies invested $501,597,854 in magazines, farm papers and network radio. Ptr Ink 219:47-8+ Ap 18 '47

20 excuses of weak-kneed advertisers. C. C. Chamberlain. Ptr Ink 219:31-2 Je 13 '47

What agencies think of the advertisers they solicit. E. J. Dever, jr. Ptr Ink 219:40-2 Ap 25; 50+ My 2; 48+ My 9; 50-1 My 16; 44+ My 23 '47

ADVERTISING

Cole agency reviews the fundamentals of advertising. M. E. Maxfield. Ptr Ink 220: 40-1 Jl 18 '47

Is advertising up to the job ahead? M. Ancker. Adv & Sell 40:46 Ap '47

Magic formula for advertising success; time, talent, training, sweat, struggle. H. Stebbins. Ptr Ink 218:37-8 F 14 '47

Manufacturing to pace 1947 ad campaigns; agencies and media weigh new year problems. Ptr Ink 217:71+ D 27 '46

1946; a review of how its turmoil affected advertising. il Ptr Ink 218:25-8 Ja 3 '47

On the threshold; a department devoted to problems of the beginner in advertising. M. Wiseman. Adv & Sell 39:104+ D '46; 40:72+ Ja; 74+ F; 126+ Mr; 50+ Ap; 64+ My; 72+ Je; 60+ Jl; 56+ Ag; 69+ S; 60+ O '47

Pattern for post-war advertising. A. Kimball. Ptr Ink 219:99 Ap 11 '47

Position of advertising stressed in talks. E. G. Borton; G. D. Wever; D. Jones. Adv & Sell 40:56 Ap '47

Three-year study finds advertising influence on press freedom is negligible. Ptr Ink 218: 83+ Mr 28 '47

What happened to the dreamworld? to that thermoplastic, aerodynamic, supersonic, electronic, gadgetonic world the admen promised? il Fortune 35:90-3+ F '47

What is advertising? Aesop Glim. Ptr Ink 220:74 Ag 1 '47

See also
Advertisements
Advertising agencies and other headings beginning Advertising
Airships in advertising
Audit bureau of circulations
Bank advertising
Catalogs
Church advertising
Color in advertising
Employment systems —Advertising aids
Government advertising
House organs
Merchandizing
Moving pictures in advertising
Municipal advertising
Premiums (merchandizing)
Publicity
Radio advertising
Sales letters
Show windows
Television advertising
also subdivision Advertising under special subjects, e.g.
Building trades
Cleaning industry
Gas industry
Hats
Insurance
Insurance, Life
Insurance agents
Medicines, Proprietary
Motor bus lines
Oil companies
Perfumery
Railroads
Retail trade
Technical products
Trust companies
Wine

Accounting

Effective expense control for advertising and catalogs. A. C. Count. Ind Marketing 32: 60+ Jl '47

Architects, Appeal to

How advertising pre-sells Gypsum's partition systems. J. J. Ryan. il Sales Management 57:73-4 N 10 '46

Bibliography

Useful guides. Adv & Sell 40:112 Jl '47

Chain stores, Appeal to

Can you sell the chains without antagonizing the independents? J. C. Cumming. il Sales Management 58:79+ Mr 15 '47

Children, Appeal to

Eight points for promotion to children; Chevrolet revives famous soap box derby. il Ptr Ink 217:46-8 N 15 '46

Juvenile appeal; research backing new Homix labels. il Mod Packaging 20:148-9 Mr '47

Point-of-sale promotion features young movie stars; Cinderella hat co. il Ptr Ink 220:38 Ag 22 '47

See also
Advertising—Youth, Appeal to

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Continuity

Continued advertising despite shortages pays dividends; Monarch steel company, Indianapolis. S. W. Terry. Ptr Ink 220:33 Jl 4 '47

Courageous advertising bridges strike crisis for Allis-Chalmers. il Sales Management 59:104+ Ag 1 '47

How to create year-round markets for seasonal items; advertise all year, educate dealers, offer special inducements. Ptr Ink 219:48+ Ap 25 '47

Ten messages for weak-kneed advertisers from successful users. Ptr Ink 220:27-9+ Jl 18 '47

Time to stop advertising is when you want to go out of business. J. R. Gilman. Ptr Ink 220:27-8 Ag 1 '47

Cost

Cost of advertising; comment on report of National institute of economic and social research; with selected statistics. Economist 151:822, 852 N 23 '46

Easy production way is often the best way. F. H. Pinkerton. Ptr Ink 218:86 F 14 '47

54 ways to combat rising production costs. H. Bauer. il Ptr Ink 218:37-9 Mr 7; 40-1 Mr 14 '47

How to save money when ordering printing; check list of 17 points. H. Bauer. Ptr Ink 218:37 Mr 21 '47

One cost that cannot be appraised. F. B. Godley. Ptr Ink 218:138 Ja 17 '47

Rising advertising costs discussed. P. S. Ellison and J. C. Cornelius. Adv & Sell 39:52+ N '46

Today's advertising dollar delivers better results; but it takes more chips. C. G. Mortimer, jr. Adv & Sell 39:41-2+ D '46

Twenty ways to cut higher advertising costs. D. D. Patterson. Sales Management 58:112+ Je 1 '47

Weiss blast at high cost of advertising may create a stir. Ptr Ink 218:105 F 7 '47; Discussion. 218:83+ F 21 '47

See also
Advertising—Rates

Dealer cooperation

Courageous advertising bridges strike crisis for Allis-Chalmers. il Sales Management 59:104+ Ag 1 '47

Kit offers sales tips for retailers; Pepperell's kit. il Sales Management 58:106 My 20 '47

Koret adds new twist to Hollywood fashion tie-ins. il Sales Management 58:76+ Ap 15 '47

New product introduced despite small budget; cooperative newspaper and direct-mail advertising; Kleen Flush. D. Markstein. Ptr Ink 218:74 F 21 '47

Salisbury dealers hitch spot radio to net program. Sales Management 59:74+ O 1 '47

This program increased dealer advertising 940 per cent; Allis-Chalmers tractor division. M. O. Gustafson. il Ptr Ink 219:42-3 Ap 11 '47

12 fundamentals for preparing retail ad mats. M. Sutton. il Ptr Ink 218:50-1 F 14 '47

Dealer helps

Barrett furnishes its distributors with ad, sales promotion catalog. A. Bernstein. il Ind Marketing 32:106+ Je '47

Merchandise your sales helps, and dealers will pay for them; experience of Williams oil-o-matic. J. H. Read. il Ptr Ink 217: 40-1 D 13 '46

Million for promotion spent in two months; Chevrolet sales contests and service promotion. D. G. Baird. il Sales Management 59: 60+ O 15 '47

Program to help retailers benefit from national ads. Ptr Ink 218:116 Ja 24 '47

See also
Advertising, Point-of-sale

Dealers, Appeal to

Dealer is often the important ingredient. C. Rondomanski. Ptr Ink 217:118 N 15 '46

Direct-mail campaign gets national dealerships; Regal manufacturing co., South Gate, Calif. J. H. Zebrowski. Ptr Ink 217: 68+ N 15 '46

$5,070 advertising builds $500,000 business in 1 year; direct mail and business publications teamed to sell furniture; food service equipment industry. W. H. Davis. Ptr Ink 219:36 My 30 '47

How does Main Street regard your advertising? D. Ross. il Adv & Sell 40:46+ Ag '47

Light treatment of copy and art in trade ads; Proctor Electric. il Ptr Ink 217:45 D 20 '46

Sold: 50,000 pieces of ready-to-wear in seven days; Koret of California. E. Gidlow. il Sales Management 59:44-6 O 15 '47

Talk profit to retailers; 33 ways to put $$$ into business-paper advertising. C. J. Swan. il Ptr Ink 219:35-7 Je 27 '47

$295 business-paper ad draws $60,000 worth of orders; Hanover wire cloth co. E. B. Frock. Ptr Ink 218:39 Ja 17 '47

When price cutting demoralizes market; point-of-sale folder and dollar bill help sell Flex-let watch bands. E. M. Housman. Ptr Ink 219:33 My 23 '47

Why some sales letters fail. E. M. Housman. Ptr Ink 218:45 Mr 7 '47

See also
Advertising—Chain stores, Appeal to

Definition

By way of definition. Aesop Glim. Ptr Ink 218:44-5 Ja 17 '47

Economic aspects

Advertising as an investment. A. C. Beane. Comm & Fin Chr 166:1535+ O 16 '47

Countercyclical fund for advertising. O. A. Keyser. Adv & Sell 40:34 Ap '47

Economics of industrial advertising; reprint of 1923 address. J. H. Neal. il Ind Marketing 32:33-4+ S '47

How advertising can spark production. F. B. Ryan, jr. Adv & Sell 40:118 Mr '47

How to sell advertising to management; prove that advertising techniques can reduce distribution costs. C. S. Wilkinson. Ptr Ink 217:35-7 N 22 '46

How U.S. prosperity hinges upon advertising. J. R. Gilman. Adv & Sell 40:33-4+ My '47

You can sell management, keep management sold if your approach is right. C. A. Petri. Ind Marketing 32:47+ Jl '47

Employees, Appeal to

Ads in plant-city newspapers show workers and public extent of strike-induced losses; Hinde & Dauch paper company, Sandusky. Ptr Ink 217:65 D 27 '46

Folder issued by Lakeside press to encourage employes to salt away some of their cash. Inland Ptr 118:45 Mr '47

Justifying cost of plant-town and similar employee advertising. J. W. De Wolf. Ptr Ink 219:86 My 23 '47

Personnel recognition promotion pays dividends; Lucky stores, inc. D. Murphy. Ptr Ink 219:94+ My 23 '47

Plant gives company facts in local ads. Factory Management 105:100-1 Je '47

Rockford NIAA chapter sparks employee information campaign. Ptr Ink 221:38-9 O 3 '47

Tools of advertising service the machinery of industrial and public relations; three-way organization at Falk corporation. L. Fox. il Ind Marketing 32:43-4+ Mr '47

Exhibitions

New display techniques highlight Paris ad show. il Ptr Ink 218:38 Ja 10 '47

Family of products

Advertising savvy pays off; flexible format, effective text and pictures, family identity help current Seamless rubber co. campaign click. R. H. Ganly. il Ptr Ink 220:36-7 S 5 '47

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Farmers, Appeal to

Farmers aren't hard to sell when approached properly; American Specialty vegetable washing machine. J. A. Ignat. il Ptr Ink 217:50-1 D 13 '46

Farmers like personalities and facts in advertisements; Lee poultry remedies. E. M. Housman. il Ptr Ink 217:48-9 D 6 '46

Farmers resent poor or ridiculous illustrations. J. D. Andrews. il Ptr Ink 220:61-2 Jl 4 '47

Service is keystone of G-E's farm radio success. G. E. Markham. Ptr Ink 218:52+ Mr 14 '47

Ten reminders for advertising to farmers. R. B. Smith. Ptr Ink 219:40-1 Ap 11 '47

What do farmers read? J. Caples. Adv & Sell 40:40-1 Jl '47

Fiction

Bid for a best-seller; I'll write a novel about advertising. H. Byer. Adv & Sell 39:48 N '46

See also

Radio advertising—Fiction, drama, etc.

History

Aesop Glim recalls 1918 to 1928 when there were four outstanding schools of advertising. Ptr Ink 220:54 Ag 29 '47

American bazaar; gallery of art of American salesmanship. il Fortune 36:108-21 N '47

Fifty years of advertising. E. E. Calkins. il Ptr Ink 220:41-3+ S 19; 38-40+ S 26; 221: 34-6+ O 3; 42-4 O 10; 48-50 O 17; 48-9 O 24 '47

Inquiries

Beware of catalog requests, if Lagos is their source. Ptr Ink 217:82 N 15 '46

Cards are effective for some direct mail. il Ptr Ink 219:74 My 23 '47

How coupon returns help us locate markets; reveal facts about media; Mullins manufacturing co. advertising of Youngstown kitchen. M. Adams. Ptr Ink 219:40-1 Je 20 '47

How national advertisers use sales letters for follow-up; examples of answers to inquiries in response to advertisements. C. J. Swan. Ptr Ink 220:32-4 Jl 11 '47

Neglect of inquiries is one war baby to eliminate; compares current practice with follow-up of national advertising in 1933, 1935 and 1940. C. J. Swan. il Ptr Ink 219: 29-31+ Je 6 '47

Sample hounds can be prevented from upsetting split-run research. F. B. Satterthwaite. Ptr Ink 220:70 Ag 22 '47

See also

Advertising, Industrial—Inquiries

Advertising, Mail—Inquiries
Follow-up systems

Jobber helps

Gray-Mills helps distributors conduct direct mail campaign. A. Bernstein. il Ind Marketing 32:66+ Mr '47

Improving distributor relations. K. H. Cummer. Ptr Ink 218:72+ Mr 21 '47

Jobbers, Appeal to

Aims small budget at jobbers' salesmen. Ptr Ink 221:108+ O 17 '47

Copy that clicked; Conlan Electric direct-mail 2-color booklet with letter, offer new customer exclusive distribution set-up. R. Manville. il Ptr Ink 219:48 Ap 4 '47

Two promotions get distributors for new appliance line; Cafex kitchen appliances uses page in trade journal and direct mail booklets. Ptr Ink 219:52 Je 6 '47

Laws and regulations

New anti-advertising rules. A. Crawford. Adv & Sell 40:70 S '47

What you can deduct for advertising costs in your income tax returns. J. K. Lasser. Adv & Sell 39:58+ D '46

Market selection

Limited audience selection in headlines and copy. R. Manville. il Ptr Ink 217:60+ D 6 '46

Mailings sell air service to specific prospect groups. J. W. Austin. il Sales Management 59:59-60 Ag 1 '47

Specific, personalized copy pays dividends for A. B. Dick; mimeograph maker. il Ind Marketing 32:42-3+ Ja '47

Measurement

Formula for evaluating industrial advertising from inquiries. P. A. Amundsen. Ind Marketing 32:37-8+ Ja; 39-40+ F; 45-6+ Mr '47

How to evaluate and compare advertising media. A. Politz. Adv & Sell 40:35+ Ap '47

How would you like to measure the sales power of your advertising? R. H. Ganly and R. D. Crisp. Ptr Ink 220:44+ S 26 '47

Measurement of advertising results. H. V. Roberts. J Bsns 20:131-45 Jl '47

Think of circulation in terms of people, not numbers. D. D. Patterson. Ptr Ink 219:78+ My 16 '47

Use of incremental analysis in the selection of advertising media. S. Banks. J Bsns 19:232-43 O '46

What is an audience? L. Warner. il Adv & Sell 40:35+ Jl; 41-2+ Ag; 39-40+ S '47

Objectives

Advertising's real job is to build recognition. A. R. Venezian. Adv & Sell 40:56+ My '47

Rifle shot appeal to specific markets; Louisiana slants its advertising to each type of desired industry. Sales Management 58:117 Je 1 '47

16 ways to back sales with spot radio in selected markets. T. R. Cox, jr. Sales Management 57:57-8+ D 15 '46

Text organization, the lead. M. Wiseman. Adv & Sell 40:50+ Ap '47

Physicians, Appeal to

Advertising savvy pays off; flexible format, effective text and pictures, family identity help current Seamless rubber co. campaign click. R. H. Ganly. il Ptr Ink 220:36-7 S 5 '47

Planning

How magazine advertising can be made more effective; selecting magazines, planning the approach, preparing advertising. H. B. West. Adv & Sell 40:37-8+ O '47

How to use research as a management tool; six important ways. D. R. G. Cowan. Adv & Sell 40:44+ F '47

Plan your ad appropriation stone by stone; build well, big enough for today's job. R. D. La Fond. Ind Marketing 32:49-50+ Ag '47

Prize contests

Brand name contest for hardware retailers Ptr Ink 221:80 O 17 '47

Contests help to improve public relations. V. J. Dallaire. il Ptr Ink 217:48-9 N 22 '46

Eight common illusions about contests. E. M. Rushmore. il Ptr Ink 221:40-1 O 10 '47

Eight points for promotion to children; Chevrolet revives famous soap box derby. il Ptr Ink 217:46-8 N 15 '46

How to avoid making a lottery of your contest; postal laws. F. J. Woods. Ptr Ink 217:138+ N 15 '46

Industrial advertiser timidly tries a contest; it worked! Pittsburgh Equitable Meter. W. A. Marsteller. il Ptr Ink 219:45+ Je 27 '47

Kroger promotes for profit; grocery chain advertising national brands. il Bsns W p62+ O 11 '47

Primer on prize contests. F. Waggoner. il Sales Management 59:85+ Jl 15 '47

What's your problem? H. J. Swart. Ptr Ink 220:104 S 19 '47

Which shall we choose, premium or contest? E. Rushmore. Sales Management 58:108-9 My 20 '47

Psychology

Advertising copy that gives people what they really want. R. Manville. il Ptr Ink 217: 54+ D 13 '46

People are like that; writing something an average 14-year-old can understand and believe. Aesop Glim. Ptr Ink 218:51 Ja 3 '47

Pocketbook nerve, and others. Aesop Glim. Ptr Ink 219:64+ Ap 11 '47

ADVERTISING—Psychology—*Continued*
Psychology in market research. E. Dichter. Harvard Bsns R 25 no 4:432-43 [Jl] '47
Sponsor identification not necessary to ad effectiveness. M. N. Chappell. Ptr Ink 219: 48-9 My 16 '47
What makes advertising tick? O. Kleppner. Ptr Ink 219:48+ My 30 '47

Public attitude

America's young people want honest, informative advertising; AFA contest essays. Ptr Ink 219:44 Je 20 '47
Consumers' ill will surveyed by Committee on consumer relations in advertising, inc. Bsns W p38+ My 17 '47
Consumers want more data on products in national advertising copy, study shows. Ptr Ink 219:97+ My 16 '47
Greatest hidden asset in agency balance sheets. H. E. Abt. Adv & Sell 40:70+ Jl '47

Rates

Ad argument; some newspapers dislike retailers' tie-ins that plug Life magazine. Bsns W p63-5 Je 14 '47
Advertising rates in business papers are too low. J. K. Lasser. Ptr Ink 220:38-40 S 19 '47
Increased circulations, how to make advertising dollar work harder and secondary readership studies. J. C. Cornelius. Adv & Sell 39:52+ N '46
Inquirer ad ban stirs controversy. Ptr Ink 219:83+ My 30 '47
NRDGA acts to clarify NAEA resolution on magazine tie-ins. D. Bruner. Ptr Ink 220: 81 Ag 1 '47
Will business papers survive a drop in income? J. K. Lasser. Ptr Ink 220:35-7 S 26 '47
Word on advertising rates. R. O. Eastman. Ind Marketing 31:114+ N '46

Returns

Ad program integrates spot, magazines and point-of-sale; Durham-Enders razor corp. il Ptr Ink 219:42-3 My 9 '47
Advertising helps build insurance premium volume; Industrial indemnity company, San Francisco. T. G. McGuire. Ptr Ink 220:36-7 Ag 29 '47
Copy that clicked; Federal Laboratories lawn edger. R. Manville. il Ptr Ink 219:46 My 9 '47
Didn't believe in advertising, tried it, now he does; Western Lace nylon fishing lines. L. F. Thomann. il Ptr Ink 220:37 Ag 1 '47
$5,070 advertising builds $500,000 business in 1 year; direct mail and business publications teamed to sell furniture; food service equipment industry. W. H. Davis. Ptr Ink 219:36 My 30 '47
Gas range ads hit cooperative jackpot; American gas association is getting five-to-one return on its national advertising investment. R. Alderman. il Adv & Sell 40:39+ O '47; Same. Am Gas Assn Mo 29:536-8 D '47
How Henry Cobbs used advertising to turn $10 into $2,000,000; markets citrus fruit by mail, through own stores and through independent retail stores. J. A. Murphy. il Adv & Sell 40:35+ F '47
How news affects coupon returns. M. Adams. Ptr Ink 219:116-17 Ap 18 '47
Informative ads outsell others by 3 to 1; analysis of 583 advertisements. D. Starch. il Adv. & Sell 39:52+ D '46
$1,000 test campaign sold hard-to-get buyers; small newspaper space created enough demand to sway department stores to stock Black Magic perfume. K. Rader. il Ptr Ink 217:54+ D 6 '46
Over $500,000 in orders from one $1,500 ad; Wilson sports equipment company. F. M. Wilson. il Ptr Ink 219:43 My 23 '47
Protection of dealer's profit is keystone of Acme success; aggressive advertising. E. Brisacher. il Ptr Ink 220:56+ S 26 '47
Sold: 50,000 pieces of ready-to-wear in seven days; Koret of California. E. Gidlow. il Sales Management 59:44-6 O 15 '47

Salesmen, Retail, Appeal to

Newspapers used for intensive selling job; New Orleans Public Service advertises lighting to retail salesmen. D. Markstein. Ptr Ink 219:96 Ap 25 '47

Schedules

Box-score; study of Portland pay rolls by the Oregon journal. Ptr Ink 217:110 N 15 '46
Product sold seasonally, advertising follows seasons; McGregor sportswear (David D. Doniger & co.). map Ptr Ink 217:52 D 13 '46

Schools, Appeal to

How consumer educators built General Mills' new program. H. E. Green. Ptr Ink 220: 28-9 Jl 4 '47
Young America; receptive minds for the story of air transportation; United Air Lines working closely with schools and colleges. R. O. Mertes. il Sales Management 57:44-6 N 10 '46

Statistics

Advertising volume figures for December issues of business papers and totals for 1946 and 1945. Ind Marketing 32:70-1 Ja '47
Agencies place 458,425 pages of advertising in business papers in 1946; register 5.5 per cent gain; tabulation. Ind Marketing 32: 52+ Ap '47
Business paper advertising volume reaches $178 million in 1946. A. R. Venezian. Ind Marketing 32:29+ Ja '47
845 agencies place 19,723 pages of advertising in U.S. export publications during 1946. Ind Marketing 32:138+ Ap '47
823 business papers report advertising up 4.0%; Printers' Ink annual survey. Ptr Ink 218:48+ F 28 '47
Farm publications; advertising linage, three-year comparative totals. Ptr Ink 218:144 F 7 '47
G-E., Westinghouse, General Motors top buyers of business space; McGraw-Hill's 4½ year check of 182 publications. Ind Marketing 32:27-30+ F '47
Leading advertisers of 1946 and their expenditures; 777 companies invested $501,597,854 in magazines, farm papers and network radio. Ptr Ink 219:47-8+ Ap 18 '47
Leading newspaper advertisers in 1946. Ptr Ink 219:54+ My 23 '47
Magazine linage; total linage for five years. Ptr Ink 218:146+ F 7 '47
Media profits rose sharply in 1946. Ptr Ink 219:110+ Ap 25 '47
National advertising expenditure up 18 per cent in first six months. H. Zeisel. Ptr Ink 220:32-3 Ag 22 '47
National advertising index; graphs. Published in weekly numbers of Printers' ink
1946 advertising volume greatest in U.S. history. H. Zeisel. Ptr Ink 218:34-5 Mr 28 '47
1946; big year for advertising. Bsns W p70+ F 15 '47
P.I. advertising index in new form. H. Zeisel. Ptr Ink 218:52-4+ Mr 7 '47
Product expenditures of newspaper advertisers in 1946. Ptr Ink 219:60+ My 9 '47

Stockholders, Appeal to

Annual report grows up. J. C. Gries. il Ind Marketing 31:33-4+ N '46

Study and teaching

Directories

Directory of advertising and marketing education in the United States. 47p pa. $2.50 Advertising federation of America, 330 W. 42d st, New York 18 '47

Terminology

By way of definition. Aesop Glim. Ptr Ink 218:69 F 14; 60+ Mr 14 '47

Testing

See Advertisements—Testing; Advertising, Mail—Testing; Advertising campaigns—Testing

Women, Appeal to

Appeal to women featured in auto copy; Kaiser-Frazer stresses style and endorsements of fashion leaders. W. A. MacDonald. il Ptr Ink 221:45 O 10 '47

ADVERTISING—Women, Appeal to—*Cont.*
Birth of advertising ideas; Odorono. J. D. Woolf. il Adv & Sell 40:43+ S '47
Far from Fifth; women's resistance to anything new. M. O'Dea. Ptr Ink 220:78 Ag 8 '47
How to classify women as factors to be sold. M. B. Ellis. Adv & Sell 40:56+ Jl '47
Study of 22 magazines reveals shifts in women's interests; McCall surveys. D. E. Robinson. Adv & Sell 39:47-8+ D '46
Ten stages in selling the thrifty homemaker. M. B. Ellis. Adv & Sell 40:60+ Ag '47
Which ads stopped women readers? J. Caples. Adv & Sell 39:46 D '46
Which newspaper features attracted most women readers? J. Caples. Adv & Sell 40: 33-4, 121 Ja '47

Youth, Appeal to
Selling the youth market. il Bsns W p56+ O 4 '47

Buenos Aires
Magazine coverage study set for Buenos Aires. Ptr Ink 219:100 Ap 4 '47
Market and media data needed for foreign sales; pioneer experiment in Buenos Aires. E. R. Smith. Ptr Ink 219:46+ My 30 '47

California
Current output from California's war plants promises expanding ad campaigns in '47. L. F. Thomann. il Ptr Ink 218:108+ F 7 '47

Canada
Advertising volume of Canadian business papers for 1946 and 1945. Ind Marketing 32:74 Ja '47

China
Advertising in Shanghai. D. King. Adv & Sell 40:54 Ja '47

Finland
Plant-community advertising next door to Russia! Finland, Arabia company. F. Rudge. il map Ptr Ink 220:30-1 Ag 15 '47

Germany
Condition of advertising in four zones of Germany. G. Baier. map Adv & Sell 40: 48+ O '47
Posters reflect mood of post-war Germany. il Ptr Ink 220:35 S 5 '47

Great Britain
Cost of advertising; comment on report of National institute of economic and social research; with selected statistics. Economist 151:822, 852 N 23 '46

Hawaiian Islands
How Koret is cashing in on sales potentials in Hawaii. E. Gidlow. il Sales Management 59:80+ S 1 '47

Hungary
Advertising regulations. For Comm W 28: 18 Ag 30 '47

Latin America
Does South America need special ads? case for and against preparing specific copy and art for each export market. E. W. H Lumsden. Adv & Sell 40:60+ My '47
How Standard Brands advertises in Latin America. B. G. Taines and J. Beck. Ptr Ink 219:38-9 Ap 4 '47
How to advertise to Latin America. R. Colorado. Ind Marketing 32:39-40+ Mr '47
Sales promotion in Latin America. B. J. Taines and J. Beck. il Ptr Ink 217:50-2 D 6 '46
Spanish copywriters' assn. asks that Latin-America copy be written by those who know the people. Ptr Ink 220:100 Ag 15 '47

Mexico
Mexico asked to clarify ban on advertising. Oil Paint & Drug Rep 152:3 S 8 '47

Poland
Advertising regulations. For Comm W 28:20 Jl 26 '47

Russia
Selling the Soviet market. il Bsns W p100 Ja 25 '47

South Africa
South Africa's Bantu press as possible medium for merchandising messages. For Comm W 28:25 Jl 26 '47

Southern states
Advertising and promotion aids in expansion of southern industry. A. Sharp. il Ind Marketing 32:60+ Ja '47

Spain
Use of American advertising techniques increased in Spain since end of war. G. Ruescas. Ptr Ink 218:105 Ja 24 '47

ADVERTISING, Association
Advertising by associations is increasing; survey made by American trade association executives. J. D. Edwards. Ptr Ink 218:38+ Ja 24 '47
Belabored steel puts up million to tell public the truth. E. L. Ryerson. il Sales Management 59:37-9 S 15 '47
California's challenge to Seventh avenue. J. H. Collins. il Sales Management 58:42-4 Ap 1 '47
Coming boom in association advertising. V. D. Clausen. il Ptr Ink 218:35-7+ Ja 24 '47
Four-A's suggests ways to improve relations with associations. D. E. Joseph. Ptr Ink 218:39+ Ja 24 '47
Gas range ads hit cooperative jackpot; American gas association is getting five-to-one return on its national advertising investment. R. Alderman. il Adv & Sell 40:39+ O '47; Same. Am Gas Assn Mo 29:536-8 D '47
Here's one plan that's already working; cooperative advertising program; Plumbing appliance dealers' assn. il Dom Eng 169: 97-8 Ja '47
Home town campaign clicks; Racine manufacturers' newspaper, radio and direct-mail effort. W. D. Stansil. il Ptr Ink 218:46-7 Mr 21 '47
How A.M.A. uses television in its public relations. H. Cushing. il Adv & Sell 40:41+ Ap '47
How Durene achieves yarn identity in finished textile products; business papers and direct mail campaigns. il Sales Management 59:76+ S 15 '47
How sound an investment is trade association advertising? W. Mitchell, jr. Sales Management 59:130+ N 1 '47
Industrial PR program at the local level; Manufacturers' assn. of Jamestown, N.Y. L. Sanborn. Ptr Ink 218:40 Mr 7 '47
Margarine manufacturers to fight for market with continuing association and brand ads. W. H. Davis. Ptr Ink 218:72 Ja 31 '47
Meat institute planning to combat misinformation. Ptr Ink 220:94 S 12 '47
Members of the men's hat industry pull together to profit separately. T. Armstrong. il Sales Management 57:44-6 N 20 '46
Planned lighting program shows utilities way to heavier pay load. E. M. Kelley. il Sales Management 59:106+ Ag 15 '47
Rockford NIAA chapter sparks employee information campaign. Ptr Ink 221:38-9 O 3 '47
325 small brewers unite to get big-time advertising. J. Clark. Ptr Ink 217:52-3 N 15 '46
$250,000 promotion spurs savings bank thrift habit. Sales Management 58:88-9 Mr 1 '47
What big money advertising is doing for West Coast lumber. L. Newkirk. il Sales Management 59:78+ Ag 15 '47
What can local associations do about the cooperative advertising campaign. R. W. Elton. Paint Oil & Chem R 109:72-3 N 14 '46

ADVERTISING, Community. See Community advertising

ADVERTISING, Cooperative
How two national advertisers doubled promotion by tie-in; Cling Peach Board and Kraft Foods join forces. C. J. Swan. il Ptr Ink 220:38-9 Ag 8 '47
Louisiana advertises yam sweet potatoes. D. H. Halsey. Ptr Ink 218:80+ F 7 '47

ADVERTISING, Cooperative—*Continued*
16 manufacturers tell the story of industry; 52 employee and community relations page messages in Keokuk newspaper. R. A. Kling. Ptr Ink 217:43-4 D 20 '46

See also
Advertising, Association

Manufacturers and dealers

Chicago Tribune's new selective-area co-op plan gives retailers low-cost mass ad coverage. H. E. Green. Ptr Ink 219:86 Je 13 '47
How to prepare a dealer-manufacturer omnibus promotion; 27-page ad introducing new line of Drexel furniture. S. S. Preston, jr. il Ptr Ink 220:34-5 Ag 8 '47
Our co-op advertising is no dark-of-the-moon deal; J. P. Smith shoe co., Chicago. M. B. Cutler. Ptr Ink 217:101-2+ N 15 '46
23 questions about your cooperative advertising. M. Adams. Ptr Ink 218:29-31 F 21 '47

Tie-in advertisements

Tie-in ads continue rapid growth. B. Tolk. il Ptr Ink 221:86 O 10 '47

ADVERTISING, Direct

See also
Package inserts

ADVERTISING, Direct mail. See Advertising, Mail

ADVERTISING, Educational
Ads in plant-city newspapers show workers and public extent of strike-induced losses; Hinde & Dauch paper company, Sandusky. Ptr Ink 217:65 D 27 '46
Advertising can help settle labor disputes; case history. M. Davis. il Ptr Ink 217:77-8+ D 13 '46
Advertising council paves way for mass world-mindedness; potent world-trade stimulus envisaged by broad campaign. C. Cloyes. il For Comm W 27:3+ Je 7 '47
Advertising freedom. M. Adams. Adv & Sell 40:78 Jl '47
America, the uninformed. A. H. Motley. Sales Management 59:sup6-7+ N 1 '47
American investment; advertising campaign to inform Americans of current crisis in education. Sales Management 59:67+ O 1 '47
American way of life; advertising campaign of Dayton power & light company. K. C. Long. Pub Util 39:69-72 Ja 16 '47
Electric industry fights back; 170 companies use advertising to oppose government ownership. A. C. Spurr. Adv & Sell 39:47-8 S '46; Same cond. Pub Util 39:48-50 Ja 2 '47
Free enterprise, what is it and how does it work? Union oil co. of California advertisements. J. H. Collins. Sales Management 58:37-9 F 1 '47
Health education campaign is good public relations; Sharp & Dohme information on immunization of children. E. J. Dever, jr. il Ptr Ink 218:44-5 Mr 14 '47
Home town campaign clicks; Racine manufacturers' newspaper, radio and direct-mail effort. W. D. Stansil. il Ptr Ink 218:46-7 Mr 21 '47
How to create year-round markets for seasonal items; advertise all year, educate dealers, offer special inducements. Ptr Ink 219:48+ Ap 25 '47
How to get full value from goodwill advertising. H. C. Link. Adv & Sell 39:78+ N '46
How we built community support for the United nations; Calco division, American cyanamid co. G. B. Meynell. il Ptr Ink 220: 30-1+ S 26 '47
Industrial PR program at the local level; Manufacturers' assn. of Jamestown, N.Y. L. Sanborn. Ptr Ink 218:40 Mr 7 '47
Land of plenty, of what? Kearney & Trecker campaign. A. John. il Ind Marketing 32: 36-7+ Ap '47
Molding public opinion through advertising. D. Dudley. Ann Am Acad 250:105-12 Mr '47
Non-commercial network program builds good-will, sales; Greatest story ever told, sponsored by Goodyear. V. J. Dallaire. il Ptr Ink 220:36-7 Ag 22 '47
Oregon Grange merchandises its activities. W. A. Ayres. Ptr Ink 217:143-4 N 15 '46
Other states eye North Carolina's success in state-wide good health campaign. Ptr Ink 219:90 My 9 '47
People must be told! urges businessmen to counteract falsehoods. E. F. Hutton. Comm & Fin Chr 166:1533+ O 16 '47
Plant city ads create good-will, boost private enterprise; Illinois watch case co. J. W. Bowman. Ptr Ink 218:34-5 Ja 3 '47
Plant-community advertising next door to Russia! Finland, Arabia company. F. Rudge. il map Ptr Ink 220:30-1 Ag 15 '47
Plant gives company facts in local ads. Factory Management 105:100-1 Je '47
Plastics makers will use educational ads to eliminate brand-name confusion. W. H. Davis. Ptr Ink 219:106 My 16 '47
Public relations ads will increase. Ptr Ink 219:66-7 My 30 '47
Putting public interest first pays off for advertisers; Ceco, Ford and others. H. E. Green. Ptr Ink 219:48-9 Ap 11 '47
Same layout, changing copy used in wide trade campaign; Joseph Dixon Crucible graphite products. il Ptr Ink 221:37 O 3 '47
Sell America to Americans; no. 1 theme of advertising men. Sales Management 59:125-6+ N 1 '47
Selling free enterprise; Union oil co. allocates 30 per cent of advertising appropriation to selling public on American way of life. D. Sweeney. Nat Pet N 39:30+ My 7 '47
Selling the public on higher fares; Capital transit company, Washington, D.C. Bus Transportation 26:60-1 F '47
16 manufacturers tell the story of industry; 52 employee and community relations page messages in Keokuk newspaper. R. A. Kling. il Ptr Ink 217:43-4 D 20 '46
Sweet land of poverty? Kearney & Trecker ad. il Ind Marketing 32:95-6+ F '47
To explain U.S. economic system; joint A.N.A.-A.A.A.A. committee renders report. J. Smock. Adv & Sell 40:41+ My '47
Town-meeting and local press; Stamford-Greenwich manufacturers tell the story of community business. Trusts & Estates 84: 486-8 My '47
Trade-paper ads meet the recession talk head-on! Cleveland chain & mfg. co. D. J. Gemmell. il Ptr Ink 220:42+ Jl 18 '47
Why doesn't public relations copy stop talking to itself? C. & O. copy and other exceptions. J. F. Egan. Adv & Sell 40:41+ Ja '47

See also
Advertisements—Books and booklets
Advertising, Association
Advertising, Institutional
Advertising, Trade union
Government advertising
Publicity

ADVERTISING, Foreign
Apply the F principle to export advertising. P. G. Cherry. Ind Marketing 32:68+ Je '47
Does South America need special ads? case for and against preparing specific copy and art for each export market. E. W. H. Lumsden. Adv & Sell 40:60+ My '47
845 agencies place 19,723 pages of advertising in U.S. export publications during 1946. Ind Marketing 32:138+ Ap '47
Export media in an agency library. M. E. Crookston. Special Lib 38:108-11 Ap '47
4A's set up new bureau to offer foreign media data. Ptr Ink 218:83 F 21 '47
Language mill; selling American products to foreign markets. D. Dyer. Ind Marketing 31:43-4+ N '46
LeTourneau tells how its ad campaign is tailored to reach export markets. J. G. Van De Loo. il Ind Marketing 32:132+ O '47

See also
Advertising—Latin America
Advertising—Russia

ADVERTISING, Fraudulent
Agencies dispute FTC jurisdiction; Ipana advertising copy case. Ptr Ink 219:97+ Je 20 '47
Fleischmann's yeast FTC charges augmented. Oil Paint & Drug Rep 151:50 F 24 '47

ADVERTISING, Indirect
Features customers' produce in chicken and eggs campaign; Staley poultry feed. il Ptr Ink 220:35 Ag 22 '47

See also
Products, Identification of

ADVERTISING, Industrial
Advertising and technical research. M. R. Budd. Ind Marketing 31:46+ D '46
Advertising industrial lubricants. il Ind Marketing 32:87-8+ Ap '47
Advertising reveals market pattern for 275 products. charts (p42-7) Ind Marketing 32: 40-1+ Ag '47
Backing up distribution of industrial goods. J. A. Proven. Ind Marketing 31:51-2+ N '46
Business paper competition winners show big improvement. il Ptr Ink 219:40-1+ My 16 '47
Cannon's man-hunt for 60,000 industrial prospects for connectors. Sales Management 59: 100 Jl 15 '47
Chemical formulas in copy penetrate special markets; B. F. Goodrich chemical co. G. B. Koch. Ptr Ink 217:43 N 22 '46
Copy chasers; review of NIAA panel exhibit winners. il Ind Marketing 32:99-100+ Ag '47
Direct mail reestablishes neglected industrial contacts; American brass co. flexible metal hose and tubing. C. E. Woodward. Ptr Ink 219:46-7 Ap 11 '47
Economics of industrial advertising; reprint of 1923 address. J. H. Neal. il Ind Marketing 32:33-4+ S '47
Effectiveness of repeated advertisements. Ind Marketing 32:36-8+ S; 50-1+ O '47 (to be cont)
Gray-Mills helps distributors conduct direct mail campaign. A. Bernstein. il Ind Marketing 32:66+ Mr '47
How Gray-Mills promotion turns prospects into customers. R. Hollis. il Sales Management 57:91-2+ N 10 '46
How sound an investment is trade association advertising? W. Mitchell, jr. Sales Management 59:130+ N 1 '47
How to get news into your industrial ads. C. Graves. il Ptr Ink 218:48-9 Mr 21 '47
How to put guts in an industrial ad; hideouts for ideas. A. J. Griffin. Ind Marketing 31:32+ N '46
How to talk with salesmen about industrial sales aids; Hewitt-Robins inc. G. J. Slade. il Sales Management 58:48+ My 20 '47
How we cracked a specialized industrial market; Resinous products & chemical co. R. P. Goodale. Ptr Ink 220:56+ Jl 25 '47
Human interest touch in industrial company publications; Forgings. S. J. Borchers. il Ind Marketing 32:45+ F '47
Industrial admen hesitate to predict heavy budgets for '47, NIAA survey shows. W. H. Davis. Ptr Ink 217:72 D 27 '46
Industrial ads talk to people, too. C. H. Biscardi. Adv & Sell 40:49 My '47
Industrial advertiser timidly tries a contest; it worked! Pittsburgh Equitable Meter. W. A. Marsteller. il Ptr Ink 219:45+ Je 27 '47
Industrial advertisers spend $300 million a year. G. D. Crain, jr. Ind Marketing 32:33 Ag '47
Industrial advertising puts over war-developed product; engineers and purchasing agent had to be convinced that cost increases were valid; Truarc retaining rings. il Ptr Ink 219:43 My 30 '47
Industrial advertising's man-of-the-year; E. J. Shelley, Ozalid division of General aniline and film corporation. il Ind Marketing 32:85-6+ Ja '47
Industrial catalogs and bulletins need a change of pace. M. A. Hasselmann. il Ind Marketing 31:44-5+ D '46
Let us sharpen up old principles! R. S. Peare. il Ptr Ink 221:58-9+ O 31 '47
Making a midget ad budget do the work of a giant; Acme fishing tool co. small-space campaign. J. H. Warburton. il Ptr Ink 220:62+ S 5 '47
National industrial advertisers association membership roster. Ind Marketing 31:1-47 sec 2 N '46
Need thought-starters for promotional pieces? National industrial advertisers association loan library. Sales Management 58:93 Ap 1 '47
100 sales letters a week keep the customers coming; California vegetable concentrates, inc. J. B. Pardieck. il Sales Management 58: 70-1 Mr 1 '47
Our plant executives read industrial ads for profit; test proves these ads contain answers to many problems. V. P. Thomas. il Ptr Ink 217:37-9 D 6 '46
Plan your ad appropriation stone by stone; build well, big enough for today's job. R. D. La Fond. Ind Marketing 32:49-50+ Ag '47
Please, no iron curtain, industrial admen plead; should be permitted to participate in policy making. R. H. Ganly. Ptr Ink 217:50-2 N 15 '46
Powerful graphics, personalized copy help launch new Harvester division. il Ind Marketing 32:46-7+ S '47
Put your mailing list in fighting trim for postwar sales. D. C. Miner. Ind Marketing 31:60+ D '46
Qualifications for the industrial advertising manager; 16 points. Ptr Ink 219:46-7 My 16 '47
Robins shakeout taps new industrial market. A. E. Conover. il Sales Management 58: 58+ Ap 15 '47
Same layout, changing copy used in wide trade campaign; Joseph Dixon Crucible graphite products. il Ptr Ink 221:37 O 3 '47
Six tools for industrial selling; salesmen's calls, business papers, catalogs, expositions, mail, personal letters. R. H. Baldwin. Ptr Ink 218:40-1 Mr 28 '47
Trade-paper ads meet the recession talk head-on! Cleveland chain & mfg. co. D. J. Gemmell. il Ptr Ink 220:42+ Jl 18 '47
Under which shell? Parker-Kalon socket screw advertising. Sales Management 58: 64+ Ap 1 '47
What do buyers expect of industrial advertising? W. E. Cummin. Ptr Ink 219:42-3 Ap 18 '47
When it takes a book to tell all, write it! machine tool builder wrote technical best-seller. F. Wittner. il Ind Marketing 32: 51-2+ Ag '47
Why not a mass technique to sell the business market? M. N. Chappell. Ptr Ink 221: 175 O 31 '47; Same. Sales Management 59: 97 N 1 '47
You can sell management, keep management sold if your approach is right. C. A. Petri. Ind Marketing 32:47+ Jl '47

See also
Advertising mediums—Trade journals
Equipment industries—Advertising
Machine tool industry—Advertising
National industrial advertisers association

Inquiries

Formula for evaluating industrial advertising from inquiries. P. A. Amundsen. Ind Marketing 32:37-8+ Ja; 39-40+ F; 45-6+ Mr '47
How American MonoRail handles inquiries. E. H. Doerger. il Ind Marketing 32:58+ Jl; 62+ Ag '47

ADVERTISING, Institutional
Consider booklets for your public relations. C. Judson. il Ptr Ink 219:40-2 Je 6 '47
Engineering advertising solves a problem; Trane company's institutional campaign. il Ind Marketing 32:43+ Je '47
How to merchandise your annual report; Borden co. uses it as public relations tool. V. Dallaire. il Ptr Ink 219:40-1 Je 13 '47
Muskegon promotes piston ring sales with famous sayings. il Ind Marketing 31:47+ D '46
Personnel recognition promotion pays dividends; Lucky stores, inc. D. Murphy. Ptr Ink 219:94+ My 23 '47
Plant city ads create good-will, boost private enterprise; Illinois watch case co. J. W. Bowman. Ptr Ink 218:34-5 Ja 3 '47
Review of plant-city advertising. il Ind Marketing 32:109-10+ Jl '47

ADVERTISING, Institutional—*Continued*
Story behind a trademark; New Jersey zinc company's booklet. R. Davison. il Ind Marketing 32:41-2+ Je '47
We made 200 products but not many people knew us; Eagle-Picher co., Cincinnati. Ptr Ink 218:41 F 28 '47

ADVERTISING, Mail
Add a personal touch to swell direct-mail results. E. N. Mayer, jr. Ptr Ink 219:38-9 Ap 25 '47
Advantages and disadvantages of direct-mail advertising. E. N. Mayer, jr. il Ptr Ink 219:38-9 Je 27 '47
Brief case notes; direct mail sells large estate. D. Crowell. Ptr Ink 217:53 N 15 '46
Bunell company gets results from its direct mail advertising literature. A. Bernstein. il Ind Marketing 32:66+ Ag '47
Business campaigns win DMAA awards. H. Burnett. il Ind Marketing 31:48-9+ D '46
Business paper advertising and/or direct mail? A. H. Dix. Ind Marketing 32:49+ O '47
Direct-mail campaign gets national dealerships; Regal manufacturing co., South Gate, Calif. J. H. Zebrowski. Ptr Ink 217:68+ N 15 '46
Direct mail pulls more if addressing is right. D. Ross. il Adv & Sell 40:58+ Jl '47
Direct-mail spokesman asks compromise on third-class postal boost. E. N. Mayer, jr. Ptr Ink 218:93 Mr 21 '47
Don't forget the envelope; it's the package for your mail. C. J. Swan. il Ptr Ink 220:32-4 Ag 15 '47
$5,000,000 pay-off from an insurance mail campaign; New England Mutual Life. W. C. Gentry. il Sales Management 58:116+ Ja 15 '47
Gray-Mills helps distributors conduct direct mail campaign. A. Bernstein. il Ind Marketing 32:66+ Mr '47
How addressing affects results of direct mail; handwriting doesn't always outpull typing and typing doesn't always outpull stenciling, but neat addressing is always best. E. N. Mayer, jr. Ptr Ink 218:42-3 Ja 17 '47
How advertising pre-sells Gypsum's partition systems. J. J. Ryan. il Sales Management 57:73-4 N 10 '46
How Carnegie-Illinois covers thousands of prospects by mail. H. R. Roberts. Sales Management 59:44-6+ S 1 '47
How Gray-Mills promotion turns prospects into customers. R. Hollis. il Sales Management 57:91-2+ N 10 '46
How to get your full money's worth at the post office. E. N. Mayer, jr. il Ptr Ink 220:36-8 Jl 25 '47
How to unearth sales leads by direct mail; Detjen electric fly screens. il Sales Management 58:107 Je 1 '47
Humanics; abstract. E. L. Bernays. Adv & Sell 40:90 Je '47
It's a form of show business sold by direct mail; J. L. Stuart manufacturing company displays for pageants, etc. E. Gidlow. il Sales Management 59:82+ N 1 '47
Mail campaign makes sales, improves esprit de corps; TelAutograph. E. M. Housman. Ptr Ink 218:44-5 Ja 31 '47
Mailings sell air service to specific prospect groups. J. W. Austin. il Sales Management 59:59-60 Ag 1 '47
Merchandising a company-sponsored textbook; Cincinnati milling and grinding machine. H. J. Dods. Ptr Ink 219:62 Je 20 '47
Mercury mailings sell improved service to 200,000 car owners. D. G. Baird. il Sales Management 59:102+ Jl 15 '47
NIAA plaque winners in industrial direct mail campaigns. W. D. Molitor. il Ind Marketing 32:108+ Ag '47
New product introduced despite small budget; cooperative newspaper and direct-mail advertising; Kleen Flush. D. Markstein. Ptr Ink 218:74 F 21 '47
100 sales letters a week keep the customers coming; California vegetable concentrates, inc. J. B. Pardieck. il Sales Management 58:70-1 Mr 1 '47
Put your mailing list in fighting trim for postwar sales. D. C. Miner. Ind Marketing 31:60+ D '46
Selective selling averts city's post-war slump; Huntsville, Ala. advertises. Sales Management 58:81 Mr 1 '47
Seven cardinal rules for direct-mail success. E. N. Mayer, jr. Ptr Ink 219:38-9 My 30 '47
73 awards to best direct-mail campaigns. Ptr Ink 221:112 O 24 '47
Six ways to put more pull into direct mail advertising; Air Express literature. il Sales Management 59:48+ S 15 '47
Study reports executive preferences in direct mail. Ptr Ink 217:102 D 20 '46
Ten ways to put prestige into your printed salesmanship. D. Ross. Ptr Ink 220:73 S 19 '47
What happens to media direct mail that does get past the secretary? J. C. Cumming. Sales Management 59:77-8+ Jl 1 '47
What kind of direct mail gets past the private secretary? il Sales Management 58:44-6 Ap 15 '47
What makes a letterhead good? C. Dahl. il Ptr Ink 221:54 O 17 '47

See also
Mailing lists

Folders
What to do when customers don't know your story; Norton company direct mail folders. R. A. Reed. il Sales Management 58:102+ Mr 15 '47

Inquiries
Direct mail reestablishes neglected industrial contacts; American brass co. flexible metal hose and tubing. C. E. Woodward. Ptr Ink 219:46-7 Ap 11 '47

Printing
Color often increases results of direct mail. E. N. Mayer, jr. Ptr Ink 217:38-9 D 20 '46
Heavyweight color of mailing pieces need not always be black. G. J. Church. il Inland Ptr 119:55 Je '47

Returns
Copy that clicked; Conlan Electric direct-mail 2-color booklet with letter, offer new customer exclusive distribution set-up. R. Manville. il Ptr Ink 219:48 Ap 4 '47
$5,070 advertising builds $500,000 business in 1 year; direct mail and business publications teamed to sell furniture; food service equipment industry. W. H. Davis. Ptr Ink 219:36 My 30 '47
How a successful mail-order business was started; Cheney's seasoning, salad mix and six food flavorings. L. F. Thomann. Ptr Ink 219:49 Ap 4 '47

Stuffers
Seven of ten plants route stuffers with bills; Worthington pump & machinery corp. F. B. Koss. Ptr Ink 220:60-1 Ag 1 '47

Testing
You can test only one part of a mailing at one time. E. N. Mayer, jr. Ptr Ink 217:49 N 15 '46

ADVERTISING, National
Advertisers must ask, explore, experiment; never be satisfied. E. B. Myers. il Ptr Ink 221:56-7+ O 31 '47
Advertisers urged to push brand name story. N. Kelne. Ptr Ink 219:118 Ap 25 '47
Advertising protects brand name from becoming generic term. il Ptr Ink 220:59 S 5 '47
Brand names get boost in Greenfield test. Sales Management 59:79 N 1 '47
Buyers want national brands. il Bsns W p65-6 Jl 5 '47
Chicago Times pantry poll no. 4; selected products of which stocking increased or decreased from August 1945 to August 1946. Ptr Ink 217:94+ D 6 '46
Cleveland newspapers hold conference on production of national advertisements. Inland Ptr 118:67-8 Mr '47
Department store ads in national magazines. E. M. Housman. il Ptr Ink 219:32-3 Je 6 '47
How a regional advertiser went national successfully; Hunt Foods 90-item line spearheaded by tomato sauce campaign. L. F. Thomann. il Ptr Ink 220:29-30+ S 5 '47

ADVERTISING, National—*Continued*
Independent grocers switching to national brands, NARG survey indicates. W. H. Davis. Ptr Ink 220:87 Ag 22 '47
Indianapolis Star issues first consumer analysis. Ptr Ink 217:58-9 D 27 '46
Kroger promotes for profit; grocery chain advertising national brands. il Bsns W p62+ O 11 '47
Local advertiser goes national without losing personal touch; O'Brien's of California. L. F. Thomann. Ptr Ink 219:36 Ap 18 '47
Most national advertising is not salesmanship in print; Ricketts' studies at N. W. Ayer show 75 per cent is indirect. J. D. Woolf. Ptr Ink 219:33-4 My 2 '47
National brands now get full recognition in Kroger chain. J. B. Hall. il Sales Management 59:42-4 Ag 1 '47
Plus uses for small space; small units added to national advertising programs. C. Judson. il Ptr Ink 218:42-3 F 14 '47
Private brands go national; Chester H. Roth co. Bsns W p59-61 Ja 18 '47
Sales zoomed 100% when all marketing devices were in gear; to make consumer specialty out of industrial private brand, marketing program integrated distribution, advertising, pricing and display; Duro plastic metal solder. C. Margolis. Ptr Ink 218:31-3+ Mr 28 '47
Stokley diversifies. Bsns W p72-5 F 15 '47
Stressing brand name in selling furniture; Morgan furniture company. N. S. Irwin. il Adv & Sell 40:50 S '47
Survey shows drug chains now push national brands; study of Madison (Wis.) market. L. J. Houfek. Ptr Ink 217:40-2 N 22 '46
What folks want for Christmas; autos, appliances most popular; brand preferences. il Sales Management 59:50+ N 1 '47
Why buyers wait for name brand radios when others are plentiful. Sales Management 57:48+ N 20 '46
Window displays and heavy newspaper linage sell brand names story in Greenfield experiment. il Ptr Ink 221:182 O 31 '47

Local tie-in

More sales power from your advertising. D. Ross. Adv & Sell 40:56+ Je '47

ADVERTISING, Outdoor
Advertising sign made of concrete block. il Concrete 55:22 O '47
Down to earth advertising; on subway sidewalk gratings. il Bsns W p48 F 1 '47
Outdoor should tell its story of public service. J. DunLany. Ptr Ink 219:36-7 My 23 '47
Packages, trade names stressed in outdoor advertising. C. D. McCormick. il Adv & Sell 40:60 F '47
T.A.B. issues Fort Wayne study of outdoors. Ptr Ink 220:90 Ag 8 '47

See also
Airships in advertising
Billboards
Electric signs
Posters

Measurement

T.A.B. studies outdoor advertising in Ft Wayne. V. H. Pelz. Adv & Sell 40:41+ S '47

ADVERTISING, Point-of-sale
Ad program integrates spot, magazines and point-of-sale; Durham-Enders razor corp. il Ptr Ink 219:42-3 My 9 '47
Don't overlook tags; they often clinch the sale. il Ptr Ink 218:42-3 Mr 21 '47
Gear point-of-purchase promotion to modern super-market merchandising; improve store displays. F. L. McKibbin, jr. il Ptr Ink 220:34-6+ Jl 18 '47
Get them to see, pick up and read your package; 59 varieties of complementary ideas. F. L. McKibbin, jr. il Ptr Ink 221:38-40 O 17 '47
Lessons we learned on point-of-sale displays. J. Ungar. il Ptr Ink 219:42-3 My 2 '47
Point-of-sale promotion features young movie stars; Cinderella hat co. il Ptr Ink 220:38 Ag 22 '47
Product to the forefront in new displays; fewer merely decorative. C. J. Swan. il Ptr Ink 217:38-9 N 22 '46
Store audits show efficiency of displays; case study made in 9 Cleveland chain drugstores. C. Margolis. Ptr Ink 217:36-7 D 27 '46
Television use taught at point of sale. Ptr Ink 219:92+ My 23 '47
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47
Will food markets use more display material? national study shows which types of manufacturer-supplied store displays dealers want. E. Van Brunt. il Ptr Ink 220:34-6+ S 12 '47
You can avoid waste of point-of-sale material. S. Brock, jr. Ptr Ink 218:43 F 21 '47

See also
Advertising—Dealers, Appeal to

ADVERTISING, Radio. See Radio advertising

ADVERTISING, Soliciting of
Advertiser's duty in agency solicitations; definition of agency-client relationship is needed. W. Weir. Ptr Ink 218:33-4 Mr 21 '47
Agencies take advertiser peeves as constructive criticism. E. J. Dever, jr. Ptr Ink 219: 44+ My 23 '47
Agency executives believe advertisers should cooperate when open to solicitation. E. J. Dever, jr. Ptr Ink 219:50+ My 2 '47
Agency men agree with critics; product and markets should be studied before a solicitation. E. J. Dever, jr. Ptr Ink 219:40-2 Ap 25 '47
Are sales executives doing their full job about their company advertising? Sales Management 59:164 S 1 '47
Better solicitations depend on advertiser cooperation. E. J. Dever, jr. Ptr Ink 219:50-1 My 16 '47
Brief case notes on media selling. D. Crowell. Published in weekly numbers of Printers' ink
Buyer talks while salesmen listen; BSF&D's Detroit conference. G. C. Smith. Adv & Sell 40:45-6+ Ap '47
Knowledge of prospects' needs helps agencies get accounts. E. J. Dever, jr. Ptr Ink 219: 48+ My 9 '47
Space rep's disease; its cause, treatment and cure. P. Wylie. Ptr Ink 221:29-31 O 3 '47
What a space buyer thinks of media salesmen. S. J. McGarvey. Ptr Ink 220:29-31 Ag 1 '47
What advertisers think of agency solicitation methods. E. J. Dever, jr. Ptr Ink 217: 31-3+ N 1; 50-1+ N 8; 42-3+ N 15; 44-5+ N 22; 36-7 N 29; 40-1 D 6; 64+ D 13; 49-50+ D 20; 40-1 D 27 '46; 218:32-3 Ja 3; 45-7 Ja 10; 40-1 Ja 17; 44-5+ Ja 24; 39-43 Ja 31 '47

ADVERTISING, Trade union
A.F.L. advertising; Taft-Hartley bill touches off a campaign costing $1 million. Bsns W p 102-3 Je 14 '47
Louisiana unions tell a public service story. Ptr Ink 220:98 Jl 18 '47
Unions talk back via radio advertising. Sales Management 59:131 Jl 15 '47

ADVERTISING agencies
Agencies in 1947. B. Tolk. Ptr Ink 217:71+ D 27 '46
All-American advertising agency. D. Ogilvy. Adv & Sell 40:50+ F '47
Cole agency; faced with the merger problem. M. E. Maxfield. Ptr Ink 219:43-5 Je 6; 42-3 Je 13; 46-7 Je 20; 40-1 Je 27; 220:40-1 Jl 4; 38-9 Jl 11; 40-1 Jl 18; 50+ Jl 25; 38-9 Ag 1; 55 Ag 8; 50 Ag 15; 58+ Ag 22 '47
Fifty years of advertising. E. E. Calkins. il Ptr Ink 221:42-4 O 10 '47
J. Walter Thompson company. il Fortune 36: 94-101+ N '47
Just what is an advertising agency? J. Sollish. Ptr Ink 217:194 N 15 '46
WAA signs 30 agencies for regional campaigns. Ptr Ink 217:104 N 22 '46
What advertisers think of agency solicitation methods. E. J. Dever, jr. Ptr Ink 217: 31-3+ N 1; 50-1+ N 8; 42-3+ N 15; 44-5+ N 22; 36-7 N 29; 40-1 D 6; 64+ D 13; 49-50 D 20; 40-1 D 27 '46; 218:32-3 Ja 3; 45-7 Ja 10; 40-1 Ja 17; 44-5+ Ja 24; 39-43 Ja 31 '47

ADVERTISING agencies—*Continued*
What agency has operated longest without change of name. Ptr Ink 218:64 Ja 31 '47

Accounting

BBD&O wins tax suit on employees' stock; working capital placed in direct ratio to billing. H. L. Stephen. Ptr Ink 221:181 O 31 '47
Does cost finding pay the agency? L. W. Ellis. Ptr Ink 220:34-5 Ag 22 '47
How modified cost systems vary agency overhead. L. W. Ellis. Adv & Sell 40:64+ S '47

Advertising

Advertisers think agencies should advertise themselves. E. J. Dever, jr. Ptr Ink 218: 44-5+ Ja 24 '47
Agency uses teaser campaign to solicit new accounts. il Ptr Ink 219:92+ Ap 11 '47
Self-advertising by agencies on upswing; strong selling copy used by majority. B. Tolk. il Ptr Ink 219:104+ Je 20 '47

Art departments

Can art in advertising be improved without impairing sales effect? P. May. Ptr Ink 220: 42+ Ag 29 '47
What good is an art director? H. F. O'Brien. Ptr Ink 219:38-9+ Je 13 '47

Buildings

Agencies scramble for anything with a roof; they buy, remodel and even turn residential. B. Tolk. il Ptr Ink 218:84 F 21 '47

Client relations

Advertiser's duty in agency solicitations; definition of agency-client relationship is needed. W. Weir. Ptr Ink 218:33-4 Mr 21 '47
Agencies seeking accounts should inform themselves about advertisers' problems. E. J. Dever, jr. Ptr Ink 217:50-1+ N 8 '46
Agencies take advertiser peeves as constructive criticism. E. J. Dever, jr. Ptr Ink 219: 44+ My 23 '47
Agency executives believe advertisers should cooperate when open to solicitation. E. J. Dever, jr. Ptr Ink 219:50+ My 2 '47
Agency men agree with critics; product and markets should be studied before a solicitation. E. J. Dever, jr. Ptr Ink 219:40-2 Ap 25 '47
Better solicitations depend on advertiser cooperation. E. J. Dever, jr. Ptr Ink 219:50-1 My 16 '47
Company ad departments should aid, not compete with their agencies; Shell's organization. H. R. Hammerman. il Ptr Ink 220: 27-9 Ag 15 '47
Four-A's suggests ways to improve relations with associations. D. E. Joseph. Ptr Ink 218:39+ Ja 24 '47
Knowledge of prospects' needs helps agencies get accounts. E. J. Dever, jr. Ptr Ink 219: 48+ My 9 '47
Ten ways to get the most out of your advertising agent. L. Gibson. Ptr Ink 220:27+ Jl 4 '47

Commissions

How should advertising agencies get paid for their service? F. R. Gamble. Sales Management 58:56 Mr 1 '47
Today's problems of the frozen 15%. J. A. Murphy. Adv & Sell 39:49+ D '46
What should the agency charge for service? L. W. Ellis. Adv & Sell 39:46+ N '46

Consolidation

Cole agency; faced with the merger problem. M. E. Maxfield. Ptr Ink 219:43-5 Je 6; 42-3 Je 13 '47
Should an agency buy billing or build it? L. W. Ellis. Ptr Ink 220:30-2 Jl 25 '47

Employees

Account executive quits. M. E. Maxfield. Ptr Ink 219:46-7 Je 20 '47
Agency ad attracts wounded veterans anxious for jobs they can perform. Ptr Ink 217:91-2 N 22 '46
B&B's college of advertising knowledge; Benton & Bowles' on-the-job training. V. J. Dallaire. il Ptr Ink 218:32-3 F 21 '47
Cream of veterans enter agencies, ad departments as apprentices. A. B. Barber. Ind Marketing 32:45-6+ Ja '47
How it feels to take 4-A's aptitude tests. P. Gilbert. Adv & Sell 40:50+ Ag '47
How to do away with copy chiefs; looking back over decade. W. Weir. Adv & Sell 40: 38+ F '47
It's embarrassing, financially that is! payroll payments of agencies favor contact over copy. J. E. Matthews. Ptr Ink 217: 160 D 13 '46
New aptitude testing weighed by 4-A's on basis of Philadelphia pilot exam. B. Tolk. Ptr Ink 217:107 D 13 '46
New talent for advertising; 4A's examination. J. H. S. Ellis. Adv & Sell 40:34 Je '47
When firing, remember that ad people are sensitive. J. Bonnell. Ptr Ink 218:74+ F 14 '47
Why some men hit the firing line. W. A. Lowen. Ptr Ink 217:118 N 29 '46

Film departments

Film departments in ad agencies. M. Frisbie. il Ptr Ink 219:53-6+ Ap 25 '47

Finance

Do advertising agencies need a new incentive? proposal to replace 15 per cent commission system with one based upon cost plus and a bonus. R. C. Shaw. Adv & Sell 40:50+ O '47
New and small agencies feel economic pinch. B. Tolk. Ptr Ink 220:141 S 19 '47
Should an agency buy billing or build it? L. W. Ellis. Ptr Ink 220:30-2 Jl 25 '47
What is safe ratio of worth to expense? L. W. Ellis. Adv & Sell 40:72+ O '47

Libraries

Export media in an agency library. M. E. Crookston. Special Lib 38:108-11 Ap '47
Librarian, first aid to the advertising agency. K. Currie. Special Lib 38:213-16 S '47
McCann-Erickson's librarian lends a hand in training more agency librarians. Ptr Ink 219:107-8 Ap 25 '47

Management

Advertising agencies; what part can they play? F. M. Cone; H. E. Cassidy. il Ptr Ink 221:60-1+ O 31 '47
Agencies hunt for cost-cutting methods; add accountants and install machine operations. B. Tolk. Ptr Ink 220:91 Jl 25 '47
Agency billing. Ind Marketing 31:122+ N '46
Agency network is cure for lonesomeness. L. W. Ellis. Adv & Sell 40:72+ F '47
Can you breed profitable business-building ideas? D. Belding. Sales Management 59: 48+ Jl 1 '47
Going over the factory. J. Barnetson. Ptr Ink 218:38 Ja 17 '47
How a large agency uses the consumer purchase panel; J. Walter Thompson co. gives clients picture of market characteristics and behavior. R. H. Ganly and R. D. Crisp. il Ptr Ink 220:50-1+ S 19 '47
How case chart helps set agency objectives. L. W. Ellis. Adv & Sell 40:66+ Je '47
How to bridge the gap between research and copy. L. W. Ellis. Adv & Sell 40:54+ My '47
How traffic department of an advertising agency functions. E. J. Dever, jr. il Ptr Ink 220:32-3 Ag 1; 44+ Ag 8 '47
Lewis credits agency's $3,500,000 coup to long-range planning. Ptr Ink 219:113 My 23 '47
One way to reduce agency costs; revising on paper, not on metal. G. H. Andrew. Adv & Sell 40:60 Je '47
Small agencies can use high-price talent; counsel for two days is worth the cost. H. A. Thompson. Ptr Ink 219:36-7 My 9 '47
Ten-man stage of agency organization. M. B. Ellis. Adv & Sell 39:53-4+ D '46; 40:50+ Ja '47
Today's advertising agency approach to advertising problems. W. Seiler. Adv & Sell 39:42 N '46
Want agency economy? organize the agency to be more productive. H. T. Ewald. Ptr Ink 220:37-9 Jl 18 '47

ADVERTISING agencies—Management—*Cont.*
Why agencies lose accounts. E. J. Dever, jr. Ptr Ink 218:40-1 Ja 17 '47

Public relations

Open house improves agency public relations; Jaqua co., Grand Rapids, Mich. il Ptr Ink 220:30-1 Ag 22 '47

Selection

Advertisers want prospective agency to have experience in their type of account. E. J. Dever, jr. Ptr Ink 217:44-5+ N 22 '46
How advertisers rated agencies seeking their accounts. E. J. Dever, jr. Ptr Ink 217:49-50+ D 20 '46
How some advertisers guide agency solicitations. E. J. Dever, jr. Ptr Ink 217:36-7 N 29 '46
Some advertisers select an agency without solicitation. E. J. Dever, jr. Ptr Ink 218:32-3 Ja 3 '47
We chose our agency by asking 36 questions. C. B. Konselman. Ptr Ink 218:34-5 Ja 17 '47
Who selects the advertising agency? E. J. Dever, jr. Ptr Ink 217:40-1 D 27 '46
Why some agency solicitations fail. E. J. Dever, jr. Ptr Ink 217:40-1 D 6 '46
Why some agency solicitations succeed; some advertisers select an agency for its organization, others for the ideas presented. E. J. Dever, jr. Ptr Ink 217:64+ D 13 '46

Service

How advertising agencies handle public relations. J. A. Murphy. Adv & Sell 40:116+ Mr '47
Jack-of-all-trades. Aesop Glim. Ptr Ink 218:74 Mr 28 '47
Major agencies tighten up on extra services as rising costs lead to added charges. B. Tolk. Ptr Ink 217:87+ D 20 '46
Services that advertisers expect from agencies. E. J. Dever, jr. Ptr Ink 218:45-7 Ja 10 '47

Space buyers

Buyer talks while salesmen listen; BSF&D's Detroit conference. G. C. Smith. Adv & Sell 40:45-6+ Ap '47
What a space buyer thinks of media salesmen. S. J. McGarvey. Ptr Ink 220:29-31 Ag 1 '47

ADVERTISING allowances
New dealer contract plan introduced by Libby's. il Ptr Ink 220:38 Ag 8 '47

ADVERTISING and credit
Quick look at consumer advertising shows opportunities for bank loans. A. F. Backinger. Banking 40:39-40 O '47

ADVERTISING and employees
Ads tell workers about company products; Simplex wire & cable co. H. A. Morss, jr. il Factory Management 105:125-6 My '47
How Hercules talks to employes about advertising and sales promotion. T. Marvin. il Sales Management 57:77-8 N 10 '46
Merchandise your advertising to your factory workers. C. B. H. Parker. il Ptr Ink 220:34-5 Jl 4 '47
Seven ways to merchandise your ads to plant and office employees. C. Rondomanski. Ptr Ink 220:38 Ag 29 '47
See also
Advertising—Employees, Appeal to

ADVERTISING and public service
Public service advertising not local enough? Ptr Ink 218:67 Ja 3 '47

ADVERTISING and salesmen
Ad proof envelope helps inform Hercules salesmen on campaign. Ind Marketing 31:72 N '46
Ads give single personality to all local representatives; Personal finance co. wants all its managers to be friendly and cheerful. R. K. Steinman. il Ptr Ink 220:34-5 Ag 29 '47
Direct-mail package of ad reprints and calendar blotters builds business for Penn Mutual's 360 agents. Ptr Ink 219:64+ Je 29 '47
How advertising can reduce unit sales costs. C. S. Wilkinson. Ind Marketing 32:35+ Ap '47
How Grolier is dignifying the job of direct-to-consumer selling. T. Armstrong. il Sales Management 59:45-6+ O 1 '47
How to talk with salesmen about industrial sales aids; Hewitt-Robins inc. G. J. Slade. il Sales Management 58:48+ My 20 '47
How we tied advertising in with our new sales program; Chamberlin co. of America, Detroit. R. H. Breitenbach. Ptr Ink 219:46 Ap 18 '47
More sales power from your advertising. D. Ross. Adv & Sell 40:56+ Je '47
Preprint promotion to salesmen boosts sales, brings copy clues. K. B. Hopkins. il Ptr Ink 220:32-4 S 26 '47
Salesman's corner; use of printing as a help to salesmen. F. Rundell. Inland Ptr 119:62-4 S; 120:54-6 O '47
Salesmen ask for closer cooperation with admen. Ptr Ink 219:110 Ap 18 '47
Salesmen, scrubwomen, truck drivers, all can be idea getters. D. Ross. Ptr Ink 220:80+ S 5 '47
This consumer campaign is really aimed at the salesmen; Central manufacturers mutual insurance co. P. W. Purmort. Ptr Ink 220:42+ Jl 11 '47
Use glamour, humor, showmanship to sell salesmen on value of ads; Philco storage battery division. J. A. Gilruth. il Ptr Ink 220:36-7+ Jl 11 '47
What to tell your salesmen about your radio advertising. S. Levitan. Sales Management 58:77-8 My 1 '47

ADVERTISING appropriations
CBS, ABC and Mutual networks report 1946 billings. Ptr Ink 218:76+ Ja 17 '47
Countercyclical fund for advertising. O. A. Keyser. Adv & Sell 40:34 Ap '47
Cowles urges advertising reserve funds. Ptr Ink 218:106 F 28 '47
Here's the answer to Eversharp's $64 question; three network radio shows and lots of newspaper, magazine and point-of-sale promotion cost $6,500,000 per year. V. J. Dallaire. il Ptr Ink 217:46-7 D 20 '46
How much of a product's sales should be spent in advertising? H. B. West. il Adv & Sell 40:36-7+ Jl '47
How to increase sales through better media selection; J. Walter Thompson co. survey. A. Hurd. Sales Management 57:44-6+ D 15 '46
How to keep management sold on advertising. E. H. Doerger. il Ind Marketing 32:62+ Ag '47
How to plan your advertising budget. J. G. Maynard. Ind Marketing 31:50+ N '46
Industrial admen hesitate to predict heavy budgets for '47, NIAA survey shows. W. H. Davis. Ptr Ink 217:72 D 27 '46
Leading advertisers of 1946 and their expenditures; 777 companies invested $501,597,854 in magazines, farm papers and network radio. Ptr Ink 219:47-8+ Ap 18 '47
Leading newspaper advertisers in 1946. Ptr Ink 219:54+ My 23 '47
Making a midget ad budget do the work of a giant; Acme fishing tool co. small-space campaign. J. H. Warburton. il Ptr Ink 220:62+ S 5 '47
Management marketing conference hears warning on setting of advertising budget. J. Givner. Ptr Ink 218:96 Ja 17 '47
NIAA releases annual survey of industrial advertising budgets. Ind Marketing 32:114+ Ja '47
Plan your ad appropriation stone by stone; build well, big enough for today's job. R. D. La Fond. Ind Marketing 32:49-50+ Ag '47
This small-budget advertiser competes with giants; Pharis tire & rubber co. H. Pitner. Ptr Ink 219:37-9 Ap 11 '47
20 excuses of weak-kneed advertisers. C. C. Chamberlain. Ptr Ink 219:31-2 Je 13 '47

ADVERTISING art
Advertising award winners, review of 1947 Art directors awards. C. Coiner. il Adv & Sell 40:44-5 My '47
American bazaar; gallery of art of American salesmanship. il Fortune 36:108-21 N '47
Art directors name winners of 26th annual exhibition. il Ptr Ink 219:36-7 Ap 25 '47
Can art in advertising be improved without impairing sales effect? P. May. Ptr Ink 220:42+ Ag 29 '47

ADVERTISING art—*Continued*
Fifty years of advertising. E. E. Calkins. il Ptr Ink 221:34-6+ O 3 '47
Gap between fine and commercial art narrows. P. Smith. Ptr Ink 219:26 Ap 25 '47
Small agencies can use high-price talent; counsel for two days is worth the cost. H. A. Thompson. Ptr Ink 219:36-7 My 9 '47
Ten medal awards in Chicago art directors' show. il Ptr Ink 219:34-5 My 30 '47
See also
Advertisements, Pictorial
Posters

ADVERTISING artists
How to copy advertising layouts and artwork honestly. F. Howley. il Inland Ptr 118:79-80 D '46
How to save money on art work and electrotypes; 14 hints on relations with artists; ordering electrotypes. H. Bauer. il Ptr Ink 218:40-1 Mr 14 '47
Who causes whose ulcers, and why? Copy writers don't give us the stuff to work with! Artists don't bother to examine our copy! A. Shaw; L. Gibson. Ptr Ink 221:36-7 O 10 '47

ADVERTISING as a profession
Copy writer is like an intern. K. Millard. Ptr Ink 219:168 Ap 18 '47
Magic formula for advertising success; time, talent, training, sweat, struggle. H. Stebbins. Ptr Ink 218:37-8 F 14 '47
New talent for advertising; 4A's examination. J. H. S. Ellis. Adv & Sell 40:34 Je '47
Night watch. A. D. Converse, jr. Ptr Ink 219:154 Ap 25 '47; Discussion. B. Kingston. 219:148 My 16 '47
Who's too old; is advertising a young man's business? Aesop Glim. Ptr Ink 218:44 Ja 17 '47

ADVERTISING associations
See also
National industrial advertisers association

Directories
Directory of associations. Adv & Sell 40:45-6 F; 174 Mr; 119 Ag '47

ADVERTISING awards
Advertising award winners, review of 1947 Art directors awards. C. Coiner. il Adv & Sell 40:44-5 My '47
Annual advertising awards, 1946; types of awards. Adv & Sell 39:33-5 N '46
Annual advertising awards, 1946; winners. il Adv & Sell 40:4-40 Mr '47
Art directors name winners of 26th annual exhibition. il Ptr Ink 219:36-7 Ap 25 '47
ABP presents awards to winners in 5th annual advertising competition. il Ind Marketing 32:38-40 Je '47
Business campaigns win DMAA awards. H. Burnett. il Ind Marketing 31:48-9+ D '46
Business paper competition winners show big improvement. il Ptr Ink 219:40-1+ My 16 '47
Butler, Kobak and Du Mont win advertising medals. Ptr Ink 218:104 Mr 14 '47
CFAC presents awards in annual competition. il Ind Marketing 32:51 Je '47
Copy chasers; review of NIAA panel exhibit winners. il Ind Marketing 32:99-100+ Ag '47
Eight car card survey winners announced by the Continuing study of transportation advertising, ARF. il Ptr Ink 219:34-5 Je 6 '47
McGraw-Hill will make annual $1,000 award to NIAA chapter. Ind Marketing 32:118+ Mr '47
Putman publishing company to make annual $1,000 award to NIAA member and his agency. Ind Marketing 32:140+ O '47
73 awards to best direct-mail campaigns. Ptr Ink 221:112 O 24 '47
STA award winners. il Inland Ptr 119:38-9 My '47
Ten medal awards in Chicago art directors' show. il Ptr Ink 219:34-5 My 30 '47
See also
Radio advertising—Awards

ADVERTISING campaigns
Advertising savvy pays off; flexible format, effective text and pictures, family identity help current Seamless rubber co. campaign click. R. H. Ganly. il Ptr Ink 220:36-7 S 5 '47
Balanced ad program used to introduce soap in the West. L. F. Thomann. il Ptr Ink 219:42 Je 27 '47
Coast-to-coast campaign launches Elgin's new mainspring with 9 lives. H. D. Shaeffer. il Sales Management 58:44-6 My 20 '47
G-E builds campaign around new re-usable package; improved heating pads. il Ptr Ink 220:47 S 19 '47
Home town campaign clicks; Racine manufacturers' newspaper, radio and direct-mail effort. W. D. Stansil. il Ptr Ink 218:46-7 Mr 21 '47
How a regional advertiser went national successfully; Hunt Foods 90-item line spearheaded by tomato sauce campaign. L. F. Thomann. il Ptr Ink 220:29-30+ S 5 '47
Land of plenty, of what? Kearney & Trecker campaign. A. John. il Ind Marketing 32:36-7+ Ap '47
Louisiana advertises yam sweet potatoes. D. H. Halsey. Ptr Ink 218:80+ F 7 '47
Making mud packs into millions; the story of Helene Curtis. W. Gidwitz. il Sales Management 58:93+ Ap 15 '47
Sold: 50,000 pieces of ready-to-wear in seven days; Koret of California. E. Gidlow. il Sales Management 59:44-6 O 15 '47
Special grower campaign moves surplus stocks held by dealers; Diamond walnuts. L. F. Thomann. il Ptr Ink 220:38-9 Ag 15 '47
Stars for sales; Kroger promotion of national brands. il Sales Management 59:56+ O 15 '47
See also
Buy-at-home campaigns

Moving picture tie-in
Point-of-sale promotion features young movie stars; Cinderella hat co. il Ptr Ink 220:38 Ag 22 '47

Special weeks
1947 merchandising days and weeks. Ptr Ink 217:76 N 22 '46
Week is born midst much publicity and advertising; American knit glove week. E. M. Housman. il Ptr Ink 219:44 My 30 '47

Teaser campaigns
Agency uses teaser campaign to solicit new accounts. il Ptr Ink 219:92+ Ap 11 '47

Testing
For a buyers' market: a tested formula for profitable sales promotions; Good House Stores laboratory, Philadelphia. H. B. Brown. Sales Management 58:46+ F 15 '47
Tests prove value of untapped markets; Prentice-Hall protests Miracle of the bells, novel by Russell Janney. R. H. Ganly. Ptr Ink 218:48+ Mr 28 '47
See also
Advertising, Mail—Testing

ADVERTISING cards
Car card slogan, devised in wartime, still good; Topps gum. M. M. Levin. il Ptr Ink 218:42 F 7 '47
Eight car card survey winners announced by the Continuing study of transportation advertising, ARF. il Ptr Ink 219:34-5 Je 6 '47
Six pointers about car cards. F. Chapman. il Ptr Ink 221:40-1 O 3 '47
Variety in car cards. il Ptr Ink 218:42 Ja 24 '47

ADVERTISING characters
After 107 years bank tries advertising, finds it pays; trade character, Mr Money-in-the-bank. A. Woodley. il Ptr Ink 219:37 Ap 18 '47
Multiple Mr Gus Gas; collection of gas advertising characters. H. Obermeyer. il Gas Age 99:48-9 Ap 17 '47
When a car company needed friends; comic strip fellow called Joe Woe shows Los Angeles that cars and buses are run by just people. J. H. Collins. Pub Util 39:823-9 Je 19 '47

ADVERTISING copy

Advertising copy; variegation or reiteration. H. Halsell. Adv & Sell 39:42 D '46

Aesop Glim's clinic; writing it simple. Ptr Ink 218:67 F 14 '47

American scene; exaggeration in copy. M. Wiseman. Adv & Sell 40:69+ S '47

Can you breed profitable business-building ideas? D. Belding. Sales Management 59: 48+ Jl 1 '47

Chemical formulas in copy penetrate special markets; B. F. Goodrich chemical co. G. B. Koch. Ptr Ink 217:43 N 22 '46

Copy capsules. H. Stebbins. Ptr Ink 219:45 Je 13; 220:32 Jl 25 '47

Copy clinic. B. Tyler. il Adv & Sell 40:36-7+ Ja '47 [cont monthly]

Copy makes it true; living up to advertising copy. Aesop Glim. Ptr Ink 220:110 S 26 '47

Copy policy. M. Wiseman. Adv & Sell 40:60+ O '47

Copy that clicked (cont). R. Manville. il Ptr Ink 213:106 N 23 '45; 214:29 F 8; 215: 47 My 31; 216:46 Jl 26; 217:43 O 18; 48 D 20; 45-6+ D 27 '46; 219:46 My 9 '47

Dear Bernice Fitz-Gibbon, I love you! lady inspires author to found whole new school of copy. D. Daniels. Adv & Sell 40:76+ Ja '47

Do you know how to think? M. Wiseman. Adv & Sell 40:72+ Je '47

Does need to fit campaign discourage good copy? R. E. De Castro. Adv & Sell 40:136+ Mr '47

Don't be product-shy! M. Wiseman. Adv & Sell 40:56+ Ag '47

The F principle. Aesop Glim. Ptr Ink 218: 74+ Mr 28 '47

Fifty years of advertising. E. E. Calkins. il Ptr Ink 220:38-40+ S 26 '47

Hog crossing America vs. the kid in upper 4. C. E. Parks. Ptr Ink 218:100 Ja 24 '47

How to apply successful copy techniques to radio commercials; comparison of printed advertisements and radio commercials. C. H. Wolfe. Ptr Ink 221:44+ O 3 '47

How to avoid tricky factors in pre-evaluating an ad program. R. Manville. il Ptr Ink 218: 54+ F 14 '47

How to do away with copy chiefs; looking back over decade. W. Weir. Adv & Sell 40: 38+ F '47

How to get an idea. R. J. McAndrews. Sales Management 58:48+ Ap 15 '47

How to put guts in an industrial ad; hide-outs for ideas. A. J. Griffin. Ind Marketing 31:32+ N '46

How will it do in Dubuque? J. Barnetson. Ptr Ink 217:37 N 22 '46

Idea approach. R. Tinsman. il Ptr Ink 218:148 F 14 '47

Industrial ads talk to people, too. C. H. Biscardi. Adv & Sell 40:49 My '47

Interestingly slovenly ad copy. J. Milton. Ptr Ink 217:138 N 22 '46

Let your copy express a selling idea; every product has personality, fingerprint it! W. B. Golovin. il Ptr Ink 218:48-9 F 7 '47

Limited audience selection in headlines and copy. R. Manville. il Ptr Ink 217:60+ D 6 '46

Memorability is important in industrial ads too; highlight company and product names. C. Graves. il Ptr Ink 218:46-7 Ja 31 '47

More about ideas. M. Wiseman. Adv & Sell 40:60+ Jl '47

Most national advertising is not salesmanship in print; Ricketts' studies at N. W. Ayer show 75 per cent is indirect. J. D. Woolf. Ptr Ink 219:33-4 My 2 '47

Pre-evaluation, properly applied, can show which ad to run. R. Manville. il Ptr Ink 218:51-2+ Ja 24; 48-9 Ja 31; 54+ F 7 '47

Relevancy in copy; necessity for no distraction. R. Manville. il Ptr Ink 217:64+ D 20; 45-6+ D 27 '46

Salesmen, scrubwomen, truck drivers, all can be idea getters. D. Ross. Ptr Ink 220:80+ S 5 '47

Start your outdoor copy with thumbnail sketch. J. Donnelly. il Adv & Sell 40:44+ Ap '47

Text organization; basic structure. M. Wiseman. Adv & Sell 40:64+ My '47

Text organization, the lead. M. Wiseman. Adv & Sell 40:50+ Ap '47

The two copy techniques have been married for years; Miss Juicy Starch Readership became the bride of Mr Best Seller in a simple ceremony at Grass Roots junction. R. York. Ptr Ink 220:42-3 Ag 8 '47

We need a wedding of the two copy techniques; golden age of advertising will come when Mr Hard-Selling Copy mates with Miss High-Readership Copy. W. Tyler. Ptr Ink 219:31-2 My 23 '47

We of Olympus, who believes us? H. Halsell. Adv & Sell 40:37 Ag '47; Discussion. (Hohum to you, Harold Halsell). F. R. Coutant. 40:43 O '47

Which counts most in advertising copy; sincerity or enthusiasm? J. L. Jones. Ptr Ink 220:33 Jl 25 '47

See also

Advertisements
Advertising ethics
Advertising—Psychology
Sales letters

Competitive copy

Campaign renders knocks ineffective and creates good-will with former knockers; Calgon advertising. C. F. Wilner. il Ptr Ink 217:35 N 29 '46

Concentrate on your own, not your competitor's advertising. W. Green. Ptr Ink 220: 84 Jl 25 '47

Credibility

Another study shows copy more important than position; Progressive Grocer ads. R. Manville. il Ptr Ink 219:53 Ap 11 '47

Believableness in copy; 15 ways to obtain it. R. Manville. Ptr Ink 218:48+ Ja 10 '47

Dealer tie-in

Personalized campaign achieves two goals; newspaper campaign of New Orleans petroleum co. D. Markstein. Ptr Ink 217:134 N 15 '46

Defensive copy

Ad to kill rumors builds business; Holbrook microfilming service, New York. Ptr Ink 218:106 Ja 24 '47

Exclamation points

Bang! exclam-less copy. J. Ecclesine. Ptr Ink 218:136 Ja 10 '47

Fashion appeal

Appeal to women featured in auto copy; Kaiser-Frazer stresses style and endorsements of fashion leaders. W. A. MacDonald. il Ptr Ink 221:45 O 10 '47

Elgin compacts climb on the fashion ensemble bandwagon. W. D. Evans. il Sales Management 59:130+ O 15 '47

We built a new brand name with almost nothing to sell; Cole swim suits. E. D. Adams. il Ptr Ink 218:48-9 Ja 24 '47

Free offers

Pressure on offer. R. Manville. Ptr Ink 218: 46-8+ Ja 17 '47

See also

Advertising copy—Premium offers
Advertising copy—Sample offers

Headlines

Layout of heading is an important part of the ad. D. E. Lathrop. il Ptr Ink 219:38-9 Je 6 '47

Limited audience selection in headlines and copy. R. Manville. il Ptr Ink 217:60+ D 6 '46

On the threshold; a department devoted to problems of the beginner in advertising. M. Wiseman. Adv & Sell 39:104+ D '46; 40: 72+ Ja '47

Start off with a smile. F. A. Kummer, jr. Adv & Sell 40:43 My '47

Starting point. Aesop Glim. Ptr Ink 219:94 Ap 25 '47

Historical appeal

Research heads off historical anachronisms for Hollywood; technique might well be applied by advertisers. il Sales Management 59:118+ O 1 '47

Human interest appeal

Human interest touch in industrial company publications; Forgings. S. J. Borchers. il Ind Marketing 32:45+ F '47

ADVERTISING copy—*Continued*

Information content

Advertising copy that gives people what they really want. R. Manville. il Ptr Ink 217:54+ D 13 '46

How to get news into your industrial ads. C. Graves. il Ptr Ink 218:48-9 Mr 21 '47

Informative ads outsell others by 3 to 1; analysis of 583 advertisements. D. Starch. il Adv & Sell 39:52+ D '46

What do buyers expect of industrial advertising? W. E. Cummin. Ptr Ink 219:42-3 Ap 18 '47

Language, style, etc.

How plain talk increases readership 45 per cent to 66 per cent; Flesch formula used by Wallaces' farmer. D. R. Murphy. Ptr Ink 220:35-7 S 19 '47

How to write copy that sells. H. J. Caverhill. Ind Marketing 32:33+ F '47

How to write copy that will be read; short sentences, concreteness, personal style. R. Flesch. il Adv & Sell 40:113+ Mr '47

H-y-p-h-e-n-i-t-i-s! A. R. Hasley. Ptr Ink 220:132 Jl 25 '47

Language mill; selling American products to foreign markets. D. Dyer. Ind Marketing 31:43-4+ N '46

People are like that; writing something an average 14-year-old can understand and believe. Aesop Glim. Ptr Ink 218:51 Ja 3 '47

Plain talk. Ind Marketing 32:31-2 S '47

Simplifying your punctuation problem; satire. F. Flanagan and S. Merritt. Ptr Ink 218: 160 F 7 '47

Style makes radio copy more effective. M. E. Milliken. Ptr Ink 219:35 My 9 '47

Test proves short words and sentences get best readership; Wallace's Farmer split-run test. D. R. Murphy. Ptr Ink 218:61-2+ Ja 10 '47

Too, too smooth. F. A. Kummer, jr. Ptr Ink 218:146 Mr 14 '47

Who's a logolept? L. Baron. Ptr Ink 220: 152 S 26 '47

Length

Thumbs down on this arbitrary division of copy. L. Baker. Adv & Sell 40:40 F '47

Local pride appeal

Rockford NIAA chapter helps launch local community relations campaign. il Ind Marketing 32:116 Ag '47

See also
Buy-at-home campaigns

Moving picture tie-in

Koret adds new twist to Hollywood fashion tie-ins. il Sales Management 58:76+ Ap 15 '47

Macy, Gimbels get together; promote new movie. Ptr Ink 219:116 My 23 '47

Negative appeal

Birth of advertising ideas; Odorono. J. D. Woolf. il Adv & Sell 40:43+ S '47

Negative appeal pays in copy for men's clothing. C. A. Lipman. il Ptr Ink 218:36 Ja 3 '47

News appeal

Advertiser equals the news; Franklin savings bank advertising in connection with Harvest moon ball in Madison Square Garden. il Ptr Ink 221:82 O 3 '47

Premium offers

Manufacturers' '47-'48 premium promotions, up over '46, expected to set new records. N. Kelne. Ptr Ink 218:97+ F 28 '47

Premium panel pays; Ralston purina co. analyzes use of whole package face for spoon offer. il Mod Packaging 20:121 Jl '47

Premium users and their offers. Ptr Ink 219: 59+ My 2 '47

Price appeal

Consumer attitudes show need of price policy advertising. E. J. Dever, jr. Ptr Ink 219: 27-9+ Je 27 '47

Putting public interest first pays off for advertisers; Ceco, Ford and others. H. E. Green. Ptr Ink 219:48-9 Ap 11 '47

Price justification

Tells customers facts about prices; Porter-Cable machine company's letter to distributors. Am Bsns 17:34+ Je '47

Price quoting

Favors price in copy. E. Bozorth. Ptr Ink 217:63 N 15 '46

Profit appeal

Talk profit to retailers; 33 ways to put $$$ into business-paper advertising. C. J. Swan. il Ptr Ink 219:35-7 Je 27 '47

Prophecies

Prophecy, 1922; International correspondence schools aviation copy. P. V. Barrett. Ptr Ink 219:47 Ap 11 '47

Quality appeal

Glamour and quality appeal prove a successful combination. il Ptr Ink 220:39 Jl 25 '47

Trade-up programs help both buyer and seller; by getting old customers to spend more and by reaching into higher-income markets. Ptr Ink 218:46-7 Mr 28 '47

Zareh Garabed Thomajan; proprietor of high-priced haberdashery in downtown Boston. Fortune 36:148 N '47

Quotations

Muskegon promotes piston ring sales with famous sayings. il Ind Marketing 31:47+ D '46

Reason appeal

Repetitive or informative copy? A. H. Peron. Adv & Sell 40:34 F '47

See also
Advertising copy—Information content

Revision

One way to reduce agency costs; revising on paper, not on metal. G. H. Andrew. Adv & Sell 40:60 Je '47

There'll be some changes made. J. Barnetson. Ptr Ink 218:51 F 14 '47

Romance appeal

Adler's tall story; Adler elevator shoe. R. G. Whalen. il Adv & Sell 40:36-7+ Ag '47

Balanced ad program used to introduce soap in the West. L. F. Thomann. il Ptr Ink 219:42 Je 27 '47

Safety appeal

Nation's airlines plan safety advertising campaign to combat air crash publicity. N. Kelne. Ptr Ink 218:107+ Ja 24 '47

Sample offers

Sample hounds can be prevented from upsetting split-run research. F. B. Satterthwaite. Ptr Ink 220:70 Ag 22 '47

Sex appeal

Is perfume advertising too sexy? Ptr Ink 217:39-40 D 13 '46

Specific copy

Specificness in copy. R. Manville. il Ptr Ink 218:41-2+ Ja 3 '47

Statistics

When to use percentages for comparisons. H. Zeisel. Ptr Ink 220:40+ Ag 15 '47

Testimonials

J. Walter Thompson company. Fortune 36: 226 N '47

Lucky Strikes save the Florida's crew. E. E. Calkins. Adv & Sell 40:58 Ja '47

Personalized campaign achieves two goals; newspaper campaign of New Orleans petroleum co. D. Markstein. Ptr Ink 217:134 N 15 '46

Themes

How we changed over to hard-selling copy; Deepfreeze division, Motor products corp. R. V. Newbell. il Ptr Ink 217:34 D 27 '46

I learned that single-theme copy sells personal service. M. Hessman. Ptr Ink 218:60+ F 14 '47

ADVERTISING copy—*Continued*

Tie-in copy

Tie-in ads continue rapid growth. B. Tolk. il Ptr Ink 221:86 O 10 '47

Use appeal

How to write copy that sells. H. J. Caverhill. Ind Marketing 32:33+ F '47

Job simplification case histories key ad theme for Standard Register. G. L. Staudt. il Ind Marketing 31:59+ D '46

LeTourneau tells how its ad campaign is tailored to reach export markets. J. G. Van De Loo. il Ind Marketing 32:132+ O '47

ADVERTISING copy writers

Are copy writers advertising men? J. H. Rogers. Ptr Ink 220:136 Ag 8 '47

Choosing the format. M. Wiseman. il Adv & Sell 39:94+ N '46

Copy writers on strike; need true, accurate and complete facts. Aesop Glim. il Ptr Ink 221:96 O 24 '47

Every copy writer should write a classified ad. S. D. Cowan, jr. Ptr Ink 219:128 My 30 '47

Five thoughts for young copy writers. H. H. Smith. Ptr Ink 218:31 F 21 '47

Imagination in writing advertising. J. D. Woolf Adv & Sell 39:54 D '46

Never-learned lesson. W. Weir. Adv & Sell 40:34 S '47

People are like that; not always as the copy writer would like to have them. Aesop Glim. Ptr Ink 217:117-18 D 6 '46

Should copy writers form a union? R. B. Hara. Ptr Ink 217:170 D 6 '46; Reply. C. Spence 218:125 F 21 '47

Time to think. B. J. Paulson. Adv & Sell 39:54 N '46

Who causes whose ulcers, and why? Copy writers don't give us the stuff to work with! Artists don't bother to examine our copy! A. Shaw; L. Gibson. Ptr Ink 221:36-7 O 10 '47

Writing for reading. A. Neville. Ptr Ink 219: 140 Ap 4 '47

See also

Radio advertising—Copy writers

ADVERTISING council

Advertising council backs ANA; 4-A drive to improve understanding U.S. system. Ptr Ink 219:109+ Ap 25 '47

Advertising council paves way for mass world-mindedness; potent world-trade stimulus envisaged by broad campaign. C. Cloyes. il For Comm W 27:3+ Je 7 '47

Mortimer, Winger named to top Ad council posts. Ptr Ink 218:103 Mr 21 '47

New ad theme. Bsns W p78+ Mr 8 '47

ADVERTISING cutouts

New high; four-page, four-color, cut-out insert for business papers announcing Crosley's new table television set. Aesop Glim. Ptr Ink 220:80 S 12 '47

ADVERTISING departments

Advertising production; what hopes for a happier future? N. C. Baron. J Retailing 22:73-7 O '46

Company ad departments should aid, not compete with their agencies; Shell's organization. H. R. Hammerman. il Ptr Ink 220: 27-9 Ag 15 '47

How an advertising department can help top management. J. M. McKibbin. Ptr Ink 220: 27-9 Jl 11 '47

How to sell advertising to top management. F. B. Heitkamp. Ind Marketing 31:29+ N '46

Tools of advertising service the machinery of industrial and public relations; three-way organization at Falk corporation. L. Fox. il Ind Marketing 32:43-4+ Mr '47

See also

Advertising managers

Records

Controlling advertising production with records; Remington Rand. J. Sheeran. Ind Marketing 32:39-40+ Ja '47

How American MonoRail handles inquiries. E. H. Doerger. il Ind Marketing 32:58+ Jl; 62+ Ag '47

This project record helps keep us within our advertising budget. M. Adams. il Ptr Ink 220:32-3 S 12 '47

ADVERTISING displays

Displays are important aids in promotion. D. W. Frye il Gas Age 98:22-3+ N 28 '46

Good window displays are saved and used again; survey in New England. il Ptr Ink 220:40-1 S 12 '47

It's a form of show business sold by direct mail; J. L. Stuart manufacturing company displays for pageants, etc. E. Gidlow. il Sales Management 59:82+ N 1 '47

Laminates for outdoor displays; polyester resin impregnated glass mat and cloth used in molding tire display figures and stands. il diag Mod Plastics 24:100-1 Mr '47

Lessons we learned on point-of-sale displays. J. Ungar. il Ptr Ink 219:42-3 My 2 '47

Point of purchase; Einson-Freeman co. specializes in lithographic store displays. il Fortune 36:147 N '47

Will food markets use more display material? national study shows which types of manufacturer-supplied store displays dealers want. E. Van Brunt. il Ptr Ink 220:34-6+ S 12 '47

ADVERTISING ethics

Lucky Strikes save the Florida's crew. E. E. Calkins. Adv & Sell 40:58 Ja '47

Move over, Fred Allen! manhandling by censors suffered by writer of radio commercials. P. Artzt. Adv & Sell 40:41+ Je '47

Why people think advertising is horsefeathers. F. T. Quinn. Ptr Ink 220:128 Ag 15 '47

ADVERTISING federation of America

Annual convention, 43d, Boston. Ptr Ink 219: 84+ My 30; 100 Je 6 '47

ADVERTISING illustrations. See Advertisements, Pictorial

ADVERTISING libraries

See also

Advertising agencies—Libraries

National industrial advertisers association—Library

ADVERTISING literature

Fire brick company issues folders to file and preserve its literature. A. Bernstein. il Ind Marketing 32:100+ Jl '47

Manufacturers can be educators. E. Booth. bibliog J Retailing 23:89-90+ O '47

Put it to work; Public service electric & gas co. distributes reference manuals to architects, builders, finance institutions and others. H. P. Morehouse. il Am Gas Assn Mo 29:328-30 Jl-Ag '47

Technical handbooks; essential service to customers. J. H. Jupe. Elec R (Lond) 141: 517-18 O 3 '47

See also

Catalogs

Bibliography

Digest of manufacturers' new publications. Published in monthly numbers of Food industries

Manufacturers' latest publications. Published in monthly numbers of Chemical engineering

Manufacturers' literature. Published in monthly numbers of Materials & methods

New bulletins; 482 items covering equipment and supplies used by power engineers. Power 90:939-952b Mid-D '46

What's new in manufacturers' literature; metals, metal work, equipment, etc. Metal Prog 51:128a-128b Ja '47 [cont monthly]

ADVERTISING managers

How the advertising manager helps increase your profits. M. D. Ormes. Ind Marketing 32:33-5+ My '47

Management and the advertising. Am Bsns 17:32+ F '47

Please, no iron curtain, industrial admen plead; should be permitted to participate in policy making. R. H. Ganly. Ptr Ink 217:50-2 N 15 '46

PR duties of ad manager call for executive rank. Ptr Ink 217:33-5 D 20 '46

ADVERTISING managers—*Continued*
Qualifications for the industrial advertising manager; 16 points. Ptr Ink 219:46-7 My 16 '47

Directories

National industrial advertisers association membership roster. Ind Marketing 31:1-47 sec 2 N '46

ADVERTISING mediums
Ad space is where you find it; don't leave it blank; Towncliffe. C. Wolff. Ptr Ink 219:52 Ap 11 '47
Advertising reveals market pattern for 275 products. charts (p42-7) Ind Marketing 32: 40-1+ Ag '47
Buyer talks while salesmen listen; BSF&D's Detroit conference. G. C. Smith. Adv & Sell 40:45-6+ Ap '47
Check list for selecting media. H. B. West. il Adv & Sell 40:35+ Ag '47
Coin changing machines new advertising medium. il Ptr Ink 217:69 N 29 '46
Critical appraisal of media research. A. Politz. il Adv & Sell 40:39-40+ Je '47
Dioramas for travelers. Bsns W p64 Ag 23 '47
Egg carton promotion, ad medium to sell eggs and many other products. il Mod Packaging 20:108-9+ Ag '47
Export media in an agency library. M. E. Crookston. Special Lib 38:108-11 Ap '47
Fifty years of advertising. E. E. Calkins. il Ptr Ink 221:48-50 O 17 '47
For better advertising; Advertising research foundation studies effectiveness of five different media. Bsns W p54+ N 9 '46
How coupon returns help us locate markets; reveal facts about media; Mullins manufacturing co. advertising of Youngstown kitchen. M. Adams. Ptr Ink 219:40-1 Je 20 '47
How to evaluate and compare advertising media. A. Politz. Adv & Sell 40:35+ Ap '47
How to increase sales through better media selection; J. Walter Thompson co. survey. A. Hurd. fold map Sales Management 57: 96-101 N 20; 92-3+ D 1; 44-6+ D 15 '46; Discussion. G. C. Jordan. 59:70-1+ Jl 1; 108+ Jl 15 '47
Lyric suite on media. C. Liggett. Ptr Ink 220:42 S 5 '47
Market and media data needed for foreign sales; pioneer experiment in Buenos Aires. E. R. Smith. Ptr Ink 219:46+ My 30 '47
Media coverage of leading county markets. Sales Management 58:114+ My 10 '47; Correction. 58:72 Je 1 '47
Media predict bigger and brighter 1947. D. Bruner. Ptr Ink 217:71+ D 27 '46
Media profits decline from '46 peak; paper companies more than double their net. Ptr Ink 220:64 Ag 29 '47
Media profits rose sharply in 1946. Ptr Ink 219:110+ Ap 25 '47
New advertising outlets continue to increase despite rising costs and shortages. D. Bruner. Ptr Ink 219:99 Je 6 '47
Nine factors in the future of media. B. Duffy. Ptr Ink 221:62-3+ O 31 '47
1946; big year for advertising. Bsns W p70+ F 15 '47
P.I. advertising index in new form. H. Zeisel Ptr Ink 218:52-4+ Mr 7 '47
Sales and advertising experts pick the best test markets of the country in three population groups for a 25-cent mass item to be distributed nationally through drug, variety and department stores. Sales Management 59:108+ S 1 '47
Tags; midget mediums that carry a hefty sales load; Marcel Schulhoff & co.'s six criteria. il Sales Management 59:45-6 Ag 15 '47
Think of circulation in terms of people, not numbers. D. D. Patterson. Ptr Ink 219:78+ My 16 '47
What is an audience? L. Warner. il Adv & Sell 40:35+ Jl; 39-40+ S '47

See also
Advertising, Soliciting of
Airships in advertising
Audit bureau of circulations
Moving pictures in advertising
Radio advertising
Slide films
Television advertising

Advertising

Publishers still have a good story to tell on the value of the advertising dollar. C. V. Kinter. Ind Marketing 32:48-9 Ap '47
What happens to media direct mail that does get past the secretary? J. C. Cumming. Sales Management 59:77-8+ Jl 1 '47

Books

Bantam books sells ads, tries out higher price. Bsns W p59 F 22 '47

Checks

ATA promotes trucking industry by adopting standard bank check. il Ind Marketing 32: 84 F '47

Comics

See Comics (books, strips, etc.)

Envelopes

Don't forget the envelope; it's the package for your mail. C. J. Swan. il Ptr Ink 220: 32-4 Ag 15 '47

Farm papers

ARF reports initial survey of farm publications; readership of the Ohio farmer. Ptr Ink 218:102 Mr 14 '47
Farm men and women rate some ads tops. Ptr Ink 219:70+ Je 20 '47
Farm publications; advertising linage, three-year comparative totals. Ptr Ink 218:144 F 7 '47
What do farmers read? J. Caples. Adv & Sell 40:40-1 Jl '47

Key tags

Frenchman to promote ads on hotel key-tags. il Ptr Ink 218:116+ F 7 '47

Match books

Aesop Glim's clinic; modest little book matches. Ptr Ink 218:67 F 14 '47

Newspapers

Ad argument; some newspapers dislike retailers' tie-ins that plug Life magazine. Bsns W p63-5 Je 14 '47
Ad research foundation reports on 100 studies. A. W. Lehman. il Ptr Ink 217:42-5 D 6 '46
Adventurous product advertising called for as NAEA plans 1947 newspaper program. H. E. Green. Ptr Ink 218:91+ Ja 17 '47
City versus town in newspaper readership. L. E. Borg. Adv & Sell 40:80 Jl '47
Cleveland newspapers hold conference on production of national advertisements. Inland Ptr 118:67-8 Mr '47
Field retrenches; PM takes ads. Bsns W p32+ N 16 '46
Home town campaign clicks; Racine manufacturers' newspaper, radio and direct-mail effort. W. D. Stansil. il Ptr Ink 218:46-7 Mr 21 '47
How N.A.E.A. standard meets mat shrinkage problem; newspapers to bill the exact space ordered by agencies in width by columns, depth by lines. K. T. Finn. Adv & Sell 40: 77+ Ap '47
Inside story of A.N.A.N. E. D. Madder. Adv & Sell 40:48+ Je '47
Just how good are plastic plates? experience for newspaper reproduction shows that they have advantages over both electros and mats. J. M. Secrest. il Ptr Ink 218:61+ Ja 3 '47
Leading newspaper advertisers in 1946. Ptr Ink 219:54+ My 23 '47
Newspaper advertising soars. Bsns W p64-5 S 6 '47
Newspaper campaign builds prestige for Pigott construction co, Hamilton, Ont. Ptr Ink 219:108 My 23 '47
Plant city ads create good-will, boost private enterprise; Illinois watch case co. J. W. Bowman. Ptr Ink 218:34-5 Ja 3 '47
Product expenditures of newspaper advertisers in 1946. Ptr Ink 219:60+ My 9 '47
34 neighborhood papers used by B'klyn Union Gas. H. A. Praeger. Adv & Sell 40:46+ S '47
The two copy techniques have been married for years; Miss Juicy Starch Readership became the bride of Mr Best Seller in a simple ceremony at Grass Roots junction. R. York. Ptr Ink 220:42-3 Ag 8 '47

ADVERTISING mediums—*Continued*

Periodicals

Ad program integrates spot, magazines and point-of-sale; Durham-Enders razor corp. il Ptr Ink 219:42-3 My 9 '47

Copy that clicked; Federal Laboratories lawn edger. R. Manville. il Ptr Ink 219:46 My 9 '47

Copyright protection for advertising in periodicals. H. G. Henn. Ptr Ink 220:42+ Ag 22 '47

How magazine advertising can be made more effective; selecting magazines, planning the approach, preparing advertising. H. B. West. Adv & Sell 40:37-8+ O '47

How we changed over to hard-selling copy; Deepfreeze division, Motor products corp. R. V. Newbell. il Ptr Ink 217:34 D 27 '46

Magazine coverage study set for Buenos Aires. Ptr Ink 219:100 Ap 4 '47

Magazine linage; total linage for five years. Ptr Ink 218:146+ F 7 '47

Merchandising helps for magazine advertisers; third Deutsch & Shea study. Ptr Ink 220:64 S 12 '47

National magazines as advertising media, booklet of Curtis publishing company. Sales Management 59:144 N 1 '47

Pulps get rating as medium in survey of agency staffs. Ptr Ink 221:102 O 3 '47

Society vs. independent magazines. K. J. Evans. Ind Marketing 31:86+ D '46

Study of 22 magazines reveals shifts in women's interests; McCall surveys. D. E. Robinson. Adv & Sell 39:47-8+ D '46

Tabloid vs. traditionals. H. S. Thoenebe. Ind Marketing 32:130 O '47

Terwilliger criticizes the lack of standardized publication research. Ptr Ink 218:69 Ja 31 '47

Townsend evaluation of advertisements to be applied to complete magazine issues. Ptr Ink 218:91-2 Mr 21 '47

Use of incremental analysis in the selection of advertising media. S. Banks. J Bsns 19:232-43 O '46

Use of magazine color ads nears new high. B. Tolk. il Ptr Ink 217:149 N 15 '46

Rating

Townsend evaluation of advertisements to be applied to complete magazine issues. Ptr Ink 218:91-2 Mr 21 '47

Service

See also
Radio broadcasting stations—Service

Telephone directories

Classified boom; phone book advertising; city directories. Bsns W p32+ S 6 '47

Trade journals

Advertising rates in business papers are too low. J. K. Lasser. Ptr Ink 220:38-40 S 19 '47

Advertising savvy pays off; flexible format, effective text and pictures, family identity help current Seamless rubber co. campaign click. R. H. Ganly. il Ptr Ink 220:36-7 S 5 '47

Advertising volume figures for December issues of business papers and totals for 1946 and 1945. Ind Marketing 32:70-1 Ja '47

Agencies place 458,425 pages of advertising in business papers in 1946; register 5.5 per cent gain; tabulation. Ind Marketing 32:52+ Ap '47

Brad-Vern's reports lists schedules of 35,000 advertisers in 649 trade papers. Ptr Ink 217: 94+ N 22 '46

Business paper advertising and/or direct mail? A. H. Dix. Ind Marketing 32:49+ O '47

Business paper advertising volume reaches $178 million in 1946. A. R. Venezian. Ind Marketing 32:29+ Ja '47

Business paper competition winners show big improvement. il Ptr Ink 219:40-1+ My 16 '47

Does publication size affect advertising readership? J. F. Arndt. Adv & Sell 40:42 Ag '47

823 business papers report advertising up 4.0%; Printers' Ink annual survey. Ptr Ink 218:48+ F 28 '47

G-E., Westinghouse, General Motors top buyers of business space; McGraw-Hill's 4½ year check of 182 publications. Ind Marketing 32:27-30+ F '47

Get those business-paper ad plates in on time! Ptr Ink 221:38-9 O 24 '47

How our business-paper ads serve customers and prospects; Bendix radio communications campaign. J. M. Sitton. il Ptr Ink 220:30-1 Ag 29 '47

How small advertiser by-passed competition to become a leader; domination in trade media and planned follow-through won national distribution for Kentile. C. J. Swan. il Ptr Ink 218:35-7 Mr 14 '47

Industrial advertising puts over war-developed product; engineers and purchasing agent had to be convinced that cost increases were valid; Truarc retaining rings. il Ptr Ink 219:43 My 30 '47

Market data book number, 1947. Ind Marketing 31:1-511 O 25 '46

Trade-paper ads meet the recession talk head-on! Cleveland chain & mfg. co. D. J. Gemmell. il Ptr Ink 220:42+ Jl 18 '47

$295 business-paper ad draws $60,000 worth of orders; Hanover wire cloth co. E. B. Frock. Ptr Ink 218:39 Ja 17 '47

What's wrong with most news releases? M. G. Walther. Ind Marketing 31:47+ N '46

Will business papers survive a drop in income? J. K. Lasser. Ptr Ink 220:35-7 S 26 '47

Trade union periodicals

Labor press gets nibbles from national admen. D. Bruner. il Ptr Ink 220:95 S 12 '47

Women's periodicals

Good Housekeeping analysis of circulation and reader audience. Sales Management 58:164 Mr 15 '47; Adv & Sell 40:78 Ap '47

Ladies home journal reports results of no-position policy. Ptr Ink 218:34-6 F 28 '47

Women's magazines. Ptr Ink 218:148+ F 7 '47

ADVERTISING men

Why don't advertising men dress better? D. Houghton. Ptr Ink 218:148 Ja 24 '47

See also
Advertising agencies—Employees
Advertising as a profession
Advertising copy writers
Advertising managers
also Fox, Herbert

ADVERTISING policies

Cinderella product scores; cooperation with suppliers and retailers helps establish new rainwear line, Aquatogs. E. M. Housman. il Ptr Ink 218:43 Ja 24 '47

How our business-paper ads serve customers and prospects; Bendix radio communications campaign. J. M. Sitton. il Ptr Ink 220:30-1 Ag 29 '47

How small advertiser by-passed competition to become a leader; domination in trade media and planned follow-through won national distribution for Kentile. C. J. Swan. il Ptr Ink 218:35-7 Mr 14 '47

Let us sharpen up old principles! R. S. Peare. il Ptr Ink 221:58-9+ O 31 '47

This small-budget advertiser competes with giants; Pharis tire & rubber co. H. Pitner Ptr Ink 219:37-9 Ap 11 '47

Where will profits come from? A. J. Gallager. Sales Management 58:128+ Je 15 '47

ADVERTISING portfolios

16 ideas for your 1948 sales and advertising presentation; Sterling Tool Products utilizes inserts to put punch in program portfolio. H. E. Green. il Ptr Ink 221:38-9 O 10 '47

This consumer campaign is really aimed at the salesmen; Central manufacturers mutual insurance co. P. W. Purmort. Ptr Ink 220:42+ Jl 11 '47

ADVERTISING research

Advertisers must ask, explore, experiment; never be satisfied. E. B. Myers. il Ptr Ink 221:56-7+ O 31 '47

Another study shows copy more important than position; Progressive Grocer ads. R. Manville. il Ptr Ink 219:53 Ap 11 '47

ADVERTISING research—*Continued*
Base on which selling plans and policies must build. V. D. Reed. Ptr Ink 221:64+ O 31 '47
Book promotion in small cities. K. S. Giniger. Adv & Sell 39:66 N '46
Cooperative readership surveys can help manufacturers get more efficient advertising. J. C. Spurr. Ind Marketing 32:41+ F '47
Copy-testing technique for a small rural store. H. G. Bierer. J Retailing 23:38-42 Ap '47
Critical appraisal of media research. A. Politz. Adv & Sell 40:39-40+ Je '47
Do respondents tell the truth? media surveys. A. Politz. Adv & Sell 40:36-7+ My '47
Effectiveness of repeated advertisements. Ind Marketing 32:36-8+ S; 50-1+ O '47 (to be cont)
Factors that create attention and reading of advertisements; analysis of 2,500 advertisements. H. J. Rudolph. il Ptr Ink 221:33-5+ O 24 '47
For better advertising; Advertising research foundation studies effectiveness of five different media. Bsns W p54+ N 9 '46
Have you tried psychological research? important to know why. E. Dichter. Ptr Ink 218:29-31+ Ja 3 '47
Haverhill (Mass.) gazette issues consumer survey. Ptr Ink 218:142-3 F 7 '47
Here's a new technique for testing readership; test of Progressive Grocer ads. R. Manville. Adv & Sell 40:46+ My '47
How a large agency uses the consumer purchase panel; J. Walter Thompson co. gives clients picture of market characteristics and behavior. R. H. Ganly and R. D. Crisp. il Ptr Ink 220:50-1+ S 19 '47
How the depth interview reveals attitudes toward new products. W. A. Yoell. Ptr Ink 218:50-2 F 7 '47
How would you like to measure the sales power of your advertising? R. H. Ganly and R. D. Crisp. Ptr Ink 220:44+ S 26 '47
Impact ad testing method announced by George Gallup. Ptr Ink 220:88 Ag 22 '47
Ladies home journal reports results of no-position policy. Ptr Ink 218:34-6 F 28 '47
Measurement of advertising results. H. V. Roberts. J Bsns 20:131-45 Jl '47
Most national advertising is not salesmanship in print; Ricketts' studies at N. W. Ayer show 75 per cent is indirect. J. D. Woolf. Ptr Ink 219:33-4 My 2 '47
Technique of depth interviewing; camera-action technique develops basic copy, merchandising and product ideas; dishwashing as illustration. W. A. Yoell. Ptr Ink 218: 33-5+ Ja 31 '47
What about copy research? report of committee on appraisal of copy research of Copy research council. Adv & Sell 40:45-6+ Jl '47
What is an audience? L. Warner. il Adv & Sell 40:35+ Jl; 41-2+ Ag; 39-40+ S '47
Which newspaper features attracted most women readers? J. Caples. Adv & Sell 40: 33-4, 121 Ja '47
See also
Radio advertising—Research

AERATORS
Technique for aeration of sterile liquid culture medium. G. E. Hunt. diags Science 105:184 F 14 '47

AERIAL mapping. See Mapping, Aerial

AERIAL photography. See Photography, Aerial

AERIAL ropeways. See Cableways

AERIAL surveying. See Surveying, Aerial

AERIAL warfare. See Aeronautics, Military; Air raids

AERIALS. See Radio antennas

AERO digest (periodical)
Prophecy and fulfilment, 1922-1947. F. A. Tichenor. Aero Digest 54:28-9 Ap '47

AERODYNAMICS
Additional developments of Greene's equation to the study of compressible airflow. G. L. Shue. bibliog J Aeronautical Sci 13: 581-6 N '46
Aerodynamic center and center of pressure of an airfoil at supersonic speeds. H. W. Sibert. J Aeronautical Sci 14:183-4 Mr '47
Aerodynamic characteristics of rectangular wings at supersonic speeds. E. A. Bonney. bibliog il diag J Aeronautical Sci 14:110-16 F '47; Discussion. 14:335-6, 409-10 Je-Jl '47
Aerodynamic forces on an oscillating airfoil at supersonic speeds. J. W. Miles. bibliog J Aeronautical Sci 14:351-8 Je '47
Aerodynamic performance of delta wings at supersonic speeds. A. E. Puckett and H. J. Stewart. bibliog diags J Aeronautical Sci 14:567-78 O '47
Aerodynamics of supersonic flight. T. von Kalman. Machine Design 19:194 Ap '47
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51: 1-23 bibliog(p22-3); Discussion. 23-34 Ja '47
Airspeed-Mach number chart; data sheet. D. D. Baals and V. S. Ritchie. Aviation W 47:43 Jl 21 '47
Compressible flows in aeronautics. J. Stack. bibliog il diags J Aeronautical Sci 12:127-43 Ap '45; Discussion. 12:143-8; 13:645-6 Ap '45, D '46
Determination of airplane thermometer recovery factors in flight. H. W. Sibert. J Aeronautical Sci 14:364+ Je '47
Effect of wind gradient on glide and climb. B. Etkin. J Aeronautical Sci 14:365-7 Je '47
Exact and approximate solutions of two-dimensional oblique shock flow. E. V. Laitone. bibliog J Aeronautical Sci 14: 25-41+ Ja '47; Discussion. C. Chang. 14:456 Ag '47
Explicit solutions of the equations for steady compressible flow. B. L. Hicks. Phys R 72: 433 S 1 '47
Flow of gases at sonic and supersonic speeds. G. A. Hankins and W. F. Cope. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 23):401-8, pl 1-4; Discussion. 409-16 '46
Fluid dynamics of axial compressors. A. R. Howell. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):441-52 bibliog(p451) '45
Ground effect on downwash angles and wake location. S. Katzoff and H. H. Sweberg. bibliog diags U S Nat Advisory Com for Aeronautics 1942:159-70 '46
High speed aircraft flying limitations and handling problems. F. W. Morgan. Roy Aeronautical Soc J 51:733-8 S '47
Increasing the range of axial-flow compressors by use of adjustable stator blades. J. T. Sinnette, jr. bibliog il diags J Aeronautical Sci 14:269-82 My '47
Interaction between boundary layer and shock waves in transonic flow. H. W. Liepmann. bibliog il diags J Aeronautical Sci 13:623-37 D '46
Internal aerodynamics opens new speed fields; proper handling of supersonic airflows inside power plants capable of reducing fuel consumption. bibliog il Aviation W 47:25-6 Jl 14 '47
Investigation of the airflow underneath helicopter rotors. R. S. Ross. il diags J Aeronautical Sci 13:665-77 D '46
Investigation of the drag of windshields in the 8-foot high-speed wind tunnel. R. G. Robinson and J. B. Delano. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:65-77 '46
Isothermal and nonisothermal air-jet investigations. V. Cleeves and L. M. K. Boelter. bibliog diags Chem Eng Prog 43:123-32; Discussion. 132-4 Mr '47
Jet airplane utilizing boundary layer air for propulsion. A. M. O. Smith and H. E. Roberts. bibliog diags J Aeronautical Sci 14: 97-109+ F '47
Laminar boundary-layer oscillations and stability of laminar flow. G. B. Schubauer and H. K. Skramstad. bibliog il diags J Aeronautical Sci 14:69-78 F '47; Discussion. 14:410-11 Jl '47
Laminar boundary-layer oscillations and transition on a flat plate. G. B. Shubauer and H. K. Skramstad. bibliog il diags J Res Nat Bur Stand 38:251-92 F '47
Linear compressibility calculation. E. V. Laitone. bibliog J Aeronautical Sci 13:404 Ag '46; Discussion. 13:637-8 D '46

AERODYNAMICS—*Continued*
Linearized supersonic flow through ducts. H. F. Ludloff and F. Reiche. J Ap Phys 18: 681-2 Jl '47
Low drag aerofoils. L. G. Whitehead. Roy Aeronautical Soc J 51:54-64 Ja '47
Mean aerodynamic chord and the aerodynamic center of a tapered wing. W. S. Diehl. diags U S Nat Advisory Com for Aeronautics 1942:413-22 '46
Measurements of base pressure on a missile in free flight. F. K. Hill and R. A. Alpher. diag J Ap Phys 18:489 My '47
Method for calculating airfoil sections from specifications on the pressure distributions. G. H. Peebles. diags J Aeronautical Sci 14:451-6 Ag '47
Model aircraft illustrating sign convention used in applied aerodynamics. F. W. Free. diags Roy Aeronautical Soc J 51:197-8 F '47
Momentum relations in propulsive ducts. P. Rudnick. diags J Aeronautical Sci 14:540-4 S '47
Motion of an unarticulated helicopter blade. J. Winson. bibliog J Aeronautical Sci 14: 520-6 S '47
NACA flight and wind-tunnel investigation of maximum lift as affected by variations of Mach and Reynolds numbers. J. R. Spreiter and P. J. Steffen. diags S A E J 55:33-9 Ja '47; Abstract. Automotive & Aviation Ind 94:36 My 1 '46
Nature of shock waves. M. M. Munk. il Aero Digest 54:66-7+ F '47
Newton and fluid mechanics. J. C. Hunsaker. J Aeronautical Sci 13:647-51 D '46
Nonstationary flow about a wing-aileron-tab combination including aerodynamic balance. T. Theodorsen and I. E. Garrick. diags U S Nat Advisory Com for Aeronautics 1942:129-38 '46
Numerical-graphical methods of characteristics for plane potential shock-free flow problems. L. L. Cronvich. bibliog J Aeronautical Sci 14:237-42 Ap '47
One-dimensional theory of steady compressible fluid flow in ducts with friction and heat addition. B. L. Hicks and others. bibliog J Ap Phys 18:891-902 O '47
Progress in dynamic stability and control research. W. F. Milliken, jr. il J Aeronautical Sci 14:493-519 bibliog (91 titles, p517-19) S '47
Refraction of plane shock waves. A. H. Taub. Phys R 72:51-60 Jl 1 '47
Rigorous solution of linearized supersonic flow through ducts. C. E. Mack, jr. and others. J Ap Phys 18:682-3 Jl '47
Shock-stalled flows for supersonic-type airfoils at transonic speeds. J. Stack. bibliog il Aviation 46:43-5 F '47
Shock-wave oscillations in wind tunnels. H. W. Liepmann and H. Ashkenas. il diags J Aeronautical Sci 14:295-302 My '47
Simple model tests predict aerodynamic characteristics of bridges. D. B. Steinman. il Civil Eng 17:20-3, 77-9 Ja-F '47; Discussion. D. J. Peery. 17:143-4 Mr '47
Some ballistic contributions to aerodynamics. A. C. Charters. bibliog il diags J Aeronautical Sci 14:155-66 Mr '47
Speeds and Mach numbers; chart. Aviation 46:79 Je '47
Steady flow of a gas through a tube with heat exchange or chemical reaction. P. Chambre and C. Lin. bibliog diags J Aeronautical Sci 13:537-42 O '46; Discussion. G. P. Wood. 14:24+ Ja '47
Studies substantiate theory of laminar-to-turbulent flow; wind tunnel experiments at National bureau of standards. diag Aviation W 47:28+ Jl 21 '47
Superaerodynamics, mechanics of rarefied gases. H. Tsien. bibliog J Aeronautical Sci 13:653-64 D '46
Supersonic aerodynamics, principles and applications. T. von Kármán. il diags J Aeronautical Sci 14:373-98 bibliog(p398-402) Jl '47; Abstracts. Aviation N 6:10 D 23 '46; Mech Eng 69:153 F '47; Discussion. J Aeronautical Sci 14:403-9 Jl '47
Tabulation method for the calculation of the critical speed of wing divergence. W. P. Targoff. J Aeronautical Sci 14:487-8 Ag '47
Tailless aircraft design problems. G. H. Lee. diags Roy Aeronautical Soc J 51:109-29 bibliog(p128-9); Discussion. 129-31, 185-8, 190-3 F '47
Use of damping screens for the reduction of wind-tunnel turbulence. H. L. Dryden and G. B. Schubauer. bibliog diag J Aeronautical Sci 14:221-8 Ap '47
Use of residue theory for treating the subsonic flow of a compressible fluid. C. Kaplan. U S Nat Advisory Com for Aeronautics 1942:39-47 '46

See also
Aeronautics
Air flow
Airplane stability and stabilizers
Airplanes—Design
Airplanes—Speed
Ballistics
Wind tunnels

Electric analogies
Use of rheo-electrical analogies in certain aerodynamical problems. L. Malavard. bibliog il diags Roy Aeronautical Soc J 51:739-53; Discussion. 753-6 S '47

AERONAUTIC associations

See also
Institute of the aeronautical sciences

AERONAUTIC charts. See Air navigation—Charts

AERONAUTIC engineering
Anglo-American aero conference; joint conference by Royal aeronautical society and Institute of aeronautical sciences, London, Sept. 3-5. Aero Digest 55:25+ O '47
Decimalism; aviation industry adopts streamlined dimensioning. P. J. Hayes, jr. diag Air Transport 5:48-9 My '47
Developments in high-speed aircraft. E. H. Heinemann. il Mech Eng 69:805-12 O '47
80 per cent of aero industry favors decimal use. S A E J 55:82 Mr '47
Engineering and research planning of the army air forces. L. C. Craigie. S A E J 55: 19-22+ Mr '47
L'évolution de la technique aéronautique depuis la seconde guerre mondiale d'après le XVII[e] Salon de l'aéronautique de Paris. R. J. de Marolles. Génie Civil 124:171-4, 189-92, 207-10 My 1-Je 1 '47
Impressions of the annual meeting of the Institute of the aeronautical sciences. A. Klemin. Aeronautical Eng R 6:26-35 Mr '47
Institute of the aeronautical sciences and Royal aeronautical society joint meeting, London, Sept. 3-5; with abstracts of papers. Aeronautical Eng R 6:5 S; 12-25 O '47
Institute of the aeronautical sciences, 15th annual meeting, New York. Automotive & Aviation Ind 96:31+ F 15 '47
Institute of the aeronautical sciences summer meeting, Los Angeles, Aug. 7-8. Aeronautical Eng R 6:18-25 S '47
Practical engineering of rotary wing aircraft. P. H. Stanley; J. E. McDonald; H. S. Campbell. bibliog il diags Aviation 45: 55-65 Jl; 76-82 Ag; 67-70 S; 74-7 O; 62-3 N; 90-1 D '46; 46:62-3+ Ja; 58-9 F; 62-3+ Ap; 54-7 Je '47; [cont as] Aviation W 47: 20+ Ag 25; 29-30 O 6 '47
Les progrès récents de la marine et de l'aéronautique. M. Bahon. Génie Civil 124: 268-9 Jl 15 '47
SAE annual meeting; abstracts of papers. il diags Automotive & Aviation Ind 96:30-6+ F 1 '47
SAE annual meeting, Detroit, Jan. 6-10; with review of technical papers. S A E J 55:29-31, 37-9 F '47
SAE national aeronautic meeting, Los Angeles, Oct. 3-5. S A E J 54:47-51+ N '46
SAE national aeronautic meeting, New York, April 9-11; abstracts of papers. Automotive & Aviation Ind 96:30-3 My 1 '47
SAE national air transport engineering meeting, Chicago, Dec. 2-4. S A E J 55:56-8+ Ja '47
Some engineering problems of large aircraft. A. E. Russell. il diags Roy Aeronautical Soc J 51:145-70; Discussion. 170-2, 176-9, 182-4, 194-6 F '47
Toward better cockpits, an engineering approach. S. A. Hall. il diag Aviation 46:47-51 Ja '47

AERONAUTIC engineering—*Continued*
What the engineer can do for commercial aviation. W. A. Patterson. Western Soc E J 52:61-70; Discussion. 70-4 Je '47

See also
Aerodynamics
Aeronautic research
Airplane engines
Airplanes
Airplanes—Design
Airplanes, Military
Airports
Airways

Bibliography

Aeronautical reviews; periodical articles, government publications, books. il diags Aeronautical Eng R 6:31-2+ Ja '47 [cont monthly]

Tables, calculations, etc.

Application of IBM machines to the solution of the flutter determinant. E. L. Leppert, jr. bibliog J Aeronautical Sci 14:171-4 Mr '47
Bending of rotor blade in the plane of rotation. Shao Wen Yuan. J Aeronautical Sci 14:285-93 My '47
Computation of influence coefficients for aircraft structures with discontinuities and sweepback; method uses Castigliano's theorem. S. Levy. bibliog diags J Aeronautical Sci 14:547-60 O '47
Graph for determining lug shear-out distance; reference book sheet. W. A. McGowan. diags Product Eng 18:157+ My '47
Method for simplifying the calculations of the natural frequencies for a system consisting of *n* rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47
Method of airplane performance calculation applicable to any polar. R. E. Wendt. J Aeronautical Sci 14:243-50 Ap '47
Nature and conditioning of least work equations in structures. L. Morris. Roy Aeronautical Soc J 51:329-33 Mr '47
Numerical-graphical methods of characteristics for plane potential shock-free flow problems. L. L. Cronvich. bibliog J Aeronautical Sci 14:237-42 Ap '47
Numerical methods for the calculation of elastic instability. B. A. Boley. bibliog il diags J Aeronautical Sci 14:337-48; Discussion. 348-50 Je '47
Pure bending in the plastic range. H. A. Williams. diags J Aeronautical Sci 14:457-69 Ag '47
Stability of rotor blade flapping motion when the hinges are tilted; generalization of the rectangular ripple method of solution. G. Horvay and S. W. Yuan. diags J Aeronautical Sci 14:583-93 O '47
Stress analysis of rotor blades. G. Horvay. bibliog diags J Aeronautical Sci 14:315-33 Je '47

See also
Aerodynamics
Airplane stability and stabilizers
Airplanes—Design
Airplanes—Stresses

AERONAUTIC engineers
So you want to be an airline engineer! G. T. Hayes. Air Transport 5:26-8 My '47
What a young engineer should know. E. T. Price. S A E J 55:28-30 O '47

AERONAUTIC instruments
Airborne instrument laboratory unveiled. il Air Transport 4:65 D '46
Automatic flight controller removes some bad-weather flying hazards. J. L. Anast. il diags Machine Design 19:116-20+ S '47
Electronic trouble-shooter signals engine trouble to flight engineer. il Bsns W p52+ O 11 '47
Engine analyzer pinpoints flight trouble. il Aviation W 47:21-2 O 20 '47
Engine servicing by electronics; engineers at Toledo conference see how Sperry analyzer spots ignition and mechanical troubles during flight. R. W. Brown. il Aero Digest 55:42-3+ O '47
Engine trouble shooting in the air. J. E. Lindberg, jr. and C. Sackett. il S A E J 55:53-4 Mr '47; Abstract. Automotive & Aviation Ind 96:84+ F 1 '47
GPI; an automatic navigational computer. W. J. Tull and N. W. MacLean. diags Franklin Inst J 242:373-98 N '46
Helicopter instrumentation. C. F. Savage and R. G. Jewell. Mech Eng 69:495-6 Je '47
Hermetically sealing aircraft instruments and control components. W. A. Reichel. diags S A E J 55:35-7 Ag '47
Improved azimuth indicating system for aircraft. E. E. Lynch and R. A. Pfuntner. bibliog il diags Elec Eng 65:Trans 806-12 D '46
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46
Jet-engine instruments. C. A. Edman. Mech Eng 69:505-6 Je '47
Latest developments in aircraft controls and instrumentation. R. A. Brown. il diags A S M E Trans 69:109-16 F '47
Magnetic compass with a cathode-ray sensing element. W. H. Kliever and R. R. Syrdal. diags Product Eng 18:132-4 Ag '47
New simplicity in servos improves automatic control. J. Andresen. il diags Aviation 46: 70-1 Je '47
Oblique-section rotor for lightweight synchro motor; Synchrotrol unit. il diag Product Eng 18:102-3 Ag '47
Pilotless plane flight points way for Sperry growth; it contributed to controls which flew C-54 to England. B. Ravits. Barron's 27:29-30 N 3 '47
Plane stall warning device is developed. il diags Aviation N 7:24 Mr 3 '47
Pneumatic units for aircraft. W. L. Nye. il diags Aero Digest 54:78-80 My '47
Position error of a Machmeter. H. W. Sibert. J Aeronautical Sci 14:283-4 My '47
Psychology and aircraft design; errors in reading instruments and in handling controls. P. M. Fitts. il diags Mech Eng 69: 135-41+ F '47
Rate-of-change meter. R. W. Treharne and others. diag Electronics 20:106-7 My '47
Theory of corrugated diaphragms for pressure-measuring instruments. A. Pfeiffer. diags R Sci Instr 18:660-4 S '47
Vacuum-tube acceleration pickup. W. Ramberg. 4pls diags J Res Nat Bur Stand 37: 391-8 D '46; Abstract. R Sci Instr 18:67-8 Ja '47
Wind-speed indicator adapted to use in airplane take-off tests. il Mech Eng 69:860-1 O '47

See also
Altimeters
Direction finding apparatus
Radio apparatus on aircraft
Radio beacons
Radio meteorographs

Bearings

Future trends in instrument bearing design; abstract. J. H. Goss. Product Eng 18:131 F '47

Maintenance and repair

Radioactive luminous paint; need for control measures in aircraft instrument overhaul as well as in dial painting. R. L. Shorkey. Nat Safety N 56:28-9 S '47

Testing

Maintenance testing of automatic direction finders. W. E. Price and E. M. Hassell. il diag Aviation 45:78-81 N '46
Navy begins work on special hangar to test aircraft electronic devices. Eng N 138:80 Ja 16 '47

AERONAUTIC laboratories
Airborne instrument laboratory unveiled. il Air Transport 4:65 D '46
Aircraft fuels and lubricants research at Thornton-le-Moors. il Engineering 163:355-7, 360 My 2 '47
All-weather tests speeded by new AAF climatic hangar. Aviation W 47:32 Jl 21 '47
AAF's climatic hangar. C. W. Kniffin. il diag Refrig Eng 54:128-31+ Ag '47
Big process refrigeration installation used in research on aircraft engines; NACA laboratory at Cleveland. il Heating-Piping 18:113-14 D '46
Climatic hangar for all-weather testing; Air proving ground command, Eglin field, Florida. il Product Eng 18:147-9 O '47

AERONAUTIC laboratories—*Continued*
Climatic hangar provides all-weather, year-around testing facilities for army air forces planes and equipment. Heat & Ven 44: 112+ O '47
Cornell aeronautical laboratory. il Aero Digest 54:59-61+ Mr '47
NACA test lab requires enormous cooling plant. il Refrig Eng 54:342-3+ O '47
Refrigerated altitude chamber for aircraft testing; North American aviation. L. P. Spalding. il Automotive & Aviation Ind 95:33+ D 1 '46
Thornton aero-engine research laboratory. il Engineer 183:360-2 Ap 25 '47
Vickers-Armstrongs stratosphere chamber. il diags Engineer 184:296-8 S 26 '47; Engineering 164:257-8 S 12 '47
Wright field has its own North pole. il Refrig Eng 52:418-19 N '46; Same. Mech Eng 69: 39 Ja '47
Wright gas-turbine laboratory. il Aero Digest 55:65 Jl '47

Electric equipment

Electric equipment at the Langley memorial aeronautical laboratory. C. C. Clymer and W. G. Gardner. il Gen Elec R 50:20-5 F '47

AERONAUTIC libraries
Industry conference on aeronautical library research facilities. Aeronautical Eng R 5:6 N '46

AERONAUTIC literature
Aviation engineer, take note; cataloging, translating, microfilming seized German aeronautic documents; index project. A. A. Arnhym. Aero Digest 53:25+ D '46

AERONAUTIC meteorology. See Meteorology, Aeronautic

AERONAUTIC research
All-weather flying center develops new operational aids. R. Hotz. il Aviation W 47:11-12 O 27 '47
Army air forces research and development. A. Leggin. il Chem & Eng N 24:2914-15 N 10 '46
Army reveals research activities of German scientists in America. il Iron Age 158:116B-17 D 12 '46; Same cond. Mech Eng 69:154 F '47
Boundary layer control may offer safety increase. bibliog Aviation W 47:34-5 Ag 18 '47
Critical review of German research on high-speed airflow. R. Smelt. il diags Roy Aeronautical Soc J 50:899-927; Discussion. 927-34 D '46
Development of the XS-1 supersonic research airplane. R. M. Stanley and R. J. Sandstrom. il Aeronautical Eng R 6:22-6+ Ag '47
Developments in high-speed aircraft. E. H. Heinemann. il Mech Eng 69:805-12 O '47
Electronic measuring equipment for aeronautical research. Engineer 184:85+ Jl 25 '47; Engineering 164:91 Jl 25 '47
Engineering and research planning of the army air forces. L. C. Craigie. S A E J 55:19-22+ Mr '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84 F, S '47 (to be cont)
Gyroscopic loads on jet shafts create new design problems; NACA studies. R. McLarren. Aviation W 47:27 O 13 '47
How new Douglas Skystreak will probe the transonic. il diag Aviation 46:54-6 My '47
Industry and CAA to confer on personal plane research. W. A. M. Burden. CAA J 8:25-6+ Mr 15 '47
Lightplanes to benefit from new data; survey shows research studies now ready. bibliog il Aviation W 47:26-7 Jl 21 '47
NACA research on effect of combustor-inlet conditions on combustion in a turbojet engine; abstract. J. H. Childs and others. Automotive & Aviation Ind 96:39-40 Ja 1 '47
NACA reveals new results of supersonic research program. R. Hotz. il Aviation W 47:18+ Jl 7 '47
NACA reveals research payload; initial exploration of transonic range. diags Aviation N 7:11 My 12 '47
New approach to flight; flapping wing experiments. W. B. Stout. il diags S A E J 55:50-2 F '47
New V-2 used as flying wind tunnel. Aviation N 7:10-11 Je 2 '47
Plane noise reduction progress achieved in research project. A. McSurely. il Aviation W 47:35-6 O 27 '47
Problem of escape from the earth by rocket. F. J. Malina and M. Summerfield. bibliog J Aeronautical Sci 14:471-80 Ag '47
Progress in dynamic stability and control research. W. F. Milliken, jr. il J Aeronautical Sci 14:493-519 bibliog(91 titles, p517-19) S '47
Psychology and aircraft design; errors in reading instruments and in handling controls. P. M. Fitts. il diags Mech Eng 69: 135-41+ F '47
La recherche aéronautique dans le domaine supersonique. P. Poisson-Quinton. il diags Génie Civil 124:25-9 Ja 15 '47
Research aircraft. P. B. Klein. il diag Mech Eng 69:813-19 O '47
Research bringing quieter aircraft. il Product Eng 18:135-6 My '47
Some ballistic contributions to aerodynamics. A. C. Charters. bibliog il diags J Aeronautical Sci 14:155-66 Mr '47
Supersonic compressor, new ramjets revealed at NACA show; first inspection of Cleveland Flight propulsion research laboratory. R. Hotz. il Aviation W 47:11-12 O 20 '47
Supersonic research quest poses construction problems; Douglas Skystreak. il Aviation N 7:13-14 F 17 '47
Transonic test craft readied by British. Aviation N 7:9-10 Je 2 '47
U.S. research program spans transonic speed range. R. Hotz. Aviation N 7:7-8 Ap 28 '47
Use of damping screens for the reduction of wind-tunnel turbulence. H. L. Dryden and G. B. Schubauer. bibliog diag J Aeronautical Sci 14:221-8 Ap '47
Use of rheo-electrical analogies in certain aerodynamical problems. L. Malavard. bibliog il diags Roy Aeronautical Soc J 51:739-53; Discussion. 753-6 S '47
Useful load ratio with jet and airscrew propulsion of aircraft. K. O. Lundberg. Roy Aeronautical Soc J 51:686-703 Ag '47
Water channel technique simulates supersonic waves. il Product Eng 18:125 O '47
Wind-tunnel turbulence effects; historical account. D. P. Riabouchinsky. bibliog diag J Aeronautical Sci 14:190-2 Mr '47

See also
Aeronautic laboratories
Wind tunnels

AERONAUTIC schools
British overseas airways corporation engineering training school. Engineering 163: 497-8 Je 13 '47
CAA predicts 20 helicopter schools operating by summer. A. McSurely. Aviation N 7:22 Mr 3 '47
Embry-Riddle network uses diversified base operations; ground and flight schools, seaplane base, maintenance depot, surplus agency and hotel. A. McSurely. il Aviation N 7:11-12 F 10 '47
Flight instruction system commences national campaign. S. Bangs. Aviation W 47:44 Jl 14 '47
HAT planning fleet of 40 helicopters as school expands. A. McSurely. il Aviation N 7:19-20 Ap 14 '47

Advertising

Ashburn's advertising pays off. il Aero Digest 55:106 Ag '47

AERONAUTIC workers
Army-navy research will probe supersonic sickness; efforts to determine effects on human beings of high-frequency vibrations emitted by jet engines. il Aviation W 47: 17 Ag 18 '47

AERONAUTIC workers—*Continued*
Employment opportunities in aviation occupations; duties, qualifications, earnings, and working conditions. il U S Bur Labor Statistics Bul 837 pt 2:1-45; pa 20c Supt. of doc. '46; Excerpt (Hours of work and earnings in aviation occupations). Mo Labor R 63:186-94 Ag '46

See also
Airlines—Employees
Airplane factories—Employees
Airplane mechanics
Aviators

AERONAUTICAL engineering review (periodical)
Who's who on the Review; portraits; editorial. Aeronautical Eng R 6:20-1 Ja '47

AERONAUTICAL radio, inc.
Air competitors cooperate in Arinc; airlines communications coordinating group. B. Stubblefield. Air Transport 5:42-3 Ag '47

AERONAUTICS
A.S.M.E. 1947 aviation conference, Los Angeles, May 26-29. Mech Eng 69:710-11 Ag '47
Fourth annual aviation clinic. O. D. Hall. Aero Digest 53:28-9+ D '46

See also
Aerodynamics
Aeronautic laboratories
Air navigation
Air travel
Aircraft
Airfoils
Airlines
Airplane engines
Airplane propellers
Airplanes
Airports
Airways
Aviation
Aviators
Bombs, Flying
Flying boats
Gliders
Helicopters
Interplanetary flight
Meteorology, Aeronautic
Photography, Aerial
Radio aids to aviation
Seaplanes
also Association technique maritime et aéronautique

Bibliography
Aeronautical reviews; periodical articles, government publications, books. il diags Aeronautical Eng R 6:31-2+ Ja '47 [cont monthly]
I.A.S. briefs; summaries of current papers received for publication or presentation at I.A.S. meetings. Aeronautical Eng R 6:24-7 F '47 [cont monthly]
New books. Published in monthly numbers of Aero digest
Recent aeronautical literature; a selective subject index for 1946. W. K. Dennis, comp. 419p $10 Beech aircraft corporation, Wichita 1, Kansas '47
Recent books. Aviation 46:123 Ja '47 [cont monthly]
Selected and annotated bibliography in aviation for guidance counsellors. 10p U.S. Dept. of commerce, Civil aeronautics administration, Washington '46
Selected and annotated bibliography of recent air age education textbooks (also includes standard texts that incorporate such materials). 41p U.S. Dept. of commerce, Civil aeronautics administration, Washington '47
Selected and annotated bibliography on the social, political, economic, and international aspects of aviation. 65p U.S. Dept. of commerce, Civil aeronautics administration, Washington 25, D.C. '46

See also
Aeronautics—Periodicals—Bibliography

Encyclopedias
Casey Jones cyclopedia of aviation terms. H. L. Williams, comp. 246p $5 McGraw-Hill book co, 330 W. 42d st, New York 18 '46

Exhibitions
British dominate French air show. il Aviation N 6:13 D 9 '46
British jet family gets new member; Napier Naiad unveiled at Radlett show; other equipment displayed. il Aviation W 47:49 O 13 '47
British show spurs new export drive. F. R. Brewster. il Aviation W 47:21-2+ O 6 '47
L'évolution de la technique aéronautique depuis la seconde guerre mondiale d'après le XVII[e] Salon de l'aéronautique de Paris. R. J. de Marolles. Génie Civil 124:171-4, 189-92, 207-10 My 1-Je 1 '47
First post-war national air show. I. F. Angstadt. il Aero Digest 54:22+ Ja '47
National aircraft show. il plan Aero Digest 53:24-5 N '46; Automotive & Aviation Ind 95:32-6+ D 15 '46; Aviation 45:94-5 D '46
National aircraft show. W. Kroger. il Aviation N 6:7 N 18; 7-8 N 25 '46
Paris postwar international air show. W. F. Bradley. il diag Automotive & Aviation Ind 96:18-21+ Ja 1 '47
Purposes of the National aircraft shows. C. M. Vandeburg. Aviation 45:38 N '46
Society of British aircraft constructors display and exhibition, Sept. 9-11. il Engineer 184:268-9 S 19 '47; Engineering 164:282-3, 300, 306-8 S 19-26 '47

History
40 years of flying friendship; American aviators fly in Canada. F. H. Ellis. il Aero Digest 54:25-7+ My '47
Gallery of aviation's frontiersmen. J. Hettich. il Aero Digest 51:40+ D 15 '45; 52:40+ Ja; 38+ F; 28+ Mr; 28+ Ap; 28+ My; 24+ Je; 53:28+ Ag; 26+ S; 30+ O; 28, 126+ N; 30+ D '46
What of the aviation pioneers? G. H. Scragg. Aero Digest 55:28-9 S '47

International aspects
See Aeronautics, Commercial—International aspects

Laws and regulations
Check those air traffic rules! Aero Digest 55:61 O '47
CAA is reversing stand on red tape. Aviation N 6:19 N 18 '46
CAB asks pilots for their views on rule changes. CAA J 7:137+ N 15 '46
Colonial challenges suspension powers; replies to mail pay probe. Aviation N 7:31 My 12 '47
Congress leaves better record on aviation bills. Aviation W 47:13-14 Ag 18 '47
Current status of aviation law; report by Committee on aeronautical law of American bar association. Weekly Underw 156:1420-2+, 1492-5 My 24-31 '47
Designing to new transport category performance requirements of Civil air regulations. W. B. Oswald. S A E J 55:23+ Mr '47
Effect of CAB requirements on airplane design; abstract. J. E. Steiner. Automotive & Aviation Ind 96:31-2 My 1 '47
Effect of the new civil air regulations on scheduled air transportation. R. W. Ayer and F. F. Fennema. diag S A E J 55:47-50 Ja '47
Helicopter council begins drive against restrictive regulations. A. McSurely. Aviation N 7:7-8 F 24 '47
Helicopter regulation program presented by AIA group. Aviation N 7:11 Mr 31 '47
New flight rules to aid helicopters. Aviation W 47:14 S 1 '47
New regulations required for high altitude transport design. M. F. Vanik. Aviation W 47:24 O 27 '47
Ohio court decision menaces future of private flying fields. Aviation N 6:14 D 30 '46
Private international air law developments; relations of CITEJA and PICAO. S. Latchford. Weekly Underw 157:559-60+, 651-2 S 6-13 '47
Public utility problems in the air industry. O. Ryan. Pub Util 38:706-14 N 21 '46
Study new air traffic rules is Wright's advice to pilots. CAA J 8:97+ S 15 '47
Utah is extending control of aviation. Aviation N 6:15 N 11 '46
Views on separate standard of liability for aviation. R. B. Lynch. East Underw 47:38 D 6 '46

Patents
Review of patents. Aviation 46:115 Ja '47 [cont monthly]
Trend of invention. Published in monthly numbers of Aero digest

AERONAUTICS—*Continued*

Periodicals

Bibliography

Aeronautical periodicals. 7p U.S. Dept. of commerce, Civil aeronautics administration, Washington '46

Safety measures

See Aviation—Safety measures

Study and teaching

Air transportation course at American university. Aviation N 7:32 Ap 21 '47
High school students get airplane flights in aviation courses. CAA J 8:87 Ag 15 '47
World air-age education congress. Aero Digest 53:172 N '46

Bibliography

Selected and annotated bibliography of recent air age education textbooks (also includes standard texts that incorporate such materials). 41p U.S. Dept. of commerce, Civil aeronautics administration, Washington '47
Selected and annotated bibliography on the professional aspects of aviation education (objectives, scope, curriculum, method). 40p U.S. Dept. of commerce, Civil aeronautics administration, Washington '47

Yearbooks

Jane's all the world's aircraft, 1945-46. L. Bridgman, comp. 34th annual ed $19 Macmillan co, 60 5th av, New York 11 '46

Alaska

CAA advises pilots on trip to Alaska over inside route. CAA J 8:60 My 15 '47
Remote CAA stations get annual supplies by plane in Alaska. CAA J 8:99 S 15 '47

Canada

40 years of flying friendship; American aviators fly in Canada. F. H. Ellis. il Aero Digest 54:25-7+ My '47

France

French private flying clubs. Aviation W 47: 16 O 20 '47

United States

New air coordinating committee established by presidential order. CAA J 7:140 N 15 '46
New ACC report urges long range plane buying program. W. Kroger. Aviation W 47:11 Ag 25 '47
Skyway One initiators commended; civil aviation discussed. J. R. Alison. CAA J 8:111 O 15 '47
State of the industry. F. W. Barker. Air Transport 5:23-6 O '47
Truman board, Congress group will probe aviation industry. Aviation W 47:11-12 Jl 28 '47

See also
Aeronautics, Commercial—United States

AERONAUTICS, Commercial

Air transportation; today and tomorrow. J. C. Leslie. il Tech R 49:525-6+ Jl '47
Future trends in aviation. C. C. Furnas. Am Pet Inst Proc 26(3):93-8 '46
Operator and his state ATA. C. A. Parker. il Aero Digest 55:70+ O '47
That flying dollar, how it flies; getting the money's worth out of personal flying. R. I. Hale. il Aero Digest 54:36-7 F '47
What the engineer can do for commercial aviation. W. A. Patterson. Western Soc E J 52:61-70; Discussion. 70-4 Je '47

See also
Air express service
Air mail service
Airlines
Airplane industry and trade
Airports
Airways
Photography, Aerial

International aspects

Air-commerce controversy. K. K. Hoyt. Aero Digest 55:28-9, 90+ Jl '47
Air navigation aids for Middle East charted at PICAO regional meeting. CAA J 7:152 D 15 '46
British, Russians lagging in air transport. J. M. Landis. Aviation N 7:7-8 Je 16 '47
China and United States sign draft of air agreement. For Comm W 25:30 D 28 '46
Current status of aviation law; report by Committee on aeronautical law of American bar association. Weekly Underw 156: 1420-2+ My 24 '47
Customs-free port established at Shannon airport. For Comm W 27:15, 28 Je 7 '47
500 days of international air transport. W. P. Hildred. Air Transport 4:27-8 D '46
For safer blind flying; international conference proposes worldwide agreement on navigation and landing aids. Bsns W p38+ Ja 4 '47
Foreign challenge in the air. P. McCarran. map Aero Digest 54:20-1+ Je '47
ICAO revamps council makeup; multilateral agreement shelved. J. Foster, jr. Aviation N 7:12, My 26 '47
More air routes all over world. Air Transport 5:42 Ap '47
New bilateral pacts open Orient, Pacific to U. S. airlines. M. Mickel. Aviation N 6:7 D 9 '46
Our international aviation policy. R. R. Hackford. Harvard Bsns R 25 no 4:483-500 [Jl] '47
Peruvian carrier admitted to U.S. Aviation W 47:58 Ag 11 '47
Portugal and Belgium sign new civil air agreement. For Comm W 26:38 F 1 '47
Present status of world air transport. L. W. Pogue. Air Transport 4:31-2 D '46
Private international air law developments; relations of CITEJA and PICAO. S. Latchford. Weekly Underw 157:559-60+, 651-2 S 6-13 '47
PICAO at work. E. Warner. Air Transport 4:23-6+ D '46
PICAO transport split threatens multilateral pacts. Aviation N 7:32+ Ap 7 '47
Red tape in international air travel. W. A. M. Burden. il Air Transport 5:41-4 Mr '47
Russo-Swedish pact opens new service. Aviation N 6:33 N 25 '46
Travel red tape under investigation. Aviation W 47:59 Jl 14 '47
26 nations ratify International civil aviation organization. Ind Stand 18:81-3 Ap '47
U.S. and Syria sign air agreement. Comm & Fin Chr 165:2530 My 8 '47
U.S.-Argentine air pact. Comm & Fin Chr 165:2786 My 22 '47
United States-India air agreement. For Comm W 26:14 Ja 11 '47
U.S.'s aircraft mortgage proposals would broaden industry market. Aviation N 7:20 F 17 '47

See also
Airlines—Trans-oceanic lines

Alaska

Alaskan carriers face new rules. il Aviation N 6:32+ N 18 '46

Argentina

Tips on the Argentine market. C. M. Cook. il Aero Digest 54:22-3+ Mr '47

California

California operators group effective in state air policy. A. McSurely. Aviation N 7:20-1 Je 16 '47

Colombia

Colombian air transport at crossroads. G. M. Galster. il Aviation 45:84 N '46

Latin America

Sky Merchant in Latin America; converted C-54 refitted for sales promotion tours. E. E. Aldrin. il Aero Digest 55:26-7+ S '47

Miami

Miami broadens world-trade aims as figures show brisk progress. W. Seltzer and K. Fitzgerald. il map For Comm W 28:6-8+ Ag 23 '47

Near East

Air navigation aids for Middle East charted at PICAO regional meeting. CAA J 7:152 D 15 '46

AERONAUTICS, Commercial—*Continued*

Netherlands Indies

Netherlands Indies has big expansion in air transport. For Comm W 25:30 D 28 '46

Russia

Moscow report lifts curtain on Soviet civil aviation growth. A. Steiger. il Aviation W 47:55-6 S 8 '47

Soviet civil aviation gaining in scope. For Comm W 26:31-2 Ja 4 '47

South Africa

Why South Africa rates A-1 for export. R. L. Hoadley. Aviation 46:81-2 Je '47

United States

Advances of civil aviation in 1946 greatest on record. T. P. Wright. CAA J 8:1+ Ja 15 '47

After the turn of the year. W. A. Patterson. Comm & Fin Chr 165:458 Ja 23 '47

Air transportation outlook. W. A. Patterson. Comm & Fin Chr 165:595+ Ja 30 '47

Aviation market hits two billion dollar rate, and still is going up! Aviation W 47:26-7 O 27 '47

40 per cent of U.S. cities lack service CAB authorized. C. Adams. Aviation N 7:24-5 Mr 24 '47

Industry speaks for 1947. C. F. Elliott. Aero Digest 54:15-19 Ja '47

Need for government aid. R. Ramspeck. Aviation N 7:30 Je 2 '47

Our international aviation policy. R. R. Hackford. Harvard Bsns R 25 no 4:483-500 [Jl] '47

Problems of postwar air transportation. J. H. Frederick. Comm & Fin Chr 165:867+ F 13 '47

Public utility problems in the air industry. O. Ryan. Pub Util 38:706-14 N 21 '46

Status of aviation industry. W. A. Harriman. Comm & Fin Chr 165:739+ F 6 '47; Excerpts. Aero Digest 54:19+ Mr '47; Aeronautical Eng R 6:22-3 Mr '47

Transport problems needing Board's solution this year. J. M. Landis. CAA J 8:2 Ja 15 '47

See also

Airlines—United States
Airplane industry and trade—United States

AERONAUTICS, Military

Fortune survey; how do veterans feel toward business and industry? making airplanes for army and navy, a privately owned or government plant? Fortune 34:6+ D '46

If we are to build the weapons. L. C. Stevens. Aero Digest 54:20-1 Mr '47

See also

Air raids
Airplanes, Military
Airports, Military
Aviators, Military
Bombs, Flying
Guns, Aircraft

Germany

Rotary wing kite; German submarine towed aircraft. il Aero Digest 53:86 N '46

Great Britain

Operational flying; naval air operations. F. M. A. Torrens-Spence. Roy Aeronautical Soc J 51:831-43; Discussion. 844 O '47

United States

Air industrial preparedness. Mech Eng 69: 586-7 Jl '47

Defensive air patrols urged for U.S. frontiers. G. C. Kenney. Aviation W 47:15 Ag 18 '47

Maintenance of peace through air power. O. P. Echols. S A E J 55:17-20 Je '47

New ACC report urges longe range plane buying program. W. Kroger. Aviation W 47:11 Ag 25 '47

Plans for industrial air preparedness. J. C. Gordon. S A E J 55:30-2 Ja '47

We must furnish the tools. C. E. LeMay. Aero Digest 54:24-5 Ap '47

See also

United States—Air service, Army
United States—Air service, Navy

AEROSOL MA

Micelle structure in aqueous solutions of colloidal electrolytes. R. J. Vetter. bibliog J Phys & Colloid Chem 51:262-77 Ja '47

AEROSOL OT

Use of aerosol OT in dissecting salivary glands of mosquitoes infected with malaria. E. S. Josephson and others. Science 105:650-1 Je 20 '47

AEROSOLS (insecticides). See Insecticides

AEROVOX corporation

Preferred stock offered. Comm & Fin Chr 165:1309 Mr 10 '47

AETNA life insurance company

Adopts C.S.O. basis. Nat Underw (Life ed) 51:19 Ap 25 '47

Changes to CSO basis; new rates and values; with tabulations. Life Ins Courant 52:240-4 Je '47

Stock offering completed. Comm & Fin Chr 166:365 Jl 28 '47

AFGHANISTAN

Commerce

Important exports. For Comm W 29:14 O 25 '47

Economic conditions

News by countries. For Comm W 29:13-14 O 25 '47

AFRICA

See also

Banks and banking—Africa

Antiquities

See also

Pan-African congress on prehistory

Industries and resources

Modern rebirth for fabulous Africa. V. L. Horoth. il Mag of Wall St 80:421-3+ Jl 19 '47

AFRICA, British East

Commercial policy

Marketing in East Africa. Economist 151: 714 N 2 '46

Economic conditions

Review of developments during 1946. For Comm W 27:14-15 Je 28 '47

AFRICA, British West

See also

Electricity supply—Africa, British West

AFRICA, North

See also

Hydroelectric plants Africa, North
Irrigation—Africa, North
Tunis (state)

AFRICA, South. See South Africa

AFRICA, West

See also

Airlines—Africa, West
Angola, West Africa
Liberia

AFTER images, Auditory. See Hearing

AGAR

Agar-agar as a coagulant for calcium sulphate. E. M. Losee. Can Chem & Process Ind 30:90 N '46

AGAR, Cross and company

Statement by the chairman of ordinary general meeting. Economist 151:1023 D 21 '46

AGASSIZ, Lake. See Glacial lakes

AGE

Age of invention; peak of inventive productivity occurring for men in their forties. T. Spooner. Tech R 49:37-41+ N '46

See also

Old age

AGE and employment

CAA age study shows most pilots are young persons. CAA J 8:39 Ap 15 '47

Compulsory retirement on calendar age basis should be abandoned. Science 105:9 Ja 3 '47

Economic effects of longevity. T. G. Klumpp. Comm & Fin Chr 164:2616+ N 21 '46

Employment status of men over forty; abstract. H. A. Wagner. Chem & Eng N 25: 968-9 Ap 7 '47

How to beat the 40-year deadline. H. A. Wagner. Power Pl Eng 51:67+ Ap '47

AGE and employment—*Continued*
Production clinic. E. G. Thomssen. Soap & San Chem 22:73+ N '46

What about the oldsters? abilities of the older worker. E. W. Fair. Pub Util 38:658-61 N 21 '46; Same. Chem Eng 53:108-9 D '46

When it's time for retirement. W. J. Reilly. Am Bsns 17:10-11+ Mr '47

Who's too old; is advertising a young man's business? Aesop Glim. Ptr Ink 218:44 Ja 17 '47

AGED, Homes for. See Old age homes

AGENCIES, Advertising. See Advertising agencies

AGENCY (law)
Agreement settling payment of note by bank's agent held valid and binding upon bank. Banking Law J 64:613-14+ Ag '47

Manufacturer's liability on sales contracts; recent law suits involving contracts for sale of machinery through distributors. L. T. Parker. Mach 53:182-4 Ja '47

Marine claims group hears talk on principal, agent; is bellboy an agent of owner? Nat Underw 51:4 F 27 '47

Problems arising from questioned securities viewed. S. W. Donovan. Nat Underw 50:5 N 28 '46

Rights of agent after paying note for principal. Banking Law J 64:718-23 S '47

See also
Brokers—Law
Insurance agents—Law

AGENTS, Insurance. See Insurance agents

AGGLUTINATION
Agglutination and an agglutinin-blocking property in serums from known cases of brucellosis. J. J. Griffitts. bibliog Pub Health Rep 62:865-75 Je 13 '47

Detection of serum agglutinins for monilia and other yeast-like organisms. R. F. Norris and A. J. Rawson. bibliog Science 105:105 Ja 24 '47

Virus hemagglutination. M. Bovarnick and P. M. de Burgh. bibliog Science 105:550-2 My 23 '47

AGGREGATES
Adhesion between binders and individual rock-forming minerals. J. F. Douglas. bibliog Soc Chem Ind J 65:377-9 D '46

How to design asphaltic concrete paving mixtures. il diag Pub Works 78:19-20+ Ap '47

Spend half million for aggregates plant; Pacific coast aggregates co. W. B. Lenhart. flow sheet il Rock Prod 50:70-3 S '47

See also
Concrete—Aggregate
Sand and gravel plants

Storage

Shade-shed for cool aggregate. il Eng N 139: 448-9 O 2 '47

Testing

Testing chemical reactivity of concrete aggregate. R. C. Mielenz and D. McConnell. Rock Prod 50:112-13+ O '47

AGING of metals. See Metals—Aging

AGING of rubber. See Rubber—Aging

AGITATORS
Formation of static electric charges on agitating petroleum products with air. C. M. Klaerner. bibliog Ind & Eng Chem 39:92-3 Ja '47

Improvement in agitator stuffing box. J. E. Troyan. diag Oil & Gas J 46:89+ Je 21 '47

Performance and design of agitators. D. E. Mack and V. W. Uhl. bibliog diags Chem Eng 54:119-21+ S; 115-16 O '47

Power consumption of agitators. J. J. Martin. bibliog Am Inst Chem Eng Trans 42:777-81 O-D '46

Practical aspects in design of liquid agitators. R. E. Chaddock. bibliog diags Chem Eng 53:151-3 N '46

AGRICULTURAL chemistry
Agricultural chemicals in the West. J. J. Jacobs. bibliog il Chem & Eng N 25:2712-14 S 22 '47

See also
Chemurgy
Farm produce—By-products
Feeding and feeding stuffs
Fertilizers
Fungicides
Insecticides
Silage

AGRICULTURAL chemists
Advisory chemist and problems in crop production; abstract. N. H. Pizer. Chem & Ind p321 Je 7 '47

AGRICULTURAL chemists, Association of official. See Association of official agricultural chemists

AGRICULTURAL credit
A.B.A. suggestions for sound agriculture. Banking 40:53 Jl '47

Amounts borrowed by farmers from banks, PCA's and Federal land banks, at any time in 1946; data by states; map. Banking 39:48 My '47

Bank credit to American farmers; loans made in 1945. Banking 39:55 D '46

Bank financing of farm machinery; Citizens & southern national bank in Georgia. P. M. Welch. il Burroughs Clearing House 31:22-5+ Ag '47

Banking and teen-age farmers; Brody Lee Koon of Brashear, Tex. H. Severson. Banking 39:50-1 Ja '47

Bill to reorganize farm credit agencies; HR 1677. N. P. Gregory. Burroughs Clearing House 31:27 Mr '47

Commercial bank loans to farmers; results of survey of loans outstanding on June 20, 1947; with specimen reporting forms and instructions. T. Smith and P. T. Allen. Fed Res Bul 33:1216-27 O '47

Expect agricultural price drop! warns banks. H. S. Cherry. Comm & Fin Chr 165:2336+ My 1 '47

Extols job done by banks in agricultural credit. C. C. Davis. Comm & Fin Chr 166: 1421 O 9 '47

Future of government in the farm mortgage field. J. D. Black. J Land & Pub Util Econ 23:1-11 F '47

Good farm credit files show more than assets and liabilities. W. Garst. Bankers Mo 64:434 S '47

Loans for 6 months or 40 years make complete farm loan service; Valley national bank, Phoenix, Ariz. L. W. Fletcher. Bankers Mo 64:113-15 Mr '47

Loans on livestock projects are one hundred per cent loans. R. B. O'Brien. Bankers Mo 64:168 Ap '47

More family help on the farm, better credit rating at the bank. O. D. Ellsworth. il Bankers Mo 63:604+ D '46

Never a re-possession on farm equipment loans; First national bank, Humboldt, Iowa. B. B. Watson. il Bankers Mo 64:59-60 F '47

1947 farm forecast. N. J. Wall. Banking 39: 42-3 Ja '47

Outside farm program in Virginia; First national exchange bank of Roanoke, Virginia. il Banking 39:57-8+ F '47

Specific cases show advantages in financing farm operations direct. R. S. Stevenson. il Bankers Mo 64:426-8 S '47

Time spent with farmers and their boys and girls increases our number of good loans; Fremont national bank, Fremont, Neb. M. C. Townsend. il Bankers Mo 64:388-9 Ag '47

We prefer farmers' notes without recourse to the dealer; Central national bank, Greencastle, Ind. F. L. O'Hair. Bankers Mo 64: 367 Ag '47

See also
Land banks
Mortgages, Farm

AGRICULTURAL education

Venezuela

Venezuela sees acute need of more agricultural technicians. For Comm W 25:20 N 9 '46

AGRICULTURAL engineering
Engineering opportunities in soil conservation. A. W. Emerson. il Eng N 138:1014-17 Je 26 '47
Petroleum and modern farming. A. W. Turner. Am Pet Inst Proc 26(1):92-6 '46
Place of agricultural engineering in agriculture. E. L. Anthony. J Eng Educ 37:310-12 D '46
Urgent needs for scientific power farming are set forth; API Agricultural development committee meeting, Memphis, May 5-8. il Nat Pet N 39:41-2+ My 21 '47

See also
Agricultural machinery
Drainage
Electricity on the farm
Irrigation

Study and teaching

Accrediting agricultural engineering curricula; view points of agricultural engineering faculty members. G. B. Nutt. J Eng Educ 37:386-8 Ja '47
Industry requirements of professional agricultural engineering education. J. D. Long. J Eng Educ 37:210-13 N '46
Meeting the engineering needs of agriculture. A. W. Turner. J Eng Educ 37:252-9 N '46

AGRICULTURAL experiment stations

See also
Rothamsted experimental station

AGRICULTURAL extension work
Agricultural workers' part in farm electrification. I. P. Trotter. Edison Elec Inst Bul 15:130-2+ Ap '47

AGRICULTURAL insecticide and fungicide association
Annual meeting, Spring Lake, N.J., Sept. 2-4. Oil Paint & Drug Rep 152:5+ S 8 '47
Spring meeting, Rye, N. Y. April 24-25. Oil Paint & Drug Rep 151:3+ Ap 28 '47

AGRICULTURAL insurance. See Insurance, Agricultural

AGRICULTURAL laboratories
USDA conference features regional lab research. Chem & Eng N 24:2913 N 10 '46
L'utilisation industrielle des matières premières agricoles. H. T. Herick. il Chimie & Ind 57:431-40 My '47

AGRICULTURAL laws and legislation

Great Britain

Agriculture bill. Economist 151:1036-7; 152: 924-5 D 28 '46, Je 14 '47; Discussion. 152: 975 Je 21 '47

AGRICULTURAL libraries
A.E.S. library takes the plunge; Agricultural experiment station library, Purdue university. C. C. Campbell. Special Lib 37: 315-17 D '46
Agricultural research library; Connecticut agricultural experiment station, New Haven. R. H. Giandonato. Special Lib 38: 111-14 Ap '47
Special librarian abroad; organization of library of the Instituto agronomico de Norte in Belém. F. B. Thorne. Special Lib 38:5-10 Ja '47

AGRICULTURAL limestone. See Lime as fertilizer

AGRICULTURAL limestone association, National. See National agricultural limestone association

AGRICULTURAL machinery
Address; viewpoints and suggestions from the farm-machinery industry. J. L. McCaffrey. Am Pet Inst Proc 26(1):97-100 '46
Diesel willow-dozing in Missouri; machine cuts down willow on farm land. J. L. Simpson. il Diesel Power 25:44+ O '47
Farm contractors rent equipment in Georgia. Barron's 26:5 D 23 '46
Food machinery; study in growth. il diags Fortune 35:114-19+ Ap '47
Future of agricultural engineering. W. H. Cashmore. Mech Handling 33:748+; 34:86-90, 107 D '46-F '47
Industrial revolution on U.S. farms opens new markets for many products. H. Everett. il Ind Marketing 32:42-4+ My '47
Machines cut costs for domestic sugar growers. H. W. Knodel. Barron's 27:33 S 22 '47
Mechanical engineering and agriculture. S. J. Wright. diag Inst Mech Eng J & Proc 156:Proc 17-23, pl 1-4 Je '47; Same cond. Engineer 182:571-3, 584-6 D 20-27 '46; Same. Engineering 163:177-80, 202-3 Mr 7-14 '47
Push-button farming; silo unloader, manure handler. il Bsns W p44+ N 9 '46
Rototiller engine. diags Automotive & Aviation Ind 95:32 N 15 '46
Urgent needs for scientific power farming are set forth; API Agricultural development committee meeting, Memphis, May 5-8. il Nat Pet N 39:41-2+ My 21 '47

See also
Cotton picking machines
Harrows
Harvesting machinery
Plows
Threshing machines
Tractors

Manufacture

Ingenious steel quenching practices developed by farm implement makers. K. Rose. il Materials & Methods 25:77-80 Je '47

AGRICULTURAL machinery industry
Expansion in farm machinery production to be matched by ad and sales boosts. N. Kelne. Ptr Ink 220:108 S 5 '47
Oliver finds foreign demand for farm equipment high. il Ind Marketing 32:114 My '47

See also
International harvester company
Tractor industry and trade

Exhibitions

Le XIX[e] Salon de la machine agricole (Paris, 4-9 mars 1947). T. Ballu. il Génie Civil 124: 175-6 My 1 '47
Electricity and agriculture; demonstrations at the Kent, Sussex and Herts shows. il Electrician 139:327-8 Ag 1 '47
Electricity for the farmer; demonstrations at the Lincoln royal show. il Electrician 139: 49-50 Jl 4 '47
Electricity in farming; uses demonstrated at agricultural shows. il Elec R (Lond) 141: 57-8 Jl 11 '47
Royal agricultural show at Lincoln. il Engineering 164:41-3, 53-5, 60, 77-9, 84, 102-3 Jl 11-Ag 1 '47; Engineer 184:5-8, 26-30, 49-51 Jl 4-18 '47
Royal Norfolk centenary agricultural show. Engineering 164:19 Jl 4 '47

Finance

Another viewpoint on farm equipment loans; abstract. R. H. Stout. Burroughs Clearing House 31:12 F '47
Bank financing of farm machinery; Citizens & southern national bank in Georgia. P. M. Welch. il Burroughs Clearing House 31:22-5+ Ag '47
Never a re-possession on farm equipment loans; First national bank, Humboldt, Iowa. B. B. Watson. il Bankers Mo 64:59-60 F '47
State-wide survey of farm equipment financing in New York. Burroughs Clearing House 31:11-12 F '47
We prefer farmers' notes without recourse to the dealer; Central national bank, Greencastle, Ind. F. L. O'Hair. Bankers Mo 64: 367 Ag '47

Securities

Farm equipments, halfway to saturation? with position of leading farm equipment stocks. P. Dobbs. il Mag of Wall St 80: 598-9+ Ag 30 '47
Weighing potentials in farm equipments; with position of leading stocks. E. A. Barnes. il Mag of Wall St 79:553-9+ F 15 '47

Great Britain

Engineering outlook. Engineering 163:184-7 Mr 14 '47
Farm-equipment demand in Great Britain mounts. C. B. Welch. il For Comm W 25: 6-7 N 16 '46
Requirements and production, United Kingdom. For Comm W 27:22-3 Ap 19 '47

AGRICULTURAL machinery industry—*Cont.*

Russia

Farm machinery in 1947. For Comm W 28:17 Jl 12 '47

AGRICULTURAL pests

See also
Insects, Injurious and beneficial
Weeds

AGRICULTURAL products

See also
Crops
Farm produce
Flax
Rice
Rubber plants and planting
Wheat

AGRICULTURAL research

Bureau of agricultural and industrial chemistry report. Chem & Eng N 25:1114 Ap 21 '47

Chemists fight for food, forage, fiber. D. H. Killeffer. il Sci Am 176:157-9 Ap '47

Chemurgists' meeting stresses plant fibers. Chem & Eng N 25:1123-4 Ap 21 '47

Farm studies set; research in farm marketing and distribution. Bsns W p68+ O 11 '47

Petroleum and agriculture team up to speed new scientific development; Shell oil company's research laboratory and experimental farm. R. Sneddon. il Pet Eng 18: 71+ N '46

Petroleum research and better farming; Shell's experimental farm and laboratory. il Nat Pet N 39:20-1 Ja 1 '47

Phosphate research group reviews radioactive tests. Oil Paint & Drug Rep 152:5 S 22 '47

Projects of Frasch foundation. Chem & Eng N 25:287 F 3 '47

Report of East African agricultural research institute, Amani; abstracts. Chem & Eng N 24:3410+ D 25 '46; Chem & Ind p106 F 22-Mr 8 '47

Research in fundamental biology and in agriculture. H. B. Tukey. Science 105:565-7 My 30 '47

Science and agriculture in inter-American affairs. R. H. Allee. Chem & Eng N 25:1184-6 Ap 28 '47

U.S. farm research program set up. Oil Paint & Drug Rep 150:52 D 16 '46

See also
Agricultural laboratories
Farm produce—By-products
Rothamsted experimental station
Texas state research foundation

AGRICULTURE

See also
Agricultural machinery
Airplanes in agriculture
Chemurgy
Cotton
Crops
Dairying
Electricity on the farm
Farm buildings
Farm labor
Farm produce
Farmers
Feeding and feeding stuffs
Fertilizers
Flax
Food supply
Forests and forestry
Irrigation
Land tenure
Live stock
Rice
Rubber plants and planting
Soils
Sugar
Wheat

Bibliography

Agricultural index, October 1945-September 1946. 584p H. W. Wilson co, New York '46

Economic aspects

Agricultural America tastes its greatest prosperity; 1945 census of agriculture; market exploration map. W. P. Burn. Ptr Ink 218:37-40 Ja 3 '47

Agricultural situation. Nat City Bank p75-6 Jl '47

Agriculture goes big business. N. T. Carruthers. il Mag of Wall St 79:362-4+ Ja 4 '47

American agriculture; Schultz' analysis and policy proposals. J. S. Davis. R Econ Stat 29:80-91; Reply. T. W. Schultz. 92-4 My '47

Conference Board analyzes forecasts and facts for 1947 agricultural outlook. Comm & Fin Chr 165:1166 F 27 '47

Development of natural resources: the coming technological revolution on the land. H. H. Bennett. Science 105:1-4 Ja 3 '47

Engrais et démographie. E. Roux. Chimie & Ind 57:395-6 Ap '47

Labor problem down on the farm; mechanization is cutting need for hired hands. Bsns W p 100-1 S 13 '47

Land; foundation for industrial society. H. DeGraff. Comm & Fin Chr 165:2645+ My 15 '47

1947 farm forecast. N. J. Wall. Banking 39: 42-3 Ja '47

Position of agriculture in mid-1947. Fed Res Bul 33:939-50 Ag '47

Production policies for a permanent and profitable agriculture. N. Clark. J Land & Pub Util Econ 23:169-79 My '47

Report from Main Street; conditions in the Middle West. D. Kramer. Comm & Fin Chr 166:905+ S 4 '47

Research needs in land tenure and farm finance. G. H. Aull. J Land & Pub Util Econ 23:255-60 Ag '47

Some aspects of the statistics program in the Department of agriculture. C. Taeuber. Am Stat Assn J 42:41-5 Mr '47

See also
Agricultural credit
Farm income
Farm market
Farm produce—Prices
Farmers
Farmers' cooperative associations
Land tenure
Mortgages, Farm

International aspects

First annual general meeting of the World farmers' federation. Economist 152:753-4 My 17 '47

See also Inter-American institute of agricultural science, Costa Rica

Statistics

Agricultural America tastes its greatest prosperity; 1945 census of agriculture; market exploration map. W. P. Burn. Ptr Ink 218:37-40 Ja 3 '47

International yearbook of agricultural statistics, 1941-42 to 1945-46. 3v 245p $1.50; 570p $3; 328p $2 International institute of agriculture, Villa Borghese, Rome; for sale by Food and agriculture organization of the U.N. Washington 6, D.C. '47

Position of agriculture in mid-1947. Fed Res Bul 33:939-50 Ag '47

Some aspects of the statistics program in the Department of agriculture. C. Taeuber. Am Stat Assn J 42:41-5 Mr '47

Alabama

From cotton to cattle; Black belt of Alabama. H. Severson. Banking 39:59-60 F '47

Arkansas

Featuring Arkansas. il Manuf Rec 116:97-103 Ag '47

Austria

Farm inheritance practices in Austria. B. T. Inman. bibliog map J Land & Pub Util Econ 23:288-96 Ag '47

Brazil

Amazon rebirth; plan proposes big-scale rehabilitation of river valley. Bsns W p110+ Ap 19 '47

Plan for Brazil; three-point scheme to stimulate agriculture, raise living standards, announced by Nelson Rockefeller. Bsns W p65 Ja 4 '47

Canada

Canadian agriculture in the postwar world. V. C. Fowke. bibliog Ann Am Acad 253:44-51 S '47

Soil of Canada. Economist 152:21-2 Ja 4 '47

China

Pattern of land utilization and possible expansion of cultivated area. S. Lee. bibliog J Land & Pub Util Econ 23:142-52 My '47

Sino-U.S. agricultural mission makes recommendations in report. For Comm W 27:35 My 10 '47

AGRICULTURE—*Continued*

Danubian countries

Prospects for agriculture. Economist 152:6-7 Ja 4 '47

Germany

Crop production, British zone of Germany. For Comm W 25:31-2 N 16 '46

Great Britain

Agricultural expansion. Economist 153:508-10 S 27 '47
Expanded agriculture. Economist 153:346-8 Ag 30 '47
Farmer's share; data on shift in distribution of farm income and rise in output per head. Economist 153:236 Ag 9 '47
Farming future. Economist 151:860-2 N 30 '46
National farm survey; its electrical implications. E. W. Golding. Electrician 137:1819-21 D 27 '46

Italy

New deal for Italian agriculture. Economist 151:1001-2 D 21 '46

Japan

See also
Soils—Japan

Missouri

Agriculture in the hub state of the Nation. il Manuf Rec 116:100-7 Ja '47

Netherlands

Dutch land used advantageously last year. For Comm W 26:26 Mr 1 '47

Panama

Panama steps up agricultural development. For Comm W 27:7 Ap 19 '47

Siam

Extension of Siamese government's agriculture program. For Comm W 25:18 N 30 '46

Spain

European antecedents of land tenures and agrarian organization of Hispanic America. D. Weeks. J Land & Pub Util Econ 23: 60-75 F '47

United States

Abundant farm production with surplus food allotments; statement before House Committee on agriculture. C. P. Anderson. Comm & Fin Chr 165:2337+ My 1 '47
Agriculture goes big business. N. T. Carruthers. il Mag of Wall St 79:362-4+ Ja 4 '47
American agriculture; Schultz' analysis and policy proposals. J. S. Davis. R Econ Stat 29:80-91; Reply. T. W. Schultz. 92-4 My '47
Economy in reconversion; agricultural production; with figures for other years. Survey of Cur Bsns 27:18-20 F '47
Farm column. Published in monthly numbers of Fortune
More wheat and more dust; former grazing land. E. S. Stateler. il Food Ind 19:1191+ S '47
Production policies for a permanent and profitable agriculture. N. Clark. J Land & Pub Util Econ 23:169-79 My '47

Farm relief

Another Republican opportunity; a new farm policy. Fortune 35:3-4 Mr '47
Farm law put off; postpone postwar farm legislation until 1948. Bsns W p34+ F 1 '47

Western states

New American market. Bsns W p43-52 Ap 12 '47

AGRICULTURE, International institute of. See International institute of agriculture

AGSTONE. See Lime as fertilizer

AIKEN, Alfred Lawrence, 1870-1946
Sketch. por East Underw 47:14 D 20 '46; Nat Underw (Life ed) 50:8 D 20 '46; Comm & Fin Chr 164:3359 D 26 '46

AILERONS
Nonstationary flow about a wing-aileron-tab combination including aerodynamic balance. T. Theodorsen and I. E. Garrick. diags U S Nat Advisory Com for Aeronautics 1942:129-38 '46

AIR
Air cycle heat pump. T. F. Thomas. diags Engineer 184:180-1, 205-6 Ag 22-29 '47
Altitude-density charts for air. Heat & Ven 44:94a-94b Ap '47
Correlation of C_p and k for dry air. L. Adams. bibliog Refrig Eng 54:140-1 Ag '47
Experiments on the electric strength of air at centimetre wavelengths. R. Cooper. bibliog diags Inst E E J 94 pt 3:315-24 S '47
Rate of fall of particles in air; nomograph; reference data. Heat & Ven 44:106a F '47
Removal of carbon dioxide from atmospheric air. N. A. Spector and B. F. Dodge. flow sheet flow diag Am Inst Chem Eng Trans 42:827-48 O-D '46
Rh of air in equilibrium with refrigerated brine. A. B. Stickney. Refrig Eng 54:232-4 S '47
Theoretical range-energy values for protons in air and aluminum. J. H. Smith. bibliog Phys R 71:32-3 Ja 1 '47

See also
Aerodynamics
Air conditioning
Atmosphere, Upper
Atmospheric pressure
Compressed air
Humidity
Ventilation

Analysis

Application of reflectance spectrophotometry to quantitative microanalysis. J. Sendroy, jr. and W. C. Granville. bibliog Anal Chem 19:500-1 Jl '47
Colorimetric method for determination of traces of carbon dioxide in air. N. A. Spector and B. F. Dodge. Anal Chem 19:55-8 Ja '47
Detection of carbon monoxide or town gas in air. L. T. Minchin. bibliog diags Gas J (Lond) 251:100+ Jl 9 '47
Determination of acetylene tetrachloride in air; protection afforded by gas mask canisters against acetylene tetrachloride. J. Goldenson and J. W. Thomas. bibliog il diag J Ind Hygiene 29:14-22 Ja '47
Determination of cadmium oxide suspended in air. H. A. Bewick, A. J. Cruickshank and F. E. Beamish. Anal Chem 19:269-70 Ap '47
Determination of carbon monoxide; microgravimetric method. J. M. Salsbury, J. W. Cole and J. H. Yoe. bibliog diag Anal Chem 19:66-8 Ja '47
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Determination of mercury in air. E. C. Barnes. bibliog J Ind Hygiene 28:257-61 N '46
Determination of small amounts of carbon monoxide in air by various reference methods. M. Shepherd. bibliog J Res Nat Bur Stand 38:351-8 Mr '47
Estimation of sulfur compounds in air. B. Feiner and others. bibliog J Ind Hygiene 28:276-7 N '46
Mixed color method for the determination of cadmium in air and biological samples by the use of dithizone. F. W. Church. bibliog J Ind Hygiene 29:34-40 Ja '47
Modified cascade impactor; device for sampling and sizing aerosols of particles below one micron in diameter. L. S. Sonkin. il diag J Ind Hygiene 28:268-72 N '46
Pressure gasometer aids in industrial health studies. il Comp Air Mag 52:255 O '47
Rapid method for the determination of chromic acid mist in air. L. Silverman and J. F. Ege, jr. bibliog diag J Ind Hygiene 29:136-9 Mr '47
Simple test detects tetrachloride vapors. Safety Eng 92:62 D '46; Nat Safety N 55: 112 Ja '47; Iron Age 159:57 Ja 9 '47
Simultaneous determination of lead and zinc in atmospheric samples; a polarographic method utilizing a double internal standard. A. S. Landry. bibliog J Ind Hygiene 29: 168-74 My '47

AIR—Analysis—*Continued*
Some experiences with polarographic methods in controlling a lead hazard in brass foundries. H. J. Weber. il J Ind Hygiene 29:158-67 My '47
Tetra-ethyl-lead; new method for determination in air. Chem Age (Lond) 57:505-6 O 11 '47
Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19:675-7 S '47
See also
Air sampling
Bacteriology
Determining and reducing the concentration of air-borne micro-organisms. M. Luckiesh and A. H. Taylor. bibliog il Heating-Piping 19:113-17 Ja '47; Abstract. Heat & Ven 44: 106 F '47; Discussion. Heating-Piping 19:121-2 Ap '47
AIR, Liquid. See Liquid air
AIR-blast circuit breakers. See Electric circuit breakers—Oilless
AIR-BORNE cargo lines
Offering to stockholders. Comm & Fin Chr 165:1181 Mr 3 '47
AIR brake association
Annual meeting, 39th, Chicago, Sept. 15-17. Ry Mech Eng 121:528-36 O '47
AIR brakes
Aftercoolers and automatic drain valves to reduce the amounts of oil, dirt and water that enter the system. F. Ellis. Ry Mech Eng 121:530-1; Discussion. 531-2 O '47
Air brake questions and answers (cont). Ry Mech Eng 121:82, 129-30, 195, 245-6, 368, 417-18 F-My, Jl-Ag '47
Air-operated brakes successfully used in Gulf Coast drilling. E. H. Short, jr. il diag Oil & Gas J 45:78-9+ F 15 '47
Ajax-Consolidated automatic brake slack adjuster. il Ry Mech Eng 121:265 My '47
Brake cylinder release valve. diag Ry Age 121:1052-3 D 21 '46; Same. Ry Mech Eng 121:95 F '47
Effect of heating sheds on air brakes; damage to air-brake parts caused by heating sheds to thaw coal. K. E. Carey. Ry Mech Eng 121:535-6 O '47
Load compensating brake goes in service. C. D. Stewart. il diag Ry Age 123:690-2 O 25 '47
Recent developments in speed controls. C. D. Stewart. il Ry Age 121:604-7 O 12 '46; Same. Ry Mech Eng 121:60-4 F '47
History
Railroads mark centenary of George Westinghouse's birth. il Comp Air Mag 51:303 N '46
Repair
Maintenance of air brakes still a problem. T. H. Birch. Ry Mech Eng 121:187-8 Ap '47
Overhauling air brake valves. il Ry Mech Eng 121:424-5 Ag '47
Testing
Terminal testing of the H.S.C. brake. R. G. Webb. Ry Mech Eng 121:533-4 O '47
Testing type AB brakes. B. F. Grieshaber. il Ry Mech Eng 121:22-3 Ja '47
AIR brakes, Motor truck
Makes vehicles safer by speeding air brake action. J. Gaussoin. il S A E J 55:44-5 O '47
Pneumatic brakes; Bosch rapid action equipment. diags Automobile Eng 37:209-12 Je '47
AIR brush
Airbrushed glass paintings. E. S. Perrine. il Cer Ind 47:68 N '46
AIR cargo carriers. See Air carriers—Non-scheduled operations—Freight carriers; Airlines—Freight service
AIR carriers
See also
Airlines
Non-scheduled operations
AAXICO's service will be revamped. Aviation N 6:14 D 2 '46
Atlantic accident stirs CAB action. Aviation W 47:41 O 27 '47
Brewster hits safety record of uncertificated operators. C. Adams. Aviation N 7:17 Ja 27 '47
California operators group effective in state air policy. A. McSurely. Aviation N 7:20-1 Je 16 '47
CAA-certificated nonscheduled operations; tabulation. Aviation W 47:45 O 27 '47
CAB issues new regulations for noncertificated carriers. CAA J 8:61+ Je 15 '47
CAB legalizes veteran airlines as irregular and cargo carriers. M. Mickel. Aviation N 7:27 My 19 '47
CAB show cause orders hit 7 more uncertificated lines. C. L. Adams. Aviation N 6:25 N 25 '46
Florida crash, cutthroat tactics jeopardize nonscheduled lines. C. Adams. Aviation W 47:59-60 O 6 '47
Nonscheds play important role in farm labor supply program; moving West Indian field workers to and from U.S. during 1946. Aviation N 7:18 F 17 '47
Nonscheduled and charter air passenger services. M. A. Brenner. il Dom Comm 34: 53-9 D '46
Nonscheduled carriers stock prices reflect dim outlook. Aviation N 7:23 My 12 '47
Nonscheduled lines renew protests against CAB regulation. Aviation W 47:52 Ag 11 '47
Public enthusiasm cooling on nonscheduled financing. Aviation N 6:27 D 2 '46
Requirements for non-sched operations into Canada. For Comm W 28:27 S 20 '47
Three-in-one trader; Air trading corp. Bsns W p106 N 9 '46
Uncertificated lines testing CAB policy. Aviation W 47:48-9 Ag 4 '47
Freight carriers
Air freight boost. il Bsns W p29-30 Ag 23 '47
Air rate war on. Bsns W p21 S 27 '47
Airfreighters' claims of pioneering hit; contract carriers not responsible for cargo growth. C. B. Monro and F. M. Glass. Aviation N 7:17 Ja 20 '47
Airfreighters draft uniform tariff aiming at 15c.=ton=mile average. Aviation N 7:29 My 26 '47
Airfreighters' hopes of survival hinge on common carrier rights. Aviation N 7:29 Ja 13 '47
Airfreighters lose battle; CAB permits scheduled lines to cut cargo rates. il Bsns W p38+ O 11 '47
Airfreighters slow in asking for common carrier rights. Aviation N 7:24-5 Je 16 '47
Airlines expanding cargo plans to whittle nonscheduled lead. M. Mickel. Aviation N 7:27-8 Ap 21 '47
Battle for air freight. Bsns W p42+ N 16 '46
Carriers intensify battle for freight. Aviation W 47:13 Ag 4 '47
CAB cargo decision blow to independents. P. A. Johnston. Barron's 27:9 O 27 '47
CAB plan would give free rein to uncertificated cargo lines. C. L. Adams. Aviation N 6:7-8 D 2 '46
CAB public counsel favor uncertificated cargo carriers. C. Adams. Aviation N 7:28-9 Ap 28 '47
Contract carrier builds cargo business with service; California eastern airways. S. Bangs. il map Air Transport 5:37-41 Ja '47
Future of air freight in commodity transportation. R. H. Rush. Dom Comm 34:12-16 N '46
Industry's lowest freight rates offered in Slick Airways tariff. C. Adams. il Aviation W 47:52 Jl 14 '47
Lines drawn for freight contest by scheduled, irregular lines. il Aviation N 7:27 Je 2 '47
Nonscheduled lines hauled major share of 1946 air freight. CAA J 8:75 Jl 15 '47
Puerto Rico needlework trades served by air. J. C. Nelson. Dom Comm 35:34-41 S '47
Slick bucks industry's trend toward retrenchment in cargo. C. L. Adams. Aviation N 7:19 Mr 17 '47

AIR cleaners
Dust precipitators for air conditioning at Madison Square Garden. il Electronics 20: 162+ N '47
Electric cleaning of home air. il Sheet Metal Worker 38:84+ S '47
Electric filters and modulated heating in 20-room house. il plans diags Sheet Metal Worker 38:63-4+ O '47
Electrostatic filter cleans air for yarn-package drying; Adelaide mills. H. L. Dozier. il Textile World 97:135 Je '47
New oil-bath air cleaner and silencer for air compressors and Diesel and gas engines. il Comp Air Mag 51:338 D '46
Oil mist can be eliminated; Precipitron electrostatic air cleaner. W. F. Herst and H. B. Heyl. il diag Am Mach 91:93 Ag 14 '47
Re-use shippers; collapsible corrugated containers, with expendable pallets for Donaldson co. industrial products. il Mod Packaging 21:141 S '47
See also
Air filters
Air washers

Testing
Air-cleaning efficiency tested electronically. V. Zeluff. il diags Sci Am 176:57-9 F '47
Photoelectric dust meter. G. F. Barnett and A. L. Free. bibliog il diags Electronics 19: 116-19 D '46

AIR cleaning
Cleanliness is essential to quality winding; electrostatic cleaning of air; Dixie mercerizing co. P. M. Thomas. il Textile World 97:120-1 Ag '47

AIR commuting, inc.
Air Commuting gets o.k. il Bsns W p40+ Je 7 '47

AIR compressors
Air compressors. Sci Am 177:33 Jl '47
Brittle lacquer technique used to test forged impeller design. H. Dobkin. il diag Steel 121:70-1+ S 1 '47
Design and development of centrifugal compressors for aircraft gas turbines. L. J. Cheshire. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):426-40, pl 7-12 '45
Design details of Bristol Theseus turboprop; first aircraft application utilizing heat exchanger. il diag Aviation 45:53-5 N '46
Design of axial compressors. A. R. Howell. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):452-62, pl 13-14 '45
Designing for pneumatics. J. L. Dooley. il Machine Design 19:115-20 Ap; 117-22 My; 122-7 Je; 130-5 Jl '47
Early history of the axial type of gas turbine engine. H. Constant. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12): 411-26, pl 1-6 '45
Fluid dynamics of axial compressors. A. R. Howell. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):441-52 bibliog(p451) '45
Free-piston compressor engines. H. O. Farmer. il diags Engineer 182:540-2; Discussion. 548-9 D 13 '46; Engineering 162:617-19 D 27 '46
Harnessed air. il Steel 121:94-8+ N 3 '47
Increasing the range of axial-flow compressors by use of adjustable stator blades. J. T. Sinnette, jr. bibliog il diags J Aeronautical Sci 14:269-82 My '47
Laboratory compressor for higher pressures. B. H. Sage and W. N. Lacey. diags R Sci Instr 18:650-4 S '47
Planning and installing an efficient compressed-air system. il Mach 53:148-52 Ag '47
Principles of balancing, properly applied; Davey air compressor. il diags Machine Design 19:96 My '47
Sealed compressor house means cleaner air, less noise; Cherokee textile mills. W. L. Bowen. il Factory Management 105:99 O '47
Series capacitor corrects compressor-motor flicker. C. A. Scammon. il Elec World 128: 115+ O 11 '47
Small compressors serve local areas; McQuay, inc., Minneapolis. il Factory Management 105:127-8 My '47
Value of wet compression in gas-turbine cycles. R. V. Kleinschmidt. Mech Eng 69: 115-16 F '47; Discussion. 69:684-5 Ag '47
What is the most economical drive for an air compressor? W. W. Gaylord. il Power Pl Eng 51:81-2 Mr '47
Wind tunnel compressor equipment. il diags Engineer 183:376-9 My 2 '47
Worthington-Simpson three-stage air-cooled compressor. diags Engineer 184:supp7-8 S 5 '47

Bearings
Bearing cures air-cylinder trouble. J. P. Carey. il Power 91:484 Jl '47

Cost of operation
Cost of delivering compressed air. Heat & Ven 44:97-8 O '47

AIR compressors, Portable
Check that air compressor! F. V. Faulhaber. il Aero Digest 53:60+ N '46

Lubrication
Lubrication of the portable air compressor. il diags Can Min J 68:481-9 Jl '47

AIR conditioning
Air conditioning a vital part of architectural design; requirements of Cincinnati's Terrace Plaza Hotel building. H. C. Hoffman. il plan diags Heating-Piping 19:71-7 O '47
Air conditioning and sterilized air; use of triethylene glycol and propylene glycol. B. H. Jennings. bibliog il Western Soc E J 51:115-19 S '46
Air conditioning calls for compactness; residence, Austin, Texas. il plans Arch Rec 101:76-8 Ja '47
Air conditioning systems arranged for ease of upkeep. M. G. Kershaw. il Factory Management 104:90-3 O '46
Air conditioning systems for rental buildings; with tabulation showing comparison of individual room air conditioning systems for large multi-room buildings. G. W. Meek. plans diags Arch Rec 100:111-16 D '46
Air conditioning the bus terminal. G. R. Wallen. il Bus Transportation 26:50-2 Ag '47
Air conditioning the New York stock exchange. D. A. Kepler. il plans Heating-Piping 19:69-73 Ap; 84-8 Je; 87-91 Ag '47
Air distribution makes or breaks air conditioning. L. R. Phillips. il Power Pl Eng 51: 73-5 My '47
Basic elements of air conditioning. S. C. Moncher. il Sheet Metal Worker 37:52+ Je; 58+ Jl; 60+ Ag; 78+ S; 62+ O '46; 38:116+ Ja; 70+ F '47
Builder Sloan erects first all-sealed house in America; Glenview, Ill. home combines solar heat, mechanical heat and air conditioning. il plans Am Bld 69:96-105 Ap '47
Causes of drafts, and how they are eliminated. L. R. Phillips. il Sheet Metal Worker 38:104+ S '47
Design of year-around air conditioning systems for residences. L. B. Nye, jr. il diags Heat & Ven 44:84-92 Ag '47
Experiment in combinations; convected, radiated and solar heat combined in sealed-in air conditioned home. il diag Sheet Metal Worker 38:78+ Ag '47
For an animal hospital, year-round climate control; Ardmore animal hospital. il diag Sheet Metal Worker 38:55-6+ Jl '47
Heat pump is proving its practicality in year-round air conditioning. il plan diags Arch Forum 85:161-4 N '46
Heat pump; some economic factors and test installation and cost data. il diags Dom Eng 170:112-13+ Jl '47
I learn most from trouble jobs; air conditioned amphitheater. S. Lewis. Heating-Piping 19:95-6 F '47
Madison Square Garden has new air conditioning system. il Heat & Ven 44:114 Ag '47
Planning to air condition? report on planned air conditioning for office buildings. il Heating-Piping 19:82-4 My '47
Solar + radiant panel + warm air = comfort; residence of H. M. Sloan, Glenview, Ill. il plan diag Arch Rec 101:92-5 Je '47

AIR conditioning—*Continued*
Something new in lighting and air conditioning; drafting room, Austin co. il Civil Eng 17:264 My '47
Twenty major advances in last decade. W. H. Carrier. Heat & Ven 44:111 Jl '47
Where does the heat pump go from here? abstract. W. L. Holladay. Elec World 128: 96 Ag 2 '47

See also
Air cleaning
Air filters
Air purification
Cold storage
Cooling
Deodorization
Electricity in air conditioning
Exhaust systems
Gas in air conditioning
Heating
Humidity
Ventilation
also subdivision Air conditioning under special subjects, e.g.
Airplanes
Cars
College buildings
Factories
Hotels
Library buildings
Printing offices
Restaurants
Ships
Textile mills
Underground structures
Warships

Cost

Consider carefully the part a modern air conditioning system can play in operating your printing plant profitably. G. C. Compton. il Inland Ptr 119:44-8 Je '47

Specifications

Simplified procedure for specification writing. G. W. Campbell. il Heating-Piping 18: 86-9 Ap '46; Supplement. 19:98-102 Je; 97-9 Jl; 99-101 Ag; 117-19 S; 99-101 O; 111-13 N; 116-18 D '47

AIR conditioning, Industrial
Air conditioning in candy manufacture. H. C. Hoffmann. bibliog Refrig Eng 53:1-4 sec 2 Ap '47
Air conditioning of processes in the bread bakery. H. R. Gable. il Heating-Piping 19: 107-12 O '47
Air conditioning pays off in four southern mills. il Textile World 97:111-13 Ag '47
Dehumidification methods and applications. J. Everetts, jr. flow diag Heating-Piping 18: 121-4 D '46
Development and design of colonial telecommunication systems and plant. C. Lawton and V. H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47
Exacting air conditioning installation; problems included two testing rooms and four cafeterias. il plans diags Sheet Metal Worker 38:108+ Ja '47
Hosiery manufacturer finds many advantages in air conditioning; abstract. R. E. Tilles. Heating-Piping 19:110 Ag '47
Modern hosiery mill controls its air; Vanette hosiery mills. H. B. Le Feaux. il Textile World 97:129-31 S '47
Modern humidification installed in Lonsdale mills. il Textile World 96:118-19 N '46
New Dublin hosiery mill features sealed construction. W. A. Newell. il plan Textile World 97:112-14 O '47
Night cooling for day comfort; wax paper warehouse. L. F. Peterson. il Sci Am 177: 70-1 Ag '47
Pacolet refrigerates spinning room air-conditioning. C. M. Bowden. il Textile World 97:120-1+ Jl '47
Refrigeration for textile mill air conditioning. P. L. Davidson. il Heat & Ven 44:57-62 My '47
Simplified constant humidity room. J. d'A. Clark. il plans diag Paper Ind 28:1305-7 D '46

AIR conditioning equipment
Air conditioning design to meet current material shortages. B. A. Jacobi. il Heat & Ven 44:77-9 Mr '47
Air conditioning restaurants; Longchamps restaurants. F. Steixner. il diags Heat & Ven 43:59-62 N '46
Annual hours of operation of air conditioning systems; abstract. A. B. Newton. Heating-Piping 19:93 Je '47
Car air conditioning equipment; report of Electrical section, Mechanical division, A.A.R. il Ry Mech Eng 120:679-81 D '46
Diesel joins the heat pump; power and air conditioning equipment for Wilton community center. il diag Diesel Power 25: 54-9 Ag '47
Exacting air conditioning installation; problems included two testing rooms and four cafeterias. il plans diags Sheet Metal Worker 38:108+ Ja '47
Heat pump; past, present, future. E. N. Kemler and others. bibliog il diags Refrig Eng 53:301-4+ Ap '47
Marvair heat pump; takes heat from the earth in winter; in summer, puts heat in the earth. il diags Sheet Metal Worker 38: 60+ My '47
Progress report on the heat pump. E. R. Ambrose; E. N. Kemler and others. il plan diags Heat & Ven 43:67-82 D '46
Train weather; electronic heat control system is designed to provide more comfort for passengers. Bsns W p69 D 14 '46

See also
Air diffusers
Dehumidifiers
Gas in air conditioning
Heat pump

Cleaning

Clean your ducts for better results! G. L. Candler. il Heating-Piping 19:83-5 Jl '47
Filter and other cleaning service; Acme engineering division of George E. Joyce, inc. il Sheet Metal Worker 38:76+ Jl '47

Fires and fire protection

Fire prevention precautions in air conditioning system. Sheet Metal Worker 38:80 Je '47
14 ways to reduce air conditioning fire hazards. E. C. Hach. diags Heating-Piping 19:73-5 Ja '47

Maintenance and repair

Air-conditioning equipment overhauled; Chicago & North Western. il Ry Mech Eng 121:362-3 Jl '47
How and why of preventive maintenance. M. B. Goddard. Heating-Piping 18:71-5 D '46
Maintaining Waukesha equipment; Southern Pacific repair shops. il Ry Mech Eng 121: 29-31+ Ja '47
Maintenance check list; data sheet. Heating-Piping 18:77-8 D '46
Tips for air-conditioning engineers. J. D. Constance. il diags Power 91:608-11 S '47

Manufacture

Mechanized soft soldering; production of air-conditioning units. il Steel 120:98+ Ap 14 '47

Noise

Acoustical linings for ducts. F. A. Westbrook. diags Heat & Ven 44:100-2 Jl '47

Testing

Air flow measurement in the laboratory. D. D. Wile. il diags Refrig Eng 53:515-21 bibliog(p520) Je '47

Water requirements

Chromate corrosion inhibitors in air conditioning waters. M. Darrin. bibliog Pub Works 78:27-8 Je '47
Planning to air condition? electrical and water requirements. Heating-Piping 19:81-2 Ag '47
Proper water treatment licks scale and corrosion in air-conditioning systems. W. J. Ryan. il diag Power 91:479-80 Jl '47

AIR conditioning industries
Building a suburban air conditioning business; Comfortair co. il plans diags Sheet Metal Worker 37:70+ N '46
Forecasts $100 million annual market for commercial, industrial air conditioning. Heating-Piping 19:88 Ap '47
Large potential market awaits air conditioning manufacturers. L. E. Browne. il Steel 120:56-7 Mr 24 '47
Law of contracts simplified; review of court decisions involving heating and air conditioning engineers. L. T. Parker. Heat & Ven 44:84-94 Ap '47
Legal status of independent contractors. L. T. Parker. Heat & Ven 44:99-100 Je '47

AIR conditioning industries—*Continued*
Market for air conditioning in commercial and industrial buildings. J. F. Brinley. Sheet Metal Worker 38:72+ My; 58+ Je; 70+ Jl '47
1947 prospects; views of representatives of the industry. Sheet Metal Worker 38:84-9 Ja '47
Object lesson in merchandising year around air conditioning; Climate control products co. il Sheet Metal Worker 38:60+ Mr '47
Prospects bright for air conditioning and refrigeration. H. E. Way. il Dom Comm 35:55-8 My '47
Spotlight on profits. il Dom Eng 168:148-9+ D '46
Survey indicates much hotel air conditioning. Heating-Piping 19:116 S '47
This contractor lands big ones; O. A. Wendt co. il Dom Eng 170:146-8 Ag '47

Directories

Directory section; names and addresses of manufacturers of equipment and products used in warm-air heating, air conditioning, ventilation and sheet metal work. Sheet Metal Worker 38:166-82 Ja '47
1947 directory of heating, piping, and air conditioning equipment for industrial, commercial, institutional and public buildings; classified by products, trade names, and manufacturers addresses. Heating-Piping 19:241-342 Ja '47

Statistics

Air conditioning and commercial refrigeration equipment shipments, first quarter, 1947. Heat & Ven 44:116 S '47

Cleveland

Cleveland has many air conditioning jobs of interest. L. T. Avery. il Heating-Piping 18: 111-12 D '46

Southern states

Predicts great importance for air conditioning in the South. W. B. Henderson. il Heating-Piping 18:77-80 N '46

AIR conditioning of cars. See Car cooling; Cars—Air conditioning

AIR conditions
Effects of moisture content on the diffusion of odors in the air. R. L. Kuehner. bibliog diags Heating-Piping 18:115-20 D '46
Minimal replenishment air required for living spaces, under conditions of mechanical cooling and removal of odors; ship's berthing space. W. V. Consolazio and L. J. Pecora. bibliog plan diag Heating-Piping 19:103-14 Mr '47

See also
Air conditioning
Air pollution
Humidity
Ventilation

AIR diffusers
Adjustable air diffuser can meet changing conditions. H. A. Baker. il diag Textile World 97:141+ My '47
Air distribution makes or breaks air conditioning. L. R. Phillips. il Power Pl Eng 51: 73-5 My '47
Anemostat; air diffuser. L. R. Phillips. il Manuf Rec 116:42-3+ F '47
Causes of drafts, and how they are eliminated. L. R. Phillips. il Sheet Metal Worker 38:104+ S '47
Give them air; air diffusers for airplane cabins. G. Herrick. il diag Air Transport 5. 37-8 Ap '47

AIR ejectors
Boiler draught production by means of the jet air-pump. S. F. Benson. diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):311-21; Discussion. 321-7 '45
Design of injectors for low-pressure air flow. diags Heat & Ven 44:82-94 Jl '47
Design of jet pumps. A. E. Kroll. diag Chem Eng Prog 43:sup21-4 F '47
Steam-air jets for abatement of locomotive smoke. E. D. Benton and R. B. Engdahl. il diags A S M E Trans 69:35-44 bibliog(p42); Discussion. 44-5 Ja '47
Steam ejector air pumps for chemicals. il Engineer 182:553 D 13 '46
Steam-jet evacuators make vacuum during power-plant starting periods. P. Freneau. diags Power 91:162-5 Mr '47

AIR engines
British Jeffrey-Diamond compressed-air engine. il Mech Handling 34:275-6 My '47
Broom and Wade crankless air motors. il diags Engineer 184:364-5 O 17 '47
Caloric engine; modern version of an old thermodynamic cycle, Philips regenerator. diags Automobile Eng 37:372-6 O '47
Piston and displacer combined for practical hot air engine. il diags Product Eng 18: 102-3 O '47
Test 20 air motors per hour with system using electric generator voltage output. E. W. Griscom. Pet Processing 1:254 D '46

AIR entrainment. See Concrete—Air entrainment

AIR express international agency, inc.
Stock offered. Comm & Fin Chr 165:1581 Mr 24 '47

AIR express service
Auto parts rushed by airfreight; how Ford averts shutdown; illustrations with text. Bsns W p42+ O 11 '47
California captures far-away markets with flying flowers. il Sales Management 59:92+ S 15 '47
International air express breaks all records in 1946. For Comm W 26:21 Mr 1 '47

See also
Airlines—Freight service
Airplanes, Freight

Advertising

Six ways to put more pull into direct mail advertising; Air Express literature. il Sales Management 59:48+ S 15 '47

AIR filters
Filter cleaning equipment. il Sheet Metal Worker 38:92+ Ag '47
Filtration of air, oil and liquid fuel. C. G. Vokes. Engineer 182:401 N 1 '46
Removal of micro-organisms from air by filtration; abstract. S. G. Terjesen and G. B. Cherry. Chem Age (Lond) 57:573 O 25 '47
Study of certain factors affecting the filtration of smoke by fibrous materials. J. J. Perot, jr. bibliog diags Paper Tr J 124: 54-62 Je 19 '47
Use of glycerine on air filters. J. B. Segur. Heat & Ven 44:86 S '47
Using air filters in food processing plants. A. Nutting. il diags Food Ind 19:37-9 Ja '47

Cleaning

Filter and other cleaning service; Acme engineering division of George E. Joyce, inc. il Sheet Metal Worker 38:76+ Jl '47

Testing

Laboratory tests air filtering. il Dom Eng 170:159+ S '47
Sensitive photoelectric photometer for laboratory tests on smoke filters, used in respirators. F. T. Gucker, jr. il diags Electronics 20:106-10 Jl '47

AIR flow
Additional developments of Greene's equation to the study of compressible airflow. G. L. Shue. bibliog J Aeronautical Sci 13: 581-6 N '46
Air flow from pitot tube readings; nomograph; reference data. Heat & Ven 44:106b F '47
Air flow measurement in the laboratory. D. D. Wile. il diags Refrig Eng 53:515-21 bibliog(p520) Je '47
Airbox method of measuring the air consumption of internal-combustion engines. L. J. Kastner. diags Engineering 163:345-8 Ap 25 '47
Convection velocities and their measurement. L. Silverman. diags Heat & Ven 44: 84-92 Je '47
Design of injectors for low-pressure air flow. diags Heat & Ven 44:82-94 Jl '47
Essentials of air gaging. W. F. Aller. diags Am Mach 91:69-72 Ja 2 '47
Exact and approximate solutions of two-dimensional oblique shock flow. E. V. Laitone. bibliog J Aeronautical Sci 14:25-41+ Ja '47
Flow of fluids through porous media. L. E. Brownell and D. L. Katz. bibliog Chem Eng Prog 43:537-44; Discussion. 544-8 O '47

AIR flow—*Continued*
Flow-resistance characteristics of fibrous acoustical materials. R. H. Nichols, jr. bibliog diag Acoustical Soc Am J 19:866-71 S '47
Heat transfer from a vertical plate to an air stream. L. Siegel and G. A. Hawkins. bibliog diags Purdue Univ Eng Exp Sta, Research Ser 79:1-23 '46 (pa 25c)
Investigation of the airflow underneath helicopter rotors. R. S. Ross. il diags J Aeronautical Sci 13:665-77 D '46
Isothermal and nonisothermal air-jet investigations. V. Cleeves and L. M. K. Boelter. bibliog diags Chem Eng Prog 43:123-32; Discussion. 132-4 Mr '47
Measurements of recovery factors and coefficients of heat transfer in a tube for subsonic flow of air. W. H. McAdams, L. A. Nicolai and J. H. Keenan. bibliog diags Am Inst Chem Eng Trans 42:907-25 O-D '46
Mechanism of countercurrent gas liquid flow through packed towers. F. A. Zenz. bibliog Chem Eng Prog 43:415-28 Ag '47
Nature of air flow at suction openings. A. D. Brandt and others. bibliog diags Heating-Piping 19:101-7; Discussion. 107-8 F '47
Numerical-graphical method of characteristics for plane potential shock-free flow problems. L. L. Cronvich. bibliog J Aeronautical Sci 14:237-42 Ap '47
Principles of air flow. S. C. Moncher. diags Sheet Metal Worker 38:88+ S; 78+ O '47
Streamlines for the subsonic flow of a compressible fluid past a sphere. E. R. Van Driest. J Ap Phys 18:194-8 F '47
Tests on elbows of a special design; carburetor air intake of airplane engines. J. J. Harper. il diags J Aeronautical Sci 13:587-92 N '46
Throw of air from slots and jets. R. D. Madison and W. R. Elliot. Heating-Piping 18:108-9 N '46
Vertical air distribution in tall buildings. W. Sturm. il Heating-Piping 19:69-72 Je; 93-6 S '47

See also
Aerodynamics
Gas flow

AIR freight. See Air carriers—Non-scheduled operations—Freight carriers; Airlines—Freight service

AIR freight forwarders. See Forwarding companies (air freight)

AIR freight forwarders association
Freight forwarder association formed. Aviation N 7:16 F 24 '47

AIR gages. See Gages, Pneumatic

AIR hose
Air hose reclamation. il Ry Mech Eng 121: 420-2 Ag '47

AIR lines. See Airlines

AIR liquefication. See Liquid air

AIR mail service
Airlines urge speedy mail pay relief, shelving of route cases; hearings before Air policy commission. C. Adams. Aviation W 47:27-8 S 29 '47
Airlines vie for increased share of record airmail appropriation. C. Adams. Aviation W 47:41+ Jl 28 '47
Air mail pay subsidy claim stirs airline-steamship row. Aviation N 6:29 D 16 '46
Airmail rate boost remains in prospect; report by the Post office department. Aviation W 47:51 Ag 18 '47
Board to probe route patterns of 3 airlines in re-examinations. CAA J 8:42 Ap 15 '47
CAB examiner favors first helicopter airmail for Los Angeles. map Aviation N 7:28-9 Mr 10 '47
CAB loads imaginary tons into airlines' mailbags; new bases of payment. S. Altschul. Barron's 27:10-11 My 12 '47
CAB sets Pan Am's rate of mail payment for Alaskan service; Pioneer's rates of mail pay set for Texas feeder routes. CAA J 8:91 Ag 15 '47
Colonial challenges suspension powers; replies to mail pay probe. Aviation N 7:31 My 12 '47
Congressional probe will seek answers to air mail losses. Aviation W 47:12-13 N 3 '47
EAL reports need for more mail pay. Aviation W 47:57 Jl 21 '47
Examiner favors helicopter try-out for Los Angeles air mail service. CAA J 8:41 Ap 15 '47
Helicopter as auxiliary in carrying mail; with cost data. A. Klemin. map Aero Digest 54: 75+ F '47
Helicopter enters air mail field with first route in Los Angeles. map CAA J 8:77 Jl 15 '47
Los Angeles ready for helicopter mail. Aviation W 47:43 S 22 '47
More mail income brings relief to ailing airlines. S. Altschul. Air Transport 5:53-5 Je '47
Narrowing profit margins intensify mail pay drive. Aviation W 47:17 Ag 11 '47
Post office expands 'copter mail test program at New York. map Aviation N 6:29 D 23 '46
Three mail pay cases test CAB policy. Aviation W 47:56 Jl 14 '47
TWA seeks large mail pay boost. Aviation N 7:26 Mr 24 '47

AIR meters
Airbox method of measuring the air consumption of internal-combustion engines. L. J. Kastner. diags Engineering 163:345-8 Ap 25 '47

AIR motors. See Air engines

AIR navigation
Circling method of holding and letting down. K. V. Beer. diags Air Transport 5:43-5 Je '47
Global avigation system projected by PICAO. il Aviation 46:79-80+ F '47
Good news for navigators; new set of celestial tables published by U.S. navy hydrographic office. D. Miller. Air Transport 5: 42+ O '47
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46

See also
Aeronautic instruments
Decca navigation system
Loran system
Radio aids to aviation

Charts

Airman's guide charts hit in Commerce economy shuffle. A. McSurely. Aviation W 47:37 Ag 18 '47
CAA discontinues navigation charts in Airman's guide. CAA J 8:108 S 15 '47

Standards

For safer blind flying; international conference proposes worldwide agreement on navigation and landing aids. Bsns W p38+ Ja 4 '47
International plan for air navigation. D. H. Pain. il diag Electronics 20:80-3 F '47

AIR patrols
Air rescue of phone cables. il Bsns W p24+ Je 21 '47

AIR pilots. See Aviators

AIR pipes
Acoustical linings for ducts. F. A. Westbrook. diags Heat & Ven 44:100-2 Jl '47
Air ducts of nonmetallic materials, types and applications. W. G. Harding. il diags Product Eng 18:138-40 O '47
Air volume increased 64 per cent by simple ductwork changes; rifle range and swimming pool at a state university. J. Cassie. diags Heat & Ven 44:78-90 Je '47
Aluminum for air ducts. G. W. Birdsall. il Sheet Metal Worker 38:51-3+ Ap; 49-52 My '47; Excerpt (pt 1). Heating-Piping 19: 77 My '47
Aluminum for duct work. H. F. Johnson. il Heat & Ven 44:95-6 Ap '47
Aluminum for ducts. Heating-Piping 19:83 Mr '47
Coating for air duct systems. il Heat & Ven 44:68 Ja '47

AIR pipes—*Continued*
Design in aluminum duct work. il Dom Eng 169:150-1+ My; 170:151-2+ Ag '47
Fabricating aluminum air ducts. il Steel 121: 93+ Jl 7 '47
Intakes, outlets in courtways can lead to plenty of grief. S. Lewis. diags Heating-Piping 19:105-6 Ag '47
Pattern for a tapering tee. O. W. Kothe. diags Sheet Metal Worker 38:49-50 Jl '47
Pattern for an expanding tee. O. W. Kothe. diags Sheet Metal Worker 38:84+ F '47
Pattern for transforming tee connection. O. W. Kothe. diags Sheet Metal Worker 38: 65-6 Ag '47
Pattern of square to oblong tee intersecting oblong duct. O. W. Kothe. diags Sheet Metal Worker 38:62-3 S '47
Streamline your duct production; use of printed forms. diags Sheet Metal Worker 38:88+ Ag '47
Use of oval angle-iron holes prevents damage. il Sheet Metal Worker 38:58 O '47

Cleaning

Clean your ducts for better results! G. L. Candler. il Heating-Piping 19:83-5 Jl '47

Tables, calculations, etc.

Design of exhaust systems. F. H. Stebbins. Sheet Metal Worker 38:46-8+ My '47
Nomograph for duct sizing. N. S. Shataloff. Heat & Ven 43:89 N '46
Principles of air flow. S. C. Moncher. diags Sheet Metal Worker 38:88+ S; 78+ O '47
Slide rule is all that's needed to figure duct equivalents. P. Franck. il Heating-Piping 19:76-7 My '47

AIR pollution
Air contamination in cotton textile processes. L. Silverman. il Nat Safety N 55:24-6+ Ap '47
Allowable atmospheric concentrations of contaminants; tabulation. Heat & Ven 44:94 Ag '47
Atmospheric contamination demands research and field study. W. C. L. Hemeon. Eng N 138:1009 Je 26 '47
Atmospheric pollution. W. C. L. Hemeon and T. F. Hatch. il Ind & Eng Chem 39: 568-71 My '47
Atmospheric trade wastes. P. Drinker. J Chem Educ 24:498-501 O '47
Causes for high toxic vapor dispersion from degreasing installations. B. F. Postman. Heat & Ven 44:98 Ap '47
Demonstration unit shows principles of industrial exhaust ventilation; to prevent exposure of workers to toxic air contaminants. K. J. Caplan and R. S. McClintock. il Safety Eng 92:58-60 D '46
Detecting carbon tetrachloride vapors. Iron Age 159:57 Ja 9 '47; Same abr. Nat Safety N 55:112 Ja '47
Determination of acetylene tetrachloride in air; protection afforded by gas mask canisters against acetylene tetrachloride. J. Goldenson and J. W. Thomas. bibliog il diag J Ind Hygiene 29:14-22 Ja '47
Effective exhaust for tanks. B. F. Postman and W. P. Battista. il diags Heat & Ven 44:53-6 Ja; 83-7 F '47
Factors rarely considered in smoke abatement. H. F. Hebley. bibliog il map diags Mech Eng 69:281-7 Ap '47
Further studies on sensory response to certain industrial solvent vapors. L. Silverman and others. J Ind Hygiene 28:262-6 N '46
Inhalation toxicity of ketene and of ketene dimer. H. A. Wooster and others. J Ind Hygiene 29:56-7 Ja '47
Keep air clean; dusts, mists, fumes and gases, or vapors; permissible safe quantities and methods of control. C. H. Mehaffey. Am Mach 91:111-13 F 13 '47
Lead and zinc fume hazards in ship-scrapping. Safety Eng 93:62 My '47
Methods used in determining the health hazards arising from the inhalation of various chemicals. F. F. Heyroth. Heating-Piping 19:109-12 Ja '47; Abstract. Heat & Ven 44:105 F '47; Discussion. Heating-Piping 19:113-16 Ap '47
Progress report on ventilation for cotton textile processes. L. Silverman and F. J. Viles, jr. il diags Heat & Ven 44:83-90 O '47
Recirculating cleaned air frequently found hazardous. Safety Eng 92:91+ O '46
Smoke, dust, fumes, and their fellow travelers. P. Sadtler. Chem & Eng N 25: 2827-8 S 29 '47
Smoke measurement. Engineering 163:62 Ja 17 '47
Smoke menaces health. il Safety Eng 92:56-7+ D '46
Some aspects of the ventilation of factories, with particular reference to the annual report of the chief inspector of factories; discussion. il diags Inst Mech Eng J & Proc 154:Proc 344-50 D '46
Study of industrial exposures to cadmium. F. Princi. bibliog il J Ind Hygiene 29:315-20 S '47
Utopia now? Niagara Falls, N.Y. air pollution. il Chem Ind 60:768-9 My '47
Ventilation; keeping contaminants out of the air. il Nat Safety N 55:17+ Mr '47

See also
Dust
Fumes
Gases, Asphyxiating and poisonous
Metal fumes
Respiratory apparatus
Smoke prevention

AIR power
Maintenance of peace through air power. O. P. Echols. S A E J 55:17-20 Je '47
Our dwindling air power. O. P. Echols. Aero Digest 55:26-7 Jl '47
Our leadership shall be strong. D. D. Eisenhower. Aero Digest 54:19+ Je '47
We must furnish the tools. C. E. LeMay. Aero Digest 54:24-5 Ap '47

AIR preheaters
Hot secondary air supply saves fuel and improves combustion; patent. il diag Pet Processing 1:263 D '46

AIR preheating

See also
Air preheaters

AIR products, inc.
Stock offered. Comm & Fin Chr 166:1781 N 3 '47

AIR pumps
Acrylic dry air pumps. il Mod Plastics 24:242 Ap '47

AIR purification
Air conditioning and sterilized air; use of triethylene glycol and propylene glycol. B. H. Jennings. bibliog il Western Soc E J 51:115-19 S '46
Air purification in the reversing exchanger. W. E. Lobo and G. T. Skaperdas. bibliog diag Chem Eng Prog 43:69-74 F '47
Design of ribbon-packed exchangers for low temperature air separation plants. P. R. Trumpler and B. F. Dodge. il diags Chem Eng Prog 43:75-84 F '47
Glycol vapors and ultraviolet radiation still in experimental stage. R. E. Dyer. Heat & Ven 44:112 F '47
Killing air-borne respiratory micro-organisms with germicidal energy. M. Luckiesh and others. bibliog il diags Franklin Inst J 244:267-90 O '47
Killing germs with lamps; disinfection by ultraviolet light. Consumers Res Bul 19: 19-24 F; 20:26 S '47
Luminaire-lamp, sterilizer, air conditioner. il Refrig Eng 53:400 My '47
More data needed on air sterilization. R. E. Dyer. Heating-Piping 19:81 Ap '47
Nemesis for germs; sterilization of air by glycol vapor. Chem Ind 61:207-8 Ag '47
Odor removal; ships' berthing spaces; abstract. W. V. Consolazio and L. J. Pecora. Heat & Ven 44:103 F '47
Pioneer in the use of triethylene glycol for air sterilization; Seamen's bank for savings. T. Barrett. il Power 91:389-91 Je '47
Portable glycol vaporizers for air disinfection. F. C. W. Olson and others. bibliog diags Science 105:23-4 Ja 3 '47
Removal of micro-organisms from air by filtration; abstract. S. G. Terjesen and G. B. Cherry. Chem Age (Lond) 57:573 O 25 '47
La stérilisation de l'atmosphère des ateliers par un aérosol d'hypochlorite de sodium. J. Wolf. diag Génie Civil 124:137 Ap 1 '47

AIR purification—*Continued*
Subway air to be electrically cleaned and sterilized in ten-car laboratory subway train. Heat & Ven 44:116 Ag '47
Triethylene glycol for air sterilization. L. D. Polderman. bibliog Soap & San Chem 23: 133+ Jl '47
Triethylene glycol vapor distribution for air sterilization; experiment at an army training camp. E. Bigg and others. bibliog il diags Heating-Piping 19:103-7 My '47; Discussion. 19:129-31 Ag '47
Ultraviolet sanitary ventilation. W. T. Anderson, jr. il Heat & Ven 44:63-8 Ap '47

See also
Air cleaners
Air conditioning
Air filters
Ventilation

AIR raids
Le bombardement de Rotterdam, ses effets sur les constructions en béton armé; la reconstruction du port et du théâtre municipal. A. Bijls. il plans diags Génie Civil 124: 325-8 S 1 '47
Fires and explosions at oil installations, due to air raids. E. P. Lancashire. 6 pls Inst Pet J 33:131-46; Discussion. 146-58 Mr '47
Simulation of radar presentations for briefing purposes. J. Westheimer. il Soc Motion Picture Eng J 48:586-90 Je '47

See also
Electric plants (central stations)—Damage from air raids

Protective measures
Research and development applied to bomb disposal. H. J. Gough. diags Inst Mech Eng J & Proc 156:Proc 6-16, pl 1-8 Je '47; Same. Engineering 163:20-4, 44-8 Ja 3-10 '47; Same cond. Engineer 182:465-7, 484-6 N 22-29 '46
Underground facilities are better protection against bombing than heavy concrete construction. Civil Eng 17:420 Jl '47; Same cond. Elec Eng 66:537 Je '47
Underground factories; experience of the Germans. Mech Eng 69:600 Jl '47
War in the ether; radio and radar countermeasures. E. B. Addison. Roy Aeronautical Soc J 51:425-36; Discussion. 436-9 My '47

AIR raids and building
Observations of war damage to concrete and to cement industry properties in Germany. M. A. Swayze. il Am Concrete Inst J 18:617-27 F '47

AIR receivers
Representative air tank accidents. il Locomotive 46:208-11+ Jl '47

AIR reduction company
Annual report. Comm & Fin Chr 165:2405 My 5 '47

AIR sampling
Air contamination in cotton textile processes. L. Silverman. il Nat Safety N 55:24-6+ Ap '47
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Factors rarely considered in smoke abatement. H. F. Hebley. bibliog il map diags Mech Eng 69:281-7 Ap '47

AIR stream modulation. See Loud speaking apparatus

AIR tours
Skycruise operator gets CAB hearing; Board to consider certification of all-expense air tours. Aviation N 7:18 Je 30 '47

AIR trading corporation
Three-in-one trader. Bsns W p106 N 9 '46

AIR transport command. See United States—Air service, Army—Transport command

AIR travel
Airline squeeze. charts Fortune 35:116-19+ My '47
Airlines promoting vacations by plane. Aviation W 47:61 Ag 11 '47
Brooklyn survey shows air travelers repeat. O. H. Ehrlich. Air Transport 5:34-6 Jl '47
Do airlines need a new sales technique? cooperation of travel agents can increase load factors. G. Forbes. il Air Transport 5:34-5+ O '47
Estimating potential passengers. R. H. Rush. Aero Digest 53:42-3 D '46
IATA's new president wants less red tape. Aviation W 47:38 O 27 '47
Red tape in international air travel. W. A. M. Burden. il Air Transport 5:41-4 Mr '47
Skycruise business attracting operators; rising interest in scheduled but unconventional passenger services. Aviation N 6:2f N 11 '46
Survey shows slight decline in enthusiasm for air travel; study made for Association of American railroads. Aviation W 47:59-60 S 8 '47
Travel red tape under investigation. Aviation W 47:59 Jl 14 '47

See also
Airlines—Around the world service
Tourist cards

Advertising
Art stirs desire to travel; copy sells travel by air. il Ptr Ink 217:117 N 15 '46
Direct mail works for the Flying Tigers. Ptr Ink 217:108 N 15 '46

AIR travel cards. See Tourist cards

AIR turbines
Aircraft refrigerating expansion turbine; Lockheed 649 Constellation. il Refrig Eng 52:417+ N '46
Large-scale production of oxygen; reducing costs of turbine methods. D. D. Howat. bibliog diags Chem Age (Lond) 57:81-5 Jl 19 '47
Steam-air plants. W. Karrer. diags Engineer 182:537-40 D 13 '46
Turbo-expanders. J. S. Swearingen. il diags Chem Eng Prog 43:85-90 F '47

AIR washers
Air scrubbers for tissue mills. W. K. Metcalfe. il Paper Tr J 124:128+ My 29 '47

AIRCRAFT

See also
Airplanes
Autogiros
Flying boats
Gliders
Helicopters

Patents
Trend of invention. Published in monthly numbers of Aero digest

AIRCRAFT accidents. See Aviation—Accidents

AIRCRAFT damage insurance. See Insurance, Aircraft damage

AIRCRAFT gas turbines. See Gas turbines, Aircraft

AIRCRAFT guns. See Guns, Aircraft

AIRCRAFT steel. See Steel, Aircraft

AIRFOILS
Additional developments of Greene's equation to the study of compressible airflow. G. L. Shue. bibliog J Aeronautical Sci 13: 581-6 N '46
Aerodynamic center and center of pressure of an airfoil at supersonic speeds. H. W. Sibert. J Aeronautical Sci 14:183-4 Mr '47
Compressible flows in aeronautics. J. Stack. bibliog il diags J Aeronautical Sci 12:127-43 Ap '45; Discussion. 12:143-8; 13:645-6 Ap '45, D '46
Ring airfoil in nonaxial flow. H. S. Ribner. diag J Aeronautical Sci 14:529-30 S '47
Shock-stalled flows for supersonic-type airfoils at transonic speeds. J. Stack. bibliog il Aviation 46:43-5 F '47

See also
Airplane wings

Testing
Shock-wave oscillations in wind tunnels. H. Liepmann and H. Ashkenas. il diags J Aeronautical Sci 14:295-302 My '47

AIRLINE captains. See Aviators

AIR line pilots association
Airlines pilots' stake in safety. D. L. Behncke. Air Transport 5:27-30 Je '47
Four-engine pilot pay case. E. M. Fitch. Air Transport 5:37-9 Jl; 28-30+ Ag; 51-2+ O; 54+ N '47

AIR line pilots association—*Continued*
Pilots support flight engineers. Aviation W 47:49 O 20 '47
AIRLINES
Skycruise business attracting operators; rising interest in scheduled but unconventional passenger services. Aviation N 6:26 N 11 '46
See also
Aeronautics, Commercial
Air express service
Air mail service
Air carriers—Non-scheduled operations
Airports
Airways
also Capital airlines; Eastern air lines, inc.; Pan American world airways; Transcontinental and western air, inc.

Accidents

Airline accident investigation. F. Barker. Air Transport 5:21-4+ Ag '47
Airline safety record not bad, but not good enough. R. H. Rush. il Air Transport 5: 32-5 Ag '47
Alcohol evidence disputed in crash. Aviation W 47:13 S 29 '47
CAB blames pilot for AOA accident. Aviation W 47:45 Ag 4 '47
CAB lays blame; report on United's DC-4 crash. Bsns W p21 S 27 '47
CAB report cites gust lock as LaGuardia DC-4 crash cause. R. Hotz. Aviation W 47:11 S 29 '47
Congressional group to monitor CAB probes of airline crashes. Aviation N 7:10 Je 9 '47
Controls were locked in LaGuardia crash, the CAB decides. CAA J 8:112 O 15 '47
Domestic airline accident record shows improvement during 1946. Aviation N 6:31 N 25 '46
Fire and downdraft factors in DC-6 crash. Aviation W 47:13-14 N 3 '47
Investigator reports on UAL accident. Aviation W 47:45 Jl 28 '47
Mishaps involving larger planes boost passenger fatality rate. Aviation W 47:51 Ag 11 '47
No passenger fatalities on 16 air lines in 1946. Nat Safety N 55:54 Je '47
Pilot error seen in two accidents. Aviation W 47:55-6 N 3 '47
Presidential board begins new air safety investigation. R. Hotz. Aviation N 7:7-8 Je 23 '47
Safety council lauds 16 lines that flew without fatalities in '46. Aviation N 7:8 My 19 '47
What causes airline accidents? J. Stuart. il map Air Transport 51:21-6 Mr '47
See also
Airlines—Safety measures

Accounting

Airline accounting. C. G. Adams. N A C A Bul 28:359-76 N 15 '46
Transport-cost precision via p-s-d (power-space-density) approach. Aviation 45:103+ D '46

Advertising

Mailings sell air service to specific prospect groups. J. W. Austin. il Sales Management 59:59-60 Ag 1 '47
Nation's airlines plan safety advertising campaign to combat air crash publicity. N. Kelne. Ptr Ink 218:107+ Ja 24 '47
Six ways to put more pull into direct mail advertising; Air Express literature. il Sales Management 59:48+ S 15 '47
Vandercook broadcasts for the airlines. Air Transport 5:47 Je '47
Young America; receptive minds for the story of air transportation; United Air Lines working closely with schools and colleges. R. O. Mertes. il Sales Management 57:44-6 N 10 '46
See also
Air travel—Advertising

Around the world service

Pan American circumavigates globe. map Aero Digest 55:25 Jl '47

Commuter service

Commuting by air to get 3-year trial in New York area. CAA J 8:65 Je 15 '47
N.Y. air commuting is approved by CAB. Aviation N 7:11 My 19 '47

Consolidation

Anti-climax seen in CAB approval of Denver-Los Angeles route sale. S. Altschul. Aviation W 47:18 S 8 '47
CAB approves UAL route purchase. Aviation W 47:12 S 1 '47
Hughes, PAA officials open TWA merger discussions. Aviation N 7:7-8 Mr 3 '47
Major CAB policy test seen in Western's Denver route sale. Aviation N 7:9 Mr 17 '47
Mid-continent control by American airlines is denied by Board. CAA J 7:141 N 15 '46
Reshaping the airline map. S. Altschul. Air Transport 5:40-1 Ag '47
Sees subsidies hiked by community line; hearing before House interstate and foreign commerce committee. Aviation N 7:8-9 My 26 '47
Trippe predicts $100,000,000 savings for community company. Aviation N 7:43-4 My 5 '47

Cooperation

Scandinair shows the way. G. H. Smith. il Air Transport 5:53-4+ F '47

Costs

Airline costs; rising tide. Air Transport 4: 68-9 D '46
Airlines dragged down by costly ground services. J. B. Ford. Barron's 27:29-30 Je 30 '47
Cost per plane mile in dollars; tabulated by companies. Air Transport 4:98-9 D '46
Pinpointing costs per passenger-mile. Aviation 46:97-8 My '47
Transport-cost precision via p-s-d (power-space-density) approach. Aviation 45:103+ D '46
Want to estimate ground and indirect expenses? J. H. Harger. Air Transport 5:44-7 My '47

Employees

Agency man, Michael J. Corley. E. Doherty, jr. Air Transport 4:44-5 D '46
Air transport industry wages, payrolls climb to new peaks. C. Adams. Aviation W 47: 41-2 S 22 '47
Building a maintenance force through apprentice training. R. Perry. il Air Transport 5:47-50 Mr '47
CAB public counsel blast airlines labor conference. Aviation N 7:28 Mr 3 '47
Labor law mystery for airlines. E. M. Fitch. Air Transport 5:33-4 S '47
Little things that count in personnel relations. E. M. Fitch. Air Transport 5:43-5 Ap '47
NMB ruling upsets airline worker status. Aviation N 7:30 F 17 '47
Pilots support flight engineers. Aviation W 47:49 O 20 '47
Rift in the ranks; airlines ask joint dealings with unions. Bsns W p68-9 D 28 '46
So you want to be an airline engineer! G. T. Hayes. Air Transport 5:26-8 My '47
Thoughts of an airline employee. T. A. Ballantyne, jr. il Air Transport 5:21-3 Je '47
See also
Aviators

Fares

Air transport for the masses; Atlantic airlines proposes to develop short-haul business and to reach mass travel market through low fares. B. E. Cole. il Air Transport 5:46-9+ Jl '47
Atlantic carriers keep fare level. Aviation W 47:55 Jl 14 '47
CAB approves 10% airline fare boost. Aviation N 7:27 Mr 31 '47; Abstract. CAA J 8:40 Ap 15 '47
Hot air age is over. C. B. Monro. Air Transport 5:45 Mr '47
How many fares make a profit? Aviation 46: 84+ Je '47
News and views of investments; move to get higher fares. Barron's 27:1 Ja 6 '47
To increase or not increase passenger fares. F. F. Butler. Air Transport 5:72+ My '47
To probe rates. Bsns W p36 F 22 '47

Feeder airlines

Aerial bus line; West coast airlines. R. Bloomberg. il Air Transport 5:21-3 Ap '47

AIRLINES—Feeder airlines—*Continued*
Analysis of approved feeders through July, 1947; table. Aviation W 47:52 Ag 25 '47
Board selects three new carriers for North Central feeder service. map CAA J 8:18 F 15 '47
Board's Texas-Oklahoma decision adds new feeders; extends routes. map CAA J 8:4 Ja 15 '47
Boeing withdrawal of model 417 narrows feeder plane competition. Aviation N 6: 15 D 23 '46
CAB decision expands feeder network to 11,728 miles. C. L. Adams. map Aviation N 6:27 D 9 '46
Feeder decisions tend to move beyond limits of experimentation. C. M. Young. map Aviation N 7:28-9 Ap 21 '47
Feederlines plead for more mileage. Aviation W 47:50 Ag 4 '47
Great Lakes area granted helicopter, feeder services. C. Adams. Aviation W 47:49 S 15 '47
Low load factors, high losses reported to CAB by feeders. C. Adams. Aviation N 7: 27-8 Je 9 '47
National feederline network swelled by North Central decision. C. L. Adams. map Aviation N 7:31-2 Ja 13 '47
New council formed by 13 feederlines. Aviation W 47:52 Ag 25 '47
Selecting a feeder fleet. H. K. Gilbert, jr. Air Transport 5:44-5 Jl '47
Southeast feeder battle reopened. Aviation W 47:58 N 3 '47
Southwest solves landing fee problem. Aviation N 6:28 D 9 '46

Finance

Air crashes hit finances. Bsns W p 18 Je 21 '47
Air transport industry wages, payrolls climb to new peaks. C. Adams. Aviation W 47: 41-2 S 22 '47
Airline profits slump. Bsns W p64-6+ Ja 11 '47
Airline revenues, and deficits, still soar. Bsns W p76 Jl 12 '47
Airline squeeze. charts Fortune 35:116-19+ My '47
Airlines' hopes for 1947 profits fade. S. Altschul. Barron's 27:32 Ag 25 '47
Airlines make plea for transport plane subsidies. C. Adams. Aviation W 47:11-12 S 22 '47
Airlines may seek more funds by means of public financing. S. Altschul. Aviation W 47: 17 O 20 '47
April brought turn in airlines' revenues. Barron's 27:30 My 5 '47
Back to financing fundamentals. Air Transport 5:81 F '47
Bankers must share criticism directed at airline management. S. Altschul. Aviation W 47:44 Ag 25 '47
Booming airline business leaves gloomy profit outlook. L. L. Bollinger; H. E. Nourse. S A E J 54:37-8+ D '46
Capital airlines attempting to revise capital structure. Aviation N 7:24 My 19 '47
Carriers see route extension as cure for financial condition. S. Altschul. Aviation W 47:15 S 1 '47
CAB loads imaginary tons into airlines' mailbags; new bases of payment will multiply some carriers' earnings. S. Altschul. Barron's 27:10-11 My 12 '47
Comeback by the airlines? Bsns W p84+ Ap 19 '47
Cost aspects of airline policies and procedures. R. D. Speas. S A E J 55:35+ Mr '47
Current investment surveys highlight airline imponderables. Aviation N 6:17 D 16 '46
Domestic airline traffic, revenue and expense statistics for 1946; tabulations. Mag of Wall St 80:208-9 My 24 '47
Domestic, trans-Atlantic carriers show first 1947 operating profit. C. Adams. Aviation W 47:58 Jl 7 '47
Domestic trunklines to show substantial third quarter profit. C. Adams. Aviation W 47: 45-6 O 20 '47
Financing plans of United indicate airline credit rise. Aviation N 7:18 F 3 '47
For air transport, the taxpayer pays; report issued by Railroad committee for study of transportation. Ry Age 123:571-2+ O 4 '47
Further airline losses seen as summer earnings disappoint. Aviation W 47:18 Jl 14 '47
Higher rate structure essential for airlines. S. Altschul. Barron's 26:12-13 D 9 '46
More mail income brings relief to ailing airlines. S. Altschul. Air Transport 5:53-5 Je '47
New pattern for airline capital structures. S. Altschul. Air Transport 5:67-8+ My '47
Northwest financing program. Aviation N 7: 42 My 5 '47
PCA refinancing plan ready; new, extended loans proposed. Aviation N 7:12 Je 23 '47
Senate committee probes finances of U.S. international airlines. Aviation N 7:22-3 Ja 20 '47
Senate investigation aimed at air policy. Aviation N 7:25 Ja 27 '47
Southern bank role big in Delta air lines expansion credit. il Manuf Rec 116:43-4 Mr '47
Successes in airline financing may herald industry's recovery. Barron's 27:13 Mr 10 '47
TWA loss hits $14,919,503 for 1946; Eastern makes net profit of $3,504,643. Aviation N 7:10 Ap 7 '47
U.S. airlines take heaviest losses despite revenue gains. C. Adams. Aviation N 7:7-8 F 17 '47

See also
Airlines—Securities

Food service

Precooked frozen foods on a production line basis; Maxson food systems. L. Spitz and T. Derby. il Food Ind 19:930-2+ Jl '47

Freight service

Air cargo growth augurs shifts in marketing strategy. E. M. Kelley. il Sales Management 58:87-8+ Ja 15 '47
Air short hauls can compete with surface. R. H. Rush. il Air Transport 5:45-9 F '47
Airfreighters' claims of pioneering hit; contract carriers not responsible for cargo growth. C. B. Monro and F. M. Glass. Aviation N 7:17 Ja 20 '47
Airlines expanding cargo plans to whittle nonscheduled lead. M. Mickel. Aviation N 7:27-8 Ap 21 '47
Battle for air freight. Bsns W p42+ N 16 '46
Box car takes to air with varied freight. R. Blanchard. il Adv & Sell 40:48 Ag '47
Business skyrockets in air freight industry. V. Patrick. il Ind Marketing 32:52-3+ My '47
Cargo ground handling improves. Air Transport 5:57-8 Ap '47
Carriers intensify battle for freight. Aviation W 47:13 Ag 4 '47
Charge certificated airlines are unfit for cargo operations; California eastern airways challenges record of presently-certificated carriers. C. L. Adams. Aviation N 6:20-1 D 23 '46
CAB counsel hits REA freight plan. Aviation N 7:25 Mr 24 '47
Diesels, sheep, typewriters, leather goods in air cargo. il Air Transport 5:30 My '47
Flying perishables to market. J. L. Nicholson. il Food Ind 19:786-9 Je '47
Freight moves forward in air revenue picture. P. A. Johnston. Barron's 27:7-8 My 19 '47
Gael Sullivan offered post as head of Air cargo, inc. M. Mickel. Aviation N 6:21 D 30 '46
Granite blocks, sweet peas, pianos, and sheep in air cargo. Air Transport 5:84 Ja '47
Lines drawn for freight contest by scheduled, irregular lines. il Aviation N 7:27 Je 7 '47
New cargo service started by Mutual. il Aviation N 6:13-14 D 16 '46
Oklahoma Express operates air freight pick-up service; Mistletoe-Braniff combine. il Manuf Rec 115:35+ N '46
Post-war air cargo, first year. K. K. Hoyt. Aero Digest 54:23+ F '47
Scheduled lines push independents for leadership in airfreight field. C. Adams. Aviation N 7:19-20 F 3 '47
Shippers' view of air cargo reported by Commerce dept. Aviation W 47:32-3 S 1 '47

AIRLINES—Freight service—*Continued*
Slick's all-freight airline. il Aero Digest 55: 92+ O '47
Steel pipe delivered to Egypt by airplane. il Iron Age 159:130 Mr 6 '47
U.S. exports by air reach record level. Aviation W 47:57 Jl 14 '47

See also
Air carriers—Non-scheduled operations—Freight carriers
Air express service
Airplanes, Freight
Containers (for air transport)

Rates

See Airlines—Rates

Maintenance and repair

Aircraft-engine maintenance in Holland. Engineering 163:519 Je 20 '47
Aviation-air transport maintenance awards for 1946. il Aviation 45:36-50 D '46
Aviation maintenance corp. grows to $8,000,000 business in year. S. Bangs. Aviation N 7:14 Ap 28 '47
Building a maintenance force through apprentice training. R. Perry. il Air Transport 5:47-50 Mr '47
Complete power egg ground testing. R. W. Lahners. diags S A E J 55:63-4 My '47
Design for profit; reducing ground time and facilitating maintenance. H. G. Lesley. il Air Transport 3:50+ D '45; 4:49-50+ F; 44+ Mr '46; 5:28-30 S '47
It happened in St Louis; ATA engineering and maintenance conference; report. F. Barker. Air Transport 5:33-7 My '47
Maintenance planning for new aircraft. R. M. Adams. Aviation 46:94+ F '47
New approach to airline maintenance; Northwest airlines. R. E. Geror and F. W. Barker. il Air Transport 5:21-5 S '47
On-condition vs. time limits; airplane engine overhaul rules. R. E. Geror. Air Transport 5:25+ S '47
Planning airline maintenance. il Aero Digest 54:204+ Ja '47
When vulnerable be vigilant; with new aircraft, maintenance will be more important than ever before. R. S. Johnson. Air Transport 5:40-1 O '47

See also
Airlines—Shops
Airplanes—Maintenance and repair

Management

Aerial bus line; West coast airlines. R. Bloomberg. il Air Transport 5:21-3 Ap '47
Air transport for the masses; Atlantic airlines proposes to develop short-haul business and to reach mass travel market through low fares. B. E. Cole. il Air Transport 5:46-9+ Jl '47
Control unit; newest techniques for controlling decentralized operations. J. B. Thurston. Advanced Management 12:74-80 Je '47
Do airlines need a new sales technique? cooperation of travel agents can increase load factors. G. Forbes. il Air Transport 5:34-5+ O '47
How to start an airline; Piedmont airlines. T. H. Davis. map Air Transport 5:47-50 O '47
Thoughts of an airline employee. T. A. Ballantyne, jr. il Air Transport 5:21-3 Je '47
What's right with airlines? reply to article in Fortune, August 1946. H. Powell. il Air Transport 5:21-5 F; 38-40 Mr; 39-41 Ap '47

Military use

Airlines make plea for transport plane subsidies. C. Adams. Aviation W 47:11-12 S 22 '47

Non-scheduled operations

See Air carriers—Non-scheduled operations

Public relations

Airlines and the public. G. P. Saunders. flow diag Air Transport 4:46+ D '46; 5:42-5 Ja '47

Purchasing

Spare parts logic; airline purchasing problems. R. C. Duffie. Air Transport 5:35-8 S '47

Radio communication

Air competitors cooperate in Arinc; airlines communications coordinating group. B. Stubblefield. Air Transport 5:42-3 Ag '47
UAL records verbal orders. C. A. Petry and S. A. Sollie. il maps Aero Digest 55:74+ Ag '47
Weatherproofed communications; CAA's radio teletype weather information for Alaskan aviation. L. LeKashman. il Aero Digest 53: 56+ N '46

Rates

Air cargo rate cut. Bsns W p28 Je 14 '47
Air rate war on. Bsns W p21 S 27 '47
Air short hauls can compete with surface. R. H. Rush. il Air Transport 5:45-9 F '47
Airfreighters lose battle; CAB permits scheduled lines to cut cargo rates. il Bsns W p38+ O 11 '47
CAB cargo decision blow to independents. P. A. Johnston. Barron's 27:9 O 27 '47
CAB halts air cargo rate war. Aviation W 47:16 N 3 '47
CAB orders cargo rate probe but refuses to suspend tariffs. C. Adams. Aviation W 47: 53 O 13 '47
Freight tariffs approved by CAB. Aviation W 47:55 Ag 11 '47
Higher rate structure essential for airlines. S. Altschul. Barron's 26:12-13 D 9 '46
Hot air age is over. C. B. Monro. Air Transport 5:45 Mr '47

Records

UAL records verbal orders. C. A. Petry and S. A. Sollie. il maps Aero Digest 55:74+ Ag '47

Regulation

Lower minimums set for airplanes landing on ILS. CAA J 8:37+ Ap 15 '47

Safety measures

Air safety board urges cuts in airline maximum weights. Aviation W 47:11 Jl 7 '47
Airlines pilots' stake in safety. D. L. Behncke. Air Transport 5:27-30 Je '47
CAA and airlines versus GCA. W. Kroker. il diags Air Transport 5:30-3+ Mr '47
CAA approves GCA, ILS for airlines use. Aviation N 7:10-11 Ap 28 '47
Effect of the new civil air regulations on scheduled air transportation. R. W. Ayer and F. F. Fennema. diag S A E J 55:47-50 Ja '47
Safety board, airlines wrestle unseen passenger problem; air temperature changes add to take-off weight. R. Hotz. il Aviation W 47:13 S 15 '47
Seven airlines approved to use ILS at 21 fields. R. Hotz. Aviation W 47:11 S 1 '47
TWA, Hughes Aircraft developing new airline radar safety devices. R. Hotz. il Aviation N 7:28-9 My 12 '47
TWA looks at radar. R. C. Ayres and R. M. Davidson. il Air Transport 5:35-7 F '47

See also
Parachutes

Securities

Airline credit sags to new low as expected earnings fail to appear. Aviation N 6:20 N 11 '46
Airline dividends are casualty of post-war finance problems. Aviation N 6:21 D 9 '46
Airline shares experience worst price deflation in 1946. Aviation N 7:27 Ja 13 '47
Airline shares gain favor, rally from year's lows. Aviation N 7:14 Ap 14 '47
Airline stock warrants lose values in declining market. Aviation N 7:19 Je 16 '47
Airline values closer to realities. S. Altschul. il Air Transport 5:60-1+ Ja '47
Airlines; with status of leading shares. F. R. Walters. Mag of Wall St 79:669-71+ Mr 15 '47
Down to earth analysis of the airlines; with financial statistics of leading airlines. W. C. Hanson. il Mag of Wall St 79:247-9+ D 7 '46
Market action on two Uniteds shifts with industry fortunes. S. Altschul. Aviation W 47:17 O 27 '47
Price depression is airline stock lure. Aviation N 7:22 F 10 '47
Trust report reflects decline in 1946 aircraft, airline values. Aviation N 7:12 Mr 3 '47

AIRLINES—Securities—*Continued*
What is the future of air transportation? opportunities in airlines' stocks. S. Janas. Comm & Fin Chr 166:809+ Ag 28 '47

Service

Flying horses; airplane transport of race and show horses. G. Herrick. il Air Transport 5:58-9 O '47
Ground speed-up urged for expanding air travel. J. D. Hungerford; J. W. Colthar; S. J. Solomon. S A E J 54:66-7 D '46
Some technical aspects of passenger handling; abstract. R. W. King. S A E J 55:60 O '47
What's right with the airlines? reply to article in Fortune, August 1946. H. Powell. il Air Transport 5:21-5 F; 38-40 Mr; 39-41 Ap '47

Shops

Engine overhauls on line production; Kansas City overhaul base. G. Molesworth. il Air Transport 5:28-30 O '47
Fabricating spacers, bushings, and washers. W. L. Nye. Air Transport 5:58+ F '47
Maintenance shops related to hangar. plan diag Arch Rec 101:123 Ap '47
One plant off and one plant on; applications of the Towmotor in TWA's Kansas City, overhaul base; illustrations with text. Air Transport 5:53-4 Ja '47
Open-air maintenance; PAA's Miami base. il plans Air Transport 5:31-3 Je '47
Plane maintenance plant analyzed; discussion by C. M. Kneisel, M. Abramovitz and F. N. Severud. il Arch Rec 101:111-13 Ap '47
TWA improves maintenance through better tooling. L. Spruill. il Aviation 45:38-41 D '46
WAL's maintenance work rises in peacetime operations. S. Bangs. il Aviation 45:42-5 D '46

Statistics

Airline passenger traffic up 16 percent during the first four months of 1947. Aviation W 47:61 Jl 7 '47
Domestic and territorial air carrier statistics; operations for the year 1946 as compared with 1945; tabulation. CAA J 8:23 F 15 '47
14,000,000 passengers carried by airlines in 1946; tabulation. Automotive & Aviation Ind 96:123 Mr 15 '47
U.S. carriers operating 61 per cent of all scheduled plane miles. C. Adams. Aviation W 47:43 Ag 4 '47

See also
Airlines—Traffic

Taxation

CAA submits plan to assess users of federal airways. Aviation N 7:8-9 F 3 '47
Guatemala imposes tax on air-line tickets. For Comm W 27:31-2 Je 21 '47
Tax and legislative problems. R. Ramspeck. Am Pet Inst Proc 26(1):107-9 '46

Terminals

Air terminal design. A. F. Heino. il S A E J 54:73 N '46
Airport terminal buildings. plans Aero Digest 55:78 Ag '47
Reducing the maze of ground-service units. W. L. Flinn. il diags Air Transport 5:29-32 My '47

See also
Airports
Seaplane bases

Ticket offices

How to start a pleasure cruise; illustrations. Sales Management 59:74 S 1 '47
TWA ticket office in Chicago. il plans Arch Forum 86:90-3 Mr '47

Traffic

Estimating potential passengers. R. H. Rush. Aero Digest 53:42-3 D '46
N.Y.-Chicago run leads airline traffic; CAB's statistical study. Aviation N 7:25-6 Mr 24 '47
Robinson to argue regional airline concept before CAB. Aviation W 47:61 Jl 7 '47
Substantial traffic gains forecast for this year by CAB analysts. M. Mickel. Aviation N 7:27-8 My 26 '47
Traffic below expectations during first half of 1947. C. Adams. Aviation W 47:47 Ag 25 '47
U.S. carriers improved position on trans-Atlantic traffic in 1946. M. Mickel. Aviation N 7:7-8 Mr 31 '47

Transoceanic lines

Air-commerce controversy. K. K. Hoyt. Aero Digest 55:28-9, 90+ Jl '47
Air immigration can build international load factors; pitfalls in entry of GI wives and fiancees. G. Forbes. il Air Transport 5:30-3 Jl '47
Air travel abroad. Bsns W p39-40 Ap 12 '47
Airlines will make one world. A. Plesman. Air Transport 5:25 My '47
Atlantic carriers keep fare level. Aviation W 47:55 Jl 14 '47
Board to probe route patterns of 3 airlines in re-examinations. CAA J 8:42 Ap 15 '47
Case against chosen instrument idea. C. R. Smith. Weekly Underw 156:1635 Je 14 '47
Chosen instrument support wanes under barrage of testimony. Aviation N 7:28-9 Je 2 '47
CAB probe to determine fate of C&S foreign routes. C. L. Adams. Aviation N 7:27 Mr 10 '47
Foreign challenge in the air. P. McCarran. map Aero Digest 54:20-1+ Je '47
International air routes and their frequencies; map. Air Transport 4:34-5 D '46
International air services are expanding. il Air Transport 5:61 Mr '47
Letter to the editor from Sea-air committee. T. L. Ford. Air Transport 5:27-9 Mr '47
Life rafts developed for over-ocean airliners. I. J. Hammill. il Air Transport 5:40-1 S '47
Many transport models on international routes. Air Transport 4:33 D '46
Northwest to the Orient; scheduled air traffic across the north Pacific. map Aero Digest 55:58 S '47
Overseas air travel insurance better. Aviation N 7:33 My 12 '47
Sees subsidies hiked by community line; hearing before House interstate and foreign commerce committee. Aviation N 7:8-9 My 26 '47
Trippe predicts $100,000,000 savings for community company. Aviation N 7:43-4 My 5 '47
Trippe, Roig decry unsound competition. Aviation W 47:55 O 13 '47
U.S. carriers improved position on trans-Atlantic traffic in 1946. M. Mickel. Aviation N 7:7-8 Mr 31 '47

See also
Steamboat lines—
Airplane auxiliaries

Africa, West

Aviation's role in West Africa. T. H. McConnell, jr. il map Aero Digest 55:40-1+ Jl '47

Alaska

Alaskan Airline tests airborne radar as aid in flying rugged coastal route. il CAA J 8:50 My 15 '47
CAB okays merger; grants mail service in Alaskan action. CAA J 8:76 Jl 15 '47
Rate wars again hit Alaskan route. Aviation W 47:51 S 15 '47
Weatherproofed communications; CAA's radio teletype weather information for Alaskan aviation. L. LeKashman. il Aero Digest 53:56+ N '46

Australia

Australia, Pacific air instrument for Empire. H. B. Fletcher. Air Transport 4:43 D '46

Bolivia

Bolivia facing civil aviation reorganization. G. M. Galster. Aviation 46:91 F '47

Brazil

Growth of air transport helps to unify Brazil. G. Herrick. il map Air Transport 5: 24-8 Jl '47

China

Planes for the transport of China. A. W. Jessup. il Air Transport 5:43-6 O '47

AIRLINES—China—*Continued*
Sino-Soviet aviation corporation. G. Yeh. For Comm W 25:20 N 16 '46

Great Britain

British post-war transport program seen faltering. Aviation N 7:33 Ja 13 '47

Great Lakes states

CAB announces decision in Great Lakes Area regional service case. CAA J 8:110 O 15 '47

Honduras

New Honduran air freight service. For Comm W 29:29+ O 11 '47

Iceland

Iceland airways, ltd., releases operating data. For Comm W 28:31 Jl 26 '47

India

India partition presents airline problems. J. K. Van Denburg, jr. il Aviation W 47:54 O 6 '47
Indian civil aviation. Aero Digest 55:97 Jl '47
India's travelers take to the air. J. K. Van-Denburg, jr. il map Air Transport 5:40-3 My '47

Latin America

Latin America uses U.S.-built planes. Aviation W 47:34 S 1 '47

Mexico

Mexico authorizes new international air service. For Comm W 29:31 O 25 '47
Mexico grants permits to new local air-line company; Aerovias trans-Mex. For Comm W 25:30 D 28 '46

Netherlands

Aircraft-engine maintenance in Holland. Engineering 163:519 Je 20 '47
Export-import bank to finance KLM Constellation purchase. W. Kroger. Aviation N 7:9 Je 9 '47
KLM; from wartime coma to peacetime expansion. H. P. Whidden, jr. il Air Transport 4:36-8 D '46

Panama Canal Zone

Pan American and Panagra to provide one-plane service from Canal Zone. CAA J 8:76 Jl 15 '47

Peru

General George's airline; Peruvian international airways. R. F. Anderson. il Air Transport 5:57-8+ Ag '47
Peruvian carrier admitted to U.S. Aviation W 47:58 Ag 11 '47

Portugal

Magellan's heirs. R. MacGall. il Air Transport 5:34-6 Ap '47

Russia

Air transport in Russia. J. Fischer. il Air Transport 5:31 Ag '47
Red air network. A. Steiger. il Air Transport 5:31-3 O '47
Sino-Soviet aviation corporation. G. Yeh. For Comm W 25:20 N 16 '46
Soviet air network expands. map Bsns W p38 S 6 '47

Scandinavia

Scandinair shows the way. G. H. Smith. il Air Transport 5:53-4+ F '47

South Africa

South Africa now witnessing big air-line service growth. E. H. Bourgerie. il For Comm W 29:5+ N 1 '47

United States

Airline squeeze. charts Fortune 35:116-19+ My '47
Airline traffic. W. Price. Mech Eng 69:36-7 Ja '47
Airports, municipal airport and terminal financing, and the future of the airlines. J. D. McGoldrick. Air Transport 5:36-7 Mr '47
CAB sees excessive costs in creating transport reserve. C. Adams. Aviation W 47:51-2 N 3 '47
Pan American's domestic plan. map Aero Digest 53:49 N '46
Reshaping the airline map. S. Altschul. Air Transport 5:40-1 Ag '47

See also
United States—Air service, Army—Transport command

Uruguay

Uruguay facing civil aviation reorganization. G. M. Galster. map Aviation 46:87-8 F '47

AIRPARKS. See Aviation landing stations

AIRPLANE accessories industry
Atlas Sky Merchant pioneers aviation line at 800 airports. il Sales Management 57: 43 D 1 '46
ADMA group urges inventory control plan. Aviation W 47:35 S 22 '47
Enterprising service has no limits; Pacific Airmotive. S. Bangs. il plan Aviation 46: 89-90+ Je '47
Firestone aircraft supply stores show 25 percent sales gain. A. McSurely. Aviation W 47:39-40 O 20 '47
Firestone dealers conference warned on excessive prices. A. McSurely. Aviation N 7: 22 Ap 28 '47
Fred Crawford's company; neat balance between auto parts and aircraft components. il Fortune 34:146-51+ D '46
Sky Merchant in Latin America; converted C-54 refitted for sales promotion tours. E. E. Aldrin. il Aero Digest 55:26-7+ S '47
Spare parts logic; airline purchasing problems. R. C. Duffie. Air Transport 5:35-8 S '47

Directories

1947 directory of aircraft and power-plant accessories and parts. Aero Digest 54:152-4 Ja '47

Statistics

Aeronautic exports, by years, 1912-1946, type of product, 1942-1945; tabulations. Automotive & Aviation Ind 96:124 Mr 15 '47

Great Britain

British building more accessories. F. R. Brewster. Aviation W 47:39 O 27 '47

AIRPLANE brakes. See Brakes, Airplane

AIRPLANE cargo insurance. See Insurance, Airplane cargo

AIRPLANE carriers
Launch of light fleet carrier H.M.S. Centaur. il Engineer 183:387 My 2 '47
Naval aircraft and carrier equipment. L. Boddington. il diags Roy Aeronautical Soc J 51:800-26; Discussion. 826-31 O '47
Operational flying; naval air operations. F. M. A. Torrens-Spence. Roy Aeronautical Soc J 51:831-43; Discussion. 844 O '47
Survey of the technical problems of the design of naval aircraft. W. S. Farren. il(p845-9) Roy Aeronautical Soc J 51:787-96; Discussion. 796-9, 850-62 O '47

AIRPLANE dusting. See Airplanes in insect control

AIRPLANE engines
Air race classic tests water-injection engines and special fuel blends. R. McLarren. il Automotive Ind 97:42-4+ S 15 '47
Aircraft propulsion. F. M. Green and J. E. Wallington. diags Inst Mech Eng J & Proc 156:Proc 176-85 S '47; Same cond. Engineer 182:516-17 D 6 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 185-94 S '47; Engineer 182:521-2 D 6 '46; Engineering 162:570-1, 593-4 D 13•20 '46
British aircraft outlook; abstract. F. R. Banks. Mech Eng 69:671-2 Ag '47
British powerplant progress. J. W. Morrison. il diag Aero Digest 53:78-9+ D '46
Chrysler aircraft engine. diag Automobile Eng 36:500 N '46
Compounding aircraft engines. W. O. Meckley and L. J. Fischer. diag Aviation 45:50-2 N '46
Curtiss engine synchronizer; designed to meet propeller control requirements of multi-engined aircraft. il Aviation N 7:14 Ja 27 '47

AIRPLANE engines—*Continued*
Design for power soaring. E. H. Rowley. il diags S A E J 55:48-9 Ag '47; Abstract. Automotive & Aviation Ind 96:90+ Je 1 '47
Development of chrome plated piston rings for aircraft engines; abstracts. J. B. Minnich. il S A E J 55:69-70 Ja '47; Automotive & Aviation Ind 96:35 Ja 1 '47
Engines for light aircraft. D. S. King. il diags S A E J 55:53-5 Ag '47
Engines, today and beyond. A. Nutt. Aero Digest 54:105 Ja '47
Evaluating Russian aircraft engines. P. H. Wilkinson. il Aviation W 47:24+ Jl 28 '47
L'évolution de la technique aéronautique depuis la seconde guerre mondiale d'après le XVII[e] Salon de l'aéronautique de Paris. R. J. de Marolles. il diag Génie Civil 124: 189-92 My 15 '47
Fairchild atomic project progresses; progress on application of nuclear energy to various types of aircraft power plants. Aviation N 7:9 Mr 3 '47
5,000-hp. Lycoming revealed. J. H. Carpenter. il Aviation 45:86-7 D '46
French develop 8,000 hp. tandem. il Aviation N 7:23 Ja 6 '47
Guide to aircraft power-plant selection. A. L. Lowell. Aeronautical Eng R 6:22-5 Ap '47
In-line aero engine; Cameron C4-I-E1. il Sci Am 176:32 Ja '47
Lycoming's 36-cylinder radial. il Aero Digest 53:82-3 D '46
McCulloch gasoline engines. il Mech Eng 69: 237 Mr '47
McCulloch offers new 120 hp. engine. il Aviation N 7:12+ Ja 20 '47
New Jacobs engines. Aeronautical Eng R 5:43 N '46
Paris postwar international air show. W. F. Bradley. il diag Automotive & Aviation Ind 96:18-21+ Ja 1 '47
Power installations. F. M. Owner. il diags Roy Aeronautical Soc J 51:71-105 bibliog (p104-5); Discussion. 105-8, 179-90 F '47
Powerplant requirements for personal aircraft. P. Altman. S A E J 55:56-7+ Ag '47
Powerplants for air leadership. G. W. Vaughan. Aero Digest 55:34-5 O '47
P&W develops 1,650-hp. Twin Wasp. Aviation N 7:16 Je 30 '47
Pratt & Whitney, Wright build compound engines; combine reciprocating, jet features. Aviation N 7:25 Je 9 '47
Problems of helicopter powerplants; abstracts. R. Insley. il S A E J 55:46-8 S '47; Automotive Ind 97:41+ Ag 15 '47
Ram-jet engine. E. Perchonok. il diag Machine Design 19:92-4 O '47
RMI'S rocket engine which powers supersonic XS-1. J. Shesta. flow diag il diag Aviation 46:44-6 Ja '47
Rolls-Royce Eagle engine. il Aero Digest 54: 68+ Je '47
Rolls-Royce Eagle 3,500-h.p. aero engine. il Engineering 163:380-1 My 9 '47
Rolls-Royce 3,500 h.p. Eagle aero engine. il Engineering 163:102 Ja 31 '47; Engineer 183: 130 Ja 31 '47
Ryan FR-1 Fireball, composite-powered aircraft. B. T. Salmon. il Aero Digest 54:66-8+ Mr '47
SAE national personal aircraft meeting, Wichita, May 1-2. S A E J 55:29-32+ Je '47
Transport aircraft powerplant outlook for 1947; abstracts. R. C. Loomis. S A E J 55: 50-2 Mr '47; Aviation N 7:34-5 Ja 13 '47
Trouble shooting. O. R. Luerssen. Aero Digest 54:40-1+ Je '47
U.S. rocket engine flight test points way to new developments. il Aviation N 6:8-9 D 23 '46
Urge engine tailored to helicopter needs; SAE committee report. S A E J 55:64 Ap '47
World's largest reciprocating aircraft engine, Army air forces model XR-7755. il Product Eng 18:152 Ja '47

See also
Jet propulsion

Air supply
Tests on elbows of a special design; carburetor air intake of airplane engines. J. J. Harper. il diags J Aeronautical Sci 13:587-92 N '46

Bearings
Antifriction bearings of new design for XR-7755 aircraft engine. il diag Machine Design 19:94-5 My '47
Grid bearings for high unit loading. L. Bass. il diags Diesel Power 25:48-51+ Ja '47
Latest developments in engine bearings. P. M. Heldt. il diags Automotive & Aviation Ind 96:28-31+ Mr 1; 34-7+ Ap 1 '47
Sphered-bore bearings developed for new aircraft engine. Mach 53:172 Mr '47

Cooling
Aircraft ejector performance. F. A. McClintock and J. H. Hood. J Aeronautical Sci 13:559-68 N '46
Foresee wider use of exhaust jet cooling. L. McRoberts. diags Automotive Ind 97: 34-5+ Jl 15 '47
Helicopter engine cooling. A. Currie. diags Aero Digest 54:66-7+ Je '47
Helicopter powerplant installations; abstracts. R. A. Wolf and C. P. Spiesz. il diags S A E J 55:50-2 Jl '47; Automotive Ind 97: 40+ Ag 15 '47
Investigation in the 7- by 10-foot wind tunnel of ducts for cooling radiators within an airplane wing. T. A. Harris and I. G. Recant. diags U S Nat Advisory Com for Aeronautics 1942:249-67 '46
Liquid-cooled engine powerplants for transport aircraft; abstract. J. D. Pearson and E. Warlow-Davies. il diags S A E J 55:58-9 Ap '47
New ejector device uses exhaust energy for engine cooling; gives added thrust to power output, and provides hot air for cabin heating and de-icing of aerodynamic surfaces. W. A. Clegern. il diags Automotive & Aviation Ind 96:24-7 Ap 15 '47
Tropical tests of Fairey Firefly Mk. IV aircraft. Engineering 162:436 N 8 '46
Water injection for lightplanes. il Aviation N 7:17 Ja 13 '47

See also
Airplane engines—Fans
Airplane engines—Radiators

Cowlings
High-speed tests of conventional radial-engine cowlings. R. G. Robinson and J. V. Becker. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:287-99 '46
Modern cowl design saves operators time and expense. il diag Aviation W 47:18-19 S 29 '47

Design
Cardboard mock-ups. M. P. Matthew. il Product Eng 18:120-2 Ja '47
Cyclone 18-BD. il diags Aero Digest 54:58-61+ Je '47
Endurance, a criterion of design. W. T. Bean, jr. il S A E J 55:44-5 S '47
Future trends in aircraft engine design. A. T. Gregory and A. L. Pomeroy. S A E J 55: 62-6 Ag '47
Major design features of the Rolls Royce 3500 hp. engine. W. F. Bradley. il diags Automotive & Aviation Ind 96:32-5+ Je 1 '47
Opposed-piston light aircraft engine. J. W. Oehrli and V. J. Jandasek. diag S A E J 54:77-8+ N '46
Slant mechanism; its fundamentals and application to Diesels for aircraft and other low-weight fields. T. L. Sherman. il diags S A E J 55:49-53 O '47

Detonation
Aircraft detonation indicators; abstracts. J. S. Bogen and W. J. Faust. diags Automotive & Aviation Ind 96:34-6 F 1 '47; Pet Processing 2:90-1 F '47; S A E J 55:70 My '47
Electronic detonation indicator. D. R. deBoisblanc and others. diags Oil & Gas J 45: 50-3+ Ja 18 '47
Knock indicator based on the principle of pressure acceleration. F. Lichtenberger. Automotive Ind 97:30-1+ Ag 1 '47
Knockometer; new instrument for fuel rating. P. J. Costa and J. W. Wheeler. il diags S A E J 55:27-9+ Ap '47; Abstract. Automotive & Aviation Ind 96:64 Ja 1 '47

AIRPLANE engines—Detonation—*Continued*
Study by high-speed photography of combustion and knock in a spark-ignition engine. C. D. Miller. bibliog il diag U S Nat Advisory Com for Aeronautics 1942:15-37 '46

Directories

1947 annual directory of aircraft engines; illustrations with brief descriptions. Aero Digest 54:107-10+ Ja '47

Efficiency

High altitude oxygen boost for aircraft engines. F. Masi and others. il diag Aviation 46:54-5 Ap '47; Abstract. Automotive & Aviation Ind 96:33 Ja 1 '47
New ejector device uses exhaust energy for engine cooling; gives added thrust to power output, and provides hot air for cabin heating and de-icing of aerodynamic surfaces. W. A. Clegern. il diags Automotive & Aviation Ind 96:24-7 Ap 15 '47
Survey of the calculated efficiencies of jet power plants. J. H. Keenan and J. Kaye. diags J Aeronautical Sci 14:437-50 Ag '47
Three times more engine power; output greatly increased through design refinements. R. McLarren. il Automotive & Aviation Ind 96:36-9+ Mr 1 '47
Useful load ratio with jet and airscrew propulsion of aircraft. K. O. Lundberg. Roy Aeronautical Soc J 51:686-703 Ag '47

Exhaust

Design trend of aircraft exhaust systems. R. L. Haver and H. A. Goodin, jr. il Automotive & Aviation Ind 95:40-2+ N 15 '46
18-8 steel in exhaust systems. W. G. Hubbell. il Aero Digest 54:92+ My '47; Same cond. Steel 119:86+ D 30 '46
Engine exhaust system for light aircraft; abstract. D. S. King. Automotive & Aviation Ind 96:31+ Je 1 '47
Foresee wider use of exhaust jet cooling. L. McRoberts. diags Automotive Ind 97:34-5+ Jl 15 '47
High-temperature protection for mild steels; heat-resistant ceramic coatings. W. N. Harrison and others. il Steel 120:92-3+ F 10 '47
New ejector device uses exhaust energy for engine cooling; gives added thrust to power output, and provides hot air for cabin heating and de-icing of aerodynamic surfaces. W. A. Clegern. il diags Automotive & Aviation Ind 96:24-7 Ap 15 '47

Fans

Test of a single-stage axial-flow fan. E. B. Bell. il diags U S Nat Advisory Com for Aeronautics 1942:49-64 '46

Fuel

Action of safety fuel hydrocarbons on Perbunan compounds. R. M. Howlett and E. N. Cunningham. bibliog Rubber Age 60:562-4 F '47
Aircraft engine induction system deposits. W. J. Sweeney and others. il S A E J 54:65 D '46
Aircraft fuel and oil recommendations; tabulation. Aviation 45:59 D '46
Aircraft fuels and lubricants research at Thornton-le-Moors. il Engineering 163:355-7, 360 My 2 '47
Cold-weather fuels. il Sci Am 176:23 Ja '47
Composite engine fuel costs. J. F. Fairlie. il Aero Digest 55:44-5 Jl '47
Evaluation of crude oils for production of straight-run aviation gasolines. B. G. Adams. diags Pet Refiner 26:126-8 F '47
Fuel-air ratio required for constant-pressure combustion of hydrocarbon fuels. N. A. Hall. S A E J 54:32-6 D '46
Fuels of the future for ram-jet motors. F. W. Schumacher. il diag Sci Am 177:122-4 S '47
Fuels of the future; for reciprocating automotive and aircraft engines. A. J. Blackwood. il Sci Am 177:18-20 Jl '47
Hydrogen peroxide for propulsive power; production and use by the Germans during World war II. L. McKee. diag Mech Eng 68:1045-8 D '46; Discussion. 69:682-4 Ag '47
Influence de la nature du mélange combustible sur la vitesse des gaz éjectés par une tuyère. M. Serruys. Génie Civil 124:213-15 Je 1 '47
Lighter weight aviation gasoline offers oil technologists their greatest potentialities. C. C. Furnas. Nat Pet N 38:45 N 20 '46
Motor fuels for light planes? S A E J 55:65 F '47
Oxygen boost method of rating the engine performance of aviation fuels. W. B. Heaton and others. diag Inst Pet J 33:256-65 Ap '47
Performance rating of fuels. T. B. Rendel. Aero Digest 53:105+ D '46
Preparation and physical properties of several aliphatic hydrocarbons and intermediates. F. L. Howard and others. bibliog J Res Nat Bur Stand 38:365-95 Mr '47
Process development and production of isohexane and isoheptane as aviation fuel components. S. F. Birch and others. diags Inst Pet J 32:167-99 Ap '46; Abstract. Pet Processing 2:136+ F '47; Discussion. Inst Pet J 32:200-5 Ap '46
Production of cumene by vapor- and liquid-phase alkylation processes. S. H. McAllister, J. Anderson and E. F. Bullard. bibliog flow diags Chem Eng Prog 43:189-95; Discussion. 195-6 Ap '47
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26 (3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46
Les propergols, fluides moteurs des engins autopropulsés. R. Lévy. Chimie & Ind 57: 221-7 Mr '47
Status report on the CFR-AAF volatility flight-test studies. H. M. Trimble. Am Pet Inst Proc 26(3):99-126 '46
Superfractionation studies; composition and octane numbers of 0.5% fractions of an Oklahoma City naphtha. C. C. Ward, R. M. Gooding and B. H. Eccleston. diags Ind & Eng Chem 39:105-9 Ja '47
Testing volatility of today's fuels. R. J. Clark and R. M. Adams. il Air Transport 5:47-9 Ap '47

See also
Gas turbines, Aircraft—Fuel

Fuel consumption

Propeller charts for the determination of the rotational speed for the maximum ratio of the propulsive efficiency to the specific fuel consumption. S. Biermann and R. N. Conway. bibliog diags U S Nat Advisory Com for Aeronautics 1942:373-90 '46

Fuel feeding

Automatic control meters fuel in Bendix direct injection. diags Automotive & Aviation Ind 96:40-1+ F 15 '47
Bendix Stromberg carburetor. il diags Aero Digest 54:38-9+ Mr '47
Carburation or injection? C. H. Fisher. il diags Automobile Eng 37:251-7, 293-301 Jl-Ag '47
Fuel injection for light aircraft. G. M. Lange. il diags S A E J 55:48-52 Ap '47; Excerpt. Automotive & Aviation Ind 96:80+ F 1 '47
Fuel injection for lightplanes. G. H. Tweney. il diags Aero Digest 55:54-6+ S '47
Fuel metering by engine speed and manifold density; abstracts. J. A. Bolt. diag Automotive & Aviation Ind 96:33 F 1 '47; S A E J 55:70 My '47
Lifting the secrecy lid on Bendix system of direct fuel ignition. J. Geschelin. il diag Automotive & Aviation Ind 96:28-9+ F 1 '47
Vapor lock and pump selection in aircraft fuel systems. R. S. Ames. bibliog Aeronautical Eng R 5:22-5+ N '46

Gearing

Geared engines under development; lightplane power plants designed to turn propellers slowly. Aviation N 7:17 My 12 '47
High-duty gears; special reduction gearing manufactured by David Brown and sons. il Automobile Eng 37:273-4 Jl '47
Precision machining and heat-treating of aircraft-engine gears; Wright aeronautical corp. V. H. Laughner. il diags Mach 53:168-73 Je '47
Twin-engine gearing for the Brabazon I. il diag Engineer 184:147-8 Ag 15 '47

AIRPLANE engines—Gearing—*Continued*
Unusual Bristol gearing. diags Automotive Ind 97:44 Jl 1 '47

Ignition

Ignition analyzer for internal combustion engines; abstract. H. E. Welch and J. V. McNulty. diag Automotive & Aviation Ind 96:32 F 1 '47
Study by high-speed photography of combustion and knock in a spark-ignition engine. C. D. Miller. bibliog il diag U S Nat Advisory Com for Aeronautics 1942:15-37 '46

Ignition devices

Electronic ignition system in experimental stage. A. J. Poole. diags Automotive & Aviation Ind 96:37+ F 1 '47
Experimental ignition systems. diag Electronics 20:180+ Jl '47
High-frequency aircraft ignition system with low-tension, low-frequency distribution; abstract. A. C. Wall. diags S A E J 55:73+ Ja '47
Low tension ignition, a system of merit; abstracts. J. K. Rudd. diags Automotive & Aviation Ind 96:33-4 Ja 1 '47; S A E J 55: 79 F '47
Surface discharge plug featured in low tension ignition research. diags Aviation 46: 64 Ap '47

Industrial applications

Airplane engines used in pipe line service. il Pet Eng 19:192 O '47; Same cond. Nat Pet N 39:36 O 1 '47

Installation

Helicopter powerplant installations. R. A. Wolf and C. P. Spiesz. il diags S A E J 55: 50-2+ Jl '47

Lubrication

Additive type lubricating oils for aircraft engines. W. E. Kuhn and J. E. Fields. il Mech Eng 69:150-2 F '47
Aircraft fuel and oil recommendations; tabulation. Aviation 45:59 D '46
Aircraft fuels and lubricants research at Thornton-le-Moors. il Engineering 163:355-7, 360 My 2 '47
Flight tests of aviation oils. J. T. Hendren. S A E J 55:38-9 Mr '47
Orifice discharge coefficients in the viscous-flow range; units measuring lubricating-oil flow rates in aviation engines during flight. G. S. Peterson. il diags A S M E Trans 69: 765-8 O '47
Visual study of cylinder lubrication. M. C. Shaw and T. J. Nussdorfer. il diags Automobile Eng 36:590-4 D '46; Same cond. S A E J 54:68-72 O '46; Abstract. Automotive & Aviation Ind 94:36-7 Je 15 '46

Manifolds

Annealing salt for 18-8; exhaust manifolds, Ryan aeronautical co. K. Whitcomb. il Steel 120:86-7+ Je 16 '47
Effect of stabilizing and stress relief; heat treatment for 18-8 stainless. W. G. Hubbell. il Steel 121:86-8+ Ag 25 '47
Investigation of a type of failure of 18-8 stabilized stainless steel. W. Kahn and others. il Am Soc for Metals Trans 37:567-82; Discussion. 582-5 '46

Manufacture

Aircraft engine plant goes underground; Swedish factory; illustrations with text. il Aviation 46:56-7 Ja '47
Aircraft engines, application and possible development of nonferrous metals. E. Wood. Metal Prog 50:1252+ D '46
Chemistry in quality control. R. B. Faurote. il Aero Digest 55:78+ Jl '47
Cylinder production for the Wasp Major engine; Pratt & Whitney. T. J. Crowley and F. J. Carney. il Mach 53:152-9 Je '47
Development in aircraft engine metallurgy, 1920-46. W. E. Jominy. Metal Prog 50:687-90 O '46
Electrolytic treatment; electro-plating and allied processes at the Hillington factory of Rolls-Royce, ltd. il Elec R (Lond) 141: 199-202 Ag 8 '47
Forging alloy steel radial engine crankcases; illustrations with text. A. J. Pepin and A. L. Rustay. Metal Prog 50:1023-8 N '46
Jig drills reduce capital outlay, eliminate setup time; Wright aeronautical corp. E. Prange. il Iron Age 159:42-5 Ja 9 '47
Machine-shop operations in producing light aircraft-engine crankshafts. M. F. Colburn. il Mach 54:146-50 O '47
Precision cast finned cylinders; using refractory molds. E. I. Valyi. il Materials & Methods 24:1450-1 D '46
Precision heat treatment; aero-engine works of Rolls-Royce. il Elec R (Lond) 141:311-15 Ag 29 '47
Surface finish; effect on fatigue strength. W. K. Wilson. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 10):347-51 '45; Same. il Engineering 159:279-80 Ap 6 '45; Same cond. Automobile Eng 35:144-6 Ap '45

Mounting

Coupled vibrations of an elastically mounted rigid body with one plane of symmetry. R. J. Dunholter. diags J Aeronautical Sci 14:359-63 Je '47

Radiators

Coolant radiator maintenance. R. E. Desch. il diags Aero Digest 54:42-3+ Ap '47

Repair

Aircraft-engine maintenance in Holland. Engineering 163:519 Je 20 '47
Engine overhauls on line production; Kansas City overhaul base. G. Molesworth. il Air Transport 5:28-30 O '47
Line maintenance of the 3000-(plus)-hp Wasp Major. F. Barker. il diag Air Transport 5: 27-30 Ap '47
Modern shop for engine overhaul; Pacific airmotive corp. flow chart il Air Transport 5: 38-9 O '47
Ounce of prevention in maintaining Wright 3350s. J. G. Cuny. il diags Air Transport 5:61-2+ Ag; 54+ S '47

Specifications

American aircraft engines; tabulation. Automotive & Aviation Ind 96:144-5 Mr 15 '47
Aviation's American piston engine specifications; tabulation. Aviation 46:supp Mr '47
British aircraft engines; tabulation. Automotive & Aviation Ind 96:168 Mr 15 '47

Starting

Aircraft engine starters; abstracts. A. Beier. Automotive & Aviation Ind 95:35-6 Jl 1 '46; S A E J 54:47-8 D '46
Aircraft turbojet and gas-turbine engine starter systems. A. G. Bardwell, jr. Mech Eng 69:577-80 Jl '47

Superchargers

Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159:67-70 Mr 6 '47

Testing

Complete power egg ground testing. R. W. Lahners. diags S A E J 55:63-4 My '47
Diagnosing engine trouble. il Electronics 20: 136 O '47
Engine analyzer pinpoints flight trouble. il Aviation W 47:21-2 O 20 '47
Engine servicing by electronics; engineers at Toledo conference see how Sperry analyzer spots ignition and mechanical troubles during flight. R. W. Brown. il Aero Digest 55: 42-3+ O '47
Engine testing; Pratt & Whitney Wasp Major. S. Reibel. il Aero Digest 53:70-1 N '46
Engine trouble shooting in the air. J. E. Lindberg, jr. and C. Sackett. il S A E J 55:53-4 Mr '47
Indentation method for measuring wear. S. A. McKee. il diags J Res Nat Bur Stand 39:155-61 Ag '47
NACA balanced diaphragm dynamometer-torque indicator. C. S. Moore and others. diags Automotive & Aviation Ind 96:41+ Je 1 '47
Thornton aero-engine research laboratory. il Engineer 183:360-2 Ap 25 '47

AIRPLANE engines—*Continued*

Vibration

Coupled vibrations of an elastically mounted rigid body with one plane of symmetry. R. J. Dunholter. diags J Aeronautical Sci 14:359-63 Je '47

Crankshaft bending vibration. E. F. Critchlow and W. T. Bean, jr. il S A E J 55:33-4 Mr '47

AIRPLANE engines, Jet propelled. See Jet propulsion of aircraft

AIRPLANE fabrics

Fire resistance in aircraft textiles. J. R. Redmond. Am Dyestuff Rep 36:103+ Mr 10 '47

AIRPLANE factories

Consolidated Vultee changes to buses and home appliances at Nashville plane plant. B. L. Clark. il Manuf Rec 116:32-3+ Jl '47

Economical design retains amenity values; B H aircraft plant, Islip, L.I. il plan diags Arch Rec 102:98-9 Ag '47

Prefabricated factory, born of war-time shortage in steel, is built entirely of wood products; Hammondsport (N.Y.) plant for Mercury aircraft, inc. il Arch Forum 87: 117-18 S '47

Electric equipment

Aircraft industry stressed in two industrial sessions; Pacific coast meeting, A.I.E.E. Elec Eng 66:1023-4 O '47

Electrolytic treatment; electro-plating and allied processes at the Hillington factory of Rolls-Royce, ltd. il Elec R (Lond) 141:199-202 Ag 8 '47

Precision heat treatment; aero-engine works of Rolls-Royce. il Elec R (Lond) 141:311-15 Ag 29 '47

Preventive measures reduce welder upkeep; Ryan aeronautical co. C. A. Lehton and H. F. Worcester. il Am Mach 91:118-19 Je 5 '47

Switchboard model pilots substation operation; Wright aeronautical corporation, Wood-Ridge, N.J. J. St Andre. il diags Factory Management 105:110-11 F '47

Employees

Case for wage incentives. F. Brine. Aviation 46:93-4 Ap '47

Educating workers in safety reduces lost-time accidents; Ryan aeronautical co. M. M. Clancy. il Factory Management 105: 103-5 S '47

Faster way to keep personnel records; North American Aviation's one-writing plan. S. Bower, jr. il Am Bsns 17:18-19+ Ag '47

Mass chest survey at Douglas Aircraft plant. E. C. Armes. il Ind Med 16:225-7 My '47

Nutritional status of aircraft workers in southern California; abstract. H. Borsook and D. G. Wiehl. Nat Safety N 54:54 D '46

Postwar adjustment of aircraft workers in southern California. L. R. Linsenmayer and P. E. Warwick. Mo Labor R 63:706-11 N '46

Equipment

Aircraft production progress. il diags Mach 53:137-84 Je '47

Automatic milling machines solve spar cap production problem at Douglas. V. C. Fergen and C. R. Wulffsohn. il Automotive Ind 97:38-40 O 15 '47

Convair's master plan for building the 240 transport. G. F. Gerhauser. il plan Automotive Ind 97:28-31+ Jl 15 '47

Jig drills reduce capital outlay, eliminate setup time; Wright aeronautical corp. E. Prange. il Iron Age 159:42-5 Ja 9 '47

Machine-shop operations in producing light aircraft-engine crankshafts. M. F. Colburn. il Mach 54:146-50 O '47

New plant practices cut costs; Ryan aeronautical co. il Aviation W 47:27 Ag 11 '47

Prevention of water pollution by oil from engineering works. C. Hogg and others. il plan diags Engineering 163:513-16, 537-9 Je 20-27 '47

Rock-like plastic preserves valuable aircraft molds; material made by Calresin corp. il Aviation 46:60-1 My '47

Management

Oil reclamation system paid for itself the first year; Wright Aeronautical. H. G. Knell and E. R. Keast. il Factory Management 105:78-81 S '47

Safety measures

Flying Wing built with safety; Northrop aircraft, inc. L. B. Johnson. il Safety Eng 92:22-3 O '46

AIRPLANE industry and trade

Aviation industry; boom or bust? C. M. Cook. il Dom Comm 35:38-43 Ap '47

Congress may relent on economy and build national defense with military plane orders. Barron's 27:31 Jl 14 '47

Lightplane leaders are optimistic despite seasonal market slump. A. McSurely. Aviation N 6:23-4 D 2 '46

Light-plane market slumps. Bsns W p36+ Je 7 '47

Light planes face the future. il Bsns W p44+ D 7 '46

Personal airplane, its market, design and utility. P. Altman. Automotive & Aviation Ind 95:22-31 N 15; 26-32 D 1 '46

Postwar aircraft industry cashes in on war-time experience. H. N. Gilbert. S A E J 55:51 Ja '47

Profit possibilities in lightplane market future. T. C. Ryan. Aviation W 47:14-15 S 29 '47

Shrinkage seen in export business. Aviation W 47:20 O 13 '47

Sound aircraft-dealer practice. I. F. Angstadt. Aero Digest 54:36-7+ Mr '47

Stinson distribution plan; sale and service of personal aircraft. F. M. Reck. il Aero Digest 53:43-5+ N '46

These are the export markets. R. L. Hoadley. il Aviation 45:82-3 N '46

Well, here we go again; private plane marketing problems. B. Havens. il Aero Digest 54:42+ Je '47

Who are best prospects for a $7,500 plane? businessmen! J. P. Gaty. il Sales Management 57:42-3 D 15 '46

Why South Africa rates A-1 for export. R. L. Hoadley. Aviation 46:81-2 Je '47

Directories

1947 annual directory of personal aircraft; illustrations, miniature plans and brief descriptions. Aero Digest 54:56-8+ Ja '47

1947 annual directory of transport aircraft; illustrations, miniature plans and brief descriptions. Aero Digest 54:36-8+ Ja '47

1947 annual index of airframe and powerplant manufacturers. Aero Digest 54:141+ Ja '47

See also

Airplane engines—Directories

Finance

Aircraft company book values show marked improvement. Aviation N 7:28 Ap 7 '47

Aircraft earnings, peacetime casualty; fiscal years of 1939, 1944, 1946; tabulation. Bsns W p63 Je 7 '47

Aircraft industry facing prospects of slight profits. W. Kroger. Aviation W 47:16-17 S 1 '47

Aircraft makers finishing postwar readjustment; volume in 1947 to be larger. S. Altschul. Barron's 27:27-8 Mr 17 '47

Convair holdings segregated in corporate financial twist; details of plan placing non-aviation properties in new Nashville corp. S. Altschul. Aviation W 47:48 N 3 '47

Drastic financial, management changes forecast for operators. S. Bangs. Aviation N 7:18-19 My 19 '47

Experiment at Republic. il Fortune 35:122-7+ F '47

Federal courts ponder settlements on Culver, Taylorcraft. A. McSurely. Aviation N 7:20 Ja 27 '47

Five aircraft makers now leading procurement race; end of tax carryback will curtail commercial experimentation next year. B. Ravits and R. P. Cooke. Barron's 27: 31-2 S 29 '47

How to hold cash, pay dividends is manufacturer's current problem. S. Altschul. Aviation W 47:44 Ag 18 '47

AIRPLANE industry and trade—Finance—*Continued*
Latest developments in specific industries. Barron's 26:1 D 9 '46
Need for military production contracts shown by industry losses. W. Kroger. Aviation N 7:12 Mr 10 '47
Optimistic lightplane outlook stimulated shaky financing. Aviation N 7:20 Ap 21 '47
Tax carryback credits are aids to many aircraft manufacturers. S. Altschul. Aviation W 47:16 S 15 '47
U.S.'s aircraft mortgage proposals. Aviation N 7:20 F 17 '47

Private planes

See Airplanes—Private ownership

Securities

Aircraft industry equities suffered sharpest declines in 1946. Aviation N 7:16 Ja 20 '47
Aircraft manufacturers' dividends decline despite strong finances. Aviation N 7:21 Ja 6 '47
Aircraft manufacturing industry; present and future prospects. G. B. Woods. 119p $5 White, Weld & co, 40 Wall st, New York 5 '46
Aircraft share prices decline sharply in new market break. Aviation N 7:26 My 26 '47
AVCO Convair urge stock option changes. Aviation N 7:18 Mr 24 '47
Many aircraft shares selling below companies' net assets. Aviation N 6:27 N 25 '46
Market action on two Uniteds shifts with industry fortunes. S. Altschul. Aviation W 47:17 O 27 '47
Outlook for aircrafts under unified military forces; pertinent statistics on aircraft stocks. H. F. Travis. il Mag of Wall St 80: 592-4+ Ag 30 '47
Realistic survey of the aircrafts; with statistics on the leading stocks. G. S. Kent. Mag of Wall St 79:672-4+ Mr 15 '47
Sales resistance to lightplanes reflected in stock price decline. Aviation N 6:36 N 18 '46
Trust report reflects decline in 1946 aircraft, airline values. Aviation N 7:12 Mr 3 '47

Statistics

Aeronautic exports, by years, 1912-1946, type of product, 1942-1945; tabulations. Automotive & Aviation Ind 96:124 Mr 15 '47
Aircraft production and other statistics; tables and charts. Automotive & Aviation Ind 96:116-21 Mr 15 '47
Civil plane output totals 34,874 units for year of 1946. CAA J 8:27 Mr 15 '47
Lightplane production reached $88,000,000 peak during 1946. Aviation N 7:12 Ja 27 '47

Argentina

Argentina seen prime export market. R. L. Hoadley. Aviation 46:97-9 Ap '47

Brazil

Regulations for importation of airplanes. For Comm W 25:12 N 23 '46

Canada

Air transport bid; North Star slated for April service. Bsns W p104-5 Mr 29 '47

France

French plane industry accents variety. M. Marsh. il Aviation 46:74-5+ Ja '47

Great Britain

Aeronautics in 1946. il Engineer 183:12-14, 42-4, supp 1, 67-8 Ja 3-17 '47
Airframe production. E. Mensforth. Inst Mech Eng J & Proc 156:Proc24-38 Je '47
Bristol aeroplane company, limited; thirty-seventh ordinary general meeting, Bristol. Economist 152:958 Je 14 '47
Britain bounces back. J. A. Sizer. il Aero Digest 54:20-1+ Ja '47
British aircraft outlook; abstract. F. R. Banks. Mech Eng 69:671-2 Ag '47
British report progress on transport production. il Aviation W 47:43 Ag 25 '47
Engineering outlook. Engineering 163:77-8 Ja 24 '47
Why America lags in jet development, why 1950 will be jet-airliner year in Britain. J. S. Walker. il Air Transport 5:33-4 F '47

Italy

Italians diversify new plane types. il Aviation W 47:32 Jl 28 '47

Latin America

Latin America's growing aircraft industry. G. M. Galster. il Automotive Ind 97:24-6+ O 15 '47

Netherlands

Merged Dutch plants tackle new planes. Aviation W 47:16 Ag 18 '47

Pacific coast

Airplane production ranks high among industries on West coast. Steel 121:51 O 27 '47

Sweden

Swedish concern unveils postwar civil planes. diags Aviation 45:70-1 N '46

United States

Air industrial preparedness. Mech Eng 69: 586-7 Jl '47
Air industry leaders urge plan for striking air arm production. A. McSurely. Aviation W 47:11-12 O 6 '47
Aircraft export sales loom as hope for industry profits. W. Kroger. Aviation N 7:13-14 Mr 24 '47
Aircraft industry facing lean years on research diet. il Aviation N 7:7-8 Ap 7 '47
Aircraft industry's biggest peacetime year, 1946. R. McLarren. Automotive & Aviation Ind 95:26-9 D 15 '46
Auto men aid Stinson. Bsns W p34+ My 17 '47
Aviation sales policies need drastic revision, survey shows. A. McSurely. Aviation N 7: 19 Mr 31 '47
Dade bros. getting set for increased plane exports. E. J. Bulban. il Aviation N 7:21 My 26 '47
Help at hand; Martin delivers a 2-0-2. Bsns W p26 Ag 23 '47
Industry forecast for 1947 holds to billion dollar level. W. Kroger. Aviation N 7:22 Ja 6 '47
Industry leaning toward federal development contracts. A. McSurely. Aviation N 7:22-3 Ap 21 '47
Manufacturing status improving in face of deficit reports. Aviation W 47:18 Jl 28 '47
New year looms as decisive for transport manufacturers. il Aviation N 7:20+ Ja 13 '47
North American discontinues production of its Navion plane. A. McSurely. Aviation N 7:13 My 26 '47
Outlook for '47; views of airplane company presidents. Aviation 46:63+ Mr '47
Personal-plane aid program. W. A. M. Burden. CAA J 8:49+ My 15 '47
Personal plane manufacturers tighten belts against dim future. A. McSurely. Aviation W 47:36+ Ag 4 '47
Plane makers sing the blues. Bsns W p34+ Ap 12 '47
Plans for industrial air preparedness. J. C. Gordon. S A E J 55:30-2 Ja '47
U.S. manufacturers jockeying for jet transport lead. S. Bangs. Aviation N 7:13 Je 16 '47
War baby in a peace economy. Bsns W p58+ Je 7 '47

See also
Martin, Glenn L., company
Republic aviation corporation

AIRPLANE landing stations. See Aviation landing stations

AIRPLANE mechanics
CAR revision seen threat to ample supply of mechanics. Aviation N 7:17-18 F 24 '47
Three useful projects; mechanics' bad weather suit and two fueling ladders. G. Habian. il Air Transport 5:68-9 Ag '47

AIRPLANE models
Model aircraft illustrating sign convention used in applied aerodynamics. F. W. Free. diags Roy Aeronautical Soc J 51:197-8 F '47
Soaring markets for model plane industry. E. Gordon. il Dom Comm 34:29-33 D '46

See also
Airplanes—Model testing

AIRPLANE parts
Aeronautic industry queried on accessory speed mounts. diags S A E J 55:66 Ap '47
AIA plans personal aircraft parts standardization program. W. Kroger. Aviation N 7: 15 Mr 31 '47
Fasteners for aircraft. il diags Aviation 46: 35-50 My '47
Integral stiffening saves time, parts, and tools; radio access door as integral part of Glenn L. Martin design. il diag Aviation 45:98-9 D '46
Lear solves short run problem for electromechanical accessories. J. Geschelin. il Automotive & Aviation Ind 96:40-1+ My 10 '47
Magnesium replaces fabric for aircraft control surfaces. R. E. Saunders. il Materials & Methods 26:88-92 Ag '47
Small sections contoured by preform rolling; forming of extrusions and sheet metal stock. C. R. Wulffsohn. il Iron Age 159: 54-7 Je 26 '47

Transportation
Cushioning curves; AAF develops graphic method of finding thickness of cushion required to protect product. Mod Packaging 20:139-43 F '47

AIRPLANE propellers
Coupled engine torsional and propeller flexural vibrations. J. Morris. diags Inst Mech Eng J & Proc 153 (War emergency issue no 3): 41-50, pl 1-2; Discussion. 50-8 '45
Curtiss propeller synchronizer. il diags Aero Digest 54:73-4 F '47
Experiments speeded to muffle lightplane propeller noise. A. McSurely. Aviation N 7: 7-8 Mr 24 '47
French develop new propellers. Aviation N 7: 15-16 My 5 '47
Low-priced props for low-priced planes; abstracts of two papers. J. F. Haines. diags S A E J 55:44-7 Je '47
NACA five-blade quiet prop forecasts noise nuisance end. A. McSurely. Aviation N 7: 16 Je 9 '47
NACA quiet prop report forthcoming. Aviation N 7:24 Ap 28 '47
New aircraft and engine designs pose unusual vibration problems. diags Aviation W 47:36 Jl 21 '47
1947 annual directory of aircraft propellers; illustrations with brief descriptions. Aero Digest 54:122-4+ Ja '47
Nitrate covering for propeller blades. S. H. Fedan. il Mod Plastics 24:142-5 N '46
Propeller aspect of practical problems in reducing noise in personal planes; abstract. L. J. Trigg. Automotive & Aviation Ind 96: 82+ F 1 '47
Propeller charts for the determination of the rotational speed for the maximum ratio of the propulsive efficiency to the specific fuel consumption. S. Biermann and R. N. Conway. bibliog diags U S Nat Advisory Com for Aeronautics 1942:373-90 '46
Propeller electric de-icing system for wide-range operating conditions. il Aviation 46: 65 Ap '47
Propeller requirements for light aircraft; abstract. J. F. Haines. Automotive & Aviation Ind 96:30 F 1 '47
Propellers, today and beyond. G. W. Brady. Aero Digest 54:121+ Ja '47
Tailor-made props fill odd needs; Sensenich corp. L. J. Trigg. il Aviation W 47:28+ O 27 '47

Control
Automatic control considerations for aircraft gas turbine-propeller powerplants. C. W. Chillson and others. S A E J 55:68-70 F '47
Automatic prop feathering. diags Aviation W 47:32 O 27 '47
Evolution of an automatic, variable-pitch propeller. J. D. Waugh. il diags S A E J 55:40-3 O '47
Martin develops propeller feathering unit. diag Aviation W 47:39-40 Jl 21 '47
Self-adjusting propeller. P. F. Hackethal. il diags Machine Design 19:141-4 Ap '47

Manufacture
High-hydrogen atmosphere intensifies quench cracking tendency. C. A. Liedholm. il diags Metal Prog 51:414-19 Mr '47
Propellers from laminated wood billets; phenolic resin-coated wood veneers. il Mod Plastics 24:132-3 Ap '47

Models
Unusual lathe set-up for making model propellers from a master. T. M. Bell. il Mach 53:194 F '47

Repair
Aeromatic establishes prop service groups. il Aviation N 7:20 Je 23 '47

Testing
Drag and propulsive characteristics of air-cooled engine-nacelle installations for large airplanes. A. Silverstein and H. A. Wilson, jr. il diags U S Nat Advisory Com for Aeronautics 1942:301-18 '46
High test cell walls and roof concreted as a monolith; Hamilton standard propeller division of United aircraft corp. R. F. Egelhoff. diags Concrete 55:3-5 Ja '47
NACA will flight test new lightplane anti-noise propellers. A. McSurely. Aviation N 7:21 Mr 10 '47
New concrete test houses accommodate 30-ft propellers. il Civil Eng 17:129 Mr '47
Prop balancing simplified; method developed by Sutton mfg. co. il diags Aviation 46:61 F '47
Value of highly destructive testing. M. G. Corson. il Metal Prog 51:613-16 Ap '47
Wind-tunnel tests of four- and six-blade single- and dual-rotating tractor propellers. D. Biermann and E. P. Hartman. il diags U S Nat Advisory Com for Aeronautics 1942:319-47 '46

AIRPLANE purchase financing. See Banks and banking—Airplane purchase financing

AIRPLANE races
Air race classic tests water-injection engines and special fuel blends. R. McLarren. il Automotive Ind 97:42-4+ S 15 '47
Heavy accident toll weighs against national air races. A. McSurely. il Aviation W 47: 11-12 S 8 '47
Lightplane race offers new field for design tests. R. McLarren. il Aviation W 47:13-14 S 8 '47
National air races. N. F. Silsbee. il Aero Digest 55:26-8+ O '47

AIRPLANE repair stations
Enterprising service has no limits; Pacific Airmotive. S. Bangs. il plan Aviation 46: 89-90+ Je '47
Global maintenance network planned; Lockheed aircraft service. G. Herrick. il Air Transport 5:40-2 Je '47
Lockheed aircraft service. il Aero Digest 55: 42-3 Jl '47
Model aircraft service center. il Aero Digest 53:50-1 N '46
Modern shop for engine overhaul; Pacific airmotive corp. flow chart il Air Transport 5:38-9 O '47
Pacific Airmotive working toward pooled maintenance. S. Bangs. Aviation N 7:16+ Ap 21 '47
Slick features factory-type maintenance. R. McDaniel. il Aviation 45:48-50 D '46
Wichita repair base uses factory methods. il Aviation W 47:24 S 29 '47

Accidents
Is there a plane in your future? new problems for safety engineers. J. M. Chase. Nat Safety N 56:18-19 Jl '47

Equipment
Southwest Airmotive builds on war-acquired tooling. F. W. Zellmer. il Aviation 46:103-4+ Ja '47

AIRPLANE service stations
Courtesy to visiting airmen; Southwest Airmotive. il Aero Digest 54:54 Ap '47
It's new, it has a future; the airport superservice station; Pacific airmotive corporation, operators of 140 franchised dealerships. il Sales Management 59:58+ S 15 '47

AIRPLANE stability and stabilizers
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51:1-23 bibliog(p22-3); Discussion. 23-34 Ja '47

AIRPLANE stability and stabilizers—*Cont.*
Expanding domain of aeroelasticity. A. R. Collar. bibliog(62 titles) Roy Aeronautical Soc J 50:613-36 Ag '46; Discussion (Mechanical vibration and aeroelasticity). P. B. Walker. 51:417-23 Ap '47
Progress in dynamic stability and control research. W. F. Milliken, jr. il J Aeronautical Sci 14:493-519 bibliog (91 titles, p517-19) S '47
Stability of an aircraft structure in a strength test frame. P. B. Walker. diags Roy Aeronautical Soc J 51:704-14 Ag '47
Static stability analysis for flying boats and seaplanes. E. G. Stout. diags Aviation 45: 70-1 D '46; 46:58-60 Ja; 55-7 F; 59-61 Ap '47

See also
Airplane wings—
Flutter
Airplanes—Spinning

AIRPLANE struts
Bearings made from steel wool; landing gear strut. Iron Age 159:63 Je 19 '47
Bushings from steel wool made by North American Aviation. C. O. Herb. il Mach 53:164-7 Je '47

AIRPLANE wings
Aerodynamic characteristics of rectangular wings at supersonic speeds. E. A. Bonney. bibliog il diag J Aeronautical Sci 14:110-16 F '47; Discussion. 14:335-6, 409-10 Je-Jl '47
Aerodynamic performance of delta wings at supersonic speeds. A. E. Puckett and H. J. Stewart. bibliog diags J Aeronautical Sci 14:567-78 O '47
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51:1-23 bibliog(p22-3); Discussion. 23-34 Ja '47
Automatic milling machines solve spar cap production problem at Douglas. V. C. Fergen and C. R. Wulffsohn. il Automotive Ind 97:38-40 O 15 '47
Bending for dihedral and sweepback simplified on heavy 75ST spar caps. il Aviation W 47:18 Ag 4 '47
Channel wing plane offers slow landing. il Aviation N 7:8 Je 2 '47
Close contouring of honeycomb sections. R. Young. il Mod Plastics 24:140-1 My '47
Design of sweptback wings. J. E. Barefoot. diags Aero Digest 54:55-7+ Je '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84 F, S '47 (to be cont)
Ground effect on downwash angles and wake location. S. Katzoff and H. H. Sweberg. bibliog diags U S Nat Advisory Com for Aeronautics 1942:159-70 '46
Investigation in the 7- by 10-foot wind tunnel of ducts for cooling radiators within an airplane wing. T. A. Harris and I. G. Recant. diags U S Nat Advisory Com for Aeronautics 1942:249-67 '46
Low drag aerofoils. L. G. Whitehead. Roy Aeronautical Soc J 51:54-64 Ja '47
Luscombe re-design cuts costs. A. McSurely. il diags Aviation W 47:22-4 S 1 '47
Mean aerodynamic chord and the aerodynamic center of a tapered wing. W. S. Diehl. diags U S Nat Advisory Com for Aeronautics 1942:413-22 '46
Method for calculating airfoil sections from specifications on the pressure distributions. G. H. Peebles. diags J Aeronautical Sci 14:451-6 Ag '47
New approach to flight; flapping wing experiments. W. B. Stout. il diags S A E J 55:50-2 F '47
New channel wing nears flight. il diag Aviation W 47:21-2 S 15 '47
New fibreglas wing is tested by AAF; all-glass plane planned. il Aviation N 6:22 N 11 '46
Newton and fluid mechanics. J. C. Hunsaker. J Aeronautical Sci 13:647-51 D '46
Severe bending of 75S-T spar caps. P. F. Girard. il Automotive Ind 97:44+ Ag 1 '47; Same abr. Materials & Methods 26:112 Ag '47
Stalling properties of wings. E. J. Richards. Roy Aeronautical Soc J 50:888-92 N '46
Supersonic aerodynamics, principles and applications. T. von Kármán. il diags J Aeronautical Sci 14:373-98 bibliog(p398-402); Discussion. 403-9 Jl '47
Systematic wing section development. G. S. Schairer. il J Aeronautical Sci 14:51-8 Ja '47
Tabulation method for the calculation of the critical speed of wing divergence. W. P. Targoff. J Aeronautical Sci 14:487-8 Ag '47

See also
Airplanes, Flying
wing

Flutter
Aerodynamic forces on an oscillating airfoil at supersonic speeds. J. W. Miles. bibliog J Aeronautical Sci 14:351-8 Je '47; Correction. 14:630 N '47
Application of IBM machines to the solution of the flutter determinant. E. L. Leppert, jr. bibliog J Aeronautical Sci 14:171-4 Mr '47
Computation of influence coefficients for aircraft structures with discontinuities and sweepback; method uses Castigliano's theorem. S. Levy. bibliog diags J Aeronautical Sci 14:547-60 O '47
Electrical computor solves wing flutter problems. il Aviation 45:111 D '46
Expanding domain of aeroelasticity. A. R. Collar. bibliog(62 titles) Roy Aeronautical Soc J 50:613-36 Ag '46; Discussion (Mechanical vibration and aeroelasticity). P. B. Walker. 51:417-23 Ap '47
Flexure-torsion flutter derivatives for semi-rigid wings; abstract. R. A. Frazer. Aeronautical Eng R 5:71 D '46
Flutter calculations in three degrees of freedom. T. Theodorsen and I. E. Garrick. U S Nat Advisory Com for Aeronautics 1942: 223-40 '46
Nonstationary flow about a wing-aileron-tab combination including aerodynamic balance. T. Theodorsen and I. E. Garrick. diags U S Nat Advisory Com for Aeronautics 1942: 129-38 '46

Testing
NACA flight and wind-tunnel investigation of maximum lift as affected by variations of Mach and Reynolds numbers. J. R. Spreiter and P. J. Steffen. diags S A E J 55:33-9 Ja '47; Abstract. Automotive & Aviation Ind 94:36 My 1 '46
Pressure distribution over an NACA 23012 airfoil with a fixed slot and a slotted flap. T. A. Harris and J. G. Lowry. bibliog diags U S Nat Advisory Com for Aeronautics 1942:85-98 '46
Wind-tunnel investigation of an NACA 23012 airfoil with 30-percent-chord venetian-blind flaps. F. M. Rogallo and B. S. Spano. bibliog diags U S Nat Advisory Com for Aeronautics 1942:241-8 '46

AIRPLANES
Aeronautics in 1946. il Engineer 183:9-12, 42-4, supp 1, 67-8 Ja 3-17 '47
Air race classic tests water-injection engines and special fuel blends. R. McLarren. il Automotive Ind 97:42-4+ S 15 '47
Airplane stands at end of era, NACA reports to Congress. W. Kroger. Aviation N 7:11 Mr 3 '47
A.S.M.E. 1947 aviation conference, Los Angeles, May 26-29. Mech Eng 69:710-11 Ag '47
Anglo-American aeronautical conference; arranged jointly by Institute of the aeronautical sciences and the Royal aeronautical society. Aviation W 47:17-18 S 22 '47
Atomic aircraft deemed unnecessary. L. Alvarez. Aviation N 6:10+ D 23 '46
Aviation's 1947 yearbook; American and foreign airplanes; brief descriptions and illustrations. Aviation 46:67-98+ Mr '47
Beech releases details and photos of feederliner; Model 34. il Aviation W 47:26 Jl 7 '47
Boeing withdrawal of model 417 narrows feeder plane competition. Aviation N 6:15 D 23 '46
Breguet 761 transport. il Aero Digest 55:74 S '47
Bristol Brabazon aircraft and hangar. il Engineering 164:369-70 O 17 '47

AIRPLANES—*Continued*
By request: a few structural modifications; Martin 202. il Bsns W p 19 Je 21 '47
Canadair Four. il Aero Digest 55:74+ S '47
Constitution flown with 158,000 lb. load. il Aviation N 6:10-11 N 18 '46
Convair model 240 makes first flight. il Aviation N 7:10 Mr 24 '47
DC-6 sets transcontinental mark as Douglas begins deliveries. R. H. Wood. Aviation N 7:13 Ap 7 '47
Debut of a new Douglas; DC-6. C. B. Allen. il Air Transport 5:46-7 Ja '47
Douglas DC-9 proposed as replacement for DC-3. il Aviation W 47:18 Ag 11 '47
Douglas delivers DC-6s to airlines. il Aviation N 7:25 Mr 31 '47
Douglas Dragon popular transport. il Aviation N 7:21 Je 23 '47
Douglas starts DC-6 deliveries. il Aero Digest 54:47+ My '47
Electrical and allied developments of 1946; aviation. G. Bartlett. il Gen Elec R 50:42-3 Ja '47
L'évolution de la technique aéronautique depuis la seconde guerre mondiale d'après le XVII[e] Salon de l'aéronautique de Paris. R. J. de Marolles. Génie Civil 124:171-4, 189-92, 207-10 My 1-Je 1 '47
Fiat transport marks Italian comeback. il diags Aviation 46:66 F '47
Future trends in aviation. C. C. Furnas. Am Pet Inst Proc 26(3):93-8 '46
Glenn L. Martin co. claims 2-0-2 ideal for use abroad. Aviation N 7:23 Je 2 '47
Glenn L. Martin co. pushing production of 3-0-3 transport. W. Kroger. il Aviation N 7:13 Ap 28 '47
Glenn L. Martin co. unveils 2-0-2. il Air Transport 5:50 Je '47
Gold-plated Connie offers new comforts; Constellation 649. Air Transport 5:62 Je '47
High-performance plane planned by Delanne. il Aviation 46:70 Ap '47
Italians diversify new plane types. il Aviation W 47:32 Jl 28 '47
Italians start work on two new transports; Siai-Marchetti SM-102, Breda-Zappata BZ-309. il diags Aviation W 47:44 Jl 7 '47
Lockheed Constitution; specifications and views. Automotive & Aviation Ind 95:25 D 1 '46
Lockheed offers new 749 Constellation. Aviation N 7:13 Ja 27 '47
Martin 202 transport makes first test flight at Baltimore. il Aviation N 6:8-9 D 2 '46
Miles building 20-passenger liner; new all-metal Merchantman. il diags Aviation W 47:28 Ag 25 '47
New Canadair Four is hybrid DC-4, DC-6. Aviation W 47:22 Jl 7 '47
New Douglas? company may re-enter two-engine transport field with DC-9. Bsns W p51-2 Ag 16 '47
New firsts all over the sky, DC-6. il Bsns W p22 Ap 5 '47
New transport has unique glide rate; Delanne DL 240. il Aviation N 7:11 F 17 '47
1947 annual directory of transport aircraft; illustrations, miniature plans and brief descriptions. Aero Digest 54:36-8+ Ja '47
Northrop Pioneer is trimotor workhorse. il Aviation 45:67 N '46; Aero Digest 53:81 N '46
Northrop to redesign Pioneer. S. Bangs. Aviation W 47:15 N 3 '47
Power installations. F. M. Owner. il diags Roy Aeronautical Soc J 51:71-105 bibliog (p104-5); Discussion. 105-8, 179-90 F '47
Society of British aircraft constructors display and exhibition, Sept. 9-11. il Engineer 184:268-9 S 19 '47; Engineering 164:282-3, 300, 306-8 S 19-26 '47
Swedish concern unveils postwar civil planes. diags Aviation 45:70-1 N '46
That Merlin-powered Canadiar Four. il Air Transport 5:49 Ag '47
Transports, today and beyond. G. L. Martin. Aero Digest 54:35+ Ja '47
Two new Curtiss planes. il Aero Digest 55:60 O '47
Viking Mark 1B. il Aero Digest 53:60 D '46

See also
Aeronautics
Airfoils
Airplane engines
Airplane propellers
Airplane wings
Autogiros
Aviation
Flying boats
Gliders
Hangars
Helicopters
Loading and unloading—Airplanes
Seaplanes

Acceleration
Vacuum tube for acceleration measurement. W. Ramberg. il diags Elec Eng 66:555-6 Je '47

Air conditioning
Air conditioning turbine-propelled aircraft. H. J. Wood. il diags Aviation 46:49-52 F; 56-8 Ap '47; Abstract. S A E J 55:58-62 F '47
Aircraft refrigerating expansion turbine; Lockheed 649 Constellation. il Refrig Eng 52:417+ N '46
Analysis of transport aircraft cabin air conditioning requirements. B. E. Del Mar. diag S A E J 55:54-60 My '47
Car heating pattern set by plane system; abstract. L. A. Rodert. diags S A E J 55:78-9 F '47
Factors affecting the design of the air conditioning and pressurizing system for the Republic Rainbow airplane. P. E. R. Brice. diags S A E J 55:66-7 F '47
Proof testing the DC-6 air conditioning system for passenger comfort; abstract. W. W. Thayer. il S A E J 55:84-5 F '47

See also
Airplanes—Heating and ventilation

Airworthiness
Gusts. W. Tye. Roy Aeronautical Soc J 51:721-32 S '47
Helicopter engineering; airworthiness problem. A. Klemin. Aero Digest 55:37+ Jl '47

Anchorage
See Airplanes—Mooring

Automobile combinations
See Airplanes, Light—Automobile combinations

Auxiliary power
Integrated control system for aircraft d-c generators. A. T. McClinton. diag Elec Eng 66:362-4 Ap '47
Parallel operation of aircraft alternators using frequency changers. O. E. Bowlus and P. T. Nims. il diags Elec Eng 66:463-6 My '47

Cabins
Noxious vapors in aircraft cabins. H. Speert. Nat Safety N 55:105-6 Ja '47

Supercharging
Aircraft refrigerating expansion turbine; Lockheed 649 Constellation. il Refrig Eng 52:417+ N '46
Analysis of transport aircraft cabin air conditioning requirements. B. E. Del Mar. diag S A E J 55:54-60 My '47
Cabin pressurization units. il Aero Digest 53:75-7+ N '46
Factors affecting the design of the air conditioning and pressurizing system for the Republic Rainbow airplane. P. E. R. Brice. diag S A E J 55:66-7 F '47
Pressurized cabin shapes. W. F. Vogel. diags Aero Digest 55:56-8+ O '47
Some applications of hydraulics to high-speed rotary drives for aircraft accessories. W. W. Thayer. il diags S A E J 55:38-42+ Ag '47

Cargo compartments
Cargo container of Lockheed Constellation's Speedpak. il Sci Am 176:175 Ap '47

Cargo release mechanisms
Cargo release mechanisms. W. L. Speilman and A. D. Neal. il diags Aero Digest 53:82-3+ N '46; 54:40-1+ Mr '47

Chartering
Air taxi service. Dom Comm 35:81 Je '47
Flying horses; airplane transport of race and show horses. G. Herrick. il Air Transport 5:58-9 O '47

AIRPLANES—Chartering—*Continued*
New Ohio carrier caters to industry; Executive Airlines sells time on contract basis. il Aviation N 6:12 D 30 '46
Piper Taxicub service announced. Aviation N 7:14 My 5 '47

Cleaning

Beauty treatments for airliners. D. M. Kelley. il Air Transport 5:31-2+ S '47
Wanted; cleaning and polishing machine. F. H. Lee, jr. il Air Transport 5:62-3 Mr '47

Climbing efficiency

Simple analytical equations for the velocity of an airplane in unaccelerated level, climbing, and diving flight. H. B. Freeman. J Aeronautical Sci 14:185-9 Mr '47

Cockpits

Development of functional cockpits for naval aircraft. N. R. Richardson. il S A E J 55: 50-2 Ag '47
Flying wing has novel cockpit layout; Northrop B-35. il Aviation W 47:33 O 13 '47
Standardized cockpit adapted for trainers. Aviation N 6:11 N 25 '46
Standardized cockpits. il Mech Eng 69:319-21 Ap '47
Toward better cockpits, an engineering approach. S. A. Hall. il diag Aviation 46:47-51 Ja '47

Cold weather operation

Cold weather no longer feared for aircraft; symposium. A. K. Forney and others. il diags S A E J 55:30-2 Mr '47

See also
Airplanes—Ice protection

Control

Actuator employs friction drive; aircraft controlled by the C-2 automatic pilot. N. Eklund. diags Machine Design 19:160 Ap '47
Automatic flight controller removes some bad-weather flying hazards. J. L. Anast. il diags Machine Design 19:116-20+ S '47
Automatic flight pioneered on AAF all-weather airline. R. B. Hotz. Aviation N 7:10-11 F 24 '47
Cathode-ray compass used in connection with autopilot. R. T. Squier. il diags Electronics 20:121-3 Ap '47
Determination of optimum plan forms for control surfaces. R. T. Jones and D. Cohen. diags U S Nat Advisory Com for Aeronautics 1942:79-84 '46
Installing the F-1 autopilot; illustrations with text. Aero Digest 55:83 Jl '47
Latest developments in aircraft controls and instrumentation. R. A. Brown. il diags A S M E Trans 69:109-16 F '47
Longitudinal control system for high speed aircraft; abstracts. H. O. Wendt. diags S A E J 55:72+ Ag '47; Automotive & Aviation Ind 96:32-3 My 1 '47
New hydraulic cylinders meet rigid operational needs; for operation of brakes and control surfaces. H. J. Marx and J. J. Mancusi. il diags Aviation 45:58-61 N '46
New Lear friction drive; electrical power package used in C-2 autopilot. diag Aero Digest 53:170 N '46
New simplicity in servos improves automatic control. J. Andresen. il diags Aviation N 46:70-1 Je '47
Pilotless airplane and missile control. bibliog il Electronics 20:152+ Ap '47
Pilotless plane flight points way for Sperry growth; it contributed to controls which flew C-54 to England. B. Ravits. Barron's 27:29-30 N 3 '47
Precision balancing at mass-production speed; electronic balancer of automatic pilot rotor. S. Bousky. il diags Electronics 20:98-104 S '47
Progress in dynamic stability and control research. W. F. Milliken, jr. il J Aeronautical Sci 14:493-519 bibliog (91 titles, p517-19) S '47
Psychology and aircraft design; errors in reading instruments and in handling controls. P. M. Fitts. il diags Mech Eng 69:135-41+ F '47
Radio control of model flying boats. V. Welge. il diags Inst Radio Eng Proc 35:526-30 My '47
Radio controlled flight. il diags Radio N 37: 25-7+ Ja '47
Trans-Atlantic automatic flight; plan trans-Pacific robot flight without crew for automatic C-54. R. Hotz. map Aviation W 47: 21+ O 27 '47
Up-to-date rigging for DC-4 flight controls. diags Aviation 45:73-5 N '46

See also
Airplane stability and stabilizers
Airplanes—Spinning
Airplanes, Light—Control

Cost of operation

How many fares make a profit? Aviation 46: 84+ Je '47
Plane, auto costs compared on trip. Aviation N 6:26 D 16 '46
Selecting a feeder fleet. H. K. Gilbert, jr. Air Transport 5:44-5 Jl '47

See also
Airplanes, Light—Cost of operation

Decoration

Color dynamics in aviation. H. Quinn. il Aero Digest 55:88+ O '47

Design

Aerodynamic characteristics of rectangular wings at supersonic speeds. E. A. Bonney. bibliog il diag J Aeronautical Sci 14:110-16 F '47; Discussion. 14:335-6, 409-10 Je-Jl '47
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51: 1-23 bibliog(p22-3); Discussion. 23-34 Ja '47
Analysis for optimum transport airplane configurations; abstract. P. A. Colman. diag Aviation W 47:33-4 Ag 25 '47
Approach to the analytical design of aircraft; abstract. H. H. Cherry and A. B. Croshere, jr. S A E J 55:68 Ag '47
Beam-columns. W. R. Osgood. J Aeronautical Sci 14:167-70 Mr '47
Boundary layer control may offer safety increase. bibliog Aviation W 47:34-5 Ag 18 '47
Buckling of curved aluminum alloy plates; discussion of three papers by G. Welter. H. L. Cox. bibliog J Aeronautical Sci 14:333-5; Reply. 335 Je '47
Cabins, crashes, and communications; notes on program and discussions of the I.A.S. National air transport meeting. J. P. Van Zandt. Aeronautical Eng R 5:22-3 D '46
Case for the tailless aircraft. G. H. Lee. diags Roy Aeronautical Soc J 50:872-87 N '46
Continental design award. F. M. Reck. il diags Aero Digest 54:64-5 Ap '47
Design details of the Martin 202. I. Stone; E. J. Bulban. il diags Aviation 46:38-43 Ja '47
Design for maintenance. T. E. G. Bowden. Roy Aeronautical Soc J 51:334-7 Mr '47; Discussion. 51:471-80 My '47
Design for profit; reducing ground time and facilitating maintenance. H. G. Lesley. il Air Transport 3:50+ D '45; 4:49-50+ F; 44+ Mr '46; 5:28-30 S '47
Design for strength; cut-outs in aircraft structures. D. J. Peery. diags Aero Digest 55:39-41+ O '47
Design of German supersonic DM-1. J. J. Rodgers. il Aviation 45:78-9 D '46
Design of sandwich structure. J. F. Korsberg. diags Machine Design 19:145-6 Mr '47
Design of sweptback wings. J. E. Barefoot. diags Aero Digest 54:55-7+ Je '47
Designing to new transport category performance requirements of Civil air regulations. W. B. Oswald. S A E J 55:23+ Mr '47
Determination of optimum plan forms for control surfaces. R. T. Jones and D. Cohen. diags U S Nat Advisory Com for Aeronautics 1942:79-84 '46
Douglas DC-6 transport. I. F. Angstadt. il plan diags Aero Digest 55:44-7+ O '47

AIRPLANES—Design—*Continued*

Drag and propulsive characteristics of air-cooled engine-nacelle installations for large airplanes. A. Silverstein and H. A. Wilson, jr. il diags U S Nat Advisory Com for Aeronautics 1942:301-18 '46

Effect of Civil air regulation performance requirements on airplane design; abstracts. J. E. Steiner. S A E J 55:68-9 Ag '47; Automotive & Aviation Ind 96:31-2 My 1 '47

Effect of radius of curvature and preliminary artificial eccentricities on buckling loads of curved thin aluminum-alloy sheets for monocoque constructions. G. Welter. J Aeronautical Sci 13:593-6+ N '46

Elastic and plastic bending of beams. T. K. Wang. bibliog diags J Aeronautical Sci 14: 422-32 Jl '47

Expanding domain of aeroelasticity. A. R. Collar. bibliog(62 titles) Roy Aeronautical Soc J 50:613-36 Ag '46; Discussion (Mechanical vibration and aeroelasticity). P. B. Walker. 51:417-23 Ap '47

Graphical and analytic methods as applied to aircraft design. S. A. Coons. diags J Eng Educ 37:858-70 Je '47

Gusts. W. Tye. Roy Aeronautical Soc J 51: 721-32 S '47

Instability analysis and design of an efficiently tapered plate under compressive loading. S. Pines and G. Gerard. diags J Aeronautical Sci 14:594-600 O '47

Internal aerodynamics opens new speed fields; proper handling of supersonic airflows inside power plants capable of reducing fuel consumption. bibliog il Aviation W 47:25-6 Jl 14 '47

Investigation of the drag of windshields in the 8-foot high-speed wind tunnel. R. G. Robinson and J. B. Delano. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:65-77 '46

Low drag aerofoils. L. G. Whitehead. Roy Aeronautical Soc J 51:54-64 Ja '47

Magnesium alloys for aircraft. F. A. Rappleyea. il Aero Digest 54:70-2+ F '47

Mean aerodynamic chord and the aerodynamic center of a tapered wing. W. S. Diehl. diags U S Nat Advisory Com for Aeronautics 1942:413-22 '46

Method for calculating airfoil sections from specifications on the pressure distributions. G. H. Peebles. diags J Aeronautical Sci 14:451-6 Ag '47

NACA flight and wind-tunnel investigation of maximum lift as affected by variations of Mach and Reynolds numbers. J. R. Spreiter and P. J. Steffen. diags S A E J 55:33-9 Ja '47

New channel wing nears flight. il diag Aviation W 47:21-2 S 15 '47

New regulations required for high altitude transport design. M. F. Vanik. Aviation W 47:24 O 27 '47

Northrop Pioneer transport. diags Aeronautical Eng R 5:31 N '46

Numerical methods for the calculation of elastic instability. B. A. Boley. bibliog il diags J Aeronautical Sci 14:337-48; Discussion. 348-50 Je '47

Numerical procedures for calculation of stress distribution in sheet-stringer-frame combinations. M. Stern. diags J Aeronautical Sci 14:481-6 Ag '47; Discussion. C. Libove. 14:629-30 N '47

Philosophy for design of sandwich type structure; abstract. J. F. Korsberg. diags Automotive & Aviation Ind 96:34 F 1 '47

Pressurized cabin shapes. W. F. Vogel. diags Aero Digest 55:56-8+ O '47

Progress in dynamic stability and control research. W. F. Milliken, jr. il J Aeronautical Sci 14:493-519 bibliog (91 titles, p517-19) S '47

Relationship of aircraft design to tooling and manufacturing costs; abstract. W. A. Davidson and others. il S A E J 55:70-1 Jl '47

Research studies directed toward the development of rational vertical-tail-load criteria. L. A. Clousing. bibliog J Aeronautical Sci 14:175-82 Mr '47

Review of production problems in relation to aircraft design. C. E. Fielding. il diags Roy Aeronautical Soc J 51:511-25; Discussion. 525-33 Je '47

Ring airfoil in nonaxial flow. H. S. Ribner. diag J Aeronautical Sci 14:529-30 S '47

Some ballistic contributions to aerodynamics. A. C. Charters. bibliog il diags J Aeronautical Sci 14:155-66 Mr '47

Some engineering problems of large aircraft. A. E. Russell. il diags Roy Aeronautical Soc J 51:145-70; Discussion. 170-2, 176-9, 182-4, 194-6 F '47

Stresses in cylindrical semimonocoque open beams. H. L. Langhaar and C. R. Smith. il diags J Aeronautical Sci 14:211-20 Ap '47

Supersonic aerodynamics, principles and applications. T. von Kármán. il diags J Aeronautical Sci 14:373-98 bibliog(p398-402); Discussion. 403-9 Jl '47

Systematic wing section development. G. S. Schairer. il J Aeronautical Sci 14:51-8 Ja '47

Tailless aircraft design problems. G. H. Lee. diags Roy Aeronautical Soc J 51:109-29 bibliog(p128-9); Discussion. 129-31, 185-8, 190-3 F '47

Tailored transport; Convair 240. S. Bangs. il diags Air Transport 5:21-4+ My '47

Theory of limit design applied to magnesium alloy and aluminium alloy structures. F. Panlilio. bibliog il diags Roy Aeronautical Soc J 51:534-71 Je '47

Thermodynamic factors in turbine-aircraft design. J. Whitney. il Aviation 46:46-8 Je '47

Trends in aircraft structures; abstract. H. E. Hoben. S A E J 55:68-9 My '47

Twin tail surfaces. L. P. Lipsick. diags Aero Digest 54:70-2 Ap '47

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Airplane wings
Airplanes—Stresses
Airplanes, Amphibious
Airplanes, Flying wing
Airplanes, Light—Design
Airplanes, Military—Design

Diving speed

Simple analytical equations for the velocity of an airplane in unaccelerated level, climbing, and diving flight. H. B. Freeman. J Aeronautical Sci 14:185-9 Mr '47

Drawings

Aviation's sketchbook of design detail. Aviation 46:93+ Ja; 73+ F; 73+ Ap; 83+ My; 72+ Je; [cont as] Aviation W 47:47 Jl 7; 28 Ag 4; 33 Ag 18; 21 S 1 '47

Electric equipment

A-c systems for large aircraft. J. D. Miner. il Aero Digest 55:40-2+ S '47

Adaptation of automotive electrical equipment for personal aircraft; abstract. J. B. Hiday. diag Automotive & Aviation Ind 96: 31 Je 1 '47

Aircraft electrical equipment; exhibition held by the Society of British aircraft constructors. il Electrician 139:771-2 S 12 '47

Aircraft sessions, Pacific coast meeting, A.I.E.E. Elec Eng 66:1018-19 O '47

Battery elevating and transporting cart. G. Habian. il Air Transport 5:76 My '47

Checking electrical assemblies. W. R. Mahoney. il Aero Digest 53:84+ N '46

Cycle-testing laboratory for aircraft batteries. Franklin Inst J 243:63-5 Ja '47; Excerpts. Product Eng 18:163 Ap '47

Design of a transport airplane electrical system; abstract. M. H. Peairs. S A E J 55:96 Mr '47

Effects of thermal characteristics of aircraft generators on load analysis. S. Rogers. diag Elec Eng 65:Trans 819-24 D '46

Electric motors for aircraft. T. B. Holliday. il diag Product Eng 18:86-90 Ja '47

Electrical anti-icing of aircraft windshields. J. D. McCrumm. bibliog Elec Eng 65:Trans 786-91 D '46

Electrical power and the transport airplane; abstract. E. P. Buckthal. S A E J 55:68-9 Jl '47

Explosion-proof electric units seen must for future craft. H. R. Crago. il Aviation 46: 51-3 Je '47

Explosion-proof type equipment for aircraft. Gen Elec R 50:52 Ag '47

Improves production of generator housings with Lincolnweld. R. C. Stupp. il diags Factory Management 105:165 S '47

AIRPLANES—Electric equipment—*Continued*
In-flight icing of highly electrified aircraft. R. Gunn. il J Aeronautical Sci 14:527-8 S '47
Integrated control system for aircraft d-c generators. A. T. McClinton. diag Elec Eng 66:362-4 Ap '47
Landing gear pre-rotator housed within wheel. il Aviation 46:55 Ja '47
Latest developments in aircraft controls and instrumentation. R. A. Brown. il diags A S M E Trans 69:109-16 F '47
Novel lift devised to ease battery change. il Aviation 46:88 My '47
Parallel operation of aircraft alternators using frequency changers. O. E. Bowlus and P. T. Nims. il diags Elec Eng 66:463-6 My '47
Variable-speed constant-frequency alternator. J. W. Crooks, jr. diags Elec Eng 66: 882-4 S '47

Equipment

Airborne or earthbound; airline ground equipment; should it clutter up the ramp or be flown. P. Macartney. il Air Transport 5:48-51 Ja '47
Five years of applied science in the low-temperature field; liquid oxygen units for submarines and airplanes. F. G. Keyes. flow diag il Chem R 39:449-80 D '46
High-pressure gear pumps. T. E. Beacham. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 24):417-29 '46; Same. Engineering 161:284-5, 310-12, 334-5 Mr 22-Ap 5 '46; Same cond. Engineer 181:182-4 F 22 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 24): 429-52 '46; Engineering 161:185-6 F 22 '46; Engineer 181:180-2 F 22 '46
Liquid oxygen in aircraft. H. Grayson-Smith and J. C. Findlay. diag Chem R 39:397-402 D '46
McCauley props on world flight cruisers. Aviation W 47:42 S 15 '47
Physical properties of steel control cable with nearly same expansion rate as aluminum alloy. C. W. Meyers. Automotive & Aviation Ind 95:44-5+ D 15 '46
Pneumatic units for aircraft. W. L. Nye. il diags Aero Digest 54:78-80 My '47
Problems in the selection of aircraft accessory equipment. E. W. Anger, jr. Automotive & Aviation Ind 96:39+ Ja 15 '47

See also
Aeronautic instruments
Airplane accessories industry
Airplanes—Hydraulic equipment
Airplanes—Pickup equipment
Brakes, Airplane
Loud speaking apparatus—Installation on airplanes
Radio apparatus on aircraft

Fires and fire protection

Aircraft fire extinguishing. D. H. Moore, jr. diag Aero Digest 55:44-5+ S '47
AAF crash rescue equipment. il Aero Digest 54:38-9 Je '47
Connie crash due to broken housing. Aviation N 6:41 N 18 '46
Fighting the engine fire; new Walter Kidde extinguishing agents. il Aero Digest 54:50 Je '47
Flame-resistant materials are urged for lightplane use. A. McSurely. il Aviation N 7: 22-3 F 17 '47
Lightplane anti-fire unit means extra safety; Kidde carbon dioxide system. il Aviation 46:111 F '47
Magnesium fires in aircraft. D. H. Moore, jr. Air Transport 5:46 Ap '47
New Fenwal fire detection unit. il diag Aero Digest 54:50+ Je '47
Prevention of fire in aircraft. W. G. Glendinning and J. W. Drinkwater. il diags Roy Aeronautical Soc J 51:616-41; Discussion. 641-50 Jl '47
Smoke-spotting eyes give plane-fire alert. J. H. Cantlin. il diags Aviation 46:44-5 Ap '47
Some causes of false alarms in aircraft fire-detector systems. R. E. Carbauh. Air Transport 5:34 Je '47
Stop that aviation fire; preventive measures, detection and protection in the air and on the ground. il diags Air Transport 5:19-34 Ja '47

Fuel tanks

Service-proving certified this integral tank. T. P. Hall. il diags Aviation 46:51-3 My '47
Under-wing fueling. H. O. Olson. il S A E J 55:27-9 Mr '47
Underwing fueling is here. il Air Transport 5:50 My '47

Fuselage

Miles' new M.68 has roadable cargo-hold; British light air-freighter has fuselage readily detachable for use as trailer. il Aviation W 47:22 S 29 '47
Shear distribution due to twist in a cylindrical fuselage with a cutout. M. M. Gololobov. diags J Aeronautical Sci 14:253-6 Ap '47
Some ballistic contributions to aerodynamics. A. C. Charters. J Aeronautical Sci 14:162-6 Mr '47
Stresses in a circular fuselage. W. J. Goodey. il diags Roy Aeronautical Soc J 50:833-71 N '46

Heating and ventilation

Fresh air automotive heating; abstract. L. A. Rodert. diags Automotive & Aviation Ind 96:60 Ja 1 '47
Give them air; air diffusers for airplane cabins. G. Herrick. il diag Air Transport 5:37-8 Ap '47
New ejector device uses exhaust energy for engine cooling; gives added thrust to power output, and provides hot air for cabin heating and de-icing of aerodynamic surfaces. W. A. Clegern. il diags Automotive & Aviation Ind 96:24-7 Ap 15 '47
Radiant heat for a new airplane; Douglas DC-6. il Heat & Ven 44:77 Ag '47
Temperature controller for airplane cabins. J. W. Bancroft. il diag Electronics 20:178+ Je '47

History

Kittyhawk biplane awaits suitable home. Aviation N 6:11 N 18 '46

Hydraulic equipment

Carving costs in hydraulics production. il Aviation 45:56-7 N '46
Design features of the Martin 202 hydraulic system. T. C. Hill and E. G. Riley. diags S A E J 55:61-4 Jl '47
Detection of internal leaks in aircraft hydraulic systems. R. G. Nuckolls and H. M. Trent. il diags Acoustical Soc Am J 19:364-7 Mr '47
Development of ultra high-pressure hydraulic systems. S. M. Parker. diags Engineer 183: 167-70 F 14 '47; Abstract. Product Eng 18: 133-4 O '47
Electronics aids hydraulic circuit analysis. il diags Machine Design 19:121-2 Mr '47
Hydraulic swivel designs. B. J. McCabe. il diags Aero Digest 54:88+ My '47
New hydraulic cylinders meet rigid operational needs; for operation of brakes and control surfaces. H. J. Marx and J. J. Mancusi. il diags Aviation 45:58-61 N '46
O-ring seals; application in hydraulic mechanisms. D. R. Pearl. diags Machine Design 19:97-102 My '47
Some applications of hydraulics to high-speed rotary drives for aircraft accessories. W. W. Thayer. il diags S A E J 55:38-42+ Ag '47; Excerpt. Automotive & Aviation Ind 96:30 My 1 '47

Ice protection

Deep drawn magnesium parts save weight; oil filter, part of aircraft de-icing system; Bendix aviation corp. R. G. Gillespie. il Materials & Methods 25:86-8 Mr '47
Electrical anti-icing of aircraft windshields. J. D. McCrumm. bibliog Elec Eng 65:Trans 786-91 D '46
Electrically heated glove for determining local values of heat-transfer coefficients; used in designing anti-icing systems for airfoils. J. K. Goss. diags A S M E Trans 69:705-7; Discussion. il 707-8 Ag '47

AIRPLANES—Ice protection—*Continued*
Hamilton Standard's new electrical de-icing system. Rubber Age 60:571 F '47; Same. Automotive & Aviation Ind 96:90 F 15 '47
In-flight icing of highly electrified aircraft. R. Gunn. il J Aeronautical Sci 14:527-8 S '47
Instrumentation for flight testing of thermal anti-icing systems. W. C. Droege. bibliog il diag A S M E Trans 69:695-8 Ag '47
Liquid-water content and droplet size in clouds of the atmosphere; study of aircraft icing conditions. G. W. Brock. bibliog A S M E Trans 69:769-70 O '47
NACA discloses anti-ice methods to plane engineers. CAA J 8:75 Jl 15 '47
NACA icing research seeks jet solution. il Aviation N 7:10 Mr 31 '47
New ejector device uses exhaust energy for engine cooling; gives added thrust to power output, and provides hot air for cabin heating and de-icing of aerodynamic surfaces. W. A. Clegern. il diags Automotive & Aviation Ind 96:24-7 Ap 15 '47
Pneumatic units for aircraft. W. L. Nye. il diags Aero Digest 54:78-80 My '47
Propeller electric de-icing system for wide-range operating conditions. il Aviation 46: 65 Ap '47
Protection of aircraft against ice. J. K. Hardy. bibliog il diags Roy Aeronautical Soc J 51:271-90; Discussion. 290-305 Mr '47
Review of some German developments in airplane anti-icing. M. Tribus. bibliog diags A S M E Trans 69:505-7 Jl '47

Instrument boards

Instrument panel lighting, using red indirect lighting system. J. W. Knoll and N. Ivanovic. il diag Aero Digest 54:68-9 Ap '47

Jet propulsion

See Jet propulsion of aircraft

Landing

Application of microwaves to instrument landing of airplanes. J. Lyman. diag Aeronautical Eng R 6:26-7+ Ap '47
Army flies all weather; Army air forces' all-weather flying center at Wilmington, Ohio. R. B. Hotz. il Air Transport 5:31-3 Ap '47
British planning expansion of ILS. F. A. Brewster. Aviation N 7:12 Ap 21 '47
Buzzing is bad business; straight-in landings instead of circling considered. R. S. Johnson. diags Air Transport 5:38-9+ My '47
Channel wing plane offers slow landing. il Aviation N 7:8 Je 2 '47
Circling method of holding and letting down. K. V. Beer. diags Air Transport 5:43-5 Je '47
CAA and airlines versus GCA. W. Kroger. il diags Air Transport 5:30-3+ Mr '47
CAA instrument landing system brings new flying techniques. CAA J 8:30-1 Mr 15 '47
CAA to continue fight for ILS omni-range airways. Aviation W 47:47 Ag 18 '47
CAB safety bulletin gives do's and don't's for pilots landing on unfamiliar fields. CAA J 8:44 Ap 15 '47
Collier trophy award to Alvarez spotlights GCA development; ground controlled approach radar landing system. W. Kroger. diag Aviation N 6:7-8 D 16 '46
Cross-wind landings. R. S. Johnson. diags Air Transport 5:24-6 Je '47
Diesels help land airplanes. il Diesel Power 25:80-2 Ag '47
Efforts to aid planes in bad-weather landings focus attention on CAA equipment in operation. diags CAA J 8:31+ Mr 15 '47
GCA in the control tower. il Aero Digest 55: 65+ S '47
GCA talkdown trainer. J. F. Gordon. il diags Aero Digest 54:52-4+ My '47
Ground effect on downwash angles and wake location. S. Katzoff and H. H. Sweberg. bibliog diags U S Nat Advisory Com for Aeronautics 1942:159-70 '46
ILS use assures more regularity in air schedules. CAA J 8:109+ O 15 '47
Integrated landing aids. R. D. Kelly and R. L. Champion. il plan S A E J 55:40-3 Je '47
Landing and launching of transport aircraft from moving land vehicles. L. A. Rodert. il S A E J 55:55-8 Mr '47
Lower minimums set for airplanes landing on ILS. CAA J 8:37+ Ap 15 '47
Naval aircraft and carrier equipment. L. Boddington. il diags Roy Aeronautical Soc J 51:812-26 O '47
Navy gets bright lights and safe landings; Moffett field. il Elec West 98:75-6 My '47
New blind landing aid. Bsns W p32 F 22 '47
Precision GCA or ILS? H. K. Morgan. il Aero Digest 54:22-3 Je '47
Problems of blind landing. H. C. Pritchard. il plan diags Roy Aeronautical Soc J 50:935-58; Discussion. 958-73 D '46
Radar put into operation as aid to civil aviation. CAA J 8:37+ Ap 15 '47
Rotative flight brake proposed to moderate landing speeds. J. G. Ray. diags Aviation 46:52-3 Ja '47
Segmented circle markers to aid pilots landing at strange fields. il CAA J 8:120 O 15 '47
Seven airlines approved to use ILS at 21 fields. R. Hotz. Aviation W 47:11 S 1 '47
Sperry A-12 Gyropilot makes landings safer. il Product Eng 18:148 Mr '47
Sperry pushing microwave air traffic control system. R. B. Hotz. il Aviation N 7:10-11 Mr 17 '47

See also
Aviation landing stations

Landing gear

Adoption of cross-wind gear may revise airport program. B. Stubblefield. Aviation N 7:13-14 Je 2 '47
Airborne aircraft arresting gear; use of nylon material, Unolyn. A. B. Schultz. diags S A E J 55:35-6 My '47
Airplane landing gear with pneumatic cushioning unit. il diag Comp Air Mag 52:131 My '47
Analytic definition of a retractable landing gear axis of rotation. R. A. Liming. diags J Aeronautical Sci 14:19-23 Ja '47
Bendix landing gear for light planes. il Automotive & Aviation Ind 96:70 Ja 15 '47
Castered-wheel gear proves its worth in 50-mile gusts. CAA J 8:51 My 15 '47
CAA accepts first cross-wind gear. il Aviation N 7:24 Mr 17 '47
CAA advisory committee endorses cross-wind gear. A. McSurely. Aviation N 7:19 Je 23 '47
CAA gets delivery on first plane with castered-wheel landing gear. il diags CAA J 8:48+ Ap 15 '47
Electrol aims at landing gear market with new lightplane item. Aviation W 47:24 Jl 21 '47
Goodyear castering gear successfully tested at Chicago. il diag Aviation N 7:20-1 Mr 31 '47
Impact strength increased by removing material; landing gear fork. il diags Product Eng 17:131-3 D '46
Landing gear handling made easy. G. Habian. il Air Transport 5:40-1 F '47
Landing gear pre-rotator housed within wheel. il Aviation 46:55 Ja '47
Monowheel gear in Volmer VJ-21. il Aviation W 47:36 Jl 14 '47
New crosswind landing gears of caster type developed for personal planes. A. Walker. il Automotive & Aviation Ind 96:40-2+ Ap 15 '47
New Firestone crosswind landing gear flight tested. A. McSurely. il Aviation W 47:27 S 1 '47
Searching drag studies check speed impeders; three landing gear installations. diags Aviation W 47:40 S 8 '47
Shock strut tests to duplicate landing. S A E J 54:75 D '46
Skis broaden aircraft utility. A. A. Bursch. il Aero Digest 55:46-7+ S '47
Tractor-tread gear put on Packet plane. il Aviation N 7:10 My 26 '47

See also
Seaplanes—Floats

Lighting

Fluorescent lighting for commercial airline interiors; abstracts. F. A. Rugge. Automotive & Aviation Ind 94:60+ Ja 1 '46; il diag S A E J 55:52-3 Ja '47

AIRPLANES—Lighting—*Continued*
Instrument panel lighting, using red indirect lighting system. J. W. Knoll and N. Ivanovic. il diag Aero Digest 54:68-9 Ap '47
Navy develops novel airplane lighting; use of Plexiglas and Lucite illuminated by internal light. il Aviation W 47:32+ O 20 '47

Lightning effects

Lightning research aimed at protection. il Aviation W 47:17 Ag 25 '47

Load

Beam-columns. W. R. Osgood. J Aeronautical Sci 14:167-70 Mr '47
Column characteristics of sandwich panels having honeycomb cores. W. W. Troxell and H. C. Engel il diag J Aeronautical Sci 14:413-20; Discussion. 420-1 Jl '47
Cost aspects of airline policies and procedures. R. D. Speas. S A E J 55:35+ Mr '47
Research studies directed toward the development of rational vertical-tail-load criteria. L. A. Clousing. bibliog J Aeronautical Sci 14:175-82 Mr '47
Temperature counts in computing loads under new ruling. CAA J 8:100 S 15 '47
Useful load ratio with jet and airscrew propulsion of aircraft. K. O. Lundberg. Roy Aeronautical Soc J 51:686-703 Ag '47

Lofting

See Airplanes—Manufacture—Drafting room practice

Maintenance and repair

Aviation's maintenance notebook (cont). il diags Aviation 45:55-8+ D '46
Design for maintenance. T. E. G. Bowden. Roy Aeronautical Soc J 51:334-7 Mr '47; Discussion. 51:471-80 My '47
Inspection and repair of DC-4 tail surfaces; check list. J. M. Linde. Air Transport 5: 58-9 Jl '47
Landing gear handling made easy. G. Habian. il Air Transport 5:40-1 F '47
Maintenance job methods; DC-4s and L-49s. J. M. Linde. diags Air Transport 4:61-2 D '46; 5:71-3 Ja; 63-4+ F; 57-8 Mr; 35-6 Je; 62-3 Jl '47
NATS calls it progressive maintenance. G. Herrick. il Air Transport 5:43-4+ S '47; Discussion. 5:63 O '47
Plane repair service offered by Grumman. Aviation W 47:36 O 27 '47
Robinson meets schedules the hard way. J. Foster, jr. il Aviation 45:46-7 D '46

See also
Airplane repair stations

Manufacture

Close contouring of honeycomb sections. R. Young. il Mod Plastics 24:140-1 My '47
Convair's master plan for building the 240 transport. G. F. Gerhauser. il plan Automotive Ind 97:28-31+ Jl 15 '47
Design and production control of silver alloy brazed joints in aircraft structures. H. A. Smith and P. A. Koerner. il diags Welding J 25:1061-7 N '46; Same. Aero Digest 55:54-6+ Jl '47
Experiment at Republic. il Fortune 35:122-7+ F '47
Forming aluminum sheets into high-strength structures; Glenn L. Martin co. B. Rogge. il diags Mach 53:174-9 Je '47
Hot dimpling and joggling 75S-T for the DC-6's; Douglas aircraft co. F. E. Bryan and D. E. Bailey. il Mach 53:146-51+ Je '47
Moving the Bristol Brabazon I to assembly hall. il plan Engineer 184:362-4 O 17 '47
Northrop speeds magnesium fabrication; illustrations with text. C. Ricker. Am Mach 91:119-21 Jl 17 '47
Photographic reproduction as an engineering tool; Ryan aeronautical co. D. E. Clark. il Iron Age 159:60-3+ F 6 '47; Same abr. Aero Digest 53:78-9+ Ag '46
Precision building of Convair-240's for low-cost maintenance; Consolidated Vultee aircraft corp. G. F. Gerhauser. il Mach 53: 180-4 Je '47
Review of production problems in relation to aircraft design. C. E. Fielding. il diags Roy Aeronautical Soc J 51:511-25; Discussion. 525-33 Je '47
Tooling the Convair 240. G. F. Gerhauser. flow chart il Aero Digest 54:81-3+ My '47

See also
Airplane engines—Manufacture
Airplane factories
Airplanes—Welding operations

Drafting room practice

Decimalism; aviation industry adopts streamlined dimensioning. P. J. Hayes, jr. diag Air Transport 5:48-9 My '47
80 per cent of aero industry favors decimal use. S A E J 55:82 Mr '47
Lofting and template reproduction. S. P. Woodley. Roy Aeronautical Soc J 51:306-24; Discussion. 324-8 Mr '47

Materials

Action of safety fuel hydrocarbons on Perbunan compounds. R. M. Howlett and E. N. Cunningham. bibliog Rubber Age 60: 562-4 F '47
All-metal shift evident at show. il Aviation N 6:17 N 25 '46
Aspects of the determination of the strength of materials; summaries of papers and discussions at two meetings held jointly with British rheologists' club and Royal aircraft establishment. Roy Aeronautical Soc J 51:65-8 Ja '47
Column characteristics of sandwich panels having honeycomb cores. W. W. Troxell and H. C. Engel. il diag J Aeronautical Sci 14:413-20; Discussion. 420-1 Jl '47
Development in aircraft engine metallurgy, 1920-46. W. E. Jominy. Metal Prog 50:687-90 O '46
Effect of radius of curvature and preliminary artificial eccentricities on buckling loads of curved thin aluminum-alloy sheets for monocoque constructions. G. Welter. J Aeronautical Sci 13:593-6+ N '46
Experiences of an aircraft manufacturer with sandwich material; abstract. H. B. Gibbons. diag Automotive & Aviation Ind 96: 36+ F 1 '47
Face buckling and core strength requirements in sandwich construction. C. C. Wan. J Aeronautical Sci 14:531-9 S '47
Forming of the aluminum alloy 75S. G. Sachs and G. Espey. bibliog(32 titles) diags Am Soc for Metals Trans 37:468-96 '46
Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159:67-70 Mr 6 '47
Investigations of 24S-T riveted tension joints. R. L. Fefferman and H. L. Langhaar. bibliog il diags J Aeronautical Sci 14:133-47 Mr '47
Magnesium alloys for aircraft. F. A. Rappleyea. il Aero Digest 52:79-81 Ap; 53:87-8 S '46; 54:70-2+ F '47
Magnesium replaces fabric for aircraft control surfaces. R. E. Saunders. il Materials & Methods 26:88-92 Ag '47
Metal cheaper than fabric in manufacturing personal plane; abstract. W. C. Jamouneau. S A E J 55:98+ Ag '47
Normal-pressure tests of circular plates with clamped edges. A. E. McPherson and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:269-85 '46
Notch effects in high strength aluminum alloys. L. Schapiro and others. il Iron Age 159:52-6 Je 12 '47
Reclamation of aircraft aluminum; chlorine gas fluxing; Reynolds metals co. G. W. Birdsall. il diag Metal Prog 50:1232-8 D '46
Sandwich materials; abstracts of SAE papers. W. W. Troxell and others. il Machine Design 19:142-6 Mr '47; S A E J 55: 20-2 Ap '47
Sandwich structures for aircraft. R. McLarren; I. Stone. bibliog il diags Aviation W 47:28-9+ N 3 '47
Theory of limit design applied to magnesium alloy and aluminium alloy structures. F. Panlilio. bibliog il diags Roy Aeronautical Soc J 51:534-71 Je '47
Use of 75ST in structural applications. G. Snyder and F. J. Crossland. il S A E J 55: 59-62 Je '47; Abstract. Automotive & Aviation Ind 96:33 My 1 '47

AIRPLANES—Materials—*Continued*

Utilization of new high strength aluminum alloys. J. F. McBrearty. S A E J 54:66 D '46

See also

Steel, Aircraft

Glass

Glass aircraft wing; abstract. Aeronautical Eng R 5:61 D '46

New fibreglas wing is tested by AAF; all-glass plane planned. il Aviation N 6:22 N 11 '46

Plastics

Close contouring of honeycomb sections. R. Young. il Mod Plastics 24:140-1 My '47

Plastics engineering in 1946. il Mod Plastics 24:137-9 Ja '47

Ridge forming of Plexiglas. W. W. Farr and R. Tomlinson. il Aero Digest 55:76+ O '47

Tips on designs in Plexiglas. il diags Aero Digest 54:74+ Mr '47

Mist problem

Anti-misting agents for aircraft. J. D. Main-Smith and J. Darge. Chem & Ind p107-8 F 22-Mr 8 '47

Model testing

High-speed tests of a model twin-engine low-wing transport airplane. J. B. Becker and L. H. Leonard. il diags U S Nat Advisory Com for Aeronautics 1942:391-412 bibliog (p411) '46

Radio control of model flying boats. V. Welge. il diags Inst Radio Eng Proc 35: 526-30 My '47

Mooring

Aircraft tie-down. il diag Aero Digest 53: 69-70 D '46

Noise

Acoustical materials and acoustical treatments for aircraft. R. H. Nichols, jr. and others. bibliog diags Acoustical Soc Am J 19:428-43 My '47

Airplane quieting; measurement of sound levels in flight; speech interference level. L. L. Beranek and H. W. Rudmose. il diags A S M E Trans 59:89-100 bibliog(p95, 100) F '47

Beating the airport noise bogey. F. R. Brine. Aviation 45:121-2 N '46

Experiments speeded to muffle lightplane propeller noise. A. McSurely. Aviation N 7:7-8 Mr 24 '47

Foundation seeking to cut airplane noise. Bsns W p36 Ap 12 '47

Loening asks public campaign against excessive aircraft noise. Aviation N 7:12-13 F 10 '47

Must flying be a racket? A. Klemin. il Sci Am 175:255-7 D '46

NACA five-blade quiet prop forecasts noise nuisance end; other airplane silencing developments. A. McSurely. il Aviation N 7: 16-17 Je 9 '47

NACA will flight test new lightplane anti-noise propellers. A. McSurely. Aviation N 7:21 Mr 10 '47

New British Sprite has noise mufflers. Aviation W 47:35 Jl 28 '47

Noise complaints trouble airlines. Aviation W 47:36 S 1 '47

Noise reduction in aircraft. H. W. Rudmose and L. L. Beranek. diags J Aeronautical Sci 14:79-96 F '47

Plane noise reduction progress achieved in research project. A. McSurely. il Aviation W 47:35-6 O 27 '47

Premodulation clipping in AM voice communication. K. D. Kryter and others. il diags Acoustical Soc Am J 19:125-31 Ja '47

Propeller aspect of practical problems in reducing noise in personal planes; abstract. L. J. Trigg. Automotive & Aviation Ind 96:82+ F 1 '47

Reduce noise nuisance in personal planes. L. J. Trigg; B. J. Simons. il S A E J 55:44-7 Ap '47

Research bringing quieter aircraft. il Product Eng 18:135-6 My '47

Sound control in airplanes. L. L. Beranek and H. W. Rudmose. bibliog Acoustical Soc Am J 19:357-64 Mr '47

Patents

Review of patents. Aviation 46:115 Ja '47 [cont monthly]

Trend of invention. Published in monthly numbers of Aero digest

Performance

Designing to new transport category performance requirements of Civil air regulations. W. B. Oswald. S A E J 55:23+ Mr '47

Effect of the new civil air regulations on scheduled air transportation. R. W. Ayer and F. F. Fennema. diag S A E J 55:47-50 Ja '47

Effect of wind gradient on glide and climb. B. Etkin. J Aeronautical Sci 14:365-7 Je '47

Martin 2-0-2 performance. il Aero Digest 54:59 My '47

Method of airplane performance calculation applicable to any polar. R. E. Wendt. J Aeronautical Sci 14:243-50 Ap '47

Performance calculation for jet-propelled aircraft. R. K. Page. Roy Aeronautical Soc J 51:440-5 My '47

Propeller charts for the determination of the rotational speed for the maximum ratio of the propulsive efficiency to the specific fuel consumption. S. Biermann and R. N. Conway. bibliog diags U S Nat Advisory Com for Aeronautics 1942:373-90 '46

Simple analytical equations for the velocity of an airplane in unaccelerated level, climbing, and diving flight. H. B. Freeman. J Aeronautical Sci 14:185-9 Mr '47

Tudor IV passes all tropical tests. il Aviation W 47:40 S 1 '47

Useful load ratio with jet and airscrew propulsion of aircraft. K. O. Lundberg. Roy Aeronautical Soc J 51:686-703 Ag '47

Performance records

Performance data presentation; graphic and tabular methods. N. N. Rubin. Aero Digest 53:46-7+ N '46

Pickup equipment

Improved air pickup installed by Beech. il Aviation N 6:29 N 11 '46

New pickup rig developed at Dayton. Aviation N 6:25 N 25 '46

Pilots

See Aviators

Prices

Beech, Bellanca hike four-place prices. Aviation W 47:39 Jl 28 '47

Private ownership

Airborne motor scooter for private flyers' transportation from airports into town. il Aviation N 7:22 Je 16 '47

Personal aircraft needs. T. P. Wright. CAA J 8:109+ O 15 '47

Personal airplane, its market, design and utility. P. Altman. Automotive & Aviation Ind 95:22-31 N 15; 26-32 D 1 '46

Personal flying for the many. J. H. Geisse. S A E J 54:77 N '46

Personal-plane aid program. W. A. M. Burden. CAA J 8:49+ My 15 '47

Proof of the peddling is found in the flying! R. L. LeTourneau as private flier; private flying in Stanton county, Kansas. il Aero Digest 54:48-9 My '47

Red tape hurts personal flying, Air policy commission hears. A. McSurely. Aviation W 47:44+ O 6 '47

That flying dollar, how it flies; getting the money's worth out of personal flying. R. I. Hale. il Aero Digest 54:36-7 F '47

Vhf will be wonderful for private flying. W. P. Lear. Aero Digest 53:26-7 N '46

Well, here we go again; private plane marketing problems. B. Havens. il Aero Digest 54:42+ Je '47

See also

Air carriers—Non-scheduled operations

Radio equipment

See Radio apparatus on aircraft

AIRPLANES—*Continued*

Range

Jet airplane range considerations. J. Jonas. J Aeronautical Sci 14:124-8 F '47

Refueling

Fast refueling for airliners. il Aero Digest 54:50 Mr '47
Jeep refueler speedy and economical. il Aviation 46:97 Je '47
Mobile refueler for small airports. il Automotive & Aviation Ind 95:46 D 15 '46
Realistic approach to location of airport fueling docks urged. H. O. Olson. Nat Pet N 38:30 D 18 '46
Servicing unit. il Air Transport 5:66 Mr '47
Three useful projects; mechanics' bad weather suit and two fueling ladders. G. Habian. il Air Transport 5:68-9 Ag '47
Two-part valve; fueling aircraft tanks from the bottom. il diags Machine Design 19:95-6 My '47
Under-wing fueling. H. O. Olson. il S A E J 55:27-9 Mr '47
Underwing fueling and how it was engineered. E. Olsen. il diag Aviation 46:37-9 Je '47
Underwing plane refueling demonstrated by Shell. il Nat Pet N 39:28 Ja 1 '47

Registration

Easier to register planes than cars by new system. CAA J 7:149+ D 15 '46

Renting

Plaints of a post war pilot. F. M. Reck. Aero Digest 53:41+ D '46
Plane rental service to experiment in N.Y. Aviation N 7:22 Mr 24 '47

Roadable airplanes

See Airplanes, Light—Automobile combinations

Safety measures

See Aviation—Safety measures

Seats

Editorial citation to Warren McArthur corp. for achievement in fabrication and use of magnesium alloys; aircraft seats. il Materials & Methods 24:1186-7 N '46
Ejection seat is new safeguard for pilot. C. Villency. il Nat Safety N 54:58 D '46
High-utility plus comfort designed into Stratocruiser seat. il Aviation 46:64 Je '47
Passenger seats can be comfortable. C. W. Morris. diags S A E J 55:24-6 S '47
Seat comfort. F. E. Randall. diag Mech Eng 68:1056-8 D '46

Skis

See Airplanes—Landing gear

Specifications

American commercial and private aircraft; tabulations. Automotive & Aviation Ind 96: 140-1 Mr 15 '47
Aviation's American and foreign aircraft specifications; tabulations. Aviation 46:supp Mr '47
British civil aircraft; tabulation. Automotive & Aviation Ind 96:166 Mr 15 '47

Speed

Aerodynamic center and center of pressure of an airfoil at supersonic speeds. H. W. Sibert. J Aeronautical Sci 14:183-4 Mr '47
Aerodynamic characteristics of rectangular wings at supersonic speeds. E. A. Bonney. bibliog il diag J Aeronautical Sci 14:110-16 F '47
Aerodynamic forces on an oscillating airfoil at supersonic speeds. J. W. Miles. bibliog J Aeronautical Sci 14:351-8 Je '47
Aerodynamic performance of delta wings at supersonic speeds. A. E. Puckett and H. J. Stewart. bibliog diags J Aeronautical Sci 14:567-78 O '47
Aerodynamics of supersonic flight. T. von Kalman. Machine Design 19:194 Ap '47
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51: 1-23 bibliog(p22-3); Discussion. 23-34 Ja '47
Airspeed-Mach number chart; data sheet. D. D. Baals and V. S. Ritchie. Aviation W 47:43 Jl 21 '47
Bell XS-1, A.A.F. supersonic research plane. Aeronautical Eng R 6:38 Ja '47
Bell XS-1 readied for supersonic trials; illustrations with text. Aviation 46:64 Ja '47
Bell's first XS-1 powered flight opens drive to supersonic speeds. il Aviation N 6:9 D 16 '46
Bell's first XS-1 supersonic airplane built for research. il Product Eng 17:150 D '46
Bell's supersonic research plane, XS-1. il Aero Digest 54:135 Ja '47
Bonanza reports 165 mph. cruise. Aviation N 7:26 Ap 21 '47
Characteristics of turbojet engines at high flight speeds. C. A. Meyer. diags A S M E Trans 69:237-43; Discussion. 243-4 Ap '47
Critical review of German research on high-speed airflow. R. Smelt. il diags Roy Aeronautical Soc J 50:899-927; Discussion. 927-34 D '46
Design of German supersonic DM-1. J. J. Rodgers. il Aviation 45:78-9 D '46
Development of the XS-1 supersonic research airplane. R. M. Stanley and R. J. Sandstrom. il Aeronautical Eng R 6:22-6+ Ag '47
Developments in high-speed aircraft. E. H. Heinemann. il Mech Eng 69:805-12 O '47
Douglas D-558 Skystreak; research aircraft designed for transonic flight. il Aero Digest 54:35 Mr '47
Douglas Skystreak hits 680 mph. Aviation W 47:17 N 3 '47
Douglas Skystreak prepared for sonic barrier assault; jet-powered D-558. diag Aviation N 7:7 Ja 6 '47
Douglas Skystreak ready for flight. S. Bangs. Aviation N 7:10 Ap 14 '47
Evolving a new speed record; apparatus used to measure speed of AAF-Lockheed P-80R Shooting Star. plan Aero Digest 55:81+ Ag '47
High speed aircraft flying limitations and handling problems. F. W. Morgan. Roy Aeronautical Soc J 51:733-8 S '47
High speed flight; abstract. R. L. Johnson. S A E J 55:79-80 O '47
High-speed tests of a model twin-engine low-wing transport airplane. J. B. Becker and L. H. Leonard. il diags U S Nat Advisory Com for Aeronautics 1942:391-412 bibliog (p411) '46
High-speed tests of conventional radial-engine cowlings. R. G. Robinson and J. V. Becker. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:287-99 '46
How new Douglas Skystreak will probe the transonic. il diag Aviation 46:54-6 My '47
Internal aerodynamics opens new speed fields; proper handling of supersonic airflows inside power plants capable of reducing fuel consumption. bibliog il Aviation W 47:25-6 Jl 14 '47
More speed for security. A. J. Weatherhead, jr. Aero Digest 54:24-5 F '47
NACA reveals new results of supersonic research program. R. Hotz. il Aviation W 47:18+ Jl 7 '47
NACA reveals research payload; initial exploration of transonic range. diags Aviation N 7:11 My 12 '47
Navy sets speed record of 650 mph. with Douglas D-558. il Aviation W 47:10 S 1 '47
New Lockheed Shooting Star cracks world's speed record. Aviation N 7:3-4 Je 30 '47
Pilot-airplane integration. M. C. Shelesnyak. il Aero Digest 53:44-5+ D '46
Research aircraft. P. B. Klein. il diag Mech Eng 69:813-19 O '47
Searching drag studies check speed impeders. diags Aviation 46:77-8 My; 64-5 Je '47; [cont as] Aviation W 47:29 Jl 28 '47
Shock-stalled flows for supersonic-type airfoils at transonic speeds. J. Stack. bibliog il Aviation 46:43-5 F '47
Speed spectrum; engineering data book. C. E. Pappas. Aviation 46:66 My '47
Speeds and Mach numbers; chart. Aviation 46:79 Je '47
Supersonic aerodynamics, principles and applications. T. von Kármán. il diags J Aeronautical Sci 14:373-98 bibliog(p398-402); Discussion. 403-9 Jl '47

AIRPLANES—Speed—*Continued*
Supersonic research quest poses construction problems; Douglas Skystreak. il Aviation N 7:13-14 F 17 '47
Transonic airplane, Douglas D-558 Skystreak. il Mech Eng 69:852-3 O '47
Transonic test craft readied by British. Aviation N 7:9-10 Je 2 '47
Unique features built into XS-1; Bell rocket-powered flying supersonic laboratory. il Aviation N 6:12 D 2 '46
U.S. research program spans transonic speed range. R. Hotz. Aviation N 7:7-8 Ap 28 '47

Spinning

Limiting effect of centripetal acceleration on man's ability to move; effect of spinning airplane. C. F. Code and others. il J Aeronautical Sci 14:117-23 F '47

Stalling

Failure to detect stalls found pilot problem. Aviation W 47:47 Jl 14 '47
Plane stall warning device is developed. il diags Aviation N 7:24 Mr 3 '47
Stall-resistant craft seen through new design data. Aviation W 47:24 S 15 '47
Stalling properties of wings. E. J. Richards. Roy Aeronautical Soc J 50:888-92 N '46

Standards

AIA plans personal aircraft parts standardization program. W. Kroger. Aviation N 7: 15 Mr 31 '47
Economic aspects of standardization; internal wrenching bolt. J. F. Cramer. il Ind Stand 18:164-6 Jl '47
Standardization equipment rules will speed aircraft production. W. Kroger. Aviation N 7:13-14 F 24 '47

Storage

Cocooning aircraft. il Refrig Eng 53:408 My '47
Navy will use 20,000 tons of sheet steel to can surplus aircraft. il Iron Age 159:115 My 1 '47

Stresses

Behaviour of structures under repeated loads. A. G. Pugsley. bibliog Roy Aeronautical Soc J 51:715-20 S '47
Bending of rectangular plates with large deflections. S. Levy. bibliog il U S Nat Advisory Com for Aeronautics 1942:139-57 '46
Column paradox. F. R. Shanley. J Aeronautical Sci 13:678 D '46
Critical compressive stress for flat rectangular plates supported along all edges and elastically restrained against rotation along the unloaded edges. E. E. Lundquist and E. Z. Stowell. bibliog diag U S Nat Advisory Com for Aeronautics 1942:99-109 '46
Critical compressive stress for outstanding flanges. E. E. Lundquist and E. Z. Stowell. diag U S Nat Advisory Com for Aeronautics 1942:111-21 '46
Determination and presentation of compressive stress-strain data for thin sheet metal. W. Ramberg and J. A. Miller. bibliog il diags J Aeronautical Sci 13:569-80 N '46
Elastic and plastic bending of beams. T. K. Wang. bibliog diags J Aeronautical Sci 14:422-32 Jl '47
Equilateral electric strain gage rosette. G. Brewer. il diags Metal Prog 51:758-63 My '47
Face buckling and core strength requirements in sandwich construction. C. C. Wan. J Aeronautical Sci 14:531-9 S '47
Failure sequence indicator. R. W. Powell. diags Aero Digest 54:62-3+ Je '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84 F, S '47 (to be cont)
Inelastic column theory. F. R. Shanley. bibliog il diag J Aeronautical Sci 14:261-7; Discussion. 267-8 My '47
Investigations of 24S-T riveted tension joints. R. L. Fefferman and H. L. Langhaar. bibliog il diags J Aeronautical Sci 14:133-47 Mr '47
Normal-pressure tests of circular plates with clamped edges. A. E. McPherson and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:269-85 '46
Normal-pressure tests of rectangular plates. W. Ramberg and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:349-71 '46
Numerical procedures for calculation of stress distribution in sheet-stringer-frame combinations. M. Stern. diags J Aeronautical Sci 14:481-6 Ag '47; Discussion. C. Libove. 14:629-30 N '47
Plates in tension joints under repeated loading. H. W. Foster. Product Eng 17:108-11 D '46
Pure bending in the plastic range. H. A. Williams. diags J Aeronautical Sci 14:457-69 Ag '47
Restraint provided a flat rectangular plate by a sturdy stiffener along an edge of the plate. E. E. Lundquist and E. Z. Stowell. bibliog diags U S Nat Advisory Com for Aeronautics 1942:123-7 '46
Separation of principal stresses in photoelastic analysis. E. K. Frankl. bibliog Roy Aeronautical Soc J 50:974-85 D '46
Shear distribution due to twist in a cylindrical fuselage with a cutout. M. M. Gololobov. diags J Aeronautical Sci 14:253-6 Ap '47
Shear lag in box beams; methods of analysis and experimental investigations. P. Kuhn and P. T. Chiarito. il diags U S Nat Advisory Com for Aeronautics 1942:171-208 bibliog(p204) '46
Square plate with clamped edges under normal pressure producing large deflections. S. Levy. diags U S Nat Advisory Com for Aeronautics 1942:209-22 bibliog(p216) '46
Stress analysis of rotor blades. G. Horvay. bibliog diags J Aeronautical Sci 14:315-33 Je '47; Correction. 14:544 S '47
Stress-strain curve equation. W. L. Gray. J Aeronautical Sci 14:250-1 Ap '47
Stresses in a circular fuselage. W. J. Goodey. il diags Roy Aeronautical Soc J 50:833-71 N '46
Stresses in cylindrical semimonocoque open beams. H. L. Langhaar and C. R. Smith. il diags J Aeronautical Sci 14:211-20 Ap '47

Surplus airplanes

Surplus plane disposal. Aero Digest 54:97+ Ja '47
United States surplus planes to Sweden for parts. For Comm W 25:25 N 23 '46

Tail surfaces

Inspection and repair of DC-4 tail surfaces; check list. J. M. Linde. Air Transport 5: 58-9 Jl '47
Research studies directed toward the development of rational vertical-tail-load criteria. L. A. Clousing. bibliog J Aeronautical Sci 14:175-82 Mr '47
Twin tail surfaces. L. P. Lipsick. diags Aero Digest 54:70-2+ Ap '47

Take-off

Crosswind takeoffs. R. S. Johnson. diags Air Transport 5:21-3 Jl '47
Electropult. il Air Transport 5:75+ Ja '47: Engineer 182:379 O 25 '46; Mech Handling 33:749-50 D '46; Mech Eng 68:990-1 N '46; Civil Eng 17:23 Ja '47; Machine Design 18: 107 N '46; Engineering 163:198 Mr 14 '47
Ground effect on downwash angles and wake location. S. Katzoff and H. H. Sweberg. bibliog diags U S Nat Advisory Com for Aeronautics 1942:159-70 '46
Le lancement des avions par catapultage. G. Bory. diags Génie Civil 124:335-6 S 1 '47
Landing and launching of transport aircraft from moving land vehicles. L. A. Rodert. il S A E J 55:55-8 Mr '47
Lightplane JATO seen in rocket design. diags Aviation W 47:21-2 S 22 '47
Lightplane takeoff with Jato demonstrated at Miami show. A. McSurely. il Aviation N 7:19 Ja 20 '47
Naval aircraft and carrier equipment. L. Boddington. il diags Roy Aeronautical Soc J 51: 800-12 O '47
New airplane catapult; Electropult. il Elec Eng 66:979 O '47
New Jato boost for jet bombers. il Aviation W 47:13 S 1 '47
Rocket assisted take-offs. Z. Krzywoblocki. bibliog Aero Digest 53:75-7+ D '46

AIRPLANES—Take-off—*Continued*
Smokeless propellant in a Jato (jet-assisted take-off) unit designed for carrier-based aircraft. Mech Eng 69:236-7 Mr '47

Testing

CAB adds new rule for service tests. Aviation N 7:15 F 24 '47
Electronic commutation for telemetering; for transmission over an f-m radio link during flight tests of new aircraft or on pilotless runs. L. L. Rauch. il diags Electronics 20: 114-20 F '47
Improved static testing helped prove DC-6. W. W. Bradley. il diags Aviation 46:49-51 Ap '47
Martin 202 begins new accelerated service tests. W. Kroger. Aviation W 47:16 Jl 21 '47
Muroc test base saves millions. Aviation N 7:10 Je 16 '47
Refrigerated altitude chamber for aircraft testing; North American aviation. L. P. Spalding. il Automotive & Aviation Ind 95: 33+ D 1 '46
Stability of an aircraft structure in a strength test frame. P. B. Walker. diags Roy Aeronautical Soc J 51:704-14 Ag '47
Strength testing Douglas DC-6. M. A. Miner. il Automotive & Aviation Ind 96:22-3 Ja 15 '47
Testing civil aircraft. P. A. Hufton. Roy Aeronautical Soc J 51:575-602; Discussion. 602-15 Jl '47
Tri-motor tested with single pilot; Northrop Pioneer. Aviation N 6:8 D 30 '46
Vibration exciter for structural tests. P. J. Holmes. il diags Electronics 19:96-100 D '46

See also
Aeronautic laboratories
Airplane engines—Testing
Airplane wings—Testing
Airplanes—Model testing
Airplanes, Military—Testing
Wind tunnels

Transportation

Surface shipping competing with flyaway on cost basis. A. McSurely. il Aviation N 7:15 Ja 13 '47

Vibration

Associated matrices of bending and coupled bending-torsion vibrations. W. P. Targoff. bibliog diags J Aeronautical Sci 14:579-82 O '47
Computation of influence coefficients for aircraft structures with discontinuities and sweepback; method uses Castigliano's theorem. S. Levy. bibliog diags J Aeronautical Sci 14:547-60 O '47
Higher modes of vibration by a method of sweeping. L. Beskin and R. M. Rosenberg. bibliog J Aeronautical Sci 13:597-604 N '46
Human response to vertical vibration. S. Lippert. S A E J 55:32-4 My '47
Method for simplifying the calculations of the natural frequencies for a system consisting of *n* rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47
New aircraft and engine designs pose unusual vibration problems. diags Aviation W 47:36 Jl 21 '47
Vibrations of a helicopter on the ground. G. Horvay. bibliog J Aeronautical Sci 13:605-19 N '46

See also
Airplane engines—Vibration
Airplane wings—Flutter

Weight

Weighing the converted C-46. J. R. Duppstadt. il Aero Digest 54:48+ F '47
Weight saving can be expensive. B. J. Vierling and L. H. Caldwell. S A E J 55:71 F '47

Welding operations

Design for flash welding. H. W. Brown. il diags Aero Digest 55:82+ S '47
Flash-welding tubular and solid parts for Lockheed planes. F. C. Pipher. il Mach 53: 160-3 Je '47
Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog il diags Welding J 26:sup26-49 Ja '47
Pressure-welding stainless steel rings. A. L. Rustay and others. il diags Welding J 26: 129-37 F '47
Production time cut by arc welding thin tubing; illustrations with text; Consolidated Vultee aircraft corporation. il Am Mach 91: 94-5 O 9 '47
Recommended spotwelding procedures. F. S. Dever. il Iron Age 159:46-50 Ja 30 '47; Same abr. Materials & Methods 25:92-6 My '47
Repair of structural tubing. L. Brady. diags Aero Digest 53:52-3+ N '46
Ryan welding innovations. W. P. Brotherton. il Welding J 26:323-6 Ap '47
Spot-welding of assemblies; Boeing aircraft co. F. Matthews. il Aero Digest 54:82 Ap '47
Spot welding of primary structures; Boeing aircraft co. il Steel 120:88+ My 19 '47
Welding with atomic hydrogen; Ryan aeronautical co. W. P. Brotherton. il Elec West 97:78-80 O '46

Wheels

Castored wheels enable directional takeoff. il Product Eng 18:95 Ag '47
Experimental determination of strains in aircraft landing wheels and brakes; stress-coat method. M. H. Polzin. il S A E J 55: 26-8+ Je '47
Pre-rotation motor for big plane wheels. Aviation N 6:20 D 2 '46

Windshields

Electrical anti-icing of aircraft windshields. J. D. McCrumm. bibliog Elec Eng 65:Trans 786-91 D '46
Investigation of the drag of windshields in the 8-foot high-speed wind tunnel. R. G. Robinson and J. B. Delano. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:65-77 '46
Transparent conductor coats glass to carry electrical current; Nesa. Sci Am 175:275 D '46

AIRPLANES, All wing. See Airplanes, Flying wing

AIRPLANES, Ambulance
Hospital plane litter deodorizer. il Heat & Ven 43:83 N '46
Largest AAF helicopter flies; Kellett XR-10. A. McSurely. il Aviation W 47:11-12 Jl 14 '47

AIRPLANES, Amphibious
Goodyear building 15 amphibs for flight test and survey. il Aviation W 47:53 Jl 7 '47
Goodyear pondering decision to market Duck amphibian. A. McSurely. Aviation N 7:13 Ja 6 '47
Grumman's new Mallard has novel refinements. il diags Aviation 46:82-3 Ja; 62-3 F '47
Mallard amphibian presented by Grumman. il Aviation 45:66 N '46; Aero Digest 53:55 D '46
Two eastern aircraft operators get Goodyear amphibians on loan. A. McSurely. Aviation W 47:44+ S 8 '47

See also
Seaplanes

AIRPLANES, Flying wing
AW 52 jet-engined tailless aircraft. W. G. Armstrong. il diags Engineer 182:588-90 D 27 '46; Engineering 163:9 Ja 3 '47; Mech Eng 69:235-6 Mr '47
Armstrong Whitworth jet powered flying wing. il diags Aviation 46:53-4 F '47
British develop new wing process; Armstrong-Whitworth AW-52 jet flying wing. Aviation N 7:12 Mr 17 '47
British jet wing project progresses. il Aviation N 7:8 Ja 6 '47
Design details of the Northrop XB-35; illustrations with text. S. Banks. Aviation 46:37-41 Ap '47
Development of all-wing aircraft. J. K. Northrop. il diags Roy Aeronautical Soc J 51: 481-509 Je '47; Same cond. Engineering 164: 36, 45-8 Jl 11 '47; Abstract. Automotive Ind 97:36-7+ S 15 '47

AIRPLANES, Flying wing—*Continued*
Flying wing has novel cockpit layout; Northrop B-35. il Aviation W 47:33 O 13 '47
Flying wing, jet bomber completed; Northrop YB-49. il Aviation W 47:14 O 13 '47
Northrop outlines all-wing progress. J. K. Northrop. Aviation N 7:9 Je 16 '47
Northrop wing. il diags Fortune 36:112-15+ O '47

AIRPLANES, Freight
Box car takes to air with varied freight. R. Blanchard. il Adv & Sell 40:48 Ag '47
Business skyrockets in air freight industry. V. Patrick. il Ind Marketing 32:52-3+ My '47
Canadian DH readies Beaver light freighter. il Aviation 46:63 Je '47
Cargo category prospects good; CAB indicates separate requirements will be established. Aviation N 7:8-9 Ap 21 '47
CAA certificates converted Curtiss Commando for cargo. W. Kroger. Aviation N 7:23 F 3 '47
Curtiss-Wright plans new cargo transport. il Aviation N 6:10 N 25 '46
Design highlights of Northrop Pioneer; illustrations with text. Aviation 46:58 Je '47
Miles' new M.68 has roadable cargo-hold; British light air-freighter has fuselage readily detachable for use as trailer. il Aviation W 47:22 S 29 '47
New all-cargo transport designed by Curtiss-Wright. Air Transport 5:83 Ja '47
Production plans set for Beaver with foreign prospects good. il Aviation W 47:21 S 8 '47
Slick features factory-type maintenance. R. McDaniel. il Aviation 45:48-50 D '46
Suggested design and operating requirements for cargo transports. J. E. Winchester. S A E J 55:46-8 Jl '47

See also
Airlines—Freight service
Loading and unloading—Airplanes
United States—Air service, Army—Transport command

Cargo handling
Air freight handling. J. H. Davis. il Mech Handling 33:619-22 O '46
Rapid handling and facile stowage featured in fast air freighter; Cargoliner 230. il Aviation 45:95+ N '46

AIRPLANES, Industrial
Growing trend to executive planes cited by distributor. A. McSurely. il Aviation N 6:22 D 9 '46
Personal airplane, its market, design and utility. P. Altman. Automotive & Aviation Ind 95:22-31 N 15; 26-32 D 1 '46
Pipe line aerial patrol. G. F. Leamon. Gas Age 99:27+ My 29 '47; Same cond. Oil & Gas J 45:64 My 3 '47
Plane, auto costs compared on trip. Aviation N 6:26 D 16 '46
Wingfoot fleet and flyers; Goodyear tire and rubber co. il Aero Digest 53:56+ D '46

AIRPLANES, Light
All-metal Streak developed by group. il Aviation N 6:12 D 23 '46
Aviation's 1947 yearbook; American and foreign airplanes; brief descriptions and illustrations. Aviation 46:67-82 Mr '47
Baumann Brigadier makes first flight. Aviation W 47:39 Jl 14 '47
Beech Bonanza certificated. A. McSurely. il Aviation N 6:13-14 N 25 '46
Bendix landing gear for light planes. il Automotive & Aviation Ind 96:70 Ja 15 '47
Bullet, new lightplane. il Aero Digest 54:46 Mr '47
Canadian DH readies Beaver light freighter. il Aviation 46:63 Je '47
Cessna 190 and 195. il Aero Digest 34:45 Je '47
Convair model L-13. il diags Aero Digest 54: 47+ F '47
Culver model V offers many equipment features at list price. A. McSurely. il Aviation N 6:13 N 11 '46
Development of the Beech Bonanza light four-place high performance airplane. H. Rawdon. il S A E J 55:36-9 Jl '47
Douglas' 5-place Cloudster. il Aero Digest 54: 44 F '47
Douglas unveils 5-place Cloudster. Aviation N 7:9 Ja 6 '47
Engineer's part in the civil aviation expansion program. W. A. M. Burden. Aeronautical Eng R 6:25 Mr '47
Engines for light aircraft. D. S. King. il diags S A E J 55:53-5 Ag '47
European lightplanes follow principal American trends. il Aviation N 6:18+ D 16 '46
Flame-resistant materials are urged for lightplane use. A. McSurely. il Aviation N 7:22-3 F 17 '47
Flying Station Wagon developed by Vultee. Barron's 27:4 Ap 21 '47
Fokker producing personal four-placer. diag Aviation 45:72 N '46
Fuel injection for lightplanes. G. H. Tweney. il diags Aero Digest 55:54-6+ S '47
Gemini invades U.S. small plane market; British twin-engine four-placer. A. E. Smyser, jr. il Aviation W 47:33-4 O 6 '47
Higher performance is quoted for Aeronca Chum. il Aviation N 6:14 N 25 '46
Industry and CAA to confer on personal plane research. W. A. M. Burden. CAA J 8:25-6 Mr 15 '47
Industry watching tests of Cloudster. S. Bangs. Aviation N 7:12 Ja 20 '47
Latest private wings; illustrations with text. Aviation 46:62 Je '47
Light plane industry. Bsns W p22 Jl 5 '47
Lightplane JATO seen in rocket design. diags Aviation W 47:21-2 S 22 '47
Lightplane leaders are optimistic despite seasonal market slump. A. McSurely. Aviation N 6:23-4 D 2 '46
Light-plane market slumps. Bsns W p36+ Je 7 '47
Lightplane production reached $88,000,000 peak during 1946. Aviation N 7:12 Ja 27 '47
Light planes face the future. il Bsns W p44+ D 7 '46
Lightplanes to benefit from new data; survey shows research studies now ready. bibliog il Aviation W 47:26-7 Jl 21 '47
Lightplanes, today and beyond. W. T. Piper. Aero Digest 54:55+ Ja '47
Losses make insurance companies leave personal plane market. S. Altschul. Aviation W 47:18 O 6 '47
Low-priced props for low-priced planes; abstracts of two papers. J. F. Haines. diags S A E J 55:44-7 Je '47
Lower price planes, flying auto studied at Detroit IAS personal aircraft meeting. Aviation N 7:16-17 Je 2 '47
Mooney prototype has fast climb. il Aviation W 47:13 Jl 28 '47
New British Sprite has noise mufflers. Aviation W 47:35 Jl 28 '47
New Cessna models add sales points. il Aviation N 7:22 Ja 27 '47
New crosswind landing gears of caster type developed for personal planes. A. Walker. il Automotive & Aviation Ind 96:40-2+ Ap 15 '47
New four-place Cessna models offer range, power, and load. il Aviation N 7:14-15 My 12 '47
New Luscombe four-placer designed for room, utility. A. McSurely. il Aviation W 47:43-4 Ag 11 '47
New personal four-placers announced by Cessna. il Aviation 46:61 Je '47
New price tags set for Temco Swifts. Aviation W 47:13 Jl 7 '47
New Wichita firm takes Culver plane sponsorship. Aviation W 47:37 Jl 28 '47
1947 annual directory of personal aircraft; illustrations, miniature plans and brief descriptions. Aero Digest 54:56-8+ Ja '47
Novel four-place Satellite readied in Britain. diags Aviation 46:73 My '47
Optimistic lightplane outlook stimulated shaky financing. Aviation N 7:20 Ap 21 '47
Personal airplane, its market, design and utility. P. Altman. Automotive & Aviation Ind 95:22-31 N 15; 26-32 D 1 '46
Personal-plane aid program. W. A. M. Burden. CAA J 8:49+ My 15 '47
Personal plane manufacturers tighten belts against dim future. A. McSurely. Aviation W 47:36+ Ag 4 '47
Personal plane progress; highlights from the I.A.S. Detroit meeting, May 26-27. R. Upson. Aeronautical Eng R 6:18-27+ Jl '47

AIRPLANES, Light—*Continued*
Powerplant requirements for personal aircraft. P. Altman. S A E J 55:56-7+ Ag '47
Price drop for personal planes by 1955. T. P. Wright. Aviation W 47:34 S 22 '47
Profit possibilities in lightplane market future. T. C. Ryan. Aviation W 47:14-15 S 29 '47
Ryan and Temco purchase Navion, Swift lightplanes. A. McSurely. Aviation N 7:9-10 Je 30 '47
Sales resistance to lightplanes reflected in stock price declines. Aviation N 6:36 N 18 '46
Silent Sprite; all-magnesium structure personal plane. il Aviation N 7:20 Je 9 '47
Simple structure features Trojan. il Aviation N 7:23 Ja 13 '47
SAE national personal aircraft meeting, Wichita, May 1-2. S A E J 55:29-32+ Je '47
SAE personal aircraft meeting, Wichita; abstracts of papers. Automotive & Aviation Ind 96:31+ Je 1 '47
Stinson producing new utility plane. Aviation N 7:21 Ap 14 '47
Stinson reveals 1947 Voyager. il Aviation 45: 68 N '46
Swedes market Safir lightplane. il Aviation N 7:14 Ja 20 '47
TEMCO seen as major factor in personal plane field. il Aviation W 47:21 Jl 28 '47
Utility in lightplane hangars. K. E. Van Scoy. il Aero Digest 53:63+ N '46
Waco Aristocraft. il Aero Digest 53:59+ D '46
Who'll sell all these light planes; W. T. Piper. E. W. Davidson, comp. Sales Management 57:105 D 1 '46

Automobile combinations

Home-made roadable readied by Los Angeles inventors; designed by S. D. Whitaker and D. D. Zuck. il Aviation 46:64-5 F '47
Roadable plane or flying auto? Airphibian; illustrations with text. Automotive & Aviation Ind 95:25 D 15 '46
Second Fulton Airphibian preparing for CAA tests. A. McSurely. il Aviation N 7:12-13 My 5 '47
Two new roadable planes renew attack on old problem. A. McSurely. il Aviation N 6:15-16 N 18 '46

Control

Lightplane controls. il diags Aero Digest 54: 62-5+ Mr '47
Two control plane is simple yet safe. J. M. Gwinn, jr. S A E J 54:108-9 N '46

Cost of operation

Cessna offers business man savings on personal flights. Aviation N 7:20 Je 23 '47
Flying for business; Bonanza. il Sci Am 176. 76 F '47

Design

Dallas firm grooms four-seater; Weatherly-Campbell Colt. il diags Aviation 45:69 N '46
Design description of the NAvion; abstract. S. G. Hellman and E. Schmued. S A E J 55:65 My '47
French lightplane designs compared. il Aviation W 47:46 O 13 '47
Light plane design criteria. B. F. Raynes. S A E J 54:108-9 N '46
Lightplane race offers new field for design tests. R. McLarren. il Aviation W 47:13-14 S 8 '47
Luscombe re-design cuts costs. A. McSurely. il diags Aviation W 47:22-4 S 1 '47
North American Navion. il diags Aero Digest 53:84-6, 89, 122, 153 D '46
Personal aircraft needs. T. P. Wright. CAA J 8:109+ O 15 '47
Safety features built into new design of Waco Aristocraft. il Aviation N 7:19-20 Mr 24 '47
Simplified structures for low cost airplanes; abstract. A. F. Boyajian. il S A E J 55:65 Mr '47
Simplifying personal plane design. R. H. Upson. Aviation 45:55-9 Je; 71-5+ Ag '46; 46: 62-5 My '47
Stall-resistant craft seen through new design data. Aviation W 47:24 S 15 '47

AIRPLANES, Military
Aviation's 1947 yearbook; American and foreign airplanes; brief descriptions and illustrations. Aviation 46:96-8+ Mr '47
Congress may relent on economy and build national defense with military plane orders. Barron's 27:31 Jl 14 '47
Consolidated Vultee all-metal liaison plane. diags Aeronautical Eng R 6:39 Ja '47
Consolidated Vultee B-36. Aeronautical Eng R 6:38 Ja '47
Convair model L-13 has folding wings. il Aviation N 6:25 D 2 '46
Five aircraft makers now leading procurement race. B. Ravits and R. P. Cooke. Barron's 27:31-2 S 29 '47
Future trends in aviation. C. C. Furnas. Am Pet Inst Proc 26(3):97-8 '46
How new Douglas Skystreak will probe the transonic. il diag Aviation 46:54-6 My '47
Naval aircraft and carrier equipment. L. Boddington. il diags Roy Aeronautical Soc J 51: 800-26; Discussion. 826-31 O '47
Naval needs; problems of naval aviation confronting the aeronautical engineer. L. C. Stevens. Aeronautical Eng R 6:22-3 F '47
Navy planes, today and beyond. A. W. Radford. Aero Digest 54:96+ Ja '47
Research aircraft. P. B. Klein. il diag Mech Eng 69:813-19 O '47
Special generator for the Flying Fortress; counter-radar apparatus. J. H. Walker and A. T. Stretton. il diags Engineer 182:413-14 N 8 '46

See also
Guns, Aircraft

Conversion

CAA certificates converted Curtiss Commando for cargo. W. Kroger. Aviation N 7:23 F 3 '47

Design

Design and development of the Douglas XB-42. C. Wood. plans diags Aeronautical Eng R 6:22-9 Ja '47; Same. Aviation 46:37-42 F '47
Design details of the Northrop XB-35; illustrations with text. S. Bangs. Aviation 46: 37-41 Ap '47
Design development of the McDonnell FD-1 Phantom. K. Perkins. il diags Aviation 45: 40-8 N '46
Design turned the trick; Lockheed P2V Truculent Turtle. T. D. Davies and H. L. Hanson. il Aviation 46:70-1 Ja '47
Designed-in maintenance ease keynoted in Douglas AD-1; Skyraider. W. L. Whittier. diags Aviation 46:78-80 Ap '47
Development of all-wing aircraft. J. K. Northrop. il diags Roy Aeronautical Soc J 51: 481-509 Je '47; Same cond. Engineering 164: 36, 45-8 Jl 11 '47; Abstract. Automotive Ind 97:36-7+ S 15 '47
Development of the Spitfire and Seafire. J. Smith. il diags Roy Aeronautical Soc J 51: 339-75; Discussion. 376-83 Ap '47
History and development of the B-29. E. C. Wells. il S A E J 55:40-2+ Ja '47
Hughes XF-11 to test photo plane worth. il Aviation W 47:23-4+ O 13 '47
Searching drag studies check speed impeders. diags Aviation 46:77-8 My; 64-5 Je '47; [cont as] Aviation W 47:29 Jl 28; 25 Ag 18; 40 S 8; 26 S 15; 25 S 22; 26 O 6 '47
Survey of the technical problems of the design of naval aircraft. W. S. Farren. il(p845-9) Roy Aeronautical Soc J 51:787-96; Discussion. 796-9, 850-62 O '47

Maintenance and repair

Urge civilian work for service planes. C. C. Moseley and R. C. Stunkel. Aviation W 47: 14 O 27 '47

Manufacture

Airframe production. E. Mensforth. Inst Mech Eng J & Proc 156:Proc24-38 Je '47
New expediting techniques proved in XB-48 production. I. Stone. il diag Aviation W 47:26+ S 8 '47

Rescue equipment

Escape method developed for Douglas D-558 Skystreak. R. C. Donovan. il diags Aviation W 47:34+ S 8 '47

AIRPLANES, Military—*Continued*

Storage

Cocooning; Army air forces' packaging technique protects whole B-29 bombers. il Mod Packaging 20:112-13 My '47

Testing

AAF begins tests with Bell XS-1. Aviation W 47:12 Ag 18 '47

Florida's new air laboratory at Eglin field. Manuf Rec 116:53 F '47

Muroc, flight-test mecca. I. F. Angstadt. il Aero Digest 55:60+ Jl '47

Recording test data on North American B-45; illustrations with text. Aviation W 47:24-5 Ag 11 '47

Germany

German rocket aircraft and their powerplants. R. A. Cole. il S A E J 54:74 N '46

Review of some German developments in airplane anti-icing. M. Tribus. bibliog diags A S M E Trans 69:505-7 Jl '47

Great Britain

Aeronautics in 1946. il Engineer 183:10-12, supp3 Ja 3 '47

British test new jet fighter; SARO flying boat. il Aviation W 47:27 Ag 25 '47

Development of the Goblin engine. E. S. Moult. il diags Roy Aeronautical Soc J 51: 655-78; Discussion. 678-85 Ag '47

Development of the Spitfire and Seafire. J. Smith. il diags Roy Aeronautical Soc J 51: 399-75; Discussion. 376-83 Ap '47

Jet-propelled flying boat fighter; Saunders-Roe A1. il Engineer 184:124 Ag 8 '47; Engineering 164:132, 140 Ag 8 '47; Mech Eng 69:853-4 O '47

Lincoln II bomber with propeller turbine engines. il diag Engineer 183:515-17 Je 13 '47

Tropical tests of Fairey Firefly Mk. IV aircraft. Engineering 162:436 N 8 '46

Vampire flown with Nene engine. il Aviation N 7:16 Je 23 '47

Russia

Evaluating Russian aircraft engines. P. H. Wilkinson. il Aviation W 47:24+ Jl 28 '47

United States

Aero digest's 1947 chart of U.S. warplanes; with illustrations. Aero Digest 54:98-103 Ja '47

Aircraft production and other statistics; tables and charts. Automotive & Aviation Ind 96:116-21 Mr 21 '47

AAF developing 500 mph. multi-jet bomber fleet. il Aviation N 7:7-8 Ap 14 '47

AAF generals hail B-50 as new standard superbomber. il Aviation W 47:13 Jl 14 '47

AAF is pondering new bomber rules. Aviation W 47:15 Jl 7 '47

AAF reveals more details on XB-36. Aviation N 6:12 N 18 '46

AAF unveils new XP-87 fighter. il Aviation W 47:11-12 S 15 '47

Army and navy distance flights. maps Aero Digest 53:59 N '46

Army planes, today and beyond. N. F. Twining. Aero Digest 54:95+ Ja '47

Better air and ground handling attained in North American XFJ-1; navy's jet fighter. il Aviation W 47:35 Jl 7 '47

Boeing reveals detail of army liaison plane. il Aviation N 7:21 Ja 20 '47

Boeing Stratojet bomber heralds transonic combat. il Aviation W 47:14-15 S 22 '47

Chance Vought anniversary. il Aero Digest 54:24+ Je '47

Consolidated B-36 bomber. il Aero Digest 54: 35 F '47

Convair producing all-metal L-13 liaison. il Aviation 46:66 Ja '47

Convair redesigns B-36 for AAF production order. il Aviation N 7:13-14 Je 23 '47

Cyclone 18 performance. S. J. Kent. S A E J 54:52-4+ N '46

Design and development of the Douglas XB-42. C. Wood. plans diags Aeronautical Eng R 6:22-9 Ja '47; Same. Aviation 46:37-42 F '47

Design development of the McDonnell FD-1 Phantom. K. Perkins. il diags Aviation 45: 40-8 N '46

Development of naval aircraft. L. C. Stevens. il S A E J 55:30-1+ My '47

Fleetwings navy bomber revealed. il Aviation 46:74 My '47

Flying wing, jet bomber completed; Northrop YB-49. il Aviation W 47:14 O 13 '47

History and development of the B-29. E. C. Wells. il S A E J 55:40-2+ Ja '47

Hughes XF-11 to test photo plane worth. il Aviation W 47:23-4+ O 13 '47

L-15A for army ground forces. il Aero Digest 54:45 Mr '47

McDonnell Banshee is tested by navy. il Aviation N 7:9 My 26 '47

McDonnell Banshee XF2D-1. il Aero Digest 55:71+ Jl '47

Martin proving six-jet XB-48. il Aviation 46: 60 Je '47; Mech Eng 69:598-9 Jl '47

Martin unveils new jet bomber, XB-48. il Aviation N 7:11 Ap 28 '47

Mustangs set flight records. il Aero Digest 54:46 Ap '47

Navy develops two new jets; Ryan XF2R-1 and Curtiss-Wright XF15C-1. il Aviation N 7:8 Ja 20 '47

Navy reveals two new jet fighters; North American XFJ-1 and Chance Vought XF6U-1. il Aviation N 6:9 N 25 '46

Navy sets speed record of 650 mph. with Douglas D-558. il Aviation W 47:10 S 1 '47

New AAF-Bell helicopter flying; XR-12 military version of model 42. il Aviation W 47: 15 Ag 25 '47

New AAF jet-rocket fighters designed for supersonic speeds. Aviation W 47:11-12 Jl 21 '47

New Jato boost for jet bombers. il Aviation W 47:13 S 1 '47

New jet bomber employs high-pressure pneumatics; XB-46. il Machine Design 19: 133 Ag '47

New Lockheed Shooting Star cracks world's speed record. Aviation N 7:3-4 Je 30 '47

North American develops new navy trainer; XSN2J-1. il diags Aviation 46:71 Ap '47

North American jet bomber XB-45 flies at Muroc. il Aviation N 7:8 Mr 24 '47; Aviation 46:71 My '47

North American XFJ-1. il Aero Digest 54: 52 F '47

North American XFJ-1 and Vought XF6U-1 new all-jet fighters join navy's air arm; illustrations with text. Aviation 46:65 Ja '47

Powerplants for air leadership. G. W. Vaughan. Aero Digest 55:34-5 O '47

RMI'S rocket engine which powers supersonic XS-1. J. Shesta. flow diag il diag Aviation 46:44-6 Ja '47

Ryan FR-1 Fireball; composite-powered aircraft. B. T. Salmon. il Aero Digest 54:66-8+ Mr '47

Ryan presents the XF2R-1. il diags Aero Digest 54:51 F '47

Speedy combat servicing designed into Republic Thunderjet; illustrations with text. Aviation 46:59 Je '47

Swept wing XP-86 readied for flight. il Aviation W 47:14 O 6 '47

Twin Mustang sets new fighter pace. il Aviation N 7:8 Mr 10 '47

Two jet bombers revealed by services; Northrop's YB-49 and Martin's XP4M-1. Aviation N 7:8 F 24 '47

U.S. sells armed planes abroad. Aviation W 47:14 Ag 25 '47

AIRPLANES, Military transport

Lockheed Constitution. il Aero Digest 55:74+ O '47

AIRPLANES, Roadable. See Airplanes, Light—Automobile combinations

AIRPLANES, Salesmen's

How Socony's flying sales force functions. E. Kinney. il Sales Management 58:85-6 Ap 1 '47

AIRPLANES, Training

Belgium offers new Tipsy Junior; wood-fabric trainer. il diags Aviation W 47:29 Ag 25 '47

Boulton Paul advanced trainer aircraft. il Engineer 184:148-9 Ag 15 '47

Cub successor, PA-11. il Aviation N 7:22 My 19 '47

Fairey Firefly high-speed trainer. Engineering 162:396 O 25 '46

AIRPLANES, Training—*Continued*
Fokker completing new trainer. il Aviation W 47:22 Ag 11 '47
New training types for service schools. Aviation W 47:15 Ag 11 '47
North American develops new navy trainer; XSN2J-1. il diags Aviation 46:71 Ap '47

AIRPLANES in agriculture
Flying farmers log 247 hours per year. Aviation W 47:43 O 13 '47
Flying farmers view planes with eye to rural utility; second annual convention of the Flying farmers association. il Aviation W 47:38 Ag 25 '47
National flying farmers assn. 2d annual convention, Stillwater, Okla. Aviation W 47:39 Ag 4 '47
Production Flying farm wagon. il Aviation N 7:17 My 26 '47
Wings for farms. il Bsns W p20 Mr 22 '47
See also
Airplanes in forestry
Airplanes in insect control

AIRPLANES in business
Company wings. il Manuf Rec 116:38-9+ F '47
Executive planes lead the way. F. M. Reck. il map Aero Digest 54:38-41+ F '47
How businessmen use small planes on the job. Sales Management 58:79 My 1 '47
I make more calls, save time, in the air, on the land; traveling by airplane equipped with midget motorcycle. O. Brower, 3d. il Paper Tr J 125:20 O 2 '47
Is there a plane in your future? new problems for safety engineers. J. M. Chase. Nat Safety N 56:18-19+ Jl '47
New Ohio carrier caters to industry; Executive Airlines sells time on contract basis. il Aviation N 6:12 D 30 '46

AIRPLANES in forestry
Helicopters in woods operations. K. Hay-Roe. il Pulp & Pa of Can 48:80+ Mr '47
U.S. eyes aerial spraying, seeding. C. Adams. Aviation N 7:15 Mr 3 '47
See also
Forest fire patrol, Aerial

AIRPLANES in insect control
Bell helicopters dust locusts in Argentina. Aviation W 47:35 S 22 '47
Effects of DDT mosquito larviciding on wildlife; effects of routine airplane larviciding on bird and mammal populations. A. B. Erickson. Pub Health Rep 62:1254-62 Ag 29 '47
High-power dusters operated in Idaho. il Aviation W 47:51 Jl 21 '47
Modern chemistry controls forest insect outbreak. D. S. Hoffman and R. H. Forbes. il Chem & Eng N 25:2499-500 S 1 '47
Operators contract to spray forest. Aviation N 7:22-3 My 19 '47

AIRPLANES in mining
Air-borne magnetometers for search and survey. E. P. Felch and others. il diags Elec Eng 66:680-5 Jl '47
Mining geophysics; airborne magnetometer; review of 1946. H. Lundberg. il diag Min & Met 28:94-5 F '47

AIRPLANES in newspaper service
Paper chases news with Bell 'copter; Oregon journal, Portland. il Aviation N 7:32 My 19 '47
Real wings for the News Hawk. W. E. Corfield. il Aero Digest 54:50+ Ap '47

AIRPLANES in patrol work. See Air patrols

AIRPLANES in selling
Atlas Sky merchant pioneers aviation line at 800 Airports. il Sales Management 57: 43 D 1 '46
Finds selling farmers by air expeditious; C. R. Waggoner, life insurance agent. Nat Underw (Life ed) 51:8 My 2 '47
How Socony's flying sales force functions. E. Kinney. il Sales Management 58:85-6 Ap 1 '47
Sky Merchant in Latin America; converted C-54 refitted for sales promotion tours. E. E. Aldrin. il Aero Digest 55:26-7+ S '47

AIRPLANES in the petroleum industry
Airborne magnetometer surveys of Bahamas soon to start. W. W. Burns. il diag Oil & Gas J 45:92-3 Ap 26 '47
Record use of aircraft features Arabian American operations. Oil & Gas J 46:47 Ag 2 '47

AIRPORT buildings
Airport basic research; Architectural Record's building types study. il maps plans diags Arch Rec 101:101-24 Ap '47
Airport terminal buildings. plans Aero Digest 55:78 Ag '47
Color dynamics in aviation. H. Quinn. il Aero Digest 55:88+ O '47
See also
Hangars

AIRPORT public and property damage liability insurance. See Insurance, Airport public and property damage liability

AIRPORTS
Airport basic research; Architectural Record's building types study. il maps plans diags Arch Rec 101:101-24 Ap '47
Airport honky-tonk. Fortune 36:120 S '47
Airport needs worrying city fathers; abstract. O. J. Porter. Roads & Sts 89:80-1 O '46
Airport total grows; tabulation by states. CAA J 8:67 Je 15 '47
Airports by class and by type, by states, Jan. 1, 1947; number of U.S. airports and landing fields, 1937-1946; tabulations and chart. Automotive & Aviation Ind 96:122-3 Mr 15 '47
Airports, municipal airport and terminal financing, and the future of the airlines. J. D. McGoldrick. Air Transport 5:36-7 Mr '47
Application of aerial strip photography to highway and airport engineering. J. E. Hittle. il Roads & Bridges 85:86-90+ My '47
Embry-Riddle network uses diversified base operations; ground and flight schools, seaplane base, maintenance depot, surplus agency and hotel. A. McSurely. il Aviation N 7:11-12 F 10 '47
Every airport counts. H. S. Vandenberg. Aero Digest 55:26-7 Ag '47
Expanded Teterboro airport offers major base services. A. E. Smyser, jr. il Aviation W 47:37+ S 15 '47
Experts discuss airport construction, operation and maintenance. il Civil Eng 17:189-92 Ap '47
464 airports added to U.S. total during 1946; tabulated by states. CAA J 8:28 Mr 15 '47
Modern airports depend on technical skill of engineer for safety, adequacy and economy. A. J. Ryan. il Civil Eng 17:246-9 My '47
New, inexpensive airport marker system devised for small fields by CAA engineer, Clyde Carlstrand. il CAA J 8:41 Ap 15 '47
Sell the public on airports; National airport show & institute. F. C. Crawford. Aero Digest 55:40-1 Ag '47
See also
Aviation landing stations
Seaplane bases

Bibliography
Highway and airport digest. Published in monthly numbers of Public works

Construction
Airport fill on soft bottom controlled to avoid mud waves; San Francisco municipal airport. il plan Eng N 138:104-7 Ja 23 '47
80-wagon fleet moves million yards per month; private haul road feature of airport job at San Francisco. H. J. McKeever. il map Roads & Sts 90:62-8 F '47
PRA builds Panama airport. il map Eng N 138:957-8 Je 12 '47
With Brewster's paving outfit on Wilkes-Barre-Scranton airport. il Roads & Sts 90: 45-8 Ap '47

Cost
Baltimore airport runways; unit prices. Eng N 138:1035 Je 26 '47
Grading at municipal airport, Idlewild, New York; unit prices. Eng N 137:747+ N 28 '46

AIRPORTS—Cost—*Continued*
Improvements at Toledo municipal airport, Ohio; unit prices. Eng N 139:349 S 4 '47
Taxiway at Logan airport, Boston; unit prices. Eng N 138:901 My 29 '47

Design

Establishing an airport planning program. il plans diags Arch Rec 102:90-9 O '47
Evansville community airport program sets a pattern. il plans Aero Digest 53:48-52 D '46
Phoenix plans a new airport. J. Girand. il Eng N 137:646-7 N 14 '46
Planning and engineering of airports. C. Froesch. maps diag S A E J 55:33-6 Je '47
Planning the airport site. A. J. Bone. bibliog plans diags Boston Soc C E J 34:215-50 Jl '47

Directories

Airport directory. 11th ed 440p pa $3 Haire publishing co, 1170 Broadway, New York 1 '46

Drainage

Combination airport drain proves its value; Ellington field, Texas. J. M. Robertson. il plan diag Eng N 139:268-9 Ag 21 '47
Drainage of airport surfaces; some basic design considerations. S. W. Jens. diags Am Soc C E Proc 73:983-1007 S '47
Sand drains for LaGuardia field. il Eng N 139:291 Ag 28 '47

Employees

Jobs and the airport program. H. B. Byer. il Aero Digest 55:28-9+ Ag '47

Equipment

Airborne or earthbound; airline ground equipment; should it clutter up the ramp or be flown. P. Macartney. il Air Transport 5:48-51 Ja '47
Check that air compressor! F. V. Faulhaber. il Aero Digest 53:60+ N '46
Diesels help land airplanes. il Diesel Power 25:80-2 Ag '47
Jeep refueler speedy and economical. il Aviation 46:97 Je '47
Mobile refueler for small airports. il Automotive & Aviation Ind 95:46 D 15 '46
Realistic approach to location of airport fueling docks urged. H. O. Olson. Nat Pet N 38:30 D 18 '46
Reducing the maze of ground-service units. W. L. Flinn. il diags Air Transport 5:29-32 My '47

Federal aid

Airport program muddle. K. K. Hoyt. Aero Digest 55:25+ Ag '47
Airports; a new national investment. il Eng N 138:295-7 F 20 '47
Big cities battle for lion's share of Federal airport program; CAA hearings. A. McSurely. Aviation N 6:7-9 N 11 '46
Cities assured ownership of ports under federal aid. C. B. Donaldson. CAA J 7:149+ D 15 '46
CAA airport plan lists 4,431 fields. Aviation N 7:26 F 17 '47
CAA airport program to spend $71,591,865 on 800 fields; with tabulated breakdown by states. W. Kroger. Aviation N 7:13-14 Ja 13 '47
CAA regulations for airport aid set in final form. CAA J 8:7 Ja 15 '47
Congressional committees urge airport fund diversion to safety. Aviation N 7:9 F 24 '47
Exclusive airport franchise opposed in CAA fund pact. W. Kroger. Aviation W 47:44-5 Jl 21 '47
Federal airport act; proposed regulations. W. R. Macatee. Roads & Sts 89:95-6+ N '46
Idaho airport first to reach building stage in seven-year federal-aid airport program. CAA J 8:72 Je 15 '47
Jobs and the airport program. H. B. Byer. il Aero Digest 55:28-9+ Ag '47
New airport program allots $137 million for 896 projects. Eng N 139:285 Ag 28 '47
Speedy local financing is key to airport construction. W. Kroger. Aviation N 7:7-8 Ja 20 '47
Symposium on the airport program. Aero Digest 55:38-9 Ag '47
31 airports get go ahead sign in $77,500,000 federal-aid program. CAA J 8:101+ S 15 '47
Where the airport funds will go; map. Bsns W p44 D 7 '46
Wright defends red tape on aid funds. Aviation W 47:13 O 27 '47

Fees

Southwest solves landing fee problem. il Aviation N 6:28 D 9 '46

Finance

Airports set revenue record. Eng N 139:136 Jl 24 '47
Expenditures for road, bridge and airport construction in Canada, 1945. Roads & Bridges 85:46-7 Ja '47
National airport books show six-year income of 3½ million dollars. CAA J 8:113 O 15 '47

See also
Airports—Federal aid

Fires and fire protection

Cardox airport fire truck. il Aero Digest 55:87 O '47
Guard your airport investment with specialized fire equipment. il Aviation 45:113-14+ N '46
Hangar fires of 1946. il Aero Digest 54:40-1+ Ap '47
Stop that aviation fire; better protection needed at most airports; ground crew training for crashes and rescues. il diag Air Transport 5:28-34 Ja '47

Insurance requirements

Airport liability; writing the airport operator. J. S. Rowland. Rough Notes 90:24-5 Jl '47
Insuring an airport's liability. plan Rough Notes 90:50 Mr '47
Liability of municipalities; airports. Rough Notes 89:46-8 N '46

Law

Airports before the bench. H. G. Hotchkiss. Aero Digest 55:37+ Ag '47
Protecting your airport investment; zoning regulations and procedures, with special reference to New York state. J. C. Federick. plan Pub Works 78:24-6+ Jl '47

Lighting

Airport-approach light system. Mech Eng 69: 497-8 Je '47
All-weather airport approach lighting system. il diag Engineer 184:17-18 Jl 4 '47; Aero Digest 55:60+ Ag '47
Device uses radio to light airport. Aviation W 47:48 Jl 14 '47
Flash; the signal for all-weather flying. il Bsns W p21 My 3 '47
General Electric taxi track light. il Electrician 137:1074 O 18 '46
High intensity contact lighting at London airport. Engineer 184:299-300 S 26 '47
High-intensity lights insure runway safety. Weekly Underw 156:73 Ja 4 '47
Large-scale attack on airport lighting problem under way. B. Stubblefield. Aviation N 7:10 Mr 10 '47
Man made lighting will increase airport safety during fogs. il Iron Age 159:137 My 22 '47
Manufacturers offering high intensity lights for airports. Elec World 127:89 Mr 15 '47
Navy gets bright lights and safe landings; Moffett field. il Elec West 98:75-6 My '47
New airport markers pioneered by Minnesota. il Aviation W 47:51 S 8 '47
New lights for the runway. il diag Aero Digest 53:64 N '46
Newark light tests favor single lane. Aviation N 7:8-9 My 5 '47
Small airport can be lighted at cost of $2,600, CAA experiment shows. il CAA J 8:3 Ja 15 '47; Abstract. Roads & Sts 90:68 F '47
Westinghouse all-weather approach light system. il Automotive Ind 97:58+ Jl 15 '47; Same. Elec Eng 66:937 S '47

Location

Planning the airport site. A. J. Bone. bibliog plans diags Boston Soc C E J 34:215-50 Jl '47

AIRPORTS—*Continued*

Management

Accurate books, good credit rating, key to airport operations; C. C. Moseley, owner of Grand Central airport, offers advice. Aviation N 7:16 My 12 '47

Aviation group move to push better airports operations; National aviation trades association, Aircraft owners' and pilots association, and National aeronautic association. A. McSurely. Aviation W 47:35 N 3 '47

Brief for the airport manager. A. M. Weir. il Aero Digest 54:63+ My '47

Operator and his state ATA. C. A. Parker. il Aero Digest 55:70+ O '47

Municipal airports

See Airports, Municipal

Noise

Beating the airport noise bogey. F. R. Brine. Aviation 45:121-2 N '46

Runways

Adoption of cross-wind gear may revise airport program. B. Stubblefield. Aviation N 7:13-14 Je 2 '47

Airfield for small planes inexpensively paved with mixed-in-place sand-asphalt emulsion. M. T. Decker. il Roads & Sts 90:83-4+ Je '47

AAF's proving ground airport. il diag Roads & Sts 89:65-70 O '46

CAA shifts its airport emphasis. plan Aviation W 47:48 Jl 21 '47

Compacting of soil by rolling and vibration. il Engineering 164:1-6 Jl 4 '47

50,000 cu.yd. daily for Baltimore airport. il plan diag Eng N 139:532-5 O 16 '47

Modern stabilization methods; soil-cement placement on Texas airfield. il Roads & Sts 89:64-7+ D '46

New formulas for stresses in concrete pavements of airfields. H. M. Westergaard. bibliog Am Soc C E Proc 73:687-701 My '47

Pavement evolution at March field. E. Koehm. il Eng N 139:122-5 Jl 24 '47

Paving for the B-36; Patterson field, Ohio. il diags Roads & Sts 90:55-9+ Ag '47

Putting soils knowledge to work on airfield runways. E. E. Seelye. il diags Eng N 138:722-7 My 1 '47

Runway construction at London airport. il plan Eng N 138:56-60 Ja 9 '47

Short runways pose problem for new twin-engine planes. Aviation N 7:25 Je 23 '47

Soil compaction essential to good paving results. A. O. Williamson. il Roads & Bridges 85:95-6+ Ap '47; Same. Roads & Sts 90:84+ My '47

Soil compaction experiments point way toward stronger, more economical subgrades. W. D. Curtis. il Civil Eng 17:390-3 Jl '47

Studies determine proper construction procedures in permafrost areas. il Civil Eng 17:387-9 Jl '47

Subgrade moisture conditions beneath highway and airfield pavements. M. S. Kersten. Roads & Sts 89:94+ O '46

University of Illinois students learn to fly at first concrete college airport. il plans diags Concrete 54:3-5+ D '46

Vibratory and impact methods for compaction of soils. G. P. Tschebotarioff. bibliog il Roads & Bridges 84:65-6+ D '46

Snow protection and removal

Airport snow removal; device operates like a gigantic flatiron. Heat & Ven 44:108+ O '47

Airport snow removal with heat. G. B. Coffey. il Heating-Piping 19:79 Mr '47

Clearing airports by new snow plowing method. J. R. Shannon. il Roads & Sts 90:87-9+ Jl '47; Same. Roads & Bridges 85:95-6+ Ap '47

Surfaces

Design of asphalt surfaces. B. E. Gray. plan diags Aero Digest 55:46-7+ Ag '47

Surfaces, Grass

Grass sowing under film of bitumen emulsion; abstracts. H. W. Jarvis. Pub Works 78:31 Ag '47; Eng N 139:523 O 16 '47

Traffic control

Air track flight control for New York. A. E. Blomquist. plan diags Air Transport 5:40-3 Jl '47

CAA developing recording device for radar signal. CAA J 8:40 Ap 15 '47

GCA in the control tower. il Aero Digest 55:65+ S '47

Integrated landing aids. R. D. Kelly and R. L. Champion. il plan S A E J 55:40-3 Je '47

Radar traffic control system developed at all-weather center. R. B. Hotz. il Aviation N 7:26-7 F 3 '47

Segmented circle markers to aid pilots landing at strange fields. il CAA J 8:120 O 15 '47

Three big airports to be test sites for use of radar as control aid. diags CAA J 7:151 D 15 '46

Traffic control towers

AAF control tower for flying safety. il Safety Eng 93:26 My '47

CAA control towers equipped to guard vhf radio channel for private pilot use. CAA J 8:43 Ap 15 '47

Chicago

Chicago gets approval for work on Douglas airport. Eng N 139:224 Ag 14 '47

Connecticut

Connecticut's Bradley field. map Aero Digest 54:57 Ap '47

Fort Worth, Texas

Community profit accrues from airport. Aviation N 7:16 Ap 7 '47

Ireland

Customs-free port established at Shannon airport. For Comm W 27:15, 28 Je 7 '47

London

Air transport and the London plan. Engineering 162:405 O 25 '46

London airport. maps Engineer 183:152-3 F 7 '47

Runway construction at London airport. il plan Eng N 138:56-60 Ja 9 '47

Marseilles, France

Marseille is on way to being big airport center. For Comm W 26:28 F 8 '47

New York (city)

Air track flight control for New York. A. E. Blomquist. plan diags Air Transport 5:40-3 Jl '47

Air transportation begins on the ground; New York survey of how transit to and from airports needs new development. O. H. Ehrlich. Mass Transportation 42:528-9 D '46

Father Knickerbocker looks ahead; Diesel-powered equipment in construction of Idlewild airport; illustrations. Diesel Power 25:88-91 Ja '47

Hervey Law heads New York airports. Aviation N 7:9-10 Je 23 '47

New York airport problem clearing. Aviation W 47:14 Ag 4 '47

N.Y. airport snarl unravels as Port authority gets leases. Aviation N 7:10 Ap 28 '47

New York considers major proposals for easing increasing air-traffic jam. plan diags Eng N 138:10-11 Ja 2 '47

New York favors turning over airports to Port authority for rehabilitation. Eng N 138:490 Ap 3 '47

N.Y. port body reveals airport plans. Eng N 138:852 My 22 '47

Plan for New York's airports. map Bsns W p39+ Ap 26 '47

Two variations on a theme; plans for Idlewild. il plans Arch Rec 101:22-3 F '47

New York (state)

Protecting your airport investment; zoning regulations and procedures, with special reference to New York state. J. C. Federick. plan Pub Works 78:24-6+ Jl '47

AIRPORTS—*Continued*

Panama

PRA builds Panama airport. il map Eng N 138:957-8 Je 12 '47

Republic of Panama's new super-airport officially opened to commercial traffic. For Comm W 28:32 Jl 12 '47

Phoenix, Arizona

Phoenix plans a new airport. J. Girand. il Eng N 137:646-7 N 14 '46

Rye, New York

Westchester's airport problem simplified through leasehold. A. E. Smyser, jr. il Aviation W 47:37-8 O 13 '47

San Francisco

Airport fill on soft bottom controlled to avoid mud waves; San Francisco municipal airport. il plan Eng N 138:104-7 Ja 23 '47

Switzerland

L'aéroport international de Bâle-Mulhouse. map Génie Civil 124:57-8 F 1 '47

Tulsa

Tulsa airport; a case history. C. W. Short, jr. il Aero Digest 55:42-3+ Ag '47

Washington, D.C.

National airport books show six-year income of 3½ million dollars. CAA J 8:113 O 15 '47

Washington airport's 1947 cost is $32,000. Aviation W 47:51 O 6 '47

AIRPORTS, College

University of Illinois students learn to fly at first concrete college airport. il plans diags Concrete 54:3-5+ D '46

AIRPORTS, County

NAPA county airport. plan Aero Digest 54: 42 Mr '47

Westchester's airport problem simplified through leasehold. A. E. Smyser, jr. il Aviation W 47:37-8 O 13 '47

AIRPORTS, Military

AAF's proving ground airport. il diag Roads & Sts 89:65-70 O '46

Pavement evolution at March field. E. Koehm. il Eng N 139:122-5 Jl 24 '47

AIRPORTS, Municipal

Evansville community airport program sets a pattern. il plans Aero Digest 53:48-52 D '46

Phoenix plans a new airport. J. Girand. il Eng N 137:646-7 N 14 '46

Protecting your airport investment; zoning regulations and procedures, with special reference to New York state. J. C. Federick. plan Pub Works 78:24-6+ Jl '47

Tulsa airport; a case history. C. W. Short, jr. il Aero Digest 55:42-3+ Ag '47

See also

Airports—New York (city)

Management

Municipal airport management. L. A. Bryan. Ill U Inst Aeronautics Bul 1:1-26 '47

AIRSHIPS

ACC advices against government subsidy for airship program. CAA J 8:63 Je 15 '47

Scaffold makes faster moves on third and fourth blimp docks. il Eng N 139:470-1 O 2 '47

AIRSHIPS, Rigid

Admiral Rosendahl heads airship study. B. Stubblefield. Aviation W 47:25 Jl 7 '47

AIRSHIPS in advertising

Advertisers eye airship displays; Douglas Leigh company converts surplus dirigibles into flying electric signs. Aviation N 7:14 Mr 31 '47

New advertising dirigible hits the road; first flying spectacular to cover the Nation; Continental baking co. T. M. Jones. il Ptr Ink 220:106 S 5 '47

AIRWAYS

Finance

CAA airways tax plan faces industry opposition. Aviation N 7:29 F 10 '47

CAA submits plan to assess users of federal airways. Aviation N 7:8-9 F 3 '47

Lighting

Keep airway lights, civil pilots say in answer to CAA questionnaire. CAA J 8:62 Je 15 '47

Maps

International air routes and their frequencies. Air Transport 4:34-5 D '46

Marking

CAA and states plan 3000 markers in 1947 program. il CAA J 8:12 Ja 15 '47

Cross-country air-marked skyway planned for use of private flyers. map CAA J 8:108 S 15 '47

Gainesville, Mo., sets example for towns along Skyway One. CAA J 8:111 O 15 '47

Skyway 1 towns pledge air cooperation to survey flyers. A. McSurely. map Aviation W 47:13 S 22 '47

Traffic control

ATA plans new airways system to meet traffic needs. R. B. Hotz. Aviation N 7:7-8 Mr 10 '47

Airline traffic. W. Price. Mech Eng 69:36-7 Ja '47

Blueprint for future airways. diags Aero Digest 54:35-7+ Je '47

Check those air traffic rules! Aero Digest 55: 61 O '47

Decca system of air traffic control. D. H. Toller-Bond. il Air Transport 5:57-8 Ja '47

Photoelectric transmitting typewriter; used in air traffic control. G. L. Bush. il diags Electronics 20:96-9 Ap '47

Sperry pushing microwave air traffic control system. R. B. Hotz. il Aviation N 7:10-11 Mr 17 '47

Teleran; air navigation and traffic control by means of television and radar. D. H. Ewing and R. W. K. Smith. diags RCA R 7:601-20 D '46

AITCHISON, Clyde Bruce, 1875-

Portrait. Bsns W p62 D 28 '46

AKRON, Ohio

Railroads

New Erie passenger station exhibits modern motif at its best. il plans Ry Age 123:644-8 O 18 '47

Rapid transit

Horse trading isn't collective bargaining; with text of decision in injunction petition by Akron transportation company. B. Muldoon and R. Jeter. Mass Transportation 43:26+ Ja '47

ALABAMA

See also

Iron ores—Alabama

Roads—Alabama

ALABAMA great southern railroad

Equipment trusts offered. Comm & Fin Chr 165:525 Ja 27 '47

ALABAMA power company

Bonds offered. Comm & Fin Chr 166:1677 O 27 '47

ALANINE

Improved synthesis of β-alanine; the addition of ammonia to acrylonitrile at 50-150°. J. H. Ford, S. R. Buc and J. W. Greiner. bibliog Am Chem Soc J 69:844-6 Ap '47

Reaction of certain secondary amines with phthalic anhydride; new syntheses of β-alanine. S. Chodroff, A. Kapp and C. O. Beckmann. bibliog Am Chem Soc J 69:256-8 F '47

Viscosities of aqueous solutions of amino-acids, with some conductivity values. A. E. Bell and W. M. Madgin. Chem Soc J p74-6 Ja '47

Analysis

Oxidative bromination in the determination of malic acid and aspartic acid; micro-method for determination of beta-alanine. S. Suomalainen and E. Arhimo. bibliog Anal Chem 19:207-9 Mr '47

ALARM clocks. See Clocks

ALARMS

Carrier failure alarm. R. E. Thornton. diag Electronics 20:142+ Ja '47

ALASKA
See also
Airlines—Alaska
Coal—Alaska
Copper mines and mining—Alaska
Iron ores—Alaska
Sulfur mines and mining—Alaska
Tin mines and mining—Alaska
Tungsten mines and mining—Alaska

Economic conditions
Blow to Alaska; shipping strike in Seattle. Bsns W p22+ Ja 18 '47

ALASKA highway
Aerial surveying on the Alaska highway, 1942. W. T. Pryor. il maps Pub Roads 24: 275-90 Ja '47
Alaska highway pact. Comm & Fin Chr 164: 2674 N 21 '46
Canada authorizes shipment of goods in bond over Alaska highway. For Comm W 25:19 N 30 '46
Mississippian rocks of Meramec age along Alcan highway, northern British Columbia. L. R. Laudon and B. J. Chronic, jr. bibliog map diags Am Assn Pet Geologists Bul 31:1608-18 S '47
Truck rules eased; shippers permitted to transport goods in bond across Dominion territory. Bsns W p113 N 16 '46

ALBANY, New York

Lighting
Capital city takes the lead in modern street lighting. C. E. Waldron. il plan Elec World 128:64-5 Ag 16 '47

ALBERTA, Canada

Industries and resources
Spotlight on the prairies. A. W. J. Dyck. il Can Chem & Process Ind 31:407-9+ My '47
See also
Petroleum industry and trade—Alberta

ALBUMIN
Adapting domestic egg albumin to industrial use. F. S. Lombardo. Chem Ind 60:599-600 Ap '47
Albumin-bacterioplasma conjugates with special reference to the etiology of rheumatic fever. M. P. Schultz and E. J. Rose. bibliog Pub Health Rep 62:1009-22 Jl 11 '47
Albumin fraction isolated from human plasma as a crystalline mercuric salt. W. L. Hughes, jr. Am Chem Soc J 69:1836-7 Jl '47
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47
Comparative nutritive value of casein and lactalbumin for man. A. J. Mueller and W. M. Cox, jr. bibliog Science 105:580 My 30 '47
Mandelate as a stabilizer of serum albumin. J. M. Luck. bibliog J Phys & Colloid Chem 51:229-39 Ja '47
New optical method for observing sedimentation equilibrium. G. Kegeles. bibliog diags Am Chem Soc J 69:1302-5 Je '47
Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47
Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46
Preparation and properties of serum and plasma proteins; osmotic equilibria in solution of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68: 2320-9 N '46
Reaction of mustard gas with proteins. S. B. Davis and W. F. Ross. bibliog Am Chem Soc J 69:1177-81 My '47
Simple but important operations; albumin platemaking. C. F. King. Inland Ptr 119: 51-4 Je '47
Spectrophotometric investigations of the interactions of proteins with organic anions. I. M. Klotz. bibliog Am Chem Soc J 68:2299-304 N '46

Analysis
Determination of egg yolk in egg white. J. H. Cook and V. C. Mehlenbacher. Ind & Eng Chem Anal ed 18:785-8 D '46

ALCAN highway. See Alaska highway

ALCLAD
Aluminum alloy condenser tubes; abstract. R. B. Mears. Materials & Methods 25:125 Ja '47
Development of a two-row high-strength spot-welded lap joint in 24S-T Alclad aluminum alloy. L. M. Crawford and J. E. Pease. il diags Welding J 25:1203-10 D '46
Heat-tube material of aluminum alloys resists action of corrosion. Sci Am 177:221 N '47
Sandwich materials; metal faces with honeycomb core. W. W. Troxell and H. C. Engel. diag Machine Design 19:142-4 Mr '47

ALCOHOL
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47
Effect of vapour composition on the assessment of fractionating columns in terms of heights of a transfer unit. J. A. Storrow. bibliog diags Soc Chem Ind J 66:41-8, 73-9 F-Mr '47
Electrical behavior of hexyl- and dodecylammonium chlorides in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. bibliog Am Chem Soc J 68:2460-4 D '46
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Ethyl alcohol war allocations. Oil Paint & Drug Rep 150:45 N 11 '46
Ferric thiocyanate complex in ethyl-alcoholic solution. N. Uri. Chem Soc J p336-7 Mr '47
Kinetics and mechanism of the reaction of hydrogen bromide with ethanol. E. Grunwald and S. Winstein. bibliog Am Chem Soc J 69:2051-3 Ag '47
Kinetics of the decomposition of certain salts of trichloroacetic acid in ethanol-water mixtures. G. A. Hall, jr. and F. H. Verhoek. bibliog Am Chem Soc J 69:613-16 Mr '47
Measurements of ultrasonic absorption and velocity in liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47
New method for testing catalysts. J. A. Hinckley, jr. and H. R. Sheppard, jr. il diags Anal Chem 19:771-3 O '47
Nomograph finds proportions for ethanol-water mixes. W. C. Frishe. Chem Eng 53: 163 N '46
Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47
Production of butadiene from alcohol. W. J. Toussaint, J. T. Dunn and D. R. Jackson. il Ind & Eng Chem 39:120-5 F '47
System for rapid evaluation of catalysts for production of butadiene from ethanol. M. H. Whitlock, G. J. Haddad and E. E. Stahly. flow diag il diags Anal Chem 19: 767-70 O '47
Ultrasonic velocity in ethanol-water mixtures. A. Giacomini. bibliog Acoustical Soc Am J 19:701-2 Jl '47
Viscosities, densities and refractive indices of solutions of dodecylammonium chloride in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:1867-9 Ag '47

Analysis
Permanganate test for alcohol quality studied by means of the spectrophotometer. O. S. Rask and F. M. Hildebrandt. bibliog Anal Chem 19:364-7 Je '47

ALCOHOL—*Continued*

Bibliography

Bibliography and evaluation of books and pamphlets on alcohol education. E. P. White. (Contributions to education no. 23) 37p pa 35c Univ. of Nebraska, Teachers college, Lincoln 8 '47

Manufacture

Acetic acid from alcohol process; E. B. Badger & sons company. flow diag Pet Refiner (Process Handbook sec) 26:100-1 Ap '47

Alcohol from sulfite waste liquor. E. O. Ericsson. flow diag il Chem Eng Prog 43: 165-7 Ap '47

Alcohol from waste sulfite liquor; abstract. H. G. Joseph. Water & Sewage Works 93: 462 D '46

Changing industrial alcohol picture; cost of production of alcohol from molasses, grain, petroleum, wood. R. S. Aries. map Chem & Eng N 25:1792-6 Je 23 '47; Abstract. Pet Processing 2:409 Je '47

Design of a two-bushel per day continuous alcohol unit. W. B. Altsheler and others. flow diags il Chem Eng Prog 43:467-72 S '47

Fermentation industry during World war II. C. S. Boruff and J. M. Van Lanen. bibliog Ind & Eng Chem 39:934-7 Ag '47

Improved grain alcohol process. Chem Ind 61:250 Ag '47

Production of synthetic alcohol from ethylene. C. M. Beamer. flow diag il Chem Eng Prog 43:92-6 Mr '47

Sulphite liquor alcohol output increased. Chem Eng 53:212 N '46

Wood hydrolysis plant operations discontinued at Bellingham, Wash. Oil Paint & Drug Rep 152:4 S 1 '47

Physiological effect

Alcohol, tobacco and longevity. W. G. Bowerman. il Spectator (Life ed) 154:26-9+ N '46

Therapeutic use

Alcohol as a disinfectant against the tubercle bacillus. C. R. Smith. bibliog Pub Health Rep 62:1285-95 S 5 '47

ALCOHOL as fuel

Changing industrial alcohol picture; cost of production of alcohol from molasses, grain, petroleum, wood. R. S. Aries. map Chem & Eng N 25:1792-6 Je 23 '47

Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47

Octane ratings of agricultural motor fuels. C. F. Elder, F. R. Truby and R. Wiebe. bibliog Ind & Eng Chem 39:508-10 Ap '47

Synthetic liquid motor fuel from farm residues. il diag Chem Eng 53:104-5 D '46

ALCOHOL industry

Statistics

Alcohol and solvents, 1939-1946. Chem Eng 64:114-15 F '47

Alcohol data for 1946-47; tabulation. Oil Paint & Drug Rep 152:55 O 27 '47

Taxation

Alcohol tax rule no. 3 modified. Oil Paint & Drug Rep 151:4+ Mr 17 '47

Alcohol tax system censured by industry; Grant bill defended. Oil Paint & Drug Rep 152:3+ O 13 '47

Drug manufacturers to ask Congress for new alcohol tax. Oil Paint & Drug Rep 150:3 N 25 '46

ALCOHOLIC polyneuritis. See Neuritis, Multiple

ALCOHOLISM

See also

Research council on problems of alcohol

ALCOHOLS

Acetals of nitro alcohols and corresponding amino acetals. M. Senkus. Am Chem Soc J 69:1380-1 Je '47

Alkamine esters and amides of some aminoalkylmercaptobenzoic acids. J. J. Donleavy and P. C. Condit. bibliog Am Chem Soc J 69:1781-4 Jl '47

Anhydrides of polyhydric alcohols; 1 : 4-3 : 6-dianhydro mannitol and 1 : 4-3 : 6-dianhydro sorbitol from sucrose. R. Montgomery and L. F. Wiggins. Chem Soc J p433-6 Ap '47

Bromination of phenols and phenol alcohols. I. W. Ruderman. bibliog Ind & Eng Chem Anal ed 18:753-9 D '46

C-18 alcohol esters of orthosilicic acid. L. B. Falkenburg, H. M. Teeter and J. C. Cowan. Am Chem Soc J 69:486-7 Mr '47

Dehydration of a hindered tertiary alcohol. R. B. Carlin and D. A. Constantine. bibliog Am Chem Soc J 69:50-2 Ja '47

Direct esterification of gallic acid with higher alcohols. W. C. Ault and others. Am Chem Soc J 69:2003-5 Ag '47

Epimeric alcohols of the *cyclo*hexane series; the optically active 3-methyl*cyclo*hexanols. A. K. Macbeth and J. A. Mills. Chem Soc J p205-8 F '47

Equilibrium studies on the dehydrogenation of primary and secondary alcohols; cyclohexanols. A. H. Cubberley and M. B. Mueller. Am Chem Soc J 69:1535-6 Je '47

Esterification rate of dibasic acid anhydrides with primary alcohols at room temperature. E. F. Siegel and M. K. Moran. bibliog Am Chem Soc J 69:1457-9 Je '47

Graphical method for predicting azeotropism and effect of pressure on azeotropic constants. L. H. Horsley. Anal Chem 19:603-9 Ag '47

Hydrogenolysis of aliphatic alcohols. V. I. Komarewsky, C. F. Price and J. R. Coley. Am Chem Soc J 69:238-9 F '47

Phenol alcohols and their reaction with oils; abstract. W. Charlton and L. E. Perkins. Paint Oil & Chem R 110:36+ S 4 '47

Polymerization; the alfin catalysts. A. A. Morton, E. E. Magat and R. L. Letsinger. Am Chem Soc J 69:950-61 Ap '47

Reaction of alcohols with dibenzoylethylene. P. S. Bailey and R. E. Lutz. Am Chem Soc J 69:498-9 Mr '47

Reactions of carbinols in the presence of alkali; reduction of ketones by primary alcohols. G. H. Hargreaves and L. N. Owen. Chem Soc J p750-2 Je '47

Reductive acetolysis of nitrate esters. D. O. Hoffman, R. S. Bower and M. L. Wolfrom. bibliog Am Chem Soc J 69:249-50 F '47

Sodium reduction of fatty acid esters. V. L. Hansley. bibliog(68 ref) diags Ind & Eng Chem 39:55-62 Ja '47

Studies on phosphorylation; further observations on the reaction of phosphites with polyhalogen compounds in presence of bases and its application to the phosphorylation of alcohols. F. R. Atherton and A. R. Todd. Chem Soc J p674-8 My '47

Study of the reaction of alcohols with thionyl chloride. W. E. Bissinger and F. E. Kung. bibliog Am Chem Soc J 69:2158-63 S '47

Synthetic mydriatics; diphenylchloroacetyl chloride as a reagent for the preparation of benzilic esters of tertiary amino-alcohols. F. E. King and D. Holmes. Chem Soc J p 164-8 F '47

Thermal data on organic compounds; modern combustion data for fourteen hydrocarbons and five polyhydroxy alcohols. G. S. Parks and others. bibliog Am Chem Soc J 68:2524-7 D '46

Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S. Nutting and L. H. Horsley. Anal Chem 19:601-2 Ag '47

See also

Alcohol
Allyl alcohol
Amyl alcohol
Butyl alcohol
Esters
Fluoroethanol
Isopropyl alcohol
Methanol
Pentaerythritol
Propyl alcohol
Sorbitol
Vinyl alcohol

Analysis

Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47

Komarowski reaction. F. R. Duke. bibliog Anal Chem 19:661-2 S '47

ALCOHOLS—*Continued*

Manufacture

Alcohols above C_3 produced from olefins, CO and hydrogen. il diag Chem Ind 60:232-3 F '47

ALCOHOLYSIS

Acid-catalyzed alcoholysis of β-naphthyl esters. M. Harfenist and R. Baltzly. Am Chem Soc J 69:362-5 F '47

ALDEHYDES

Chemicals from petroleum. J. E. Bludworth. flow sheet il Oil & Gas J 45:76-7+ Ap 12 '47; Same. Pet Refiner 26:120-4 Ap '47

Concerning aromatic acetylenic carbinols. P. Rutan and C. E. May. bibliog Am Chem Soc J 69:2017-18 Ag '47

Condensation of aldehydes and amines with nitrogenous five-atom ring systems. G. B. Bachman and L. V. Heisey. bibliog Am Chem Soc J 68:2496-9 D '46

Organic sulphur compounds; the stereochemistry of trimeric thioaldehydes. A. Schönberg and M. Z. Barakat. Chem Soc J p693 My '47

Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46

Some new fluorinated phenolic aldehydes and acids. L. N. Ferguson, J. C. Reid and M. Calvin. bibliog Am Chem Soc J 68:2502-4 D '46

See also

Acetaldehyde
Cholenaldehyde
Cinchoninaldehyde
Formaldehyde
Furfural

ALDEN, Herbert Watson, 1870-

Automobile industry honors Col. Herbert W. Alden. P. D. Hoffman. Mech Eng 69:81 Ja '47

ALDOLS

Chemicals from petroleum. J. E. Bludworth. flow sheet il Oil & Gas J 45:76-7+ Ap 12 '47; Same. Pet Refiner 26:120-4 Ap '47

ALDONOLACTONES. See Lactones

ALDOSES

Controlled sodium amalgam reduction of aldonolactones and their esters to aldoses and an improved synthesis of D-arabinose. N. Sperber, H. E. Zaugg and W. M. Sandstrom. bibliog Am Chem Soc J 69:915-20 Ap '47

ALDRICH, Winthrop Williams, 1885-

Chairman of Chase national bank. por (cover) Bsns W p8 My 24 '47

Portrait. Bsns W p26 O 11 '47

ALEMÁN, Miguel, 1902-

Portrait. Bsns W p89 Mr 1 '47

ALEXANDRIA, Louisiana

Civil service comes to Alexandria. D. P. Moriarty. Water & Sewage Works 94:104 Mr '47

ALFALFA

Dehydrated alfalfa risk poses insurance problems. Nat Underw 51:8 O 16; 29 O 23 '47

Handling fresh alfalfa before dehydration. R. E. Silker and H. H. King. bibliog Ind & Eng Chem 39:1163-5 S '47; Correction. 39: 1334 O '47

Vitamin extraction; chlorophyll and carotene from alfalfa. il Chem & Eng N 25:3082 O 20 '47

Analysis

Determination of carotene in alfalfa; studies on methods for meals and fresh leaves. F. P. Zscheile and R. A. Whitmore. bibliog Anal Chem 19:170-2 Mr '47

ALFALFA meal

Handling fresh alfalfa before dehydration. R. E. Silker and H. H. King. bibliog Ind & Eng Chem 39:1163-5 S '47; Correction. 39: 1334 O '47

Vapor pressure of water adsorbed on dehydrated alfalfa. W. G. Schrenk and H. H. King. bibliog Ind & Eng Chem 39:1165-7 S '47

Analysis

Chromatographic determination of carotene; kieselguhr as a chromatographic adsorbent. J. B. Wilkes. bibliog Ind & Eng Chem Anal ed 18:702-7 N '46

Storage

Storage of commercial dehydrated alfalfa meal. R. E. Silker, W. G. Schrenk and H. H. King. bibliog Ind & Eng Chem 39: 1160-2 S '47

ALFIN catalysts. See Catalysts

AL-FIN process. See Aluminum—Joining to steel, etc.

ALGAE

Copper sulphate distributing craft. S. S. Anthony. il Water & Sewage Works 94:343-4 S '47

Experience with anabaena in Kenoza lake, Haverhill, Massachusetts. E. S. Chase. N E Water Works Assn J 61:128-34 Je '47

Fertilization of lakes by agricultural and urban drainage. C. N. Sawyer. bibliog pl N E Water Works Assn J 61:109-27 Je '47

How much chlorine for swimming pool water? Power Pl Eng 51:99 Mr '47

Moss industry thriving; sea moss for use in food industry. Bsns W p19 D 21 '46

Pumice for water treatment; used in filter beds of the plant, primarily to remove algae from water. Rock Prod 50:162 O '47

Reconsideration of the photosynthetic mechanism in chlorella. J. Myers and M. L. Cramer. Science 105:552 My 23 '47

Role of algae in corrosion. H. C. Myers. Am Water Works Assn J 39:322-4 Ap '47

Scottish sea-weed research. Chem & Ind p613 O 4 '47

Seaweed harvesting methods. W. Mackenzie. il diags Engineer 184:337-9, 373-5, 387-9 O 10-24 '47

Slime and algae control. Oil & Gas J 45:101 F 8 '47

Use of activated carbon in treating open reservoirs. H. E. Bailey and J. Studley. il plan diags N E Water Works Assn J 61: 135-44 Je '47; Same. Water & Sewage Works 94:219-22 Je '47

ALGAE, Fossil

Lime-secreting algae from the Pennsylvanian and Permian of Kansas. J. H. Johnson. bibliog map diags Geol Soc Bul 57:1087-1119, pl 1-10 D '46

ALGEBRA

See also

Equations, Simultaneous
Matrices

ALGERIA

See also

Hydroelectric plants—Algeria

ALGIN

Alginates; their use as emulsifiers and thickeners in soaps and cosmetics. N. J. Federici. Soap & San Chem 23:35+ My '47

Preparation of mannuronic lactone from algin. H. L. Frush and H. S. Isbell. bibliog pl J Res Nat Bur Stand 37:321-4 N '46

ALGINATES

Alginates; their use as emulsifiers and thickeners in soaps and cosmetics. N. J. Federici. Soap & San Chem 23:35+ My '47

ALGINIC acid. See Algin

ALICYCLIC compounds. See Cyclic compounds

ALIEN fiancée bonds. See Insurance, Surety and fidelity—Alien fiancée bonds

ALIEN property. See Enemy property

ALIEN property custodian. See United States—Alien property custodian

ALIENS

Estimating the resident alien population of the United States. E. P. Hutchinson and E. Rubin. Am Stat Assn J 42:385-400 S '47

ALINEMENT of machinery

How to align rotating machine shafts; illustrated instruction. Power 91:203 Mr '47

Miller saves time on generator reassembly alignment problem. il Elec World 126:124 D 7 '46

Misaligned two-stage die saved by adjusting the guides. S. Framurz. diags Am Mach 90:137 N 21 '46

Portable milling machine decreases down time of generators; used for realinement at Hell Gate generating station. il Mach 53: 155-6 Ja '47

ALINEMENT of machinery—*Continued*
Shaft alignment of a centrifugal pump and its driver. W. L. Nelson. diags Oil & Gas J 46:105 S 6 '47
Two indicators check coupling alignment. R. Nanni. diag Power 91:558 Ag '47

ALISON, John R.
Introducing John Alison, new Assistant secretary of commerce for aeronautics. R. Hotz. por Aviation W 47:13 Ag 25 '47

ALIZARIN
Spectrophotometric study of the hafnium-alizarin lake. H. A. Liebhafsky and E. H. Winslow. bibliog Am Chem Soc J 69:1130-4 My '47

ALKALI metal chlorides
Effect of alkali and alkaline earth salts on the spectrographic determination of strontium. E. Fast and J. R. Nielsen. bibliog Opt Soc Am J 37:614-22 Ag '47

ALKALI metal halides
Calculation of the shear elastic constants of the alkali halides. W. J. Price. bibliog Phys R 72:514-15 S 15 '47
Orientation of electrical breakdown paths in single crystals. J. W. Davisson. bibliog il diags Phys R 70:685-98 N 1 '46
Spectral location of the absorption due to color centers in alkali halide crystals. H. F. Ivey. bibliog Phys R 72:341-3 Ag 15 '47
Ultrasonic measurements on single crystals. H. B. Huntington. bibliog diag Phys R 72: 321-31 Ag 15 '47

ALKALI metal hydrides
Alkali and alkaline earth hydrides; survey of their manufacture and uses. Chem Age (Lond) 55:675-7 N 30 '46

ALKALI metal hydroxides
See also
Potassium hydroxide
Rubidium hydroxide
Sodium hydroxide

ALKALI metal oxides
Oxides of the alkali and alkaline earth metals. W. H. Schechter and J. Kleinberg. bibliog J Chem Educ 24:302-3 Je '47

ALKALI metal silicates
Chemistry of the soluble silicates. R. C. Merrill. il J Chem Educ 24:262-9 Je '47

ALKALI metals
See also
Cesium
Lithium
Potassium
Sodium

ALKALI sulfates
Ternary systems silver sulfate—alkali sulfate—water. E. L. Simons and J. E. Ricci. bibliog Am Chem Soc J 68:2194-202 N '46

ALKALIES
Alkali and heat recovery in deinking systems. H. P. Bailey and A. H. Nadelman. bibliog Paper Tr J 125:43-5 Jl 10 '47
Alkali institute suggested. C. C. Concannon. Oil Paint & Drug Rep 151:7+ Ap 28 '47
Alkali makers struggle to meet demand. Barron's 27:7 Ja 27 '47
Alkali shortage explained. J. V. Stauf. Oil Paint & Drug Rep 151:5+ Mr 10 '47
Alkaline fission of some 2-substituted dimethylethylsulphonium iodides. C. W. Crane and H. N. Rydon. Chem Soc J p766-72 Je '47
Reactions of carbinols in the presence of alkali. G. H. Hargreaves and L. N. Owen. Chem Soc J p750-8 Je '47
See also
Ammonia
Potassium hydroxide
Soap
Sodium hydroxide

ALKALINE earth compounds
Effect of alkali and alkaline earth salts on the spectrographic determination of strontium. E. Fast and J. R. Nielsen. bibliog Opt Soc Am J 37:614-22 Ag '47

ALKALINE earth hydrides
Alkali and alkaline earth hydrides; survey of their manufacture and uses. Chem Age (Lond) 55:675-7 N 30 '46

ALKALINE earth metals
See also
Barium
Calcium
Strontium

Analysis
Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses. L. W. Strock and G. E. Heggen. Opt Soc Am J 37: 29-36 Ja '47

ALKALINE earth selenides
Preparation of strontium selenide and its properties as a base material for phosphors stimulated by infrared. A. L. Smith, R. D. Rosenstein and R. Ward. bibliog diags Am Chem Soc J 69:1725-9 Jl '47

ALKALINE earth sulfides
Function of fluxes in the preparation of infrared sensitive phosphors of the alkaline earth sulfides and selenides. W. Primak, R. K. Osterheld and R. Ward. bibliog Am Chem Soc J 69:1283-7 Je '47

ALKALINITY
Rapid electrometric determination of the alkalinity of sea water using a glass electrode. D. H. Anderson and R. J. Robinson. bibliog Ind & Eng Chem Anal ed 18:767-9 D '46
See also
Hydrogen ion concentration

ALKALOIDS
Alkaloid with high antimalarial activity from dichroa febrifuga. J. B. Koepfli, J. F. Mead and J. A. Brockman, jr. Am Chem Soc J 69:1837 Jl '47
Alkaloids of delphinium consolida L. L. Marion and O. E. Edwards. bibliog Am Chem Soc J 69:2010-14 Ag '47
Alkaloids of fumariaceous plants; the constitution of capaurimine. R. H. F. Manske. Am Chem Soc J 69:1800-1 Jl '47
Alkaloids of lycopodium species; lycodium annotinum var. acrifolium, Fern. and the structure of annotinine. R. H. F. Manske and L. Marion. Am Chem Soc J 69:2126-9 S '47
Curare alkaloids; alkaloids from chondrodendron tomentosum R. and P. H. King. Chem Soc J p936-7 Jl '47
Larkspurs, delphiniums, and chemistry. R. C. Kuder. bibliog(48 ref) il J Chem Educ 24: 418-22 S '47
Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:72-6, 185-91 Ja 11, F 1 '47
α-Pseudaconitine and α-veratroylpseudaconine. L. Marion and O. E. Edwards. bibliog Am Chem Soc J 68:2565-8 D '46
See also
Apocupreine
Ergonovine
Quinine

ALKANES. See Paraffins

ALKATHENE
Films, resistant to organic solvents, for use in the electron microscope. S. G. Ellis. il J Ap Phys 18:846-7 S '47

ALKYD resins. See Resinous products

ALKYL group
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-811 S '46
Aromatization studies; synthesis of alkylanilines from alkylcyclohexenones. E. C. Horning and M. G. Horning. Am Chem Soc J 69:1907-8 Ag '47
Course of cyclisation in the formation of alicyclic rings; effect of alkyl groups on the cyclisation of esters of polycarboxylic acids R. N. Chakravarti. Chem Soc J p 1028-9 Ag '47
Dealkylation of 4-(4-diethylamino-1-methylbutylamino)-7-chloroquinoline, SN 7618. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 69:704 Mr '47
Electrical conductivities of long-chain quaternary ammonium chlorides containing hydroxyalkyl groups. A. W. Ralston and others. Am Chem Soc J 69:2095-7 S '47
Physical and chemical properties of organometallic compounds; oxidation of zinc alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p688-95 Ag '46

ALKYL halides
Hydrogen-halogen exchange reactions of triethylsilane; new rearrangement of neopentyl chloride. F. C. Whitmore, E. W. Pietrusza and L. H. Sommer. bibliog Am Chem Soc J 69:2108-10 S '47

Analysis
Nitro Captax, 6-nitro-2-mercaptobenzothiazole, as a reagent for the identification of alkyl halides. H. B. Cutter and H. R. Golden. Am Chem Soc J 69:831-2 Ap '47

ALKYLISOFORMANILIDES
Reactions of alkyl*iso*formanilides; with phenols. E. B. Knott. Chem Soc J p976-8 Jl '47

ALKYLATES
Analyses of alkylates and hydrocodimers. A. R. Glasgow, jr. and others. charts diags J Res Nat Bur Stand 38:537-81 My '47; Same. Am Pet Inst Proc 26(3):127-69 '46; Same. Pet Refiner 25:93-119 N '46; Excerpt. Oil & Gas J 45:236 N 16 '46
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26(3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46

ALKYLATION
Acid-catalyzed alkylation of isoparaffins with alcohols. J. D. Gibson, R. C. Cole and M. P. Matuszak. Am Chem Soc J 68:2728-9 D '46
1-Alkyl-1,2,3,4-tetrahydroquinoxalines. J. C. Cavagnol and F. Y. Wiselogle. bibliog Am Chem Soc J 69:795-9 Ap '47
Alkylation acid regeneration process; Chemical construction corporation. flow diag Pet Refiner (Process Handbook sec) 26:104-5 Ap '47
Alkylation and polymerization; effect on refinery earnings of the two processes. il Pet Eng 18:116+ N '46
Alkylbenzenes from benzene and isobutene; preparation, identification of several fractions. D. I. Legge. bibliog Am Chem Soc J 69:2079-86 S '47
Catalytic alkylation process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:114-15 Ap '47
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2113-19 S '47
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Experimental study of the alkylation of aromatic amines using (1) aluminium alkoxides and (2) alumina with alcohols. J. C. Earl and N. G. Hills. Chem Soc J p973-6 Jl '47
HF alkylation process by Phillips petroleum company. flow diag Oil & Gas J 45:159 Mr 22 '47
Hydroxyalkylation with cyclic alkylene esters; synthesis of hydroxyethylapocupreine. W. W. Carlson and L. H. Cretcher. bibliog Am Chem Soc J 69:1952-6 Ag '47
Laboratory explosions with ethylene and carbon tetrachloride; nature of the explosion; precautions in avoiding the explosion. R. O. Bolt; R. M. Joyce. Chem & Eng N 25:1866-7 Je 30 '47
Miscellaneous fractionating techniques; study of alkylation-plant *iso*butane tower performance. J. J. Cicalese and others. diags Am Pet Inst Proc 26(3):203-21 '46; Same. Pet Refiner 26:127-43 My '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Perco HF alkylation process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:214-15 Ap '47
Pilot plant production of 2,3-dimethylbutane. C. Holloway, jr. and W. S. Bonnell. bibliog flow sheet il diag Ind & Eng Chem 38:1231-8 D '46
Production of cumene by vapor- and liquid-phase alkylation processes. S. H. McAllister, J. Anderson and E. F. Bullard. bibliog flow diags Chem Eng Proc 43:189-95; Discussion. 195-6 Ap '47
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46
4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46
Sulfuric acid alkylation. flow diag Oil & Gas J 45:160 Mr 22 '47
UOP paraffin alkylation processes; Universal oil products company. flow diags Pet Refiner (Process Handbook sec) 26:288-9 Ap '47

ALL American aviation, inc.
Annual report. Comm & Fin Chr 166:1145 S 22 '47

ALLEE, Ralph Herbert
Sketch. por(cover) Chem & Eng N 25:1041 Ap 14 '47

ALLEGHANY corporation
Tired of railroading? Bsns W p80+ N 23 '46

ALLEGHENY county, Pennsylvania
Allegheny county sanitary authority progress and plans. J. F. Laboon. map Pub Works 78:33 Ja '47
Program for a community attack on stream pollution in Allegheny county. Eng N 138: 90-1 Ja 16 '47

ALLEGHENY Ludlum steel corporation
Companies forging ahead. Mag of Wall St 80:381 Jl 5 '47
Stainless steel pays off. il Bsns W p37-8+ Mr 29 '47

ALLEN, George Edward, 1896-
Takes post with Kemper group. por Nat Underw 51:22 Mr 6 '47; East Underw 48:33-4 Mr 7 '47

ALLERGY
Progress in allergy therapy. S. M. Feinberg. Chem & Eng N 25:2134-6 Jl 28 '47

ALLICINE
Certain antibiotics; abstract. I. J. Postovskii and N. P. Bednyagin. Chem Eng 54:266+ S '47

ALLIED chemical and dye corporation
Allied Chemical's earnings would allow large extra dividend. Barron's 27:35 Jl 21 '47
Annual report. Comm & Fin Chr 165:1445-6 Mr 17 '47

ALLIED stores corporation
Puckett of Allied Stores. il map Fortune 35: 122-5+ Mr '47

ALLIS-CHALMERS manufacturing company
Allis-Chalmers' experience with a left-wing union. W. Geist. Factory Management 105: 80-3 Mr '47
Courageous advertising bridges strike crisis. il Sales Management 59:104+ Ag 1 '47
Marathon ends, but who was chief loser in Allis-Chalmers strike? Bsns W p90+ Mr 29 '47
New U.A.W. rift. Bsns W p90+ F 15 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:274 Je 7 '47
U.A.W. stays in the saddle at West Allis. Bsns W p86 F 1 '47

ALLOXAN
Effect of certain substances on the prevention of diabetogenic action of alloxan. S. Banerjee. bibliog Science 106:128-30 Ag 8 '47
New potential chemotherapeutic agents; basically-substituted *iso*alloxazines. F. E. King and R. M. Acheson. Chem Soc J p681-5 Ag '46
Serum phosphatases and alloxan diabetes. M. M. Cantor and others. bibliog Science 105: 476-7 My 2 '47

ALLOYS
Alloy metal ores in 1946. B. Burwell. il Min Cong J 33:96-7 F '47
Alloy to watch; Elgin's development is nonmagnetic, resists corrosion. Bsns W p59-60 Mr 15 '47
Contributions to the theory of beta-phase alloys. C. Zener. bibliog Phys R 71:846-51 Je 15 '47
Corrodibility of some common metals and alloys; tabulation, comp. by J. Strauss; revised (1946) by E. E. Thum; data sheet. Metal Prog 50:884b N '46
Die-cast high melting point alloys; abstract. Product Eng 17:140 D '46

ALLOYS—*Continued*
Directory of materials for the construction of chemical equipment. Chem Eng 53:110-16 N '46
Engineering applications of controlled expansion alloys; Ni-Resist and others. F. G. Sefing. il Iron Age 159:46-50 Mr 20 '47
Fabrication notes on corrosion resistant alloys; abstract. J. C. Holmberg. Oil & Gas J 45:53 Mr 8 '47
Influence de la structure et de la composition des alliages métalliques sur leurs propriétés élastiques. L. Guillet. bibliog diags Génie Civil 124:45-50 F 1 '47
Internal stresses in metals and alloys; symposium. Engineer 184:393-4, 405-7, 431-3, 464-5, 476-8 O 24-N 21 '47; Engineering 164: 401-2, 426, 449-50, 473 O 24-N 14 '47
Jet alloys tested by rapid spinning at high temperatures. il Sci Am 177:77-8 Ag '47
Metallurgical substitutions. A. M. Portevin. Metal Prog 51:271-2 F '47
Metallurgy in 1946. E. S. Kopecki. il diag Iron Age 159:96-103 Ja 2 '47
Metals for refinery corrosion; abstract. B. B. Morton. Oil & Gas J 45:290 Mr 22 '47
New metals for old. E. Appleton. Engineering 164:69, 90-1 Jl 18-25 '47
New strong, nonmagnetic spring material has high corrosion resistance; Elgiloy, announced by Elgin national watch co. il Materials & Methods 25:94-5 Ap '47
Nonferrous alloy materials for mechanical springs. F. P. Zimmerli. il Product Eng 17: 85-7 D '46
Precipitation hardening. L. Sanderson. Chem Age (Lond) 56:202-4, 412-14, 741-3; 57:13-15, 151-2 F 1, Ap 5, Je 7, Jl 5, Ag 2 '47
Precision plating of bearing alloys. R. A. Schaefer. bibliog il Iron Age 159:60-3 Ap 10 '47
Present trends in alloys. Pet Eng 18:79-80 D '46
Properties of various alloys at sub-zero temperatures. Iron Age 158:75 N 14 '46
Resistance of metals to scaling. B. Lustman. bibliog Metal Prog 50:850-6+ N '46; Same abr. Steel 120:68-9+ Ja 20 '47
Selecting spring materials. F. P. Zimmerli. Steel 121:78-9+ Ag 11 '47; Materials & Methods 26:74-9 S '47
Vacuum melting in Germany. G. T. Motock. il diags Iron Age 158:64-9 D 12 '46

See also
Aluminum alloys
Babbitt metal
Bearing metals
Beryllium alloys
Brass
Bronze
Chromium alloys
Copper alloys
Iron alloys
Lead alloys
Magnesium alloys
Monel metal
Nickel alloys
Solutions, Solid
Steel alloys
Tantung
Tin alloys
Zinc alloys

Analysis

Analysis of light alloys based on electrical resistivity. L. Rotherham and J. I. Morley. il diag Engineering 163:416-18 My 16 '47
High-speed alloy analyzer; Quantometer uses electronic eyes. il Bsns W p66-8+ O 18 '47
New scheme for the microchemical analysis of ferrous alloys. E. J. Vaughan and C. Whalley. bibliog il diags Iron & Steel Inst J 155:535-62 Ap '47; Abstract. Engineer 183:475 My 30 '47; Discussion. Iron & Steel Inst J 156:487-91; 157:191-3 Ag, O '47; Engineer 183:475 My 30 '47

Testing

Fluidity testing of foundry alloys. K. L. Clark. bibliog(105 titles) il diags Foundry 74:92-6+ D '46

ALLOYS, Hard facing

Hard-facing materials; types and characteristics, processing, directory, etc. H. R. Clauser. il Materials & Methods 25:103-18 Je '47
How to select hard-facing materials. H. W. Sharp. il Iron Age 160:62-6 Jl 3 '47
How to select wear resisting alloys for welding; engineering data sheet. J. A. Cunningham. Machine Design 19:139-42 Ja '47

ALLOYS, Heat resisting

Alloys for heat and corrosion-resistant castings; reference book sheet. Am Mach 91:215 Ja 16 '47
Chromium-base alloys for high temperature service; abstract. J. W. Freeman and others. Materials & Methods 26:121-2 S '47
Cobalt-base and nickel-base alloys for ultra-high temperature. F. S. Badger, jr. and F. C. Kroft, jr. il Metal Prog 52:394-400+ S '47
Editorial citation to Elliott company for achievement in use of high temperature alloys. il Materials & Methods 24:1176-7 N '46
Extrusion method of manufacturing tubes of stainless steel, special steel, nickel, monel, and inconel. H. Lorant. il diags Mech Eng 69:471-4 Je '47; Same cond. Mach 53:170-1 Jl '47
Gas turbine power plant; gas turbine materials. J. I. Yellott. bibliog diags Power Pl Eng 51:113-14+ S '47
Haynes alloys for high-temperature service. W. O. Sweeny. il diags A S M E Trans 69:569-81 Ag '47
High-temperature alloys. Mech Eng 69:37-8 Ja '47
High-temperature metals; special section. L. N. Rowley and B. G. A. Skrotzki. il diags Power 91:681-96 O '47
Honorable mention to Haynes stellite co., for achievement in high temperature alloys. il Materials & Methods 24:1162-3 N '46
Honorable mention to Martin Fleischmann, for achievement in heat resistant alloys; Timken 16-25-6 alloy. il Materials & Methods 24:1164-5 N '46
Interpretation of creep and stress rupture data; abstract. F. B. Foley. Iron Age 159: 76 Ap 10 '47
Jet materials progress slow; search for heat resistant alloys. Aviation N 6:17+ D 2 '46
Magnesium-cerium-zirconium alloys; properties at elevated temperatures; abstract and discussion. A. J. Murphy and R. J. M. Payne. Engineer 183:258 Mr 28 '47
Materials for power gas turbines. C. T. Evans, jr. bibliog il diags A S M E Trans 69:601-8 Ag '47
Metallurgical considerations of gas turbines. N. L. Mochel. bibliog il diags A S M E Trans 69:561-8 Ag '47
Metals and ceramics able to withstand higher stresses and temperatures being developed; abstracts. C. E. Williams. Steel 121:48-9 S 8 '47; Iron Age 160:240+ S 11 '47
Modified type 405 stainless iron, satisfactory lining for petroleum refinery vessels. M. A. Scheil. il Metal Prog 52:91-102 Jl '47
Nickel-chromium alloys for gas-turbine service. C. A. Crawford. A S M E Trans 69: 609-12 Ag '47
Precipitation-hardened alloys for gas-turbine service. H. Scott and R. B. Gordon. il A S M E Trans 69:583-99 Ag '47
Precision drop forging of high temperature alloys. S. G. Demirjian. il Materials & Methods 26:68-71 S '47
Progress in engineering knowledge during 1946; high-temperature metals. P. L. Alger and others. Gen Elec R 50:19-20 Mr '47
Stability of alloys to oxidizing atmospheres; engineering file facts; tabulation. B. Lustman. Materials & Methods 25:125 F '47
Westinghouse uses new jet metal test. il Aviation N 7:18 Mr 31 '47

Testing

Precipitation-hardened alloys for gas-turbine service. H. Scott and R. B. Gordon. il A S M E Trans 69:593-9 Ag '47
Screw-driven creep-rupture testing machine. M. J. Manjoine. il Metal Prog 50:1100-1 N '46

ALLOYS, Temperature indicating

Color change reveals temperatures in gas turbines. Sci Am 175:268 D '46

ALLYL acetate

Analysis

Determination of allyl groups in polyallyl ethers and esters. H. M. Boyd and J. R. Roach. bibliog Anal Chem 19:158-9 Mr '47

ALLYL alcohol

Allyl alcohol. 95p bibliog(p69-90) Shell chemical corp. 500 Fifth av. New York 18 '46

ALLYL alcohol—*Continued*

Manufacture

Commercial scale manufacture of allyl chloride and allyl alcohol from propylene; Shell development company, Emeryville, Calif. A. W. Fairbairn, H. A. Cheney, and A. J. Cherniavsky. bibliog flow diags il Chem Eng Prog 43:280-90 Je '47

How I.G. made allyl alcohol. diag Chem Ind 60:227 F '47

ALLYL benzene

Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47

ALLYL chloride

Commercial scale manufacture of allyl chloride and allyl alcohol from propylene; Shell development company, Emeryville, Calif. A. W. Fairbairn, H. A. Cheney and A. J. Cherniavsky. bibliog flow diags il Chem Eng Prog 43:280-90 Je '47

Metastable ion transitions in the mass spectra of the monochloropropenes. V. H. Dibeler and others. Phys R 71:381-2 Mr 15 '47

ALLYL compounds

Polymerization of allyl esters. H. S. Lilley. bibliog Chem & Ind p133 Mr 15 '47

Analysis

Determination of allyl groups in polyallyl ethers and esters. H. M. Boyd and J. R. Roach. bibliog Anal Chem 19:158-9 Mr '47

ALLYL group

Activation energies and entropies of activation in the rearrangement of allyl groups in three carbon systems. E. G. Foster, A. C. Cope and F. Daniels. Am Chem Soc J 69:1893-6 Ag '47

ALLYL phthalate

Analysis

Determination of allyl groups in polyallyl ethers and esters. H. M. Boyd and J. R. Roach. bibliog Anal Chem 19:158-9 Mr '47

ALLYLAMINE

8-Aminoquinolines with allylamine substituents. C. D. Hurd and R. J. Sims. Am Chem Soc J 68:2228 N '46

ALMEN, J. O.

Award to J. O. Almen, for achievement in pre-stressing of metals and metal parts. por Materials & Methods 24:1156-9 N '46

ALMONDS

Bitter almonds as food in France. W. G. Cass. Chem & Eng N 25:1828 Je 23 '47

L'utilisation des amandes amères dans l'alimentation pendant la période 1940-1945. R. Talon. bibliog diags Chimie & Ind 57:331-5 Ap '47

ALMSHOUSES. See Workhouses

ALOE-EMODIN

Solubility, absorption spectrum and ionization constant for aloe-emodin. K. G. Stone and N. H. Furman. Am Chem Soc J 68: 2742 D '46

Analysis

Estimation of aloe-emodin and the aloins in Curaçao aloes. K. G. Stone and N. H. Furman. bibliog Anal Chem 19:105-7 F '47

ALOINS

Analysis

Estimation of aloe-emodin and the aloins in Curaçao aloes. K. G. Stone and N. H. Furman. bibliog Anal Chem 19:105-7 F '47

ALPHA portland cement company

1948 outlook for cement companies. H. S. Coffin. Mag of Wall St 81:88 O 25 '47

ALPHA rays

Alpha-particles associated with fission. E. O. Wollan and others. bibliog il Phys R 72: 447-51 S 15 '47

Calorimetric determination of the energy produced by plutonium (239). J. W. Stout and W. M. Jones. bibliog diag Phys R 71:582-5 My 1 '47

Conductivity pulses induced in diamond by alpha-particles. D. E. Woolridge and others. Phys R 71:913 Je 15 '47

Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46

Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diag J Phys & Colloid Chem 51: 654-61 My '47

Excitation-function of the γ-radiation generated by Po-α bombardment of Na. M. Kovács. bibliog diags Phys R 70:895-6 D 1 '46

Fading of latent alpha-ray image in emulsions. H. Yagoda and N. Kaplan. il Phys R 71:910-11 Je 15 '47

Long range alpha-particles emitted in connection with fission; preliminary report. G. Farwell and others. diag Phys R 71: 327-30 Mr 15 '47; Correction. 71:639 My 1 '47

Low energy alpha-particles from radium. W. Y. Chang. bibliog Phys R 70:632-9 N 1 '46

Quantitative alpha-particle counting by the emulsion technique. H. Yagoda and N. Kaplan. il Phys R 72:356 Ag 15 '47

Range measurements of alpha-particles from 94^{239} and 94^{238}. O. Chamberlain and others. Phys R 71:529-30 Ap 15 '47

Rate of oxygen absorption by alpha ray cuprene. G. Glockler and C. A. Hollingsworth. Electrochem Soc Trans 92 (preprint 1):1-9 '47

Theory of alpha-radioactivity. M. A. Preston. bibliog Phys R 71:865-77 Je 15 '47

ALPHABETS

Alphabet source book. O. Ogg. 199p $3.95 Dover publications, 1780 Broadway, New York 19 '47

ALTERNATORS. See Electric generators, Alternating current

ALTIMETERS

Automatic altimeter increases air safety. diag Product Eng 17:146 D '46

Electronic position pickup; used to transmit position of altimeter hand to distant station. D. W. Moore, jr. il diags Electronics 20:100-1 Ja '47

Rate-of-change meter. R. W. Treharne and others. diag Electronics 20:106-7 My '47

ALTITUDE

Altitude-density charts for air. Heat & Ven 44:94a-94b Ap '47

Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. diag Acoustical Soc Am J 19: 120-5 Ja '47

Psychrometric charts for high altitude calculations. H. E. Karig. Refrig Eng 52:433-7+ N '46

Temperature corrections in altimeter surveying. J. K. Rogers. chart Am Assn Pet Geologists Bul 31:370-4 F '47

See also

Aviation—Altitude flying

Aviation—Medical aspects

ALTITUDE, Effect of

Mining in very high altitudes and deep level mines. W. Schweisheimer. Can Min J 68: 657-8 S '47

ALTITUDE flying. See Aviation—Altitude flying

ALTON railroad

Gulf, Mobile & Ohio absorbs Alton. M. Halpern. Barron's 27:23 Je 23 '47

Managers upheld by court. Comm & Fin Chr 165:677 F 3 '47

Plan of reorganization consummated. Comm & Fin Chr 165:3161 Je 16 '47

ALUM. See Alums

ALUMINA

Alumina in whiteware; vitreous chinaware, semivitreous dinnerware, electrical porcelain, cooking ware and sanitary ware. C. R. Austin and others. il Am Cer Soc J 29: 341-54 D 1 '46

Alumina-silica relationship in glass. H. W. Safford and A. Silverman. bibliog Am Cer Soc J 30:203-11 Jl 1 '47

L'alumine activé; sa préparation, ses propriétés, sa nature. H. Thibon and others. Chimie & Ind 57:117-25 F '47; Abstract (Activated alumina; recent research in France). Chem Age (Lond) 56:535-7 Ap 26 '47

Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47

ALUMINA—*Continued*
Chemical nature of coal hydrogenation products; initial resolution by chromatography on alumina. M. B. Neuworth. bibliog diag Am Chem Soc J 69:1653-7 Jl '47
Colloidal aluminum oxide. A. A. Vernon. bibliog J Phys & Colloid Chem 51:768-70 My '47
Decenes formed from *t*-amyl alcohol and from 2-methyl-2-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47
Dehydration with activated alumina. Chem Age (Lond) 56:285-6 Mr 8 '47
Developments in high alumina fused refractories; abstract. J. C. McMullen and A. P. Thompson. Glass Ind 28:515+ O '47
Effect of magnesia and alumina on rate of crystal growth in some soda-lime-silica glasses. H. R. Swift. bibliog il Am Cer Soc J 30:170-4 Je 1 '47
Enthalpy, specific heat, and entropy of aluminum oxide from 0° to 900° C. D. C. Ginnings and R. J. Corruccini. bibliog diags J Res Nat Bur Stand 38:593-600 Je '47
Experimental study of the alkylation of aromatic amines using (1) aluminium alkoxides and (2) alumina with alcohols. J. C. Earl and N. G. Hills. Chem Soc J p973-6 Jl '47
Heats of solution of solid solutions of hexacalcium dialumino ferrite and dicalcium ferrite. E. S. Newman. bibliog J Res Nat Bur Stand 38:661-4 Je '47
High alumina-iron laterite deposits, Columbia county, Oreg. J. V. Kelly. 8pls U S Bur Mines Rep of Invest 4081:1-51 '47
High-temperature protection for mild steels; heat-resistant ceramic coatings. W. N. Harrison and others. il Steel 120:92-3+ F 10 '47
Hydrogenolysis of aliphatic alcohols. V. I. Komarewsky, C. F. Price and J. R. Coley. Am Chem Soc J 69:238-9 F '47
Industrial application of activated alumina to adsorption drying; abstract. A. J. Carter. Chem & Ind p114 F 22-Mr 8 '47
Interaction of hydrous alumina with salt solutions. R. P. Graham and A. E. Horning. Am Chem Soc J 69:1214-15 My '47
Low-temperature heat capacities and high-temperature heat contents of $Al_2O_3.3H_2O$ and $Al_2O_3.H_2O$. C. H. Shomate and O. A. Cook. bibliog Am Chem Soc J 68:2140-2 N '46
Melting relations in the systems $Na_2-Al_2O_3-SiO_2$ and $K_2O-Al_2O_3-SiO_2$. J. F. Schairer and N. L. Bowen. bibliog diags Am J Sci 245: 193-204 Ap '47
Production of alumina by the lime-soda process. W. E. Prytherch, M. L. R. Harkness and W. D. Spencer. bibliog maps Chem Age (Lond) 56:149-59, 219-23, 339-43, 607-13, 717-20 Ja 25, F 8, Mr 22, My 10, 31 '47
Production of alumina from clay by a modified Pedersen process. T. P. Hignett. bibliog flow sheet il plans diags Ind & Eng Chem 39:1052-60 Ag '47; Correction. 39: 1334 O '47
Purification of streptomycin salts by means of alumina. G. P. Mueller. bibliog Am Chem Soc J 69:195-200 F '47
Reactivity of hydrous alumina toward acids. R. P. Graham and A. W. Thomas. bibliog Am Chem Soc J 69:816-21 Ap '47
Recovery of alumina from kaolin by the lime-soda sinter process. F. J. Cservenyak. 18pls U S Bur Mines Rep of Invest 4069:1-59 '47
Recovery of soda and removal of sulfate in the lime-soda process for alumina production. F. J. Frattali and others. bibliog 11 pls U S Bur Mines Rep of Invest 4126:1-14 '47
Sorption of hydrogen on alumina. A. S. Russell and J. J. Stokes, jr. bibliog Am Chem Soc J 69:1316-19 Je '47
Susceptibility-composition isotherm for the chromium-aluminum oxide catalyst system. R. P. Eischens and P. W. Selwood. Am Chem Soc J 69:1590-4 Jl '47
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K. Kelley and others. bibliog U S Bur Mines Tech Pa 688: 1-104; pa 20c Supt. of doc. '46
X-ray diffraction studies in the system $NiO-Al_2O_3$. W. O. Milligan and L. Merten. bibliog il J Phys Chem 50:465-70 N '46

See also
Bauxite
Corundum

Analysis
Analysis of silica-alumina cracking catalysts; spectrographic determination of contaminants. R. A. Burdett and L. C. Jones, jr. bibliog Anal Chem 19:238-41 Ap '47
Composition of rosin size precipitate; occurrence of alumina. D. Price. bibliog Ind & Eng Chem 39:1143-7 S '47

Terminology
Alumina nomenclature. J. D. Edwards. Chem & Ind p229-30 Ap 26 '47

Testing
Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47

ALUMINA cement. See Cement—Alumina cement

ALUMINUM
Aluminum backed phosphor screen in cathode ray tubes. A. Bramley. Electrochem Soc Trans 91 (preprint 30):463-6 '47
Aluminum heat conductor. A. B. Hubbard and K. E. Stanfield. diag Anal Chem 19: 434 Je '47
Aluminum + plastics offers unusual design possibilities. J. D. Edwards. il Iron Age 160: 46-8 O 23 '47
Aluminum versus copper. H. A. Knight. il Materials & Methods 25:61-4 F '47
Further experiments on the elastic single scattering of electrons by nuclei. W. W. Buechner and others. Phys R 72:678-9 O 15 '47
Further observation of graphitization in aluminum-killed carbon-molybdenum-steel steam piping. R. W. Emerson and M. Morrow. bibliog il plan A S M E Trans 68:597-607 Ag '46; Same. Welding J 26:sup139-49 Mr '47
Gamma-ray yield curve of aluminum bombarded with protons. K. J. Broström and others. bibliog diags Phys R 71:661-6 My 15 '47
Kaiser-Frazer and Ford lead swing to aluminum. W. G. Patton. Iron Age 160:88+ S 25 '47
Kinetics of oxide film formation on metals and alloys. E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29):431-61 '47
Light weight bodies of aluminum for trucks; abstract. F. O. Lewis. il S A E J 55:59 O '47
Light weight pallets for easy handling of materials. T. O. Palmer. Mech Handling 34:100-2 F '47
Minimum sparking potentials of barium, magnesium, and aluminum in argon. H. Jacobs and A. P. LaRocque. bibliog diags J Ap Phys 18:199-203 F '47
Minimum sparking potentials of barium, magnesium, and aluminum in helium. H. Jacobs and A. P. LaRocque. bibliog diags Electrochem Soc Trans 91 (preprint 20): 297-310 '47
Phase of scattering of thermal neutrons by aluminum and strontium. E. Fermi and L. Marshall. Phys R 71:915 Je 15 '47
Reclamation of aircraft aluminum; chlorine gas fluxing; Reynolds metals co. G. W. Birdsall. il diag Metal Prog 50:1232-8 D '46
Spin dependence of scattering of slow neutrons by Be, Al, and Bi. E. Fermi and L. Marshall. Phys R 72:408-10 S 1 '47
Stopping power of various substances for fission fragments. E. Segrè and C. Wiegand. diag Phys R 70:808-11 D 1 '46
Study of the films of aluminum obtained by anodic oxidation of different aluminum alloys; abstract. Chem Eng 53:270 D '46
Sulfur dioxide vs. materials of chemical plant construction; aluminum. E. D. Vernik, R.H. Wagner and R. H. Brown. Chem Eng 54: 210+ Ag '47
Surface hardening of aluminum and its alloys; abstract. K. G. Robinson and B. W. Mott. Product. Eng 18:133-4 Jl '47

ALUMINUM—*Continued*

System board of aluminum uses colored-tape diagrams; load dispatching facilities of the Consolidated gas electric light & power co. of Baltimore. E. S. Bailey. il plan Elec World 128:54-6 S 27 '47

Theoretical range-energy values for protons in air and aluminum. J. H. Smith. bibliog Phys R 71:32-3 Ja 1 '47

Thermal conductivity of aluminum; solid and liquid states. C. C. Bidwell and C. L. Hogan. bibliog J Ap Phys 18:776-9 Ag '47

Thin oxide films on aluminum. E. A. Gulbransen and W. S. Wysong. bibliog J Phys & Colloid Chem 51:1087-103 S '47

Total cross section of aluminum for fast neutrons. L. W. Seagondollar and H. H. Barschall. bibliog diag Phys R 72:439-44 S 15 '47

Toxicity of chemicals in electroplating; aluminum and its salts. P. M. Van Arsdell. Metal Finishing 45:55-6 Ag '47

Unfired cylindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman. A S M E Trans 69: 337-43; Discussion. 343-4 My '47

Width of 985-Kev Al (p, γ) resonance. R. S. Bender and others. Phys R 71:905 Je 15 '47

See also

Bauxite

Thermit

Analysis

Determination of metallic aluminum in aluminum pigments. A. K. Light and L. E. Russell. bibliog diag Anal Chem 19:337-8 My '47

Spot testing for aluminum. W. E. Thrun and C. R. Heidbrink. Iron Age 158:68-9 N 28 '46

Cleaning

Aluminum cleaning must be engineered. D. Vance. il Automotive & Aviation Ind 96: 22+ Ja 1 '47

Aluminum cleaning procedures. J. S. Brady. il Iron Age 158:76-9 D 19 '46

Cleaning aluminum before welding with inert-arc method. M. J. Conway. Materials & Methods 24:1230 N '46

Coloring

Color anodizing of aluminum. Chem Ind 61: 78+ Jl '47

Color control for aluminum dyeing. E. Rhael and F. P. Summers. il Metal Finishing 45: 64-5 Ja '47

Coloring of aluminum and its alloys; engineering file facts. G. Black. Materials & Methods 25:145 Ap '47

Formation of self-coloring anodized coatings on aluminum; abstract. H. Fischer and N. Budiloff. Metal Prog 50:716+ O '46

Electrotechnical uses

Aluminum busbar laps and joints need not be larger than copper. S. C. Killian. diags Elec World 128:118-19 S 13 '47

Aluminum conductors for building wires. Nat Safety N 54:106 D '46

Aluminum conductors for interior wiring. F. Benz. il Elec West 98:47-9 Ja '47

Aluminum for cable sheathing; abstract. Materials & Methods 24:1522 D '46

Application of insulated aluminum wire and cable. C. W. Ange and E. E. McIlveen. il Elec World 128:104-13 S 13 '47

How to bend tubular aluminum bus. T. L. Bourbonnais, 2d. il Elec World 127:70-1 Je 21 '47

New uses for aluminium. E. D. Iliff. Elec R (Lond) 141:445-6 S 19 '47

Voltage-drop charts for selecting insulated aluminum cable. F. A. Gunther. Elec World 128:114-17 S 13 '47

Finishing

Aluminum electropolishing plant; manufacture of plumbing fixtures. F. A. Herr. il Metal Finishing 45:63-4 Ag '47

How to select coatings for aluminum. R. Swan and N. P. Ruther. il Steel 120:78-9+ Mr 24 '47

Phosphate coating of aluminum. R. C. Gibson and W. S. Russell. bibliog il Ind & Eng Chem 38:1222-7 D '46

Process puts bright finishes on aluminum; developed by Colonial alloys co. Steel 121: 127 Jl 21 '47

Reflector finishing process; Alzak process. R. Pettit. Steel 120:114+ Je 23 '47

Selection and application of mechanical finishes for aluminum. R. E. Pettit. il Steel 120:98-100+ Mr 17 '47

See also

Aluminum—Coloring

Isotopes

Disintegration energies of Na^{24} and Al^{28}. W. H. Barkas. bibliog Phys R 72:346 Ag 15 '47

Nuclear excitation functions; $Al^{27}(d;p, \alpha)Na^{24}$. E. T. Clarke. bibliog Phys R 71:187-91 F 1 '47

Joining to steel, etc.

Aluminum timing gears for automotive use; aluminum bonded to steel by the Al-Fin process. il Bus Transportation 26:227-9 My '47; Excerpts. Iron Age 160:74 Jl 3 '47

Increased efficiency of heat transfer; aluminum cylinder barrel cast on thin-wall steel liner. il Machine Design 19:107 Je '47

Metallography

Experimental evidence of the viscous behavior of grain boundaries in metals. T. Kê. bibliog diags Phys R 71:533-46 Ap 15 '47; Abstract. Engineer 184:196-7 Ag 29 '47

Grain growth in high purity aluminum. P. A. Beck and others. Phys R 71:555 Ap 15 '47

Stress relaxation across grain boundaries in metals. T. S. Kê. il Phys R 72:41-6 Jl 1 '47

Theory of the age hardening of aluminum-copper alloys, based on vacant lattice sites; abstract. F. Röhner. Metal Prog 52:422+ S '47

Paint

Alpaste. 87p Aluminum co. of Canada, 1700 Sun Life bldg, Montreal '46

Aluminum paint dries fast, resists attack by most chemicals. Sci Am 177:181-2 O '47

Prices

Aluminum, 99% plus; monthly, 1929-1946; tabulation. Iron Age 159:242 Ja 2 '47

Competition forces sheet aluminum price reductions. J. Anthony. il Iron Age 160:117 Ag 21 '47

Protection

Bichromate in anodized films; abstract. H. Fischer and N. Budiloff. Metal Prog 50: 718+ O '46

Corrosion; cathodic methods. M. G. Fontana. diag Ind & Eng Chem 39:sup93A-94A Ag '47

New bonderizing process for aluminum and steel. H. A. Knight. il Materials & Methods 26:99-101 O '47

New surface treatment for aluminum; Alodine coating. J. Anthony. flow sheet il Iron Age 158:64-7 D 5 '46

Oxide coatings on aluminum; abstract. V. F. Henley. Materials & Methods 24:1258 N '46

Phosphate coating of aluminum. R. C. Gibson and W. S. Russell. bibliog il Ind & Eng Chem 38:1222-7 D '46

Stinson adopts alodizing process. Automotive Ind 97:60 Jl 1 '47

Testing

Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdam, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46

Radiography reveals internal quality of die castings. R. W. Dively. il Steel 121:88-9+ N 3 '47

Textile uses

Aluminum fabrics. Mech Eng 69:231 Mr '47

Aluminum has many uses in textile equipment. C. Braglio. il Textile World 97:123+ Ap '47

Welding

Battery powered aluminum flash welder. il Iron Age 158:51 D 26 '46

Certain aspects of seam welds in aluminum alloy sheets. G. H. Boss. il Metal Prog 51: 599-602 Ap '47

ALUMINUM—Welding—*Continued*
Classification and recording of spot-weld defects revealed by radiography. R. C. McMaster and others. bibliog il Welding J 26:121-8 F '47
Development of a two-row high-strength spot-welded lap joint in 24S-T Alclad aluminum alloy. L. M. Crawford and J. E. Pease. il diags Welding J 25:1203-10 D '46
Fatigue tests on some spot-welded joints in aluminum alloy sheet materials. H. J. Grover and L. R. Jackson. bibliog il diags Welding J 26:sup215-32 Ap '47
Hot-shortness of some aluminium-iron-silicon alloys; Properties of aluminium-silicon alloys at temperatures in the region of the solidus; abstracts and discussion. A. R. E. Singer and others. Engineer 183:221-2 Mr 14 '47; Engineering 163:245 Mr 28 '47
Portable inert gas metal arc welder. il Iron Age 159:46 My 1 '47
Pressure welding; manufacture of light alloy charge-cooler element; abstract. H. Herrmann. Metal Prog 51:1004+ Je '47
Pressure welding of light alloys without fusion; work undertaken for Joint committee on recrystallisation welding. R. F. Tylecote. bibliog il diags Welding J 26:sup88-103 F '47
Progress report on the flash welding of high-strength aluminum alloys. R. Della-Vedowa and E. A. Reynolds. il Welding J 26:sup 81-7 F '47
Radiography and the fatigue strength of spot welds in aluminum alloys. R. C. McMaster and H. J. Grover. bibliog il Welding J 26: 223-32 Mr '47
Radiography of spot welds in various sheet gages and dissimilar gage combinations. R. C. McMaster and others. bibliog il Welding J 26:19-29 Ja '47
Recommended spotwelding procedures. F. S. Dever. il Iron Age 159:46-50 Ja 30 '47
Some observations on the weldability of high-strength wrought aluminum alloys. W. R. Apblett, jr. il diag Welding J 25:sup802-8 N '46; Excerpts. Iron Age 158:62-3 N 28 '46
Static and fatigue tests of arc-welded aluminum alloy 61S-T plate. E. C. Hartmann and others. bibliog il diags Welding J 26:sup129-38 Mr '47
Static-strength tests of fillet welds on aluminum alloy 61S-T plate. R. L. Moore. il diags Welding J 26:sup593-600 O '47
Summary of results of tests made by aluminum research laboratories of spot-welded joints and structural elements. E. C. Hartmann and G. W. Stickley. il diags Welding J 26:sup233-51 Ap '47
Unit welds aluminum electrical connections. il Elec World News ed 127:29 My 31 '47
Welding aluminum. 107p Aluminum co. of Canada, 1700 Sun Life bldg, Montreal '46

ALUMINUM, Powdered

Therapeutic use
Medical facts revealed by aluminum therapy tests. W. D. Robson. Eng & Min J 148:64-7 My '47
Silicosis can be controlled. W. A. Betz. Cer Ind 47:63-4 D '46; Same. Brick & Clay Rec 110:62+ F '47
Techniques are improved for aluminum therapy. A. W. Jacob. il diag Eng & Min J 148:84-8 Je '47
Use of aluminum powder in the prevention and treatment of silicosis; abstract. W. E. George. J Ind Hygiene 29:sup90-1 S '47

ALUMINUM, Structural
All-aluminum prefab is sectional, has integral kitchen-bath-utility unit; Airoh house made in Gloucester, England. il Arch Forum 86:126 Mr '47
Aluminum alloy derrick weighs ⅓ that of steel. N. P. Carlson. il Elec World 127:62 F 1 '47
Aluminum building products and how to apply them; corrugated roofing and siding. il diags Am Bld 68:104 N '46
Aluminum crane. il Mech Handling 34:53 Ja '47
Aluminum for water works structures; with cost data. J. M. Perryman. il Am Water Works Assn J 38:1327-9 D '46
Aluminum house; Kansas City, Mo. il plans Am Bld 68:92-4 N '46
Aluminum in rural construction. F. B. Hastings. il Sheet Metal Worker 38:48-9 Je '47
Aluminum roof trusses for an enginehouse. il Eng N 138:820-1 My 15 '47
Aluminum span for E-60 railroad bridge. il Eng N 137:714-16 N 28 '46
Butler manufacturing co. produces all-aluminum house. il plans diags Arch Forum 86:96-7 Ja '47
California house mass-produced in aluminum; Muntz house. il plan Arch Rec 101: 143 Je '47
Handling of pre-fabs; mechanical equipment aid to mass production of prefabricated aluminum houses. J. A. Oates. il plan diags Mech Handling 33:631-43+ O '46
Pittsburgh builder uses aluminum siding on 31-unit house project. il diags Am Bld 69: 84 Ja '47
Recommended application methods for aluminum roofing and siding. J. S. Pollack. il diags Sheet Metal Worker 37:36-9 N '46; Same cond. Mech Eng 68:1080-1 D '46; Excerpt. Steel 119:107+ D 9 '46

See also
Aluminum alloys
Bridges, Aluminum
Roofs, Aluminum

ALUMINUM alloys
Acetic acid vs. materials of chemical plant construction. B. D. Verink, jr. flow sheet il Chem Eng 53:253-4+ N '46
Aging of high purity aluminum alloy containing 4 pct Cu; abstracts. M. L. V. Gayler. Iron Age 158:45 O 31 '46; Engineer 182: 281 S 27 '46; Engineering 162:306 S 27 '46; Metal Prog 51:830+ My '47
Aluminum advances on all fronts. F. P. Peters. il Sci Am 176:63-5 F '47
Aluminum alloy bearings. H. Y. Hunsicker. il diags Machine Design 19:121-7 Ja '47
Aluminum alloy forging materials and design. L. W. Davis. il diags Am Soc for Metals Trans 35:156-79; Discussion. 179-83 '45
Aluminum alloy 75S; properties, fabrication and other data. Machine Design 19:143-5 Ja '47
Aluminum alloys; wrought, R300 series; analyses, properties, characteristics, applications, etc. Machine Design 19:159-62 Mr '47
Aluminum and magnesium in highway transportation bodies; abstract. J. H. Dunn. S A E J 55:67 Mr '47
Aluminum and the automobile engineer. E. G. West. Metal Prog 50:1262+ D '46
Aluminum casting alloy. O. Tichy. Materials & Methods 24:1512 D '46
Aluminum casting alloys; tabulation; data sheet. H. S. Jerabek, comp. Metal Prog 50:874 N '46
Aluminum-silicon alloys by electrothermal reduction of clay with coke. M. M. Striplin, jr. and W. M. Kelly. bibliog il diags Chem Eng Prog 43:569-78 O '47
Annual engineering review. il Materials & Methods 25:91-2 Ja '47
Automobile designed for light alloy construction. il diags Product Eng 17:88-92 D '46
Buckling the curved aluminum alloy plates; discussion of three papers by G. Welter. H. L. Cox. bibliog J Aeronautical Sci 14:333-5; Reply. 335 Je '47
Chemical engineering materials of construction; review of literature from start of World war II; aluminum alloys. R. H. Brown and E. D. Verink, jr. bibliog(37 ref) il Ind & Eng Chem 39:1198-201 O '47
Cold working of a high-purity aluminum alloy containing 4 percent of copper and its relation to age-hardening; abstracts. M. L. V. Gayler. Product Eng 18:129 Je '47; Iron Age 158:45 O 31 '46
Composition of aluminum alloys. W. L. Nelson. Oil & Gas J 45:272 D 28 '46
Creep deflections in columns. J. Marin. il diags J Ap Phys 18:103-9 Ja '47
Deep drawing aluminum alloys at elevated temperatures. D. M. Finch and others. bibliog il diags Am Soc for Metals Trans 36: 254-81, 290-307 '46; Abstract. Iron Age 157: 70-3 F 14 '46; Discussion. Am Soc for Metals Trans 36:281-9, 307-10 '46
Economic aspects in the use of aluminum and magnesium alloys. L. W. Eastwood. Materials & Methods 25:63-8 Je '47

ALUMINUM alloys—*Continued*
Effect of radius of curvature and preliminary artificial eccentricities on buckling loads of curved thin aluminum-alloy sheets for monocoque constructions. G. Welter. J Aeronautical Sci 13:593-6+ N '46
Forming of the aluminum alloy 75S. G. Sachs and G. Espey. bibliog(32 titles) diags Am Soc for Metals Trans 37:468-96 '46
French and German aluminum-silicon alloys; abstract. Materials & Methods 26:120 Ag '47
Gas porosity in aluminum alloys. H. Brown. il diags Foundry 75:88-9+ F '47
Glenn Martin engineer offers new aging cycle for aluminum alloys. Iron Age 159: 156 Mr 13 '47
Hot-shortness in welds and castings of the aluminum-silicon alloys; abstract. A. R. E. Singer and P. H. Jennings. Materials & Methods 25:128 Je '47
Hot-shortness of some aluminium-iron-silicon alloys; Properties of aluminium-silicon alloys at temperatures in the region of the solidus; abstracts and discussion. A. R. E. Singer and others. Engineer 183:221-2 Mr 14 '47; Engineering 163:245 Mr 28 '47
Hot-shortness of the aluminium-silicon alloys of commercial purity. A. R. E. Singer and P. H. Jennings. il Engineering 163:369-71 My 2 '47; Abstract. Metal Prog 52:1028+ D '47
Lead improves aluminum-magnesium alloys; abstract. H. Bauer. Materials & Methods 26:126-7 Jl '47
Light-alloy vehicles; approach to weight reduction. Automobile Eng 37:55-7 F '47
Light alloys as applied to mining and general engineering. W. F. Fennell. il Mech Handling 34:133-7 Mr '47
Machining light alloys; abstract. R. Schweyckart. Materials & Methods 26:118-19 S '47
New aluminum alloys, containing small amounts of beryllium. R. H. Harrington. Am Soc for Metals Trans 36:311-23; Discussion. 324-35 '46
New developments in high strength aluminum alloy products. E. H. Dix, jr. bibliog Am Soc for Metals Trans 35:130-48; Discussion. 149-55 '45
New short time aging practice for 75S aluminum alloy sheet. J. A. Nock, jr. and A. C. Wooll. Iron Age 159:57-9 Ja 30 '47
New strong aluminum casting alloy; Almag. H. Knight. il Materials & Methods 25:68-71 Ja '47
Phosphate coating of aluminum. R. C. Gibson and W. S. Russell. bibliog il Ind & Eng Chem 38:1222-7 D '46
Physical properties of aluminum alloys. W. L. Nelson. Oil & Gas J 45:88 N 30 '46
Properties and fabrication of aluminum alloys; engineering file facts. Materials & Methods 25:121 My '47
Sandwich materials; metal-faced balsa-core material. H. B. Gibbons. diag Machine Design 19:144-5 Mr '47
Some observations on the weldability of high-strength wrought aluminum alloys. W. R. Apblett, jr. il plan diag Welding J 25: sup802-8 N '46
Stabilizing aluminum castings. A. C. Jones. Metal Prog 51:775-6 My '47
Surface hardening of aluminum and its alloys; abstracts. K. G. Robinson and B. W. Mott. Product Eng 18:133-4 Jl '47; Materials & Methods 26:130 Jl '47
Theory of limit design applied to magnesium alloy and aluminium alloy structures. F. Panlilio. bibliog il diags Roy Aeronautical Soc J 51:534-71 Je '47
Unfired cyclindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman. A S M E Trans 69: 337-43; Discussion. 343-4 My '47
Use of 75ST in structural applications. G. Snyder and F. J. Crossland. il S A E J 55:59-62 Je '47; Abstract. Automotive & Aviation Ind 96:33 My 1 '47
Utilization of new high strength aluminum alloys. J. F. McBrearty. S A E J 54:66 D '46
Wrought aluminum alloys; compositions, properties, and designations of American commercial alloys; data sheet. H. S. Jerabek, comp. Metal Prog 50:864 N '46
Zicral, a new high strength light alloy; abstract. M. Tournaire. Materials & Methods 25:150 Ap '47

See also
Alclad
Aluminum bronze

Analysis

Adapting basic spectrographic equipment to precision quantitative analysis. P. H. Brotzman and H. E. Hemker. il Steel 121: 83+ Jl 14 '47
Analysis of light alloys based on electrical resistivity. L. Rotherham and J. I. Morley. il diag Engineering 163:416-18 My 16 '47; Abstract. Metal Prog 51:1002+ Je '47
Determination of bismuth, copper and lead in aluminum alloys. G. Norwitz, S. Greenberg and F. Bachtiger. bibliog Anal Chem 19:173-5 Mr '47
Distinguishing the common aluminum alloys. F. C. Bennett, jr. Metal Prog 50:659+ O '46
Rapid gravimetric determination of silicon in aluminum alloys. P. Lisan and H. L. Katz. bibliog Anal Chem 19:252-3 Ap '47

Testing

Damping capacity and the fatigue of metals. R. F. Hanstock and A. Murray. il diags Engineering 161:358-60, 381-3 Ap 12-19 '46; Abstract. Metal Prog 50:1108+ N '46; Discussion. Engineer 181:284-5 Mr 29 '46
Editorial citation to Aluminum co. of America for achievement in supersonic inspection of aluminum alloy. il Materials & Methods 24:1172-3 N '46
Effect of artificial aging on tensile properties and resistance to corrosion of 24S-T aluminum alloy. H. L. Logan, H. Hessing and H. E. Francis. bibliog il charts J Res Nat Bur Stand 38:465-89 My '47
Effect of iron and silicon impurities on the tensile properties and heat-treatment characteristics of sand-cast aluminum-10 per cent magnesium alloy test bars. R. T. Parker and others. il Engineering 163:273-6 Ap 4 '47
Failure sequence indicator. R. W. Powell. diags Aero Digest 54:62-3+ Je '47
Fracture of some aluminum alloys under combined stress. E. G. Thomsen and others. bibliog il diags A S M E Trans 69:81-7 F '47
Influence of shot peening on fatigue strength of 14ST alloy. C. B. Gleason. Iron Age 159: 62-4 Ja 9 '47
Micro-hardness testing; a study of the W.63 high duty piston alloy. A. J. Stokes and S. B. Dew. il Automobile Eng 37:181-6 My '47
Notch effects in high strength aluminum alloys. L. Schapiro and others. il Iron Age 159:52-6 Je 12 '47
Properties of aluminum alloys melted in an induction heated crucible furnace. J. W. Poynter. Am Soc for Metals Trans 35:184-93; Discussion. 193-4 '45
Room temperature tensile properties of aluminum-alloy sheet following brief elevated temperature exposure. J. T. Lapsley and others. bibliog J Aeronautical Sci 14:148-54 Mr '47
Some experiments on the effects of residual stresses on the fatigue of aluminum alloys; abstracts. G. Forrest. Engineering 161:280-1 Mr 22 '46; Engineer 181:285 Mr 29 '46; Metal Prog 50:1254+ D '46
Study of age-hardening by the aid of the electron microscope. A. H. Geisler and F. Keller. Engineer 183:194-5 Mr 7 '47
Value of highly destructive testing. M. G. Corson. Metal Prog 51:616 Ap '47
X-ray method of measuring Poisson's ratio. R. F. Hanstock and E. H. Lloyd. il diags Engineering 163:68-70 Ja 17 '47

ALUMINUM alloys, Heat treatment of
Control of internal stresses in heat-treated aluminum-alloy parts. L. E. Benson. Engineering 162:463 N 15 '46; Discussion. Engineer 182:281-2 S 27 '46; Engineering 162:306 S 27 '46

ALUMINUM alloys, Heat treatment of—*Cont.*
Effect of iron and silicon impurities on the tensile properties and heat-treatment characteristics of sand-cast aluminum-10 per cent magnesium alloy test bars. R. T. Parker and others. il Engineering 163:273-6 Ap 4 '47
Heat treating schedules. J. E. Burkhardt. Metal Prog 51:442 Mr '47
Heat treatment and aging 61S sheet. J. A. Nock, jr. diags Iron Age 159:48-54 Ap 24 '47
Improving the quality of heat treated aluminum alloy parts. D. V. Ludwig. il Materials & Methods 26:90-4 S '47
Precipitation hardening. L. Sanderson. Chem Age (Lond) 56:202-4, 412-14, 741-3; 57:13-15, 151-2 F 1, Ap 5, Je 7, Jl 5, Ag 2 '47
Room temperature tensile properties of aluminum-alloy sheet following brief elevated temperature exposure. J. T. Lapsley and others. bibliog J Aeronautical Sci 14:148-54 Mr '47

ALUMINUM boxes. See Boxes, Aluminum

ALUMINUM bridges. See Bridges, Aluminum

ALUMINUM bromide
Physical and chemical properties of hydrocarbon solutions of aluminum bromide; the solubility of aluminum bromide in *n*-hexane. E. R. Boedeker and A. G. Oblad. bibliog Am Chem Soc J 69:2036-9 Ag '47

ALUMINUM bronze
Attack of superheated steam atmospheres upon aluminum bronze alloys; abstract. A. P. C. Hallowes and E. Voce. Product Eng 17:138 D '46
High-strength aluminum bronze castings; abstract. J. Duport. Materials & Methods 24:1256 N '46
Identification of delta constituent in aluminum bronzes. D. J. Mack and M. A. Shurman. il Metal Prog 51:976-7 Je '47
Mechanical properties of aluminum bronzes at high temperatures; abstract. E. Voce. Materials & Methods 25:149 Ap '47
New metallographic etchant for aluminum bronze and copper-beryllium alloys. W. C. Coons and D. J. Blickwede. bibliog il Am Soc for Metals Trans 35:284-97 '45

ALUMINUM cars. See Cars, Aluminum

ALUMINUM chloride
Aluminum chloride-catalyzed addition of *t*-butyl chloride to propylene. V. A. Miller. bibliog Am Chem Soc J 69:1764-8 Jl '47
Aluminum from a fused chloride bath. C. G. Fink and D. N. Solanki. bibliog Electrochem Soc Trans 91 (preprint 15):221-36 '47
Butane isomerization; U.O.P. process. J. A. Chenicek and others. flow diag Chem Eng Prog 43:210-18 My '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 123-4 N '46
Cracking of paraffin hydrocarbons in the presence of aluminum chloride. V. I. Komarewsky and S. C. Ulick. Am Chem Soc J 69:492-5 Mr '47
Development of a hydrochloric acid process for the production of alumina from clay. J. I. Hoffman and others. flow sheets diags J Res Nat Bur Stand 37:409-28 D '46
Effect of reducing agents on ferric coagulation of digested sludge. G. C. Laidlaw. il Water & Sewage 85:16-17+ Ja '47
Extraction of aluminium from clay; hydrochloric-acid process and alkaline process. il diags Engineering 164:265-6, 292-3 S 19-26 '47
Isomerization of light hydrocarbons. S. F. Perry. flow plans Am Inst Chem Eng Trans 42:639-46 Ag '46; Same. Pet Eng (Ref annual) 18:185-8 Jl 1 '47
Pilot plant production of 2,3-dimethylbutane. C. Holloway, jr. and W. S. Bonnell. bibliog flow sheet il diag Ind & Eng Chem 38: 1231-8 D '46
Polymerisation of olefinic substances by Friedel-Crafts catalysts. J. P. W. Houtman. bibliog Soc Chem Ind J 66:102-3 Mr '47
Reaction of propane with carbon monoxide in the presence of aluminum chloride. H. Pines and V. N. Ipatieff. bibliog Am Chem Soc J 69:1337-9 Je '47
Some studies in the system $AlCl_3$-$FeCl_3$-KCl-NaCl-HCl-H_2O at 25, 30 and 35°. G. L. Miles. Am Chem Soc J 69:1716-19 Jl '47
See also
Friedel-Crafts reaction

ALUMINUM clad steel. See Steel, Aluminum clad

ALUMINUM coating
Making Fresnel off-axis parabolic mirrors by the evaporation technique. L. G. Schulz. diags Opt Soc Am J 37:349-54 My '47
Preparation by an evaporation technique of correcting elements for refracting optical systems. L. G. Schulz. il Opt Soc Am J 37:509 Je '47

ALUMINUM company of America
Alcoa asks trust suit dismissal. Oil Paint & Drug Rep 151:68 Ap 7 '47
Alcoa fights back. Bsns W p22 Ap 5 '47
Alcoa's current expansion geared to future markets. Barron's 27:34 S 1 '47
It's open house at Alcoa's sales office. R. A. Sweet. il Sales Management 59:130+ O 1 '47
Slashes senior charges. Barron's 27:1+ F 3 '47

ALUMINUM compounds
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47
Electron deficient molecules; aluminum alkyls. K. S. Pitzer and H. S. Gutowsky. bibliog Am Chem Soc J 68:2204-9 N '46
Experimental study of the alkylation of aromatic amines using (1) aluminium alkoxides and (2) alumina with alcohols. J. C. Earl and N. G. Hills. Chem Soc J p973-6 Jl '47
See also
Alums
Alunite

ALUMINUM containers. See Containers, Aluminum

ALUMINUM dilaurate
Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. B. Working. J Phys & Colloid Chem 51:974-80 Jl '47
Studies of aluminum soaps; water sorption and moisture content. G. W. Shreve, H. H. Pomeroy and K. J. Mysels. bibliog J Phys & Colloid Chem 51:963-6 Jl '47

ALUMINUM dust
Lung changes associated with the manufacture of alumina abrasives. C. G. Shaver and A. R. Riddell. bibliog il J Ind Hygiene 29: 145-57 My '47; Abstract. Nat Safety N 56: 103-4 Ag '47

ALUMINUM foil
Aluminum foil rolling; illustrations with text. Iron Age 159:123 Ap 10 '47
Aluminum + plastics offers unusual design possibilities. J. D. Edwards. il Iron Age 160:46-8 O 23 '47
First reparations plant offered U.S. industry; German aluminum foil plant. Chem & Eng N 25:2506 S 1 '47
Foil-fresh; delicacies in unusual gift packages. il Mod Packaging 20:126-7 N '46
Foiled again. il Food Ind 19:643 My '47
Laminated foil butter wrap. J. V. Ziemba. il Food Ind 19:456-7 Ap '47
20th century heraldry: display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47

ALUMINUM founding
Aluminum and magnesium; abstracts of A.F.A. papers. Foundry 75:130+ Je '47
Aluminum casting alloy. O. Tichy. Materials & Methods 24:1512 D '46
Aluminum casting alloys; tabulation; data sheet. H. S. Jerabek, comp. Metal Prog 50:874 N '46
Aluminum hand truck cast in permanent mold. H. R. Noyes. il Iron Age 159:72-3 Mr 6 '47
Brittleness of aluminium as it cools from the casting temperature; abstract. H. Jolivet and M. Armand. Engineer 183:287 Ap 4 '47
Casting aluminum alloy ingots; semi-continuous casting. diag Metal Prog 51:468+ Mr '47
Casting aluminum billets for extruding. R W. Graham. il Iron Age 158:52-4 D 26 '46

ALUMINUM founding—*Continued*
Continuous casting of light alloys; abstract. J. M. Peloutier. Materials & Methods 26: 130 O '47
Editorial citation to Johnson motors co. for achievement in manufacturing aluminum alloy die castings. il Materials & Methods 24:1178-9 N '46
Effect of iron and silicon impurities on the tensile properties and heat-treatment characteristics of sand-cast aluminum-10 per cent magnesium alloy test bars. R. T. Parker and others. il Engineering 163:273-6 Ap 4 '47
Foundry, a good place to work. L. W. Woodhouse. il Foundry 75:90-5+ Jl '47
Gas porosity in aluminum alloys. H. Brown. il diags Foundry 75:88-9+ F '47
Hot-shortness of the aluminium-silicon alloys of commercial purity. A. R. E. Singer and P. H. Jennings. il Engineering 163:369-71 My 2 '47; Abstract. Metal Prog 52:1028+ D '47
Lightweight gasoline engines made from die-castings; McCulloch motors corp. R. P. McCulloch. il Iron Age 159:52-6 My 15 '47
Melting aluminum scrap in the low frequency induction furnace. M. Tama. il diag Iron Age 160:76-9 S 4 '47
Modernized foundry to make it a better place to work; United States rubber company's aluminum alloy lasts. il Factory Management 105:74-6 S '47
New strong aluminum casting alloy; Almag. H. Knight. il Materials & Methods 25:68-71 Ja '47
Nonferrous foundry industry; its structure, sales, costs and profits. J. B. Meier and V. H. McClung. Foundry 75:86-8+ Jl; 88-90+ Ag; 94-7+ S '47
Permanent mold casting of aluminum. E. Bremer. il Foundry 75:86-9+ N '47
Pilot foundry aids product development; Reynolds metals co. G. W. Birdsall. il Foundry 75:90-1+ Ja '47
Properties of aluminum alloys melted in an induction heated crucible furnace. J. W. Poynter. Am Soc for Metals Trans 35:184-93; Discussion. 193-4 '45
Radiography reveals internal quality of die castings. R. W. Dively. il Steel 121:88-9+ N 3 '47
Some casting troubles; abstract. J. L. Francis. Materials & Methods 24:1526 D '46
See also
Aluminum bronze

ALUMINUM freight cars. See Freight cars, Aluminum

ALUMINUM houses. See Aluminum, Structural

ALUMINUM hydride
Lithium aluminum hydride, aluminum hydride and lithium gallium hydride, and some of their applications in organic and inorganic chemistry. A. E. Finholt, A. C. Bond, jr. and H. I. Schlesinger. bibliog Am Chem Soc J 69:1199-1203 My '47

ALUMINUM industry and trade
After the turn of the year. G. R. Gibbons. Comm & Fin Chr 165:436 Ja 23 '47
Aluminum and bauxite, 1946. il Min Cong J 33:87-9 F '47
Aluminum cartels. R. L. Bishop. Mech Eng 69:663-5 Ag '47
Aluminum; the coming metal? Bsns W p32+ F 15 '47; Discussion. p42+ Mr 22 '47
Competitive battle between new and established metals; expanding use of aluminum and magnesium. W. Beecher. il Mag of Wall St 80:710-11+ S 27 '47
From spoons to rowboats, Alcoa's road show sells aluminum to the public. il Sales Management 57:40-2 D 1 '46
Light metals, 1946. J. L. Head. Eng & Min J 148:89-91 F '47
Lots of aluminum. il Bsns W p 17-18 My 31 '47
Sag in demand spotlights excess aluminum capacity. B. Ravits. Barron's 27:27-8 Je 16 '47
See also
Aluminum company of America

Advertising
Research changes focus in marketing of aluminum scrap. H. M. Gross. Ind Marketing 31:35+ N '46

Germany
German aluminium developments. Chem Age (Lond) 56:159 Ja 25 '47; Same abr. Oil Paint & Drug Rep 150:42 D 30 '46

Southern states
Aluminum fabrication grows in South. W. Ogden. il Manuf Rec 115:42-3, 63 D '46

ALUMINUM lifeboats. See Lifeboats, Aluminum

ALUMINUM metallurgy
Aluminum and magnesium; review of 1946. J. D. Sullivan. Min & Met 28:63-4 F '47
Aluminum from clay; hydrochloric-acid extraction process and alkaline extraction. flow sheets Mech Eng 69:600-2 Jl '47
Aluminum-silicon alloys by electrothermal reduction of clay with coke. M. M. Striplin, jr. and W. M. Kelly. bibliog il diags Chem Eng Prog 43:569-78 O '47
Development of a hydrochloric acid process for the production of alumina from clay. J. I. Hoffman and others. flow sheets diags J Res Nat Bur Stand 37:409-28 D '46; Summary. Iron Age 159:68 Mr 13 '47
Extraction of aluminium from clay; hydrochloric-acid process and alkaline process. il diags Engineering 164:265-6, 292-3 S 19-26 '47
Gas fluxing in production of secondary aluminum. G. W. Birdsall. il Steel 121:88-9+ Ag 4; 86-8+ Ag 11 '47
Manufacture of aluminum from clay developed by National bureau of standards. flow sheet il Dom Comm 35:39-42 Jl '47
Production of alumina by the lime soda process. W. E. Prytherch, M. L. R. Harkness and W. D. Spencer. bibliog maps Chem Age (Lond) 56:149-59, 219-23, 339-43, 607-13, 717-20 Ja 25, F 8, Mr 22, My 10, 31 '47
Production of alumina from clay by a modified Pedersen process. T. P. Hignett. bibliog flow sheet il plans diags Ind & Eng Chem 39:1052-60 Ag '47; Correction. 39:1334 O '47
Production of aluminum; abstract. L. C. Sturbelle. Am Cer Soc J 29(Cer A):203 N 1 '46
Recovery of alumina from kaolin by the lime-soda sinter process. F. J. Cservenyak. 18pls U S Bur Mines Rep of Invest 4069:1-59 '47
Some studies in the system $AlCl_3$-$FeCl_3$-KCl-NaCl-HCl-H_2O at 25, 30 and 35°. G. L. Miles. Am Chem Soc J 69:1716-19 Jl '47
Synthetic bauxite; wartime emergency material for the production of aluminous cement. A. V. Hussey. flow sheet Chem & Ind p635-8+ O 18 '47
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K. Kelley and others. bibliog U S Bur Mines Tech Pa 688:1-104; pa 20c Supt. of doc. '46

Electrometallurgy
Aluminum from a fused chloride bath. C. G. Fink and D. N. Solanki. bibliog Electrochem Soc Trans 91 (preprint 15):221-36 '47

ALUMINUM nails. See Nails, Aluminum

ALUMINUM ores
Aluminous lateritic soil of the Sierra de Bahoruco area, Dominican Republic, W.I. S. S. Goldich and H. R. Bergquist. maps U S Geol S Bul 953-C:53-84, pl 15-19; pa 40c Supt. of doc. '47
See also
Bauxite

ALUMINUM oxide. See Alumina; Alundum

ALUMINUM pipes. See Pipes, Aluminum

ALUMINUM plating
Aluminum electroplating in America; City Hall in Philadelphia; reprinted from Scientific American of Oct. 22, 1892. il Metal Finishing 45:66-7+ My '47

ALUMINUM powder. See Aluminum, Powdered

ALUMINUM roofs. See Roofs, Aluminum

ALUMINUM ships. See Ships, Aluminum

ALUMINUM silicates
Symmetrical arrangement of atoms in aluminosilicates and random arrangement of two kinds of objects in a regular array. W. G. Schlecht. bibliog In U S Geol S Bul 950: 35-82, pl 1 '46

See also
Beryl
Cordierite
Kyanite
Sillimanite

ALUMINUM therapy. See Aluminum, Powdered —Therapeutic use

ALUMINUM thiosulfate
Thiosulphate complexes of the tervalent metals, iron, aluminium, and chromium. N. Uri. Chem Soc J p335-6 Mr '47

ALUMINUM tubes. See Tubes, Aluminum

ALUMINUM ware

Standards

Aluminum utensil trade aided by commercial standardization. W. H. Jackett, jr. il Dom Comm 35:23-5 Ag '47

ALUMINUM waste
Melting aluminum scrap in the low frequency induction furnace. M. Tama. il diag Iron Age 160:76-9 S 4 '47
Refining aluminum airplane scrap for reuse. Comp Air Mag 51:306 N '46
Research changes focus in marketing of aluminum scrap. H. M. Gross. Ind Marketing 31:35+ N '46
Three systems for handling and storing metal chips; aluminum-chip handling system. S. Reibel. flow diag A S M E Trans 69:413-16 My '47; Same. Mech Handling 34:528-34 O '47

ALUMINUM water tanks. See Water tanks, Aluminum

ALUMINUM wire. See Wire, Aluminum

ALUMINUM work
Aluminum alloy forging materials and design. L. W. Davis. il diags Am Soc for Metals Trans 35:156-79; Discussion. 179-83 '45
Aluminum brazing; pictorial technical review of a paper by L. P. Saunders and P. S. Rogers. il S A E J 54:42-6 N '46
Aluminum fairwater on submarine. H. J. Andrews. il Marine Eng 52:83-4 Ag '47
Aluminum solder that requires no flux. il Materials & Methods 25:81-2 My '47
Assembly of aluminum parts by furnace and dip brazing methods. A. H. Petersen. il diags Product Eng 18:115-17 F '47
Bending for dihedral and sweepback simplified on heavy 75ST spar caps. il Aviation W 47:18 Ag 4 '47
Brittle lacquer technique used to test forged impeller design. H. Dobkin. il diag Steel 121:70-1+ S 1 '47
Control of raw materials and processes assures quality aluminum forgings. L. J. Barker. il Materials & Methods 25:63-7 My '47
Convolute flat springs. C. A. Tea. il diags Machine Design 18:109-13 D '46
Cronstrom's says it with aluminum. il Sheet Metal Worker 38:42-3 Jl '47
Deep drawing aluminum alloys at elevated temperatures. D. M. Finch and others. bibliog il diags Am Soc for Metals Trans 36: 254-81, 290-307 '46; Abstract. Iron Age 157:70-3 F 14 '46; Discussion. Am Soc for Metals Trans 36:281-9, 307-10 '46
Die design for aluminum alloys. E. W. Mason. il Am Mach 91:102-4 My 22 '47
Extruded aluminum freezer compartment; Servel gas refrigerator. il Product Eng 18:104 Ag '47
Fabricating aluminum air ducts. il Steel 121: 93+ Jl 7 '47
Fabricating aluminum radiators; three novel machines developed by Germans. il Steel 119:102 D 16 '46
Forging aluminum and magnesium on a giant hydraulic press. R. Moore and J. R. Douslin. il diags Mach 54:135-41 O '47
Forging practice; aluminum alloys. A. Ashburn. diags Am Mach 91:130-1 My 8 '47
Forming aluminum sheets into high-strength structures; Glenn L. Martin co. B. Rogge. il diags Mach 53:174-9 Je '47
Forming of aluminum by the drop stamp. Engineering 163:251 Mr 28 '47
Gisholt automatic lathe for machining aluminum cooking utensils. il diags Product Eng 18:150-2 S '47
Hot dimpling and joggling 75S-T for the DC-6's; Douglas aircraft. co. F. E. Bryan and D. E. Bailey. il Mach 53:146-51+ Je '47
Hot roll forming of various aluminum alloys. G. Sachs and others. il Am Soc for Metals Trans 37:449-67 '46
Investigations of 24S-T riveted tension joints. R. L. Fefferman and H. L. Langhaar. bibliog il diags J Aeronautical Sci 14:133-47 Mr '47
Light metal extrusion; industrial heating applications. il Elec R (Lond) 140:923-8 Je 6 '47
Machining huge aluminum slabs on scalper of unusual design. il Mach 53:150 D '46
Multiple-spindle automatics speed up Dodge piston production. C. H. Wick. il plan Mach 53:154-60 My '47
Operations on small high-speed automatic turret lathes; Potter & Johnston machine co. il diags Mach 53:140-2 Jl '47
Riveting aluminum. 104p Aluminum co. of Canada, 1700 Sun Life bldg, Montreal '46
Severe bending of 75S-T spar caps. P. F. Girard. il Automotive Ind 97:44+ Ag 1 '47; Same abr. Materials & Methods 26:112 Ag '47
Soldering aluminum. G. W. Birdsall. Iron Age 159:53 Je 26 '47
Tool design streamlines drawing practice. G. W. Birdsall. il diags Am Mach 91:77-81 Mr 27 '47
Torque converter for bus engines; assembly of aluminum parts made by furnace brazing. E. E. Thum. Metal Prog 52:230 Ag '47

See also
Aluminum—Welding
Aluminum founding

Tables, calculations, etc.

Weights of aluminum sheets, rods, and bars; data sheet. Mach 53:225 Jl '47

ALUMINUM works
Alcoa bids $5 million for the St Lawrence U.S. aluminum plant. Iron Age 159:179 Mr 6 '47

Accounting

Cost problems for West Coast aluminum. L. A. Doyle. N A C A Bul 29:145-62 O 1 '47

Power

Electrolytic production of aluminium; power plant designed and built at Witton engineering works of General electric co. il Electrician 139:1144 O 17 '47
Large rectifier station practice; operation in aluminum plants. J. W. Ward. il Elec Eng 66:958-60 O '47

ALUMS
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 122-3 N '46
Production of iron-free alum. E. A. Gee, W. K. Cunningham and R. A. Heindl. il plans diags Ind & Eng Chem 39:1178-88 S '47; Discussion. 39:1681-3 D '47
Solubilities of ammonium and potassium alums in water; densities of the saturated solutions. D. Schlain, J. D. Prater and S. F. Ravitz. bibliog diag Ind & Eng Chem 39: 74-6 Ja '47
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K. Kelley and others. bibliog U S Bur Mines Tech Pa 688:1-104; pa 20c Supt. of doc. '46

ALUNDUM
Abrasive grains produced without crushing; 38 Alundum. R. R. Ridgway. il Am Mach 90:110-11 D 19 '46
New abrasive made by unique electric furnace process; 32 Alundum. Materials & Methods 24:1566 D '46
New abrasive reduces grinding costs; 32 Alundum. J. Anthony. il Iron Age 158:56-9 N 21 '46
New aluminum-oxide abrasive improves grinding efficiency; 32 Alundum. G. T. Rideout. il Mach 53:158-64 Ja '47
Toward longer-lived abrasives; Norton 32 Alundum. L. E. Browne. il Steel 119:104-5+ D 2 '46

ALUNITE
Effect of adding alunite to refractory clays. J. O. Knížek and H. Fetter. bibliog il Am Cer Soc J 29:355-63 D 1 '46
Exploration of alunite deposits, Marysvale, Piute county, Utah. J. H. Hild. bibliog 24pls U S Bur Mines Rep of Invest 3972:1-74 '46
Properties of natural alunitic clays. J. O. Knížek and H. Fetter. bibliog il map Am Cer Soc J 29:308-13 N 1 '46
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K. Kelley and others. bibliog U S Bur Mines Tech Pa 688:1-104; pa 20c Supt. of doc. '46

ALVAREZ, Luis W.
Collier trophy award to Alvarez spotlights GCA development; ground controlled approach radar landing system. W. Kroger. diag Aviation N 6:7-8 D 16 '46

AMALGAMATED press, limited
Statement by the chairman at annual general meeting. W. E. B. Camrose. Economist 153:218 Ag 2 '47

AMALGAMS
See also
Sodium amalgam

AMARANTH
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47

AMATOL
Bomb filling with 80:20 amatol; procedure may have peace-time application. H. Graham and others. il diags Can Chem & Process Ind 30:37-41 N '46

AMBER (color)
Control of color on amber container ware during production. W. H. Manring. Am Cer Soc J 30:27-31 Ja 1 '47

AMBEROLS. See Resinous products

AMBRIDGE, Pennsylvania
Water supply
New water field development. E. C. Taggart. Am Water Works Assn J 39:750 Ag '47

AMERADA petroleum corporation
Diversified stake in dynamic oil industry. H. L. Blackburn. Mag of Wall St 80:91 Ap 26 '47
May double 1945 profit. Barron's 26:1+ N 18 '46

AMERICA
See also
Census of the Americas
Central America
Latin America
North America
South America

AMERICAN academy of tropical medicine
New members and officers. Science 105:10 Ja 3 '47

AMERICAN air export and import company
AAXICO's service will be revamped. Aviation N 6:14 D 2 '46

AMERICAN airlines, inc.
Annual report. Comm & Fin Chr 165:1994 Ap 14 '47
Mid-continent control by American airlines is denied by Board. CAA J 7:141 N 15 '46

AMERICAN and foreign power company, inc.
Amended plan filed with SEC. Comm & Fin Chr 165:3045-6 Je 9 '47
American & Foreign Power plan. O. Ely. Pub Util 39:849-50 Je 19 '47
New plan gives more to preferreds. Barron's 27:26 Je 2 '47
New recapitalization plan. Comm & Fin Chr 165:2984 Je 5 '47

AMERICAN aniline products, inc.
American aniline products, inc. il Am Dyestuff Rep 35:sup8-9 D 2 '46

AMERICAN architecture. See Architecture, American

AMERICAN-associated insurance companies
Booklet honors 35th anniversary. East Underw 48:40 Ap 11 '47

AMERICAN association for public opinion research
Nation's pollsters organize own association. E. Peterson. Ptr Ink 220:94 S 12 '47

AMERICAN association for the advancement of science
Annual meeting, Pacific division, 28th, San Diego, June 16-21. Chem & Eng N 25:1938 Jl 7 '47
Association membership dues increased. F. R. Moulton. Science 106:310 O 3 '47
Chemical research conferences; program. Chem & Eng N 25:674-5 Mr 10 '47
Cooperative committee on the teaching of science and mathematics; its organization and program. Science 106:28-30 Jl 11 '47
Financial problems of Association meetings. Science 105:615-16 Je 13 '47
Financial reports for 1945. F. R. Moulton. Science 106:6 Jl 4 '47
Future of science. C. F. Kettering. Science 104:609-14 D 27 '46
Meeting, 113th, Boston, Dec. 26-31. Chem & Eng N 25:154-6 Ja 20 '47
Meeting of Southwestern and Pacific divisions. Science 106:181-2 Ag 29 '47
Officers, 1947. Science 105:273, 305, 325, sup 19 Mr 14-28, Je 27 '47
Program, one hundred thirteenth meeting and exhibition. Science 104:523-34, 544-54 D 6 '46
Science exhibition. Science 104:589 D 20 '46
Synopses of section program plans. Science 105:641-2 Je 20 '47
Vice-presidents of the sections for 1947. Science 105:61 Ja 17 '47

AMERICAN association of cereal chemists
Annual convention, 32d, Kansas City, Mo. May 19-23. Oil Paint & Drug Rep 151:7+ My 26 '47; Food Ind 19:949-50 Jl '47

AMERICAN association of insurance general agents
Annual meeting, Dallas, April 28-29. East Underw 48:19+ My 2 '47; Nat Underw 51: 1+ My 1 '47; Weekly Underw 156:1185+, 1190+ My 3 '47

AMERICAN association of oilwell drilling contractors
Annual meeting, 7th, Long Beach, Oct. 13-15. Oil & Gas J 46:66 O 25 '47
California drilling contractors, hosts at annual convention. Oil & Gas J 46:110+ O 11 '47
Men who direct the A.A.O.D.C.; portraits. Oil & Gas J 46:108-9 O 11 '47

AMERICAN association of passenger traffic officers
Annual meeting, 84th, Asheville, N.C. Oct. 15-17. Ry Age 123:704-6 O 25 '47

AMERICAN association of petroleum geologists
Annual meeting, Los Angeles, March 25-27; with abstracts of papers. Oil & Gas J 45: 104-5+ Mr 29 '47
Annual meeting, 32d, Los Angeles, March 24-27. Am Assn Pet Geologists Bul 31:843-97 My '47
Constitution and by-laws. Am Assn Pet Geologists Bul 31:905-14 My '47
Membership list, March 8, 1947. Am Assn Pet Geologists Bul 31:537-637 Mr '47
Puts official sanction on research committee projects. C. J. Deegan. Oil & Gas J 45:123 Ap 5 '47

AMERICAN association of railroad superintendents
Annual meeting, 51st, Chicago, June 5-7. Ry Age 122:1211-14 Je 14 '47

AMERICAN association of state highway officials
Annual meeting, New York, Sept. 22-26. Eng N 139:437+ O 2 '47
Annual meeting, 32d, Los Angeles, Dec. 17-20. Eng N 138:6-8, 437-8 Ja 2, Mr 20 '47; Concrete 55:14 Ja '47; Roads & Sts 90:74-6+ F '47

AMERICAN association of textile chemists and colorists
Abstracts of papers to be presented at technical program. Am Dyestuff Rep 36:594-9 O 20 '47
American association of textile chemists and colorists, its history, 1921-1946; accomplishments of Research committee, histories of local sections, review of general meetings, list of charter members, past and present national officers, etc. Am Dyestuff Rep 35:549-612 D 2 '46

AMERICAN association of textile chemists and colorists—*Continued*
Annual meeting, 25th, Boston, Dec. 12-14. Rayon 27:633 D '46; Oil Paint & Drug Rep 150:7+ D 23 '46
Historical sketch. P. J. Wood. Am Dyestuff Rep 36:79-84 F 24 '47
National convention, Chicago, Oct. 23-25, 1947; program. Am Dyestuff Rep 36:581-4 O 20 '47
One hundred and fifty-seventh council meeting. Am Dyestuff Rep 36:263-4+ My 19 '47
Research committee meeting, 149th, Boston, Dec. 14, 1946. Am Dyestuff Rep 36:195-207 Ap 21 '47
Research committee, one hundred and forty-ninth and fiftieth meetings. Am Dyestuff Rep 36:378-9 Jl 14 '47
Silver jubilee anniversary, Boston, Dec. 12-14. Chem & Eng N 25:28 Ja 6 '47; Textile Col 69:20-1+ Ja '47; Am Dyestuff Rep 35: 704-16 D 30 '46
Third annual report of executive committee on research. Am Dyestuff Rep 36:32-3 Ja 27 '47
25 years of textile chemistry and its application. C. W. Bendigo and others. bibliog il Textile World 96:101-14+ D '46

AMERICAN association of university teachers of insurance
Annual meeting, Philadelphia. East Underw 48:4 Ja 31 '47; Nat Underw 51:1+ Ja 30 '47; Nat Underw (Life ed) 51:1+ Ja 31 '47; Weekly Underw 156:326-7 F 1 '47

AMERICAN bank note company
Selected stocks. Mag of Wall St 80:427 Jl 19 '47

AMERICAN bankers association
A.B.A. holds post-war convention in Chicago; extracts from principal addresses. Banking Law J 63:807-10+ N '46
Annual convention, 73d, Atlantic City, Sept. 28-Oct. 1. Comm & Fin Chr 166:1405+ O 9 '47

Country bank operations commission
Kit for country banks. Banking 39:47-8 Ja '47

Small business credit commission
ABA expands small business program. Comm & Fin Chr 165:2535 My 8 '47

Trust division
15th Mid-continent trust conference, Chicago. Banking 39:116 D '46
50th anniversary Trust conference, New York, Feb. 3-5. Banking 39:79-80 Mr '47
Newly elected state vice presidents. Trusts & Estates 84:626 Je '47
Proceedings of 15th Mid-continent trust conference, Chicago, Nov. 7-8. Trusts & Estates 83:572-5+ D '46
Trust and banking highlights of the 73d annual convention. Trusts & Estates 85:367-70 O '47
28th mid-winter trust conference commemorates fiftieth anniversary of Division at New York, Feb. 3-5; proceedings. Trusts & Estates 84:135-40+ F '47

AMERICAN bankers insured loan plan
Not A.B.A.-sponsored. Banking 39:76 D '46; Nat Underw (Life ed) 50:20 D 27 '46

AMERICAN bar association
Insurance section
Annual meeting, Cleveland, Sept. 22-23. East Underw 48:36-8 S 26 '47; Nat Underw 51:1+ S 25 '47; Nat Underw (Life ed) 51:2 S 26 '47; Weekly Underw 157:740-1 S 27 '47
Continue group on insurance interstate commerce status. Nat Underw 51:2 F 13 '47; Same. Nat Underw (Life ed) 5:9 F 14 '47
Name committees. Nat Underw (Life ed) 51: 24 F 21 '47

Real property, probate and trust law section
Annual meeting, Atlantic City, Oct. 28-29. Trusts & Estates 83:443-58+ N '46
Annual meeting, Cleveland, Sept. 22-23. Trusts & Estates 85:285-366 O '47

AMERICAN book center for war devastated libraries, inc.
Americans help restore libraries in war devastated Europe. Eng N 138:954 Je 12 '47

AMERICAN brake shoe company
Expansion expected to boost sales. Barron's 27:35 S 8 '47
Preferred stock offered. Comm & Fin Chr 166: 1349 O 6 '47
Preferred subscriptions. Comm & Fin Chr 166: 1677-8 O 27 '47

AMERICAN businessmen's club
A.B.C. in Amsterdam, one year old. For Comm W 27:23 My 17 '47

AMERICAN can company
Annual report. Comm & Fin Chr 165:1857 Ap 7 '47
Completes Arkansas plant. Manuf Rec 116:46 F '47
Realistic re-appraisal; American Can vs. Continental Can. R. Carleson. il Mag of Wall St 79:743-5 Mr 29 '47

AMERICAN car and foundry company
Annual report. Comm & Fin Chr 166:365-6 Jl 28 '47
C. J. Hardy, jr, succeeds F. A. Stevenson as president. pors Ry Age 122:1169 Je 7 '47
Several years of big sales ahead. Barron's 27:27 Je 23 '47

AMERICAN ceramic society
Annual meeting, 49th, Atlantic City, April 21-25; abstracts of papers. Brick & Clay Rec 110:49-50, 62+ My; 54+ Je '47
Annual meeting, 49th, Atlantic City, April 21-25; abstracts of papers. Cer Ind 48:56-7+ Je '47
Annual meeting, 49th, Atlantic City, April 21-25; officers. Cer Ind 48:50-2 My '47
Annual meeting program, 49th, Atlantic City, April 21-25. Cer Ind 48:86-8 Ap '47
Annual meeting program, 49th, Atlantic City, April 21-25; with author index[p 108]. Am Cer Soc Bul 26:59-85 Mr 15 '47
Forty-ninth annual meeting with historical data, portraits, committees, etc. Am Cer Soc Bul 26:143-64 My 15 '47
President's report. J. E. Hansen. Am Cer Soc Bul 26:123 Ap 15 '47
Report of committee on publications. Am Cer Soc Bul 26:242-4 Ag 15 '47

Glass division
Annual meeting, Atlantic City, April 22-23; with abstracts of papers. Glass Ind 28: 178-9+, 291-8+ Ap, Je '47
Autumn meeting, 19th, Sept. 5-6; with abstracts of papers. Glass Ind 28:513-15+ O '47
Meeting, Columbus, Sept. 13-14. Cer Ind 47: 64-6 N '46

AMERICAN chemical society
Abstracts of papers, 110th meeting, Chicago, Ill. Sept. 9-13, 1946. A. C. S. news service, 1155 Sixteenth st, NW, Washington 6, D.C. '46 (pa $1)
ACS activities in promoting scientific relations with other countries. Chem & Eng N 24:2887-8 N 10 '46
ACS candidates for 1948; sketches and portraits. Chem & Eng N 25:3058-62 O 20 '47
ACS council meeting, New York, Sept. 13. Chem & Eng N 25:2716-17+ S 22 '47
Annual meeting, 111th, Atlantic City, April 14-18. Chem & Eng N 24:1241, 1321, 1495, 1568, 1655, 1720, 1852, 1930 My 5-12, 26-Je 16, 30-Jl 7 '47
Annual meeting, 111th, Atlantic City, April 14-18. Paper Ind 29:256+ My '47
Award citations by President Noyes. il Chem & Eng N 25:2811+ S 29 '47
Board of directors; minutes of meeting, Washington, D.C. Dec. 13-14, 1946. Chem & Eng N 25:20-2 Ja 6 '47
Discussions on meetings. A. H. Emery. Chem & Eng N 24:2757, 3018, 3148, 3306+; 25:219-20 O 25-D 25 '46, Ja 27 '47
Divisional business reports. Chem & Eng N 25:3078-9 O 20 '47
Divisional programs at the Atlantic City meeting. Chem & Eng N 25:1244-61 My 5 '47
Hancock report. G. M. Juredine. Chem & Eng N 25:1298 My 5 '47
Market research division in ACS urged by Concannon. Chem & Eng N 25:1331 My 12 '47
Meeting, New York, Sept. 15-19; program. Chem & Eng N 25:2262-88 Ag 11 '47

AMERICAN chemical society—*Continued*
Meeting, 112th, New York, Sept. 15-19. Chem & Eng N 25:2806-10 S 29 '47
Meeting, 112th, New York, Sept. 15-19, divisional programs; with abstracts of papers. Chem & Eng N 25:2882-99 O 6 '47
Midwest regional meeting, 15th, Kansas City, June 23-25. Chem & Eng N 25:2006-7 Jl 14 '47
National meeting, 111th. Can Chem & Process Ind 31:413-16 My '47
National meeting, 112th, New York. Chem Age (Lond) 57:435-6 S 27 '47
National meeting, 112th, New York, Sept. 15; abstracts of papers. Soap & San Chem 23: 41-3+ O '47
New constitution offered for ratification; official report. Chem & Eng N 25:2823-6 S 29 '47
New council committees. A. H. Emery. Chem & Eng N 25:1789 Je 23 '47
New York AIC discusses merger with ACS. Chem & Eng N 25:368 F 10 '47
Northwest regional meeting, Moscow, Idaho. Chem & Eng N 25:1508-9 My 26 '47
Officers, committees, and student affiliate chapters. Chem & Eng N 25:1601-6 Je 2 '47
Official reports, 111th meeting, Atlantic City. Chem & Eng N 25:1348-74 My 12 '47
Official reports, 112th meeting, New York, Sept. 12-14. Chem & Eng N 25:2995-3010 O 13 '47
Official reports for the year 1946. Chem & Eng N 25:513-40 F 24 '47
Ohio-Michigan regional meeting, Toledo, March 14-15. Chem & Eng N 25:909-10 Mr 31 '47
Preliminary program, Atlantic City meeting, April 14-18, 1947. Chem & Eng N 25:23-7 Ja 6 '47
Program of fifteenth Midwest regional meeting, Kansas City, Mo. June 23-25. Chem & Eng N 25:1586-8 Je 2 '47
Program of the Atlantic City meeting, April 14-18. Chem & Eng N 25:676-96 Mr 10 '47
Progress report no. 14 of the committee on professional training. Chem & Eng N 24: 3301-2+ D 25 '46
Progress report no. 15 of the committee on professional training. Chem & Eng N 25: 2369-70 Ag 18 '47
Record-breaking program scheduled for fall ACS meeting. Chem & Eng N 25:2491-3 S 1 '47
Report of the committee on revision of the ACS constitution. Chem & Eng N 25:1595-600 Je 2 '47
Report on organization of the American chemical society; Hancock report. Chem & Eng N 25:insert [p 1-57] F 17 '47
Second annual Southwestern regional meeting. Chem & Eng N 25:30-1 Ja 6 '47
Special programs at Atlantic City meeting. Chem & Eng N 25:964-5 Ap 7 '47
Spring meeting, 111th, Atlantic City, April 14-18. Chem & Eng N 25:1172-7 Ap 28 '47; Oil Paint & Drug Rep 151:7+ Ap 21 '47

Chemical education division

Meeting, Chicago, Sept. 9-13. J Chem Educ 23:618-19+ D '46

Chicago section

Technical conference, 2d, Chicago. Chem & Eng N 25:370-1 F 10 '47

Industrial and engineering chemistry division

Distillation topic at I & E C symposium. Chem & Eng N 25:158-9+ Ja 20 '47

Kansas state college section

Kansas state college and the American chemical society. il Chem & Eng N 25: 1045 Ap 14 '47

New York section

New York section makes air debut. Chem & Eng N 25:366-7 F 10 '47

Petroleum division

Abstracts of papers presented before Division of petroleum chemistry, Kansas City, Mo. June 23-25. Pet Refiner 26:182+ Jl '47
Annual meeting, Atlantic City, April 14-18; abstracts of papers. Oil & Gas J 45:72-3 Ap 19 '47; Pet Refiner 26:182+ Ap '47
Meeting, New York. Nat Pet N 39:19 S 17 '47

Rubber division

Spring meeting, Cleveland, May 26-28. Chem & Eng N 25:1732-3 Je 16 '47; Oil Paint & Drug Rep 151:7+ Je 2 '47
Spring meeting, Cleveland, May 26-28; abstracts of papers. Rubber Age 61:197-204 My '47; India Rubber World 116:212-17 My '47

AMERICAN chicle company
Recession resistant stocks. Mag of Wall St 80:157 My 10 '47

AMERICAN cities power and light corporation
Annual report. Comm & Fin Chr 165:1182 Mr 3 '47
Liquidation asked. Comm & Fin Chr 165:1446 Mr 17 '47

AMERICAN coke and coal chemicals institute
Annual meeting, French Lick, Ind. June 9. Chem & Eng N 25:1803 Je 23 '47

AMERICAN college of life underwriters
C.L.U. examination series completed by 206 candidates. Nat Underw (Life ed) 51:2+ Ag 8 '47
Rapid expansion noted in demand for broad educational facilities. J. S. Myrick. Weekly Underw 156:96 Ja 4 '47
Reports peak year. Nat Underw (Life ed) Daily ed 51:20+ S 11 '47
Trustees meeting, Boston, Sept. 8. Spectator (Life ed) 155:28-9+ S '47

AMERICAN commission on stratigraphic nomenclature
Stratigraphic commission; organization and objectives of the Stratigraphic commission; Nature and classes of stratigraphic units. R. C. Moore. bibliog diags Am Assn Pet Geologists Bul 31:513-28 Mr '47

AMERICAN concrete institute
Annual meeting, 43d, Cincinnati, Feb. 24-26. Am Concrete Inst J 18:sup2-12 Ap '47; Eng N 138:505-7 Ap 3 '47; Concrete 55:16+ Ap '47
Institute, today and tomorrow. H. F. Gonnerman. Am Concrete Inst J 18:885-92 Ap '47

AMERICAN concrete pipe association
Annual meeting, 39th, St Louis, Feb. 24-26. Concrete 55:22+ Ap '47; Rock Prod 50:172-4+ Ap '47

AMERICAN congress on surveying and mapping
Annual meeting, 7th, Washington. Eng N 139:236+ Ag 21 '47

AMERICAN council of style and design
New fight against design piracy. Textile Col 68:14-15+ O '46

AMERICAN cyanamid company
How American Cyanamid handles its research reports. H. C. E. Johnson. Chem Ind 60: 217-18 F '47
New Cyanamid preferred a cheap call on earnings. Barron's 27:31 Je 16 '47
Plan for promoting new chemicals. F. S. Swackhammer and J. M. Rogers. il Chem Ind 61:62-4 Jl '47
Preferred stock sold. Comm & Fin Chr 166: 49 Jl 7 '47

AMERICAN drug manufacturers association
Annual meeting, 35th, Hot Springs, Va. June 9-12. Chem & Eng N 25:1868-9 Je 30 '47; Oil Paint & Drug Rep 151:5+ Je 16 '47

AMERICAN dyestuff reporter (periodical)
Brief outline of the origin and growth. il Am Dyestuff Rep 35:669-71 D 2 '46

AMERICAN electroplaters' society
Annual meeting, Detroit, June 23-27. Metal Finishing 45:62-3 Jl '47
Annual meeting, 34th, Detroit, June 23-27; abstracts of papers. Iron Age 160:74-7+ Ag 21; 81-2 S 25 '47
Annual meeting, 34th, Detroit, June 23-27; program, officers, exhibitors' list. Metal Finishing 45:70-7 Je '47

AMERICAN export lines, inc.
American export lines. il map Fortune 36: 88-93+ Ag '47
Fleet expansion program. Marine Eng 52:98 Je '47

AMERICAN fabrics (periodical)
Fabric swatches, art tip-ins among production features of new quarterly. Ptr Ink 217: 91 N 22 '46

AMERICAN fair trade council
Fair trade again; interest in contracts for price maintenance. Bsns W p66+ N 23 '46

AMERICAN federation of labor
AFL for unity at home and abroad. W. Green. Comm & Fin Chr 165:14 Ja 2 '47
A.F.L. joins the boycott; Lewis forces decision against signing non-Communist affidavits. Bsns W p89-90+ S 20 '47
American federation of labor's wage policy. W. Green. Ann Am Acad 248:1-5 N '46
How CIO and AFL stand on current issues. Factory Management 104:286+ O '46
Interfederation warfare and its prospects. A. Levenstein. Ann Am Acad 248:44-53 N '46
Labor law tends to widen CIO-AFL rift. H. Davenport. Barron's 27:11 Ag 25 '47
Outlook for merger dims. Bsns W p81-2 My 10 '47
Unions begin '48 campaign. Bsns W p94+ O 25 '47

AMERICAN federation of musicians
Halo for Petrillo? Bsns W p92-3 Mr 22 '47
Petrillo blows hot; disc-making ban. Bsns W p 101-2 O 25 '47

AMERICAN fidelity and casualty company
Markel service for truck and bus line. Fortune 36:146+ O '47

AMERICAN foundrymen's association
Annual meeting, 51st, Detroit, April 28-May 1. Iron Age 159:80, 83-4 My 8 '47; Steel 120: 70-1 My 5 '47; Foundry 75:66-71+ Je '47
Annual meeting, 51st, Detroit, April 28-May 1; program, committee members, awards. Foundry 75:82-93+ Ap '47
Chapter chairmen; 4th annual conference, Chicago, June 30-July 2. Foundry 75:124+ Ag '47
Officers and directors. Foundry 75:202+ Je '47
Seven divisions elect new chairmen. Iron Age 159:142+ Je 19 '47
Technical program of 51st convention, Detroit, April 28-May 1. Iron Age 159:44-7+ Ap 24 '47

AMERICAN gas and electric company
Elects Sporn president. Elec World News ed 127:20 My 31 '47
Greater dividend return for common. Barron's 27:24 Ap 14 '47
Thumbnail stock appraisal. Mag of Wall St 79:315 D 21 '46

AMERICAN gas association
Annual convention, 29th, Cleveland, Oct. 6-8. Chem & Eng N 25:3220 N 3 '47
Annual meeting, 29th, Cleveland, Oct. 6-8; abstracts of papers. Pub Util 40:656-63 N 6 '47
Industrial and commercial gas section; active program set for 1947. Am Gas Assn Mo 29:94-6 F '47
1946-1947 officers and section chairmen; portraits. Gas Age 100:68 O 2 '47
Our first postwar year. J. J. Quinn. Am Gas Assn Mo 28:545-6 D '46
Presidential address. E. J. Boothby. Am Gas Assn Proc 1946:19-22; Same. Am Gas Assn Mo 28:485-7+ N '46
Research and promotional plan of the gas industry. Pub Util 39:181-2 Ja 30 '47
Residential gas section set to meet domestic market challenge. W. M. Chamberlain. Gas Age 99:30-3+ Ja 23 '47; Same abr. Am Gas Assn Mo 29:91-3 F '47
Selling helps, for what we have to sell. R. A. Malony. Gas Age 99:32-4 F 20 '47
Technical section; organized for technical progress. C. S. Goldsmith. Am Gas Assn Mo 29:97-9 F '47; Same. Gas Age 99:34-6+ Ja 23 '47

Appliance testing laboratory
A.G.A. laboratories' accomplishments. R. M. Conner. Am Gas Assn Mo 28:526-7+ D '46
Laboratories' operations hit peak; annual report. Am Gas Assn Mo 29:430 O '47
Underwriting gas appliance approvals. G. E. Whitwell. il Am Gas Assn Mo 29:77-80+ F '47

Natural gas department
Spring meeting, Chicago, April 30-May 1. Am Gas J 166:31-3 My '47; Gas Age 99:13-17+ My 29 '47; Oil & Gas J 46:53-4 My 10 '47; Chem & Eng N 25:1440 My 19 '47; Am Gas Assn Mo 29:259-63+ Je '47

AMERICAN gear manufacturers association
Annual meeting, 31st, Hot Springs, June 1-4. Steel 120:48 Je 9 '47; Iron Age 159:104 Je 12 '47; Mach 53:154-5 Jl '47
Semi-annual meeting, Chicago, Oct. 26-29. Steel 121:65-6 N 3 '47
Semi-annual meeting, Chicago, Oct. 28-30. Mach 53:164-5 D '46

AMERICAN heart association
Attacking the no. 1 killer; campaign for greater public support to fight cardiac ailments. il Bsns W p21-2 Jl 12 '47

AMERICAN heritage foundation
See also
Freedom train

AMERICAN hide and leather company
Cut in preferred stock aids common. Barron's 27:35 Ag 18 '47

AMERICAN independent oil company
Drive for foreign crude headed by Davies. Bsns W p 19 Ag 30 '47
Oil producers organize for foreign operations. Chem & Eng N 25:2570 S 8 '47

AMERICAN industrial development engineering company
Specialist in know-how; Amer-Ind, inc. designs, builds, and trains personnel for industrial installations anywhere in the world. Bsns W p93-4 My 3 '47

AMERICAN institute for property and liability underwriters
CPCU awards. East Underw 48:20+ F 14 '47
C.P.C.U.'s of Nation congregate at Los Angeles. Nat Underw 51:6 S 11 '47
57 new C.P.C.U. awards. Nat Underw 51:1+ Ag 7 '47

AMERICAN institute of actuaries
Annual meeting, Chicago, May 29-30. East Underw 48:3-4 Je 6 '47; Nat Underw (Life ed) 51:1+ Je 6 '47
Joint meeting with Actuarial society of America, Cincinnati. Nat Underw (Life ed) 50:1+ N 15 '46
Joint meeting with Actuarial society of America, Quebec, Oct. 1-3. East Underw 48:10-11 O 10 '47; Nat Underw (Life ed) 51:1+ O 10 '47

AMERICAN institute of architects
Annual convention, 79th, Grand Rapids, April 29-May 1. Arch Rec 101:100-2 Je '47; Arch Forum 86:11+ Je '47
Attitude of the young practitioner; address at A.I.A. convention. C. Koch. Arch Rec 101:103+; Editorial comment. K. K. Stowell. 83 Je '47

AMERICAN institute of bank clerks. See American institute of banking

AMERICAN institute of banking
Annual convention, 45th, Detroit, June 2-6. Am Inst Banking Bul 29:2-28 Jl '47; Banking 39:42-3+ Je; 40:72 Jl '47
How the A.I.B. began; with chronology of annual conventions. J. L. Cooley. Banking 39:34-8+, 39 Je '47
National committee objectives. Am Inst Banking Bul 29:25-7 O '47
National committee objectives. Am Inst Banking Bul 28:18-21 O '46
National committee reports. Am Inst Banking Bul 29:21-4 Jl '47
Story of the convention; first meeting of American institute of bank clerks. J. C. Lincoln. Banking 39:29-31+ Je '47
View of the A.I.B. office. F. W. Larson. il Banking 39:40-1+ Je '47

AMERICAN institute of biological sciences (proposed)
Shall biologists set up a national institute? R. F. Griggs. Science 105:559-65 My 30 '47

AMERICAN institute of chemical engineers
Annual convention, 40th, Detroit, Nov. 9-13, 1947. Chem Eng Prog 43:sup 16-19+ O '47
Annual meeting, 39th, Atlantic City, Dec. 2-5. Oil Paint & Drug Rep 150:7+ D 9 '46; Chem Eng Prog 43:sup75-8+ Ja '47

AMERICAN institute of chemical engineers—*Continued*
Professional guidance in Detroit. H. G. Donnelly. Chem Eng Prog 43:505-6 S '47
Regional meeting, Buffalo. Chem & Eng N 25:3077 O 20 '47
Regional meeting, Louisville, Feb. 16-19; program. Chem Eng Prog 43:sup78-80 F '47
Regional meeting, Louisville, Feb. 18-19. Chem & Eng N 25:670-1 Mr 10 '47; Chem Eng Prog 43:sup13-14+ Ap '47
Regional meeting, 2d, St Louis, May 11-14. Chem & Eng N 25:1506-7 My 26 '47; Oil Paint & Drug Rep 151:5+ My 19 '47; Chem Eng Prog 43:sup 11 Je '47

AMERICAN institute of chemists
Annual meeting, 24th, New York, May 2. Oil Paint & Drug Rep 151:5+ My 5 '47
Crossley awarded AIC medal for research achievements. Chem & Eng N 25:1332-3 My 12 '47
New York AIC discusses merger with ACS. Chem & Eng N 25:368 F 10 '47

AMERICAN institute of electrical engineers
Activities for year summarized. Elec Eng 66:78-82 Ja '47
Edison and the AIEE. J. E. Housley. Elec Eng 66:118 F '47
Electrical standardization and AIEE. H. E. Farrer. Elec Eng 66:768-71 Ag '47
New AIEE committee organization. Elec Eng 66:1006-11 O '47
Officers and committees for 1947-48; local sections and student branches. Elec Eng 66: 1031-8 O '47
Pacific coast meeting, San Diego, Aug. 26-29. Elec Eng 66:1013-24 O '47
Pacific coast meeting, San Diego, Aug. 26-29. Elec West 99:96-8 O '47
President's responsibilities. B. D. Hull. Elec Eng 66:799 Ag '47
Reorganizing the AIEE with other organizations; correspondence between F. W. Knoeppel and H. H. Henline. Elec Eng 66: 211-12 F '47
Report of the board of directors; fiscal year ending April 30, 1947. Elec Eng 66:714-36 Jl '47
Section and branch activities, annual report for 1946-47; tabulations. Elec Eng 66:837-40 Ag '47
Summer meeting, Montreal, June 9-13. Elec World 128:88-93 Jl 5 '47; Elec Eng 66:803-35 Ag '47; Power 91:553-4 Ag '47
Winter meeting, New York, Jan. 27-31. Elec Eng 66:265-301 Mr '47; Elec World 127:108-15 F 15 '47; Electronics 20:192+ Ap '47; Power Pl Eng 51:126+ Ap '47

Publications
New AIEE publication policy becomes effective in January 1947. C. F. Wagner. Elec Eng 65:576-8 D '46

AMERICAN institute of laundering
64 year old question. J. C. Stirling. il Textile Col 69:18-19 Ag '47

AMERICAN institute of local highway administration
Important function. C. M. Upham. Roads & Sts 90:56+ My '47

AMERICAN institute of mining and metallurgical engineers
Annual meeting, 75th, New York. Iron Age 159:63-6 Mr 27 '47; Steel 120:46-8 Mr 24 '47 Oil Paint & Drug Rep 151:7+ Mr 24 '47; Eng & Min J 148:109-10+ Ap '47; Min & Met 28:225-43, 246-9 My '47; Rock Prod 50:96+ My '47
Annual meeting, 75th, New York; with abstracts of papers. Oil & Gas J 45:142-5+ Mr 22 '47
Annual meeting, technical sessions; program. Min & Met 28:116-20 F '47
Board studies Institute finances at April meeting, New York, April 16. Min & Met 28:293-4 Je '47
Diamond jubilee. E. C. McDowell, jr. Metal Prog 51:755-7 My '47
Mineral strength of U.S. discussed by AIME at 75th anniversary celebration, New York, March 17-22. Chem & Eng N 25:966-7 Ap 7 '47
World conference on mineral resources and 75th anniversary followed by annual meeting, AIME; program. Min & Met 28:157-64 Mr '47

Coal division
Fuels conference, Philadelphia, Oct. 24-25. Min & Met 27:597-8 D '46

Industrial minerals division
Fall meeting, Columbus and Los Angeles, Oct. 23-25. Min & Met 27:595-6 D '46; Rock Prod 49:71+ D '46

Institute of metals division
Fall meeting, Atlantic City, Nov. 18-22; abstracts of papers. Iron Age 158:64-6 N 28 '46

Iron and steel division
Fall meeting, Atlantic City, Nov. 18-22; abstracts of papers. Iron Age 158:64-6 N 28 '46

Petroleum division
Annual meeting, New York, March 19-22. Min & Met 28:238-9 My '47
First 1947 regional meeting, Denver. Oil & Gas J 46:49 O 4 '47
Foreign oil production reviewed in A.I.M.E. papers. Oil & Gas J 45:66+ Mr 29; 44-6 Ap 5 '47

AMERICAN institute of physics
By-laws. R Sci Instr 18:5-10 Ja '47
Our contributions to international relations in physics. H. A. Barton. R Sci Instr 17: 529-32 D '46
Reorganization of the American institute of physics. R Sci Instr 18:1-4 Ja '47
Report of the chairman and other reports. R Sci Instr 18:443-50 Je '47

AMERICAN international association for economic and social development
Good neighbor, good business; corporation to aid economies of Latin American nations. Bsns W p17-18 Mr 1 '47
To aid progress in South America. E. Whitmore. il Am Bsns 17:26+ Je '47

AMERICAN international corporation
Annual report. Comm & Fin Chr 165:1182 Mr 3 '47

AMERICAN iron and machine works company
Securities offered. Comm & Fin Chr 165:2793-4 My 26 '47

AMERICAN iron and steel institute
Annual meeting, 55th, New York, May 21-22. Steel 120:62-4, 114-16+ My 26 '47; Iron Age 159:64-6 My 29 '47

AMERICAN laundry machine company
Promising stocks. Mag of Wall St 79:666 Mr 15 '47

AMERICAN leather chemists association
Annual meeting, 43d, Chicago, June 19-21. Chem & Eng N 25:1937 Jl 7 '47

AMERICAN life convention
Annual meeting, 42d, Chicago, Oct. 6-10. East Underw 48:1+, 3-9 O 10 '47; Nat Underw (Life ed) 51:17-18 O 10; 1+ O 17 '47; Spectator (Life ed) 155:58-67+ O '47; Weekly Underw 157:912 O 11 '47
Formation of American life convention. I. M. Hamilton. Nat Underw 50th anniv no:184-5 1947
Joint committees of ALC and LIAA named. East Underw 48:7 Ja 31 '47
Medical section, annual meeting, 35th, Asheville, N.C. May 28-30. East Underw 48:6 My 30 '47; Nat Underw (Life ed) 51:1+ My 30 '47
Medical section officers. East Underw 48:10 Je 6 '47; Nat Underw (Life ed) 51:7 Je 6 '47
Regional parley at Indianapolis. Nat Underw (Life ed) 51:1+ My 2 '47
State vice presidents appointed. East Underw 48:11 Ja 24 '47; Nat Underw (Life ed) 51:1 Ja 24 '47

AMERICAN light and traction company
Larger earnings in sight. Barron's 27:33 Jl 14 '47
Public utility securities. Comm & Fin Chr 164:3208 D 19 '46
SEC affirms refusal to stay proceedings on plan. Comm & Fin Chr 166:1041 S 15 '47
United Light to pay more in American Light common stock. Barron's 27:27 Ag 4 '47

AMERICAN locomotive company
Looks for years of good volume. Barron's 27: 24 My 26 '47

AMERICAN machine tool distributors' association
Annual meeting, 23d, Chicago, Sept. 15. Steel 121:44-5 S 22 '47
Spring meeting, 23d, Chicago, March 24-25. Am Mach 91:148-9 Ap 10 '47

AMERICAN management association

Insurance division
Meeting, Chicago, Dec. 5-6. East Underw 47:94+ D 13 '46; Nat Underw 50:13, 17+ D 12 '46
Spring meeting, New York, May 5-6. Nat Underw 51:23+ My 8 '47; East Underw 48: 37, 40-1+ My 9 '47

Packaging conference
Annual conference and exposition, 16th, Philadelphia, April 8-11; program and list of exhibitors. Mod Packaging 20:124-5+ Mr '47
Annual packaging conference and exposition, 16th, Philadelphia, April 8-11; with abstracts of papers. Mod Packaging 20:139-54 Ap '47
Package show exhibits forecast design changes. Sales Management 58:90+ My 1 '47
Packaging exposition and conference, Philadelphia, April 8-11. Chem & Eng N 25: 1192 Ap 28 '47
Paper industry's leaders talk at second annual industrial packaging and materials handling exposition. Paper Tr J 124:7+ My 8 '47
Working machines intrigue 19,000 at record AMA packaging exposition. il Ind Marketing 32:54+ My '47

AMERICAN marketing association
Annual convention, 10th, New York. Ptr Ink 219:99 Je 20 '47
Cites nine for marketing leadership. Sales Management 59:93 Jl 1 '47
How A.M.A. advances marketing science. R. M. Cunningham. Adv & Sell 40:42-3+ My '47
'47 officers. Sales Management 57:96 N 10 '46

AMERICAN meat institute
Annual meeting, 42d. Food Ind 19:1388-9 O '47

AMERICAN medical association

Council on industrial health
Industrial health congress. C. O. Sappington. Ind Med 16:18-27 Ja '47

AMERICAN men of science
Starring in American men of science. S. S. Visher. Science 106:359-61 O 17 '47; Reply. D. H. Sweet. 106:617 D 19 '47

AMERICAN merchant marine conference
Proceedings, v 12, twentieth annual convention, New York, Oct. 16-18, 1946. 335p $5 Propeller club of the United States, 17 Battery pl, New York 4 '47

AMERICAN mining congress
Annual meeting, 49th, New York, Dec. 4. Min Cong J 33:37 Ja '47
Coal division annual meeting, Cleveland, May 12-15. Coal Age 52:97-107 Je '47; Min Cong J 33:54-76 Je '47
Coal division annual meeting, Cleveland; program, committees, speakers. Min Cong J 33:40-52 Ap '47
Coal division annual conference, Uniontown, Pa. Nov. 21. Min Cong J 33:42-4 Ja '47

Western division
Annual meeting, Denver, Sept. 9-12; with abstracts of papers. Min Cong J 32:43-54+ O '46
Annual meeting, El Paso, Oct. 27-29; committee members, directors, program. Min Cong J 33:30-8 O '47

AMERICAN newspaper publishers association
Newsprint shortages overshadow ad gains and labor problems at ANPA sessions. D. Bruner. Ptr Ink 219:86+ My 2 '47

AMERICAN oil chemists' society
Annual meeting, 38th, New Orleans, May 20-22. Chem & Eng N 25:1662-3 Je 9 '47; Oil Paint & Drug Rep 151:5+ My 26 '47; Soap & San Chem 23:47-9 Je '47
Fall meeting, 20th, Chicago, Oct. 30-Nov. 1. Chem & Eng N 24:3036-7 N 25 '46; Soap & San Chem 22:38-9 N '46; Oil Paint & Drug Rep 150:5+ N 4 '46
Fall meeting, 21st, Chicago, Oct. 20-22. Oil Paint & Drug Rep 152:7+ O 27 '47

AMERICAN paper and pulp association
Annual meeting, 70th, New York, Feb. 23-28. Paper Ind 28:1751-2+ Mr '47

AMERICAN petroleum institute
Annual meeting, 26th, Chicago, Nov. 11-14. Nat Pet N 38:11-14 N 13; 15-16, 18-20+ N 20 '46; Oil & Gas J 45:154-6+ N 16; 41-2 N 23 '46; Chem & Eng N 24:3042-3 N 25 '46
Board of directors and Executive committee. Nat Pet N 38:39 D 18 '46
Eastern district of Production division meeting, Pittsburgh, April 18. Oil & Gas J 45: 94-5 Ap 26 '47
Farms, the oil they need; work of API Agricultural development committee. G. Krieger. Nat Pet N 39:31-2+ Ap 23 '47
Jobbers asked to specify how API could aid them. Nat Pet N 39:11-12 S 10 '47
Marketing committee meeting, French Lick. Nat Pet N 39:15-19 Ap 9 '47
Marketing committee meeting, Minneapolis, June 30-July 1. Nat Pet N 39:17-20+ Jl 9 '47
Mid-continent district of Production division spring meeting, Amarillo; abstracts of papers. Oil & Gas J 46:71 My 24 '47
Pacific coast district, Production division spring meeting, Los Angeles; abstracts of papers. Oil & Gas J 46:58-9 My 17 '47
Progressive public relations for the progressive petroleum industry. R. T. Haslam. il Am Pet Inst Proc 26(1):31-5 '46; Same abr. Oil & Gas J 45:44-5 N 23 '47
Refining division semi-annual meeting, St Louis, June 2-3. Nat Pet N 39:19-22 Je 11 '47
Resolutions adopted by board of directors; extracts from minutes of board and executive-committee meetings; and division and department reports to the board; list of officers, directors and committee members. Am Pet Inst Proc 26(1):145-208 '46

AMERICAN pharmaceutical association
Meeting, Milwaukee. Chem & Eng N 25:2718 S 22 '47

AMERICAN pharmaceutical manufacturers association
Annual meeting, Boca Raton, Fla. April 28-30. Oil Paint & Drug Rep 151:7+ My 5 '47; Chem & Eng N 25:1435 My 19 '47
Eastern section meeting, New York, Feb. 17. Oil Paint & Drug Rep 151:7+ F 24 '47; Chem & Eng N 25:672-3 Mr 10 '47
Mid-year meeting, New York, Dec. 9-11. Chem & Eng N 24:3352 D 25 '46; Oil Paint & Drug Rep 150:7+ D 16 '46
Western section meeting, Chicago, Feb. 20. Oil Paint & Drug Rep 151:7+ Mr 10 '47; Chem & Eng N 25:673 Mr 10 '47

AMERICAN philosophical society
Abstracts of papers presented at 1947 annual general meeting. Science 106:117-23 Ag 8 '47

AMERICAN physical society
Meeting of the New England section, Amherst, Mass. May 31; abstracts of papers. Phys R 72:521-2 S 15 '47
Meeting of the Southeastern section, 13th, Salisbury, N.C. April 4-5; abstracts of papers. Phys R 71:831-7 Je 1 '47
Proceedings, meeting at Minneapolis, Nov. 29-30, 1946; with abstracts of papers. Phys R 71:136-44 Ja 15 '47
Proceedings, meeting at Montreal, June 19-21; with abstracts of papers. Phys R 72: 523-39 S 15 '47
Proceedings, meeting at New York, Jan. 30-Feb. 1, 1947; with abstracts of papers. Phys R 71:460-84 Ap 1 '47
Proceedings, meeting at Stanford University, California, July 11-12, 1947; with abstracts of papers. Phys R 72:738-48 O 15 '47
Proceedings, meeting of the New England section at New Haven, Oct. 25, 1946; with abstracts of papers. Phys R 71:133-5 Ja 15 '47
Proceedings; minutes of the meeting at Washington, May 1-3, 1947; with abstracts of papers. Phys R 72:151-87 Jl 15 '47

AMERICAN plant food council
Annual convention, 2d, Hot Springs, Va. June 13-15. Chem & Eng N 25:1870 Je 30 '47; Oil Paint & Drug Rep 151:5+ Je 23 '47

AMERICAN potash and chemical corporation
Preferred stock offered. Comm & Fin Chr 165:1582 Mr 24 '47

AMERICAN power and light company
SEC approves loans to subsidiaries. Comm & Fin Chr 165:1582 Mr 24 '47
Supreme court upholds death sentence clause of Holding company act. Comm & Fin Chr 164:2825 D 2 '46

AMERICAN public health association
Proceedings of Industrial hygiene section, 74th annual meeting, Cleveland, Nov. 12-14, 1946. Ind Med 16:448-9+ S '47

AMERICAN public power association
Annual meeting, 4th, Cleveland. Elec World News ed 127:11-12 My 31 '47

AMERICAN public works association
Annual meeting, 52d, Fort Worth, Sept. 22-25. Roads & Sts 89:80-3 O '46
Annual meeting, 53d, Jacksonville. il Eng N 139:503+ O 16 '47
Public works engineers' yearbook-directory, 1946. 252p $3 American public works assn, 1313 E. 60th st, Chicago '46

AMERICAN pulp and paper mill superintendents association
Annual meeting, 27th, Chicago, May 22-24. Paper Tr J 124:39-40+ My 29 '47; Paper Ind 29:381-2+ Je '47
TAPPI and APPMSA groups hold twin meetings, Asheville. Paper Tr J 125:7+ O 16 '47

AMERICAN railway bridge and building association
Annual meeting, Chicago, Sept. 16-18. Ry Age 123:560-5 O 4 '47

AMERICAN railway engineering association
Annual meeting, 46th, Chicago, March 18-20. Ry Age 122:602-19 Mr 22 '47; Eng N 138: 471+ Mr 27 '47

AMERICAN road builders' association
Annual meeting, 44th, Chicago, Feb. 17-20. Roads & Sts 90:79+ Mr '47; Eng N 138: 331+ F 27 '47; Roads & Bridges 85:136-8 Ap '47

AMERICAN rolling mill company
1946 a record year. Comm & Fin Chr 165:2266 Ap 28 '47

AMERICAN Roumanian trading and development corporation
Formed to foster and develop trade. Comm & Fin Chr 165:2406 My 5 '47

AMERICAN service bureau
Affiliated with American life convention 27 years. East Underw 48:17 F 28 '47

AMERICAN short line railroad association
Annual meeting, 34th, New York, Oct. 22. Ry Age 123:707+ O 25 '47

AMERICAN society for engineering education
Annual meeting, 55th, Minneapolis. Eng N 138:989 Je 26 '47
Officers, council members and committees for 1946-47; with list of members. J Eng Educ 37:15-267 F '47
Open letter to Mr Duerksen. C. J. Freund. J Eng Educ 37:281-2 D '46
Reports. J Eng Educ 38:18-56 S '47
Summary of activities. Refrig Eng 53:118+ F '47
Turning points. C. E. MacQuigg. J Eng Educ 38:9-11 S '47

New England section
Operation of the New England section, A.S.E.E. C. E. Tucker. J Eng Educ 37: 243-5 N '46

AMERICAN society for metals
Annual meeting, Atlantic City, Nov. 18-22; abstracts of papers. Iron Age 158:54-8 N 28 '46
Officers, medalists, chairmen, Campbell memorial lecturers. Metal Prog 52:559 O '47
Officers, medalists, committee chairmen, Campbell memorial lecturers. Metal Prog 50:791 N '46
Tribute to the Chicago chapter. Metal Prog 52:550-5 O '47

AMERICAN society for metals. Review of metal literature
Review of metal literature. E. C. Skarshaug. Special Lib 37:294-7 N '46

AMERICAN society for testing materials
ASTM accepts new and revised materials specifications. il Ind Stand 17:314-15 D '46
ASTM's spring meeting of committees. Ind Stand 18:120-3 My '47
Annual meeting, 50th, Atlantic City, June 16-20. Steel 120:74-5 Je 23 '47; Eng N 138: 991 Je 26; 139:10 Jl 3 '47; Iron Age 159:50-2 Je 26 '47
Annual meeting, 50th, Atlantic City; abstracts of papers and committee reports on concrete. Concrete 55:6-9+ Jl '47
Annual meeting, 50th, Atlantic City; abstracts of reports and papers on cement, lime, and concrete. Rock Prod 50:154+ Ag '47
Committee D-1 meeting, Philadelphia, Feb. 24-28. Oil Paint & Drug Rep 151:5+ Mr 10 '47
Dedicates new headquarters in Philadelphia. Chem & Eng N 25:768-9 Mr 17 '47
Paint evaluation discussed in ASTM symposium. Oil Paint & Drug Rep 151:5+ Mr 3 '47

AMERICAN society for X-ray and electron diffraction
EMSA and ASXRED hold joint meeting. Chem & Eng N 24:3341 D 25 '46

AMERICAN society of bakery engineers
Annual meeting, 23d, Chicago, March. Food Ind 19:660+ My '47

AMERICAN society of body engineers
Annual meeting, 1st, Detroit; abstracts of papers. Automotive & Aviation Ind 95:40-6 D 1 '46

AMERICAN society of brewing chemists
Annual meeting, New York. Chem & Eng N 25:1667 Je 9 '47

AMERICAN society of chartered life underwriters
New York chapter CLU forum surveys economic trends. East Underw 48:3-4 Ap 25 '47; Nat Underw (Life ed) 51:4-5 Ap 25 '47; Spectator (Life ed) 154:26-9 My '47

AMERICAN society of civil engineers
ASCE will make congressional presentation on stream pollution legislation; statement. Civil Eng 17:342 Je '47
Annual meeting, 94th, New York, Jan. 15-18. Eng N 138:81-2, 95-9 Ja 16-23 '47
Annual meeting, 94th, New York; technical discussions. Civil Eng 17:92-9 F '47
Convention, Duluth, Minn. July 18-20. Eng N 139:97+ Jl 24 '47; Civil Eng 17:445-52+ Ag '47
E. M. Hastings stresses objectives at inaugural. Civil Eng 17:91-2 F '47
Expansion of ASCE suggested by juniors. E. B. Madden and L. E. Bona. Civil Eng 17: 89 F '47
Fall meeting, Jacksonville. Eng N 139:555+ O 23 '47
Leadership of ASCE in collective bargaining is hailed. Civil Eng 17:28 Ja '47
Membership grades committee presents statement on grades question; questionnaire. Civil Eng 17:422-6 Jl '47
Should ASCE be purely professional; discussion. Civil Eng 17:37-8 Ja '47
Spring meeting, Phoenix, April 23-24. Civil Eng 17:235-9 My '47; Eng N 138:719+ My 1 '47; Concrete 55:20+ My '47
Stewardship of professionalism given high priority. W. W. Horner. Am Soc C E Proc 72:1371-9 D '46

AMERICAN society of composers, authors and publishers
A.S.C.A.P. under fire. Bsns W p37 Je 28 '47

AMERICAN society of heating and ventilating engineers
Annual meeting, 53d, Cleveland, Jan. 27-30. Heating-Piping 19:123-31 Mr; 103-23 Ap '47
Semi-annual meeting, Coronado Beach, Calif. June 2-4. Heating-Piping 19:123-5 Jl; 119-33 Ag '47

Committee on research
1946 report. Heating-Piping 19:115-22 Mr '47

AMERICAN society of lubrication engineers
Spring meeting, Pittsburgh. Steel 120:102+ Ap 21 '47

AMERICAN society of mechanical engineers
Annual meeting, New York, Dec. 2-6; abstracts of power plant papers. Power 90: 931-8 Mid-D '46; Power Pl Eng 51:113-18+ F '47
Annual meeting, 67th, New York, Dec. 2-6. Mech Eng 69:53-75 Ja '47; Steel 119:62 D 9 '46
Committee organization changes. Mech Eng 69:147-8 F '47
Council reports for 1946. Mech Eng 69:41-52 Ja '47
Depositories for A.S.M.E. transactions in the United States, including territories and dependencies, and in Central and South America and Great Britain. A S M E Trans 69:47-50 sec 2 Ja '47
Fall meeting, Salt Lake City, Sept. 1-4. Steel 121:48-9 S 8 '47
Postwar design for A.S.M.E. research. R. A. O'Brien. Mech Eng 69:145-6 F '47
Qualifications and duties of council members. Mech Eng 69:171 F '47
Regional meeting, Tulsa; abstracts of papers. Oil & Gas J 45:52-3 Mr 8 '47
Semi-annual meeting, Chicago, June 15-19. Mech Eng 69:689-700 Ag '47; Power 91:546-8+ Ag '47
Semi-annual meeting, Chicago, June 15-19; abstracts of power plant papers. Power Pl Eng 51:124+ Ag '47

Gas turbine power division
Gas turbine power division established. Mech Eng 69:875 O '47

AMERICAN society of photogrammetry
Officers for 1947. Science 105:158 F 7 '47

AMERICAN society of refrigerating engineers
Spring meeting, Los Angeles. Heating-Piping 19:92-4 Jl '47

AMERICAN society of sanitary engineering
Annual meeting, Chicago, Aug. 17-22. Dom Eng 170:104-9+ S '47
Facts on polio program. Dom Eng 169:106-7+ F '47

AMERICAN society of tool engineers
Annual meeting, 15th, Houston, March 19-22. Iron Age 159:53-5 Mr 27 '47; Steel 120: 98-9 Ap 7 '47

AMERICAN soybean association
Annual convention, 27th, Columbus, Ohio, Sept. 5-6. Oil Paint & Drug Rep 152:7+ S 8 '47

AMERICAN spice trade association
Annual convention, 41st, New York, May 5-7. Oil Paint & Drug Rep 151:7+ My 12 '47

AMERICAN standards association
ASA moves forward. F. R. Lack; P. G. Agnew. Ind Stand 18:51-5 Mr '47
Annual meeting, 28th, New York, Nov. 21-22. Steel 119:78-9 D 2 '46; Elec Eng 66:100-2 Ja '47; Ind Stand 18:1-2 Ja '47
Company member committee shows results in first year. Ind Stand 18:14-16 Ja '47
Diversity of interest represented by four new ASA member-bodies. Ind Stand 18:148-9 Je '47
Five new members elected to board of directors. pors Ind Stand 18:59+ Mr '47
Greater support means more service. H. B. Bryans; H. Coonley. Ind Stand 18:10-11 Ja '47
Lack is ASA president; Taber new vice president. Ind Stand 18:17 Ja '47
Mechanical Standards group elects Ward and Hoagland. pors Ind Stand 18:88-90 Ap '47
Our colleague in standardization. W. H. Crew. Inst Radio Eng Proc 34:874-5 N '46
Sectional committee on motion pictures, Z22. C. R. Keith. Soc Motion Picture Eng J 48:67-9 Ja '47
Seidel and Williams elected by ASA consumer committee; plans for increasing activity. Ind Stand 18:111-12+ My '47

Library
Domestic and foreign standards in library for ASA members. Ind Stand 18:102-3 Ap '47

AMERICAN states utilities corporation
SEC approves amended plan. Comm & Fin Chr 166:1469 O 13 '47

AMERICAN statistical association
Proceedings, 106th annual meeting, Atlantic City, Jan. 24-26. Am Stat Assn J 42:134-64 Mr '47
Tribute to two past presidents of the Association. Am Stat Assn J 42:1-10 Mr '47

AMERICAN steel foundries
Annual report. Comm & Fin Chr 165:201 Ja 13 '47
Selected stocks. Mag of Wall St 80:488 Ag 2 '47

AMERICAN steel warehouse association
Annual meeting, 38th, Los Angeles, May 12-15. Steel 120:58-9 My 19 '47; Iron Age 159: 111 My 29 '47
New officers elected by chapters. Iron Age 159:154+ Je 5 '47
Warehouses get more steel. Bsns W p42+ My 3 '47

AMERICAN sugar refining company
Annual report. Comm & Fin Chr 165:1858 Ap 7 '47

AMERICAN telephone and telegraph company
AT&T debentures minimize market risk. Barron's 26:1+ D 2 '46
AT&T $9 dividend due again this year. Pub Util 40:651 N 6 '47
Annual report. Comm & Fin Chr 165:1183 Mr 3 '47
Annual report sounds careful note. Pub Util 39:372-3 Mr 13 '47
Arbitrage opportunity in Telephone. Barron's 27:6 F 24 '47
Debentures offered. Comm & Fin Chr 165: 3046 Je 9 '47
Early premium probable for Telephone's debentures. Barron's 27:35 O 27 '47
Earnings on new capital to aid AT&T's stock. Barron's 27:26 Mr 31 '47
Landmark since 1921 newly vulnerable to higher demands by employees. O. J. Gingold. Barron's 27:8 Ja 20 '47
More bad news for A.T.&T. Bsns W p 115 Je 14 '47
New profit potentials for communication companies. W. Beecher. Mag of Wall St 80:320-1 Je 21 '47
New 2¾ per cent debentures authorized. Comm & Fin Chr 166:1574 O 20 '47
Offers $360,000,000 convertible debentures. Comm & Fin Chr 166:1782 N 3 '47
Perhaps A.T. & T. bears have wrong number; Western Electric dividend offsets cut in subsidiaries' payments. O. J. Gingold. Barron's 27:7 Je 23 '47
Preliminary report. Comm & Fin Chr 165: 334 Ja 20 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:386 Jl 5 '47
What is A.T.&T.'s future? Bsns W p58+ My 31 '47

AMERICAN tobacco company
Annual report. Comm & Fin Chr 165:1858 Ap 7 '47
May capitalize growth. Barron's 27:6 F 10 '47
Stock placed. Comm & Fin Chr 165:2266-7 Ap 28 '47

AMERICAN transit association
ATA needs a little yeast. R. Schram. Mass Transportation 43:53-5 F '47
Christmas card to ATA labor group. Mass Transportation 42:521-3+ D '46
What actually happened at Chicago; report of A.T.A. convention; with papers. Mass Transportation 42:429-49+ O '46
What is done with $1000 per day ATA revenue; auditor's report. Mass Transportation 43:190-3 My '47

AMERICAN type founders, inc.
Thomas Roy Jones prepared himself to achieve his goal. il Inland Ptr 119:46-9 Ap '47

AMERICAN viscose corporation
Dr Frank H. Reichel elected president; others advanced as vice-presidents. Rayon 27:576-8 N '46

AMERICAN water works and electric company
Reinvested earnings help reorganization plan. Barron's 27:34 Jl 28 '47
SEC approves new plan. Comm & Fin Chr 165:1062 F 24 '47
Slight boost likely in Water Works issue. Barron's 27:6 Ja 20 '47

AMERICAN water works association
Annual meeting, 67th, and joint conference with Federation of sewage works associations, San Francisco, July 21-25. Water & Sewage Works 94:315-26, 359-63, 409-12 S-N '47; Water & Sewage 85:26-30+ S '47
Membership directory, committees, constitution and by-laws. Am Water Works Assn J 38:1-288 pt 2 N '46
1946 conference, St Louis; with list of papers. Am Water Works Assn J 38:1408-15 D '46
Publications report and report of Committee on water works practice, year ending Dec. 31, 1946. Am Water Works Assn J 39:262-72 Mr '47
Report of the audit of Association funds, year ending Dec. 31, 1946. Am Water Works Assn J 39:273-8 Mr '47

Canadian section
Active, well-managed organizations serve Canada's water and sewage interests. Water & Sewage 85:24+ Ag '47
Annual meeting, 27th, Montreal, April 14-16. Water & Sewage Works 94:207-13 Je '47; Water & Sewage 85:60-71+ My; 50-3 Jl '47

AMERICAN water works association Journal (periodical)
Style manual for Journal authors. Am Water Works Assn J 39:473-88 bibliog(p484-5) My '47

AMERICAN water works company
Details of plans; proposed offerings, etc. Comm & Fin Chr 166:1146 S 22 '47
Public utility securities. Comm & Fin Chr 165:1788 Ap 3 '47
Public utility securities. Comm & Fin Chr 166:1112 S 18 '47
Stock sold. Comm & Fin Chr 166:1469 O 13 '47
Subscription offer. Comm & Fin Chr 166:1350 O 6 '47

AMERICAN welding society
Annual meeting, 27th, Atlantic City, Nov. 18-22; abstracts of papers. Iron Age 158:59-63 N 28 '46
Meeting of board of directors, Chicago, May 16. Welding J 26:701+ Ag '47
Message from President Delhi. Welding J 26:38+ Ja '47
Summary of activities for year ending September 30, 1946. M. M. Kelly. Welding J 26:91-6 Ja '47
Technical activities committee. Welding J 26:181-3+ F '47
Welding research council and its relation to the American welding society. Welding J 26:705-6+ Ag '47

AMERICAN wood preservers' association
Annual meeting, 43d, Portland, Ore. April 22-24. Ry Age 122:882-5 My 3 '47

AMERICAN wool council
Graphics speed up and spark up annual report. A. B. Ecke. il map Sales Management 58:107-8+ Mr 15 '47

AMERICAN woolen company
Annual report. Comm & Fin Chr 165:2130 Ap 21 '47

AMERICAN zinc institute
Annual meeting, 29th, St Louis, April 28-29. Steel 120:72+ My 5 '47; Oil Paint & Drug Rep 151:7+ My 5 '47

AMERICANS
Fortune survey; self-portrait of the American people, 1947. Fortune 35:5-6+, 73-9+ Ja '47

AMERICIUM
Plutonium and other transuranium elements. G. T. Seaborg. il Chem & Eng N 25:358-60+ F 10 '47
Pure americium compound isolated. Chem & Eng N 24:3041 N 25 '46

AMIDES
Alkamine esters and amides of some amino-alkylmercaptobenzoic acids. J. J. Donleavy and P. C. Condit. bibliog Am Chem Soc J 69:1781-4 Jl '47
Amidines; preparation of cyanides, amides and amidines from carboxylic acids. P. Oxley and others. Chem Soc J p763-71 S '46
Imide-modified alkyd resins. H. J. Wright and R. N. DuPuis. bibliog Ind & Eng Chem 38:1303-8 D '46
Polyamides; resins of the Norelac type for hot-melt and heat-seal coatings. A. G. Hovey. il Mod Packaging 21:143-8+ O '47
Some amines and amides derived from vanillin. A. A. L. Challis and G. R. Clemo. Chem Soc J p613-18 My '47
Some polygalacturonide *n*-alkylamides. J. F. Carson. Am Chem Soc J 68:2723-4 D '46
See also
Sulfonamides

AMIDINES
Amidines; preparation of amidines from cyanides and ammonium thiocyanate or substituted ammonium thiocyanates. M. W. Partridge and W. F. Short. Chem Soc J p390-4 Mr '47
Amidines; preparation of amidines from cyanides and substituted aminomagnesium halides. R. P. Hullin, J. Miller and W. F. Short. Chem Soc J p394-6 Mr '47
Amidines; preparation of cyanides, amides and amidines from carboxylic acids. P. Oxley and others. Chem Soc J p763-71 S '46
Amidines; preparation of substituted amidines from ammonium or substituted ammonium salts and *N*-acylbenzenesulphonalkylamides or acylbenzenesulphonanilides. P. Oxley and W. F. Short. Chem Soc J p382-9 Mr '47
Amidines; preparation of 2-substituted 4 : 5-dihydroglyoxalines and ring homologues from cyanides and alkylenediamines. P. Oxley and W. F. Short. Chem Soc J p497-505 Ap '47
Aryloxyacetamidines and 2-(aryloxymethyl)-imidazolines. C. Djerassi and C. R. Scholz. bibliog Am Chem Soc J 69:1688-92 Jl '47
Attempts to find new chemotherapeutic amidines. J. O. Harris. Chem Soc J p690-2 My '47
Attempts to find new chemotherapeutic amidines; some aliphatic monoamidines. G. Newbery and W. Webster. Chem Soc J p738-42 Je '47
Cyano-ethylation of arsines, and the preparation of amidino-alkyl-arsines and carboxy-alkyl-arsines. R. C. Cookson and F. G Mann. Chem Soc J p618-24 My '47
Polarographic study of the restriction of the tautomerism of amidines by hydrogen bonding. M. E. Runner, M. L. Kilpatrick and E. C. Wagner. bibliog Am Chem Soc J 69: 1406-10 Je '47
Search for chemotherapeutic amidines. H. J. Barber, R. Slack and others. Chem Soc J p82-9 Ja '47
Synthesis of nuclear amidino-derivatives of 5-aminoacridine. A. A. Goldberg and W. Kelly. Chem Soc J p637-41 My '47
Synthetic antimalarials; some *N*-dialkylaminoalkylamidines. F. H. S. Curd and C. G. Raison. Chem Soc J p 160-4 F '47

AMIDINO compounds
Conversion of sucrose into furan compounds; some amidino-furans. F. H. Newth and L. F. Wiggins. Chem Soc J p396-8 Mr '47

AMIDONE
Reaction of aminoalkyl halides with diphenylacetonitrile; structure of amidone. E. M. Schultz, C. M. Robb and J. M. Sprague. Am Chem Soc J 69:188-9 Ja '47
Rearrangement of the isomeric 1,2-dimethylaminochloropropanes; the synthesis of amidone. W. R. Brode and M. W. Hill. Am Chem Soc J 69:724 Mr '47
Some isomers of amidone and related compounds. N. R. Easton, J. H. Gardner and J. R. Stevens. Am Chem Soc J 69:976-7 Ap '47

AMINATION
Amination of pyrazine with sodium amide. R. N. Shreve and L. Berg. bibliog Am Chem Soc J 69:2116-17 S '47

AMINES
Acridine syntheses and reactions; synthesis of amino-acridines from formic acid and amines. A. Albert. Chem Soc J p244-50 F '47
Alkylamine derivatives of fluorene. F. E. Ray and I. R. MacGregor. bibliog Am Chem Soc J 69:587-9 Mr '47
Amidines; preparation of 2-substituted 4 : 5-dihydroglyoxalines and ring homologues from cyanides and alkylenediamines. P. Oxley and W. F. Short. Chem Soc J p497-505 Ap '47

AMINES—*Continued*
Amine dust-bane. Chem Ind 61:38-9 Jl '47
Analgesics; N-alkylated-1,2-diphenylethylamines prepared by the Leuckart reaction. L. H. Goodson, C. J. W. Wiegand and J. S. Splitter. Am Chem Soc J 68:2174-5 N '46
Chlorination of methyldi-2-(chloroethyl)amine and related compounds. C. W. Crane and others. Chem Soc J p827-30 S '46
Cinchoninaldehyde and aliphatic amines; preparation of some lepidylamines. A. P. Phillips. Am Chem Soc J 69:865-6 Ap '47
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Condensation of aldehydes and amines with nitrogenous five-atom ring systems. G. B. Bachman and L. V. Heisey. bibliog Am Chem Soc J 68:2496-9 D '46
Effect of nitrogen-containing compounds on drying of paints. G. K. Wheeler. Ind & Eng Chem 39:1115-17 S '47
Electric moments of some aliphatic fluorides, cyanides and amines. M. T. Rogers. bibliog Am Chem Soc J 69:457-9 F '47
Experience shows amines stop corrosion. R. S. Moncrief and M. E. Dreyfus. il Power 91:19-21 Ja '47
Experimental study of the alkylation of aromatic amines using (1) aluminium alkoxides and (2) alumina with alcohols. J. C. Earl and N. G. Hills. Chem Soc J p973-6 Jl '47
Fatty amines; new commercial chemical family. K. E. Johnson. il Chem Ind 59:838-40 N '46
Identification of acidic oxycellulose by means of aromatic amines and diamines; new qualitative method. M. Krajčinovič and M. Krajčinovič. bibliog Textile Inst J 38:T11-12 Ja '47
Improved procedure for the replacement of aromatic amino groups by bromine. M. S. Newman and W. S. Fones. Am Chem Soc J 69:1221-2 My '47
Induction of mutants in penicillium notatum by methyl-bis(β-chloroethyl)amine. M. A. Stahmann and J. F. Stauffer. bibliog Science 106:35-6 Jl 11 '47
Mannich bases from kojic acid and aryl amines. L. L. Woods. Am Chem Soc J 68:2744 D '46
Mechanism of the sulfonation of aromatic amines; sulfonation at elevated temperatures with sulfuric acid. E. R. Alexander. bibliog Am Chem Soc J 69:1599-602 Jl '47
Molecular rearrangement and displacement of arylamine residues in α-arylamino-ketones. R. M. Cowper and T. S. Stevens. Chem Soc J p 1041-5 Ag '47
New condensation products of formaldehyde with amides and amines. H. Scheuermann. Paper Ind 28:1495-6 Ja '47; Same. Mod Plastics 24:161-2+ F '47
Nitrogen-containing organic inhibitors of corrosion. S. Ch'iao and C. A. Mann. bibliog diags Ind & Eng Chem 39:910-19 Jl '47
Preparation and properties of some long-chain aliphatic amines. E. T. Borrows and others. Chem Soc J p 197-202 F '47
Preparation of certain primary amines. R. Brown and W. E. Jones. Chem Soc J p781-2 S '46
Preparation of N-substituted diamines. E. L. Wittbecker, R. C. Houtz and W. W. Watkins. Am Chem Soc J 69:579-81 Mr '47
Preparation of quinoline derivatives from aromatic amines and ethyl ethoxymethylenemalonate. K. Schofield and J. C. E. Simpson. Chem Soc J p 1033-5 N '46
Reaction of certain secondary amines with phthalic anhydride; new synthesis of β-alanine. S. Chodroff, R. Kapp and C. O. Beckmann. bibliog Am Chem Soc 69:256-8 F '47
Reaction of clays with organic cations in producing refractory insulation. R. E. Grim and others. Am Cer Soc J 30:142-5 My 1 '47
Reaction of different clay minerals with some organic cations. R. E. Grim and others. bibliog Am Cer Soc J 30:137-42 My 1 '47
Relative stabilities of D-glucose-amine derivatives. A. Mohammad and H. S. Olcott. Am Chem Soc J 69:969 Ap '47
Researches on acetylenic compounds; miscellaneous addition reactions of ethynyl ketones. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p945-8 O '46
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46
Some alkoxy- and alkylenedioxydi-amines and alkoxy- and alkylenedioxydi-guanidines. A. T. Fuller and H. King. Chem Soc J p963-9 Jl '47
Some amines and amides derived from vanillin. A. A. L. Challis and G. R. Clemo. Chem Soc J p613-18 My '47
Some α-*t*-amino-*s*-dibenzoylethanes and 3-*t*-amino-2,5-diphenylfurans; preparation and reactions of dibenzoyl-N-morpholinoethylene. R. E. Lutz, P. S. Bailey and N. H. Shearer, jr. bibliog Am Chem Soc J 68:2224-7 N '46
Steric inhibition of resonance; basic strengths of some dimethyl-substituted aromatic primary and tertiary amines. G. Thomson. Chem Soc J p 1113-16 D '46
Studies on the Willgerodt reaction; preparation of nuclear-substituted phenylacetic acids and some further extensions of the reaction. J. A. King and F. H. McMillan. bibliog Am Chem Soc J 68:2335-9 N '46
Sulfur-containing amines. S. C. Laskowski and R. O. Clinton. Am Chem Soc J 69:519-21 Mr '47
Syntheses of some β-chlorinated amines. A. H. Ford-Moore, A. G. Lidstone and W. A. Waters. Chem Soc J p819-20 S '46
Synthesis of tetrahydro-5-substituted-2(1)-*s*-triazones. W. J. Burke. bibliog Am Chem Soc J 69:2136-7 S '47
Trinitro-phenylethyl amines from TNT. H. A. Bruson and G. B. Butler. bibliog Am Chem Soc J 68:2348-50 N '46

See also
Benzylamine
Ethanolamine
Methylamine
Tryethylamine

Analysis

Colorimetric determination of certain primary and tertiary aromatic amines. F. L. English. bibliog Anal Chem 19:457-9 Jl '47

AMINO acids
Ammonia nitrogen produced from isomeric peptides in kidney homogenate digests. J. M. Goncalves and others. bibliog Science 106:369-70 O 17 '47
Analytical determination of basic groups in amino acids and proteins. D. P. Grettie. Science 106:277 S 19 '47
Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Kertesz. bibliog Am Chem Soc J 68:2178-9 N '46
Competitive inhibition of the metabolism of α-amino acids by their halogenated analogs. H. K. Mitchell and C. Niemann. Am Chem Soc J 69:1232 My '47
Conversion of alkaline-metals salts of amino acids into free amino acids. A. Galat. Am Chem Soc J 69:707 Mr '47
Determination of alpha-amino nitrogen as ammonia after oxidation of amino acids by ninhydrin. F. S. Schlenker. bibliog Anal Chem 19:471-4 Jl '47
Ethyl formylaminomalonate; an intermediate in the synthesis of amino acids. A. Galat. Am Chem Soc J 69:965 Ap '47
Functions of the amino acids, the building blocks of proteins; abstract. C. F. Kade, jr. Chem & Eng N 24:3348 D 25 '46
Future of amino acid and protein therapy; abstract. R. J. Block. Oil Paint & Drug Rep 151:49 Je 16 '47
Heats of dilution of aqueous solutions of four amino butyric acids at 25°. L. S. Mason and A. L. Robinson. bibliog Am Chem Soc J 69:889-93 Ap '47
Human amino acid requirements. R. A. Harte and J. J. Travers. Science 105:15 Ja 3 '47
Industrial aspects of browning reaction. H. M. Barnes and C. W. Kaufman. bibliog Ind & Eng Chem 39:1167-70 S '47
Nutritive role of the amino acids; abstract W. C. Rose. Food Ind 19:1452+ O '47

AMINO acids—*Continued*
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47
Some Schiff bases of free amino acids. F. C. McIntire. bibliog Am Chem Soc J 69:1377-80 Je '47
Synthesis of certain α-amino acid esters from malonic ester. J. C. Shivers and C. R. Hauser. bibliog Am Chem Soc J 69:1264-5 Je '47
Synthesis of β-(3 : 4-dihydroxyphenyl)-*N*-methylserine (adrenalinecarboxylic acid). C. E. Dalgliesh and F. G. Mann. Chem Soc J p658-62 My '47
Three sources of amino acids for niacin assay. A. R. Kemmerer and F. Shapiro. bibliog Anal Chem 19:358-9 My '47
Viscosities of aqueous solutions of amino-acids, with some conductivity values. A. E. Bell and W. M. Madgin. Chem Soc J p74-6 Ja '47

See also
Aminobutyric acid
Tryptophan

Analysis

Amino acid determination; microbiological assay method. Chem & Eng N 25:47 Ja 6 '47
Modern methods of amino-acid analysis; abstract. G. R. Tristram. Chem & Ind p164 Mr 29 '47
Some methods for determination of amino acids. D. C. Hill. bibliog Can Chem & Process Ind 31:339-40+ Ap '47

Nomenclature

Nomenclature of natural amino acids and related substances. Chem & Eng N 25:1364-6 My 12 '47

AMINOACRIDINE
Acridine syntheses and reactions; synthesis of amino-acridines from formic acid and amines. A. Albert. Chem Soc J p244-50 F '47
Ionisation of acridine bases. A. Albert and R. Goldacre. bibliog Chem Soc J p706-13 Ag '46
Quaternary 3-ethoxy-7,9-diaminoacridinium salts. A. Weizmann. bibliog Am Chem Soc J 69:1224-5 My '47
Some 4-aminoquinoline and 9-aminoacridine derivatives. C. K. Kwartler and P. Lucas. bibliog Am Chem Soc J 68:2395-7 N '46
Synthesis of diaminoacridines. A. A. Goldberg and W. Kelly. Chem Soc J p595-7 My '47
Synthesis of nuclear amidino-derivatives of 5-aminoacridine. A. A. Goldberg and W. Kelly. Chem Soc J p637-41 My '47

AMINO alcohols. See Alcohols

AMINOAZO compounds. See Azo compounds

AMINOBENZENEPHOSPHONOUS acid
Antibacterial activity of *p*-aminobenzenephosphonous acid. I. M. Klotz and R. T. Morrison. Am Chem Soc J 69:473 F '47

AMINOBUTYRIC acid
Methionine metabolism and α-aminobutyric acid. C. E. Dent. Science 105:335-6 Mr 28 '47

AMINOCAPROIC acid
Preparation of ε-aminocaproic acid. A. Galat and S. Mallin. Am Chem Soc J 68:2729-30 D '46

AMINOCHLOROBENZONITRILE
6-(and 7-)-chloro-4-(1-diethylamino-4-pentylamino)-2- (*p*-methoxyphenyl)- quinazoline dihydrochlorides. R. L. McKee, M. K. McKee and R. W. Bost. bibliog Am Chem Soc J 69:940-2 Ap '47

AMINOCHLOROQUINOLINE
Dealkylation of 4-(4-diethylamino-1-methylbutylamino)-7-chloroquinoline, SN 7618. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 69:704 Mr '47

AMINO compounds
Alkamine esters and amides of some aminoalkylmiercaptobenzoic acids. J. J. Donleavy and P. C. Condit. bibliog Am Chem Soc J 69:1781-4 Jl '47
α,β-Diamino ketones; addition and cleavage with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:1857-60 Ag '47
Reaction of aminoesters with ethyl isocyanate; open chain models of desthiobiotin. E. M. Schultz. bibliog Am Chem Soc J 69:1056-7 My '47
Reaction of β-naphthol, β-naphthylamine and formaldehyde; 2-amino-2′-hydroxy-1,1′-dinaphthylmethane. R. S. Corley and E. R. Blout. bibliog Am Chem Soc J 69:755-60 Ap '47
Reaction of β-naphthol, β-naphthylamine and formaldehyde; 1-(2′-naphthylaminomethyl)-2-naphthol and its isomerization to 2′-amino-2-hydroxy-1,1′-dinaphthylmethane. R. S. Corley and E. R. Blout. bibliog Am Chem Soc J 69:761-3 Ap '47
Some amino-derivatives of dihydro-β-quinindene and tetrahydroacridine. V. Petrow. Chem Soc J p634-7 My '47
Some basically substituted diaryl sulfides and sulfones. H. Gilman and H. S. Broadbent. bibliog Am Chem Soc J 69:2053-7 Ag '47
Synthetic antimalarials; cinnolines; synthesis and antimalarial action of 4-aminoalkylaminocinnolines. J. R. Keneford and J. C. E. Simpson. Chem Soc J p917-20 Jl '47
Synthetic antimalarials; some *N*-dialkylaminoalkylamidines. F. H. S. Curd and C. G. Raison. Chem Soc J p 160-4 F '47
Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47

AMINODIBENZOYLETHANE
Some α-*t*-amino-*s*-dibenzoylethanes and 3-*t*-amino-2,5-diphenylfurans; preparation and reactions of dibenzoyl-N-morpholinoethylene. R. E. Lutz, P. S. Bailey and N. H. Shearer, jr. bibliog Am Chem Soc J 68: 2224-7 N '46

AMINODIMETHYLANILINE
Oxalate salt of p-aminodimethylaniline, an improved reagent for the oxidase test. C. M. Carpenter and others. Science 105:649-50 Je 20 '47

AMINODIPHENYL
Observations on the effects of diphenyl, *o*- and *p*-aminodiphenyl, *o*- and *p*-nitrodiphenyl and dihydroxyoctachlorodiphenyl upon experimental animals. W. B. Deichmann and others. bibliog il diag J Ind Hygiene 29:1-13 Ja '47

AMINODIPHENYLFURAN
Some α-*t*-amino-*s*-dibenzoylethanes and 3-*t*-amino-2,5-diphenylfurans; preparation and reactions of dibenzoyl-N-morpholinoethylene. R. E. Lutz, P. S. Bailey and N. H. Shearer, jr. bibliog Am Chem Soc J 68: 2224-7 N '46

AMINODIPHENYLMETHANE
Substituted 4-aminodiphenylmethanes. C. E. Kaslow and R. D. Stayner. Am Chem Soc J 68:2600-2 D '46

AMINOETHANEPHOSPHONIC acid
Preparation of β-aminoethanephosphonic acid. J. Finkelstein. Am Chem Soc J 68:2397-8 N '46

AMINOFLUORENE
2-Aminofluorene. J. R. Sampey and E. E. Reid. Am Chem Soc J 69:712 Mr '47

AMINOHYDROXYBENZENEARSONOUS acid
3-Amino-4-hydroxybenzenearsonous acid; salts and structural considerations. C. K. Banks and others. bibliog Am Chem Soc J 69:5-11 Ja '47

AMINOHYDROXY caproic acid
dl-α-Amino-ε-hydroxy caproic acid in the rat. R. Gingras and others. Science 105: 621-2 Je 13 '47

AMINOISOBUTYRIC acid
Esters of α-aminoisobutyric acid. R. A. Jacobson. bibliog il Am Chem Soc J 68:2628-30 D '46

AMINOISOQUINOLINE
1-Dialkylaminoalkylaminoisoquinolines. R. A. Robinson. bibliog Am Chem Soc J 69:1939-42 Ag '47
5-(γ-Diethylaminopropylamino)-isoquinoline. R. A. Robinson. Am Chem Soc J 69:1942-3 Ag '47
7-(γ-Diethylaminopropylamino)-isoquinoline. R. A. Robinson. Am Chem Soc J 69:1944 Ag '47

AMINOISOQUINOLINE—*Continued*
8-(γ-Diethylaminopropylamino)-isoquinoline. R. A. Robinson. bibliog Am Chem Soc J 69: 1944-5 Ag '47

AMINOKETONES. See Ketones

AMINOMETHOXYLEPIDINE
Some derivatives of 6-methoxy-8-aminolepidine. K. N. Campbell and others. Am Chem Soc J 69:1465-7 Je '47

AMINOMETHYLTHIAZOLE
Derivatives of 2-amino-4-methylthiazole. J. M. Sprague, A. H. Land and C. Ziegler. bibliog Am Chem Soc J 68:2155-9 N '46

AMINONITRILES
Reaction of aminoalkyl halides with diphenylacetonitrile; structure of amidone. E. M. Schultz, C. M. Robb and J. M. Sprague. Am Chem Soc J 69:188-9 Ja '47
Some isomers of amidone and related compounds. N. R. Easton, J. H. Gardner and J. R. Stevens. Am Chem Soc J 69:976-7 Ap '47

AMINONITROBENZENE
New sweetening agents; 1-*n*-propoxy-2-amino-4-nitrobenzene. P. E. Verkade. Chem & Eng N 24:2912 N 10 '46

AMINOPHENAZINE
Improved syntheses of phenazines; 1-aminophenazine and 1:3-diaminophenazine. A. Albert and H. Duewell. bibliog Soc Chem Ind J 66:11-13 Ja '47

AMINOPHENOLS
Investigations on the influence of chemical constitution upon toxicity; compounds related to prostigmine. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 182-91 F '47

AMINOPHENYL sulfones
Preparation of 4-aminophenyl sulphones; reaction between 4-acetamidobenzenesulphinic acid and aromatic nitroso-compounds. S. Pickholz. Chem Soc J p 1058-62 N '46
Preparation of 4-aminophenyl sulphones; reaction between aromatic sulphinic acids and quinones or quinoneimines. S. Pickholz. Chem Soc J p685-7 Ag '46

AMINOPHOSPHONIC acid
Synthesis of amino-substituted phosphonic acids. G. M. Kosolapoff. bibliog Am Chem Soc J 69:2112-13 S '47

AMINOPICOLINE
Substituted 2-picolines derived from 6-amino-2-picoline. E. D. Parker and W. Shive. bibliog Am Chem Soc J 69:63-7 Ja '47

AMINOPLASTIC adhesives. See Resinous products—Adhesives

AMINOPURINE. See Adenine

AMINOPYRAZINE
Amination of pyrazine with sodium amide. R. N. Shreve and L. Berg. bibliog Am Chem Soc J 69:2116-17 S '47
Pyrazine chemistry; derivatives of 3-hydroxypyrazinoic acid. F. G. McDonald and R. C. Ellingson. bibliog Am Chem Soc J 69:1034-7 My '47

AMINOPYRIDAZONE
Conversion of sucrose into pyridazine derivatives; 4-amino-2-phenyl-6-methyl-3-pyridazone, 4-amino-2-(*p*-nitrophenyl)-6-methyl-3-pyridazone, and their sulphanilamido-derivatives. W. G. Overend and L. F. Wiggins. Chem Soc J p549-54 Ap '47

AMINOPYRIDINE
Derivatives of aminopyridines. J. Bernstein and others. bibliog Am Chem Soc J 69: 1147-50 My '47
Derivatives of 2,6-diaminopyridine. J. Bernstein and others. bibliog Am Chem Soc J 69:1151-8 My '47
Some substituted sulfanilamidopyridines. J. Bernstein and others. Am Chem Soc J 69: 1158-60 My '47
Tuberculostatic compounds; ethers of 2-hydroxy-5-aminopyridine. H. L. Friedman and others. Am Chem Soc J 69:1204-6 My '47

AMINOPYRIMIDINE
Synthetic antimalarials; some aryloxy- and arylthio-dialkylaminoalkylaminopyrimidines. F. H. S. Curd and others. Chem Soc J p783-90 Je '47
Tuberculostatic compounds; alkoxy-aminopyrimidines. L. D. Braitberg and others. Am Chem Soc J 69:2005-6 Ag '47

AMINOQUINAZOLINE
Synthetic antimalarials; 4-dialkylaminoalkylaminoquinazolines; variation of substituents in the 6- and 7-positions. N. B. Chapman, G. M. Gibson and F. G. Mann. Chem Soc J p890-9 Jl '47
Synthetic antimalarials; some 2-arylamino-4-aminoalkylaminoquinazolines. F. H. S. Curd, J. K. Landquist and F. L. Rose. Chem Soc J p775-83 Je '47

AMINOQUINOLINE
8-Aminoquinolines with allylamine substituents. C. D. Hurd and R. J. Sims. Am Chem Soc J 68:2228 N '46
Antimalarials; 6- and 7-chloro-α-(dialkylaminomethyl)-4-quinolinemethanols. R. E. Lutz, J. F. Codington and N. H. Leake. bibliog il Am Chem Soc J 69:1260-3 Je '47
α-(Dialkylaminomethyl)-8-amino(or hydroxy)-4-quinolinemethanols. R. B. Turner, J. Mills and A. C. Cope. Am Chem Soc J 68: 2220-4 N '46
α-(Dialkylaminomethyl)-2-phenyl-4-quinolinemethanols with 8-amino or hydroxy substituents. R. B. Turner and A. C. Cope. bibliog Am Chem Soc J 68:2214-19 N '46
Heterocyclic basic compounds; 4,8-diaminoquinoline and derivatives. R. W. Gouley, G. W. Moersch and H. S. Mosher. bibliog Am Chem Soc J 69:303-6 F '47
Methylene and *p*-phenylene analogs of plasmocid. C. C. Price, H. R. Snyder and E. M. Van Heyningen. bibliog Am Chem Soc J 68:2589-92 D '46
Preparation of 3-halo-4-dialkylaminoalkylaminoquinoline derivatives. A. R. Surrey and R. A. Cutler. bibliog Am Chem Soc J 68:2570-4 D '46
Preparation of unsymmetrical diaryl amines; 5-phenylamino-6-methoxy-8-(3-diethylaminopropylamino)-quinoline. H. R. Snyder and N. R. Easton. bibliog Am Chem Soc J 68:2641-3 D '46
Some 4-aminoquinoline and 9-aminoacridine derivatives. C. K. Kwartler and P. Lucas. bibliog Am Chem Soc J 68:2395-7 N '46
Some derivatives of 6-methoxy-8-aminolepidine. K. N. Campbell and others. Am Chem Soc J 69:1465-7 Je '47
Spectrophotometric and potentiometric evaluation of apparent acid dissociation exponents of various 4-aminoquinolines. J. L. Irvin and E. M. Irvin. bibliog Am Chem Soc J 69:1091-9 My '47
Studies in the quinoline series; some 6-β-hydroxyethoxy-4-aminoquinolines. V. G. Ramsey and L. W. Cretcher. bibliog Am Chem Soc J 69:1659-62 Jl '47
Studies in the quinoline series; synthesis of certain 4-substituted quinoline derivatives. V. G. Ramsey, W. E. Baldwin and R. S. Tipson. bibliog Am Chem Soc J 69:67-70 Ja '47
Synthesis of certain 8-(5-alkylamino-1-methylpentylamino)- derivatives of quinoline. R. C. Elderfield and others. bibliog Am Chem Soc J 69:1258-60 Je '47
Synthesis of 4-hydroxyquinolines; some halogen containing 4-aminoquinoline derivatives. H. R. Snyder and others. Am Chem Soc J 69:371-4 F '47
Synthesis of some 6-methoxy-8-(β-aminopropionylamino)-quinolines. H. R. Snyder and H. E. Freier. Am Chem Soc J 68:2485-6 D '46
Synthetic antimalarials; some arylamino-aminoalkylaminoquinoline derivatives. F. H. S. Curd, C. G. Raison and F. L. Rose. Chem Soc J p899-909 Jl '47

See also
Aminoisoquinoline

AMINOSULFANILAMIDOANISOLE
Aminosulfanilanisides. F. H. Bergeim, K. Losee and W. A. Lott. Am Chem Soc J 69:583-7 Mr '47

AMINOSULFANILANISIDE. See Aminosulfanilamidoanisole

AMINOTETRAPHENYLMETHANE
Preparation of *p*-amino-tetraphenylmethane. B. Witten and E. E. Reid. Am Chem Soc J 69:973 Ap '47

AMINOTHIAZOLE
t-Aminoalkyl derivatives of 2-aminothiazole. A. H. Land, C. Ziegler and J. M. Sprague. bibliog Am Chem Soc J 69:125-8 Ja '47
Reaction of ketones with formanidine disulfide. L. C. King and I. Ryden. bibliog Am Chem Soc J 69:1813-14 Jl '47

AMINOTHIAZOLE sulfonic acid
2-Amino-5-thiazolesulfonic acid derivatives. H. E. Faith. bibliog Am Chem Soc J 69: 2063 Ag '47

AMMETERS
Clamp-on ammeter finds grounds on loaded circuits. S. B. Hoag. diag Elec World 127: 52 Ja 4 '47

AMMINO compounds
Cobaltammines and chlorostannic acid. T. P. McCutcheon and E. L. d'Ouville. Am Chem Soc J 69:989-90 My '47

AMMONIA
Adsorption-desorption isotherm studies of catalysts; comparison of low temperature isotherms of ammonia and nitrogen. H. E. Ries, jr., R. A. Van Nordstrand and W. E. Kreger. bibliog Am Chem Soc J 69: 35-40 Ja '47
Ammonia nitrogen produced from isomeric peptides in kidney homogenate digests. J. M. Goncalves and others. bibliog Science 106:369-70 O 17 '47
Ammonia spectrum and line shapes near 1.25-cm wave length. C. H. Townes. bibliog diags Phys R 70:665-71 N 1 '46
Ammonolysis of ethyl iodide by liquid ammonia. G. W. Watt and J. B. Otto, jr. bibliog Am Chem Soc J 69:836-8 Ap '47
Amphiprotic substances; system formamide-ammonia. H. H. Sisler, C. A. WanderWerf and S. Stephanou. bibliog Am Chem Soc J 68:2538-9 D '46
Anomalous values of certain of the fine structure lines in the ammonia microwave spectrum. H. H. Nielsen and D. M. Dennison. Phys R 72:86-7 Jl 1 '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 124-5 N '46
Conductivity of sodium-ammonia solutions. D. K. C. MacDonald and others. Phys R 71:563-4 Ap 15 '47
Determination of alpha-amino nitrogen as ammonia after oxidation of amino acids by ninhydrin. F. S. Schlenker. bibliog Anal Chem 19:471-4 Jl '47
Electrical conductivity of Na-ammonia solutions at low temperatures. L. Giulotto and A. Gigli. Phys R 71:211-12 F 1 '47
Equation of state for a system with a single type of transformation. J. L. Finck. Franklin Inst J 243:117-29 F '47
Heats of solution and heats of reaction in liquid ammonia. E. Hennelly and others. Am Chem Soc J 69:1025-7 My '47
How chlorine kills ammonia in boiler feedwater. Power Pl Eng 51:126+ Je '47
Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of groups 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47
Hydrogen cyanide from carbon monoxide and ammonia. H. Burrell. Chem & Eng N 25: 1939 Jl 7 '47
Hyperfine structure and the stark effect of the ammonia inversion spectrum. J. M. Jauch. bibliog Phys R 72:715-23 O 15 '47
Hyperfine structure of the microwave spectrum of ammonia and the existence of a quadrupole moment in N^{14}. B. P. Dailey and others. Phys R 70:984 D 1 '46
Improved synthesis of β-alanine; the addition of ammonia to acrylonitrile at 50-150°. J. H. Ford, S. R. Buc and J. W. Greiner. bibliog Am Chem Soc J 69:844-6 Ap '47
Inversion spectrum of ammonia. B. Bleaney and R. P. Penrose. Phys R 70:775-6 N 1 '46
Inversion spectrum of ammonia. M. W. P. Strandberg and others. Phys R 71:326 Mr 1 '47
Magnetic susceptibility of sodium in liquid ammonia solutions at low temperatures. R. B. Gibney and G. L. Pearson. bibliog Phys R 72:76-7 Jl 1 '47
Mechanism of ammonia stabilization of cellulose nitrate. R. E. Reeves and J. E. Giddens. bibliog Ind & Eng Chem 39:1306-9 O '47
Mercury and ammonia; an explosion hazard. J. J. Sampey. Chem & Eng N 25:2138 Jl 28 '47; Same. Refrig Eng 54:349 O '47
Microwave absorption frequencies of $N^{14}H_3$ and $N^{15}H_3$. W. E. Good and D. K. Coles. Phys R 71:383-4 Mr 15 '47
Microwave spectra; the hyperfine structure of ammonia. W. Gordy and M. Kessler. bibliog il Phys R 71:640 My 1 '47
Microwave spectrum of ammonia. L. N. Hadley and D. M. Dennison. bibliog Phys R 70: 780-1 N 1 '46
New reefer car solves frozen food shipment problem. M. Burton. il diags Food Ind 19: 906-8+ Jl '47
Nuclear quadrupole moment effects in the inversion spectrum of ammonia. R. J. Watts and D. Williams. il Phys R 72:263-5 Ag 15 '47
Nuclear quadrupole moment effects in the microwave spectrum of ammonia. R. J. Watts and D. Williams. Phys R 71:639 My 1 '47
Proton-deuteron exchange between ammonia and ammoniated diborane. A. B. Burg. bibliog diags Am Chem Soc J 69:747-50 Ap '47
Reaction between acetone and ammonia; formation of pyrimidine compounds analogous to the aldozanes of Späth; abstract. R. P. Bradbury, N. C. Hancox and H. H. Hatt. Chem & Ind p196 Ap 12 '47
Reaction between cellulose nitrate and sodium acetylide in liquid ammonia. P. C. Scherer and G. A. Saul. bibliog Rayon 28: 474-5, 537-8 S-O '47
Reaction of 1-nitropropane with formaldehyde and ammonia. E. L. Hirst and others. Chem Soc J p924-8 Jl '47
Reduction by dissolving metals. A. J. Birch. Chem Soc J p 102-5 Ja '47
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47
Removal of hydrogen bromide from certain β-phenylalkyl bromides by means of potassium amide in liquid ammonia. C. R. Hauser and others. bibliog Am Chem Soc J 69:589-93 Mr '47
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46
Safety in the use and handling of ammonia. Power Pl Eng 51:88-9 Mr '47
Saturation effect in microwave spectrum of ammonia. W. V. Smith and R. L. Carter. Phys R 72:638-9 O 1 '47
Separation of butadiene by azeotropic distillation with ammonia. N. Poffenberger and others. bibliog flow sheets Am Inst Chem Eng Trans 42:815-26 O-D '46
Separation of the nitrogen isotopes by the exchange reaction between ammonia and solutions of ammonium nitrate. I. Kirshenbaum and others. bibliog diags J Chem Phys 15:440-6 Jl '47
Shortage engineering; waterworks substitutes ammonia liquor for ammonium sulfate. H. W. Poston. plan Water & Sewage Works 94:68 F '47
Solubility of silver selenide and silver telluride in aqueous ammonia. R. S. Young and A. Golledge. Ind & Eng Chem 39:1299-300 O '47
Solubility product and the silver-ammonia halides. K. B. Morris. J Chem Educ 24: 286-7 My '47
Some observations on the ring scission of 4 : 6-benzylidene 2 : 3-anhydro α-methylmannoside with ammonia. L. F. Wiggins. Chem Soc J p 18-21 Ja '47
Stabilization of cellulose nitrate with ammonia. R. E. Reeves and J. E. Giddens. bibliog diag Ind & Eng Chem 39:1303-6 O '47
Stark and Zeeman effects in the inversion spectrum of ammonia. D. K. Coles and W. E. Good. Phys R 70:979 D 1 '46

AMMONIA—*Continued*
Thermodynamic properties; saturated liquid and vapor of ammonia-water mixtures. G. Scatchard and others. bibliog Refrig Eng 53:413-19+ My '47
Use of liquid ammonia increasing; report of Stanford University conference. Chem & Eng N 25:2429-30 Ag 25 '47
Vapour pressures of ammonia and carbon dioxide in equilibrium with aqueous solutions at 90°. E. H. M. Badger and D. S. Wilson. diag Soc Chem Ind J 66:84-6 Mr '47

Analysis

Micro-Kjeldahl determination of nitrogen; use of potassium biiodate in iodometric titration of ammonia. R. Ballentine and J. R. Gregg. bibliog Anal Chem 19:281-3 Ap '47

Manufacture

Ammonia from natural gas; Lion oil company. flow diags Pet Refiner (Process Handbook sec) 26:106-7 Ap '47
Le craquage des hydrocarbures naturels par le procédé de la Hercules powder co. P. Guillaumeron. il diag Génie Civil 123:341-2 D 15 '46
Dutch synthetic ammonia plant. Chem Age (Lond) 55:703 D 7 '46
Liquor effluents and ammonia committee, Institution of gas engineers; 8th report. Gas J (Lond) 249:101-2+ Ja 8 '47
Process equipment cost estimation; complete ammonia plants. C. O. Brown. Chem Eng 54:124 My '47
Production and performance of ammonia-synthesis catalyst. G. L. Bridger and others. bibliog flow diag il diag Chem Eng Prog 43:291-302 Je '47

AMMONIA compressors
Preventing accidents to ammonia compressor crankshafts. H. J. Vander Eb. diag Locomotive 46:141-4 Ja '47

AMMONITES. See Ammonoidea

AMMONIUM aluminum sulfate
Solubilities of ammonium and potassium alums in water; densities of the saturated solutions. D. Schlain, J. D. Prater and S. F. Ravitz. bibliog diag Ind & Eng Chem 39:74-6 Ja '47

AMMONIUM bromide
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47

AMMONIUM chloride
Electrical conductivities of aqueous solutions of mixtures containing alkylammonium chlorides. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:883-6 Ap '47
Electrical conductivities of long-chain quaternary ammonium chlorides containing hydroxyalkyl groups. A. W. Ralston and others. Am Chem Soc J 69:2095-7 S '47
λ-Point of NH_4Cl and thermodynamic equilibria of the second order. E. O. Hall. bibliog Phys R 71:916-17 Je 15 '47

See also
Dodecylammonium chloride

AMMONIUM citrate
Tungsten and nickel codeposition from an aqueous ammoniacal citrate bath; abstract. L. E. Vaaler and M. L. Hoyt. Materials & Methods 25:149-50 Ap '47

AMMONIUM compounds
Amidines; preparation of substituted amidines from ammonium or substituted ammonium salts and *N*-acylbenzene-sulphonalkylamides or acylbenzenesulphonanilides. P. Oxley and W. F. Short. Chem Soc J p382-9 Mr '47
Amphiprotic substances; system formamide-ammonia. H. H. Sisler, C. A. VanderWerf and S. Stephanou. bibliog Am Chem Soc J 68:2538-9 D '46
Bacteriological evaluation of cationic germicides. A. S. DuBois. bibliog Soap & San Chem 23:139+ My '47
Dielectric behavior of solutions of electrolytes in solvents of low dielectric constant. A. H. Sharbaugh, jr. and others. bibliog diags J Chem Phys 15:47-64 Ja '47
Equilibrium between gaseous carbon dioxide and hydrogen sulphide and solutions of alkali carbonates, bicarbonates and hydrosulphides; ammonium salts. I. G. C. Dryden. Soc Chem Ind J 66:62-4 F '47
False disinfection velocity curves produced by quaternary ammonium compounds. E. C. McCulloch. Science 105:480-1 My 2 '47
Investigations on the influence of chemical constitution upon toxicity; compounds related to doryl. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 176-82 F '47
NAIDM-USDA report on quaternary ammonium testing; E typhosa and S. aureus in various cultures. L. S. Stuart. Soap & San Chem 23:135+ S '47
New medium for study of quaternary bactericides. E. H. Armbruster and G. M. Ridenour. bibliog Soap & San Chem 23:119-21+ Ag '47
Note on the problem of bacteriological evaluation of cationics; reply to A. S. Dubois, E. G. Klarmann and E. S. Wright. Soap & San Chem 23:151+ Jl '47
Postwar problems in testing disinfectants. L. S. Stuart. Soap & San Chem 23:129-31+ Mr '47
Properties of electrolytic solutions; conductance of some substituted ammonium salts in ethylene chloride. L. M. Tucker and C. A. Kraus. Am Chem Soc J 69:454-6 F '47
Properties of electrolytic solutions; the conductance of several quaternary ammonium salts in ethylene chloride at 25°. W. E. Thompson and C. A. Kraus. bibliog Am Chem Soc J 69:1016-20 My '47
Quaternary ammonium germicidal treatment for jute-packed water mains. A. L. Sotier and H. W. Ward. bibliog il Am Water Works Assn J 39:1038-45 O '47
Quaternary ammonium germicides. C. A. Lawrence. il Chem Ind 60:44-7 Ja '47
Quaternary ammonium germicides; methods for their evaluation. R. A. Quisno and others. Soap & San Chem 23:145+ Je '47
Rearrangement of *l*-phenacyl-α-phenylethyldimethylammonium bromide. A. Campbell, A. H. J. Houston and J. Kenyon. Chem Soc J p93-5 Ja '47
Sanitizing efficiency; germicidal speed of four quaternary ammonium compounds; abstract. C. K. Johns. Soap & San Chem 23: 155 S '47
Soaps in reverse. H. C. E. Johnson. il Sci Am 177:21-3 Jl '47
Some post-war problems in testing disinfectants; abstract. L. S. Stuart. Soap & San Chem 22:132 D '46
Testing quaternary ammonium sanitizers as used in the dairy industry. W. S. Mueller and others. bibliog Soap & San Chem 23: 123+ S '47
Toxicity of chemicals in electroplating; ammonium hydroxide and ammonium salts. P. M. Van Arsdell. Metal Finishing 45:56-7 Ag '47

See also
Roccal

Analysis

Photocolorimetric method for determination of quaternary ammonium salts. E. L. Colichman. Anal Chem 19:430-1 Je '47
Testing the quaternary ammoniums; review of methods currently in use. A. S. DuBois. bibliog Soap & San Chem 22:125+ N '46

AMMONIUM ferrocyanide
Hydrogen sulphide removal by ammoniacal iron ammonium ferrocyanide liquors. H. C. Craggs and M. H. M. Arnold. diag Chem & Ind p571-3, 590-3 S 20-27 '47

AMMONIUM formate
Analgesics; N-alkylated-1,2-diphenylethylamines prepared by the Leuckart reaction. L. H. Goodson, C. J. W. Wiegand and J. S. Splitter. Am Chem Soc J 68:2174-5 N '46

AMMONIUM hydroxide
Toxicity of chemicals in electroplating; ammonium hydroxide and ammonium salts. P. M. Van Arsdell. Metal Finishing 45:56-7 Ag '47

AMMONIUM nitrate
Ammonium nitrate disasters bring rash of local actions. Oil Paint & Drug Rep 152:3 Ag 4 '47

AMMONIUM nitrate—*Continued*
Ammonium nitrate hazard study planned by new five-man committee. Oil Paint & Drug Rep 152:3+ S 15 '47
Ammonium nitrate problem discussed by gathering at Washington. Chem & Eng N 25:3076 O 20 '47
Ammonium nitrate regulations tightened by Coast guard. Oil Paint & Drug Rep 152:5 Ag 11 '47
Ammonium nitrate safety in transport reviewed; United States coast guard committee report. Oil Paint & Drug Rep 152:3+ S 1 '47
Another nitrate disaster. Chem Age (Lond) 57:146 Ag 2 '47
Bomb filling with 80:20 amatol; procedure may have peace-time application. H. Graham and others. il diags Can Chem & Process Ind 30:37-41 N '46
Carbon 14 production from ammonium nitrate solution in the chain-reacting pile. L. D. Norris and A. H. Snell. bibliog diag Science 105:265-7 Mr 7 '47
Cool nitrate is the key. il Chem Ind 61:377-8 S '47
Crop food or A-bomb? Chem Ind 60:771 My '47
Detonation of ammonium nitrate fertilizer. il Chem & Eng N 25:2143 Jl 28 '47
Guanidine nitrate from dicyandiamide and ammonium nitrate by pressure reaction. J. H. Paden, K. C. Martin and R. C. Swain. bibliog flow sheet diags Ind & Eng Chem 39:952-8 Ag '47
Many insurance men at ammonium nitrate parley; discuss how to combat menace without restricting export. Nat Underw 51: 12 S 11 '47
Nitrate hazards under review. Chem Age (Lond) 57:197 Ag 9 '47
No blame placed on oil, chemical industries in Texas City disaster; abstracts. G. Armistead, jr. Nat Pet N 39:24 Jl 23 '47; Pet Refiner 26:145 Jl '47
Observations relating to the Texas City disaster. G. W. Cox. bibliog Ind Med 16:352-4 Jl '47
Precautions in handling ammonium nitrate. Chem & Eng N 25:1594 Je 2 '47; Same. Weekly Underw 156:1468 My 31 '47; Same. Chem Ind 60:1000 Je '47; Same. Safety Eng 93:22+ Je '47; Same. Pet Refiner 26:154 Je '47; Same. Nat Safety N 56:90-2 Jl '47; Excerpt. Chem Eng 54:184+ Je '47
Product that couldn't explode. C. Field. il Chem Eng 54:146-7 My '47
Report on Texas City ammonium nitrate explosions issued by interagency committee. A. Leggin. Chem & Eng N 25:2611 S 15 '47
Separation of the nitrogen isotopes by the exchange reaction between ammonia and solutions of ammonium nitrate. I. Kirshenbaum and others. bibliog diags J Chem Phys 15:440-6 Jl '47
Texas disaster starts new research project by Underwriters' laboratories. Weekly Underw 156:1328 My 17 '47; Same. Safety Eng 94:33 Jl '47
War dept. advised to return ammonia nitrate tonnage. Oil Paint & Drug Rep 151: 5+ F 10 '47

AMMONIUM phosphates
Ammonium dihydrogen phosphate crystals in production. Chem & Eng N 25:1965 Jl 7 '47
See also
Magnesium ammonium phosphate

AMMONIUM picrates
Properties of electrolytic solutions; conductance of some salts in nitrobenzene at 25°. E. G. Taylor and C. A. Kraus. Am Chem Soc J 69:1731-5 Jl '47

AMMONIUM sulfamate
Aqueous solubilities of some sulfamates, and the system ammonium sulfamate-sulfamic acid-water at 25°. J. E. Ricci and B. Selikson. bibliog Am Chem Soc J 69:995-8 My '47
Chemical treatment of live trees; proposed process for easy barking and providing of more solid wood per cord. A. R. White. Pulp & Pa of Can 48:67-71 F '47
Conductance of tetraethylammonium sulfamate in liquid hydrogen sulfide. E. E. Lineken. Am Chem Soc J 69:467-8 F '47

AMMONIUM sulfate
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 125-6 N '46
Shale by-products. il Elec R (Lond) 139:863-5 N 29 '46
Sulfate of ammonia; continued demand for nitrogen fertiliser. Chem Age (Lond) 56: 160-2 Ja 25 '47; Abstract. Chem & Ind p50 Ja 25 '47
Wartime consumption of sulphate of ammonia. Gas J (Lond) 249:204-5 Ja 22 '47

Manufacture
Billingham anhydrite mine. Chem Age (Lond) 55:699 D 7 '46
Wartime alumina plant now making ammonium sulphate. R. L. Taylor. il diag Chem Ind 59:830-3 N '46
West meets East in unique engineering project; Indian government imports American engineering skill to design and construct unusual ammonium sulphate plant. J. V. Van Denburg, jr. flow chart il diag Chem Eng 54:92-5 Ag '47

AMMONIUM thiocyanate
Amidines; preparation of amidines from cyanides and ammonium thiocyanate or substituted ammonium thiocyanates. M. W. Partridge and W. F. Short. Chem Soc J p390-4 Mr '47
Colorimetric determination of uranium with thiocyanate. J. E. Currah and F. E. Beamish. Anal Chem 19:609-12 Ag '47

AMMONOIDEA
Upper cretaceous ammonites from Haiti. J. B. Reeside, jr. bibliog U S Geol S Professional Pa 214-A:1-5, pl 1-3; pa 15c Supt. of doc. '47

AMMONOLYSIS
Ammonolysis of ethyl iodide by liquid ammonia. G. W. Watt and J. B. Otto, jr. bibliog Am Chem Soc J 69:836-8 Ap '47

AMMUNITION
Underground conveyors handle ammunition. il Mech Handling 33:607-11 O '46
See also
Projectiles

Transportation
Moving hot stuff for the fleet; lift trucks, small cranes and utility loaders for handling ammunition. G. F. Hussey, jr. il Ry Age 122:232-4 Ja 25 '47

AMPEROMETRIC titration. See Volumetric analysis

AMPHETAMINE. See Benzedrine

AMPHIBIAN engineer association
Society created in interest of national defense. Eng N 137:773 D 12 '46

AMPHIBIOUS airplanes. See Airplanes, Amphibious

AMPHIBIOUS motor trucks. See Motor trucks, Amphibious

AMPHIPROTIC substances. See Amphoteric substances

AMPHITHEATERS
I learn most from trouble jobs; air conditioned amphitheater. S. Lewis. Heating-Piping 19:95-6 F '47

AMPHOTERIC substances
Amphiprotic substances; system formamide-ammonia. H. H. Sisler, C. A. VanderWerf and S. Stephanou. bibliog Am Chem Soc J 68:2538-9 D '46

AMPLIDYNE generator
Amplidyne inverters for Pennsylvania passenger cars. il Ry Mech Eng 121:88-9 F '47; Same abr. Ry Age 122:456-7 Mr 1 '47
Analysis of hunting by means of vector diagrams. B. Adkins. diags Inst E E J 93 pt 2:542-5 D '46
Basic procedures in motor control; amplidyne control circuits. G. W. Heumann. il diags Gen Elec R 50:41-8 Jl '47
Constant-tension reel drives. E. S. Murrah. il diags Blast F & Steel Pl 35:205-14 F '47
Donnacona machine and its new electronic amplidyne drive. D. G. P. Sanderson. Pulp & Pa of Can 48:111-13 My '47
Electric positioning systems of high accuracy for industrial use. D. E. Garr. il diags Gen Elec R 50:17-24 Jl '47

AMPLIDYNE generator—*Continued*
Electronic amplidyne sectional drive. W. A. Messervey. il diag Pulp & Pa of Can 48: 108-10 My '47
Multiple generator power for sectional paper machine drive. G. E. Plaisted. il diags Paper Ind 28:1447-52 Ja '47

AMPLIFIERS
Applications of magnetic amplifiers. W. E. Greene. bibliog il diags Electronics 20:124-8 S '47
Electromechanical d-c amplifier. C. G. Roper and J. F. Engelberger. il diags Electronics 20:117-19 N '47
Magnetic amplifier circuits, neutral type. A. S. FitzGerald. diags Franklin Inst J 244: 249-65 O '47
Premodulation clipping in AM voice communication. K. D. Kryter and others. il diags Acoustical Soc Am J 19:125-31 Ja '47

AMPLIFIERS, Vacuum tube
A.c.-d.c. audio amplifier, using the new selenium rectifiers. G. Eannarino. il diags Radio N 37:40-1 F '47
Analysis of problems in dynamics by electronic circuits. J. R. Ragazzini and others. bibliog il diags Inst Radio Eng Proc 35:444-52 My '47
Automatic gain control and limiting amplifier. W. M. Jurek and J. H. Guenther. il diags Electronics 20:94-7 S '47
Balanced amplifiers. F. F. Offner. diags Inst Radio Eng Proc 35:306-10 Mr '47
Bandwidth and speed of build-up as performance criteria for pulse and television amplifiers. D. G. Tucker. bibliog Inst E E J 94 pt 3:218-26 My '47
Beam-deflection control for amplifier tubes. G. R. Kilgore. bibliog diags RCA R 8:480-505 S '47
Beam traveling-wave amplifier tube. il R Sci Instr 17:559 D '46
Capacitance-coupled intermediate-frequency amplifiers. M. J. Larsen and L. L. Merrill. bibliog diags Inst Radio Eng Proc 35:71-4 Ja '47
Carrier-type amplifier for electric gages. H. C. Roberts. il diags Electronics 20:92-5 My '47
Class B audio-frequency amplifiers. F. Butler. diags Wireless Eng 24:14-19 Ja '47
Constant-gain knock pickup amplifier. R. F. Krebs and T. Dallas. diags Electronics 20:87-9 Ja '47
Design of transmission line tank circuits. W. C. Hollis. bibliog diags Electronics 20:130-4 My '47
Diode contact potential for negative bias. H. T. Sterling. diags Electronics 20:164+ O '47
Direct-coupled r-f amplifier. E. Travis. diag Electronics 19:154+ D '46
D-c amplifier for low-level signals; used in measurement of physical quantities in research and materials testing laboratories. C. B. Aiken and W. C. Welz. il diags Electronics 20:124-8+ O '47
Effect of *Q* on power-amplifier efficiency. F. F. Offner. diags Inst Radio Eng Proc 34: 896-7 N '46
Electro-encephalograph amplifier. D. L. Johnston. bibliog(61 titles) il diags Wireless Eng 24:231-42, 271-7, 292-7 Ag-O '47
Electroencephalographic technique from an engineer's point of view. W. G. Egan. bibliog il diags Inst Radio Eng Proc 34:1000-4 D '46
Electrometer input circuits. H. A. Thomas. diag Electronics 19:130-1 D '46
Empirical formula for amplification factor. E. W. Herold. Inst Radio Eng Proc 35: 493 My '47
Exact design and analysis of double- and triple-tuned band-pass amplifiers. M. Dishal. bibliog charts diags Inst Radio Eng Proc 35:606-26 Je '47; Discussion. 35:1507-10 D '47
Four-tetrode f-m power amplifier. il diag Electronics 20:132+ Ag '47
General purpose portable amplifier. C. R. Smitley. il diag Electronics 20:150+ O '47
Graphical analysis of cathode-biased degenerative amplifiers. W. A. Huber. bibliog diags Inst Radio Eng Proc 35:265-9 Mr '47
Graphical solutions for cathode followers. H. L. Krauss. bibliog diags Electronics 20: 116-21 Ja '47
Grounded-grid amplifier valves for very short waves and Triodes for very short waves; oscillators for radar; discussion of papers by J. Foster; J. Bell and others. Inst E E J 94 pt 3:364-8 S '47
Harmonic-amplifier design. R. H. Brown. bibliog diags Inst Radio Eng Proc 35:771-7 Ag '47
High gain d-c amplifier. W. G. Shepard. il diags Electronics 20:138+ O '47
High-quality recording power amplifier. K. Singer. il diag Soc Motion Picture Eng J 48:560-8 Je '47
Input admittance of cathode-follower amplifiers. H. J. Reich. diags Inst Radio Eng Proc 35:573-6 Je '47
Intermediate-frequency amplifiers for frequency-modulation receivers. J. J. Adams. diags Inst Radio Eng Proc 35:960-4 S '47
Linearity range of noise-measuring amplifiers. R. L. Bell. Wireless Eng 24:119-22 Ap '47
Low cost phono amplifier. G. R. Cryder. il diag Radio N 38:61 S '47
Magnetron as d-c amplifier; abstract. H. B. G. Casimer. diags Electronics 20:182+ N '47
Method of graphically analyzing cathode-degenerated amplifier stages. E. M. Lonsdale and W. F. Main. diags Inst Radio Eng Proc 35:981-4 S '47
Midget 4-watt amplifier. E. Snader, jr. il diags Radio N 37:40+ Mr '47
Note on a paper by Faust and Beck; Oscillation conditions in single tuned amplifiers. W. M. Stone. J Ap Phys 18:414-16 Ap '47
Parallel-T bridge amplifier. A. B. Hillan. bibliog Inst E E J 94 pt 3:42-51 Ja '47
Phono amplifier and power supply. il diag Radio N 38:78+ Ag '47
Power measurement of class B audio amplifier tubes. D. P. Heacock. diags RCA R 8:147-57 Mr '47
Practical radio course; i.f. amplifier in superheterodyne receivers. A. A. Ghirardi. il diags Radio N 37:58-9+ Mr; 62-3+ Jl '47
Radio Corporation four new tubes. il R Sci Instr 18:68-9 **Ja '47**
Reduction of microphonics in triodes. A. H. Waynick. diags J Ap Phys 18:239-45 F '47
Reduction of microphonics in triodes. V. W. Cohen and A. Bloom. J Ap Phys 18:847-8 S '47.
Self-switching r-f amplifier. H. M. Wagner and J. F. Herrick. il diags Electronics 20: 128-31 Je '47
Some designs and applications for packaged amplifiers using subminiature tubes. B. Chance and others. bibliog il diags R Sci Instr 18:610-16 S '47
Stabilized d-c amplifier with high sensitivity. H. S. Anker. diags Electronics 20:138+ Je '47
Stable selective audio-amplifier. J. M. Sturtevant. diag R Sci Instr 18:124-7 F '47
Theory of the beam-type traveling-wave tube. J. R. Pierce. Inst Radio Eng Proc 35:111-23 F '47
Transient response of v.f. couplings; compensated networks for wide-band amplifiers. W. E. Thomson. bibliog diags Wireless Eng 24:20-7 Ja '47
Traveling-wave tube as amplifier at microwaves. R. Kompfner. diags Inst Radio Eng Proc 35:124-7 F '47
Travelling-wave tube; centimetre-wave amplifier. R. Kompfner. diags Wireless Eng 24:255-66 S '47
Traveling-wave tubes. J. R. Pierce and L. M. Field. il diags Inst Radio Eng Proc 35:108-11 F '47
Voltage amplifier gain. diags Radio N 38:32 Ag '47
Wideband i-f amplifiers above 100 mc. M. T. Lebenbaum. il diags Electronics 20:138-41 Ap '47
Wideband i-f amplifiers for radiolocation. Electronics 19:232+ D '46
Wireless pre-amp; designed primarily as an amplifier for musical instruments. R. L. Parmenter. il diag Radio N 38:64-5+ O '47

See also
Multivibrators

AMPLIFIERS, Vacuum tube—*Continued*

Rating

Audio amplifiers; Brook and Stromberg-Carlson public address amplifier. Consumers Res Bul 19:10-11 My '47

Speaker, amplifiers, pickups. Consumers Res Bul 19:23-5 Ap '47

Testing

Distortion analyzer. J. T. Goode. il diag Radio N 37:60-1+ F '47

Square-wave response; nomograph. A. J. Baracket. Electronics 20:130 Ag '47

AMPOULES

Ampule cutter; patent. diag Glass Ind 28:469 S '47

Changes in distilled water stored in glass ampuls. A. L. Hinson and others. bibliog diag Am Cer Soc J 30:211-14 Jl 1 '47

AMPUTATION

Amputation of the leg. R. Householder. Ind Med 16:196+ Ap '47

Reconstruction of the amputation stump. D. D. Toffelmier. Ind Med 15:677-8 D '46

AMSTERDAM, Netherlands

Industries

Amsterdam's burgeoning industries find some bizarre quarters. For Comm W 27:11 Ap 12 '47

AMSTERDAM stock exchange

Rush of Dutch to dump U.S. stocks is unlikely; with list of North American securities now quoted in Amsterdam. Barron's 27:29 Mr 24 '47

AMUSEMENT industries

Frivolity on the skids; entertainment industry experiencing postwar slump. il Bsns W p31-2 Mr 15 '47

See also

Betting

Moving picture industry

AMUSEMENT parks

See also

Coney Island

AMYL alcohol

Decenes formed from *t*-amyl alcohol and from 2-methyl-2-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47

AMYLASES

Recent developments in amylase chemistry. S. Redfern. Can Chem & Process Ind 31: 245-6 Mr '47

AMYLENE. See Trimethylpentene

AMYLOPECTINS

Analysis

Starches and starch fractions; the intensity of the colour of starch-iodine-iodide solutions as an index of the amylose-amylopectin ratio. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:142-7 My '47

AMYLOSES

Configuration of starch in the starch-iodine complex; Fourier projections from X-ray diagrams. R. E. Rundle. bibliog il Am Chem Soc J 69:1769-72 Jl '47

Oriented filaments of amylose and alkali amylose. F. R. Senti and L. P. Witnauer. il Am Chem Soc J 68:2407-8 N '46

Separation of amylose and amylopectin; abstract. R. S. Higginbotham and G. A. Morrison. Chem & Ind p45 Ja 18 '47

Starches and starch fractions; the intensity of the colour of starch-iodine-iodide solutions as an index of the amylose-amylopectin ratio. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:142-7 My '47

Ultracentrifugal and viscometric studies of amylose acetates; further evidence for the helical structure of amylose. B. A. Dombrow and C. O. Beckman. bibliog J Phys & Colloid Chem 51:107-17 Ja '47

ANACONDA copper mining company

Thumbnail stock appraisal. Mag of Wall St 79:420 Ja 18 '47

ANALBIS

Products liability problems raised by Analbis fear. Nat Underw 51:14 Mr 27 '47

ANALGESICS

Analgesics; N-alkylated-1,2-diphenylethylamines prepared by the Leuckart reaction. L. H. Goodson, C. J. W. Wiegand and J. S. Splitter. Am Chem Soc J 68:2174-5 N '46

Analgesics; the Grignard reaction with Schiff bases. R. B. Moffett and W. M. Hoehn. Am Chem Soc J 69:1792-4 Jl '47

Comparison of some new analgesic compounds. C. C. Scott and others. bibliog Science 104:587-8 D 20 '46

Edrisal in the management of dysmenorrhea. C. F. Long. Ind Med 15:679-81 D '46

Statistical study of delivery with continuous caudal analgesia, as compared with other methods. S. D. Collins and others. bibliog diags Pub Health Rep 61:1713-35 N 29 '46

Synthesis of analgesic substances. J. A. Barltrop. Chem Soc J p958-65 O '46

Synthetic analgesics; abstract. E. J. Foley. Oil Paint & Drug Rep 151:57 Ja 20 '47

See also

Amidone

ANALYSIS, Chemical. See Chemistry, Analytic

ANALYSIS, Colorimetric. See Colorimetric analysis

ANALYSIS, Electrographic. See Electrographic analysis

ANALYSIS, Mineralogical. See Mineralogical analysis

ANAPHYLAXIS

See also

Allergy

ANATOMY

Laboratory methods

Vinyl acts to preserve anatomical structures. il Mod Plastics 24:127 D '46

ANCHOR bolts. See Bolts and nuts

ANCHORAGE homes, inc.

Preferred stock offered. Comm & Fin Chr 165:3046-7 Je 9 '47

ANCHORS, Guy

Good anchoring is inexpensive guy insurance against storms; effect of soil moisture on holding power. D. C. Hubbard and B. O. Watkins. il Elec World 128:94-6 O 11 '47

ANDERSON, Benjamin McAlester, 1886-

President of Economists' group on monetary policy. por Comm & Fin Chr 165:1293 Mr 6 '47

ANDERSON, Frank Marion, 1863-1945

Memorial. C. E. Weaver. bibliog por(pl 3) Geol Soc Proc 1946:141-4 Jl '47

ANDERSON, Peter M. 1879-

Portrait. Fortune 34:166 D '46

ANDERSONIAN chemical society

Diamond jubilee celebrations. Chem Age (Lond) 55:669-70 N 30 '46

ANDES mountains

Structural evolution of the South American Andes. V. Oppenheim. bibliog fold map Am J Sci 245:158-74 Mr '47

ANDREW, John Harold, 1887-

Sketch. por Iron & Steel Inst J 157:front S '47

ANDROSTANE

Steroids and the Walden inversion; derivatives of androstane and cholestane. C. W. Shoppee. Chem Soc J p 1138-47 D '46

ANDROSTENE

Steroids and the Walden inversion derivatives of Δ^5-cholestene and Δ^5-androstene. C. W. Shoppee. Chem Soc J p 1147-51 D '46

ANDROSTENEDIONE

Structure of adreno-cortical metabolites; $\Delta^{9:11}$-androstene-3 : 17-dione. C. W. Shoppee. Chem Soc J p 1134-7 D '46

ANEMIA

Absence of a macrocytic anemia in dogs fed choline or choline plus fat. M. F. Clarkson and C. H Best. Science 105:622-3 Je 13 '47

Evidence that the hemolytic anemia caused by fat and choline is not due to lipotropic action. J. E. Davis. bibliog Science 105: 43 Ja 10 '47

Isolation and characterization of vitamin Bc from liver and yeast; occurrence of an acid-labile chick antianemia factor in liver. J. J. Pfiffner and others. bibliog il Am Chem Soc J 69:1476-87 Je '47

ANEMIA—*Continued*
New antibody in serum of patients with acquired hemolytic anemia. P. Sturgeon. Science 106:293-4 S 26 '47
Reduction of excess acetylcholine in the serum of pernicious anemia patients by treatment with pteroyl glutamic acid, liver extract, or ventriculin. J. E. Davis. Science 104:605-6 D 20 '46
Synthetic L. casei factor (folic acid) in treating certain anemias in man. G. A. Goldsmith. bibliog Science 104:439 N 8 '46

ANEMOMETERS
Extended applications of the hot-wire anemometer. S. Corrsin. bibliog R Sci Instr 18:469-71 Jl '47
Heat transmission from fine wires to water; low velocity data and correlation. E. L. Piret, W. James and M. Stacy. bibliog il diags Ind & Eng Chem 39:1098-103 S '47

ANESTHESIA
Anesthesia's second power; probing the mind. H. K. Beecher. bibliog Science 105:164-6 F 14 '47
Century of sleep; developments and early uses of anesthesia. T. L. Davis. Tech R 49:279-80+ Mr '47

ANESTHETICS
Barbituric acids and related compounds containing alicyclicalkyl groups. W. Braker, E. J. Pribyl and W. A. Lott. bibliog Am Chem Soc J 69:866-9 Ap '47
Curare alkaloids; alkaloids from chondrodendron tomentosum R. and P. H. King. Chem Soc J p936-7 Jl '47
Effect of body temperature on the duration of barbiturate anesthesia in mice. F. A. Fuhrman. bibliog Science 105:387-8 Ap 11 '47
Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:72-6 Ja 11 '47
Synthesis of halobutanes. E. T. McBee and W. R. Hausch. bibliog Ind & Eng Chem 39:418-20 Mr '47

See also
Analgesics
Chloroform
Ethyl ether
Narcotics

ANESTHETICS, Local
Alkamine esters and amides of some aminoalkylmercaptobenzoic acids. J. J. Donleavy and P. C. Condit. bibliog Am Chem Soc J 69:1781-4 Jl '47
p-Alkoxybenzenesulfonic acid esters. M. H. Carr and H. P. Brown. bibliog Am Chem Soc J 69:1170-2 My '47
Alkylamine derivatives of fluorene. F. E. Ray and I. R. MacGregor. bibliog Am Chem Soc J 69:587-9 Mr '47
Dialkylaminoalkyl esters of 4,4'-stilbenedicarboxylic and 4,4'-dibenzyldicarboxylic acid. L. S. Fosdick and K. F. Urbach. bibliog Am Chem Soc J 69:503-5 Mr '47
Piperidine derivatives; local anesthetics derived from substituted piperidinoalcohols. S. M. McElvain and T. P. Carney. bibliog Am Chem Soc J 68:2592-600 D '46
Tetraethylammonium chloride as nerve block. Chem & Eng N 25:998 Ap 7 '47

See also
Cold—Therapeutic use
Metycaine

ANETHOLE
Organized commercial chemical development; market and product development; illustrated by Hercules powder co.'s vinsol, anethole and resin 731. J. H. Long. Chem & Eng N 24:3325-9 D 25 '46

ANEURISM
False aneurysm. S. T. Glasser and J. Bloom. il Ind Med 16:115-17 Mr '47

ANEURISM, False. See Hematoma

ANGELICA lactone
Production of coumarin derivatives by condensation of *o*-hydroxy-aldehydes with Aβγ-angelicalactone. D. H. Marrian and P. B. Russell. Chem Soc J p753-4 Ag '46

ANGLE irons
Use of oval angle-iron holes prevents damage. il Sheet Metal Worker 38:58 O '47

ANGLE of repose
Stability of soil slopes. E. Tan. diags Am Soc C E Proc 73:19-38 Ja '47; Discussion. 73:723-8, 963-8, 1119-21 My-Je, S '47

ANGLE plates
Angle plate clamp for grinding setups. W. Dimitruk. diag Am Mach 90:143 D 5 '46
Checking squares and angle plates; reference book sheet. E. J. Rychlik. diags Am Mach 91:155 O 9 '47

ANGLES
Check right angles by optics. H. Harrison. diags Am Mach 91:110 My 8 '47
Compound-angle calculator. il diags Mach 53:176-7 F '47
Graphical solution to problem of connecting two lines by a third line which makes specified angles with each. P. O. Potts and H. J. Johnson. diags Machine Design 19:114-16 My '47
Precision method of checking compound angles. J. Ahearn. diags Mach 53:178-81 Ja '47
Simple device for measurement of angles of azimuth and deviation from the horizontal on glass tubes used for surveying diamond-drill holes. J. W. Townsend. 4pls U S Bur Mines Rep of Invest 4062:1-3 '47
Toolmaker's buttons establish accurate angles and straightedges. S. Framurz. diags Am Mach 90:139 D 5 '46
Trigonometrical nomenclature; calculation of angles; diagrams. Power Pl Eng 51:100 Ap '47

ANGLO-IRANIAN oil company, ltd.
Iran's benefits from oil; A.I.O.C.'s record of achievement. W. W. Burns. il Oil & Gas J 46:68-9 S 13 '47

ANGLO-PORTUGUESE telephone company, limited
Statement by the chairman. A. Roger. Economist 152:1045 Je 28 '47

ANGLO-SAXON ironwork. See Ironwork, Anglo-Saxon

ANGOLA, West Africa
Economic conditions
News by countries. For Comm W 25:22 D 7 '46

ANHEUSER-BUSCH, Inc.
Brewery stays in the family; Anheuser-Busch splits stock five for one. il Bsns W p75-6+ S 6 '47

ANHYDRIDES
Anhydrides of polyhydric alcohols; 1 : 4-3 : 6-dianhydro mannitol and 1 : 4-3 : 6-dianhydro sorbitol from sucrose. R. Montgomery and L. F. Wiggins. Chem Soc J p433-6 Ap '47
1,5-Anhydro-D-arabitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69:1672-4 Jl '47
Esterification rate of dibasic acid anhydrides with primary alcohols at room temperature. E. F. Siegel and M. K. Moran. bibliog Am Chem Soc J 69:1457-9 Je '47
Use of diarylvinyl bromides as diene components in the Wagner-Jauregg reaction. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1777-9 Jl '47

ANHYDRITE
Billingham anhydrite mine. flow sheet il Chem Age (Lond) 55:695-701 D 7 '46
Control of mud properties in drilling anhydrite. G. R. Gray. Pet Eng 18:142+ Je '47

ANHYDROARABITOL
1,5-Anhydro-D-arabitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69:1672-4 Jl '47

ANHYDRO-XYLITOL
1,5-Anhydro-xylitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69: 921-4 Ap '47

ANILIDES
Analysis
Identification of organic compounds by use of chromium target X-ray diffraction powder patterns. F. W. Matthews and J. H. Michell. bibliog il Ind & Eng Chem Anal ed 18:662-5 N '46

ANILINE
American aniline products, inc. il Am Dyestuff Rep 35:sup8-9 D 2 '46
Aromatization studies; synthesis of alkylanilines from alkylcyclohexenones. E. C. Horning and M. G. Horning. Am Chem Soc J 69:1907-8 Ag '47

ANILINE—*Continued*
Distribution in hydrocarbon-solvent systems. T. G. Hunter and T. Brown. Ind & Eng Chem 39:1343-5 O '47
Mechanism of the sulfonation of aromatic amines; sulfonation at elevated temperatures with sulfuric acid. E. R. Alexander. bibliog Am Chem Soc J 69:1599-602 Jl '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47
Preparation of quinoline derivatives from aromatic amines and ethyl ethoxymethylenemalonate. K. Schofield and J. C. E. Simpson. Chem Soc J p 1033-5 N '46
Reaction of the dioxane-sulfotrioxide reagent with aniline; classification of the sulfamic acids. C. D. Hurd and N. Kharasch. bibliog Am Chem Soc J 69:2113-15 S '47
Skraup reaction with *m*-substituted anilines. L. Bradford, T. J. Elliott and F. M. Rowe. Chem Soc J p437-45 Ap '47

ANILINE and film corporation, General. See General aniline and film corporation

ANILINE formate
Aniline formate and its changes on keeping. J. R. Pound. J Phys & Colloid Chem 51: 378-82 Mr '47

ANILINE point
Automatic determination of aniline point of petroleum products. C. W. Brown. bibliog il diag Ind & Eng Chem Anal ed 18:739-41 D '46

ANILS
Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47
Experiments with diazomethane and its derivatives; action of diazomethane on hydroxyanils. A. Schönberg, A. Mustafa and M. K. Hilmy. Chem Soc J p 1045-8 Ag '47

ANIMAL experimentation
Blood picture of normal laboratory animals; a review of the literature, 1936-1946. M. V. Gardner. bibliog Franklin Inst J 243:77-86, 172-6, 251-8, 434-6, 498-502; 244:155-61 Ja-Mr, My-Je, Ag '47 (to be cont)
Oral administration of small doses of liquids to laboratory animals. C. A. Cabell. il Science 105:370-1 Ap 4 '47

ANIMAL hospitals. See Hospitals, Veterinary

ANIMAL husbandry. See Live stock

ANIMAL products
See also
Dairy products
Hides and skins
Meat
Packing houses—By-products
Wool

ANIMAL trainers and handlers union
In the union now. Bsns W p78 Jl 5 '47

ANIMAL traps. See Traps

ANIMALS
Migration
Dispersal of faunas over land bridges. W. L. McAtee. Science 105:599 Je 6 '47
Holarctic mammalian faunas and continental relationships during the cenozoic. G. G. Simpson. bibliog Geol Soc Bul 58:613-87 Jl '47

ANIMALS, Sound production by. See Sound production by fishes

ANIONS
Effect of anions on the performance of sacrificial anodes; study of cathodic protection. K. M. Wight and R. F. Hadley. bibliog diag Am Gas Assn Proc 1946:304-20
Spectrophotometric investigations of the interactions of proteins with organic anions. I. M. Klotz. bibliog Am Chem Soc J 68: 2299-304 N '46

ANISOLE
Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H. Sisler and J. C. Cory. Am Chem Soc J 69:1515-19 Je '47

ANISOTROPY
Anisotropic oscillations in the hexamethylenetetramine crystal. P. A. Shaffer, jr. Am Chem Soc J 69:1557-61 Jl '47
Band theory of graphite. P. R. Wallace. diags Phys R 71:622-34 My 1 '47; Correction. 72:258 Ag 1 '47
Magnetic anisotropy of coronene, naphthazarin, and other crystals. M. T. Rogers. bibliog diags Am Chem Soc J 69:1506-8 Je '47
Magnetic anisotropy of organic solids. P. W. Selwood and J. Parodi. bibliog diag J Chem Educ 23:574-8 D '46

ANISYLMETHYLCARBINOL
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p803-7 S '46

ANISYLNAPHTHYLCARBINOL
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p803-7 S '46

ANNEALING
Annealing salt for 18-8; exhaust manifolds, Ryan aeronautical co. K. Whitcomb. il Steel 120:86-7+ Je 16 '47
Annealing studies on cold-rolled iron and iron binary alloys. C. R. Austin and others. il Am Soc for Metals Trans 35:446-80 bibliog (p480); Discussion. 481-4 '45
Electronic heating speeds up can production. il Mach 53:191 Ap '47
Gas annealing developed for whiteheart malleable castings; abstract. P. F. Hancock. Materials & Methods 25:130 Mr '47
Graphite in cold-rolled subcritically annealed hypoeutectoid steels. M. A. Hughes and J. G. Cutton. bibliog il Am Soc for Metals Trans 37:110-29; Discussion. 129-35 '46
Mild steel; proper relationship of cold working to annealing protects against shock failure. H. Markus and D. F. Armiento. il Machine Design 18:123-6 N '46
Model which shows hardening and annealing mechanisms. E. C. Davis. il Metal Prog 51: 248-9 F '47
Surface effects during the annealing of 70 : 30 brass; abstracts and discussion. I. Jenkins. Engineer 184:346 O 10 '47; Engineering 164: 329-30 O 3 '47

ANNEALING (plastics)
Taking the stress out of styrene. C. A. Breskin. il Sci Am 176:11-14 Ja '47

ANNEALING furnaces. See Furnaces, Annealing

ANNEALING of glass. See Glass manufacture

ANNIVERSARIES, Company
Advertising
14 points to observe in preparing company history; analysis of four commemorative books. H. E. Green. Ptr Ink 218:40-1 F 21 '47
Greenfield marks 75th anniversary by changing from kodachromes to historical full color paintings. il Ind Marketing 32:42+ Mr '47
Harvester plans huge 100th anniversary drive. Ptr Ink 221:94 O 10 '47

ANNOTININE
Alkaloids of lycopodium species; lycopodium annotinum var. acrifolium, Fern. and the structure of annotinine. R. H. F. Manske and L. Marion. Am Chem Soc J 69:2126-9 S '47

ANNUAL reports. See Corporations—Reports and yearbooks

ANNUAL wage plans. See Wage payment plans—Guaranty of earnings

ANNUITIES
Annuitant had right to convert to life policy without insertion of war clause; Rosenbloom, et al vs. New York Life. Nat Underw (Life ed) 51:17 S 12 '47
Annuity payments up nearly 10 per cent for 1947. East Underw 48:23 S 12 '47
Annuity reserve strengthening; with tabulation by company showing 1946 figures for annuities, disability and double indemnity. Nat Underw (Life ed) 51:2+ Mr 14 '47
Continuing gains shown in payment of annuities; tabulation by company showing figures for 1936, 1945 and 1946. Weekly Underw 156:64-7 sec 2 My 10 '47

ANNUITIES—*Continued*
Future of annuities. H. H. Jackson. Nat Underw 50th anniv no:296-9 1947
Individual annuities; group annuities'; ranking Dec. 31, 1946; tabulation. Life Ins Courant 52:202 My '47
It may develop into a big business; Salvation army annuities; editorial. Weekly Underw 156:1307 My 10 '47; Discussion. G. B. Abrams. 156:1670 Je 21 '47
Prudential issues new retirement annuity. Nat Underw (Life ed) 51:15 Ja 3 '47
Prudential revives retirement annuity. Nat Underw (Life ed) 51:19 Ja 17 '47
Retirement income. O. D. Billett. East Underw 47:15 N 29 '46
See also
Old age pensions
Pensions, Industrial

Taxation
Annuities and taxation. Economist 152:250-2 F 8 '47
Changes in annuity taxation recommended before House committee by NALU. J. C. Benson. East Underw 48:7 Jl 25 '47
Fails to win exception to 3 per cent annuity tax rule; MacArthur vs. Commissioner. Nat Underw (Life ed) 51:6 Mr 21 '46
New method for taxing annuities gets much support. Nat Underw (Life ed) 51:3 Ja 31 '47
Some tax aspects of annuities and pension plans. W. D. Freyburger. Weekly Underw 156:1051-3, 1098-1100 Ap 12-19 '47; Same. bibliog Life Ins Courant 52:220-4 Je '47; Same. Spectator (Life ed) 155:30+ Jl; 31-2+ Ag '47; Excerpts. East Underw 48:9 Ap 4 '47; Nat Underw (Life ed) 51:7 Ap 4 '47
Tax revision in 1948. F. L. Morton. Spectator (Life ed) 154:12-15+ Je; 155:18-19+ Jl '47
Three per cent rule. F. L. Morton. Spectator (Life ed) 154:31+ Ja; 20-1+ F; 16-17+ Mr '47
Way is found in England to save capital content of annuity from tax. Nat Underw (Life ed) 51:3 F 14 '47

ANODES. See Electrodes

ANOL
Oxidation and dimerisation of propenylphenols; abstract. N. J. Cartwright and R. D. Haworth. Chem & Ind p117-18 F 22-Mr 8 '47

ANOXEMIA
Current interest in the therapeutic use of cytochrome C. V. R. Potter. Science 106:342 O 10 '47; Reply. S. Proger, G. Schmidt and D. Decaneas. 106:367 O 17 '47
Effects of cytochrome C in anoxia. I. H. Scheinberg and H. O. Michel. bibliog Science 105:365-6 Ap 4 '47

ANSONIA-Derby-Shelton expressway. See Roads—Connecticut

ANTARCTIC exploration
Electronics in the Antarctic; U.S. navy Antarctic expedition. H. C. Bailey. il Electronics 20:82-8 Ag '47

ANTARCTIC regions
Geographical names of Antarctica. (Special publication, no. 86) 253p bibliog(p 111-26) Dept. of the interior. U.S. bd. on geographical names, Washington, D.C.
Glacial climates in the southern hemisphere. R. F. Flint. Am J Sci 244:861-2 D '46

ANTENNAS, Radio. See Radio antennas

ANTENNAS, Television. See Television antennas

ANTHRACENE
Mechanism of the oxidation of anthracene with lead tetraacetate. L. F. Fieser and S. T. Putnam. bibliog Am Chem Soc J 69:1038-41 My '47
Metabolism of polycyclic compounds; configuration of the dihydroxydihydroanthracenes produced from anthracene. E. Boyland and C. W. Shoppee. Chem Soc J p801-4 Je '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47
Solvent quenching of fluorescence. E. J. Bowen and E. Coates. Chem Soc J p 105-9 Ja '47

ANTHRACITE silt. See Coal waste

ANTHRAQUINONE
Chemistry of 1-azanthraquinone; chloroderivatives of 2 : 4-dimethyl-1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p545-9 Ap '47
Chemistry of 1-azanthraquinone; sulphonation of 1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p539-44 Ap '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47

ANTHROPOLOGICAL society of Washington Officers. Science 105:158 F 7 '47

ANTHROPOLOGY
Study of man embracing error; difficulties in reconstruction from fossilized skeletons. M. F. A. Montagu. bibliog il Tech R 49:345-7 Ap '47

ANTIBIOTIC substances
Actidione, an antibiotic from streptomyces griseus. E. E. Leach, J. H. Ford and A. J. Whiffen. Am Chem Soc J 69:474 F '47
Antibiotic compound isolated from the lichen ramalina reticulata. A. Marshak and others. bibliog Science 106:394-5 O 24 '47
Antibiotics; the new weapon on tuberculosis. H. E. Hilleboe. Pub Health Rep 62:1-3 Ja 3 '47
Certain antibiotics; abstract. I. J. Postovskii and N. P. Bednyagin. Chem Eng 54:266+ S '47
Chemistry of fungal antibiotics in relation to soil microbiology. J. C. McGowan. bibliog Chem & Ind p205-7 Ap 19 '47
Crystalline antibacterial substance from the lichen ramalina reticulata. A. Marshak. bibliog Pub Health Rep 62:3-19 Ja 3 '47
Disinfectants and antiseptics; review of selected papers published during 1946. E. G. Klarmann. bibliog(p100 ref) Soap & San Chem 23:125+ Ja; 139+ F '47
Effects of an antibiotic from aspergillus fumigatus Fresenius on tumor cells in vitro, and its possible identity with gliotoxin. J. G. Kidd. bibliog Science 105:511-13 My 16 '47
Garlic antibiotic now synthesized. Chem Ind 60:986 Je '47
Graduate school of the U.S. Department of agriculture course entitled Progress in field of antibiotics. Science 104:466 N 15 '46
Lack of influence of thiosulfate and metabisulfite on the antibiotic activity of penicillin. C. S. Leonard. bibliog Science 104:501-2 N 29 '46; Reply (Penicillin site of action). C. J. Cavallito. 105:235-6 F 28 '47
Mechanism of the antibiotic action of certain quinones. O. Hoffman-Ostenhof. bibliog Science 105:549-50 My 23 '47
Production of antibiotics by fungi; javanicin, an antibacterial pigment from fusarium javanicum. H. R. V. Arnstein and A. H. Cook. Chem Soc J p 1021-8 Ag '47
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68:2510-13 D '46
Two new antibiotics reported at National Institute symposium. Chem & Eng N 25:436 F 17 '47
See also
Citrinin
Penicillin
Streptobiosamine
Streptomycin
Subtilin

ANTIBODIES. See Antigens and antibodies

ANTICOINCIDENCE counters
One-shot multivibrator anticoincidence and recording circuit. S. J. du Toit. diags R Sci Instr 18:31-5 Ja '47

ANTICONVULSANTS
Anticonvulsants; esters of γ-diethylamino-α-phenylbutyric acid. J. H. Billman, W. T. Smith, jr. and J. L. Rendall. Am Chem Soc J 69:2058-9 Ag '47
Certain 5-phenyl-5-(substituted phenyl)-hydantoins. J. W. Melton and H. R. Henze. bibliog Am Chem Soc J 69:2018-20 Ag '47
5-R-Thiomethyl- and 5-R-sulfonylmethyl-5-phenylhydantoins. L. M. Long. bibliog Am Chem Soc J 68:2159-61 N '46
See also
Antispasmodics

ANTI-CORONA
Theory of the anti-coronae. H. C. van de Hulst. bibliog diags Opt Soc Am J 37:16-22 Ja '47

ANTIFILARIAL compounds. See Filariasis

ANTI-FOULING paint. See Paint, Anti-fouling

ANTI-FRICTION bearings. See Bearings, Anti-friction

ANTIGENS and antibodies
Antigenic carbohydrate-lipid isolated from paraffin-oil extract of dead tubercle bacilli. N. Choucroun. Science 105:46-7 Ja 10 '47
Coproantibody excretion during enteric infections. P. E. Harrison and J. Banvard. bibliog Science 106:188-9 Ag 29 '47
Effect of cysteine—hydrogen peroxide treatments on the electrophoretic and immunological assay behavior of human gamma globulin. H. F. Deutsch. bibliog Am Chem Soc J 68:2625-8 D '46
Immunochemical studies on blood groups; further characterization of blood group A and O substances from individual hog stomachs. A. Bendich, E. A. Kabat and A. E. Bezer. bibliog Am Chem Soc J 69:2163-7 S '47
Rickettsialpox; a newly recognized rickettsial disease. R. J. Huebner and others. bibliog Pub Health Rep 61:1605-14, 1677-82 N 8, 22 '46
Separation and immunologic evaluation of soluble pertussal antigens. L. Pillemer and others. bibliog Science 106:36-7 Jl 11 '47
Serological study of influenzal antibodies. S. S. Kalter and others. Science 105:499-500 My 9 '47
Skin reaction in rabbits produced by intradermal inoculation of suspensions of killed pasteurella tularensis. C. L. Larson. Pub Health Rep 61:1797-806, pl 1 D 13 '46
Studies of fungus antigens; quantitative studies of cross-reactions between histoplasmin and blastomycin in guinea pigs. A. Howell, jr. bibliog Pub Health Rep 62:631-51 My 2 '47

See also
Agglutination
Allergy
Complement fixation
Vaccines

ANTIHISTAMINIC activity. See Histamine

ANTIMALARIALS. See Malaria

ANTI-MISTING agents. See Airplanes—Mist problem

ANTIMONY
Addition agent for electrolytic refining of Sb and Pb; abstract. F. C. Mathers. Chem Eng 54:244+ Ja '47
Antimony in Canada; possible sources in various provinces. A. S. Dawson. Can Min J 68:20-1 Ja '47
Antimony, 1946. J. P. Bradley. il Min Cong J 33:92-3 F '47
Antimony, 1946. T. P. Wootton. Eng & Min J 148:79 F '47
Antimony supply held inadequate. Oil Paint & Drug Rep 151:3 Ap 21 '47
Industry viewpoint of metal subsidies, tariffs and stockpiling. J. P. Bradley. Min Cong J 32:68 O '46
Quicksilver-antimony deposits of Huitzuco, Guerrero, Mexico. J. F. McAllister and D. H. Ortiz. il map diags U S Geol S Bul 946-B:49-71, fold maps(pl 7-24); pa 75c Supt. of doc. '45
Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others. bibliog diag Phys R 71:65-79 Ja 15 '47
Spectrophotometric investigation of the interaction between ions of different oxidation states of an element. J. Whitney and N. Davidson. Am Chem Soc J 69:2076-7 Ag '47

Analysis

Colorimetric determination of antimony in copper-base alloys. A. C. Holler. bibliog Anal Chem 19:353-5 My '47
Colorimetric microdetermination of antimony with rhodamine B. T. H. Maren. bibliog Anal Chem 19:487-91 Jl '47
Polarographic characteristics of chloro complexes of +5 antimony. J. J. Lingane and F. Nishida. bibliog Am Chem Soc J 69:530-3 Mr '47
Rhodamine B method for microdetermination of antimony. L. D. Freedman. Anal Chem 19:502 Jl '47

Isotopes

Decay scheme of Sb^{124}. W. E. Meyerhof and G. Scharff-Goldhaber. bibliog diags Phys R 72:273-5 Ag 15 '47

ANTIMONY compounds
Configuration of heterocyclic compounds; preparation of phenoxstibines and resolution of 10-*p*-carboxyphenyl-2-methylphenoxstibine. I. G. M. Campbell. Chem Soc J p4-10 Ja '47
Flameproofing with antimony compounds; British patent. Am Dyestuff Rep 36:280-1 My 19 '47
Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis. E. A. H. Friedheim, H. J. Vogel and R. L. Berman. Am Chem Soc J 69:560-2 Mr '47
Physical and chemical properties of organometallic compounds; the oxidation of boron and antimony alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p695-701 Ag '46

ANTIMONY mines and mining

Mexico

Antimony deposits of the Tejocotes region, state of Oaxaca, Mexico. D. E. White and R. Guiza, jr. map diag U S Geol S Bul 953-A:1-26, pl 1-9(in pocket); pa 75c Supt. of doc. '47

ANTIMONY poisoning
Protective action of BAL in experimental antimony poisoning; abstract. H. Eagle and others. J Ind Hygiene 29:sup69 Jl '47
Toxicity of chemicals in electroplating; antimony and its salts. P. M. Van Arsdell. Metal Finishing 45:57-8 Ag '47

ANTIMONY sulfides

See also
Stibnite

ANTIOXIDANTS
Anti-skinning agents. bibliog Paint Oil & Chem R 109:88-9 N 14 '46
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Determination of antioxidants in gasoline. L. R. Williams and B. R. Strickland. Anal Chem 19:633-4 S '47
Development of additives and lubricating oil compositions. D. C. Atkins, jr. and others. bibliog Ind & Eng Chem 39:491-7 Ap '47
Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47
Nor-conidendrin; a new antioxidant for fats and oils; abstract. G. S. Fisher and others. Soap & San Chem 23:49 Je '47
Synthesis of nordihydroguaiaretic acid. S. V. Lieberman, G. P. Mueller and E. T. Stiller. bibliog Am Chem Soc J 69:1540-1 Je '47
Tocopherols as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:225-32 F '47
Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47

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Spiral in antiques; sales climb high, prices boom. il Arch Forum 85:14+ N '46

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ANTISEPTICS
Antiseptics and disinfectants as formulated for the British market. J. M. Vallance. bibliog il Soap & San Chem 23:127-9+ O; 133+ N '47
Disinfectants and antiseptics; review of selected papers published during 1946. E. G. Klarmann. bibliog(100 ref) Soap & San Chem 23:125+ Ja; 139+ F '47

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Factors affecting the zone-of-inhibition antiseptic test as it applies to toilet-goods preparations. A. R. Cade. Soap & San Chem 23:167 Je '47

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Antispasmodics; cyclohexyl and Δ^2-cyclohexenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1854-7 Ag '47

Antispasmodics; cyclopentyl and Δ^2-cyclopentenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1849-54 Ag '47

Antispasmodics; derivatives of 1-phenylcycloparaffincarboxylic acids. A. W. Weston. bibliog Am Chem Soc J 68:2345-8 N '46

Antispasmodics; diarylacetic acid esters of some pyridyl and piperidyl alkanols. R. R. Burtner and J. M. Brown. Am Chem Soc J 69:630-3 Mr '47

Dysmenorrhea in industry; treatment with a new antispasmodic. F. A. Viggiano. bibliog Ind Med 15:632-5 N '46

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AORTA

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Television antennas for apartments. il diags Electronics 20:96-102 My '47

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Heating the Metropolitan Life apartment projects. L. Smith and W. Bessler. il plan diags Heating-Piping 19:77-82 S '47

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How to heat garage apartments. S. R. Lewis. Heating-Piping 19:89 Je '47

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APPLE juice

Fresh fruit essences available for use as flavoring material. Food Ind 19:785 Je '47

Nitrogen content of apple juice and its importance in cider making. D. W. Steuart. Chem & Ind p55-6 Ja 25 '47

APPLE sirup

l-Malic acid as by-product in apple sirup manufactured by ion exchange. R. E. Buck and H. H. Mottern. bibliog Ind & Eng Chem 39:1087-90 S '47

APPLEBY, Troy W. 1874-1947

Sketch. por Nat Underw (Life ed) 51:20 Ap 25 '47

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Apples; jumble-packed in pliofilm-window carton. il Mod Packaging 20:129 Mr '47

Spray mixture useful for thinning apples after bloom. A. L. Kenworthy. Science 105: 238 F 28 '47

Storage

Activated carbon protects apples in storage. il Heat & Ven 44:80 Je '47

Use of CO_2 to prevent scald of stored apples. E. P. Christopher. bibliog il Refrig Eng 53: 311-14+ Ap '47

APPLETON and Cox, inc.

75th anniversary. Nat Underw 51:5 F 20 '47; East Underw 48:1+ F 14 '47

APPLICATIONS for positions

Adecdote by Mike Goldgar. Ptr Ink 217:50 N 15 '46

Application blank in employee selection. M. A. Mitzel. Personnel J 26:6-8 My '47

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Accident prevention in the training of apprentices. R. N. Le Fevre. Gas J (Lond) 249:512+ Mr 12 '47
Apprentice training assures a reservoir of skilled craftsmen. H. J. Williams. il Am Mach 91:113-28 My 22 '47
Apprentice training scheme; David Brown & sons. il Mech Handling 33:767-8 D '46
Apprenticeship gaining momentum. Sheet Metal Worker 38:57-8+ F '47
Apprenticeship vs mechanization. E. L. Cady. il Sci Am 176:18-20 Ja '47
Building a maintenance force through apprentice training. R. Perry. il Air Transport 5:47-50 Mr '47
Hydraulics know-how taught to apprentices; Caterpillar tractor co. P. G. Griebel. il Am Mach 90:132-3 N 21 '46
Is apprenticeship slipping? R. L. Coleman and others. Am Mach 91:202+ Je 19 '47
Misinformation please; boners collected from apprentice papers. J. Davies. il Am Mach 91:98-9 Ap 10 '47
Training apprentices and supervisors. W. H. Sagstetter. Ry Mech Eng 121:176-7+ Ap '47
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AQUEDUCTS
Booster pumping on a large closed aqueduct. H. A. Knudsen. plan diags Am Water Works Assn J 39:133-8 F '47
Diesel engines underground; use of Diesel locomotives in construction of the Delaware aqueduct; effect of exhaust gases upon quality of tunnel air. L. B. Berger and others. bibliog 2 pls U S Bur Mines Rep of Invest 4032:1-26 '47
Kutter formula favored in aqueduct tests. Eng N 138:60 Ja 9 '47
Navy-built aqueduct for San Diego. il map diag Eng N 138:362-6 Mr 6 '47
Navy-constructed aqueduct supplies Colorado River water to city of San Diego. R. D. Thorson. il Civil Eng 17:372-7+ Jl '47
Pneumatic concrete placers speed lining of small tunnels of the San Diego aqueduct. il diags Eng N 138:502-4 Ap 3 '47
San Diego aqueduct. M. Wharton. il maps diags Explosives Eng 24:169-72+ N '46
Ventilation of long tunnels during construction; Delaware aqueduct tunnel. W. B. Harris. il diags Heat & Ven 44:63-5 Jl; 95-9 Ag; 97-9 S '47

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Arabian American gets bank loan; Moore named president. Oil & Gas J 45:138-9 Mr 22 '47
Court denies order to produce Aramco concession documents. Oil & Gas J 46:158 Jl 26 '47
Great oil deals. il maps Fortune 35:138-43+ My '47
Jersey Standard and Socony delay buying Aramco stock. Nat Pet N 39:12 Mr 19 '47
Letters show Moffett suggested expropriation to Arabian King. W. W. Burns. Oil & Gas J 45:51 My 3 '47
Middle East fuel saves money for U.S. navy, Aramco say in answer to charges. Nat Pet N 39:15 Mr 5 '47
Moffett asks $6,000,000 in Arabian American suit. Oil & Gas J 45:28 F 1 '47
Officials defend Aramco export license at Wherry hearing. Oil & Gas J 46:65 O 25 '47
Out-of-court settlement sought in Cie. Francaise suit. W. W. Burns. Oil & Gas J 45: 29 F 1 '47
Senate opens Middle East inquiry following Moffett's charges. H. D. Ralph. Oil & Gas J 45:36-7 Ap 5 '47

ARABINOPYRANOSE
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ARABINOSE
Condensation of nitromethane with D- and L-arabinose: preparation of L-glucose and L-mannose. J. C. Sowden and H. O. L. Fischer. Am Chem Soc J 69:1963-5 Ag '47
Controlled sodium amalgam reduction of aldonolactones and their esters to aldoses and an improved synthesis of D-arabinose. N. Sperber, H. E. Zaugg and W. M. Sandstrom. bibliog Am Chem Soc J 69:915-20 Ap '47
Evidence that racemic arabinose is β-D,L-arabinopyranose. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69: 1145-7 My '47
Isolation of *l*-arabinose. E. V. White. Am Chem Soc J 69:715 Mr '47
Reactions of β-methylarabinoside; 3 : 4-acetone β-methylarabinopyranoside; 3 : 4-dimethyl arabinose; conversion of arabinose into xylose. J. Honeyman. Chem Soc J p990-3 N '46
Reactions of β-methylarabinoside; 3 : 4 benzylidene and 3 : 4-ethylidene β-methylarabinopyranoside. M. A. Oldham and J. Honeyman. Chem Soc J p986-9 N '46
Synthesis of 3-methyl and 3 : 5-dimethyl *l*-arabinose. E. L. Hirst, J. K. N. Jones and E. Williams. Chem Soc J p 1062-4 Ag '47

Analysis
Quantitative determination of galactose, mannose, arabinose, and rhamnose. E. L. Hirst, J. K. N. Jones and E. A. Woods. Chem Soc J p 1048-51 Ag '47

ARABINOSYL-*N*-methylamine
N - Methyl - L - glucosaminic acid. M. L. Wolfrom, A. Thompson and I. R. Hooper. bibliog Am Chem Soc J 68:2343-5 N '46

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1,5-Anhydro-D-arabitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69:1672-4 Jl '47

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Arbitration board will settle TWA-pilot battle over wages. B. Stubblefield. Aviation N 6:29-30 N 25 '46
Arbitration doesn't settle anything. J. E. McCarthy. Mass Transportation 43:465-6 O '47
Arbitration law in Indiana. Bsns W p99-100 Ap 5 '47
Belated recipe; Labor-management committee indorses voluntary methods of settling disputes. Bsns W p86 D 21 '46
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Compulsory arbitration in New Zealand. L. Cohen. Personnel J 25:310-15 Mr '47
Conciliation services in labor relations. E. L. Warren. Ann Am Acad 248:120-9 N '46
Federal labor court; is it needed? D. R. Richberg. Comm & Fin Chr 165:605+ Ja 30 '47
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Management and labor form mediation group. Factory Management 105:250+ O '47
Management looks at compulsory arbitration; summary of opinion. Factory Management 105:66-70 Mr '47
No need for Federal mediation board. L. B. Schwellenbach. Comm & Fin Chr 165: 1045+ F 20 '47
Opposes compulsory arbitration. W. B. Weisenburger. Comm & Fin Chr 165:606 Ja 30 '47
Rules of evidence in labor arbitration. J. F. Sembower. Management R 36:255-7 My '47
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Bibliography

Library bulletin. Published quarterly by Royal inst. of British Architects, 66 Portland Place, London, W 1

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L'emploi des sgraffites pour la décoration des maisons de la cité-jardin du Wylergut, près de Berne, Suisse. il Génie Civil 124: 77 F 15 '47

Texas

In the tradition of the Southwest, this San Antonio house offers maximum comfort despite hot, dazzling summers and sharp winter cold. il plans diags Arch Forum 87: 96-101 S '47
Tree-set in Texas. il plan Arch Rec 102:76-8 Ag '47
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United States

Houses USA, 1607-1946; development of domestic architecture in America. il Arch Forum 86:81-8 Ja; 97-104 Mr; 81-8 My '47

ARCHITECTURE, Modernistic
I'm going to build modern from now on, and here's why. A. M. Hoffberg. il plans Brick & Clay Rec 110:26-7 F '47
Seven postwar houses. il plans diags Arch Forum 87:77-116 S '47

ARCHIVES

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Libraries—Ephemeral and source materials

ARCTIC locker system
Freezer lockers. il Fortune 36:92-5+ S '47

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See also
Water supply—Arctic regions

AREA measurement
Area of irregular plots with circular curve boundaries computed by DMD method. O. D. Keese. Civil Eng 17:481-2 Ag '47

ARGENTINA

See also
Architecture—Argentina
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Railroads—Argentina

Commerce

Argentina; the world's no. 2 garden spot; offers best opportunity for profit to our exporters. C. Davidson. Comm & Fin Chr 166: 106+ Jl 10 '47
Argentina's shift to creditor status. E. A. Gomez del Rey. Comm & Fin Chr 165:3232+ Je 19 '47
Argentina's two faces. Economist 153:469-71, 510-11 S 20-27 '47

Commercial policy

Argentina's trade campaign. J. Lyons. il Mag of Wall St 79:424 Ja 18 '47
Argentine imports need original bill of lading. Oil Paint & Drug Rep 150:49 D 30 '46
Differential peso; Argentina exchange rates. Economist 151:882 N 30 '46
Latin American exchange- and import-control developments. C. F. Carson and J. J. Magurn. For Comm W 28:3-5 Jl 12 '47
List of imported goods subject to prior exchange permit requirement. For Comm W 26:18 Ja 25 '47
List of permissible imports broadened. For Comm W 29:12 O 18 '47

ARGENTINA—Commercial policy—*Continued*
Peron relaxes; Argentina begins to open door to foreign business again. Bsns W p 110+ O 25 '47
Prior exchange-permit requirement instituted for certain imports. For Comm W 25:14 D 28 '46

Economic conditions

Argentina reflects prosperity of war years. J. W. Rowe. Comm & Fin Chr 166:1021 S 11 '47
Argentine economy strong in 1946, as oversea trade zoomed. H. Houston and T. J. Pursley. il For Comm W 27:6-7+ My 31 '47
News by countries. Published in Foreign commerce weekly

Economic policy

Argentina's two faces. Economist 153:469-71, 510-11 S 20-27 '47
Argentine five-year plan aims at great-power status. W. P. Schuck. Barron's 26: 11 D 2 '46
Argentine five-year plan envisages broad progress. T. J. Pursley. il For Comm W 26:4-6+ Ja 18 '47
Argentine guide; economic survey. Bsns W p101 F 8 '47
Lord off to run Peron's five-year plan. Bsns W p 112 Je 14 '47
Peron's five-year plan. map Bsns W p98 Ja 11; 106 Ja 18; 98 Ja 25; 102 F 1; 98 F 22 '47

Expropriation policy

Argentine municipality of Rosario to expropriate power plant. For Comm W 27:26 My 31 '47

ARGINASE
Elementary effect of arginase in the weight physiology of the mouse. W. G. Irons and O. B. Wiswell. Science 106:393-4 O 24 '47
New method for the purification of arginase. C. B. Thompson. bibliog il Science 104: 576-7 D 13 '46

ARGON
Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46
Infrared emission spectra of krypton and argon. C. J. Humphreys and E. K. Plyler bibliog J Res Nat Bur Stand 38:499-503 My '47
Minimum sparking potentials of barium, magnesium, and aluminum in argon. H. Jacobs and A. P. LaRocque. bibliog diags J Ap Phys 18:199-203 F '47

ARGONNE national laboratory
New location. il Science 105:355 Ap 4 '47; Same abr. Mech Eng 69:507 Je '47

ARGYRIA
Experimental argyrosis; treatment of rats receiving silver with 2,3-dimercaptopropanol (BAL). C. T. Olcott and W. F. Riker, jr. Science 105:67 Ja 17 '47

ARGYROSIS. See Argyria

ARINC. See Aeronautical radio, inc.

ARIZONA
See also
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Geology—Arizona
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ARIZONA times
Arizona times' conversion to daily tells story of building a newspaper. Ptr Ink 218:81-2 Mr 28 '47

ARKANSAS
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Mines and mineral resources—Arkansas

Industries and resources

Arkansas campaigns for industries owned and managed by Arkansans. F. Cantrell. il Manuf Rec 115:36-8+ N '46
Featuring Arkansas. il Manuf Rec 116:85-128 Ag '47

ARKANSAS-MISSOURI power company
Annual report. Comm & Fin Chr 165:1994 Ap 14 '47

ARKANSAS power and light company
Bonds offered. Comm & Fin Chr 166:366-7 Jl 28 '47
To spend $54,000,000 for expansion and improvement plan. il Manuf Rec 116:34 Jl '47

ARKANSAS river
Army engineers complete dredged cutoff to control meander of Arkansas river. A. B. Smith. il Eng N 138:508-10 Ap 3 '47

ARK-LA-TEX chemurgic conference
Annual meeting, 2d, Shreveport, La. Chem & Eng N 25:2556 S 8 '47

ARKWRIGHT, Preston Stanley, 1871-1946
Sketch. por Edison Elec Inst Bul 14:427 D '46
Sketch. Manuf Rec 115:97 D '46

ARMAMENTS
Scientist in war time. E. Appleton. Inst Mech Eng J & Proc 154:Proc 309-12 D '46; Same cond. Engineer 180:432-3 N 30 '45
See also
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Tanks, Military

ARMATURES
Bend testing of armature binding wire. il Steel 121:92 O 27 '47
D.c. armature reaction chart. O. H. Hahn. diag Electrician 137:1582 D 6 '46
Inside of electrical machines. R. H. Robinson. il diags Electrician 138:115-19+ Ja 10 '47

Manufacture

Mechanism for retarding an automatic feeding device; die used to form flanges on relay armature. V. Santacatarina. diags Mach 53:191-2 Ja '47

Testing

Capacitance of synchronous-machine armature windings determined for high-potential test. R. W. Wieseman. il Gen Elec R 50:26-30 Jl '47

ARMIES
See also
Demobilization
Water supply for armies
also subdivision Army under names of countries, e.g. Germany—Army; United States—Army

ARMOR plate
Armor plate in Germany; abstract. Materials & Methods 26:135-6 O '47
Induction hardening of armor. T. Bishop. Metal Prog 50:954-5+ N '46

ARMORIES
Design for armory of today; proposed National Guard armory with roof landing space for helicopters. il plan Aero Digest 54:53 Ap '47

ARMOUR and company of Illinois
Annual report. Comm & Fin Chr 165:202 Ja 13 '47
Armour's big earnings cut capital needs. Barron's 27:10 Ja 6 '47
Big four in meat packing. R. Colston. Mag of Wall St 80:440 Jl 19 '47
Sells $35,000,000 debentures privately. Comm & Fin Chr 166:367 Jl 28 '47
Thumbnail stock appraisal. Mag of Wall St 79:607 Mr 1 '47

ARMOUR research foundation
Counter-gravity casting; new foundry technique, developed by Armour Foundation. Bsns W p47-8+ D 28 '46

ARMSTRONG cork company
Big five in floor coverings. R. Colston. Mag of Wall St 81:32 O 11 '47
Consolidated income statement for calendar years, 1944-1946. Comm & Fin Chr 165: 1859 Ap 7 '47
Controlling raw materials to meet varying production. R. L. Bowles. Factory Management 105:94-6 Ja '47
Several years of big sales seen. Barron's 27:27 O 20 '47

ARMSTRONG rubber company
Annual report. Comm & Fin Chr 165:202 Ja 13 '47

ARMY air forces institute of technology. See United States—Army air forces institute of technology

ARMY camps. See Camps, Military

ARMY exchanges. See Post exchanges

ARMY map service, Washington, D.C.
Army map service gets a new home. il Eng N 138:367-70 Mr 6 '47

ARMY medical library. See United States—Army medical library

ARMY-navy munitions board
Army-navy munitions board seeks industrial cooperation. K. Rannells. Iron Age 159:104-5 F 13 '47

What is the ANMB doing? R. R. Deupree. Power Pl Eng 51:67+ O '47

ARMY-navy petroleum board
Has good start on picking military oil organization; works to extend roster. Nat Pet N 39:13 Je 4 '47

ARMY rations. See United States—Army—Commissariat

ARNOLD, Hoffman and company, inc.
Stock offered. Comm & Fin Chr 166:850 S 1 '47

AROMATIC compounds
Aromatic cyclodehydration; elimination of alkyl groups in cyclizations of the olefin oxide type. C. K. Bradsher, L. Rapoport and P. Anderson. bibliog Am Chem Soc J 68:2152-4 N '46

Aromatic cyclodehydration; use of intermediates obtained by the Diene addition reaction. C. K. Bradsher and L. J. Wissow. bibliog Am Chem Soc J 68:2149-51 N '46

Growth of an American aromatic chemical industry. R. M. Stevenson. Am Dyestuff Rep 35:625+ D 2 '46

Improved procedure for the replacement of aromatic amino groups by bromine. M. S. Newman and W. S. Fones. Am Chem Soc J 69:1221-2 My '47

AROMATIC hydrocarbons. See Hydrocarbons, Aromatic

AROMATIZATION
Aromatization studies; palladium dehydrogenation of arylcyclohexenones to phenols. E. C. Horning and M. G. Horning. bibliog Am Chem Soc J 69:1359-61 Je '47

Aromatization studies; synthesis of alkylanilines from alkylcyclohexenones. E. C. Horning and M. G. Horning. Am Chem Soc J 69:1907-8 Ag '47

Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47

ARRHENIUS equation
Structure in liquids and the relation between the parameters of the Arrhenius equation for reactions in the condensed phase. C. E. Waring and P. Becher. bibliog J Chem Phys 15:488-96 Jl '47

ARSENIC
Arsenic, 1946. T. P. Wootton. Eng & Min J 148:79 F '47

Role of arsenic in the production of alcoholic polyneuritis. M. R. Brown and J. L. Hastings. Science 105:256 Mr 7 '47

Analysis

Development of the Marsh test for arsenic. S. H. Webster. bibliog(44 ref) diags J Chem Educ 24:487-90 O '47

Source of error in the Gutzeit method for arsenic. N. I. Goldstone. bibliog diags Ind & Eng Chem Anal ed 18:797-9 D '46

Isotopes

Evidence for, and cross section of 115 day Se^{75}. H. N. Friedlander and others. il Phys R 72:23-5 Jl 1 '47

Radiations from As^{72}. A. C. G. Mitchell and others. Phys R 71:825 Je 1 '47

ARSENIC chloride
X-ray absorption structure of $GeCl_4$ and $AsCl_3$. S. T. Stephenson. bibliog Phys R 71:84-7 Ja 15 '47

ARSENIC compounds
Arsenicals of the 5-pyrazolone, 5-isoxazolone and α-acetoglyoxylic acid series. R. F. Coles and C. S. Hamilton. Am Chem Soc J 68:2588 D '46

Comparison of the spirocheticidal activity of arsphenamines and phenarsines (arsenoxides) in experimental syphilis. T. F. Probey. bibliog Pub Health Rep 62:1041-8 Jl 18 '47

Derivatives of methylphenylarsine. E. J. Cragoe, jr. and others. Am Chem Soc J 69:925-6 Ap '47

Furan arsenicals. J. F. Morgan and others. Am Chem Soc J 69:932-3 Ap '47

Reaction between arsenicals and di-(*p*-biphenyl)-thiocarbazone. D. S. Tarbell and J. F. Bunnett. bibliog Am Chem Soc J 69: 263-5 F '47

See also
Arsenides
Arsine
Lewisite

ARSENIC poisoning
Cryolite as a detoxifying agent for lead arsenate on plants and animals. S. Marcovitch. bibliog il J Ind Hygiene 29:175-7 My '47

Systematic treatment of arsenic poisoning with BAL; abstract. H. Eagle. J Ind Hygiene 29:sup9 Ja '47

Toxicity of chemicals in electroplating; arsenic. P. M. Van Arsdell. Metal Finishing 45:58-9 Ag '47

ARSENIC sulfide
Study of anhydrous conditions in the preparation of lyophobic organosols. H. A. Nelson. bibliog diags J Phys & Colloid Chem 51:1103-11 S '47

ARSENIDES
Higher mineral arsenides of cobalt, nickel, and iron. R. J. Holmes. diags tables Geol Soc Bul 58:299-391, pl 1-5 bibliog(p 385-91) Ap '47

ARSENOSO compounds
3-Amino-4-hydroxybenzenearsonous acid; salts and structural considerations. C. K. Banks and others. bibliog Am Chem Soc J 69:5-11 Ja '47

Analysis

Quantitative method for the estimation of the arsenoso group. C. K. Banks and J. A. Sultzaberger. bibliog Am Chem Soc J 69: 1-4 Ja '47

ARSENOXIDES
Comparison of the spirocheticidal activity of arsphenamines and phenarsines (arsenoxides) in experimental syphilis. T. F. Probey. bibliog Pub Health Rep 62:1041-8 Jl 18 '47

Filaricidal activity of substituted phenyl arsenoxides. G. F. Otto and T. H. Maren. bibliog Science 106:105-7 Ag 1 '47

ARSINE
Action of heat on diphenylchloroarsine. G. D. Parkes, R. J. Clarke and B. H. Thewlis. Chem Soc J p429-31 Mr '47

Aliphatic chloroarsines. C. K. Banks and others. Am Chem Soc J 69:927-30 Ap '47

Cyano-ethylation of arsines, and the preparation of amidino-alkyl-arsines and carboxy-alkyl-arsines. R. C. Cookson and F. G. Mann. Chem Soc J p618-24 My '47

Derivatives of methylphenylarsine. E. J. Cragoe, jr. and others. Am Chem Soc J 69: 925-6 Ap '47

Development of the Marsh test for arsenic. S. H. Webster. bibliog(44 ref) diags J Chem Educ 24:487-90 O '47

Difluoroarsines. L. H. Long, H. J. Emeléus and H. V. A. Biscoe. Chem Soc J p1123-6 D '46

Method for the synthesis of tertiary aromatic arsines. W. E. Hanby and W. A. Waters. Chem Soc J p 1029-31 N '46

Nitroaryldichloroarsines and related compounds. J. F. Morgan and others. Am Chem Soc J 69:930-2 Ap '47

Preparation and properties of 2-substituted *iso*arsindolines and of *as-spiro*-bis*iso*arsindolinium salts. D. R. Lyon, F. G. Mann and G. H. Cookson. Chem Soc J p662-70 My '47

Reaction products of phenyldichloroarsine and acetylene. C. K. Banks, F. H. Kahler and C. S. Hamilton. Am Chem Soc J 69: 933 Ap '47

ARSON
National Board campaign against arson; data on arrests, convictions, acquittals; 1934-1946. Weekly Underw 156:1539 Je 7 '47

ARSONIUM compounds
Tetra-aryl-phosphonium, -arsonium, and -stibonium salts; the synthesis and properties of tetra-aryl-arsonium salts having four dissimilar aryl groups. F. G. Mann and J. Watson. Chem Soc J p505-13 Ap '47

ARSPHENAMINE
Comparison of the spirocheticidal activity of arsphenamines and phenarsines (arsenoxides) in experimental syphilis. T. F. Probey. bibliog Pub Health Rep 62:1041-8 Jl 18 '47

ART
See also
Architecture
Bronzes
Ceramic art
Design
Glass sculpture
Photography
Consult Art Index for additional references

Bibliography

Art books for special purchase. R. M. Jedermann. Booklist [ALA] 43:320-3 bibliog(21 titles) Je 15 '47

ART and industry
Industrial design in new role; combines engineering with functional styling. il Bsns W p38+ Ja 11 '47

ART dealers

Directories

Mastai's classified directory of American art and antique dealers, 1947. 3d ed 420p $6 Boleslaw Mastai, 104 E. 57th st, New York 22 '46

ART directors. See Advertising agencies—Art departments

ART education
Fine arts for engineers. H. L. Seaver. J Eng Educ 37:811-17 Je '47

ART galleries and museums

Lighting

Theatrical lighting used by electrical engineer to create dramatic sculpture display. il diags Arch Forum 86:100+ My '47

ART objects

Storage

Heat pump plant protects works of art stored in subterranean workings. A. C. Pallot. diags Heating-Piping 18:95-6 N '46

ARTERIES
Waves in elastic tubes; velocity of the pulse wave in large arteries. A. L. King. bibliog diags J Ap Phys 18:595-600 Jl '47

ARTERIOSCLEROSIS
Atherosclerosis and alimentary hyperlipemia. J. R. Moreton. bibliog Science 106:190-1 Ag 29 '47

ARTESIAN wells
Effective radius of drawdown test to determine artesian well. C. E. Jacob. diags Am Soc C E Proc 72:629-46 My '46; Discussion. 72:1319-20, 1433-4; 73:239-40 N-D '46, F '47

ARTHRITIS
ω-Aurothio fatty acids and their salts. E. E. Moore and R. T. Rapala. Am Chem Soc J 69:266 F '47
Principles of acknowledging compensation claims for arthritis. E. E. Englehart. bibliog Ind Med 15:626-8 N '46

ARTHROPODA
Organization of arthropod cuticle. A. G. Richards. Science 105:170 F 14 '47

ARTIFICIAL flowers. See Flowers, Artificial

ARTIFICIAL limbs
Artificial legs tested under accelerated conditions. il Sci Am 176:266 Je '47
Cosmetic gloves from electroformed molds; gloves for use over artificial hands. C. L. Milton, jr. and others. il Metal Finishing 45:61-2+ Ag '47
Finnish captain invents artificial arm. For Comm W 26:12 Ja 11 '47
Rexall branches out to aid amputees. il Bsns W p75 Mr 29 '47

ARTIFICIAL rubber. See Rubber, Artificial

ARTIFICIAL sunlight. See Sunlight, Artificial

ARTS and crafts
See also
Handicraft

ARVESON, Maurice Henshaw, 1902-
Sketch. por Chem & Eng N 25:3058 O 20 '47

ARVIN, California
Small farms aid small towns. Bsns W p17-18 Ap 12 '47

ASBESTOS
Arizona asbestos deposits, Gila county, Ariz. L. A. Stewart and P. S. Haury. bibliog 22pls U S Bur Mines Rep of Invest 4100:1-28 '47
Asbestos-felt blanket protects thin concrete dam from frost; Florence Lake dam in California. il Eng N 138:802-4 My 15 '47
Asbestos: its uses and history. O. Bowles. Rock Prod 50:94 Jl '47
Competition in asbestos products. Adv & Sell 40:98 O '47
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships, Quebec. C. Faessler and M. S. Badollet. bibliog Can Min J 68:157-67 Mr '47
Industrial material used in home construction; corrugated asbestos sheets. il plans diags Am Bld 69:118-19 My '47
Rayon in the spinning of asbestos. H. E. Shearer. Rayon 27:599 N '46
Recovering asbestos floats with dust collectors. L. J. Wieschhaus. il Rock Prod 50: 104-5+ Ag '47
Testing commercial pads used for sterile filtration; efficiency of asbestos filter pads. S. S. Epstein. il Food Ind 19:1070-1+ Ag '47
See also
Turner and Newall, limited

Analysis

Analysis of fabrics, papers and boards containing wool and asbestos; abstract. P. Goldsmid. Paper Ind 28:1656 F '47

ASBESTOS cement
Ruberoid hangar plans. M. V. Engelbach. plans diags Aero Digest 55:65-6+ Ag '47

ASBESTOS cement pipes. See Pipes, Asbestos cement

ASBESTOS shingles. See Shingles, Asbestos

ASCORBIC acid. See Vitamins—Vitamin C

ASH handling
Change in pumps expedites ash handling. H. Nagle. il diag Power 91:339-40 My '47
Earley power station; coal, ash and dust handling equipment. il plan diags Mech Handling 34:27-36 Ja '47
Low-pressure ash-sluicing systems, with particular reference to power station practice; with cost data. T. H. Carr. plans diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):294-302, pl 1-2; Discussion. il 303-10 '45

ASH trays

Manufacture

Compound die for blanking and forming part with curled edge. J. E. Hallberg. diags Mach 53:193-4 Ap '47

ASIA
Asia and the Truman doctrine. map Economist 152:483-4 Ap 5 '47

ASIA, Southeastern
Nationalism in south-east Asia. map Economist 153:348-50 Ag 30 '47

ASLIB. See Association of special libraries and information bureaux

ASPARAGUS
Nutritive value of canned foods. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Subtilin from asparagus waste. Chem & Eng N 25:1070-1 Ap 14 '47

ASPARTIC acid
New synthesis of *dl*-aspartic acid. H. J. Klosterman and E. P. Painter. bibliog Am Chem Soc J 69:1674-5 Jl '47
Synthesis of orotic acid from aspartic acid. J. F. Nyc and H. K. Mitchell. bibliog Am Chem Soc J 69:1382-4 Je '47

ASPARTIC acid—*Continued*

Analysis

Oxidative bromination in the determination of malic acid and aspartic acid; micromethod for determination of beta-alanine. H. Suomalainen and E. Arhimo. bibliog Anal Chem 19:207-9 Mr '47

ASPEN, Colorado

Bonanza days again for silver town. il Bsns W p26 Ja 18 '47

ASPEN

Experiments on the grinding of quaking aspen and use of pulp in printing paper. A. Hyttinen and others. Paper Tr J 125:53-62 S 25 '47; Same cond. Paper Ind 29:271-4 My '47

Lake States aspen reports. Pulp & Pa of Can 48:132 O '47

Molecular properties of hemicellulose fractions. M. A. Millett and A. J. Stamm. bibliog J Phys & Colloid Chem 51:134-48 Ja '47

Use of bleached aspen semichemical pulp in groundwood book paper. J. N. McGovern. bibliog Paper Tr J 123:47-52 N 14 '46

ASPERGILLIC acid

Pyrazine derivatives; synthesis of a racemic 2-hydroxy-3 : 6-di-*sec.*-butylpyrazine and its relationship to deoxyaspergillic acid. G. T. Newbold and F. S. Spring. Chem Soc J p373-8 Mr '47

ASPERGILLUS

Effects of an antibiotic from aspergillus fumigatus Fresenius on tumor cells in vitro, and its possible identity with gliotoxin. J. G. Kidd. bibliog Science 105:511-13 My 16 '47

Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47

Production of citric acid in submerged culture. E. O. Karow and S. A. Waksman. bibliog Ind & Eng Chem 39:821-5 Jl '47

Structure of clavatol, a metabolic product of aspergillus clavatus. C. H. Hassall and A. R. Todd. Chem Soc J p611-13 My '47

ASPHALT

Asphalt in concrete makes soft mix that increases floor comfort. Eng N 138:389 Mr 6 '47

Asphalts and their evaluation for commercial use; abstract. J. C. Roediger. Pet Processing 1:170 N '46

Fumes from asphalt oxidation; method of disposal. W. L. Nelson. Oil & Gas J 46:99 O 25 '47

Postwar developments with emulsified asphalt sizing in cylinder boards. E. M. Lorenzini. Paper Tr J 124:43-4 Je 5 '47; Same. Paper Ind 29:1208-10 N '47

Propane deasphalting process; E. B. Badger & sons company. flow diag Pet Refiner (Process Handbook sec) 26:226-7 Ap '47

Propane deasphalting process; M. W. Kellogg company. flow diag Oil & Gas J 45:175 Mr 22 '47

Propane deasphalting process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:228-9 Ap '47

Propane decarbonizing process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:230-1 Ap '47

Results of experiments to improve asphalt subsealing methods. H. L. Cooper and W. R. Lovering. Pub Works 78:25-6 Ja '47

Undersealing pavements with asphalt; with cost data. H. A. Wallace. il Pub Works 78: 23-4 Je '47

See also

Bituminous materials

Bituminous sand

ASPHALT heaters

Surface heaters and heater-planers; asphalt resurfacing program in Los Angeles. L. Miller. il Roads & Sts 90:101-3 Ap '47

ASPHALT mixers

Continuous mix asphalt plants handle paving operations in London area. il Roads & Bridges 85:114-15+ Ja '47

Volumetric proportioning and continuous mixing asphalt plants in Ohio. F. W. Kimble. il Roads & Sts 90:101-2 My '47

ASPHALT pavements. See Pavements, Asphalt

ASPHALT plants

Continuous mix asphalt plants handle paving operations in London area. il Roads & Bridges 85:114-15+ Ja '47

Los Angeles builds a new asphalt plant. il plan Pub Works 78:22-4 Ag '47

Volumetric proportioning and continuous mixing asphalt plants in Ohio. F. W. Kimble. il Roads & Sts 90:101-2 My '47

Equipment

Asphalt tanks are heated electrically. W. W. Pearce. il Elec West 99:86-7 O '47

ASPHALT shingles. See Shingles, Asphalt

ASPHYXIA

Death lurks in an empty tank; accident on board ship. Marine Eng 52:87 S '47

Treatment of respiratory depression and asphyxia. Ind Med 15:640-1 N '46

ASSAYING

Assaying gold solutions; method used at Hollinger gold mines. M. B. Scott. Can Min J 68:405-7 Je '47

Electrolytic gold solution assay. J. E. Nelson. Can Min J 68:15-16 Ja '47

Multiple cupel machine. plans diags Can Min J 67:1113 D '46

ASSEMBLING methods

Assembling electric locomotives. il Steel 120: 105 Ap 14 '47

Assembling small diameter copper tubes with S.A.E. fittings. il Paper Ind 28:1192-3 N '46

Assembly of aluminum parts by furnace and dip brazing methods. A. H. Petersen. il diags Product Eng 18:115-17 F '47

Cementing and assembly of plastics; abstract. Product Eng 18:128 Mr '47

Convair's master plan for building the 240 transport. G. F. Gerhauser. il plan Automotive Ind 97:28-31+ Jl 15 '47

Conveyors aid the assembly of motor accessories; windscreen wipers and direction indicators. il Mech Handling 34:66-9 F '47

Conveyors aid the production of electric cleaners; Messrs Hoover, ltd. il plans diag Mech Handling 34:232-44+ My '47

Editorial citation to Myron J. Bestervelt and William Blanchard, Continental motors corp. for achievement in induction heating and spinning; governor sub-assembly. il Materials & Methods 24:1190 N '46

Engine assembly; system and layout employed by the Austin motor co. il plan Automobile Eng 37:90-7 Mr '47

Flow layout means more output at less than estimated cost; Crosley's Cobra engine. H. E. Brazier. flow plan il Factory Management 105:76-9 O '47

Hands off handling for high productivity; Norge division, Borg-Warner corporation. G. P. Kennedy. il diags Factory Management 105:125-8 Ja '47

High-speed assembling fixture cuts noise and lost motion. J. F. Budnick. diag Am Mach 91:137 Ap 10 '47

Improved products by mechanized welding and cutting; manufacture of Terra Cobra scraper. E. Griffeth. il diags Welding J 26:670-4 Ag '47; Steel 121:80-4+ O 27 '47

Joining complicated assemblies in one operation; record changers. il Steel 120:112+ My 5 '47

Merry-go-round system feeds jeep front-ends to final assembly; illustrations with text. Steel 119:59 D 23 '46

Modern methods characterize mass production in Bendix brake plant. J. Geschelin. il Automotive & Aviation Ind 96:26-30+ F 15 '47

New idea 20 years old; Studebaker reverses assembly line. il Automotive & Aviation Ind 95:21+ N 15 '46

New ideas in conveyorized assembly. C. S. Ricker. il diags Am Mach 91:96-100 O 9 '47

Operations in the production of electronic tube components. il diags Mach 53:160-4 F '47

ASSEMBLING methods—*Continued*
Precision building of Convair-240's for low-cost maintenance; Consolidated Vultee aircraft corp. G. F. Gerhauser. il Mach 53: 180-4 Je '47
Production firsts at Plymouth's enlarged plant. J. Geschelin. il plan Automotive & Aviation Ind 96:28-32+ Ap 1 '47
Radically different method of building motor coaches; Consolidated-Vultee's use of master tooling dock and geometric mastering system. L. A. Bryant. il Automotive Ind 97:24-8 O 1 '47
Short assembly line. B. Frank. Management R 35:523-5 D '46
Special fasteners cut assembly time; Motorola gasoline car heater. il diags Product Eng 18:96-8 Jl '47
Spot-welding of assemblies; Boeing aircraft co. F. Matthews. il Aero Digest 54:82 Ap '47
Steel truck body members standardized for mass production. N. E. Cole. il plans Steel 120:96-9+ My 5 '47
Storage that means no waits for parts; National cash register company. R. J. Wood. il Factory Management 104:137 O '46
Straight-line assembly cuts labor costs 20 per cent; Kemline Metal Products. H. T. Ehrlich. il Factory Management 105:86-7 O '47
Television comes of age; assembly-line production adapted by RCA. il plan Am Mach 91:98-101 S 25 '47
Tooling dock simplifies building assembly fixtures. L. A. Bryant. diags Iron Age 159:60-2 Mr 20 '47
Tooling the Convair 240. G. F. Gerhauser. flow chart il Aero Digest 54:81-3+ My '47
Turntables aid assembly-line testing; production of Hotpoint electric dishwashers. B. C. Brosheer. il plan Am Mach 91:129-32 F 13 '47
Unique engine assembly system; parts and accessories kits on conveyor moving with assembly line. il Automotive & Aviation Ind 96:25+ Mr 1 '47
Weldments; assemblies or subassemblies made by welding. E. L. Cady. il diags Materials & Methods 25:101-16 F '47

See also
Automobile assembly plants
Routing systems

ASSESSMENT insurance. See Insurance, Assessment

ASSETS (term)
Balance sheet presentation of items held in trust, as agent, or as bailee. D. Borth, jr. J Account 83:417-21 My '47
Current assets and current liabilities; working capital; Accounting research bulletin. J Account 84:282-5 O '47

ASSETS, Fixed
Fixed assets subject to lease. J Account 84: 338 O '47

ASSETS, Liquid
Estimated liquid asset holdings of individuals and business; with half-yearly figures by type of holder, Dec. 1939-June 1946. Fed Res Bul 32:1236-7 N '46
Estimated liquid asset holdings of individuals and businesses; with half-yearly figures by type of holder, Dec. 1939-Dec. 1946. Fed Res Bul 33:1103-4 S '47
Financial position and buying plans of consumers, July 1947. D. M. Holthausen. Fed Res Bul 33:1212-15 O '47
Idle cash now at abnormally high level. Weekly Underw 156:239 Ja 18 '47
Slackened growth in liquid assets. Fed Res Bul 32:1221-9 N '46
Survey of consumer finances. D. M. Holthausen. Fed Res Bul 33:647-63, 788-802 Je-Jl '47; Abstract. Mo Labor R 65:329-31 S '47
Where consumer money lies; anatomy of incomes and liquid asset holdings. Bsns W p19 Jl 19 '47

ASSIGNMENT of book accounts
Credit official discusses business finance. F. M. Nicodemus. Manuf Rec 116:56+ O '47
Washington state passes accounts receivable law; to eliminate secret assignment. Credit & Fin Management 49:33 F '47

ASSOCIATED business papers
ABP presents awards to winners in 5th annual advertising competition. il Ind Marketing 32:38-40 Je '47

ASSOCIATED equipment distributors of America
Annual meeting, 28th, Chicago, Feb. 13-15. Roads & Bridges 85:100+ F '47; Eng N 138: 257 F 20 '47; Roads & Sts 90:85 Mr '47

ASSOCIATED general contractors of America
Annual meeting, 28th, Chicago, Jan. 27-30. Eng N 138:183-4 F 6 '47; Roads & Sts 90: 72-3+ F '47; Concrete 55:22-6+ Mr '47
AGC agrees to sponsor reserve units for army engineer utilization. Eng N 139:489 O 9 '47
Board meetings, Seattle. Concrete 55:22-4 Jl '47

ASSOCIATED traffic clubs of America
Annual meeting, 24th, Baltimore, Oct. 6-8. Ry Age 123:608-9+ O 11 '47

ASSOCIATED universities, inc.
Brookhaven national laboratory, government-owned, government-financed atomic research project. Science 105:491 My 9 '47

ASSOCIATED weavers, limited
Statement by the chairman at annual general meeting. F. Newnes. Economist 153:217 Ag 2 '47

ASSOCIATES investment company
Stock offered. Comm & Fin Chr 166:1470 O 13 '47

ASSOCIATES of the food and container institute
Formation and functions of new nonprofit organization. Science 106:165 Ag 22 '47
Industry-wide research organization announced. Chem & Eng N 25:2504 S 1 '47

ASSOCIATION advertising. See Advertising, Association

ASSOCIATION and associations
Organization membership as a source of prospects. F. Rundell. Inland Ptr 118:68 F '47

See also
Benefit societies
Building and loan associations
Cooperative associations
Corporations
Governmental research associations
Trade associations
Trade unions

Directories
Directory of professional, scientific, technical and trade associations and societies. Chem Eng 54:234+ Jl '47

ASSOCIATION of American economic poisons control officials
Officials organize. Soap & San Chem 23:149 Mr '47

ASSOCIATION of American fertilizer control officials
Annual convention, 2d, Washington, Oct. 21. Oil Paint & Drug Rep 152:4 O 27 '47

ASSOCIATION of American geographers
Officers. Science 105:158 F 7 '47

ASSOCIATION of American railroads
Battling railroad groups' opening shots turn out to be mostly duds. Barron's 27:31 Mr 17 '47
Faricy elected president. Ry Age 122:688-9 Ap 5 '47

Accounting division
Annual meeting, Miami Beach, May 20-23. Ry Age 122:1112-16 My 31 '47

Electrical sections
Annual meeting, Chicago. Ry Age 121:756-60 N 9 '46; Ry Mech Eng 120:591-605 N '46
Annual meeting, Chicago, Sept. 30-Oct. 2. Ry Age 123:696-700 O 25 '47

Freight claim division
Annual meeting, 56th, St Louis, April 15-17. Ry Age 122:838+ Ap 26 '47

Signal section
Annual meeting, 49th, Chicago, Sept. 11-13. Ry Age 123:484-7 S 20 '47

Treasury division
Annual meeting, Swampscott, Mass. Oct. 8-10. Ry Age 123:651-3 O 18 '47

ASSOCIATION of American soap and glycerine producers
Meeting, New York, Jan. 22; officers elected; abstracts of papers. Soap & San Chem 23: 41-4+ F '47

ASSOCIATION of British chemical manufacturers
Chairman's speech. L. P. O'Brien. Chem Age (Lond) 57:527-8 O 18 '47

ASSOCIATION of casualty and surety companies (formerly Association of casualty and surety executives)
Annual meeting, New York, May 13. East Underw 48:29 My 16 '47; Nat Underw 51:17 My 15 '47; Weekly Underw 156:1321+ My 17 '47
Casualty and surety public relations mission accomplished on many fronts. J. F. Matthai. East Underw 47:92+ D 13 '46
New officers. East Underw 48:37 Je 6 '47
Past year busy one for executives group. J. D. Dorsett. Weekly Underw 156:76-8 Ja 4 '47
Public welfare is our business. J. D. Dorsett. Nat Underw 50th anniv no:106+ 1947

ASSOCIATION of casualty and surety executives. See Association of casualty and surety companies

ASSOCIATION of comics magazine publishers
Association of comics publishers. Adv & Sell 40:102 Jl '47
Comics magazine publishers organize. D. Bruner. Ptr Ink 219:115 My 23 '47

ASSOCIATION of consulting chemists and chemical engineers
Meeting, New York, Jan. 29. Oil Paint & Drug Rep 151:7+ F 3 '47; Chem & Eng N 25:428 F 17 '47
Meeting, New York, April 21. Oil Paint & Drug Rep 151:7+ Ap 28 '47

ASSOCIATION of highway officials of the North Atlantic states
Meeting, Atlantic City. Eng N 138:351-2 Mr 6 '47

ASSOCIATION of industrial scientists
Seeks recognition as bargaining unit. Chem & Eng N 24:3349 D 25 '46

ASSOCIATION of iron and steel engineers
Annual meeting, Pittsburgh. Steel 121:50-1 S 29; 96+ O 13 '47

ASSOCIATION of life insurance counsel
Annual meeting, New York, Dec. 10-11. East Underw 47:29+ D 13 '46; Spectator (Life ed) 154:26-7 D '46; Weekly Underw 155:1459 D 14 '46
Spring meeting, Hot Springs, Va. May 26-27. Nat Underw (Life ed) 51:6+ My 30 '47

ASSOCIATION of national advertisers
Annual convention, 38th, Atlantic City, Oct. 8. Sales Management 59:125-6+ N 1 '47
Annual spring meeting, 38th, Chicago. Ptr Ink 219:122+ Ap 18 '47

ASSOCIATION of official agricultural chemists
Agricultural chemists discuss analytical methods. Chem & Eng N 24:2909 N 10 '46
Annual meeting, 61st, Washington, Oct. 20-22. Oil Paint & Drug Rep 152:5+ O 27 '47

ASSOCIATION of professional engineers of the province of Ontario
25th anniversary. Can Chem & Process Ind 31:122+ F '47

ASSOCIATION of special libraries and information bureaux
Information service for industry and commerce; ASLIB's twenty-first annual conference. I. B. N. Evans. Special Lib 38:80-2 Mr '47
Year's work of Aslib, 1945-6. Assn of Sp Lib & Inf Bur Proc 1946:18-26

Microfilm service
ASLIB microfilm service; the story of its wartime activities; with list of films available in the A.M.S. library. L. Moholy. J Doc 2:147-73 D '46

ASSOCIATION of superintendents of insurance of the provinces of Canada
Annual meeting, Jasper, Canada, Sept. 8-12. East Underw 48:21 S 12; 22+ S 19 '47; Nat Underw 51:13 S 18 '47; Nat Underw (Life ed) 51:2+ S 19 '47

ASSOCIATION technique de fonderie de France
Annual meeting, 20th, Oct. 18-19. Foundry 74:110+ D '46

ASSOCIATION technique maritime et aéronautique
La 46e session (Paris, 3-6 juin 1947). Génie Civil 124:268-9, 291-3 Jl 15-Ag 1 '47

ASSOCIATIONS, Trade. See Trade associations

ASSUMPTION of risk. See Personal injuries

ASTHMA
Reduction in the vital capacity of asthmatic subjects following exposure to aerolized pollen extracts. F. C. Lowell and I. W. Schiller. Science 105:317 Mr 21 '47

ASTRAKANITE
System potassium sulfate-sodium sulfate-magnesium sulfate-water at 35°. N. S. Bayliss and others. bibliog diag Am Chem Soc J 69:2033-6 Ag '47

ASTROMETRY
Astrometry; contributions of the Yerkes observatory. G. Van Biesbroeck. Science 106: 203-4 S 5 '47

ASTRONOMERS
Some reminiscences of the Yerkes observatory, 1898-1904. W. S. Adams. Science 106: 196-200 S 5 '47
Yerkes observatory; past, present, and future. O. Struve. il Science 106:217-20 S 5 '47

ASTRONOMICAL instruments
Four phenolic parts in observer; good dielectric and weathering properties; Observoscope. il Mod Plastics 24:139 My '47
Spectral recorder developed at Northwestern university. Mech Eng 69:312-13 Ap '47
See also
Telescope

ASTRONOMICAL measurements. See Astrometry

ASTRONOMICAL observatories
See also
Greenwich royal observatory
Yerkes observatory

ASTRONOMICAL photography
Astrometry; contributions of the Yerkes observatory. G. Van Biesbroeck. Science 106: 203-4 S 5 '47
Camera filter for photographing the solar prominences. B. Billings. Mech Eng 69:162 F '47; Same cond. Gen Elec R 50:50 F '47

ASTRONOMICAL research
Solar research and theoretical astrophysics at the Yerkes observatory. S. Chandrasekhar. Science 106:213-14 S 5 '47

ASTRONOMY
See also
Astrometry
Astrophysics
Meteors
Stars

Terminology
New unit, the langley, proposed. L. B. Aldrich and others. Science 106:225 S 5 '47

ASTRONOMY, Mathematical
See also
Orbits

ASTROPHYSICS
Astrophysics; highlights of the new universe, circa 1947. col il diags Fortune 35:112-23 Ja '47
Magnetic field of the galaxy. L. Spitzer, jr. Phys R 70:777 N 1 '46
Magnetic fields of astronomical bodies. H. W. Babcock. Phys R 72:83 Jl 1 '47
Solar research and theoretical astrophysics at the Yerkes observatory. S. Chandrasekhar. Science 106:213-14 S 5 '47
Stellar electromagnetic fields. L. Davis, jr. bibliog Phys R 72:632-3 O 1 '47
Stellar spectroscopy at Yerkes observatory. O. Struve. Science 106:204-12 S 5 '47
See also
Milne's equation

ASUNCION, Paraguay

Rapid transit
Transit in Asuncion. R. W. Moore. il Mass Transportation 43:382-5 S '47

ATABRIN. See Atebrin

ATCHESON, George, jr., 1896-
Portrait. Fortune 35:136 Mr '47

ATCHISON, Topeka and Santa Fé railway
Four lines oppose Santa Fe's plans; see losses if rival enters St Louis. Ry Age 121: 966-7 D 7 '46
Selected stocks. Mag of Wall St 80:428 Jl 19 '47
Thumbnail stock appraisal. Mag of Wall St 79:418 Ja 18 '47

ATEBRIN
Resolution of atabrine dihydrochloride. F. A. Bacher and others. Am Chem Soc J 69:1534-5 Je '47
Some 7-chloroquinolines patterned as open models of atebrin. H. Gilman and R. A. Benkeser. bibliog Am Chem Soc J 69:123-4 Ja '47
Syntheses of 9-substituted flavins as antimalarials. M. M. Neeman. Chem Soc J p811-13 S '46
Synthetic antimalarials; some *N*-dialkylaminoalkylamidines. F. H. S. Curd and C. G. Raison. Chem Soc J p 160-4 F '47

ATHENS
Water supply
Athens water supply increased with UNRRA help. For Comm W 25:23 N 16 '46
Marathon Dam-Souli Springs scheme, Greece. il Engineer 182:395 N 1 '46

ATHEROSCLEROSIS. See Arteriosclerosis

ATHLETE'S foot (disease)
Athlete's foot compound; abstract. A. Axon. Soap & San Chem 23:155 S '47

ATHLETIC fields
Lighting
Soldier field, a new approach to sports lighting. F. D. Wyatt and W. H. Miller. il plans diags Illum Eng 42:781-92 S '47

ATKINSON, Arthur Kimmins, 1891-
Atkinson and Pitcairn assume new Wabash positions. por Ry Age 122:900 My 3 '47

ATLANTA, Georgia
Rapid transit
Atlanta expands trolley bus express service. il Bus Transportation 26:39-41 F '47

ATLANTIC and Pacific tea company. See Great Atlantic and Pacific tea company

ATLANTIC CITY electric company
Common stock offered. Comm & Fin Chr 166: 1146-7 S 22 '47

ATLANTIC CITY gas company
Merger approved with Peoples gas co. Comm & Fin Chr 165:1995 Ap 14 '47

ATLANTIC coast line railroad
Atlantic Coast line improves, rehabilitates rail routes. il Manuf Rec 116:80-1+ Ja '47
I.C.C. approves Coast Line control of Florida East Coast. Ry Age 122:1072+ My 24 '47
Railroad securities. Comm & Fin Chr 166: 328 Jl 24 '47

ATLANTIC ocean
Atlantis sailed from Woods Hole, its destination being the mid-Atlantic Ridge. Science 106:58 Jl 18 '47
See also
St Paul's rocks

ATLANTIC refining company
Preferred stock offered. Comm & Fin Chr 165:1359 Ap 7 '47
Thumbnail stock appraisal. Mag of Wall St 79:606 Mr 1 '47

ATLANTIC states
New American market; Middle Atlantic states. Bsns W p55-62 Jl 5 '47

ATLAS corporation
Annual report. Comm & Fin Chr 165:1583 Mr 24 '47
Atlas corp. acquires control of Convair. Aviation W 47:18 S 15; 37 S 22 '47
Reinvestment of profits poses problem for Atlas corp. L. J. Rolland. Barron's 27:38 O 6 '47

ATLAS plywood corporation
Outlook for U.S. Plywood and Atlas Plywood. R. Carleson. il Mag of Wall St 80: 99-101 Ap 26 '47
Recent expansion lifts earnings. Barron's 27: 32 O 13 '47
Stock offered. Comm & Fin Chr 166:462 Ag 4 '47

ATLAS powder company
Annual report. Comm & Fin Chr 165:1722 Mr 31 '47
Earnings reflect upped productivity. Barron's 27:34 S 8 '47

ATLASES
Encyclopædia Britannica; world atlas; physical and political maps, geographical comparisons, a glossary of geographical terms, a gazetteer index, geographical summaries, world spheres of influence. W. Yust, ed. xii,280,154p $25 Encyclopædia Britannica, 20 N. Wacker Drive, Chicago 6 '47
World reference atlases; a survey of current resources. W. W. Ristow, ed. bibliog Special Lib 38:67-73, 100-8 Mr-Ap '47

ATMOMETERS
Relation of vapor-pressure deficit to evaporation from a spherical atmometer in an air-conditioned room. B. E. Livingston and J. D. Wilson. Science 104:487-8 N 22 '46

ATMOSPHERE
Concerning two oceans. J. E. Cavelti. J Chem Educ 24:406-12 Ag '47
Estimate of transparency of the atmospheric window 16 mu to 24 mu. A. Adel. Opt Soc Am J 37:769-71 O '47

ATMOSPHERE, Upper
Distribution of neutrons in the atmosphere. H. M. Agnew and others. bibliog Phys R 72:203-6 Ag 1 '47
Electronic collisional frequency in the upper atmosphere. E. F. George. bibliog Inst Radio Eng Proc 35:249-52 Mr '47
Geomagnetic control of F_2 layer ionization. E. Appleton. Science 106:17 Jl 4 '47
Ionization by meteoric bombardment. J. A. Pierce. bibliog il Phys R 71:88-92 Ja 15 '47
Ionosphere equipment for field use during a solar eclipse. G. H. Musselman. il diag Electronics 20:112-16 My '47
Latitude effect of the hard component as a function of altitude. P. S. Gill and others. bibliog diag Phys R 72:733 O 15 '47
Mean life of mesotrons at an altitude of 11,500 ft. H. K. Ticho. diag Phys R 72:255-6 Ag 1 '47
Measurement of the slow meson intensity at several altitudes. B. Rossi and others. bibliog diags Phys R 72:120-5 Jl 15 '47
Pressure and temperature measurements in the upper atmosphere. N. R. Best and others. Phys R 70:985 D 1 '46
Radiation angle variations from ionosphere measurements. H. E. Hallborg and S. Goldman. RCA R 8:342-51 Je '47
Rate of electron production in the ionosphere. S. L. Seaton. bibliog Phys R 72:712-14 O 15 '47
Science reaches upward. D. Sarnoff. il Sci Am 177:6-9 Jl '47
Telemetering from V-2 rockets; time-modulated pulse system in nose samples instruments and transmits readings to ground station. V. L. Heeren and others. il diags Electronics 20:100-5 Mr; 124-7 Ap '47
Temperature of the upper atmosphere. S. L. Seaton. bibliog Phys R 71:557 Ap 15 '47
Torrid upper air found. Aviation N 7:9 F 10 '47
True height of an ionospheric layer. J. A. Pierce. bibliog Phys R 71:698-706 My 15 '47
Upper atmosphere of the earth. E. O. Hulburt. bibliog il Opt Soc Am J 37:405-15 Je '47
Very-high-frequency and ultra-high-frequency signal ranges as limited by noise and co-channel interference. E. W. Allen, jr. maps diags Inst Radio Eng Proc 35:132-5 F '47
See also
Kennelly-Heaviside layer

ATMOSPHERIC electricity
Atmospheric electricity and lightning. J. Frenkel. diags Franklin Inst J 243:287-307 Ap '47
See also
Lightning

ATMOSPHERIC pressure
Barometric coefficient of cosmic-ray intensity. M. Kidnapillai. Phys R 72:518 S 15 '47

ATMOSPHERIC pressure—*Continued*
How atmospheric pressure affects safety of entombed men. diags Coal Age 52:110+ F '47
Humidity and tolerance to low barometric pressure. N. E. Phillips and others. Science 106:67 Jl 18 '47
Pressure and temperature of the atmosphere to 120 km. N. Best and others. Phys R 71: 915-16 Je 15 '47

ATMOSPHERIC temperature
Determination of outside design temperatures; method of using Weather bureau temperature records. W. L. Holladay. bibliog Heating-Piping 19:117-22 Jl '47; Discussion. 19:131 Ag '47
Meteorological history and the space-heating machine. R. Grierson. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 11):381-408, pl 1-4 '45
Microclimatology; facts for architects, realtors and city planners on climatic conditions at the breathing line. il Arch Forum 86:114-19 Mr '47
Pressure and temperature of the atmosphere to 120 km. N. Best and others. Phys R 71:915-16 Je 15 '47
Safety board, airlines wrestle unseen passenger problem; air temperature changes add to take-off weight. R. Hotz. il Aviation W 47:13 S 15 '47
Temperature counts in computing loads under new ruling. CAA J 8:100 S 15 '47
Temperature of the upper atmosphere. S. L. Seaton. bibliog Phys R 71:557 Ap 15 '47
Use of climatological data in heating and cooling design. H. E. Landsberg. Heating-Piping 19:121-5 S '47
See also
Cold

ATOLLS. See Coral reefs and islands

ATOMIC bombs
Army-navy split on role of air power in atom warfare. R. Hotz. il Aviation N 7:7-8 Ap 21 '47
Atom bomb; hazards incident to its use. S. L. Warren and others. Ind Med 16:275-9 Je '47
Atomic bomb. J. E. Johnsen, comp. Ref Shelf v 19, no 2:1-335 bibliog(p292-335) '46 ($1.25)
Atomic bombing effects on Japanese water supply systems. il Pub Works 78:25-7 Ag '47
Atomic energy in 1946. il Engineer 183:2-3, supp 1 Ja 3 '47
Birth of atomic energy and its human meaning. A. H. Compton. Gen Elec R 50:9-15 Jl '47; Same. il Elec Eng 66:857-63 S '47
Decision to use the atomic bomb. H. L. Stimson. Metal Prog 51:250 F '47
Declares optimism for peace with atomic bomb. A. H. Compton. Chem & Eng N 25:1730-1 Je 16 '47
Engineering in an atomic era. A. C. Klein. Mech Eng 68:1029-31 D '46; Same. Power Pl Eng 51:110-13 Ja '47; Same abr. Comm & Fin Chr 164:1778+ O 10 '46
International commission for atomic energy control proposed. A. Gromyko. Metal Prog 52:251 Ag '47
Los Alamos, the town of beginning again; birthplace of the atomic bomb. M. Kinzel. il Min & Met 27:585-7 D '46
Minority report. T. L. Davis. Tech R 49:32+ N '46
Mr Hancock and the bomb. il Fortune 35: 102-7+ F '47
Mr Molotov discusses bombs; from address before General assembly of the United nations. Metal Prog 50:956 N '46
Naval replacement. il Engineer 183:19-21 Ja 3 '47
Peace in the atomic age. L. Szilard. Metal Prog 51:764 My '47
Plan for controlling atomic energy and weapons; recommendations of United nations Atomic energy commission. il Metal Prog 51:88-90 Ja '47
Public in survey votes against destroying atom bomb; Gallup poll. Iron Age 158:105 D 26 '46
Role of instruments in the atomic bomb project. W. P. Jesse. Chem & Eng N 24:2906-9 N 10 '46
Russian plan for atomic control. Metal Prog 51:444 Mr '47
Scientist in war time. E. Appleton. diags Inst Mech Eng J & Proc 154:Proc 304-7 D '46; Same cond. Engineer 180:417-19 N 23 '45
Scientists blamed for panic leadership. Chem & Eng N 25:778 Mr 17 '47
Significance of atomic energy. H. B. Hass. S A E J 55:48-9+ F '47
Soviets push bomb research. Chem & Eng N 25:1075-6 Ap 14 '47
U.S. atom superiority increasing. B. McMahon. Comm & Fin Chr 166:1023 S 11 '47
Unmasks German atom bomb project. S. A. Goudsmit. Chem & Eng N 25:3216-17 N 3 '47
What price nuclear power? A. W. Kramer. Power Pl Eng 51:112-14+ Je '47
Who gave away what secrets? A. W. Kramer. il Power Pl Eng 51:108-11 Ap '47

Manufacture
Ceramics and nucleonics role of ceramics in the Manhattan project; abstract. A. L. Johnson. Brick & Clay Rec 110:62 My '47
General electric company's part in Manhattan district electromagnetic process. T. R. Rhea. il Gen Elec R 50:11-12 Ap '47
Special materials solved corrosion problems at Oak Ridge. R. J. Schrader and A. De Haan. il diags Chem Eng 53:96-101 N '46

Radiological effect
Bikini; documentary photographs, abstract paintings, and meteorological charts. il Fortune 34:156-61 D '46
Bikini experiment; the largest single industrial hygiene project in history. J. H. Sterner. Ind Med 16:279-81 Je '47
Genetic effects of the atomic bombs in Hiroshima and Nagasaki; genetics conference, committee on atomic casualties, National research council. Science 106:331-3 O 10 '47
What price nuclear power? A. W. Kramer. Power Pl Eng 51:114+ Je '47

Testing
Bikini; documentary photographs, abstract paintings, and meteorological charts. il Fortune 34:156-61 D '46
Bikini observations and their significance. H. Pratt and A. Van Dyck. Inst Radio Eng Proc 34:930-3 D '46; Same. il Elec Eng 66: 1-5 Ja '47
Electronics; workhorse at Bikini. D. G. Fink and others. il Elec Eng 66:6-10 Ja '47
Motion pictures on operation crossroads. R. J. Cunningham. Soc Motion Picture Eng J 48:554-9 Je '47
Operation crossroads; measurements task of colossal magnitude. H. W. Bousman. il Gen Elec R 50:10-13 My '47
Spindle Eye; ship used to send press dispatches, radiophotos and broadcasts at operation crossroads. M. J. Luichinger. il Radio N 36:32-4+ D '46
What happened at Bikini? A. W. Kramer. il Power Pl Eng 50:84-9 N '46

ATOMIC casualties, Committee on. See National research council—Committee on atomic casualties

ATOMIC clock. See Relativity (physics)

ATOMIC energy commission (United nations)
UN atomic energy commission submits first report. Chem & Eng N 25:305+ F 3 '47

ATOMIC energy commission (United States)
Accent on war; transfer of research on atom-powered planes from army to AEC. Bsns W p22 Ag 23 '47
Advisory committee for biology and medicine. Science 106:285 S 26 '47
Advisory scientific personnel committee. Science 106:224 S 5 '47
Asks greater participation in program; second semiannual report to Congress. Steel 121:69 Ag 18 '47
Assume control of Manhattan engineer district. Science 104:590 D 20 '46
Atom control; personnel and policy. R. B. Colborn. Bsns W p34+ Mr 15 '47
Atom research broadens. R. B. Colborn. il Bsns W p32+ Mr 22 '47
Atom, top secret. Economist 152:281-2 F 15 '47; Same. Iron Age 159:111+ F 27 '47
Atomic commission gets military-liaison body. Oil Paint & Drug Rep 150:5 N 11 '46

ATOMIC energy commission (United States)—*Continued*
Atomic control goes to civil board; President Truman names manager. Comm & Fin Chr 165:321 Ja 16 '47
Atomic crossroad; industry must take bigger part in research. il Bsns W p21-2 Ag 2 '47
Atomic energy commission. Chem & Eng N 25:504 F 24 '47
Atomic energy commission appointed. Product Eng 17:147 D '46
AEC board appointed as industry adviser for atomic research. Iron Age 160:116 O 23 '47; Oil Paint & Drug Rep 152:5 O 13 '47
Atomic energy commission girded for action. Product Eng 18:155-7 Ag '47
AEC reports on problems of atomic energy program. Power 91:653+ S '47
Atomic energy commission shipped 1000 radioisotopes. Iron Age 160:124-5 Ag 7 '47
AEC takes over one of last atomic jobs in military hands; research project on use of nuclear energy for propulsion of aircraft. Elec World News ed 128:11 Ag 23 '47
Atomic energy health aspects study planned. Oil Paint & Drug Rep 152:4 S 15 '47
Atomic energy; its future and yours; pattern for control. Elec World 127:106-7 Mr 15 '47
Atomic energy raw materials unit formed. Oil Paint & Drug Rep 152:60 O 20 '47
Atomic shift; commission is getting set for armament race. Bsns W p26+ Je 7 '47
Civilian-controlled Atomic energy commission takes over entire atomic development program. Chem & Eng N 25:69 Ja 13 '47
David Lilienthal approved as Atomic energy commission chairman. Chem & Eng N 25: 1101 Ap 21 '47
Export of radioactive tracers barred. Chem & Eng N 25:2018 Jl 14 '47
First report. D. E. Lilienthal and others. Science 195:199-204 F 21 '47
Great labs organize atom research to serve America. R. Colborn. Power 91:296-9 My '47
Industry's stake in atomic energy. R. Colborn. il Chem Eng 54:96-100+ Mr '47
Isotope distribution program, Isotopes branch. Science 106:175-9 Ag 29 '47
Law and atomic energy. E. B. Stason. Ann Am Acad 249:89-98 Ja '47
Medical research planned by Atomic energy commission. Chem & Eng N 25:2086-8 Jl 21 '47
New atom board names. Pub Util 38:662-3 N 21 '46
New Atomic energy commission. Science 104: 441 N 8 '46
Organization growing slowly, but outline is evident. Elec World News ed 127:4-5 My 17 '47
President Truman signed order transferring atomic energy program to civilian hands. Science 105:37 Ja 10 '47
Problems of management. C. L. Wilson. Tech R 49:529-30+ Jl '47
Regulations for control of uranium and thorium. Chem & Eng N 25:916 Mr 31 '47
Report of U.S. Atomic energy commission. Metal Prog 52:378-9 S '47
Scientists back Lilienthal. Chem & Eng N 25: 599 Mr 3 '47
United States Atomic energy commission; sketches of members. M. Weiss. pors Metal Prog 51:978-80 Je '47
Voters want to see Lilienthal confirmed; Gallup poll. Iron Age 159:103 Mr 20 '47

Insurance problems

Atom insurance; life underwriters set up job code. Bsns W p 19 S 6 '47

Patent policy

Patent policy o.k.; putting atomic matters outside normal scope of patent system. Bsns W p48+ O 4 '47; Excerpts. Elec World 128:45 S 27 '47

ATOMIC patents. See Atomic energy commission (United States)—Patent policy

ATOMIC power
Application of nuclear energy to power generation; abstract. H. A. Winne. diag S A E J 55:56 S '47
Army reveals status of atomic power development. diag Iron Age 158:137+ D 12 '46
Atomic aircraft deemed unnecessary. L. Alvarez. Aviation N 6:10+ D 23 '46
Atomic crusade and its social implications. A. H. Compton. Ann Am Acad 249:9-19 Ja '47
Atomic dilemma. B. Brodie. Ann Am Acad 249:32-41 Ja '47
Atomic-electric power plant designed. diag Product Eng 18:155 Ja '47
Atomic energy. diags Power Pl Eng 51:80-1 Ja '47
Atomic energy. W. Kelly. Edison Elec Inst Bul 14:409-11+ D '46
Atomic energy. W. S. Parsons. Edison Elec Inst Bul 15:217-19 Je '47; Excerpts. Elec World 127:97 Je 7 '47
Atomic energy; abstract. P. I. Dee. Chem & Ind p414 N 16 '46
Atomic energy and electricity; abstracts. J. D. Cockcroft. Electrician 139:42-3 Jl 4 '47; Elec R (Lond) 141:8+ Jl 4 '47
Atomic energy and state; abstract. R. Renwick. Electrician 139:929 S 26 '47
Atomic energy centre; work to begin in Lake district. Chem Age (Lond) 57:147 Ag 2 '47
Atomic energy for power generation; abstract. C. P. Cabell. Chem & Eng N 25:433 F 17 '47
Atomic energy in industry. I. Perlman. J Chem Educ 24:115-20 Mr '47
Atomic energy in industry. H. A. Winne. bibliog diags Elec Eng 66:631-8 Jl '47
Atomic energy in industry; abstract. I. Perlman. Chem & Eng N 24:2918 N 10 '46
Atomic energy in 1946. il Engineer 183:2-3, supp 1 Ja 3 '47
Atomic energy in the world of tomorrow. B. Pregel. il Mag of Wall St 80:19-21 Ap 12 '47
Atomic energy; its future and yours. diags Elec World 127:101-8 Mr 15 '47
Atomic energy subsidiary of M. W. Kellogg seeks to dominate field. S. G. Ebert. Barron's 27:7-8 Jl 28 '47
Atomic-power engineering; some design problems. B. R. Prentice. bibliog diags Mech Eng 69:721-7 S '47
Atomic-power engineering; some nuclear problems. A. O. C. Nier. diags Mech Eng 69:728-31 S '47; Same cond. Power 91:605-7 S '47; Abstracts. Iron Age 160:138-41 Jl 10 '47; Chem Eng 54:252+ Ag '47
Atomic power for industrial applications remote; abstract. D. E. Lilienthal. Iron Age 160:112+ O 30 '47
Atomic power for industrial service. H. A. Winne. Gen Elec R 49:6-7 D '46
Atomic power pile project progresses at Oak Ridge without Energy Commission confirmation. il diag Manuf Rec 116:35, 54 Ap '47
Atomic power plant expected to be in operation by 1948. diag Steel 120:90+ Ja 27 '47
Atomic power plant seen reality in next 10 years. M. Burton. Manuf Rec 116:57 F '47
Atomic power; will it compete with power from coal? E. Snyder. Coal Age 52:85-8 Mr '47
Atomic power workers to get intensive training. Elec World 127:93 F 15 '47
Atomic-powered ramjet. A. L. Feldman. Mech Eng 69:499-500 Je '47
Atomic progress. R. B. Colborn. Bsns W p21-2+ Mr 8; 34+ Mr 15; 32+ Mr 22; 22+ Mr 29 '47
Benefits of nuclear energy and its products; abstract. A. H. Dowdy. Chem Eng 53:254+ D '46
Britain may get first electric power from nuclear fission. Elec World News ed 128:11 S 6 '47
California atomic energy conference, March 26-27. Chem & Eng N 25:1189 Ap 28 '47
Chicago pile; experiment in the development of atomic energy. Electrician 138:125-6 Ja 10 '47
Civil liberties in the atomic age; threat of military control. R. E. Cushman. Ann Am Acad 249:54-65 Ja '47
Design for harnessing atom to wheels of industry. diag Bsns W p17 N 23 '46
Development of atomic power no simple problem. Pub Util 38:822-5 D 19 '46
Eee equals em see squared; significance of the Einstein equation in production of atomic power; production of helium from hydrogen. A. W. Kramer. diags Power Pl Eng 51:80-5 F '47
Effect of atomic energy on scientific and technical publications. R. E. Peierls. Engineering 164:305, 318 S 26-O 3 '47
Electricity and atomic power. Electrician 138: 351-3 Ja 31 '47

ATOMIC power—*Continued*
Engineering in an atomic era. A. C. Klein. Mech Eng 68:1029-31 D '46; Same. Power Pl Eng 51:110-13 Ja '47; Same abr. Comm & Fin Chr 164:1778+ O 10 '46
Fairchild atomic project progresses; progress on application of nuclear energy to various types of aircraft power plants. Aviation N 7:9 Mr 3 '47
First atomic energy plant in Britain to be built soon. Elec World 128:55 Ag 16 '47
First public atomic power exhibit at Mid-America exposition, Cleveland, May 22-31. Science 105:521 My 16 '47
G.E.'s youngest V.P.; Chauncey Guy Suits. Fortune 35:134+ F '47
Industrial applications of atomic energy. H. E. Stanton. Western Soc E J 51:176-8 D '46
Industry and the atom. G. R. Harrison. il (front) Am Gas Assn Mo 29:159-60 Ap '47
Industry's stake in atomic energy. R. Colborn. il Chem Eng 54:96-100+ Mr '47
Industry's stake in the atom. R. Colborn. il diag Power 91:224-7, 296-9 Ap-My '47
International commission for atomic energy control proposed. A. Gromyko. Metal Prog 52:251 Ag '47
New atomic pile may solve key problems in generation. Elec World 128:33 Ag 30 '47
Nuclear energy and electric power. A. W. Kramer. diags Power Pl Eng 51:104-7 Mr; 101-5 My '47
Nuclear power; with diagram of power pile, suggested by F. Daniels. Metal Prog 50: 1204-5 D '46
Nucleonics and electronics. K. Henney. Electronics 20:80-1 Je '47
Petroleum vs. plutonium. C. Goodman. diags Am Pet Inst Proc 25(1):71-83 '45; Same. Pet Refiner 24:101-9 N '45; Same. Oil & Gas J 44:227-8+ N 17 '45; Same. Pet Eng 18:224+ S '47
Plan for controlling atomic energy and weapons; recommendations of United nations Atomic energy commission. il Metal Prog 51:88-90 Ja '47
Possibilities of nuclear energy for heat and power production. J. D. Cockcroft. il diags Inst Mech Eng J & Proc 156:Proc 206-11 S '47; Excerpt. Engineer 183:514-15 Je 13 '47; Abstract. Electrician 138:1597-9 Je 13 '47
Powers search far places for atomic energy resources. B. Ravits. Barron's 27:23-4 Mr 31 '47
Problems in atomic power development. A. W. Kramer. diags Power Pl Eng 51:104-7 S '47
Problems of atomic energy. F. Daniels. Ind Marketing 32:45-6+ Jl '47
Progress in engineering knowledge during 1946; atomic energy. P. L. Alger and others. il diags Gen Elec R 50:12-13 Mr '47
Prospectus on atomic power; with cost data; group of California scientists present a summary. Elec West 97:55-62 N '46
Report of U.S. Atomic energy commission. Metal Prog 52:378-9 S '47
Research in Germany on the technical application of atomic energy. W. Heisenberg. bibliog Chem & Eng N 25:2620-3 S 15 '47
Russian plan for atomic control. Metal Prog 51:444 Mr '47
Scientific vs. popular thinking on atomic energy. A. W. Kramer. il diag Power Pl Eng 51:112-15 Ag '47
Scientists seeking solution of atomic power problems. diag Elec World 126:87 N 23 '46
75 scientists to attend NEPA school at Oak Ridge; research on nuclear energy for propulsion of aircraft. Chem & Eng N 25:1950 Jl 7 '47
Structural design for nuclear power. diag Eng N 137:756 D 5 '46
What is nuclear energy? A. W. Kramer. il diags Power Pl Eng 51:108-12 Jl '47
When will atomic energy be an industrial power source? report of Atomic energy committee of New England council. Power 91:136+ F '47
World government and the control of atomic energy. H. W. Briggs. bibliog Ann Am Acad 249:42-53 Ja '47

See also
Atomic bombs

Bibliography
Papers on atomic energy; 30-page list (OTS-555) from Office of technical services. Chem & Eng N 25:804 Mr 17 '47

Economic aspects
Atom-powered city predicted. Sci Am 176:124 Mr '47
Atomic-bomb by-products. H. C. E. Johnson. il Sci Am 175:261-4 D '46
Atomic timetable; Lilienthal sees long wait for peacetime uses. Bsns W p24 O 18 '47
Atom's industrial sponsors. R. B. Colborn. il Bsns W p22+ Mr 29 '47
Engineering and economics of atomic power. J. H. Lum. bibliog il Chem Eng 54:122-5 O '47
Hazard of new inventions; effect of atomic energy on established power and fuel facilities? E. R. Abrams. Pub Util 38:651-7 N 21 '46

ATOMIC research
Atom research broadens. R. B. Colborn. il Bsns W p32+ Mr 22 '47
Atomic crossroad; industry must take bigger part in research. il Bsns W p21-2 Ag 2 '47
Atomic crusade and its social implications. A. H. Compton. Ann Am Acad 249:9-19 Ja '47
AEC board appointed as industry adviser for atomic research. Iron Age 160:116 O 23 '47
AEC reports on problems of atomic energy program. Power 91:653+ S '47
AEC takes over one of last atomic jobs in military hands; research project on use of nuclear energy for propulsion of aircraft. Elec World News ed 128:11 Ag 23 '47
Atomic energy in peacetime investigated by Associated universities. plan Chem & Eng N 25:846 Mr 24 '47
Atomic energy; its future and yours; new research horizons. Elec World 127:104-5 Mr 15 '47
Atomic laboratory to be built at Schenectady, New York. Heat & Ven 44:110-12 F '47
Atomic progress in power, research and isotopes. diag Power 91:63+ Ja '47
Atomic research center; Brookhaven national laboratory. il Mech Eng 69:321-3 Ap '47; Power 91:227 Ap '47
Atoms, electrons and engineers. T. E. Allibone. il diags Inst E E J 94 pt 1:165-71 Ap '47; Abstracts. Engineer 181:449 My 17 '46; Elec R (Lond) 138:762 My 17 '46; Electrician 136:1300-2 My 17 '46
Atom's industrial sponsors. R. B. Colborn. il Bsns W p22+ Mr 29 '47
Big increase in atom development indicated by budget request. il Chem Ind 60:246 F '47
Birth of atomic energy and its human meaning. A. H. Compton. Gen Elec R 50:9-15 Jl '47; Same. Elec Eng 66:857-63 S '47; Excerpts. Refrig Eng 54:350+ O '47
Brookhaven national laboratory, government-owned, government-financed atomic research project. Science 105:491 My 9 '47
Charting a course for atomic action; Knolls atomic power laboratory. il Bsns W p26 F 8 '47
Chicago U. is nucleonic leader. R. M. Hutchins. Iron Age 160:127 Ag 28 '47
Clinton goes back to U of C. il Bsns W p46+ O 4 '47; Chem & Eng N 25:2908 O 6 '47; Elec World News ed 128:13 O 4 '47; Science 106:365-6 O 17 '47; Power Pl Eng 51: 108-9 N '47
Conference on nuclear chemistry, Hamilton, Ontario. Can Chem & Process Ind 31:530-4, 542+ Je '47
Cyclotron in atomic energy developments. I. Perlman. Chem & Eng N 24:3032-5 N 25 '46
Electrical and allied developments of 1946; research and laboratory investigations. G Bartlett. il Gen Elec R 50:12-13 Ja '47
Electron and nucleus: lessons for those who can learn. K. T. Compton. Western Soc E J 52:56-61 Je '47
Electron in research. G. Thomson. Electrician 139:993-4 O 3 '47
Elementary theory of the chain-reacting pile. E. Fermi. Science 105:27-32 Ja 10 '47
Fifty years of atomic research. S. C. Lind. Chem & Eng N 25:2495-9 S 1 '47
G.E.'s youngest V.P.; Chauncey Guy Suits. Fortune 35:134+ F '47

ATOMIC research—*Continued*
Great labs organize atom research to serve America. R. Colborn. Power 91:296-9 My '47
Ground broken for atomic pile at Brookhaven. Steel 121:61 Ag 25 '47
Ion beams in high voltage tubes using differential pumping. E. S. Lamar and W. W. Buechner. bibliog diag J Ap Phys 18:22-7 Ja '47
New high-energy pile uses plutonium fuel. Power 91:725+ O '47
New navy research contract for development of a synchrotron. Science 105:280 Mr 14 '47
Nuclear energy; Navy bureau of ships organization for handling of nuclear matters. Mech Eng 69:592 Jl '47
Nuclear photography. Mech Eng 69:667-8 Ag '47
Nuclear physics and the future. M. L. Oliphant. Inst E E J 94 pt 1:304-8 Jl '47
Nuclear research for industry planned by National research council. Oil Paint & Drug Rep 151:5+ F 17 '47
Nuclear transformations in the new high energy ranges. G. T. Seaborg. Chem & Eng N 25:2819-22 S 29 '47
Nuclei formed in fission; decay characteristics, fission yields, and chain relationships; issued by the Plutonium project. bibliog Am Chem Soc J 68:2411-42 N '46; Same. Rs Mod Phys 18:513-44 O '46
Oak Ridge to get powerful atomic chain reactor pile. Oil Paint & Drug Rep 152:3 S 29 '47
Peacetime atomic pile at Brookhaven national laboratory. Mech Eng 69:854 O '47
Plan for world-wide atomic research. J. R. Oppenheimer. Chem & Eng N 25:1804 Je 23 '47
Possibilities of nuclear energy for heat and power production. J. D. Cockcroft. il diags Inst Mech Eng J & Proc 156:Proc 206-11 S '47
Private industry to play part in atomic research. Elec World 127:92 F 15 '47
Problems in atomic power development. A. W. Kramer. diags Power Pl Eng 51:104-7 S '47
Pulse analyser for nuclear research. H. F. Freundlich and others. bibliog il diags R Sci Instr 18:90-100 F '47
Race to judgment day; the locations of the world's atomic production and research centers; map. Iron Age 159:123 Je 26 '47
Radiation chemistry. M. Burton. bibliog diags J Phys & Colloid Chem 51:611-25 Mr '47
Radioactive isotopes; widespread uses, transport difficulties; Clinton laboratories. Chem Age (Lond) 57:261-3 Ag 23 '47
Recorder and timer for short intervals; designed to meet the needs of nucleonic research. W. H. Bliss. il diags Electronics 20:126-7 N '47
Research in Germany on the technical application of atomic energy. W. Heisenberg. bibliog Chem & Eng N 25:2620-3 S 15 '47
Story of atomic energy. F. Soddy. il diags Engineering 164:313-17, 361-4, 409-11 O 3, 17, 31 '47
Surveys atomic research. S. C. Lind. Chem & Eng N 25:1661 Je 9 '47
Theoretical physics in the metallurgical laboratory of Chicago. E. P. Wigner. bibliog J Ap Phys 17:857-63 N '46
Westinghouse plans to coordinate activities for atomic research; annual report. il Iron Age 159:127 Ap 17 '47
What is the atom's industrial future? R. B. Colborn. il Bsns W p21-2+ Mr 8 '47

See also
Argonne national laboratory
United States—War department—Knolls atomic power laboratory

Bibliography
Atomic energy; British reports released. Chem Age (Lond) 57:471, 561-2 O 4, 25 '47

ATOMIC scientists, Emergency committee of. See Emergency committee of atomic scientists

ATOMIC theory
Story of atomic energy. F. Soddy. Engineering 164:361-4, 409-11 O 17, 31 '47

ATOMIC weights
Continued fairy story of atomic weights. A. Standen. J Chem Educ 24:453 S '47
Fairy story of atomic weights. A. Standen. J Chem Educ 24:143-5 Mr '47
Twelfth report of the committee on atomic weights of the International union of chemistry. G. P. Baxter and others. Chem Soc J p980-2 Jl '47
Thirteenth report of the committee on atomic weights of the International union of chemistry. G. P. Baxter, M. Guichard and R. Whytlaw-Gray. Am Chem Soc J 69:731-6 Ap '47; Same. Chem Soc J p983-8 Jl '47
William Prout, 1785-1850. S. Glasstone. J Chem Educ 24:478-81 O '47

ATOMIZERS
Modified atomizer for the flame photometer. V. Toscani. diags Anal Chem 19:820 O '47
New-type atomizer for large-scale application of 2,4-D. C. L. Hamner and H. B. Tukey. Science 105:104-5 Ja 24 '47
Pressurized perfume; an aerosol package. il Mod Packaging 20:107 D '46

ATOMS
Atomic particles and light quanta. H. Greinacher. il diags Engineering 162:478-80, 502-3 N 15-22 '46
Atomic radii and interatomic distances in metals. L. Pauling. bibliog Am Chem Soc J 69:542-53 Mr '47
Atomic structure and transmutation. H. Greinacher. il Engineering 162:406-7, 429-30 O 25-N 1 '46
Atoms, electrons and engineers. T. E. Allibone. il diags Inst E E J 94 pt 1:165-71 Ap '47
Chart of nuclei on trilinear coordinates. D. E. Hull and W. H. Sullivan. bibliog diags J Chem Educ 24:436-7 S '47
Compatibility of primary protons with the atom-annihilation hypothesis. H. Turner. Phys R 72:512-13 S 15 '47
Dependence of nuclear radius on the mass number. E. Amaldi and B. N. Cacciapuoti. Phys R 71:739-40 My 15 '47
Distribution of electric charge in nuclei. B. Davison and W. H. Watson. Phys R 71:742 My 15 '47
Free fall of atoms and the measurement of the velocity distribution in a molecular beam of cesium atoms. I. Estermann and others. diags Phys R 71:238-49 F 15 '47
Further experiments on the elastic single scattering of electrons by nuclei. W. W. Buechner and others. Phys R 72:678-9 O 15 '47
Integral and rational numbers in the nuclear domain and their significance. E. E. Witmer. Phys R 71:126 Ja 15 '47
Interaction between meson and nucleon. C. L. Critchfield. bibliog Phys R 71:908-9 Je 15 '47
Interaction of neutrons with electrons in lead. W. W. Havens, jr. and others. bibliog Phys R 72:634-6 O 1 '47
Mean free paths of cesium atoms in helium, nitrogen, and cesium vapor. I. Estermann and others. diags Phys R 71:250-7 F 15 '47
Neutron-proton and neutron-carbon scattering cross sections for fast neutrons. C. L. Bailey and others. bibliog diag Phys R 70:583 N 1 '46
Nucleus as a crystalline solid. J. G. Winans. Phys R 72:435-6 S 1 '47
Pais' *f*-field theory and the mirror nuclei. A. S. Wightman. Phys R 71:447-8 Ap 1 '47
Possibility of conditional saturation in nuclei. E. Feenberg and H. Primakoff. Phys R 70:980-1 D 1 '46
Primary cosmic-ray protons and the atom-annihilation hypothesis. R. A. Millikan and others. Phys R 72:513 S 15 '47
Representation of single particle operators in two-particle form. E. Feenberg. Phys R 70:768-9 N 1 '46
Resonance fluorescence of nuclei. L. I. Schiff. Phys R 70:761-2 N 1 '46
Scattering and absorption of particles by atomic nuclei. H. Feshbach and others. bibliog Phys R 71:145-58 F 1 '47; Correction. 71:564 Ap 15 '47
Semi-empirical theory of the nuclear energy surface. E. Feenberg. bibliog Rs Mod Phys 19:239-58 Jl '47

ATOMS—*Continued*
Structure of the quadrielectron. A. Ore. Phys R 71:913-14 Je 15 '47
Theory of nuclear Coulomb energy. E. Feenberg and G. Goertzel. bibliog Phys R 70: 597-602 N 1 '46
Theory of the slowing down of neutrons by elastic collision with atomic nuclei. R. E. Marshak. bibliog(41 ref) Rs Mod Phys 19: 185-238 Jl '47
Weinstein's variational method. W. Kohn. bibliog Phys R 71:902-4 Je 15 '47

See also
Atomic research
Atomic theory
Deuterons
Electrons
Isosterism
Molecules
Neutrons
Nuclear spin
Positronium
Protons
Radiation
Spectrum
Stereochemistry

Disintegration

Alleged gamma-ray of N^{13}. L. M. Langer and others. bibliog Phys R 71:906 Je 15 '47
Alpha-particles associated with fission. E. O. Wollan and others. bibliog il Phys R 72: 447-51 S 15 '47
Angular distributions in nuclear reactions. E. Eisner and R. G. Sachs. Phys R 72:680-1 O 15 '47
Atomic-power engineering; some nuclear problems. A. O. C. Nier. diags Mech Eng 69:728-31 S '47; Same cond. Power 91:605-7 S '47
Calculation of angular distributions in resonance reactions. G. Breit and B. T. Darling. bibliog Phys R 71:402-5 Ap 1 '47
Calorimetric determination of the energy produced by plutonium (239). J. W. Stout and W. M. Jones. bibliog diag Phys R 71: 582-5 My 1 '47
Charts of isotopes and of disintegration and transmutation reactions. H. M. Spencer. fold chart J Chem Educ 24:19-20 Ja '47
Cloud-chamber studies of electronic and nuclear stopping of fission fragments in different gases. J. K. Bøggild and others. bibliog il Phys R 71:281-7 Mr 1 '47
Conservation of momentum in the disintegration of Li^8. R. F. Christy and others. bibliog il diags Phys R 72:698-711 O 15 '47
Delayed neutrons in plutonium and uranium fission. W. C. Redman and D. Saxon. bibliog diag Phys R 72:570-5 O 1 '47
Determination of the ranges of the fission fragments emitting delayed neutrons; chemical identification of the 4.51-sec. delayed neutron activity. N. Sugarman. bibliog diag J Chem Phys 15:544-51 Ag '47
Directional properties of fission neutrons. R. R. Wilson. il plan Phys R 72:189-92 Ag 1 '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Disintegration by consecutive orbital electron captures $_{56}Ba^{131} \rightarrow {}_{55}Cs^{131} \rightarrow {}_{54}Xe^{131}$. F. Yu and others. Phys R 71:382 Mr 15 '47
Disintegration energies of Na^{24} and Al^{28}. W. H. Barkas. bibliog Phys R 72:346 Ag 15 '47
Disintegration of Li^7 by deuterons. W. E. Bennett and others. bibliog Phys R 71:11-14 Ja 1 '47
Disintegration scheme of Sc^{46}. C. Peacock and R. G. Wilkinson. Phys R 72:251-2 Ag 1 '47
Division of nuclear charge in fission. R. D. Present. bibliog Phys R 72:7-15 Jl 1 '47
Electron-neutrino angular correlation in beta-decay. D. R. Hamilton. Phys R 71: 456-7 Ap 1 '47
Engineering and economics of atomic power. J. H. Lum. bibliog il Chem Eng 54:122-5 O '47
Fifty years of atomic research. S. C. Lind. Chem & Eng N 25:2495-9 S 1 '47
Fission cross section of Np^{237}. E. D. Klema. Phys R 72:88 Jl 1 '47
Fission of bismuth, lead, thallium, platinum, and tantalum with high energy particles. I. Perlman and others. Phys R 72:352 Ag 15 '47; Abstract. Chem & Eng N 25:2428 Ag 25 '47
5.3 day isotope in element 61. G. W. Parker and others. Phys R 72:85 Jl 1 '47
Formation of radium E and polonium by deuteron bombardment of bismuth. H. E. Tatel and J. M. Cork. Phys R 71:159-64 F 1 '47
Giant cyclotron produces 22 fragments from single nucleus. il Chem & Eng N 25:2144 Jl 28 '47
Long range alpha-particles emitted in connection with fission; preliminary report. G. Farwell and others. diag Phys R 71:327-30 Mr 15 '47; Correction. 71:639 My 1 '47
New fission processes of uranium nuclei. T. San-Tsiang and others. bibliog il Phys R 71:383-4 Mr 15 '47
Nuclear excitation functions; $Al^{27}(d,p,\alpha)Na^{24}$. E. T. Clarke. bibliog Phys R 71:187-91 F 1 '47
Nuclear photography. Mech Eng 69:667-8 Ag '47
Nuclear physics and the future. M. L. Oliphant. Inst E E J 94 pt 1:304-8 Jl '47
Nuclei formed in fission; decay characteristics, fission yields, and chain relationships; issued by the Plutonium project. bibliog Am Chem Soc J 68:2411-42 N '46; Same. Rs Mod Phys 18:513-44 O '46
Photo-fission in heavy elements. G. C. Baldwin and G. S. Klaiber. bibliog diags Phys R 71:3-10 Ja 1 '47
Proposed methods of detecting the neutrino. K. C. Wang. bibliog Phys R 71:645-6 My 1 '47
Range-momentum measurements of particles emitted in nuclear disintegrations induced by 100-Mev X-rays. G. S. Klaiber and others. bibliog il diags Phys R 71:649-56 My 15 '47
Resonances in the disintegration of fluorine by protons. W. E. Bennett and others. bibliog diags Phys R 70:882-90 D 1 '46
Studies of the delayed neutrons; decay curve and the intensity of the delayed neutrons; chemical isolation of the 56-second and the 23-second activities. A. H. Snell and others. bibliog diags Phys R 72:541-9 O 1 '47
Time required for the fission process. R. R. Wilson. il diag Phys R 72:98-100 Jl 15 '47
Total disintegration energy of Na^{24}. E. C. Barker. bibliog Phys R 71:453 Ap 1 '47
Width of 985-Kev Al (p,γ) resonance. R. S. Bender and others. Phys R 71:905 Je 15 '47
Yield of nuclei formed by fission. A. J. Dempster. bibliog Phys R 72:431 S 1 '47
Yield of photo-neutrons from U^{235} fission products in heavy water. S. Bernstein and others. diag Phys R 71:573-81 My 1 '47

Models

Classical model for the nucleus. J. G. Winans. Phys R 71:379 Mr 15 '47
Dynamics of a square lattice. E. W. Montroll. J Chem Phys 15:575-91 Ag '47
Model of an oxygen atom. W. O. Brooks. il J Chem Educ 24:245 My '47

Size

Atomic size and the periodic table. J. A. Campbell. il J Chem Educ 23:525-9 N '46

ATTACHMENT and garnishment
Assured's judgment creditor can recover only limit of policy though insurer negligent in failing to settle. Weekly Underw 157:579 S 6 '47
Rights of creditors of insured and beneficiary. C. C. Jones, jr. East Underw 48:138+ pt 2 O 3 '47
Rights of spouse and creditor in inter vivos trusts. R. P. Goldman. bibliog Trusts & Estates 85:305-11 O '47

ATTAPULGITE
Adsorptive mineral product. Chem & Eng N 25:2651 S 15 '47
Colloid chemistry of the clay mineral attapulgite. C. E. Marshall and O. G. Caldwell. il J Phys & Colloid Chem 51:311-20 Ja '47
Hydrated silicate. Chem Eng 54:167 S '47

ATTASOL
Adsorptive mineral product. Chem & Eng N 25:2651 S 15 '47
Colloidal clay. Chem Ind 61:442+ S '47
Hydrated silicate. Chem Eng 54:167 S '47

ATTICS
Cool breezes for hot summer days; attic ventilating fans. il diag Am Bld 69:99 Jl '47
Ten points to guide your attic fan installations. Sheet Metal Worker 38:55-6+ My '47

ATTITUDE (psychology)
Custom made men; molding employee attitudes; National schools in Los Angeles. E. C. Stodel. il Diesel Power 25:44+ Je '47
Psychology of social change. D. G. Marquis. Ann Am Acad 249:75-80 Ja '47
Study of relationship in industry. J. J. Gillespie and A. K. Rice. Engineer 183:544-6 Je 20 '47

ATTLEE, Clement Richard, 1883-
Attlee's popularity down sharply since his election; Gallop poll. Iron Age 159:105 F 20 '47

ATTRACTIVE nuisance. See Nuisance

AUCTIONS
Auction forecast. Bsns W p22 Mr 1 '47
Bank does farm auction business; Merchants national bank and trust company of Syracuse, N.Y. il Burroughs Clearing House 31:6-7 Jl '47
Commissions, loans, and depositors come from clerking farm sales; Commercial national bank, Hillsboro, Ore. A. H. Abts. il Bankers Mo 63:564 N '46

AUDIT bureau of circulations
Audited weeklies. Bsns W p53 D 21 '46
Hooper defends ratings, lists ABC deficiencies. Ptr Ink 218:101 F 28 '47
Promotion of readership studies forces defense of factual circulation data, ABC hears. W. H. Davis. Ptr Ink 221:105 O 24 '47
Rising advertising costs discussed. P. S. Ellison and J. C. Cornelius. Adv & Sell 39: 52+ N '46

AUDITING
Accounting and auditing for the United nations. J. B. Payne. J Account 83:129-34 F '47
Auditee speaks. J. A. Dowling. N A C A Bul 28:669-72 F 1 '47
Auditing cash forty years ago. J Account 84:340-1 O '47
Auditing practice forum. V. Z. Brink, ed. J Account 83:62-5 Ja '47 [cont monthly]
Defalcation in relation to audit, internal control, and fidelity bonds. J. L. Carey. J Account 83:353-5 Ap '47
Deferred credits. H. R. Howell. J Account 83:325-6 Ap '47
In quest of an audit principle. J. F. Blair. J Account 83:117-19 F '47
More comments regarding second reconciliations. J Account 84:61-2 Jl '47
Reporting events occurring subsequent to close of fiscal period. C. G. Blough. J Account 83:229-34 Mr '47
Three audit principles. A. C. Littleton. J Account 83:280-2 Ap '47
Verification of traffic and transportation functions. D. J. Menges. N A C A Bul 28: 1271-9 Je 15 '47

See also
Auditors' reports
Bank auditing

Internal control

Coordination between public accountants and internal auditors. W. Ranking. J Account 83:26-30 Ja '47
Coördination of independent public accountants and internal auditors. J Account 83:152 F '47
Internal control through mailing W-2 forms. J Account 84:142-3 Ag '47; Discussion. J. Marker. 84:339-40 O '47
Inventories and the internal auditor. G. A. Bricault and C. D. Marshall. N A C A Bul 28:377-90 N 15 '46
Investigation of internal control. J. H. Stewart. J Account 82:477-81 D '46
Steps to be taken in investigation of system of internal control. C. R. Macklin. J Account 84:207-13 S 47

AUDITORIUMS, School. See School auditoriums

AUDITORS
Auditors are not well trained; an indictment of educational methods. C. A. Smith. J Account 84:214-15 S '47

AUDITORS' reports
Audit reports should be planned when audit program is laid out. T. Herz. J Account 84:286-8 O '47
Notes on not being misled; what does an auditor's statement mean? Credit & Fin Management 49:13-15 Ag '47; Same, J Account 84:171-3 Ag '47

AUDOGRAPH. See Dictating machines

AUFFMORDT, C. A., and company
Auffmordt ante-dates U.S. fabric industry. Rayon 28:358 Jl '47

AUGER showers. See Cosmic rays—Showers

AUGUSTA, Maine

Water supply

Copper sulphate distributing craft. S. S. Anthony. il Water & Sewage Works 94:343-4 S '47

AURIN
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

AUSTENITE
Determination of austenite grain size in cast steels. M. F. Hawkes. il Iron Age 159:46-51 Mr 13 '47
Induction hardening and austenitizing characteristics of several medium carbon steels. D. L. Martin and W. G. Van Note. il Am Soc for Metals Trans 36:210-44 bibliog(p242-4); Discussion. 244-53 '46
Rate of diffusion of molybdenum in austenite and in ferrite. J. L. Ham. Am Soc for Metals Trans 35:331-55 bibliog(p354-5); Discussion. il 355-61 '45

AUSTIN, James Bliss, 1904-
Heads United States Steel research laboratory. bibliog por Am Cer Soc Bul 26:1-5 Ja 15 '47

AUSTIN motor company
Statement by the chairman at ordinary general meeting. L. P. Lord. Economist 151: 1020-1 D 21 '46

AUSTRALASIA

See also
Banks and banking —Australasia

AUSTRALIA

See also
Airlines—Australia
Hospitals—Australia
Mines and mineral resources—Australia
Plastic industries—Australia
Steel industry and trade—Australia

Commerce

Australian oversea trade. Textile Inst J 37: P533-6 N '46

Commercial policy

Exportation of additional goods restricted; import licensing. For Comm W 28:14 Ag 23 '47
Imports from nonsterling countries drastically reduced. For Comm W 29:8 O 4 '47

Constitutional law

Australia and the international labour conventions. K. H. Bailey. bibliog Int Labour R 54:285-308 N '46

Defenses

Australian defence plans. Economist 153:23 Jl 5 '47

Foreign relations

Australia and the Japanese treaty. Economist 153:311-12 Ag 23 '47

Industries and resources

Industrial research advances in Australia and New Zealand. R. C. Leslie. il For Comm W 28:5-7+ Ag 9 '47
Wool in Australia; portfolio. il Fortune 35: 94-7 Ja '47

AUSTRIA
Austria gambles on the future. W. G. Bowman. il Eng N 138:975-6 Je 19 '47

See also
Hydroelectric plants —Austria
Iron works—Austria
Land tenure—Austria

AUSTRIA—*Continued*

Allied military government

Austria; advance post in Europe. F. A. Hayek. Comm & Fin Chr 164:2745+ N 28 '46

Divided Austria. Economist 151:1002-3 D 21 '46

Our economic operations in Austria. H. M. Bratter. Comm & Fin Chr 164:3026+ D 12 '46

Vienna is battleground of East and West. R. Smith. Bsns W p22 S 27 '47

Commerce

Austria between two plans. Economist 153: 646 O 18 '47

Commercial policy

Government promotion and control of foreign trade. For Comm W 26:16 Mr 15 '47

Transitory customs law reinstates pre-Anschluss duties with provision for reduction or refunding. For Comm W 27:12 My 31 '47

Economic conditions

Austria to-day; the struggle to live. R. L. Sivard. il map Dun's R 55:21-3+ S '47

Austria's future dependent on American help. H. M. Bratter. Comm & Fin Chr 164: 2882+ D 5 '46

News by countries. For Comm W 27:12-13 Ap 26; 28:11-12 Ag 9; 29:11 O 11 '47

Outlook for Austria's reconstruction. V. Kienbock. Comm & Fin Chr 164:2604+ N 21 '46

Economic policy

Nationalization law for Austrian basic industry. For Comm W 27:12-13 Ap 26 '47

New wage-price-tax program adopted. For Comm W 28:8 S 20 '47

Economic relations

United States

America has stake in Austrian reconstruction. E. H. Weinwurm. Comm & Fin Chr 165:1384+ Mr 13 '47

Industries and resources

Austria's economic dilemma. Bsns W p97 Je 21 '47

AUTHORSHIP

See also

Advertising copy writers
Chemical writing
Radio authorship
Technical writing

AUTOCAR company

Output far above prewar. Barron's 26:7 D 16 '46

AUTOCLAVES

Autoclave design. C. A. Long. il Machine Design 19:101-4 Ag '47

AUTOCOLLIMATOR. See Collimators

AUTOGIROS

Practical engineering of rotary wing aircraft. P. H. Stanley; J. E. McDonald; H. S. Campbell. bibliog il diags Aviation 45: 55-65 Jl; 76-82 Ag; 67-70 S; 74-7 O; 62-3 N; 90-1 D '46; 46:62-3+ Ja; 58-9 F; 62-3+ Ap; 54-7 Je '47; [cont as] Aviation W 47: 20+ Ag 25; 29-30 O 6 '47

AUTOMATIC machinery. See Machinery, Automatic

AUTOMATIC selling. See Vending machines

AUTOMATIC telephone. See Telephone, Automatic

AUTOMOBILE accessories industry

Auto equipment makers should have good year. C. R. Sutton. Barron's 27:7 Ap 28 '47

Automotive trade clinics; how to plan them. Sales Management 59:82 Jl 15 '47

Could be a three billion dollar parts year if raw materials are available. C. O. Skinner. Automotive & Aviation Ind 96:17+ F 1 '47

Go West with a gadget. Fortune 35:151 My '47

Report progress in fight against mounting costs; Monroe auto equipment co. Steel 121:64 S 29 '47

Sales ideas? Fram gets them right out of the field. H. E. Robinson. Sales Management 57:113-14+ D 1 '46

Year-round line; F. L. Jacobs co., auto supply firm, integrating home appliances into its production setup. Bsns W p50 D 14 '46

Advertising

Pep boys—Manny, Moe & Jack. R. Cole. Adv & Sell 40:36+ Ap '47

Securities

Divergent trends in motor accessories; with financial survey of leading stocks. C. F. Morgan. il Mag of Wall St 80:604-6 Ag 30 '47

Diversified stake in auto accessories; with analysis of financial position of four leading firms. G. S. Kent. il Mag of Wall St 80:164+ My 10 '47

Factors dominating motor accessories; with financial survey of leading stocks. W. Beecher. Mag of Wall St 79:611-12+ Mr 1 '47

Statistics

U.S. exports of automotive products, 1942-1946; tabulation. Automotive & Aviation Ind 96:114 Mr 15 '47

Wholesale value of repair parts and accessories production, 1933-1946; 1946 volume of parts and accessory sales by states at wholesale prices, estimated; tabulations and chart. Automotive & Aviation Ind 96: 112 Mr 15 '47

AUTOMOBILE accidents

Connecticut and Washington, D.C. named grand award winners in 1946 national traffic safety contest. Nat Underw 51:33 Ap 10 '47

Court holds Queens utility not liable in accident suit involving failure of street lights. Elec World News ed 128:20 Ag 9 '47

Highway situation laid to public indifference. W. E. Hall. Weekly Underw 156:686 Mr 8 '47

Improving highway safety. R. A. Stapells. Roads & Bridges 85:130+ S '47

Mayor proves intoxicated auto drivers chief accident cause. D. A. Quarles. Weekly Underw 156:351 F 1 '47

Spectrophotometer for FBI; can trace cars used by hit-and-run drivers; abstract. D. J. Parsons. Electronics 20:166+ N '47

Traffic safety program credited with saving 6800 lives in year. maps Roads & Sts 90: 90-1 Jl '47

Travelers' booklet You bet your life dramatizes 1946 auto accident toll. il East Underw 48:31 My 2 '47; Weekly Underw 156:1224 My 3 '47

Trends in highway accidents. G. H. Gallup. Roads & Bridges 84:73+ N '46

Truman hints national action to cut accidents. Weekly Underw 156:1690 Je 21 '47

What automobile insurance underwriters say; report on survey on accident causes by Hooper-Holmes bureau. V. W. Forkel. East Underw 48:45+ Ap 25 '47

What is visibility? court case involving night accident. L. T. Minchin. diag Light & Lighting 40:67-8 Ap '47

Statistics

Highway to destruction; automobile fatalities in 1946. T. J. V. Cullen. il map Spectator (Property ed) 13:12-18 O 9 '47; Same. Spectator (Life ed) 155:36-42 O '47

AUTOMOBILE assembly plants

California auto-assembly building has seismic and solar protection. il diags Eng N 138:53-5 Ja 9 '47

Chevrolet assembly plant shows way for postwar production. W. G. Patton. il Iron Age 160:80+ Jl 3 '47

Crosleys on the production line. J. Geschelin. Automotive & Aviation Ind 96:74+ My 15 '47

Factors affecting relocation of industry; power needs. H. F. Rech. Edison Elec Inst Bul 15:274-6 Jl '47

Flexibility of chassis assembly widened by suspended conveying system; Chevrolet's new plant. J. C. Webb. il Steel 121:72-4+ S 8 '47

General motors corporation; new plant for Truck & coach division at Pontiac, Mich. il Factory Management 105:B63-5 pt 2 Ap '47

AUTOMOBILE assembly plants—*Continued*
Latest body assembly techniques by Fisher. J. Geschelin. il Automotive Ind 97:28-30+ S 15 '47
Operations in a new Chevrolet-Fisher body assembly plant; illustrations with text. Mach 53:154-5 Ag '47
Ultramodern production features at Chevrolet's new Flint plant. J. Geschelin. il Automotive Ind 97:24-6+ Ag 15 '47

AUTOMOBILE brakes. See Brakes, Automobile

AUTOMOBILE camps. See Tourist camps, hostels, etc.

AUTOMOBILE clubs
See also
Automobile service clubs

AUTOMOBILE drivers
Disabled are learning to drive readily at N.Y. safety education center. Nat Underw 50:10 N 21 '46
Motorists must learn to use driving head. A. W. Magee. Weekly Underw 156:28-9 Ja 4 '47

Licenses

Survey reveals widespread trend to tighten drivers' license laws. B. Jones. East Underw 47:33 N 29 '46
318,000 lose right to drive in 1946. Nat Underw 51:18 Je 12 '47
Uniform driver licensing program. East Underw 48:44 Mr 28 '47; Same. Weekly Underw 156:1495 My 31 '47

Testing

Aetna Life Driverometer tests driver reactions with realistic film ride. Nat Underw 51:30a My 8 '47; Weekly Underw 156:1360 My 17 '47
Driver testing; Michigan consolidated gas co. F. M. Rudman. Am Gas Assn Proc 1946: 330-2

Training

To support driver education; annual awards will be granted to states by National conservation bureau. Weekly Underw 157:894 O 11 '47; Same abr. East Underw 48:40 O 10 '47
What can the automotive engineer do to promote safety in the schools? abstract. J. F. Creamer. S A E J 55:68 My '47

AUTOMOBILE driving
Highway construction and maintenance, training of new drivers essential if automotive market is not to be stunted artificially. G. Romney. Steel 121:65-6 Ag 11 '47

Equipment for disabled

Equipment for limbless motorists. il Engineer 183:171 F 14 '47

AUTOMOBILE engineering
Engineering process. M. C. Horine. S A E J 55:21-3 Ag '47
SAE annual meeting; abstracts of papers. il diags Automotive & Aviation Ind 96:30-6+ F 1 '47
Society of automotive engineers, annual meeting, Detroit. Iron Age 159:107-9 Ja 30 '47
SAE annual meeting, Detroit, Jan. 6-10; with review of technical papers. S A E J 55:17-36 F '47
S.A.E. weighs new techniques. Bsns W p44+ Ja 18 '47
See also
Automobile engines
Automobiles

Bibliography

Check list of SAE meetings papers. S A E J 55:65-7 Ja '47

Tables, calculations, etc.

New method of computing effective valve area. E. G. Ingram. diags Automotive Ind 97:34-5+ Ag 1 '47

AUTOMOBILE engineers
Making the most of engineering. J. C. Zeder. S A E J 55:17-21 S '47

AUTOMOBILE engines
Aircooled engines in Germany; abstract. A. M. Madlé. S A E J 54:70-1 N '46
Automotive gas turbine; abstract. G. L. Lentz. Mech Eng 69:233-4 Mr '47
Diesel for the Volkswagen. diags Automotive & Aviation Ind 96:54 Je 1 '47
Effect of crankcase ventilation on engine deposits; abstract. H. L. Moir and H. L. Hemingway. diags Automotive & Aviation Ind 96:34-5 Ja 1 '47
Ferrai Italian V-12 engine; drawing. Automotive & Aviation Ind 96:40 Ap 1 '47
New G.M. engine. Bsns W p52-3 Je 14 '47
Some problems of cylinder-bore wear. W. A. Robotham. Engineering 163:392-6 My 9 '47
See also
Automobiles
Motor bus engines
Motor truck engines

Bearings

Automotive bearings from the service viewpoint. H. W. Luetkemeyer. S A E J 55:49+ Jl '47
Engine bearings; trends and developments as indicated by recent patents. Automobile Eng 36:583-4 D '46
Present day bearings; abstract. E. Crankshaw. il diags S A E J 55:70-1 Ag '47

Cleaning

Auto laundry, new style. il Am Gas J 166:47 Mr '47

Cooling

Passenger car engine cooling. B. W. Bogan. diags S A E J 55:48-50+ My '47

Design

Design features of the 1948 Packard convertible. il diag Automotive & Aviation Ind 96:34-5+ My 1 '47
Design thirty years ago; the 1917 Bugatti 10-12 h.p. chassis. diags Automobile Eng 37:350 S '47
Development of the Skinner slide-valve engine. R. L. Skinner. il diag S A E J 55: 34-7 Ap '47
Do higher octane gasolines favor the V engine? P. M. Heldt. diags Automotive & Aviation Ind 96:30-2+ Je 15 '47
How silver brazing may simplify casting design. S. D. Heron. il diags Steel 120:90-1+ Ap 7 '47
Looking forward to future automobile engines. A. Taub. il diags Automotive & Aviation Ind 94:36-8+ N 1; 95:34-7+ N 15; 34-6+ D 1; 40-2+ D 15 '46
More efficient utilization of fuels; new high-compression automobile engines. C. F. Kettering. diags Oil & Gas J 46:73-4+ Jl 12 '47; Same cond. Pet Processing 2: 486-9 Jl '47; Same cond. S A E J 55:31-5+ Jl '47; Abstracts. Automotive & Aviation Ind 96:38-9+ Je 15 '47; Chem & Eng N 25:1801 Je 23 '47; Iron Age 159:74+ Je 12 '47; Mech Eng 69:594-5 Jl '47; Nat Pet N 39:11-12 Je 4 '47; Steel 120:61-2 Je 9 '47; Discussion. Pet Processing 2:489 Jl '47
New approach to cam design. W. M. Dudley. diags Machine Design 19:143-8+ Jl '47
Output of higher quality gasoline with greater mileage awaits advance in design of automobiles. R. P. Russell. Nat Pet N 39:39 Ap 23 '47
Private cars; a survey of components employed on current designs. il diags Automobile Eng Extra no 36:514-29 N 21 '46
Progress in engine design. J. Geschelin. Automotive & Aviation Ind 95:18-20+ N 15 '46
Smaller engines with more rugged construction will result from trend toward higher compression and increased efficiency. A. H. Allen. Steel 120:85-6 Je 23 '47
Trend in combustion chambers and fuel systems. A. T. Colwell and A. Taub. diags S A E J 55:30-3 Ap '47

Detonation

Application of fuels to engines. W. G. Lovell. S A E J 55:58-61 Ag '47
Development of detonation instrumentation for automotive vehicles; abstract. J. H. Goffe and J. W. Wheeler. il Automotive & Aviation Ind 96:36 F 1 '47
Octane versus conservation. E. O. Thompson. bibliog Pet Refiner 26:86-90 My '47

AUTOMOBILE engines—*Continued*

Efficiency

Compression ratio, or expansion ratio. Consumers Res Bul 20:32-3 O '47
How 12.5 compression ratio and current stock engines compare in performance; charts. Automotive Ind 97:32-3 Jl 1 '47
More efficient utilization of fuels; new high-compression automobile engines. C. F. Kettering. diags Oil & Gas J 46:73-4+ Jl 12 '47; Same cond. Pet Processing 2:486-9 Jl '47; Abstracts. Automotive & Aviation Ind 96:38-9+ Je 15 '47; Chem & Eng N 25: 1801 Je 23 '47; Iron Age 159:74+ Je 12 '47; Mech Eng 69:594-5 Jl '47; Nat Pet N 39: 11-12 Je 4 '47; Steel 120:61-2 Je 9 '47; Discussion. Pet Processing 2:489 Jl '47

Fuel

Application of fuels to engines. W. G. Lovell. S A E J 55:58-61 Ag '47
Approach to selection of compression ratio to fit fuel anti-knock quality; abstracts. E. J. Gay and H. T. Mueller. Pet Processing 2:91 F '47; S A E J 55:38-9 Ap '47
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
High octane fuel for 12 to 1 ratio engines will come; discussion at SAE summer meeting. Nat Pet N 39:47 Je 11 '47
Higher compression engine may multiply supply woes. Nat Pet N 39:11-12 O 29 '47
Lower volatility of postwar gasolines lengthens engine warm-up period; abstracts. J. G. Moxey, jr. Pet Processing 2: 92+ F '47; S A E J 55:48-9 Je '47
Maximum use of gasoline quality imperative; abstract. W. H. Holaday. Oil & Gas J 46:83 O 18 '47
More efficient utilization of fuels; new high-compression automobile engines. C. F. Kettering. diags Oil & Gas J 46:73-4+ Jl 12 '47; Same cond. S A E J 55:31-5+ Jl '47
Motor-fuel trends in relation to antiknock requirements. T. H. Risk and J. F. Jordan. Pet Refiner 26:99-108 Ap '47; Same cond. Oil & Gas J 45:78-9+ Ap 5 '47
Nowata road tests and their economic significance; abstract. K. C. Bottenberg. Pet Processing 2:553-4 Jl '47
Octane versus conservation. E. O. Thompson. bibliog Pet Refiner 26:86-90 My '47
Sludge; summary of a symposium. il S A E J 55:54-5 S '47

See also
Gasoline

Fuel consumption

Relationship of lines versus shape on miles per gallon. A. Taub. il S A E J 54:64 D '46

Fuel feeding

Carburation or injection? C. H. Fisher. il diags Automobile Eng 37:251-7, 293-301 Jl-Ag '47; Discussion. W. S. Dack. 37:380-2 O '47
Fuel injection engine with spark ignition. A. M. Starr. diags S A E J 55:28-30; Discussion. 30 S '47
Looking forward to future automobile engines. A. Taub. Automotive & Aviation Ind 95:41-2+ D 15 '46
Trend in combustion chambers and fuel systems. A. T. Colwell and A. Taub. diags S A E J 55:30-3 Ap '47

Gearing

Ford utilizes extrusion method for producing metal powder gears. E. E. Ensign. il diags Automotive Ind 97:30-1+ Ag 15 '47

Heaters

See also
Motor bus engines—Heaters

Ignition

Fuel injection engine with spark ignition; abstracts. A. M. Starr. diags S A E J 55: 28-30 S '47; Automotive & Aviation Ind 96: 42-3 Je 15 '47; Discussion. S A E J 55:30 S '47
Looking forward to future automobile engines. A. Taub. il diags Automotive & Aviation Ind 95:34-7+ N 15 '46

Ignition devices

High-frequency automobile ignition. diag Electronics 20:136 O '47
Ignition progress. H. L. Hartzell. S A E J 54:98-101 N '46

Lubrication

API lube report challenges auto makers on 3,000-mile oil change. Nat Pet N 39:20+ Jl 9 '47
Heavy-duty motor oils and suggested engine design changes. E. B. Lien. S A E J 54:64-5 D '46
Heavy duty oils for petrol and Diesel engines. E. V. Paterson. il Automobile Eng 37:147-54 Ap '47
Heavy-duty oils; use and abuse. P. V. Keyser, jr. and others. S A E J 55:35-6 S '47
Loopholes in car makers 2,000 to 3,000-mile lube periods. D. P. Clark. Nat Pet N 39: 40+ Je 4 '47
Marketers urged to combat car makers' effort to extend oil change period; abstract. H. L. Moir. Nat Pet N 39:18-19 My 7 '47
New motor oils, their benefits, their limitations; abstract. C. M. Larson. il diag S A E J 55:64-5 Je '47
Oil filtration and its effect on engine wear. N. C. Penfold and D. S. Gray. Automotive & Aviation Ind 96:35-6 Ja 1 '47
Premium gasoline and motor oil to be recommended for Tucker car. E. Lamm. il Nat Pet N 39:41-2 Jl 23 '47
Prestone motor oil. Consumers Res Bul 19: 27-8 My '47
Sludge; summary of a symposium. il S A E J 55:54-5 S '47
S A E National fuels and lubricants meeting, Tulsa, Nov. 7-8. Nat Pet N 38:60+ N 13 '46
Some new aspects of pour-depressant treated oils. C. E. Hodges and D. T. Rogers. il Oil & Gas J 46:89-93+ O 4 '47
Some problems of cylinder-bore wear. W. A. Robotham. Engineering 163:393-4 My 9 '47

See also
Oil filters, Automobile

Manifolds

Rise and fall milling speeds manifold machining; Buick's engine plant. il Steel 120: 125 F 17 '47

Manufacture

Advanced production methods used at Buick engine plant; illustrations with text. Automotive Ind 97:40-1 Jl 1 '47
Buick cylinder blocks now machined on first unitized transfer line. J. Geschelin. il plan Automotive & Aviation Ind 96:20-7+ F 1 '47
Buick modernizes cylinder bore production. H. E. Linsley. il Iron Age 158:65-8 N 21 '46
Continuity in the production of specified surface finish. E. Swain. Inst Mech Eng J & Proc 153 (War emergency issue no 10): 345-7, pl 3-4 '45; Same. il Engineering 159: 258-60 Mr 30 '45; Same abr. Engineer 179:250 Mr 30 '45; Same cond. Automobile Eng 35: 142-4 Ap '45
Crosley builds a 59-lb. engine; illustrations with text. C. Ricker. Am Mach 91:85-9 Ag 28 '47
Crosleys on the production line. J. Geschelin. il Automotive & Aviation Ind 96:28-32+ My 15 '47
Engine assembly; system and layout employed by the Austin motor co. il plan Automobile Eng 37:90-7 Mr '47
Flow layout means more output at less than estimated cost; Crosley's Cobra engine. H. E. Brazier. flow plan il Factory Management 105:76-9 O '47
High-production broaching of automobile connecting-rods. il Mach 53:160 Mr '47
Honorable mention to Jack & Heintz precision industries, inc. for achievement in use of light metal die castings. il Materials & Methods 24:1160-1 N '46
How the Ford Rouge foundry handles hot metal for continuous pouring. W. G. Patton. il diags Iron Age 159:40-3 Ap 24 '47
Independent units protect automatic transfer lines. J. Geschelin. il Automotive Ind 97: 31-2 O 1 '47

AUTOMOBILE engines—Manufacture—*Cont.*
Modern tooling steps up Buick quality. R. Le Grand. il diags Am Mach 91:114-16 My 8 '47
Multiple-spindle automatics speed up Dodge piston production. C. H. Wick. il plan Mach 53:154-60 My '47
New production machine automatically coats cylinder block cores. il Automotive & Aviation Ind 96:39 Ap 15 '47
Pattern rigging for production molding; Ford motor co. F. C. Riecks. Foundry 74:111+ D '46
Precision boring of cylinder blocks on Greenlee automatic transfer machine. il Mach 53:171-3 My '47
Silicon carbide addition in gray iron automotive castings. E. A. Loria and others. il Metal Prog 51:587-92 Ap '47

Mounting

Unique machine tests engine mount materials. il Automotive & Aviation Ind 96:42+ My 10 '47

Mufflers

Muffler maker cuts material and manufacturing costs by installing equipment to handle coiled strip; Mackenzie muffler co. il Steel 121:88-9+ O 13 '47

Radiators

Fabricating aluminum radiators; three novel machines developed by Germans. il Steel 119:102 D 16 '46
Ford redesigns for straight-line production of radiators. il Automotive Ind 97:45+ Jl 15 '47

Testing

Electronic dynamometer. il Sci Am 176:59 F '47
Flowmeter for testing crankcase ventilation. B. G. Brown. il diag Automotive & Aviation Ind 95:38-9+ N 15 '46
Measuring force and horsepower in automobile engines; use of Thrustorq. il Steel 120:120 Mr 10 '47
Nowata road tests and their economic significance; abstract. K. C. Bottenberg. Pet Processing 2:553-4 Jl '47
Passenger car engine cooling. B. W. Bogan. diags S A E J 55:48-50+ My '47
Torque tests; Thrustorq. il Sci Am 176:220 My '47
Unique merry-go-round speeds engine testing; Kaiser-Frazer Detroit engine division. il Automotive & Aviation Ind 96:41 Ap 1 '47

Valves

Considerations in valve gear design; abstract. V. C. Young. S A E J 55:63+ My '47
Development of the Skinner slide-valve engine. R. L. Skinner. il diag S A E J 55:34-7 Ap '47
Looking forward to future automobile engines. A. Taub. Automotive & Aviation Ind 95:40-1 D 15 '46
New approach to cam design. W. M. Dudley. diags Machine Design 19:143-8+ Jl '47
New method of computing effective valve area. E. G. Ingram. diags Automotive Ind 97:34-5+ Ag 1 '47
Producing automotive valves by extrusion; Chevrolet-Flint manufacturing division of the General motors corporation. C. H. Wick. il diag Mach 53:142-6 Ag '47
Surging of valve springs. diag Automobile Eng 37:265-70 Jl '47
Torsion bars replace valve springs in the Panhard Dyna automobile. il Machine Design 19:79 O '47

Vibration

Analysis of a shock-excited transient vibration associated with combustion roughness; abstracts. A. S. Fry and others. Automotive & Aviation Ind 94:36 Ja 15 '46; S A E J 55:54-5 Ja '47

AUTOMOBILE fabrics
Automotive trim materials. V. J. Fisher. S A E J 55:27 O '47

AUTOMOBILE factories
Customer specifications teletyped to assembly; Kaiser-Frazer corporation, Willow Run, Mich. H. J. Bustetter. il Factory Management 105:86-8 Je '47
More car and truck plants on the Pacific coast. R. R. Kay. il Automotive & Aviation Ind 96:17-19+ F 15 '47

See also
Automobile assembly plants

Employees

Automotive industry gives increasing attention to industrial relations problem. A. H. Allen. Steel 121:61-2 O 27 '47
Bonuses for profit; Kaiser-Fraser production pool fund and Bundy Tubing cost savings sharing plan. Bsns W p86+ Je 21 '47
Drive on offices; campaign to organize white-collar workers in automotive companies. Bsns W p90-2 Je 21 '47
Employees' suggestions; basic principles, problems, and potentialities. D. C. Ling. Automobile Eng 36:585-9; 37:70 D '46, F '47
Ford employees at Buffalo vote down proposed plan for pensions. Steel 121:63 S 15 '47
Ford pension benefits. J. S. Bugas. Steel 121:73-4 Ag 18 '47
La gestion ouvrière des usines de construction automobile Berliet, à Lyon, depuis la Libération. Génie Civil 124:78 F 15 '47
Hourly and weekly earnings and hours worked per week; by years, 1899-1946, by months, 1942-1946; tables and chart. Automotive & Aviation Ind 96:76-8 Mr 15 '47
How the Kaiser-Frazer production bonus works. il Factory Management 105:106-7 Jl '47
Ideology trouble; U.A.W. strike notice at Ford. Bsns W p90-2 N 9 '46
Looking ahead into 1947. L. Westrate. Automotive & Aviation Ind 96:17+ Ja 15 '47
Physically fitting man to job. G. E. Finout. Factory Management 104:113 D '46
Plain talk; Hudson helps workers understand their union contracts. Bsns W p92 Ag 16 '47
Rand labor-relations formula at work; Ford motor company of Canada. Factory Management 105:94-6 Mr '47
Retirement plan written into wage contract of Ford and United automobile workers. A. H. Allen. Steel 121:73 Jl 7 '47

See also
United automobile workers of America

Equipment

Advanced methods in heavy duty truck building; Autocar co. J. Geschelin. il Automotive & Aviation Ind 96:30-3+ Ap 15 '47
Air tools speed manufacture of automobile bodies. il Steel 121:89-90+ Ag 18 '47
Automatic electroplating line at Pontiac. A. H. Allen. il Steel 121:80-3+ Ag 25 '47
Biggest remodeling job; Kaiser-Frazer plant at Willow Run. il Dom Eng 169:116-23 Je '47
Buick cylinder blocks now machined on first unitized transfer line. J. Geschelin. il plan Automotive & Aviation Ind 96:20-7+ F 1 '47
Cadillac reorganizes electroplating dept. for greater efficiency. J. Geschelin. il Automotive Ind 97:28-9+ O 15 '47
Cadillac's foundry modernization program nears completion. W. G. Patton. Iron Age 159:92+ My 8 '47
Cadillac's modernized foundry facilities. J. Geschelin. il plan Automotive & Aviation Ind 96:24-7+ Je 15 '47
Cases in work simplification; eight photographed improvements at Tonawanda. R. L. Dustman and D. R. Bell. Factory Management. 105:97-9 S '47
Chip-removal and coolant-temperature regulating system; Chevrolet gear & axle division of the General motors corporation. il diags Mach 53:151-4 D '46
Crosleys on the production line. J. Geschelin. il Automotive & Aviation Ind 96:28-32 My 15 '47
Dodge bodies baked by gas ovens. R. Le Grand. il diags Am Gas Assn Mo 29:213-16+ My '47
Flights and chutes for between-operations handling, Fisher body-Ternstedt division, Trenton. il Factory Management 105:88-9 My '47

AUTOMOBILE factories—Equipment—*Cont.*
Ford redesigns for straight-line production of radiators. il Automotive Ind 97:45+ Jl 15 '47
Hard chrome plating finds wide use at Ford. H. Chase. il Iron Age 159:51-3 Ja 30 '47
Independent units protect automatic transfer lines. J. Geschelin. il Automotive Ind 97:31-2 O 1 '47
Ingenious work-transfer mechanisms for progressive dies; designed by Ford engineers. C. O. Herb. il plan diags Mach 53:139-47+ D '46
Kaiser-Frazer production innovations; illustrations with text. Automotive & Aviation Ind 96:28-9 My 1 '47
Machine removes scale from welded axle housings. Comp Air Mag 52:230 S '47
Magnaflux machine permits continuous inspection of heavy-duty crankshafts. il Automotive & Aviation Ind 96:52+ Je 1 '47
Material handling; fork truck and pallet system. D. C. Ling. il diags Automobile Eng 37:213-20, 239-47, 287-91 Je-Ag '47
Material handling in the motor industry. N. M. Loney. Mech Handling 34:195-9 Ap '47; Abstract. Automotive & Aviation Ind 96: 244+ Mr 15 '47
Modern heat-treating methods in an automobile plant; Buick motor division, General motors corporation. C. H. Wick. il diags Mach 53:141-9 Ja '47
Multiple-spindle automatics speed up Dodge piston production. C. H. Wick. il plan Mach 53:154-60 My '47
New enameling system; Dodge division of Chrysler corp. il Steel 120:92-3+ F 17 '47
New phosphating tunnel installed at Ford. H. Chase. il Iron Age 159:82-4 Ap 10 '47
Pontiac's expanded facilities. J. Geschelin. il Automotive Ind 97:42-4+ O 1 '47
Producing automotive valves by extrusion; Chevrolet-Flint manufacturing division of the General motors corporation. C. H. Wick. il diag Mach 53:142-6 Ag '47
Spra-bonderizing; continuous carrier plant at works of Wolseley motors. il diag Automobile Eng 37:313-14 Ag '47
Spring-steel clutch plates require unusual operations. C. H. Wick. il diags Mach 53: 139-45+ F '47
Transfer machine of sectional design; Baush machine tool co. flow diag il Mach 53:192-5 Je '47
Unique machinery facilitates production of body hardware; Fisher body, Ternstedt div., General motors corp. J. Geschelin. il diag Automotive & Aviation Ind 96:38-40 Je 1 '47
Why Buick uses clamp toolholders for carbide shapes. R. Le Grand. il diags Am Mach 91:90-3 O 9 '47
Willow Run water softening plant. N. Herda. il Water & Sewage Works 94:334-5 S '47
World's largest production equipment market; automobile companies committed to heavy spending for equipment. L. Westrate. il Automotive Ind 97:24-6+ Jl 15 '47

Layout

Buick cylinder blocks now machined on first unitized transfer line. J. Geschelin. il Automotive & Aviation Ind 96:20-7+ F 1 '47
Engine assembly; system and layout employed by the Austin motor co. il Automobile Eng 37:90-7 Mr '47
Miniature auto plant aids engineers in analyzing production layouts; Lincoln division of Ford motor co. il Steel 120:89+ F 17 '47
Miniatures in motordom; model automotive plant layout, Dodge truck division of Chrysler corp. il Steel 120:104 Ap 21 '47
Production firsts at Plymouth's enlarged plant. J. Geschelin. il Automotive & Aviation Ind 96:28-32+ Ap 1 '47

Management

Auto parts rushed by airfreight; how Ford averts shutdown; illustrations with text. Bsns W p42+ O 11 '47
Ford purchasing department reorganization. A. H. Allen. Steel 121:59-60 S 22 '47
Ford reorganizes salvage department. L. Westrate. il Automotive & Aviation Ind 96:30-1+ Ja 1 '47
Handling organized for mass production; Kaiser-Frazer corp. E. M. Argersinger. il Am Mach 91:98-100 O 23 '47
Quality control at Cadillac based on latest methods. il Automotive Ind 97:27+ Ag 1 '47
Tailor-made cars by teletype; production scheduling at Dodge plant of equipment and combinations of body types, colors, accessories and other options. J. Geschelin. il Automotive Ind 97:32-3+ Jl 15 '47
We depreciate at ten per cent and reinvest the same year; Dodge mfg. corp. E. M. Carver. Am Mach 91:101-3 O 23 '47

Records

Hudson parts control method. D. G. Baird. il Am Bsns 17:12-13+ O '47

Safety measures

General Motors recommends six operating principles in getting worker cooperation in safety. D. Mould. il Safety Eng 93:18-19+ My '47

AUTOMOBILE financial responsibility laws. See Automobile laws and regulations—Financial responsibility laws; Insurance, Automobile—Financial responsibility laws

AUTOMOBILE headlights. See Automobiles—Lighting

AUTOMOBILE industry and trade
Auto makers and dealers attack black market with resale penalties and local price ads. B. Tolk. Ptr Ink 219:85+ Je 13 '47
Automotive picture for 1947. A. H. Allen. il Steel 120:191-2+ Ja 6 '47
Chevrolet sets up trading posts for management ideas; dealers' sales managers have once-a-month forum. D. G. Baird. Sales Management 57:63+ D 15 '46
Foreign motorcars. Fortune 35:151 Mr '47
Highway construction and maintenance, training of new drivers essential if automotive market is not to be stunted artificially. G. Romney. Steel 121:65-6 Ag 11 '47
Hull-Dobbs; first in Fords; Hull-Dobbs agency in Memphis. Fortune 34:178 D '46
Keeping independent banners flying; plan used by General Motors to finance and counsel independent automobile dealers. F. C. Sturtevant. Nat Pet N 39:28-9 S 17 '47
Madman Muntz; used-car dealer and Kaiser-Frazer distributor. Fortune 36:140 N '47
Nash keep 'em sold plan. R. G. French. il Am Bsns 16:12-13+ N '46
Owner quiz gives Plymouth ideas for car improvement. Sales Management 58:86 Ja 1 '47
Pontiac using punch card system for distributing available cars. W. G. Patton. Iron Age 159:74 Mr 27 '47
Prices, production and sales possibilities. L. Westrate. Automotive & Aviation Ind 95: 17+ D 1 '46
Ubiquitous Buick. il Fortune 36:86-93+ N '47

See also
Automobile accessories industry
Automobile factories
Automobile parts
Ford motor company
General motors corporation
Kaiser-Frazer corporation
Motor bus industry and trade
Motor truck industry
Taxicabs
Tractor industry and trade
Tucker corporation

Advertising

Appeal to women featured in auto copy; Kaiser-Frazer stresses style and endorsements of fashion leaders. W. A. MacDonald. il Ptr Ink 221:45 O 10 '47
Eight points for promotion to children; Chevrolet revives famous soap box derby. il Ptr Ink 217:46-8 N 15 '46
How A.M.A. uses television in its public relations. H. Cushing. il Adv & Sell 40:41+ Ap '47
Kaiser-Frazer sales copy. Sales Management 58:57-8 F 15 '47
Mercury mailings sell improved service to 200,000 car owners. D. G. Baird. il Sales Management 59:102+ Jl 15 '47

AUTOMOBILE industry and trade—Advertising—*Continued*
Million for promotion spent in two months; Chevrolet sales contest and service promotion. D. G. Baird. il Sales Management 59:60+ O 15 '47

Finance

Can auto industry avoid serious roadblocks? H. L. Blackburn. Mag of Wall St 80:262-4+ Je 7 '47
Competitive pattern in consumer credit. F. R. Wills. Comm & Fin Chr 164:3216+ D 19 '46
Dealers plan attack on Regulation W. Bsns W p36 Mr 1 '47
Trend; issues giving rise to the Ford, Chrysler, Universal Credit, CIT and Commercial Credit consent decrees. T. W. Rogers. Banking 39:44+ D '46; 34+ Ja '47

See also
Banks and banking
—Automobile purchase financing

New models

Auto makers delay changes. il Bsns W p28+ D 14 '46
Forced style changes spur our prosperity. J. G. Lippincott. il Adv & Sell 40:42-3+ O '47
1948 models make their bows. il Bsns W p28+ S 27 '47
What are chances for Tucker car? J. Turner. il Am Bsns 17:20-1+ Je '47
Willys' strategic designs. il Bsns W p36+ O 25 '47

Securities

Chrysler's earnings cost less than GM's. Barron's 27:25 Ap 14 '47
Weighing potentials in the motors; with financial survey of leading stocks. G. W. Mathis. Mag of Wall St 79:609-10+ Mr 1 '47

Service

See Automobile service stations

Statistics

Automotive wholesalers, dealers and repair shops by years, 1928-1947; by states as of Jan. 1947; tabulations. Automotive & Aviation Ind 96:109 Mr 15 '47
Cars set record. Bsns W p36+ S 20 '47
Independents up; big three auto makers got smaller share of 1947 total sales. Bsns W p38+ S 13 '47
Motor vehicle factory sales; new or revised data; monthly figures and monthly averages 1940-1941, yearly totals and monthly averages 1942-1945; tabulation. Survey of Cur Bsns 27:24 Je '47
New car sales by makes, 1932-1946; by states, 1936-1946; tabulations. Automotive & Aviation Ind 96:110-11 Mr 15 '47
1946 leading automotive export markets by country of destination; tabulation. Automotive & Aviation Ind 96:115 Mr 15 '47
1946 motor-vehicle factory sales to domestic and foreign markets; tabulation. Automotive & Aviation Ind 96:82 Mr 15 '47
92 million motor vehicles produced in 47 years; tabulation. Automotive & Aviation Ind 96:81 Mr 15 '47
Passenger car and truck production by months, 1934-1946; tabulations. Automotive & Aviation Ind 96:86 Mr 15 '47
Prewar passenger car production; sales by body types, 1935-1940, sales by wholesale price classes, 1935-1941; tabulations and charts. Automotive & Aviation Ind 96:84 Mr 15 '47
Station wagons set popularity record. Bsns W p28 S 6 '47
U.S. exports of new motor vehicles, 1916-1946; tabulation and chart. Automotive & Aviation Ind 96:113 Mr 15 '47

Used cars

Car buying pattern may change; annual scrapping rate. Bsns W p39+ Ap 5 '47
Drive on gouging. Bsns W p44+ Je 14 '47
Used car dealers see continued high prices. Bsns W p38 S 27 '47
Used-car dealers set public relations plan; abstract. K. A. Whittenton. Ptr Ink 220: 122 S 26 '47
Used car reconditioning program introduced to Pontiac dealers. W. G. Patton. Iron Age 159:74+ Mr 27 '47
Used-car slump? Bsns W p38+ O 25 '47

Canada

Motor vehicle production in Canada, 1921-1946; Canadian motor vehicle registrations, 1941-1945; tabulations. Automotive & Aviation Ind 96:83 Mr 15 '47

Czechoslovakia

Nationalization undergoing crisis in Czechoslovakia. Automotive Ind 97:29+ Ag 15 '47

Denmark

Imports into Denmark, first 6 months of 1946. For Comm W 25:22 D 28 '46

France

French government extends financial aid to racing team. W. F. Bradley. il Automotive Ind 97:45+ O 1 '47
Light metals dominate French automotive design. il diags Product Eng 18:81-7 F '47

Germany

Design features of German passenger cars A. M. Wolf. Automotive & Aviation Ind 96: 238+ Mr 15 '47
German automobile industry must restart from scratch. L. Vogel. Automotive Ind 97:28-9 Ag 15 '47
German design mediocrity disclosed by automotive survey; abstracts of papers. S A E J 54:71-2 N '46
Higher ceilings authorized for German automobile production. Automotive Ind 97:45+ S 15 '47
Specific industries show German production problems. J. Christie. il Am Mach 91:137-40 My 22 '47

Great Britain

Autos for export; Vauxhall production nears prewar mark. Bsns W p118+ Ap 26 '47
British auto tax put on flat rate, $40 per car basis. Iron Age 160:82 Jl 3 '47
British look for new tax system to boost car exports. W. F. Bradley. Automotive & Aviation Ind 96:54+ Ap 1 '47
British motor vehicle exports, eleven months, 1945 and 1946 compared; tabulations. Automotive & Aviation Ind 96:154-5 Mr 15 '47
Cars for export. Economist 152:471 Mr 29 '47
Difficulties for British car exports. Economist 153:257 Ag 9 '47
Engineering outlook. Engineering 163:64-7 Ja 17 '47
Increased vehicle export quotas. Economist 152:1039 Je 28 '47
Morris motors, limited; statement by the chairman at annual general meeting. M. Thomas. Economist 152:915-16 Je 7 '47
Motor taxation again. H. S. Rowell. Engineering 164:87-8, 112-13 Jl 25-Ag 1 '47
1946 British car production by taxable hp ratings; tabulation. Automotive & Aviation Ind 96:161 Mr 15 '47
Standard motor company, limited, forty-third ordinary general meeting. Economist 151:924 D 7 '46

See also
Austin motor company
Ford motor company, England

Italy

Current activities of Italian automobile firms. J. P. Wilson. Automotive Ind 97:34-5+ S 15 '47
Italian high speed cars. W. F. Bradley. il diags Automotive Ind 97:36-7 Ag 1 '47

Mexico

Mexico best export market for motor vehicles in 1946. Automotive Ind 97:37 O 15 '47

Netherlands

Statistical data on motor-vehicle registrations, imports, etc. For Comm W 28:21 S 27 '47

Pacific coast

More car and truck plants on the Pacific coast. R. R. Kay. il Automotive & Aviation Ind 96:17-19+ F 15 '47

AUTOMOBILE industry and trade—*Continued*

Russia

Russia's auto industry expands. il Bsns W p86 Jl 5 '47

United States

Auto industry finds 1946 bumps in 1947 road. C. M. Macko. Barron's 27:3 Ja 13 '47
Auto slowdowns; heat and steel shortages are two causes. Bsns W p31 Ag 30 '47
Auto supply situation still touch and go. Bsns W p32 My 24 '47
Automobile production outlook. M. E. Coyle. Comm & Fin Chr 164:2751+ N 28 '46
Automotive facts for oil men. J. C. Weed. Nat Pet N 38:41 D 11 '46
Automotive industry in 1946; prospects for 1947. W. G. Patton. il Iron Age 159:148-53 Ja 2 '47
Automotive; you still have to wait, but. Bsns W p31+ Mr 1 '47
Big demand for cars to continue three to five years. M. E. Coyle. Automotive Ind 97:41+ O 15 '47
Engineer says he will produce a new car. Bsns W p18 Jl 19 '47
How many new cars and trucks in 1947. G. Romney. Automotive & Aviation Ind 96: 17+ Mr 1 '47
Imbalance forces cutbacks. Bsns W p19 N 16 '46
Looking ahead into 1947. L. Westrate. Automotive & Aviation Ind 96:17+ Ja 15 '47
New American market. J. R. Davis. Comm & Fin Chr 165:650+ Ja 30 '47; Same cond. Automotive & Aviation Ind 96:58+ Ja 15 '47
1946, year of calamity. L. Westrate. Automotive & Aviation Ind 95:17-24 D 15 '46
Outlook for automobile industry. R. Tucker. Comm & Fin Chr 165:1376+ Mr 13 '47
Production outlook for automobile industry. B. E. Hutchinson. Comm & Fin Chr 164: 2899+ D 5 '46
What is the actual demand for cars? national survey. Automotive Ind 97:44-6+ Ag 15 '47
World's largest production equipment market; automobile companies committed to heavy spending for equipment. L. Westrate. il Automotive Ind 97:24-6+ Jl 15 '47

AUTOMOBILE insurance. See Insurance, Automobile

AUTOMOBILE jacks. See Jacks, Automobile

AUTOMOBILE laboratories

Ford to build research-engineering center. il Product Eng 18:155 F '47

AUTOMOBILE laws and regulations

Family purpose doctrine; Cohen vs. Whiteman et al. J. L. Roesch. Spectator (Property ed) 12:10-11+ Je 26 '47

See also
Automobile drivers—Licenses

Financial responsibility laws

Alabama act approved. Weekly Underw 157: 441 Ag 23 '47
Answers four queries about new North Carolina motor law. H. McMullen. Weekly Underw 157:161 Jl 19 '47
Auto crash echo; 41 states consider financial responsibility laws and compulsory motor vehicle insurance. Bsns W p30+ Ap 26 '47
British Columbia adopts Manitoba law features. Nat Underw 51:31 My 15 '47
Call new Colorado law traffic advance. Weekly Underw 156:805 Mr 22 '47
Compulsory auto act operating in Alberta; accident fund is feature. East Underw 48: 31 My 2 '47
Manitoba to cut assessment under responsibility act. Nat Underw 50:35 D 5 '46
Manitoba unsatisfied judgment fund plan enacted in North Dakota. Nat Underw 51: 28 Ap 3 '47
New California responsibility act takes effect in July, 1948. Nat Underw 51:5 Jl 17 '47
New York-New Hampshire type responsibility law offered in Washington. Nat Underw 51:24 F 20 '47
Ontario financial responsibility plan; twenty states have reciprocal arrangements. G. Doucett. East Underw 48:35 Je 20 '47; Same cond. Nat Underw 51:20 Je 5 '47
Responsibility bill signed by Florida Governor. Weekly Underw 156:1264 My 10 '47
Unsatisfied judgment fund set up in Ontario; to reimburse hit-run victims. East Underw 48:35 Ap 11 '47; Nat Underw 51: 30 Ap 3 '47
Washington responsibility law is winning favor. Weekly Underw 156:659 Mr 8 '47; Same cond. Nat Underw 51:19 Mr 6 '47

See also Insurance, Automobile—Financial responsibility laws

Nebraska

Nebraska gets tough on drunken auto drivers. Weekly Underw 156:1412 My 24 '47

AUTOMOBILE manufacturers association

How A.M.A. uses television in its public relations. H. Cushing. il Adv & Sell 40:41+ Ap '47
New setup for patent cross-licensing. L. Westrate. Automotive & Aviation Ind 96: 208+ Mr 15 '47

AUTOMOBILE mechanics

Wage structure of general automobile repair shops, July 1946. F. W. Mohr. Mo Labor R 64:824-8 My '47

AUTOMOBILE parking

Action on parking problem; what some cities are doing. P. Donald. il Roads & Sts 89: 90-2+ N '46
Back 'em up, stack 'em up. il Bsns W p17 Ap 5 '47
Bird's-eye view of ossification of the average city's transit life. R. N. Graham. Mass Transportation 43:280-1 Jl '47
Business views on the parking problem in Ohio cities. J. C. Yocum. Ohio State U Research Monograph [Columbus] no R-45:1-35 '47
Cities curb parking abuses. Eng N 139:195 Ag 7 '47
City official believes underground parking would pay for itself; parking problem of Memphis, Tenn. Eng N 137:665 N 14 '46
Displays + parking = good business; Conrad Troll, Pasadena, Calif. il plan Am Bld 69:124-5 Ag '47
Elevated building provides parking. il plans Arch Rec 102:133 O '47
Has the automobile made the skyscraper obsolete? two-story drive-in office building for Seaboard finance company, Los Angeles. il plans Arch Rec 102:124-9 O '47
Kentucky city (Georgetown) gets court sanction for condemning property for parking. Eng N 137:642 N 14 '46
Liability of operators of parking lots for thefts of automobiles. M. J. Gwertzman. East Underw 48:52+ O 17 '47; Excerpt. Nat Underw 51:12 O 16 '47
Many cities open off-street parking lots. Eng N 139:403 S 18 '47
Mechanised car park; electrical features. il Electrician 138:348 Ja 31 '47; Elec R (Lond) 140:277 F 7 '47
Mechanised car parking. il diag Engineer 183: 120-1 Ja 31 '47; Mech Handling 34:91-4 F '47; Engineering 163:187-8 Mr 14 '47; Mech Eng 69:503 Je '47
Multi-story garage for public parking; Spiralway ramp principle. B. Yurchenco and E. Catalano. il diags Arch Rec 101:125-8 Ap '47
Municipal provision of parking facilities—state laws and city projects. J. C. Yocum and J. P. Whipple. 117p pa $1.25 Ohio state univ. Bur. of business research, College of commerce, Columbus, Ohio '46
No parking 7 A.M. to 9 P.M. H. L. Swift. il Banking 39:26+ F '47
Parking-shuttle bus plan successful in Hartford. il map Bus Transportation 26:62-3 F '47
Parking solution; surface and subterranean parking facilities; American national bank of Denver. H. F. Feucht. il Burroughs Clearing House 31:28+ Ag '47
Setting and printing parking lot tickets. F. F. Lilley. il Inland Ptr 119:87 Ag '47
Swiss mechanised car parking system. C. F. Armstrong. il plan diags Engineer 183: 554-6 Je 27 '47
Transfer of car by parking lot operator not use within exception of liability policy. Weekly Underw 155:1381 D 7 '46

AUTOMOBILE parking—*Continued*
Urban expressways and the parking problem. P. Donald. Roads & Sts 89:91-2 O '46
What was done about traffic congestion in 1946? W. J. Shea. il Civil Eng 17:64-6 F '47

Meters

Meter makers look for boom. il Bsns W p28+ My 17 '47
N.Y. community tries off-street parking meters; White Plains. Eng N 137:655 N 14 '46
Parking meters as an aid in traffic control. H. Janes. il Roads & Bridges 85:87-9 O '47
Parking meters get revenue. Eng N 139:133 Jl 24 '47

AUTOMOBILE parts
Automotive industry's sales emphasis swinging to increased service promotion. R. G. Silbar. Ptr Ink 218:101+ Mr 7 '47
Conveyors aid the assembly of motor accessories; windscreen wipers and direction indicators. il Mech Handling 34:66-9 F '47
Developments at Ford's plastics plant. il Automotive & Aviation Ind 96:18-21+ Ja 15 '47
Die casting and plating operations; AC spark plug div., General motors corp. J. Geschelin. il Automotive & Aviation Ind 95:30-1+ D 15 '46
Electroplating zinc base die castings. C. F. Nixon. Metal Finishing 45:58-60 Mr '47; Same cond. Mach 53:180-2 Mr '47; Same cond. Am Mach 91:149+ Jl 3 '47
Handling mechanization boosts Monroe shock absorber and sway bar output. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 15 '47
Hard to buy; Ford receives 450 bids in response to request for western suppliers. Bsns W p47+ Je 14 '47
Ingenious equipment used in making split bushings at a Ford hydro plant. C. H. Wick. il Mach 53:141-6 Ap '47
Manufacture of precision castings. G. Vennerholm and E. Ensign. il diags S A E J 55:37-40+ Je '47
Metal spraying; reclamation of worn or faulty parts. J. Porter. il diags Automobile Eng 37:343-6 S '47
Offset machines produce wood grain on steel parts for automobiles in the Fisher body, Trenton, N.J. plant. H. Chase. il Iron Age 160:80-4 Ag 21 '47
One in 10 an inspector; quality control system, Monroe auto equipment co. il Steel 119:70-2 D 30 '46
1,000,000 pounds of small die castings for automobile hardware items produced each month in Ternstedt plant. H. Chase. il Steel 119:56-8+ D 23 '46
Prime steel scrap salvaged for other auto parts. il Am Mach 91:140 Mr 13 '47
Synchronized stamping and plating; Eaton mfg. co. D. Dewey. il Steel 120:94-6 F 3 '47
Transfer presses boost output at AC Spark Plug. H. L. Curtis. il Am Mach 91:100-1 My 22 '47
Unique exhaust system for a unique process; metal spraying of worn automobile crankshafts and parts. diags Sheet Metal Worker 38:53-4 Mr '47
Unique machinery facilitates production of body hardware; Fisher body, Ternstedt div., General motors corp. J. Geschelin. il diag Automotive & Aviation Ind 96:38-40 Je 1 '47
Unique tooling used to mass produce special parts at GMC Saginaw steering plants. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 1 '47

Transportation

Auto parts rushed by airfreight; how Ford averts shutdown; illustrations with text. Bsns W p42+ O 11 '47

AUTOMOBILE purchase financing. See Banks and banking—Automobile purchase financing

AUTOMOBILE racing
Auto racing. il Fortune 36:110-15+ S '47
Design highlights of new cars in the Indianapolis race. R. T. Jackson. il diags Automotive & Aviation Ind 96:24-30+ Je 1 '47
French government extends financial aid to racing team. W. F. Bradley. il Automotive Ind 97:45+ O 1 '47

AUTOMOBILE rental service. See Railroads—Automobile rental service

AUTOMOBILE research
Auto research shows how. il Bsns W p72-3+ O 4 '47
More efficient utilization of fuels; new high-compression automobile engines. C. F. Kettering. diags Oil & Gas J 46:73-4+ Jl 12 '47
Surging of valve springs. diag Automobile Eng 37:265-70 Jl '47

See also
Automobile laboratories

AUTOMOBILE seat covers. See Automobiles—Seat covers

AUTOMOBILE service clubs
ACA headquarters building, Buenos Aires; three provincial clubs. il map plans diag Arch Forum 86:111-14 F '47

AUTOMOBILE service stations

See also
Gasoline service stations

Heating and ventilation

World's biggest and best garage; heating, ventilation and air supply; eliminating carbon monoxide fumes; Cadillac headquarters in Chicago. il Dom Eng 169:144-5+ Je '47

Lubricating service

Car dealers and manufacturers moving in on service stations' lubrication dollar. F. C. Sturtevant. Nat Pet N 39:28+ F 12 '47

AUTOMOBILE shops
How to inspect garages. M. E. Bulske. Rough Notes 90:34+ Mr '47
Use of lifts versus creepers in repair shops. R. Logan. Am Gas Assn Proc 1946:341-2

Employees

Wage structure of general automobile repair shops, July 1946. F. W. Mohr. Mo Labor R 64:824-8 My '47

AUTOMOBILE steel. See Steel, Automobile

AUTOMOBILE strikes. See Automobile factories—Employees

AUTOMOBILE tires. See Tires, Automobile

AUTOMOBILE touring
Winter tourist; urge to travel in cold weather spells profit to jobbers. F. C. Sturtevant. Nat Pet N 38:30 D 25 '46

AUTOMOBILE trailers
New torsion rod suspension features welded construction; two-wheel trailer, Kit Kamper. G. Brewer. il diags Automotive & Aviation Ind 96:24-7+ My 1 '47
Trailer communities on a university campus. S. Riemer and M. Riley. J Land & Pub Util Econ 23:81-3 F '47

AUTOMOBILE workers of America, United. See United automobile workers of America

AUTOMOBILES
Auto racing. il Fortune 36:110-15+ S '47
British aircraft firm enters automotive field; design details of 1947 Frazer Nash-Bristol. il Automotive & Aviation Ind 96:33 Ja 15 '47
Cars for 1950. Sci Am 176:76 F '47
Critical clearance dimensions of automobiles; table. Arch Rec 102:157 O '47
Data on the new Ferrari car. il Automotive Ind 97:27 S 15 '47
Duesenberg car to be made again. Bsns W p 17 S 13 '47
French design radical cars for economy reasons; illustrations. Am Mach 90:160-160a D 5 '46
French styling; illustrations. Automotive & Aviation Ind 95:38-9 D 1 '46
German design mediocrity disclosed by automotive survey; abstracts of papers. S A E J 54:71-2 N '46
How a typical small car has grown up: the Chevrolet through the years. il Bsns W p20-1 Je 7 '47
Italian Ninfea car equipped with radial engine and front drive. il Automotive Ind 97:33+ Jl 15 '47
Lagonda, British postwar car of interesting design. Iron Age 159:74 F 20 '47

AUTOMOBILES—*Continued*

Latest Italian custom styling; illustrations. Automotive Ind 97:36-7 O 1 '47

Mr Tucker tells about his car; as related to J. Geschelin. Automotive & Aviation Ind 96:50+ F 1 '47

Motor vehicle outlook. E. W. Jahn. Am Gas Assn Proc 1946:380-2; Discussion. 382-4

New Hudson model brings cheer from distributors at preview. A. H. Allen. Steel 121:75 N 3 '47

1947 automobiles. Consumers Res Bul 19:27-32+ Je '47

1948 models make their bows. il Bsns W p28+ S 27 '47

Packard introduces its all-new postwar convertible. W. G. Patton. Iron Age 159:76+ Ap 3 '47

Premium gasoline and motor oil to be recommended for Tucker car. E. Lamm. il Nat Pet N 39:41-2 Jl 23 '47

Preview of tomorrow's model. Bsns W p41-2+ Je 14 '47

Torsion-bar valve-springs of unusual design used in French engine; new Panhard 1000-lb. W. F. Bradley. il Automotive & Aviation Ind 96:24-6 Ap 1 '47

Tucker innovations; illustrations with text. Automotive Ind 97:39 Ag 15 '47

Tucker Torpedo. il Consumers Res Bul 19:8-9 Ap '47

Volkswagen, cheap lightweight German automobile. Mech Eng 69:680 Ag '47

Willys 6-cylinder cars for 1947. il Consumers Res Bul 19:7-8 Ap '47

See also

Airplanes, Light—Automobile combinations
Automobile engines
Automobile industry and trade
Motor buses
Motor trucks
Motor vehicles
Railroads—Motor vehicle competition
Tires, Automobile
Tractors

Air conditioning

Car air conditioning. T. C. Gleason. S A E J 55:63-4 F '47

Car heating pattern set by plane system; abstract. L. A. Rodert. diags S A E J 55: 78-9 F '47

Airplane combinations

See Airplanes, Light—Automobile combinations

Axles

High-volume production of passenger car axles; Salisbury axle works, division of Dana corp. J. Geschelin. il Automotive Ind 97:34-5+ Jl 1 '47

Private cars; rear axles. il diags Automobile Eng Extra no 36:544-52 N 21 '46

Bearings

Independent front suspension system improves car roadability. diags Steel 120:95 Ap 21 '47

Non-ferrous powder metallurgy; abstract. W. H. Tait. Automobile Eng 37:324 S '47

Bodies

Air tools speed manufacture of automobile bodies. il Steel 121:89-90+ Ag 18 '47

American society of body engineers 1st annual meeting, Detroit; abstracts of papers. diags Automotive & Aviation Ind 95:40-6 D 1 '46

Assembling operations in a Fisher Body plant; illustrations with text. Mach 53:148-9 D '46

Bodywork competitions; exhibits in I.B.C.A.M. contest. diags Automobile Eng 37:221-5 Je '47

Complete car bodies built on Big Bertha conveyor. il Automotive Ind 97:32-3 S 15 '47

Heat and sound insulation. L. M. Ball. il S A E J 54:39-40 D '46

Latest body assembly techniques by Fisher. J. Geschelin. il Automotive Ind 97:28-30+ S 15 '47

Spot welding mass-produces body panels for Kaiser-Frazer car. il Am Mach 91:90-1 Ag 28 '47

Bumpers

Improved methods produce 80 bumper sets per hour; Oldsmobile division, General motors corporation. il Automotive & Aviation Ind 96:44+ Ap 15 '47

Late bumper crop. Fortune 36:120 S '47

Lowering production costs of bumpers and springs; United States spring & bumper co. H. Laurent. il Automotive Ind 97:24-6+ Ag 1 '47

SAE project unlocks passenger car bumpers. S A E J 55:72+ My '47

Chassis

Design thirty years ago; 1916 Berna 3½-ton chassis. plan diag Automobile Eng 37:58 F '47

Design thirty years ago; the 1917 Bugatti 10-12 h.p. chassis. diags Automobile Eng 37:350 S '47

Clutches

Clutches for automatic transmissions; abstract. H. Nutt and R. L. Smirl. diags Automotive & Aviation Ind 96:40-1+ Je 15 '47

Electromagnetic control; Z.F. actuation of an orthodox layshaft gear box. E. M'Ewen. il diags Automobile Eng 37:141-4 Ap '47

Precise manufacture, repeated tests minimize service failure of Buick clutch springs. H. Chase. il Steel 120:100-2+ F 24 '47

Private cars; clutches. diags Automobile Eng Extra no 36:530-2 N 21 '46

Spring-steel clutch plates require unusual operations. C. H. Wick. il diags Mach 53: 139-45+ F '47

Control

See also

Brakes, Automobile

Cost of operation

New approach to salesmen's auto costs. S. B. Severson. Sales Management 59:73 O 1 '47

Decoration

Styling automobile interiors. T. C. Hobbs. Automotive & Aviation Ind 95:43-4 D 1 '46

Design

Automobile designed for light alloy construction. il diags Product Eng 17:88-92 D '46

Design features of German passenger cars. A. M. Wolf. Automotive & Aviation Ind 96: 238+ Mr 15 '47

Design features of the 1948 Packard convertible. il diag Automotive & Aviation Ind 96:34-5+ My 1 '47

Design highlights of new cars in the Indianapolis race. R. T. Jackson. il diags Automotive & Aviation Ind 96:24-30+ Je 1 '47

Designing and building the reinforced plastic automobile. L. A. Werner. il diags S A E J 55:51-3 S '47

Engineering process. M. C. Horine. S A E J 55:21-3 Ag '47

How light is light in the passenger car field; abstracts. W. D. Appel. Automotive & Aviation Ind 96:20-3 F 15 '47; S A E J 55: 23-6 Ap '47

Italian high speed cars. W. F. Bradley. il diags Automotive Ind 97:36-7 Ag 1 '47

Light metals dominate French automotive design. il diags Product Eng 18:81-7 F '47

Performance of European economy cars. L. Pomeroy. il S A E J 54:63-9 N '46

Private cars; survey of current design and future trends. il diags Automobile Eng Extra no 36:509-60 N 21 '46

Relationship of lines versus shape on miles per gallon. A. Taub. il S A E J 54:64 D '46

Suspension dampers; interconnected system to provide pitch control. G. E. L. Walker. diags Automobile Eng 37:178-80 My '47

Tooling plans for production of the Davis D-2 car. R. L. Bricker. il diag Automotive Ind 97:38-9+ S 15 '47

Le XXXIII[e] salon de l'automobile, Paris, 3-13 octobre 1946. J. Angeli. il diags Génie Civil 123:305-10; 124:4-11 N 15 '46, Ja 1 '47

Unusual design features of the latest Lagonda. il diags Automotive & Aviation Ind 96:24-5 F 15 '47

What will influence automobile styling? K. A. Hopkins; V. M. Exner. il S A E J 55: 59-60 S '47

See also

Automobile engines—Design
Automobiles—Riding qualities

AUTOMOBILES—*Continued*

Electric equipment

Automobile battery chargers or boosters. il Consumers Res Bul 19:12-15 Ja '47
Check motor vehicle interference with video and radio reception. il S A E J 55:83-4 Mr '47
Modern vehicle generating systems. A. D. Gilchrist. il diag Elec Eng 66:779-80 Ag '47
Shop care lights way to generator longevity; abstract. A. M. Baump. S A E J 55:81-2 F '47

See also
Storage batteries

Equipment

Dura hydro-lectric system for operation of windows, front seat and top; Packard convertibles. il diags Automotive & Aviation Ind 96:24-6+ My 15 '47
Four plastics, four car accessories. il Mod Plastics 24:216-17 Je '47
Harnessed air power; by-product of internal combustion engine control. E. C. Horton. Automotive & Aviation Ind 95:43 D 1 '46
Hydraulic-electric system operates windows, seat and top; Buick convertibles. diags Product Eng 18:100-1 Je '47
Hydraulic mechanism as used in bodies. J. B. Parsons. Automotive & Aviation Ind 95:46 D 1 '46
What's new in auto bodies. diags Am Mach 90:149-50 D 19 '46

See also
Automobile accessories industry
Brakes, Automobile
Oil filters, Automobile
Tires, Automobile

Exhibitions

Paris automobile show; exhibits in the touring car section. il diag Automobile Eng 36: 467-79 N '46
Le XXXIII[e] salon de l'automobile, Paris, 3-13 octobre 1946. J. Angeli. il Génie Civil 123: 305-10; 124:4-11, 34-7, 50-5 N 15 '46, Ja 1-F 1 '47

Fabrics

See Automobile fabrics

Frames

Car frame and crankcase improved by brittle coating tests. diags Automotive Ind 97:31+ Jl 1 '47
Hydraulic gaging units check frame alignment. il diags Product Eng 18:96-7 Ja '47
Private car frames. il Automobile Eng 37: 24-6 Ja '47

Gearing

Bevel gears. G. W. Nash. il Automobile Eng 37:71-6 F '47
Forty years of automotive gear lubrication. A. E. Hickel. il Pet Refiner 26:89-91 S '47
New applications of roto-shaving. il Automotive & Aviation Ind 96:28-9+ Ap 15 '47
New type cutter boosts gear output; used by Ford motor co. W. G. Patton. il Iron Age 160:63 S 25 '47
Ring gears formed from steel bar stock. K. Rose. il Materials & Methods 26:74-7 Ag '47
Tooth deflection and scuffing in design of highly loaded gears. F. R. McFarland. il diags Product Eng 18:141-5 F '47

See also
Automobiles—Steering gear
Automobiles—Transmission

Heating and ventilation

Special fasteners cut assembly time; Motorola gasoline car heater. il diags Product Eng 18:96-8 Jl '47
Thermal capacity of fresh air automotive heaters; abstract. V. Matulaitus. S A E J 55:63-4 Mr '47

History

Design thirty years ago (cont). plan diags Automobile Eng 37:58, 350 F, S '47
Emancipation day; November 14, 1896; early European automobiles. E. H. Livesay. il Engineer 182:435-7, 461-2 N 15-22 '46

Insurance

See Insurance, Automobile

Length of service

Car buying pattern may change; annual scrappage rate. Bsns W p39+ Ap 5 '47
Cars in use by makes, states and year of manufacture; tabulation. Automotive & Aviation Ind 96:92-9 Mr 15 '47

Lighting

Auto haze lights of polystyrene. il Mod Plastics 24:124-5 Mr '47

Lubrication

American petroleum institute lubrication committee meeting, Los Angeles, May 20-21. Nat Pet N 39:18-19 My 28 '47
Chassis lubrication; automatic centralized scheme with individual supply to each point. il diags Automobile Eng 37:248-50 Jl '47
Forty years of automotive gear lubrication. A. E. Hickel. il Pet Refiner 26:89-91 S '47
Latest hypoid lubricants. C. F. Prutton. il Steel 120:84-5+ Mr 31 '47
Lubrication is cheap as preventive maintenance. C. W. Georgi. Nat Pet N 39:39-40 Je 4 '47
Transmission and rear axle oils; should they be changed? Consumers Res Bul 19:39 Je '47

See also Gasoline service stations—Lubricating service

Manufacture

Automotive foundries around Detroit; illustrations with text. Foundry 75:94-105 Ap '47
Crosleys on the production line. J. Geschelin. il Automotive & Aviation Ind 96:28-32 My 15 '47
Flexibility of chassis assembly widened by suspended conveying system; Chevrolet's new plant. J. C. Webb. il Steel 121:72-4+ S 8 '47
Modern trends in body assembly and welding. L. M. Benkert. Automotive & Aviation Ind 95:44-5 D 1 '46
New automotive foundry engineered on assembly line pattern; Cadillac motor car division. il Foundry 75:80-5+ Jl '47
New idea 20 years old; Studebaker reverses assembly line. il Automotive & Aviation Ind 95:21+ N 15 '46
New ideas in conveyorized assembly. C. S. Ricker. il diags Am Mach 91:96-100 O 9 '47
Plastics simplify auto-body tooling; illustrations with text. C. S. Ricker. Am Mach 91:102-5 Ap 24 '47
Production firsts at Plymouth's enlarged plant. J. Geschelin. il plan Automotive & Aviation Ind 96:28-32+ Ap 1 '47
Shop shots at Kaiser-Frazer. flow diag il Am Mach 91:74-5 S 25 '47
Tooling plans for production of the Davis D-2 car. R. L. Bricker. il diag Automotive Ind 97:38-9+ S 15 '47
Ultramodern production features at Chevrolet's new Flint plant. J. Geschelin. il Automotive Ind 97:24-6+ Ag 15 '47

See also
Automobile assembly plants
Automobile engines—Manufacture
Automobile factories
Automobiles—Painting and finishing

Materials

Aluminum and the automobile engineer. E. G. West. Metal Prog 50:1262+ D '46
Application of magnesium in body building. G. H. Found and G. K. Glaza. il Automotive & Aviation Ind 95:44 D 1 '46
Automobile designed for light alloy construction. il diags Product Eng 17:88-92 D '46
Effect of residual stresses on the fatigue strength of structural materials; abstract. J. O. Almen. S A E J 55:79-80 Ap '47
Heat and sound insulation; abstract. L. M. Ball. Automotive & Aviation Ind 96:58+ Ja 1 '47
Is there a relationship between metallurgy, engineering, and materials specifications. F. G. Tatnall. diag S A E J 55:55-7 Ap '47
Kaiser-Frazer and Ford lead swing to aluminum. W. G. Patton. Iron Age 160:88+ S 25 '47
Light-alloy vehicles; approach to weight reduction. Automobile Eng 37:55-7 F '47

AUTOMOBILES—Materials—*Continued*
Production and fabricating possibilities of glass fabric reinforced plastics. G. Slayter. il plan Mod Plastics 24:142-5 D '46; Abstract. Automotive & Aviation Ind 95:45 D 1 '46
Resin adhesives in car bodies. il Mod Plastics 24:174-6+ Je '47
Steel shortage causing shifts to aluminum. Bsns W p34 S 27 '47

See also
Steel, Automobile

Plastics

Briggs introduces its new line of laminated plastics to the industry. W. G. Patton. Iron Age 158:86+ D 19 '46
Designing and building the reinforced plastic automobile. L. A. Werner. il diags S A E J 55:51-3 S '47
Developments at Ford's plastics plant. il Automotive & Aviation Ind 96:18-21+ Ja 15 '47
Full vision plastic top announced for convertibles. il Safety Eng 93:26 Ja '47
High standards hold for plastics in cars; abstract. N. J. Rakas. il S A E J 55:83+ F '47
Interior panels of plastic with photographic reproduction of leather, wood and fabric patterns. il Automotive & Aviation Ind 96: 32+ Ja 1 '47
Laminates take over interior paneling in postwar automobile. il Mod Plastics 24:112-18 Ja '47
Plastics deglamorized in down-to-earth evaluation of virtues and drawbacks. N. J. Rakas. S A E J 54:82 D '46
Plastics on wheels. C. A. Breskin. il Sci Am 176:66-8 F '47
Plastics simplify auto-body tooling; illustrations with text. C. S. Ricker. Am Mach 91: 102-5 Ap 24 '47
Some things old and some things new in plastics. F. B. Stanley. il S A E J 55:48-9 Mr '47

New models

See Automobile industry and trade—New models

Painting and finishing

Auto-body polishes. J. M. Vallance. Soap & San Chem 23:153 Mr '47
Briggs adopts special lacquer-drying ovens. J. Geschelin. il Automotive Ind 97:32-3+ Ag 1 '47
Dodge bodies baked by gas ovens. R. Le Grand. il diags Am Gas Assn Mo 29:213-16+ My '47
Experimental laboratory for paint testing; Newcomb-Detroit co. il Automotive & Aviation Ind 96:45 My 15 '47
New enameling system; Dodge division of Chrysler corp. il Steel 120:92-3+ F 17 '47
Nu-Enamel strikes sales bonanza in face-lifting for shabby cars. L. Boyd. il Sales Management 58:37-9 My 1 '47
Offset machines produce wood grain on steel parts for automobiles in the Fisher body, Trenton, N.J. plant. H. Chase. il Iron Age 160:80-4 Ag 21 '47
Safe use and storage of volatile paints and thinners; automobile repainting. W. T. Utley. il Safety Eng 93:18-19+ F '47
Spra-bonderizing; continuous carrier plant at works of Wolseley Motors. il diag Automobile Eng 37:313-14 Ag '47

Parking

See Automobile parking

Patents

Current patents. Published in monthly numbers of Automobile engineer
New setup for patent cross-licensing. L. Westrate. Automotive & Aviation Ind 96: 208+ Mr 15 '47

Prices

Auto industry compares prices; listing prices on all models of all standard makes as of April 15, 1947. Bsns W p40 My 3 '47
Auto reaction to Ford cut. Bsns W p16 Ja 25 '47
Current passenger car price, weight and body table; prices as of Jan. 1947; tabulation. Automotive & Aviation Ind 96:125 Mr 15 '47
Ford price cut. Nat City Bank p14-15 F '47
Ford slashes prices $15 to $50. W. G. Patton. Iron Age 159:76+ Ja 23 '47
Fuel to the fire; Ford strikes back in its feud with Chevrolet. Bsns W p43 Ap 5 '47
General Motors' action in raising prices on all models $100 analyzed. A. H. Allen. Steel 119:67 N 18 '46
Late slants on high prices. L. Westrate. Automotive & Aviation Ind 96:32+ Mr 1 '47
Price kickoff; G.M. starts new round of increases. Bsns W p 18 Ag 9 '47
Prices; Detroit's big question. Bsns W p32+ Ja 18 '47
Pricing; abstract. E. R. Breech. Adv & Sell 40:64 Jl '47
Studebaker is last of auto firms to be announcing increases. Iron Age 160:136 S 4 '47

Purchasing

See also
Banks and banking—Automobile purchase financing

Radio equipment

Adapting two-way radio to vehicle simplified by new SAE publication. diags S A E J 55:62-4 S '47
Mobile on ten meters; rugged, reliable transmitter and converter. W. B. Ford. il diags Radio N 36:25-8 D '46
Mobile radio set for 100 megacycles. Engineering 164:138 Ag 8 '47
Mobile radio-telephone service links nation. F. E. Butler. il diags Radio N 37:45-7+ My '47
Police radio equipment. il Engineer 184:134 Ag 8 '47; Elec R (Lond) 141:174 Ag 1 '47
Selective dial calling of radio cars. R. L. Brinton. il Elec World 126:93 N 9 '46
Two-way radio-telephone suitable for automotive fleets. W. C. Baylis. il diags S A E J 55:43-7 Mr '47
Utilities try mobile phone channel. H. P. Lawther. il map Elec World 128:64-5 Ag 2 '47
VHF link for press photos; station wagon with mobile radio and picture-transmitting equipment; New York daily mirror. il Electronics 20:100-2 Ag '47

See also
Taxicabs—Radio equipment

Bibliography

Radio progress during 1946; railroad and vehicular communication. Inst Radio Eng Proc 35:423-4 Ap '47

Renting

Southern Pacific offers rail-and-auto service; tie-up with Hertz drivurself system in 250 cities. il Sales Management 59:136+ O 15 '47

Repair

Specialized repair procedure for Nash 600 car. Nat Underw 50:8 N 21 '46

Riding qualities

Effects of unsprung mass on ride; abstract. R. Schilling. diag S A E J 55:61 O '47

Safety measures

Better vision means more safety; increased window area in modern automobiles. il Safety Eng 93:24+ My '47
K. S. Clapp invents safety switch for motor vehicles. il Nat Pet N 39:28 S 24 '47

Seat covers

Rating

Ready-made automobile seat covers. Consumers Res Bul 18:12-14 D '46

Skidding

See also
Motor buses—Skidding

Small size

Performance of European economy cars. L. Pomeroy. il S A E J 54:63-9 N '46
What builders of small vehicles are doing. il diag Automotive Ind 97:44-6+ O 15 '47

AUTOMOBILES—*Continued*

Specifications

American passenger cars; tabulation. Automotive & Aviation Ind 96:126-7 Mr 15 '47
British passenger cars; tabulation. Automotive & Aviation Ind 96:164 Mr 15 '47

Speed

Electronic speed cop develops from radar technique. il Electronics 20:148+ Jl '47

Springs and suspension

Advantage of rubber over steel springs; abstract. A. S. Krotz and R. W. Brown. Bus Transportation 26:89 Mr '47
Experimental suspension system; German design. A. M. Wolf. diags Automotive Ind 97:42-3+ Jl 15 '47
Independent four-wheel suspension for light car. il Product Eng 18:103 Ja '47
Independent four-wheel suspension using rubber torsion springs. A. S. Krotz and others. diags S A E J 54:34-41 N '46
Independent front suspension system improves car roadability. diags Steel 120:95 Ap 21 '47
Liquid springing for motor vehicles. diag Automotive & Aviation Ind 96:47+ Je 1 '47
Lowering production costs of bumpers and springs; United States spring & bumper co. H. Laurent. il Automotive Ind 97:24-6+ Ag 1 '47
New torsion rod suspension features welded construction; two-wheel trailer, Kit Kamper. G. Brewer. il diags Automotive & Aviation Ind 96:24-7+ My 1 '47
New wheel suspension design; British Invicta car. diags Automotive & Aviation Ind 96: 43 Ap 15 '47
Private cars; front suspension. il diags Automobile Eng Extra no 36:553-8 N 21 '46
Rear individual wheel suspension analysis; table. A. M. Wolf, comp. Automotive & Aviation Ind 96:47 F 1 '47
Rear individual wheel suspensions, American and foreign. A. M. Wolf. diags S A E J 55:40-3+ Ap '47
Rubber and its application to suspensions. A. S. Krotz. diags S A E J 55:40-2 Jl '47
Rubber springs. J. E. Hale. il diags Automotive & Aviation Ind 95:18-23+ O 15 '46; Same cond. S A E J 54:28-33 N '46
Something different in wishbone design. il Automotive Ind 97:40 O 15 '47
Suspension dampers; interconnected system to provide pitch control. G. E. L. Walker. diags Automobile Eng 37:178-80 My '47

Standards

New serrated shaft standards developed. Automotive & Aviation Ind 96:234+ Mr 15 '47

Starting

Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
Helps for car, starting on very cold mornings. Consumers Res Bul 19:33 Mr '47

Steering gear

Private cars; steering. diags Automobile Eng Extra no 36:559-60 N 21 '46
Unique tooling used to mass produce special parts at GMC Saginaw steering plants. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 1 '47

Theft

Liability of operators of parking lots for thefts of automobiles. M. J. Gwertzman. East Underw 48:52+ O 17 '47

Three wheel cars

Californian trundles out three-wheel car again. Bsns W p38 Ag 9 '47
Tooling plans for production of the Davis D-2 car. R. L. Bricker. il diag Automotive Ind 97:38-9+ S 15 '47

Towing

Claim men declare war on gouging tow-car operators. Nat Underw 51:8 Ja 16 '47

Transmission

Analysis of epicyclic gear systems for torque converters. A. Y. Dodge. diags Automotive Ind 97:38-40+ Ag 1; 34-7 Ag 15 '47
Clutches for automatic transmissions; abstract. H. Nutt and R. L. Smirl. diags Automotive & Aviation Ind 96:40-1+ Je 15 '47
Electromagnetic control; Z.F. actuation of an orthodox layshaft gear box. E. M'Ewen. il diags Automobile Eng 37:141-4 Ap '47
Fluid couplings for passenger cars; abstract. A. E. Kimberly. diag Automotive & Aviation Ind 96:41-2+ Je 15 '47
Gear shaving. il diags Automobile Eng 36: 443-50, 481-6 O-N '46
Hudson automatic transmission is vacuum operated. W. G. Patton. Iron Age 160:90+ Ag 7 '47
Hydra-matic automatic transmission control systems; abstract. O. K. Kelley and M. S. Rosenberger. diag Automotive & Aviation Ind 96:39-40+ Je 15 '47
Hydra-matic fluid standardization needed before GM considers release to service station. H. R. Wolf. Nat Pet N 39:30 Mr 12 '47
Hydraulic transmission. il Automobile Eng 37:175-7 My '47
Kegresse gear box; automatic design based on hydraulic actuation. diags Automobile Eng 37:11-15 Ja '47
Making transmissions automatic; abstracts. O. K. Kelley and others. S A E J 55:49-50 S '47
New auxiliary transmissions announced by Fuller. diag Automotive Ind 97:47 O 1 '47
New Kegresse transmission; gear shifting actuated by hydraulic and centrifugal governor control. diags Automotive & Aviation Ind 96:40-1+ My 15 '47
Private cars; gear boxes. il diags Automobile Eng Extra no 36:533-43 N 21 '46

Transportation

New automobile barges built by the St Louis shipbuilding and steel co. il Automotive & Aviation Ind 96:27+ Ap 1 '47
New automobile-carrying river craft. il Marine Eng 52:79-81 Ap '47

Upholstery

See also
Automobile fabrics

Weight

Current passenger car price, weight and body table; prices as of Jan. 1947; tabulation. Automotive & Aviation Ind 96:125 Mr 15 '47
How light is light in the passenger car field; abstracts. W. D. Appel. Automotive & Aviation Ind 96:20-3 F 15 '47; S A E J 55:23-6 Ap '47
Light-alloy vehicles; approach to weight reduction. Automobile Eng 37:55-7 F '47

Windows

Automotive glazing with plastics. G. B. Watkins and J. D. Ryan. il S A E J 54:54-5 D '46
Better vision means more safety; increased window area in modern automobiles. il Safety Eng 93:24+ My '47
Plastic car windows practical says SAE safety code proposal. il S A E J 54:80-1 N '46
Power window operation. il diags Automobile Eng 37:109-10 Mr '47

Windshield wipers

Problems related to cleaning curved and flat windshields. H. Malone. Automotive & Aviation Ind 95:42-3 D 1 '46
Trico wiper blades for curved glass windshields. il Automotive & Aviation Ind 96: 45 Ja 15 '47
Wiping curved windshields was a problem. J. W. Anderson. diags Automotive & Aviation Ind 95:40-1 D 1 '46

Windshields

Automotive glazing with plastics. G. B. Watkins and J. D. Ryan. il S A E J 54:54-5 D '46
Curved glass in automotive glazing. J. W. Kamerer. Automotive & Aviation Ind 95: 41-2 D 1 '46
Self-defrosting windshields for automobiles. Mach 53:173 Mr '47

AUTOMOBILES, Industrial

Summary of discussions during A.G.A. motor vehicle luncheon conferences. L. Edsall. Am Gas Assn Proc 1946:328-30

AUTOMOBILES, Salesmen's
New approach to salesmen's auto costs. S. B. Severson. Sales Management 59: 73 O 1 '47
Salesmen's automobile expense allowances; abstract. Management R 36:97-9 F '47
What to pay salesmen for auto expenses; National wholesale druggists association study. Sales Management 58:44-6 My 1 '47
Will salesmen walk? Ptr Ink 217:115 D 6 '46

AUTOMOBILES, Steam
Steam automobiles. il Consumers Res Bul 19: 11-13 Mr '47
Thermodynamics of vapor power plants for motor vehicles; abstracts. E. B. Neil. diags S A E J 55:22-3+ S '47; Automotive & Aviation Ind 96:43 Je 15 '47; Pet Processing 2:592 Ag '47

AUTOMOBILES, Toy
Plastics and metal make a sturdy toy roadster. il Mod Plastics 24:110-11 Ap '47

AUTOMOBILES, Used
See also Automobile industry and trade—Used cars

Prices
Automobile appraisal guides. Fed Res Bul 33:28-30 Ja '47

AUTOMOBILES and roads
Resurfacing Packard's famous test track. il diag Roads & Sts 89:57-63 N '46
Road costs must be justified by savings to drivers. J. E. Williams. il Civil Eng 16: 540-1 D '46
Sealing joints with rubberized asphalt; Packard test track. B. Gould. il Roads & Sts 90: 91-2+ F '47

See also
Motor trucks and roads

AUTOMOTIVE Diesel engines. See Diesel engines, Automotive

AUTOMOTIVE fuel
Believes LPG can be used as automotive fuel. Nat Pet N 38:49 N 27 '46
Fuels of the future; for reciprocating automotive and aircraft engines. A. J. Blackwood. il Sci Am 177:18-20 Jl '47
Fuels of the future; liquid fuels in improved forms, obtained from crude oil and synthesized from coal, vegetable matter, etc. R. P. Russell. il Sci Am 177:162-4 O '47
Octane ratings of agricultural motor fuels. C. F. Elder, F. R. Truby and R. Wiebe. bibliog Ind & Eng Chem 39:508-10 Ap '47
Oil company synthetic fuels and lubes show good records in navy tests. flow sheet il Pet Processing 2:37-9+ Ja '47
Preparation and physical properties of several aliphatic hydrocarbons and intermediates. F. L. Howard and others. bibliog J Res Nat Bur Stand 38:365-95 Mr '47
S.A.E. annual meeting; abstracts of papers. Oil & Gas J 45:40-1 Ja 18 '47
SAE National fuels and lubricants meeting, Tulsa, Nov. 7-8. Oil & Gas J 45:164-5 N 16 '46; S A E J 54:18-21+ D '46
Substitute fuels; wartime developments in Australia. J. Fielder. Automobile Eng 37: 115 Mr '47
What next in automotive fuels? D. P. Barnard. Pet Processing 2:245-8 Ap '47

See also
Airplane engines—Fuel
Automobile engines—Fuel
Gasoline
Motor truck engines—Fuel

Testing
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
Fuel research by mass production methods; Ethyl corp., Detroit laboratories. il Pet Processing 2:57-9 Ja '47

AUTOMOTIVE industries
Fred Crawford's company; neat balance between auto parts and aircraft components. il Fortune 34:146-51+ D '46

See also
Airplane industry and trade
Automobile accessories industry
Automobile industry and trade
Motor bus industry and trade
Motor truck industry and trade
Tractor industry and trade

Statistics
Automotive and aviation industries 1947 statistical issue. il map Automotive & Aviation Ind 96:73-124 Mr 15 '47

AUTOPOT. See Potentiometers

AUTO-RAILER. See Motor trucks on rails

AUTOTRANSFORMERS. See Electric transformers—Autotransformers

AUXINS
Promotion and inhibition of growth. H. C. Eyster. Science 106:265 S 19 '47

AVIATION

See also
Aeronautics
Aeronautics, Commercial
Air navigation
Airlines
Airplane races
Airplanes
Airports
Airways
Aviators
Flying boats
Gliders
Insurance, Aviation
Meteorology, Aeronautic
Radar aids to aviation
Radio aids to aviation
Radio apparatus on aircraft
Seaplanes
Television aids to aviation
Wind tunnels

Accidents
Air accident rate drop shown in '45. Aviation N 6:27 D 16 '46
Air crashes hit finances. Bsns W p 18 Je 21 '47
Atlantic accident stirs CAB action. Aviation W 47:41 O 27 '47
Bad weather snarls airways, stirs landing aids demand. Aviation N 7:11-12 Ja 13 '47
Brewster hits safety record of uncertificated operators. C. Adams. Aviation N 7:17 Ja 27 '47
Crash injury research. Mech Eng 69:33-4 Ja '47
Design for an impact decelerator. H. R. Bierman. il diag Science 104:510-13 N 29 '46
Domestic and international safety record 1939-1946; tabulation. CAA J 8:17 F 15 '47
Florida crash, cutthroat tactics jeopardize nonscheduled lines. C. Adams. Aviation W 47:59-60 O 6 '47
Laramie accident blamed on pilot. Aviation W 47:56 Ag 11 '47
McCarran scores CAB accident probe. Aviation N 7:9 Ap 7 '47
Personal plane accidents double. Aviation N 7:15 Ap 7 '47
Pilot fiddling with gust lock sends DC-4 into outside loop; new Eastern crash verdict. R. Hotz. Aviation W 47:40-1 O 27 '47
Pilot proneness to accident. B. Kaufman. il Aero Digest 54:38-9+ Ap '47
Pilot responsibility for accidents; record for 1946. R. H. Wood. Aviation N 7:26 Ja 20 '47
Protection sought in crash landings. Aviation W 47:52 S 15 '47
Record proves danger of pre-flight drinks. il CAA J 8:79 Jl 15 '47
Statistical methods simplify evaluation of data. Electronics 20:198+ N '47
Stop that aviation fire; train ground crews for crashes and rescue. il Air Transport 5:31-4 Ja '47
Theirs is to reason why; photographs of subcommittee of Senate interstate commerce committee. Bsns W p16 Ja 25 '47
Two Congressional probes tackle air safety problems. R. B. Hotz. diag Aviation N 7: 7-8 Ja 27 '47
Views on separate standard of liability for aviation. R. B. Lynch. East Underw 47:38 D 6 '46

See also
Airlines—Accidents

Altitude flying
High altitude oxygen boost for aircraft engines. F. Masi and others. il diag Aviation 46:54-5 Ap '47
Liquid oxygen in aircraft. H. Grayson-Smith and J. C. Findlay. diag Chem R 39:397-402 D '46

AVIATION—Altitude flying—*Continued*
New regulations required for high altitude transport design. M. F. Vanik. Aviation W 47:24 O 27 '47
Suits for high fliers. il Comp Air Mag 51: 302 N '46
Vickers-Armstrongs stratosphere chamber. il diags Engineer 184:296-8 S 26 '47; Engineering 164:257-80 S 12 '47

Clubs

Aeronca offers plan for flying clubs. Aviation W 47:45 Jl 14 '47
French private flying clubs. Aviation W 47: 16 O 20 '47
Guatemala offers growing private-plane market; Aero club de Guatemala. For Comm W 26:28 F 8 '47

Flights

Army and navy distance flights. maps Aero Digest 53:59 N '46
CAA radio station helped Dreamboat's nonstop flight. CAA J 7:150 D 15 '46

Ice problem

See also
Airplanes—Ice protection

Instrument flying

Army flies all weather; Army air forces' all-weather flying center at Wilmington, Ohio. R. B. Hotz. il Air Transport 5:31-3 Ap '47

Medical aspects

Application of basic physiologic data in the design of respiratory equipment. L. D. Carlson and V. J. Wulff. bibliog diags J Aeronautical Sci 14:229-36 Ap '47
Is aviation medicine industrial hygiene? abstract. E. G. Reinartz. Ind Med 16:454+ S '47
Pilot-airplane integration. M. C. Shelesnyak. il Aero Digest 53:44-5+ D '46

Navigation

See Air navigation

Safety measures

Air navigation facilities. W. A. M. Burden. S A E J 55:17-19 Ap '47
Air safety record is being steadily improved. W. E. Kline. il diags Dom Comm 35:6-10 Ap '47
Airborne aircraft arresting gear; use of nylon material, Unolyn. A. B. Schultz. diags S A E J 55:35-6 My '47
Airline pilots score airport radio range locations; testimony in congressional investigation. il Aviation N 7:7 F 3 '47
Boundary layer control may offer safety increase. bibliog Aviation W 47:34-5 Ag 18 '47
Buzzing is bad business; straight-in landings instead of circling considered. R. S. Johnson. diags Air Transport 5:38-9+ My '47
CAB safety bulletin gives do's and don't's for pilots landing on unfamiliar fields. CAA J 8:44 Ap 15 '47
CAB takes first action on Special Board proposals. CAA J 8:85+ Ag 15 '47
Congressional committees urge airport fund diversion to safety. Aviation N 7:9 F 24 '47
Congressional investigators promise more safety funds. Aviation N 7:7-8 F 10 '47
Cross-wind landings. R. S. Johnson. diags Air Transport 5:24-6 Je '47
Crosswind takeoffs. R. S. Johnson. diags Air Transport 5:21-3 Jl '47
Ejection seat is new safeguard for pilot. C. Villency. il Nat Safety N 54:58 D '46
Explosion-proof electric units seen must for future craft. H. R. Crago. il Aviation 46: 51-3 Je '47
Exposure, the key to flight safety. R. S. Johnson. diags Air Transport 5:24-6 Ap '47
For safer blind flying; international conference proposes worldwide agreement on navigation and landing aids. Bsns W p38+ Ja 4 '47
ICAO-ISO cooperation to promote air safety. Ind Stand 18:199 Ag '47
Is there a plane in your future? new problems for safety engineers. J. M. Chase. Nat Safety N 56:18-19+ Jl '47
Joint conference will study new air safety requirements. il Aviation N 6:21 N 11 '46
Laboratory test of aviator's ejection seat. D. T. Watts and others. il Science 105:583-5 My 30 '47
Life rafts developed for over-ocean airliners. I. J. Hammill. il Air Transport 5:40-1 S '47
Lightning research aimed at protection. il Aviation W 47:17 Ag 25 '47
New instrument system proposed for flight and landing safety. H. L. Jackson. diags Aviation 46:86-8 Ja '47
New light planes have safety features. Aviation N 7:25 Mr 10 '47
1946 safest airline year, Wright and Landis testify before House committee investigating airline accidents. CAA J 8:13 F 15 '47
Personal flying; abstract. J. Lederer. Mech Eng 69:864 O '47
Presidential board begins new air safety investigation. R. Hotz. Aviation N 7:7-8 Je 23 '47
Protection of the human body; restraining harness for aircraft pilots; abstract. H. B. Bierman and others. Nat Safety N 55:48 My '47
Psychology and aircraft design; errors in reading instruments and in handling controls. P. M. Fitts. il diags Mech Eng 69:135-41+ F '47
Research dealing with pilots makes air-safety progress. CAA J 8:73+ Jl 15 '47
Safe, easy instrument flying CAA objective. T. P. Wright. CAA J 7:137+ N 15 '46
Special board spans wide field in fifth report on air safety. CAA J 8:97+ S 15 '47
Special board works to frame safety program. CAA J 8:73 Jl 15 '47
Stall-resistant craft seen through new design data. Aviation W 47:24 S 15 '47
Survey of aircraft rescue requirements; abstract. J. Lederer. Aeronautical Eng R 5: 23-4 D '46
This is your program; Civil aeronautics administration technical development service. A. L. Morse. S A E J 55:45-7 F '47
Top flight safety in the ATC. M. E. Sanders. il Safety Eng 94:12-13+ S '47
Transport category seen facing general revision. Aviation W 47:55+ Jl 21 '47
Wright, ATA clash over air safety program funds. Aviation N 7:9 F 17 '47

See also
Aeronautic instruments
Parachutes

Social aspects

Bibliography

Selected and annotated bibliography on the social, political, economic, and international aspects of aviation. 65p U.S. Dept. of commerce, Civil aeronautics administration, Washington '46

Transatlantic flights

Analyzing winds for North Atlantic flight. F. M. Booth. Air Transport 5:36-8+ Ag '47
Transatlantic fliers get wind reports from CAA station. CAA J 7:139 N 15 '46

Transoceanic flights

Trans-Atlantic automatic flight; plan trans-Pacific robot flight without crew for automatic C-54. R. Hotz. map Aviation W 47: 21+ O 27 '47

See also
Airlines—Transoceanic lines

Weather aspects

See Meteorology, Aeronautic

AVIATION distributors and manufacturers association
Annual meeting, Chicago. Aviation N 6:24-5 D 23 '46

AVIATION fuel. See Airplane engines—Fuel

AVIATION insurance. See Insurance, Aviation

AVIATION landing stations
Airports by class and by type, by states, Jan. 1, 1947; number of U.S. airports and landing fields, 1937-1946; tabulations and chart. Automotive & Aviation Ind 96:122-3 Mr 15 '47
Close-in airpark financed by Oklahoma City businessmen. il Aviation W 47:48 Jl 7 '47
Grand River air park is operating. Aviation N 6:14 N 11 '46

AVIATION landing stations—*Continued*
Ohio court decision menaces future of private flying fields. Aviation N 6:14 D 30 '46
See also
Airports

AVIATION libraries. See Aeronautic libraries

AVIATION maintenance corporation
Aviation maintenance corp. grows to $8,000,000 business in year. S. Bangs. Aviation N 7:14 Ap 28 '47

AVIATION trades association, National. See National aviation trades association

AVIATORS
Airline captain; interview with Clyde H. Proper, jr. il Fortune 35:136-9+ Je '47
Alcohol evidence disputed in crash. Aviation W 47:13 S 29 '47
CAA age study shows most pilots are young persons. CAA J 8:39 Ap 15 '47
40 years of flying friendship; American aviators fly in Canada. F. H. Ellis. il Aero Digest 54:25-7+ My '47
Limiting effect of centripetal acceleration on man's ability to move; effect of spinning airplane. C. F. Code and others. il J Aeronautical Sci 14:117-23 F '47
Opens new rest haven for tired pilots, planes. Aviation W 47:39 Ag 18 '47
Pilot proneness to accident. B. Kaufman. il Aero Digest 54:38-9+ Ap '47
Psychology and aircraft design; errors in reading instruments and in handling controls. P. M. Fitts. il diags Mech Eng 69:135-41+ F '47
Research dealing with pilots makes air-safety progress. CAA J 8:73+ Jl 15 '47
What of the aviation pioneers? G. H. Scragg. Aero Digest 55:28-9 S '47
See also
Air line pilots association
Women as aviators

Clothing
Safety flying suit. il Aviation N 7:16 Mr 24 '47
Suits for high fliers. il Comp Air Mag 51:302 N '46

Equipment
Application of basic physiologic data in the design of respiratory equipment. L. D. Carlson and V. J. Wulff. bibliog diags J Aeronautical Sci 14:229-36 Ap '47

Physical examinations
CAA recommends single physical exam for private pilots. Aviation N 7:14-15 Ap 7 '47

Salaries
Arbitration board will settle TWA-pilot battle over wages. B. Stubblefield. Aviation N 6:29-30 N 25 '46
EAL, C & S and PCA agreements create pattern for pilots' pay. Aviation W 47:58 Jl 21 '47
Four-engine pilot pay case. E. M. Fitch. Air Transport 5:37-9 Jl; 28-30+ Ag; 51-2+ O; 54+ N '47
New pilot pay formula in AA agreement. Aviation N 7:37 Ap 7 '47
TWA-ALPA settlement hangs fire as pilots refuse to sign. M. Mickel. Aviation N 6:27 N 11 '46
TWA pilots award seen as pattern. Aviation N 7:30 F 10 '47
When facts fail; TWA pilots' refusal to accept board award. Bsns W p92+ N 9 '46

Testing
Discovery of aptitude and achievement variables. J. P. Guilford. bibliog Science 106: 279-82 S 26 '47

Training
Cross country stressed in novel experimental flight course at Ohio university. A. McSurely. Aviation W 47:23 S 29 '47
Flight instruction system commences national campaign. S. Bangs. Aviation W 47:44 Jl 14 '47
New electronic flight trainer soon ready for delivery to PAA. il Aviation W 47:16 Ag 4 '47

AVIATORS, Military
Pilot-airplane integration. M. C. Shelesnyak. il Aero Digest 53:44-5+ D '46

Testing
Scientific development of the use of human resources; progress in the army air forces. J. C. Flanagan. Science 105:57-60 Ja 17 '47

Training
New training types for service schools. Aviation W 47:15 Ag 11 '47

AVIGATION. See Air navigation

AWARDS. See Rewards, prizes, etc.

AWARDS, Advertising. See Advertising awards

AWNINGS
Case studies in small business; canvas goods repair service. Dom Comm 35:66-7 My '47
How to raise a family of promising new products; Setfast canvas paint. W. Hansot. il Sales Management 58:46+ Mr 1 '47

AXLES
See also
Automobiles—Axles
Car axles

Manufacture
Controlling quality at the machine; use of Precisionaire gages; Timken Detroit axle co. il Steel 120:110 Ja 20 '47
High-volume production of passenger car axles; Salisbury axle works, division of Dana corp. J. Geschelin. il Automotive Ind 97:34-5+ Jl 1 '47

AXONOMETRIC projection. See Projection, Axonometric

AYARS, Alice Annie, 1895-1946
Sketch. por Am Cer Soc Bul 25:490 D 15 '46

AYRES, Leonard Porter, 1879-1946
Appreciation. W. R. Burgess. Am Stat Assn J 42:128-33 Mr '47
Tributes to Leonard Ayres. por Banking 39: 47+ D '46

AZACYCLOBUTADIENE
Investigation of the compound described as azacyclobutadiene. W. J. Gensler. bibliog il Am Chem Soc J 69:1966-8 Ag '47

AZANONANE
Syntheses in the morphine series; derivatives of bicyclo[3 : 3 : 1]-2-azanonane. J. A. Barltrop. Chem Soc J p399-401 Mr '47

AZEOTROPES
Graphical method for predicting azeotropism and effect of pressure on azeotropic constants. L. H. Horsley. Anal Chem 19:603-9 Ag '47
Graphical method for predicting effect of pressure on azeotropic systems. H. S. Nutting and L. H. Horsley. Anal Chem 19: 602-3 Ag '47
Table of azeotropes and nonazeotropes. L. H. Horsley. Anal Chem 19:508-600 bibliog(172 ref, p599-600) Ag '47
Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S. Nutting and L. H. Horsley. Anal Chem 19:601-2 Ag '47

AZEOTROPY
Azeotropic fractionation process; Union oil company of California. flow diag Pet Refiner (Process Handbook sec) 26:108-9 Ap '47
Composition of vapors from boiling binary solutions; acetonitrile-water system. D. F. Othmer and S. Josefowitz. bibliog Ind & Eng Chem 39:1175-7 S '47
Composition, pressure, and temperature relationships in binary azeotropic systems. E. A. Coulson and E. F. G. Herington. Chem Soc J p597-607 My '47
Correlation of vapor-liquid equilibria data for nonideal ternary systems. E. G. Scheibel and D. Friedland. bibliog Ind & Eng Chem 39:1329-34 O '47
Evaluation of azeotropic entrainers. L. Berg and J. M. Harrison. bibliog Chem Eng Prog 43:487-96 S '47
Separation of butadiene by azeotropic distillation with ammonia. N. Poffenberger and others. bibliog flow sheets Am Inst Chem Eng Trans 42:815-26 O-D '46

AZIMUTH
Simple device for measurement of angles of azimuth and deviation from the horizontal on glass tubes used for surveying diamond-drill holes. J. W. Townsend. 4pls U S Bur Mines Rep of Invest 4062:1-3 '47

See also
Cosmic rays—Azimuthal effect

AZIMUTH indicator
Improved azimuth indicating system for aircraft. E. E. Lynch and R. A. Pfuntner. bibliog il diags Elec Eng 65:Trans 806-12 D '46

AZO compounds
Chemistry of 1-azanthraquinone; chloro-derivatives of 2 : 4-dimethyl-1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p545-9 Ap '47
Chemistry of 1-azanthraquinone; sulphonation of 1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p539-44 Ap '47
Decomposition reactions of the aromatic diazo-compounds; mechanism of formation of azo-compounds, polyaryls, and aryl sulphides. K. H. Saunders and W. A. Waters. Chem Soc J p 1154-6 D '46
Reaction between *o*-aminoazo compounds and barbituric acid; a new synthesis of riboflavin. M. Tishler and others. bibliog Am Chem Soc J 69:1487-92 Je '47
Vat and azoic colors preferred for printing. A. K. Saville. il Textile World 97:122-3+ Ag '47

AZO dyes. See Dyes and dyeing—Chemistry

AZONAPHTHALENE
Reduction of 1 : 1′-azonaphthalene and of some 4 : 4′-derivatives. H. H. Hodgson and J. Habeshaw. Chem Soc J p77-8 Ja '47

AZOSULFATHIAZOLE
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47

AZOTIZATION
Tetrazotisation of 1 : 5- and 1 : 8-naphthylenediamines and the tetranitration of 1 : 5- and 1 : 8-di-*p*-toluenesulphonamidonaphthalenes. H. H. Hodgson and J. S. Whitehurst. Chem Soc J p80-1 Ja '47

AZOXYANISOLE
Surface tension of liquid crystals. W. M. Schwartz and H. W. Moseley. bibliog il diags J Phys & Colloid Chem 51:826-37 My '47

B

BABBITT, B. T., inc.
Net reflects drop from wartime profit margins. Barron's 27:32 My 19 '47
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:214 My 24 '47
Stock offered. Comm & Fin Chr 165:526 Ja 27 '47

BABBITT metal
Babbitt alloys for plain bearings. P. G. Forrester. bibliog Engineering 164:184-5, 208-9, 234-5 Ag 22-S 5 '47
Lead base babbitt alloys. H. P. George. il diags Product Eng 18:118-21 My; 138-41 Je '47

BABBITTING
Babbitt anchorage and shrinkage. Paper Ind 29:98 Ap '47
Bearings babbitted upside down. W. Willecke. diags Power 91:265-6 Ap '47
How to pour bearings. K. T. MacGill. Paper Ind 28:1336 D '46; Same. diag Iron Age 159: 50-1 Ja 9 '47; Same. Steel 120:106 F 10 '47; Same. Materials & Methods 25:133+ F '47; Same. Pulp & Pa of Can 48:63-4 F '47; Same. Marine Eng 52:112+ Mr '47; Same. Oil & Gas J 46:75 Jl 19 '47; Same cond. Mach 53:189 Ja '47; Same abr. Mech Eng 69:238-9 Mr '47
Pouring a babbitted bearing. il Paper Ind 29:97 Ap '47
Preparing bearing shells for babbitting. A. A. Goodman. il Am Mach 91:100 Je 5 '47; Same. Metal Prog 51:776 My '47

BABSON, Roger Ward, 1875-
Utopia in Eureka. Bsns W p34+ Jl 12 '47

BABY food. See Infants' food

BABY products. See Infants' supplies

BACH, Alexei N. 1856-1946
Sketch. Chem & Ind p393 N 2 '46

BACITRACIN
Two new antibiotics reported at National Institute symposium. Chem & Eng N 25:436 F 17 '47

BACK
Back injuries drop when Louie the Lifter puts on a show; mechanical robot built by the safety division of Standard oil co. of California. il Pet Processing 2:578 Ag '47
Physical capacities appraisal of the industrial back. R. B. O'Connor. Ind Med 15: 639-40 N '46

BACKACHE
Backache. P. Rizzo. Ind Med 15:642-3 N '46
Low back pain; a different cause and treatment; pronation syndrome. L. Jones. il diags Ind Med 16:57-62 F '47

BACON
Flexible vacuum package. il Mod Packaging 20:100-1+ Je '47

BACTERIA
A.P.I. assigned ZoBell patent on use of bacteria in oil production. Oil & Gas J 45:36 Ja 18 '47
API research project 43A; role of microörganisms in the transformation of organic matter into petroleum. C. E. ZoBell. bibliog Am Pet Inst Proc 26(4):159-63 '46
Bacterial fractionation of oxygen isotopes. M. Dole, R. C. Hawkings and H. A. Barker. bibliog Am Chem Soc J 69:226-8 F '47
Bacterial release of oil from sedimentary materials. C. E. ZoBell. il Oil & Gas J 46:62-5 Ag 2 '47
Macromolecules synthesised by micro-organisms. M. Stacey. Chem Soc J p853-64 Je '47
Microbial transformation of molecular hydrogen in marine sediments, with particular reference to petroleum. C. E. ZoBell. Am Assn Pet Geologists Bul 31:1709-51 bibliog(200 titles, p1745-51) O '47
Possible relations of bacteria to reservoir fluids. C. E. ZoBell. Am Assn Pet Geologists Bul 31:391-2 F '47
Recent developments in the microbiology of retting; microbial flora in different systems of retting. L. A. Allen. bibliog Soc Chem Ind J 65:365-70 N '46
Recent developments in the microbiology of retting; part played by bacteria in retting the flax and in purifying the liquor. L. A. Allen. bibliog Soc Chem Ind J 65:373-6 D '46

See also
Air—Bacteriology
Bacteriology
Bacteriostasis
Fermentation
Lactobacillus casei
Sulfur bacteria
Viruses
Water—Bacteriology

BACTERIA, Pathogenic
Critical study of machine dishwashing; abstract. W. L. Mallmann and others. Nat Safety N 56:50 Ag '47
Determining and reducing the concentration of air-borne micro-organisms. M. Luckiesh and A. H. Taylor. bibliog il Heating-Piping 19:113-17 Ja '47; Discussion. 19:121-2 Ap '47
Killing bacteria in water under pressure. M. Luckiesh and others. il diags Gen Elec R 50:16-21 My '47
Pathogenic organisms in dried eggs; abstract. M. D. Schneider; N. E. Gibbons and others. Food Ind 19:266 F '47

See also
Salmonella
Staphylococci
Streptococci
Tubercle bacilli

BACTERIOLOGICAL apparatus
Cultivation of microorganisms with the aid of cellophane membranes. G. W. Harmsen and W. J. Kolff. diags Science 105:582-3 My 30 '47

BACTERIOLOGICAL laboratories
Improved and improvised sterilizing containers for bacteriological Petri dishes and pipettes. I. C. Hall. Science 106:170 Ag 22 '47

BACTERIOLOGY

See also
Agglutination
Air—Bacteriology
Antigens and antibodies
Antiseptics
Bacteria
Disinfection and disinfectants
Fermentation
Food—Bacteriology
Milk—Bacteriology
Viruses
Water—Bacteriology

Culture mediums

Chemical sterilization of bacteriological media by means of mercuric oxycyanide and subsequent inactivation of the mercurial by thioglycolate. N. Grossowicz and D. Kaplan. bibliog Science 105:237 F 28 '47

NAIDM-USDA report on quaternary ammonium testing; E typhosa and S aureus in various cultures. L. S. Stuart. Soap & San Chem 23:135+ S '47

Studies on false confirmed test using B.G.B. and comparison studies on lauryl sulfate tryptose broth as a presumptive medium. M. S. Shane. Am Water Works Assn J 39: 337-40 Ap '47

Yeast autolysate; a culture medium for hemophilus influenzae. E. Neter. bibliog Science 106:350-2 O 10 '47

Technique

Improved technique for enumeration of escherichia coli on black walnut meats. A. R. Colmer and H. D. Erickson. Science 105:582 My 30 '47

Use of aerosol OT in dissecting salivary glands of mosquitoes infected with malaria. E. S. Josephson and others. Science 105: 650-1 Je 20 '47

BACTERIOSTASIS

Bacteriostasis is important phase in recent development of chemotherapy. M. Copisarow. Science 106:241 S 12 '47

Basic derivatives of cholane and norcholane; synthesis of certain basic nitrogen derivatives of cholane and norcholane. S. P. James and others. Chem Soc J p665-70 Ag '46

Effect of flavonols on the bacterio-static action of dicoumarol. J. Naghski and others. bibliog Science 105:125 Ja 31 '47

α-Methylene butyrolactone from erythronium americanum. C. J. Cavallito and T. H. Haskell. bibliog Am Chem Soc J 68:2332-4 N '46

Preparation of some sugar acid derivatives of sulfanilamide. C. L. Mehltretter. Am Chem Soc J 69:2133-4 S '47

Some alkoxy- and alkylenedioxydi-amines and alkoxy- and alkylenedioxydi-guanidines. A. T. Fuller and H. King. Chem Soc J p963-9 Jl '47

Synthesis of diaminoacridines. A. A. Goldberg and W. Kelly. Chem Soc J p595-7 My '47

Synthesis of nuclear amidino-derivatives of 5-aminoacridine. A. A. Goldberg and W. Kelly. Chem Soc J p637-41 My '47

BAD debts. See Collecting of accounts; Income tax—Deductions

BAEKELAND award

Baekeland award to Paul J. Flory. Chem & Eng N 25:287 F 3 '47

Paul John Flory receives Baekeland award. Chem & Eng N 25:1502-3+ My 26 '47

BAG filling machines

Automatic cellophane bagging of frozen foods; making, filling and heat sealing duplex bags. il Mod Packaging 20:143-5 Mr '47

St Regis bag filler reduces high cost. Paper Tr J 124:28 Je 12 '47

BAG making machines

Improved model of Clipper. il Mod Packaging 20:176 Mr '47

BAGGAGE

Carrier's liability for baggage. H. S. Daynard. Weekly Underw 156:538+ F 22 '47; Same abr. East Underw 48:38 F 21 '47

See also
Luggage
Motor bus lines—Baggage

BAGGAGE and express cars

New York Central installs 20 aluminum alloy combination baggage cars. il Ry Age 122:853-6 Ap 26 '47

BAGGS, Arthur Eugene, 1886-1947

Sketch. bibliog por Am Cer Soc Bul 26:105-6 Mr 15 '47

BAGS

Bagged oranges. il Mod Packaging 21:108-11 O '47

Changing to heat seals for coffee bags. Mod Packaging 21:154 O '47

Comparison of methyl bromide and hydrogen cyanide for the fumigation of empty bags in barges. W. B. Brown and S. E. Lewis. bibliog Soc Chem Ind J 65:241-5 S '46

Humidor bag; protecting dehumidifying powder uses aluminum foil, glassine and kraft. il Mod Packaging 21:133 O '47

Hushed popcorn bags prove silence is golden. Bsns W p52 S 27 '47

Polyethylene packages in use. il Mod Packaging 20:118-22 Ja '47

See also
Burlap
Cotton bags
Paper bags

BAHRS, George O.

Portrait. Bsns W p108 O 18 '47

BAILEES' customers insurance. See Insurance, Bailees' customers

BAILEY, Calvin Weston, 1861-1947

Sketch. por East Underw 48:18+ Ja 10 '47; Nat Underw 51:15 Ja 9 '47

BAILEY, Josiah William, 1873-1946

Sketch. Comm & Fin Chr 164:3398 D 26 '46

BAILEY, William Bacon, 1873-

Economist retires from Travelers. East Underw 47:21 D 27 '46; Nat Underw (Life ed) 50:6 D 27 '46

BAILEY bridges. See Bridges, Prefabricated

BAILMENT

Carrier liable for goods stolen at warehouse not selected by owner. East Underw 48:22 Ag 15 '47

Liability of operators of parking lots for thefts of automobiles. M. J. Gwertzman. East Underw 48:52+ O 17 '47

BAKELITE

Clarinet of machined extruded phenolic. il Mod Plastics 25:110-11 S '47

Four phenolic parts in observer; good dielectric and weathering properties; Observoscope. il Mod Plastics 24:139 My '47

Plastics in electrical industry. T. J. Fielding. il diag Electrician 137:1196-9, 1281-5, 1370-4 N 1-15 '46

Reduced wear on the way; fabric-reinforced phenolic sheet provides low-friction planer ways. il diags Am Mach 91:96 My 22 '47

BAKER, Stephen, 1859-1946

Sketch. Comm & Fin Chr 165:584 Ja 27 '47

BAKER, William L.

Up from tourist printer to printing plant executive; idea and ambition have built a prosperous packaged printing business; Advertisers' press of Holyoke. S. McIntyre. por Inland Ptr 118:41-2 Mr '47

BAKERS and bakeries

Air conditioning of processes in the bread bakery. H. R. Gable. il Heating-Piping 19:107-12 O '47

How humanized distributor relations spur baking company's growth; Brick oven bakers, inc. T. Armstrong. il Sales Management 58:48+ Ap 1 '47

How to work out a sanitation program in a food plant; National biscuit co. J. L. Barron. il Food Ind 19:170-1 F '47

Modern bakery sanitation. P. W. Hodler. il Food Ind 18:1865-7+ D '46

This success was built on quality competition, not price; a good product, good labor relations, good distribution, Arnold bakers, inc. C. J. Swan. il Ptr Ink 219:46-7 Ap 25 '47

See also
Bread
Cake
Cookies
Pastry, Frozen

Advertising

Back twin-pack with $300,000 campaign; Columbia baking reintroduces split loaf. il Sales Management 58:91 Ap 1 '47

BAKERS and bakeries—*Continued*

Employees

Union wages and hours in the printing, trucking, local transit, and baking industries, 1946. J. P. Corkery and H. M. Abowitz. Mo Labor R 64:444-53 Mr '47

Equipment

American standard safety code for bakery equipment. 31p pa $1 American standards assn, 70 E. 45th st, New York 17 '47
Handling in a food factory; J. Lyons & co, ltd. il Mech Handling 34:461-4 S '47
Mechanized bakery; mass production of bread. Mech Handling 34:69-71 F '47

Safety measures

American standard safety code for bakery equipment. 31p pa $1 American standards assn, 70 E. 45th st, New York 17 '47
Safety for bakery workers; first national safety code. A. Hecht and P. Pirrie. il Ind Stand 18:220-3 S '47

Great Britain

Stocktaking. R. T. Colgate. Chem & Ind p499-505 Ag 16 '47

BAKERY engineers, American society of. See American society of bakery engineers

BAKING

Baking quality of dried egg. D. W. Grover and J. R. Hawthorne. bibliog il Chem & Ind p458-62 D 28 '46
Baking under the microscope. S. H. Carleton. il Sci Am 177:216-18 N '47
Baking with sweet potato flour; cakes have improved flavor and texture when sweet potato flour is used to replace part of eggs, butter and sugar. L. M. Ware and others. il Food Ind 19:1365+ O '47
Painless baking; prepared cake, specialty flours invade small commercial bakery field. Bsns W p56+ O 18 '47
Some present trends and future developments in baking; abstract. D. W. Kent-Jones. Chem & Ind p537 Ag 30 '47

See also

Bakers and bakeries
Bread

BAL

BAL peacetime use development; abstract. C. M. Suter. Oil Paint & Drug Rep 150:45 N 25 '46
Clinical uses of 2,3-dimercaptopropanol (BAL); abstract. J Ind Hygiene 29:sup10 Ja '47
2 : 3-Dimercaptopropanol (British anti-lewisite) and related compounds. L. A. Stocken. Chem Soc J p592-5 My '47
Effects and treatment of inhalation of cadmium chloride aerosols in the dog. H. E. Harrison and others. bibliog il J Ind Hygiene 29:302-14 S '47
Experimental argyrosis; treatment of rats receiving silver with 2,3-dimercaptopropanol (BAL). C. T. Olcott and W. F. Riker, jr. Science 105:67 Ja 17 '47
Heavy-metal poisoning treated with BAL. Chem & Eng N 25:1210 Ap 28 '47
Influence of dithiopropanol (BAL) on human lead metabolism. H. W. Ryder and others. bibliog Science 106:63-4 Jl 18 '47
Oral efficacy of BAL in protecting rats against alloxan diabetes. A. Chesler and R. Tislow. Science 106:345 O 10 '47
Protective action of BAL in experimental antimony poisoning; abstract. H. Eagle and others. J Ind Hygiene 29:sup69 Jl '47
Systemic treatment of arsenic poisoning with BAL; abstract. H. Eagle. J Ind Hygiene 29:sup9 Ja '47

BALABAN, Barney, 1887-

Paramount: Oscar for profits. por Fortune 35:90-5+ Je '47

BALANCE of payments

Balance of payments. Economist 153:310-11, 350-1, 390-2, 511-12, 549-50 Ag 23-S 6, 27-O 4 '47
Balance of payments prospects for 1947. Fed Res Bul 32:1333-4 D '46
Barclays bank sees permanent need for sterling area. Comm & Fin Chr 166:923 S 4 '47
Britain's balance of payments. Economist 151:1009-10 D 21 '46
British balance of payments crisis. Nat City Bank p99-103 S '47
British crisis; balance of payments, position. Fed Res Bul 33:1071-82 S '47
Canada's balance of international payments. F. A. Knox. Ann Am Acad 253:134-42 S '47
Canada's critical exchange problem. M. Palyi. Comm & Fin Chr 165:1117+ F 27 '47
Canadian balance of payments with the United States, 1946; table. Banking 39:76 Je '47
Canadian dollar; Bank of Nova Scotia analyzes present position. Comm & Fin Chr 165:3240+ Je 19 '47
Convertibility ahead. Economist 152:724-5 My 10 '47
Danger in our surplus productive capacity; importance of exports to our economy; problem of foreign dollar balances. V. L. Horoth. il Mag of Wall St 80:192-4+ My 24 '47
Debt to India. Economist 152:204-6 F 1 '47
Dollar famine hits next-door neighbor; Canada feels drain on funds. E. C. Ertl. Barron's 27:30 Je 9 '47
Dollars for Europe? Economist 152:833-5 My 31 '47
Economic riddle of the dollar shortage. J. D. Mooney. Comm & Fin Chr 166:2+, 517+ Jl 3, Ag 7 '47
Eire's international balance of payments. Economist 151:755 N 9 '46
Europe's dollar needs; comments on the Paris report. Economist 153:610-11 O 11 '47
Exchange depreciation and international monetary stability. J. J. Polak. bibliog R Econ Stat 29:173-82 Ag '47
Future of the sterling area. V. L. Horoth. il Mag of Wall St 79:730-2+ Mr 29 '47
India and the Empire dollar pool. For Comm W 26:15+ Ja 11 '47
International transactions of the United States in 1946. Survey of Cur Bsns 27:11-16 Mr '47
International transactions of the United States, third quarter of 1946. Survey of Cur Bsns 26:11-13+ D '46
International transactions of the United States during the first quarter of 1947. Survey of Cur Bsns 27:5-9 Je '47
International transactions of the United States during the second quarter of 1947. Survey of Cur Bsns 27:5-8 S '47
Mills, Spence & co. decries danger of Canadian exchange collapse; dollar problem. Comm & Fin Chr 166:1643+ O 23 '47
Myth of Uncle Sap. Fortune 34:126-7+ D '46
1948 balance of payment estimates for the 16 countries participating in the European economic conference (Marshall plan countries), and western Germany and comparison with 1938; tables. Survey of Cur Bsns 27:5 O '47
Scope for import cuts; problem of Britain's balance of overseas-payments. Economist 152:856-8 My 31 '47
Sees leakage of British capital. L. Robbins. Comm & Fin Chr 166:1755 O 30 '47
Sterling after July 15th. Economist 152:1032-3 Je 28 '47
Sterling and July 15. Nat City Bank p82-3 Jl '47
Sterling convertibility in July anticipated. H. M. Bratter. Comm & Fin Chr 165:1653+ Mr 27 '47
Sterling position not alarming; return to free convertibility. G. Cummings. Comm & Fin Chr 166:117 Jl 10 '47
Trade against dollars; with table showing British balance of payments position with hard currency countries, 1938 and 1946. Economist 152:345 Mr 8 '47
United States transactions with Europe in the year 1946; balance-of-payments structure shows impressive changes. W. McCarroll. For Comm W 28:3-5+ Ag 16 '47

BALANCE sheets

Accountancy in credit work; auditing experience is a basic factor. A. S. Burton. Credit & Fin Management 49:7+ My '47
Average balance sheets will avoid present danger to credit grantors. J. B. Gordon. J Account 84:49-50 Jl '47
Balance sheet presentation of items held in trust, as agent, or as bailee. D. Borth, jr. J Account 83:417-21 My '47
Contingent liabilities. J Account 82:523-5 D '46

BALANCE sheets—*Continued*
Future of the balance sheet. G. O. May. J Account 84:98-101 Ag '47
See also
Consolidated statements
Financial statements

BALANCES
Balance for wind tunnel tests. A. B. Asch. il diags Aero Digest 54:68-9+ F '47
Balances, ancient and modern. G. S. Clayson. Paper Ind 29:254+ My '47
Heat guard for the McBain-Bakr sorption balance. R. D. Zentner. diags J Phys & Colloid Chem 51:972-4 Jl '47
Instrument de laboratoire à usages multiples; la balance thermique. Y. Jouin. diags Chimie & Ind 58:24-7 Jl '47
Microbalance for weighing textile fibres. E. Lord. il Textile Inst J 38:T84-92; Discussion. T92-3 F '47
Quartz microgram balance. P. L. Kirk and others. bibliog il diag Anal Chem 19:427-9 Je '47
Vapor-phase sorption study of iodine and active magnesium oxide utilizing the McBain-Bakr sorption balance. R. C. Dunn and H. H. Pomeroy. bibliog J Phys & Colloid Chem 51:981-4 Jl '47

BALANCING machines
Electronic balancer. il Engineer 182:441 N 15 '46
Pneumatic balance and transmitter. il diags Engineer 184:273-5 S 19 '47
Precision balancing at mass-production speed; electronic balancer of automatic pilot rotor. S. Bousky. il diags Electronics 20:98-104 S '47
Reid and Sigrist electronic balancing machine for gyroscope rotors. il diags Engineering 163:56-7 Ja 17 '47
Self-synchronous transmitters electrically couple machine tools; balancing machine presets drilling unit for correcting unbalance in crankshafts. il diags Product Eng 18:92-5 Ja '47

BALANCING of machinery
Balance conditions in five-cylinder in-line engines. P. M. Heldt. diags Automotive & Aviation Ind 96:34-8+ Ja 15 '47
Calculators for balancing problems; reference book sheet. R. Hartmann. Am Mach 91:163, 165, 167 Jl 17 '47
How to balance pulleys, sheaves, gears, sprockets, etc. W. F. Schaphorst. diag Paper Ind 29:97-8 Ap '47
Prop balancing simplified; method developed by Sutton mfg. co. il diags Aviation 46:61 F '47
Proposals on API rating form for rotary counterbalance. diags Am Pet Inst Proc 26(4):332-41 '46
Testing dynamic balance; checking rapidly rotating bodies. diag Electrician 139:846 S 19 '47
See also
Balancing machines

BALDPATE inn, Rocky Mountain national park
Keys to everything; collection at Baldpate inn. A. S. Park. il Comp Air Mag 52:223-5 S '47

BALKE, Clarence William, 1880-
Sketch. A. D. McFadyen. por(cover) Chem & Eng N 25:848 Mr 24 '47

BALL, Joseph Hurst, 1905-
Ball committee takes over. por Bsns W p60+ Ag 2 '47

BALL bearings. See Bearings, Ball

BALL mills
Arc weld fabrication of ball mills. J. F. Cunningham, jr. il Iron Age 160:43 O 23 '47
Ball and pebble mills; abstract. R. G. Baines. Paint Oil & Chem R 110:28 Ja 9 '47
Centrifugal ball-mill classifier. C. E. Wuensch. il diag Min Cong J 33:22-5+ S '47
Factors in relative wear of grinding ball sizes. O. E. B. Timmermans. Eng & Min J 148:78-9 My '47
German ball mill information offered. Oil Paint & Drug Rep 151:62 Ja 27 '47
Influence of various dealring treatments on wearing qualities and structure of balls for ball mills; abstract. H. G. Schurecht. Cer Ind 48:99 Je '47
What is in the future for grinding? J. M. Wolfe. diags Rock Prod 50:119-23+ Ja '47

BALLAST
How station track upkeep cost was cut; New York Central installs asphalt ballast, effective drainage and welded rails at South Bend, Ind. J. R. Scofield. il Ry Age 122:747-50 Ap 12 '47
Roadway and ballast; A.R.E.A. committee report. Ry Age 122:616-17 Mr 22 '47

BALLISTICS
Flow of gases at sonic and supersonic speeds. G. A. Hankins and W. F. Cope. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 23):401-8, pl 1-4; Discussion. 409-16 '46
Some ballistic contributions to aerodynamics. A. C. Charters. bibliog il diags J Aeronautical Sci 14:155-66 Mr '47

BALLISTITE. See Smokeless powder

BALLISTOCARDIOGRAPH
Simple laboratory apparatus for the demonstration of cardiac ballistics. V. E. Krahl. diags Science 105:393-4 Ap 11 '47

BALLOONS
Balloon is sky-hook for test antenna. S. C. Bartlett. il Elec World 127:114+ Je 7 '47

BALLOONS, Meteorological
Application of colloid chemistry to the manufacture of inflated articles. L. W. Isom. il J Chem Educ 23:620-3 D '46

BALLOONS, Toy
Bubble boom. il Chem Ind 61:612 O '47
Plastic balloons: Bub-O-Loon. il Bsns W p26+ S 20 '47
Vinyl balloons, a booming kid craze. il Mod Plastics 25:110 O '47

BALLS, Carbide
Carbide-ball burnishing cuts bore-finishing cost 90%. J. Busch. il diag Am Mach 90: 129 D 19 '46

BALLS, Steel
Manufacture of balls for bearings and pens. J. Porterfield. il Materials & Methods 25: 97-100 Je '47
Quenching of steel balls and rings; temperature-time-space relationships investigated on Heat and mass flow analyzer at Columbia university. V. Paschkis. bibliog diag Am Soc for Metals Trans 37:216-44 '46

BALSA
Sandwich materials; metal-faced balsa-core material. H. B. Gibbons. diag Machine Design 19:144-5 Mr '47

BALSAM fir
Extended periods of seedfall of white spruce and balsam fir. E. I. Roe, comp. Paper Ind 29:213 My '47

BALTIC states
In the Baltic republics. Economist 151:1047-8 D 28 '46

BALTIMORE
Rapid transit
Cecelius, Lucius and Claude; Baltimore's three transiteers. Mass Transportation 43:333-4 Ag '47
Water supply
Baffled basins improve sedimentation; Baltimore's Montebello filtration plant. E. S. Hopkins. il diags Eng N 138:514-15 Ap 3 '47
Enlargement of the Baltimore water supply system. S. C. Blackburn. map Am Water Works Assn J 39:119-22 F '47
Experimental observations on grouting sands and gravels; preventing salt water intrusion in wells. A. Machis. il diags Am Soc C E Proc 72:1203-27 N '46
Results of the control of water quality in the Baltimore distribution system. E. S. Hopkins and S. E. Edwards. bibliog il Pub Works 78:20-4+ Ja '47

BALTIMORE and Ohio railroad
Annual report. Comm & Fin Chr 165:2267 Ap 28 '47
Baltimore & Ohio taps new coal field; converts light traffic lines into stabilizers of coal traffic. il map Ry Age 121:1075-9 D 28 '46

BALTIMORE and Ohio railroad—*Continued*
Equipment issue offered. Comm & Fin Chr 165:1723, 2922-3 Mr 31, Je 2 '47
Equipment trust certificates. Comm & Fin Chr 165:806 F 10 '47
Equipment trusts awarded. Comm & Fin Chr 166:1678 O 27 '47
Equipment trusts offered. Comm & Fin Chr 165:203 Ja 13 '47
Notice of exchange. B. B. White. Comm & Fin Chr 166:1042 S 15 '47
Refuses RFC request to delay reorganization. Comm & Fin Chr 165:2131 Ap 21 '47
Summary of annual report, 1946. Ry Age 122:870 Ap 26 '47
Tobey's case against B. & O. loan extension. Ry Age 122:803-6, 908-10, 954-6, 1085-6, 1138+ Ap 19, My 3-10, 24-31 '47

BAMBOO
DDT for powder-post beetle control in bamboo. H. K. Plank. Science 106:317 O 3 '47

BANANAS
Banana exports, Cuba, 1946. For Comm W 27:21 My 24 '47
Banana exports, Dominican Republic. For Comm W 27:25 Je 14 '47
Banana exports, Honduras, 1946. For Comm W 27:19 My 31 '47
Banana production and prices, Jamaica, B.W.I. For Comm W 26:24 Mr 22 '47
New reverse-cycle application; bananas ripened by heat from frozen foods. il Elec West 99:75 O '47
Le transport et la conservation de la banane. diag Génie Civil 124:254-5 Jl 1 '47
United Fruit awaits ships to expand banana sales. Barron's 27:35 S 22 '47

BANBURY mixers
Cooling Banbury mixers and rubber mills. J. Partington, jr. il diag Heat & Ven 44: 91-4 O '47

BANGOR and Aroostook railroad
Early profit bridges summer lag. Barron's 27: 26 Je 23 '47

BANK accounting
Accrual plan for installment loans; American trust co. San Francisco. W. C. Snitjer. Burroughs Clearing House 31:24-5+ Ap '47; Same cond. Bankers Mo 64:215-16 My '47
Bookkeeping errors reduced 35 per cent by a department contest. H. G. James. Bankers Mo 64:274 Je '47
Cost accounting study for banks; abstract. J. C. Gibson. Banking 39:74 D '46
Deposit proving, commercial posting, savings posting all done on one machine. C. A. Downheimer. il Bankers Mo 64:180+ Ap '47
End of window-dressing. Economist 151:961-2+ D 14 '46
Hidden losses in service charges. G. R. Amy. Banking 40:49+ O '47
How to price bank services. A. P. Thompson. Banking 40:38+ O '47
How we control inactive accounts. O. B. Lovell. Bankers Mo 64:9 Ja '47
Laws do not prevent delayed return of dishonored items. map Bankers Mo 64:121-3 Mr '47
Our tellers now handle 100 deposits instead of 80 with the old passbooks; commercial tellers' machine records and receipts account deposits. F. B. Peake. il Bankers Mo 64:483-4 O '47
Reserve for losses on loans needed for changing conditions. W. R. Harrison. Bankers Mo 63:568-9 N '46
Reserve method for loan losses is a more scientific approach to better banking and accounting. M. B. Lane, jr. Bankers Mo 64:265-7 Je '47
Reserves and dividends have an important relationship. H. M. Stillman. Bankers Mo 63:591-2 D '46
Short way to get the average balance. W. R. Harrison. Bankers Mo 64:218-19 My '47
Simple plan for eliminating earnings credit work. Bankers Mo 64:120 Mr '47
Suggested bank cost accounting procedure. J. C. Gibson. 31p Univ. of Wisconsin, School of commerce, Bur. of business research and service, Madison '46
22 more clearing houses return items the following day. Bankers Mo 64:220-1 My '47

See also
Bank auditing
Savings deposits—Accounting
Trust companies—Accounting

BANK advertising
Advertiser equals the news; Franklin savings bank advertising in connection with Harvest moon ball in Madison Square Garden. il Ptr Ink 221:82 O 3 '47
After 107 years bank tries advertising, finds it pays; trade character, Mr Money-in-the-bank. A. Woodley. il Ptr Ink 219:37 Ap 18 '47
Banish pomp from financial advertising. B. Fitz-Gibbon. Comm & Fin Chr 165:2342+ My 1 '47
Bank admen look at bank advertising and find a few faults. Ptr Ink 217:68 N 29 '46
Bank advertising is being humanized. I. I. Sperling. il Ptr Ink 217:38 D 27 '46
Bank looks to past, future; Arizona bank president writes own advertising, Will Rogers style. il Burroughs Clearing House 31:12-13 Jl '47
Bank runs ad urging full insurance protection; First trust & deposit co., Syracuse. East Underw 48:13 Ja 17 '47
Banks feel this way about their advertising. J. B. Mack, jr. Banking 39:38-9+ F '47
Lobbies that sell; display possibilities; text by J. W. Irwin; cartoons by B. Kirkpatrick. Banking 39:26-7 Ja '47
Local history makes good public relations campaign; First national bank and trust company of Greenfield, Mass. il Trusts & Estates 85:106-7 Ag '47
Low cost advertising to direct prospects. il Burroughs Clearing House 31:8+ D '46
New comic book on thrift issued by ABA. J. B. Mack, jr. Comm & Fin Chr 165:2264 Ap 24 '47
Packaged savings make attractive offer for bank; Bowery savings bank. H. L. Stephen. Ptr Ink 220:60+ Jl 25 '47
Radio scripts that sell; Hartford-Connecticut trust company's programs. Banking 40: 48+ O '47
Sales guide for banks; highlights of the Median, Ohio, survey. A. Herrick. Banking 39:62 D '46
Say it with pictures; Peter Penny and his magic dollar; use of comic book technique. G. E. Heming. il Banking 39:27 Mr '47
$250,000 promotion spurs savings bank thrift habit. Sales Management 58:88-9 Mr 1 '47

See also
Trust companies—Advertising

BANK associations. See Bankers' associations

BANK auditing
Depositors willingly help to audit our savings department. M. E. Diffenbaugh. Bankers Mo 64:74+ F '47
What the banker expects in an audit report. J Account 83:526-7 Je '47

BANK books, Depositors'
Informality in handling deposit account; change in pass book to joint names. C. R. Rosenberg, jr. Burroughs Clearing House 31:54+ D '46

BANK buildings
Branch bank for industrial neighborhood; Seattle-first national bank. il plans Am Bld 69:124-5 F '47
Branch bank in Rockefeller Center; Bankers trust company. il plans diags Arch Rec 100:80-3 N '46
City national bank building, Houston. il plans Arch Rec 102:138-9 O '47
Customer appeal in bank design; Orinda, Calif. branch, American trust company. E. V. Krick. il Burroughs Clearing House 31:24-5+ Je '47
For installment credit customers; modern financing; Marshall & Ilsley bank, Milwaukee, Wisconsin. A. S. Puelicher. il Burroughs Clearing House 31:15-17+ N '46
Former G.I.'s will feel at home here; Quonset-type structure for bank at Tolleson, Ariz. il Burroughs Clearing House 31:14 Ja '47
New buildings for Canada. il Burroughs Clearing House 31:42 N '46

BANK buildings—*Continued*
Portland, Ore. bank and office building for Equitable savings & loan association. il plans diags Arch Forum 86:98-101 Ap '47
Practical view of auto banking. R. L. Schutt. il plan Burroughs Clearing House 31:26-8+ Ag '47
Quonset banks. il Banking 39:62+ Ja '47
Remodeled bank reveals magic of designer's touch; Manufacturers bank and trust co., St Louis. il Bankers Mo 64:17 Ja '47
Small branch development; new Long Branch office, Canadian bank of commerce. J. Montagnes. il Burroughs Clearing House 31:43 My '47
Small modern bank building; Bank of Virginia Beach. il Am Bld 69:94 Ja '47

Air conditioning

Pioneer in the use of triethylene glycol for air sterilization; Seamen's bank for savings. T. Barrett. il Power 91:389-91 Je '47

Cost

Are bank building costs high? J. J. McCann. il Banking 40:62+ Ag '47

Heating and ventilation

Remodels bank heating system without interrupting service. il Heating-Piping 19:81 F '47

Layout

Well-planned working quarters. J. C. Wilkinson. il plans Banking 39:76-7 O; 73 N; 52-3 D '46

Lighting

Modern lighting improves customer service, operating accuracy; illustrations with text. Bankers Mo 64:425 S '47

Tellers' cages

Drive-in bank designed to improve customer service; Exchange national bank, Chicago. il Am Bsns 16:24+ D '46
Drive-in service for the smaller bank. il Burroughs Clearing House 31:11 N '46
Guide for future bank design; Seattle-first national bank. il diag Burroughs Clearing House 31:3 Ja '47
Paying-receiving costs and saw-tooth cages. il Burroughs Clearing House 31:7-9 Ap '47

BANK checks. See Checks

BANK clearings
Bank clearings. Published in monthly numbers of Dun's statistical review; summary in Dun's review
Course of bank clearings. Published in weekly Monday numbers of Commercial and financial chronicle
Course of bank clearings; figures for 1946 by Federal reserve districts and comparison with other years. Comm & Fin Chr 165: 247-9 Ja 13 '47
Misleading clearing statistics. Economist 152: 78 Ja 11 '47

BANK consolidations
State, national bank mergers; tax discriminations against state banks. J. C. Wilson. Banking 39:70-1 Je '47

BANK credit. See Credit, Bank

BANK defalcations. See Embezzlement

BANK deposits
Bank deposit by trust company as trustee in company's banking department held proper; City bank farmers trust co. v. Pedrick, U.S. district court, S.D. New York. Banking Law J 64:461-8 Je '47
Bank's right to offset indebtedness by application of mortgagor's credit on deposit in bank. Banking Law J 64:313-21 Ap '47
Deposit rules posted in lobby reduce misunderstandings, give the bank legal protection. M. B. Lake. Bankers Mo 64:278+ Je '47
Evidence insufficient to establish gift inter vivos. Banking Law J 63:854-8 N '46
Fall in bank deposits. Economist 153:579 O 4 '47
Funds deposited illegally constituted preferred claim against bank; Fidelity & casualty co. of New York v. Niles bank co., Court of common pleas of Ohio. Banking Law J 64:413-19 My '47
Funds of corporate depositor set aside by bank as special preferred stock retirement fund account did not constitute trust funds. Banking Law J 64:624-6 Ag '47
Ownership of demand deposits as of Feb. 26, 1947. R. F. Hart and R. Youngdahl. Fed Res Bul 33:689-91 Je '47
Writing on bank deposit signature card held to establish valid trust entitling beneficiary to fund. Banking Law J 63:843-6 N '46

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Joint accounts

Checks on joint account not payable over surviving joint tenant's objections. Banking Law J 64:401-5 My '47
Gift inter vivos established of money held in joint account. Banking Law J 63:869-73 N '46
Husband and wife as joint tenants of money saved by wife from husband's earnings. Banking Law J 64:649-52 Ag '47
Informality in handling deposit account; change in pass book to joint names. C. R. Rosenberg, jr. Burroughs Clearing House 31:54+ D '46
No effective gift although bank account held jointly; Ogle v. Barker, Supreme court of Indiana. Banking Law J 64:240-8 Mr '47
Ownership of joint account funds delayed pending determination of issue. Banking Law J 64:140-3 F '47
Survivor of joint bank account entitled to funds; Pye v. Higgason, Supreme court of Arkansas. Banking Law J 64:26-9 Ja '47
Withdrawal by joint tenant does not affect right of survivorship as to balance. Banking Law J 64:639-42 Ag '47

Statistics

Changes in bank standings with tabulation giving comparative ranking of 100 largest commercial banks, based on year-end deposit totals as of Dec. 31, 1946. Burroughs Clearing House 31:4+ Mr '47
Slackened growth in liquid assets. Fed Res Bul 32:1221-9 N '46
Wartime shifts of bank deposits hold firm. Bsns W p83 O 18 '47
Year-end deposits of the ten largest banks, 1946 and 1945 compared. Burroughs Clearing House 31:3 F '47

BANK deposits, Government
Deposit not changed to trust fund; Fidelity & casualty co. of New York v. Niles bank co. Court of appeals of Ohio. Banking Law J 64:496-510 Je '47

BANK directors
Impressions of a bank director's job; text by J. W. Irwin; cartoons by B. Kirkpatrick. Banking 39:30-1 Ap '47
Suit regarding removal of bank directors; Paterson national bank. Fed Res Bul 33:30-4 Ja '47; Same. Banking Law J 64:115-22 F '47

See also
Federal reserve banks—Directors

BANK employees
Aids to recruiting bank personnel. M. A. Ralston. il Burroughs Clearing House 31: 20-1+ My '47
Bank of any size can have a successful personnel program. J. D. Kingery and W. A. Garrett. Bankers Mo 63:558+, 599-601; 64: 61-3, 212-14, 498-503 N-D '46, F, My, O '47
Bank sponsors fashion show morale builder. il Burroughs Clearing House 31:4+ Ja '47
Bank strike tactics, strike of Financial employees guild at Brooklyn (N.Y.) trust company. il Trusts & Estates 85:190 S '47
Bookkeeper and the customer. A. W. Mueller. Am Inst Banking Bul 29:14 O '47
Ceylon; bank strike in Colombo. For Comm W 25:22 N 16 '46; 26:12 F 1 '47
C.I.O. calls first major U.S. bank strike; Brooklyn trust co. il Bsns W p68+ Jl 26 '47

BANK employees—*Continued*
Elements of good staff relations; program of Merchants national bank of Mobile, Ala. W. H. Barney. Burroughs Clearing House 31: 22-3+ F '47
Employee-management participation plan; Community savings bank of Rochester. Burroughs Clearing House 31:4 Ja '47
For top executives; vacations. H. G. Vincent. il Burroughs Clearing House 31:23+ N '46
Group activities for bank morale; California bank, Los Angeles. K. Monroe. il Burroughs Clearing House 31:18-19+ N '46
Improving the bank's personnel relationships. W. Powers. Burroughs Clearing House 31:3 Ap '47
Job analysis; experience of Harris trust and savings bank, Chicago. C. C. Looney. Burroughs Clearing House 31:17-19+ Ja '47
Management listens, too; one bank's relations with employees; Continental Illinois national bank and trust company of Chicago prepares Manual for managers and the Man in management. A. G. Bradt. il Banking 39:33-4 D '46
Money saved, money earned by the work of a planning committee; First national bank of Madison, Wis. il Bankers Mo 63:596-8 D '46
Past is the gaslight era of staff relations. J. S. Lawrence. Banking 39:25+ Ja '47
Pension plans offered to small banks. Burroughs Clearing House 31:7 N '46
Personalized time card; Central Hanover bank, New York city. il Burroughs Clearing House 31:6-7 My '47
Pros and cons of profit sharing. B. T. Salisbury. Burroughs Clearing House 31:22-4+ My; 22-3+ Je '47
Recent growth in pension plans for bank employees shown in Bankers trust company's study. Comm & Fin Chr 166:457 Jl 31 '47
Roving hostess added to bank staff; United States national bank of Denver. il Burroughs Clearing House 31:4 Jl '47
Some banks say it with music; national survey. M. B. Leach. il Banking 39:40-1+ D '46; 42-3+ F '47
Trend in bank pension plans. E. E. Mountjoy. Banking 39:37+ Mr '47
Trends in bank employee pensions. W. B. Dunckel. Banking 40:42-3+ Ag '47
Union activities in banks and trust companies. Trusts & Estates 83:556 D '46
Union official disputes contention employees of banks with public funds shouldn't organize. E. Germain. Comm & Fin Chr 164: 2886+ D 5 '46
Unionization of bank employees against public interest. J. S. Baker. Comm & Fin Chr 164:2889+ D 5 '46
Why and how small banks may benefit from a pension retirement plan. C. A. Bethel. Bankers Mo 64:10-11 Ja '47

See also
Banks and banking
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Contests

Bank workers team up, gain 11,763 new customers; Irving Trust employees double their quota. il Sales Management 59:58 O 1 '47
Bookkeeping errors reduced 35 per cent by a department contest. H. G. James. Bankers Mo 64:274 Je '47
Prospective depositors walk into the bank daily and walk right out again; new business contest of First national bank, Madison, Wis. L. Miller and others. Bankers Mo 63: 542-3 N '46

Training

Achievement report system helped develop capable employees; Bank of Virginia, Richmond. J. W. Taliaferro. il Bankers Mo 64: 161-3 Ap '47
All not ready holler, I. B. Spradlin, jr. Am Inst Banking Bul 29:15 Ja '47
Better reception for bank customers; with instruction manual for receptionists. J. Kinnemann, jr. il Burroughs Clearing House 32:22-3+ O '47
Bible for the bank credit man; manual of Robert Morris associates. H. V. Odle. il Burroughs Clearing House 31:20-1+ D '46
Co-operative school-bank training plan; First national bank of Paonia, Colo. Burroughs Clearing House 31:8-9 Mr '47
Development and training of bank personnel. H. E. Randall. Am Inst Banking Bul 28:7-9 O '46
Employee and supervisor training made easy. J. D. Kingery and W. A. Garrett. il Bankers Mo 64:212-14 My '47
Everyone wins; bank job program for disabled veterans; Bank of the Manhattan company. J. T. DePalma. il Banking 39:25-6 Mr '47
How to use movies and sound films. il Banking 39:16-17 Mr '47
Personnel training made easy by an operations manual. C. N. Richards. Bankers Mo 64:18-20 Ja '47
Simplified plan of teller training; Detroit bank program. C. H. Hewitt. il Burroughs Clearing House 31:20-2+ N '46
Tested plan for training supervisors. R. C. Rutherford. Bankers Mo 64:236-7 My '47
These training procedure outlines encourage employees to do better work. E. L. Stucker. Bankers Mo 64:116-18 Mr '47
Training and responsibility in banking. M. Harrison. Comm & Fin Chr 164:3393+ D 26 '46

BANK failures
Bank liable for obligations imposed by contract; receivership of Pacific bank, Hawaii; Kiyoichi Fujikawa v. Sunrise soda water works co. Banking Law J 64:571-7 Jl '47
Distinction between liquidating agent and receiver of bank; Dobler v. Bowden, Supreme court of Iowa. Banking Law J 64:393-401 My '47
Limitation period prescribed by banking law on claims filed by trustee in bankruptcy. Banking Law J 64:479-87 Je '47
Moratorium agreement executed by depositors of private bank held binding on proprietor individually and on bank. Banking Law J 63:904-11 D '46

BANK for international settlements
Annual report for year ending March 31, 1947. Fed Res Bul 33:1228-50 O '47
Bank for international settlements revived. Comm & Fin Chr 165:132+ Ja 9 '47
Clarification of International settlements bank. H. M. Bratter. Comm & Fin Chr 166:120+ Jl 10 '47
Future of the Bank for international settlements and the Marshall plan. E. H. Weinwurm. bibliog Comm & Fin Chr 166:906+ S 4 '47

BANK holidays
Banking holidays by states, January-June, 1947; tabulation. Bankers Mo 63:614 D '46
Banking holidays by states, July-December, 1947; tabulation. Bankers Mo 64:324 Jl '47

BANK-insurance group of unit trusts
Statement by the chairman at 12th annual general meeting. B. Ottley. Economist 152: 651 Ap 26 '47

BANK liability
Bank guaranteeing endorsements which were forged held liable. Banking Law J 64:1-8 Ja '47
Bank held liable for value of bonds accepted for safekeeping. Banking Law J 64:468-75 Je '47
Bank liable for breach of implied agreement to pay money to depositors. Banking Law J 64:626-30 Ag '47
Bank liable for obligations imposed by contract; receivership of Pacific bank, Hawaii; Kiyoichi Fujikawa v. Sunrise soda water works co. Banking Law J 64:571-7 Jl '47
Bank liable to depositor for payments on forged checks of depositor's employee; R. H. Kimball, inc. v. Rhode Island hospital national bank. Banking Law J 63:819-32 N '46
Bank not liable for fraud of officers in sale of stock; First and American national bank of Duluth v. Conley, Supreme court of Wisconsin. Banking Law J 64:310-13 Ap '47
Bank not liable for proceeds of checks which fiduciary endorsed and deposited in his personal account. Banking Law J 64:185-8 Mr '47
Bank not liable if not notified of check forgeries within one year. Banking Law J 64:382-6 My '47

BANK liability—*Continued*
Bank not liable to depositor for proceeds of checks misapplied by corporate officer of depositor. Banking Law J 63:899-903 D '46
Bank's liability for fraudulent credit information. C. R. Rosenberg, jr. Burroughs Clearing House 31:60+ Ag '47
Collecting bank liable to payee of check bearing forged indorsement. Banking Law J 63: 911-14 D '46
Drawer credulous, not negligent; bank liable for checks that depositor gave confidence men for charity. Nat Underw 50:18 D 19 '46
Failure of depositor to examine bank statements precludes recovery against bank. Banking Law J 64:93-8 F '47
Liability of bank for misrepresentations of cashier. Banking Law J 64:277-83 Ap '47
Liability of bank for refusal to transfer stock on its books into name of owner. Banking Law J 64:211-14 Mr '47
Proof of damage necessary to hold bank liable because of fraudulent representations of bank cashier; Standard surety & casualty co. of New York v. Plantsville national bank. Banking Law J 64:617-23 Ag '47
Secret trust funds in deposit account. C. R. Rosenberg, jr. Burroughs Clearing House 31:51-2 D '46

BANK libraries
Bank library; Royal bank of Canada. J. Montagnes. il Burroughs Clearing House 31:47-9 Ap '47

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BANK notes
Infrared halves drying time in banknote printing. il Elec World 127:142 Mr 15 '47

BANK of America
World's biggest bank. il Fortune 36:68-75 Jl '47

BANK of Chicago. See Banks and banking —Chicago

BANK of England
End of year position; bank rate since 1862; position, Sept. 12, 1945, to Sept. 4, 1946. Economist 151:sup5 N 16 '46
Old Lady finds tongue, but does not speak; first report. Economist 152:684 My 3 '47

BANK of London and South America
Statement by the chairman at ordinary general meeting. Lord Wardington. Economist 151:925 D 7 '46

BANK of Montreal
Annual general meeting, 129th, Montreal. Economist 151:1059 D 28 '46

BANK officials
Personnel changes in trust institutions. Published in monthly numbers of Trusts and estates
President of National bank as executive agent of directors. Banking Law J 64:143-6 F '47

BANK protection rivers. See Rivers—Bank protection

BANK research
Money saved, money earned by the work of a planning committee; First national bank of Madison, Wis. il Bankers Mo 63:596-8 D '46
Treasury of banking research; American bankers association's library of Graduate school of banking theses. R. O'Neill. il Banking 39:46-7 Je '47

BANK reserves
Reserve for losses on loans needed for changing conditions. W. R. Harrison. Bankers Mo 63:568 N '46
Reserve method for loan losses is a more scientific approach to better banking and accounting. M. B. Lane, jr. Bankers Mo 64:265-7 Je '47
Reserves and dividends have an important relationship. H. M. Stillman. Bankers Mo 63:591-2 D '46

BANK robberies
Burglary! C. W. Fishbaugh. Banking Law J 64:449-51 My '47
F.B.I. wants your help in capturing bank bandits. J. E. Hoover. Bankers Mo 64: 490+ O '47

BANK stocks. See Banks and banking—Stock

BANK tellers. See Banks and banking—Tellers

BANKERS
Magic after banking hours; hobby of J. G. Thompson, jr. president, First national bank, Middleburg, Pa. Banking 40:22-3 Jl '47
Some ingredients for a banker's education. H. E. Zarker. Am Inst Banking Bul 29:9-11+ O '47
What case against the German bankers? A. J. Warner. Comm & Fin Chr 165:4+ Ja 2 '47
What it takes to be a banker. L. Lewis. Banking 39:48-9 Je '47
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Some new state association presidents; portraits. Banking 40:75 Jl '47
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Investment bankers association of America

BANKERS' blanket bond
Assails banks' stand in Illinois; proposed to exempt London Lloyds from regulation. W. W. Hamilton. Nat Underw 51:24 My 22 '47
BBB amended to cover armed forces leave bonds without additional charge. Nat Underw 51:21 Ag 14 '47
Brokers' forgery coverage made more flexible. Nat Underw 51:30 Mr 20 '47
Coverages and forms; analysis of changes in savings banks blanket bond, Federal home loan banks blanket bond and savings and loan blanket bond. Spectator (Property ed) 13:8-10 Jl 10 '47
False representation as to loss insured under banker's blanket bond; Fidelity & deposit co. of Maryland v. Krout. Banking Law J 64:330-2 Ap '47
London Lloyds revises its HAN (C) form for banks. Nat Underw 50:31 D 5 '46
Surety association of America revises three bond forms; broadens scope of coverage. East Underw 48:41 Je 27 '47; Nat Underw 51:17 Je 26 '47; Weekly Underw 156:1754 Je 28 '47
Want safe deposit liability in bank blanket coverage. F. B. Post. Nat Underw 51:16 My 15 '47

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BANKING law
Bank not required to turn over money held by it where not made party to agreement between parties at interest. Banking Law J 63:832-7 N '46
Bank records in income tax investigations. C. R. Rosenberg, jr. Burroughs Clearing House 31:45-8 Ja '47
Claim of protection of fiduciary relation between bank and customer does not preclude revenue agents from making examination of records; United States v. First national bank of Mobile. Banking Law J 64:102-15 F '47
Foreign bank entitled to preferred claim against assets of New York agency; Banque Mellie Iran v. Yokohama specie bank, limited. Banking Law J 64:98-100 F '47
Law department. Published in monthly numbers of Federal reserve bulletin
Laws do not prevent delayed return of dishonored items. map Bankers Mo 64:121-3 Mr '47
Legal page; questions and answers. Banking 39:63-5+ Ja '47 [cont monthly]
Moratorium agreement executed by depositors of private bank held binding on proprietor individually and on bank. Banking Law J 63:904-11 D '46
Only in the open market; an inflation safeguard; attacks Wolcott bill. F. E. Lee. Comm & Fin Chr 164:1510+ Mr 20 '47
Resolution of bank directors not necessary in foreclosing trust deed securing notes; Texas Pacific coal and oil co. v. Mulvihill, Supreme court of Mississippi. Banking Law J 64:202-10 Mr '47

BANKING law—*Continued*
Suggested reciprocal act authorizing out-of-state banks and trust companies to serve as fiduciaries. Trusts & Estates 83:658 D '46

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Brazil

Banking reform proposed. For Comm W 26: 20-2 Ja 25 '47

Czechoslovakia

Non resident depositor bound by terms of contract with bank of foreign country relative to performance and payment of funds on deposit; Kraus v. Zivnostenska banka, Supreme court of New York. Banking Law J 64:229-32 Mr '47

Germany

Central banking laws for American zone of Germany; with text of law establishing the Land central bank of Wuerttemberg-Baden. Fed Res Bul 33:130-5 F '47
New German bank laws. Comm & Fin Chr 164:3237 D 19 '46

Guatemala

New Guatemalan bank law. D. L. Grove. Fed Res Bul 33:398-401 Ap '47

Hawaiian Islands

Bank liable for obligations imposed by contract; receivership of Pacific bank, Hawaii; Kiyoichi Fujikawa v. Sunrise soda water works co. Banking Law J 64:571-7 Jl '47

Nebraska

Nebraska par check law does not impair obligations of contracts in violation of constitution; Supreme court of Nebraska in the case of Placek v. Edstrom. Banking Law J 64:559-70 Jl '47
Nebraska par clearance law held constitutional. Banking 39:66 Je '47; Burroughs Clearing House 31:44-5 Jl '47

New York (state)

Common trust fund practices approved; court rules favorably on policies of Bank of New York. Trusts & Estates 83:621-4 D '46
Dewey approves changes in New York state Investment companies' act; Bewley bill. Comm & Fin Chr 165:2251 Ap 24 '47
Gov. Dewey signs bill for 5-day bank week in New York state. Comm & Fin Chr 165: 1308 Mr 6 '47
New York banks and trust companies not empowered to sell transportation. Comm & Fin Chr 165:1308 Mr 6 '47

North Dakota

Documents and facts used to encourage par clearance legislation in North Dakota. H. W. Bangert. il Bankers Mo 64:371-4+ Ag '47

BANKING research. See Bank research

BANKRUPTCY
Agent's indebtedness for balance of premiums after deduction of commissions not dischargeable in bankruptcy. Weekly Underw 156:722 Mr 8 '47
Bankruptcy and the courts. J. C. Knox. Credit & Fin Management 49:4-5+ Je '47
Bankruptcy curve leveling off. Credit & Fin Management 49:19-20 Mr '47
Discrimination in world trade; priority rights to local creditors in insolvency cases; need for creditor equality clause in I.T.O. charter. K. H. Nadelmann. Credit & Fin Management 49:28-9 Ap '47

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Business failures
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BANKS and banking
After the turn of the year. F. C. Rathje. Comm & Fin Chr 165:462 Ja 23 '47
Bank director looks at banks. O. H. Lamborn. Comm & Fin Chr 166:1538+ O 16 '47
Bankers know their business; divisional organization of a commercial bank; First national bank of Chicago deals with customers by industry groupings. H. V. Prochnow. Trusts & Estates 84:432-6 Ap '47
Bankers monthly quiz. Bankers Mo 64:23+ Ja '47 [cont monthly]
Banker's view of business. D. W. Michener. Comm & Fin Chr 165:2597+ My 15 '47
Banking developments indicate a boom. P. W. McCracken. Comm & Fin Chr 166:1202+ S 25 '47
Banking without tears; address before National association of bank auditors and comptrollers. R. Rodgers. Comm & Fin Chr 165:2200+ Ap 24 '47
Bank's spring housecleaning; First national bank, Madison, Wis. H. C. Nicholls. il Banking 39:53 My '47
Challenge to management; transition policies of Anglo California national bank of San Francisco. A. A. Calkins. Burroughs Clearing House 31:17-19+ My '47
Defects and remedies of banking. H. L. Reed. Comm & Fin Chr 165:876+ F 13 '47
Economist banking supplement. Economist 151:sup1-8+ N 16 '46
Holding our banking system firm. P. Delano. Comm & Fin Chr 166:1316 O 2 '47
How are the banks doing; address before National association of bank auditors and comptrollers. M. A. Schapiro. Comm & Fin Chr 165:2200+ Ap 24 '47
If I were a banker. R. P. Vanderpoel. Comm & Fin Chr 165:1429+ Mr 13 '47; Same. Banking Law J 64:265-70 Mr '47
Independent banking; it must be preserved. O. W. Adams. Comm & Fin Chr 165:394+ Ja 23 '47
Money saved, money earned by the work of a planning committee; First national bank of Madison, Wis. il Bankers Mo 63:596-8 D '46
Outlook for banking; address before American bankers association. M. Nadler. Comm & Fin Chr 166:1424-6+ O 9 '47
Postwar bank credit problems. M. S. Eccles. Fed Res Bul 33:1207-11 O '47; Same abr. Comm & Fin Chr 166:1310+ O 2 '47
Problems facing banks. A. Sproul. Comm & Fin Chr 165:397 Ja 23 '47
Profit policies for suburban banks; experience of Villa Park, Illinois, Trust and savings bank. P. W. Ballance. il Burroughs Clearing House 31:26-8+ Je '47
Put your money in a bank. E. C. Randolph. Comm & Fin Chr 165:1385 Mr 13 '47
Recapitulation of 273 ideas published since January, 1947. Bankers Mo 64:332-9+ Jl '47
Review of 363 tested ideas published since July, 1946. Bankers Mo 64:28-32+ Ja '47
Task of the banker today. J. L. Robertson. Comm & Fin Chr 165:2777+ My 22 '47
War's legacy for banking. E. V. Bell. Comm & Fin Chr 165:2343+ My 1 '47
What's ahead for business and banking? A. R. Upgren. Comm & Fin Chr 165:3342+ Je 26 '47

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Agricultural credit
Bank accounting
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Airplane purchase financing

Airplane financing; an opportunity. J. P. Gaty. il Bankers Mo 64:314-16 Jl '47

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Automobile parking service

Parking solution; surface and subterranean parking facilities; American national bank of Denver. H. F. Feucht. il Burroughs Clearing House 31:28+ Ag '47

Automobile purchase financing

Direct vs. indirect automobile financing. Banking 40:38-9+ Ag '47

How one banker hopped after a skip. C. C. Lewis. Banking 40:68 Ag '47

200 insurance agents bring auto loans to our bank; Union trust co. of Indianapolis. C. A. Mattox. Bankers Mo 64:368-9 Ag '47

Branch banking

Airport banking; branch banks in large airport terminals. il Burroughs Clearing House 31:15 Mr '47

Free banks, free enterprise and free men; attacks branch banking and group banking as monopolistic. W. J. Bryan. Comm & Fin Chr 165:3029+ Je 5 '47

Number of banks and branches in operation on December 31, 1946. Fed Res Bul 33:752-3 Je '47

World's biggest bank; Bank of America. il Fortune 36:68-75 Jl '47

Cash handling

Improved cash handling system; prepackaged currency speeds check-cashing service; National bank of Detroit. B. F. Studebaker. il Burroughs Clearing House 31:22-4+ D '46

Central banks

Central banking laws for American zone of Germany; with text of law establishing the Land central bank of Wuerttemberg-Baden. Fed Res Bul 33:130-5 F '47

Federal reserve in Germany; new central banking system in the American zone. Economist 152:512 Ap 5 '47

Chain banking

Chain banking; number, deposits, and branches of chain banks, Dec. 31, 1945. Fed Res Bul 33:463 Ap '47

Checking accounts

Check usage soars. Bsns W p84+ S 20 '47

14,000 new depositors; 4½ year accomplishment. E. W. Miller. il Bankers Mo 63: 593-5 D '46

See also

Banks and banking
—Service charge

Collection charges

Documents and facts used to encourage par clearance legislation in North Dakota. H. W. Bangert. il Bankers Mo 64:371-4+ Ag '47

Nebraska par check law does not impair obligations of contracts in violation of constitution; Supreme court of Nebraska in the case of Placek v. Edstrom. Banking Law J 64:559-70 Jl '47

Nebraska par clearance law held constitutional. Banking 39:66 Je '47; Burroughs Clearing House 31:44-5 Jl '47

Par clearance of checks. Bsns W p79-80 Mr 22 '47

Collections

Collecting bank not agent for depositor. Banking Law J 64:475-9 Je '47

Correspondent banks

We get many benefits from Federal reserve membership, correspondent bank services. J. G. Dickerson. Bankers Mo 64:269-70 Je '47

Costs

Consumer credit; costs are a critical factor. A. A. Friedrich. il Banking 40:41 O '47

How to price bank services. A. P. Thompson. Banking 40:38+ O '47

Rising bank costs; what can be done about them. A. van Vlissingen. Burroughs Clearing House 31:19-21+ Ap '47

Country banks

Agricultural group of ABA adopts program. Comm & Fin Chr 164:2899 D 5 '46

A.B.A. country bank program for 1947. Burroughs Clearing House 31:6-8 Ja '47

Bank does farm auction business; Merchants national bank and trust company of Syracuse, N.Y. il Burroughs Clearing House 31:6-7 Jl '47

Bank laboratory; to serve as model and source of advice for country banks. Bsns W p100 D 7 '46

Banker-college agricultural program; banker-farmer meeting sponsored by Virginia bankers association and Virginia polytechnic institute. E. A. Wayne. Banking 39:50+ My '47

Banking on future farmers, Carlin brothers and National bank of Coatsville, Pa. redeem a worn out farm. R. G. Struble. Banking 40:53+ Ag '47

Bill Bailey and the four pillars; Clarksville, Tennessee, cooperates in making motion picture. il Banking 39:56-7 D '46

Case history of pasture development; what the banker can do. D. R. Francis. il Banking 39:45+ My '47

City bank's farm program; Houston's Second national bank. J. J. McCann. il Banking 39:45-7 Mr '47

Commissions, loans, and depositors come from clerking farm sales; Commercial national bank, Hillsboro, Ore. A. H. Abts. il Bankers Mo 63:564 N '46

Country bank plan in operation; service charges; banks in Rochester, Minnesota use A.B.A. simplified plan. H. J. Boone. Burroughs Clearing House 31:17-19 Mr '47

Country banker. Banking 39:42-54 Ja '47 [cont monthly]

Country banker gets around; Harding E. Williams, president Bank of commerce at Morristown, Tennessee. H. Severson. Banking 39:60 D '46

Eye-opener on country banks' U.S. bonds. C. F. Pack; T. B. Robb. Banking 39:58+ N '46; 32-3 Ja '47

Farm field men; a bank's mass test; First national bank of Portland, Oregon. J. M. Richardson. il Burroughs Clearing House 31:22-3+ Ap '47

Getting ready for the fair; bank develops homemade farm aids. il Banking 39:62+ F '47

G.I. loan program in a country bank. G. E. Detrick. il Burroughs Clearing House 31: 24-6+ Ja '47

Home on the Florida range; Commercial bank and trust company of Ocala and the cattle industry. H. Severson. Banking 39:49 Ap '47

How to help farm youths. A. G. Brown. Banking 40:54 Ag '47

Member bank earnings, 1946; country member banks, by Federal reserve districts; with ratios. Fed Res Bul 33:605, 612 My '47

Muck makes millions in the Florida Everglades: role of banks. H. Severson. il Banking 40:50-1+ Ag '47

No bank is stronger than its friends; bank in Forrest City, Arkansas. K. Detzer. Banking 40:50-1+ Jl '47

Ohio bank's work with farmers; Old Phoenix national bank, Medina. il Banking 39:48 Mr '47

One bank's farm operating service; Central national bank and trust company of Des Moines, Iowa. F. R. Warden, plans Banking 40:52 Ag '47

1,000 banker-farmer meetings. map Banking 40:54 Jl '47

Operation of a government-owned bank; Rural bank of New South Wales. Burroughs Clearing House 31:12 My '47

Outside farm program in Virginia; First national exchange bank of Roanoke, Virginia. il Banking 39:57-8+ F '47

Radio scripts that sell; Hartford-Connecticut trust company's programs. Banking 40:48+ O '47

Ten-year test of soil conservation; Thomas Jefferson country provides laboratory. il Banking 39:58-9 D '46

Time spent with farmers and their boys and girls increases our number of good loans; Fremont national bank, Fremont, Neb. M. C. Townsend. il Bankers Mo 64:388-9 Ag '47

Twelve banker-farmer projects of Agricultural commission of American bankers association. Banking 39:44-5 Ja '47

BANKS and banking—Country banks—*Cont.*
Unique country bank, Benton, Ill. il Burroughs Clearing House 31:12 Ja '47
When farming declines, business declines; soil conservation program of Princeton bank and trust company, W. Va. A. Banov. Banking 39:44+ My '47

See also
Agricultural credit

Credit departments

Bible for the bank credit man; manual of Robert Morris associates. H. V. Odle. il Burroughs Clearing House 31:30-1+ D '46
Code of credit department ethics of the Robert Morris associates. Bankers Mo 64: 384 Ag '47
Consumer credit; costs are a critical factor. A. A. Friedrich. il Banking 40:41 O '47
Credit suggestions for smaller banks; abstract. E. F. Gee. Burroughs Clearing House 31:10-12 Ag '47
Keep operations simple. I. E. Brown. Banking 40:40 Ag '47
Specialized, volume business; Timeway bankredit; First security corporation of Ogden, Utah. B. R. Broderick. il Burroughs Clearing House 31:15-17+ Jl '47

See also
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Records

Central file's a handy thing. B. S. Hamilton. il Banking 40:39 Jl '47
Lower costs for credit records; American trust company, South Bend, Ind. uses Ditto master copy. P. Eastman. il Am Bsns 17: 12-13+ Jl '47

Credit information service

Bank's liability for fraudulent credit information. C. R. Rosenberg, jr. Burroughs Clearing House 31:60+ Ag '47

Custodianship

Bank held liable for value of bonds accepted for safekeeping. Banking Law J 64:468-75 Je '47

Customer relations

Better reception for bank customers; with instruction manual for receptionists. J. Kinnemann, jr. il Burroughs Clearing House 32:22-3+ O '47
Bookkeeper and the customer. A. W. Mueller. Am Inst Banking Bul 29:14 O '47
For customers only; leaflet of Central state bank of Oklahoma City. il Burroughs Clearing House 31:6 D '46
No parking 7 A.M. to 9 P.M. H. L. Swift. il Banking 39:26+ F '47
Roving hostess added to bank staff; United States national bank of Denver. il Burroughs Clearing House 31:4 Jl '47

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Trust companies—Customer relations

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Dual system

FDIC and the dual banking system. H. E. Cook. Comm & Fin Chr 166:1436-7 O 9 '47

Exchange charges

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Exhibits

Bank program for home planners; Northwestern national bank of Minneapolis. il Banking 40:58+ S '47
Department for family banking; Franklin Square national bank, L.I. il Banking 40: 46-7+ Jl '47
Getting ready for the fair; bank develops homemade farm aids. il Banking 39:62+ F '47
Lobbies that sell; display possibilities; text by J. W. Irwin; cartoons by B. Kirkpatrick. Banking 39:26-7 Ja '47
Shoes, comics and a Cape Cod bank; Falmouth national bank. Banking 40:16 Ag '47
Thrift exhibit at Gefle, Sweden. Banking 39: 111 Ap '47
What! refrigerators on a bank floor? il Ptr Ink 220:31 Jl 18 '47
Window display program; Second federal savings and loan association, Cleveland. il Burroughs Clearing House 31:10 Ja '47

Farm development service

See Banks and banking—Country banks

Fees

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Banks and banking—Collection charges
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Finance

Bank earnings take a dip; first-quarter profits of 20 New York banks. Bsns W p68+ My 3 '47
Bank liquidity and the war. C. R. Whittlesey. 86p pa 50c National bur. of economic research, 1819 Broadway, New York 23 '45
Comparison of consolidated statements of American banks, selected dates, June 30, 1930-June 30, 1947; tabulation. Bankers Mo 64:510 O '47
Comparison of consolidated statements of American banks, selected years, 1929-1946; tabulation. Bankers Mo 64:222 My '47
Deposits shrink, costs rise, banks suffer; with table giving earnings and price relationship of 16 New York banks for first quarter. H. Rohs. Barron's 27:22 Ap 14 '47
Do banks need more capital? deposits have risen faster than capital funds. Bsns W p82-4 O 25 '47
Favorable factors enhance bank outlook; with table giving second quarter earnings of 16 New York city banks. H. T. Rohs. Barron's 27:19 Jl 21 '47
FDIC reports increased 1946 earnings of commercial banks. Comm & Fin Chr 166:827 Ag 28 '47
FDIC reports net profits of insured commercial banks in 1946. Comm & Fin Chr 165:2653 My 15 '47
Forsees renewal of upward trend in bank deposits and assets; Northern trust company of Chicago. Comm & Fin Chr 165:751 F 6 '47
Items about banks, trust companies; excerpts from year-end statements. Comm & Fin Chr 165:189+ Ja 9 '47
Member bank earnings; national and state member banks, first half of the year, 1946-1947. Fed Res Bul 33:1315 O '47
Member bank earnings, 1946 and comparisons for selected years, 1929-1945; with ratios. Fed Res Bul 33:528-30, 602-12 My '47
National City, Chase National, Guaranty Trust and Manufacturers; comparisons for the year 1946. Comm & Fin Chr 165:1010 F 20 '47
New York City commercial banks 1945 and 1946 records compared. Comm & Fin Chr 165:748 F 6 '47
News and views of investments; banking in 1947. H. T. Rohs. Barron's 27:1 Ja 20 '47
Outlook for bank earnings. J. W. Wooster, jr. Banking 40:25-7+ Jl '47
Radical changes in industrial banks; survey of insured banks, 1934-1946. E. A. Dauer. Harvard Bsns R 25 no 4A:609-24 [O] '47
Reports drop in banking profits related to capital funds; second Federal reserve district report for 1946; abstract. A. Sproul. Comm & Fin Chr 165:1259+ Mr 6 '47
Total deposits of U.S. banks Dec. 31; report of Comptroller of the currency. Comm & Fin Chr 165:2649 My 15 '47
Trend of bank deposits and earnings. E. W. Nelson. Comm & Fin Chr 166:121 Jl 10 '47
Wartime banking developments; Treasury department analysis of changes in bank assets and liabilities from Dec. 31, 1939, to June 30, 1946. Comm & Fin Chr 165:650+ Ja 30 '47
World's biggest bank; Bank of America. il Fortune 36:68-75 Jl '47

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Bank accounting
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Foreign banking departments

Foreign departments are busy. Banking 39: 41-2+ My '47

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Foreign banking service

First national bank of Chicago provides instruction on foreign financing. Burroughs Clearing House 31:3-4 D '46

Foreign banking for Main street; how American national bank and trust company of Chicago assists country banks. A. M. Strong. il Burroughs Clearing House 31: 26-8+ Ap '47

London as banking center. P. Einzig. Comm & Fin Chr 165:745 F 6 '47; Correction. 165: 1383 Mr 13 '47

London still leader in world finance. P. Bareau. Comm & Fin Chr 165:2860+ My 29 '47

Foreign branches

Boston and Rio join hands; First national bank of Boston's new Rio branch. il Burroughs Clearing House 31:15 My '47

New horizons for foreign banking; Bank of America opens branch in Manila. R. G. Smith. il Burroughs Clearing House 31:20-1+ Mr '47

Foreign business

Foreign bank entitled to preferred claim against assets of New York agency; Banque Mellie Iran v. Yokohama specie bank, limited. Banking Law J 64:98-100 F '47

Government ownership

Are banks to be nationalized? F. A. Potts. Comm & Fin Chr 166:1306+ O 2 '47

Australian banking nationalisation? Economist 153:338-9, 457 Ag 23, S 13 '47

Nationalisation of Netherlands bank. Economist 152:1000-1 Je 21 '47

Nationalization without cause. Economist 153: 536 S 27 '47

On the bank of the Delaware; Farmers bank of the state of Delaware. Fortune 36:126 S '47

Operation of a government-owned bank; Rural bank of New South Wales. Burroughs Clearing House 31:12 My '47

Government service

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Group banking

Free banks, free enterprise and free men; attacks branch banking and group banking as monopolistic. W. J. Bryan. Comm & Fin Chr 165:3029+ Je 5 '47

Group banking; number, deposits, and branches of group banks, Dec. 31, 1945. Fed Res Bul 33:462 Ap '47

Guaranty of deposits

FDIC reports net profits of insured commercial banks in 1946. Comm & Fin Chr 165:2653 My 15 '47

Radical changes in industrial banks; survey of insured banks, 1934-1946. E. A. Dauer. Harvard Bsns R 25 no 4A:609-24 [O] '47

Holding companies

Bank holding company bill introduced. N. P. Gregory. Burroughs Clearing House 31:28+ My '47

Bank holding company curb bill proposed by Senator Tobey. Comm & Fin Chr 165:1568 Mr 20 '47

Competitive credit fights for survival; Tobey bill would bar bank holding firms' expansion. W. H. Hillyer. Barron's 27:34 Je 16 '47

Economists' national committee on monetary policy supports regulation of bank holding companies. Comm & Fin Chr 166:334 Jl 24 '47

Full control of bank holding companies needed; statement of S.829 before Senate Banking and currency committee. M. S. Eccles. Comm & Fin Chr 165:3031+ Je 5 '47

Hours of business

Banks in N.Y. favor Saturday closing. Comm & Fin Chr 164:2525 N 14 '46

Canadian banking; Saturday banking hours. J. Montagnes. Burroughs Clearing House 32:43 O '47

Evening window service. Burroughs Clearing House 31:12-13 Mr '47

Five-day banking. Bsns W p82 Mr 22 '47

Five-day week in New York state. H. V. Odle. il Burroughs Clearing House 31:18-21+ Jl '47

Five-day week trend broadens. Burroughs Clearing House 31:3 D '46

Geography and the five-day week. Banking 39:35 D '46

Gov. Dewey signs bill for 5-day bank week in New York state. Comm & Fin Chr 165: 1308 Mr 6 '47

Is Saturday closing a boomerang? E. E. Agger. Banking 39:39+ Ap '47

Saturday closing of New York savings banks. Comm & Fin Chr 165:1978 Ap 10 '47

Saturday closings in New York Reserve district. Comm & Fin Chr 165:1294 Mr 6 '47

Six banking days for customers but only five for employees; and no more help is needed; Central national bank in Chicago. L. A. Bowman. Bankers Mo 64:440+ S '47

Status of the five-day week. Banking 39: 38+ Ap; 110+ My '47

Support of all-year Saturday closing advocated by New York savings banks. Comm & Fin Chr 165:643 Ja 30 '47

Two questions facing New York banks; Saturday closing and service charges. C. R. Dewey. Comm & Fin Chr 165:493+ Ja 23 '47

Year-round Saturday closing of banks; data for Rhode Island, New Hampshire, Georgia, Maryland and St Louis, Mo. Comm & Fin Chr 165:2660 My 15 '47

Insurance requirements

Bank burglary insurance. D. Quinn. Weekly Underw 156:230-2+, 412-16+ Ja 18, F 8 '47

Bank crimes on upswing, greater protection urged; abstracts. F. E. Post. Nat Underw 51:19 O 23 '47; East Underw 48:55 O 17 '47

Banks have $10,000,000 in undiscovered losses. W. J. Nichols. Weekly Underw 156:1564-5 Je 7 '47; Correction. 156:1756 Je 28 '47

FDIC alerts banks on fidelity cover. H. C. Hallman. Nat Underw 51:17+ Jl 17 '47

FDIC director urges ample fidelity cover. H. E. Cook. Nat Underw 51:19+ O 23 '47; Same abr. Nat Underw (Life ed) 51:2 O 24 '47

National Bureau has excess securities policy for banks; devised to supplant excess bank burglary-robbery cover. Nat Underw 50:23 D 26 '46

New bond for bank's legal liability proving popular. Nat Underw 51:27 My 22 '47

New excess securities policy approved in New York. East Underw 49:30 Ja 10 '47

Night depository and other current bank losses and suggestions for protection. E. W. Fields. Weekly Underw 156:1548-50 Je 7 '47; Same abr. Nat Underw 51:28 My 22 '47

To broaden bankers liability indemnity bond. Nat Underw 51:16 Je 12 '47

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Bankers' blanket bond — Insurance, Safe deposit box

Insurance selling

Montana calls on insurers to terminate bank agencies. Nat Underw 51:2+ Ag 7 '47

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Investments

Bankers' responsibility in government debt management. D. W. Bell. Comm & Fin Chr 165:2981+ Je 5 '47

Eye-opener on country banks' U.S. bonds. C. F. Pack; T. B. Robb. Banking 39:58+ N '46; 32-3 Ja '47

Factors fixing commercial bank investments; address before Illinois bankers association, Chicago. M. Nadler. Comm & Fin Chr 165: 2854+ My 29 '47

Money management and bank investments. E. S. Adams. Comm & Fin Chr 165:2607+ My 15 '47

Municipal bonds in the bank portfolio. I. A. Long. Comm & Fin Chr 165:3122+ Je 12 '47

Reasons for confidence in Canadian credit. C. Elliott. Comm & Fin Chr 165:1650+ Mr 27 '47

BANKS and banking—Investments—*Continued*
Suggested portfolio policies; what governments? P. R. Easterday. il Burroughs Clearing House 31:17-19+ D '46
Tailor-made policy yields 12 per cent on total invested capital; Bank of Burlington, Wis. F. W. New. Bankers Mo 64:186-7 Ap '47
Your bonds if money rates rise. J. S. Lawrence. Banking 39:40-1 F '47

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Joint accounts

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Negro banks

Number fourteen; Douglas state bank of Kansas City. il Burroughs Clearing House 32:14-15 O '47

New business

14,000 new depositors; 4½ year accomplishment. E. W. Miller. il Bankers Mo 63:593-5 D '46
Prospective depositors walk into the bank daily and walk right out again; new business contest of First national bank, Madison, Wis. L. Miller and others. Bankers Mo 63:542-3 N '46

Night and curb depositories

Night depository and other current bank losses and suggestions for protection. E. W. Fields. Weekly Underw 156:1548-50 Je 7 '47; Same abr. Nat Underw 51:28 My 22 '47

Periodicals

Monthly bank letters. Banking 39:116 Ap '47

Protection

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Bank robberies

Public relations

Applying a human relations program; interview with S. P. Goodenough, vice-president, Rochester Trust co. Rochester, N.Y. il Burroughs Clearing House 31:22-4+ Jl '47
Bank public relations program launched by Connecticut bankers association. Trusts & Estates 85:6 Jl '47
Bank's role in the community. S. H. Chelsted. Trusts & Estates 84:282-3 Mr '47
Broad field of public relations; abstract. R. W. Kneebone. Banking 40:64-5 O '47
Community economic leadership through public relations. A. Crawford. Am Inst Banking Bul 28:15-17+ O '46
Familiarity breeds confidence; Opinion research corporation's survey. Trusts & Estates 85:182 S '47
Five W's of news in your bank. J. De Jong. Banking 40:43-5+ S '47
If banking is to progress, sound public relations is the answer; program of Bank of America, San Francisco. W. Braunschweiger. il Trusts & Estates 85:272-7 O '47
Neighborhood bank's long range program; Manufacturers bank and trust company of St Louis. J. P. Hickok. Banking 39:41+ Ap '47
New business through financial relations. il Trusts & Estates 85:280-1 O '47
Our unpublished balance sheet; a look at the human assets and liabilities. S. P. Goodenough. Trusts & Estates 84:285-6 Mr '47
Public side of private banking; Financial Advertisers launch far-reaching public relations program. Trusts & Estates 84:284 Mr '47

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Banks and banking—Customer relations

Ration coupon handling

Termination of ration banking program. Fed Res Bul 33:978 Ag '47

Real estate operations

Bank's village for veterans; Farmers and mechanics savings bank of Minneapolis housing project, Penn Model village. P. Edmonds. il Banking 39:49 D '46
Insured banks' real estate. M. T. Harl. Banking 39:109 D '46
Veterans' rental housing plan, banks' role in Worcester, Mass. community plan. il Banking 40:56-7 S '47

Records

Bank records in income tax investigations. C. R. Rosenberg, jr. Burroughs Clearing House 31:45-8 Ja '47
Claim of protection of fiduciary relation between bank and customer does not preclude revenue agents from making examination of records; United States v. First national bank of Mobile. Banking Law J 64:102-15 F '47
How we reduce errors on deposit tickets; First national bank of Meadville, Pa. A. Hutchens. Bankers Mo 64:123 Mr '47
Microfilming saves weight and space; preserves records of first 25 years, Federal reserve bank of Cleveland. Bankers Mo 63:576 N '46
This savings ledger card saves work and storage space. H. R. Fischer. Bankers Mo 64:234-5 My '47
Time and storage space eliminated; customer's signature acknowledges receipt of each withdrawal and verifies new balance. Bankers Mo 64:93 F '47

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Regulation

Supervision is not based on arbitrary rules and regulations. A. C. Lueder. Bankers Mo 64:68+ F '47

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Banks and banking—Dual system

Reorganization

Publication of plans for reorganization of bank sufficient notice to all interested parties. Banking Law J 64:38-44 Ja '47

Reports

Ideas for humanizing bank reports. il Burroughs Clearing House 31:3-4 Mr '47
This bank takes its friends to the circus; annual statement of Bank of Warwick, Hilton Village, Va. Bankers Mo 64:230+ My '47
21 banks cited for excellence of reports. Banking 40:109 Ag '47

Safe deposits

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Savings departments

More emphasis on savings dollars. F. F. Spellissy. Burroughs Clearing House 31:22-4+ Mr '47
Stimulating savings; program of Wells Fargo bank & union trust co., San Francisco; interview with G. W. Wickland. il Burroughs Clearing House 32:24-6+ O '47

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Airport banking; branch banks in large airport terminals. il Burroughs Clearing House 31:15 Mr '47
Bank literature on foreign trade. Burroughs Clearing House 31:8-10 F '47
Bank service for the United nations; Chemical bank & trust company, New York. il Banking 39:17+ D '46
Cable address, intimate; Colonial trust company, N.Y. Fortune 36:116+ Jl '47
Good defense against crime loss; public awareness of problem; program of Citizens trust company, Summit, N.J. W. J. Knowles. Banking 39:16 My '47
Leave bond cashing went smoothly. il Banking 40:98+ O '47
Michigan national bank of Flint gives veterans bonus-application aid. il Burroughs Clearing House 31:10-11 Je '47

BANKS and banking—Service—*Continued*
Opportunity and a responsibility; Bond-a-month plan. R. M. Hanes. Banking 39:54+ Je '47
Regional research program of Federal reserve bank of Boston. Banking 39:106 F '47
Stockholders stay for lunch; leading corporations, with registered offices in Flemington, N.J., are served by local bank's trust department. D. H. Moreau. il Banking 40:42-3 Jl '47
Why 10,000,000 people altered their views; the new banking; popularization of services. G. M. Wallace. il Burroughs Clearing House 31:19-21+ Je '47

Management aids

A.B.A. booklet, Small business aids; source material to help banks extend counseling service. Banking 39:43 My '47
Management aids for bank customers; merchandising manuals and portfolios. il Banking 39:72+ F '47

Service charge

Bank copy important in new market idea. C. H. Carlson. Bankers Mo 63:595 D '46
Controllable-cost checking accounts; plan of National bank of Hyde Park in Chicago. Burroughs Clearing House 31:8+ Je '47
Country bank plan in operation; service charges; banks in Rochester, Minnesota use A.B.A. simplified plan. H. J. Boone. Burroughs Clearing House 31:17-19 Mr '47
Here's an easy way to settle the matter of earnings credits. Bankers Mo 64:63 F '47
Hidden losses in service charges. G. R. Amy. Banking 40:49+ O '47
Indirect benefits of service charges to banks. L. J. Pritchard. Comm & Fin Chr 165:866+ F 13 '47
It's this way, Mr Depositor; College Point, N.Y. national bank explains service charge. O. Goerke. Banking 39:40 My '47
New York's new formula for service charges; Committee on bank management and research, New York state bankers association. T. Rokahr. Burroughs Clearing House 31:22-4+ S '47
Short way to get the average balance. W. R. Harrison. Bankers Mo 64:218-19 My '47
Simple plan for eliminating earnings credit work. Bankers Mo 64:120 Mr '47
Simplified service charge calculations; Wheatley Hills national bank, Westbury, L.I. J. J. Kuethen. Banking 39:88-90 Ap '47
Three-cent check charge replaces exchange, reduces work, provides income, pleases customers. L. H. Scherf. Bankers Mo 64:80 F '47
Two questions facing New York banks; Saturday closing and service charges. C. R. Dewey. Comm & Fin Chr 165:493+ Ja 23 '47
We've used a simple schedule for service charges for twelve years; Stockmen's bank, Gillette, Wyoming. J. E. Spielman. il Bankers Mo 64:429-30 S '47

Service to government

Banks aid savings bond sales. Banking 39:71 D '46
Bond-a-month plan; selling to bank depositors. Banking 39:27+ Ap '47

Show windows

Window display program; Second federal savings and loan association, Cleveland. il Burroughs Clearing House 31:10 Ja '47

Signature cards

Deposit rules posted in lobby reduce misunderstandings, give the bank legal protection. M. B. Lake. Bankers Mo 64:278+ Je '47

Statements of account

Part-time help prepares check statements. Burroughs Clearing House 31:7-8 My '47

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Statistics

All member banks; assets and liabilities on Dec. 31, 1946, by class of bank. Fed Res Bul 33:464 Ap '47
All member banks; assets and liabilities on June 30, 1947, by class of bank. Fed Res Bul 33:1317 O '47
Assets and liabilities of insured commercial banks in United States and possessions, Dec. 31, 1946, June 29, 1946, and Dec. 31, 1945. Fed Res Bul 33:465 Ap '47
Assets and liabilities of insured commercial banks in United States and possessions, on June 30, 1947, Dec. 31, 1946, and June 29, 1946. Fed Res Bul 33:1316 O '47
Bank earnings; insured commercial banks in United States and possessions, 1943-1946. Fed Res Bul 33:613 My '47
Banking's top fifteen. Bsns W p79 N 16 '46
Chain banking; number, deposits, and branches of chain banks, Dec. 31, 1945. Fed Res Bul 33:463 Ap '47
Group banking; number, deposits, and branches of group banks, Dec. 31, 1945. Fed Res Bul 33:462 Ap '47
Number of banks and branches in operation on December 31, 1946. Fed Res Bul 33: 752-3 Je '47
Radical changes in industrial banks; survey of insured banks, 1934-1946. E. A. Dauer. Harvard Bsns R 25 no 4A:609-24 [O] '47

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Bank clearings
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Federal reserve banks—Statistics

Stock

Bank stocks; market change of 18 stocks of leading New York City banks, Dec. 31, 1945 and Dec. 31, 1946. E. A. Van Deusen. Comm & Fin Chr 165:136 Ja 9 '47
Bank stocks; Public national bank & trust co., New York. E. A. Van Deusen. Comm & Fin Chr 164:3022 D 12 '46
Do banks need more capital? deposits have risen faster than capital funds. Bsns W p82-4 O 25 '47
Earnings and price relationships of 16 New York banks, 1945 and 1946 compared. Barron's 27:6 Ja 20 '47
Earnings prospect for bank shares; with earnings comparison of principal banks. G. L. Merton. Mag of Wall St 79:421-3+ Ja 18 '47
Future of bank stock earnings; with earnings comparisons and statistics of selected stocks. J. A. Finley. Mag of Wall St 80: 442-3+ Jl 19 '47
Liability of bank for refusal to transfer stock on its books into name of owner. Banking Law J 64:211-14 Mr '47

Stockholders

Bank stockholders take a tour; Butler (Pa.) savings and trust company. Trusts & Estates 85:188-9 S '47
Liability of bank for refusal to transfer stock on its books into name of owner. Banking Law J 64:211-14 Mr '47
Missing stockholders located by Skip tracers company of New York. Banking 39:76 Ap '47
Seven specific ways in which a stockholder can be of service to his bank. Bankers Mo 64:84 F '47
Shareholder-relations experiment; First national bank, Orlando, Fla. il Burroughs Clearing House 31:8-9 Jl '47
Stockholders are invited; entertainment programs of two small banks. Banking 39:109 Ap '47
Timing of annual stockholders meetings. Banking 39:63 Ja '47

Stockholders' liability

Receiver of national bank restricted to state law in enforcement of liability of deceased stockholder's distributees for assessment. Banking Law J 64:15-20 Ja '47
State constitutional provision imposing double liability on stockholder of bank held valid; Henrys v. Raboin, Supreme court of Illinois. Banking Law J 64:188-202 Mr '47

Study and teaching

Asset value of A.I.B. training. M. B. Leach. il Banking 39:50-1+ Je '47
Banker students of housing; A.B.A. mortgage officer training course at University of Illinois. Banking 40:28-9 Ag '47

BANKS and banking—Study and teaching—*Continued*
First national bank of Chicago provides instruction on foreign financing. Burroughs Clearing House 31:3-4 D '46
How to learn banking; eighth grade students operate First national bank of Whippany, N.J. il Burroughs Clearing House 31:3-4 Je '47
It's tomorrow; how American institute of banking aids veterans. L. Lewis. Am Inst Banking Bul 29:16 Ja '47
No ceiling on education; work of the American institute of banking and the Graduate school of banking. W. E. Atkins. il Banking 39:25-7+ Je '47
Some ingredients for a bankers' education. H. E. Zarker. Am Inst Banking Bul 29:9-11+ O '47
Standards for a banking education. W. G. F. Price. Am Inst Banking Bul 29:9-11 Ap '47
State, regional school projects. Banking 39:53+ Je '47
Studies in home lending; A.B.A. mortgage officers training course at University of Illinois. H. J. Boone. il Burroughs Clearing House 31:17-19+ S '47
Training for mortgage officers. H. B. Smith. il Banking 39:52+ Je '47
Treasury of banking research; American bankers association's library of Graduate school of banking theses. R. O'Neill. il Banking 39:46-7 Je '47

See also
American institute of banking — Bank employees—Training

Taxation

Administrative classification discriminating against national banks held improper and invalid; Hamilton national bank v. District of Columbia. Banking Law J 64:44-50 Ja '47
California banks may get big tax refund. Bsns W p38 Ag 23 '47
Patchwork of state laws taxing banks. P. Nichols. Banking 39:30+ F '47
Prospective tax changes of particular interest to banks. J. W. Drye, jr. Comm & Fin Chr 165:2471+ My 8 '47
State, national bank mergers; tax discriminations against state banks. J. C. Wilson. Banking 39:70-1 Je '47
Undistributed earnings and surplus taxes. Banking 39:102 Ja '47

Tellers

Bank liable for slander; teller publicly accused of short changing. C. R. Rosenberg, jr. Burroughs Clearing House 31:47 N '46
Improved cash handling system; prepackaged currency speeds check-cashing service; National bank of Detroit. B. F. Studebaker. il Burroughs Clearing House 31:22-4+ D '46
Our tellers now handle 100 deposits instead of 80 with the old passbooks; commercial tellers' machine records and receipts account deposits. F. B. Peake. il Bankers Mo 64:483-4 O '47
Simplified plan of teller training; Detroit bank program. C. H. Hewitt. il Burroughs Clearing House 31:20-2+ N '46

See also
Bank buildings—Tellers' cages

Transit operations

See also
Checks—Collection

Trust departments

Bases of selling trust service. F. L. Dwight. Trusts & Estates 85:34 Jl '47
Director and the trust department; text by J. W. Irwin; cartoons by B. Kirkpatrick. Banking 40:28-9 Jl '47
Fiduciary activities of national banks, comparison as of December 31, 1945, and December 31, 1944; fiduciary activities by Federal reserve districts as of Dec. 31, 1945; tabulations. Trusts & Estates 84:94-5 Ja '47
Investment review in smaller trusts. F. C. Mayne, jr. Trusts & Estates 83:631-2+ D '46
People of moderate means largest users of trust services says ABA. Comm & Fin Chr 165:3037 Je 5 '47
Practical trust cost analysis. G. A. Biggs. Trusts & Estates 84:85-8 Ja '47
Selling trust services; practical suggestions for stimulating staff and prospect interest. J. L. Chapman. Trusts & Estates 84:508-11 My '47
Small estates market; banks get only 11% of $10,000 to $50,000 group. B. F. Dunn. Trusts & Estates 84:30-2 Ja '47
Stockholders stay for lunch; leading corporations, with registered offices in Flemington, N.J., are served by local bank's trust department. D. H. Moreau. il Banking 40:42-3 Jl '47
Trust forums create trusts; Mercantile national bank, Dallas, Tex.; abstracts. C. E. Sample. Bankers Mo 64:136 Mr '47; Trusts & Estates 84:179-80 F '47
Trust promotion through a sales manual; Baltimore national bank. Burroughs Clearing House 31:8-10 Ja '47
Trust prospects in the Midwest; with reports by groups of states. J. A. Reid and others. Trusts & Estates 83:607-15 D '46
Trust service at a profit. E. G. Schwalm. Trusts & Estates 84:631-2 Je '47
Trust year in review; excerpts from annual reports. Trusts & Estates 84:437-41, 537-41; 85:63-5 Ap-My, Jl '47

See also
American bankers association—Trust division — Trust companies — Trusts and trustees

Africa

Dominion joint stock banks with London offices. Economist 151:sup26-7 N 16 '46

Alaska

Chattel mortgages on totem poles; First bank of Sitka. H. G. Brown. Banking 40:16-17 O '47

Arizona

Monthly bank bulletin of state-wide statistics published by Valley national bank of Phoenix. il Burroughs Clearing House 31:4 D '46

Australasia

Australasian banks with London offices. Economist 151:sup10, 26-7 N 16 '46
Bank of Australasia, annual general meeting, London. Economist 152:474 Mr 29 '47

Australia

Another Australian banking merger; National bank of Australasia and Queensland national bank. Economist 152:511 Ap 5 '47
Australian banking nationalisation? Economist 153:338-9, 457 Ag 23, S 13 '47
Nationalisation without cause. Economist 153:536 S 27 '47
Operation of a government-owned bank; Rural bank of New South Wales. Burroughs Clearing House 31:12 My '47

Beverly Hills, California

Beasleys Beverly Hills bank. R. S. Beasley. il Burroughs Clearing House 31:20-1+ S '47

California

Suit regarding condition of membership; Peoples bank, Lakewood Village, Calif. v. Eccles, et al. Fed Res Bul 33:532-40 My '47

Canada

Annual report highlights. J. Montagnes. il Burroughs Clearing House 31:39-41 Ja '47
Annual report of the Bank of Canada for 1946. Fed Res Bul 33:392-7 Ap '47
Canadian banking; Saturday banking hours. J. Montagnes. Burroughs Clearing House 32:43 O '47
Canadian banks with offices in London. Economist 151:sup10, 26-7 N 16 '46
Evolution of Canadian banking. C. A. Curtis. Ann Am Acad 253:115-24 S '47

See also
Bank of Montreal

Ceylon

Bank strike in Colombo. For Comm W 25:22 N 16 '46; 26:12 F 1 '47

BANKS and banking—*Continued*

Chicago

Bank laboratory; to serve as model and source of advice for country banks. Bsns W p100 D 7 '46

China

Private foreign currency accounts in China liquidated. For Comm W 25:19-20 N 9 '46

See also
Hongkong and Shanghai banking corporation

Dallas

Region-builders; Dallas in wonderland. J. J. McCann. il Banking 29:28-30+ Ja '47

Delaware

On the bank of the Delaware; Farmers bank of the state of Delaware. Fortune 36:126 S '47

Egypt

National bank of Egypt 47th annual general meeting. Economist 152:650 Ap 26 '47

Florida

Florida banking progress. F. W. Norris. Comm & Fin Chr 165:2113+ Ap 17 '47

France

Nationalisation of banks and industries in France. Int Labour R 54:206-9 S-O '46
Revision of statute of the Caisse centrale of Overseas France. For Comm W 26:18 F 1 '47

Franklin Square, Long Island

Department for family banking; Franklin Square national bank. il Banking 40:46-7+ Jl '47

Germany

American plan for German bank reform. H. M. Bratter. Comm & Fin Chr 164:3208+ D 19 '46
Central banking laws for American zone of Germany; with text of law establishing the Land central bank of Wuerttemberg-Baden. Fed Res Bul 33:130-5 F '47
Federal reserve in Germany; new central banking system in the American zone. Economist 152:512 Ap 5 '47
What case against the German bankers? A. J. Warner. Comm & Fin Chr 165:4+ Ja 2 '47

Great Britain

Banking in socialist Britain. F. B. Makin. Banking 39:16-17 Ap '47
Banks in 1947. Economist 152:153-4 Ja 25 '47
Britain's unusual co-operative bank; Co-operative wholesale society bank. F. Plachy. il Burroughs Clearing House 31:24-5+ F '47
British banks under socialistic regime. F. E. Lee. Comm & Fin Chr 165:1921+ Ap 10 '47
Chartered bank of India, Australia and China; statement by the chairman, V. A. Grantham. Economist 152:398 Mr 15 '47
Economist banking supplement. Economist 151:sup1-8+ N 16 '46
End of window-dressing. Economist 151:961-2+ D 14 '46
Riddle of bank profits. Economist 152:115 Ja 18 '47
Trends in bank advances. Economist 152:36 Ja 4 '47

See also
Bank of England
Bank of London and South America
Barclays bank (Dominion, colonial and overseas)
Barclays bank, limited
District bank, limited
Lloyds bank
Martins bank, limited
Midland bank limited
National provincial bank
Westminster bank limited
Williams Deacon's bank limited

Hungary

Hungarian commercial bank of Pest; forint-balance presented at annual general meeting. Economist 153:342 Ag 23 '47
Leading banks placed under government control. For Comm W 28:18 Jl 26 '47

Illinois

Supervision is not based on arbitrary rules and regulations. A. C. Lueder. Bankers Mo 64:68+ F '47

India

Annual report of Reserve bank of India. For Comm W 26:15 Ja 18 '47
Indian banks with offices in London. Economist 151:sup10, 26-7 N 16 '46
National bank of India, limited, ordinary general meeting, London. Economist 152:476 Mr 29 '47

Ireland

Joint stock banks of Ireland. Economist 151: sup6-8, 22+ N 16 '46

London

Foreign banks with London offices and British banks trading abroad. Economist 151: sup28+ N 16 '46
London as banking center. P. Einzig. Comm & Fin Chr 165:745 F 6 '47; Correction. 165: 1383 Mr 13 '47
London still leader in world finance. P. Bareau. Comm & Fin Chr 165:2860+ My 29 '47

Mexico

Credit restrictions eased. For Comm W 26:28 Ja 25 '47

Netherlands

Nationalisation of Netherlands bank. Economist 152:1000-1 Je 21 '47

New York (city)

Bank stocks; Public national bank & trust co., New York. E. A. Van Deusen. Comm & Fin Chr 164:3022 D 12 '46
Deposits shrink, costs rise, banks suffer; with table giving earnings and price relationship of 16 New York banks for first quarter. H. Rohs. Barron's 27:22 Ap 14 '47
Earnings and price relationships of 16 New York banks, 1945 and 1946 compared. Barron's 27:6 Ja 20 '47
Earnings prospects of New York City banks. M. A. Schapiro. Comm & Fin Chr 165:1654+ Mr 27 '47
Favorable factors enhance bank outlook; with table giving second quarter earnings of 16 New York City banks. H. T. Rohs. Barron's 27:19 Jl 21 '47
National City, Chase National, Guaranty Trust and Manufacturers; comparisons for the year 1946. Comm & Fin Chr 165:1010 F 20 '47
New York City banks halt drop in earnings; third quarter record of fifteen leading banks. H. T. Rohs. Barron's 27:31 O 20 '47
New York City commercial banks 1945 and 1946 records compared. Comm & Fin Chr 165:748 F 6 '47

See also
Chase national bank of New York
Chemical bank and trust company
City bank farmers trust company
Guaranty trust company of New York
Manufacturers trust company
National city bank of New York

New York (state)

Decline in resources and deposits of state bank shown at year-end. E. V. Bell. Comm & Fin Chr 165:1430 Mr 13 '47

Palestine

Anglo-Palestine bank, limited, ordinary general meeting. Economist 152:692 My 3 '47

Palm Beach, Florida

Bank with a personality; First national of Palm Beach. il Bsns W p42+ Ap 19 '47

Persia

Imperial bank of Iran; statement by the chairman at ordinary general meeting. Lord Kennet. Economist 153:84 Jl 12 '47

Philippine Islands

Plans for central bank initiated. For Comm W 28:18 S 20 '47

Scotland

Bank of Scotland; statement by the chairman at annual general meeting. Lord Elphinstone. Economist 152:558 Ap 12 '47
Clydesdale bank limited 109th general meeting, Glasgow. Economist 152:260 F 8 '47

BANKS and banking—Scotland—*Continued*
Commercial bank of Scotland; statement by the chairman at annual meeting of shareholders. Earl of Mar and Kellie. Economist 151:1018 D 21 '46
Joint stock banks of Scotland. Economist 151: sup6-8, 21-2 N 16 '46
National bank of Scotland; statement by the chairman at annual general meeting of proprietors. Lord Zetland. Economist 151: 1019 D 21 '46
Royal bank of Scotland; annual general court of proprietors; with figures showing position Oct. 12, 1946. Economist 151:883, 886 N 30 '46
Union bank of Scotland, limited, annual meeting. Economist 152:739 My 10 '47

South Africa

Standard bank of South Africa, limited; statement by the chairman at ordinary meeting. J. Ridley. Economist 153:172 Jl 26 '47

Turkey

See also
Ottoman bank

United States

Banks cash in on U.S. trade. Bsns W p105-6+ My 24 '47
Debt retirement and bank credit. Fed Res Bul 33:775-87 Jl '47; Same. Comm & Fin Chr 166:438+ Jl 31 '47
Earning power of banks; address before American bankers association. J. S. Lawrence. Comm & Fin Chr 166:1434-5+ O 9 '47
Nation's banks reconvert. Bsns W p64+ Ja 25 '47
Not a bank failure for two years. Bsns W p 116 Je 14 '47
Wartime banking developments; Treasury department analysis of changes in bank assets and liabilities from Dec. 31, 1939, to June 30, 1946. Comm & Fin Chr 165:650+ Ja 30 '47

See also
Banks and banking, National — Federal reserve banks
Banks and banking, State — Federal reserve board

BANKS and banking, Cooperative
Britain's unusual co-operative bank; Co-operative wholesale society bank. F. Plachy. il Burroughs Clearing House 31:24-5+ F '47
Co-operative wholesale society bank; question of liquidity. Economist 152:253 F 8 '47

See also
Credit unions

BANKS and banking, Industrial
Radical changes in industrial banks; survey of insured banks, 1934-1946. E. A. Dauer. Harvard Bsns R 25 no 4A:609-24 [O] '47

BANKS and banking, International

See also
Bank for international settlements — International bank for reconstruction and development

BANKS and banking, National
Administrative classification discriminating against national banks held improper and invalid; Hamilton national bank v. District of Columbia. Banking Law J 64:44-50 Ja '47
Condition of national banks in the United States on June 30, Dec. 31, 1945 and June 29, 1946; tabulation. Comm & Fin Chr 164: 2530 N 14 '46
Condition of national banks in the United States on Dec. 31, 1945, June 29, 1946 and Sept. 30, 1946. Comm & Fin Chr 165:582 Ja 27 '47
Condition of national banks, June 29, Sept. 30 and Dec. 31, 1946. Comm & Fin Chr 165: 2125 Ap 17 '47
Fiduciary activities of national banks, comparison as of December 31, 1945, and December 31, 1944; fiduciary activities by Federal reserve districts as of Dec. 31, 1945; tabulations. Trusts & Estates 84: 94-5 Ja '47
Member bank earnings, 1946; national banks, by size of bank. Fed Res Bul 33:607 My '47
National bank assets nearly $85 billion on Dec. 31. Comm & Fin Chr 165:1705 Mr 27 '47
Profits of national banks in 1946. Comm & Fin Chr 165:2401 My 1 '47; Same abr. Burroughs Clearing House 31:32 My '47
Receiver of national bank restricted to state law in enforcement of liability of deceased stockholder's distributees for assessment. Banking Law J 64:15-20 Ja '47
State court without power to grant preliminary restraint against national bank. Banking Law J 64:510-13 Je '47
Suit regarding removal of bank directors; Paterson national bank. Fed Res Bul 33: 30-4 Ja '47; Same. Banking Law J 64:115-22 F '47

BANKS and banking, State
Member bank earnings, 1946; state member banks, by size of bank. Fed Res Bul 33: 608 My '47
State, national bank mergers; tax discriminations against state banks. J. C. Wilson. Banking 39:70-1 Je '47

BANKS and banking, Trade union
Status of labor banks, 1946. Mo Labor R 64:334 My '47

BANTUS
Suggestions regarding principles acting in the use of the Bantu divining basket. J. M. Parker. Science 104:513 N 29 '46

BAR associations

See also
American bar association — New York state bar association

BARBER asphalt corporation
Net hinges on cash reinvestment. Barron's 26:6 D 30 '46

BARBITURATES
Barbiturates rules tightened in New York city. Oil Paint & Drug Rep 152:41 Jl 14 '47
Barbiturates uniform bill passage urged; abstract. R. P. Fischelis. Oil Paint & Drug Rep 151:4 Ja 6 '47
Effect of body temperature on the duration of barbiturate anesthesia in mice. F. A. Fuhrman. bibliog Science 105:387-8 Ap 11 '47
New York defers action on barbiturates. Oil Paint & Drug Rep 151:7+ Ap 7 '47
Undifferentiated growth of orchid embryos on media containing barbiturates. J. T. Curtis. Science 105:128 Ja 31 '47

BARBITURIC acid
Barbituric acids and related compounds containing alicyclicalkyl groups. W. Braker, E. J. Pribyl and W. A. Lott. bibliog Am Chem Soc J 69:866-9 Ap '47
Reaction between *o*-aminoazo compounds and barbituric acid; a new synthesis of riboflavin. M. Tishler and others. bibliog Am Chem Soc J 69:1487-92 Je '47

BARCLAYS bank (Dominion, colonial and overseas)
Ordinary general meeting, 21st, London. Economist 151:1059 D 28 '46
Statement by the chairman at ordinary general meeting. W. Goodenough. Economist 151:972 D 14 '46

BARCLAYS bank, limited
Statement by the chairman. E. Fisher. Economist 152:121-3 Ja 18 '47

BARCROFT, Sir Joseph, 1872-1947
Sketch. D. H. Barron. Science 106:160-1 Ag 22 '47

BARGES
Acid-disposal barge Sayreville. il Marine Eng 52:93-4 Ag '47
Barge haulage and new terminals extend cement markets; Missouri portland cement co. il plans diags Rock Prod 50:126-31+ Ag '47
Bethlehem launches largest barges ever constructed for harbor use. il Marine Eng 52: 104+ Ja '47
Diesel electric barge rig, 2100-hp, designed to drill 15,000-ft. wells. K. M. Fagin. il Pet Eng 18:49-52 Ja '47
Difficult barge-holding problem in blasting a submerged rock; removing Ripple rock between Vancouver island and the mainland of British Columbia. il Eng N 138:48-9 Ja 9 '47

BARGES—*Continued*
Dravo builds river craft for Argentina. il Marine Eng 52:87-8 Ag '47
Drilling barge designed for 15-ft. water operation. E. H. Short, jr. il plan diag Oil & Gas J 45:62-3+ N 23 '46
Giant barge drilling rig; one of most modern on Gulf coast. E. H. Short, jr. il plans Oil & Gas J 46:220+ My 31 '47
London barge explosion. il Chem Age (Lond) 56:737 Je 7 '47
New automobile barges built by the St Louis shipbuilding and steel co. il Automotive & Aviation Ind 96:27+ Ap 1 '47
New Diesel-electric barge rig designed for routine drilling to 15,000 ft. il Oil & Gas J 45:59-60 Ja 11 '47
Oil field flood protection; pump equipped barge protects Oklahoma's second largest oil reserve. il Diesel Power 25:53+ Mr '47
Recent innovations in lease work barges. E. H. Short, jr. il Oil & Gas J 45:61+ Ap 5 '47
Refitted boiler barge; supplies power for drilling in Quarantine Bay field, Louisiana. E. H. Short, jr. il diags Oil & Gas J 45: 71-2 Mr 8 '47
Self-propelled cementing barge for offshore operations. N. Williams. il Oil & Gas J 45: 84-5 Ap 12 '47
Specially designed workover barges meet multiplicity of operational requirements. E. H. Short, jr. il Oil & Gas J 46:62-3+ My 10 '47
Testing integrated barge fleets. A. B. Murray. il diag Marine Eng 51:106-8 D '46
Waste-disposal barge for National lead company. il Marine Eng 52:132 Jl '47

Sanitation

Comparison of methyl bromide and hydrogen cyanide for the fumigation of empty bags in barges. W. B. Brown and S. E. Lewis. bibliog Soc Chem Ind J 65:241-5 S '46

BARITE
Barite concentration; froth flotation. J. A. Barr, jr. il Rock Prod 50:92-4 My '47
Barium industry shows increased activity. Chem Eng 53:208+ N '46
Exploration for barite in Hot Spring county, Arkansas. R. B. McElwaine. 3pls U S Bur Mines Rep of Invest 3963:1-21 '46
Exploration of barite deposits in Montgomery county, Arkansas. R. B. McElwaine. U S Bur Mines Rep of Invest 3971:1-24, pl 1-10 '46
Recovery of barite from rotary drilling mud fluids by centrifugal separation. C. A. Lindsay. il diags Oil & Gas J 45:92+ D 14 '46

BARIUM
Minimum sparking potentials of barium, magnesium, and aluminum in argon. H. Jacobs and A. P. LaRocque. bibliog diags J Ap Phys 18:199-203 F '47
Minimum sparking potentials of barium, magnesium, and aluminum in helium. H. Jacobs and A. P. LaRocque. bibliog diags Electrochem Soc Trans 91 (preprint 20): 297-310 '47
Polarographic study of sodium polyphosphates. J. A. Campbell. bibliog Am Chem Soc J 69:109-10 Ja '47

Analysis

Absorption isotherm for determination of barium in quantities as low as 10^{-10} gram atom. M. H. Kurbatov and J. D. Kurbatov. Am Chem Soc J 69:438-41 F '47
Determination of sulfate as barium sulfate; in the presence of metals of the acid hydrogen sulfide group. W. H. Millett and W. M. McNabb. bibliog Franklin Inst J 243:205-17 Mr '47
Quantitative separation of barium from strontium. G. L. Beyer and W. Rieman, 3d. bibliog Anal Chem 19:35-7 Ja '47

Isotopes

Absorption isotherm for determination of barium in quantities as low as 10^{-10} gram atom. M. H. Kurbatov and J. D. Kurbatov. Am Chem Soc J 69:438-41 F '47
Disintegration by consecutive orbital electron captures $_{56}Ba^{131} \rightarrow _{55}Cs^{131} \rightarrow _{54}Xe^{131}$. F. Yu and others. Phys R 71:382 Mr 15 '47

BARIUM carbonate
Carburizing experiment with radioactive carbon. J. K. Stanley. diag Metal Prog 52: 227-9 Ag '47
Correcting for the absorption of weak beta-particles in thick samples; general method for use in tracer work; data presented for samples of $BaC^{14}O_3$. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47
Exchange of carbon dioxide between barium carbonate and the atmosphere. W. D. Armstrong and J. Schubert. Science 106:403-4 O 24 '47
Production of radioactive carbon monoxide from barium carbonate. J. T. Kummer. diag Am Chem Soc J 69:2239 S '47

BARIUM chloride
Annealing salt for 18-8; exhaust manifolds, Ryan aeronautical co. K. Whitcomb. il Steel 120:86-7+ Je 16 '47

BARIUM hydride
Observations on the stability of the barium-hydrogen and zirconium-hydrogen systems. W. C. Schumb, E. F. Sewell and A. S. Eisenstein. bibliog diags Am Chem Soc J 69:2029-33 Ag '47

BARIUM nitrate
Decomposition of solid barium nitrate by fast electrons. A. O. Allen and J. A. Ghormley. J Chem Phys 15:208-9 Ap '47

BARIUM octadecylbenzenesulfonate
Aliphatic and aromatic sulfonates of phenyloctadecane. B. B. Schaeffer and A. J. Stirton. bibliog Am Chem Soc J 69:2071-2 Ag '47

BARIUM ores
See also
Barite

BARIUM oxide
Cements resistant to sea water; experiments by Gino Gallo. Chem Age (Lond) 57:318 S 6 '47
Low-lead, bright opaque glazes at cones 08 to 06. R. R. Danielson. bibliog Am Cer Soc J 30:245-9 Ag 1 '47
X-ray diffraction data for compounds in systems Li_2O-SiO_2 and BaO-SiO_2. A. E. Austin. Am Cer Soc J 30:218-20 Jl 1 '47

BARIUM peroxide
Strychnine and brucine; cuninecarboxylic acid. H. L. Holmes, H. T. Openshaw and A. Robinson. Chem Soc J p908-10 O '46

BARIUM phenyloctadecanesulfonate
Aliphatic and aromatic sulfonates of phenyloctadecene. B. B. Schaeffer and A. J. Stirton. bibliog Am Chem Soc J 69:2071-2 Ag '47

BARIUM potassium chromate
Corrosion inhibitive pigment. Chem Eng 54: 163 Mr '47

BARIUM silicate
Barium silicate phosphors. K. H. Butler. Electrochem Soc Trans 91 (preprint 27): 405-17 '47

BARIUM steel corporation
New set-up provides earning power. Barron's 27:35 Jl 28 '47
Sells Jacobs division for new tractor unit. Comm & Fin Chr 165:1583 Mr 24 '47

BARIUM sulfate
Determination of sulfate as barium sulfate; in the presence of metals of the acid hydrogen sulfide group. W. H. Millett and W. M. McNabb. bibliog Franklin Inst J 243:205-17 Mr '47
Effect of sulfate ion on workability of brick clays; abstract. A. L. Johnson and G. B. Hughes. Brick & Clay Rec 110:56 Je '47
Electrokinetic potentials of precipitates. L. H. Reyerson, I. M. Kolthoff and K. Coad. bibliog diags J Phys & Colloid Chem 51: 321-32 Ja '47
See also
Barite

BARIUM titanate
Dielectric and piezoelectric properties of barium titanate. S. Roberts. bibliog Phys R 71:890-5 Je 15 '47
Effect of field strength on dielectric properties of barium strontium titanate. H. L. Donlevy. bibliog diag RCA R 8:539-53 S '47

BARIUM titanate—*Continued*
Oscillograph study of dielectric properties of barium titanate. A. de Bretteville, jr. bibliog il diag Am Cer Soc J 29:303-7 N 1 '46
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47

BARK
Bark products; Silvacon. il Chem Eng 54: 159-60+ Jl '47
Chemical composition of barks. E. F. Kurth. bibliog (84 ref) Chem R 40:33-49 F '47
Chemical composition of western red cedar bark. K. H. Cram and others. Pulp & Pa of Can 48:85-7 S '47; Abstract. Paper Ind 29:598 Jl '47
Drying redwood bark; infrared installation to useful commercial by-products; Sequoia products co. il Elec West 98:88-9 Ap '47
Fillers from bark. il Mod Plastics 25:162+ S '47
Fractionated bark for use in glues, plastics, insecticides. Chem Ind 61:36 Jl '47
New composition found effective for use in radiantly-heated floors; Silvacon made of powdered treebark. il Arch Forum 87:124 S '47
Weyerhaeuser now operating bark processing plant. il Paper Ind 29:489-90 Jl '47; Excerpt. Oil Paint & Drug Rep 151:66 Je 23 '47

BARK peeling
Allis-Chalmers streambarker in export market. Pulp & Pa of Can 48:149+ Je '47
Analysis of hydraulic barking methods. G. Gomeniouk. Pulp & Pa of Can (Convention no) 48:188-90 [F] '47
Chemical treatment of live trees; proposed process for easy barking and providing of more solid wood per cord. A. R. White. Pulp & Pa of Can 48:67-71 F '47
Log peeling machine. il Can Min J 67:1112 D '46
Marine barking unit, Canada. Engineer 184: 181 Ag 22 '47
New developments in the sulphite industry. Pulp & Pa of Can 48:79-80 Ja '47
Powell River hydraulic barkers and new wood preparing plant. A. R. M. Stewart. il plan Pulp & Pa of Can 47:95-102 N '46
Product film does sales and public relations job; Worthington Hydro-Barker. T. F. Clark. Ptr Ink 218:46-7 Ja 24 '47
Pulps from shavings obtained in barking spruce; abstract. O. Wurz. Paper Ind 29: 134 Ap '47

BARKER, Melvin G.
Sketch. Special Lib 38:138 My-Je '47

BARKER brothers corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:274-5 Je 7 '47

BARLEY
Action of subtilin in reducing infection by a seed-borne pathogen. J. J. Goodman and A. W. Henry. Science 105:320-1 Mr 21 '47
Distribution of C^{14} in photosynthesizing barley seedlings. S. Aronoff and others. diag Science 105:664-5 Je 27 '47
Organic compounds of magnesium and phosphorus in relation to chlorophyll formation. J. H. C. Smith. Am Chem Soc J 69:1492-6 Je '47
Post-war barley problems; abstract and discussion. L. R. Bishop. Chem & Ind p58 Ja 25 '47

BARNARD, Harry Everett, 1874-1946
Sketch. por Chem & Eng N 25:110 Ja 13 '47

BARNS and stables
Connecticut hay barn remodeled into country house pleasantly free of affectation or cliché. B. Kehm. il plans Arch Forum 87: 80-2 Jl '47
Modern variant of stockade construction proposed as low-cost use for second growth timber. il diags Arch Forum 86:176 Ap '47

Heating and ventilation
Power for dairy barn ventilation. Elec World 127:72+ Ja 4 '47
Some heating jobs that can be sold down on the farm. R. H. Emerick. il diags Dom Eng 169:102-5+ F '47

BARNSDALL oil company
Annual report. Comm & Fin Chr 165:1311 Mr 10 '47
Barnsdall's crude reserves gain in value on price rise. Barron's 27:34 O 27 '47

BAROGRAPHS
Microbarometric pressures from large high explosive blasts. E. F. Cox. bibliog map diag Acoustical Soc Am J 19:832-46 S '47

BARRACKS
Prefabricated troop shelter for the Arctic. il Arch Rec 102:119 S '47

Heating and ventilation
Triethylene glycol vapor distribution for air sterilization; experiment at an army training camp. E. Bigg and others. bibliog il diags Heating-Piping 19:103-7 My '47; Discussion. 19:129-31 Ag '47

BARRELS
Barrel head and staves are bonded with phenolic resin. il Mod Plastics 24:98-9 Mr '47
Barrel loader. il Sci Am 175:274 D '46

Testing
Build inexpensive barrel leak tester from materials in refinery scrap pile. diags Pet Processing 1:255 D '46

BARRELS, Plating. See Plating barrels

BARRELS, Steel
FTC attack on steel producers' drum business proves hollow; hearing before Senate judiciary antimonopoly subcommittee. Steel 120:60-1 My 26 '47

BARRETT machine tool company
Preferred stock offered. Comm & Fin Chr 166:946 S 8 '47

BARRIGER, John Walker, 1899-
Aspirin for a Hoosier headache; Monon showing signs of new life. Bsns W p18 Mr 29 '47
Barriger of the Monon. J. Garth. por Am Bsns 17:28+ Ag '47
President of the Monon. por(cover) Bsns W p8 Mr 29 '47

BARRY, James Victor, 1861-1947
Sketch. por East Underw 48:6+ Mr 28 '47; Nat Underw (Life ed) 51:13 Mr 28 '47; Spectator (Life ed) 154:42 Ap '47

BARS and bar rooms
Restaurants and bars; Architectural record's building types study. H. H. Siegel. il plans diags Arch Rec 102:96-116 Jl '47

BARTA, Rudolf, 1897-
Sketch. M. Odvárka. bibliog(42 titles) por Am Cer Soc Bul 26:184-5 Je 15 '47

BARTER
Tobacco standard; cigarette currency. Economist 152:526-7 Ap 12 '47; Same. Iron Age 159:113+ My 29 '47

BARUCH, Bernard Mannes, 1870-
Baruch resigns atomic post. Comm & Fin Chr 165:319 Ja 16 '47

BASCULE bridges. See Bridges, Bascule

BASE exchanging compounds
Catalysis by acid-regenerated cation exchangers. S. Sussman. bibliog Ind & Eng Chem 38:1228-30 D '46
Cationic exchange reactions of cellulose and their effect on insulation resistance. H. F. Church. Soc Chem Ind J 66:221-6 Jl '47
Lignin as cation exchanger; abstract. W. Lautsch. Paper Ind 28:1366 D '46
Manufacture of Wofatit; base-exchange resins; uses and properties. N. E. Topp. Chem Age (Lond) 55:809 D 28 '46
Method for extending study of metal ion-cation exchanger isotope fractionation. M. L. Eidinoff. J Chem Phys 15:527 Jl '47
Reaction of clays with organic cations in producing refractory insulation. R. E. Grim and others. Am Cer Soc J 30:142-5 My 1 '47
Reaction of different clay minerals with some organic cations. R. E. Grim and others. bibliog Am Cer Soc J 30:137-42 My 1 '47
See also
Zeolites

BASEBALL
Lighting the Yankee stadium. J. E. Bock and R. J. Swackhamer. il plan Illum Eng 41: 737-44; Discussion. 745-8 N '46

BASEBALL clubs

Employees

Prudential underwrites Yankee's non-players pension and insurance plan. East Underw 48: 21 F 21 '47; Nat Underw (Life ed) 51:2 F 21 '47

See also
Baseball players

BASEBALL players
Ballplayers' group and annuities; program adopted by Major leagues; coverage furnished by Equitable Society. A. B. Chandler. East Underw 48:12 Ap 11 '47

Baseball pensions. Bsns W p24+ S 27 '47

Equitable underwrites baseball pension plan for players; National, American leagues involved. East Underw 48:4 F 7 '47; Nat Underw (Life ed) 51:1 F 7; 2 F 14 '47

BASEBALL stadiums. See Stadiums

BASEBOARDS
Use of baseboard radiation for steam and hot water home heating. C. F. Hill. Nat Pet N 39:39+ My 14 '47

BASEMENT stores
Field splits. il Bsns W p41-3 F 8 '47

BASEMENTLESS construction
Five requirements for floors of basementless houses; abstract. S. Konzo. Sheet Metal Worker 37:76 D '46

Homes planned for efficient coal heat; Simpli-Fire room. il plans Am Bld 69:80-1 Ja '47

BASEMENTS
Unit heaters ideal for home basements. M. J. Druse. il Heat & Ven 44:89-90 My '47

BASES (chemistry)
Base effect in catalytic hydrogenation; simple synthesis of 6-methoxy-α-tetralone. G. Stork. bibliog Am Chem Soc J 69:576-9 Mr '47

Electrometric titrations of weak acids and bases in aqueous solution. D. O. Jordan and H. F. W. Taylor. Chem Soc J p994-7 N '46

Four aspects of basicity. A. Albert. bibliog Chem & Ind p51-5 Ja 25 '47

Heterocyclic basic compounds; 4,8-diaminoquinoline and derivatives. R. W. Gouley, G. W. Moersch and H. S. Mosher. bibliog Am Chem Soc J 69:303-6 F '47

On the theory of acids and bases. A. W. Devor. Science 104:492 N 22 '46

Steric inhibition of resonance; basic strengths of some dimethyl-substituted aromatic primary and tertiary amines. G. Thomson. Chem Soc J p 1113-16 D '46

Strength of organic bases. S. R. Palit. J Phys & Colloid Chem 51:1028-9 Jl '47

Strychnine and brucine; constitution of the neo-series of bases and their oxidation products. L. H. Briggs, H. T. Openshaw and R. Robinson. Chem Soc J p903-8 O '46

BASH, Francis Edwin, 1893-
Sketch. E. C. McDowell, jr. por Metal Prog 51:432-4 Mr '47

BASIC magnesium, inc.
Las Vegas' industrial hope. il Bsns W p26+ O 25 '47

BASICITY
Amphiprotic substances; system formamide-ammonia. H. H. Sisler, C. A. VanderWerf and S. Stephanou. bibliog Am Chem Soc J 68:2538-9 D '46

Four aspects of basicity. A. Albert. bibliog Chem & Ind p51-5 Ja 25 '47

BASING point system. See Price policies

BASINS, Tidal. See Tidal basins

BASKETBALLS
New Voit rubber production set-up utilizes radiant drying apparatus; manufacture of footballs, basket balls, and other balls which require rubber bladders. R. D. Holman. il Rubber Age 60:696-8 Mr '47

BASSETT, Neal, 1871-1947
Sketch. C. M. Cartwright. por Nat Underw 51:4 My 8 '47

BAST fibers
Cottonized bast fibre: production and properties; abstract. J. B. A. Stroink and others. Textile Inst J 37:A503 D '46

See also
Flax
Jute
Ramie

BASYN, Thomas, 1898-
Alternate executive director of the Bank for Belgium, Norway, Luxemburg and Iceland. por Comm & Fin Chr 165:2745 My 22 '47

BATA shoe company
Machines from a shoe factory; Czechoslovakia's famed Bata plant. il Bsns W p 113-14 O 18 '47

They planned it that way; Zlin, Czechoslovakia. J. Pokorny and E. Hird. il plans Arch Rec 102:68-75 Ag '47

BATCHELLER, Hiland Garfield, 1885-
Stainless steel pays off. por Bsns W p37-8+ Mr 29 '47

BATH iron works corporation
All's shipshape. Bsns W p21 Ja 11 '47

BATH powder. See Powder, Bath

BATHING beaches
Malibu quarterdeck club. il plans Arch Forum 85:82-7 D '46

BATHING suits

Advertising

We built a new brand name with almost nothing to sell; Cole swim suits. E. D. Adams. il Ptr Ink 218:48-9 Ja 24 '47

BATHROOM fixtures
Molding and marketing three lines of styrene bathroom fixtures. il Mod Plastics 24:126-8 My '47

BATHROOMS
Britain produces acrylic kitchen and bathroom fixtures. il Mod Plastics 24:116-19 Je '47

1,100 prefab bathrooms swung into place in new 22-story Canadian hotel; Unitility. il diags Arch Forum 87:119-20 S '47

Prefabricated bathroom; Standard fabrications, inc. il Arch Forum 87:13 Jl '47

BATHS (chemical apparatus)
Constant temperature cell bath for use with the Spekker photoelectric absorptiometer. B. R. Ingle Finch and C. A. Parker. il Chem & Ind p257 My 10 '47

BATHTUBS
Vent identification for bath tubs. diags Dom Eng 170:128+ O '47

Manufacture

Press-shaping bath tubs. il Steel 121:90-1 O 20 '47

BATON ROUGE, Louisiana

Bridges

Practical lessons in caisson sinking from the Baton Rouge bridge. E. S. Blaine. diags Eng N 138:213-15 F 6 '47

Streets

Baton Rouge plan calls for four-lane expressway. il Civil Eng 17:538 S '47

BATS
Vascular changes in the wings of bats. R. B. Cowles. bibliog Science 105:362-3 Ap 4 '47

BAUSCH and Lomb optical company
Annual report. Comm & Fin Chr 165:1860 Ap 7 '47

More about U.S. optical glass. M. C. Williamson. Cer Ind 49:76 S '47

BAUXITE
Aluminum and bauxite, 1946. il Min Cong J 33:87-9 F '47

Australasian aluminium industry; survey of Australian-Tasmanian resources. Chem Age (Lond) 56:402 Ap 5 '47

Bauxite processing tests described. Oil Paint & Drug Rep 150:86 D 2 '46

Catalytic desulfurization and reforming of naphthas over bauxite; abstract. G. M. Brooner and C. J. Helmers. Pet Refiner 26:187+ Jl '47; Same cond. Oil & Gas J 46:125-6 Je 28 '47

BAUXITE—*Continued*
More uses for bauxite; effective absorbent, filter and catalyst. Chem Age (Lond) 56: 482 Ap 19 '47
New jobs for bauxite. Can Min J 67:1108 D '46
Production of alumina by the lime soda process. W. E. Prytherch, M. L. R. Harkness and W. D. Spencer. maps Chem Age (Lond) 56:149-59, 219 Ja 25, F 8 '47
Synthetic bauxite; wartime emergency material for the production of aluminous cement. A. V. Hussey. flow sheet Chem & Ind p635-8+ O 18 '47
See also
Laterite

BAVARIA
Bavarian reconstruction. W. G. Bowman. il Eng N 138:923-4 Je 12 '47

BEACH clubs
See also
Malibu quarterdeck club

BEACH houses
Florida beach house is open in all directions, relies on windbreaks and wide overhangs for protection. il plan Arch Forum 86:92-3 Ap '47
Tompkins house, Hewlett Harbor, Long Island. il plans diags Arch Rec 102:66-73 S '47

BEACONS
See also
Lighthouses
Radio beacons

BEAL, Carl Hugh, 1889-1946
Memorial. A. I. Levorsen. bibliog por(pl 4) Geol Soc Proc 1946:145-7 Jl '47

BEAMS and girders
Analysis of unsymmetrical beams by the method of segments. S. Lifsitz. diags Am Soc C E Proc 72:323-35 Mr '46; Discussion. 72:1191-8, 1297-9 O-N '46
Approximate formulæ for beam-columns. R. O. Whiting. diag Engineering 164:25-6 Jl 11 '47
Beam deflections by second and third moments. Hsu Shih-Chang. Am Soc C E Proc 73:291-310 Mr '47; Discussion. 73:1157-62, 1417-18 S, N '47
Beam deflections by simple graphical analysis. W. Schroeder. plan diags Machine Design 19:85-90 Ja '47
Beam deflections under combined loads. F. A. Wallace. diags Eng N 138:43-4 Ja 9 '47
Beams on elastic foundation; abstract. M. Hetenyi. Am Concrete Inst J 18:349-51 N '46
Bending stiffness of beams with ribs or slots; engineering data sheet. R. L. Benford. diags Machine Design 19:157-8 F '47
Chart for pumice-concrete beams. A. E. Niederhoff. Eng N 139:389-90 S 18 '47
Column and beam spacing considered for economy in steel bar lengths. C. L. Dayton. Civil Eng 17:36 Ja '47
Design constants facilitate analysis of beams composed of prismatic segments. H. Solman. diags Civil Eng 17:265+ My '47
Design of plywood I-beams. H. J. Hansen. bibliog Am Soc C E Proc 72:749-58 Je '46; Discussion. 72:1300-2; 73:85-8, 703-4 N '46, Ja, My '47
Elastic and plastic bending of beams. T. K. Wang. bibliog diags J Aeronautical Sci 14: 422-32 Jl '47
Étude des poutres à âme gauche; application aux poutres de retombée des conoïdes. L. Hahn. diags Génie Civil 123:327-9 D 1 '46
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup372-432 Jl '47
Matrix analysis of continuous beams. S. U. Benscoter. diags Am Soc C E Proc 72:1091-122 O '46; Discussion. 73:241-50, 543-56, 960-2 F, Ap, Je '47
Natural modes of vibration of simple frames. S. Bennon. Franklin Inst J 243:13-39 Ja '47
New data on Douglas fir beams in Department of commerce report. Eng N 138:207 F 6 '47
Numerical transformation procedures in continuous beam analysis. S. U. Benscoter. bibliog diags Franklin Inst J 244:15-26 Jl '47
Placing a long beam in an awkward spot. H. B. McDermid. diag Factory Management 105: 134 F '47
Prestressed concrete bridge beams being tested in England. R. L. M'Ilmoyle. il diags Ry Age 123:478-82 S 20 '47
Shear lag in box beams; methods of analysis and experimental investigations. P. Kuhn and P. T. Chiarito. il diags U S Nat Advisory Com for Aeronautics 1942:171-208 bibliog(p204) '46
Strength of beams as determined by lateral buckling. K. de Vries. diags Am Soc C E Proc 72:985-1011 S '46; Discussion. 72:1425-32; 73:236-8, 397-403, 559-68, 953-9 D '46, F-Ap, Je '47
Stresses in cylindrical semimonocoque open beams. H. L. Langhaar and C. R. Smith. il diags J Aeronautical Sci 14:211-20 Ap '47
Suspension beam with unique hinge provides wide unobstructed floor. il diag Eng N 138: 1013 Je 26 '47
Tests verify accuracy of transformed-area method of predicting beam stresses. J. T. Thompson. diags Civil Eng 17:398-9 Jl '47
Torsion in steel spandrel girders. J. E. Lothers. diags Am Soc C E Proc 72:307-21 Mr '46; Discussion. 72:1199-200, 1305-16; 73: 219-20 O-N '46, F '47
Welded girder sustains high stresses in test at zero degrees F. L. Grover. il Eng N 139:256-7 Ag 21 '47

BEAN sprouts
Growing mung bean sprouts for canning. W. F. Kuhn. il diags Food Ind 18:1858-60+ D '46

BEANS
Bad beans given the bounce; electronic sorting mechanism. il diags Food Ind 18:1031+ Jl '46; Product Eng 17:90-2 O '46; Mech Eng 68:1067-8 D '46
Effect of duration and temperature of blanch on proximate and mineral composition of certain vegetables. A. Kramer and M. H. Smith. bibliog Ind & Eng Chem 39:1007-9 Ag '47
Effect of duration and temperature of blanch on vitamin retention by certain vegetables. N. B. Guerrant and others. Ind & Eng Chem 39:1000-7 Ag '47
Effect of 2,4-D on bean progeny seedlings. A. M. S. Pridham. il Science 105:412 Ap 18 '47
Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:990-3 Ag '47
Nutritive value of canned foods. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Relative growth rates of bean and oat plants containing known amounts of a labeled plant-growth regulator (2-iodo^{131}-3-nitrobenzoic acid. J. W. Mitchell and others. Science 106:395-7 O 24 '47
See also
Lima beans
Soybeans

Diseases
Production of yellow bean mosaic in beans by virus from mottled gladiolus. F. P. McWhorter and others. Science 105:177-8 F 14 '47

BEANS, Frozen
Undercooling retards freezing of foods in cartons; freezing time of canned beans. il diags Food Ind 19:1226-8 S '47

BEARING metals
Aluminum alloy bearings. H. Y. Hunsicker. il diags Machine Design 19:121-7 Ja '47
Bearing development up to date. H. W. Luetkemeyer. Nat Pet N 37 pt 2:R718+ S 5 '45; Abstract. Metal Prog 50:918 N '46
Bearing metals for high-speed Diesel engines; abstract. P. T. Holligan. Materials & Methods 26:116 S '47
Corrosion resistant bearing alloys; abstract. C. H. Meyer. Materials & Methods 26:128-9 Jl '47

BEARING metals—*Continued*
Frictional properties of some lubricated bearing metals; abstracts and discussion. P. G. Forrester. Engineer 184:346-8 O 10 '47; Engineering 164:353-4 O 10 '47
Influence of composition on the adhesion of tin-base bearing alloys to steel. P. G. Forrester and L. T. Greenfield. il diags Engineering 163:322-4 Ap 18 '47; Abstract and discussion. Engineer 183:234 Mr 21 '47
Latest developments in engine bearings. P. M. Heldt. il diags Automotive & Aviation Ind 96:28-31+ Mr 1; 34-7+ Ap 1 '47
New developments in bearing metals. O. W. Ellis. Engineer 183:123 Ja 31 '47
Plain bearings; materials and design. W. H. Tait. Automobile Eng 37:111-15 Mr '47
Practical aspects of sleeve bearing materials. R. A. Watson and W. E. Thill. S A E J 54: 41-6 D '46
Precision plating of bearing alloys. R. A. Schaefer. bibliog il Iron Age 159:60-3 Ap 10 '47
White-metal bearings applied to hot-steel rolling mills. J. M. Borland. diags Iron & Steel Inst J 155:593-7 Ap '47

See also
Babbitt metal

Bibliography

Bearing metals and bearings; a list of articles published between 1942 and 1946. R. Ruedy. 54p pa 25c National research council of Canada, Ottawa '46

BEARINGS
Exploratory study of oil grooves in plain bearings. D. Clayton. diags Inst Mech Eng J & Proc 155 (War emergency issue no 14): 41-9 '46; Same. Engineering 159:158-60, 178-80 F 23-Mr 2 '45; Discussion. il Inst Mech Eng J & Proc 155 (War emergency issue no14):53-64 '46
Facteur d'usure et défauts des coussinets. F. Picard. diags Génie Civil 124:233-5 Je 15 '47
Facts to know about selection of bearings. W. F. Schaphorst. Pet Eng 18:138 Ag '47; Same abr. Pulp & Pa of Can 48:87 Jl '47
Film lubrication in journal bearings. Abd El-Fattah Nagib. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 14):67-72 '46
Frictional properties of oil-seal materials. P. G. Forrester. il diags Engineering 164:121-4 Ag 8 '47
Grid bearings for high unit loading. L. Bass. il diags Diesel Power 25:48-51+ Ja '47
Plain bearings; materials and design. W. H. Tait. Automobile Eng 37:111-15 Mr '47
Powder metal bearings. Sci Am 176:268 Je '47
System warns of overheated bearings. Steel 121:108 S 22 '47

See also
Babbitt metal
Babbitting
Bearing metals
also subdivision Bearings under special subjects, e.g.
Automobile engines
Cars
Electric generators
Lubrication and lubricants
Electric motors
Internal combustion engines

Bibliography

Bearing metals and bearings; a list of articles published between 1942 and 1946. R. Ruedy. 54p pa 25c National research council of Canada, Ottawa '46

Cleaning

Arrangement permits proper washing of bearings. diags Textile World 97:154+ Mr '47

Manufacture

Copper-lead bearings from metal powder; abstract. E. R. Darby. Iron Age 159:86 Je 5 '47
Plain bearings; products and manufacturing methods of Glacier metal co. il Automobile Eng 37:325-35 S '47
Precision powder spreader and other highlights of bearing strip process; Federal-Mogul corp. il Automotive Ind 97:46+ O 1 '47
Sleeve bearing lining materials; abstract. W. E. Thill. il S A E J 55:66-7 Jl '47
Special setups turn spherical surfaces; ball and socket sections for self-aligning bearings and pillow blocks. C. A. Bloom. il diags Am Mach 91:108-12 Ag 14 '47

See also
Babbitting

Testing

Bearing test machine evaluated; abstract. E. T. Johnson. Machine Design 18:180 D '46
Lagerreibung und grenzflächenerscheinungen. S. Kiesskalt. bibliog V D I 87:321-4 My 29 '43; Abstract (Bearing friction and border surface phenomena). Prod Eng 18:125-7 My '47
Latest developments in engine bearings. P. M. Heldt. il Automotive & Aviation Ind 96: 34-7+ Ap 1 '47
Smooth surfaces increase plain-bearing capacity. E. L. Hemingway. il diags Am Mach 91:92-5 Je 5 '47

BEARINGS, Anti-friction
Bearing industry offers standard numbering system; abstract. H. O. Smith. Blast F & Steel Pl 35:460 Ap '47
Bearings for jet engines. il Aero Digest 53: 102 D '46
18,000 ways to fight friction. H. O. Smith. il diags Sci Am 177:149-53 O '47
How wholesalers can apply market research; SKF Industries and its distributors. C. W. Moore. Sales Management 59:96, 98 N 1 '47
Interchangeability is goal of work on anti-friction bearings. Ind Stand 18:87-8 Ap '47
Lubricating roller and ball bearings. P. C. Ziemke. Coal Age 52:118 O '47
Lubrication of antifriction bearings. D. T. Achorn. Paper Tr J 122:152-3 Je 20 '46; Same cond. Paper Ind 29:579-80 Jl '47
Three-way antifriction bearings; patent. diag Machine Design 18:172+ D '46

See also
Bearings, Ball
Bearings, Roller

BEARINGS, Ball
Ball and roller bearing seals. E. P. Stahl. diags Product Eng 18:103-6 Ap '47
Ball-bearing life. Coal Age 52:136+ O '47
Ball bearing ratings. T. Barish. diag Machine Design 19:127-8 F '47
Ball-bearing top rolls reduce costs. il Textile World 97:169 S '47
Centers ball bearings with setscrews. F. Cowan. diag Factory Management 105:146 Ja '47
Damage of ball bearings by heat. il Roads & Sts 89:109 N '46
Life measurement of ball-bearing grease. D. F. Wilcock. bibliog il diag Gen Elec R 50: 37-9 O '47
Puller removes ball bearings without damage. A. F. Scoblic. diags Am Mach 91:128 Je 5 '47

Manufacture

Centralized oil reclamation and distribution; International Harvester's west Pullman ball bearing plant. il Steel 121:83-4+ Ag 11 '47
Exacting air conditioning installation; problems included two testing rooms and four cafeterias. il plans diags Sheet Metal Worker 38:108+ Ja '47
Examples of metallurgical progress at International harvester co.; continuous heat treatment of ball bearing race rings. il Metal Prog 52:619-20 O '47
Isothermal heat treatment of steel ball bearing races. H. A. Knight. diag Materials & Methods 26:86-7 Ag '47
Manufacture of balls for bearings and pens. P. Porterfield. il Materials & Methods 25: 97-100 Je '47

BEARINGS, Jewel
Development of hard glasses. A. E. Pavlish and I. Mockrin. bibliog(32 foot notes and 99 titles) Am Cer Soc J 30:54-63 F 1 '47
Future trends in instrument bearing design; abstract. J. H. Goss. Product Eng 18:131 F '47
Manufacture in synthetic gems in Britain. Can Chem & Process Ind 31:576 Je '47
Oil-tight meter bearings assembled by fixtures. J. C. Humbel. il Elec World 128:90 S 27 '47

BEARINGS, Needle
Proposed specification on load rating of needle bearings. Am Pet Inst Proc 25(4):150 '45

BEARINGS, Non-metallic
Porcelain enameled bearings. il Cer Ind 47: 61 N '46
Synthetic-resin bearings. F. W. Jones. Iron & Steel Inst J 155:602-6; Discussion. 608-20 Ap '47

BEARINGS, Roller
Antifriction bearings of new design for XR-7755 aircraft engine. il diag Machine Design 19:94-5 My '47
Ball and roller bearing seals. E. P. Stahl. diags Product Eng 18:103-6 Ap '47
Building on roller bearing foundations; Los Angeles anti-earthquake construction. il Steel 119:102 N 18 '46
Comparison of stationary and rotating axle idler wheel mountings for tractor and implement service; abstract. G. W. Curtis. diags Automotive Ind 97:33-4 O 15 '47
Diesel locomotives and anti-friction bearings. F. S. Ball. il diags Diesel Power 24:1317-19 N '46
Experiments with roller bearings on L.M.S. locomotives. Engineer 184:182 Ag 22 '47
Journal box to increase the life of spherical roller bearings on cars, locomotives, tenders, etc. il Ry Mech Eng 120:634 N '46
Packaging of metal parts; abstract. L. A. Holder. Mod Packaging 20:146 Ap '47
Roller bearings. L. R. Pearson. diags Iron & Steel Inst J 155:597-602; Discussion. 611-20 Ap '47
Saddle mounting increases roller bearing life. il diags Product Eng 17:99 D '46
Timken bearings for Union Pacific stock cars. il Ry Age 122:1073-4 My 24 '47; Same. Ry Mech Eng 121:351-2 Jl '47

See also
Bearings, Needle

BEARINGS, Step. See Bearings, Thrust

BEARINGS, Thrust
Analysis of the parallel-surface thrust bearing. M. C. Shaw. bibliog il diags A S M E Trans 69:381-5; Discussion. 385-7 My '47
Fluid film lubrication of parallel thrust surfaces. A. Fogg. diags Inst Mech Eng J & Proc 155 (War emergency issue no 14): 49-53 '46; Same. Engineering 159:138-40 F 16 '45; Discussion. il Inst Mech Eng J & Proc 155 (War emergency issue no 14): 53-67 '46; Engineering 159:54-5 Ja 19 '45
Hydrostatic lubrication; step bearings. D. D. Fuller. il diags Machine Design 19:115-20 Ag '47
Performance of vertical water wheel thrust bearings during the starting period. C. M. Laffoon and others. il diags A S M E Trans 69:371-7; Discussion. 377-9 My '47

BEATING process. See Paper making—Beating

BEATRICE foods company
Prepared for commodity price declines. Barron's 27:27 Je 23 '47
Selected stocks. Mag of Wall St 80:428 Jl 19 '47
Thumbnail stock appraisal. Mag of Wall St 79:418 Ja 18 '47

BEAUTY shops
Modern beauty salon and shop building for suburban area, Seattle, Wash. il plans Am Bld 69:104-7 Mr '47

Equipment

Making mud packs into millions; the story of Helene Curtis. W. Gidwitz. il Sales Management 58:93+ Ap 15 '47

BECKLEY, Adam M. 1863-1947
Distinguished doorman; Marsh & McLennan functionary. C. M. Cartwright. Nat Underw 51:2+ S 11 '47; Same. Nat Underw (Life ed) 51:11+ S 19 '47

BECKMANN rearrangement. See Molecular rearrangements

BEDBUGS
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47
Techniques of application and the control of roaches and bedbugs with DDT. R. L. Stenburg. bibliog Pub Health Rep 62:669-81 My 9 '47

BEDDING
Improved method for quantitative impregnation of textiles with germicidal emulsifiable oils. Science 104:60-1 Jl 19 '46; Abstract. Soap & San Chem 22:159 D '46

See also
Mattresses

Advertising

Salisbury dealers hitch spot radio to net program. Sales Management 59:74+ O 1 '47

Standards

Bedding materials now defined. J. D. Donovan. il Ind Stand 18:29-31 F '47

BEDINGER, Margery, 1891-
Sketch. por Power Pl Eng 51:67 Je '47

BEDPLATES. See Machinery—Bedplates

BEDSPREADS. See Coverlets

BEECH, Olive Ann
Olive Ann can handle this; Beech aircraft corp. por Fortune 35:144+ My '47

BEECH aircraft corporation
Empire sues Beech over feeder planes. Aviation N 7:4 Je 30 '47
Olive Ann can handle this. Fortune 35:144+ My '47

BEECH-NUT packing company
Investment audit. F. R. Walters. Mag of Wall St 80:36-7+ Ap 12 '47
Selected stocks with long dividend records. Mag of Wall St 79:203 N 23 '46
Stock offered. Comm & Fin Chr 165:3275 Je 23 '47

BEEF
Economy of retail cuts of different grades of beef. S. Bull. Consumers Res Bul 20:22-4 S '47

BEEF, Frozen
Temperature of freezing affects tenderness of beef. R. L. Hiner and O. G. Hankins. il Food Ind 19:1078-81 Ag '47

BEER
Beer labels; traditional yet modern. il Mod Packaging 20:116-18 D '46
Biological stability of beer. B. M. Brown. bibliog Chem & Ind p609-11 O 4 '47
Conditions in Canadian beer industry. For Comm W 26:20 Mr 29 '47
Nutritive value of yeast, beer, wines and spirits. H. J. Bunker. bibliog Chem & Ind p203-5 Ap 19 '47
Throwaway beer bottles. il Mod Packaging 20:102-6 Ag '47

Transportation

Axle load spread aids beer deliveries. il Food Ind 19:56 Ja '47
Handling and packing of bottled beer; National breweries. H. G. Jarman. il Mech Handling 34:259-62 My '47

BEER bonds. See Insurance, Surety and fidelity—Liquor bonds

BEES
Beekeepers to meet; claim bees can hear. Ind Stand 18:204 Ag '47

BEET molasses. See Molasses

BEETS and beet sugar
Beet sugar manufacture; Bonelli method. Chem Age (Lond) 56:533 Ap 26 '47
Denmark's sugar-beet area and beet and sugar production, 1939-1947; table. For Comm W 25:25 D 14 '46
Favorable factors in beet sugar shares. R. H. Burton. Comm & Fin Chr 165:738+ F 6 '47
Industrial wastes; beet sugar industry. B. M. McDill. flow sheets il diag Ind & Eng Chem 39:657-69 My '47
Italian beet sugar process. W. G. Cass. Chem & Eng N 25:1388 My 12 '47
Machines cut costs for domestic sugar growers. H. W. Knodel. Barron's 27:38 S 22 '47
Processing stone for rotary lime kilns and sugar rock for beet sugar industry; United States lime products corp. L. N. Grindell. flow sheet il Rock Prod 50:82-3 My '47

BEETS and beet sugar—*Continued*
Sugar beet support program bond designed for Commodity credit corp. Nat Underw 51:11 Jl 17 '47
Sugar in the making; pictures of manufacture of sugar from beets. Food Ind 19:312-15 Mr '47

Storage

Temperature reduction in sugar beet storage. R. D. Barmington. il Refrig Eng 54: 339-41 O '47

BÉHAL, Auguste, 1859-1941
Sketch. C. S. Gibson. por (pl) Chem Soc J p1092-3 N '46

BEHENIC acid
Water repellent compositions; derivatives of behenic acid; British patent. Am Dyestuff Rep 36:395 Jl 14 '47

BEIRNE, Joseph A. 1898-
Portrait. Bsns W p78 Mr 29 '47

BELÉM, Brazil

Libraries

Special librarian abroad; organization of library of the Instituto agronomico de Norte in Belém. F. B. Thorne. Special Lib 38: 5-10 Ja '47

BELGIUM
See also
Foundries—Belgium

Commercial policy

Anglo-Belgian payments agreement; Belgium's Schachtian devices. P. Einzig. Comm & Fin Chr 166:1755 O 30 '47
Union for trade. Economist 152:150-1 Ja 25 '47
See also
Benelux Union

Economic conditions

Abundance in Belgium. Economist 153:484-5 S 20 '47
Belgium's progress; interview with M. Frere. Comm & Fin Chr 165:2075 Ap 17 '47
Belgium's remarkable recovery. E. Kaskeline. Comm & Fin Chr 165:2597+ My 15 '47

Industries and resources

Belgian industry; abstract. G. W. Parker. Mech Eng 69:674-5 Ag '47

Politics and government

Belgian municipal elections. Economist 151: 713-14 N 2 '46

BELL, Alexander Graham, 1847-1922
Alexander Graham Bell, scientist. F. J. Mann. bibliog por Elec Eng 66:215-29 Mr '47
Centenary. Electrician 138:559-60 Mr 7 '47
Graham Bell, pioneer; an era of outstanding developments in world communication. A. S. Angwin. Inst E E J 94 pt 1:269-74 Je '47
How Bell invented the telephone; address at annual meeting of AIEE in 1915. T. A. Watson. Elec Eng 66:232-6 Mr '47
Man behind the telephone. L. D. Farrar. por Pub Util 39:332-41 Mr 13 '47
Sketch. G. W. O. Howe. Wireless Eng 24:65-7 Mr '47

BELL, Lawrence Dale, 1894-
Portrait. Bsns W p22 Ja 25 '47

BELL aircraft corporation
Bell Aircraft delivers $1,309,514 in 'copters. Aviation N 7:8 Mr 24 '47
Bell charges merger schemes. Aviation N 7: 10-11 Ap 21 '47

BELL and Howell company
Photographic companies in new era. S. Devlin. Mag of Wall St 79:758 Mr 29 '47

BELL telephone company of Canada
Bonds offered. Comm & Fin Chr 165:1583 Mr 24 '47

BELL telephone company of Pennsylvania
Annual report. Comm & Fin Chr 165:1583-4 Mr 24 '47

BELLOWS
Bellows-type heat exchanger for compactness and efficiency. E. H. Ziebold. il diags Product Eng 18:121-4 Je '47
Metallic bellows. il Engineer 183:133 Ja 31 '47
Typical applications of the bellows unit in control assemblies; diagrams. Product Eng 18:116-17 My '47

BELSLEY, Gilbert Lyle, 1905-
Portrait. Bsns W p36 Mr 15 '47

BELT conveyors. See Conveying machinery—Belt conveyors

BELTING
Belt speed chart. Power Pl Eng 50:112 D '46
Campbell collapsible V-belt curing mold. il Rubber Age 61:229 My '47
Farrel-Birmingham 3100-ton belt press. il Rubber Age 60:479 Ja '47
Half twist improves quarter-turn belt drives. P. C. Ziemke. diags Am Mach 91:146-7 F 13 '47
Handy belt transmission chart. Can Min J 68:174 Mr '47
Inert-arc welding stainless steel belt. M. J. Conway. Welding J 26:791-2 S '47
Power-transmission belts; special section. F. A. Annett. il diags Power 91:93-108 F '47
Report of committee on the standardization of oil-field belting. diags Am Pet Inst Proc 26(4):181-6 '46
Report of subcommittees of the Committee on the standardization of oil-field belting. diags Am Pet Inst Proc 25(4):126-39 '45
Story of leather. J. E. Rhoads. il Comp Air Mag 51:298-301 N '46

Testing

Electrical slip-recorder. N. Haglov and R. C. Parker. il diags Engineering 164:365-6 O 17 '47
Nouvelle machine d'essai des courroies trapézoidales. H. Wintsch and A. Tenot. il diag Génie Civil 124:293-5 Ag 1 '47

BELTING, Conveyor
Training conveyor belts. Coal Age 52:120 O '47
U.S. Rubber develops strong, flexible belt for material handling. il Iron Age 159:168 My 8 '47; Bsns W p54 My 10 '47

Repair

Conveyor belt spliced underground. il Mech Handling 33:706 N '46

BELTS, Safety. See Safety belts

BEMIT. See Building materials

BEN DAY process
How to get extra color at no additional cost; proper use of screen tints. H. Bauer. il Ptr Ink 220:44-5 S 19 '47

BEN seed oil. See Moringa oil

BENDER, Robert J.
Gartner & Bender, greeting-card manufacturers. Fortune 35:132+ F '47

BENDINER, Irvin, 1900-1946
Last message on life insurance. East Underw 47:1+ N 15 '46

BENDING
Allowances for 90° bends in sheet steel; reference book sheet. A. J. Abrahamsen. diags Am Mach 91:167, 169 My 8; 155, 157 My 22 '47
Associated matrices of bending and coupled bending-torsion vibrations. W. P. Targoff. bibliog diags J Aeronautical Sci 14:579-82 O '47
Bending for dihedral and sweepback simplified on heavy 75ST spar caps. il Aviation W 47:18 Ag 4 '47
Bending fracture of fibres; Franz and Henning instrument. R. H. K. Thomson and D. Traill. il Textile Inst J 38:T43-8; Discussion. T48-9 F '47
Bending of rectangular plates with large deflections. S. Levy. bibliog diags U S Nat Advisory Com for Aeronautics 1942:139-57 '46
Bending stiffness of beams with ribs or slots; engineering data sheet. R. L. Benford. diags Machine Design 19:157-8 F '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84 F, S '47 (to be cont)
Hand bending fixture for light strip stock. D. A. Baker. diags Am Mach 91:146 F 13 '47
Handy bending fixture. R. Mawson. diag Materials & Methods 25:131 Ja '47
Measurement of the bending modulus of monofils; Cambridge fibre extensometer. P. W. Carlene. il diag Textile Inst J 38:T38-42; Discussion. T48-9 F '47

BENDING—*Continued*
Pure bending in the plastic range. H. A. Williams. diags J Aeronautical Sci 14:457-69 Ag '47
Raised (?) yield point in bend tests. T. J. Dolan and O. Sidebottom. Metal Prog 50: 653-7 O '46
Roll bending and flash welding stainless steel turbosupercharger rings. P. B. Scharf. il diags Iron Age 159:52-6 Ja 23 '47
Severe bending of 75S-T spar caps. P. F. Girard. il Automotive Ind 97:44+ Ag 1 '47; Same abr. Materials & Methods 26:112 Ag '47
See also
Pipe bending

BENDING machines
Hydraulic steel bending machine. il Concrete 55:34 F '47

BENDING moment
Approximate formulæ for beam-columns. R. O. Whiting. diag Engineering 164:25-6 Jl 11 '47
Beam deflections by second and third moments. Hsu Shih-Chang. Am Soc C E Proc 73:291-310 Mr '47; Discussion. 73:1157-62, 1417-18 S, N '47
Bending of rotor blades. A. H. Flax. bibliog J Aeronautical Sci 14:42-50 Ja '47
Numerical transformation procedures in continuous beam analysis. S. U. Benscoter. bibliog diags Franklin Inst J 244:15-26 Jl '47
Stress analysis of rotor blades. G. Horvay. bibliog diags J Aeronautical Sci 14:315-33 Je '47
Theory of inelastic bending with reference to limit design. A. Hrennikoff. Am Soc C E Proc 73:255-89 Mr '47; Discussion. 73:944-6, 1293-301 Je, O '47

BENDIX home appliances, Inc.
Bendix sued; Justice dept. charges illegal restraints on automatic washer rentals. Bsns W p20 D 21 '46
Best-selling Bendix. il Fortune 36:132-7+ N '47

BENEFIT societies
Big fraternal is proposing to mutualize; A.O.U.W. of North Dakota. B. C. Marks. Nat Underw (Life ed) 51:3+ S 26 '47
Code project falls by wayside. Nat Underw (Life ed) 51:18 Ja 17 '47
Commissioners' fraternal committee dissolved. Weekly Underw 155:1397 D 14 '46
Controversy on fraternal code at N.A.I.C. meet. Nat Underw (Life ed) 50:22 D 13 '46
Fraternal orders; business of 1946 and condition December 31, 1946; tabulation. Weekly Underw 156:83 sec 2 My 10 '47
Justice Black contends insurance case decision violates United States constitution; Order of United commercial travelers of America v. Wolfe. Weekly Underw 156:1759 Je 28 '47
Massachusetts takes action against Knights of Columbus. Nat Underw (Life ed) 51:18 S 26 '47
Pennsylvania Fraternal's treasury padlocked Malone; Croatian fraternal union. Nat Underw (Life ed) 51:6 O 3 '47
Policy's time limit overrides statute, Supreme court says; United Commercial Travelers upheld in South Dakota. Nat Underw 51:15 Je 12 '47; Nat Underw (Life ed) 51:1 Je 13; 1 Je 20 '47
Steady growth in usefulness marks history of fraternal benefit societies. C. B. Bender. Nat Underw 50th anniv no:225-7 1947
Unexpected result of an intentional act can be considered as accidental means; United commercial travelers v. Wolfe. E. W. Dillon. Weekly Underw 157:562-4 S 6 '47
Urges license rule for fraternal agents in Texas. G. B. Butler. Nat Underw (Life ed) 50:20 N 22 '46
Why code is delayed. N. R. Johnson. Nat Underw (Life ed) 50:22 D 27 '46
Writing of substandard is urged. D. L. Smith. Nat Underw (Life ed) 51:24 F 14 '47
See also
Fraternal field managers association
Insurance, Assessment
National fraternal congress of America
Taxation
Michigan rules on premium tax on cooperative and assessment carriers. Nat Underw (Life ed) 51:19 S 5 '47
Sustain exemption of fraternals from Oklahoma tax. Nat Underw (Life ed) 51:22 My 2 '47

BENELUX Union
Benelux under way. map Economist 152:851-3 My 31 '47
Customs-union agreement with Belgium-Luxemburg enacted into law in the Netherlands. For Comm W 28:20 S 6 '47
New Benelux Union; western European tariff pattern? project analyzed with special reference to Netherlands. W. Buchdahl. il For Comm W 29:3-5+ O 11 '47

BENRUS watch company
Stock offered. Comm & Fin Chr 165:3390 Je 30 '47

BENTON, William B.
House may not accept scheme to kill Benton program. por Ptr Ink 219:25 My 2 '47

BENTONITE
Bentonite in the Miami-Deerwood area, Manitoba. E. L. Cameron. Can Min J 68:643 S '47
Effect of exchangeable cations on hydrophilic nature of kaolin and bentonite. A. C. Siefert and E. C. Henry. bibliog il diag Am Cer Soc J 30:37-48 F 1 '47
Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:305, pl 5 O '46
Industrial application of chemicals. Oil Paint & Drug Rep 152:7 O 13 '47
West's bentonite output reaches new high. Chem Eng 53:204 N '46
See also
Montmorillonite

BENZACRIDINE
Chemistry of carcinogenic nitrogen compounds; new derivatives of the angular benzacridines and of some related nuclei. N. P. Buu-Hoï. Chem Soc J p792-5 S '46

BENZALACETONE. See Phenyl butenone

BENZAL chloride. See Dichlorotoluene

BENZALDEHYDE
Condensation of substituted benzaldehydes with creatinine; influence of substituents. V. Deulofeu and M. Fondovila. Chem Soc J p 1108-10 D '46
Further study of the porphine-like products of the reaction of benzaldehyde and pyrrole. R. H. Ball, G. D. Dorough and M. Calvin. diag Am Chem Soc J 68:2278-81 N '46
Komarowski reaction. F. R. Duke. bibliog Anal Chem 19:661-2 S '47
Preparation of benzaldehyde from benzene. W. J. King and P. T. Izzo. Am Chem Soc J 69:1220 My '47
Studies on the mechanism of the Cannizzaro reaction. E. R. Alexander. bibliog Am Chem Soc J 69:289-94 F '47

BENZANTHRACENE
New synthesis of 1,2-benzanthracene. M. S. Newman and R. T. Hart. bibliog Am Chem Soc J 69:298-300 F '47
Polycyclic aromatic hydrocarbons; 2'-methoxy- and 2'-methoxy-9 : 10-dimethyl-1 : 2-benzanthracene. G. M. Badger. Chem Soc J p940-3 Jl '47
Synthesis of 3,4-dihydro-10-hydroxy-1,2-benzanthracene and derivatives. H. E. Zaugg. bibliog Am Chem Soc J 68:2492-4 D '46

BENZANTHRYLISOCYANATE
Conjugation of peptides with 1,2-benzanthryl-10-isocyanate. L. Q. Green and H. J. Creech. bibliog Am Chem Soc J 68:2401-2 N '46

BENZAURIN
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

BENZAZIDE. See Benzoyl azide

BENZEDRINE
Benzedrine case review refused. Oil Paint & Drug Rep 150:5 D 30 '46

BENZEDRINE—*Continued*
Benzedrine trust alleged; Smith, Kline & French laboratories charged. Oil Paint & Drug Rep 151:5 Mr 24 '47
Edrisal in the management of dysmenorrhea. C. F. Long. Ind Med 15:679-81 D '46

BENZENE
Absorption spectra of some benzene derivatives with unsaturated side chains. T. W. Campbell and others. Am Chem Soc J 69: 880-3 Ap '47
Alkylbenzenes from benzene and isobutene; 1,4-di-*t*-butylbenzene. D. I. Legge. bibliog Am Chem Soc J 69:2086-90 S '47
Alkylbenzenes from benzene and isobutene; preparation, identification of several fractions. D. I. Legge. bibliog Am Chem Soc J 69:2079-86 S '47
Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. B. Working. J Phys & Colloid Chem 51:974-80 Jl '47
Aromatics from methane; patent. P. J. Gaylor. Pet Processing 2:264+ Ap '47
Benzene; supply and demand. F. W. Sullivan, jr. bibliog il Chem & Eng N 25:2000-3 Jl 14 '47
Blending of water with organic solvents by detergents. S. R. Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47
Catalytic formation of toluene from benzene and benzene-methane at high pressures. V. N. Ipatieff and G. S. Monroe. Am Chem Soc J 69:710 Mr '47
Condensation and subcooling inside an inclined tube. J. B. Tepe and A. C. Mueller. bibliog diags Chem Eng Prog 43:267-76; Discussion. 276-8 My '47
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47
Decomposition of benzoyl peroxide; the kinetics and stoichiometry in benzene. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-42 Jl '47
Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47
Fluorine as a halogen; reaction with a highly deactivated aromatic nucleus. L. A. Bigelow, R. Y. Tompson and P. Tarrant. bibliog diags Ind & Eng Chem 39:360-4 Mr '47
Fractionation of binary mixtures in packed columns. J. A. Storrow and B. D. Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47
Government issues data on benzene hazards. Chem Ind 60:662 Ap '47
Heat capacity of benzene vapor; the contribution of anharmonicity. D. W. Scott and others. bibliog J Chem Phys 15:565-8 Ag '47
Magnetic susceptibilities of the vapors of benzene and carbon tetrachloride. R. K. Reber and G. F. Boeker. bibliog diags J Chem Phys 15:508-13 Jl '47
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 69:773-85 Ap '47
Mercuration of benzene with mercuric nitrate. A. A. Morton and others. bibliog Am Chem Soc J 69:908-11 Ap '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Numbers of isomeric alkylbenzenes. A. W. Francis. Am Chem Soc J 69:1536-7 Je '47
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Oxynitration of benzene; studies relating to the reaction mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47
Performance of McMahon packing; tests in a 6-inch-diameter fractionating column with benzene-ethylene dichloride mixtures. W. L. Forsythe, jr. and others. bibliog diag Ind & Eng Chem 39:714-18 Je '47
Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47
Plate efficiencies of benzene-toluene-xylene systems in distillation. M. Nord. bibliog Am Inst Chem Eng Trans 42:863-81 O-D '46
Pressure-volume-temperature relations of benzene. E. J. Gornowski, E. H. Amick, jr. and A. N. Hixson. bibliog diag Ind & Eng Chem 39:1348-52 O '47
Production of benzyl chloride by chloromethylation of benzene; laboratory and pilot plant studies. A. Ginsburg and others. Ind & Eng Chem 38:478-85 My '46; Correction. W. H. C. Rueggeberg and others. 38: 1322 D '46
Raman apparatus for quantitative polarization measurements. B. L. Crawford, jr. and W. Horwitz. bibliog diags J Chem Phys 15: 268-74 My '47
Rate of corrosion of lead by hydrocarbon solutions of organic acids. D. Turnbull and D. R. Frey. bibliog diags J Phys & Colloid Chem 51:681-704 My '47
Rectification of benzene-toluene; effect of operating variables on plate efficiency. J. Griswold and P. S. Stewart. bibliog il diags Ind & Eng Chem 39:752-62 Je '47
Size and vibration frequency of the excited benzene molecule. V. Griffing. bibliog J Chem Phys 15:421-30 Jl '47
Some catalysed gas-phase reactions of aromatic hydrocarbons; interaction of benzene with methyl ether. P. H. Given and D. L. Hammick. Chem Soc J p928-35 Jl '47
Synthesis of aromatic phosphonic acids and their derivatives; the derivatives of benzene, toluene and chlorobenzenes. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 69:2020-1 Ag '47
Thiophene-free benzene. R. J. Graul and J. V. Karabinos. Science 104:557 D 6 '46

See also
Benzol (commercial benzene)

Analysis
Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37:798-803 O '47

See also
Benzol (commercial benzene)—Analysis

BENZENE disulfonic acid
Colorimetric determination of titanium with disodium-1,2-dihydroxybenzene-3,5-disulfonate. J. H. Yoe and A. R. Armstrong. bibliog Anal Chem 19:100-2 F '47

BENZENE hexachloride. See Hexachlorocyclohexane

BENZENE poisoning
Benzol. Ind Med 16:211-13+ Ap '47
Idiopathic thrombocytopenic purpura in a woman with prolonged exposure to benzol. W. T. Vaughan, jr. and C. A. Finch. J Ind Hygiene 29:227-8 Jl '47
Les solvants benzoliques et l'hygiène industrielle. A. Vallaud. Chimie & Ind 57: 391-4 Ap '47

BENZENESULFENAMIDOTHIAZOLE
Rearrangement of 2-benzenesulphenamidothiazoles; thiazole compounds not substituted in position 4. E. Hoggarth. Chem Soc J p 110-14 Ja '47
Rearrangement of 2-benzenesulphenamidothiazoles; thiazole compounds substituted in position 4. E. Hoggarth. Chem Soc J p 114-18 Ja '47

BENZENESULFONIC acid
p-Alkoxybenzenesulfonic acid esters. M. H. Carr and H. P. Brown. bibliog Am Chem Soc J 69:1170-2 My '47

BENZENETHIOL
Addition of thio-compounds to olefins; reactions of thioglycollic acid, thiophenol, and *iso*pentanethiol. J. I. Cunneen. Chem Soc J p36-40 Ja '47

BENZIDINE
Electrolytic recorder paper. J. E. Currah and others. bibliog Ind & Eng Chem 39: 1286-8 O '47
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46
Replacement of the diazonium by the nitro-group; extension of the method to nitronaphthylamines, benzidine and 3 : 3'-dichlorobenzidine. H. H. Hodgson and E. R. Ward. Chem Soc J p 127-9 Ja '47

BENZILIC acid
Substituted benzilic acids and benzophenones. A. H. Ford-Moore. Chem Soc J p952-4 Jl '47
Synthetic mydriatics. A. H. Ford-Moore and H. R. Ing. Chem Soc J p55-60 Ja '47
Synthetic mydriatics; diphenylchloroacetyl chloride as a reagent for the preparation of benzilic esters of tertiary amino-alcohols. F. E. King and D. Holmes. Chem Soc J p 164-8 F '47

BENZOFURAN
Preparation and properties of indene and coumarone. J. N. Breston and A. W. Gauger. bibliog Am Gas Assn Proc 1946: 492-507
Synthesis of analgesic substances. J. A. Barltrop. Chem Soc J p958-65 O '46

BENZOHYDROL
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p807-11 S '46

BENZOIC acid
Benzoic acid cell, a new thermometric standard. diag Chem Age (Lond) 57:540 O 18 '47
Benzoic acid cell made by Bureau of standards. Oil Paint & Drug Rep 152:7 Ag 25 '47
Thermometric standard. il Chem & Eng N 25:2170 Jl 28 '47

BENZOIN
Cinchoninaldehyde; benzoin and Cannizzaro reactions. A. P. Phillips. Am Chem Soc J 68:2568-9 D '46

BENZOISOTHIAZOLONES
Formation of some benz-1 : 3-thiazine derivatives by the reduction of benz*iso*thiazolones. J. S. Ingram and E. W. McClelland. Chem Soc J p763-4 Je '47

BENZOL (commercial benzene)
Benzole recovery plant at Liverpool gas company's Garston works. flow diag il Gas J (Lond) 249:561-2+ Mr 19 '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 126-7 N '46

Analysis

Estimation of small quantities of total sulphur in benzoles. K. H. V. French and G. Claxton. bibliog diags Soc Chem Ind J 65:344-8 N '46
Estimation of sulphur compounds in crude and refined benzoles. G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 65:333-44 N '46

Manufacture

Analysis of sludges from benzole recovery plants using petroleum oils. T. A. Dick, G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 66:238-48 Jl '47

BENZONITRILE
Benzonitrile produced on semicommercial basis. Oil & Gas J 46:116 Ag 9 '47
Pilot-plant benzonitrile. Chem Ind 61:438 S '47

BENZOPHENANTHRENE
1,2,3,4-Dibenzphenanthrene and its derivatives; synthesis of 1,2-dimethyl-3,4-benzphenanthrene. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1367-70 Je '47

BENZOPHENONE
Certain 5-phenyl-5-(substituted phenyl)-hydantoins. J. W. Melton and H. R. Henze. bibliog Am Chem Soc J 69:2018-20 Ag '47
Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S. Johnson, J. W. Petersen and W. P. Schneider. bibliog Am Chem Soc J 69:74-9 Ja '47
Substituted benzilic acids and benzophenones. A. H. Ford-Moore. Chem Soc J p952-4 Jl '47

BENZOPYRYLIUM compounds
New synthesis of benzopyrylium salts. A. W. Johnson and R. R. Melhuish. Chem Soc J p346-50 Mr '47

BENZOQUINOLINE
Cyclization studies in the benzoquinoline and naphthoquinoline series. W. S. Johnson, E. Woroch and F. J. Mathews. bibliog Am Chem Soc J 69:566-71 Mr '47
1-Substituted benzo(f)quinolines. R. E. Benson and C. S. Hamilton. bibliog Am Chem Soc J 68:2644-6 D '46

BENZOQUINONE. See Quinone

BENZOTHIAZINE
Formation of some benz-1 : 3-thiazine derivatives by the reduction of benz*iso*thiazolones. J. S. Ingram and E. W. McClelland. Chem Soc J p763-4 Je '47

BENZOTHIOFURAN. See Thionaphthene

BENZOTHIOPHENE. See Thionaphthene

BENZOYL azide
Solvent effect in the Curtius rearrangement of benzazide. M. S. Newman, S. H. Lee, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:113-16 Ja '47

BENZOYL ethylene
Reaction of alcohols with dibenzoylethylene. P. S. Bailey and R. E. Lutz. Am Chem Soc J 69:498-9 Mr '47

BENZOYL peroxide
Decomposition of benzoyl peroxide. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-55 Jl '47
Effect of benzoyl peroxide on rubber solutions; abstract. P. Compagnon and A. Delalande. India Rubber World 116:408 Je '47
Inhibition and retardation of the peroxide initiated polymerization of styrene. S. G. Cohen. bibliog Am Chem Soc J 69:1057-64 My '47
Laboratory explosions with ethylene and carbon tetrachloride; nature of the explosion; precautions in avoiding the explosion. R. O. Bolt; R. M. Joyce. Chem & Eng N 25:1866-7 Je 30 '47
Methoxymercuration of cyclohexene. J. Romeyn and G. F. Wright. Am Chem Soc J 69:697-701 Mr '47
Products of the reaction of benzoyl peroxide with certain ethers. W. E. Cass. bibliog Am Chem Soc J 69:500-3 Mr '47
Vinyl polymers; reaction of benzoyl peroxide and maleic ester. C. S. Marvel, E. J. Prill and D. F. DeTar. bibliog Am Chem Soc J 69:52-8 Ja '47

BENZOYLATION
Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47

BENZYLAMINE
Mannich reaction with *p*-hydroxybenzaldehyde and N-(*p*-hydroxybenzyl)-acetamide. N. H. Cromwell. Am Chem Soc J 68:2634-6 D '46
Preparation of ethyl β-benzylaminopropionate and benzyl-di-(β-carbethoxyethyl)-amine. G. Stork and S. M. McElvain. bibliog Am Chem Soc J 69:971-2 Ap '47

BENZYL benzoate
Chigger repellents. F. M. Snyder and F. A. Morton. Soap & San Chem 22:133+ N '46
Production of benzyl benzoate; laboratory and pilot plant studies. I. D. Tharp and others. bibliog Ind & Eng Chem 39:1300-2 O '47

BENZYL chloride. See Chlorotoluene

BENZYLMAGNESIUM chloride
Rearrangement in the reaction between benzylmagnesium chloride and ethyl sulfate. J. G. Burtle and R. L. Shriner. Am Chem Soc J 69:2059-60 Ag '47

BENZYLPENICILLIN. See Penicillin

BENZYLIDENE anhydromethylalloside
Action of acidic reagents on ethylene oxide anhydro sugars; action of acid reagents on 4 : 6-benzylidene 2 : 3-anhydro α-methylalloside. F. H. Newth, W. G. Overend and L. F. Wiggins. Chem Soc J p 10-18 Ja '47

BENZYLIDENE anhydromethylmannoside
Some observations on the ring scission of 4 : 6-benzylidene 2 : 3-anhydro α-methylmannoside with ammonia. L. F. Wiggins. Chem Soc J p 18-21 Ja '47

BERG, Helen
Portrait. Fortune 35:136 My '47

BERG plastics and die casting company
Stock offered. Comm & Fin Chr 166:258 Jl 21 '47

BERGE, Wendell, 1903-
Still against monopoly. por Bsns W p34 My 31 '47

BERGIUS, Friedrich, 1884-
Portrait. Fortune 35:104 Ap '47

BERGSTROM, Francis William, 1897-1946
Sketch. G. S. Parks. Science 104:500 N 29 '46

BERICHTE der deutschen chemischen gesellschaft. See Chemische berichte (periodical)

BERLIN

Rapid transit

Kriegsstrabenbahnwagen; German transit. G. Stetza. il Mass Transportation 43:238-9 Je '47

BERLIN, New Hampshire

Bridges

Repairing an old Phoenix-section bridge to carry modern loads safely; Cascade bridge. C. A. Johnson and E. E. Seelye. il plan diags Eng N 137:796-8 D 12 '46

BERMUDA
Oligarchy in Bermuda. Economist 153:71-2 Jl 12 '47

BERQUIST, Fred E.
Two economists for congressional staff posts. por Bsns W p18 Ap 12 '47

BERYL
Beneficiation of western beryl ores. H. D. Snedden and H. L. Gibbs. bibliog U S Bur Mines Rep of Invest 4071:1-18 '47
Beryl resources of Connecticut. E. N. Cameron and V. E. Shainin. maps plans diags Econ Geol 42:353-67 Je '47
Minéraux alumineux industriels; sillimanite et béryl, leurs possibilités en France. V. Charrin. Chimie & Ind 58:197-8 Ag '47

BERYLLIA. See Beryllium oxide

BERYLLIUM
Beryllium, 1946. A. F. Matthews. Eng & Min J 148:80 F '47
Beryllium production and use continues to expand. W. Janssen. Dom Com 35:49-52 Jl '47
Cementation by beryllium. J. Laissus. Engineer 183:563 Je 27 '47
Further experiments on the elastic single scattering of electrons by nuclei. W. W. Buechner and others. Phys R 72:678-9 O 15 '47
Iron Mountain beryllium deposits, Sierra and Socorro counties, New Mexico. W. R. Storms. 10pls U S Bur Mines Rep of Invest 4024:1-13 '47
New aluminum alloys, containing small amounts of beryllium. R. H. Harrington. Am Soc for Metals Trans 36:311-23; Discussion. 324-35 '46
Preparation of pressed Ra+Be neutron sources. H. L. Anderson and B. T. Feld. R Sci Instr 18:186-8 Mr '47
Spin dependence of scattering of slow neutrons by Be, Al, and Bi. E. Fermi and L. Marshall. Phys R 72:408-10 S 1 '47
Transmission of slow neutrons through microcrystalline materials. E. Fermi and others. bibliog Phys R 71:589-94 My 1 '47

Analysis

Determination of beryllium in ores. R. E. Stevens and M. K. Carron. bibliog In U S Geol S Bul 950:91-100 '46

Isotopes

Energy and half-life of the Be^{10} radioactivity. E. M. McMillan. Phys R 72:591-3 O 1 '47
Evidence for a γ-p reaction in Be^{9}. W. Ogle and others. Phys R 71:378 Mr 15 '47
Half-life of Be^{10}. D. J. Hughes and others. bibliog Phys R 71:269 F 15 '47
Mass spectrographic confirmation of the isotopic assignment for the long-lived radioactivity in beryllium. A. K. Pierce and F. W. Brown, 3d. Phys R 70:779 N 1 '46
Radioactivity of Be^{10}. J. Levinger and E. Meiners. bibliog Phys R 71:586-8 My 1 '47
Results of H^3 bombardment of Ag leading to Pd^{109}. D. N. Kundu and M. L. Pool. bibliog Phys R 72:101-8 Jl 15 '47

Metallography

Hexagonal slip in beryllium crystal. L. Tarnopol. il Metal Prog 52:391 S '47

Testing

Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47

BERYLLIUM alloys
Beryllium copper formed parts; advantages of fixture heat-treatment. il diags Product Eng 18:118-21 F '47
Copper-beryllium-alloy castings; Navy department specification 46C11. Foundry 75: 121-2 Je '47
Distinguishing the Be-Cu alloys. F. C. Bennett, jr. Metal Prog 52:250 Ag '47
New metallographic etchant for aluminum bronze and copper-beryllium alloys. W. C. Coons and D. J. Blickwede. bibliog il Am Soc for Metals Trans 35:284-97 '45
Stress-relief-hardening of beryllium copper. R. W. Carson. il Mech Eng 69:651-4 Ag '47

BERYLLIUM fluoride
Unstable glass has high light transmission speed; beryllium-fluoride glass. Sci Am 176: 31 Ja '47

BERYLLIUM metallurgy
Beneficiation of New England beryllium ores. F. D. Lamb. U S Bur Mines Rep of Invest 4040:1-9 '47
Vacuum melting and casting of beryllium. A. R. Kaufmann and E. Gordon. diags Metal Prog 52:387-90 S '47

BERYLLIUM nitride
Chemical forms assumed by C^{14} produced by neutron irradiation of beryllium nitride. P. E. Yankwich. bibliog J Chem Phys 15:374-5 Je '47

BERYLLIUM oxide
Pure beryllium oxide as a refractory. F. H. Norton. il diag Am Cer Soc J 30:242-5 Ag 1 '47

BESSEL'S functions
Tables of spherical Bessel functions. v2 328p $7.50 Columbia univ. press, 2960 Broadway, New York 27 '47
Vibrations of shallow spherical shells. E. Reissner. diags J Ap Phys 17:1038-42 D '46

BESSEMER process
Applications of Bessemer bars requiring quality. J. D. Armour. Metal Prog 50:904-5 N '46
Dephosphorized Bessemer steel. G. M. Yocom. il Metal Prog 51:243-7 F '47
German basic Bessemer steels. T. P. Colclough and J. Simpson. Metal Prog 51:462+ Mr '47
Killed Bessemer steel for seamless tubes. E. C. Wright. Metal Prog 50:662-4 O '46
Manufacture of basic Bessemer steel low in nitrogen. Y. Dardel. Metal Prog 52:252-6 Ag '47
Production of iron and steel with oxygen-enriched blast. R. Durrer. Iron & Steel Inst J 156:253-6 Je '47; Discussion. Engineering 164:67-8 Jl 18 '47; Engineer 184:33-4 Jl 25 '47; Iron & Steel Inst J 157:369-76 N '47
Who was Holley; his part in development of Bessemer steel industry. Mech Eng 69:564-6 Jl '47

See also
Steel metallurgy—
Duplex process

BEST books. See Bibliography—Best books

BESTERMAN, Theodore D. Nathaniel, 1904-
Sketch. Special Lib 38:138 My-Je '47

BETA rays
Average energy of beta-rays emitted by radioactive isotopes. L. D. Marinelli and others. bibliog Rs Mod Phys 19:25-8 Ja '47
Beta- and gamma-ray energies of several radioactive isotopes. L. C. Miller and L. F. Curtiss. Phys R 70:933 D 1 '46
Beta-ray spectrum of C^{14}. P. W. Levy. Phys R 72:248 Ag 1 '47
β-ray spectrum of K^{40} and theory of β-decay. R. E. Marshak. Phys R 70:980 D 1 '46
Beta-ray thickness gage for sheet steel; G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O. J. M. Smith. il diags Electronics 20:106-12 O '47
Beta-rays from H^3. R. J. Watts and D. Williams. Phys R 70:640-2 N 1 '46

BETA rays—*Continued*
Construction of Geiger-Müller tubes of high sensitivity to β-radiations. G. A. Elliott and R. H. Lee. R Sci Instr 18:450-1 Je '47
Correcting for the absorption of weak beta-particles in thick samples; general method for use in tracer work; data presented for samples of $BaC^{14}O_3$. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47
Decay scheme of Sb^{124}. W. E. Meyerhof and G. Scharff-Goldhaber. bibliog diags Phys R 72:273-5 Ag 15 '47
Disintegration of scandium^{46}. I. Feister and L. F. Curtiss. bibliog diags J Res Nat Bur Stand 38:411-14 Ap '47
Disintegration scheme of Sc^{46}. C. Peacock and R. G. Wilkinson. Phys R 72:251-2 Ag 1 '47
Double focusing beta-ray spectrometer. E. S. Rosenblum. Phys R 72:731 O 15 '47
Double focusing beta-ray spectrometer. F. B. Shull and D. M. Dennison. Phys R 71:681-7 My 15 '47; Correction. 72:256 Ag 1 '47
Duralumin window beta-ray counter. W. M. Good. diags R Sci Instr 18:133 F '47
Energy and half-life of the Be^{10} radioactivity. E. M. McMillan. Phys R 72:591-3 O 1 '47
Evaluation of the beta and gamma radiation due to extended linear sources of radium. R. D. Evans. bibliog J Ind Hygiene 28:243-56 N '46
Gamma- and beta-ray energies of some radioactive isotopes as measured by a thin magnetic lens beta-ray spectrometer. W. Rall and R. G. Wilkinson. Phys R 71:321 Mr 1 '47
H^3 and the mass of the neutrino. E. J. Konopinski. Phys R 72:518-19 S 15 '47
Magnetic-lens electron spectrometer; radiations from 5.3 year cobalt^{60}. L. C. Miller and L. F. Curtiss. diags J Res Nat Bur Stand 38:359-64 Mr '47
Maximum β-energies and the mass of the neutrino. O. Kofoed-Hansen. Phys R 71: 451-2 Ap 1 '47
Measurement of radioactive tracers; particularly C^{14}, S^{35}, T, and other longer-lived low-energy activities. W. F. Libby. bibliog diags Anal Chem 19:2-6 Ja '47
Positively charged particles accompanying the beta-rays of P^{32}. T. H. Pi and C. Y. Chao. Phys R 72:639-40 O 1 '47
Radioactivity of Be^{10}. J. Levinger and E. Meiners. bibliog Phys R 71:586-8 My 1 '47
Upper energy limit of the K^{40} beta-ray spectrum. W. J. Henderson. bibliog Phys R 71: 323-4 Mr 1 '47
See also
Electrons
Radioactivity
Spectrometers

BETATRON. See Electron accelerator

BETHLEHEM steel company
Bethlehem buys land for Baltimore expansion. il map Manuf Rec 116:34 S '47
Bethlehem pushes expansion at Baltimore steel plant at Sparrows Point. il Manuf Rec 116:38+ Je '47
Progress of Bethlehem steel co. during past 20 years. E. G. Grace. Iron Age 159:132+ Je 12 '47

BETHLEHEM steel corporation
Bonds offered. Comm & Fin Chr 164:2826 D 2 '46
Preliminary report. Comm & Fin Chr 165: 678 F 3 '47
Selected stocks. Mag of Wall St 80:510 Ag 2 '47

BETTING
Tantalus and the pools. Economist 152:446-7 Mr 29 '47

BEVATRON (proposed)
Bevatron proposed for University of California; proton accelerator. il Chem & Eng N 25:3236 N 3 '47

BEVEL gearing. See Gearing, Bevel

BEVEN, Thomas D. 1898-
Beven succeeds Bond on E.J. and E. por Ry Age 121:964 D 7 '46

BEVERAGES
Biological stability of cider, fruit juices and soft drinks; abstract and discussion. B. T. P. Barker and V. L. S. Charley. Chem & Ind p227 Ap 26 '47
Carbonated coffee; Cola-moca. Bsns W p57 Jl 19 '47
Delivery costs by the case; system devised by bottlers' association. Food Ind 19:476-7 Ap '47
Mr O'Hara's nickel drink; after sixty-three snug years in the South, Dr Pepper company wants national distribution. il Fortune 36:108-11+ O '47
Mixer campaign; A. J. Lehman co. aims at national distribution for its Tom Collins, jr. Bsns W p24+ My 10 '47
Psyche on wing; local-franchise distribution, sideline beverages. Bsns W p70+ Mr 29 '47
Weighing outlook for soft drink companies; with statistics on leading companies. C. F. Morgan. il Mag of Wall St 80:33-5+ Ap 12 '47
Wet-dry cooler for beverages; developed by Canada Dry. il diag Food Ind 19:1363-4 O '47
See also
Beer — Whisky
Cocoa — Wine
Coffee

BEWLEY bill. See Investment companies

BIBLE
See also
Gutenberg Bible

BIBLIOGRAPHY
Book review digest; forty-second annual cumulation, March 1946 to February 1947 inclusive, with cumulated index, 1942-1946. M. M. James and D. Brown, eds. 1345p H.W. Wilson co, New York '47
Preparation and coverage of critical and select bibliographies. A. D. Roberts. bibliog Assn of Sp Lib & Inf Bur Proc 1946:34-42; Discussion. 42-6
See also
Book reviews — Indexing
Catalogs, Booksellers' — Libraries
Catalogs, Classified *also* subdivision Bibliography under special subjects, e.g. — Periodicals—Indexes
Business
Reference books
Technology

Best books
Best books of the year 1946, classified on the Dewey decimal system. (New ser, v. 18) 94p pa Librarian and bk. world, 5 Wardrobe pl, Carter lane, London, E.C. 4 '47
Books published in the United States, 1945; a selection for reference libraries. 37p American library assn, 520 N. Michigan av, Chicago '47
English 113, an experiment in reading; Washington university. A. M. Buchan. J Eng Educ 37:780-5 Je '47
Interpreting the United States; a selection of books published January-March, 1947 made by the Readers' advisers, the New York public library. R. E. Kingery. N Y Pub Lib Bul 51:191-9 Ap '47

Methods
Bibliographical citation in the social sciences; a handbook of style. L. Appel. 2d ed rev 30p pa 60c Univ. of Wisconsin press, 811 State st, Madison 5 '46
Bibliography compilation in technical fields. R. H. Hopp. bibliog Special Lib 37:291-3 N '46
Punched card method for the bibliography, abstracting, and indexing of chemical literature. C. D. Gull. il J Chem Educ 23:500-7 O '46

BIBLIOGRAPHY of scientific and industrial reports
Bibliography of scientific and industrial reports; U.S. Commerce department publication. L. S. Thompson. J Doc 3:3-8 Je '47

BICYCLE insurance. See Insurance, Bicycle

BICYCLES
German bicycle industry. For Comm W 27:30 Ap 12 '47
Production of bicycles, and problems of industry, Netherlands. For Comm W 28:26-7 Jl 26 '47

BICYCLOHEPTENE
Oxidation of [2 : 2 : 1]bicycloheptene-2 (norbornylene). S. F. Birch, W. J. Oldham and E. A. Johnson. Chem Soc J p818-20 Je '47

BIDDING, Competitive. See Securities—Marketing

BI-ELECTRON. See Positronium

BIG Inch pipe line. See Petroleum pipe lines

BIG THOMPSON project. See Colorado-Big Thompson project

BIGELOW-SANFORD carpet company
Attacking high sales costs. Bsns W p58-60 My 3 '47
Big five in floor coverings. R. Colston. Mag of Wall St 81:32-3 O 11 '47
Net rising sharply. Barron's 26:6 D 2 '46

BILE acids
Application of the method of molecular rotation differences to steroids; steroidal hormones and bile acids. bibliog(101 ref) D. H. R. Barton. Chem Soc J p 1116-23 D '46
Preparation of C-27 steroids from bile acids; coprostanetetrol-3(α),7(α),12(α),25. W. H. Pearlman. bibliog Am Chem Soc J 69:1475-6 Je '47

BILLBOARDS
Laclede billboards adopt one theme. R. Latimer. il Gas Age 98:37 N 14 '46
Slogan used 10 years is still effective; Southern Pacific billboards. F. Q. Tredway. il Ptr Ink 218:47 F 7 '47

BILLFOLDS
How Rolfs sells $100 Signature billfolds. il Sales Management 57:89-90 D 1 '46
We traded a Cinderella item to the luxury class; $100 wallet as bellwether for entire line. A. A. Weiss. il Ptr Ink 218:75-6+ F 7 '47

BILLING
Agency billing. Ind Marketing 31:122+ N '46
Billing; minus the usual errors; Consumers company, Chicago. P. Eastman. il Am Bsns 17:14-15+ S '47
Billing without meters. W. A. Hill. Am Gas Assn Mo 29:449 O '47
Bi-monthly billing. A. W. Fyfe. Am Gas Assn Mo 29:33-7 Ja '47
Estimated billings circumvent meter shortage. Elec World 128:148+ O 25 '47
Lone Star changes over to district billing. W. R. Stephens. il Gas Age 100:69-70+ O 2 '47
Practical approach to office cost control. J. A. Handy, jr. Management R 36:514-17 O '47
Seven of ten plants route stuffers with bills; Worthington pump & machinery corp. F. B. Koss. Ptr Ink 220:60-1 Ag 1 '47

BILLS of exchange
Interest due on bills of exchange though credits allowed by way of set-off. Banking Law J 64:714-18 S '47

BILLS of lading
Marine insurance and new standard bills of lading. C. Christensen. Weekly Underw 157: 887-9 O 11 '47

BIMETAL. See Thermostats

BINARY vapor systems. See Steam plants—Binary vapor systems

BINDERS. See Insurance—Binders

BINDING materials
British bonding clays. W. Davies and W. J. Rees. Iron & Steel Inst J 152:117-25 no 2 '45
Cores, sands and binders. O. J. Myers. il Foundry 75:74-5+ Je '47
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47
L'importance de la viscosité dans l'emploi des liants hydrocarbonés. L. Christophe. Génie Civil 124:73-6, 86-9 F 15-Mr 1 '47
See also
Resinous products—Binding materials

BINGHAM family
Roller-making family celebrates its centennial, Samuel Bingham's son manufacturing company. Inland Ptr 119:88-9 Ag '47

BINOCULARS. See Field glasses

BINS
Valley angle chart for bins and hoppers. W. E. Casler. Power Pl Eng 51:100 Jl '47
See also
Coal bins

BINS, Concrete
Hipped plate construction. G. Winter and Minglung Pei. bibliog il diags Am Concrete Inst J 18:505-31 Ja '47
Slip forms for million-bushel elevator for soybeans. H. R. Straight. il plan diags Eng N 137:728-30 N 28 '46
Storage of bulk flour in concrete silos. J. Fruchtbaum. Am Concrete Inst J 19:79-80 S '47

BIOCHEMICAL oxygen demand tests. See Sewage—Testing

BIOCHEMICAL research foundation. See Franklin institute—Biochemical research foundation

BIOCHEMISTRY. See Biological chemistry

BIOGRAPHY

Bibliography

Biography index; a cumulative index to biographical material in books and magazines. Published quarterly by H. W. Wilson co, New York
Biography index; a cumulative index to biographical material in books and magazines, January 1946-June 1947. B. Joseph, ed. 393p H. W. Wilson co, New York '47
Index to profile sketches in New Yorker magazine. T. S. Shaw, comp. 100p $2 F. W. Faxon co, Boston '46

Dictionaries

Current biography; who's news and why, 1946. A. Rothe, ed. 734p H. W. Wilson co, New York '47
Italian-American who's who, a biographical dictionary of Italian-American leaders. G. Schiavo, ed. v 11 460p $15 Vigo press, 2 Rector st, New York '46
Who's who in commerce and industry, the international business who's who. 5th ed 1416p $15.25 A. N. Marquis co, 210 E. Ohio st, Chicago 11 '47
Who's who in Latin America. pt. 4, Bolivia, Chile, and Peru. R. Hilton, ed. 3d ed rev & enl 209p $2.50 Stanford univ. press, Stanford University, Calif. '47
Who's who in New York, 1947. W. S. Downs, ed. 11th ed 1235p $15 Lewis historical pub. co, 80 8th av, New York 11 '47
Who's who in the theatre; a biographical record of the contemporary stage. J. Parker, comp. 10th ed rev 2014p $15 Pitman pub. corp, 2 W. 45th st, New York 19 '47

BIOLOGICAL apparatus
Apparatus for continuous yeast culture. J. G. B. Castor and T. J. B. Stier. bibliog diag Science 106:43-4 Jl 11 '47
Apparatus for mustard gas treatment. J. G. Carr. Science 105:369 Ap 4 '47
Automatic recording siphon. E. W. Ligon, jr. diag Science 105:624 Je 13 '47
Improved alcohol check for rat metabolism apparatus. I. Goodman and R. G. Gustavson. diag Science 105:215 F 21 '47

BIOLOGICAL assay
Adaptation of the dosimetric method for use in smaller animals; the retained median lethal dose and the respiratory response in normal, unanesthetized, rhesus monkeys (macaca mulatta) exposed to phosgene. R. E. Weston and L. Karel. bibliog J Ind Hygiene 29:29-33 Ja '47
Apparatus for rapid electrometric titration of acid; determination of pH and measurement of turbidity in microbiological assays. L. B. Rockland and M. S. Dunn. bibliog diags Anal Chem 19:812-13 O '47
Bioassay by direct potency estimation. S. Loewe. Science 106:89-91 Jl 25 '47
Biological assay of inhaled substances by the dosimetric method; the retained median lethal dose and the respiratory response in unanesthetized, normal goats exposed to different concentrations of phosgene. L. Karel and R. E. Weston. bibliog J Ind Hygiene 29:23-8 Ja '47

BIOLOGICAL assay—*Continued*

Detection of drugs in horse saliva; comparison of sensitivities of a chemical and a biological method. C. E. Morgan and A. Gellhorn. bibliog Anal Chem 19:806-8 O '47

Estimation of types of penicillin in broths and finished products; microbiological method. K. Higuchi and W. H. Peterson. bibliog Anal Chem 19:68-71 Ja '47

Maillard reaction in microbiological assay. E. G. Hill and A. R. Patton. Science 105: 481-2 My 2 '47

Short cuts to the estimation of standard errors, particularly in microbiological assays. E. C. Wood. Chem & Ind p334-6 Je 14 '47

Use of the angular transformation in biological assays. L. F. Knudsen and J. M. Curtis. bibliog Am Stat Assn J 42:282-96 Je '47

Vitamin B_8 group; extraction procedures for the microbiological determination of vitamin B_8. J. C. Rabinowitz and E. E. Snell. bibliog Anal Chem 19:277-80 Ap '47

BIOLOGICAL chemistry

Carbohydrate components of biologically active materials. W. N. Haworth. Chem Soc J p582-9 Ap '47

Chemical production of mutations. C. Auerbach, J. M. Robson and J. G. Carr. bibliog Science 105:243-7 Mr 7 '47

Movement of substances through a two-phased solution system. T. C. Broyer. Science 105:67-9 Ja 17 '47

Some biological and chemical properties of animal hair. J. L. Stoves. bibliog(77 ref) diag Soc Dyers & Col J 63:65-77, pl 1-4 Mr '47

Studies on biological methylation; the fission of the mono- and di-sulphide links by moulds. F. Challenger and P. T. Charlton. Chem Soc J p424-9 Mr '47

Use of isotopes to determine the rate of a biochemical reaction. H. Branson. Science 106:404 O 24 '47

See also

Antigens and antibodies
Bacteria
Biological materials—Analysis
Biotin
Blood
Botanical chemistry
Enzymes
Hormones
Immunity
Metabolism
Nucleoproteins
Nutrition
Physiological chemistry
Plant growth
Plants—Chemical analysis
Proteins
Vitamins

also Franklin institute—Biochemical research foundation

BIOLOGICAL laboratories

See also

Marine biological laboratories

Equipment

Detection of hypoglycemic reactions in the mouse assay for insulin. D. M. Young and A. H. Lewis. bibliog il Science 105:368-9 Ap 4 '47

Slide rule for determining chicken red cell agglutination titer. M. C. Davies. diag Science 106:273 S 19 '47

BIOLOGICAL materials

See also

Blood
Feces
Urine

Analysis

Determination of mercury in biological material. F. L. Kozelka. diag Anal Chem 19: 494-6 Jl '47

Mixed color method for the determination of cadmium in air and biological samples by the use of dithizone. F. W. Church. bibliog J Ind Hygiene 29:34-40 Ja '47

Polarographic determination of tin in foods and biological materials. E. M. Godar and O. R. Alexander. bibliog diag Ind & Eng Chem Anal ed 18:681-4 N '46

Solid polyethylene glycols (carbowax compounds); quantitative determination in biological materials. C. B. Shaffer and F. H. Critchfield. bibliog Anal Chem 19:32-4 Ja '47

See also

Blood—Analysis

BIOLOGICAL physics

Ninth Washington conference on theoretical physics. Science 104:574 D 13 '46

See also

Biomechanics

BIOLOGICAL products

See also

Serum
Toxins and antitoxins
Vaccines
Viruses

Manufacture

Industrial wastes; pharmaceutical and biological plants. E. L. Knoedler and S. H. Babcock, jr. il Ind & Eng Chem 39:578-82 My '47

BIOLOGICAL research

Biological research of Clinton laboratories. Chem & Eng N 24:3060 N 25 '46

Construction and performance of a large grating monochromator with a high energy output for photochemical and biological investigations. C. S. French and others. bibliog il diag R Sci Instr 18:11-17 Ja '47

Office of naval research is supporting a program of biological research at Pt. Barrow, Alaska. Science 106:164-5 Ag 22 '47

Research in fundamental biology and in agriculture. H. B. Tukey. Science 105:565-7 My 30 '47

Work of Soviet biologists; theoretical genetics. N. P. Dubinin. Science 105:109-12 Ja 31 '47

See also Franklin institute—Biochemical research foundation

BIOLOGICAL societies

Shall biologists set up a national institute? R. F. Griggs. Science 105:559-65 My 30 '47

BIOLOGICAL specimens

Most favorable absorption of the phase plate in phase contrast microscopy. A. T. Brice and P. H. Keck. bibliog Opt Soc Am J 37: 647-51 Ag '47

Specimens in acrylic. il Mod Plastics 24:178-9 Ag '47

Use of unsaturated polyester resins for embedding biological material. T. H. Romaniak. il Science 104:601-2 D 20 '46

See also

Zoological specimens

BIOLOGISTS

See also

Biological societies

BIOLOGY

See also

Anatomy—Laboratory methods
Biological chemistry
Biological research
Botany
Cell division (biology)
Ecology
Electrophysiology
Fouling organisms
Microorganisms
Microscope and microscopy
Mutation (biology)
Paleontology
Physiology
Plants
Zoology

Periodicals

Possible advantages of cooperation between societies in publication. R. E. Cleland. Science 105:567-8 My 30 '47

Study and teaching

Immobilizing paramecia for study in the introductory course. K. A. Stiles and D. A. Hawkins. Science 105:101-2 Ja 24 '47

Terminology

Addenda to the Naturalist's lexicon; comprehensive classified English-classical key to descriptive terms; additions and emendations to the Classical-English lexicon. R. S. Woods. 47p pa 25c Abbey Garden press, Box 101, Pasadena '47

See also

Botany—Terminology
Zoology—Nomenclature

Russia

Work of Soviet biologists; theoretical genetics. N. P. Dubinin. Science 105:109-12 Ja 31 '47

BIOMECHANICS

Limiting effect of centripetal acceleration on man's ability to move; effect of spinning airplane. C. F. Code and others. il J Aeronautical Sci 14:117-23 F '47

BIOPHOTOMETER
Simply constructed biophotometer. S. A. Goldblith. Science 104:449 N 8 '46

BIOTECHNOLOGY
Biotechnology; new fundamental in the training of engineers. C. L. Taylor and L. M. K. Boetler. Science 105:217-19 F 28 '47; Same cond. Mech Eng 69:403 My '47

BIOTIN
Biotin; abstract. N. G. Yartseva. Chem Eng 53:308+ N '46
Synthesis and stereochemistry of biotin and related products. S. A. Harris. bibliog il J Chem Educ 24:459-64 S '47

BIOTIN, Analogs of
Furan and tetrahydrofuran derivatives; synthesis and biological activity of a number of oxybiotin homologs. K. Hofmann and others. bibliog Am Chem Soc J 69:191-5 F '47

BIOTITE
Relation between chemical composition and paragenesis in the biotite micas of igneous rocks. S. R. Nockolds. bibliog Am J Sci 245:401-20 Jl '47
Studies in the mica group; the biotite-phlogopite series. E. W. Heinrich. bibliog fold pl Am J Sci 244:836-48 D '46

BIPYRIDINE
Effect of the symmetrical situation of methyl groups on the property of dimethyl-2,2'-bipyridyl to complex the ferrous ion. F. W. Cagle, jr. and G. F. Smith. bibliog Am Chem Soc J 69:1860-2 Ag '47
Synthesis of certain substituted 2,2'-bipyridyls. F. H. Case. bibliog Am Chem Soc J 68: 2574-7 D '46

BIPYRIDYLS. See Bipyridine

BIRCH
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. King and others. bibliog J Res Nat Bur Stand 37:281-310 N '46; Same. Mod Plastics 24:123-8+ Jl '47
Hardwoods for newsprint. G. E. Shipman. bibliog Pulp & Pa of Can 47:93-7 D '46
Problems of the dying birch in eastern Canada. R. E. Balch. Pulp & Pa of Can 47: 104-5 D '46

BIRDS
Deposits of shells transported by birds. C. Teichert and D. L. Serventy. bibliog pl Am J Sci 245:322-8 My '47
Effects of DDT mosquito larviciding on wildlife; effects of routine airplane larviciding on bird and mammal populations. A. B. Erickson. Pub Health Rep 62:1254-62 Ag 29 '47
Possible avian analogue of the scrotum. R. B. Cowles and A. Nordstrom. Science 104: 586-7 D 20 '46
See also
Electric lines—Bird problem

BIREFRINGENCE. See Refraction, Double

BIRKHOFF, Georg David, 1884-
Physical significance of Birkhoff's gravitational equations. H. E. Ives. bibliog Phys R 72:229-32 Ag 1 '47

BIRMINGHAM, England
City of Birmingham. il map Gas J (Lond) 250:supp 1-8 My 28 '47

BIRMINGHAM electric company
Preferred stock offered. Comm & Fin Chr 165:526 Ja 27 '47

BIRTH rate
Reproduction rates adjusted for age, parity, fecundity, and marriage. P. K. Whelpton. Am Stat Assn J 41:501-16 D '46
Some demographic aspects of the changing role of women. I. B. Taeuber and H. T. Eldridge. bibliog Ann Am Acad 251:24-34 My '47
U.S. births this year may reach 3½ millions. Weekly Underw 157:238 Jl 26 '47

Great Britain
Birth rate. Economist 152:660-2 My 3 '47
Light on the birth rate. Economist 152:843 My 31 '47

BISMUTH
Bismuth in works by-products. C. C. Downie. Can Min J 68:660-1 S '47
Bismuth, 1946. T. P. Wootton. Eng & Min J 148:80 F '47
Fission of bismuth, lead, thallium, platinum, and tantalum with high energy particles. I. Perlman and others. Phys R 72:352 Ag 15 '47; Abstract. Chem & Eng N 25:2428 Ag 25 '47
Influence of glass composition on reducibility of Ag^{+}, Bi^{3+}, Sb^{3+}, and Pb^{2+}. A. W. Bastress. Am Cer Soc J 30:52-3 F 1 '47
Mechanism of the embrittlement of deoxidised copper by bismuth; abstracts. E. Voce and A. P. C. Hallowes. Engineer 183: 493 Je 6 '47; Engineering 163:540 Je 27 '47; Metal Prog 52:432+ S '47; Discussion. Engineer 183:493-4 Je 6 '47; Engineering 163: 540 Je 27 '47
Microstructure of wrought non-arsenical phosphorus-deoxidised copper containing small quantities of bismuth. T. H. Schofield and F. W. Cuckow. il Engineering 164: 190-1 Ag 22 '47
Spin dependence of scattering of slow neutrons by Be, Al, and Bi. E. Fermi and L. Marshall. Phys R 72:408-10 S 1 '47

Analysis
Determination of bismuth, copper, and lead in aluminum alloys. G. Norwitz, S. Greenberg and F. Bachtiger. bibliog Anal Chem 19:173-5 Mr '47

Isotopes
Artificial radioactive isotopes of polonium, bismuth and lead. J. J. Howland and others. Phys R 71:552 Ap 15 '47
Formation of radium E and polonium by deuteron bombardment of bismuth. H. E. Tatel and J. M. Cork. Phys R 71:159-64 F 1 '47

BISMUTH chlorides
Solubility product of bismuth oxychloride and the ionization constant of tetrachlorobismuth ion. R. K. McAlpine. J Chem Educ 24:395-8 Ag '47

BISMUTH oxychloride
Solubility product of bismuth oxychloride and the ionization constant of tetrachloro-bismuth ion. R. K. McAlpine. J Chem Educ 24:395-8 Ag '47

BISON, Fossil
Fossil bison and associated artifacts from Plainview, Texas. E. H. Sellards and others. il maps diags Geol Soc Bul 58:927-54, pl 1-5 bibliog(p952-4) O '47

BITS
Diamond-bit coring at Rangely. N. Williams. il Oil & Gas J 46:141-2+ O 11 '47
Diamond core drilling methods and problems. C. Deely. il Pet Eng 18:98+ Je '47
Diamond drilling and diamond bit investigation. L. Obert and others. bibliog 7 pls U S Bur Mines Rep of Invest 4041:1-18 '47
Experiment with tungsten carbide bits. C. W. Nicolson. il diag Min Cong J 33:36-7+ Jl '47
Hard alloys go underground; tungsten carbide insert bits in rock drilling. S. P. Wimpfen. il Min & Met 28:148-9 Mr '47
Improved barrel and bit increases core recovery. L. J. Burrows. diags Eng & Min J 147:80-1 N '46
Ingersoll-Rand carbide jackbit promises faster drilling. il Comp Air Mag 52:102 Ap '47
Rock-bit design and experimental data. W. B. Noble. diags Oil & Gas J 46:118+ O 18 '47; Same. Pet Eng 19:141-2+ N '47
Survey of mining progress. A. H. Hubbell. Eng & Min J 148:92-7 F '47
Tungsten carbide bits; key to low-cost drilling. il Eng & Min J 148:102 Ap '47
Tungsten carbide promises faster, cheaper drilling. R. G. Sullivan. il Eng & Min J 148:57-60 Mr '47
Use and care of diamond drill bits and shells. il Eng & Min J 148:78-81 Ag '47

BITUMINOUS concrete pavements. See Pavements, Bituminous concrete; Roads, Bituminous concrete

BITUMINOUS materials
Asphaltic oil-latex joint-sealing compound. B. W. Pocock. bibliog il Am Concrete Inst J 17:565-80 Je '46; Discussion. 18:580[1]-580[6] pt 2 D '46

BITUMINOUS materials—*Continued*
Grass sowing under film of bitumen emulsion; abstracts. H. W. Jarvis. Pub Works 78:31 Ag '47; Eng N 139:523 O 16 '47
History, source, and general nature of asphaltic bitumen. A. J. Hoiberg. bibliog il diags Pet Refiner 26:77-83 Ja '47
L'importance de la viscosité dans l'emploi des liants hydrocarbonés. L. Christophe. Génie Civil 124:73-6, 86-9 F 15-Mr 1 '47
Mobile hot asphalt plant. il diag Engineer 182:562-4 D 20 '46
Rubber-asphalt joint fillers. R. H. Lewis. Pub Roads 24:291-8 Ja '47
Saving paving; rubber-base compounds for sealing pavement joints. R. B. Jennings. diags Pub Works 78:25-6 Ap '47
Sealing joints with rubberized asphalt; Packard test track. B. Gould. il Roads & Sts 90:91-2+ F '47
Second report on tests for soil stabilization, by the soil stabilization panel of standardization sub-committee no. 7, asphaltic bitumen. pl diags Inst Pet J 33:113-28 F '47
Waterproofed mechanical stabilization in road construction; soil-bituminous roads. il Roads & Bridges 85:72-5+ F '47

See also
Asphalt
Bituminous sand
Oil shales
Road tar
Roads, Bituminous

Testing

Texas method of molding asphaltic concrete density specimens. il Roads & Sts 89:59-60 D '46

BITUMINOUS pavements. See Pavements, Bituminous

BITUMINOUS roads. See Roads, Bituminous

BITUMINOUS sand
Discovery of rich bitumen deposit in northern Canada reported. Oil & Gas J 45:130 Ja 25 '47
Petroleum substitutes; past and present research, development and economics. H. H. Power. Pet Eng 18:75+ F '47

BLACK, Eugene, 1879-
World bank goes Wall Street. por Bsns W p17 Mr 8 '47

BLACK, Hugo La Fayette, 1886-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

BLACK
One-bath method of dyeing acetate developed black. L. S. Thompson. Rayon 28: 495-6 S '47

See also
Carbon black

BLACK body
Table of logarithmic corrections to the Wien radiation law. E. Q. Adams. Opt Soc Am J 37:695-7 S '47

BLACK currants. See Currants

BLACK light. See Ultraviolet rays

BLACK liquor. See Paper mills—Waste

BLACK markets. See Profiteering

BLACK widow spiders. See Spiders

BLACKOUTS in war
Radio controlled buoys; lights controlled for harbor blackouts. A. F. Hopkins, jr. and F. A. B. Smith. il diag Electronics 20:84-6 Ja '47

BLACKSTRAP. See Molasses

BLANCHING
Commercially dehydrated vegetables; oxidative enzymes and other factors. M. F. Mallette and others. bibliog Ind & Eng Chem 39:1345-8 O '47
Cooling after water and electronic blanching. J. C. Moyer and K. C. Holgate. il Food Ind 19:1370-1+ O '47
Effect of duration and temperature of blanch on proximate and mineral composition of certain vegetables. A. Kramer and M. H. Smith. bibliog Ind & Eng Chem 39:1007-9 Ag '47
Effect of duration and temperature of blanch on vitamin retention by certain vegetables. N. B. Guerrant and others. Ind & Eng Chem 39:1000-7 Ag '47
Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:990-4 Ag '47
It peels, blanches, cooks; fruits and vegetables processed in small batches. E. S Stateler. il diag Food Ind 19:1053-5 Ag '47
Nutritive value of canned foods; effect of commercial canning operations on the ascorbic acid, thiamine, riboflavin, and niacin contents of vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47

BLANKETS, Electric. See Electric blankets

BLAST furnace gas
Developments in the use of blast-furnace gas at the Port Kembla steelworks. H. Escher. il plans diags Iron & Steel Inst J 156:1-27 My '47
Fuel utilization in iron and steel works. N. H. Turner and F. A. Gray. Blast F & Steel Pl 34:1408-12+ N '46
How a steel mill prepares blast-furnace gas for fuel. W. M. Cline, jr. il Power 91:746-7 N '47
Memorandum on soot blowing. A. J. Anderson. Power Pl Eng 51:86-7 Je '47
Use of carbon in the blast furnace and heat balances. T. L. Joseph and K. Neustaetter. Blast F & Steel Pl 35:824-31, 944-8 Jl-Ag '47

BLAST furnace slag. See Slag

BLAST furnaces
Blast-furnace at the Margam I works. fold pl Iron & Steel Inst J 155:289-90 F '47
Blast furnace group discusses technical problems at Chicago. Steel 120:67 F 10 '47
Blast-furnace of today. W. R. Brown and I. S. Scott-Maxwell. 4pls plans diags Iron & Steel Inst J 155:107-20 Ja '47; Discussion. 156:399-411 Jl '47
Blast furnace vitamins; carbon, oxygen and pressure. O. R. Rice. diag Blast F & Steel Pl 35:89-91 Ja '47
Blowing-out a blast-furnace. R. Fowler; J. W. Houghton. Iron & Steel Inst J 155: 513-20 Ap '47
Brûleur sans flamme pour le chauffage des chaudières au gaz de haut fourneau. diags Génie Civil 123:330 D 1 '46
Carbon bottoms for blast furnaces; abstract. C. J. Fleisch. Steel 121:102 O 20 '47
Design for blast furnace hearths; abstracts. W. S. Unger. Steel 120:122 My 26 '47; Iron Age 159:64 Je 12 '47
Engineering problems in the preparation of ores for blast-furnaces. D. C. Hendry. plans diags Iron & Steel Inst J 155:121-35 Ja '47; Discussion. il 156:415-28 Jl '47
Handling blast furnace materials. J. A. Oates. il plan diags Mech Handling 34:539-48 O '47
Inland Steel acquires blast furnaces and coke ovens. W. Sykes. Blast F & Steel Pl 34: 1526 D '46
More Ford iron; new blast furnace at the Rouge. Bsns W p22 O 11 '47
National open hearth steel committee and coke oven, blast furnace and raw materials committee 30th conference program. Blast F & Steel Pl 35:23-4+ Ap '47
Observations on coke oven and blast furnace practice at the Geneva plant. C. L. Waggoner. Blast F & Steel Pl 35:325-8 Mr '47
Production of low-silicon basic iron using high-magnesia slags. M. E. Nickel. bibliog Steel 119:112-14+ D 9 '46; Same. Blast F & Steel Pl 34:1522-6 D '46
Recent American blast-furnaces. T. H. Stayman. Iron & Steel Inst J 155:136-40 Ja '47; Discussion. 156:411-14 Jl '47
Relined blast furnace jumps gun; Great Lakes B stack relights self day ahead of schedule. Steel 121:61 S 15 '47; Iron Age 160: 74-5 S 18 '47
Sinters and sintering. H. L. Saunders and H. J. Tress. Iron & Steel Inst J 152:303-15, pl 30-3 no 2 '45; Same cond. Blast F & Steel Pl 33:1385-90 N '45; Discussion. Iron & Steel Inst J 152:315-18 no 2 '45
Some economics of blast furnace operation. J. Dale. il Blast F & Steel Pl 35:220-3, 340-3 F-Mr '47

BLAST furnaces—*Continued*
Texas adds to iron output; Sheffield furnaces at Houston produce at 15,500-ton rate. il Manuf Rec 116:35+ S '47

Thermal requirements for blast furnace operation. C. E. Agnew. bibliog il Steel 120:130-2+ Mr 3; 106+ Mr 10; 120-2+ Mr 17; 104+ Mr 24 '47

Use of carbon in the blast furnace and heat balances. T. L. Joseph and K. Neustaetter. Blast F & Steel Pl 35:824-31, 944-8 Jl-Ag '47

See also
Blast furnace gas
Cupola furnaces

Air supply

Blast-furnace developments. E. Kirkendall. Min & Met 28:456-7 S '47

Blowing oxygen-enriched air into the blast furnace. K. Neustaetter. diag Blast F & Steel Pl 35:329-32 Mr '47; Same. Steel 120:110+ My 19 '47

Cheap, fast iron, Republic Steel uses more air in blast furnaces. J. H. Slater. Bsns W p20 My 24 '47

Economics of the blast furnace; top pressure, + beneficiation, + oxygen. B. S. Old and others. bibliog Iron Age 160:60-9 S 18 '47

Furnace operation; increasing hot-blast temperature and use of oxygen-enriched blast; abstract. W. Bennett. Mech Eng 69:769-70 S '47; Excerpt. Chem Eng 54:114 O '47

Gas turbine applications in iron and steel works; blast-furnace blowing applications. W. H. Gibson and others. il diags Iron & Steel Inst J 156:104-18 My '47

Operation of the iron blast furnace at high pressure. J. H. Slater. bibliog diag Blast F & Steel Pl 35:1083-90+, 1213-18 S-O '47; Same cond. Steel 120:102-4+ Je 9 '47; Abstracts. Iron Age 159:67-8 My 29 '47; Chem Eng Prog 43:sup 19 Jl '47

Possibilities for the extended use of oxygen in the British iron and steel industry. M. W. Thring. Iron & Steel Inst J 156:286-8 Je '47

Pressure-operated blast furnaces. Mech Eng 69:587-8 Jl '47

Production of iron and steel with oxygen-enriched blast. R. Durrer. Iron & Steel Inst J 156:253-6 Je '47; Discussion. Engineering 164:67-8 Jl 18; 89 Jl 25 '47; Engineer 184:83-4 Jl 25 '47; Iron & Steel Inst J 157:369-76 N '47

Progress of high top pressure operation of the pig iron blast furnaces; abstract. B. S. Old and others. Steel 121:100+ O 13 '47

Renewed interest in oxygen enriched blast. W. A. Haven. il Blast F & Steel Pl 35:95-6 Ja '47

Supercharged pig. il Chem Ind 60:944-5 Je '47

Teaching the blast furnace new tricks; pressure blowing. C. H. Vivian. il diag Comp Air Mag 52:162-6 Jl '47

Charging

Blast furnace bell development; abstract. T. H. Kennedy. Iron Age 159:76 Je 19 '47

Distribution of materials in the blast furnace. H. L. Saunders and R. Wild. diags Iron & Steel Inst J 152:259-86, pl 24-9; Discussion. 286-90 no 2 '45

Lining

Blast furnace relined and in service in 44 days. il Blast F & Steel Pl 35:1227-9 O '47

Measuring stick for the life of a blast furnace lining. F. E. Kling. Blast F & Steel Pl 35: 215-16 F '47

Progress report on carbon linings for blast furnaces. V. J. Nolan. il Blast F & Steel Pl 35:454-60 Ap '47

Safety measures

Safety in blast furnace operation. A. DuFresne. Steel 119:102+ D 9 '46

BLASTING
Appraising the hidden values in blasthole diamond drilling. C. H. Hopper. diags Eng & Min J 148:84-6 O '47

Bessemer limestone and cement company. J. I. Horty. il Explosives Eng 25:103-6 Jl '47

Billion-dollar waterway in California; Central Valley project, the Friant-Kern canal. O. H. Barnhill. il map Explosives Eng 25:50-2+ Mr '47

Blasting reveals subterranean fairyland; Wisconsin's Cave of the mounds. R. J. Brodhead. il Explosives Eng 25:108-9 Jl '47

Blasting vibration measurements indicate no danger to green concrete in Ross dam. F. Neumann. il Civil Eng 17:32-3; Discussion. H. A. Coombs. 33-4 Ja '47

Blasting water ponds on North Dakota farms. il Explosives Eng 25:53 Mr '47

Delayed action blasting. L. F. Miller. il Rock Prod 50:83-5+ Mr '47

Demolishing bridge piers with explosives. W. F. McCandlish. il Explosives Eng 25:42-3 Mr '47

Developments in underground drilling and blasting practice; National tunnel & mines co., Tooele, Utah. W. T. Warren. diags Min Cong J 32:39-41 O '46

Diamond drilling blast holes, Balmat mine, St Lawrence county, N.Y. M. Mosier. pl U S Bur Mines Information Circ 7408:1-6 '47

Dynamite opens ice-jammed rivers. il Explosives Eng 25:55 Mr '47

Dynamite spells doom for insect menace; blasting drainage ditches. B. H. Ludwig il Explosives Eng 25:119 Jl '47

Felling a chimney with dynamite. il diag Eng N 139:53-8 O 16 '47

San Diego aqueduct. M. Wharton. il maps diags Explosives Eng 24:169-72+ N '46

Shaped charge helpful in placer drilling tests. J. A. Roos. il diag Eng & Min J 148:73 Ja '47

Three-tower transmission structure successfully lowered by detonations. il Elec World 128:58 Ag 30 '47

Well-drill blasting in a granite quarry. O. M. Davis. il Explosives Eng 25:110-11 Jl '47

See also
Coal mines and mining—Blasting
Coal mines and mining—Explosives
Detonators, Electric
Explosives
Petroleum—Well blasting

Safety measures

It's meant to explode; technique of using explosives underground. H. B. Hicks. il Can Min J 68:734-6 O '47

Loading and lighting. H. B. Hicks. Can Min J 68:654-6 S '47

Watch out for monoxide; among poison gases, fumes of blasting hold distinguished place. H. B. Hicks. Can Min J 68:254-6 Ap '47

BLASTING, Subaqueous
Blasting concrete piers under water; foundations of bridge quickly demolished. W. F. McCandlish. il plan diag Explosives Eng 24:179-81 N '46

Difficult barge-holding problem in blasting a submerged rock; removing Ripple rock between Vancouver Island and the mainland of British Columbia. il Eng N 138:48-9 Ja 9 '47

BLASTOMYCIN
Studies of fungus antigens; quantitative studies of cross-reactions between histoplasmin and blastomycin in guinea pigs. A. Howell, jr. bibliog Pub Health Rep 62:631-51 My 2 '47

BLEACHERIES

Equipment

Bleaching-range efficiency depends on its control methods. E. A. Murphy and R. Pollock. diags Textile World 97:119+ Ap '47

Definized process at Lincoln Bleachery. C. H. Carlson and L. Shapiro. il Rayon 28:19 Ja '47

Terra-cotta finishing tanks solve corrosion problem. il diag Textile World 97:152 Mr '47

BLEACHERS (grandstands)

Accidents

Much interest in Purdue University accident. Nat Underw 51:14 F 27 '47

Purdue bleacher accident raises issues; liability of charitable institutions. Nat Underw 51:3 Mr 6 '47

BLEACHERS' association, limited

Statement by the chairman at ordinary general meeting. A. Sykes. Economist 153:130 Jl 19 '47

BLEACHING

Bleaching-range efficiency depends on its control methods. E. A. Murphy and R. Pollock. diags Textile World 97:119+ Ap '47

Cotton-woolen fabrics bleached as wool. Textile World 97:212+ S '47

Old dyers, old books and old methods; remarks on the history of dyeing and finishing. S. M. Edelstein. il Am Dyestuff Rep 36:525-6 S 22 '47

Ozone methods of bleaching yarns or fabrics; abstract. E. Howlett. Am Dyestuff Rep 36: 184 Ap 7 '47

See also

Dyes and dyeing

Paper making—Bleaching

Cotton

Bleaching speeded up from days to hours; developments in twenty-five years. K. H. Barnard. il Textile World 96:104-5+ D '46

Continuous bleaching successful on colored-yarn goods. D. S. Quern. il Textile World 97:131+ Jl '47

Continuous peroxide bleach reduces mill's costs; Dundee mills. E. D. White. il diags Textile World 97:141+ Je '47

Determination of residual silica on cotton in peroxide bleaching. B. DuBose and V. B. Holland. Am Dyestuff Rep 36:227-8 My 5 '47

Pilot-plant bleaching of cotton fabrics. J. H. Kettering and W. N. Berard. bibliog il Am Dyestuff Rep 36:552-4 O 6 '47

Progress in finishing machinery exemplified by continuous bleaching and vat dyeing equipment. E. S. Pierce. Rayon 28:294 My '47

BLEACHING materials

Bleaching; hypochlorites combined with alkylarylsulfonates; patents. Am Dyestuff Rep 36:396 Jl 14 '47

Rapid test for ferricyanide bleach exhaustion. L. E. Varden and E. G. Seary. Soc Motion Picture Eng J 47:450-2 D '46

See also

Chlorine
Hydrogen peroxide
Lithium hypochlorite
Sodium chlorite

BLIND

Blind agent of Aetna masters estate control the Braille way; A. S. Forman. East Underw 48:3+ Ja 17 '47

Blind veterans find employment. Nat Safety N 55:95-6 Je '47

BLIND, Apparatus for

Aids for the blind; application of Braille to instruments; reading machines; guidance devices. T. A. Benham. il Elec Eng 66:178-82 F '47

Aural current indicator. T. A. Benham. diags Electronics 20:164+ Jl '47

Circuit analyzer for the blind. C. M. Witcher. il diags Electronics 20:132+ S '47

Electronic eyesight. il Sci Am 176:121 Mr '47

Sees through his ears; sound apparatus to aid blind workers. il Steel 120:112 Ap 28 '47

BLIND, Printing for

Aids for the blind; application of Braille to instruments; reading machines; guidance devices. T. A. Benham. il Elec Eng 66:178-82 F '47

BLINKING. See Winking

BLISS, E. W., company

Investment audit. H. S. Coffin. il Mag of Wall St 81:28-30+ O 11 '47

New ideas build new markets. Bsns W p40+ Ag 23 '47

BLOCK caving. See Coal mines and mining—Methods

BLOCK talc. See Steatite

BLOOD

Blood picture of normal laboratory animals; a review of the literature, 1936-1946. M. V. Gardner. bibliog Franklin Inst J 243:77-86, 172-6, 251-8, 434-6, 498-502; 244:155-61 Ja-Mr, My-Je, Ag '47 (to be cont)

Blood protein studies with labeled elements; abstract. W. F. Bale. Science 105:632-3 Je 20 '47

Fibrin film and other products from human plasma. J. D. Ferry and P. R. Morrison. bibliog il Ind & Eng Chem 38:1217-21 D '46

Fluorescence of red blood cells. D. H. Hamly and others. bibliog Science 106:169-70 Ag 22 '47

Freeze-drying as applied to penicillin, blood plasma and orange juice. E. W. Flosdorf. il Chem Eng Prog 43:343-8 Jl '47; Same cond. Refrig Eng 54:226-30+ S '47

β-Glucuronidase activity of the blood and tissues of obstetrical and surgical patients. W. H. Fishman. bibliog Science 105:646-7 Je 20 '47

Hypervolemia in mice bearing transplantable granulosa cell tumors. J. Furth and H. Sobel. Science 105:41 Ja 10 '47

Low-density lipoprotein appearing in normal human plasma. K. O. Pedersen. bibliog J Phys & Colloid Chem 51:156-63 Ja '47

Physical-chemical characteristics of certain of the proteins of normal human plasma. J. L. Oncley, G. Scatchard and A. Brown. bibliog J Phys & Colloid Chem 51:184-98 Ja '47

Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47

Preparation and properties of serum and plasma proteins; modification of the physical and chemical properties of fibrin film by heat treatment. J. D. Ferry and others. bibliog Am Chem Soc J 69:409-16 F '47

Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46

Preparation and properties of serum and plasma proteins; osmotic equilibria in solutions of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68: 2320-9 N '46

Preparation and properties of serum and plasma proteins; quantitative interpretation of electrophoretic Schlieren diagrams of normal human plasma proteins. S. H. Armstrong, jr., M. J. E. Budka and K. C. Morrison. bibliog Am Chem Soc J 69:416-29 '47

Preparation and properties of serum and plasma proteins; the refractive properties of the proteins of human plasma and certain purified fractions. S. H. Armstrong, jr. and others. bibliog Am Chem Soc J 69:1747-53 Jl '47

Quantitative interpretation of the electrophoretic patterns of proteins. L. G. Longsworth. bibliog J Phys & Colloid Chem 51: 171-88 Ja '47

Red blood cell sensitivity to the blood-group-enzyme. P. M. Neuda. bibliog il Science 106:296-7 S 26 '47

See also

Hemocyanins
Hemolysis

Agglutination

Slide rule for determining chicken red cell agglutination titer. M. C. Davies. diag Science 106:273 S 19 '47

Analysis

Acute and chronic toxicity of methyl chloride; hematology and biochemical studies. W. W. Smith. bibliog(34 titles) J Ind Hygiene 29:185-9 My '47

Colorimetric micromethod for determination of formic acid. W. M. Grant. bibliog Anal Chem 19:206-7 Mr '47

Comparison of hematocrit methods. P. L. McLain. bibliog Science 106:275-6 S 19 '47

M-dinitrobenzene in blood; abstract. J. Roubal and others. J Ind Hygiene 29: sup 98-9 S '47

BLOOD—Analysis—*Continued*
Some experiences with polarographic methods in controlling a lead hazard in brass foundries. H. J. Weber. il J Ind Hygiene 29: 158-67 My '47

See also
Hemoglobin—Analysis

Circulation

Cinephotomicroscopy of normal blood circulation in the cheek pouch of the hamster. G. P. Fulton and others. Science 105:361-2 Ap 4 '47

Waves in elastic tubes; velocity of the pulse wave in large arteries. A. L. King. bibliog diags J Ap Phys 18:595-600 Jl '47

Coagulation

Electrical resistance of whole blood. S. Graff and others. diag Science 106:68-9 Jl 18 '47

Hyperheparinemia; cause of the hemorrhagic syndrome associated with total body exposure to ionizing radiation. J. G. Allen and L. O. Jacobson. Science 105:388-9 Ap 11 '47

Multiple protein interactions as exhibited by the blood-clotting mechanism. W. H. Seegers. bibliog(47 ref) J Phys & Colloid Chem 51:198-206 Ja '47

Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:388-400 F '47

Preparation and properties of serum and plasma proteins; human fibrin in the form of an elastic film. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:400-9 F '47

Thromboplastic properties of penicillin and streptomycin. D. I. Macht. bibliog Science 105:313-14 Mr 21 '47

See also
Heparin
Prothrombin

Diseases

Whole-blood cholinesterase determinations in some hematologic dyscrasias; low cholinesterase values in the leucoses. R. D. Barnard and others. Science 104:449 N 8 '46

Sampling

Simple anaerobic method of obtaining plasma. H. W. Davenport. diag Science 105:103 Ja 24 '47

Transfusion

Blood brothers; Tube Turns' blood donors' club. il Nat Safety N 55:46+ F '47

Loss of virulence of treponema pallidum during processing of dried blood serum. T. F. Probey. bibliog Pub Health Rep 62:1199-1202 Ag 15 '47

Malaria infection acquired through blood transfusion. Pub Health Rep 61:1630 N 8 '46

Radioactive blood cells; determining post-transfusion survival of blood cells by means of radioactive iron. J. G. Gibson, 2d and R. D. Evans. bibliog il Tech R 49:91-4+ D '46

BLOOD, Dried
Desiccation of plasma by sublimation; abstract. J. Murchio. Chem Eng 53:258+ D '46

BLOOD doners. See Blood—Transfusion

BLOOD groups
Immunochemical studies on blood groups; further characterization of blood group A and O substances from individual hog stomachs. A. Bendich, E. A. Kabat and A. E. Bezer. bibliog Am Chem Soc J 69: 2168-7 S '47

Rh and Hr factors in chimpanzees. A. S. Wiener and M. Wade. bibliog Science 102: 177 Ag 17 '45; Discussion. 104:277, 578-9 S 20, D 13 '46

BLOOD meal. See Feeding and feeding stuffs

BLOOD pressure
New method of recording arterial blood pressure. J. R. Braunstein and others. il Science 105:267 Mr 7 '47

BLOOD vessels

See also
Arteries

BLOOMINGDALE brothers, inc.
Annual report. Comm & Fin Chr 165:67 Ja 6 '47

BLOWERS
Auxiliary ventilation for better mechanical mining. J. H. Dickerson. il diags Coal Age 52:96-101 O '47

First commercial axial flow blower. il Engineer 184:372 O 17 '47

Gas turbine applications in iron and steel works; blast-furnace blowing applications. W. H. Gibson and others. il diags Iron & Steel Inst J 156:104-18 My '47

Harnessed air. il Steel 121:98+ N 3 '47

New plant developments at Bay Shore. C. A. Gallagher. il diags Am Gas J 167:12-13 Ag '47

Quick-action pneumatic core blower. il Comp Air Mag 52:74 Mr '47

Water gas generator air supply. H. A. Reynolds. diags Am Gas J 166:11-13 Ap '47

Manufacture

Six-stage progressive die operation; produces blade sections for multivane centrifugal blower wheels; Morrison products inc. il Steel 120:88-9+ Ap 21 '47

BLOWFLIES
Preliminary studies on the control of blowflies with DDT. W. C. Baker and L. G. Schwartz. pl Pub Health Rep 62:800-7 My 30 '47

Simple method for rearing blowflies without meat. H. Frings. Science 105:482 My 2 '47

BLOWING agents for rubber. See Rubber, Sponge

BLUE
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47

Pigments of cottonseed; gossycaerulin, a blue quinonoid gossypol derivative occurring in cooked cottonseed. C. H. Boatner and others. bibliog Am Chem Soc J 69:668-72 Mr '47

BLUE Cross hospitalization plan. See Insurance, Hospitalization

BLUE Sky laws. See Securities—Law

BLUEBERRIES
Prevention of mold in kettled blueberries in no. 10 cans; abstract. E. H. Ruyle and others. Food Ind 18:1957 D '46

BLUEPRINTING machinery
Revolving contact principle used in automatic blueprinter. il diags Machine Design 19:110-11 O '47

BLUM, Leon, 1872-
Portrait. Bsns W p93 D 21 '46

BOARDWALKS
Atlantic City boardwalk rebuilt with precast concrete piles and joists. il diags Eng N 137:799-800 D 12 '46

BOAT building
All-plastic boat; molded of fiberglas and a low pressure thermosetting resin. il Mod Plastics 25:166 S '47

Electric steam box for boat builders. M. M. Clayton. il diag Elec West 97:60 D '46

Fiberglas boat. il Sci Am 176:222 My '47

Plywood in boat construction. F. W. Hagerty. bibliog il Mech Eng 69:213-17 Mr '47

See also
Shipbuilding

BOAT models
New use for deep drawn laminates; model racing boat. il Mod Plastics 24:110-12 F '47

BOATS and boating
Price bros. and co. design and build all-steel logging boats. il Pulp & Pa of Can 48:86 Mr '47

See also
Freight ships
Motor boats
Shipbuilding
Ships
Steamboats
Submarine boats
Towboats
Yachts and yachting

BOBBINS
Bobbin refinishing machine gives low-cost, uniform results. il Textile World 97:148+ Ag '47
Filling-bobbin cleaner attaches to loom. diag Textile World 96:153-4 D '46

BOEGEHOLD, Alfred Lindley, 1893-
Sketch. R. R. Voorhees. por Metal Prog 51: 76-8 Ja '47

BOGS
See also
Peat bogs

BOILER cleaning
Acid-cleaning of boilers and auxiliary equipment. S. T. Powell. il A S M E Trans 68: 905-11; Discussion. 911-17 N '46
Cleaning boiler heating surfaces. il Comp Air Mag 52:108-12 My '47
Cleaning external boiler heating surfaces; oil-fired marine water-tube boilers. F. W. Wright, jr. il Marine Eng 52:97-8 Mr '47
How to operate and maintain water tube cleaners for boilers, heat exchangers, condensers and evaporators. il diag Power Pl Eng 51:78-9+ S '47
Investigation of acid attack on boilers and the effect of repeated acid cleaning on the metal. H. C. Farmer. il A S M E Trans 69:405-11; Discussion. 411-12 My '47
Solvents offer quick removal of mill scale from new boilers. L. B. Wilson. il diags Power 91:458-60 Jl '47
Soot removal; an operating must. J. C. McCabe. il diags Power 91:88-9, 160-1, 235-8+ F-Ap '47

BOILER deposits, Exterior
Analysis of external deposits from boilers. H. E. Crossley, A. H. Edwards and D. Flint. bibliog Soc Chem Ind J 65:251-7 S '46
Boiler plant; external deposits and corrosion. il Elec R (Lond) 139:1061-2 D 27 '46

BOILER explosions
Explosion of a water-tube boiler. Engineering 163:541-2 Je 27 '47
Explosion of heating boiler wrecks greenhouse. il Locomotive 46:194-5 Jl '47
Faulty ignition endangers boilers. F. X. Gilg. diags Power 91:777-9 N '47
Furnace explosion in water tube boiler causes damage aground and aloft. il Locomotive 46: 130-1 Ja '47
Furnace explosion in water tube boiler causes $30,000 damage. il Locomotive 46:86-8 Jl '46; Same. Power Pl Eng 50:81 D '46
Furnace explosions. A. H. Agaton. il Safety Eng 92:54-5 O '46
Preventable accidents caused by incompetence of operators. Locomotive 46:203 Jl '47

BOILER feed pumps. See Pumps, Feed water

BOILER feed water. See Feed water

BOILER furnaces. See Furnaces, Boiler

BOILER plants
Underpinning features commercial building construction; installation of heating plant. J. C. Weaver. il plan Civil Eng 16:542-3 D '46
See also
Boilers
Steam plants

Costs
Selling gas for firing large boilers; comparative fuel costs and efficiencies. L. S. Reagan. Am Gas Assn Proc 1946:248-52

Equipment
Automatic control. J. E. O'Breen. diags Blast F & Steel Pl 35:236-8+, 366+ F-Mr '47
Bellefield boiler plant continues expansion. R. D. Spellman. il plan diags Power Pl Eng 51:112-14+ My '47
Blowoff tanks and systems. T. W. Reynolds. diags Heat & Ven 44:70-6 O '47
Calculation of heat recovery at Cities Service refinery with continuous blowoff system. M. C. McKeown. il diag Pet Refiner 26:107-9 Jl '47
Chemical feeds for new water conditioner electrically operated, centrally controlled. C. E. Joos. flow diag Pet Processing 2:156-7 F '47
Corrosion-erosion of boiler feed pumps and regulating valves. H. A. Wagner and others. il diags A S M E Trans 69:389-97; Discussion. 397-403 My '47
Modern boiler, tank and line insulation; Salisbury axle plant. il Power Pl Eng 51: 84-6 S '47
Proper fan installation reduces operating and maintenance costs. J. P. Holtzclaw. il diags Power 91:171-3+ Mr '47
Steam power plant corrosion problems; abstract. J. A. Keeth. Elec World 127:87 Mr 1 '47
What the power engineer needs to know about heat insulation. il Power Pl Eng 51: 77-9 O '47
See also
Carbon dioxide recorders
Feed water heaters
Pumps, Feed water
Soot blowers
Stokers, Mechanical
Water gages

Management
Operation and maintenance. diag Power 90: 847-52 D '46
Preparing a steam generator for service. J. C. Gore. diags Power Pl Eng 50:99-103 N '46
Starting up steam generators. J. C. Gore. il diags Power Pl Eng 51:68-73+ F '47

Safety measures
Faulty ignition endangers boilers. F. X. Gilg. diags Power 91:777-9 N '47
Maintaining safe water-level. G. E. Coons. Paper Ind 29:1023-4 O '47
Safe boiler operation. M. H. Kuhner. Power Pl Eng 50:120+ N '46

Standards
Steam boiler plants. Chem Age (Lond) 57: 386 S 20 '47

BOILER scale
Formation of boiler scale. Oil & Gas J 45:111 F 15 '47
Identification of scale deposits. Oil & Gas J 45:173 F 22 '47
Inhibition of hard scale in boilers, and the action of static charges upon colloids. E. J. B. Willey. bibliog il diag Soc Chem Ind J 65:433-6 D '46
See also
Boiler deposits, Exterior

BOILER tubes
Measurement of corrosion pits in boiler tubes. B. M. Thornton. il diag Engineering 163:229-30 Mr 28 '47
Soot removal; an operating must. J. C. McCabe. il diags Power 91:88-9, 160-1, 235-8+ F-Ap '47
Tube cleaning hints. Power Pl Eng 51:87-8 Mr '47
Tube rolling. diags Power Pl Eng 51:93 S '47
What bows the tubes in low-pressure hrt boiler? diags Power 91:122-5+ F '47

BOILERS
Boiler for Springdale's new 80,000-kw unit; illustrations with text. Power Pl Eng 50: 75 N '46
Boilers for power and process loads in small plants; with cost data. W. W. Gaylord. diags Power Pl Eng 51:84-5 My '47
Cost of steam varies according to type of boiler unit used in steam production. C. O. Brown. diag Ind & Eng Chem 39:69A-70A Ap '47
Feedwater, pressure vessels; abstracts of ASME papers. diag Power 90:934 Mid-D '46
How one plant keeps oil out of boilers. C. R. Kenney. diag Power 91:118-19 F '47
How to calculate combustion space. Power Pl Eng 50:104 Ag; 109 N '46
Insulating boiler headers can be profitable. il Pet Processing 2:125 F '47
Modern boiler, tank and line insulation; Salisbury axle plant. il Power Pl Eng 51: 84-6 S '47
Placing the steam generator in operation. J. C. Gore. diags Power Pl Eng 51:78-82+ My; 108-11+ Je '47.
Preparing a steam generator for service. J. C. Gore. diags Power Pl Eng 50:99-103 N '46

BOILERS—*Continued*
Recent engineering developments in Switzerland on gas turbines and steam generators. H. J. Rose. bibliog U S Bur Mines Information Circ 7403:1-38 '47
Steam generation; boilers and how they operate; types, characteristics, construction details, design, operation and maintenance. diags Power 90:806-52 D '46
Temper brittleness in boiler steels and rail steels. W. J. Holtman and W. C. Keil. il 9pls Colorado School of Mines [Golden] Quarterly 42 no 2:1-56 bibliog(p55-6) Ap '47 (pa $1)
Trends in steam generation among steel mills. A. D. Blake. diags Blast F & Steel Pl 35:112-13 Ja '47
What's in a name? boiler ratings, and how to specify boilers and unit heaters. S. Lewis. Heating-Piping 18:102 N '46

See also
Boiler explosions and other headings beginning Boiler
Feed water
Feed water purification
Flue gas
Mechanical draft

Blowdown

Are blowdown valves in the right spot? question with answers. diags Power 91:342-5, 414-17+ My-Je '47
Blowoff tanks and systems. T. W. Reynolds. diags Heat & Ven 44:70-6 O '47
Boiler blowdown, like a hole in your pocket, can waste income. N. T. Pef. il diag Power 91:166-7 Mr '47
Chart to determine boiler-water concentration and blowdown; data sheet. Power 91:61 Ja '47
Correct blowdown setting keeps boiler and steam clean, saves fuel dollars. W. D. Turner. Power 91:28-9 Ja '47
How define per cent of blowdown? Power Pl Eng 51:99 Je '47
How to determine heat recovery with boiler continuous blowdown system; chart. M. C. McKeown. Elec World 128:79 Ag 2 '47
Placing the steam generator in operation. J. C. Gore. diags Power Pl Eng 51:79-80 My '47

Cleaning

See Boiler cleaning

Coke firing

Burning coke breeze on a chain grate stoker. F. X. Gilg. diags Blast F & Steel Pl 35:1252-4+ O '47
Mirrlees Watson automatic stoker designed to feed coke. il Engineer 182:599 D 27 '46

Control

Automatic control. J. E. O'Breen. diags Blast F & Steel Pl 35:236-8+, 366+ F-Mr '47
Automatic control applied to modern high-pressure boilers; abstracts. L. Young. Engineering 163:543 Je 27 '47; diag Electrician 138:1375-6 My 23 '47
Automatic operation of electric boilers. M. Eaton. il diags Elec Eng 66:991-5 O '47
Boiler draught control; abstract. D. D. Rayner. Electrician 139:1147 O 17 '47
Lockheed hydraulic remote-control gear; controlling draft fans of boilers. il diags Engineering 162:608-9 D 27 '46; Abstract. Mech Eng 69:242-3 Mr '47
Power plant performance reports step up sales for Northern equipment company. D. Allshouse. il Ind Marketing 32:46-7+ Ap '47
Uncontrollability factors in boiler operation. J. A. Pellettere. diags Power Pl Eng 51:80-2 Ap '47

Corrosion

Corrosion and embrittlement of boiler metal at 1350 pounds operating pressure. L. E. Hankison and M. D. Baker. bibliog il A S M E Trans 69:479-86; Discussion. 500-3 Jl '47
Corrosion and oxidation experiences in high pressure and high temperature steam service. P. M. Brister and J. B. Romer. bibliog il diags Electrochem Soc Trans 91(preprint 17):249-72 '47; Abstracts. Blast F & Steel Pl 35:578+ My '47; Mech Eng 69:500-1 Je '47; Pet Eng 18:60 My '47
Corrosion and pitting in boiler systems. Oil & Gas J 45:87 Ja 18 '47
Curing corrosion in boiler drums. Elec World 126:86 D 21 '46
Experiences with internal-boiler-surface corrosion in 1450-lb open-pass boilers at West End station of the Cincinnati gas and electric company. E. H. Mitsch and B. J. Yeager. il diag A S M E Trans 69:487-91; Discussion. 500-3 Jl '47
Gage-glass condensate cracks metal by pocketing at drum counterbore. J. A. Keeth. il diags Power 91:532-3 Ag '47
Investigation of acid attack on boilers and the effect of repeated acid cleaning on the metal. H. C. Farmer. il A S M E Trans 69:405-11; Discussion. 411-12 My '47
Measurement of corrosion pits in boiler tubes. B. M. Thornton. il diag Engineering 163:229-30 Mr 28 '47
Some experiments on corrosion of steel by boiling water. A. J. Gould and U. R. Evans. bibliog diag Iron & Steel Inst J 155: 195-200 F '47
Wall-tube corrosion in steam-generating equipment operating around 1300 psi. F. G. Straub. il diags A S M E Trans 69:493-9; Discussion. 499-503 Jl '47
Water-treatment question box; what causes boiler corrosion? K. M. Herstein and J. S. G. Shotwell. Power 91:55 Ja '47

See also
Boilers—Failure

Design

Boiler design for extreme load variations. M. H. Kuhner. diags A S M E Trans 68: 895-902; Discussion. 902-4 N '46
Construction; design and performance. diags Power 90:832-46 D '46
Packaged boilers. M. Frisch and H. H. Hemenway. bibliog il diags A S M E Trans 69: 177-84; Discussion. 184-9 Ap '47
Steam generators; firetube types. diags Power 90:814-19 D '46
Swirlyflo fire-tube boilers. il diags Engineering 163:495-7 Je 13 '47

Efficiency

Generation and utilization of steam in the heavy industries. G. E. Hider. Inst Mech Eng J & Proc 155 (War emergency issue no 22):376-84; Discussion. 385-6 '46
Selling gas for firing large boilers; comparative fuel costs and efficiencies. L. S. Reagan. Am Gas Assn Proc 1946:248-52

Electric heating

America's first all-electric laundry; with cost data. il Elec World 128:70-1 Jl 5 '47
Automatic operation of electric boilers. M. Eaton. il diags Elec Eng 66:991-5 O '47
Electric boilers from the utility point of view. L. B. Stirling. Elec Eng 66:995-7 O '47
Electric laundry. il Elec West 98:84-5 Ap '47
Electric steam boilers use excess hydro power in Switzerland. il diag Power 90:856+ D '46
Electric-steam heating cuts spoilage; rubber printing plate press. il Elec World 128:92 S 27 '47

Embrittlement

See Boilers—Failure

Equipment

See also
Air preheaters
Feed water heaters
Water gages

Failure

Caustic embrittlement in boilers. P. Hamer and E. W. Colbeck. il Inst Chem Eng Trans 21:38-40 '43
Corrosion and embrittlement of boiler metal at 1350 pounds operating pressure. L. E. Hankison and M. D. Baker. bibliog il A S M E Trans 69:479-86; Discussion. 500-3 Jl '47
Hidden danger in lap joints. H. M. Spring. diags Power 91:331 My '47
Preventable accidents caused by incompetence of operators. Locomotive 46:203-4 Jl '47
Water treating; embrittlement. Oil & Gas J 45:289 Ja 25 '47
When sections crack. il Locomotive 46:136-41 Ja '47

See also
Boiler explosions

BOILERS—*Continued*

Firing

Boiler draught production by means of the jet air-pump. S. F. Benson. diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):311-21; Discussion. 321-7 '45

Boiler installations on the Continent, and future problems. J. H. Bock. il map diags Inst Mech Eng J & Proc 155 (War emergency issue no 22):387-99; Discussion. 399-400 '46

Byproduct steam cuts fuel cost in large pulp and paper mill; Kalamazoo vegetable parchment co. il diags Power 91:518-21+ Ag '47

Cinder and fly-ash factors when burning small anthracite coal on traveling-grate stokers. C. S. Gladden. bibliog diag A S M E Trans 69:191-8 Ap '47; Excerpts. Power Pl Eng 50:124 D '46; Discussion. A S M E Trans 69:198-202 Ap '47

Clean stacks; a job for the power engineer. L. N. Rowley and J. C. McCabe. il Power 91:442-3 Jl '47

Cut your smoke by increasing turbulence. diags Power 91:407-8 Je '47

Cyclone burners made Chicago utility standard. Elec World News ed 128:13 S 6 '47

Faulty ignition endangers boilers. F. X. Gilg diags Power 91:777-9 N '47

Fuel and the future conference; abstracts. Elec R (Lond) 139:605-8 O 18 '46; Electrician 137:1067-9 O 18 '46

Fuels and combustion. il diags Power Pl Eng 51:76-8 Ja '47

German coal usage. H. A. Herder. Mech Eng 69:38 Ja '47

Guide for reducing fuel consumption in commercial plants. J. F. Barkley and others. il 2pls diags U S Bur Mines Bul 466:1-168; pa 50c Supt. of doc. '47

Horizontal cyclone burner for use with crushed coal. A. E. Grunert and others. il diags A S M E Trans 69:613-27 Ag '47; Excerpts. Elec World 126:69-71 D 21 '46; Power Pl Eng 51:113-14 F '47; Abstract. Power 91:15-18+ Ja '47; Discussion. A S M E Trans 69:627-34 Ag '47

Hot secondary air supply saves fuel and improves combustion; patent. il diag Pet Processing 1:263 D '46

How fuel burns; start of pollution and its remedy. L. N. Rowley and J. C. McCabe. diags Power 91:525-7 Ag '47

Know coal and its selection for smokefree combustion. L. N. Rowley and J. C. McCabe. il Power 91:758-61 N '47

Plant saves fuel by burning waste hemp; Plymouth cordage co. C. B. Hudson. il diags Power 91:555-7 Ag '47

Research on coal utilisation. R. W. Foot. Engineering 163:7 Ja 3 '47; Same cond. Engineer 182:567 D 20 '46

Selection of boiler plant for chemical works. il Chem Age (Lond) 56:376-8 Mr 29 '47

Shovel on wheels meets an emergency. il Power 91:483 Jl '47

Smoke abatement can pay off. il diags Power 91:703-5 O '47

Steam generation in steel mills. F. X. Gilg. diags Blast F & Steel Pl 35:106+ Ja '47

Steam jet blowers and fans on steam boilers at gas-works. R. L. Greaves. il Gas J (Lond) 250:288+ My 7 '47

Wartime experience in combustion of wide variety of coals is applied in peacetime. J. E. Tobey. Min & Met 28:108-9 F '47

What is best way to build coal conveyor? diags Power 91:268-70 Ap '47

What is safe way to burn fiber in hrt boiler? diags Power 91:198-9+ Mr '47

Why not take before and after photos of coal segregation and other power plant problems? C. T. Smith. il Power 91:335-6 My '47

See also

Boilers—Coke firing
Boilers—Oil firing
Boilers—Pulverized coal firing
Boilers, Heating—Firing
Boilers, Marine—Firing
Locomotive boilers—Firing
Stokers, Mechanical

Foaming and priming

Foaming in boilers can be economically controlled. W. H. Thompson and C. Jacklin. diag Power Pl Eng 51:80-1 Jl '47

Water treatment question box; what causes solids carryover? K. M. Herstein and J. S. G. Shotwell. diags Power 91:275 Ap '47

Foundations

Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72:759-80 Je '46; Discussion. 72:1321-4; 73:79-84, 915-22 N '46, Ja, Je '47

Furnaces

See Furnaces, Boiler

Gas firing

How to fire oil or gas without smoke. L. N. Rowley and J. C. McCabe. il diags Power 91:592-6 S '47; Discussion. 91:856-7+ D '47

Memorandum on soot blowing. A. J. Anderson. Power Pl Eng 51:86-7 Je '47

Selling gas for firing large boilers; comparative fuel costs and efficiencies. L. S. Reagan. Am Gas Assn Proc 1946:248-52

La Mont boiler

See Boilers, Water tube—La Mont boiler

Manufacture

Automatic fusion welding; Renfrew works of Babcock & Wilcox. il Elec R (Lond) 141: 237-42 Ag 15 '47

Oil firing

Boiler conversion eases fuel crisis; Fisk and Northwest stations of the Commonwealth Edison co., Chicago. P. B. Juhnke. il Elec World 127:57 Mr 1 '47

Conversion to fuel oil. F. J. Erroll. Chem Age (Lond) 55:671-3 N 30 '46

How Cleveland Company's rapid switch to oil was made during coal strike. D. R. Buschman. il Edison Elec Inst Bul 15:5-8 Ja '47

How to fire oil or gas without smoke. L. N. Rowley and J. C. McCabe. il diags Power 91:592-6 S '47; Discussion. 91:856-7+ D '47

How to store and handle fuel oil. R. J. Bender. il plan diags Power Pl Eng 51:118+ O '47

Indicating lamps simplify trouble-shooting in heating plant; Bell & Howell company, Chicago. B. Weaver. il diags Factory Management 105:86-8 F '47

Neasden conversion scheme; oil-firing project. il plan Electrician 137:1277-8 N 8 '46

Tailor-made industrial oil firing. R. J. Bender. il diags Power Pl Eng 51:101-3+ Mr '47

To convert from stoker to oil firing. J. A. McMullin; C. Gerbig; C. V. Emerson. diags Power Pl Eng 50:106-7 S; 109 N '46

Twenty years of progress in industrial oil firing. R. J. Bender. il diags Power 91:90-2 F '47

See also

Locomotive boilers—Oil firing

Pulverized coal firing

Future of pulverised-coal firing in Great Britain. C. H. Sparks. Engineer 182:590-1 D 27 '46; Abstract. Electrician 137:1835-6 D 27 '46; Discussion. Elec R (Lond) 139: 1063; 140:34-6 D 27 '46-Ja 3 '47; Electrician 138:49-51 Ja 3 '47

History and use of pulverized fuel at Detroit power stations; disposal and uses of fly ash and cinders. P. W. Thompson. il diags Power Pl Eng 51:108-10 O '47

Horizontal furnace burns low-grade coal. Sci Am 176:173-4 Ap '47

Operation of pulverized fuel systems. il diags Power Pl Eng 51:84-7 Ap '47

Placing the steam generator in operation. J. C. Gore. diag Power Pl Eng 51:108-11+ Je '47

Second steam generator for Bathurst. W. S. Hosking. il diag Pulp & Pa of Can 48:57-60 F '47

Starting up steam generators. J. C. Gore. il diags Power Pl Eng 51:68-73+ F '47

Steam jet fuel pulverizer. diag Heat & Ven 44:87 F '47

BOILERS—*Continued*

Repair

Boiler trouble-shooting chart; data sheet. H. M. Spring. Power 90:877 D '46
What is the advantage of each boiler-patch shape? diags Power 91:562-4 Ag '47

Settings

Rebuilding boiler setting improves performance, reduces maintenance. J. G. Thorpe. il Power 91:620-1 S '47

Standards

Proposed revisions and addenda to boiler construction code. diags Mech Eng 69:166-7, 330-2, 868-9 F, Ap, O '47
Report of committee on the standardization of oil-field boilers. Am Pet Inst Proc 26(4): 187-96 '46
Report of subcommittees of the committee on the standardization of oil-field boilers. diags Am Pet Inst Proc 25(4):140-3 '45

Wood firing

Photocell improves sander-dust burning in veneer plant. diag Power 91:409 Je '47
Waste-wood utilization by the United States plywood corporation. Mech Eng 69:781 S '47

BOILERS, Heating

Boiler headers lose heat? insulate; with cost data. Dom Eng 168:143 N '46

Electric heating

Heating at the Bodleian library. il Electrician 137:1380 N 15 '46

Firing

Fuel forecast and what to do about it. K. Steiner. il Heating-Piping 19:78-80 O '47

Gas firing

Chimney liner corrosion resulting from gas-fired furnaces. G. B. Johnson. Gas Age 100: 29-32+ Jl 10 '47
LP; fourth string to the automatic heat bow. il Dom Eng 170:157-8 O '47

Oil firing

Effect of catalytically cracked fuels on heating system design. E. B. Delgass and B. S. Garrett. il Heat & Ven 44:61-3 Ja '47
Heating the Metropolitan Life apartment projects. L. Smith and W. Bessler. il diag Heating-Piping 19:81-2 S '47
Packaged steam generators; shipped with burner and controls completely assembled. C. H. Neiman. il Heat & Ven 44:66-70 Jl '47

Roof installation

Highest heating installation; boiler installed on roof of Kirby building, Dallas. il Dom Eng 169:112-15+ Mr '47; Gas Age 99:33-4 Mr 6 '47; Eng N 138:414 Mr 13 '47; Heat & Ven 44:102+ Mr '47; Heating-Piping 19: 93 Mr '47; Power Pl Eng 51:136 Je '47
Houses heating boilers on roof to keep valuable space marketable. H. B. Steggall. il Power 91:302-3 My '47
New roof-top boiler room heats Dallas building. il plan diag Arch Forum 86:173 Ap '47

BOILERS, Marine

Cleaning external boiler heating surfaces; oil-fired marine water-tube boilers. F. W. Wright, jr. il Marine Eng 52:97-8 Mr '47
Feed distribution and hunting in marine water-tube boilers. H. Hillier. diags Inst Mech Eng J & Proc 156:Proc 139-55, pl 1-4 S '47; Same. Engineering 162:548-52, 573-5 D 6-13 '46; Same cond. Engineer 182: 450-1, 477-9 N 15-22 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 155-75 S '47; Engineering 162:472-3, 498-9, 521, 592; 163:41 N 15-29, D 20 '46, Ja 10 '47
Reducing modern marine steam power plant casualties. L. M. Goldsmith. Marine Eng 52:77-8 Ap '47
Water arch furnace for Scotch boilers. il diags Power Pl Eng 51:122+ Ag '47

See also Naval boiler and turbine laboratory

Efficiency

Heat-balance calculations for a marine steam power plant. F. V. Smith. diags Marine Eng 52:76-85 Jl '47

Firing

Cut your smoke by increasing turbulence. diags Power 91:407-8 Je '47
Fuel consumption of Liberty ship reduced over 10 percent. il diag Marine Eng 52: 86-8 Ap '47

BOILERS, Range

Method of installing an automatic electric hot water range boiler and a hot water range boiler of 40 gals. diag Dom Eng 168:126 N; 123-4 D '46; 169:116 Ja; 123 F '47

BOILERS, Waste heat

Light weight waste heat boiler is economical for cat crackers; patent. diag Pet Processing 2:271 Ap '47
Waste-heat boiler. il Sci Am 177:229-30 N '47

BOILERS, Water tube

Expansion theory of circulation in water-tube boilers. R. F. Davis. Engineering 163:145-8 F 14 '47
Explosion of a water-tube boiler. Engineering 163:541-2 Je 27 '47
Feed distribution and hunting in marine water-tube boilers. H. Hillier. diags Inst Mech Eng J & Proc 156:Proc 139-55, pl 1-4 S '47; Same. Engineering 162:548-52, 573-5 D 6-13 '46; Same cond. Engineer 182:450-1, 477-9 N 15-22 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 155-75 S '47; Engineering 162:472-3, 498-9, 521, 592; 163:41 N 15-29, D 20 '46, Ja 10 '47
Present-day water-tube boiler practice. Engineer 183:114-15 Ja 31 '47
Second steam generator for Bathurst. W. S. Hosking. il diag Pulp & Pa of Can 48:57-60 F '47
Soot removal; an operating must; soot blowers for watertube boilers. J. C. McCabe. diags Power 91:235-8+ Ap '47
Steam generators; water-tube types. diags Power 90:820-31 D '46
Technique for insulating boiler headers. il Power Pl Eng 51:126+ My '47
Thermodynamic theory of circulation in water-tube boilers. R. S. Silver. Inst Mech Eng J & Proc 153 (War emergency issue no 9):261-71 bibliog(p271); Discussion. 272-81 '45
Water-tube boilers for iron and steel works. Iron & Steel Inst J 156:90-7 My '47; Discussion. il diags 156:541-62 Ag '47

La Mont boiler

Development of the La Mont boiler in Great Britain. G. A. Plummer. diags Inst Mech Eng J & Proc 155 (War emergency issue no 22):333-45, pl 1-4 '46; Same cond. Engineer 181:83-5, 116-17 Ja 25-F 1 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 22):357-75, pl 5-6 '46; Engineer 181:88-9 Ja 25 '46
La Mont boiler developments in Sweden, 1932-1946. diags Engineer 182:502-3 N 29 '46
Operating experience with La Mont boilers, with special reference to feed water problems. G. A. J. Begg and others. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 22):346-57 '46; Same cond. Engineer 181:129-31 F 8 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 22):357-75, pl 5-6 '46

BOILING

Acoustical concomitants of cavitation and boiling, produced by a hot wire. M. F. M. Osborne and F. H. Holland. bibliog il diags Acoustical Soc Am J 19:13-29 Ja '47
Boiling coefficients for finned tubes. W. E. Zieman and D. L. Katz. bibliog flow diag il Pet Refiner 26:78-82 Ag '47

BOILING points

Antoine vapor-pressure equation for mononuclear aromatic hydrocarbons. N. Corbin, M. Alexander and G. Egloff. J Phys & Colloid Chem 51:528-40 Mr '47
Apparatus for determining boiling points. L. M. Simmons. diag J Chem Educ 24:233-4 My '47
Calculation method for complex mixtures. W. D. Harbert. bibliog Ind & Eng Chem 39:1118-24 S '47
Calculation of relative volatility from boiling points. F. W. Melpolder and C. E. Headington. bibliog Ind & Eng Chem 39:763-6 Je '47

BOILING points—*Continued*
Determination of the boiling-points of liquids of low vapour pressure. G. Burrows. bibliog diag Soc Chem Ind J 65:360-5 N '46
Hydrofluoric acid-water and hydrofluoric acid-hydrofluosilicic acid-water. P. A. Munter, O. T. Aepli and R. A. Kossatz. bibliog il diags Ind & Eng Chem 39:427-31 Mr '47
Method of calculating the boiling points of silicon compounds. R. N. Lewis and A. E. Newkirk. bibliog Am Chem Soc J 69:701-3 Mr '47
Naphthenic acids; boiling points and distribution in gas oil distillates. K. F. Coles. Inst Pet J 33:325-9 My '47
Nomograph for normal boiling points of hydrocarbons. G. E. Mapstone. Pet Refiner 26:120-1 Mr '47
Structural determination of paraffin boiling points. H. Wiener. bibliog Am Chem Soc J 69:17-20 Ja '47
See also
Azeotropes
Vapor pressure

BOLIVIA
Engineer looks at Bolivia. R. Hammond. maps diags Engineer 183:509-11, 535-6, 556-8 Je 13-27 '47
See also
Airlines—Bolivia
Land tenure—Bolivia
Tin mines and mining—Bolivia
Tungsten mines and mining—Bolivia

Commerce
Shortage of dollar exchange has become serious. For Comm W 28:8 Jl 12 '47

Economic conditions
News by countries. Published in Foreign commerce weekly

BOLOMETERS
Bolometers for v.h.f. power measurement. E. M. Hickin. il diags Wireless Eng 23: 308-13 N '46
Construction and characteristics of evaporated nickel bolometers. B. H. Billings and others. il diag R Sci Instr 18:429-35 Je '47
Fast bolometer, tuned amplifier, and light-chopper provide the means of an infrared spectrophotometer. R. H. Müller. il diag Anal Chem 19:25A-6A Mr '47
Heating and cooling of bolometer elements. J. N. Shive. bibliog diags J Ap Phys 18:398-405 Ap '47
Investigation of the properties of evaporated metal bolometers. B. H. Billings, W. L. Hyde and E. E. Barr. diags Opt Soc Am J 37:123-32 Mr '47
Microwave power measurement. T. Moreno and O. C. Lundstrom. il diags Inst Radio Eng Proc 35:514-18 My '47
Superconducting bolometer for infrared measurements. R. M. Milton. bibliog il diags Chem R 39:419-33 D '46
Superconductive radio-frequency detector. il Electronics 20:142+ F '47
Theoretical consideration in heat and infrared detection, with particular reference to the pneumatic detector. M. J. E. Golay. diags R Sci Instr 18:347-56 My '47

BOLTON, Elmer K. 1886-
American contemporary. A. D. McFadyen. Chem & Eng N 25:3145 O 27 '47

BOLTS and nuts
Anchor-bolt design for all refinery vessels. S. W. Lewaren. diags Oil & Gas J 46:127 Je 14 '47
Anchor bolts set in drilled holes. E. L. Richard. Am Concrete Inst J 19:81-3 S '47
Automatic tension nut improves hacksawing. D. E. McDonald. il diag Am Mach 91:151 Je 19 '47
Calculation chart; bolt and stud tension; data sheet. R. Septor. diag Power 91:575 Ag '47
Cast bolts for pipe joints. C. K. Donoho. il diag Mech Eng 69:739-42 S '47
Fasteners for aircraft. il diags Aviation 46: 35-50 My '47
Interchangeability of B.S.W. and American national nuts and bolts. Engineer 183:104 Ja 24 '47
Locking fasteners. H. Raech, jr. il diags Machine Design 19:128-32+ Je '47
Nuts, bolts and maintenance. diags Mech Handling 33:737-9 D '46
Plaster and masonry fastenings. T. Trail. diags Power Pl Eng 51:90-1 My '47
Portable electric stud-welding machine, Cycarc. il Engineering 163:234, 240 Mr 28 '47
Powder actuated tool develops force capable of driving threaded stud into steel. il diag Machine Design 19:108 F '47
Stripper bolts; standards; reference book sheet. Am Mach 91:151 Ag 28 '47

Manufacture
Casting fastening hardware with dies and metal molds: J. Edward Ogden corp. H. Chase. il diag Steel 121:94-6+ Ag 18 '47
High-production nut tapper made from standard parts. D. A. Baker. diag Mach 53:192-3 Ap '47
Modern heat-treating methods in an automobile plant; Buick motor division, General motors corporation. C. H. Wick. il diags Mach 53:141-3 Ja '47
Waterbury Farrel announces giant nut former. il Iron Age 158:80 D 19 '46

Standards
Economic aspects of standardization; internal wrenching bolt. J. F. Cramer. il Ind Stand 18:164-6 Jl '47

Testing
Does torque weaken bolts? H. O. Hill. Eng N 139:120-1 Jl 24 '47
Studs tested with helium under pressure. il Comp Air Mag 51:307 N '46

BOMBS
Bomb filling with 80:20 amatol; procedure may have peace-time application. H. Graham and others. il diags Can Chem & Process Ind 30:37-41 N '46
Investigation of explosions. C. Field. il diag Mech Eng 69:629-38 Ag '47; Same cond. Chem Eng 54:102-4 Ja '47

BOMBS (chemical apparatus)
See also
Oxygen bombs

BOMBS, Aerial
Research and development applied to bomb disposal. H. J. Gough. diags Inst Mech Eng J & Proc 156:Proc 6-16, pl 1-8 Je '47; Same. Engineering 163:20-4, 44-8 Ja 3-10 '47; Same cond. Engineer 182:465-7, 484-6 N 22-29 '46
See also
Bombs, Flying

BOMBS, Atomic. See Atomic bombs

BOMBS, Flying
Air-power status. Mech Eng 69:854-6 O '47
Fairey guided missile. il Engineer 183:332-3 Ap 18 '47
Flight control of rockets. G. White. il diag Aero Digest 54:50-1+ My '47
Full-scale free-flight ballistic measurements of guided missiles. L. A. Delsasso, L. G. de Bey and D. Reuyl. plan Aviation W 47: 28+ S 15 '47
Gaging rocket-engine forces and flows. G. P. Sutton. il diags Aviation 46:46-8 Ap '47
German guided and rocket missiles. E. Burgess. il diags Engineer 184:308-10, 332-3, 356-8, 381-3, 407-9 O 3-31 '47
Giant rocket test center planned for California desert. Aviation N 7:13 Je 9 '47
Guided missiles. Franklin Inst J 243:489-91 Je '47
If we are to build the weapons. L. C. Stevens. Aero Digest 54:20-1 Mr '47
Jet propulsion measurements. Gen Elec R 50:56-7 Ap '47
Nature of shock waves. M. M. Munk. il Aero Digest 54:66-7+ F '47
Navy developing variety of missiles. W. Kroger. il Aviation N 6:9-10 N 11 '46
New navy rocket aimed at ionosphere; Neptune built by the Glenn L. Martin co. il Aviation N 7:13 My 12 '47
New V-2 used as flying wind tunnel. Aviation N 7:10-11 Je 2 '47
Pilotless airplane and missile control. bibliog il Electronics 20:152+ Ap '47
Radar-guided bomb. il Electronics 19:186+ D '46
Radar signals guide missiles in flight. Electronics 20:160+ Jl '47

BOMBS, Flying—*Continued*
Radio control systems for guided missiles. S. L. Ackerman and G. Rappaport. il diags Electronics 19:86-91 D '46
Research on guided missiles. R. S. Neblett. Franklin Inst J 243:40 Ja '47
Rocket tests. H. Rivkins. Mech Eng 69:415 My '47
Scientist rebels against furnishing information concerning controlled missiles. N. Wiener. il Metal Prog 51:598 Ap '47
Telemetering from V-2 rockets; time-modulated pulse system in nose samples instruments and transmits readings to ground station. V. L. Heeren and others. il diags Electronics 20:100-5 Mr; 124-7 Ap '47
Tiamat, NACA research missile. il Aero Digest 54:80 F '47
Too few, too late; group of German remotely controlled rockets might have become formidable weapons. W. Ley. diags Tech R 49: 281-2+ Mr '47
Yale-G.E. joint research on guided missile controls. Product Eng 18:137-8 My '47

Testing

Blockhouse for V-2 rocket tests. il diag Engineering 163:31, 36 Ja 10 '47
Essais de projectiles à réaction V2 à White Sands (Nouveau-Mexique, É.-U.). il Génie Civil 124:15-16 Ja 1 '47
White Sands proving ground. Tech R 49:24 N '46

BOMBS, Incendiary
Analysis of thermite-type incendiary and pyrotechnic mixtures. C. E. Danner and J. Goldenson. bibliog Anal Chem 19:627-30 S '47
Tendency to smoke of organic substances on burning. A. E. Clarke and others. pl diags Inst Pet J 32:627-42, 643-55 O-N '46

BOND club of Cleveland
New officers and pictures of silver anniversary celebration. Comm & Fin Chr 166: insert A-B Jl 3 '47

BOND traders club of Chicago
Twentieth anniversary mid-winter dinner; portraits. Comm & Fin Chr 165:insert A-D F 6 '47

BONDERIZING
New bonderizing process for aluminum and steel. H. A. Knight. il Materials & Methods 26:99-101 O '47
Phosphate coating of aluminum. R. C. Gibson and W. S. Russell. bibliog il Ind & Eng Chem 38:1222-7 D '46

BONDIMETER
Bondimeter; instrument for detecting faulty bonding of flat, laminated materials. il R Sci Instr 18:376-7 My '47

BONDS
Axis bonds. Fortune 36:123 Jl '47
Bond market outlook for 1947. F. R. Walters. Mag of Wall St 79:373-5+ Ja 4 '47
Buy bonds on merit without regard to taxes. R. W. Babson. Comm & Fin Chr 165:1293+ Mr 6 '47
Corporate bond experience study. J. R. Morss. Banking 39:111 D '46
Corporate bond study of National bureau of economic research; preliminary report. Trusts & Estates 84:312-14 Mr '47; Same cond. Banking 39:100 Ap '47
Exemption of security interest from income taxes in the United States; an economic and statistical analysis. L. Derrick. bibliog J Bsns 19 pt 2:1-81 O '46
Foresees no change in bond market; Halsey, Stuart and co. Comm & Fin Chr 165:47 Ja 2 '47
Securities dealer says SEC hasn't been much help to holders of bonds of enemy countries. Comm & Fin Chr 165:2855+ My 29 '47
Speculative interest in bonds of enemy countries noted on Wall Street. E. Germain. Comm & Fin Chr 165:2730+ My 22 '47
Study in investment mortality. O. K. Burrell. 56p pa $1 Bur. of business research, School of business administration, Univ. of Oregon, Eugene '47
Tax exemption feature alone no longer assures success for bond offerings. Barron's 27:26 Ag 4 '47

See also
Municipal bonds
New York stock exchange
Railroads—Securities
Securities
Stock exchange
Stocks

Default

Half of foreign dollar bonds paying full interest; position, Dec. 31, 1946. J. T. Madden. Comm & Fin Chr 166:751 Ag 21 '47

See also
Bonds, Government —Default

Prices

Bond prices as a stock market forecaster. J. Coe. Comm & Fin Chr 165:862+ F 13 '47
Bond prices, 1944-1946 average; monthly Dec. 1945-Dec. 1946; weekly Dec. 1946. Fed Res Bul 33:64 Ja '47 [cont monthly]
Listed bond quotations. Published in weekly numbers of Barron's
Monthly range of prices on the New York stock exchange. Comm & Fin Chr 165:512-19 Ja 23 '47
Outlook for interest rates and bond prices. R. W. Valentine. Comm & Fin Chr 165: 1931+ Ap 10 '47

Yields

1944-1946 average, monthly Dec. 1945-Dec. 1946 and weekly Dec. 1946. Fed Res Bul 33:63 Ja '47. [cont monthly]
Trend of bond yields seemingly upward; business loans competing for funds available in banks. B. Ravits. Barron's 27:10 S 22 '47

BONDS, Chemical. See Chemical bonds

BONDS, Government
Securities dealer says SEC hasn't been much help to holders of bonds of enemy countries. Comm & Fin Chr 165:2855+ My 29 '47
Short-term rates unpegged. Bsns W p22+ Jl 12 '47

See also
Debts, Public
Municipal bonds
State bonds
Taxation, Exemption from

Default

Foreign bondholders protective council issues 1945 report on default status of foreign bonds. Comm & Fin Chr 164:3122 D 12 '46
Outlook now for foreign bonds; and where servicing may resume on defaulted issues. J. C. Clifford. Mag of Wall St 79:429-31+ Ja 18 '47
Past record makes education prerequisite for foreign loans. M. Winkler. Comm & Fin Chr 165:2472+ My 8 '47

Marketing

Asks end of pegged short-term rate; opposes bill to restrict Federal reserve purchases to open market; H.R. 2233. M. S. Eccles. Comm & Fin Chr 165:1251+ Mr 6 '47
Banks aid savings bond sales. Banking 39:71 D '46
Bond-a-month plan. N. P. Gregory. Burroughs Clearing House 31:32+ Ap '47
Bond-a-month plan; selling to bank depositors. Banking 39:27+ Ap '47
Building small business reserves by the Bond-a-month plan. R. M. Hanes. Banking 40:36+ Ag '47
Continuing sale of U.S. savings bonds. Nat City Bank p142-3 D '46
Direct exchange of maturing Treasury bills for new issues; statement by Treasury department. Fed Res Bul 33:520 My '47
Economists' national committee on monetary policy urges Congress to repeal all authority of Treasury to sell securities directly to Federal reserve banks. Comm & Fin Chr 165:1522 Mr 20 '47
Explains termination of repurchase privilege on Treasury bills. A. G. Lanston. Comm & Fin Chr 166:124, 232 Jl 10, 17 '47
Federal Reserve terminates fixed rate on Treasury bills. Comm & Fin Chr 166:124 Jl 10 '47

BONDS, Government—Marketing—*Continued*
National debt; bank problem no. 1; savings bond sales. M. M. Townsend. Comm & Fin Chr 165:2738+ My 22 '47
Only in the open market; an inflation safeguard; attacks Wolcott bill. F. E. Lee. Comm & Fin Chr 165:1510+ Mr 20 '47
Opportunity and a responsibility; Bond-a-month plan. R. M. Hanes. Banking 39:54+ Je '47
Permanent authority for Federal reserve to buy bonds from Treasury dangerous. W. E. Spahr. Comm & Fin Chr 165:1375+ Mr 13 '47
Purchase of government obligations by Federal reserve banks; amendment to Federal reserve act; text. Fed Res Bul 33:694 Je '47
Selling savings bonds for good public relations. M. M. Townsend. Comm & Fin Chr 164:3049+ D 12 '46
$10 million worth of bond advertising. J. L. Cooley. il Banking 39:28-9+ My '47
Trading in U.S. bonds. F. N. Childs. Comm & Fin Chr 165:135+ Ja 9 '47
Treasury initiates new bond-buying plan; payroll savings deduction technique extended to bank depositors. Comm & Fin Chr 165:1663 Mr 27 '47
Treasury permits bidders for Treasury bills to obtain new issues on exchange basis. Comm & Fin Chr 165:2390 My 1 '47
Unpegging Treasury bill rates. Nat City Bank p88-9 Ag '47

Prices

Course of prices of government securities for the year 1946; monthly tabulation. Comm & Fin Chr 165:520 Ja 23 '47

Redemption

E savings bond program not worth saving now; with patriotic appeal gone; redemptions are costly to government and buyers. H. Spero and J. Leavitt. Barron's 27:7-8 S 22 '47
Majority in Minnesota hold war bonds; reasons for cashing bonds. Banking 40:79 O '47
Purchasers of war savings bonds not guilty of forgery for signing checks with names of original owners. Banking Law J 64: 387-92 My '47
Savings bond responsibility and liability. W. T. Wilson. Banking 39:117 D '46

Yields

Fallacies of fixed yields on government securities. J. B. Willis. bibliog Comm & Fin Chr 165:592+ Ja 30 '47
Yields on United States government securities; revision of averages; annual figures, 1939-1946; monthly and weekly figures, Jan. 1945-Sept. 1947. Fed Res Bul 33:1251-3 O '47

Australia

Australia files $38,000,000 bonds with SEC in final refunding step. Comm & Fin Chr 165: 2999 Je 5 '47

Canada

New regulations governing sales abroad of Canadian government securities. Comm & Fin Chr 165:1940 Ap 10 '47

China

China proposes issue of U.S. currency bonds. Comm & Fin Chr 165:1938 Ap 10 '47
Chinese borrowing and the yuan. Comm & Fin Chr 165:2524 My 8 '47
Chinese government issues US $400,000,000 in Treasury notes and bonds. For Comm W 27:15 Ap 19 '47

Colombia

Big discount from market in Colombian bond plan. Barron's 27:27 Jl 7 '47
Debt adjustment plan for Colombia units. Comm & Fin Chr 165:2484 My 8 '47

Czechoslovakia

Carlsbad bonds discount plan to pay back interest. Barron's 27:32 Jl 14 '47

Germany

Dawes loan trustees protest; Paris reparations conference made no provisions for servicing 1924 German issue. Comm & Fin Chr 165: 1042 F 20 '47

Great Britain

Britain's cheap money drive. F. B. Makin. Banking 40:45 O '47
Cheap money now. Economist 153:25-6 Jl 5 '47
Doctor's dilemma; gilt-edged market. Economist 153:649-50 O 18 '47
Exchange fears make yield high on British bonds here. Barron's 27:27 My 26 '47
Gilt-edged yield disparities. Economist 153: 208 Ag 2 '47
Savings interest cut. Economist 152:116+ Ja 18 '47

Haiti

Haiti bonds called for redemption, new 5 per cent issue. Comm & Fin Chr 166:530, 636 Ag 7, 14 '47

Italy

Terms of Italian bond plan benefit six-year holders. Barron's 27:4 Jl 14 '47

Netherlands

Holland plans sale of $20,000,000 bonds. Comm & Fin Chr 165:2618, 2864 My 15, 29 '47

Norway

Norway to float new money issue here. Comm & Fin Chr 165:2079 Ap 17 '47

Peru

Peru offers to resume service on dollar bonds. Comm & Fin Chr 165:3351 Je 26 '47
Peru seeks to restore credit at small cost. R. E. Bedingfield. Barron's 27:10 Mr 10 '47
Peru's latest offer to American investors not meeting with acceptance. Comm & Fin Chr 166:218 Jl 17 '47
Peruvian bondholders not given square deal. B. Williams. Comm & Fin Chr 166:4+ Jl 3 '47; Correction. 166:460 Jl 31 '47

United States

Abandon savings bond issue; they compete unfairly with private investment institutions. R. B. Westerfield. Comm & Fin Chr 166:1405+ O 9 '47
Asks end of pegged short-term rate at congressional hearing. M. S. Eccles. Comm & Fin Chr 165:1251+ Mr 6 '47; Excerpts. Fed Res Bul 33:402-4 Ap '47
E savings bond program not worth saving now; with patriotic appeal gone, redemptions are costly to government and buyers. H. Spero and J. Leavitt. Barron's 27:7-8 S 22 '47
Eccles says take it easy. Bsns W p83-4+ Mr 15 '47
Eye-opener on country banks' U.S. bonds. C. F. Pack; T. B. Robb. Banking 39:58+ N '46; 32-3 Ja '47
Federal finances and the money market. Nat City Bank p63-5 Je '47; Same. Comm & Fin Chr 165:2985+ Je 5 '47
How dangerous is the big debt? E. S. Adams. Banking 39:40+ Ap '47
Investment market. H. E. Dickhuth. Banking 39:103 Ja '47 [cont monthly]
More long-term Treasury bonds favored; Bankers trust co. of New York. Comm & Fin Chr 165:873 F 13 '47
1946 Treasury finance and securities market; IBA committee report. Comm & Fin Chr 164:3053+ D 12 '46
No authority for pegging interest rates. A. G. Lanston. Comm & Fin Chr 165:1373+ Mr 13 '47
Outlook for government bonds. R. Rodgers. Comm & Fin Chr 165:1648+ Mr 27 '47
Ownership of U.S. government marketable public issues, by class of security and by earliest callable or due date, end of month, Jan. 1941-Aug. 1947. Fed Res Bul 33:1312-13 O '47
Ownership of U.S. government marketable public securities, by earliest callable or due date, 1942-June 1947; graphs. Fed Res Bul 33:786 Jl '47
Ownership of United States government securities, direct and fully guaranteed, June 1940 and June and Dec. 1941-1945, monthly Feb.-Oct. 1946. Fed Res Bul 33:68 Ja '47 [cont monthly]
Sales redemptions and maturities of United States savings bonds, yearly, 1940-1946, monthly Dec. 1945-Dec. 1946. Fed Res Bul 33:67 Ja '47 [cont monthly]

BONDS, Government—United States—*Cont.*
Security exchanges in world finance. R. A. Foulke. Dun's R 54:11-12+ N '46
September Treasury financing. Nat City Bank p 104-5 S '47
Suggested portfolio policies; what governments? P. R. Easterday. il Burroughs Clearing House 31:17-19+ D '46
Treasury's debt redemption policy weakens business financial position; Northern trust company of Chicago. Comm & Fin Chr 165: 2607+ My 15 '47
United States savings bonds issued and redeemed through Dec. 31, 1946; tabulation. Comm & Fin Chr 165:672 Ja 30 '47
Urges market balance in U.S. debt refinancing. A. Sproul. Barron's 27:11 Je 16 '47
Whither government bonds? R. Rodgers. Comm & Fin Chr 166:1106+ S 18 '47
Your bonds if money rates rise. J. S. Lawrence. Banking 39:40-1 F '47
See also
Bonds, Government—Marketing

BONDS, Municipal. See Municipal bonds

BONDS, Real estate
Real estate bonds well above prewar level. R. C. Baker. Comm & Fin Chr 166:913 S 4 '47
Real estate securities. Published in weekly Thursday numbers of Commercial and financial chronicle

BONDS, Revenue
Financing improvements by revenue or general obligation bonds. W. S. Evatt. Am Water Works Assn J 39:331-6 Ap '47
First revenue-bond bridge pays off; Louisville municipal bridge. C. W. Hanson. il Eng N 138:114-16 Ja 23 '47
Legislation for revenue bond financing; Los Angeles bonds for water and power. S. B. Robinson. Am Water Works Assn J 39: 1021-31 O '47; Abstract. Water & Sewage Works 94:324-5 S '47
Recent revenue bond legislation. L. N. Thompson. Am Water Works Assn J 39: 1032-7 O '47; Abstract. Water & Sewage Works 94:324 S '47

BONDS, State. See State bonds

BONE, William Arthur, 1871-1938
Fuel technologist and chemist. A. C. Egerton. Chem Soc J p 1165-75 D '46

BONE
Deposition of C^{14} in bone. W. Bloom and others. Science 105:45 Ja 10 '47
Histochemical demonstration of alkaline phosphatase in decalcified dental and osseous tissues. R. O. Greep and others. Science 105:666 Je 27 '47
Specific surfaces of bone, apatite, enamel, and dentine. N. V. Wood, jr. bibliog Science 105:531-2 My 16 '47
See also
Fractures (surgery)

BONE grafting
Refrigeration aids bone transplants. Refrig Eng 54:32+ Jl '47

BONNEVILLE power administration
Bonneville Power and labor. O. S. Beyer. Pub Util 39:575-8 Ap 24 '47
Conferences reconciling BPA and northwestern private utilities. Elec World News ed 127:3 Ja 25 '47
Union for power; private and public utility may unite to oppose congressional slash in Bonneville appropriations. Bsns W p22 Ja 25 '47

BONUS system
Bonus and profit sharing raise plant efficiency; Signode steel strapping company. J. M. McGregor. Factory Management 105:102-3 F '47
Good production and cooperation record benefits employees of Rome Cable. Elec World News ed 127:20 Ja 25 '47
How union and workers bought time study and bonus; Liquid Carbonic plan. il Factory Management 105:74-5 O '47
Increasing production; success of bonus scheme at Twickenham switch factory. il Elec R (Lond) 139:1039 D 20 '46
Investment in incentive plan yields one plant 455%; saves another $68,500. P. C. Laborde. il Brick & Clay Rec 110:48+ F '47
See also
Wage payment plans—Group bonus

BONUSES, Non-production. See Wage payment plans

BONUSES, Soldier. See Veterans—Bonuses

BONYUN, William
Portrait. Bsns W p74 Ja 25 '47

BOOK auctions
United States cumulative book auction records, 1940-45. S. R. Shapiro, ed. 2062p $40 U. S. cumulative book auction records, 95 Broad st, New York 4 '46

BOOK industry and trade
Advertising man looks at the book business. il Adv & Sell 39:43+ N '46
Pair of advertising women collaborate on a book to be sold through jewelers; Marriage of diamonds and dolls, by Mary E. Lewis and Dorothy Dignam. Ptr Ink 219:94 Ap 4 '47
See also
Book prices
Booksellers and bookselling
Paper industry and trade
Printing trade
Publishing
Reprints

Advertising
Book promotion in small cities. K. S. Giniger. Adv & Sell 39:66 N '46
How Grolier is dignifying the job of direct-to-consumer selling, T. Armstrong. il Sales Management 59:45-6+ O 1 '47
It's a tough market but this old-timer cracked it; research, advertising and merchandising of ads; Encyclopaedia Britannica children's books. H. E. Green. il Ptr Ink 219:38-9 My 2 '47
Tests prove value of untapped markets; Prentice-Hall pretests Miracle of the bells, novel by Russell Janney. R. H. Ganly. Ptr Ink 218:48+ Mr 28 '47
Why the book clubs are successful. M. Sackheim. il Adv & Sell 40:38+ Ag '47

Hungary
Foreign books and periodicals; new regulations and procedure for importation. For Comm W 29:19 O 25 '47

BOOK of the month club
Book squabble; retailers say they're under sold by club operators. Bsns W p35-6 My 31 '47
Of-the-month clubs hypo advertising, distribution for established manufacturers. N Kelne. Ptr Ink 217:150+ N 15 '46
Pioneering proves profitable. Bsns W p76-8+ Ap 5 '47
Stock offered. Comm & Fin Chr 165:1584 Mr 24 '47
Why the book clubs are successful. M. Sackheim. il Adv & Sell 40:38+ Ag '47

BOOK prices
American book-prices current; a record of literary properties sold at auction in the United States during the season of 1945-1946. E. Lazare, ed. 685p $12.50 R. R. Bowker co, 62 W. 45th st, New York 19 '46
Book squabble; retailers say they're undersold by club operators. Bsns W p35-6 My 31 '47

BOOK reviews
Book review digest; forty-second annual cumulation, March 1946 to February 1947 inclusive, with cumulated index, 1942-1946. M. M. James and D. Brown, eds. 1345p H. W. Wilson co, New York '47
Study of reviewing mediums for technical books. M. M. Field. Special Lib 37:324-6 D '46

BOOK stacks. See Shelving (for books)

BOOKKEEPING
How to keep in cash and out of red ink. J. L. Cooney. Inland Ptr 118:61-2 Ja '47
See also
Accounting

BOOKS
See also
Bibliography — Printing
Libraries — Publishing

BOOKS, Out-of-print. See Out-of-print books

BOOKS and reading
English 113, an experiment in reading; Washington university. A. M. Buchan. J Eng Educ 37:780-5 Je '47

BOOKSELLERS and bookselling
How Grolier is dignifying the job of direct-to-consumer selling. T. Armstrong. il Sales Management 59:45-6+ O 1 '47
Some notes on the acquisition of old books. F. W. Allen. Special Lib 38:73-6 Mr '47

BOOKSELLERS' catalogs. See Catalogs, Booksellers'

BOOKSTACKS. See Shelving (for books)

BOOSTERS
Constant voltage supply for railway cars; amplidyne booster inverter. il Machine Design 18:128 D '46

BOOTH, Paul, 1898-1947
Paul Booth, of Printers' ink. por Ptr Ink 219:84 My 30 '47

BOOTS, Paul Heath, 1909-1947
Sketch. E. A. Eckhardt. por Am Assn Pet Geologists Bul 31:1905-6 O '47

BORATES
Preparation of mixed organic orthoborates. L. H. Thomas. diag Chem Soc J p823-4 S '46
Preparation of simple organic orthoborates. L. H. Thomas. diags Chem Soc J p820-2 S '46

BORAX
Output of Owens Lake chemicals shown. G. D. Dub. Chem .Eng 53:174+ D '46

Manufacture

American Potash announces plant expansion. Chem Eng 53:164+ D '46

BORAZOLE
Absorption spectrum of borazole in the vacuum ultraviolet. J. R. Platt and others. bibliog J Chem Phys 15:598-601 Ag '47

BORDEN company
Annual report. Comm & Fin Chr 165:1860 Ap 7 '47

BOREHOLE surveying
Dip and inclination of drill holes; time-locking device. diags Can Min J 67:1085 N '46
Simple device for measurement of angles of azimuth and deviation from the horizontal on glass tubes used for surveying diamond-drill holes. J. W. Townsend. 4pls U S Bur Mines Rep of Invest 4062:1-3 '47
Technique of surveying diamond-drill holes with the Wright radiolite borehole-surveying instrument. J. W. Townsend and W. H. King. 6pls U S Bur Mines Rep of Invest 4061:1-7 '47

BORERS (insects)
Problem of the dying birch in eastern Canada. R. E. Balch. Pulp & Pa of Can 47:104-5 D '46

BORERS, Marine. See Marine borers

BORG-WARNER corporation
Diversified stake in auto accessories. G. S. Kent. Mag of Wall St 80:165 My 10 '47

BORING bars
Bent-leg inside mike reaches around boring bar. H. Landauer. diags Am Mach 91:147 F 13 '47
Boring bar stops chatter. M. H. Ball. diags Am Mach 91:127 Ag 28 '47
Micro boring bars. il Engineer 182:552 D 13 '46
Solid carbide boring bars. il diags Iron Age 160:44-5 O 23 '47
Supported bar bores small deep holes. J. J. Urello. diag Am Mach 91:146 My 8 '47
Taper pin locks taper shank boring bars. L. W. Spaulding and C. H. Spaulding. diags Am Mach 90:139-40 D 19 '46
Telescoping support centers boring bars. E. J. Rogers. diags Am Mach 91:101 F 27 '47
Universal boring-bar holder designed especially to obtain rigidity. A. M. Thomas. il Mach 53:193-4 F '47

BORING machinery. See Drilling and boring machinery

BORON
Boron in iron and steel. R. S. Dean and B. Silkes. bibliog(297 titles) 13pls U S Bur Mines Information Circ 7363:1-56 '46
Capture cross section of boron for neutrons of energies from 0.01 ev to 1000 ev. R. B. Sutton and others. Phys R 71:272 F 15 '47
Influence of boron on some properties of experimental and commercial steels. T. G. Digges and F. M. Reinhart. bibliog il diags J Res Nat Bur Stand 39:67-131 Jl '47
Method for measuring neutron-absorption cross sections by the effect on the reactivity of a chain-reacting pile. H. L. Anderson and others. Phys R 72:16-23 Jl 1 '47
Thermal neutron velocity selector and its application to the measurement of the cross section of boron. E. Fermi and others. bibliog diag Phys R 72:193-6 Ag 1 '47

See also
Steel—Boron content
Water supply—
Boron content

Analysis

Determination of boric oxide in glass. M. Hollander and W. Rieman, 3d. bibliog Ind & Eng Chem Anal ed 18:788-9 D '46
Fluorometric determination of microgram quantities of boron. C. E. White, A. Weissler and D. Busker. bibliog Anal Chem 19:802-5 O '47

Isotopes

Isotopic constitution of tungsten, silicon, and boron. M. G. Inghram. bibliog diag Phys R 70:653-60 N 1 '46
U.S. atomic energy commission has announced that concentrated boron 10 is available. Science 105:662 Je 27 '47

BORON bromide
Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide. H. M. Spencer. bibliog J Chem Phys 14:729-32 D '46

BORON carbide
Hardest man-made material; boron carbide applied to metalworking operations. il Am Mach 91:122-4 Je 19 '47

BORON chloride
Coördination compounds of boron trichloride; systems with propyl chlorides. D. R. Martin and A. S. Humphrey. bibliog J Phys & Colloid Chem 51:425-30 Mr '47
Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide. H. M. Spencer. bibliog J Chem Phys 14:729-32 D '46

BORON compounds
Physical and chemical properties of organometallic compounds; the oxidation of boron and antimony alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p695-701 Ag '46
Preparation and properties of 2-chloroalkyl esters of boric, silicic, and phosphoric acids. W. J. Jones and others. Chem Soc J p824-7 S '46

BORON fluoride
Boron trifluoride neutron detector for low neutron intensities. E. Segrè and C. Wiegand. diags R Sci Instr 18:86-9 F '47
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Neutron detector having uniform sensitivity from 10 Kev to 3 Mev. A. O. Hanson and J. L. McKibben. bibliog diags Phys R 72: 673-7 O 15 '47
Polymerisation of olefinic substances by Friedel-Crafts catalysts. J. P. W. Houtman. bibliog Soc Chem Ind J 66:102-3 Mr '47
Solubility of boron fluoride in normal pentane. G. N. Cade, R. E. Dunn and H. J. Hepp. Am Chem Soc J 68:2454-5 D '46
Thermal diffusion with boron trifluoride. W. W. Watson and others. bibliog diag Phys R 71:887-90 Je 15 '47
Thermal neutron velocity selector and its application to the measurement of the cross section of boron. E. Fermi and others. bibliog diag Phys R 72:193-6 Ag 1 '47

BORON fluoride—*Continued*
Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide. H. M. Spencer. bibliog J Chem Phys 14:729-32 D '46

Analysis

Sampling and analysis of boron trifluoride. C. F. Swinehart, A. R. Bumblis and H. F. Flisik. bibliog diags Anal Chem 19:28-32 Ja '47

BORON hydrides
Absorption spectrum of borazole in the vacuum ultraviolet. J. R. Platt and others. bibliog J Chem Phys 15:598-601 Ag '47
Co-ordinate links formed by bonding electrons; suggestion regarding the structure of diborane. A. D. Walsh. diags Chem Soc J p89-92 Ja '47
Crystal structure of lithium borohydride $LiBH_4$. P. M. Harris and E. P. Meibohm. Am Chem Soc J 69:1231-2 My '47
Crystal structure of sodium borohydride. A. M. Soldate. Am Chem Soc J 69:987-8 My '47
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47
Electron deficient compounds; the bridge structure for B_2H_6. R. E. Rundle. Am Chem Soc J 69:2075-6 Ag '47
Electron deficient molecules; entropy of diborane. K. S. Pitzer. Am Chem Soc J 69: 184 Ja '47
Lithium aluminum hydride, aluminum hydride and lithium gallium hydride, and some of their applications in organic and inorganic chemistry. A. E. Finholt, A. C. Bond, jr. and H. I. Schlesinger. bibliog Am Chem Soc J 69:1199-1203 My '47
Proton-deuteron exchange between ammonia and ammoniated diborane. A. B. Burg. bibliog diags Am Chem Soc J 69:747-50 Ap '47
Structure of diborane. W. C. Price. bibliog J Chem Phys 15:614 Ag '47

BORON oxide
Effect of boric oxide on properties of soda-dolomite lime-silica glass; abstract. J. C. Coleman. Cer Ind 48:83-4 Je '47
Properties of enamel slips; soluble salts in enamel slips. B. W. King, jr. and others. bibliog Am Cer Soc J 30:22-6 Ja 1 '47

BORON trichloride. See Boron chloride

BORON trifluoride. See Boron fluoride

BORON trimethyl
Dissociation of the addition compounds of trimethylboron with the ethylamines; configuration of the ethylamines. H. C. Brown and M. D. Taylor. bibliog il diags Am Chem Soc J 69:1332-6 Je '47
Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47

BOSCH process. See Zinc coating

BOSTON
See also
Electric plants (central stations)—Boston

Harbor

Rails bid for foreign trade. il Bsns W p97-8 N 30 '46

Industries

Getting together; Boston industrial center for small firms. il Bsns W p31 O 11 '47

Metropolitan district

Shopping center for suburban Boston, near Beverly, Mass. il maps plans Arch Forum 86:84-93 Je '47

Railroads

Boston's charter railroad. il Diesel Power 25:86-7 Mr '47

Rapid transit

Boston tries to get financial plight understood. L. J. Mathieu. Mass Transportation 43:56-7 F '47
Boston's new Transit authority. Mass Transportation 43:491-2 O '47
New plans for Boston rapid transit. map Eng N 138:1005 Je 26 '47
Trolley buses in the Hub. il maps Bus Transportation 26:75-9 Ap '47
See also
Boston elevated railway

Sanitary affairs

Proposed Southampton Street refuse incinerator, Boston, Mass. G. W. Coffin. il 3pls maps, plan Boston Soc C E J 33:209-35 O '46

Water supply

Character of Quabbin Reservoir water during reservoir filling. C. H. Reed. N E Water Works Assn J 61:181-201 Je '47
Extension of Metropolitan district works; what's accomplished and what's ahead. K. R. Kennison. flow diag il Boston Soc C E J 34:151-214 bibliog(p152-4) Jl '47
Reforestation on the Quabbin Reservoir project. R. Snow. fold maps N E Water Works Assn J 61:34-47; Discussion. W. R. La Due. 47-9 Mr '47

BOSTON conference on distribution
Eighteenth Boston conference on distribution, 1946. 111p pa $3.75 Retail trade board, Boston chamber of commerce, 80 Federal st, Boston 10 '46

BOSTON elevated railway
Civic notions breaking Boston transit's back. Mass Transportation 43:187 My '47
Taken over by city. Comm & Fin Chr 166: 946 S 8 '47

BOSTON society of civil engineers
Annual reports. Boston Soc C E J 34:116-49 Ap '47

BOTANICAL chemistry
Biochemistry of plant pigments. W. D. Bancroft. bibliog J Phys & Colloid Chem 51: 1078-87 S '47
Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47
Chemistry of some plant gums and mucilages. E. L. Hirst and J. K. N. Jones. bibliog Soc Dyers & Col J 63:249-54 Ag '47
See also
Bacteria
Cellulose
Gums and resins
Molds (botany)
Photosynthesis
Plants—Chemical analysis
Poisonous plants
Sapogenins

BOTANICAL research
Direct introduction of chemical substances into herbaceous plants. I. M. Felber. bibliog il Science 106:251 S 12 '47

BOTANY
See also
Bacteria
Fungi
Plant growth
Rubber plants and planting

Ecology

Determination of world plant formations from simple climatic data. L. R. Holdridge. Science 105:367-8 Ap 4 '47

Embryology

Undifferentiated growth of orchid embryos on media containing barbiturates. J. T. Curtis. Science 105:128 Ja 31 '47

Study and teaching

Eleven separate agencies at Harvard university in the botanical field. Science 104: 509 N 29 '46

Terminology

Terminology of pollination. J. R. King and R. M. Brooks. Science 105:379-80 Ap 11 '47

BOTANY worsted mills
Botany hand picks its markets with selective selling plan. A. B. Ecke. il Sales Management 57:37-9 N 10 '46

BOTFLIES
Visibility of the deer fly in flight. E. Ludvigh. Science 105:176-7 F 14 '47

BOTTLE caps and seals
Shrink seals of tough vinyl plastics. il Mod Packaging 20:138-9 N '46
Wine in vacuum; continuous-thread, rolled-on aluminum cap with special liner. il Mod Packaging 20:155 Mr '47

BOTTLE cleaning machines
Machine dry cleans new glass bottles. il Food Ind 19:1422 O '47

BOTTLE filling machines. See Bottling machines

BOTTLE making machinery
Construction and surface treatment of blank molds on a press and blow machine; patent. diags Glass Ind 27:611 D '46

BOTTLE washing
Improved method of washing glassware; patent. Glass Ind 28:305 Je '47
Method of washing milk bottles; patent. Glass Ind 28:521 O '47

BOTTLE washing machines
Bottle washer and rinser; Load-A-Matic. il Mod Packaging 20:188 Je '47
Owens-Illinois machine for emptying and washing bottles; patent. Glass Ind 28:305 Je '47

BOTTLED goods
See also
Beer
Beverages
Ink bottles
Wine

BOTTLES
Decorating at Laurens. P. Nelson. il Glass Ind 28:511-12+ O '47
Effect of chemical composition on the durability of bottle glass; abstract. H. E. Simpson. Glass Ind 28:298 Je '47
Non-tipping nail polish; new bottle, new carton, new shape. il Mod Packaging 20: 120-1 D '46
Throwaway beer bottles. il Mod Packaging 20:102-6 Ag '47
See also
Ink bottles
Milk bottles

Inspection

Bottle inspection apparatus; patent. diag Glass Ind 28:520-1 O '47

Manufacture

Brockway enters new territory with Muskogee plant. il plans Glass Ind 27:601-5+ D '46

Testing

Effect of abrasion and other influences on glass surface strength; abstracts. D. W. Mueller and G. D. Mylchreest. Glass Ind 28: 515 O '47; Cer Ind 49:76 O '47

BOTTLES, Plastic
British plastic packaging; non-spillable india ink bottle and cellulose acetate pinch-bottle blower for powders. il Mod Packaging 21:123 S '47
New Sportsman; John Hudson Moore has a plastic talcum bottle; new line of toiletries for juniors. il Mod Packaging 20:126-7 F '47
Talc of the town; bottle of polyethylene; a dispensing talcumizer for bath powder. il Mod Packaging 20:87 Ag '47
Undercut bottle made of blown polystyrene. il Mod Plastics 25:97 O '47

BOTTLING
Container breakage reduced by infrared; lamps preheat jars before being filled with hot molasses. J. R. Heilman. il Food Ind 19:193 F '47
Low trailer runway cuts bottler's handling time; Minnehaha water co., Cleveland. il plan Food Ind 19:1224-5 S '47
Mixer campaign; A. J. Lehman co. aims at national distribution for its Tom Collins, jr. Bsns W p24+ My 10 '47
Package keeps pace; Welch modernization. flow chart il Mod Packaging 20:108-11 My '47
Pressure in bottles; breakage avoided by controlling filling height. H. J. Wing. diag Mod Packaging 20:146-7+ Ja '47

BOTTLING machines
Adaptable filler; cosmetic maker develops own machine. il Mod Packaging 20:118-19 My '47
Sterile filling; plastic hooded machine for bottling parenamine. il Mod Packaging 20: 134-5 Ja '47
Tablet bottling machine. il Chem Eng 54:148+ S '47

BOTTLING plants

Equipment

Handling and packing of bottled beer; National breweries. H. G. Jarman. il Mech Handling 34:259-62 My '47
See also
Bottling machines

Safety measures

Bottles and broken glass; hazards and precautions; data sheet. Nat Safety N 55:40+ My '47

BOUCHALL, Thomas C.
Southerner who left the South but returned to stay. por Manuf Rec 116:33+ Je '47

BOULDER CITY, Nevada
There's no place like Boulder City. il Eng N 138:1021-4 Je 26 '47

BOULDER Dam project. See Colorado river—Hoover Dam project

BOUNDARIES (estates)
State bureaus of maps and surveys aid planning of engineering projects; Ohio coordinate system. O. J. Marshall and M. T. Jones. il map Civil Eng 17:198-201 Ap '47

BOUNDARY layer
Boundary layer control may offer safety increase. bibliog Aviation W 47:34-5 Ag 18 '47
Heat transfer by forced convection along a smooth flat surface; laminar and transitional boundary layer flow. G. V. Parmelee and R. G. Huebscher. bibliog il diags Heating-Piping 19:115-18 Ag '47
Interaction between boundary layer and shock waves in transonic flow. H. W. Liepmann. bibliog il diags J Aeronautical Sci 13:623-37 D '46
Jet airplane utilizing boundary layer air for propulsion. A. M. O. Smith and H. E. Roberts. bibliog diags J Aeronautical Sci 14: 97-109+ F '47
Laminar boundary-layer oscillations and stability of laminar flow. G. B. Schubauer and H. K. Skramstad. bibliog il diags J Aeronautical Sci 14:69-78 F '47; Discussion. 14:410-11 Jl '47
Laminar boundary-layer oscillations and transition on a flat plate. G. B. Schubauer and H. K. Skramstad. bibliog il diags J Res Nat Bur Stand 38:251-92 F '47
Studies substantiate theory of laminar-to-turbulent flow; wind tunnel experiments at the National bureau of standards. diag Aviation W 47:28+ Jl 21 '47; Excerpts. Product Eng 18:167 S '47

BOUNDARY value problems
Note on a boundary value problem of Reissner and Sagoci. I. N. Sneddon. bibliog J Ap Phys 18:130-2 Ja '47

BOWER roller bearing company
Thumbnail stock appraisal. Mag of Wall St 79:314 D 21 '46

BOWL covers
Product is the wrap; bowl cover package. il Mod Packaging 20:107 Ag '47

BOWLBY, Joel Morgan, 1887-
Eagle-Picher; this lead and zinc house presents a case study in industrial transition. por Fortune 36:79-83+ S '47

BOWLING alleys
Tile gives colorful front to bowling alley; views. Brick & Clay Rec 109:24 N '46

Fires and fire protection

Finishing of bowling alleys and floors involves large fire risks. C. L. Jones. East Underw 48:18 Ag 8 '47

BOWMAN gum, inc.
Stock offered. Comm & Fin Chr 166:50 Jl 7 '47

BOX making machines
Automatic machine for making plastic set-up boxes. il Mod Packaging 20:102-9 Je '47
Plastic boxes can now be made automatically. il Mod Plastics 24:123-9 Je '47

BOXCARS. See Freight cars

BOXES
Application of wood and fiber to industrial packing. J. A. DeLuca. il diags A S M E Trans 69:163-76 F '47

BOXES—*Continued*
Box for pliofilm-cured cheese. J. V. Ziemba. il Food Ind 19:457 Ap '47
Designs for sheet metal boxes with square and round corners. W. C. Mills. diags Product Eng 18:122-3 F; 122-3 Mr; 148-9 Ap '47

See also
Candy boxes
Crates
Hosiery boxes
Powder boxes

Manufacture
Paint brush boxes. H. R. Dampman. diags Sheet Metal Worker 38:47-8 O '47

See also
Boxes, Plastic—Manufacture
Boxes, Steel—Manufacture

BOXES, Aluminum
Imported 'tins' of English boxes of aluminum, lithographed and embossed. il Mod Packaging 20:140-1 Mr '47

BOXES, Paper. See Paper boxes

BOXES, Plastic
Acetate sheeting dresses up a closet. il Mod Plastics 24:127 N '46
Belt display boxes. il Mod Plastics 24:194 Jl '47
Polystyrene razor box; protective re-use case. il Mod Packaging 20:129 F '47
Tools in styrene boxes. il Mod Packaging 20:135 Mr '47

Manufacture
Automatic machine for making plastic set-up boxes. il Mod Packaging 20:102-9 Je '47
Plastic boxes can now be made automatically. il Mod Plastics 24:123-9 Je '47
X design for transparent plastic boxes. il Mod Plastics 24:146-7 Ap '47; Same. Mod Packaging 20:170-2 Mr '47

BOXES, Steel

Manufacture
Modern box fabrication; Pelham electric mfg. corp. W. Rudolph. il Sheet Metal Worker 38:45-6 O '47

BOYCOTT
Death by boycott. Bsns W p102-5 Ap 12 '47
How practical personnel men think the labor law will work; secondary boycotts. H. S. Hall. Factory Management 105:88-9 S '47
I.B.E.W. president answers NEMA charges of boycotts. Elec World News ed 127:5 F 8 '47
NEMA calls upon Congress to bar secondary boycotts. Elec World 127:127 Ja 18 '47
Secondary boycott problem. Elec World News ed 127:16-17 Ap 5 '47
Secondary boycotts; legal racketeering! R. S. Edwards. Comm & Fin Chr 165:129 Ja 9 '47
Union coercion by service station boycott is held illegal by court. Nat Pet N 39:13 Mr 12 '47
Westinghouse lighting plant may become boycott casualty. Elec World News ed 127:5-6 Ap 5 '47

BOYD, James, 1904-
Nominated as Bureau of mines director. por Eng & Min J 148:107 Ap '47

BOYLE'S law
Burnett apparatus used for gas-deviation determinations. E. N. Armstrong. il diags Oil & Gas J 45:82-4+ D 7 '46

BOYS TOWN, Nebraska
New buildings for Boys Town, Nebraska. il plans Arch Rec 101:66-73 Ja '47

BOYS' tours. See Railroads—Boys' tours

BRACING
Analysis of rigid knee-braced bents used in petroleum and chemical plants. W. H. Blank. il diags Pet Refiner 25:111-18 D '46
Deep building excavation in Cincinnati required a bold design of cross-bracing. A. D. Quinn. il diags Eng N 139:30-3 Jl 10 '47
Suggestions for safe lateral bracing design. C. M. Throop. diags Eng N 138:218-19 F 6 '47

BRACKEN, Brendan, 1901-
Portrait. Fortune 34:165 D '46

BRACY, Harry W.
Golden touch; Kroger's district manager Bracy. Bsns W p17-18 Ja 25 '47

BRAD-VERN'S reports
Seventh annual edition lists schedules of 35,000 advertisers in 649 trade papers. Ptr Ink 217:94+ N 22 '46

BRAILLE system. See Blind, Printing for

BRAIN
Action of thiamine applied directly to the cerebral cortex. M. V. Dias. bibliog Science 105:211-13 F 21 '47
Frequency analysis of electroencephalograms. F. A. Gibbs and A. M. Grass. bibliog Science 105:132-4 Ja 31 '47
Functions of the intercortical neurones in sensorimotor coordination and thinking in man. K. U. Smith. diags Science 105:234-5 F 28 '47
Variations in the normal electroencephalogram during a five-year period. G. L. Engel and others. bibliog Science 105:600-1 Je 6 '47

See also
Electroencephalograph

Injuries
Chromatolytic effect of cerebrospinal fluid following cerebral concussion. E. A. Spiegel and others. Science 105:208 F 21 '47

Surgery
Stereotaxic apparatus for operations on the human brain. E. A. Spiegel and others. il Science 106:349-50 O 10 '47

BRAKE linings
Phenolics, not rivets, bond brake linings; Permafuse corp. uses Durez. il Mod Plastics 25:100 O '47
Uni-bond process of relining brakes for motor vehicles. il Rubber Age 61:196 My '47

BRAKE shoes
External floating friction shoes; theoretical analysis and design. A. C. Rasmussen. diags Product Eng 18:119-21 O '47
Haulage safety device for steep grades; method of automatically removing friction shoes from beneath the wheels of mine cars. L. L. Maus. il diags Min Cong J 33:28-31 S '47
Internal floating friction shoes; analysis and application. A. C. Rasmussen. diags Product Eng 18:106-10 Jl '47

Manufacture
Mechanical pouring unit handles 11 tons per hour; American brake shoe co. J. R. Shepard and W. J. Olson. il diag Iron Age 158:77-80 D 5 '46

BRAKES
Forces and stresses in clutch and brake bands. A. C. Rasmussen. diags Product Eng 18:152-5 My '47
Internal friction blocks and shoes; analyses and applications. A. C. Rasmussen. diags Product Eng 18:133-8 Mr '47; Discussion. 18:161-2 Jl '47
Modern rotary drilling; draw-works auxiliary. J. Zaba. Oil & Gas J 45:133 Ap 19 '47
Welded brake straps for excavators. W. C. Black. il diags Welding J 26:494-6 Je '47

See also
Air brakes
Braking, Dynamic

BRAKES, Airplane
New hydraulic cylinders meet rigid operational needs; for operation of brakes and control surfaces. H. J. Marx and J. J. Mancusi. il diags Aviation 45:58-61 N '46
Power brake valves; abstracts. E. F. Loweke. diags Automotive & Aviation Ind 94:33-4 Ja 15 '46; S A E J 55:68 Ja '47
Rotative flight brake proposed to moderate landing speeds. J. G. Ray. diags Aviation 46:52-3 Ja '47

Testing
Experimental determination of strains in aircraft landing wheels and brakes; stress-coat method. M. H. Polzin. il S A E J 55:26-8+ Je '47

BRAKES, Automobile
Brake fluids face a lively future. J. M. Fain. il diag Chem Ind 59:1012-15 D '46
Hydraulic brakes with two leading shoes. il Engineering 163:378 My 9 '47
Lockheed brakes; hydraulic servo accumulator system. diags Automobile Eng 37:339-42 S '47

BRAKES, Automobile—*Continued*

Manufacture

Auto brake disks produced with progressive dies. H. Chase. il diags Iron Age 160:80-2 S 4 '47

Modern methods characterize mass production in Bendix brake plant. J. Geschelin. il Automotive & Aviation Ind 96:26-30+ F 15 '47

BRAKES, Eddy current

Energy dissipators auxiliary to brakes. J. G. Oetzel. il diag S A E J 55:44-7+ My '47

BRAKES, Electric

Braking system for heavy-duty vehicles. il Automotive & Aviation Ind 95:50 N 15 '46

Capacitor slows up brake action. O. C. Miles. diag Power 91:266 Ap '47

On the business horizon; electric braking device. Barron's 27:8 F 24 '47

Street-car braking improved; abstract. S. B. Cooper. Machine Design 19:182+ Jl '47

Warner electric brake and clutch. il Automotive & Aviation Ind 96:47+ Je 15 '47

Warner electric braking system. il Rock Prod 49:68 D '46

BRAKES, Hydraulic

Brake fluids face a lively future. J. M. Fain. il diag Chem Ind 59:1012-15 D '46

Hydraulic brakes with two leading shoes. il Engineering 163:378 My 9 '47

Lockheed brakes; hydraulic servo accumulator system. diags Automobile Eng 37:339-42 S '47

Modern rotary drilling; auxiliary draw-works brake, hydraulic type. J. Zaba. diags Oil & Gas J 45:181 Ap 26; 105 My 3 '47

New hydraulic cylinders meet rigid operational needs; for operation of brakes and control surfaces. H. J. Marx and J. J. Mancusi. il diags Aviation 45:58-61 N '46

BRAKES, Magnetic

Modern rotary drilling; electromagnetic draw-works brakes. J. Zaba. diag Oil & Gas J 46:97 My 10 '47

BRAKES, Motor bus

Energy dissipators auxiliary to brakes. J. G. Oetzel. il diag S A E J 55:44-7+ My '47

BRAKES, Motor truck

Braking system for heavy-duty vehicles. il Automotive & Aviation Ind 95:50 N 15 '46

Energy dissipators auxiliary to brakes. J. G. Oetzel. il diag S A E J 55:44-7+ My '47

Energy dissipators valuable adjunct to wheel brakes for safe transportation of motor freight. il diag Machine Design 19:105-6 Ag '47

Warner electric braking system. il Rock Prod 49:68 D '46

See also

Air brakes, Motor truck

Manufacture

Modern methods characterize mass production in Bendix brake plant. J. Geschelin. il Automotive & Aviation Ind 96:26-30+ F 15 '47

BRAKES, Vacuum

Testing

Instrument for testing vacuum brake systems. il Engineer 183:387-8 My 2 '47; Engineering 163:333 Ap 25 '47

BRAKING, Dynamic

Dynamic braking of d-c motors. J. D. Leitch. diags Elec Eng 66:694-7 Jl '47

Dynamic braking promotes efficiency in slope hoisting. J. A. Setter. il diags Coal Age 52:98-104 Jl '47

BRAKING, Electric

Braking induction motors. B. Feltbower. Elec R (Lond) 140:260-3 F 7 '47

Three-phase induction motors; views on starting, reversal and electrical braking. S. A. Vincze. bibliog diags Electrician 139: 692-3, 768-70+ S 5-12 '47

See also

Brakes, Electric

BRANCH banking. See Banks and banking—Branch banking

BRANCH factories

Administrative control of branch plant operations. J. L. Brennan. Management R 36: 49-58 Ja '47

BRANCH factories, Foreign

Sell and produce abroad for profit; export of technology to build foreign plants for the production of products which cannot be exported. A. Rooseboom. il Chem Ind 60:605-6 Ap '47

U.S. courts French market; American business in France. il Bsns W p97-8 F 22 '47

BRANCH management

Administrative control of branch plant operations. J. L. Brennan. Management R 36:49-58 Ja '47

BRANCH stores. See Department stores—Branch stores

BRAND names foundation

New officers. Comm & Fin Chr 165:2717 My 19 '47

BRANIFF airways, inc.

To receive $10,000,000 bank loan for flight equipment. Comm & Fin Chr 165:806 F 10 '47

BRANTFORD, Ontario

Sanitary affairs

Brantford's troubles with garbage and refuse disposal. G. H. Richards. Water & Sewage 85:71-2+ O '47

BRASCH, Arno A.

Electronized Chemicals. por Fortune 35:104-9+ Mr '47

BRASS

Contributions to the theory of beta-phase alloys. C. Zener. bibliog Phys R 71:846-51 Je 15 '47

Forging practice; copper and its alloys. A. Ashburn. diags Am Mach 91:127-9 My 8 '47

High melting-point alloys; abstract. H. K. Barton and L. C. Barton. Product Eng 18: 129 My '47

Recent developments in the physical metallurgy of copper and copper alloys, and in equipment and practice. H. L. Burghoff and W. D. France. il Min & Met 28:79-84 F '47

Stress induced preferential orientation of pairs of solute atoms in metallic solid solution. C. Zener. bibliog Phys R 71:34-8 Ja 1 '47

Surface effects during the annealing of 70 : 30 brass; abstracts and discussion. I. Jenkins. Engineer 184:346 O 10 '47; Engineering 164: 329-30 O 3 '47

System of microstresses in cold-worked metal. N. M. Blachman. bibliog Phys R 70: 698-704 N 1 '46

See also

Brass founding

Analysis

Colorimetric determination of iron in brass and bronze. W. Goodman. bibliog Anal Chem 19:141-2 F '47

Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47

Corrosion

Pitting and dezincification described. M. G. Fontana. il Ind & Eng Chem 39:sup87A-8A My '47

BRASS, Powdered

Copper-base powder metallurgy parts. H. Chase. il diags Materials & Methods 24: 1439-44 D '46

BRASS founding

Brass and bronze foundry practice. D. F. O'Connor. Foundry 75:105+ Mr '47

Brass, bronze division, A.F.A.; abstracts of papers. Foundry 75:133-4+ Je '47

Brass foundry practice at Crane co. H. M. St John. il Metal Prog 52:636-9 O '47

Centrifugal casting of brass ingots for cold rolling; abstract. T. B. Cros. Materials & Methods 25:123 My '47

Centrifugal casting of copper-alloy wheels in sand moulds. O. R. J. Lee and L. Northcott. il Engineering 163:556-9 Je 27 '47; Discussion. 164:353 O 10 '47

New brass foundry makes plumbing fixtures; Hays mfg. co. W. Rudolph. il Foundry 75:128 Ja 20 '47

BRASS founding—*Continued*
Nonferrous foundry industry; its structure, sales, costs and profits. J. B. Meier and V. H. McClung. Foundry 75:86-8+ Jl; 88-90+ Ag; 94-7+ S '47
Practical procedures for reducing gas porosity in nonferrous castings. A. E. St John. Iron Age 160:46-8 Jl 3 '47
Standard brass foundry practices. W. W. Young. Am Gas Assn Proc 1946:246-8; Same. Gas Age 98:26-7 N 28 '46; Same. Am Gas J 165:21-2 D '46

BRASS foundries
Some experiences with polarographic methods in controlling a lead hazard in brass foundries. H. J. Weber. il J Ind Hygiene 29: 158-67 My '47
Study of the hazards of exposure to metallic fumes and dust in brass foundries. W. W. Stalker. bibliog il J Ind Hygiene 29:96-112 Mr '47

BRASS industry and trade
Demand for brass lessens. Barron's 27:28 Je 2 '47

BRASS plating
Bright brass plating of zinc diecastings; abstract. S J. Beyer. Iron Age 160:76-7 Ag 21 '47
Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47

BRASS work
Editorial citation to William Werme, general superintendent, Worcester pressed steel co. for achievement in cold forming of brass. il diags Materials & Methods 24:1184-5 N '46

BRASS workers
Trouble in brass; C.I.O. disapproves action of shipbuilding union in absorbing 25,000 brass workers. Bsns W p94+ My 24 '47

BRASS works

Electric equipment

Motor selection for a rolling mill. L. H. Berkley. diags Elec Eng 66:444-7 My '47

Waste

Industrial wastes; brass and copper industry. W. S. Wise, B. F. Dodge and H. Bliss. flow sheets Ind & Eng Chem 39:632-6 My '47

BRASSIDIC acid
X-ray and thermal examination of the glycerides; glycerides of erucic, brassidic, oleic, and elaidic acids. M. G. R. Carter and T. Malkin. Chem Soc J p554-8, pl 1-2 Ap '47

BRATTICE cloth
New method and support cut bratticing cost. diags Coal Age 52:132+ Je '47

BRAY, William Crowell, 1879-1946
Sketch. W. M. Latimer. Science 104:500 N 29 '46

BRAZIL

See also
Banking law—Brazil
Mines and mineral resources—Brazil
Paper mills—Brazil
Textile industry—Brazil
Trade unions—Brazil

Commercial policy

Anglo-Brazilian commercial understanding; exchange of notes of Sept. 21. Comm & Fin Chr 165:16+ Ja 2 '47
Latin American exchange- and import-control developments. C. F. Carson and J. J. Magurn. For Comm W 28:4-5 Jl 12 '47
Priority schedule established for the allocation of foreign exchange. For Comm W 28: 13 Jl 5; 13-14 Ag 2 '47

Constitution

Labor under the constitution of September 1946. Mo Labor R 64:443 Mr '47

Economic conditions

Brazil in transition. Economist 153:243-5 Ag 9 '47
Brazil's economy in 1946 held generally to high levels. G. E. Heare. For Comm W 27:7-8+ Je 7 '47
Letter from Brazil. Fortune 35:207-8+ F '47
News by countries. For Comm W 25:17-18 N 30; 16-17 D 28 '46; 26:19-22 Ja 25; 15 Mr 1; 27:13 My 3; 13-14 Je 28; 28:12-14 Jl 26; 13-14 S 6; 29:9-10 O 4 '47
Prospects of business in Brazil. H. W. Spiegel. J Bsns 20:33-43 Ja '47

Industries and resources

Amazon rebirth; plan proposes big-scale rehabilitation of river valley. Bsns W p110+ Ap 19 '47
Brazil; a coming industrial empire. A. P. Peck. il map Sci Am 176:100-4+ Mr '47
Industrial outlook for Brazil. R. L. Heilbroner. Comm & Fin Chr 165:4+ Ja 2 '47
Letter from Brazil. Fortune 35:207-8+ F '47

Politics and government

Return of Vargas. Economist 152:23 Ja 4 '47

BRAZING
Aluminum brazing; pictorial technical review of a paper by L. P. Saunders and P. S. Rogers. il S A E J 54:42-6 N '46
Assembly of aluminum parts by furnace and dip brazing methods. A. H. Petersen. il diags Product Eng 18:115-17 F '47
Bonding sapphire to metal. T. C. Du Mond. il Materials & Methods 26:84-6 O '47
Brazing in electric furnaces. S. DeDomenico and J. A. Comstock. il Metal Prog 52:71-6 Jl '47
Brazing lawn mower rotors. il Electronics 20:168+ S '47
Bunsen aids small brazing. N. Laycock. diags Am Mach 91:120 O 23 '47
Capillarity of metallic surfaces. E. R. Parker and R. Smoluchowski. il diag Am Soc for Metals Trans 35:362-71; Discussion. 371-3 '45
Carbon brazes copper parts. W. Scott. il Am Mach 91:98-100 N 6 '47
Continuous furnace brazing. C. L. West. il diags Am Mach 91:124-5 Jl 3; 122-4 Jl 17; 98-100 Jl 31 '47
Electric-furnace brazing for Aer-a-sol insecticide bomb. A. T. Cole and H. M. Webber. il diag Gen Elec R 50:25-31 Je '47
Electric furnaces increase brazed parts production. Steel 121:112 S 22 '47
Furnace brazing. H. D. Hendrick. il diags Automobile Eng 37:365-71 O '47
Furnace brazing steel insecticide bombs; Bridgeport brass co. A. T. Cole and H. M. Webber. il diag Steel 120:70-3+ Ja 27 '47
Furnace brazing; 12 per cent chromium low carbon steel. T. H. Gray. il diags Steel 121:104-6+ Jl 21 '47
Generator for small and medium soldering and brazing. Materials & Methods 25:141 Ja '47
Metal-ceramic brazed seals for microwave tubes. R. J. Bondley. il Electronics 20:97-9 Jl '47
Methods for maintaining positions and dimensions of parts during brazing; drawings. Product Eng 18:120-1 Ag '47
Methods for placing brazing materials, and vent locations. diags Product Eng 18:124-5 Jl '47
Oxyacetylene flame brazing on commercial aluminium. Engineer 183:235 Mr 21 '47
Salt baths for metals. E. L. Cady. il Sci Am 176:164-6 Ap '47
Temperature chart for soldering, brazing and welding processes; reference book sheet. R. C. Hitchcock. Product Eng 18: 171 O '47
Torque converter for bus engines; assembly of aluminum parts made by furnace brazing. E. E. Thum. Metal Prog 52:230 Ag '47

See also
Silver solder

BRAZING, Silver. See Silver solder

BREAD
Air conditioning of processes in the bread bakery. H. R. Gable. il Heating-Piping 19: 107-12 O '47
Back twin-pack with $300,000 campaign; Columbia baking reintroduces split loaf. il Sales Management 58:91 Ap 1 '47
Bread composition; patent. Food Ind 19:706+ My '47
Bread; plus or minus? Chem & Ind p198 Ap 12 '47

BREAD—*Continued*
Canned bread tested. Bsns W p34 Ja 4 '47
Effects of whole-wheat and white bread diets on susceptibility of mice to pneumococcal infection. G. H. Hitchings and E. A. Falco. Science 104:568-9 D 13 '46
Half a loaf; halves separately wrapped. il Mod Packaging 20:120-1 Ap '47
Mechanized bakery; mass production of bread. Mech Handling 34:69-71 F '47
Rapid method for estimation of whey proteins as an indication of baking quality of nonfat dry-milk solids; abstract. H. A. Harland and U. S. Ashworth. Food Ind 19:1441 O '47
Shortening eliminates bakers' stale returns. Food Ind 19:1225-7 S '47
This success was built on quality competition; not price; a good product, good labor relations, good distribution, Arnold bakers, inc. C. J. Swan. il Ptr Ink 219:46-7 Ap 25 '47
Two-in-one bread; Twin-pack. il Bsns W p54 Mr 1 '47
Wrapping half-loaves. J. V. Ziemba. il Food Ind 19:458 Ap '47
Zipper bread wrap that recloses. il Mod Packaging 20:135 Ja '47

Advertising

New advertising dirigible hits the road; first flying spectacular to cover the Nation; Continental baking co. T. M. Jones. il Ptr Ink 220:106 S 5 '47

Analysis

Dextrins in flour and yeast raised bread. W. Cunliffe. Soc Chem Ind J 66:187-9 Je '47

BREAKWATERS
Dredging at Two Harbors, Minnesota; unit prices. Eng N 139:617 O 30 '47

BREATHERS. See Dehumidifiers

BREECH, Ernest Robert, 1897-
Portrait. Fortune 35:89 My '47

BREEN, Eugene L.
30 years with Aetna companies; excels in public relations. por East Underw 48:34 Mr 7 '47

BRENNER, Ralph F.
Portrait. Glass Ind 28:293 Je '47

BRETTON WOODS agreement
Bretton Woods in retrospect and prospect; address at University of Amsterdam. F. A. G. Keesing. Comm & Fin Chr 166:622+, 718 Ag 14, 21 '47

BREWERIES

Accidents

Injuries and accident causes in the brewing industry, 1944. U S Bur Labor Statistics Bul 884:1-70; pa 15c Supt. of doc. '46
Their goggles were on the job; saves eyes of two employees of Blatz brewing company. il Nat Safety N 55:60+ My '47

Equipment

New Planet Diesel locomotive; Arthur Guinness, son & co. il Mech Handling 34:262-4+ My '47
Park Royal brewery. il Engineer 183:511-14 Je 13 '47

Waste

Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47

BREWING
Brewing chemists discuss malting control. Chem & Eng N 25:1667 Je 9 '47

BREWING corporation of America
Thumbnail stock appraisal. Mag of Wall St 79:313 D 21 '46

BREWING industries
West coast beer moves east. Bsns W p54+ Ag 16 '47

See also
Anheuser-Busch, inc.
Beer

Advertising

Franchised beer; Brewers' Best Associates licenses local brewers to use its name, formula. Bsns W p68 O 25 '47
Protection of dealer's profit is keystone of Acme success; aggressive advertising. E. Brisacher. il Ptr Ink 220:56+ S 26 '47
325 small brewers unite to get big-time advertising. J. Clark. Ptr Ink 217:52-3 N 15 '46

BREWSTER aeronautical corporation
Report. Comm & Fin Chr 165:68 Ja 6 '47

BRICK, Fire. See Fire brick

BRICK buildings

See also
Brick houses

BRICK chimneys. See Chimneys, Brick

BRICK construction
Architects specify brick when erecting buildings of distinction; illustrations. Brick & Clay Rec 110:22-4 Je '47
Brick and tile masonry faces its biggest chance in building history. A. S. Low. Brick & Clay Rec 109:26+ D '46
Brick office building, shopping center, court house, nurses' home; views. Brick & Clay Rec 111:22-5 O '47
Brickbuilt radio station, WHBC; views. Brick & Clay Rec 109:25 N '46
Details for modern brickbuilders; illustrations. Brick & Clay Rec 110:22-4 Je; 111: 24-7 Jl; 22-5 S; 32-3 N '47
Factory builders prefer brick; illustrations. Brick & Clay Rec 111:23-7 Ag '47
Fire cannot attack 400,000 all ceramic homes a year. diag Brick & Clay Rec 110:29 F '47
How to build brick incinerators for easy waste disposal. diags Brick & Clay Rec 111: 29 Jl '47
Light construction details for a small factory; working drawings. Brick & Clay Rec 111:28-9 Ag '47
Masonry details for modern brickbuilders; fireplace construction. L. Maffett. diags Brick & Clay Rec 110:36-7 My '47
1001 details for modern brickbuilders; illustrations. Brick & Clay Rec 110:22-7 My '47
Overcrowded colleges and universities need new brick dormitories; views. Brick & Clay Rec 109:26-7 N '46
Powerhouse design for brickbuilders; illustrations. Brick & Clay Rec 109:22 D '46
Prize-winning store front of brick; illustrations. Brick & Clay Rec 110:26 Je '47
Proper construction details; use of brick and tile in wall construction; illustrations with text. Am Bld 69:130-1 Je '47
Smart business men build their new structures with brick; illustrations. Brick & Clay Rec 110:28-9 Ja '47
Some brickbuilding facts every mason foreman should know. il Brick & Clay Rec 110:40 Ap '47
Some good tricks with brick and tile; illustrations. Brick & Clay Rec 110:26-30 Ap '47
Through-wall flashing installed to make masonry library rainproof. il diags Brick & Clay Rec 111:32 S '47
Using mortar color in brickwork. il Brick & Clay Rec 110:34 My '47

See also
Brick houses
Chimneys, Brick
Retaining walls, Brick
Walls, Brick

Reinforcement

How to construct walls of reinforced brick masonry. diags Brick & Clay Rec 110:35+ Ap '47

BRICK handling
Fork lift truck sets 20,000 more brick daily; reduces setter crew from 8 to 2; United brick and tile co. W. C. Francis. il Brick & Clay Rec 110:52-4 Ap '47
Overhead cranes can be used with scove, tunnel and continuous kilns. il plans Brick & Clay Rec 109:47-9 N '46

BRICK houses
Brick homes for discriminating people; views and plans. Brick & Clay Rec 110:31 Ja '47
Brick house worth coming home to; views and plans. Brick & Clay Rec 111:21 S '47
Brickbuilt New England home; view and plan. Brick & Clay Rec 111:21 O '47
Brickbuilt ranch home in old Wyoming; views and plan. Brick & Clay Rec 110:25 Je '47
Expect to lower building costs on house engineered on modular basis. il plan Brick & Clay Rec 111:30 S '47

BRICK houses—*Continued*
George Fred Keck designs a solar house of brick with cavity walls and radiant heating; illustrations with text. Brick & Clay Rec 110:18-20 F '47
Hillside house, formerly a country store, built to a split level plan. il plans diags Arch Forum 87:111-13 O '47
Imagineering designs for brickbuilt homes using three different floor plans; views and plans. Brick & Clay Rec 110:16-17 F '47

BRICK industry and trade
1946 brick production reaches prewar levels. H. Kuptzin. il Dom Comm 35:62-6 Mr '47
Sell clay products through the dealer! H. H. Roberts. il Brick & Clay Rec 109:33-5 N '46
$20 billion building estimate for 1947 means 12 billion B & T equivalents. il Brick & Clay Rec 110:37-8 Ja '47
What's wrong with present structural clay products? symposium. E. J. Jacobsen and others. Brick & Clay Rec 110:49-50 My '47

China
Chinese brick and tile industry in Tientsin area. For Comm W 25:27 D 28 '46

Great Britain
Welfare in the brickworks. Economist 152: 258 F 8 '47

See also
London brick company

South Africa
Brick and tile plant for South Africa. T. W. Garve. il plans Am Cer Soc Bul 26:269-71 S 15 '47

BRICK manufacture. See Brickmaking

BRICK retaining walls. See Retaining walls, Brick

BRICK veneer
Leaky and eroded walls made watertight by veneering with face brick. il diags Brick & Clay Rec 111:26-7 S '47

BRICK walls. See Walls, Brick

BRICK work
Facts on the use of basic brick bonds. diags Brick & Clay Rec 111:30-1 Jl '47; Correction. 111:35 Ag '47

BRICK works
Sell all-masonry wall of brick and concrete block; Camp bros. co. il Brick & Clay Rec 109:43 D '46
Texas plant combines efficiency of production with employe good will; Elgin standard brick manufacturing co. il Brick & Clay Rec 109:52+ N '46

Costs
Labor claims 54c out of every dollar spent to make brick and tile. J. B. Kneipple. Brick & Clay Rec 111:60 Jl '47

Electric equipment
Shale by-products. il Elec R (Lond) 139:866-7 N 29 '46

Employees
Firebrick Freddie attracts workers for A. P. Green fire brick co.; increases staff 60 per cent. Brick & Clay Rec 110:70+ Ap '47

Equipment
Brick and tile plant for South Africa. T. W. Garve. il plans Am Cer Soc Bul 26:269-71 S 15 '47
Darlington story; a rebuilt plant becomes one of most efficient in U.S. il Brick & Clay Rec 110:48-52 Je '47
Five men off-bear 100,000 brick a day-or 270 a minute at Ga. plant. il Brick & Clay Rec 111:47-8+ S '47
Fork lift truck sets 20,000 more brick daily; reduces setter crew from 8 to 2; United brick and tile co. W. C. Francis. il Brick & Clay Rec 110:52-4 Ap '47
Hydraulic's Affton plant makes 50,000 dry press brick daily with 28 men. il Brick & Clay Rec 110:54+ My '47
Overhead cranes can be used with scove, tunnel and continuous kilns. il plans Brick & Clay Rec 109:47-9 N '46
Plant made dryer car pusher and converted vacuum cleaner saves time and money. il Brick & Clay Rec 110:45 Ap '47
Quick changeover from gas provided by low pressure air oil burners; driers and kilns serving the brick industry. A. J. Nordenson. il diags Brick & Clay Rec 111:46-7 Ag '47
Refractory concrete is used in brick plants on kilns, dryers, car tops. F. E. Lobaugh. il Brick & Clay Rec 109:52+ D '46
Scrap brick shredder, ground loader developed at Merry bros. brick plant. il Brick & Clay Rec 111:52-3 O '47

See also
Brickmaking
Brickmaking machinery

Layout
Brick and tile plant for South Africa. T. W. Garve. il plans Am Cer Soc Bul 26:269-71 S 15 '47

BRICKER, John William, 1893-
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47

BRICKLAYERS
Masonry labor, the bottleneck to plant production; panel discussion. Brick & Clay Rec 110:54+ Je '47
Silicosis and the ceramics worker; report of Ohio industrial commission. L. M. Merritt. Safety Eng 93:61+ Ap '47

BRICKLAYING
Coursing tables for glazed units laid with ¼" joints. Brick & Clay Rec 110:36 Ja '47
Who's going to help masons lay brick? mechanical handling equipment. il Brick & Clay Rec 110:31 F '47

Study and teaching
Radio enlisted GI mason trainees make good in Maryland; others on waiting list. Brick & Clay Rec 110:38 Je '47

BRICKMAKING
Effect of sulfate ion on workability of brick clays; abstract. A. L. Johnson and G. B. Hughes. Brick & Clay Rec 110:56 Je '47
Shale by-products. il Elec R (Lond) 139: 866-7 N 29 '46
Spun concrete pipe; Hunziker process for manufacture of flint-lime brick and Superbeton concrete pipe. M. W. Loving. il Rock Prod 49:141-3 D '46

See also
Fire brick—Manufacture

BRICKMAKING machinery
Hard facing brick machinery parts cuts costs of repairs and shutdowns. il Brick & Clay Rec 110:54 F '47
Reed markets vibrating brick machine. il Concrete 54:21+ D '46

BRICKS
Using new 4 in. x 8 in. modular brick on different pattern bonds. P. Bradley. il Brick & Clay Rec 111:28 S '47

See also
Brick construction
Brick industry and trade
Brickmaking
Fire brick
Masonry
Silica brick

Freezing
Disintegrating effect of repeated freezing and thawing on building brick. J. F. McMahon and C. R. Amberg. il diags Am Cer Soc J 30:81-9 Mr 1 '47

Testing
Disintegrating effect of repeated freezing and thawing on building brick. J. F. McMahon and C. R. Amberg. il diags Am Cer Soc J 30:81-9 Mr 1 '47

BRICKS, Concrete. See Concrete bricks

BRICKS, Crushed
Handling of crushed bricks. il Mech Handling 33:688-9 N '46

BRICKS, Insulating
Vermiculite insulating brick. R. F. Rea. bibliog il Am Cer Soc Bul 26:36-8 F 15 '47; Abstract. Brick & Clay Rec 108:68 My '46

BRICKWORK. See Brick work

BRIDGE approaches
Louisville & Nashville builds long concrete trestle at Henderson, Ky. il diag Ry Age 122:187-90 Ja 18 '47
Steel forms speed construction of long bridge approach. il Eng N 138:525-7 Ap 3 '47

BRIDGE design
Analysis of the two span rigid frame highway bridge. C. D. Williams. bibliog il diags Florida Eng and Industrial Exp Sta [Gainesville] Bul 15:1-47 '47
Battered piles in bridge abutments. C. H. Wood. Eng N 138:1018-19 Je 26 '47
Continuous steel-girder bridges. L. Loch. il diags Roads & Bridges 85:57-63 F '47
Design constants facilitate analysis of beams composed of prismatic segments. H. Solman. diags Civil Eng 17:265+ My '47
800-ton vertical lift span; Cerritos Channel bridge, Port of Los Angeles area. il plan diags Roads & Sts 89:65-71 N '46
Highway traffic and bridge design; abstracts of ASCE papers. Eng N 138:98-9 Ja 23 '47
Influence lines for continuous structures by geometrical computation. D. F. Peterson, jr. diags Am Soc C E Proc 73:1009-25 S '47
Lower cost bridges and how to get them. F. D. Hartford. il Eng N 138:588-91 Ap 17 '47; Discussion. W. F. Wiley. 138:959 Je 12 '47
Mississippi River bridge at Dubuque, Iowa. R. N. Bergendoff and J. Sorkin. il diags Am Soc C E Proc 73:761-82 Je '47; Discussion. 73:1163-5, 1319-21 S-O '47
Modern European practice promotes economic use of timber structures. E. G. Stern. bibliog il diags Civil Eng 17:193-7 Ap '47
1,500-ft. welded continuous-girder bridge; St Rose, Quebec. Engineering 163:285-6 Ap 11 '47
Reflections on standard specifications for structural design. A. M. Freudenthal. Am Soc C E Proc 73:103-21 F '47
Safety of structures. A. M. Freudenthal. bibliog Am Soc C E Proc 71:1157-91 O '45; Discussion. 72:111-14, 251-5, 559-60, 885-8; 73:208-18 Ja-F, Ap, Je '46, F '47
Significant changes in modern bridge design. R. Archibald. il Roads & Sts 90:57-9 F '47
Simple model tests predict aerodynamic characteristics of bridges. D. B. Steinman. il Civil Eng 17:20-3, 77-9 Ja-F '47; Discussion. D. J. Peery. 17:143-4 Mr '47
Steel and concrete combined in Spanish truss bridge at Tordera. il diag Eng N 138:946-7 Je 12 '47
Tordera bridge, Spain. il Engineer 183:340 Ap 18 '47
Welded girder bridge of composite design carries deck area of two acres; bridge for Erie Thruway over Cattaraugus creek, southwest of Buffalo. E. W. Wendell. diags Eng N 137:856-8 D 26 '46
Wind-tunnel tests reveal serious inadequacy of present bridge specifications. D. B. Steinman. Civil Eng 17:601-4 O '47

BRIDGE failures
Describes early M.I.T. tests of Tacoma Bridge failure. F. B. Farquharson. il Civil Eng 17:401-2 Jl '47
Über die alterungsempfindlichkeit von baustählen hoher festigkeit. A. Fry and L. Kirschfeld. bibliog il VDI 87:123-7 Mr 3 '43; Abstract (Aging of high-tensile structural steel). Welding J 26:sup149-52 Mr '47

BRIDGE insurance. See Insurance, Bridge

BRIDGE moving
Railroad bridge sails to new position; truss spans floated on barges in T.V.A. river project. K. C. Roberts. il map Ry Age 122: 270-2 F 1 '47

BRIDGE railings
Standard bridge railing of steel tube. il Eng N 138:154 Ja 23 '47

BRIDGEPORT brass company
Borrows $10,000,000 from insurance companies and banks. Comm & Fin Chr 165: 1311 Mr 10 '47

BRIDGES, Sir Edward E. 1892-
Britain's brain trust. por Bsns W p113-14 Ap 12 '47

BRIDGES
Distribution of highway and bridge construction; charts, 1925-1946. Eng N 138:sup47 F 6 '47
Major projects; brief reports on status of construction operations. il Eng N 138:323-4 F 20 '47
Le nouveau pont métallique soudé sur l'estuaire du fleuve Hawkesbury (Australie). il map diags Génie Civil 124:339 S 1 '47
Principles and techniques of highway bridge surveys. H. L. Doten. bibliog il plans Maine Tech Exp Sta (Orono) Bul 41:1-55 '46
Spillway bridge of Shasta dam. il diag Engineering 163:325-7, 336 Ap 25 '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway. H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47

See also
Bridge approaches — Highway engineering
Bridge design — Trusses
also subdivision Bridges under names of cities, e.g. Los Angeles—Bridges; New York (city)—Bridges

Abutments
Battered piles in bridge abutments. C. H Wood. Eng N 138:1018-19 Je 26 '47
Reconstruction of 67-year-old bridge piers and abutments, Canadian national railways, Black Creek bridge. J. F. Salmon. il plan diags Roads & Bridges 84:57-61+ N '46

Architecture
Architect helps California highway bridge designers; H. C. van der Goes. il Eng N 138: 186 F 6 '47
Exhibits; Robert Maillart's bridges. il diags Arch Forum 87:130+ Jl '47
On the force of esthetic values; with photographs of bridges designed by R. Maillart. S. Giedion. il Arch Rec 101:84-7 Je '47

Clearance
Bridge clearances concern navigation, federal government, railroads, and highways; symposium. il Civil Eng 17:67-73 F '47
Recent legislation alleviates railways' economic burden; waterway clearance requirements. J. B. Akers. il Civil Eng 17:71-2 F '47
War department determines bridge clearances required for public navigation. R. A. Wheeler. il Civil Eng 17:69-71 F '47

Cost
Bridge over Stony creek, Anne Arundel co., Maryland; unit prices. Eng N 137:891 D 26 '46
Connecticut River bridge; unit prices. Eng N 138:900 My 29 '47
Excessive cost of bridges. V. P. Maun. Eng N 139:343 S 4 '47
Index to projects covered. Eng N 138:673-5+ Ap 17 '47
Little Red River bridges, Arkansas; unit prices. Eng N 139:346 S 4 '47

See also
Bridges, Concrete—Cost

Damage from floods, etc.
Ratchet lever hoists straighten tilted bridge. il Civil Eng 17:179 Ap '47

Design
See Bridge design

Erection
800-ton vertical lift span; Cerritos Channel bridge, Port of Los Angeles area. il plan diags Roads & Sts 89:65-71 N '46
Mississippi River bridge at Dubuque, Iowa. R. N. Bergendoff and J. Sorkin. il diags Am Soc C E Proc 73:776-81 Je '47
Semi-permanent bridges over the Rhine at Mainz. il Engineering 164:145-7, 156 Ag 15 '47

Finance
Expenditures for road, bridge and airport construction in Canada, 1945. Roads & Bridges 85:46-7 Ja '47
First revenue-bond bridge pays off; Louisville municipal bridge. C. W. Hanson. il Eng N 138:114-16 Ja 23 '47

BRIDGES—*Continued*

Floors

Bascule bridge leaves relieved by hidden load by cleaning of steel-mesh flooring. C. L. Wartelle. Eng N 139:324 S 4 '47

Better expansion joints in bridge floors. N. W. Morgan. plans diags Eng N 138:151-4 Ja 23 '47

Fiber tubes imbedded in concrete slab increase effective span. E. R. Schofield. il diag Eng N 139:114 Jl 24 '47

New York Port authority paves center area of George Washington bridge. il Concrete 55:16-17+ Ja '47

Open steel flooring used on Pennsylvania bridges. L. A. Porter. Roads & Sts 89:78 O '46

Repairs to Spruce Street bridge, Scranton, Pa. A. B. Cohen. il plans diags Am Concrete Inst J 18:241-8 N '46

Steel and concrete deck replaces timber roadway on Eads bridge. N. J. Law, jr. il Civil Eng 17:394-6 Jl '47

Two additional pavement lanes for George Washington bridge. il diags Roads & Sts 90:59-61 Ja '47

See also
Bridges—Sidewalks

Foundations and piers

Deep cylinder piers support heavy steel trusses of bridge over Colorado river. W. E. Robey. il Civil Eng 17:519-22 S '47

Floating caissons form pier foundations for Anacostia River bridge. K. C. Cox. il Civil Eng 16:532-5 D '46

Four-lane bridge replaces hazardous structure at Tansley, Ont. H. Robertson. il diags Roads & Bridges 85:85-90+ Ag '47

New piers for railway bridge save $1,400,000; use of steel piles encased in prepakt concrete. J. F. Salmon. il diags Roads & Bridges 85:72-7+ Ag '47

Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

Practical lessons in caisson sinking from the Baton Rouge bridge. E. S. Blaine. diags Eng N 138:213-15 F 6 '47

Raising railway bridge over Tennessee river. il diags Engineering 162:457-9, 468 N 15 '46

Raising sunken bridge spans with chain hoists. il Roads & Sts 90:79 My '47

Reconstruction of 67-year-old bridge piers and abutments, Canadian national railways, Black Creek bridge. J. F. Salmon. il plan diags Roads & Bridges 84:57-61+ N '46

Tubular steel pile piers withstand rigid test; two piers of Garrison Dam construction bridge subjected to unusual ice load. E. E. Howard. il map diags Civil Eng 17:580-3+ O '47

Insurance

See Insurance, Bridge

Laws and regulations

Government shares expense of removing obstructions to shipping on navigable streams. L. C. Sabin. il Civil Eng 17:67-9 F '47

Many factors determine benefits or damages in alteration of highway bridges. J. H. Porter. il Civil Eng 17:72-3 F '47

See also
Bridges—Clearance

Maintenance and repair

Encasing bridge piles in concrete. W. H. Johnson and C. J. Beer. il diags Concrete 55:3-5 Jl '47

Repairs to Spruce Street bridge, Scranton, Pa. A. B. Cohen. il plans diags Am Concrete Inst J 18:241-8 N '46

Unusual method of repairing tilted bridge spans. il Roads & Bridges 85:83+ My '47

Model testing

Simple model tests predict aerodynamic characteristics of bridges. D. B. Steinman. il Civil Eng 17:20-3, 77-9 Ja-F '47

Moving

See Bridge moving

Reconstruction

Civil engineering in 1946. il map Engineer 183:27-9, supp7 Ja 3 '47

Converted railroad bridge over Colorado river carries California-Arizona highway traffic. R. R. Rowe. il map Civil Eng 17:584-7 O '47

Lyon rebuilds its many wrecked bridges. il map diags Eng N 138:34-7 Ja 9 '47

Many factors determine benefits or damages in alteration of highway bridges. J. H. Porter. il Civil Eng 17:72-3 F '47

La reconstruction du viaduc de Nogent-sur-Marne sur la ligne de chemin de fer de Paris à Bâle. A. Chansigaud and M. Martin. il plans diags Génie Civil 124:145-9, 168-71 Ap 15-My 1 '47

Repairs to war-damaged bridges in Holland. il Engineering 163:1-4, 12 Ja 3 '47

Rhine; how its bridges and barges are being restored. W. G. Bowman. il map diags Eng N 139:588-601 O 30 '47

Stiffening the Bronx-Whitestone bridge. il diags Engineer 183:532-5 Je 20 '47

Widening and stiffening a suspension bridge; New York City's Bronx-Whitestone bridge. H. K. Glidden. il diag Roads & Sts 90:68-9+ Mr '47

Widening and stiffening Whitestone bridge. E. L. Pavlo. il diags Eng N 139:466-9 O 2 '47

See also
Bridges, Railroad—Reconstruction

Sidewalks

Cantilevered I-beams support the forms for concrete bridge walk replacement. il diags Roads & Sts 89:71-3 O '46

Stresses

Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46

Wind-tunnel tests reveal serious inadequacy of present bridge specifications. D. B. Steinman. Civil Eng 17:601-4 O '47

Welding operations

1,500-ft. welded continuous-girder bridge; St Rose, Quebec. Engineering 163:285-6 Ap 11 '47

Reflections on standard specifications for structural design. A. M. Freudenthal. Am Soc C E Proc 73:115-21 F '47

Widening

Widening and stiffening a suspension bridge; New York City's Bronx-Whitestone bridge. H. K. Glidden. il diag Roads & Sts 90:68-9+ Mr '47

Widening and stiffening Whitestone bridge. E. L. Pavlo. il diags Eng N 139:466-9 O 2 '47

Wrecking

Blasting concrete piers under water; foundations of bridge quickly demolished. W. F. McCandlish. il plan diag Explosives Eng 24:179-81 N '46

Demolishing bridge piers with explosives. W. F. McCandlish. il Explosives Eng 25:42-3 Mr '47

Belgium

Belgian railway bridge reconstruction. C. F. B. Lemaire. il diags Engineer 184:168-71 Ag 22 '47

Canada

Statistics of the road and bridge building industry. Roads & Bridges 85:76-8+ Je '47

France

France rebuilds big bridge twice; Eauplet bridge across the Seine. il diags Eng N 139:384-5 S 18 '47

La reconstruction du viaduc de La Canardière, près de Chantilly, Oise. G. Kimpflin. il diags Génie Civil 124:65-7 F 15 '47

Germany

Rhine; how its bridges and barges are being restored. W. G. Bowman. il map diags Eng N 139:588-601 O 30 '47

BRIDGES—*Continued*

Netherlands

Repairs to war-damaged bridges in Holland. il Engineering 163:1-4, 12 Ja 3 '47

BRIDGES, Aluminum

All-aluminum bridge span makes debut. il Ry Age 122:136-8 Ja 11 '47

All-aluminum span carries rail traffic over Grasse River bridge. S. Hardesty and J. M. Garrelts. il Civil Eng 16:527-31+ D '46

Aluminum span for E-60 railroad bridge. il Eng N 137:714-16 N 28 '46

BRIDGES, Arched

La reconstruction du viaduc de Nogent-sur-Marne sur la ligne de chemin de fer de Paris à Bâle. A. Chansigaud and M. Martin. il plans diags Génie Civil 124:145-9, 168-71 Ap 15-My 1 '47

BRIDGES, Bascule

Bascule bridge leaves relieved of hidden load by cleaning of steel-mesh flooring. C. L. Wartelle. Eng N 139:324 S 4 '47

Record double-leaf bascule; bridge across Black river near Lorain, Ohio. il Civil Eng 17:249 My '47

BRIDGES, Concrete

Bridge over Mond river in Udaipur State, India. il Eng N 138:335 F 27 '47

Design constants facilitate analysis of beams composed of prismatic segments. H. Solman. diags Civil Eng 17:265+ My '47

Fiber tubes imbedded in concrete slab increase effective span. E. R. Schofield. il diag Eng N 139:114 Jl 24 '47

Louisville & Nashville builds long concrete trestle at Henderson, Ky. il diag Ry Age 122:187-90 Ja 18 '47

Luzancy bridge, France. il Engineer 183:469 My 30 '47

New bridges pay for themselves in ten years in reduced maintenance costs; Tarrant county, Texas. il Pub Works 78:28-9 Ap '47

Le pont-rail en béton de La Jonction, à Genève. il diags Génie Civil 123:312-14 N 15 '46

Le pont-route en béton armé d'Ayouthia, sur le Ménam, Siam. diags Génie Civil 124:37-8 Ja 15 '47

Precast prestressed concrete rail bridge. il Engineer 184:10-11 Jl 4 '47; Engineering 164:252, 263 S 12 '47

Prestressed concrete bridge beams being tested in England. R. L. M'Ilmoyle. il diags Ry Age 123:478-82 S 20 '47

Railroad rails serve as reinforcing steel in secondary-road bridge construction. S. W. La Lance. il Civil Eng 17:544-5 S '47

Seventeen arches in this pipe culvert on the Sunset highway. il diags Roads & Sts 90: 80+ Je '47

Steel forms speed construction of long bridge approach. il Eng N 138:525-7 Ap 3 '47

Cost

Bridge and substructures, Kern co., California; unit prices. Eng N 138:329 F 20 '47

Bridge, Monroe county, Indiana; unit prices. Eng N 138:326+ F 20 '47

Concrete pavement and bridge over Angelico creek, Virginia; unit prices. Eng N 139: 346+ S 4 '47

Highway construction, Huntingdon county, Pa.; unit prices. Eng N 138:156 Ja 23 '47

Reinforced concrete bridge at Cherryvale, Kansas; unit prices. Eng N 138:469 Mr 20 '47

Reinforced concrete bridge, Los Angeles, Calif.; unit prices. Eng N 139:618 O 30 '47

Three bridges over Caney river, near Bartlesville, Oklahoma; unit prices. Eng N 137: 892 D 26 '46

Testing

Loading tests of a reinforced concrete slab-bridge of 25 ft span; abstract. P. W. Clark. Am Concrete Inst J 18:1075-6 My '47

BRIDGES, Floating

Les grands ponts des routes stratégiques reliant la Birmanie et l'Inde à la Chine. il map diags Génie Civil 124:305-7 Ag 15 '47

See also
Bridges, Pontoon

BRIDGES, Iron and steel

Builds new bridge across the Kanawha; project on B. & O. C. E. Sloan. il diags Ry Age 123:315-20+ Ag 23 '47

Continuous steel-girder bridges. L. Loch. il diags Roads & Bridges 85:57-63 F '47

Converted railroad bridge over Colorado river carries California-Arizona highway traffic. R. R. Rowe. il map Civil Eng 17:584-7 O '47

Deep cylinder piers support heavy steel trusses of bridge over Colorado river. W. E. Robey. il Civil Eng 17:519-22 S '47

Mississippi River bridge at Dubuque, Iowa. R. N. Bergendoff and J. Sorkin. il diags Am Soc C E Proc 73:761-82 Je '47; Discussion. 73:1163-5, 1319-21 S-O '47

Semi-permanent bridges over the Rhine at Mainz. il Engineering 164:145-7, 156 Ag 15 '47

Welded girder bridge of composite design carries deck area of two acres; bridge for Erie Thruway over Cattaraugus creek, southwest of Buffalo. E. W. Wendell. diags Eng N 137:856-8 D 26 '46

BRIDGES, Lift

800-ton vertical lift span; Cerritos Channel bridge, Port of Los Angeles area. il plan diags Roads & Sts 89:65-71 N '46

BRIDGES, Military. See Military bridges

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BRIDGES, Pontoon

Irrawaddy River bridge on the Ledo-Burma road. il diags Engineering 163:49-51, 60 Ja 17 '47

BRIDGES, Prefabricated

Bailey bridge. S. A. Stewart. il Metal Prog 50:674-5 O '46

Callender-Hamilton standardized bridging in war and postwar use. A. M. Hamilton. il Roads & Bridges 85:90-4+ Je '47

Precast prestressed concrete rail bridge. il Engineer 184:10-11 Jl 4 '47; Engineering 164: 252, 263 S 12 '47

Welded steel tubular bridges; used for sea forts off British coast. il plan diag Engineering 162:391, 396 O 25 '46

BRIDGES, Railroad

All-aluminum bridge span makes debut. il Ry Age 122:136-8 Ja 11 '47

All-aluminum span carries rail traffic over Grasse River bridge. S. Hardesty and J. M. Garrelts. il Civil Eng 16:527-31+ D '46

Aluminum span for E-60 railroad bridge. il Eng N 137:714-16 N 28 '46

Baltimore and Ohio's $2,000,000 bridge across the Kanawha river opens new heavy freight gateway to South. il Manuf Rec 116:36+ Je '47

Builds new bridge across the Kanawha; project on B. & O. C. E. Sloan. il diags Ry Age 123:315-20+ Ag 23 '47

Deep cylinder piers support heavy steel trusses of bridge over Colorado river. W. E. Robey. il Civil Eng 17:519-22 S '47

Government shares expense of removing obstructions to shipping on navigable streams. L. C. Sabin. il Civil Eng 17:67-9 F '47

High trestle tests construction types; Northern Pacific structure, half creosoted pile bents and half Wolmanized frame bents. il Ry Age 122:308-10 F 8 '47

Louisville & Nashville builds long concrete trestle at Henderson, Ky. il diag Ry Age 122:187-90 Ja 18 '47

Le pont-rail en béton de La Jonction, à Genève. il diags Génie Civil 123:312-14 N 15 '46

Precast prestressed concrete rail bridge. il Engineer 184:10-11 Jl 4 '47; Engineering 164: 252, 263 S 12 '47

Prestressed concrete bridge beams being tested in England. R. L. M'Ilmoyle. il diags Ry Age 123:478-82 S 20 '47

Railroad bridge sails to new position; truss spans floated on barges in T.V.A. river project. K. C. Roberts. il map Ry Age 122: 270-2 F 1 '47

Railroad relocated above Conemaugh dam. il diags Eng N 139:179-80 Ag 7 '47

BRIDGES, Railroad—*Continued*
Recent legislation alleviates railways' economic burden; waterway clearance requirements. J. B. Akers. il Civil Eng 17:71-2 F '47
Recent tests on determination of impact and stresses in steel, masonry and timber bridges; abstract. E. J. Ruble. Ry Age 123: 562 O 4 '47
Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46; Excerpt. Civil Eng 17:205-6 Ap '47
Union completes major improvements. il map Ry Age 122:442-4+, 490-3 Mr 1-8 '47

Maintenance and repair

Repairing an old Phoenix-section bridge to carry modern loads safely; Cascade bridge, Berlin, N.H. C. A. Johnson and E. E. Seelye. il plan diags Eng N 137:796-8 D 12 '46

Reconstruction

Belgian railway bridge reconstruction. C. F. B. Lemaire. il diags Engineer 184:168-71 Ag 22 '47
France rebuilds big bridge twice; Eauplet bridge across the Seine. il diags Eng N 139:384-5 S 18 '47
New arches strengthen old trusses; three spans on the Paraná railway in Brazil. O. Machado da Costa. il diag Eng N 137:738-9 N 28 '46
New piers for railway bridge save $1,400,000; use of steel piles encased in prepakt concrete. J. F. Salmon. il diags Roads & Bridges 85:72-7+ Ag '47
Raising railway bridge over Tennessee river. il diags Engineering 162:457-9, 468 N 15 '46
La reconstruction du viaduc de La Canardière, près de Chantilly, Oise. G. Kimpflin. il diags Génie Civil 124:65-7 F 15 '47
La reconstruction du viaduc de Nogent-sur-Marne sur la ligne de chemin de fer de Paris à Bâle. A. Chansigaud and M. Martin. il plans diags Génie Civil 124:145-9, 168-71 Ap 15-My 1 '47
Reconstruction of Nogent viaduct, France. il diags Engineer 182:514 D 6 '46
Reconstruction of 60-ft. skew railway bridge. il Engineering 162:451 N 8 '46; Engineer 182:425-6 N 8 '46
Reconstruction of 67-year-old bridge piers and abutments, Canadian national railways, Black Creek bridge. J. F. Salmon. il plan diags Roads & Bridges 84:57-61+ N '46
La reconstruction semi-provisoire du pont-route de Chalampé, sur le Rhin. Werner and Kolhos. diag Génie Civil 124:219 Je 1 '47
Restoration of L.P.T.B. viaduct at Kilburn. il Engineer 183:477-8 My 30 '47

Testing

Santa Fe makes stress tests on track and rolling stock; electrical strain gage recording equipment. il Ry Age 122:1165-6 Je 7 '47; Same. Ry Mech Eng 121:256-7 My '47

BRIDGES, Suspension
Europe's longest suspension bridge; to be built across the Severn river in England. il Roads & Bridges 84:58+ D '46
Severn Bridge scheme. il maps Engineer 184: 123 Ag 8 '47
Stiffening the Bronx-Whitestone bridge. il diags Engineer 183:532-5 Je 20 '47
Widening and stiffening a suspension bridge; New York City's Bronx-Whitestone bridge. H. K. Glidden. il diag Roads & Sts 90:68-9+ Mr '47
Widening and stiffening Whitestone bridge. E. L. Pavlo. il diags Eng N 139:466-9 O 2 '47

BRIDGES, Temporary
Tubular steel pile piers withstand rigid test; two piers of Garrison Dam construction bridge subjected to unusual ice load. E. E. Howard. il map diags Civil Eng 17:580-3+ O '47

BRIDGES, Wooden
Covered bridges. C. H. Vivian. il Comp Air Mag 52:240-4 O '47
High trestle tests construction types; Northern Pacific structure, half creosoted pile bents and half Wolmanized frame bents. il Ry Age 122:308-10 F 8 '47
Last of Brunel's wooden viaducts. il Engineering 163:126 F 7 '47
Modern European practice promotes economic use of timber structures. E. G. Stern. bibliog il diags Civil Eng 17:193-7 Ap '47

Maintenance and repair

Extra beams replace bent in temporary bridge repair. il Eng N 137:874 D 26 '46

BRIDGMAN, Percy Williams, 1882-
American chemists awarded Nobel prizes at Stockholm. Chem & Eng N 25:300-1 F 3 '47 Portrait. Science 104:cover D 6 '46

BRIGGS and Stratton corporation
Secondary offering. Comm & Fin Chr 165: 68 Ja 6 '47

BRIGHTNESS
Brightness and legibility at night of road traffic signs. J. S. Smyth. Light & Lighting 40:26-7 F '47
Brightness and polarization of the daylight sky at various altitudes above sea level. R. Tousey and E. O. Hulburt. Opt Soc Am J 37:78-92 F '47
Brightness distribution in rooms; report no. 4 of the Committee on standards of quality and quantity for interior illumination. Illum Eng 42:180-216 F '47
Brightness engineering calculations for school and office lighting. W. Allphin. bibliog il Illum Eng 42:741-57 S '47
Brightness of apparent fluorescence as a function of the exciting intensities. F. Urbach and others. Opt Soc Am J 37:122 F '47
Classroom fields of vision. A. S. Turner and A. A. Brainerd. bibliog il plans Illum Eng 42:488-99; Discussion. 499-502 Ap '47
Effect of atmospheric scattering upon the appearance of a dark object against a sky background. G. A. Fry and others. diags Opt Soc Am J 37:635-41 Ag '47
Relation of the configuration of a brightness contrast border to its visibility. G. A. Fry. diags Opt Soc Am J 37:166-75 Mr '47
Silberstein on intrinsic properties of the color domain. R. H. Sinden. Opt Soc Am J 37:396-8 My '47
Size, shape, and contrast in detection of targets by daylight vision; data and analytical description. E. S. Lamar and others. bibliog diag Opt Soc Am J 37:531-45 Jl '47
Studies of illumination and brightness in residential interiors. E. W. Commery. il diags Illum Eng 42:87-107 Ja '47
Visual thresholds of steady point sources of light in fields of brightness from dark to daylight. H. A. Knoll and others. diags Opt Soc Am J 36:480-2 Ag '46; Discussion. S. Hecht. 37:59 Ja '47

See also
Paper—Brightness

BRILLIANT green
Studies on false confirmed test using B.G.B. and comparison studies on lauryl sulfate tryptose broth as a presumptive medium. M. S. Shane. Am Water Works Assn J 39: 337-40 Ap '47

BRINE
Chemicals from the Dead sea. Z. Halperin. flow diag il Chem Eng 54:94-6 Je '47
Deterioration of concrete in brine storage tanks. I. Lyse. il Am Concrete Inst J 19: 141-7 O '47
Flume system aids brining and siruping operations; Gorton-Pew installation to clean, chill and brine fish fillets; can be adopted for washing vegetables and siruping fruits. M. P. Vucassovich. il diags Food Ind 19: 34-6 Ja '47
Plastic used for brine tanks; Plexiglas used by processor of olives. il Food Ind 119:464 Ap '47
Rh of air in equilibrium with refrigerated brine. A. B. Stickney. Refrig Eng 54:232-4 S '47
Saturated brine reduces costs at Dan River. N. Agnew. il Textile World 97:135+ Ag '47
Sodium chloride versus construction materials; symposium. il Chem Eng 54:211-12+ O '47 (to be cont)

BRISBANE, Arthur, 1864-1936
When Arthur Brisbane wrote an ad. E. Hoftyzer. por Adv & Sell 40:40 Ja '47

BRISTLES, Artificial
Brushes from milk; Rubberset company's new plant at Salisbury, Md. L. B. Howard. il Manuf Rec 116:32-3+ Ap '47

Casein bristles. Chem & Eng N 25:46 Ja 6 '47; Science 105:63 Ja 17 '47

Casein for brush bristles. il Chem Eng 54: 108-9 Mr '47

BRISTOL-MYERS company
Expanding in ethical drug field. Barron's 27:27 Je 23 '47

Net to drop from abnormal 1947 period. Barron's 27:30 Mr 24 '47

BRITISH-AMERICAN tobacco company
Annual general meeting, 44th, London. Economist 152:301 F 15 '47

BRITISH anti-lewisite. See BAL

BRITISH association for the advancement of science
Annual meeting, 109th, Dundee, Aug. 27-Sept. 3. Engineer 184:200-3, 224-5, 242-4, 272-3, 295-6 Ag 29-S 26 '47; Engineering 164:231-3, 256-7 S 5-12 '47; Elec R (Lond) 141:361-2, 410 S 5-12 '47; Electrician 139: 697-9, 765-6 S 5-12 '47

BRITISH association of chemists
Political fund to be put into operation; new officers. Chem Age (Lond) 55:805-6 D 28 '46

BRITISH cast iron research association
Silver jubilee of Cast Iron Research. H. Hartley. il Gas J (Lond) 249:33-5 Ja 1 '47

BRITISH chemical and dyestuffs traders' association
Annual general meeting, London, May 19. Chem Age 56:603 My 10 '47

BRITISH chemical plant manufacturers' association
Annual meeting, London, June 25. Chem Age (Lond) 57:5-7 Jl 5 '47; Chem & Ind p386-7 Jl 5 '47

BRITISH COLUMBIA
Roving reporter's notes on the western Canada market. A. G. Mezerik. Sales Management 59:144+ O 15 '47

See also
Geology—British Columbia
Mines and mineral resources—British Columbia
Mining industry and finance—British Columbia

Industries and resources

Industrial fuels. P. Borchard. Pulp & Pa of Can 48:74-6 O '47

Selling the West to industry; development work of British Columbia electric railway. J. E. Underhill. il Elec West 97:70-1 O '46

BRITISH COLUMBIA university
Forestry department of the University of British Columbia. J. E. Liersch. Pulp & Pa of Can 48:126+ My '47

BRITISH council
British council, 1947. Economist 151:862-3 N 30 '46

BRITISH EAST AFRICA. See Africa, British East

BRITISH electrical and allied industries research association
Work of the Electrical research association; annual report. Electrician 138:441-2 F 7 '47; Engineer 183:193 Mr 7 '47; Engineering 163:299-300 Ap 11 '47

BRITISH electrical and allied manufacturers' association
Annual meeting, 36th, London, April 17. Electrician 138:1088 Ap 25 '47

Report of the Council, 1946-1947. Elec R (Lond) 140:675-6 Ap 25 '47; Electrician 138: 1076 Ap 25 '47

BRITISH electrical development association
Annual meeting, London, March 21. Electrician 138:775-6 Mr 28 '47; Elec R (Lond) 140:471-4 Mr 28 '47

Future of the E.D.A. and E.A.W.; abstract. W. M. Citrine. Electrician 139:1224 O 24 '47

Sales management conference, London, May 7-9. Elec R (Lond) 140:819-20 My 16 '47

BRITISH export trade research organization
British offer to help American importers find goods. For Comm W 28:7 S 20 '47

BRITISH glaciological society
Officers. Science 105:120 Ja 31 '47

BRITISH glues and chemicals, limited
Statement by the chairman at ordinary general meeting. R. Duncalfe. Economist 153: 216 Ag 2 '47

BRITISH industries fair
British industries fair. il Chem Age (Lond) 56:553-62, 593-601 My 3-10 '47

British industries fair. Chem & Ind p273-5, 289 Mr 17-24 '47

British industries fair. il diags Engineer 183: 372-4, supp 1-8, 395-7, supp 1-8, 418-20, 442-4, 463-6 My 2-30 '47; Engineering 163:373-6, 384, 397-400, 408, 424-6, 448-50, 454, 517-18, 524 My 9-30, Je 20 '47

British industries fair; electrical exhibits. il plan Elec R (Lond) 140:697-721, 787-801 My 2, 16 '47; Electrician 138:1151-5, 1233-41 My 2-9 '47

British industries fair; exhibits of interest to the gas industry. Gas J (Lond) 250:346+ My 14 '47

British industries fair; mechanical handling equipment. il Mech Handling 34:265-73, 303-4 My-Je '47

BRITISH iron and steel research association
Committee organization; chart. Iron & Steel Inst J 156:292 Je '47

BRITISH MALAYA. See Malayan Union

BRITISH overseas mining association
Unity in mining. Bsns W p114+ N 23 '46

BRITISH parliamentary and scientific committee
Methods of work, activities, etc. G. Schuster. Can Chem & Process Ind 31:423-5 My '47

BRITISH plaster board, limited
Statement by the chairman. Lord Belper. Economist 153:262 Ag 9 '47

BRITISH trades union congress
Annual session, 78th, Brighton, Oct. 21-25, 1946. Int Labour R 55:152-6 Ja-F '47

BRITISH WEST INDIES. See West Indies, British

BRITTLE coating test. See Strains and stresses—Brittle coating test

BRITTLENESS
Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47; Abstract. Engineer 184:506-7 N 28 '47; Discussion. S. Thompson. J Ap Phys 18:781-2; Reply. 782-3 Ag '47

See also
Steel—Brittleness

BRITTON, Edgar Clay, 1891-
Portrait. Fortune 35:106 My '47
Sketch. por Chem & Eng N 25:3058 O 20 '47

BROACHES
Blind holes splined with short-section broaches. H. H. Gotberg. il diags Am Mach 91:99 Ja 2 '47

Colonial broach sharpening machine. il Automotive & Aviation Ind 96:41 Ja 1 '47

How to sharpen broaches; illustrations with text. H. S. Wharen. Am Mach 91:102-5 Ag 28 '47

Keyed broach maintains accurate alignment. W. H. Genich. diags Am Mach 91:138-9 Ap 10 '47

Screw holes for broach inserts and holders; reference book sheet. diags Am Mach 91: 139 Ap 24 '47

Standard keyway broaches; table; reference book sheet. Am Mach 91:171 My 8 '47

BROACHING
Bench shapers are versatile tools for broaching and knurling; Telechron, inc. il diag Am Mach 91:106-7 Ag 14 '47

Broach a square hole to remove a broken bushing. A. T. Roudebush. diag Am Mach 91:116 Ja 30 '47

Broachability of materials. H. Gotberg. il diag Materials & Methods 25:103-7 Ap '47

Broaching machines, tools and practice. E. P. Edwards. Engineering 162:485-6, 534-5 N 22, D 6 '46; Same cond. il diags Automobile Eng 37:27-31 Ja '47

Three and one broaching on one dual-ram machine; automobile connecting rods. il Steel 120:123 Ap 14 '47

BROACHING—*Continued*
What AC learned in broaching two parts. R. Le Grand. diags Am Mach 91:100-1 Ap 10 '47

BROACHING machines
Broaching development. G. Hubbard. il Steel 121:96-8+ Jl 21 '47
Broaching machines, tools and practice. E. P. Edwards. Engineering 162:485-6, 534-5 N 22, D 6 '46; Same cond. il diags Automobile Eng 37:27-31 Ja '47
Broaching matches golf irons within 1/16 oz. il diags Am Mach 91:90-1 Ja 30 '47
Colonial air operated eccentric fixture simplifies broaching. il Iron Age 159:52 Mr 27 '47
Design of large broaching machines. G. R. Squibb. il Machine Design 19:124-5 F '47
Good fixtures make broaching suitable for many jobs; illustrations with text. H. H Gotberg. Am Mach 91:90-2 Mr 27 '47
High-production broaching of automobile connecting-rods. il Mach 53:160 Mr '47
Machine tool show in print; broaching. il Am Mach 91:239 S 11 '47
Oilgear vertical broaching machines. il Mach 54:214 S '47
Oilgear's double slide surface broaching machines. il diags Product Eng 18:98-100 S '47
Two Swiss machine tools; hydraulic broaching machine, milling cutter milling machine. il Engineer 184:64 Jl 18 '47

BROADCAST measurement bureau
Broadcasters postpone survey of circulation. Bsns W p60-1 Je 28 '47

BROADCASTERS, National association of. See National association of broadcasters

BROADCASTERS advisory council (proposed)
Supporters of new radio advisory council to push plans despite early setbacks. Ptr Ink 218:93+ Mr 21 '47

BROADCASTING, Radio. See Radio broadcasting

BROADCASTING stations, Radio. See Radio broadcasting stations

BROGDEXING. See Fruit—Preservation

BROILERS, Electric. See Electric broilers

BROKER (term)
By way of definition. Aesop Glim. Ptr Ink 217:66 O 11; 56+ N 22 '46

BROKERS
Attorney General defends questionnaire sent to upstate security dealers; exchange of correspondence. F. Kernan; N. L. Goldstein. Comm & Fin Chr 165:1248+ Mr 6 '47
Brokerage record. Bsns W p65-6 Mr 1 '47
Finance talks with the people; 1946 report of Merrill Lynch. Trusts & Estates 84:482-3 My '47
Margins, trading hours and commission rates. J. F. Burns, jr. Comm & Fin Chr 165:863+ F 13 '47
Official witch hunt; New York State Attorney General's questionnaire; with text. Comm & Fin Chr 165:1117+, 1375+ F 27, Mr 13 '47
Plan to reduce underwriting standby losses. E. P. Barry. Comm & Fin Chr 165:743 F 6 '47
SEC reports resources and liabilities of registered brokers and dealers. Comm & Fin Chr 166:531 Ag 7 '47
See also
Insurance brokers

Commissions
Customer protests; feels brokerage charges are on wrong basis and service is cumbersome. R. Parker. Barron's 27:9 Mr 10 '47; Discussion (Brokers have to live too, they think). F. M. Stern. Barron's 27:21-2 My 5 '47
Members of NYSE believed inclined to favor substantial increases in commission rates. Comm & Fin Chr 165:1649+ Mr 27 '47

Employees
CIO gets contract from first Wall Street brokerage house to sign up with a union. E. Germain. Comm & Fin Chr 165:1121+ F 27 '47
Employees of Ward, Gruver & co. choose UFE as collective bargaining agent, 10 to 7. Comm & Fin Chr 165:2988 Je 5 '47
Third union enters Wall Street scene as UFE wins limited arbitration of wages at Kidder. E. Germain. Comm & Fin Chr 165: 2197+ Ap 24 '47

Law
Problems of stock brokers and transfer agents arising from questioned securities. S. W. Donovan. Weekly Underw 155:1564-6; 156:284-6, 552-3 D 28 '46, Ja 25, F 22 '47

BROKERS' blanket bond. See Bankers' blanket bond

BROKERS' loans
Customers' debit balances, money borrowed, and principal related items of stock exchange firms carrying margin accounts, June and Dec. 1936-1945 and monthly, Jan.-Nov. 1946. Fed Res Bul 33:62 Ja '47 [cont monthly]

BROKERS' offices
Brokerage office boosts business and employe morale with space-saving modern design. il plan diag Arch Forum 87:98-9 O '47

BROMIDES
Infrared spectra of fifteen organic bromides from 500 to 800 cm.$^{-1}$. F. S. Mortimer, R. B. Blodgett and F. Daniels. bibliog Am Chem Soc J 69:822-6 Ap '47
Preparation and identification of alkylcyclopropanes; 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane. J. D. Bartleson, R. E. Burk and H. P. Lankelma. bibliog Am Chem Soc J 68:2513-18 D '46
Properties of some metal bromide systems; abstract. E. J. Horenbein. Chem Eng 54: 258 Ja '47
Removal of hydrogen bromide from certain β-phenylalkyl bromides by means of potassium amide in liquid ammonia. C. R. Hauser and others. bibliog Am Chem Soc J 69:589-93 Mr '47

Analysis
Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46
Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46
Estimation of bromide in presence of chloride. L. Farkas and M. Lewin. bibliog Anal Chem 19:665-6 S '47
Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46

BROMINATION
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47
t-Aminoalkyl derivatives of 2-aminothiazole. A. H. Land, C. Ziegler and J. M. Sprague. bibliog Am Chem Soc J 69:125-8 Ja '47
Analysis of hypochlorite-hypobromite solutions. L. Farkas and M. Lewin. bibliog Anal Chem 19:662-4 S '47
Bromination of phenols and phenol alcohols. I. W. Ruderman. bibliog Ind & Eng Chem Anal ed 18:753-9 D '46
Bromination of 4-phenylphenol and 4-phenylphenyl benzoate. S. E. Hazlet and L. C. Hensley. Am Chem Soc J 69:708-9 Mr '47
Carbazoles, carbolines, and related compounds; quindoline derivatives. S. J. Holt and V. Petrow. Chem Soc J p607-11 My '47
Direct bromination of fluorinated alkanes. E. T. McBee and others. bibliog Ind & Eng Chem 39:420-1 Mr '47
Improved procedure for the replacement of aromatic amino groups by bromine. M. S. Newman and W. S. Fones. Am Chem Soc J 69:1221-2 My '47

BROMINATION—*Continued*
Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives. I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47
Kinetics of halogen addition to unsaturated compounds; the halogen-ethylenes. B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47
No-bond resonance; competitive bromination of toluene and *t*-butylbenzene. E. Berliner and F. J. Bondhus. bibliog Am Chem Soc J 68:2355-8 N '46
Oxidative bromination in the determination of malic acid and aspartic acid; micromethod for determination of beta-alanine. H. Suomalainen and E. Arhimo. bibliog Anal Chem 19:207-9 Mr '47
Photochemical bromination of fluorene. J. R. Sampey and E. E. Reid. Am Chem Soc J 69:234-5 F '47
Side-chain bromination of some alkylnaphthalenes with N-bromosuccinimide. N. P. Buu-Hoï and J. Lecocq. Chem Soc J p830-2 S '46
Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; bromination, halogeno-derivatives, and the preparation of the new 7-nitro-2-naphthol. H. H. Hodgson and E. R. Ward. Chem Soc J p327-31 Mr '47
See also
Hexabromide number

BROMINE
Amperometric titration of thiodiglycol with electrolytically generated bromine. J. W. Sease, C. Niemann and E. H. Swift. diags Anal Chem 19:197-200 Mr '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 127-8 N '46
Kinetics of the reaction between tin and solutions of bromine and iodine in organic solvents. A. F. Trotman-Dickenson and E. J. F. James. Chem Soc J p736-8 Je '47
Preparation of hydrobromic acid by the reduction of bromine with sulphur. R. Bloch and others. bibliog diags Soc Chem Ind J 66:115-17 Ap '47
Quadrupole moments and spins of Br, Cl, and N nuclei. C. H. Towns and others. bibliog Phys R 71:644-5 My 1 '47

Analysis

Sensitive confirmatory test for bromine. S. Weiner. J Chem Educ 24:501 O '47

Isotopes

Determination of the ranges of the fission fragments emitting delayed neutrons; chemical identification of the 4.51-sec. delayed neutron activity. N. Sugarman. bibliog diag J Chem Phys 15:544-51 Ag '47
Nuclear moments of the bromine isotopes. S. B. Brody and others. bibliog Phys R 72:258-9 Ag 1 '47

Manufacture

SO_2 control problem solved in sea water bromine plants; abstract. P. Hart. Chem Eng 54:102 O '47

BROMINE compounds
Halogenated derivatives of methyleugenol; 6-bromomethyleugenol glycol and 6-bromohomoveratraldehyde. S. Kaufmann, G. Rosenkranz and J. López. Am Chem Soc J 68:2733-4 D '46

BROMOACETAMIDE
Organic fungicides; preparation of some α-bromoacetamides. W. E. Weaver and W. M. Whaley. bibliog Am Chem Soc J 69:515-16 Mr '47

BROMOACRYLIC acid
Olefinic acids; reactivity of α-bromoacrylic acid and some related compounds. L. N. Owen and H. M. B. Somade. Chem Soc J p 1030-4 Ag '47

BROMOFLUORENE
Photochemical bromination of fluorene. J. R. Sampey and E. E. Reid. Am Chem Soc J 69:234-5 F '47

BROMOFORM
Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47

BROMOMETHANE. See Methyl bromide

BROMONITROÖCTANE
Basis for the reported optical activity of the salts of aliphatic nitro compounds; 2-nitroöctane. N. Kornblum and others. bibliog Am Chem Soc J 69:307-13 F '47

BROMOPROPIONAMIDE
Organic fungicides; preparation of some α-bromopropionamides. W. E. Weaver and W. M. Whaley. Am Chem Soc J 69:1144-5 My '47

BROMOSUCCINIMIDE
Side-chain bromination of some alkylnaphthalenes with N-bromosuccinimide. N. P. Buu-Hoï and J. Lecocq. Chem Soc J p830-2 S '46
Synthesis and structure of tetrahydropyrethrolone. H. J. Dauben, jr. and E. Wenkert. bibliog Am Chem Soc J 69:2074-5 Ag '47

BROMOTHYMOL blue
Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69: 1296-301 Je '47

BROMOTRICHLOROMETHANE
Reactions of atoms and free radicals in solution; addition of bromotrichloromethane to olefins. M. S. Kharasch, O. Reinmuth and W. H. Urry. bibliog Am Chem Soc J 69: 1105-10 My '47

BRONZE
Arc welding of copper and copper-base alloys. F. E. Garriott. il diags Welding J 26:907-15 O '47
Effect of tin content on the properties of degassed chill-cast tin bronze; abstract. W. T. Pell-Walpole. il Metal Prog 51:138+ Ja '47
Forging practice; copper and its alloys. A. Ashburn. diags Am Mach 91:127-9 My 8 '47
Improvements in the manufacture of tin bronzes. W. T. Pell-Walpole. il diags Metal Prog 50:1221-31 D '46
Recent developments in the physical metallurgy of copper and copper alloys, and in equipment and practice. H. L. Burghoff and W. D. France. il Min & Met 28:79-84 F '47
Unsoundness caused by gases in copper-base alloys. L. W. Eastwood and J. G. Kura. bibliog il Foundry 75:80-2+ My; 82-3+ Je; 70-1+ Jl; 76-81+ Ag; 86-8+ S; 86-91+ O; 94-9+ N '47
See also
Aluminum bronze
Bronze founding
Gun metal

Analysis

Colorimetric determination of iron in brass and bronze. W. Goodman. bibliog Anal Chem 19:141-2 F '47

Testing

Comparison of test bar designs cast in 85-5-5-5 alloys. L. W. Eastwood and J. G. Kura. il Foundry 75:76-81+ Ag '47
Effect of pouring temperature on test bar properties of 85-5-5-5 alloy. L. W. Eastwood and J. G. Kura. Foundry 75:86-8+ S '47
Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdam, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46
Plasticity in experiment and theory. M. G. Corson. il Metal Prog 50:1209-10 D '46
Reliability of test bar properties as a measure of the quality of 85-5-5-5 alloy melts. L. W. Eastwood and J. G. Kura. Foundry 75:94-9+ N '47
Selective corrosion of phosphor bronze in hot-water service. W. D. Clark. il Engineering 164:214-16 Ag 29 '47; Abstract. Engineer 183:257 Mr 28 '47; Discussion. Engineering 163:280 Ap 11 '47; Engineer 183:257-8 Mr 28 '47

BRONZE (color)
Phenomenon of bronze in surface coatings. G. L. Buc and others. bibliog il pl diags Ind & Eng Chem 39:147-54 F '47

BRONZE, Powdered
Copper-base powder metallurgy parts. H. Chase. il diags Materials & Methods 24: 1439-44 D '46

BRONZE founding
Brass and bronze foundry practice. D. F. O'Connor. Foundry 75:105+ Mr '47
Brass, bronze division, A.F.A.; abstracts of papers. Foundry 75:133-4+ Je '47
Casting artistic bronzes; Roman bronze works. P. Dwyer. il diag Foundry 75:66-71 N '47 (to be cont)
Casting gurdy spools in the Northwest; illustrations with text. Foundry 75:125 N '47
Centrifugal casting of copper-alloy wheels in sand moulds. O. R. J. Lee and L. Northcott. il Engineering 163:556-9 Je 27 '47; Discussion. 164:353 O 10 '47
Comparison of test bar designs cast in 85-5-5-5 alloys. L. W. Eastwood and J. G. Kura. il Foundry 75:76-81+ Ag '47
Effect of chills on rate of solidification of gun metal. W. J. Richmond. il Foundry 75:72-3+ O '47
Effect of mold material on gas absorption by 85-5-5-5 alloy. L. W. Eastwood and J. G. Kura. Foundry 75:86-91+ O '47
Effect of pouring temperature on test bar properties of 85-5-5-5 alloy. L. W. Eastwood and J. G. Kura. Foundry 75:86-8+ S '47
Gas and shrinkage in tin bronzes. E. F. Tibbetts. il Foundry 75:74-7+ S '47
Improvements in the manufacture of tin bronzes. W. T. Pell-Walpole. il diags Metal Prog 50:1221-31 D '46
Modified melting practice improves bronze pressure castings; use of cover compound and degassifier. S. W. Wysocki. il Iron Age 159:47-9 My 1 '47
Nonferrous foundry industry; its structure, sales, costs and profits. J. B. Meier and V. H. McClung. Foundry 75:86-8+ Jl; 88-90+ Ag; 94-7+ S '47
Practical procedures for reducing gas porosity in nonferrous castings. A. E. St. John. Iron Age 160:46-8 Jl 3 '47
Reliability of test bar properties as a measure of the quality of 85-5-5-5 alloy melts. L. W. Eastwood and J. G. Kura. Foundry 75:94-9+ N '47
Revolution in the bronze foundries since 1917. J. D. Zaiser. il Metal Prog 52:603-5 O '47
Some casting troubles; abstract. J. L. Francis. Materials & Methods 24:1526 D '46

BRONZES
Casting artistic bronzes; Roman bronze works. P. Dwyer. il diag Foundry 75:66-71 N '47 (to be cont)

BROOKHAVEN national laboratory
Atomic energy in peacetime investigated by Associated universities. plan Chem & Eng N 25:846 Mr 24 '47
Atomic research center. il Mech Eng 69:321-3 Ap '47; Power 91:227 Ap '47
Ceremonies held on Aug. 11. Science 106: 162 Ag 22 '47
First peacetime atomic pile going up at Brookhaven. Chem Eng 54:179 S '47; Chem & Eng N 25:2636+ S 15 '47
Government-owned, government-financed atomic research project. Science 105:491 My 9 '47

BROOKLYN, New York
Brooklyn survey shows air travelers repeat. O. H. Ehrlich. Air Transport 5:34-6 Jl '47
See also
Housing—Brooklyn, New York

BROOKLYN bridge. See New York (city)—Bridges

BROOMS
New broom; Deshler Brownie. il Bsns W p40+ S 6 '47

BROTHERHOOD of locomotive engineers
Strike tactics net Southern Pacific engineers small gain over mediation. Ry Age 123:204 Ag 2 '47

BROTHERHOOD of railroad trainmen
Congressman calls A. F. Whitney unregistered lobbyist. Ry Age 123:113-16 Jl 19 '47

BROWN, Lewis Henry, 1894-
Portrait. Bsns W p26 O 11 '47

BROWN, William J.
Challenge in films. por Bsns W p46+ F 15 '47

BROWN coal. See Lignite

BROWNE, Charles Albert, 1870-1947
Sketch. por Chem & Eng N 25:448 F 17 '47

BROWNIAN movements
Further remarks on the possible use of Brownian motion in low temperature thermometry. A. W. Lawson and E. A. Long. Phys R 70:977-8 D 1 '46
Possible use of Brownian motion for low temperature thermometry. J. B. Brown and D. K. C. MacDonald. bibliog diag Phys R 70: 976-7 D 1 '46
Statistical mechanical theory of transport processes; transport in gases. J. G. Kirkwood. J Chem Phys 15:72-6 Ja '47

BROWNING
Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Kertesz. bibliog Am Chem Soc J 68: 2178-9 N '46
Browning of dehydrated vegetables during storage. R. R. Legault and others. bibliog Ind & Eng Chem 39:1294-9 O '47
Industrial aspects of browning reaction. H. M. Barnes and C. W. Kaufman. bibliog Ind & Eng Chem 39:1167-70 S '47
Maillard reaction in microbiological assay. E. G. Hill and A. R. Patton. Science 105: 481-2 My 2 '47

BRUCE, David Kirkpatrick Este
In training. por Bsns W p86 Je 14 '47

BRUCE, James, 1892-
Nominated as Ambassador to Argentina. por Bsns W p74 Je 21 '47

BRUCELLOSIS
Agglutination and an agglutinin-blocking property in serums from known cases of brucellosis. J. J. Griffitts. bibliog Pub Health Rep 62:865-75 Je 13 '47

BRUCELLOSIS in cattle
Isolation of brucella melitensis from cow's milk. S. R. Damon and R. Fagan. Pub Health Rep 62:1097-8 Jl 25 '47

BRUCINE
Gravimetric determination of tungsten with brucine. F. S. Grimaldi and N. Davidson. bibliog In U S Geol S Bul 950:135-8 '46
Strychnine and brucine; constitution of the neo-series of bases and their oxidation products. L. H. Briggs, H. T. Openshaw and R. Robinson. Chem Soc J p903-8 O '46
Strychnine and brucine; cuninecarboxylic acid. H. L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p908-10 O '46
Strychnine and brucine; preparation of *neo*strychnine and *neo*brucine. R. N. Chakravarti and R. Robinson. Chem Soc J p78-80 Ja '47
Strychnine and brucine; synthetical experiments. H. L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p910-18 O '46

BRUNAUER-EMMETT-TELLER equation
Multilayer gas adsorption on composite surfaces. W. G. McMillian. bibliog J Chem Phys 15:390-7 Je '47
Relationship between the Brunauer-Emmett-Teller adsorption isotherm and the new isotherm of Jura and Harkins. H. K. Livingston. bibliog J Chem Phys 15:617-24 S '47

BRUNS, Walter E.
Bank's ambassador. por Bsns W p93 Mr 15 '47

BRUSHES
Brush with 55 molded acrylic parts; Bennart hairbrush. il Mod Plastics 24:134-5 Ja '47
New acrylic brushes. il Mod Plastics 25:186+ O '47
Plastic brushes and their packages. il Mod Plastics 24:204 My '47
Six uses for plastic in an electric brush; ethyl cellulose, butyrate, two types of phenolic, nylon and vinyl resin combine in hair brush. il Mod Plastics 24:105 D '46

BRUSHES—*Continued*

Advertising

Advertise it, show it, sell it; how to crash a market; Jewelite brushes. F. E. Camp. il Sales Management 58:90+ My 20 '47

Manufacture

Brush backs of fabricated acrylic. E. A. Neugass. il Mod Plastics 24:134-5 Ap '47

BRUSHES (electric machinery)

Maintenance of d.c. commutators and brush gear. il Mech Handling 34:150-3+ Mr '47

Why do brushes squeal on starting? question with answers. diags Power 91:345+ My '47

BRUSHES, Industrial

Applications of power brushing in turret lathe production. il Mach 53:175 F '47

60 new Fuller brush packages. il Mod Packaging 20:204 Ap '47

See also

Paint brushes

BUBBLE trays. See Distillation apparatus—Design

BUBBLES

Cavitation from solid surfaces in the absence of gas nuclei. D. C. Pease and L. R. Blinks. bibliog J Phys & Colloid Chem 51: 556-67 Mr '47

Propagation of sound through a liquid containing bubbles. E. L. Carstensen and L. L. Foldy. diags Acoustical Soc Am J 19: 481-501 My '47

Rise of air bubbles in lubricating oils. J. V. Robinson. diag J Phys & Colloid Chem 51: 431-7 Mr '47

See also

Boiling

BUCHERER reaction

Mechanism of the Bucherer reaction; isolation of bisulphite compounds from naphthionic acid. W. A. Cowdrey. Chem Soc J p 1041-4 N '46

Mechanism of the Bucherer reaction; kinetics of the conversion of naphthols into naphthylamines. W. A. Cowdrey. Chem Soc J p 1046-50 N '46

Mechanism of the Bucherer reaction; kinetics of the conversion of naphthylamines into naphthols. W. A. Cowdrey and C. N. Hinshelwood. Chem Soc J p 1036-41 N '46

Mechanism of the Bucherer reaction; kinetics of the reaction between naphtholsulphonic acids and sodium hydrogen sulphite. W. A. Cowdrey. Chem Soc J p 1044-5 N '46

BUCHI, Alfred J.

Sketch; work on Diesel engines. Diesel Power 25:74 My '47

BUCKETS, Minnow. See Minnow pails

BUCYRUS-ERIE company

Selected stocks. Mag of Wall St 80:487 Ag 2 '47

BUDD, Edward Gowen, 1870-1946

Sketch. por(front) Franklin Inst J 243:185-6 Mr '47

Sketch. por Ry Age 121:963 D 7 '46

BUDD, Edward Gowen, jr

Portrait. Bsns W p32 D 21 '46

BUDD, John M. 1907-

New president of the C. & E.I. por Ry Age 122:1081 My 24 '47

BUDD company

Better earnings ease threat to pfd. dividend. Barron's 27:26 My 5 '47

Losses threaten preferred dividend. Barron's 26:7 N 18 '46

BUDGET

See also

Finance

Government expenditures

Australia

Australian budget. Economist 151:912-13 D 7 '46

Brazil

Federal budget for 1947. For Comm W 26:11 F 1 '47

Fiscal operations, January to July 1946. For Comm W 25:18-19 N 16 '46

Canada

Budget features income-tax cuts. For Comm W 27:12-14 My 24 '47

Czechoslovakia

Czechoslovak 1947 budget. For Comm W 27:15 Ap 5 '47

Great Britain

Acceptable budget. Economist 152:569-70 Ap 19 '47

Britain's austerity budget. P. Einzig. Comm & Fin Chr 165:2248 Ap 24 '47

Budget accounts. Economist 152:590-2 Ap 19 '47

Budget recoil. Economist 152:32+ Ja 4 '47

Budget targets for 1947. Economist 152:384-5, 424-6, 463-5 Mr 15-29 '47

Capital budget. Economist 152:633-4 Ap 26 '47

Equality and the budget. Economist 153:546-8 O 4 '47

India

Budget of interim government for fiscal period April 1, 1947, to March 31, 1948. For Comm W 28:18 Ag 16 '47

Ireland

New budget introduced. For Comm W 27:17 Je 14 '47

Paraguay

Paraguay's 1947 budget up. For Comm W 27:24 Ap 12 '47

Philippine Islands

Budget for 1947-48 submitted to Philippine Congress. For Comm W 27:19+ Ap 19 '47

Poland

Polish budget for 1946. For Comm W 27:25 Ap 12 '47

Russia

Budget for 1946; with figures for 1938, 1940, 1943-46. For Comm W 25:32 D 7 '46

Russian budget. Economist 151:670 O 26 '46; Same. Iron Age 158:119+ N 28 '46

Spain

Budget for 1947 approved. For Comm W 27:20 Ap 5 '47

United States

Balanced national budget. H. L. Lutz. Comm & Fin Chr 165:2059+ Ap 17 '47

Budget and tax relief. Nat City Bank p27-31 Mr '47

Budget and taxes; radio discussion. R. A. Taft; B. Ruml; R. Blough. Comm & Fin Chr 165:1381+ Mr 13 '47

Budget for fiscal '48 submitted to Congress. Ry Age 122:200+ Ja 18 '47

Budget must be cut deeply. J. W. Martin, jr. Comm & Fin Chr 165:733+ F 6 '47

Budget reform needed, not mere pruning. J. Hirsch. Barron's 27:13 Ja 27 '47

Budgetary outlook. Nat City Bank p42-5 Ap '47

Budgets are very tricky. L. Stafford. Banking 39:40-1+ Mr '47

Businessman's look at budget. Bsns W p19-20 Ja 18 '47

Chamber of commerce of U.S. outlines 1948 budget. Comm & Fin Chr 164:3269 D 19 '46

Extravagant Truman budget. R. W. Babson. Comm & Fin Chr 165:1378+ Mr 13 '47

Federal budget document; Appendix 6, Budget receipts and expenditures, fiscal years 1939 thru 1948. J Account 83:356-62 Ap '47

Federal budget estimates for fiscal year 1948. Survey of Cur Bsns 27:3-5 S '47

Federal budget summary, 1940, 1945-1947; tabulation. Survey of Cur Bsns 27:8 Jl '47

Federal budget; the turning point. A. A. Ballantine. Comm & Fin Chr 165:1385+ Mr 13 '47

Floor under federal spending? Bsns W p21 Ag 30 '47

Fortune survey; balancing the budget. Fortune 35:25, 30 Mr '47

Impact of the federal budget. A. Smithies. R Econ Stat 29:28-31 F '47

Let's slash the federal budget. L. D. Hokerk. Comm & Fin Chr 164:2463+ N 14 '46

BUDGET—United States—*Continued*
New budget. Fed Res Bul 33:115-22 F '47
N.Y. Chamber calls for provision for debt retirement in federal budget. Comm & Fin Chr 165:1050 F 20 '47
President releases mid-year budget estimate. Comm & Fin Chr 166:819+ Ag 28 '47
President Truman submits $37.5 billion budget; text of budget message. Comm & Fin Chr 165:317+ Ja 16 '47
President's August budget review. Nat City Bank p 103-4 S '47
President's budget for fiscal 1948. Bsns W p17 Ja 11 '47
Reducing government expenditures; recent efforts of Congress. Nat City Bank p89-92 Ag '47; Same. Comm & Fin Chr 166:532+ Ag 7 '47
Score President Truman's budget statement. S. Bridges and J. Taber. Comm & Fin Chr 166:819+ Ag 28 '47
Some items of public utility interest in the President's budget. Pub Util 39:181 Ja 30 '47
Streamlining of budget demanded by Committee on public debt policy. Comm & Fin Chr 166:336 Jl 24 '47
Tax cuts vs. balanced budget. Bsns W p28+ N 16 '46
Taxes, national budget and debt. F. L. Crawford; R. Magill. Comm & Fin Chr 165:1118+ F 27 '47
$37.5 billion budget. Nat City Bank p15-21 F '47; Excerpt. Comm & Fin Chr 165:750 F 6 '47
$37,527,917,167, or Mr. Truman's budget for next year. Fortune 35:110-15+ Mr '47
Truman reports surplus in current budget. Comm & Fin Chr 165:2250 Ap 24 '47
Wants three-year budget program for achieving financial stability. H. G. Moulton. Comm & Fin Chr 165:1129 F 27 '47
We can't afford this budget. R. Magill. Banking 39:28 Mr '47

See also
United States—
Budget, Bureau of

BUDGET, Business
Approach to budgetary control. C. H. Eckelkamp. N A C A Bul 28:1253-70 Je 15 '47
Budgetary control of manufacturing and commercial expense. J. B. Heckert. N A C A Bul 28:869-80 Mr 15 '47
Budgetary control of plant maintenance costs. E. V. Hopton. N A C A Bul 28:426-37 D 1 '46
Budgets and budgetary control. P. A. Wilks. N A C A Bul 28:1138-48 My 15 '47
Graphic system to control costs; Cribben & Sexton company. J. Turner. il Am Bsns 17:8-9+ Ap '47
Long range forecasts of operations; abstract. L. W. Jaeger. Management R 36:42-4 Ja '47
Selling budgetary control to the supervisor. F. J. Muth. N A C A Bul 28:1501-11 Ag 15 '47
Simplified budgeting for small companies. J. Goliger. N A C A Bul 28:757-60 F 15 '47
Some budget observations for 1947; abstract. E. S. La Rose. Management R 36:223-4 Ap '47
Staff budgeting; Home title guaranty company. Management R 36:349-50 Je '47
Synchronized budgeting in the business machine industry. R. Walker. N A C A Bul 28:1453-70 Ag 1 '47
Variable budget to insure profits; Lakeside laboratories, inc., Milwaukee. J. Turner. Am Bsns 17:8-9+ Jl '47
Variable budgets in the control of costs. T. D. Foy. N A C A Bul 29:267-78 N 1 '47

BUDGET, Household
Farm family budgets; a moving picture. W. W. Cochrane. R Econ Stat 29:189-98 Ag '47
Quantity and cost budgets for dependent families or children; prices for San Francisco, September 1946. 56p pa 75c Univ. of Calif, Heller committee for research in social economics, Berkeley '46
Quantity and cost budgets for three income levels; prices for San Francisco, September 1946. 107p pa $1 Univ. of Calif, Heller committee for research in social economics, Berkeley '46

BUDGET, Personal
Our girl, Martha; upstate New York's typical retail-trade worker. H. Black. J Retailing 23:77-80 O '47

BUENOS AIRES
Export admen's Buenos Aires survey labels area an opportunity for U.S. industry. N. Kelne. Ptr Ink 218:71+ Ja 31 '47
Ownership of radios, telephones, cars shown in Buenos Aires survey. Ptr Ink 220:132 S 19 '47

See also
Advertising—Buenos Aires

Architecture
Forum's South American correspondent reports. il map plans Arch Forum 86:103-7, 110-13 F '47

Hospitals
Bartolomé Churruca hospital. il plan Arch Forum 86:107 F '47

BUFFALO, New York

See also
Housing—Buffalo, New York

Lighting
Traffic and safety lighting plans for Buffalo. H. W. Osborne. il map plans diags Illum Eng 41:749-61 N '46

Rapid transit
Frontier days again at Buffalo; public ownership advocated. Mass Transportation 43: 106-9+ Mr '47

BUFFING. See Polishing

BUFORD, Charles H. 1886-
Buford succeeds Scandrett as Milwaukee president. por Ry Age 122:1082-3 My 24 '47

BUICK automobile. See General motors corporation

BUILDERS' equipment. See Construction equipment

BUILDERS' risk insurance. See Insurance, Builders' risk

BUILDING
Building products on review; photographs with text. plans Am Bld 69:100-13+ F '47
Cavity walls and slab bands cut costs for multi-story public housing project; Elliott project, New York city; with cost data. il diags Eng N 138:584-7 Ap 17 '47
Construction methods and building materials; modern factory. H. Penn. il Western Soc E J 52:81-5 Je '47
Home building surges again. Bsns W p 15-16 Ag 30 '47
Metal jigs developed for preassembly of house parts; HomOgraf system. A. P. Wittman. il Am Bld 69:112-13 Jl '47
New construction technique reduces cost of large-scale housing in New York. J. P. Riley. il Civil Eng 17:254-8+ My '47
Planning for elevator installations. diags Eng N 137:875-9 D 26 '46
Ten-story Terrace Plaza hotel set atop stores seven stories high. il plans diags Eng N 139:196-9 Ag 7 '47
Underpinning features commercial building construction; installation of heating plant. J. C. Weaver. il plan Civil Eng 16:542-3 D '46

See also
Acoustics, Architectural
Air conditioning
Architecture
Brick construction
Building contracts
Building laws and regulations
Building materials
Building trades
Chimneys
Cold storage lockers
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Concrete, Reinforced
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Dampness in buildings
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Strains and stresses
Strength of materials
Tile construction
Trusses
Ventilation
Walls
Warehouses
Windowless construction
Winter construction
Wood construction

Accidents

See Building accidents

Cost

Brownsville houses construction costs; tabulation. Eng N 139:274 Ag 21 '47

Building cost fixation. E. Goble. il plans Arch Rec 101:85-9 Mr '47

Building cost problem. Nat City Bank p69-71 Je '47

Building costs; preliminary report on Dow Service survey. M. L. Matthews. Comm & Fin Chr 166:625 Ag 14 '47

Building deflation expected to be less than in 1920. Civil Eng 17:496 Ag '47

Construction cost indexes, labor and materials; for New York, Atlanta, St Louis and San Francisco; selected years 1920-1945 and monthly Jan. 1946-date. C. Shute, comp. Arch Rec 101:26 Mr '47 [cont monthly]

Construction costs, 1947. Eng N 138:597-9+ Ap 17 '47

Construction costs to continue high. H. A. Ward. Eng N 139:130-1 Jl 24 '47; Abstract. Comm & Fin Chr 166:721 Ag 21 '47

Cost comparisons aid selection of building materials and installations; Westinghouse electric corp. G. Parkman. il Eng N 138: 592-4 Ap 17 '47

Engineered houses promise small builders lower costs via modular design and standardization. il plans diag Arch Forum 87:14-16 S '47

Forum yardstick houses; basic unit sales prices of five topflight builders. plans diags Arch Forum 86:102-4 Je '47

Future costs and their effects on engineering budgets. L. R. Howson. Am Soc C E Proc 72:337-46 Mr '46; Discussion. 73:39-42, 525-7 Ja, Ap '47

High cost of building; contractors wondering if they are being priced out of business. Elec West 98:104-7 Je '47

High costs; a building problem. C. M. Shanks. Comm & Fin Chr 165:2605 My 15 '47

Holds high building costs cancer in the economy. R. E. Wood. Comm & Fin Chr 166:335 Jl 24 '47

Home sweet home, at a price. il Bsns W p17-18 F 22 '47

Houses best buy for today's dollar; comparison of values, 1947-1941. Am Bld 69: 84-5 O '47

Index of small house costs; cost index for standard house in 47 cities, 1939, 1943-1946. Eng N 138:647, 649 Ap 17 '47

Index to projects covered. Eng N 138:651+ Ap 17 '47

Industrial plant cost reaching peak. E. W. Bowden. Eng N 138:591 Ap 17 '47

Industry's buildings and low unit costs. il Factory Management 105:B41-2 pt 2 Ap '47

New construction activities converted to 1939 prices for comparison; tabulation. il Civil Eng 17:393 Jl '47

Peak in building costs reached, consensus of general contractors shows; F. W. Dodge survey. Comm & Fin Chr 165:1982 Ap 10 '47

Plain talk on housing costs. H. B. Smith. Banking 40:62 Jl '47

Process equipment cost estimation; buildings costs; unit costs; design, location. Chem Eng 54:111-17 My '47

Reduction of costs needs cooperation of owners, engineers and contractors. F. W. Parrott. il Civil Eng 17:471-3+ Ag '47

Sees adjustments in construction costs. T. S. Holden. Comm & Fin Chr 165:3343 Je 26 '47

Stalemate in home building; buyers' resistance to higher prices. Bsns W p19 Ap 5 '47

Standardized design for low costs; H. K. Ferguson company. il diag Arch Rec 100 110 D '46

What can be done about high construction costs. Eng N 138:881-8 My 29 '47

What will it cost to rebuild your property? (cont) Rough Notes 90:30 Ja; 34 Ap; 32 Jl; 32 O '47

What's ahead for building construction in 1947? E. W. Bowden. Dun's R 55:16-19+ Ja '47

Would-be home owners are holding off; Northwestern life insurance co. study reports building and wage costs almost double prewar level. Comm & Fin Chr 165: 2480 My 8 '47; Same. Nat Underw 51:6 My 15 '47; Same. Nat Underw (Life ed) 51:23 My 9 '47

Finance

Construction contracts awarded, by ownership, monthly, Jan. 1944-Nov. 1946. Fed Res Bul 33:79 Ja '47 [cont monthly]

Construction tops $10 billion for near-record 1946 volume. Eng N 138:1 Ja 2 '47

Cost of financing; bond yields, 1933-1946; interest rates, 1929-1946. Eng N 138:645 Ap 17 '47

1946; a year of construction maximums. Eng N 138:276-86 F 20 '47

See also
Building trades—Securities
Home ownership—Finance
Housing finance
Mortgages

Heating aspects

Avoiding wet walls in high humidity industrial plants. G. R. Morgan. Heat & Ven 43:74-9 N '46

Better detail plate; insulation types and methods of application. R. J. Alexander. diags Am Bld 69:132-3 S '47

Conductivities and conductances of building materials and insulations; data sheets. P. D. Close. Heating-Piping 19:101-2 Ja; 99-100 F; 101-2 Mr; 101-2 Ap; 101-2 My '47

Effect of floor slab on building structure temperatures and heat flow. C. F. Kayan. bibliog diags Heating-Piping 19:103-11 Je '47; Discussion. 19:131-2 Ag '47

Heat and moisture transfer in all-metal houses. F. G. Hechler and others. il Heat & Ven 44:69-74 Ap '47

How to figure heat loss. K. H. Pfeiffer. map plan diags Brick & Clay Rec 110:24-5 F '47

Insulated brick cavity wall ventilated for dryness. C. E. Baty. diag Brick & Clay Rec 110:32 Ja '47

Solar heat test structure at M.I.T. F. N. Hollingsworth. il Heat & Ven 44:76-7 My '47

Solar house heating, problem of heat storage; new method using the heat of fusion of chemical compounds. M. Telkes. bibliog diags Heat & Ven 44:68-75 My '47

Temperature distribution tests made for household heating. il Dom Comm 35:6-8 Ag '47

Thermal properties of building materials. H. B. Nottage. bibliog Heating-Piping 19:127-30 S '47

U.N. capital imposes exceptional problem in heat transfer through huge glass area. Heat & Ven 44:105 O '47

See also
Basementless construction
Solar heating

Insect problem

Building construction and insect prevention. J. J. Davis. il Am Bld 69:90-1+ Ja '47

Rapid construction

Close scheduling speeds housing project; Brownsville houses in Brooklyn, N.Y.; with cost data. il Eng N 139:272-4 Ag 21 '47

BUILDING—Rapid construction—*Continued*
House construction by factory methods; Greenway Addition, Houston, Texas. il plans Am Bld 69:102-5 Jl '47
How New Orleans builders save time and reduce costs with precutting. il plans Am Bld 69:122-5 Je '47
Saving to aid selling; precutting and assembly in on-site workshop; Goudreau builders, Cleveland. il plans Am Bld 69:84-7 S '47

See also
Houses, Prefabricated

Repair and reconstruction

How-to-do-it pointers. diags Am Bld 69:92 Ja '47 [cont monthly]
Precast fireproofing on used steel reinforces columns for re-use; building for Cuneo press. il Eng N 139:464-5 O 2 '47
Timber trusses of cathedral roof supported by outside cantilever beams; St Patrick's, New York. il diags Eng N 137:720-1 N 28 '46

See also
Houses, Remodeled

Safety aspects

What is good building? T. C. Bannister. Nat Safety N 55:38+ F '47

Safety measures

Fire safety measures can avoid costly construction disasters. A. L. Brown. il Civil Eng 17:532-5 S '47
Safety effort and labor turnover; construction industry presents a special challenge. C. W. Kinnison. il Safety Eng 94:10-11+ Jl '47

Standards

Acclaim pioneers' work on modular coordination. Ind Stand 17:272 N '46
Adequate light and ventilation goal of new building standards. H. Vermilya. il Ind Stand 17:277-8 N '46
Basic design developed by house building industry to cut construction costs through standardization. plan Heat & Ven 44:108 O '47
Building code committee reports on status of work. Ind Stand 18:90-2+ Ap '47
Building code for smaller municipalities, based on the National building code (NRC no. 1068) and the Model zoning by-law (NRC no. 859). 89p pa $1 National research council of Canada, Ottawa '47
Building technology division set up at the National bureau of standards. Eng N 139: 304 S 4 '47; Same. Ind Stand 18:245-6 O '47
Engineered houses promise small builders lower costs via modular design and standardization. il plans diag Arch Forum 87:14-16 S '47
Expect to lower building costs on house engineered on modular basis. il plan Brick & Clay Rec 111:30 S '47
FHA's building code does not cover 10″ cavity or 6″ masonry walls. Brick & Clay Rec 111:34 Ag '47
How simplified practice aids the construction industry. E. W. Ely. Dom Comm 35:19-22 My '47
Industrial research and co-ordination produce engineered modular house. il plans Am Bld 69:138-9 O '47
Industry engineered house. G. Lorimer. il plans diag Arch Rec 102:74-9 S '47
Modular coordination; another progressive step; with listing of manufacturers making modular products. plans diags Am Bld 69:74-7 Jl '47
Modular coordination gains in use. il Ind Stand 18:243-5 O '47
Modular coordination in engineered house! il plans Ind Stand 18:208-11 S '47
Modular house on Pacific coast. il plans diags Arch Forum 87:110-16 S '47
New building standard provides for light weight flooring. S. H. Burgess. il Ind Stand 18:173-6 Jl '47
New guide to building coordination. W. H. Deacy. plan Ind Stand 17:273-5 N '46
New plan to widen home-building market; Industry engineered homes program. Barron's 27:4 O 27 '47
Plan for attack on home costs; building material makers push industry-engineered homes. plan Bsns W p54-6 S 13 '47
Within the building industry a plan is evolved for low-cost housing; industry-engineered homes. A. A. Hood. il plan Banking 39:52-3 Mr '47

See also
Building laws and regulations
Concrete construction—Standards

Statistics

Building forecast, 1947. Arch Forum 86:insert Ja '47
Building outlook improved for 1947. Am Bld 69:56-9+ Ja '47
Building permit figures show government helps best by keeping hands off. Barron's 27:12 Jl 28 '47
Building permit values by cities. Published in monthly numbers of Dun's statistical review; summary in Dun's review
Construction activity in the United States; revised data, 1915-1946. Survey of Cur Bsns 27:23 Jl '47
Construction activity, November 1946-January 1947 and outlook for year 1947. Mo Labor R 64:296-304 F '47
Construction activity. Published in numbers of Monthly labor review
Construction and business cycles. S. Gertler. Survey of Cur Bsns 26:7-14 N '46
Construction contracts awarded, by type of construction, monthly Jan. 1945-Oct. 1946, and by districts, Nov. 1945 and Oct.-Nov. 1946. Fed Res Bul 33:79 Ja '47 [cont monthly]
Construction, 1915-1947; graph. Dom Comm 35:78 Ap '47
Construction volume for 1947 estimated. T. S. Holden. Comm & Fin Chr 164:2670 N 21 '46
Contracts for residential construction established new record in 1946: Comm & Fin Chr 165:643 Ja 30 '47
Economy in reconversion; construction activity in 1946; with figures for other years. Survey of Cur Bsns 27:20-2 F '47
Engineering construction reported by Engineering news-record, first half 1947; tabulation. Eng N 139:51 Jl 24 '47
High costs slow construction; non-residential building during first quarter sharply lower. Bsns W p19 Ap 12 '47
New construction activity in the United States; revised data, monthly figures and monthly averages, 1939-1945. Survey of Cur Bsns 27:24 Jl '47
1946; a year of construction maximums. Eng N 138:276-86 F 20 '47
See 12 billion dollar-volume for construction in 1947. Eng N 139:571 O 30 '47
Trends in housing during the war and postwar periods. M. J. Jessup. Mo Labor R 64: 11-23 Ja '47
What's happening to building this year? Department of labor clocks building pace in 1939 dollars; chart. Arch Forum 87:10 Ag '47

Study and teaching

Education; opportunities for young men entering the building field. il Am Bld 69:87-91+ Jl '47

Australia

Australia tries new building materials. il Am Bld 69:160+ Je '47

Chicago

See also
Building laws and regulations—Chicago

Chile

Construction in Chile. For Comm W 27:29 Ap 12 '47
Shortage of building materials delays construction. For Comm W 29:22 O 25 '47

France

L'état économique de la France; les matériaux de construction. A. Caquot. Génie Civil 124:130-2 Ap 1 '47

BUILDING—*Continued*

Great Britain

Housing and industry. Economist 152:768-9 My 17 '47; Correction. 152:817 My 24 '47

Southern states

Southern construction sets peacetime record; totals $1,797,532,000 in 1946. S. A. Lauver. Manuf Rec 116:72-3+ Ja '47

United States

Building forecast, 1947. Arch Forum 86:insert Ja '47
Building in 1947; abstract. G. T. O. Hollyday. Comm & Fin Chr 165:2337 My 1 '47
Building outlook improved for 1947. Am Bld 69:56-9+ Ja '47
Changed prospects for construction in first quarter of 1947. Survey of Cur Bsns 27: 3-5 My '47
Congress, construction weathervane. Eng N 138:300 F 20 '47
Construction activity and building materials in 1947. S. J. Dennis. il Dom Comm 35:70-5 Ja '47
Construction and business cycles. S. Gertler. Survey of Cur Bsns 26:7-14 N '46; Excerpts. Heat & Ven 44:90-1 Ja '47
Construction and real estate markets in 1947. Fed Res Bul 33:635-46 Je '47
Construction in mid-1947. T. S. Holden. Comm & Fin Chr 166:525+ Ag 7 '47
Construction in 1947. T. S. Holden. Rock Prod 50:150 Ap '47
Construction; it is an industry! L. T. Avery. il Heating-Piping 19:86-9 F '47
Construction outlook. J. W. Follin. Rock Prod 50:79 Mr '47
Construction outlook for 1947. T. S. Holden and C. Shute. Arch Rec 100:70-2 D '46
Estimates new home building 50 per cent above 1939; Investors syndicate survey. Comm & Fin Chr 166:921 S 4 '47
Forecasts in building construction; address before Mortgage bankers association of America. L. C. Hart. Comm & Fin Chr 165: 2068+ Ap 17 '47
Home building at highest rate in two decades. W. W. McAllister. Comm & Fin Chr 166:1209 S 25 '47
House that Jack couldn't build. R. R. Wason. Comm & Fin Chr 164:2809+ N 28 '46
Major projects; brief reports on status of construction operations. il Eng N 138:311-24 F 20 '47
Oil industry construction boom indicated as forecasts promise eased restrictions. R. E. Bjorkback and D. L. Harbour. Nat Pet N 39:22+ F 19 '47
Reports more rapid home building. R. M. Smith. Comm & Fin Chr 166:817 Ag 28 '47
Survey and forecast, 1946-1947. il Eng N 138: 263-74 F 20 '47
Survey indicates home building slows as buyers resist continuing cost rise. Eng N 138: 489 Ap 3 '47
What's ahead for building construction in 1947? E. W. Bowden. Dun's R 55:16-19+ Ja '47
Year ahead in building. Sheet Metal Worker 37:51-3 D '46

See also
Building trades—United States

BUILDING accidents

Contractors die, too. R. L. Moore. il Nat Safety N 55:30-1+ Ap '47
One emergency after another in building. N. B. O'Connell. Nat Safety N 55:18-19+ Je '47

See also
Building—Safety measures

BUILDING and loan associations

Insurance requirements

Towner Bureau research; study of proper building and loan blanket bond cover. Nat Underw 50:23 D 5 '46

Taxation

Building societies and tax. Economist 152: 815-16 My 24 '47

Great Britain

Abbey national building society; Co-operative permanent building society; annual meetings. Economist 152:515-16 Ap 5 '47

BUILDING contracts

Construction costs can be cut. W. A. Johnson. Civil Eng 16:546 D '46
Good records make good witnesses. O. C. Herwitz. Civil Eng 17:259-61+ My '47
Parties to a construction contract make their own law. O. C. Herwitz. il Civil Eng 17:186-8 Ap '47

BUILDING exits. See Exits

BUILDING failures

See also
Concrete—Failure
Wood construction—Failures

BUILDING fittings

Builders' hardware goes into mass production. L. E. Browne. il Steel 120:58-9+ Je 9 '47

See also
Door knobs
Plumbing fixtures
Sheet metal work, Architectural

BUILDING laws and regulations

Building code requirements for welding structural steel. S. A. Greenberg. Welding J 26: 219-22 Mr '47
Building controls soon to be removed. F. R. Creedon. Comm & Fin Chr 165:3231+ Je 19 '47
Building exits and fire safety. R. S. Moulton. il Ind Stand 18:37-40 F '47
Building officials conference clears way for speedy code revisions. Concrete 54:26-7 N '46
Building permit rules; loans period extended. F. R. Creedon. Comm & Fin Chr 165:32 Ja 2 '47
Housing controls eased. Comm & Fin Chr 165:3031 Je 5 '47
Modern building code? building-officials group draws up model rules. Bsns W p22 O 4 '47; Discussion. A. J. Eken. p 114-15 O 25 '47
Modernization of building laws needs prompt action. C. H. Yuill. il Dom Comm 35:18-23 Je '47
National code-making. Arch Forum 85:22+ N '46
New group meets to modernize codes; Building officials foundation. Arch Rec 101:142+ Ap '47
Proposed revision of building regulations for reinforced concrete (ACI 318-41). diags Am Concrete Inst J 18:401-66 D '46
What kind of group design? possibilities and preventions. A. C. Holden. il plans Arch Rec 101:94-8 Mr '47

See also
Heating—Laws and regulations
Plumbing laws and regulations

Atlanta

Revision of Atlanta's building code likely as result of fatal hotel fire. Eng N 137:842 D 19 '46

Chicago

Chicago's code-maker. Arch Forum 85:18+ N '46

Connecticut

Connecticut state building code voluntarily adopted by communities. P. White. Eng N 138:507 Ap 3 '47

Denver

Denver code; plumbing and electrical barriers are let down. Arch Forum 85:10 D '46

Georgia

New safety law covers many structures. Weekly Underw 156:1153 Ap 26 '47

San Francisco

Earthquake provision in new building code. Nat Underw 51:2 Jl 10 '47

BUILDING loans

See also
Mortgages

BUILDING lots. See Building sites

BUILDING machinery

Elevator hod carrier lets two men do work of four and saves builder $150 a week. il Brick & Clay Rec 111:33-4 O '47

Man-hours expended per unit; selected construction machinery, 1939 to 1945. G. E. Sadler. Mo Labor R 65:41-7 Jl '47

BUILDING materials

Australia tries new building materials. il Am Bld 69:160+ Je '47

Building material outlook good. T. S. Rogers. Comm & Fin Chr 165:1387+ Mr 13 '47

Building material producers answer to congressional inquiry. Arch Forum 87:12-13 S '47

Building materials, availability and prices. Factory Management 105:B58-9 pt 2 Ap '47

Building materials makers increase capacity; industry's greatest expansion goes into newer products. J. V. Sherman. Barron's 27:29 S 29 '47

Building products on review; photographs with text. plans Am Bld 69:100-13+ F '47

Commerce department launches plan to aid research for building industry. Eng N 138: 473 Mr 27 '47

Conductivities and conductances of building materials and insulations; data sheets. P. D. Close. Heating-Piping 19:101-2 Ja; 99-100 F; 101-2 Mr; 101-2 Ap; 101-2 My '47

Construction activity and building materials in 1947. S. J. Dennis. il Dom Comm 35:70-5 Ja '47

Construction methods and building materials; modern factory. H. Penn. il Western Soc E J 52:81-5 Je '47

Cost comparisons aid selection of building materials and installations; Westinghouse electric corp. G. Parkman. il Eng N 138: 592-4 Ap 17 '47

Domestic economy retains most building materials. E. M. Artenberg. il Dom Comm 34:31-3 N '46

Dry wall construction popular. il plan Am Bld 69:124-5 O '47

Handy table for material weights. Brick & Clay Rec 111:32 O '47

Manufacture of a new building material in U.S.S.R.; Bemit. For Comm W 28:27 Jl 26 '47

Marvels of mikolite. J. McCaleb. Can Min J 68:571 Ag '47

Materials bottleneck breaking. Eng N 138:298-9 F 20 '47

Paraffine companies, inc. new research laboratory on West coast. Chem & Eng N 25: 3084 O 20 '47

Plastic partitions and windows; advantages and limitations of transparent acrylic plastic. il diags Arch Forum 87:121-4 O '47

Report on the various applications of vermiculite in building; abstract. G. B. Coggins. Brick & Clay Rec 110:45 Je '47

Research on building and its materials. F. M. Lea. il Chem & Ind p603-8 O 4 '47

Resistances of building materials to flow of heat and water vapor; tabulation. Heat & Ven 43:77 N '46

Rheology and its application to road and building materials. G. W. Scott Blair. bibliog Chem & Ind p363-5 Je 28 '47

Saw palmetto, a new raw material; cabbage palm. G. Anderson. il Manuf Rec 115:40-1+ D '46

Sawdust-cement and other sawdust building products. T. W. Parker. Chem & Ind p593-6 S 27 '47

Selling programs for building materials and household products. W. H. Davis. Ptr Ink 218:109 Mr 7 '47

Shortage of major building materials was 1946 construction bottleneck. Am Bld 69:64-5 Ja '47

Thermal properties of building materials. H. B. Nottage. bibliog Heating-Piping 19:127-30 S '47

Ultra-modern research center; Johns-Manville corporation unveils first laboratory and pilot plant building. il Ry Age 123:694-5 O 25 '47; Chem & Eng N 25:3224 N 3 '47; Steel 121:73 N 3 '47

Volcanic ash makes building material; Pumicell. A. L. Burwell. Heat & Ven 44:99 Ag '47

Wall construction unit featuring metal-clad insulation. Heat & Ven 44:114 Jl '47; il Steel 120:101 Je 30 '47

See also

Aluminum, Structural
Asbestos cement
Bricks
Building products institute
Building stone
Cement
Clay products
Concrete
Concrete, Reinforced
Concrete blocks
Flooring
Gypsum
Lime
Lumber
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Mineral wool
Pisé
Plywood
Roofing
Sheet metal work, Architectural
Shingles, Asphalt
Sound absorbent materials
Steel, Structural
Strength of materials
Tiles
Wall board
Wood

Prices

Material and wage price increases in 1946 range from 11.2 to 43.6 percent. Eng N 138: sup67 Ja 23 '47

Prices of building materials, dealer to contractor, delivered job site, May 1947; tabulation. Concrete 55:27 Jl '47

Prices of construction materials; price trends; basic building materials prices, New York city, 1874-1946. Eng N 138:611+ Ap 17 '47

Testing

Research laboratories of the Reclamation bureau; selection of construction materials. E. B. Wood and W. H. Price. il Eng N 139:472-6 O 2 '47

BUILDING products institute

Manufacturers organize Building products institute. Am Bld 68:124 D '46; Arch Rec 100:14 D '46

BUILDING research

Building research advisory board serves as clearing house for technical studies. J. C. Stevens. il Civil Eng 17:463-7 Ag '47

Commerce department launches plan to aid research for building industry. Eng N 138: 473 Mr 27 '47

First unit of modern building research center. il Civil Eng 17:477 Ag '47

Industrial plants; a Harvard research project; with construction analysis. W. F. Bogner. plans diags Arch Rec 102:103-14 Ag '47

National research council to set up research board. Comm & Fin Chr 165:1178 F 27 '47

Research on building and its materials. F. M. Lea. il Chem & Ind p603-8 O 4 '47

Seek formation of national construction research group; Construction industry advisory council. Eng N 137:699-700 N 28 '46

BUILDING sites

Microclimatology; facts for architects, realtors and city planners on climatic conditions at the breathing line. il Arch Forum 86:114-19 Mr '47

Shortage of improved lots begins to plague new building. il Arch Forum 85:18+ D '46

BUILDING stone

South, leader in stone production. O. Bowles and R. P. Willing. il Manuf Rec 116:40-1+ F '47

BUILDING trades

Builders reply; faster home-building pace. Bsns W p36 O 11 '47

Building to rise as hidden costs fall. R. M. Bleiberg. Barron's 27:7 My 12 '47

Bust in 1951? some cyclical forecasters think building disaster is inevitable. charts Arch Forum 86:10-12 My '47

Here's man who can smash your postwar distribution bottlenecks; building material dealer; reprinted from April, 1943 number. J. Parshall. Cer Ind 49:48-9 Jl '47

Home seekers hold off; builders afraid to start housing on speculation. Bsns W p20 Jl 12 '47

Housing probe. Bsns W p50-1 O 25 '47

Industry capitalism forgot; housebuilding business. il Fortune 36:61-7+ Ag '47

BUILDING trades—*Continued*
Within the building industry a plan is evolved for low-cost housing; industry-engineered homes. A. A. Hood. il plan Banking 39:52-3 Mr '47

See also
Brick industry and trade
Cement industry and trade
Houses, Prefabricated
Housing projects
Lumber trade
Plumbing trade

also Associated general contractors of America; National association of home builders

Accounting

Accelerated depreciation and the Treasury's new declining balance method of computation; to permit increased depreciation of rental-housing dwellings. P. D. Seghers. J Account 83:113-16 F '47

Advertising

How advertising pre-sells Gypsum's partition systems. J. J. Ryan. il Sales Management 57:73-4 N 10 '46
How we tied advertising in with our new sales program; Chamberlin co. of America, Detroit. R. H. Breitenbach. Ptr Ink 219:46 Ap 18 '47
Newspaper campaign builds prestige for Pigott construction co, Hamilton, Ont. Ptr Ink 219:108 My 23 '47
Number of inquiries doubled while cost per inquiry dropped 69%; Kimsul insulation. il Ptr Ink 218:49 F 14 '47
Putting public interest first pays off for advertisers; Ceco, Ford and others. H. E. Green. Ptr Ink 219:48-9 Ap 11 '47

Labor conditions

AFL building trades unions, AGC sign arbitration accord. Eng N 138:181 F 6 '47
AFL building trades unions to fight Taft-Hartley law on construction. Eng N 139:159 Jl 31 '47
Base rates on compensation insurance for construction, April 1, 1947. Eng N 138:639 Ap 17 '47
Building trades support referee for jurisdictional strike settlements. Eng N 138:775 My 8 '47
Comparative employment levels; construction projects, 1941-47. Mo Labor R 65:202-3 Ag '47
Construction labor productivity gains. Eng N 138:582-3 Ap 17 '47
Construction wage rates and trends, 1926-1946. Eng N 138:621+ Ap 17 '47
Constructors seek stability in union-employer compacts. Eng N 139:1-2 Jl 3 '47
Earnings reach an all time high for N.Y. state construction workers. Eng N 139:238 Ag 21 '47
Estimating future occupational labor requirements for private construction; summary of Fresno, Calif. survey. E. M. Gordon. Mo Labor R 65:73-5 Jl '47
First meeting of the I.L.O. building, civil engineering and public works committee. Int Labour R 55:85-96 Ja-F '47
Material and wage price increases in 1946 range from 11.2 to 43.6 percent. Eng N 138: sup67 Ja 23 '47
New York builders, unions, stabilize pay, eliminate overtime in new agreement. Eng N 138:89 Ja 16 '47
Profits split; small Connecticut housebuilder shows how not to have labor troubles. il Arch Forum 87:14-15 O '47
Truman announces building trades management-labor arbitration agreement. Comm & Fin Chr 165:922 F 13 '47
Union wages and hours in the building trades, July 1, 1946. D. H. Gerrish and others. Mo Labor R 64:53-66 Ja '47; Same, with additional data. U S Bur Labor Statistics Bul 910:1-73; pa 20c Supt. of doc. '47
Unions' role in building slump. Bsns W p68+ My 31 '47
Wage rates in the building trades. Sheet Metal Worker 38:102 Ja '47
What can be done about high construction costs; labor's opportunity and responsibilty. Eng N 138:882-6 My 29 '47

Securities

Building stocks. R. W. Babson. Comm & Fin Chr 165:3121 Je 12 '47
How much boom in building stocks; with position of leading stocks. S. Devlin. Mag of Wall St 79:493-5+ F 1 '47
Todays investment outlook for building shares; with position of leading stocks. G. S. Kent. Mag of Wall St 80:542-4+ Ag 16 '47

Brazil

Brazil, now making prefabricated houses, hopes to find export markets. For Comm W 28:23 Ag 2 '47

Florida

Miami building surges. il Bsns W p63-4+ S 13 '47

United States

After the turn of the year. L. M. Cassidy. Comm & Fin Chr 165:426 Ja 23 '47
Building industry leaders comment on 1947 prospects. Am Bld 69:66-8 Ja '47
Building material producers answer to congressional inquiry. Arch Forum 87:12-13 S '47
Building materials makers increase capacity; industry's greatest expansion goes into newer products. J. V. Sherman. Barron's 27:29 S 29 '47
Construction and real estate markets in 1947. Fed Res Bul 33:635-46 Je '47
Construction industry needs public relations program; abstract. J. E. Wiley. Am Bld 68: 132 N '46
Forum yardstick houses; basic unit sales prices of five topflight builders. plans diags Arch Forum 86:102-4 Je '47
Houses or politics? T. S. Holden. Arch Rec 100:92-5 N '46
Let's have ourselves a housing industry. Fortune 36:2-4 S '47
Market outlook for the construction industry. V. D. Reed. Ind Marketing 31:40-2+ N '46
No famine ahead in building. B. Dahlberg. Comm & Fin Chr 166:215 Jl 17 '47
Outlook for construction industry. F. W. Parrott. Comm & Fin Chr 166:325+ Jl 24 '47
Outlook for construction industry. C. Shute. Comm & Fin Chr 164:2751+ N 28 '46
Outlook in building industry. J. L. Wood. Comm & Fin Chr 165:596+ Ja 30 '47
Public and private construction outlook; address before Municipal finance officers association, New York city. T. S. Holden. Comm & Fin Chr 165:2985+ Je 5 '47
Who are the postwar builders? status of builders in their communities. Am Bld 69: 126 Ag '47

BUILDINGS
Major projects; brief reports on status of construction operations. il Eng N 138:315-18 F 20 '47

See also
Architecture
Bank buildings
College buildings
Concrete buildings
Electric utilities—Buildings
Exits
Factories
Farm buildings
Foundries
Gas companies—Buildings
Gasoline service stations
High buildings
Hospitals
Hotels
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Insurance company buildings
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Mine buildings
Office buildings
Railroads—Buildings and structures
Recreation buildings
School buildings
Sheet metal buildings
Shopping centers
Steel buildings
Store buildings
Theaters
Warehouses

Obsolescence

Depreciation schedule, U.S. Bureau of internal revenue; length of life of buildings and equipment, construction equipment, bridges, waterworks, gas and electric plants. Eng N 138:635+ Ap 17 '47

BUILDINGS, Industrial. See Industrial buildings

BUILDINGS, Multiple use
Conversion of war plant into industrial center, Birmingham, Ala. J. Adams. il Dom Comm 35:26-30 Mr '47
Ten-story Terrace Plaza hotel set atop stores seven stories high. il plans diags Eng N 139:196-9 Ag 7 '47

BUILDINGS, Portable
Hollingsworth & Whitney adopt portable woods housing units. il Paper Tr J 124:18 F 13 '47

BUILDINGS, Prefabricated
All-welded prefabricated sandwich shops shipped completely assembled anywhere in the United States. R. H. Davies. il Welding J 26:788-9 S '47
Army engineers design new arctic-type shelter. Eng N 139:92 Jl 17 '47
Composite steel concrete panels; Latisteel. il Concrete 55:20+ Jl '47
Concrete precast panels used in building Vermont dormitories. A. D. Campbell. il Concrete 55:30+ Ag '47
New prefabricated plant design; Mobil-Mill. flow sheet il Can Min J 68:403-4, 464 Je '47
Package welds; stainless steel and aluminum shops. il Steel 120:116 Je 2 '47
Precast concrete storehouses. A. Amirikian. il diags Am Concrete Inst J 18:1097-1116 Je '47; Discussion. il 19:1116[1]-1116[12] pt 2 D '47
Precast concrete warehouse construction; with cost data. L. P. Corbetta. Am Concrete Inst J 18:1117-24 Je '47
Prefabricated concrete structures test new design concepts and construction techniques; two storehouses at the Naval supply depot, Mechanicsburg, Pa. A. Amirikian. il diags Civil Eng 17:383-6 Jl '47
Prefabricated factory, born of war-time shortage in steel, is built entirely of wood products; Hammondsport (N.Y.) plant for Mercury aircraft, inc. il Arch Forum 87:117-18 S '47
Prefabricated offshore drilling platform sets up in record time. E. H. Short, jr. il map plan diags Oil & Gas J 46:82-5+ Ag 9 '47
Welded construction provides economical and rigid shop structure. A. F. Davis. il Welding J 26:18 Ja '47
What makes a prefabrication business grow? Well built manufacturing company, Somerville, N.J. E. A. Chandler. il Am Bld 68: 104+ D '46
See also
Houses, Prefabricated

BUILDINGS, Remodeled
Chicago's Auditorium theater now safe; new college starts careful remodeling of Adler & Sullivan masterpiece. il Arch Forum 86:16 My '47
Furniture store in Schenectady, N.Y. undergoes both face-lifting and surgery to meet merchandising needs. il diags Arch Forum 86:116-17 Ap '47
See also
Houses, Remodeled

BUILT-IN furniture. See Furniture, Built-in

BULGARIA
Commerce
Bulgarian trade. Bsns W p 108-9 My 17 '47
Economic policy
Two-year plan. Bsns W p 106+ O 11 '47

BULKHEADS
Tests probe design of bulkheads; abstract. G. P. Tschebotarioff. diag Eng N 138:96 Ja 23 '47

BULLETIN boards
High interest bulletin board designed for safety publicity. il Safety Eng 93:30 Mr '47
Newspaper on the wall. Nat Safety N 56:44 Jl '47

BUNA S. See Rubber, Artificial

BUNDESMANN tester. See Textile testing machines

BUNGALOWS
Cleveland builders' blue ribbon bungalow. il plan Am Bld 69:112-13 S '47

BUNSEN burners
Bunsen aids small brazing. N. Laycock. diags Am Mach 91:120 O 23 '47

BUNTING, Earl, 1893-
Portrait. Bsns W p 17 Je 28 '47
Presidency of National association of manufacturers. por(cover) Bsns W p8 D 14 '46

BUOYS
Lighthouse engineering. K. C. Sutton-Jones. il diags Engineer 184:116-19 Ag 8 '47
Radio controlled buoys; lights controlled for harbor blackouts. A. F. Hopkins, jr. and F. A. B. Smith. il diag Electronics 20:84-6 Ja '47

BUREAU of accident and health underwriters (formerly Bureau of personal accident and health underwriters)
Annual meeting, Fairlee, Vt., Sept. 8-10. East Underw 48:38-41+ S 12; 37-8 S 19 '47; Nat Underw 51:27+ S 11 '47; Nat Underw (Life ed) 51:1+ S 12 '47; Weekly Underw 157: 624+ S 13 '47
Formation of A. & H. bureau; its purposes and modern function. J. F. Follmann, jr. Nat Underw 51:14+ Ap 10 '47
Name committees. Nat Underw 50:24 N 14 '46; Same. Nat Underw (Life ed) 50:7 N 15 '46

BUREAU of personal accident and health underwriters. See Bureau of accident and health underwriters

BUREAU of safety. See Interstate commerce commission—Bureau of safety

BUREAUCRACY
Bureaucracy trend toward collectivism. J. C. O'Mahoney. Comm & Fin Chr 165:373+ F 13 '47

BURETS
Burette reading device. F. C. Guthrie. diags Chem & Ind p240-1 My 3 '47
Practical syringe microburet. P. A. Shaffer, jr., P. S. Farrington and C. Niemann. bibliog il Anal Chem 19:492-4 Jl '47
Simple syringe burette. P. F. Scholander. diag Science 105:581-2 My 30 '47

BURGESS battery company
Customers furnish ideas to sell 400 items; help Burgess battery co. discover uses for variety of merchandise. C. L. Anson. il Adv & Sell 40:64 O '47

BURGLARY insurance. See Insurance, Burglary

BURIAL insurance. See Insurance, Burial

BURKE, Edward Raymond, 1880-
Portrait. Bsns W p88 N 30 '46

BURLAP
Salvaging bags by air cleaning. il diags Sheet Metal Worker 38:49-52 O '47
Textile bags; plastic treatment and laminations. il Mod Packaging 20:140-2 My '47
See also
Jute

BURLINGTON mills corporation
Annual report. Comm & Fin Chr 165:203 Ja 13 '47

BURMA
Burma; a tragedy of waste. Economist 152: 1028-9 Je 28 '47
Commerce
Burma's reconstruction and trends of post-war trade. D. J. Steinberg. il For Comm W 28:5-7+ S 27 '47
Import-export possibilities in U.S. trade with Burma. For Comm W 27:14 Ap 19 '47
Commercial policy
Opportunity for export to Burma; import and export restrictions. For Comm W 27: 14-15 Je 14 '47
Restrictions announced on imports, exports, and foreign exchange. For Comm W 25:17 N 9 '46
Economic conditions
Burma's reconstruction and trends of post-war trade. D. J. Steinberg. il For Comm W 28:5-7+ S 27 '47

BURMA road
Les grands ponts des routes stratégiques reliant la Birmanie et l'Inde à la Chine. il map diags Génie Civil 124:305-7 Ag 15 '47

BURMAH oil company
Statement by the chairman at 45th annual general meeting. R. I. Watson. Economist 153:501 S 20 '47

BURNERS
Changing fuels without temperature loss; dual oil-gas burner system at Smoot-Holman company plant. W. G. Holman and G. F. Thomas. il diag Cer Ind 48:70-2 Mr '47
Crowe water cooled burner for steel mill furnaces. il Blast F & Steel Pl 35:862-3 Jl '47
Cyclone burners made Chicago utility standard. Elec World News ed 128:13 S 6 '47
Future of pulverised-coal firing in Great Britain; cyclone furnace. C. H. Sparks. Engineer 182:591 D 27 '46
Horizontal cyclone burner for use with crushed coal. A. E. Grunert and others. il diags A S M E Trans 69:613-27 Ag '47; Excerpts. Elec World 126:69-71 D 21 '46; Power Pl Eng 51:113-14 F '47; Abstract. Power 91:15-18+ Ja '47; Discussion A S M E Trans 69:627-34 Ag '47
Wellman Smith Owen universal burner. il diag Engineering 164:218-19 S 5 '47
See also
Gas burners
Oil burners

BURNS and scalds
Creosote burn treatment. Safety Eng 92:95 O '46
Don't add infection to injury. Safety Eng 93:56-7 Je '47
First-aid treatment for caustic soda burns. Paper Ind 29:1023 O '47
Recent research on chemical injuries to the eye. R. S. McLaughlin. Ind Med 16:86+ F '47; Abstract. Nat Safety N 55:52 Je '47
Studies of thermal injury; automatic recording caloric applicator and skin-tissue and skin-surface thermocouples. F. C. Henriques, jr. bibliog diags R Sci Instr 18:673-80 S '47

BURRELL, Frank L.
Portrait. Fortune 35:116 Ap '47

BURRIDGE, Howard J.
Sketch. L. Cartwright and C. M. Cartwright. por Nat Underw 50th anniv no:50 1947

BURRS
Rotary power filing technique. il Mach 53:165-7 Ap '47

BURRY biscuit corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:386-7 Jl 5 '47

BURSK, Edward C.
Sketch. por Sales Management 58:39 Ap 15 '47

BURTON, Harold Hitz, 1888-
Supreme court: 1947. A. M. Schlesinger, jr por Fortune 35:73-9+ Ja '47

BUS terminals. See Motor bus lines—Terminals

BUSBARS
Aluminum busbar laps and joints need not be larger than copper. S. C. Killian. diags Elec World 128:118-19 S 13 '47
Bus appearance favored by streamlined connectors. D. L. Greene. Elec World 126:98 N 23 '46
Bus bar weights; table. Power Pl Eng 51:104 F '47
Design of secondary manhole buses for use in heavy load areas. R. A. Moulthrop. il Elec West 98:50-1 Mr '47
Flexible bus and switching layout in plant extension; building the third section of Venice no. 2 power station, St Louis. diag Elec World 127:70 Mr 1 '47
How to bend tubular aluminum bus. T. L. Bourbonnais, 2d. il Elec World 127:70-1 Je 21 '47
Three-phase rectangular conductors; simplified reactance formula. W. H. Miller. bibliog Electrician 138:1681-2 Je 20 '47
Ventilated feeder bus reduces weight and temperature. diag Elec World News ed 128: 29 Jl 12 '47

Protection
Busbar zone protection; abstract. G. W. B. Mitchell. Elec World 127:132 Ap 12 '47

BUSES, Motor. See Motor buses

BUSH, Vannevar, 1890-
Awarded Hoover medal for 1946. por Elec Eng 66:191 F '47
1946 Hoover medal; presentation, by E. L. Moreland; response by V. Bush. por Elec Eng 66:258-60 Mr '47
Receives Hoover medal for 1946. por Mech Eng 69:251 Mr '47
Wins Hoover medal. Civil Eng 16:555 D '46

BUSHINGS
Ball bushings minimize friction in linear motion. L. H. Leonard. diags Steel 120:74-5+ Ja 27 '47
Broach a square hole to remove a broken bushing. A. T. Roudebush. diags Am Mach 91:116 Ja 30 '47
Bushings from steel wool made by North American Aviation. C. O. Herb. il Mach 53: 164-7 Je '47
Expanding extractor removes blind bushings. H. A. Livingston. diag Am Mach 91:131 Jl 3 '47
Fabricating spacers, bushings, and washers. W. L. Nye. Air Transport 5:58+ F '47
Guide puts accuracy into plastic bushing production. D. A. Baker. diag Am Mach 91: 115 Ap 24 '47
Ingenious equipment used in making split bushings at a Ford hydro plant. C. H. Wick. il Mach 53:141-6 Ap '47
Large bushings sensitively installed in close quarters. H. Weitz. diags Am Mach 90: 143 D 19 '46
Machining operations eliminated by formed tubing. il Iron Age 159:59 Je 19 '47
Making an expansion fit; bushing for Diesel engine. A. C. Jones. il Metal Prog 52:248-9 Ag '47
Making pipe bushings from standard pipe. Water & Sewage Works 94:R69 Jl '47
Stamped bushings; National formetal co. D. B. Wilkin. il Steel 119:64-6+ N 25 '46
Undulated bushing guides tool for chamfering elliptical holes. I. Herman. diags Am Mach 91:143 Jl 17 '47

BUSINESS
Blueprint for American business. R. F. Patterson. Comm & Fin Chr 165:1841+ Ap 3 '47
Business and economic research. J. M. Cleary. Paper Ind 29:889-90+ S '47
Business looks ahead. E. O. Shreve. Comm & Fin Chr 166:620+ Ag 14 '47
Businessmen and the community forum. F. K. Ballaine. Harvard Bsns R 25 no 3:372-84 [Ap] '47; Excerpts. Trusts & Estates 85:191 S '47
Challenge to leadership. E. R. Breech. Comm & Fin Chr 164:2602+ N 21 '46
Disposition of business interests by inter vivos and testamentary trusts. M. Garwood. Trusts & Estates 83:465-73 N '46
Guideposts for business planning. M. Shields. Comm & Fin Chr 165:1925+ Ap 10 '47
Leadership, obligation of business management. H. Ford, 2d. Comm & Fin Chr 165: 2338+ My 1 '47
Problems in business recovery. C. D. Smith. Comm & Fin Chr 164:3224 D 19 '46
Responsibility of management; economic problems now faced by industry. E. O. Shreve. Credit & Fin Management 49:8-10 O '47
Role of American business leadership. W. A. Harriman. Comm & Fin Chr 164:2752+ N 28 '46
Role of businessman in dynamic economy defined. P. G. Hoffman. Factory Management 105:230+ Ag '47
Three schools of business thought. E. G. Nourse. Comm & Fin Chr 165:1517+ Mr 20 '47
To the boards of directors of American business; buy peace, cut prices, encourage loans, foster imports, send engineering missions abroad. Fortune 35:2-4 Je '47
See also
Accounting
Advertising
Applications for positions
Auditing
Banks and banking
Billing
Budget, Business
Business conditions and other headings beginning Business
Card system in business
Catalogs
Christmas business
Collecting of accounts
Commerce
Commercial correspondence
Corporations
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Economics
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Executives

BUSINESS—See also—*Continued*
Exhibitions
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Government aid to business
Government regulation of industry
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Instalment plan
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Mail order business
Mailing lists
Manufactures
Market surveys
Marketing
Money
Office management
Organization in industry
Partnership
Price policies
Profit
Prosperity
Public relations
Purchasing
Real estate business
Retail trade
Risk
Sales letters
Salesmanship
Salesmen
Securities
Taxation
Trade associations
Trade marks
Trust companies
Trusts, Industrial

Bibliography

Business reference publications; catalogs, directories, buyers' guides, etc. Ind Marketing 31:129-30 O 25 '46

Credit executive's library. C. D. Smith. Credit & Fin Management 49:22+ Ja '47 [cont monthly]

Current reading list for sales executives and salesmen. Sales Management 58:104-9 Mr 1; 150+ Mr 15; 108+ Ap 1 '47

Desk library of information sources for the businessman. (Business literature v. 19, no. 7) p59-60 Business library, Newark public lib, Newark, N.J. Mr '47

Gair company business library; partial list of books. W. F. Howell. il Paper Ind 29: 72-5 Ap '47

New business books and reports. C. M. Monen. Dom Comm 35:92-6 Ja '47 [cont monthly]

See also
Business—Small business—Bibliography

Biography

Who's who in commerce and industry, the international business who's who. 5th ed 1416p $15.25 A. N. Marquis co, 210 E. Ohio st, Chicago 11 '47

Dictionaries

Dictionary of foreign trade. F. Henius. 2d ed rev & enl 959p $12.50 Prentice-Hall, 70 Fifth av, New York 11 '47

Fiction

State of the novel. Fortune 36:2-3 O '47

Mortality

Business population and turn-over; trends in first half of 1947. Survey of Cur Bsns 27: 15-16+ Jl '47

Business turn-over and causes of failure in 1946. M. J. Ulmer. Dom Comm 35:14-19 My '47

Business turn-over and causes of failure, second quarter of 1946. M. J. Ulmer and A. Nielsen. graphs Survey of Cur Bsns 27: 10-16 Ap '47

Postwar business population. M. J. Ulmer. Survey of Cur Bsns 27:9-18+ Ja '47

New businesses

New business incorporations in the United States; monthly and quarterly record by states. Published in monthly numbers of Dun's statistical review; summary in Dun's review

New business puts down roots. il Bsns W p21-2 Mr 22 '47

Postwar business population. M. J. Ulmer. Survey of Cur Bsns 27:9-18+ Ja '47

Political aspects

Business men may expect more favorable treatment from Washington as New Deal is thrown overboard. E. C. Kreutzberg. il Steel 120:179-80+ Ja 6 '47

Small business

Aids for small business; power industry's interest. R. E. Turner. Power Pl Eng 51: 110-11 O '47

A.B.A. booklet, Small business aids; source material to help banks extend counseling service. Banking 39:43 My '47

Building small business reserves by the Bond-a-month plan. R. M. Hanes. Banking 40: 36+ Ag '47

Business of your own; the Reader's digest manual of ideas for small businesses. 128p pa 25c Reader's digest assn, Pleasantville, New York

Case studies of small business. plans diag Dom Comm 35:76-82 Ja; 76-80 F; 70-2 Ap; 64-8 My; 60-5 Je '47

Census has problems in measuring small business. R. C. Janoschka. il Dom Comm 35:3-7 Mr '47

Central underwriting fund for small business. E. J. Hopkins. bibliog Comm & Fin Chr 164:2613+ N 21 '46

CED report suggests aid for small business firms. Steel 120:70 Je 16 '47

CED research committee publishes statement on needs of small business. Credit & Fin Management 49:30-1 Je '47; Same cond. Iron Age 159:125+ Je 12 '47

Control in small businesses. P. F. Lawler. Harvard Bsns R 25 no 4:521-6 [Jl] '47

Credit group at work; Connecticut bank credit association continues aid to small business postwar plans. Banking 39:39 D '46

Department of justice to help small business; Anti-trust division establishes new unit. Comm & Fin Chr 165:396 Ja 23 '47

Expects 1947 prosperity for small N.Y. businessman; Commerce and industry association of New York. Comm & Fin Chr 165:142+ Ja 9 '47

Finance and tax program for small business. J. C. Dockeray. Dom Comm 35:10-14 F '47

Financing small business; NAM study. bibliog Comm & Fin Chr 164:2461+ N 14 '46; Excerpt. Banking 39:107-8 Ja '47

Incubators for baby businesses; New England Council's industrial development program. J. L. Cooley. Banking 39:38+ D '46

Instalment credit to small business. L. J. Asterita. il Banking 40:28-30+ S '47

Instalment loans for small business. C. A. Bimson. Comm & Fin Chr 165:604+ Ja 30 '47

Little business and how it grew; Acme steel and wire works, San Antonio. R. McDaniel. il Am Bsns 16:23-4+ N '46

Management assistance for small business. M. L. Mace. Harvard Bsns R 25 no 4A:587-94 [O] '47

Member bank loans to small business. C. H. Schmidt. Fed Res Bul 33:963-77 Ag '47

One hundred questions on starting manufacturing. W. Greene. Dom Comm 35:55-7 F '47

Problem of small business. R. A. Stevenson. Comm & Fin Chr 166:523+ Ag 7 '47

Problems of the postwar capital market. C. L. Dunn. Ann Am Acad 248:251-9 N '46

Rough seas ahead for small business. Trusts & Estates 84:151-3 F '47

Small business and government regulation. B. W. Roper. U S Dept of Com, Economic (Small Business) Ser 58:1-16; pa 10c Supt. of doc. '46

Small business and regulation of pricing practices. B. Bock. U S Dept of Commerce, Economic (Small Business) Ser 61:1-32; pa 15c Supt. of doc. '47

Small business, how strong? Bsns W p 15-16 My 31 '47

Small business in the returning competitive world. R. A. Foulke. Banking 39:42-3 Mr '47

Small business; it can go places, and without a free ride. A. M. Sullivan. Ptr Ink 221:94+ O 31 '47

Small business re-zooms. W. H. Hillyer. Management R 36:178-80 Ap '47

Small business today, tomorrow; management counsel available from Office of small business, Department of commerce. J. L. Kelly. Credit & Fin Management 49:18+ Ap '47

Small business, what it needs; Committee for economic development lists some tax and finance reformations to strengthen the independent's status. F. C. Sturtevant. Nat Pet N 39:38+ Ag 20 '47

So big; hard to stay small and survive. Fortune 36:144+ O '47

BUSINESS—Small business—*Continued*
Some factors in starting small chemical enterprises. W. R. Koster. il Dom Comm 35:49-54 F '47
Spotcheck on loans to small business; interviews with bankers in 19 selected cities. il map Banking 40:25-35+ O '47
Swallowing up small business. Nat City Bank p67-8 Je '47
Tax revisions for small business. J. F. Newcomb. Comm & Fin Chr 165:746+ F 6 '47; Same, with table (Comparative schedule of income taxes, Revenue acts of 1918 to 1945, p42) Credit & Fin Management 49:4-7+ O '47
Three-way program for helping small business. P. G. Hoffman. il Dun's R 55:11-13+ O '47

See also
American bankers association—Small business credit commission
Industrial development corporations

Bibliography
Information sources for small businesses; selected list of sources of information on beginning and operating a small business. J. C. Yocum and E. Ferrin. 59p pa 25c Ohio state univ, Bur. of business research, College of commerce and administration, Columbus 10 '46

Terminology

See also
Advertising—Terminology
Merchandizing—Definition

BUSINESS budget. See Budget, Business

BUSINESS cards
It's only a card, but it gets attention. D. Ross. Ptr Ink 219:76+ Je 20 '47

BUSINESS conditions
Advertisers in 1947. N. Kelne. Ptr Ink 217:71+ D 27 '46
America of tomorrow; an optimistic outlook. J. W. Snyder. Comm & Fin Chr 164:2605+ N 21 '46
American business in 1947. A. W. Zelomek. Comm & Fin Chr 165:271+ Ja 16 '47
American business outlook under Truman doctrine. A. W. Zelomek. Comm & Fin Chr 165:2473+ My 8 '47
At the crossroads; prosperity or recession. O. Ely. Pub Util 39:640-2 My 8 '47
Bank economist notes that market trends now are similar to those that followed World war I. Comm & Fin Chr 164:3392; 165:1512+, 2334+ D 26 '46, Mr 20, My 1 '47
Banker's view of business. D. W. Michener. Comm & Fin Chr 165:2597+ My 15 '47
Boom; a second look. il Fortune 34:113-19+ D '46
Boom or bust? S. B. Lurie. Comm & Fin Chr 164:2603+ N 21 '46
Boom or bust depends on government. R. R. Wason. Comm & Fin Chr 165:590+ Ja 30 '47
Business after World war I and II; First national bank of Boston. Comm & Fin Chr 164:2524 N 14 '46
Business and dividend outlook for the last quarter. W. A. Howell. Mag of Wall St 80:692-3+ S 27 '47
Business and finance speaks after the turn of the year; symposium. Comm & Fin Chr 165:414+ Ja 23 '47
Business as usual despite cashing of veterans' terminal leave bonds. Bsns W p22+ S 20 '47
Business has reached the fine shape. Barron's 27:12 O 27 '47
Business man, watch your step; working man, watch yours, too. E. S. Horwitz. Credit & Fin Management 49:15-17+ O '47
Business outlook. D. M. Keezer. Comm & Fin Chr 165:2777+ My 22 '47
Business outlook. S. H. Slichter. Comm & Fin Chr 165:2469+ My 8 '47
Business outlook. C. D. Smith. Credit & Fin Management 49:8-10+ My '47
Business outlook. Q. F. Walker. Comm & Fin Chr 166:1006+ S 11 '47
Business outlook for 1947. R. Rodgers. Comm & Fin Chr 164:2605+ N 21 '46
Business outlook for 1947; address before New York credit men's association. H. H. Heimann. Credit & Fin Management 49:4-7+ Mr '47
Business perspectives. C. A. Sienkiewicz. Comm & Fin Chr 166:331+ Jl 24 '47
Business prospects in 1947. Q. F. Walker. Comm & Fin Chr 165:1119+ F 27 '47
Business prospects in 1947. L. F. Whittlemore. Comm & Fin Chr 165:1783+ Ap 3 '47
Business situation as 1946 drew to a close. Survey of Cur Bsns 27:1-5 Ja '47
Can prosperity last. Fortune 35:2-4 My '47
Challenge to pessimism. A. J. Neumark. Comm & Fin Chr 165:1373+ Mr 13 '47
Commerce's crystal ball; fewer shortages in '47. Bsns W p16 Ja 18 '47
Confidence in business outlook justified. C. Wampler. Comm & Fin Chr 165:2606 My 15 '47
Conflicting trends in 1947 outlook. J. C. Houston, jr. Comm & Fin Chr 165:1565+ Mr 20 '47
Congressional survey reports falling prices and high wages. Comm & Fin Chr 165:2993 Je 5 '47
Current business outlook. W. H. Stead. Credit & Fin Management 49:9-10+ Ap '47
Current costs and credit; balance sheet will not show whole picture in 1947. W. L. McGrath. Credit & Fin Management 49:8-11+ Ja '47
Economic and political tendencies. A. W. Zelomek. Comm & Fin Chr 166:1549+ O 16 '47
Economic guideposts for business planning. M. Shields. Edison Elec Inst Bul 15:157-60 My '47
Economic outlook. G. R. Collins. Comm & Fin Chr 165:2853+ My 29 '47
Economic outlook. P. W. McCracken. Comm & Fin Chr 166:110+ Jl 10 '47
Economic outlook. R. Rodgers. Comm & Fin Chr 165:2058+ Ap 17 '47
Economic outlook. S. H. Slichter. Comm & Fin Chr 164:3010+ D 12 '46
Economic outlook for 1947. S. Barkin. Comm & Fin Chr 165:596+ Ja 30 '47
Economic report. Bsns W p20 Jl 26 '47
Economic signals worth watching. R. L. Heilbroner. il Am Bsns 17:10-11+ Ag '47
Executive forecast. Fortune 36:supp 1-7 Ag '47
Getting back to normal. C. L. Benner. Comm & Fin Chr 164:2607+ N 21 '46
Going down, who's first this time? Bsns W p17-18 Ap 26 '47
Greater dollar sales, higher employment indicated by poll. Elec World News ed 128:13 Jl 26 '47
High prices and business prospects. F. D. Newbury. Comm & Fin Chr 165:3225+ Je 19 '47
I am an optimistic pessimist. J. Backman. Comm & Fin Chr 165:3231+ Je 19 '47
Industrial balance sheet; with preview of 1947 trends and summary of favorable and unfavorable factors. W. C. Hanson. Mag of Wall St 79:406-7+ Ja 18 '47
Industrial trends and prospects for 1947. H. B. McCoy and others. Dom Comm 35:22-62 Ja '47
Inventories and business trends. C. F. Hughes. Comm & Fin Chr 164:2750+ N 28 '46
Is the buyers' market here? business paper editors' opinions. E. W. Davidson, comp. Sales Management 58:80-1+ Ap 1 '47
Look into world and national affairs. E. O. Shreve. Comm & Fin Chr 165:396+ Ja 23 '47
Looking at prices and inventories; implications for banks. C. W. Williams. Burroughs Clearing House 31:20-1+ Ja '47
Looking forward. R. Rodgers. Comm & Fin Chr 166:1630+ O 23 '47
Marketing outlook in 1947. H. S. Firestone, jr. Comm & Fin Chr 164:2607+ N 21 '46
Monthly business trend; new sensitive overall index. Sales Management 58:148+ F 15 '47 [cont monthly]
Nation well off despite liabilities. H. H. Heimann. Comm & Fin Chr 165:48 Ja 2 '47
National summary of business conditions. Published in monthly numbers of Federal reserve bulletin

BUSINESS conditions—*Continued*
New vistas for American enterprise. W. Gates. Mag of Wall St 80:472-4+ Ag 2 '47
1946 good year for business; Commerce dept. year-end summary. Comm & Fin Chr 165: 926 F 13 '47
1947 jobs-markets trends surveyed by associations. J. Judkins. il Dom Comm 35:6-10 Je '47
1947-1948 business outlook; address before National retail credit association. P. Millians. Comm & Fin Chr 165:3338+ Je 26 '47
Only moderate adjustments in '47; Indiana university professors are bullish. G. W. Christenson and others. Nat Underw (Life ed) 51:3 Ja 17 '47
Our outlook at home. L. Henderson. Comm & Fin Chr 164:2883+ D 5 '46
Outlook for business. W. E. Hoadley, jr. Comm & Fin Chr 165:1976 Ap 10 '47
Outlook for business. P. W. McCracken. Comm & Fin Chr 164:2884+ D 5 '46
Outlook for business. P. Mazur. Comm & Fin Chr 166:1306+ O 2 '47
Outlook for income and spending. R. D. Naess. Comm & Fin Chr 165:589+ Ja 30 '47
Outlook for the decisive third quarter. H. M. Tremaine. il Mag of Wall St 80:304-6+ Je 21 '47
Outlook for this year and next. G. T. Thomas. Paint Oil & Chem R 110:14+ My 29 '47; Same. Credit & Fin Management 49:4-5+ Ag '47
Perhaps current clamor over living costs reflects falling incomes of consumers. Barron's 27:12 S 29 '47
Present economic problems and prospects. N. H. Jacoby. Comm & Fin Chr 165:1782+ Ap 3 '47
Price distortions and the business outlook. Q. F. Walker. Comm & Fin Chr 164:3204+ D 19 '46
Price outlook and consumer purchasing power. J. Hirsch. Comm & Fin Chr 165:2728+ My 22 '47
Projecting business outlook into second quarter. W. Gates. Mag of Wall St 79:716-18+ Mr 29 '47
Purchasing agent's eye view of business. Oil Paint & Drug Rep 151:5 Ja 27 '47 [cont monthly]
Recent market developments. Fed Res Bul 33:1-10 Ja '47
Regional trade barometers. map Published in monthly numbers of Dun's statistical review; summary in Dun's review
Remedial deflation needed. J. R. Bancroft. Comm & Fin Chr 164:2606+ N 21 '46
Reports more optimism among purchasing agents; Business survey committee of National association of purchasing agents. Comm & Fin Chr 164:2887+; 165:6+, 1784+, 2340; 166:118, 921 D 5 '46, Ja 2, Ap 3, My 1, Jl 10, S 4 '47
Review of the month. Published in monthly numbers of Federal reserve bulletin
Sees leveling off prices, costs and income major problem. J. C. Cowdin. Comm & Fin Chr 166:221+ Jl 17 '47
Spotcheck on loans to small business; interviews with bankers in 19 selected cities. il map Banking 40:25-35+ O '47
Time for confidence. T. I. Parkinson. Comm & Fin Chr 165:2+ Ja 2 '47; Abstract. Nat Underw (Life ed) 51:1 Ja 10 '47
Time looks at industry. R. E. Larsen. Ind Marketing 32:43-4+ Jl '47
Trend of business, Canada and U.S.A.; graphs. Bsns W p112 N 16 '46; 108 Mr 22; 120 Ap 26 '47
Two pressing uncertainties; labor strife and inflation. B. W. Dempsey. Comm & Fin Chr 165:2601+ My 15 '47
U.S.A. 1950-1960; synopsis of findings of the Twentieth century fund survey. Air Transport 5:51-66 My '47; Same. Am Mach 91: 114 My '47; Same. Aviation N 7:21-36 My 5 '47; Same. Bsns W p55-70 Ap 26 '47; Same. Coal Age 52:86a-86p My '47; Same. Elec World News ed 127:17-32 My 3 '47; Same. Factory Management 105:96a-96p My '47; Same. Food Ind 19:sup71-86 My '47; Same. Product Eng 18:144a-144p My '47; Same. Bus Transportation 26:71-86 My '47; Same. Chem Eng 54:75-90 My '47; Same. Elec West 98:79-94 My '47; Same. Electronics 20:40a-40p Je '47; Same. Eng & Min J 148:50a-50p My '47; Same. Eng N 138:827-42 My 15 '47; Same. Power 91:427a-427p Je '47; Same. Product Eng 18:144a-144p My '47; Same. Textile World 97:121-36 My '47
Wall Street bankers and business analysts changing views on inevitability of market bust. E. Germain. Comm & Fin Chr 164: 2204+ D 19 '46
What business faces in 1947. L. M. Cherne. Comm & Fin Chr 165:266+ Ja 16 '47
What is the business outlook? P. M. Brown. Comm & Fin Chr 166:1637+ O 23 '47
What's ahead for American business. J. D. Wilson and D. M. Keezer. Chem Eng 54: 94-7 F '47
What's ahead for business? A. D. Whiteside. Comm & Fin Chr 165:3116+ Je 12 '47
What's ahead for business and banking? A. R. Upgren. Comm & Fin Chr 165:3342+ Je 26 '47
When will the bear market end? J. H. Lewis. Comm & Fin Chr 164:2883+ D 5 '46
Where do we go from here. R. Rodgers. Comm & Fin Chr 165:2853+ My 29 '47
Which industries offer best prospects for 1947? G. W. Mathis. il Mag of Wall St 79:408-11+ Ja 18 '47
Why the confusion? A. P. Sloan, jr. Comm & Fin Chr 164:2609+ N 21 '46
Will America slump? British view of U.S. business prospects; abstract. Management R 35:503 D '46
World commodity price decline; what it portends for business. N. T. Carruthers. Mag of Wall St 79:180-2+ N 23 '46

See also
Business cycles
Business depression
Business failures
Business forecasting
Index numbers (economics)
Inflation (finance)
Market statistics
Prices
Production
Prosperity

BUSINESS conferences
Conferences and departmental meetings; how to make them most effective. E. Mottershead. Bankers Mo 64:165-8 Ap '47

BUSINESS consolidations
Bill to regulate mergers, Kefauver bill. Nat City Bank p79-82 Jl '47
Causes and cure of present day trends toward business monopoly. W. S. Baren. Comm & Fin Chr 166:1536+ O 16 '47
Certain phases of merger accounting. W. M. Black. J Account 83:214-20 Mr '47
Cooperation pays. Bsns W p 17 Je 14 '47
Drake America takes over; purchase control in Mark Cross. il Bsns W p80+ S 13 '47
Facts and figures about industrial mergers. G. H. Montague. Comm & Fin Chr 166: 1751 O 30 '47
FTC attack on steel producers' drum business proves hollow; hearing before Senate judiciary antimonopoly subcommittee. Steel 120:60-1 My 26 '47
FTC submits report to Congress on trend of corporate mergers. Iron Age 159:112-14 Mr 27 '47
How big corporations plan vast growth. W. A. Howell. Mag of Wall St 80:370-1+ Jl 5 '47
Mergers; a cause of high prices. R. E. Freer. Comm & Fin Chr 165:2906+ My 29 '47
Mergers viewed with alarm. Bsns W p19 Mr 22 '47
Santa Claus diversifies; Noma electric corp. expands into year-round market. Bsns W p56+ D 28 '46
Swallowing up small business. Nat City Bank p67-8 Je '47
Textile integration has been over estimated. Bsns W p18-19 Ap 5 '47
Things to watch in the business picture; abstract. Management R 35:434-5 N '46

See also
Airlines—Consolidation
Bank consolidations
Insurance companies—Consolidation
Railroads—Consolidation
Steel mergers

BUSINESS cycles
Business-stock market anomaly parallels 1881-2. B. Ravits. Barron's 27:9 Jl 28 '47

BUSINESS cycles—*Continued*
Cleveland trust company bulletin questions stock market decline-business recession theory. Comm & Fin Chr 165:1010 F 20 '47
Construction and business cycles. S. Gertler. Survey of Cur Bsns 26:7-14 N '46; Excerpts. Heat & Ven 44:90-1 Ja '47
Consumption function; cyclically variable? E. G. Bennion. R Econ Stat 28:219-24 N '46
Elasticity of physical quantities and flexibility of unit prices in the dimension of time. F. C. Mills. Am Stat Assn J 41:439-67 D '46
Factors governing the length of inventory cycles. L. A. Metzler. R Econ Stat 29:1-15 F '47
Influence of business cycles on industrial research. M. Holland. il Dun's R 54:15-16+ D '46
Master market cycles. C. J. Collins. Comm & Fin Chr 165:2726+ My 22 '47
Measurement without theory; review of Measuring business cycles, by A. F. Burns and W. C. Mitchell. T. C. Koopmans. R Econ Stat 29:161-72 Ag '47
Mechanical cycle theorists; how sound are their predictions? J. S. Williams. il Mag of Wall St 80:197-9+ My 24 '47
Misplaced emphasis in contemporary business-fluctuation theory; erratic variation in quantity of money has been ignored. C. Warburton. bibliog J Bsns 19:199-220 O '46
More about sun spots and economic cycles. D. Pingree. Comm & Fin Chr 166:719 Ag 21 '47
Relation of disposable income and the business cycle to expenditures. L. H. Bean. R Econ Stat 28:199-207 N '46
Rhythmic cycles in the stock market. F. R. Macaulay. Comm & Fin Chr 165:3114+ Je 12 '47
Trends, cycles and business forecasting. E. R. Dewey. Comm & Fin Chr 166:106+ Jl 10 '47
What can be done to stabilize our economy. S. H. Slichter. Factory Management 105: 242+ O '47

See also
Business depression

Bibliography

Business cycles. (Business literature v. 19, no. 8) p61-2 Business library, Newark public lib, Newark, N.J. Ap '47

BUSINESS depression
Anti-depression forces. S. J. Flink. Comm & Fin Chr 166:114 Jl 10 '47
Are we talking ourselves into a collapse? R. C. Rowe. il Can Min J 68:321-3 My '47
Business outlook; address before Pennsylvania electric association. S. H. Slichter. Comm & Fin Chr 166:1307+ O 2 '47
Certain depression ahead. W. J. Baxter. Comm & Fin Chr 165:595+ Ja 30 '47
Comparison of 1919-1920 and now. K. W. Schlubach. Comm & Fin Chr 166:1736+ O 30 '47
Credit men and the recession; how they may help to minimize it. J. K. Heyman. Credit & Fin Management 48:19-21 N '46
Danger signs for business. A. C. Neal. Credit & Fin Management 48:12-14+ D '46
Depression fears unwarranted. T. R. Hill. Comm & Fin Chr 165:2473+ My 8 '47
Depression in 1950? a challenge. A. B. May. Comm & Fin Chr 165:3246 Je 19 '47
Depression not inevitable. G. F. Johnston. Comm & Fin Chr 166:424+ Jl 31 '47
Economists expect mild business recession next year; Dodge survey. Comm & Fin Chr 166:1756 O 30 '47
Europe fears U.S. slump. Bsns W p113-14 D 14 '46
Financial outlook. R. Rodgers. Comm & Fin Chr 165:2977+ Je 5 '47
General business outlook. H. R. Bowen. Comm & Fin Chr 165:1921+ Ap 10 '47
Ghoulish game; abstract. W. Weir. Adv & Sell 40:70 O '47
How can we avoid a recession? L. H. Keyserling. Comm & Fin Chr 165:2331+ My 1 '47
How much recession. R. Rodgers. Comm & Fin Chr 165:3340+ Je 26 '47
Is a recession necessary? S. H. Slichter. il Dun's R 55:11-14+ Ag '47
Is recession behind or ahead? D. M. Keezer. Mass Transportation 43:473-4 O '47
Keep up selling activity to avoid depression. P. G. Hoffman. Comm & Fin Chr 166:1022 S 11 '47; Same cond. Sales Management 59:sup6 O 1 '47
Look into the future. R. Rodgers. Comm & Fin Chr 165:2600+ My 15 '47
Management problems in threatened recession. W. Sykes. Comm & Fin Chr 165:2113+ Ap 17 '47
Maybe we're having that recession; then again, perhaps we're just rehearsing for it. Barron's 27:18 Ap 21 '47
Must we have a bust? P. G. Hoffman. Comm & Fin Chr 164:2752+ N 28 '46
Need we have a depression? T. Prince. Comm & Fin Chr 164:2460+ N 14 '46
No depression ahead; address before New York industrial conference of NAM. E. Bunting. Comm & Fin Chr 165:2850+ My 29 '47
No depression now, but perhaps later. T. L. Norton. Comm & Fin Chr 165:645+ Ja 30 '47
No-depression seers as plentiful now as were prophets of ruin in spring. Barron's 27:12 O 6 '47
No depression unless government makes it. R. R. Wason. Comm & Fin Chr 165:2604+ My 15 '47
No drastic recession; testimony before Senate finance committee. L. D. Edie. Comm & Fin Chr 165:2597+ My 15 '47
No recession impending. A. P. Sloan, jr. Comm & Fin Chr 166:1541+ O 16 '47
Our advertised 1947 recession. R. L. Heilbroner. il Am Bsns 17:16-17+ Je '47
Predicts severe depression. J. T. Adams. Comm & Fin Chr 164:2602+ N 21 '46
Prospects of recession in 1947. H. R. Bowen. Comm & Fin Chr 165:392+ Ja 23 '47
Recession now under way! M. Nadler. Comm & Fin Chr 165:2600+ My 15 '47
Sees no depression in 1947. T. I. Parkinson. East Underw 48:9 Ja 3 '47
Short 1947 recession. H. R. Bowen. Comm & Fin Chr 164:2751+ N 28 '46
Slump psychosis. F. H. Rosenstiel. Comm & Fin Chr 165:1645+ Mr 27 '47
Voters prefer Democratic party to GOP during hard times; Gallup poll. Iron Age 159: 107+ Ap 17 '47
Wage adjustments, down and up, could mitigate depressions' evils. E. M. Friedman. Comm & Fin Chr 165:2470+ My 8 '47
War honeymoon approaching end; First national bank of Boston. Comm & Fin Chr 165:13+ Ja 2 '47
Warding off depression. H. T. Lewis. Comm & Fin Chr 165:2201+ Ap 24 '47
Why the scare campaign? R. W. Coyne. Comm & Fin Chr 165:2602+ My 15 '47
Will there be a recession in 1947? L. Cherne. Comm & Fin Chr 165:1246+ Mr 6 '47
Yes, we have no depression today. Hamabit. Comm & Fin Chr 166:128 Jl 10 '47

See also
Business failures

BUSINESS districts
Flushing $50,000,000 retail center. il maps plans Arch Forum 85:100-5 N '46
Miami improves traffic flow in central business district. E. J. Reeder. il Civil Eng 17:305 Je '47
Rye, New York, plans, remodels its business district. il diags Am Bld 68:68-71 N '46

See also
Business streets
Industrial districts
Shopping centers

BUSINESS education
Academic mind in business. J. D. Miller, jr. bibliog J Bsns 20:146-55 Jl '47
Boy goes to work. H. L. Stein. Personnel J 25:250-6 Ja '47
Business education 1945-1946 including world co-operation; sixteenth yearbook. Commercial education assn. of the city of New York and vicinity. B. Nunes, ed. 230p $2 New York university bookstore, Washington Square east, New York 3 '46

BUSINESS education—*Continued*
Collegiate training needed for distribution careers. H. S. Firestone, jr. Ptr Ink 221:148 O 31 '47
Education for business life; Johnson & Johnson collaborates with employees and schools. il Trusts & Estates 84:576-8 Je '47
Insurance goes to college; suggested minimum program. D. McCahan and H. J. Lomar. Spectator (Property ed) 12:10-12+ F 13 '47
Sells the American way of doing business; method of acquainting boys with processes by which a manufacturing business is conducted; foundation sponsored by Lehigh foundries inc. il Foundry 75:89+ S '47
Understanding business and economics. W. Chevalier. Comm & Fin Chr 166:332+ Jl 24 '47
Utility employee training program of educational courses of Commonwealth Edison company. G. E. Trulock. Pub Util 40:205-10 Ag 14 '47
You and business; Pennsylvania Bell Telephone's demonstration class. il Trusts & Estates 83:429-32 N '46

BUSINESS English. See English language—Business English

BUSINESS expansion. See Business management—Expansion problems

BUSINESS failures
Business failures in 1946. Comm & Fin Chr 165:1162 F 27 '47
Business turn-over and causes of failure in 1946. M. J. Ulmer. Dom Comm 35:14-19 My '47
Business turn-over and causes of failure, second quarter of 1946. M. J. Ulmer and A. Nielsen. graphs Survey of Cur Bsns 27: 10-16 Ap '47
Canadian failures by provinces, monthly record. Published in Dun's statistical review
Manufacturing failures by size of liabilities, 1934-Sept. 1947. Ptr Ink 221:96 O 31 '47
Monthly failures by division of industry, city, state, size of liability and Federal reserve district. Published in monthly numbers of Dun's statistical review; summary in Dun's review
New credit byword: beware. Bsns W p 15-16 My 10 '47

See also
Bankruptcy
Business—Mortality

BUSINESS fluctuations. See Business cycles

BUSINESS forecasting
Business historian views the future. N. S. B. Gras. Management R 36:242-4 My '47
Business planning and statistical analysis. C. F. Roos. Comm & Fin Chr 166:1110+ S 18 '47
Business prospects for last half of 1947; survey by National industrial conference board. Comm & Fin Chr 166:459 Jl 31 '47
Business slow-up ahead. R. C. Shook. Comm & Fin Chr 166:1015+ S 11 '47
Buyers market for heavy goods? industrial editors think it's more than a year away in most fields. Sales Management 58:68-70 My 1 '47
CPA views the future brightly, with only a few ifs. Bsns W p20 Mr 8 '47
Danger signs for business. A. C. Neal. Credit & Fin Management 48:12-14+ D '46
Economic outlook for 1947. L. H. Haney. Comm & Fin Chr 164:3201+ D 19 '46
Economic outlook for 1947. E. P. Schmidt. Comm & Fin Chr 165:121+ Ja 9 '47
Economists look ahead. Bsns W p 19-20 My 31 '47
Executive forecast. Fortune 36:supp 1-7 Ag '47
Financial outlook. C. O. Hardy. Comm & Fin Chr 165:1+ Ja 2 '47
Forecast of business prospects. F. D. Newbury. Harvard Bsns R 25 no 3:273-88 [Ap] '47
Future of industrial production. D. M. Keezer. Am Gas Assn Proc 1946:209-12
How to forecast residential gas customers from population trends. F. B. Jones. Gas Age 99:51-4+ Ap 17 '47
How to make crystal-gazing pay off. Management R 36:455-6 S '47
Inventories and price trends. C. Hoskins. Comm & Fin Chr 165:2343+ My 1 '47
Latest developments in specific industries; review and outlook. Barron's 26:1+ D 30 '46
Lessons of reconversion; economic forecasting, inflation, bottlenecks. C. Hitch. R Econ Stat 29:16-20 F '47
Long range forecasts of operations; abstract. L. W. Jaeger. Management R 36:42-4 Ja '47
Management poll; business leaders predict the business trends of 1947. Fortune 35: 5-6+ Ja '47
Many conflicting tendencies in the new year; Business bulletin of LaSalle extension university. Comm & Fin Chr 165:134+ Ja 9 '47
Memo on 1947 business. Bsns W p41-4 D 28 '46
Metalworking industry reports on prospects for 1947. maps Steel 120:supl-32 Ja 6 '47
1947 business and financial outlook. R. W. Babson. Comm & Fin Chr 164:3350+ D 26 '46
1947 outlook; Industrial conference board forum. M. Gilbert and others. Comm & Fin Chr 165:272+ Ja 16 '47
No depression in 1947 says New York economist. M. Nadler. Sales Management 58:108 F 1 '47
Preview of 1947; business and investment trends. W. Gates. Mag of Wall St 79:348-50+ Ja 4 '47
Preview of 1947 problems. Nat City Bank p1-5 Ja '47; Excerpt. Comm & Fin Chr 165:129+ Ja 9 '47
Reconversion period; reflections of a forecaster. E. E. Hagen. R Econ Stat 29:95-101 My '47
Sharp reduction in prices and production in sight. E. W. Zelomek. Comm & Fin Chr 164:2750+ N 28 '46
Some comments on the dismal art of forecasting. M. Palyi. Comm & Fin Chr 165: 2193+ Ap 24 '47; Discussion. W. R. Gutman. 165:2481 My 8 '47
Steel sales research men look for corrective period in 1947. T. Campbell. Iron Age 159: 99-100 Ja 30 '47
Stock market as business forecaster. Bsns W p116 Ap 19 '47; Discussion. A. Gaubis. 31 My 3 '47
Today's economic factors confronting management. M. Shields. Comm & Fin Chr 165: 265+ Ja 16 '47
Trillion to go! P. B. B. Andrews. Sales Management 59:37-9 O 15 '47
What's ahead for industry? F. D. Newbury. Ind Marketing 32:33-4+ Je '47
Year's outlook. L. H. Bradshaw. Comm & Fin Chr 165:49+ Ja 2 '47

See also
Budget, Business
Prices—Forecasting
Production and sales, Coordination of
Sales estimates
Stocks—Price forecasting

BUSINESS gifts. See Christmas gifts—Business gifts

BUSINESS history
Fairbanks, Morse receives unusual response to historical book. F. J. Cummings. il Ind Marketing 32:41+ My '47
14 points to observe in preparing company history; analysis of four commemorative books. H. E. Green. Ptr Ink 218:40-1 F 21 '47

BUSINESS information
Those typewritten doomsday reports. W. Weir. Ptr Ink 220:112 Ag 1 '47
Where you can get government market data; with chart. W. P. Burn. Ptr Ink 218:43-6 F 7 '47

See also
Business libraries
Libraries—Business branches

BUSINESS insurance. See Insurance, Business

BUSINESS interruption insurance. See Insurance, Use and occupancy

BUSINESS letters. See Commercial correspondence

BUSINESS libraries
Gair company business library; partial list of books. W. F. Howell. il Paper Ind 29: 72-5 Ap '47

BUSINESS libraries—*Continued*
Organizing a special business library. Management R 36:368-71 Jl '47
Special library for office employees; Prudential insurance company maintains management library; abstract. V. Kent. Management R 35:448-9 N '46

See also
Bank libraries
Libraries—Business branches

BUSINESS liquidation agreements. See Partnership—Business liquidation agreements

BUSINESS literature

See also
Business—Bibliography
Trade journals

BUSINESS machines. See Office appliances; Office equipment industry

BUSINESS management
Academic mind in business. J. D. Miller, jr. bibliog J Bsns 20:146-55 Jl '47
Business planning and statistical analysis. C. F. Roos. Comm & Fin Chr 166:1110+ S 18 '47
Changing channels of distribution. W. Mitchell, jr. il Dun's R 54:17-19+ N '46
Controlling volume for profit. Dom Comm 35: 76-7 F '47
Costs for plans and policies. W. W. Miller. N A C A Bul 29:55-64 S 15 '47
Hanna is as Hanna does. il Fortune 35:90-5+ My '47
Hans Wyman makes big businesses; millionaire Czech refugee's industrial comeback in the new world. il Fortune 35:94-7+ Ap '47
Importance of management; excerpt from General Motors annual report. A. P. Sloan, jr. Comm & Fin Chr 165:1932+ Ap 10 '47
Is your company prepared for rough weather? J. C. Olson. Harvard Bsns R 25 no 4A:595-608 [O] '47
Management assistance for small business. M. L. Mace. Harvard Bsns R 25 no 4A: 587-94 [O] '47
Management; basis of prosperity; America's best-managed companies. Am Bsns 17:10-11+ Ja; 20-2 F; 18+, 19 Je '47
Minimizing tax outgo through business policies in purchase and sale of property. J. K. Lasser. J Account 84:106-12 Ag '47
Nine critical problems facing management. A. E. Dodd. il Dun's R 55:11-12+ Jl '47
Outline for a management audit. J Account 83:255-6, 331-2, 449-50 Mr-My '47
Plan of organization. F. H. Rowland. Advanced Management 11:152-66 D '46
Problems confront chemist or chemical engineer who wants to start manufacturing business. W. von Pechmann. Ind & Eng Chem 38:sup87-8 D '46
Seven points to watch in 1948. R. L. Heilbroner. Am Bsns 17:10-11+ O '47
Small business; it can go places, and without a free ride. A. M. Sullivan. Ptr Ink 221:94+ O 31 '47
Strict check on results at Butler brothers. J. A. Donaldson. Am Bsns 17:8-9+ F '47
Tide is changing. S. Garfield. Adv & Sell 40:34 My '47
Top executive's real job; subordinates should lift the load off top management's shoulders. J. Garth. Am Bsns 17:20-1+ O '47

See also
Accounting
Advertising
Auditing
Banks and banking—Service—Management aids
Branch management
Budget, Business
Business consolidations
Collecting of accounts
Complaints
Corporations
Credit
Credit departments
Diversification in industry
Employment management
Executive ability
Executives
Factory management
Ideas in business
Industrial development corporations
Industrial management
Instalment plan
Inventories
Jobbers
Location in industry
Mail order business
Marketing
Merchandizing
Office management
Order blanks
Organization in industry
Planning
Profit
Public relations
Purchasing
Retail trade—Store management
Sales management
Sales policies
Sales promotion
Trade marks
Turnover
Visitors

Expansion problems
Carrier builds for the future. il Bsns W p52+ O 25 '47
Mr O'Hara's nickel drink; after sixty-three snug years in the South, Dr Pepper company wants national distribution. il Fortune 36:108-11+ O '47
Organization plan for expansion; Johns-Manville reorganizes executive duties. E. Whitmore. Am Bsns 16:10-11+ N '46
Warns against undue expansion. G. M. Pelton. Comm & Fin Chr 165:3355 Je 26 '47

BUSINESS men
Who's who in commerce and industry, the international business who's who. 5th ed 1416p $15.25 A. N. Marquis co, 210 E. Ohio st, Chicago 11 '47
Yesterday, high brass of armed forces, today, high brass of industry. pors Bsns W p20-1 Ap 5 '47

See also
Executives

BUSINESS men's clubs
American businessmen's club at Amsterdam. For Comm W 25:17 D 28 '46

BUSINESS mortality. See Business—Mortality

BUSINESS names
Use imagination when you select a trade name or company name. J. D. Woolf. Ptr Ink 217:85+ N 15 '46

See also
Corporate names

BUSINESS periodicals

See also
Banks and banking—Periodicals
Trade journals

BUSINESS records. See Records

BUSINESS research

See also
Advertising research
Committee for economic development
Market research

BUSINESS risks. See Risk

BUSINESS schools and colleges

Directories
Directory of private business schools in the United States; a handbook for vocational advisors and guidance officers. 36p National council of business schools, 839 Seventeenth st, NW, Washington 6, D.C. '46

BUSINESS statistics
Better tool for business; complete revision of Commerce dept.'s estimates of national income and national product, with statistics for 1929-1946. Bsns W p32+ Jl 26 '47
Business analyst; statistics of money and credit, trade, industry, commodities. Published in bi-weekly numbers of Magazine of Wall street
Business indexes; industrial production; construction contracts, employment, etc; index totals, 1919-1945, monthly Sept. 1943-Nov. 1946. Fed Res Bul 33:71 Ja '47 [cont monthly]
Business population and turn-over; trends in first half of 1947. Survey of Cur Bsns 27: 15-16+ Jl '47
Business turn-over and causes of failure, second quarter of 1946. M. J. Ulmer and A. Nielsen. graphs Survey of Cur Bsns 27:10-16 Ap '47
Financial position of manufacturing and trade in relation to size and profitability, 1946. A. R. Koch and C. H. Schmidt. Fed Res Bul 33:1091-102 S '47
Important monthly indicators. Published in monthly numbers of Dun's statistical review

BUSINESS statistics—*Continued*
Monthly trade reports; a Census business barometer. H. Kailin. Dom Comm 35:8-16 Ja '47
Neglected business index; Department of commerce quarterly report on current and prospective capital expenditures. J. E. Loshar. Comm & Fin Chr 165:50 Ja 2 '47
New business incorporations in the United States; monthly and quarterly record by states. Published in monthly numbers of Dun's statistical review; summary in Dun's review
Postwar business population. M. J. Ulmer. Survey of Cur Bsns 27:9-18+ Ja '47
Postwar financial position of business; with tabulation showing composite balance sheet and income statement, 1944 and 1945, 2,708 manufacturing and trade concerns by broad industries and asset size of business. A. R. Koch and E. J. Stockwell. Fed Res Bul 32:1335-44 D '46
Problems in providing adequate statistics on business profits. S. S. Burr. Am Stat Assn J 42:432-8 S '47
Trend of business; production, prices, trade, finance. Dun's R 55:24-6+ Ja '47 [cont monthly]
See also
Advertising—Statistics.
Business—Mortality
Business forecasting
Index numbers (economics)
Market statistics
Prices—Statistics
Prices, Wholesale—Statistics

BUSINESS streets
Keeping Fifth avenue elite. Bsns W p48 F 8 '47

BUSINESS visitors. See Visitors

BUSINESS women
See also
Woman—Employment

BUTADIENE
Adsorption of butadiene on activated charcoal. H. N. Taylor and C. F. Bonilla. bibliog diag Ind & Eng Chem 39:871-6 Jl '47
Continuous preparation of butadiene-styrene copolymer. J. J. Owen, C. T. Steele and P. T. Parker. Ind & Eng Chem 39:110-13 Ja '47
Copolymerization of vinyl compounds with dienes. T. Alfrey, jr., A. I. Goldberg and W. P. Hohenstein. bibliog Am Chem Soc J 68:2464-7 D '46
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47
Depolymerization of butadiene dimer. T. F. Doumani, R. F. Deering and A. C. McKinnis. diag Ind & Eng Chem 39:89-92 Ja '47
Develop new equipment for handling volatile butadiene gas. il Rubber Age 61:82 Ap '47
Effects of impurities on copolymerization of butadiene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:893-5 Jl '47
Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Fire protection for volatile gases. il Safety Eng 93:21+ Ap '47
Infra-red absorption spectra of some C_4 and C_5 dienes. R. S. Rasmussen and R. R. Brattain. J Chem Phys 15:131-5 Mr '47
Investigations on the stereoisomerism of unsaturated compounds; the catalytic hydrogenation of butadiene. W. G. Young and others. bibliog diags Am Chem Soc J 69: 2046-50 Ag '47
Oxidation of GR-S and other elastomers. J. O. Cole and J. E. Field. bibliog Ind & Eng Chem 39:174-9 F '47
Polymerization; catalytic polymerization of butadiene by phenylsodium and amylpotassium. A. A. Morton and R. L. Letsinger. bibliog Am Chem Soc J 69:172-6 Ja '47
Polymerization; the alfin catalysts. A. A. Morton, E. E. Magat and R. L. Letsinger. Am Chem Soc J 69:950-61 Ap '47
Properties of polymers as functions of conversion; intrinsic viscosities. F. T. Wall and others. bibliog Am Chem Soc J 69:904-7 Ap '47
Research leading to commercial butadiene synthetic rubber; Charles Goodyear memorial lecture. W. L. Semon. bibliog(59 ref) il Chem & Eng N 24:2900-5 N 10 '46; Same. bibliog(36 ref) India Rubber World 115:364-9+ D '46
Safe handling of butadiene; illustrations with text. Chem & Eng N 25:438 F 17 '47
Study of the structure of butadiene polymers by means of ozonolysis. N. Rabjohn and others. bibliog Am Chem Soc J 69:314-19 F '47
Use of fatty acids and their soaps in the manufacture of butadiene synthetic rubber. W. L. Semon. bibliog India Rubber World 116:63-5+ Ap '47

Analysis
Continuous recording ultraviolet spectrophotometer; application to butadiene analysis. E. J. Rosenbaum and L. Stanton. il diags Anal Chem 19:794-8 O '47

Manufacture
Babcock & Wilcox reports on use of butadiene equipment. Rubber Age 60:341 D '46
Butadiene process; Standard oil development company. flow diag Pet Refiner (Process Handbook sec) 26:110-11 Ap '47
Corrosion resistance of 27% chrome alloy recorded high in plant service tests. H. D. Newell. bibliog il Pet Processing 2:116-17+ F '47
Extractive distillation-separation by C_4 hydrocarbons using furfural. J. Happel and others. il Am Inst Chem Eng Trans 42: 1001-7 O-D '46
Furfural extractive distillation for separation and purification of C_4 hydrocarbons. C. K. Buell and R. G. Boatright. bibliog il diags Ind & Eng Chem 39:695-705 Je '47
Inhibition of polymerization; laboratory and plant control of popcorn polymer growth. M. S. Kharâsch and others. bibliog il diags Ind & Eng Chem 39:830-7 Jl '47
Initiation and growth of butadiene resinous polymers. L. M. Welch and others. bibliog il Ind & Eng Chem 39:826-9 Jl '47
New method for testing catalysts. J. A. Hinckley, jr. and H. R. Sheppard, jr. il diags Anal Chem 19:771-3 O '47
Pilot plant production of diacetate 2,3-butylene glycol. H. W. Grubb. bibliog flow diag il diags Chem Eng Prog 43:437-48 Ag '47
Production of butadiene from alcohol. W. J. Toussaint, J. T. Dunn and D. R. Jackson. il Ind & Eng Chem 39:120-5 F '47
Separation of butadiene by azeotropic distillation with ammonia. N. Poffenberger and others. bibliog flow sheets Am Inst Chem Eng Trans 42:815-26 O-D '46
Some practical applications of flue gas recirculation; installation at Neches butane products company. W. H. Rowand and E. Durham. diags Pet Refiner 26:99-102 Ja '47
System for rapid evaluation of catalysts for production of butadiene from ethanol. M. H. Whitlock, G. J. Haddad and E. E. Stahly. flow diag il diags Anal Chem 19: 767-70 O '47

BUTADIENE oxide
Malonic ester synthesis with styrene oxide and with butadiene oxide. R. R. Russell and C. A. VanderWerf. bibliog Am Chem Soc J 69:11-13 Ja '47

BUTADIENE sulfone
Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46

BUTANE
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Butane and propane as tractor fuels; abstract. E. A. Jamison and J. R. Strother. Automotive Ind 97:34-5 O 15 '47
Butane isomerization process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:112-13 Ap '47

BUTANE—*Continued*
Butane isomerization; U.O.P. process. J. A. Chenicek and others. flow diag Chem Eng Prog 43:210-18 My '47
Butane-powered trucks in production at International's California plant. H. Ridder. Nat Pet N 39:41 Ja 22 '47
Isomerization of alkanes; deuterium exchange in the isomerization of *n*-butane. H. Pines and R. C. Wackher. bibliog diag Am Chem Soc J 68:2518-21 D '46
Isomerization of light hydrocarbons. S. F. Perry. flow plans Am Inst Chem Eng Trans 42:639-46 Ag '46; Same. Pet Eng (Ref annual) 18:185-8 Jl 1 '47
Mechanism of catalytic cracking. R. C. Hansford. bibliog diag Ind & Eng Chem 39: 849-52 Jl '47
Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W. N. Lacey. bibliog diag Ind & Eng Chem 39:77-82 Ja '47
Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H. H. Reamer and others. Ind & Eng Chem 39:206-9 F '47
Propane and butane explosions cause heavy toll of life and property. Locomotive 46: 132+ Ja '47
Shell butane isomerization process. flow diag Oil & Gas J 45:169 Mr 22 '47
Shell butane isomerization process. flow diag Pet Refiner (Process Handbook sec) 26:244-5 Ap '47
Shell liquid-phase isomerization process. flow diag Pet Refiner (Process Handbook sec) 26:248-9 Ap '47
Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47
Thermodynamic properties of saturated propylene, propane, isobutane, isobutylene and normal butane. G. H. Hanson. bibliog Am Inst Chem Eng Trans 42:959-73 O-D '46
Thiophene; new industrial chemical from butane and sulfur. H. E. Rasmussen and F. E. Ray. flow diag il Chem Ind 60:593-5+ Ap '47
Universal dehydrogenation. flow diag Oil & Gas J 45:179 Mr 22 '47

BUTANEDIOL. See Butylene glycol

BUTANONE
Application of methyl ethyl ketone to the analysis of developers for Elon and hydroquinone. V. C. Shaner and M. R. Sparks. bibliog Soc Motion Picture Eng J 47:409-17 N '46
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47
Production of waxes from California crudes. R. A. David and P. M. Huemmer. flow sheet il Chem Eng Prog 43:174-6 Ap '47

BUTCHERS' supplies industries

Advertising
Direct-mail campaign gets national dealerships; Regal manufacturing co., South Gate, Calif. J. H. Zebrowski. Ptr Ink 217: 68+ N 15 '46

BUTENE
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Heat capacities of gaseous oxygen, isobutane, and 1-butene from —30° to +90° C. P. F. Wacker and others. bibliog diags J Res Nat Bur Stand 38:651-9 Je '47
Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene. R. S. Rasmussen and R. R. Brattain. bibliog J Chem Phys 15:120-30 Mr '47
Ionization and dissociation of *cis*- and *trans*-2-butene by electron impact. V. H. Dibeler. bibliog diag J Res Nat Bur Stand 38:329-36 Mr '47
Normal coordinate analysis of the vibrational frequencies of ethylene, propylene, *cis*-2-butene, *trans*-2-butene, and isobutene. J. E. Kilpatrick and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:191-209 F '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47
Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47

BUTLER, Albert N. 1889-1947
Sketch. por East Underw 48:20 Je 6 '47

BUTLER, Ralph Starr, 1882-
Gold medal award to R. S. Butler. S. Peabody. por Adv & Sell 40:6-7 Mr '47

BUTLER brothers
Strict check on results at Butler brothers. J. A. Donaldson. Am Bsns 17:8-9+ F '47
23,000 items; Butler bros., quality branding and coordinated packaging program. H. C. Isaacs. il Mod Packaging 20:103-7+ Ja '47

BUTLIN, William Edmund
Britain's Billy Butlin with his 'oliday camps. por Fortune 35:126-33+ Mr '47

BUTOXYAMINOPYRIDINE
Tuberculostatic compounds; N^5-derivatives of 2-butoxy-5-aminopyridine. H. L. Friedman and others. bibliog Am Chem Soc J 69: 1795-6 Jl '47

BUTOXYAMINOPYRIMIDINE
Tuberculostatic compounds; alkoxy-aminopyrimidines. L. D. Braitberg and others. Am Chem Soc J 69:2005-6 Ag '47

BUTTER
Biological stability of cheese and butter. A. T. R. Mattick. Chem & Ind p421-3 Jl 12 '47
Butter concentrate; groups of four related patents. Food Ind 18:1962+ D '46
Butter probe. Bsns W p60 Ja 11 '47
Innovations in butter; heat-sealed wraps and further streamlining of packaging operations. il Mod Packaging 20:136-8 Jl '47
Laminated foil butter wrap. J. V. Ziemba. il Food Ind 19:456-7 Ap '47
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47

Manufacture
Continuous butter production; a comparison of methods. F. H. McDowall. il diags Food Ind 19:909-12+ Jl '47
Recent developments in continuous butter making. A. V. Gemmill. flow diags Food Ind 18:1872-3+ D '46

Prices
Butter disposal set. Bsns W p59 Ja 25 '47
Butter to be even higher. Barron's 27:36-7 S 22 '47
Fearing further price declines, butter trade keeps stocks low. J. A. McWethy. Barron's 27:7 Ja 20 '47

BUTTER, Dried
High melting butter. il Food Ind 19:626-7 My '47

BUTTER substitute. See Oleomargarine

BUTTONS
Manufacture
Button, button; Diesel plant for button factory of Peter Emr & sons pearl button and novelty co. il Diesel Power 25:43+ Jl '47

BUTTONS, Plastic
Two-color thermosetting moldings. il Mod Plastics 25:148 O '47

BUTYL acenaphthene
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47

BUTYL acrylate
Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag '47

BUTYL alcohol
Alkoxyl content of urea formaldehyde resin films. B. M. Shaw. diags Soc Chem Ind J 66:147-9 My '47; Abstract. Paint Oil & Chem R 110:60+ O 16 '47
Determination of sodium and potassium in silicates. S. Kallmann. bibliog Ind & Eng Chem Anal ed 18:678-80 N '46

BUTYL alcohol—*Continued*
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 66:48-50 F '47
Ionization constants of some weak acids in aqueous tertiary butyl alcohol. W. H. Fletcher. bibliog Am Chem Soc J 68:2726-8 D '46
Study of the reaction of alcohols with thionyl chloride. W. E. Bissinger and F. E. Kung. bibliog Am Chem Soc J 69:2158-63 S '47

Analysis
Test for *tert*-butyl and isopropyl alcohols with Denigès' reagent. R. F. Robey and N. C. Robertson. bibliog Anal Chem 19: 310-11 My '47

BUTYL benzene
No-bond resonance; competitive bromination of toluene and *t*-butylbenzene. E. Berliner and F. J. Bondhus. bibliog Am Chem Soc J 68:2355-8 N '46
Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47
Some *s*-butyl- and 1,4-di-*s*-butylbenzene derivatives. D. I. Legge. Am Chem Soc J 69:2238-9 S '47

BUTYL chloral. See Trichlorobutyraldehyde

BUTYL chloride
Addition of hydrogen chloride to isobutylene. F. R. Mayo and J. J. Katz. bibliog diags Am Chem Soc J 69:1339-48 Je '47
Aluminum chloride-catalyzed addition of *t*-butyl chloride to propylene. V. A. Miller. bibliog Am Chem Soc J 69:1764-8 Jl '47
Condensation of saturated halides with unsaturated compounds; condensation of *t*-butyl chloride with cyclohexene. L. Schmerling. bibliog Am Chem Soc J 69: 1121-5 My '47
Methylcyclopropane; infrared absorption spectrum and synthesis from *i*-butyl chloride. F. E. Condon and D. E. Smith. Am Chem Soc J 69:965-6 Ap '47

BUTYL lithium. See Lithium compounds

BUTYL methyl ketone
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47

BUTYL stearate
Effect of humidity on properties of plasticized ethylcellulose. W. P. Moeller and N. Taylor. bibliog Ind & Eng Chem 39:1149-52 S '47

BUTYL tolyl ether
Physical properties supporting the phenolic nature of a certain hindered phenol; a synthesis of *t*-butyl *p*-tolyl ether. J. B. McKinley. bibliog Am Chem Soc J 69: 1624-6 Jl '47

BUTYL trichlorosilicane
Preparation and fluorination of *n*-butyl trichlorosilane. H. S. Booth and A. A. Schwartz. bibliog Am Chem Soc J 68:2662-5 D '46

BUTYLENE
Certified iso-octane by the car load. O. Gerbes and others. flow diag il Pet Processing 2: 734-6 O '47

BUTYLENE glycol
Cuprammonium-2,3-butanediol complexes. R. E. Reeves. Am Chem Soc J 69:1836 Jl '47
Fermentation industry during World war II. C. S. Boruff and J. M. Van Lanen. bibliog Ind & Eng Chem 39:934-7 Ag '47
Pilot plant production of diacetate 2,3-butylene glycol. H. W. Grubb. bibliog flow diag il diags Chem Eng Prog 43:437-48 Ag '47
Production of 2 : 3-butylene glycol by fermentation of molasses. G. G. Freeman and R. I. Morrison. bibliog Soc Chem Ind J 66: 216-21 Jl '47

BUTYNEDIOL
2-Butyne-1 : 4-diol; reactions involving the triple bond. A. W. Johnson. Chem Soc J p 1014-17 N '46
2-Butyne-1 : 4-diol; reactions of the hydroxyl groups. A. W. Johnson. Chem Soc J p 1009-14 N '46

BUTYRALDEHYDE
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47
2,3-Dimethylbutanal and 2-ethyl-3-methylbutanal. R. A. Barnes and W. M. Budde. bibliog Am Chem Soc J 68:2339-41 N '46

BUTYRIC acid
Heats of dilution of aqueous solutions of four amino butyric acids at 25°. L. S. Mason and A. L. Robinson. bibliog Am Chem Soc J 69:889-93 Ap '47
Rate of corrosion of lead by hydrocarbon solutions of organic acids. D. Turnbull and D. R. Frey. bibliog diags J Phys & Colloid Chem 51:681-704 My '47

BUTYROLACTONE
See also
Methylene butyrolactone

BUY-at-home campaigns
Urge local buying, Seneca Falls shop-at-home campaign. il Bsns W p68 Jl 19 '47

BUYING. See Purchasing

BUYING habits
Factors determining retail shopping preferences; with data on Clinton, Hoopeston and Taylorville, Illinois. P. D. Converse. il Dun's R 55:21-3+ Ag '47
Family panel; a technique for diagnosing sales ills. D. D. Patterson and A. J. McAnally. Sales Management 59:134-6 O 1 '47
Impulse buying re-surveyed. H. D. Chickering. il Mod Packaging 20:126-9+ Ja '47
New applications for market research; measuring strength of the buying urge. W. Alderson. Sales Management 58:99 Mr 1 '47
Shortages are major influence in present grocery purchasing habits. A. R. Hahn. Sales Management 58:42-6 Ja 15 '47
Survey checks buying habits in 45 markets; Illinois daily newspaper markets analysis. Sales Management 58:93 My 1 '47
34,000 students report on spending habits. D. Layman. Adv & Sell 40:52+ Ja '47
What will be the fate of war-born grocery items? J. A. H. Rehm. il Adv & Sell 40: 36-7 Je '47

BUYING offices. See Purchasing companies

BUYING power. See Consumption (economics)

BY-products. See Coke manufacture—By-products; Farm produce—By-products; Gas manufacture—By-products; Paper making—By-products

BYRD, Richard Evelyn, 1888-
Claimed by cloth. por Bsns W p79 Jl 12 '47

BYRNES, James Francis, 1879-
Resignation of Secretary Byrnes; General Marshall to succeed him in State department. por Comm & Fin Chr 165:183 Ja 9 '47

BYSSINOSIS. See Lungs—Dust diseases

BYSSOCHLAMYS
Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47

C

C.I.O. See Congress of industrial organizations

C.M.C. See Carboxymethyl cellulose

CABBAGE
Cabbage as a source of ascorbic acid in human diet. M. Olliver. bibliog Chem & Ind p235-40 My 3 '47

CABBAGE, Dried
Browning of dehydrated vegetables during storage. R. R. Legault and others. bibliog Ind & Eng Chem 39:1294-9 O '47
Commercially dehydrated vegetables; oxidative enzymes and other factors. M. F. Mallette and others. bibliog Ind & Eng Chem 39:1345-8 O '47

CABBAGE, Dried—*Continued*
Comprehensive survey of the ascorbic acid content of dehydrated cabbage prepared in the factories operating in the United Kingdom in the season 1945. W. Price-Davies. bibliog Soc Chem Ind J 66:29-31 Ja '47

Drying of vegetables; loss of ascorbic acid in drying cabbage and potato in large-scale factory plants. R. J. L. Allen and L. W. Mapson. Soc Chem Ind J 66:166-8 My '47

CABBAGE palm
Saw palmetto, a new raw material; cabbage palm. G. Anderson. il Manuf Rec 115:40-1+ D '46

CABINET (United States). See United States—Cabinet

CABINET work
Better detail plate; kitchen and dinette cabinetwork. R. J. Alexander. plans diags Am Bld 69:144-5 F '47

CABINETS, Frozen food. See Food, Frozen—Cabinets

CABINETS, Kitchen. See Kitchen cabinets

CABINETS, Radio. See Radio cabinets

CABINS
See also
Log cabins

CABLE and wireless (holding) limited
Statement by the chairman. E. Wilshaw. Economist 153:41 Jl 5 '47

CABLE laying machines
Triple-duty plowtrain lays cable. il Elec World 128:94 Ag 16 '47

CABLE stations. See Telegraph, Submarine—Stations

CABLES
Nickel-manganese-chromium steel wire for aircraft control cables. H. C. Boynton. il Materials & Methods 25:91-3 Ap '47

Physical properties of steel control cable with nearly same expansion rate as aluminum alloy. C. W. Meyers. Automotive & Aviation Ind 95:44-5+ D 15 '46

Welding small cables for conveyors. H. W. Young. il Mech Handling 34:206+ Ap '47
See also
Cableways
Electric cables
Telephone cables

Testing
Thermal expansion of cables. H. C. Boynton and H. J. Godfrey. bibliog Aero Digest 53:92+ N '46

CABLES, Electric. See Electric cables

CABLEWAYS
World's longest aerial ropeway; transporting ores from Boliden mine. il Mech Handling 34:549+ O '47 (to be cont)

CABOOSE cars. See Cars, Caboose

CACAO
Bahia's 1946-47 crop, sales, and prices, Brazil. For Comm W 27:29 Ap 12 '47

Production of and trade in cacao and products, Cuba. For Comm W 29:19-20 O 18 '47

Rehabilitation of cacao industry, Gold Coast. For Comm W 28:23 Ag 16 '47

CACODYL
Continuous method for the preparation of Cadet's liquid. R. C. Fuson and W. Shive. diag Am Chem Soc J 69:559-60 Mr '47

CACODYL chloride
Preparation of cacodyl chloride. B. Witten. bibliog Am Chem Soc J 69:1229-30 My '47

CACOTHELINE
Application of cacotheline in volumetric analysis; abstract. M. L. Kuchment and A. I. Gengrinovich. Am Water Works Assn J 39:597-8 Je '47

CADALENE
Stobbe condensation with methyl *p*-tolyl ketone; a synthesis of cadalene. W. S. Johnson and A. R. Jones. bibliog Am Chem Soc J 69:792-4 Ap '47

CADET'S liquid. See Cacodyl

CADMIUM
Bent crystal neutron spectrometer and its application to neutron cross-section measurements. R. B. Sawyer and others. bibliog diags Phys R 72:109-15 Jl 15 '47

Cadmium, 1946. T. P. Wootton. Eng & Min J 148:80 F '47

Chemically generated film aids in corrosion control; Iridite. il Steel 120:101-2+ Je 2 '47

Diffraction of neutrons by a single crystal. W. H. Zinn. bibliog il diag Phys R 71:752-7 Je 1 '47

Kinetics of dissolution of cadmium in hydrochloric acid. J. F. Zimmerman and H. J. McDonald. bibliog diags J Phys & Colloid Chem 51:857-68 My '47

Method for measuring neutron-absorption cross sections by the effect on the reactivity of a chain-reacting pile. H. L. Anderson and others. Phys R 72:16-23 Jl 1 '47

Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47

Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others. bibliog diag Phys R 71:65-79 Ja 15 '47

Analysis
Determination of cadmium oxide suspended in air. H. A. Bewick, A. J. Cruickshank and F. E. Beamish. Anal Chem 19:269-70 Ap '47

Forty-three day $_{48}Cd^{115}$. L. Seren and others. diags Phys R 71:409-12 Ap 1 '47

Mixed color method for the determination of cadmium in air and biological samples by the use of dithizone. F. W. Church. bibliog J Ind Hygiene 29:34-40 Ja '47

Isotopes
Forty-three day $_{48}Cd^{115}$. L. Seren and others. diags Phys R 71:409-12 Ap 1 '47

Isotopic assignment of Cd and Ag activities. A. C. Helmholz. bibliog Phys R 70:982-3 D 1 '46

Isotopic changes in cadmium by neutron absorption. A. J. Dempster. il Phys R 71: 829 Je 1 '47

Recoil of silver nuclei due to *K*-capture in cadmium. B. T. Wright. bibliog diag Phys R 71:839-41 Je 15 '47

Physiological effect
Effects and treatment of inhalation of cadmium chloride aerosols in the dog. H. E. Harrison and others. bibliog il J Ind Hygiene 29:302-14 S '47

Studies on the toxicity of inhaled cadmium; pathology of cadmium smoke poisoning in man and in experimental animals. J. C. Paterson. bibliog il J Ind Hygiene 29:294-301 S '47

CADMIUM borate
Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47

CADMIUM chloride
Effects and treatment of inhalation of cadmium chloride aerosols in the dog. H. E. Harrison and others. bibliog il J Ind Hygiene 29:302-14 S '47

Studies on the toxicity of inhaled cadmium; pathology of cadmium smoke poisoning in man and in experimental animals. J. C. Paterson. bibliog il J Ind Hygiene 29:294-301 S '47

CADMIUM compounds
Use of organocadmium reagents for the preparation of ketones. J. Cason. bibliog(48 ref) Chem R 40:15-32 F '47

CADMIUM oxide
Studies on the toxicity of inhaled cadmium; pathology of cadmium smoke poisoning in man and in experimental animals. J. C. Paterson. bibliog il J Ind Hygiene 29:294-301 S '47

Studies on the toxicity of inhaled cadmium; the acute lethal dose of cadmium oxide for man. H. M. Barrett and B. Y. Card. plan J Ind Hygiene 29:286-93 S '47

CADMIUM oxide—*Continued*
Studies on the toxicity of inhaled cadmium; the acute toxicity of cadmium oxide by inhalation; lethal dose for animals. H. M. Barrett and others. bibliog J Ind Hygiene 29:279-85 S '47

Analysis

Determination of cadmium oxide suspended in air. H. A. Bewick, A. J. Cruickshank and F. E. Beamish. Anal Chem 19:269-70 Ap '47

CADMIUM oxide dust
Microscopic detection of cadmium oxide particles in lung tissue. R. E. Thiers and others. il J Ind Hygiene 29:129-33 Mr '47

CADMIUM plating
Passivating treatment improves cadmium plate coatings; abstract. E. E. Halls. Materials & Methods 25:131 Mr '47

CADMIUM poisoning
Effects and treatment of inhalation of cadmium chloride aerosols in the dog. H. E. Harrison and others. bibliog il J Ind Hygiene 29:302-14 S '47

Poisoning of firemen by irritant fumes; cadmium and sulphonated castor oil; abstract. D. O. Shiels and I. Robertson. J Ind Hygiene 29:sup99-100 S '47

Possibility of chronic cadmium poisoning. H. L. Hardy and J. B. Skinner. bibliog J Ind Hygiene 29:321-4 S '47

Studies on the toxicity of inhaled cadmium. H. M. Barrett and others. bibliog il plan J Ind Hygiene 29:279-301 S '47

Study of industrial exposures to cadmium. F. Princi. bibliog il J Ind Hygiene 29:315-20 S '47

Toxicity of chemicals in electroplating; cadmium and its salts. P. M. Van Arsdell. Metal Finishing 45:59-60 Ag '47

CADMIUM selenide
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47

CADMIUM sulfide
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47

CADMIUM telluride
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47

CADY, William Hamlin, 1877-
Olney medal award. por Am Dyestuff Rep 36:86-90 F 24 '47

CAFETERIAS, Employees'. See Lunchrooms and cafeterias, Employees'

CAFFEIN
Synthetic caffeine. C. C. Scott and others. bibliog Science 105:176 F 14 '47

CAFFREY, James J.
Will he love us in May as he does in December? J. Dutton. Comm & Fin Chr 164:3011+ D 12 '46

CAGES
Improved cage designs for use in handling monkeys. H. F. Brubach. diags Science 106:18-19 Jl 4 '47

CAGES, Mine. See Mine cages

CAISSONS
Floating caisson for dry dock at Le Havre. il maps diags Engineering 163:544-5, 548 Je 27 '47; Engineer 183:457 My 23 '47

Floating caissons form pier foundations for Anacostia River bridge. K. C. Cox. il Civil Eng 16:532-5 D '46

Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

Practical lessons in caisson sinking from the Baton Rouge bridge. E. S. Blaine. diags Eng N 138:213-15 F 6 '47

Prefabricated caisson foundations for submarine oil wells under Lake Maracaibo. E. J. Cleary. il diag Eng N 137:859-67 D 26 '46

CAKE
Baking under the microscope. S. H. Carleton. il Sci Am 177:216-18 N '47

Baking with sweet potato flour; cakes have improved flavor and texture when sweet potato flour is used to replace part of eggs, butter and sugar. L. M. Ware and others. il Food Ind 19:1365+ O '47

Correction of baking complaints; A.G.A. laboratories' testing program. J. Huck. il Am Gas Assn Mo 29:219-21 My '47

New emulsifiers for foods. N. F. Johnston and H. H. Favor. il Food Ind 19:1196-7 S '47

CAKE, Frozen
How storage affects frozen cakes and batters. L. S. Graul and B. Lowe. il Food Ind 19:330-2 Mr '47

CAKE mixes
Painless baking. Bsns W p56+ O 18 '47

CALCIFICATION
Calcifications in the spleen; occurrence in histoplasmin and tuberculin reactors. R. H. High. bibliog Pub Health Rep 61:1782-6, pl 1 D 6 '46

Variation with age in the frequency of tuberculous pulmonary calcification. R. H. High and H. B. Zwerling. bibliog Pub Health Rep 61:1769-82 D 6 '46

CALCITE
Finding and mining optical calcite crystals. C. R. King. Eng & Min J 148:94-6 Je '47

Sensitized luminescence of manganese-activated calcite. J. H. Schulman and others. bibliog il J Ap Phys 18:732-9 Ag '47

CALCIUM

Analysis

Determination of calcium by potentiometric titration. N. Uri. Anal Chem 19:192-3 Mr '47

Determination of calcium in magnesite and fused magnesia. W. M. Hazel and W. K. Eglof. bibliog Ind & Eng Chem Anal ed 18: 759-60 D '46

Rapid determination of the calcium content of lead-calcium alloys by titrating in the molten state with metallic antimony. G. M. Bouton and G. S. Phipps. il Electrochem Soc Trans 92 (preprint 13):159-65 '47; Abstract. Steel 121:110 N 17 '47

Rapid digestion method for determination of calcium. O. E. Stamberg and D. W. Bolin. Anal Chem 19:695-6 S '47

Isotopes

Existence of a calcium isotope with an 8.5 day period. R. Overstreet and L. Jacobson. Phys R 72:349 Ag 15 '47

CALCIUM acetate
Investigation of the properties of cellulose oxidized by nitrogen dioxide; reaction of the carboxyl groups of polyuronides with calcium acetate. P. A. McGee, W. F. Fowler, jr. and W. O. Kenyon. bibliog Am Chem Soc J 69:347-9 F '47

CALCIUM alloys
Corrosion and growth of lead-calcium alloy storage battery grids as a function of calcium content. U. B. Thomas and others. bibliog il Electrochem Soc Trans 92 (preprint 12):145-57 O '47

CALCIUM ascorbate
Crystalline dihydrate of calcium ascorbate. S. L. Ruskin and A. T. Merrill. Science 105:504-5 My 9 '47

CALCIUM borate
Heats of formation of $3CaO \cdot B_2O_3$, $2CaO \cdot B_2O_3$, $CaO \cdot B_2O_3$ and $CaO \cdot 2B_2O_3$. D. R. Torgeson and C. H. Shomate. bibliog Am Chem Soc J 69:2103-5 S '47

CALCIUM bromide
Osmotic and activity coefficients of lithium bromide and calcium bromide solutions. R. A. Robinson and H. J. McCoach. Am Chem Soc J 69:2244 S '47

CALCIUM carbide
Apparatus for determining the reactivity of calcium carbide and acetylene-water vapor mixtures. G. W. Jones and others. 14 pls U S Bur Mines Rep of Invest 4067:1-15 '47

Quick moisture determination; calcium carbide, heated with finely grated cheese, gives off acetylene. E. R. Shemin and J. W. Wagner. Food Ind 19:1230+ S '47

Reduction of magnesium chloride by calcium carbide. L. R. Michels and others. U S Bur Mines Rep of Invest 4059:1-8 '47

CALCIUM carbonate
Calcium carbonate extender pigments; abstract. L. H. Cohan and H. W. Siesholtz. Chem Eng 54:288+ My '47
Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61:232-4 Ag '47
Influence of calcium carbonate on settling characteristics of silica dust. M. W. First and L. Silverman. bibliog J Ind Hygiene 29:259-64 Jl '47

Analysis
Study concerning characteristics of the high-voltage a.c. arc. E. A. Boettner and C. F. Tufts. bibliog il diags Opt Soc Am J 37: 192-8 Mr '47

Manufacture
Precipitated calcium carbonate; limestone becomes a fine chemical; Wyandotte plant. R. L. Taylor. il diag Chem Ind 60:954-7 Je '47

CALCIUM cerium phosphate
Causes of early loss of light output of fluorescent lamps. G. Meister and R. Nagy. bibliog il Opt Soc Am J 36:696-701 D '46
New ultraviolet phosphors. H. C. Froelich. bibliog il Electrochem Soc Trans 91 (preprint 11):161-81 '47

CALCIUM chloride
Acrylics improve performance of industrial salter unit; calcium chloride dispenser. il Mod Plastics 24:114-15 My '47
Calcium chloride as a compaction aid in gravel base construction. J. A. Knight. Roads & Bridges 85:90-3+ O '47
Concrete block makers report on advantages of calcium chloride. Concrete 54:28-9 N '46
Equilibria in saturated salt solutions; ternary systems $CaCl_2$-$MgCl_2$-H_2O, $CaCl_2$-KCl-H_2O and $MgCl_2$-KCl-H_2O at 75°. W. J. Lightfoot and C. F. Prutton. Am Chem Soc J 69: 2098-100 S '47
Granular stabilization; American road builders association report by Soils calcium chloride granular stabilization committee. il Roads & Bridges 85:53+ Jl '47
Some e.m.f. and conductance measurements in concentrated solutions of zinc and calcium chlorides. R. A. Robinson and R. O. Farrelly. bibliog J Phys & Colloid Chem 51:704-8 My '47

Physiological effect
Calcium necrosis of the skin; abstract. A. G. Heppleston. J Ind Hygiene 29:sup92 S '47

CALCIUM cyanamide
Cyanamide and melamine; the French process. Chem Age (Lond) 57:507 O 11 '47
Production of calcium cyanamide, Italy. For Comm W 27:19 My 24 '47

CALCIUM fluoride
Comparison of LiF and CaF_2 prisms for infrared use. R. C. Gore and others. Opt Soc Am J 37:23-8 Ja '47
Resonance absorption by nuclear magnetic moments in a single crystal of CaF_2. E. M. Purcell and others. Phys R 70:988 D 1 '46

CALCIUM hydride
Alkali and alkaline earth hydrides; survey of their manufacture and uses. Chem Age (Lond) 55:675-7 N 30 '46
Large scale production of metal hydrides; and their uses in chemical and metallurgical operations. H. W. Zabel. bibliog il Chem Ind 60:37-9 Ja '47
Metals plus hydrogen. H. C. E. Johnson. il Sci Am 176:116-18 Mr '47

CALCIUM hydroxide
Solubility of $Ca(OH)_2$ and $CaSO_4 \cdot 2H_2O$ in dilute alkali solutions; application to portland cement pastes. W. C. Hansen and E. E. Pressler. bibliog Ind & Eng Chem 39:1280-2 O '47

CALCIUM hypochlorite
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 129 N '46
Wool scouring wastes treated by new chemical process. H. S. Faber and P. F. Howard. flow diag il Water & Sewage Works 93: 467-73 D '46

CALCIUM in the body
Calcium and growth in aging and cancer. A. I. Lansing. bibliog Science 106:187-8 Ag 29 '47

See also
Calcification

CALCIUM phosphates
La fabrication d'un phosphate assimilable sans emploi d'acide sulfurique. E. Lemaire. diags Génie Civil 124:195-7 My 15 '47
Fused tricalcium phosphate; production by defluorination of rock phosphate in a shaft furnace. T. P. Hignett and T. N. Hubbuch. bibliog il plan diags Ind & Eng Chem 38:1208-16 D '46
New ultraviolet phosphors. H. C. Froelich. bibliog il Electrochem Soc Trans 91 (preprint 11):161-81 '47
Penetration of air-borne particulates through the human nose. H. D. Landahl and S. Black. bibliog flow diag J Ind Hygiene 29: 269-77 Jl '47

CALCIUM silicates
System CaO-SiO_2-H_2O and the hydration of the calcium silicates. H. H. Steinour. Chem R 40:391-460 bibliog(191 ref, p455-60) Je '47

CALCIUM stearate
Le graissage des surfaces métalliques par un mélange d'acide stéarique et de stéarate de calcium. Gregory and Spink. Génie Civil 124:378-9 O 1 '47

CALCIUM sulfate
Agar-agar as a coagulant for calcium sulphate. E. M. Losee. Can Chem & Process Ind 30:90 N '46
Étude de l'action du sulfate de calcium sur la prise des ciments. L. Chassevent and P. Stiglitz. bibliog Chimie & Ind 57:535-9 Je '47

See also
Anhydrite

CALCIUM tungstate
Causes of early loss of light output of fluorescent lamps. G. Meister and R. Nagy. bibliog il Opt Soc Am J 36:696-701 D '46
Physical properties of calcium tungstate X-ray screens. J. W. Coltman and others. diags J Ap Phys 18:530-44 Je '47

CALCULATING devices
Calculators for balancing problems; reference book sheet. R. Hartmann. Am Mach 91:163, 165, 167 Jl 17 '47
Compound-angle calculator. il diags Mach 53: 176-7 F '47
Computer for principal stresses. R. G. Manley. diag Engineering 164:340-1 O 10 '47
General purpose calculator. W. F. Martin. diags Pet Eng 18:131-2 N '46
Microwave impedance-plotting device. W. Altar and J. W. Coltman. il diags Inst Radio Eng Proc 35:734-7 Jl '47
Practical calculator for directional antenna systems. H. A. Ray, jr. il diags Inst Radio Eng Proc 34:898-902 N '46

See also
Slide rule

CALCULATING machines
Analysis of problems in dynamics by electronic circuits. J. R. Ragazzini and others. bibliog il diags Inst Radio Eng Proc 35: 444-52 My '47
Atom-taming equations turn to peace tasks; ENIAC, miracle electronic calculator. A. Lion. Barron's 27:21 Ja 6 '47
British automatic computing engine. Engineering 162:471 N 15 '46
Burroughs announces new calculator line. J Account 83:255 Mr '47
Calculating machine furnishes shortcut method of computing coordinates of the point of intersection of two lines. H. G. Weissenstein. Civil Eng 17:545 S '47; Discussion. R. E. Burnett. 17:50 D '47
Calculations and electronics; automatic computator designed by National physical laboratory. L. J. Comrie. Electrician 137: 1279-80 N 8 '46
Design of mercury delay lines for radar, computers, and memory devices. T. K. Sharpless. il diags Electronics 20:134-6+ N '47
Electric analog computer of the new analysis laboratory, California Institute of technology. Science 105:543 My 23 '47

CALCULATING machines—*Continued*
Electrical computor solves wing flutter problems. il Aviation 45:111 D '46
Electronic computing circuits of the ENIAC (electronic numerical integrator and computer). A. W. Burks. bibliog diags Inst Radio Eng Proc 35:756-67 Ag '47
Electronics and the future. E. U. Condon. il Elec Eng 66:355-6 Ap '47
Frigidaire ouija board shows dealers how to pay salesmen. E. Gilbert. il Sales Management 58:37-9 Je 1 '47
Future role of rapid computing in meteorology; abstract. J. von Neumann. Aeronautical Eng R 6:30 Ap '47
High-speed computers; abstracts of papers at winter meeting, A.I.E.E. il Electronics 20:194+ Ap '47
High speed electronic digital computers. Franklin Inst J 243:323-6 Ap '47; Same. R Sci Instr 18:384-6 My '47; Same cond. Heat & Ven 44:118+ Ag '47; Excerpt. Mech Eng 69:413-14 My '47
Large-scale computer developments discussed; winter meeting, AIEE. Elec Eng 66:289-90 Mr '47
Mark II calculator. R Sci Instr 18:202 Mr '47
Mechanical brains; electronic machinery and potential insurance uses. E. C. Berkeley. Nat Underw (Life ed) 51:2 My 16 '47
Mercury memory tanks in new EDVAC computer. diag Electronics 20:168+ My '47
Recent developments in calculating machines. D. R. Hartree. Engineer 183:292 Ap 4 '47
Science creates a brain; the Ace. il For Comm W 26:10 Ja 11 '47
Tube failures in ENIAC. F. R. Michael. il diags Electronics 20:116-19 O '47
Two calculating machines for X-ray crystal structure analysis. A. D. Booth. il diag J Ap Phys 18:664-6 Jl '47
Use of punched cards in molecular structure determinations; crystal structure calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:648-58 N '46
Value of super-calculators. R. R. Seeber, jr. Nat Underw (Life ed) 51:6 Ap 4 '47
Whiz at figures; machines practical for insurance companies. Bsns W p20 My 17 '47

See also
Counting machines and devices
Marchant calculating machine company

CALCULI
Chemical composition of seminal vesicle calculi. J. S. Hepburn and P. E. Yount. Franklin Inst J 243:487-8 Je '47

CALCULUS
Generalized intensity formula for a system of retardation plates. H. Hsü and others. Opt Soc Am J 37:99-106 F '47
New calculus for the treatment of optical systems; experimental determination of the matrix. R. C. Jones. Opt Soc Am J 37:110-12 F '47
New calculus for the treatment of optical systems; more general formulation, and description of another calculus. R. C. Jones. diag Opt Soc Am J 37:107-10 F '47

CALCUTTA
Rapid transit
So you think you have troubles; Calcutta tramways company. P. Kocan. il Mass Transportation 42:549-50 D '46

Sanitary affairs
Sanitation for the American forces in Calcutta. D. C. Teal. Am Water Works Assn J 39:416-22 My '47

CALDWELL, Frank Walker
Portrait. Aeronautical Eng R 6:20 F '47

CALDWELL, Otis William, 1869-1947
Sketch. Science 106:31 Jl 11 '47

CALENDARS
Annual calendar review. M. Kelly. il Ind Marketing 32:48-9+ Ja '47
Is it a waste basket or the wall for the calendars you distribute? J. A. Ray. il Inland Ptr 120:63-4 O '47

CALENDERS
Controls tension on winder drive of supercalender. J. L. Van Nort. il diag Machine Design 19:112-13 Ap '47
Fundamentals of calendering. G. A. Schoonkind. bibliog diags Paper Ind 28:1443-6 Ja '47

CALGON. See Sodium hexametaphosphate

CALICHE
Caliche presents excavating difficulties. il Comp Air Mag 52:99 Ap '47

CALICO printing
Exhibition of print styles. N. Hamer and others. Soc Dyers & Col J 63:97-101 Ap '47
Lint doctor in roller printing. Rayon 28:501 S '47
Printing multicolor relief designs; patent. Am Dyestuff Rep 36:366-7 Je 30 '47
Resist printing demands close attention to details. T. N. Patrick. il Textile World 97:139+ Mr '47
Vat and azoic colors preferred for printing. A. K. Saville. il Textile World 97:122-3+ Ag '47

History
History of West African styles. F. Crompton. Soc Dyers & Col J 62:307-8 O '46

CALIFORNIA
Wave erosion along the southern California coast. F. P. Shepard and U. S. Grant, 4th. bibliog Geol Soc Bul 58:919-26, pl 1-5 O '47

See also
Architecture, Domestic—California
Central Valley project
Gold mines and mining—California
Housing—California
Iron mines and mining—California
Iron ores—California
Motor bus lines—California
Petroleum—California
Pottery industry—California
Retail trade—California

Economic conditions
Problems of the postwar capital market. C. L. Dunn. Ann Am Acad 248:251-9 N '46

History
California in perspective. R. D. Hunt. Ann Am Acad 248:203-8 N '46

Industries and resources
Assaying industrial prospects for California and mountain states. J. D. C. Weldon. il Mag of Wall St 79:657-9+ Mr 15 '47
California industry is on the march. E. H. Klaus. Ind Marketing 32:49-50+ S '47
East and West square off for business battle. W. Gates. il Mag of Wall St 80:583-5+ Ag 30 '47
Industrialization in southern California. P. Neff. Ann Am Acad 248:239-50 N '46
Selling the West to industry; development work of Pacific gas and electric company. D. V. Doub. Elec West 97:74-6 O '46

Legislature
Geographic basis for a unicameral legislature. W. W. Mather. Ann Am Acad 248: 236-8 N '46
Place of Central valley in social prospect of southern California. P. S. Taylor. Ann Am Acad 248:214-19 N '46

Politics and government
Cross filing of political candidates in California. D. E. McHenry. Ann Am Acad 248: 226-31 N '46
Sectionalism in state politics. G. W. Bemis. Ann Am Acad 248:232-5 N '46

Social conditions
Culture and society in southern California, products of migration. C. McWilliams. Ann Am Acad 248:209-13 N '46

CALIFORNIA electric power company
Preferred stock offered. Comm & Fin Chr 166:258+ Jl 21 '47

CALIFORNIA Oregon power company
Common stock offered. Comm & Fin Chr 165:3390-1 Je 30 '47

CALIFORNIA-PACIFIC utilities company
Preferred stock offered. Comm & Fin Chr 166:1351 O 6 '47

CALIFORNIA university

Division of war research
Wartime activities of the San Diego laboratory of the University of California Division of war research. F. N. D. Kurie and G. P. Harnwell. R Sci Instr 18:207-18 Ap '47

CALIFORNIA university press
California employing printers are urged to protest practices of University press; pirating skilled employes. L. A. Ireland. Inland Ptr 119:81-2 Ap '47

CALIFORNIA water and telephone company
Stock offered. Comm & Fin Chr 165:3276 Je 23 '47

CALIPERS
Center the screw on inside calipers. A. H. Young. diag Am Mach 91:112 Ja 30 '47

Electrical calipers for inspecting vertical and horizontal tubes. I. S. Roberts. il Oil & Gas J 46:117 O 18 '47

Precision taper measurement with micrometer calipers. S. Framurz. diags Am Mach 91:131-3 My 22 '47

CALKING
Disinfection of water mains; calking materials as source of contamination. A. N. Heller. bibliog il Am Water Works Assn J 38:1335-41 D '46

CALKINS, Earnest Elmo, 1868-
When the message was the all of advertising; Earnest Elmo Calkins' autobiography. J. A. Murphy. por Adv & Sell 40:58+ Ja '47

CALL aircraft company
Call combats lightplane slump with diversified production. il Aviation W 47:16 Ag 25 '47

CALL-in pay. See Wages—Call-in pay

CALORIC applicator
Studies of thermal injury; automatic recording caloric applicator and skin-tissue and skin-surface thermocouples. F. C. Henriques, jr. bibliog diags R Sci Instr 18:673-80 S '47

CALORIC engines
Caloric engine; modern version of an old thermodynamic cycle; Philips regenerator. diags Automobile Eng 37:372-6 O '47

CALORIMETERS and calorimetry
Calorimeter measures heat of gases; developed at the National bureau of standards. diag Chem Ind 61:688+ O '47

Calorimetric determination of the energy produced by plutonium (239). J. W. Stout and W. M. Jones. bibliog diag Phys R 71: 582-5 My 1 '47

Calorimetric investigation of moisture in textile fibers. F. C. Magne, H. J. Portas and H. Wakeham. bibliog diag Am Chem Soc J 69:1896-902 Ag '47

Calorimetric measurements of heats of hydration of starches. W. G. Schrenk, A. C. Andrews and H. H. King. bibliog diag Ind & Eng Chem 39:113-16 Ja '47

Determination of the heat of combustion of nitroglycerin and thermochemical constants of nitrocellulose. J. Taylor and C. R. L. Hall. bibliog diags J Phys & Colloid Chem 51:593-611 Mr '47

Dielectric behavior of solutions of electrolytes in solvents of low dielectric constant. A. H. Sharbaugh, jr. and others. bibliog diags J Chem Phys 15:47-64 Ja '47

Enthalpy, specific heat, and entropy of aluminum oxide from 0° to 900° C. D. C. Ginnings and R. J. Corruccini. bibliog diags J Res Nat Bur Stand 38:593-600 Je '47

Flow calorimeter for specific heats of gases. diag Chem & Eng N 25:2520 S 1 '47

Heat capacities of gaseous oxygen, isobutane, and 1-butene from —30° to +90°. P. F. Wacker and others. bibliog diags J Res Nat Bur Stand 38:651-9 Je '47

Heat measurement advanced by new flow calorimeter. Heat & Ven 44:118+ S '47; diag Pet Refiner 26:143 O '47

Heat of combustion of tungsten carbide, WC. L. D. McGraw, H. Seltz and P. E. Snyder. bibliog Am Chem Soc J 69:329-31 F '47

Heat of the inactivation of pepsin. M. Bender and J. M. Sturtevant. bibliog Am Chem Soc J 69:607-12 Mr '47

Heats of combustion and solution of liquid styrene and solid polystyrene, and the heat of polymerization of styrene. D. E. Roberts and others. bibliog(40 ref) J Res Nat Bur Stand 38:627-35 Je '47

Improved flow calorimeter; experimental vapor heat capacities and heats of vaporization of *n*-heptane and 2,2,3-trimethylbutane. G. Waddington, S. S. Todd and H. M. Huffman. bibliog diag Am Chem Soc J 69:22-30 Ja '47

Improved ice calorimeter developed. diag Chem & Eng N 25:1757 Je 16 '47; R Sci Instr 18:459 Je '47; Product Eng 18:155-6 O '47

Improved ice calorimeter, the determination of its calibration factor and the density of ice at 0° C. D. C. Ginnings and R. J. Corruccini. bibliog diag J Res Nat Bur Stand 38:583-91 Je '47

Low-temperature calorimetry at the Bartlesville station of the Bureau of mines. H. M. Huffman. flow diags bibliog il diags Chem R 40:1-14 F '47

Melting point calorimeter for purity determinations. J. G. Aston and others. bibliog il diag Anal Chem 19:218-21 Ap '47

Modern calorimeter room; Liverpool gas company's Garston works. il Gas J (Lond) 251:356 Ag 13 '47; Abstract. Chem Age (Lond) 57:57 Jl 12 '47

Phase boundaries in concentrated systems of sodium oleate and water. R. D. Vold. bibliog J Phys & Colloid Chem 51:797-816 My '47

Quick determination of steam moisture with a throttling calorimeter; chart; data sheet. Power 91:281 Ap '47

Standards

Calorimetric standards discussed at second conference. Chem & Eng N 25:2138 Jl 28 '47

CALUMET and Hecla consolidated copper company
Calumet & Hecla lessens dependence on mining. Barron's 27:38 S 15 '47

CALUMET-SAG project
Proposed work on the Calumet-Sag channel. il Eng N 139:241 Ag 21 '47

CAMERA lucida
Camera lucida method for measuring air voids in hardened concrete. G. J. Verbeck. il Am Concrete Inst J 18:1025-39 My '47; Discussion. 19:1040[1]-1040[5] pt 2 D '47

CAMERA obscura
Camera obscura for measuring projected areas. W. Allphin. il Illum Eng 42:641-4 Je '47

CAMERAS
Automatic portrait camera; Portramatic. il Bsns W p42 Jl 5 '47

Deep-well camera permits visual examination of bore holes. O. E. Barstow and C. M. Bryant. bibliog il diags Oil & Gas J 45:74-5+ Mr 15 '47

Do you really need a Speed Graphic? Consumers Res Bul 19:23-4 Je '47

Folding hand camera and a stereo camera. il Consumers Res Bul 19:14 F '47

GE develops camera for equipment tests; speed 1 millionth sec. Iron Age 159:124 Je 5 '47; Same. Chem & Eng N 25:1824 Je 23 '47; Same. Mech Eng 69:595-6 Jl '47

How the camera transit is used in survey work. R. G. Sanders. bibliog il Pub Works 77:23-4+ D '46

Interval-timing, automatically resetting switch to operate after any given number of counts. J. R. Ballew and A. S. Marrazzi. diag Science 106:324 O 3 '47

Microscope camera has reflex feature. il Textile World 97:150 Ag '47

More plastics in cameras. il Mod Plastics 25:116-19 O '47

New one-step photographic process. E. H. Land. il diag Opt Soc Am J 37:61-77 F '47

One-minute photography; camera and process developed by Polaroid corporation. il diag Tech R 49:330-2 Ap '47

One-step camera; Polaroid corp.'s device. diag Bsns W p40-1 Mr 1 '47

Photographic companies in new era; with statistics on leading producers of cameras and photographic supplies. S. Devlin. il Mag of Wall St 79:741-2+ Mr 29 '47

Photo-projection inspection and layout of castings. C. J. Kettler. il Iron Age 160:47-8 Jl 31 '47

Pictures in 60 seconds; Land process. H. Manchester. il diag Sci Am 176:167-70 Ap '47

CAMERAS—*Continued*
Revolutionary camera announced at Optical society of America meeting. Chem & Eng N 25:667 Mr 10 '47
Speed-O-Matic camera. Consumers Res Bul 20:16 O '47
Surveying simplified by new camera transit. il Roads & Bridges 84:90+ N '46
Theory of the tilting camera. J. Sikorski and others. Textile Inst J 38:T35-6 F '47

See also
Camera obscura
Lenses, Photographic

Rating

Report on four post-war cameras. il Consumers Res Bul 18:25-6 D '46

Small size

Free-prints-by-mail policy cracks market for new baby camera. Sales Management 59:138-9 O 1 '47
Micro 16 camera not recommended. Consumers Res Bul 20:23-4 Jl '47
Midget camera. il Sci Am 177:76-7 Ag '47
Report on three miniature cameras. il Consumers Res Bul 18:25-6 D '46

CAMERAS, Electron diffraction
High temperature furnace for electron diffraction studies. E. A. Gulbransen. il diag R Sci Instr 18:546-50 Ag '47
Single crystal electron diffraction by microcrystalline materials. N. Davidson and J. Hillier. bibliog il diags J Ap Phys 18:499-511 Je '47
Universal electron microscope as a high resolution diffraction camera. R. G. Picard and J. H. Reisner. il diags R Sci Instr 17:484-9 N '46

CAMERAS, Moving picture. See Moving picture cameras

CAMERAS, Television. See Television cameras

CAMERON machine company
Cameron builds new factory to handle $4 million orders. il Paper Tr J 124:26 Mr 13 '47

CAMOUFLAGE
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47

CAMP cookery
Training of camp cooks. J. W. Paterson. Pulp & Pa of Can 48:106 Jl '47

CAMP fees refund policies. See Insurance, Casualty—Camp fees refund policies

CAMP sanitation
How to design Imhoff tanks and trickling filters for schools, camps and hotels. diags Pub Works 78:33-4 S '47

CAMPHOR sulfonic acid
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47

CAMPS
Britain's Billy Butlin with his 'oliday camps. il Fortune 35:126-33+ Mr '47
Recreation business index for New England's vacation establishments. Banking 40:96 Ag '47

See also
Labor camps
Lumber camps

Insurance requirements

How Michael H. Levy of New York has created a market in private camp insurance. East Underw 48:30+ pt 2 Je 20 '47
Kids is dynamite. Fortune 36:120 Jl '47

CAMPS, Military
City buys suburb, Spartanburg, S. C. group takes over Camp Croft. il Bsns W p67-8 S 13 '47

CAMPS, Tourist. See Tourist camps, hostels, etc.

CAMS
Cam design and analysis for high speeds and torques. M. A. Sanders. diags Product Eng 18:84-7 Mr '47.
Cam design chart for constant acceleration. E. A. Hartbauer. Machine Design 19:161-2 Ag '47
Cam for introducing periodic functions into mechanical drives. K. P. Yates and G. Sinclair. diags R Sci Instr 18:454-5 Je '47
Kinematics of disk cam and flat follower. A. H. Candee. il diags A S M E Trans 69:709-18; Discussion. 718-24 O '47
Master cams control cutters; turn miller, developed by Gisholt machine co. il diags Product Eng 18:98-9 O '47
New approach to cam design. W. M. Dudley. diag Machine Design 19:143-8+ Jl '47

Manufacture

Cam-cutting attachment fits any milling machine. S. Framurz. diags Am Mach 91:111 S 25 '47
Mechanism for controlling cutter-head slide of cam-generating device. C. Golosman and D. Golosman. diags Mach 54:184-6 O '47
One way to produce a cam. R. Mawson. diags Steel 120:108+ Ap 28 '47

CAN openers

Rating

Can openers. diags Consumers Res Bul 18:19-20 D '46

CANADA
Features of present-day Canada. R. H. Coats, ed. bibliog Ann Am Acad 253:1-201 S '47

See also
Banks and banking—Canada
Coal supply—Canada
Finance—Canada
Fish trade—Canada
Immigration and emigration—Canada
Income tax—Canada
Irrigation—Canada
Paper industry and trade—Canada
Railroads—Canada
Rayon industry—Canada
Shipping—Canada
Silk trade—Canada
Steel industry and trade—Canada

Bibliography

Canadian catalogue of books published in Canada, about Canada, as well as those written by Canadians, with imprint of 1945. 72p Ontario. Dept. of education, Office of the inspector of public libs, Toronto 2 '47

Commerce

Bank of Montreal holds Canada benefits from sterling convertibility. Comm & Fin Chr 166:439 Jl 31 '47
Businessmen urged to create of Canada a world trading nation. M. W. Mackenzie. Can Chem & Process Ind 31:549-50+ Je '47
Canada and the United States; their mutual economic problems. J. D. Mooney. Comm & Fin Chr 166:1733+ O 30 '47
Canada faces the problem of restoring three-cornered trade. Mag of Wall St 79:425 Ja 18 '47
Canada may sell many products in stable Colombian market. H. W. Richardson. Can Chem & Process Ind 31:230-1+ Mr '47
Canada; Uncle Sam's biggest customer. F. S. Chalmers. Ind Marketing 32:70+ Jl '47
Canada's changed position in international trade. Can Chem & Process Ind 30:37-8 D '46
Canada's critical exchange problem. M. Palyi. Comm & Fin Chr 165:1117+ F 27 '47
Canada's new trade drive. il Mag of Wall St 79:192+ N 23 '46
Canadian dollar; Bank of Nova Scotia analyzes present position. Comm & Fin Chr 165:3240+ Je 19 '47
Canadian exports value down in 1946; tabulation. Oil Paint & Drug Rep 151:50 F 24 '47
Canadian imports value up in 1946; tabulation. Oil Paint & Drug Rep 151:59 Mr 31 '47
Dollar deficit. Bsns W p 100 F 22 '47
Dollar famine hits next-door neighbor; Canada feels drain on funds. E. C. Ertl. Barron's 27:30 Je 9 '47
Dominion crisis; drain on U.S. dollar reserves. Bsns W p78+ S 27 '47
Mills, Spence & co. decries danger of Canadian exchange collapse; dollar problem. Comm & Fin Chr 166:1643+ O 23 '47
No change in Canadian dollar's status pending. E. C. Ertl. Barron's 27:35 S 15 '47
Roving reporter's notes on the western Canada market. A. G. Mezerik. Sales Management 59:144+ O 15 '47

CANADA—Commerce—*Continued*
Survey of Canadian foreign trade. D. H. Fullerton. Ann Am Acad 253:143-9 S '47

Commercial policy

Draw-back regulations revised. For Comm W 26:11 Ja 11 '47

Defenses

Defense of North America. A. G. I. McNaughton. Elec Eng 66:754-7 Ag '47

Economic conditions

Canada feels impact of world insecurity. V. L. Horoth. il Mag of Wall St 80:149-51 My 10 '47
Canada's economy in 1946; reconversion won, output rises. P. F. DuVivier. il For Comm W 26:10-13+ Mr 15 '47
Canadian failures by provinces, monthly record. Published in Dun's statistical review
Canadian labor-market and postwar employment. H. A. Logan. Ann Am Acad 253:88-97 S '47
Commodity comments. Can Chem & Process Ind 31:427+ My '47
Economic conditions in Canada during first eight months of 1946. Can Chem & Process Ind 30:57 N '46
News by countries. For Comm W 25:20-2 N 16 '46; 26:10 Ja 11; 16-17 F 22; 27:14-15 Ap 26; 15-16 Je 21; 28:14-15 Jl 26; 29:11-12 N 1 '47

Economic relations

Canada and the Marshall offer. Economist 153:408-9 S 6 '47

Geological survey

Century in the history of the Geological survey of Canada. F. J. Alcock. il Can Min J 68:307-15, 410-19, 491-503 My-Jl '47
More work for the survey; improved data needed to aid prospecting. W. J. Bichan. Can Min J 68:242-4 Ap '47

Industries and resources

Canada; investment goals of businessmen for 1947. For Comm W 27:13-14 My 3 '47
Peat moss deposits in Canada. H. A. Leverin. bibliog maps 9pls 102p pa 25c Canada. Dept. of mines and resources, Ottawa '46
Power and manufacturing in Canada. L. R. Thomson. Ann Am Acad 253:74-80 S '47
Progress in peat moss production is climbing steadily. W. M. Bonham. il Can Min J 68:584-5 Ag '47

See also
Coal mines and mining—Canada

Interim defence research board

Canadian chemistry. S. J. Cook. Chem & Eng N 25:333 F 3 '47

Politics and government

Canada's national status in recent years. H. M. Clokie. Ann Am Acad 253:22-31 S '47
Dominion-provincial relations. W. Eggleston. Ann Am Acad 253:40-3 S '47

Sanitary affairs

Refuse disposal. il Water & Sewage 85:22+ Ag '47

Social conditions

Canadian social services. H. M. Cassidy. Ann Am Acad 253:190-9 S '47

Statistics

Canadian Bureau of statistics supplies wide range of data. W. H. Losee and H. McLeod. Chem Ind 59:845-8+ N '46
National accounts income and expenditure, 1938-1946. 19p pa 50c Canada. Dominion bur. of statistics, Ottawa '47

Technical information service

Canada's new technical information service. Chem & Eng N 25:306 F 3 '47

CANADA dry ginger ale, inc.
Annual report. Comm & Fin Chr 165:204 Ja 13 '47

CANADA life assurance company
Centennial anniversary celebration, Toronto. East Underw 48:6 Je 20 '47

CANADIAN admiral corporation, limited
Stock offered. Comm & Fin Chr 165:527 Ja 27 '47

CANADIAN associated equipment distributors
Annual meeting, 4th, Niagara Falls, Ont. May 12-15. Roads & Bridges 85:64-5+ My '47

CANADIAN construction association
Annual meeting, 29th, Niagara Falls, Ont. Eng N 138:167 Ja 30 '47

CANADIAN gas association
Annual meeting, 40th, Niagara Falls, Canada, June 8-11. Am Gas J 167:35-6 Jl '47

CANADIAN goods roads association
Annual convention, 28th, St Andrews, N.B. Sept. 8-10. Roads & Bridges 85:82-93+ S '47

CANADIAN institute of mining and metallurgy
Annual meeting, Ottawa, Jan. 20-22. Eng & Min J 148:121 F '47; Rock Prod 50:88+ Mr '47

CANADIAN institute on sewage and sanitation
Active, well-managed organizations serve Canada's water and sewage interests. Water & Sewage 85:24+ Ag '47
Annual meeting, 13th, Toronto, Oct. 6-9. Water & Sewage 84:41-8+ O '46
Annual meeting, Niagara Falls, Ont. Oct. 6-8. Water & Sewage 85:48-56+ O '47

CANADIAN life insurance officers association
Annual meeting, Montebello, Quebec, May 13-15. East Underw 48:1, 4+ My 16; 3+ My 23 '47; Nat Underw (Life ed) 51:5+ My 23 '47

CANADIAN literature

Bibliography

Canadian catalogue of books published in Canada, about Canada, as well as those written by Canadians, with imprint of 1945. 72p Ontario. Dept. of education, Office of the inspector of public libs, Toronto 2 '47

CANADIAN national railways
Bonds offered. Comm & Fin Chr 165:68 Ja 6 '47
Canadian national railway, 1923-1946. 14p pa 25c Canada. Dominion bur. of statistics, Ottawa '47

CANADIAN Northwest. See Northwest, Canadian

CANADIAN Pacific railway
Annual report, 66th, year ended Dec. 31, 1946. Comm & Fin Chr 165:2072-4 Ap 17 '47; Excerpts. Ry Age 122:819-23 Ap 19 '47
C.P.R. expands, needs more revenue; price increases reduce net. D. C. Coleman and R. C. Vaughan. Ry Age 122:47-8 Ja 4 '47
Canadian Pacific railway, 1923-1946. 12p pa 25c Canada. Dominion bur. of statistics, Ottawa '47
Coleman to retire as C.P.R. president; will be succeeded by W. M. Neal. Ry Age 122: 182+ Ja 18 '47
Income account for calendar years 1943-1946. Comm & Fin Chr 165:2131-2 Ap 21 '47

CANADIAN pulp and paper association
Annual meeting, 34th, Montreal. Pulp & Pa of Can (Convention no) 48:75-7 [F] '47
Canadian associations hold annual meetings. Paper Ind 28:1602+ F '47
Proud of record, confident of future; industry organized to provide means of progress to prosperity. R. M. Fowler. Pulp & Pa of Can (Convention no) 48:79-82 [F] '47
Sections review, 1946. Pulp & Pa of Can (Convention no) 48:313-14+ [F] '47

Technical section

Annual meeting, 33d, Montreal, Jan. 29-31. Pulp & Pa of Can (Convention no) 48:83-93 [F] '47
Summer meeting, St Andrews-by-the-Sea, June 11-13. Paper Ind 29:550+ Jl '47; Pulp & Pa of Can 48:60-86 Jl '47
Technical section, its development and opportunity. F. L. Mitchell. Pulp & Pa of Can 48:64-7 Jl '47

Woodlands section

Annual meeting, 29th, Montreal, Jan. 29-31. Pulp & Pa of Can (Convention no) 48:251-4+ [F] '47

CANADIAN pulp and paper association—Woodlands section—*Continued*
Summer meeting, Petawawa military camp and the Petawawa forest experiment station, July 16-18. Pulp & Pa of Can 48:91-4+ Ag '47

CANADIAN sanitation equipment association
Active, well-managed organizations serve Canada's water and sewage interests. Water & Sewage 85:24+ Ag '47
Annual meeting, 4th, Toronto. Water & Sewage 84:64+ O '46
Annual meeting, Niagara Falls, Ont. Oct. 8. Water & Sewage 85:57+ O '47

CANADIAN scientific film association
Aims, functions and organization. Can Chem & Process Ind 31:129+ F '47

CANADIAN transit association
Annual meeting, 43d, Murray Bay. Mass Transportation 43:271-4 Jl '47

CANADIAN water works equipment association
Active, well-managed organizations serve Canada's water and sewage interests. Water & Sewage 85:24+ Ag '47
Annual meeting, Montreal, April 16. Water & Sewage 85:72-3 My '47

CANAL lining
Concrete block was used for canal lining. il Eng N 138:529 Ap 3 '47
Low cost linings for irrigation canals. W. R. Young. il Eng N 138:192-6 F 6 '47
Reclamation laboratories develop new joint-sealing compound. M. R. Spindler. il Concrete 55:25-6 F '47
Slip form places wasteway canal concrete. il Civil Eng 17:543 S '47

CANAL locks. See Locks (hydraulic engineering)

CANALS
Chain of Rocks project improves navigation on Mississippi river. R. E. Smyser, jr. il map Civil Eng 17:302-4 Je '47
Charts for canal flow computations. G. G. Commons and L. B. Griffith. Eng N 137: 664-5 N 14 '46
Proposed work on the Calumet-Sag channel. il Eng N 139:241 Ag 21 '47

See also
Locks (hydraulic engineering)
Panama canal
Waterways

Belgium

Le canal de contournement de la ville de Gand (Belgique). map Génie Civil 124:357 S 15 '47

France

Donzere-Mondragon project. W. G. Bowman. il map Eng N 139:150-1 Jl 31 '47

Netherlands

Les travaux en béton; du canal d'Amsterdam au Rhin. A. Bijls. map Génie Civil 124:132-4 Ap 1 '47

New York (state)

See also
New York state barge canal

CANCELED checks. See Checks, Canceled

CANCELLATION of orders

See also
Returned goods

CANCER
Addendum to cytoplasmic diseases and cancer. M. W. Woods and H. G. duBuy. Science 104:469-70 N 15 '46
Application of metabolite antagonism to cancer research. D. M. Greenberg and M. P. Schulman. bibliog Science 106:271-2 S 19 '47
Calcium and growth in aging and cancer. A. I. Lansing. bibliog Science 106:187-8 Ag 29 '47
Cancer linked to enzymes. Can Chem & Process Ind 30:94 D '46
Cancer research; Sloan-Kettering Institute. Chem & Eng N 25:1111 Ap 21 '47
Cancer study; University of Chicago and University of California. Chem & Eng N 25: 3236-7 N 3 '47
Carcinogenic action of smegma. A. Plaut and A. C. Kohn-Speyer. bibliog Science 105: 391-2 Ap 11 '47
Chemistry has new role in cancer research; discussion, North Jersey section, American chemical society. Chem & Eng N 25:593 Mr 3 '47
Chemistry of carcinogenic nitrogen compounds; new derivatives of the angular benzacridines and of some related nuclei. N. P. Buu-Hoï. Chem Soc J p792-5 S '46
Comparison of the β-glucuronidase activity of normal, tumor, and lymph node tissues of surgical patients. W. H. Fishman and A. J. Anlyan. Science 106:66-7 Jl 18 '47
Cosmic radiation and cancer. F. H. J. Figge. Science 105:323-5 Mr 28 '47; Discussion. S. A. Korff. 105:645 Je 20 '47
1,2,3,4-Dibenzphenanthrene and its derivatives; synthesis of 1,2-dimethyl-3,4-benzphenanthrene. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1367-70 Je '47
Effect of intraperitoneal injection of malignant urine extracts in normal and hypophysectomized rats. H. H. Beard and others. Science 105:475-6 My 2 '47
Effects of an antibiotic from aspergillus fumigatus Fresenius on tumor cells in vitro, and its possible identity with gliotoxin. J. G. Kidd. bibliog Science 105:511-13 My 16 '47
Electrometric studies in women with malignancy of cervix uteri. L. Langman and H. S. Burr. Science 105:209-10 F 21 '47
Fellowships and senior fellowships in cancer research. Science 106:9-10 Jl 4 '47
Financing cancer research. E. V. Cowdry. Science 105:53-7 Ja 17 '47; Reply. G. E. Wakerlin. 105:175 F 14 '47
Fluorescein as an agent in the differentiation of normal and malignant tissues. G. E. Moore. Science 106:130-1 Ag 8 '47
Industrial management and occupational cancer; abstract. W. C. Hueper. Nat Safety N 54:46 N '46
Influence of liver L. casei factor on spontaneous breast cancer in mice. R. Lewisohn and others. Science 104:436 N 8 '46
Inhibitory effects of ethyl carbamate on prostatic cancer. C. Huggins and others. bibliog Science 106:147-8 Ag 15 '47
Interim report of the joint advisory committee of the cotton industry; mule spinners' cancer and automatic wiping-down motions. diags Textile Inst J 38:P5-14 Ja '47
Mechanism of the invasiveness of cancer. D. R. Coman. Science 105:347-8 Ap 4 '47
Metabolism of polycyclic compounds; configuration of the dihydroxydihydro-anthracenes produced from anthracene. E. Boyland and C. W. Shoppee. Chem Soc J p801-4 Je '47
New theory of cancer treatment. D. M. Greenberg. Chem & Eng N 25:3238 N 3 '47
Occupational and post-traumatic cancer; abstract. F. W. Stewart. Ind Med 16:328-9 Je '47
Oiling of mule spindles. W. S. Moore. Textile Inst J 38:P1-5 Ja '47
Polycyclic aromatic hydrocarbons; 2'-methoxy- and 2'-methoxy-9 : 10-dimethyl-1 : 2-benzanthracene. G. M. Badger. Chem Soc J p940-3 Jl '47
Preparation and properties of thionaphthindoles. C. E. Dalgliesh and F. G. Mann. Chem Soc J p653-8 My '47
Progress of the Biochemical research foundation (1946). E. McDonald. bibliog diag Franklin Inst J 242:435-48 D '46
Rate of oxidation of aromatic hydrocarbons by lead tetraacetate. L. F. Fieser and S. T. Putman. bibliog Am Chem Soc J 69:1041-6 My '47; Reply. H. F. Park. 69:2248-9 S '47
Some notes on the cancer problem. G. M. Kosolapoff. Science 104:491-2 N 22 '46; Discussion. K. S. Pilcher. 105:160 F 7 '47
Some αββ-triarylacrylonitriles, αββ-triarylacrylic acids, and their derivatives. Buu-Hoï and J. Lecocq. Chem Soc J p641-4 My '47
Species character of cancer cells. R. G. Green. bibliog Science 105:93 Ja 24 '47
Spleen extract and tumor growth. G. F. Watson and others. Science 106:348 O 10 '47
Synthesis of 1,2,5,6-dibenzanthracene labeled in the 9-position with carbon-14. C. Heidelberger, P. Brewer and W. G. Dauben. Am Chem Soc J 69:1389-91 Je '47

CANCER—*Continued*
Ultraspectrophotometric studies in extracts of normal and tumor tissue of human origin. M. E. Sano and M. Spiegel-Adolf. Science 106:346-7 O 10 '47

CANDLENUT oil. See Lumbang oil

CANDY
See also
Confectionery

Manufacture
Air conditioning in candy manufacture. H. C. Hoffmann. bibliog Refrig Eng 53:1-4 sec 2 Ap '47
Candies from sweet potatoes pack health-promoting values. M. S. Van de Mark and L. M. Ware. il Food Ind 19:1204-5 S '47
Progress toward continuous processing; O'Brien's of California. J. Kleiber. flow diags il Food Ind 19:899-905 Jl '47

CANDY boxes
Oval pack for wafers; Rockwood single sheet window box. il Mod Packaging 20:160-1 Mr '47

CANDY factories
Air conditioning
New candy plant air conditioned; Walter H. Johnson candy co. Heating-Piping 19:94 Jl '47
Employees
Candy makers discuss employee relations. Food Ind 19:1095-6 Ag '47
Equipment
Progress toward continuous processing; O'Brien's of California. J. Kleiber. flow diags il Food Ind 19:899-905 Jl '47

CANDY stores
Design for displaying merchandise; Barton's bonbonniere, New York. il Arch Rec 101:81 Mr '47
How to stop condensation on confectionery window. diags Heating-Piping 19:98-9 Ap '47

CANDY trade
Candy worries. Bsns W p 18 Je 7 '47
Eye-catcher for candy counters bids for impulse sales. il Mod Packaging 20:106 N '46
Jobbers' school; candy makers establish training course for salesmen. Bsns W p74+ Mr 15 '47
Nation's confectionery bill estimated at $600 million. G. F. Dudik. il maps Dom Comm 34:56-60 N '46
1946 confectionery production limited but sales reach peak. G. F. Dudik. map Dom Comm 35:30-4 Jl '47
Simplifying a trademark; Colonial House candies switches to doorway as design theme. il Mod Packaging 20:138 Ap '47
Advertising
Local advertiser goes national without losing personal touch; O'Brien's of California. L. F. Thomann. Ptr Ink 219:36 Ap 18 '47

CANFIELD, H. O., company
Hans Wyman makes big businesses; millionaire Czech refugee's industrial comeback in the new world. il Fortune 35:94-7+ Ap '47

CANNED fish
Canning fish; patent. Food Ind 19:559 Ap '47
Trimethylamine oxide in marine products. O. A. Ronold and F. Jakobsen. bibliog Soc Chem Ind J 66:160-6 My '47

CANNED food
Australian canned-fruit industry. For Comm W 28:28 Jl 19 '47
Canned in layers; five vegetables in one conventional can. il Mod Packaging 21:125 O '47
Canners' dilemma; name brands set record sales, less well-known pile up on shelves. Bsns W p57-8+ Ag 9 '47
Canners in price squeeze. Bsns W p19 Ap 26 '47
Canners' troubles greatly exaggerated; major firms face 1947 with high hopes, low inventories. S. G. Ebert. Barron's 27:11+ Ja 27 '47
Electronic sterilization of canned foods? problems of localized overheating, heat losses, etc. J. M. Jackson. bibliog il Food Ind 19:634-6+ My '47
Logical Miss Tilly; Flotill canned foods. Bsns W p56-7 Mr 1 '47
Market developments in canned fruits, vegetables. J. A. Monroe. il Dom Comm 35:57-63 Ap '47
Menu label; Lakeside Packing menu for complete, scientifically balanced meal on can label. il Mod Packaging 20:116-17 My '47
Nutritive value of canned foods. J. R. Wagner and others. Ind & Eng Chem 39:985-1009 Ag '47
Russian canned food tops 1945 production. Food Ind 19:355-6 Mr '47
Stokely diversified. Bsns W p72-5 F 15 '47
Tomato sauce breaks trail for line as Hunt opens New York market. J. H. Collins. il Sales Management 58:41-3 Ja 1 '47
Undercooling retards freezing of canned foods; data sheets. Food Ind 18:513-17, 866-9, 1034-7, 1716-17; 19:188-90 Ap, Je-Jl, N '46, F '47
What's cooking at College Inn; chicken, chili, fatter quotas. P. F. Tevis. il Sales Management 58:37-9 Mr 15 '47
See also
Canned fish
Canned meat
Canneries
Canning and preserving
Tin cans
Advertising
How radio spots led to newspaper spots; small-space advertiser calls repetition key to success; Monarch foods. Ptr Ink 218:42 F 21 '47
Storage
Effect of time and temperature of storage on vitamin content of commercially canned fruits and fruit juices (stored 12 months). D. S. Moschette, W. F. Hinman and E. G. Halliday. bibliog Ind & Eng Chem 39: 994-9 Ag '47
Testing
Substitution of blackplate for tinplate in cans for fruit and vegetables. W. B. Adam and D. Dickinson. bibliog Iron & Steel Inst J 152:205 no 2 '45

CANNED meat
Bacteriological studies relating to thermal processing of canned meats; thermal resistance of spores normally present in meats; abstract. C. Vincent and others. Food Ind 19:1441 O '47
How Swift finessed its entry into a huge new market for meat; all-meat foods for infants. L. B. Colby. Sales Management 58: 77+ Ja 15 '47
Pre-test sets sales pattern for new chicken product. il Sales Management 59:70+ Ag 1 '47
That new product may need a separate sales staff; Swift & co. promotes meats for babies and juniors. H. E. Green. il Ptr Ink 219:30-1 Je 27 '47

CANNERIES
Electric equipment
Frozen foods; Wisbech produce canners. il Elec R (Lond) 140:51-3 Ja 10 '47
Equipment
Canners convention highlights; machinery exhibit; staff report. Food Ind 19:319+ Mr '47
Waste
Cannery waste; an example of complete treatment and disposal. L. B. Miller. flow sheet il Pub Works 78:19-20+ F '47
Industrial wastes; canning industry. E. F. Eldridge. flow diags il diags Ind & Eng Chem 39:619-24 My '47
Industrial wastes; citrus canning industry. R. R. McNary. bibliog flow sheet Ind & Eng Chem 39:625-7 My '47
Solving cannery waste problems; abstract and discussion. L. F. Warrick. Water & Sewage Works 94:387 O '47
Treatment of strong wastes. A. W. Banister and R. J. Ellison. Pub Works 78:26-7+ S '47

CANNERIES—Waste—*Continued*
Vitamin A and oil content of fish livers and viscera; fishes of the Oregon coast. R. O. Sinnhuber and D. K. Law. bibliog Ind & Eng Chem 39:1309-10 O '47

CANNERS association, National. See National canners association

CANNING and preserving
Controlling the quality of kraut during manufacture. C. S. Pederson. il Food Ind 19: 778-80+ Je '47
Growing mung bean sprouts for canning. W. F. Kuhn. il diags Food Ind 18:1858-60+ D '46
H-P condensate return improves output of preserves at Colonial preserves, Buffalo. flow sheet il Food Ind 19:630-1 My '47
Juicells, new form of canned grapefruit. flow diag Food Ind 19:47-9 Ja '47
Nutritive value of canned foods; effect of commercial canning operations on the ascorbic acid, thiamine, riboflavin, and niacin contents of vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Oregon City canning school aided public and dealers. G. E. Stedman. il Gas Age 100:35-6+ S 4 '47
Processing food for sterilization. C. O. Ball. il diag Food Ind 19:44-6+, 174-8+, 338-40+ Ja-Mr '47
Thermophiles in a cannery; sources and control means. B. B. Lipske and M. R. Hubbard. il diag Food Ind 19:1062-6+ Ag '47
Undercooling retards freezing of canned foods; data sheets. Food Ind 18:513-17, 866-9, 1034-7, 1716-17; 19:188-90 Ap, Je-Jl, N '46, F '47
Using froth flotation to clean vined canning peas. A. M. Neubert. il diag Food Ind 19: 769-72+ Je '47

See also
Canned food
Canneries
Tin cans

CANNING factories. See Canneries

CANNIZZARO reaction
Cinchoninaldehyde; benzoin and Cannizzaro reactions. A. P. Phillips. Am Chem Soc J 68:2568-9 D '46
Studies on the mechanism of the Cannizzaro reaction. E. R. Alexander. bibliog Am Chem Soc J 69:289-94 F '47

CANNON mills company
Selected stocks with long dividend records. Mag of Wall St 79:202 N 23 '46

CANOES
Folding canoe now being produced for export in Great Britain. For Comm W 27:27 Je 14 '47

Manufacture
Press forms 4-part magnesium canoe; illustrations with text. C. S. Ricker. Am Mach 91:96-7 Ap 10 '47

CANS
British jam can that needs no opener. il Mod Packaging 20:129 D '46
Canmakers estimate 1.4 million tons of plate for '47 food pack. J. Anthony. Iron Age 159: 114-15 My 22 '47
Canned heat heats hotcan; no fire. il Food Ind 19:1383 O '47
Cigars in cans. il Mod Packaging 20:172 Ag '47
Reseal can for dried food products and drugs. il Mod Packaging 20:99 Ap '47
Rust prevention on cans; abstract. R. A. Gillies. Food Ind 19:1006+ Jl '47

See also
Milk cans
Paint cans
Tin cans

Manufacture
Fabrication of metal cans. Chem & Eng N 24:3234 D 10 '46
High speed food can manufacture. il Gas J (Lond) 252:90 O 8 '47

Testing
Substitution of blackplate for tinplate in cans for fruit and vegetables. W. B. Adam and D. Dickinson. bibliog Iron & Steel Inst J 152:195-205 no 2 '45

CANTEENS, Industrial. See Lunchrooms and cafeterias, Employees'

CANTON, China

Rapid transit
Transport facilities still inadequate. For Comm W 29:28 N 1 '47

CANVASSING
How Grolier is dignifying the job of direct-to-consumer selling. T. Armstrong. il Sales Management 59:45-6+ O 1 '47
Will planned cold canvass pay out in selling Deepfreeze units? G. H. Smith. il Sales Management 58:37-9 Ja 15 '47

CAPACITORS. See Condensers (electricity)

CAPACITRON
Ultrashort application time of penetrating electrons; tool for sterilization and preservation of food in the raw state. A. Brasch and W. Huber. il Science 105:112-17 Ja 31 '47

CAPAURIMINE
Alkaloids of fumariaceous plants; the constitution of capaurimine. R. H. F. Manske. Am Chem Soc J 69:1800-1 Jl '47

CAPE hake. See Stockfish

CAPETOWN, South Africa

Water supply
Waterworks showplace in South Africa; Capetown's Steenbras filtration works. flow plans il Eng N 139:312-14 S 4 '47

CAPILLARIMETER
New type of precision capillarimeter. J. J. Jasper and K. D. Herrington. bibliog diag Am Chem Soc J 68:2142-4 N '46

CAPILLARITY
Capillarity of metallic surfaces. E. R. Parker and R. Smoluchowski. il diag Am Soc for Metals Trans 35:362-71; Discussion. 371-3 '45

See also
Capillarimeter

CAPITAL
Canada; investment goals of businessmen for 1947. For Comm W 27:13-14 My 3 '47
Capital flotations in the United States during the month of December and for the twelve months of the calendar year 1946. Comm & Fin Chr 165:528-9+ Ja 27 '47
Capital formation; life line of progress. D. G. Mitchell. Comm & Fin Chr 166:1734+ O 30 '47; Discussion. 166:1842+ N 6 '47
Capital issues in 1946. Economist 152:40 Ja 4 '47
Central underwriting fund for small business. E. J. Hopkins. bibliog Comm & Fin Chr 164:2613+ N 21 '46
Corporate working capital at new high in fourth quarter of 1946; analysis by Securities and exchange commission; with table showing current assets and liabilities of U.S. corporations, 1939-1946. Comm & Fin Chr 165:2487 My 8 '47
Current assets and current liabilities; working capital; Accounting research bulletin. J Account 84:282-5 O '47
Estimated plant and equipment expenditures for 1947; quarterly survey by Securities and exchange commission and Department of commerce. Comm & Fin Chr 165:2651 My 15 '47
Expenditures for new plant and equipment in 1946. G. B. Wimsatt. Survey of Cur Bsns 26:14-17+ D '46
Finance and tax program for small business. J. C. Dockeray. Dom Comm 35:10-14 F '47
Financing corporations. J. M. Killpack. Comm & Fin Chr 165:2249+ Ap 24 '47
Financing industrial development in Europe; address before International chamber of commerce, Montreux. M. A. Heilperin. Comm & Fin Chr 165:3115+ Je 12 '47
Financing small business; NAM study. bibliog Comm & Fin Chr 164:2461+ N 14 '46; Excerpt. Banking 39:107-8 Ja '47
Financing the postwar business expansion. Fed Res Bul 33:487-97 My '47; Excerpt. Comm & Fin Chr 165:3132 Je 12 '47
Handicaps to venture capital. J. F. Burns, jr. Comm & Fin Chr 166:1416 O 9 '47
Industry 1947 plant and equipment expenditures to exceed last year's; SEC prediction. Comm & Fin Chr 165:2211 Ap 24 '47; Survey of Cur Bsns 27:8+ My '47

CAPITAL—*Continued*
Insurance company private lending. W. W. Bodine. Comm & Fin Chr 165:740+ F 6 '47; Discussion. L. R. Engstrom. 165:1005 F 20 '47
New capital issues in Great Britain, 1936 to date. Comm & Fin Chr 165:384 Ja 20 '47
New capital issues in Great Britain, quarterly and half-yearly figures, 1936-date. Comm & Fin Chr 164:2595 N 18 '46
New capital issues; with table giving 1945 total, monthly average and monthly figures, Jan.-Sept. 1946. Survey of Cur Bsns 26:5-6 N '46
New financial facilities for industry; abstract. Lord Piercy. Chem & Ind p439 D 7 '46
New security issues for new capital and for refunding, domestic, totals, 1936-1945, by months, Nov. 1945-Nov. 1946. Fed Res Bul 33:64 Ja '47 [cont monthly]
Plant and equipment expenditures in 1946. Survey of Cur Bsns 27:6-7 Ap '47
Problems of the postwar capital market. C. L. Dunn. Ann Am Acad 248:251-9 N '46
Venture capital is the spark. H. E. Humphreys, jr. Pub Util 40:114-17 Jl 17 '47
Venture capital pooled to finance business growth. Am Bsns 16:26+ N '46
Why many large corporations are now seeking new capital. J. D. C. Weldon. Mag of Wall St 79:236-8+ D 7 '46

See also
Corporations—Finance
Dividends
Finance corporation for industry
Interest
Investments

CAPITAL airlines
Capital airlines, 1927-1947. il Aero Digest 54: 48+ Ap '47
Celebrates twentieth anniversary. il Manuf Rec 116:42 My '47

CAPITAL and labor. See Labor and capital

CAPITAL gains tax. See Income tax—Capital gains tax

CAPITAL goods industries. See Equipment industries

CAPITAL levy
Bulgaria; capital tax levy voted. For Comm W 27:15 Je 28 '47
Danish capital levy. Economist 151:884 N 30 '46
Extraordinary property tax in Italy. For Comm W 27:17-18 Ap 19 '47; Correction. 27:16 My 24 '47

CAPITAL punishment
Stalin's dose of optimism; abolition of the death penalty. Economist 152:854 My 31 '47

CAPITAL surplus. See Surplus

CAPITALISM
Big business organizations; are they man's greatest invention? A. W. Robertson. Pub Util 39:573-5 Ap 24 '47
Businessmen, not bureaucrats, responsible for America's high living standard. L. von Mises. Comm & Fin Chr 166:363 Jl 24 '47
Capitalizing on capitalism; address before National association of credit men. P. G. Hoffman. Credit & Fin Management 49:6-9+ Je '47
Challenge to management, labor and capital. O. H. Lamborn. Comm & Fin Chr 165: 741+ F 6 '47
Crisis facing private enterprise. C. Bowles. Comm & Fin Chr 166:1745+ O 30 '47
Democratic capitalism is worth fighting for. C. Francis. Factory Management 105:102-5 Ja '47
Don't dilute capitalism. E. Schram. Comm & Fin Chr 165:3110+ Je 12 '47
Free enterprise; a challenge to business; address before National security traders association, Boston. L. F. Whittemore. Comm & Fin Chr 166:7+ sec 2 Ag 28 '47
Free enterprise; an old coin, but good as gold. G. A. Price. Comm & Fin Chr 165: 1929+ Ap 10 '47
Free enterprise and the clenched fist. A. W. Coolidge. Pub Util 40:201-4 Ag 14 '47
Free enterprise must develop own emotional appeal. W. Sulzbach. Comm & Fin Chr 165:3109+ Je 12 '47
Free markets and the free enterprise system. L. H. Haney. Comm & Fin Chr 165:1647+ Mr 27 '47
Freedom is our heritage; free enterprise is hope of world. G. D. Palmer. Comm & Fin Chr 166:910+ S 4 '47
Fundamental issue; free enterprise vs. collectivism. A. E. Grauer. Edison Elec Inst Bul 15:71-3 Mr '47
Great challenge to capitalism. P. G. Hoffman. Advanced Management 11:127-31 D '46
Great delusion; where Marx went wrong. C. E. Wilson. Mech Eng 69:658-60 Ag '47
Industry and the common interest. J. E. McCarthy. Comm & Fin Chr 164:2758+ N 28 '46
Let industry show the way. E. F. Jeffe. Comm & Fin Chr 166:320+ Jl 24 '47
Making the free market free. Fortune 36:2-4 N '47
Management-stockholder versus union-worker relations. M. Woll. Comm & Fin Chr 165:2859+ My 29 '47
NAM treatise upholds present system of government and business; stresses individual enterprise. Comm & Fin Chr 165:1846 Ap 3 '47
National defense for American industry. W. C. Mullendore. Pub Util 39:757-65 Je 5 '47
Outlook for freedom. P. G. Hoffman. Comm & Fin Chr 165:2194+ Ap 24 '47; Same abr. East Underw 48:4+ Ap 18 '47
Popular economic misconceptions regarding competitive private enterprise and nature of profits. F. M. Surface. Comm & Fin Chr 166:231+ Jl 17 '47
Price and profit control perils free enterprise; Guaranty trust company of New York. Comm & Fin Chr 164:2795 N 28 '46
Private property in a socialistic world. A. A. Berle, jr. Trusts & Estates 83:421-3 N '46
Reappraising our American opportunity. H. C. Link. Comm & Fin Chr 165:3348+ Je 26 '47
Survival of a free economy. V. Jordan. Comm & Fin Chr 165:1650+ Mr 27 '47
We must have economic freedom! H. E. Stassen. Comm & Fin Chr 166:1113+ S 18 '47
Western Europe; testing ground for private enterprise. V. L. Horoth. Mag of Wall St 80:259-61+ Je 7 '47
What future for capitalism? symposium. G. F. Shirras and others. Comm & Fin Chr 166:1207+ S 25 '47
Why American enterprise keeps ticking. V. Jordan. Comm & Fin Chr 165:3111+ Je 12 '47

CAR. See Cars

CAR axles
Car-axle production machinery. il Ry Mech Eng 121:490-1 S '47
Cross Transfer-matic finishes railroad axles in three steps. il Am Mach 91:170+ Jl 17 '47
Fabricated steel axleboxes on the L.N.E.R. il Engineer 184:42 Jl 11 '47; Engineering 164:80 Jl 25 '47
Fabricated steel plate axleboxes. il Engineer 183:133 Ja 31 '47; Engineering 163:43 Ja 10 '47
Vertical-axle generator drive. il diag Ry Mech Eng 121:484-5 S '47

CAR cards. See Advertising cards

CAR cleaning
Dust removal from electric railway rolling stock. il Engineer 184:148 Ag 15 '47
Railroad car cleaning. il Soap & San Chem 23:33-5+ Jl '47

CAR cooling
Car air conditioning equipment; report of Electrical section, Mechanical division, A.A.R. il Ry Mech Eng 120:679-81 D '46
Electronic air conditioning control; Chesapeake & Ohio will equip 284 new cars. il Ry Mech Eng 121:32-4 Ja '47; Same. Ry Age 122:498-9+ Mr 8 '47
Refrigerating unit mounted inside car. il Ry Age 122:411 F 22 '47
Refrigeration is principal feature in revolutionary train of tomorrow. il Refrig Eng 53:523+ Je '47

CAR couplings
Automatic couplers for railway rolling stock. R. I. D. Arthurton. diags Inst Mech Eng J & Proc 156:Proc74-7, pl 1-2; Discussion. 78 Je '47

See also
Draft gears

CAR decoration. See Cars—Decoration

CAR department officers' association
Annual meeting, 36th, Chicago, Sept. 15-18. Ry Mech Eng 121:552-64 O '47

CAR departments. See Railroads—Car departments

CAR dumpers
Electric shaker speeds unloading of railroad cars at Carbon fuel storage and barge plant. il Coal Age 51:90-1 D '46
Rock dump features efficiency and safety. il Coal Age 52:94+ Mr '47

CAR ferries. See Train ferries

CAR heating
Car air conditioning equipment; report of Electrical section, Mechanical division, A.A.R. il Ry Mech Eng 120:679-81 D '46
Electronic air conditioning control; Chesapeake & Ohio will equip 284 new cars. il Ry Mech Eng 121:32-4 Ja '47; Same. Ry Age 122:498-9+ Mr 8 '47
Maintenance of steam-heat equipment. L. A. Richardson. Ry Mech Eng 120:671-3 D '46
Passenger-car electrical and heating equipment; equipment weight reduction. H. H. Hanft. Mech Eng 68:1041-4 D '46
Rador car heating system. il Ry Mech Eng 121:264 My '47; Same. Ry Age 123:162 Jl 26 '47

CAR inspection
Inspection railroad car parts; Magnaflux method. C. B. Bryant. Ry Mech Eng 121: 73-4; Discussion 74-7 F '47

CAR lighting
Car air conditioning and lighting. il Ry Age 121:815-17 N 16 '46
Fluorescent lighted car operating in New York subway. il Elec Eng 66:937-8 S '47
Fluorescent lighting; experimental tramcar installation at Sheffield. il plans diag Electrician 137:1293-4 N 8 '46; Abstract. Elec R (Lond) 139:756 N 8 '46
Fluorescent lighting on a Sheffield tramcar. il Light & Lighting 39:224 D '46
Improvements in London underground coaches; fluorescent lighting and collector-shoe gear. il Engineering 163:391 My 9 '47
London transport experiments; new car lighting. Elec R (Lond) 140:397 Mr 14 '47

CAR load. See Freight car service—Car load

CAR numbers. See Freight cars—Numbering

CAR painting and finishing
Passenger car painting and its maintenance; report of Car department officers' assn. Ry Mech Eng 121:557-9 O '47

CAR seats
Riding comfort of the passenger. N. D. Mattison. Ry Age 123:660 O 18 '47

CAR shakeout
Robins shakeout taps new industrial market. A. E. Conover. il Sales Management 58:58+ Ap 15 '47

CAR shops
Builds modern coach-repair shop; Chicago, Rock Island & Pacific. il plan Ry Age 123: 241-4 Ag 9 '47

Equipment

Assembling box cars at Reading. il Ry Mech Eng 121:462-4+ S '47
Milwaukee passenger coach shop. il diags Ry Mech Eng 121:248-50 My '47

CAR springs
Torsion springs ride rails. il Bsns W p56+ Mr 15 '47

CAR trucks
Chrysler high-speed freight truck. il Ry Age 122:1222-3 Je 14 '47
High speed freight car truck. il diags Ry Mech Eng 121:94 F '47
Milwaukee passenger truck shop. il Ry Mech Eng 121:357-60 Jl '47
Tests of bogie-control device. il diag Engineering 164:249-50 S 12 '47
Unsymmetrical sections; simple procedure facilitates calculation of properties. A. B. Cox. il diags Machine Design 19:129-32 F '47

CAR wheels
Car-wheel maintenance mechanized; Pittsburgh Glenwood wheel shop of the Baltimore & Ohio. L. W. Sayle. il layout plan Am Mach 90:104-6 N 21; 114-16 D 5 '46
Improvements at the D. & R.G.W. wheel shop. C. Eisele. il Ry Mech Eng 121:254-5 My '47
Relation of mechanical properties and internal stresses to casting design. R. A. Flinn. diag Foundry 75:106-9+ Ap '47
Wheel shop handling devices. il diags Ry Mech Eng 121:78, 137, 186, 361 F-Ap, Jl '47

Manufacture

Car wheel boring and turning mill. il Ry Mech Eng 120:686-7 D '46
Machining steel car wheels. il Steel 120:115 Ja 13 '47
Modern improvements in the chilled car wheel. L. H. Rudesill. il diag Foundry 75: 84-7+ F '47
Niles car-wheel lathe. il Ry Mech Eng 121: 206 Ap '47; Am Mach 91:180 My 8 '47
Sellers 75 high-production car wheel lathe. il Ry Mech Eng 121:146-7 Mr '47

Testing

Study of the riding and wearing qualities of railway carriage tyres having various profiles. C. W. Newberry. diags Inst Mech Eng J & Proc 153 (War emergency issue no 2): 25-35, pl 1-2; Discussion. 35-40 '45
Testing wrought steel wheels. R. L. Kenyon. il diags Ry Mech Eng 121:347-50+ Jl '47

CARACAS, Venezuela
See also
Housing—Caracas, Venezuela

CARBAMINOYLCHOLINE. See Doryl

CARBAZOLE
Carbazoles, carbolines, and related compounds; quindoline derivatives. S. J. Holt and V. Petrow. Chem Soc J p607-11 My '47
Friedel-Crafts reaction in the carbazole series. S. G. P. Plant and J. F. Powell. Chem Soc J p937-9 Jl '47
Infra-red spectrum and structural diagnosis: substituted carbazoles. R. E. Richards. Chem Soc J p978-9 Jl '47
Polyvinyl carbazole in Germany; Luvican. G. M. Kline. diags Mod Plastics 24:157-8+ N '46
Polyvinyl carbazole resin. W. M. Shine. il diags Mod Plastics 25:130-2+ S '47
Recent advances in the chemistry of carbazole. N. Campbell and B. M. Barclay. Chem R 40:359-80 bibliog(103 ref, p378-80) Je '47
Schmidt's so-called 1 : 4-dihydrocarbazole. B. M. Barclay, N. Campbell and R. S. Gow. Chem Soc J p997-9 N '46

CARBETHOXY group
Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S. Johnson, J. W. Petersen and W. P. Schneider. bibliog Am Chem Soc J 69:74-9 Ja '47

CARBIDE and carbon chemicals corporation
Chemical wealth in the Kanawha valley; Carbide's South Charleston plant. T. R. Ragland. il Manuf Rec 116:78-9+ Ag '47

CARBIDE balls. See Balls, Carbide

CARBIDE cutting tools. See Cutting tools, Carbide

CARBIDES
Carbide parts with drilled and tapped holes for fastening screws. il Mach 53:187-8 Ap '47
Carbides in powder metallurgy. J. R. Longwell. il diags Steel 119:130+ D 2 '46
Drilling, tapping of carbide parts made possible by Carboloy process. il Am Mach 91: 161 Ap 10 '47; Steel 120:94 Mr 31 '47; Mach 53:187-8 Ap '47; Iron Age 159:56 Ap 17 '47
Effect of changes in condition of carbides on some properties of steel. J. B. Austin. il diags Am Soc for Metals Trans 38:28-69 bibliog(p68-9) '47; Excerpts. Metal Prog 50: 1191-5 D '46; Abstract. Iron Age 158:54-6 N 28 '46
French carbide patents. W. G. Cass. Chem & Eng N 24:3392 D 25 '46
Manufacture and application of sintered carbides. E. M. Trent. il Engineer 184:396-7 O 24 '47
Method of drilling and tapping carbides. il Steel 120:94 Mr 31 '47

CARBIDES—*Continued*
Powder metallurgy; hard metal carbides. Engineer 184:119-21 Ag 8 '47
Principles of design for carbides and some unusual applications. il diags Iron Age 159:56-7 Mr 27 '47
Some metallurgical aspects of cemented carbides. J. C. Redmond. bibliog il Iron Age 159:42-5+ Ja 30 '47

See also
Cutting tools, Carbide — Silicon carbide; Tungsten carbide
Iron carbide

CARBINOLS
Concerning aromatic acetylenic carbinols. P. Rutan and C. E. May. bibliog Am Chem Soc J 69:2017-18 Ag '47
Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47
Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47
Reactions of carbinols in the presence of alkali. G. H. Hargreaves and L. N. Owen. Chem Soc J p750-8 Je '47
Researches on acetylene compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Studies on resin acids; carbinols. H. H. Zeiss. Am Chem Soc J 69:302-3 F '47

CARBITOL
Acute toxicity and general systemic actions of diethylene glycol monoethyl ether (carbitol). P. J. Hanzlik and others. bibliog J Ind Hygiene 29:190-5 My '47
Comparative chronic toxicity of diethylene glycol monoethyl ether (carbitol) and some related glycols; results of continued drinking and feeding. P. J. Hanzlik and others. bibliog J Ind Hygiene 29:233-41 Jl '47
Hydrolysis by carbitolic caustic. R. Macy. Science 105:527-8 My 16 '47

CARBOHYDRATES
Carbohydrate C-nitroalcohols; the acetylated nitroölefins. J. C. Sowden and H. O. L. Fischer. bibliog Am Chem Soc J 69:1048-50 My '47
Carbohydrate components of biologically active materials. W. N. Haworth. Chem Soc J p582-9 Ap '47
Digestible carbohydrates in the diet of human beings. J. R. Marrack. bibliog Chem & Ind p619-20 O 11 '47
Spray dried whole eggs improved with carbohydrates. E. H. Dawson and others. il Food Ind 19:483-6+ Ap '47
Studies of sewage purification; the utilization of organic substrates by activated sludge. O. R. Placak and C. C. Ruchhoft. bibliog Pub Health Rep 62:697-716 My 16 '47

See also
Sugar

CARBOLIC acid. See Phenol

CARBOLOY. See Tungsten carbide

CARBON
Carbon-hydrogen ratios of distillate fuel oils. S. P. Cauley and E. B. Delgass. Oil & Gas J 46:83-4 Jl 19 '47
Collision cross sections of carbon and hydrogen for fast neutrons. W. Sleator, jr. bibliog diag Phys R 72:207-19 Ag 1 '47
High pressure bands of carbon and the formation of C_2 molecules. G. Herzberg. bibliog Phys R 70:762-4 N 1 '46
pH of nonaqueous colloidal carbon sludges. M. Brooke. Ind & Eng Chem 39:846 Jl '47
Influence of carbon content upon the transformations in 3 per cent chromium steel. T. Lyman and A. R. Troiano. il Am Soc for Metals Trans 37:402-44 bibliog(p444); Discussion. 444-8 '46
Maximum carbon in gas carburizing. G. H. Boss. il Metal Prog 50:657-8 O '46
Neutron-proton and neutron-carbon scattering cross sections for fast neutrons. C. L. Bailey and others. bibliog diag Phys R 70:583 N 1 '46
Neutrons from C^{12} + D. W. E. Bennett and H. T. Richards. Phys R 71:565-7 My 1 '47
Re-evaluation of the covalent radii of some of the elements. W. Gordy. bibliog J Chem Phys 15:81-4 F '47
^5S state of carbon. A. G. Shenstone. bibliog il Phys R 72:411-14 S 1 '47
Simple carbon-resistance thermometer for low temperatures. H. A. Fairbank and C. T. Lane. diag R Sci Instr 18:525-6 Jl '47
Strain in non-tetrahedral carbon atoms. C. A. Coulson and W. E. Moffitt. bibliog J Chem Phys 15:151 Mr '47
Total cross sections of carbon and hydrogen for neutrons of energies from 35 to 490 kev. D. H. Frisch. diags Phys R 70:589-92 N 1 '46
Use of carbon in the blast furnace and heat balances. T. L. Joseph and K. Neustaetter. Blast F & Steel Pl 35:824-31, 944-8 Jl-Ag '47

See also
Carbon black — Diamonds; Graphite
Coal — Petroleum coke
Coke

Analysis
Automatic microdetermination of carbon and hydrogen. R. O. Clark and G. H. Stillson. il diag Anal Chem 19:423-6 Je '47
Determination of carbon and hydrogen by combustion; unitized dual apparatus and improved procedure. D. D. Tunnicliff and others. bibliog il diags Ind & Eng Chem Anal ed 18:710-18 N '46
Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47
Determination of carbon in low-carbon steel; low-pressure gasometric method. C. E. Nesbitt and J. Henderson. bibliog il diags Anal Chem 19:401-4 Je '47
Elementary isotopic analysis; determination of carbon. A. V. Grosse and others. Science 105:100-1 Ja 24 '47
Semimicrodetermination of carbon and hydrogen. E. C. Horning and M. G. Horning. bibliog il Anal Chem 19:688-90 S '47
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47

Isotopes
Beta-ray spectrum of C^{14}. P. W. Levy. Phys R 72:248 Ag 1 '47
Carbon dioxide filled Geiger-Müller counters. S. C. Brown and W. W. Miller. bibliog R Sci Instr 18:496-500 Jl '47
Carbon 14 production from ammonium nitrate solution in the chain-reacting pile. L. D. Norris and A. H. Snell. bibliog diag Science 105:265-7 Mr 7 '47
Carburizing experiment with radioactive carbon. J. K. Stanley. diag Metal Prog 52: 227-9 Ag '47
Chemical forms assumed by C^{14} produced by neutron irradiation of beryllium nitride. P. E. Yankwich. bibliog J Chem Phys 15:374-5 Je '47
Correcting for the absorption of weak beta-particles in thick samples; general method for use in tracer work; data presented for samples of $BaC^{14}O_3$. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47
Cosmic radiocarbon and natural radioactivity of living matter. A. V. Grosse and W. F. Libby. Science 106:88-9 Jl 25 '47
Decarbonylation of ethyl pyruvate. M. Calvin and R. M. Lemmon. Am Chem Soc J 69: 1232-3 My '47
Deposition of C^{14} in bone. W. Bloom and others. Science 105:45 Ja 10 '47
Enrichment of C^{13} and O^{18} by a countercurrent gaseous exchange process using thermal diffusion. T. I. Taylor and R. B. Bernstein. Am Chem Soc J 69:2076 Ag '47
Evidence for the reaction O^{17} (n,α) C^{14}. E. P. Hincks. Phys R 70:770-1 N 1 '46

CARBON—Isotopes—*Continued*
Half-life determination of carbon (14) with a mass spectrometer and low absorption counter. L. D. Norris and M. G. Inghram. Phys R 70:772-3 N 1 '46
High-efficiency counting of long-lived radioactive carbon as CO_2. W. W. Miller. bibliog Science 105:123-5 Ja 31 '47
Infra-red spectrum and molecular constants of $C^{12}O^{16}$ and $C^{13}O^{16}$. R. T. Lagemann and others. bibliog Phys R 72:284-9 Ag 15 '47
Methanol labeled with radioactive carbon 14 available from Clinton laboratories. Chem & Eng N 25:2292 Ag 11 '47
Production of radioactive carbon monoxide from barium carbonate. J. T. Kummer. diag Am Chem Soc J 69:2239 S '47
Radiocarbon from cosmic radiation. E. C. Anderson and others. Science 105:576-7 My 30 '47
Radiographs with C^{14}. A. V. Grosse and J. C. Snyder. il Science 105:240-1 F 28 '47
Synthesis of carbon radioactive methyl iodide and methanol from carbon dioxide. B. M. Tolbert. diag Am Chem Soc J 69:1529-31 Je '47
Synthesis of 1,2,5,6-dibenzanthracene labeled in the 9-position with carbon-14. C. Heidelberger, P. Brewer and W. G. Dauben. Am Chem Soc J 69:1389-91 Je '47
Synthesis of organic compounds labelled with isotopic carbon. W. Sakami, W. E. Evans and S. Gurin. bibliog Am Chem Soc J 69: 1110-12 My '47
Use of C^{13} and C^{14} in medical research. D. W. Wilson. Franklin Inst J 244:209-19 S '47

CARBON, Activated
Activated carbon protects apples in storage. il Heat & Ven 44:80 Je '47
Adsorption equilibria of liquid mixtures of carbon tetrachloride-methanol with charcoal. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1172-81 S '47
Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25°C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1154-71 S '47
Adsorption of butadiene on activated charcoal. H. N. Taylor and C. F. Bonilla. bibliog diag Ind & Eng Chem 39:871-6 Jl '47
Decolourization by vegetable carbons; Percofil process; Collactivit process; abstracts. L. Wickenden; D. Ramondt. Chem & Ind p445 D 14 '46
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Effect of physical adsorption on the electrical resistance of activated carbon. R. McIntosh and others. bibliog diag J Chem Phys 15:17-27 Ja '47
Electrode potentials of carbon in acid electrolytes. N. M. Winslow. bibliog Electrochem Soc Trans 92 (preprint 3):33-48 '47
Hypersorption, new fractionating process. C. Berg and W. E. Bradley. il diags Pet Eng 18:115-16+ My '47
Hypersorption process for separation of light gases. C. Berg. il diags Pet Processing 2: 300-1+ Ap '47
Length changes of activated carbon rods caused by adsorption of vapors. R. S. Haines and R. McIntosh. diags J Chem Phys 15:28-38 Ja '47
Méthode de mesure de la chaleur de mouillage des charbons décolorants. M. Pesez and R. Berret. diags Chimie & Ind 58:28-30 Jl '47
Progress in solvent recovery. flow sheet(p136-9) il Chem Eng 54:98-9 Ja '47
Purification of aqueous solutions. D. Ramondt. Chem & Ind p543-5 S 6 '47
Railway car ventilation problem; activated carbon for odor removal. diags Sheet Metal Worker 38:67-8+ Je '47
Rate of adsorption of phosgene and chloropicrin on charcoal. M. Dole. bibliog J Chem Phys 15:447-54 Jl '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46
Use of activated carbon in treating open reservoirs. H. E. Bailey and J. Studley. il plan diags N E Water Works Assn J 61:135-44 Je '47; Same. Water & Sewage Works 94:219-22 Je '47

CARBON, Structural
Acetic acid vs. materials of chemical plant construction; carbon, graphite, karbate. E. S. Malkin. Chem Eng 53:253 N '46
Blast furnace vitamins; carbon, oxygen and pressure. O. R. Rice. diag Blast F & Steel Pl 35:89-90 Ja '47
Carbon and graphite; properties, characteristics, fabrication, etc. diags Machine Design 19:157-60 Jl '47
Carbon bottoms for blast furnaces; abstract. C. J. Fleisch. Steel 121:102 O 20 '47
Carbon brazes copper parts. W. Scott. il Am Mach 91:98-100 N 6 '47
Carbon soldering fixtures. F. C. Dupre. il diags Am Mach 91:101-3 My 8 '47
Chemical engineering materials of construction; review of literature from start of World war II; carbon and graphite. C. E. Ford. bibliog(34 ref) il Ind & Eng Chem 39:1202-4 O '47
Design for blast furnace hearths; abstract. W. S. Unger. Iron Age 159:64 Je 12 '47
Progress report on carbon linings for blast furnaces. V. J. Nolan. il Blast F & Steel Pl 35:454-60 Ap '47
Sulphur dioxide versus construction materials; carbon and graphite. L. C. Werking. Chem Eng 54:222+ S '47
Wet and dry chlorine vs. materials of chemical plant construction; carbon, graphite. L. C. Werking. Chem Eng 54:226+ F '47

CARBON black
Carbon black faces progressive changes. G. Weber. flow diag il Oil & Gas J 45:94-8 My 3 '47
Carbon black placed under consolidated license procedure. Oil Paint & Drug Rep 150: 3+ N 25 '46
Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61: 232-4 Ag '47
Effect of electron bombardment upon carbon black. J. H. L. Watson. bibliog il J Ap Phys 18:153-61 F '47
Effect of quantity of black and softener on GR-S; Philblack A-1.75 sulfur system cured at 280° F. L. R. Sperberg, L. A. Bliss and J. F. Svetlik. Ind & Eng Chem 39:511-14 Ap '47
Electrical conductivity of GR-S and natural rubber stocks loaded with Shawinigan and R-40 blacks. P. E. Wack and others. bibliog il J Ap Phys 18:456-69 My '47
From bags to bulk with mechanized handling. il Factory Management 105:78-9 Mr '47
Furnace blacks, present and future. W. R. Smith and B. A. Wilkes. diags India Rubber World 116:361-3+ Je '47
Heats of adsorption on carbon black. R. A. Beebe and others. bibliog diag Am Chem Soc J 69:95-101 Ja '47
Importance of carbon black; abstracts. L. J. Venuto. Rubber Age 61:337 Je '47; India Rubber World 116:369 Je '47
Observations of crystal structure and particle shape in electron micrographs of several carbon blacks. J. H. L. Watson. il diags Electrochem Soc Trans 92 (preprint 4):49-61 '47
Physico-chemical aspects of reinforcement. G. Antonoff. bibliog diags Rubber Age 60: 187-92 N '46
Processing of channel blacks in a GR-S tread stock. G. L. Brown. il India Rubber World 116:787-8 S '47
Softeners for GR-S tires; evaluation of combinations of carbon black and plasticizer as extending agents. F. M. McMillan and others. bibliog il Rubber Age 61:555-62 Ag '47
Some rheological properties of carbon black suspensions; discussion. J. E. Arnold. Chem Age (Lond) 55:775 D 21 '46
Statex K, furnace carbon superior to channel black. R. L. Carr and W. B. Wiegand. il India Rubber World 116:205-7 My '47
Statex K; new furnace carbon of channel black quality. R. L. Carr. il Rubber Age 61:66-7+ Ap '47

CARBON black—*Continued*
Studies on carbon black; electrometric titration. D. S. Villars. bibliog Am Chem Soc J 69:214-17 F '47
Swelling of rubber; effect of carbon blacks on the swelling of vulcanized GR-S. F. S. Rostler and R. E. Morrison. bibliog Rubber Age 61:59-62 Ap '47

Manufacture

Carbon black manufacture; high utility value dependent upon low-cost natural gas. J. F. Gallie. flow diag il diags Pet Processing 1: 197+ N '46
Columbian Carbon introduces new furnace process. il Chem & Eng N 25:1115 Ap 21 '47
German carbon blacks. Chem Age (Lond) 57: 86 Jl 19 '47

Statistics

Production of carbon black establishes record in 1946. Rubber Age 61:589 Ag '47

Transportation

Bulk handling of SRF pellets from car to Banbury accomplished. il Rubber Age 60:83 O '46; Same. India Rubber World 115:237 N '46

CARBON compounds
Recent developments in dielectric materials. W. Jackson. bibliog Inst E E J 94 pt 1:29-31 Ja '47; Same. Inst E E J 94 pt 3:5-7 Ja '47
Synthesis of organic compounds labelled with isotopic carbon. W. Sakami, W. E. Evans and S. Gurin. bibliog Am Chem Soc J 69: 1110-12 My '47

See also
Carbohydrates
Chains, Chemical
Chemistry, Organic
Fluorocarbons
Hydrocarbons

CARBON dioxide
Absorption of carbon dioxide with ethanol amines; rate of absorption of carbon dioxide with mono-, di- and triethanol amine; abstract. A. L. Schneerson and A. G. Leibusch. Chem Eng 54:268+ S '47
Acetylene from carbon dioxide; abstract. W. J. Arrol and R. Glascock. Chem Age (Lond) 56:799 Je 21 '47
Carbon dioxide filled Geiger-Müller counters. S. C. Brown and W. W. Miller. bibliog R Sci Instr 18:496-500 Jl '47
CO_2 unstable above 1000° C; excerpt from Making true porcelain dinnerware, by R. E. Gould. Cer Ind 49:94+ Jl '47
Comparison of rectification and desorption in packed columns; desorption tests on carbon dioxide-water and oxygen-water, and rectification tests on isopropanol-water. D. W. Deed, P. W. Schutz and T. B. Drew. bibliog diags Ind & Eng Chem 39:766-74 Je '47
Corrosion in high-pressure gas-condensate wells. H. A. Carlson. bibliog Oil & Gas J 45:81-4 D 21 '46
Equilibrium between gaseous carbon dioxide and hydrogen sulphide and solutions of alkali carbonates, bicarbonates and hydrosulphides. I. G. C. Dryden. bibliog Soc Chem Ind J 66:59-64 F '47
Exchange of carbon dioxide between barium carbonate and the atmosphere. W. D. Armstrong and J. Schubert. Science 106:403-4 O 24 '47
High-efficiency counting of long-lived radioactive carbon as CO_2. W. W. Miller. bibliog Science 105:123-5 Ja 31 '47
pH of waters from gas-condensate wells saturated with carbon dioxide at various pressures. H. A. Carlson. bibliog Pet Eng 18: 160+ N '46
Investigation of the properties of cellulose oxidized by nitrogen dioxide; evolution of carbon dioxide from uronic acids and polyuronides. E. W. Taylor and others. bibliog Am Chem Soc J 69:342-7 F '47
Kinetics of the reactions of steam and carbon dioxide with carbon. W. K. Lewis. Chem & Eng N 25:2815-18 S 29 '47
New heat treating atmosphere producer for neutralene gas. A. G. Hotchkiss and H. M. Webber. flow diag il diag Iron Age 158:48-55 N 21 '46; Same cond. Gen Elec R 49:21-7 N '46
On the $^2\Pi_u \rightarrow {}^2\Pi_g$ bands of CO_2+. S. Mrozowski. bibliog il Phys R 72:682-98 O 15 '47
Pressure broadening in the infra-red and optical collision diameters. N. D. Coggeshall and E. L. Saier. bibliog J Chem Phys 15:65-71 Ja '47
Production of synthesis gas by reacting light hydrocarbons with steam and carbon dioxide. R. E. Reitmeier and others. Pet Processing 2:732-3 O '47
Recording vacuum grating spectrometer for the infra-red. E. E. Bell and others. bibliog il diags R Sci Instr 18:48-56 Ja '47
Removal of carbon dioxide from atmospheric air. N. A. Spector and B. F. Dodge. flow sheet flow diag Am Inst Chem Eng Trans 42:827-48 O-D '46
Some case histories of corrosion problems in chemical process equipment; effect of carbon dioxide in steam. W. Z. Friend and F. L. La Que. Am Inst Chem Eng Trans 42:854-7 O-D '46; Same. Pet Eng (Ref annual) 18:214+ Jl 1 '47
Synthesis of carbon radioactive methyl iodide and methanol from carbon dioxide. B. M. Tolbert. diag Am Chem Soc J 69:1529-31 Je '47
Twenty-five years of corrective treatment for corrosion; use of lime to control carbon dioxide. E. S. Hopkins. bibliog il diag Pub Works 78:19-21+ Jl '47
Vapour pressures of ammonia and carbon dioxide in equilibrium with aqueous solutions at 90°. E. H. M. Badger and D. S. Wilson. diag Soc Chem Ind J 66:84-6 Mr '47

Analysis

Colorimetric method for determination of traces of carbon dioxide in air. N. A. Spector and B. F. Dodge. Anal Chem 19:55-8 Ja '47
Combined absorption and titration tube for volumetric determination of carbon dioxide. E. J. Roberts. bibliog diags Anal Chem 19:616-17 Ag '47
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47
Volumetric method for the determination of carbon dioxide. J. J. Fahey. diag In U S Geol S Bul 950:139-41 '46

Industrial applications

Use of CO_2 to prevent scald of stored apples. E. P. Christopher. bibliog il Refrig Eng 53:311-14+ Ap '47

See also
Carbon dioxide, Solid
Fire extinguishers, Carbon dioxide

Therapeutic use

Treatment of respiratory depression and asphyxia. Ind Med 15:640-1 N '46

CARBON dioxide, Liquid
Piping, industry's best transportation system; pipe line for carbon dioxide use in fire extinguishers; Walter Kidde & co. T. E. Kennedy. il Heating-Piping 18:87-8 D '46

CARBON dioxide, Solid
Acrylic applicator. il Mod Plastics 24:194-5 Ag '47
Disposable icebox; shipping container using dry ice. il Bsns W p34-5 Ja 11 '47
Dry ice man cometh; controlling an oil well Pet Eng 18:129 Je '47
Dry ice refrigeration for air-borne perishables. D. E. Cox and H. W. Rahn. bibliog il Refrig Eng 53:404-7 My '47
Plant freezer for fitting huge eccentric shafts. il Steel 120:98-9+ F 10 '47
Shrinking of machine parts by means of dry ice. Locomotive 46:213-15 Jl '47

CARBON dioxide fire extinguishers. See Fire extinguishers, Carbon dioxide

CARBON dioxide recorders
Pyrorex CO_2 indicator and recorder. il diag Engineering 162:512-14 N 29 '46

CARBON disulfide
Action of acrylonitrile on viscose; effect on the normal aging process. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:222-4 F '47
Infrared absorption spectrum of carbon disulfide. E. K. Plyler and C. J. Humphreys. bibliog J Res Nat Bur Stand 39:59-65 Jl '47

CARBON disulfide—*Continued*

Analysis

Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37: 798-803 O '47

CARBON monoxide

Alcohols above C_3 produced from olefins, CO and hydrogen. il diags Chem Ind 60:232-3 F '47

Dissociation energy of CO. H. D. Hagstrum. bibliog Phys R 71:376-7 Mr 15 '47

Effect of combined carbon monoxide on the power factor of polythene. W. Jackson and J. S. A. Forsyth. bibliog Inst E E J 94 pt 3:55-7 Ja '47

Equilibrium atom and free radical concentrations in carbon monoxide flames and correlation with burning velocities. C. Tanford and R. N. Pease. bibliog J Chem Phys 15:431-3 Jl '47

Hydrogen cyanide from carbon monoxide and ammonia. H. Burrell. Chem & Eng N 25: 1939 Jl 7 '47

Infra-red spectrum and molecular constants of $C^{12}O^{16}$ and $C^{13}O^{16}$. R. T. Lagemann and others. bibliog Phys R 72:284-9 Ag 15 '47

Production of radioactive carbon monoxide from barium carbonate. J. T. Kummer. diag Am Chem Soc J 69:2239 S '47

Reaction of propane with carbon monoxide in the presence of aluminum chloride. H. Pines and V. N. Ipatieff. bibliog Am Chem Soc J 69:1337-9 Je '47

Analysis

Application of reflectance spectrophotometry to quantitative microanalysis. J. Sendroy, jr. and W. C. Granville. bibliog Anal Chem 19:500-1 Jl '47

Carbon-monoxide detector. Comp Air Mag 52:156 Je '47

Detection of carbon monoxide or town gas in air. L. T. Minchin. bibliog diags Gas J (Lond) 251:100+ Jl 9 '47

Determination of carbon monoxide; microgravimetric method. J. M. Salsbury, J. W. Cole and J. H. Yoe. bibliog diag Anal Chem 19:66-8 Ja '47

Determination of small amounts of carbon monoxide in air by various reference methods. M. Shepherd. bibliog J Res Nat Bur Stand 38:351-8 Mr '47

Extremely sensitive carbon monoxide indicator developed by Bureau chemists. Franklin Inst J 242:325-6 O '46; Same cond. Heat & Ven 43:114+ D '46

Instrumentation to ensure safety in the gas industry. J. F. Anthes. Gas Age 100:23+ S 18 '47

Rapid determination of small amounts of carbon monoxide; preliminary report on the NBS colorimetric indicating gel. M. Shepherd. Anal Chem 19:77-81 F '47

CARBON monoxide poisoning

Avoid carbon monoxide. H. W. Boggess. Oil & Gas J 45:91+ D 14 '46

Carbon monoxide in the mine; how to keep it from following you. diags Coal Age 52:84+ Ja '47

Watch out for monoxide; among poison gases, fumes of blasting hold distinguished place. H. B. Hicks. Can Min J 68:254-6 Ap '47

CARBON oxysulfide. See Carbonyl sulfide

CARBON selenides

Preparation, properties, and chlorination products of carbon diselenide. D. J. G. Ives, R. W. Pittman and W. Wardlaw. diag Chem Soc J p 1080-3 Ag '47

CARBON tetrabromide

Bromine-sensitized photochemical formation of hexabromoethane from carbon tetrabromide. L. B. Seely, jr. and J. E. Willard. Am Chem Soc J 69:2061 Ag '47

Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47

CARBON tetrachloride

Adsorption equilibria of liquid mixtures of carbon tetrachloride-methanol with charcoal. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51: 1172-81 S '47

Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25° C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1154-71 S '47

Automatic fire extinguishers, carbon tetrachloride bulb type. Consumers Res Bul 20: 10 S '47

Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 130-1 N '46

Chlorinated hydrocarbons in solvent mixtures. Paint Oil & Chem R 110:26 F 20 '47

Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47

Fractionation of binary mixtures in packed columns. J. A. Storrow and B. D. Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47

Investigation of the properties of cellulose oxidized by nitrogen dioxide; study of mechanism of oxidation in presence of carbon tetrachloride. P. A. McGee and others. bibliog diags Am Chem Soc J 69:355-61 F '47

Isomerization of alkyl phosphites; reactions with chlorides of singular structure. G. M. Kosolapoff. Am Chem Soc J 69:1002-3 My '47

Laboratory explosions with ethylene and carbon tetrachloride; nature of the explosion; precautions in avoiding the explosion. R. O. Bolt; R. M. Joyce. Chem & Eng N 25:1866-7 Je 30 '47

Magnetic susceptibilities of the vapors of benzene and carbon tetrachloride. R. K. Reber and G. F. Boeker. bibliog diags J Chem Phys 15:508-13 Jl '47

Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H. Sisler and J. C. Cory. Am Chem Soc J 69:1515-19 Je '47

Photochemical investigations; photolysis of solutions of ethylene iodide. R. J. Grabenstetter and E. O. Wiig. bibliog Am Chem Soc J 69:1027-31 My '47

Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47

Preparation of chlorofluoromethanes by vapor-phase fluorination. E. T. McBee and others. bibliog diag Ind & Eng Chem 39: 404-9 Mr '47

Raman apparatus for quantitative polarization measurements. B. L. Crawford, jr. and W. Horwitz. bibliog diags J Chem Phys 15:268-74 My '47

Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47

Studies on phosphorylation; further observations on the reaction of phosphites with polyhalogen compounds in presence of bases and its application to the phosphorylation of alcohols. F. R. Atherton and A. R. Todd. Chem Soc J p674-8 My '47

Analysis

Colorimetric determination of carbon tetrachloride using a modified Fujiwara reaction. G. W. Rogers and K. K. Kay. bibliog J Ind Hygiene 29:229-32 Jl '47

Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37:798-803 O '47

Simple test detects tetrachloride vapors. Safety Eng 92:62 D '46; Nat Safety N 55: 112 Ja '47; Iron Age 159:57 Ja 9 '47

Test detects carbon-tetrachloride vapors. R. Gentzler. Power 91:636-7 S '47

CARBON tetrachloride poisoning

Duodenal ulcer following exposure to carbon tetrachloride; report of two cases. A. R. Smith. bibliog J Ind Hygiene 29:134-5 Mr '47

Effect of protein and carbohydrate intake on liver injury produced in dogs by carbon tetrachloride. V. A. Drill and others. bibliog J Ind Hygiene 29:180-4 My '47

How to use safely; carbon tetrachloride. il Safety Eng 93:66-7+ Ap '47

CARBONYL chloride. See Phosgene

CARBONYL compounds
Action of sodium hydride on certain carbonyl compounds; condensations and reductions. F. W. Swamer and C. R. Hauser. bibliog Am Chem Soc J 68:2647-9 D '46
α,β-Diamino ketones; addition and cleavage with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:1857-60 Ag '47
Reduction of αβ-unsaturated carbonyl compounds by sodium butoxide. C. Weizmann, M. Sulzbacher and E. Bergmann. Chem Soc J p851 Je '47
Simple modification of the Wolff-Kishner reduction. Huang-Minlon. bibliog Am Chem Soc J 68:2487-8 D '46
Structure of the organomagnesium complex in carbonyl bridge indenones. C. F. H. Allen and J. A. VanAllan. bibliog Am Chem Soc J 68:2387-90 N '46

CARBONYL sulfide
Bond distances in OCS from microwave absorption lines. T. W. Dakin and others. bibliog Phys R 71:640-1 My 1 '47
Microwave spectra of linear molecules. C. H. Townes and others. bibliog Phys R 72:513-14 S 15 '47

CARBORUNDUM company
Annual report. Comm & Fin Chr 165:1585 Mr 24 '47
Item-by-item package refurbishing spotlights Carborundum trade-mark. M. S. Ireys. il Sales Management 57:55 N 20 '46

CARBOSTYRIL
1-Methyl-4-carbostyrilcarboxaldehyde and certain condensation products. D. J. Cook and M. Stamper. bibliog Am Chem Soc J 69:1467-8 Je '47

CARBOWAX compounds
Solid polyethylene glycols (carbowax compounds); quantitative determination in biological materials. C. B. Shaffer and F. H. Critchfield. bibliog Anal Chem 19:32-4 Ja '47

CARBOXYL group
Decarboxylation of opianic acid. J. Weijlard, E. Tashjian and M. Tishler. Am Chem Soc J 69:2070-1 Ag '47
Investigation of the properties of cellulose oxidized by nitrogen dioxide; reaction of the carboxyl groups of polyuronides with calcium acetate. P. A. McGee, W. F. Fowler, jr. and W. O. Kenyon. bibliog Am Chem Soc J 69:347-9 F '47
Substituted styrenes; the decarboxylation of substituted cinnamic acids. C. Walling and K. B. Wolfstirn. bibliog Am Chem Soc J 69:852-4 Ap '47

CARBOXYLATION
Reppe's acetylene chemistry. M. H. Bigelow. Chem & Eng N 25:1038-42 Ap 14 '47

CARBOXYLIC acids
Action of Grignard reagents on esters of optically active carboxylic acids. A. Campbell and J. Kenyon. Chem Soc J p436-7 Ap '47
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-811 S '46
Amidines; preparation of cyanides, amides and amidines from carboxylic acids. P. Oxley and others. Chem Soc J p763-71 S '46
Chemistry of the pyrrocolines; the synthesis of pyrrocoline-2-carboxylic acid; a new route to pyrrocoline. E. T. Borrows and D. O. Holland. Chem Soc J p672-4 My '47
Course of cyclisation in the formation of alicyclic rings; effect of alkyl groups on the cyclisation of esters of polycarboxylic acids. R. N. Chakravarti. Chem Soc J p 1028-9 Ag '47
Influence of charge and configuration on the solvent power of benzene carboxylic acid ions. C. F. Failey. bibliog Am Chem Soc J 68:2619-24 D '46
Reactions of the halogens with the silver salts of carboxylic acids. J. Kleinberg. Chem R 40:381-90 Je '47
Rearrangements between primary ethanolamides of carboxylic acids and the corresponding aminoethylesters. A. P. Phillips and R. Baltzly. bibliog Am Chem Soc J 69: 200-4 F '47
Reversible esterification of carboxylic acids with isobutene and trimethylethylene; quantitative studies and synthetic applications. R. Altschul. bibliog Am Chem Soc J 68:2605-9 D '46

CARBOXYMETHYL cellulose
Carboxymethylcellulose. il Chem & Eng N 24:3222 D 10 '46
Carboxymethyl cellulose now produced in U.S. il Chem Ind 60:236-7 F '47
Cellulose derivative, forms useful films, improves detergents. il Sci Am 177:26-7 Jl '47
Practical application of carboxymethylcellulose in drilling muds. J. R. Pettigrove. il Oil & Gas J 46:170-3 O 11 '47
Sodium carboxymethylcellulose for papermaking. E. F. Horsey. bibliog Paper Tr J 125:52-6 Jl 24 '47

Analysis
Determination of carboxymethylcellulose in paper. R. W. Eyler and R. T. Hall. Paper Tr J 125:59-62 O 9 '47
Determination of degree of substitution of sodium carboxymethylcellulose. R. W. Eyler, E. D. Klug and F. Diephuis. bibliog diag Anal Chem 19:24-7 Ja '47

CARBOXY sulfide. See Carbonyl sulfide

CARBOYS
Vacuum dispenser for discharging carboys. J. B. Whittum. diag Chem Eng 54:122-3 Mr '47

CARBURETERS
Bendix Stromberg carburetor. il diags Aero Digest 54:38-9+ Mr '47
New small engine design; two-stroke single cylinder equipped with floatless carburetor. diags Automotive & Aviation Ind 96:35 Ap 15 '47

Manufacture
High production of carburetor die-castings; Ford motor co. H. Chase. il Mach 53:158-63 Jl '47

CARBURIZATION, Case. See Case hardening

CARBURIZING furnaces. See Furnaces, Carburizing

CARD system in business
Card and quantity-chart system controls 32,000-item inventory. W. F. Lent. il Am Mach 91:121-4 Mr 13 '47
Controlling parts flow. J. T. Lancaster. diag Steel 120:66-7+ Je 30 '47
Keeping track of 18,000 customers; Duquesne light company. il Am Bsns 17:12-13+ Je '47
Matching inventory with sales; experience of Buda company. il Am Bsns 17:24+ S '47
Quick facts about your employees. H. L. Corley, jr. il Am Bsns 17:18-19+ F '47
Sylvania's sales control system. E. J. Lynch. il Am Bsns 16:14-15+ N '46
See also
Punched card system

CARDBOARD
Cardboard mock-ups. M. P. Matthew. il Product Eng 18:120-2 Ja '47

CARDED merchandize. See Merchandize cards

CARDING
Carding of nylon staple. J. L. Beacon. il Rayon 28:137-9 Mr '47
See also
Cotton carding
Wool carding

CARDING machines
Cotton mills analyze card-stripping methods. il diag Textile World 97:141+ Mr '47
Installation technique improved for metallic clothing. C. R. Pease. il Textile World 97:118-20 Mr '47
New England machine works woolen card has 96-in. cylinder. diag Textile World 97:153 F '47
Some recent trends in woollen carding. R. W. Wright and A. Brearley. bibliog il diags Textile Inst J 38:P319-39 Ag '47
Whitin model L cotton card has improved details. il Textile World 97:146 Mr '47

CARDING of cotton. See Cotton carding

CARDING of wool. See Wool carding

CARDIOGRAPH
See also
Ballistocardiograph
Electrocardiograph

CARDIOPHONE
See also
Electrocardiophone

CARDS, Business. See Business cards

CARDS, Merchandize. See Merchandize cards

CAREY, James Barron, 1911-
Portrait. Bsns W p98 N 16 '46

CARGO airplanes. See Airplanes, Freight

CARGO handling
Cargo handling with crane gear. A. C. Rohn and others. il Marine Eng 52:72-4+ O '47
Dravo develops new shipping container. il Marine Eng 52:102+ S '47
Self propelled Diesel and Diesel electric deck whirleys. il Diesel Power 25:50-2 Mr '47
Unit-handling of steamship freight. il map Mech Handling 34:429-35 Ag '47
See also
Airplanes, Freight—Cargo handling
Loading and unloading—Airplanes
Loading and unloading—Ships
Stevedoring companies
Winches, Electric

CARGO release mechanisms. See Airplanes—Cargo release mechanisms

CARGO ships. See Freight ships

CARGOCAIRE. See Ships—Air conditioning

CARIBBEAN plywood and plastics corporation
Stock offered. Comm & Fin Chr 165:527 Ja 27 '47

CARIBBEAN region
Miami broadens world-trade aims as figures show brisk progress. W. Seltzer and K. Fitzgerald. il map For Comm W 28:6-8+ Ag 23 '47
See also
Tourist trade—Caribbean region

CARIES, Dental. See Teeth—Diseases and defects

CARILLONS
Tolling electrons. Fortune 36:118+ Ag '47

CARLSBAD caverns national park
Servicing elevator ropes at Carlsbad Caverns. R. L. Parr. il Power Pl Eng 51:92-3 Je '47

CARMICHAEL, James Henry
New president of Capital airlines. por Bsns W p41 O 11 '47

CARNATION company
Debentures placed privately. Comm & Fin Chr 165:68 Ja 6 '47
Profits from contented cows. Bsns W p96-8 O 4 '47

CARNAUBA wax
Emulsion for carnauba wax. Chem & Eng N 25:2310+ Ag 11 '47

CARNAUBA wax, Substitute for
Carnauba wax substitute. Soap & San Chem 23:145 Ja '47

CARNEGIE corporation
Carnegie corp. investment saga; safety of principal cuts income. Bsns W p62-6 Mr 8 '47

CARNEGIE institute of technology, Pittsburgh
Museum
Reorganization of a special library. A. P. Wallgren. Special Lib 38:167-72 Jl-Ag '47

CAROLINA power and light company
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:215 My 24 '47
Stock offered. Comm & Fin Chr 166:1783-4 N 3 '47

CAROLINA telephone and telegraph company
Common stock offered. Comm & Fin Chr 166:1679 O 27 '47

CAROTENE
Ascorbic acid and carotene in dehydrated peaches; abstract. M. S. Eheart and M. L. Sholes. Food Ind 19:126+ Ja '47
Handling fresh alfalfa before dehydration. R. E. Silker and H. H. King. bibliog Ind & Eng Chem 39:1163-5 S '47; Correction. 39:1334 O '47
Oxidation of β-carotene in solution by oxygen. R. F. Hunter and R. M. Krakenberger. Chem Soc J p 1-4 Ja '47
Oxidation of β-carotene with osmium tetroxide. G. C. L. Goss and W. D. McFarlane. bibliog Science 106:375 O 17 '47
Stability of carotene in dehydrated carrots impregnated with antioxidants. T. E. Weier and C. R. Stocking. Science 104:437-8 N 8 '46
Storage of commercial dehydrated alfalfa meal. R. E. Silker, W. G. Schrenk and H. H. King. bibliog Ind & Eng Chem 39:1160-2 S '47
Analysis
Analytical methods for carotenes of lycopersicon species and strains. F. P. Zscheile and J. W. Porter. bibliog Anal Chem 19: 47-51 Ja '47
Carotenoids of stored dehydrated carrots. G. Mackinney and W. E. Fratzke. bibliog Anal Chem 19:614-15 Ag '47
Chromatographic determination of carotene; kieselguhr as a chromatographic adsorbent. J. B. Wilkes. bibliog Ind & Eng Chem Anal ed 18:702-7 N '46
Determination of carotene in alfalfa; studies on methods for meals and fresh leaves. F. P. Zscheile and R. A. Whitmore. bibliog Anal Chem 19:170-2 Mr '47
Drying of vegetables; effect of scalding in starch or sulphite solutions on the loss of carotene and the deterioration in culinary quality of dried carrot during storage. R. G. Tomkins, L. W. Mapson and H. G. Wager. bibliog Soc Chem Ind J 65:384-5 D '46

CAROTENOIDS
Some poly-*cis*-lycopenes occurring in the fruit of pyracantha. L. Zechmeister and J. H. Pinckard. bibliog il Am Chem Soc J 69:1930-5 Ag '47
Stability of carotene in dehydrated carrots impregnated with antioxidants. T. E. Weier and C. R. Stocking. Science 104:437-8 N 8 '46
Analysis
Carotenoids of stored dehydrated carrots. G. Mackinney and W. E. Fratzke. bibliog Anal Chem 19:614-15 Ag '47
Drying of vegetables; effect of scalding in starch or sulphite solutions on the loss of carotene and the deterioration in culinary quality of dried carrot during storage. R. G. Tomkins, L. W. Mapson and H. G. Wager. bibliog Soc Chem Ind J 65:384-5 D '46
Nomenclature
Nomenclature of carotenoid pigments. L. Zechmeister. Chem & Eng N 25:463-4 F 17 '47
Notation of carotenes. R. D. Kleene. Chem & Eng N 25:1766-7 Je 16 '47

CARPENTER, Lewis Van, 1895-1940
N.Y. university sanitary engineering laboratory and experimental station named the Lewis Van Carpenter laboratory. por Water & Sewage Works 94:227 Je '47

CARPENTER steel company
Selected stocks. Mag of Wall St 80:539 Ag 16 '47

CARPET beetles
Carpet-beetle control unsolved wool problem. H. N. Mitchell. Textile World 96:170+ N '46
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47

CARPET factories
New Lees mill shows advanced engineering; illustrations with text. Textile World 97: 109-11 Jl '47
New plant built for low-cost production and upkeep; carpet yarn mill, Glasgow, Va. R. E. Oberholtzer. il Factory Management 105:116-20 Jl '47
Employees
Skillful publicity aids labor procurement; Bigelow-Sanford newspaper advertising. H. S. Knowlton. il plan Textile World 97:135+ O '47

CARPETS
Association highlights; work of Institute of carpet manufacturers of America. Dom Comm 34:77-8 D '46
Bring retailers to plant to learn facts of production; Lees carpet marketing clinic. il Ptr Ink 220:30-1 Jl 11 '47
Carpet industry takes a new lease on home life. M. E. Poole. il Dom Comm 35:64-9 Ag '47
Carpet showplace for buggy trade; Carpet mart, Hempstead, N.Y. il plan Arch Rec 101:110-12 My '47
Carpet yarns. S. Kershaw. Textile Inst J 38:P431-3 S '47
Light tells a magic carpet story; Bigelow-Sanford showroom, Merchandise mart, Chicago. il plans diags Arch Rec 101:88-93 Ap '47
Research on carpets at its finest; A. S. Smith and sons laboratory. H. R. Mauersberger. il Rayon 27:587-8 N '46
See also
Rugs

History
History and tradition of European carpets. C. S. Newton. il Textile Inst J 38:P107-17 Mr '47

Manufacture
Carpets can be knitted at high production rate. diags Textile World 96:150+ Ag '46; Discussion. 97:164+ Mr '47
Steps followed in carpet manufacture; illustrations with text. Textile World 96:112-15 N '46

Standards
People, things and words; consumer wants in carpets. A. G. Ashcroft. bibliog Rayon 28: 259-62 My '47

CARRAGEEN
Moss industry thriving; sea moss for use in food industry. Bsns W p19 D 21 '46
Useful gum gathered from the sea. il Chem Ind 60:66 Ja '47

CARRARA structural glass. See Glass, Structural

CARRIER corporation
Carrier builds for the future. il Bsns W p52+ O 25 '47
Thumbnail stock appraisal. Mag of Wall St 79:606 Mr 1 '47

CARRIER current control
Carrier controls lake water pumps over seven miles of cable circuit; U.S. sugar corp., Clewiston, Fla. W. A. Derr and others. il diag Elec World 128:66-9 Ag 2 '47
Electronic toy-train controls. J. L. Bonanno. il diags Electronics 20:94-6 F '47
Modern power line carrier equipment. R. C. Cheek. il Power Pl Eng 51:81-3 Ag '47
Radio and carrier controls for C.T.C. on Pennsylvania; use in emergencies. diags Ry Age 131:600-2 O 12 '46; Abstract. il Electronics 20:136+ F '47
Remote control of street lighting in Ayrshire. il plan Engineer 184:348-9 O 10 '47; Engineering 164:318 O 3 '47; Elec R (Lond) 141:510 O 3 '47; Electrician 139:928 S 26 '47

CARRIER current telephone. See Telephone, Carrier current

CARRIERS
Carrier's liability for baggage. H. S. Daynard. Weekly Underw 156:538+ F 22 '47; Same abr. East Underw 48:38 F 21 '47
Liabilities arise during transportation. L. T. Parker. Am Gas J 165:46-7 D '46
See also
Air carriers
Airlines
Freight and freightage
Freight car service
Gas, Natural—Pipe lines
Interstate commerce commission
Motor bus lines
Motor trucks—Laws and regulations
Petroleum pipe lines
Pipe lines
Railroads
Shipping
Steamboat lines

CARROTING. See Felt

CARROTS, Dried
Stability of carotene in dehydrated carrots impregnated with antioxidants. T. E. Weier and C. R. Stocking. Science 104:437-8 N 8 '46
Vacuum drying of compressed vegetable blocks. W. C. Dunlap, jr. diag Ind & Eng Chem 38:1250-3 D '46

Analysis
Carotenoids of stored dehydrated carrots. G. Mackinney and W. E. Fratzke. bibliog Anal Chem 19:614-15 Ag '47
Drying of vegetables; effect of scalding in starch or sulphite solutions on the loss of carotene and the deterioration in culinary quality of dried carrot during storage. R. G. Tomkins, L. W. Mapson and H. G. Wager. bibliog Soc Chem Ind J 65:384-5 D '46

Storage
Carotenoids of stored dehydrated carrots. G. Mackinney and W. E. Fratzke. bibliog Anal Chem 19:614-15 Ag '47

CARS
B.&O.'s arm chair on wheels; the Cincinnatians twin five-car, all-coach trains. il plans Ry Age 122:398-407 F 22 '47
Car production outlook brightening. S. M. Felton. Ry Age 121:811 N 16 '46
Coaches for the G.W.R. Engineer 182:452 N 15 '46
Color dynamics in railway cars. Sci Am 176: 221-2 My '47
Corridor composite carriages for the L.M.S. Engineer 183:226 Mr 14 '47
General Motors Train of tomorrow is on exhibition tour. il Ry Age 123:149-56 Jl 26 '47; Same cond. Ry Mech Eng 121:395-400+ Ag '47
Illinois Central day train. il Ry Mech Eng 121:339-41+ Jl '47
Illinois Central's new train provides fast day service to New Orleans. il Ry Age 122: 930-3 My 10 '47
Louisville and Nashville receives new streamlined passenger trains. il Manuf Rec 115: 43+ N '46
Passenger cars; Central of Georgia railway. plan Mech Eng 69:778 S '47
P.R.R. recreation cars. il Ry Age 123:750 N 1 '47
Progress in railway mechanical engineering, 1945-1946. il diags Mech Eng 69:208-11 Mr '47
Reducing the weight of rolling-stock; reports before International railway congress. Engineering 164:66, 101-2, 137-8 Jl 18, Ag 1-8 '47
Train of tomorrow; use of Diesel engines. il Diesel Power 25:92-6 Je '47
What will new passenger cars be like? il Ry Age 121:806-10 N 16 '46
See also
Air brakes
Car cooling and other headings beginning Car
Cars, Caboose
Dining cars
Freight cars
Mine cars
Motor cars (railroad)
Motor cars (railroad)—Diesel-electric
Railroads—Car departments
Railroads—Trains
Refrigerator cars
Sleeping cars
Stock cars
also Car department officers' association

Air conditioning
Air-conditioning equipment overhauled; Chicago & North Western. il Ry Mech Eng 121:362-3 Jl '47
Air conditioning systems for railroad cars; abstract. J. D. Strobell. Heating-Piping 19: 73 Ap '47
Car air conditioning and lighting. il Ry Age 121:815-17 N 16 '46
Case for head-end train power; car supplying all heating, cooling, lighting and other electrical needs of an 18-car train. J. D. Loftis. diags Ry Age 122:265-9 F 1 '47
Generation and use of power for passenger cars. H. H. Hanft. diag Ry Mech Eng 121: 317-19+ Je '47
Railway car ventilation problem; activated carbon for odor removal. diags Sheet Metal Worker 38:67-8+ Je '47

CARS—Air conditioning—*Continued*
Train of tomorrow features latest air conditioning, refrigeration, and passenger comfort design. il Heat & Ven 44:115-16 Je '47; Heating-Piping 19:105-7 S '47
Train weather; electronic heat control system is designed to provide more comfort for passengers. Bsns W p69 D 14 '46
See also
Car cooling

Bearings

Journal box to increase the life of spherical roller bearings on cars, locomotives, tenders, etc. il diags Ry Mech Eng 120:634 N '46
Timken bearings for Union Pacific stock cars. il Ry Age 122:1073-4 My 24 '47; Same. Ry Mech Eng 121:351-2 Jl '47

Decoration

Plastics in railways; urea-formaldehyde, phenolic laminates used in British coach. il Mod Plastics 25:206-7 O '47

Design

Changing passenger car. E. D. Campbell. il Ry Mech Eng 121:109-12 Mr '47
De luxe service on a 117-mile route; coaches of the Central of Georgia Man o' War. il plans Ry Age 123:270-4+ Ag 16 '47
Design features of the Train of tomorrow. il diags Product Eng 18:98-101 Ag '47
Dome coaches for Twin Zephyrs. il diag Ry Age 123:604-8+ O 11 '47
New train; General motors corporation Train of tomorrow. il Mech Eng 69:506-7 Je '47; Same. Iron Age 159:107-8 My 29 '47
Old Reliable starts something new; L. & N. streamliners, Humming Bird and Georgian go into service. il plans diags Ry Age 121: 995-1002 D 14 '46
Railcoach rejuvenated with plastics panels in modern colors. il Sci Am 175:251 D '46
Some suggestions for new commuter equipment. B. L. Webster. il diags Ry Age 122: 644-6 Mr 29 '47
Sunliner equipment for Central of Ga. il plans Ry Age 123:230-5 Ag 9 '47
Trends in railway passenger car design. E. D. Campbell. il Ry Age 122:530-2+ Mr 15 '47

Electric equipment

Amplidyne inverters for Pennsylvania passenger cars. il Ry Mech Eng 121:88-9 F '47; Same abr. Ry Age 122:456-7 Mr 1 '47
Car air conditioning and lighting. il Ry Age 121:815-17 N 16 '46
Car electrical equipment; A.A.R. Electrical section committee report. Ry Mech Eng 120:602-5 N '46
Case for head-end train power; car supplying all heating, cooling, lighting and other electrical needs of an 18-car train. J. D. Loftis. diags Ry Age 122:265-9 F 1 '47
Cleaning electrical machinery on tube trains. il Engineering 164:225 S 5 '47
Constant voltage supply for railway cars; amplidyne booster inverter. il Machine Design 18:128 D '46
Diesel engine generator for railway passenger car air conditioning and electric current requirements. il diag Diesel Power 25:76-8 Ag '47
Diesel power plant for passenger car power supply. il Ry Mech Eng 121:434-5 Ag '47
Generation and use of power for passenger cars. H. H. Hanft. diag Ry Mech Eng 121: 317-19+ Je '47
Modern railway passenger car auxiliary power equipment; abstract. D. R. MacLeod and J. Hause. il Elec Eng 66:864-8 S '47; Ry Mech Eng 121:375-9 Jl '47
Passenger-car electrical and heating equipment; equipment weight reduction. H. H. Hanft. Mech Eng 68:1041-4 D '46
Power for passenger cars. A. J. Manson. diags Ry Mech Eng 121:427-31 Ag '47
Refrigeration is principal feature in revolutionary train of tomorrow. il Refrig Eng 53:523+ Je '47
Roll-out battery boxes; Southern Pacific. il Ry Mech Eng 121:482-3 S '47
Royal train for South Africa. il Engineering 162:522 N 29 '46; Abstracts. Engineer 182: 490-1 N 29 '46; Elec R (Lond) 139:873 N 29 '46
Train of tomorrow features latest air conditioning, refrigeration, and passenger comfort design. il Heat & Ven 44:115-16 Je '47; Heating-Piping 19:105-7 S '47
Vertical-axle generator drive. il diag Ry Mech Eng 121:484-5 S '47
See also
Car lighting

Equipment

Great Northern gets first postwar transcontinental streamliners. il Ry Age 122:734-41 Ap 12 '47; Same cond. Ry Mech Eng 121: 225-8+ My '47
Maintenance of steam-heat equipment. L. A. Richardson. Ry Mech Eng 120:671-3 D '46
Weight reductions in passenger cars; summary of the statements made by 26 manufacturers of equipment, specialties and materials. il Ry Age 121:1082-6+ D 28 '46

Length of service

Passenger cars have high average age. il Ry Age 121:812-14 N 16 '46

Manufacture

Automatic resistance welders speed railroad car construction. A. M. Unger. il Iron Age 159:40-5 Mr 20 '47; Same cond. Ry Mech Eng 121:236-8 My '47
Large spot welder speeds production; Pullman-standard car manufacturing company. il Ry Mech Eng 120:626-7 N '46
Making the Train of tomorrow. il Am Mach 91:123 Jl 3 '47
Plastics are tested for train interiors; General Motors Train of tomorrow. il diag Mod Plastics 24:80-2 Jl '47

Prices

Passenger-train car prices; tabulation. Ry Age 122:78 Ja 4 '47

Reconstruction

Old passenger train cars; when and how to rebuild. il Ry Mech Eng 120:611-14+ N '46

Repair

Car-repair automotive equipment. il Ry Mech Eng 120:624-6 N '46
Short cuts in work on repair tracks. il Ry Mech Eng 121:467-9 S '47
Suggestions for better car maintenance. C. K. Steins. Ry Mech Eng 121:298-9 Je '47

Seats

See Car seats

Statistics

Passenger-car orders for year total 1,986. E. C. Farrar. Ry Age 122:107-9 Ja 4 '47
Passenger-train cars on order total 2,598. il Ry Age 121:797-803+ N 16 '46

Toilet rooms

Sewage treatment plants on trains will be given trial by railroads. Eng N 138:977 Je 19 '47

Weight

Future passenger-car weight reductions. P. W. Kiefer. Ry Age 121:961-2 D 7 '46; Same. Ry Mech Eng 121:4-5 Ja '47
Passenger-car weight reduction. P. W. Kiefer. Mech Eng 69:509-10 Je '47
Railroad passenger cars; reduction of weight in heating and air conditioning equipment; abstracts of papers. Heat & Ven 44:94+ Ja '47
Weight reductions in passenger cars; summary of the statements made by 26 manufacturers of equipment, specialties and materials. il Ry Age 121:1082-6+ D 28 '46

CARS (automobile). See Automobiles

CARS, Aluminum
Coach-baggage car constructed of aluminum alloys. il Product Eng 18:104-5 Jl '47
New York Central installs 20 aluminum alloy combination baggage cars. il Ry Age 122: 853-6 Ap 26 '47

CARS, Aluminum—*Continued*
Old Reliable starts something new; L. & N. streamliners, Humming Bird and Georgian go into service. il plans diags Ry Age 121: 995-1002 D 14 '46
See also
Freight cars, Aluminum

CARS, Caboose
Caboose power supply; train communication equipment. G. R. Merz. il Ry Mech Eng 121:138-9 Mr '47; Same. Ry Age 122:898-9 My 3 '47
Propane gas engines for caboose power supply for radio communication. il Ry Mech Eng 120:675 D '46
Rock Island tries air-started caboose power-supply unit. il Ry Age 122:754 Ap 12 '47; Same, with additional diag. Ry Mech Eng 121:196-7 Ap '47
Shock-proof caboose axle drive; generator for train communication service. il plans Ry Mech Eng 121:144-5 Mr '47
Southern Pacific's all-steel bay-window cabooses. il Ry Age 123:4-5 Jl 5 '47

CARS, Dynamometer. See Dynamometer cars

CARS, Electric railroad
D.c. control equipments on British motor-coach trains. B. J. Prigmore. Inst E E J 93 pt 1:456 O '46
Pacific Electric modernizes cars. il Ry Age 122:370 F 15 '47
See also
Cars, Subway

CARS, Freight. See Freight cars

CARS, Inspection
Better rail-testing technique. T. B. Thompson. il Ry Age 122:1126-8 My 31 '47

CARS, Instruction
Chicago & North Western instruction car. il Ry Mech Eng 121:401 Ag '47
Rolling school for locomotive engineers; instruction car for Chicago and north western railway system. il Diesel Power 25: 66-7 Ag '47
Trained in hand brake operation; Chicago, Milwaukee, St Paul and Pacific railroad company's hand brake instruction car. il Nat Safety N 56:60 S '47

CARS, Steel
British get stainless-steel coach. il Ry Age 123:658-9 O 18 '47
Problems in resistance welding stainless steel railway car structures. J. H. Van den Beemt. il Welding J 26:837-43 O '47
See also
Freight cars, Steel

CARS, Subway
Dust removal from electric railway rolling stock. il Engineer 184:148 Ag 15 '47
Fluorescent lighted car operating in New York subway. il Elec Eng 66:937-8 S '47
Improvements in London underground coaches; fluorescent lighting and collector-shoe gear. il Engineering 163:391 My 9 '47
New cars for New York subways. B. F. Cordts. il Elec Eng 66:547-9 Je '47
New Yorkers to get more speed, comfort in new subway cars. Iron Age 159:136-7 My 29 '47
Subway air to be electrically cleaned and sterilized in ten-car laboratory subway train. Heat & Ven 44:116 Ag '47

CARTELS. See Trusts, Industrial—International trusts

CARTER, Garnett A.
Heads American institute of banking. por Trusts & Estates 84:584 Je '47

CARTOONS
Cartoons give technical information to supervisors. R. C. Berman. il Factory Management 104:130-3 N '46
See also
Advertisements, Pictorial—Cartoons
Safety cartoons

CARTWRIGHT, Charles M. 1869-
Retires as editorial head of National underwriter. por East Underw 48:5 Ag 15 '47; Nat Underw 51:1 Ag 14 '47; Nat Underw (Life ed) 51:1 Ag 15 '47
Sketch. H. J. Burridge. por Nat Underw 51: 2+ Ag 14 '47; Same. Nat Underw (Life ed) 51:2+ Ag 15 '47

CARVACROL
Some phenol-chloral condensations. J. B. Niederl and A. A. Bothner-By. bibliog Am Chem Soc J 69:1172-3 My '47

CASCADE mountains
Snoqualmie tunnel plan provides low-level route through Cascade mountains. O. Singstad. il map diag Civil Eng 17:122-5+ Mr '47

CASCO products corporation
Go West with a gadget. Fortune 35:151 My '47

CASE, James Herbert, 1872-
Sketch. Comm & Fin Chr 165:3236+ Je 19 '47

CASE, Theodore Willard, 1888-1944
SMPE honor roll awards; pioneers in development of talking moving pictures; with bibliography and patent list. Soc Motion Picture Eng J 48:437-40 My '47

CASE hardening
Application of Ms points to case depth measurement. E. S. Rowland and S. R. Lyle. bibliog il Am Soc for Metals Trans 37:27-46; Discussion. 46-7 '46
Carbo-nitriding of S.A.E. steel parts. W. H. Holcroft. il diags Metal Prog 52:380-6 S '47
Carburizing experiment with radioactive carbon. J. K. Stanley. diag Metal Prog 52: 227-9 Ag '47
Chromium-vanadium carburizing steels and their modifications; abstract. F. F. Franklin and B. B. Beckwith. Product Eng 18: 147 Ap '47
Electronically controlled flame hardening machine. il Automotive Ind 97:48 S 15 '47
Flame hardening locomotive brake and spring rigging pins and bushings. B. W. Covell. il Welding J 26:918-22 O '47
Fundamentals of carburization and decarburization of steel. J. K. Stanley. bibliog diags Steel 120:92-6+ Ap 14 '47
Gas cyaniding. H. M. Parshall. il Steel 119: 86-8 D 16 '46
Good and bad structures in machining steel. N. E. Woldman. il Materials & Methods 25:80-2 F '47
Hardenability test for low carbon and shallow hardening steels. O. W. McMullan. il Am Soc for Metals Trans 35:584-602; Discussion. 602-8 '45
How to select and treat mold steels. R. J. Hoensheid. il Am Mach 90:130-2 D 19 '46
Liquid carburizing. R. S. Komarnitsky. il Metal Prog 50:665-9 O '46
Mass production heat treating; special gas carburizing and carbonitriding installations. il diags Steel 120:88+ Mr 24 '47
Metallographic constituents of steels and cast iron as affecting flame hardening. O. M. Harrelson. il Welding J 26:771-5 S '47
New deep hardening carburizing steels; SuperKore steels. Iron Age 160:62-4 Jl 24 '47
New surface hardener combines precision and speed; Cincinnati Flamatic hardening machine. il Iron Age 160:84 O 9 '47; Materials & Methods 26:145 O '47
One salt bath for both carburizing and cyaniding. F. Steigerwald. il Materials & Methods 26:75-7 Jl '47
Practical aspects of surface hardening methods. H. E. Boyer. il Iron Age 160: 74-9 Ag 14; 74-8 Ag 28 '47
Precision machining and heat-treating of aircraft-engine gears; Wright aeronautical corp. V. H. Laughner. il diags Mach 53: 168-73 Je '47
Reducing distortion in case-hardened nickel-chromium gears. C. A. E. Wilkins. Metal Prog 51:441 Mr '47
Salt baths for metals. E. L. Cady. il Sci Am 176:164-6 Ap '47
Salt baths for metals; liquid bath case hardening. E. L. Cady. Materials & Methods 25:106-10 Mr '47
Shorter flame hardening machine. il Engineer 183:236-7 Mr 21 '47
Theory of moving sources of heat and its application to metal treatments. D. Rosenthal. A S M E Trans 68:862-4 N '46

CASE hardening—*Continued*

Electric hardening

Basic requirements of materials for induction hardening. R. H. Lauderdale. il Product Eng 18:110-15 My '47

Case hardening wrist pins with induction heat. T. E. Lloyd. il Iron Age 159:54-6 Ja 30 '47

Cuts cost of heat treating 40 percent by induction heating. R. I. Lavelle. il Elec World 126:138+ N 9 '46

High-frequency hardening of ice-skate runners. il Mach 53:182 F '47

Induction hardening and austenitizing characteristics of several medium carbon steels. D. L. Martin and W. G. Van Note. il Am Soc for Metals Trans 36:210-44 bibliog(p242-4); Discussion. 244-53 '46

Induction hardening of armor. T. Bishop. Metal Prog 50:954-5+ N '46

Induction hardening of steel. D. L. Martin and R. A. Gehr. bibliog il diags Steel 120: 78-81+ Ja 13; 74-8 Ja 20; 78-80+ Ja 27; 100-1+ F 3; 96-7+ F 10 '47

Long pieces can be induction-hardened progressively. F. W. Curtis. il diags Am Mach 91:102-4 Ag 14 '47

Metallurgical characteristics of induction-hardened steel. J. W. Poynter. bibliog il Am Soc for Metals Trans 36:165-97; Discussion. 197-209 '46

Skin hardening; some aspects of the high-frequency induction process. R. J. Brown. Automobile Eng 37:389-90 O '47

Spray quench speeds induction hardening. F. W. Curtis. il diags Am Mach 91:79-81 S 25 '47

Gas carburizing

Carburizing treatments; National cash register co. il Steel 119:101 N 18 '46

Continuous gas carburizing of steel without a gas generator. W. H. Holcroft and E. C. Bayer. il diags Materials & Methods 26:92-3 O '47

Gas carburising. I. Jenkins. il diags Engineering 162:260-4, 285-7 S 13-20 '46; Same cond. Automobile Eng 37:33-8, 63-6 Ja-F '47; Abstract. Metal Prog 50:960+ N '46

Maximum carbon in gas carburizing. G. H. Boss. il Metal Prog 50:657-8 O '46

Practical aspects of surface hardening methods. H. E. Boyer. il Iron Age 160:74-6 Ag 28 '47

Suspended carburization; method for holding charges in gas carburizing furnaces up to 72 hours. S. L. Widrig and others. diag Materials & Methods 25:65-8 F '47

Nitriding process

Attempts to accelerate the nitriding of steel. H. Bennek and O. Rüdiger. Engineer 183: 194 Mr 7 '47

Liquid nitriding increases tool life. G. A. Roberts. Am Mach 91:134-6 F 13 '47

Nitrided steel hot formed after heat treatment; Jack & Heintz precision industries, inc. J. Frazier. il diag Materials & Methods 26:80-3 O '47

Nitriding of steel. C. F. Floe. il diag Metal Prog 50:1212-20 D '46

Practical aspects of surface hardening methods. H. E. Boyer. il Iron Age 160:76-8 Ag 28 '47

CASE liners. See Containers (for shipping)

CASE school of applied science

Admission test procedure. R. R. Slaymaker. J Eng Educ 37:402-13 Ja '47

Case school names businessman as head. Bsns W p36-7 Je 28 '47

CASEIN

Brushes from milk; Rubberset company's new plant at Salisbury, Md. L. B. Howard. il Manuf Rec 116:32-3+ Ap '47

Case for casein; production in 1946; prospect for 1947. N. Anderson, jr. Paper Tr J 124: 70+ F 27 '47

Casein bristles. Chem & Eng N 25:46 Ja 6 '47

Casein for brush bristles. il Chem Eng 54: 108-9 Mr '47

Comparative nutritive value of casein and lactalbumin for man. A. J. Mueller and W. M. Cox, jr. bibliog Science 105:580 My 30 '47

Higher fatty acid derivatives of proteins. W. G. Gordon, A. E. Brown and R. W. Jackson. bibliog Ind & Eng Chem 38:1239-42 D '46

Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46

Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47

CASH accounting

Cash reconciliation. J Account 83:250-1 Mr '47

CASH discount. See Discount, Cash

CASH handling

Cashiers' errors. L. Derrick. J Bsns 20:9-13 Ja '47

See also

Banks and banking
—Cash handling

CASHEW nuts

Cashew resins; their use in manufacture of insulating varnishes. A. E. Williams. Elec R (Lond) 141:244-5 Ag 15 '47

CASHIERS

Cashiers' errors. L. Derrick. J Bsns 20:9-13 Ja '47

CASHIERS (retail stores)

Job analysis plus job training mean top performance; American stores company job training of grocery-store-merchandise cashier-checkers. W. C. Ferguson. J Retailing 23:56-9 Ap '47

CASINGHEAD gas. See Gas, Natural

CASKETS. See Coffins

CASPARI, Wilhelm, 1872-1944

Sketch. E. Schwartz and R. Chambers. Science 105:613 Je 13 '47

CASSITERITE

Occurrence of cassiterite as a stone in glass. B. L. Steierman. Am Cer Soc J 29:367 D 1 '46

Some pipe deposits of eastern Australia. R. Blanchard. maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47

Transport and deposition of the non-sulphide vein minerals. F. G. Smith. bibliog il diag Econ Geol 42:251-64 My '47

CAST iron

Abrasion resistance of white cast iron improved by suitable alloying. K. A. DeLonge. Steel 121:184+ O 6 '47

A.G.M.A. standard materials; cast iron gear blanks; reference book sheet. Product Eng 17:155+ D '46; Same. Am Mach 91:127 Ja 2 '47

Annual engineering review. Materials & Methods 25:91 Ja '47

Austempered cast iron serves as cylinder liners. C. W. Ohly. il Materials & Methods 25:89-91 My '47

Austenitic malleable iron; type I Ni Resist. C. K. Donoho. il Materials & Methods 26: 85 S '47

British cast iron uses; abstract. J. G. Pearce. Materials & Methods 24:1236 N '46

Cast bolts for pipe joints. C. K. Donoho. il diag Mech Eng 69:739-42 S '47

Changes in endurance limit of alloyed gray irons caused by heat treatment; tables; engineering file facts. R. S. Burpo, jr., comp. Materials & Methods 25:119, 121 Ja '47

Chart indicates grinding time on cast iron. D. G. Anderson. Foundry 75:136 Ja '47

Convection currents in gray cast iron. J. H. Schaum. il Foundry 75:66-9+ S '47

Corrosion resistance of steel and cast iron. A. W. Spitz. Chem Eng 54:135 F '47

Design possibilities in the silver brazing of cast iron. H. Frick. il diags Product Eng 18:128-32 O '47

Effect of varying relief angles when face-milling cast iron with sintered-carbide-tipped cutters. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:657-63 Ag '47

Flat slabs on cast-iron columns increase usable space; hog-cooler building for a meat-packing plant; Wilson & co. il diags Eng N 138:216-17 F 6 '47

CAST iron—*Continued*
Gas annealing developed for whiteheart malleable castings; abstract. P. F. Hancock. Materials & Methods 25:130 Mr '47
Graphitic corrosion of cast iron. L. M. Leedom. Am Water Works Assn J 38:1392-7 D '46
Hard wear-resisting cast irons and steels; abstract. M. Ballay and R. Chavy. Materials & Methods 25:127 F '47
High tensile cast irons. D. H. Hartley. Engineer 182:573-4 D 20 '46; Same abr. Engineering 162:595-6 D 20 '46; Excerpts. Iron Age 159:53 F 20 '47; Abstract. Metal Prog 51:466+ Mr '47
Hot rolling iron-carbon alloys; German investigations to determine feasibility of producing piston rings from rolled cast iron. E. Piwowarsky and A. Wittmoser. bibliog il Iron Age 159:52-7 F 6; 63-5 F 13 '47
How silver brazing may simplify casting design. S. D. Heron. il diags Steel 120:90-1+ Ap 7 '47
How to set up carbide milling jobs; 10-step setup procedure. H. A. Frommelt. il Am Mach 91:96-9 Ap 24 '47
How to use carbide cutters for milling. H. A. Frommelt. il Iron Age 159:58-62 Mr 27 '47
Influence on tool life and power of nose radius, chamfer, and peripheral-cutting-edge angle when face-milling a 40,000-psi cast iron. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:117-24 F '47
Is cast iron superior in corrosion resistance to steel? R. W. White. il Materials & Methods 26:82-5 Ag '47
Malleable iron castings; grades, design data and applications. J. H. Lansing. il diags Product Eng 18:110-14 Je '47
Metallographic constituents of steels and cast iron as affecting flame hardening. O. M. Harrelson. il Welding J 26:771-5 S '47
Mode of occurrence of tellurium in cast iron. H. Morrogh. bibliog pl Iron & Steel Inst J 155:21-3 Ja '47; Discussion. il 156:491-6 Ag '47
Molybdenum in cast iron. A. E. M. Smith. Engineering 163:55 Ja 17 '47
Neutralisation of sulphur in cast iron by various alloying elements. H. Morrogh. il Engineering 162:598-600, 621-3 D 20-27 '46; Abstracts. Engineer 182:487 N 29 '46; Metal Prog 51:824+ My '47; Discussion. Engineer 182:487 N 29 '46
Planing cast iron with carbide tools. il Steel 119:108 D 16 '46
Practical aspects of gray iron inoculation. E. V. Somers and D. W. Gunther. il Iron Age 160:72-5 S 4 '47
Relation of mechanical properties and internal stresses to casting design. R. A. Flinn. diag Foundry 75:106-9+ Ap '47
Research on cast iron; report of British cast iron research association. Engineering 163: 19 Ja 3 '47
Role of vanadium in gray iron castings; abstract. T. E. Barlow. Product Eng 18:132 Mr '47
Segregation of molybdenum in phosphorus-bearing alloyed gray cast iron. F. B. Rote and W. P. Wood. il Am Soc for Metals Trans 35:402-25; Discussion. 425-34 '45
Some problems in cast iron. E. Piwowarsky. diags Iron Age 159:58-60 Ja 9 '47
Study of dry-process cast-iron ground-coat enamels. R. R. Danielson and J. H. Koenig. il diags Am Cer Soc J 30:306-11 O 1 '47
Tinning cast iron. Iron Age 159:44-5 Ja 16 '47
Tinning of cast iron. R. A. Cresswell. bibliog Iron & Steel Inst J 152:157-69, pl 15-18 no 2 '45; Same. Engineering 161:526-8, 550-1 My 31-Je 7 '46; Abstract. Metal Prog 51: 802+ My '47
Wear resistance of gray irons; abstract. F. G. Sefing. Pet Processing 1:174+ N '46
When and how to use cast iron; abstract. T. E. Eagan. Steel 121:96+ S 29 '47
Where are the toy banks of yesteryear? P. Dwyer. il Foundry 75:116-19+ Ap; 84-5+ My '47

See also
Chilled iron
Foundry practice
Iron founding
Pig iron
Spiegeleisen
also British cast iron research association

Analysis
Spectrochemical analysis of high copper in cast iron and steel. W. R. Kennedy. Opt Soc Am J 37:154-8 Mr '47
Spectrographic analysis of cast iron; abstract. J. E. Hurst and R. V. Riley. Materials & Methods 24:1544 D '46

Gas content
Absorbed gases in cast iron. E. V. Somers and D. W. Gunther. bibliog il Foundry 75: 66-9+ Mr '47

Graphitization
Graphite flake size in gray cast iron; chart; data sheet. Metal Prog 52:96B Jl '47
Graphite flake type in gray cast iron; data sheet. il Metal Prog 51:616b Ap '47
Graphite formation in cast irons and in nickel-carbon and cobalt-carbon alloys. H. Morrogh and W. J. Williams. bibliog (115 ref) diags Iron & Steel Inst J 155:321-71, pl 1-14 Mr '47; Abstracts. Engineer 183:475 My 30 '47; Engineering 163:460-1 My 30 '47; Discussion. Iron & Steel Inst J 156:491-6; 157:193-7 Ag, O '47; Engineer 183:475-6 My 30 '47; Engineering 163:461 My 30 '47
Graphite formation in grey cast iron. H. Morrogh and W. J. Williams. il Engineering 164:141-3, 166-8 Ag 8-15 '47
Graphitization in the solid state and its industrial application, malleable iron; abstract. H. Laplanche. Materials & Methods 24:1526 D '46
Silicon carbide addition in gray iron automotive castings. E. A. Loria and others. il Metal Prog 51:587-92 Ap '47

Specifications
Specifications for malleable iron castings. J. E. Linabury. Foundry 75:84+ Je '47
Standard specifications for gray iron castings; data sheet. diags Foundry 75:163-4 Jl; 121-2 Ag '47
Standard specifications for gray iron castings for valves, flanges and pipe fittings; data sheet. diags Foundry 75:117-18 N '47

Testing
Absorbed gases in cast iron. E. V. Somers and D. W. Gunther. bibliog il Foundry 75: 66-9+ Mr '47
Development of a single-blow impact test for cast iron. A. B. Everest and others. bibliog diags Iron & Steel Inst J 152:403-23, pl 40-1 no 2 '45; Same cond. Engineering 161:117-20 F 1 '46; Abstract. Metal Prog 48:1354+ D '45; Discussion. Iron & Steel Inst J 152:423-7 no 2 '45
Effect of microstructure on machinability of cast irons. M. Field and E. E. Stansbury. il A S M E Trans 69:665-82 Ag '47
Micro-radiography of gray cast iron; abstract. E. I. Salkovitz and others. Iron Age 159:86 My 8 '47
Reducing metal wear with abrasion-resisting castings. J. S. Vanick. il Am Cer Soc Bul 26:109-16 Ap 15 '47
Some unusual tests of cast iron. J. S. Vanick. bibliog il diags Foundry 75:66-71 Ja; 78-83 F '47

Welding
How a cast iron block was welded with steel patches. il Roads & Sts 89:108 O '46
Salvaging iron castings with machinable arc welds. D. W. DeArmand and S. Epstein. il Materials & Methods 25:68-72 My '47; Foundry 75:146+ My '47
Weld repair of gray iron castings. C. E. Phillips. il diags Iron Age 160:49-51 O 23 '47
Welding of heavy gray iron castings. L. J. Larson. il diags Welding J 26:504-11 Je '47

CASTIGLIANO theorem. See Least work, Principle of

CASTILE formation
Sedimentation in Permian Castile sea. R. H. King. bibliog Am Assn Pet Geologists Bul 31:470-7 Mr '47

CASTING, Centrifugal
Centrifugal casting copper-spun rotors. G. A. Anderson. il Steel 120:96-7+ Ap 28 '47

CASTING, Centrifugal—*Continued*
Centrifugal casting of brass ingots for cold rolling; abstract. T. B. Cros. Materials & Methods 25:123 My '47
Centrifugal casting of copper-alloy wheels in sand moulds. O. R. J. Lee and L. Northcott. il Engineering 163:556-9 Je 27 '47; Discussion. 164:353 O 10 '47
Centrifugal casting process applied to stainless- and carbon-steel tubes. J. W. Moore and J. W. MacKay. il diags Mech Eng 69: 551-8 Jl '47
Copperspun squirrel-cage rotor, cast of copper by a centrifugal process. G. R. Anderson. il diags Elec Eng 66:980-2 O '47
Role of centrifugal casting in transforming pigs to pipe; National cast iron pipe co. G. E. Stedman. il Steel 121:90-2+ O 13 '47
Welding rod casting machine. il Iron Age 158:55 N 21 '46

CASTING, Precision. See Lost wax process

CASTING machines
Sheppard and sons continuous ingot casting machine. il Engineer 183:341 Ap 18 '47
Sheppard mobile pig-casting machine. il diags Engineering 164:176-7 Ag 22 '47
See also
Die casting machines

CASTINGS
Alloys for heat and corrosion-resistant castings; reference book sheet. Am Mach 91: 215 Ja 16 '47
Annual engineering review. il Materials & Methods 25:94-5 Ja '47
Castings laid out and inspected with 3-dimensional projection equipment developed by G.E. engineers. il Am Mach 91:125 Mr 27 '47; Mech Eng 69:407-8 My '47; Blast F & Steel Pl 35:484 Ap '47; Gen Elec R 50:51 My '47; Product Eng 18:154 Ag '47
Castings made leakproof for pressure service. Comp Air Mag 52:49 F '47
Controlling gas porosity in castings. A. J. Phillips. il Iron Age 159:63 Ap 17 '47
Copper-beryllium-alloy castings; Navy department specification 46C11. Foundry 75: 121-2 Je '47
Formulas for determining the weights of castings; data sheet. diags Foundry 74:135-6 S; 171-2 O; 137-8 N; 167-8 D '46; 75:121-2 Ja; 121-2 F; 151-2 Mr; 175-6 Ap; 139 My '47
How silver brazing may simplify casting design. S. D. Heron. il diags Steel 120:90-1+ Ap 7 '47
Photo-projection inspection and layout of castings. C. J. Kettler. il diag Iron Age 160:45-9 Jl 31 '47
Plastic resin seals porous castings. diag Am Mach 91:100 Mr 27 '47
Pricing castings for profit. J. B. Meier. Foundry 75:72-3+ F; 108-9+ Mr '47
Relation of mechanical properties and internal stresses to casting design. R. A. Flinn. diag Foundry 75:106-9+ Ap '47
Sealing of porous castings; Polyplastex MC. P. C. Fuller. il Aero Digest 53:96+ N '46
Solid and slush type zinc alloy permanent mold castings. H. Chase. il Iron Age 159: 58-63 My 29 '47
Study of resinous sealants for porous metal castings. V. C. F. Holm. bibliog pl J Res Nat Bur Stand 37:177-82 S '46; Same. il Foundry 75:86-7+ Ja '47; Abstract. Iron Age 158:90-1 N 14 '46
Technical progress in metalworking; casting. Steel 120:217-18+ Ja 6 '47; Same cond. il Foundry 75:94-5+ F '47
Three-dimensional layout and inspection of castings. C. A. Falkenan. il Materials & Methods 25:133 My '47
See also
Die casting
Steel castings

Cleaning
Electroplating zinc base die castings. C. F. Nixon. Metal Finishing 45:58-60 Mr '47; Same cond. Mach 53:180-2 Mr '47
Flytool milling cutter removes sand or scale. A. B. Miller. diags Am Mach 91:142 Mr 13 '47
1947 inventory of foundry equipment; cleaning. Foundry 75:[99-103] insert S19-23 Mr '47
Specially designed machinery cleans newly cast cylinder blocks; illustrations with text. Automotive & Aviation Ind 96:33 F 15 '47

Repair
Cold repair of broken castings. il diag Engineer 184:395 O 24 '47
Salvaging iron castings with machinable arc welds. D. W. DeArmand and S. Epstein. il Materials & Methods 25:68-72 My '47; Foundry 75:146+ My '47
Weld repair of gray iron castings. C. E. Phillips. il diags Iron Age 160:49-51 O 23 '47
Weld repairing defective and damaged castings; Mogul arc bonder. il Steel 120:118 My 12 '47
Welding in the iron foundry. H. E. Schultz. il Foundry 75:78-80+ O '47

Specifications
ASTM reports on casting specifications. Foundry 75:91+ Ag '47

Statistics
1946 gray iron casting; shipments detailed in report. Foundry 75:136 O '47

Testing
Casting inspection simplified by three dimensional projection. il Sci Am 177:31 Jl '47
How to measure surface roughness of castings. G. Hobman. il diag Am Mach 91:94-5 Jl 3 '47
Limitations on precision cast parts. N. J. Grant. il Iron Age 160:62-6 Ag 7 '47
Magnesium-cerium-zirconium alloys; properties at elevated temperatures. A. J. Murphy and R. J. M. Payne. il Engineering 163: 485-7 Je 6 '47
X-ray inspection promotes casting quality control. E. H. Grimm. il Foundry 75:94-6+ O '47; Same. Steel 120:110-12+ My 12 '47; Same cond. Automotive & Aviation Ind 96: 36-8+ My 15 '47

CASTNER, Hamilton Young, 1858-1899
Life and work of H. Y. Castner. A. Fleck. Chem & Ind p515-21 Ag 23 '47

CASTOR oil
High viscosity compounds improve stainless plate drawing; hydrogenated castor oil. Iron Age 160:130 O 16 '47
Reactions of carbinols in the presence of alkali; scission of ricinoleic acid. G. H. Hargreaves and L. N. Owen. Chem Soc J p753-6 Je '47
Regulation of castor oil business. V. A. Acer. Paint Oil & Chem R 109:72 N 14 '46
TGA oleic and castor specifications. Soap & San Chem 23:77 My '47

CASUALTY actuarial society
Annual meeting, New York, Nov. 22. East Underw 47:34, 30+ N 29 '46; Nat Underw 50:15+ N 28 '46; Nat Underw (Life ed) 50: 1 N 29 '46
Test syllabus revised. Weekly Underw 157: 166 Jl 19 '47

CASUALTY and surety underwriters, National bureau of. See National bureau of casualty and surety underwriters

CASUALTY insurance. See Insurance, Casualty

CATALIN
Adult games make 3-way use of plastics. il Mod Plastics 24:99-101 D '46
Cast phenolic control housing. il Mod Plastics 24:190 Ap '47
Cast phenolic houses coffee-tea unit. il Mod Plastics 24:109 Je '47

CATALOGING
Library of Congress printed cards; some suggested improvements. H. V. M. Roberts. J Doc 3:17-19 Je '47
Rules for descriptive cataloging in the Library of congress; preliminary edition. 125p pa 50c Library of Congress, Card division, Washington 25 '47
United States author headings including those adopted by the Library of Congress as appearing in the Union catalog. 211p Information and publications office, Library of Congress, Washington, D.C. '46 [reprinted from vol. 151, Catalog of books represented by Library of Congress printed cards]

CATALOGS
Catalog changes save mail order business. G. J. Cullinan. il Adv & Sell 40:44+ Ja '47
Catalogs are expensive; don't let them die. il Ptr Ink 219:49 My 2 '47
Check list for industrial catalogs. C. J. Swan. il Ptr Ink 218:39-41 F 7; 44-5+ F 14 '47
Eight rules to help personalize industrial catalog mailings; form letters slanted to buyers' individual needs. J. K. Rector. il Ptr Ink 218:35-7 Ja 10 '47
Exploded product technique has many uses in visual aids. il Sales Management 57:97 N 10 '46
Industrial catalogs and bulletins need a change of pace. M. A. Hasselmann. il Ind Marketing 31:44-5+ D '46
Seven points on distributing a catalog. C. J. Swan. il Ptr Ink 218:34-6 F 21 '47
Some ideas for selling in-the-home; Crogan plumbing and heating company. Dom Eng 169:99+ Ja '47
Time- and money-saving method of attaching sample swatches to catalogs. il diags Inland Ptr 118:61 D '46
What kind of catalog is best? G. J. Roth. Adv & Sell 39:136a+ N '46

CATALOGS, Booksellers'
Bookman's classified guide, 1947. 100p Baker & Taylor co, 55 Fifth av, New York 3 '47

CATALOGS, Card
Simple method for cross-indexing a reference file. J. G. Aldous. Science 106:109 Ag 1 '47

CATALOGS, Classified
Development and use of a classified catalog for periodical literature in selected subject fields. M. J. Voigt. Special Lib 37:285-90 N '46

CATALOGS, Library
Library of Congress and the future of its catalogue. T. Besterman. J Doc 1:194-205 Mr '46; Discussion. H. H. Henkle and others. 2:245-54 Mr '47

CATALOGS, Union
Cumulative world thesaurus. C. W. David and R. Hirsch. J Doc 3:43-5 Je '47

CATALYSIS
Acid-base catalysis in non-aqueous solvents; isomerisation of methyl mesityl oxide oxalate in chlorobenzene solution at 99°. R. P. Bell and S. M. Rybicka. Chem Soc J p24-31 Ja '47
Acid catalysis in the iodination of phenol; iodination by acyl hypoiodites. B. S. Painter and F. G. Soper. Chem Soc J p342-6 Mr '47
Catalysis and the elementary chemistry course. J. A. Campbell. J Chem Educ 23: 582 D '46
Catalysis by acid-regenerated cation exchangers. S. Sussman. bibliog Ind & Eng Chem 38:1228-30 D '46
Catalysis of the reaction of chlorine and oxalic acid; complexes of trivalent manganese in solutions containing oxalic acid. H. Taube. bibliog Am Chem Soc J 69:1418-28 Je '47
Catalytic cracking of pure hydrocarbons; cracking of structural isomers. G. M. Good, H. H. Voge and B. S. Greensfelder. bibliog Ind & Eng Chem 39:1032-6 Ag '47
Catalytic desulfurization of cracked and straightrun gasolines. R. C. Amero and W. H. Wood. bibliog diag Oil & Gas J 46:82-5+ My 24 '47
Catalytic production of methane; abstract. E. T. Wilkins and L. J. Jolley. Am Gas J 167:18 S '47
Control of chemical reactions on a large scale; fluid catalyst process of oil refining; catalytic and gas-solid reactions. J. G. King. Chem Age (Lond) 56:795-7 Je 21 '47
Determination of the kinetics mechanism of a catalytic reaction. J. L. Tschernitz and others. bibliog flow chart pl diag Am Inst Chem Eng Trans 42:883-903; Discussion. 903-5 O-D '46
Fluid catalytic cracking process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:150-1 Ap '47
Fluid catalytic cracking process; Standard oil development company. flow diag Pet Refiner (Process Handbook sec) 26:152-3 Ap '47
High-frequency dielectric heating in heterogeneous catalysis. V. I. Komarewsky. il Science 105:291 Mr 14 '47
Houdry fixed-bed catalytic cracking process. flow diag Pet Refiner (Process Handbook sec) 26:168-9 Ap '47
Industrial catalysis. B. B. Corson. il J Chem Educ 24:99-103, 150-5 F-Mr '47
Mechanism of decomposition of hydrogen peroxide solutions with manganese dioxide. D. B. Broughton, R. L. Wentworth and M. E. Laing. Am Chem Soc J 69:741-7 Ap '47
Modern fluid catalytic cracking. E. Van Dornick. flow diag Pet Eng 18:149-50+ Ap '47
Oxidation processes; quinone catalysis in the autoxidation of hydroquinones. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1576-82 Jl '47
Polymerization; catalytic polymerization of butadiene by phenylsodium and amylpotassium. A. A. Morton and R. L. Letsinger. bibliog Am Chem Soc J 69:172-6 Ja '47
Preparation of β-tetralone by the catalytic reduction of β-naphthol. G. Stork and E. L. Foreman. bibliog Am Chem Soc J 68: 2172-4 N '46
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Recherches sur la catalyse d'oxydation. J. Ternisien and H.-F. Mélot. il diag Chimie & Ind 57:11-21 Ja '47
Removal of organic sulphur compounds from gases. Gas J (Lond) 248:1102+, 1154+ D 18-25 '46
Sensitized catalysis; the fundamental facts; oxidation of acid indigo. H. J. Kauffmann. Am Chem Soc J 69:899-903 Ap '47

See also
Catalysts
Hydrogenation

CATALYSTS
Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46
Acylation studies in the thiophene and furan series; natural and synthetic silica-metal oxide catalysts. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1014-16 My '47
Acylation studies in the thiophene and furan series; zinc chloride catalyst. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 69:1012-13 My '47
Adsorption-desorption isotherm studies of catalysts; comparison of low temperature isotherms of ammonia and nitrogen. H. E. Ries, jr., R. A. Van Nordstrand and W. E. Kreger. bibliog Am Chem Soc J 69:35-40 Ja '47
Analysis of silica-alumina cracking catalysts; spectrographic determination of contaminants. R. A. Burdett and L. C. Jones, jr. bibliog Anal Chem 19:238-41 Ap '47
Catalytic coal; esterification catalysts by sulfonated coal, an ion-exchange resin. Chem Ind 61:381 S '47
Catalytic gas alarm. diag Chem & Eng N 25:2368 Ag 18 '47
Catalytic reduction of sodium sulfate. C. J. Nyman and T. D. O'Brien. bibliog diag Ind & Eng Chem 39:1019-21 Ag '47
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Combustion of coke deposit on synthetic-bead cracking catalyst. W. A. Hagerbaumer and R. Lee. bibliog flow diag il diags A S M E Trans 69:779-83 O '47; Same. Oil & Gas J 45:76-8+ Mr 15 '47; Same. Pet Refiner 26:123-8 Je '47; Abstract. Pet Processing 2:308+ Ap '47

CATALYSTS—*Continued*
Conversion of liquid white phosphorus to red phosphorus; kinetics of the reaction. T. W. DeWitt and S. Skolnik. diag Am Chem Soc J 68:2305-9 N '46
Cracking sulfur stocks with natural catalyst. R. C. Davidson. bibliog diags Pet Refiner 26:79-88 S '47
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. Kline and others. bibliog J Res Nat Bur Stand 37: 281-310 N '46; Same. Mod Plastics 24:123-8+ Jl '47
Esso's fluid catalyst modifies Fischer-Tropsch; natural gas becomes source of liquid fuels and many chemicals. J. A. Lee. il Chem Eng 54:104-7 O '47
Fluid cat cracker designed to use new MS catalyst. D. P. Thornton, jr. il Pet Processing 2:173-6 Mr '47
Heterogeneity of catalyst surfaces for chemisorption; zinc oxide. H. S. Taylor and S. C. Liang. bibliog Am Chem Soc J 69:1306-12 Je '47
Heterogeneous catalytic activity of colloidal silver in the reduction of silver acetate. B. Krishna and S. Ghosh. bibliog J Phys & Colloid Chem 51:1130-7 S '47
High pressure hydrogenations with Adams catalyst. R. H. Baker and R. D. Schuetz. bibliog Am Chem Soc J 69:1250-2 Je '47
High temperature corrosion of metals under alternate carburization and oxidation. H. K. Ihrig. bibliog il Electrochem Soc Trans 91 (preprint 23):333-44 '47
Hydrocarbon synthesis in the presence of cobalt catalysts at medium pressures. C. C. Hall and S. L. Smith. flow diag Inst Pet J 33:439-59 Jl '47
Hydrogenation of lignin over Raney nickel. J. F. Saeman and E. E. Harris. bibliog Am Chem Soc J 68:2507-9 D '46
Magnetochemical study of catalysts; abstract. P. W. Selwood. Chem Eng 54:276+ Ap '47
Mechanism of catalytic cracking. R. C. Hansford. bibliog diag Ind & Eng Chem 39:849-52 Jl '47
Naphthas from fluid catalyst cracking. C. E. Starr, jr., J. A. Tilton and W. G. Hockberger. bibliog Ind & Eng Chem 39:195-202 F '47
Nitroölefins by the vapor phase catalytic cleavage of esters of nitro alcohols. M. H. Gold. bibliog Am Chem Soc J 68:2544-6 D '46
Operation and development of the Fischer-Tropsch and similar processes in Germany. C. C. Hall. diags Chem & Ind p67-74; Discussion. 74-5 F 1 '47
Oxidation processes; the mechanism of autoxidation reactions in the presence of foreign catalysts and inhibitors. J. E. Lu-Valle and A. Weissberger. bibliog Am Chem Soc J 69:1821-6 Jl '47
Particle size distribution of cracking catalysts. G. M. Webb. bibliog il Pet Processing 2:497-8+ Jl '47
Photo cells used in controller for catalyst regeneration unit; patent. diag Pet Processing 2:462 Je '47
Physical research methods increase knowledge of catalysts, hydrocarbons. G. M. Webb. il Oil & Gas J 45:203-4+ Mr 22 '47
Plant-built equipment grades catalyst on California polymerization unit. il Pet Processing 2:417 Je '47
Polymerisation of olefinic substances by Friedel-Crafts catalysts. J. P. W. Houtman. bibliog Soc Chem Ind J 66:102-3 Mr '47
Polymerization; the alfin catalysts. A. A. Morton, E. E. Magat and R. L. Letsinger. Am Chem Soc J 69:950-61 Ap '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47
Production and performance of ammonia-synthesis catalyst. G. L. Bridger and others. bibliog flow diag il diag Chem Eng Prog 43:291-302 Je '47
Production of butadiene from alcohol. W. J. Toussaint, J. T. Dunn and D. R. Jackson. il Ind & Eng Chem 39:120-5 F '47
Properties of cracking catalysts. G. M. Webb and C. H. Ehrhardt. il Pet Processing 2:5-8 Ja '47
Regeneration of spent catalyst in fluid catalytic cracking. J. F. Snuggs. il diag A S M E Trans 69:785-8 O '47; Same. Oil & Gas J 45:88-91 Mr 15 '47; Same. Pet Eng 18:230+ Mr '47; Same. Pet Refiner 26:107-10 Mr '47; Abstract. Pet Processing 2:311-12 Ap '47
Reppe's acetylene chemistry. M. H. Bigelow. Chem & Eng N 25:1038-42 Ap 14 '47
Spherical catalysts; patent. P. J. Gaylor. flow diag Pet Processing 2:701 S '47
Studies in the detoxication of catalyst poisons; thiophen. E. B. Maxted. Chem Soc J p624-7 My '47
Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47
Susceptibility-composition isotherm for the chromium-aluminum oxide catalyst system. R. P. Eischens and P. W. Selwood. Am Chem Soc J 69:1590-4 Jl '47
Use of bead catalyst in commercial Houdry units. C. V. Hornberg and others. il Oil & Gas J 46:214-16+ Jl 26 '47

See also
Antioxidants
Benzoyl peroxide
Catalysis
Enzymes
Growth promoting substances
Hormones
Nickel—Raney nickel
Vitamins

Testing
New method for testing catalysts. J. A. Hinckley, jr. and H. R. Sheppard, jr. il diags Anal Chem 19:771-3 O '47
System for rapid evaluation of catalysts for production of butadiene from ethanol. M. H. Whitlock, G. J. Haddad and E. E. Stahly. flow diag il diags Anal Chem 19: 767-70 O '47
Testing of cracking catalysts. M. E. Conn and G. C. Connolly. bibliog diags Ind & Eng Chem 39:1138-43 S '47

CATAPULTS, Airplane. See Airplanes—Take-off

CATAROLE process
British catarole plant. G. Abrahamson. Chem & Eng N 25:263 Ja 27 '47
Catarole process; high temperature cracking produces a mixture of aromatic and olefinic hydrocarbons. Chem Ind 60:226-7 F '47
English petrochemical plant taking shape near Manchester. il diags Oil & Gas J 46: 44+ Je 7 '47
New chemical plant at Partington, Cheshire. Chem Age (Lond) 57:288 Ag 30 '47

CATASTROPHE coverage. See Insurance—Catastrophe coverage

CATCH basins
Manholes and catchbasins; discussion. Water & Sewage 85:86+ O '47

CATECHOL
Allergenic principles of poison ivy; note on the synthesis of 3-substituted catechols. H. S. Mason. bibliog Am Chem Soc J 69:2241-2 S '47
Catechins of green tea. A. E. Bradfield, M. Penney and W. B. Wright. Chem Soc J p32-6 Ja '47
Kinetics of development by catechol. T. H. James. bibliog Am Chem Soc J 69:1217-19 My '47
Some derivatives of catechol and pyrogallol. R. D. Haworth, D. Woodcock and A. H. Lamberton. Chem Soc J p999-1005 N '46

CATENARY
Chart for stringing catenaries, using stainless steel, 3/8-in., 1 x 7 strand. V. H. Godfrey. Elec World 127:128 Mr 15 '47

CATERERS and catering
Waiting on the Main Line; John W. Holland co., Philadelphia. Fortune 35:136+ Ap '47

CATERPILLAR tractor company
Caterpillar diversifies. il Bsns W p36+ Ag 2 '47

CATERPILLAR tractor company—*Continued*
Community relations are important; Caterpillar has a special division to develop and hold local confidence. L. J. Fletcher. il Am Mach 91:89-92 Ag 14 '47
Financial statements for corporate annual reports. W. Blackie. J Account 83:191-207 Mr '47

CATHEDRALS
See also
St Patrick's cathedral, New York

CATHODE followers
Adjustable-bandwidth f-m discriminator. W. G. Tuller and T. P. Cheatham, jr. diags Electronics 20:117-19 S '47
Cathode follower driven by a rectangular voltage wave. M. S. McIlroy. diags Inst Radio Eng Proc 34:848-51 N '46; Discussion. H. L. Krauss. 35:694 Jl '47
Cathode-follower gate circuit. J. Kurshan. bibliog diags R Sci Instr 18:647-9 S '47
Cathode follower nomograph. M. B. Kline. Electronics 20:136 My; 136 Je; 130 Jl '47
Classroom demonstration of cathode follower. F. Duerden. diag Electronics 20:188+ F '47
Graphical analysis of cathode-biased degenerative amplifiers. W. A. Huber. bibliog diags Inst Radio Eng Proc 35:265-9 Mr '47
Graphical solutions for cathode followers. H. L. Krauss. bibliog diags Electronics 20:116-21 Ja '47
Input admittance of cathode-follower amplifiers. H. J. Reich. diags Inst Radio Eng Proc 35:573-6 Je '47
Method of graphically analyzing cathode-degenerated amplifier stages. E. M. Lonsdale and W. F. Main. diags Inst Radio Eng Proc 35:981-4 S '47

CATHODE ray oscillographs. See Oscillographs, Cathode ray

CATHODE ray tubes
Aluminum backed phosphor screen in cathode ray tubes. A. Bramley. Electrochem Soc Trans 91 (preprint 30):463-6 '47
Application of I.C.I. color system to development of all-sulfide white television screen. A. E. Hardy. bibliog RCA R 8:554-63 S '47
Cathode-ray compass used in connection with autopilot. R. T. Squier. il diags Electronics 20:121-3 Ap '47
Cathode-ray tube for displaying speech waves; teaching aid for deaf children. il Electronics 20:142 F '47
Cathode-ray tube for viewing continuous patterns. J. B. Johnson. il diags J Ap Phys 17:891-4 N '46
C-r tube on power lines; use as synchroscope in making reconnections at points of circuits interruption. Electronics 20:158+ S '47
Cathode tube improves compass. il diag Aviation 46:80-1 My '47
Electron beam deflection. R. G. E. Hutter. bibliog il diags J Ap Phys 18:740-58, 797-810 Ag-S '47
Electronic indicator for low audio frequencies. A. E. Hastings. il diags Inst Radio Eng Proc 35:821-7 Ag '47
Engine trouble shooting in the air. J. E. Lindberg, jr. and C. Sackett. il S A E J 55:53-4 Mr '47
Experimental cathode ray tubes for television. il diags Electronics 20:112-15 Mr '47
High voltage r.f. power supply; particularly applicable to cathode-ray tubes. J. F. Price. diags Radio N 39:54+ Jl '47
Identifying cathode-ray tubes. Radio N 38: 124 O '47
Image formation in cathode-ray tubes and the relation of fluorescent spot size and final anode voltage. G. Liebmann. bibliog diags Inst Radio Eng Proc 33:381-9 Je '45; Correction. 33:485 Jl '45; Discussion. 34:580-6; 35:791 Ag '46, Ag '47
Linear sweep circuits. R. P. Owen. diags Electronics 19:136+ D '46
Location of thunderstorms by radio direction-finding. F. Adcock and C. Clarke. bibliog il diags Inst E E J 94 pt 3:118-25; Discussion. 133-40 Mr '47
Magnetic compass with a cathode-ray sensing element. W. H. Kliever and R. R. Syrdal. diags Product Eng 18:132-4 Ag '47
Magnetic-deflection circuits for cathode-ray tubes. O. H. Schade. diags RCA R 8:506-38 S '47
Memory tube; pattern is produced, stored, and scanned on dielectric screen by electron beams. A. V. Haeff. il diags Electronics 20: 80-3 S '47
Nonlinear limiter in intensity modulation channel of cathode-ray tubes; radar device. diags Electronics 20:198+ My '47
Polar coordinate cathode-ray indicator. il R Sci Instr 18:595 Ag '47
Pulse rise and decay time measurement. A. Easton. diags Electronics 20:180+ S '47
R.f. power supplies. J. C. McGuire. il diags Radio N 37:51+ Je '47
Silicate phosphors for cathode-ray tubes. P. N. Campbell. Soc Chem Ind J 66:191-4 Je '47
Survey of cathode-ray-tube problems in service applications, with special reference to radar; abstract. diags Inst E E J 93 pt 1: 471-4 O '46
Visual null indicator for impedance bridge measurements at radiofrequencies. P. J. Brine and J. W. Whitehead. diags R Sci Instr 17:537-9 D '46
War-time developments in cathode-ray tubes for radar; abstract. L. C. Jesty and others. Inst E E J 93 pt 1:474-5 O '46; Discussion. 94 pt 3:344-5 S '47
See also
Electron gun
Oscillographs, Cathode ray

Manufacture
Television tube production; illustrations with text. Electronics 20:117 My '47

CATHODES
Excess noise in cavity magnetrons. R. L. Sproull. bibliog diags J Ap Phys 18:314-20 Mr '47
Magnetron cathodes. M. A. Pomerantz. bibliog il diags Inst Radio Eng Proc 34:903-10 N '46
Note concerning the motion of arc cathode spots in magnetic fields. R. L. Longini. bibliog Phys R 71:642-3 My 1 '47

CATHODIC protection. See Pipe lines—Protection; Water pipes—Protection; Water tanks, Steel—Cathodic protection

CATION exchangers. See Base exchanging compounds

CATTLE
See also
Cows
Insurance, Live stock

CATTLE industry and trade
Home on Pennsylvania range, Texas' King ranch. Bsns W p21-2 Ap 5 '47
Home on the Florida range. H. Severson. Banking 39:49 Ap '47
Next year's meat supply hinges on answer to corn puzzle and high-priced feeder cattle. Barron's 27:36 Ag 11 '47

CAUSEWAYS
Causeway built of precast units. il Eng N 137:710-13 N 28 '46

CAUSTIC embrittlement. See Boilers—Failure

CAUSTIC potash. See Potassium hydroxide

CAUSTIC soda. See Sodium hydroxide

CAVE, Edward Powell, 1880-
Wholesaling on borrowed time; Ely & Walker. por Fortune 36:122-5+ N '47

CAVES
Blasting reveals subterranean fairyland; Wisconsin's Cave of the mounds. R. J. Brodhead. il Explosives Eng 25:108-9 Jl '47
Servicing elevator ropes at Carlsbad Caverns. R. L. Parr. il Power Pl Eng 51:92-3 Je '47

CAVITATION
Acoustical concomitants of cavitation and boiling, produced by a hot wire. M. F. M. Osborne and F. H. Holland. bibliog il diags Acoustical Soc Am J 19:13-29 Ja '47
Cavitation from solid surfaces in the absence of gas nuclei. D. C. Pease and L. R. Blinks. bibliog J Phys & Colloid Chem 51: 556-67 Mr '47
Cavitation in hydraulic structures; a symposium; discussion by J. W. Ball and others. bibliog il diags Am Soc C E Proc 72:705-16, 867-80; 73:197-207 My-Je '46, F '47

CAVITATION—*Continued*
Cavity formation in water. E. N. Harvey and others. bibliog il J Ap Phys 18:162-72 F '47
Erosion of concrete by cavitation and solids in flowing water. W. H. Price. bibliog il Am Concrete Inst J 18:1009-23 My '47
Properties of liquids at high sound pressure. H. B. Briggs and others. bibliog diags Acoustical Soc Am J 19:664-77 Jl '47
Shock produced by a collapsing cavity in water. M. F. M. Osborne. il diag A S M E Trans 69:253-62; Discussion. 262-6 Ap '47
Some model experiments on the effect of blade area on propeller cavitation; abstract. L. C. Bell. Engineering 164:331; Discussion. 331-2 O 3 '47; Engineer 184:312-13 O 3 '47

See also
Hydraulic machinery
—Cavitation

CAVITY magnetron. See Magnetron

CAVITY resonators. See Radio resonators

CEDAR
Chemical composition of western red cedar bark. K. H. Cram and others. Pulp & Pa of Can 48:85-7 S '47; Abstract. Paper Ind 29:598 Jl '47
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47

CEILINGS
Ceiling panels heated with air; abstract. H. F. Randolph. Heating-Piping 19:94-5 Je '47
Electrified ceilings for house heating; heating element of conductive rubber. il Sheet Metal Worker 38:57+ Je '47
Insulating your ceiling. C. H. Minster. diags Food Ind 18:1850-1 D '46

CEILOMETER
Device records cloud height and density to improve flying safety; General Electric ceilometer. il Iron Age 159:140+ My 1 '47; Gen Elec R 50:50 My '47

CELANESE corporation of America
Annual report. Comm & Fin Chr 165:1447+ Mr 17 '47
Celanese opens central research laboratories. H. R. Mauersberger. il Rayon 28:526-7 O '47
Celanese research laboratories opened. il Chem & Eng N 25:2908 O 6 '47
Expects big sales from Texas chemical plant. Barron's 27:27 Je 2 '47
Forest for Celanese in British Columbia. map Bsns W p109 Mr 22 '47
Industrial Rayon versus Celanese. G. L. Merton. il Mag of Wall St 80:705-7+ S 27 '47
Sells debentures privately. Comm & Fin Chr 164:3410 D 30 '46
Thumbnail stock appraisal. Mag of Wall St 79:314 D 21 '46

CELESTITE
Celestite deposits, Brown, Nolan, Fisher, and Coke counties, Tex. W. E. Dennis and others. flow sheet 15pls U S Bur Mines Rep of Invest 4018:1-16 '47

CELL division (biology)
On the concepts of mitosis. L. Vanderlyn. Science 104:514-15 N 29 '46
Origin and evolution of meiosis. L. R. Cleveland. il Science 105:287-9 Mr 14 '47; Correction. 105:546 My 23 '47
Wright's hypothesis; its relation to volume growth of tissue cells and mitotic index. J. G. Hoffman. bibliog Science 106:343-4 O 10 '47

CELLER bill, H.R. 942. See National science foundation (proposed)

CELLOPHANE
Absorption of water by films of cellophane and polyvinyl alcohol. E. Creutz and R. R. Wilson. J Chem Phys 14:725-8 D '46
Automatic cellophane bagging of frozen foods; making filling and heat sealing duplex bags. il Mod Packaging 20:143-5 Mr '47
Bagged cranberries; Ocean Spray turns out 165 a minute. il Mod Packaging 21:107+ S '47
Colorful hams; Millar launches red cellophane wrap. il Mod Packaging 20:112-14 Jl '47
Conduction of electricity through cellulose. J. B. O'Sullivan. bibliog il diags Textile Inst J 38:T271-306 Jl '47
Cultivation of microorganisms with the aid of cellophane membranes. G. W. Harmsen and W. J. Kolff. diags Science 105:582-3 My 30 '47
Factors affecting measurement of water vapor permeability at low temperatures. W. H. Aiken. bibliog Paper Tr J 125:31-5 O 2 '47
Kleenex purse pack. il Mod Packaging 20:127 Je '47
Recommendations on cellophanes for meats. Mod Packaging 21:106 O '47

CELLOSOLVE
Products of the reaction of benzoyl peroxide with certain ethers. W. E. Cass. bibliog Am Chem Soc J 69:500-3 Mr '47

CELLS
Acetone-desiccated adult tissues as a source of cell growth-promoting extracts. E. Margoliash. Science 105:369-70 Ap 4 '47
Acid phosphatase and lipids in the mast cells of the rat. W. Montagna and C. R. Noback. bibliog Science 106:19 Jl 4 '47
Macromolecules synthesised by micro-organisms. M. Stacey. Chem Soc J p853-64 Je '47
Nucleus in relation to heredity and sex. E. C. Jeffrey. il Science 106:305-8 O 3 '47

See also
Cancer
Chromosomes
Cytochromes
Genes
Phagocytosis
Plant cells and tissues

CELLS, Electric. See Electric batteries; Storage batteries

CELLS, Electrolytic. See Electrolytic cells

CELLULAR glass. See Glass, Cellular

CELLULAR plastic materials. See Plastic materials, Cellular

CELLULOSE
Absorption spectra in the detection of chemical changes in cellulose and cellulose derivatives. J. W. Rowen and others. bibliog J Res Nat Bur Stand 39:133-40 Ag '47
Cellulose-dyestuff complex; effect of orientation on the reflection of polarised light. J. M. Preston and P. C. Tsien. bibliog il Soc Dyers & Col J 62:368-72 D '46
Cellulose industries of the West. J. E. Lodewick. il Chem & Eng N 25:2696-8 S 22 '47
Cellulose molecule; physical-chemical studies bibliog il diag J Phys & Colloid Chem 51: 1-18 Ja '47
Chemical composition of barks. E. F. Kurth. bibliog Chem R 40:33-49 F '47
Chemical research again surges upward; cellulose. M. A. Heath. Chem Ind 61:391-2 S '47
Chemically modified wood. E. C. Jahn. Chem Age (Lond) 57:459-60 O 4 '47
Cold alkaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Cold alkaline purification of wood cellulose; the influence of surface properties on resistant pentosans. A. Meller. bibliog Paper Tr J 125:57-60 S 11 '47
Density and refractivity of cellulose fibres in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47
Development of standards for analytical filter papers. B. W. Scribner and W. K. Wilson. bibliog J Res Nat Bur Stand 39:21-7 Jl '47
Electron microscopic structure of cellulose powder from wood pulp ground in very dry condition. P. H. Hermans. il Am Chem Soc J 68:2730-2 D '46
Fundamental aspects of the prevention of the microbiological degradation of cotton textiles. R. G. H. Siu. Am Dyestuff Rep 36: 320-3 Je 16 '47
High-molecular wood celluloses obtained in sulphite cooking; abstract. N. Gralen and B. Ranby. Paper Ind 28:1366 D '46
Hot alkaline purification of cellulose; cooking of pine wood by the sulphate process in one and two stages; hot alkaline purification of pine sulphate pulp. A. Meller. bibliog Paper Tr J 123:49-54 D 26 '46
Improved equipment and methods for fluidity measurements of cellulose and cellulose acetate. D. S. Lyle and F. K. Ray. bibliog il diags Am Dyestuff Rep 36:123-7 Mr 10 '47

CELLULOSE—*Continued*
Investigation of the properties of cellulose oxidized by nitrogen dioxide. E. W. Taylor and others. bibliog diags Am Chem Soc J 69:342-61 F '47
Nomographic treatment of the results from the cuprietheylenediamine method of determining the viscosity of cellulose. G. Beall. Paper Tr J 124:37-8 My 15 '47
Physical characteristics and chemical structure of cellulose derivatives; abstract. E. Ott. Chem & Ind p389 O 26 '46
Polymolecularity of cellulose; fractional precipitation method for its determination. J. E. Tasman and A. J. Corey. bibliog diag Pulp & Pa of Can (Convention no) 48:166-70 [F] '47
Quantitative isolation of hemicelluloses and the summative analysis of wood. L. E. Wise and E. K. Ratliff. bibliog Anal Chem 19:459-62 Jl '47
Reactions of cellulose. J. Honeyman. Chem Soc J p 168-73 F '47
Recent advances in the chemistry of wood. F. H. Yorston. bibliog Pulp & Pa of Can (Convention no) 48:296+ [F] '47
Recrystallization of amorphous cellulose. P. H. Hermans and A. Weidinger. bibliog il Am Chem Soc J 68:2547-52 D '46
Solubility of cellulose in mixtures of nitrogen tetroxide with organic compounds. W. F. Fowler, jr. and others. bibliog Am Chem Soc J 69:1636-40 Jl '47
Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47
Unsolved cellulose problems; abstract. E. Heuser. Chem & Eng N 25:2715 S 22 '47
Wood cellulose in rubber compounding. P. M. Goodloe and others. il Rubber Age 61:697-703 S '47

See also
Carboxymethyl cellulose
Cotton
Hemicellulose
Holocellulose
Lignin
Lignocellulose
Oxycellulose
Rayon
Viscose
Vulcanized fiber

Analysis

Cellulose in pulp; revision of TAPPI official standard T 201 m-45. diag Paper Tr J 123: 33-4 D 19 '46
Cellulose in wood; TAPPI tentative standard T17m-46. diag Paper Tr J 123:47-8 D 26 '46
Determination of alpha-cellulose in unbleached pulps. P. F. Cundy and M. M. Beck. Paper Ind 28:1800-1 Mr '47; Same cond. Paper Tr J 124:36-7 My 1 '47
Effect of sample preparation on analytical values for alpha-cellulose, copper number, and cuprammonium viscosity. B. L. Browning. Paper Tr J 124:54-5 Ap 10 '47

Electric properties

Cationic exchange reactions of cellulose and their effect on insulation resistance. H. F. Church. Soc Chem Ind J 66:221-6 Jl '47
Conduction of electricity through cellulose. J. B. O'Sullivan. bibliog il diags Textile Inst J 38:T271-306 Jl '47

CELLULOSE acetate
Absorption spectra in the detection of chemical changes in cellulose and cellulose derivatives. J. W. Rowen and others. bibliog J Res Nat Bur Stand 39:133-40 Ag '47
Acetate containers. il Mod Plastics 24:196 Ap '47
Acetate jazz brush. il Mod Plastics 25:174 O '47
Acetate of cellulose; complete saponification of fibers; patents. Am Dyestuff Rep 36:439 Ag 11 '47
Acetate staple, its function and use in blended yarns. H. Wild. Textile Inst J 37: P190-6; Discussion. P196-7 Jl '46
Association of polymer molecules in dilute solution. P. Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51: 32-57 Ja '47
Cellulose acetate microphones look and sound well. il Mod Plastics 24:132-3 Ja '47
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47
Fabricating of cellulose acetate; sewing, embossing, drilling, forming and blowing. R. G. O'Kane. diags Mod Plastics 24:138-43 Mr '47
Five advantages of acetate moth suffocator; vacuum cleaner attachment. il Mod Plastics 24:101 Ag '47
Foamed cellulose acetate, a new plastic. R. A. Hoffer. il Materials & Methods 25:58-61 Ja '47
Heat sealing acetate. W. F. Cullom. il diags Mod Packaging 21:152-3+ S '47
Improved equipment and methods for fluidity measurements of cellulose and cellulose acetate. D. S. Lyle and F. K. Ray. bibliog il diags Am Dyestuff Rep 36:123-7 Mr 10 '47
Low temperature impact strength of cellulosic plastics. W. E. Gloor. bibliog il Ind & Eng Chem 39:1125-9 S '47
Marketing pretests indicated plastics; kitchen fixtures of cellulose acetate and styrene meet the demand for colorful, easy-to-clean hardware. il Mod Plastics 24:126 D '46
Molded housing for electric manicurer. il Mod Plastics 24:109 D '46
New complete sheeting unit. il diags Mod Plastics 25:142-5 O '47
Plastics-coated mesh; Vimlite. Sci Am 176: 163 Ap '47
Powder boxes combine styrene and acetate. il Mod Plastics 24:132 N '46
Properties of cellulose as applied in plastic materials. W. E. Gloor. bibliog J Chem Educ 24:214-21 My '47
Recent developments; cellulosic plastics. il Product Eng 18:[134-5] insert 22-3 Ap '47
Study of the rate of saponification of cellulose acetates. F. Howlett and E. Martin. pl Textile Inst J 38:T212-25 Ap '47
Sulfonamide plasticizers and resins. H. S. Bergen, jr. and J. K. Craver. bibliog Ind & Eng Chem 39:1082-7 S '47
Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51:58-70 Ja '47

Physiological effect

Slow dissolving, non-irritating salt tablet for use in hot environments. W. V. Consolazio and others. bibliog il J Ind Hygiene 29:347-50 S '47

CELLULOSE acetate butyrate
Butyrate hot-melt coatings. M. Salo. diag Mod Packaging 20:127-8+ Ag '47
Cellulose ester melt-coating compositions. C. J. Malm, M. Salo and H. F. Vivian. bibliog(32 ref) Ind & Eng Chem 39:168-74 F '47
Folding toothbrush. il Mod Plastics 25:154 S '47
Fractional precipitation of molecular-weight species from high polymers; theories of the process and some experimental evidence. D. R. Morey and J. W. Tamblyn. bibliog diags J Phys & Colloid Chem 51:721-46 My '47
San Diego company uses plastic tubing. il Gas Age 98:14 D 26 '46

CELLULOSE acetate propionate
Tenite III announced. Chem & Eng N 25:2652 S 15 '47
Tennessee Eastman Tenite III, cellulose acetate propionate plastic. Mod Plastics 24: 120 Ag '47

CELLULOSE esters
Cellulose ester melt-coating compositions. C. J. Malm, M. Salo and H. F. Vivian. bibliog(32 ref) Ind & Eng Chem 39:168-74 F '47
Properties of cellulose as applied in plastic materials. W. E. Gloor. bibliog J Chem Educ 24:214-21 My '47

CELLULOSE nitrate. See Nitrocellulose

CELLULOSE propionate
Cellulose propionate in the field; Forticel. J. J. Keville, jr. il Mod Plastics 24:127-30 Ja '47
Properties of Forticel in mold and film forms. E. K. Cliver. Elec World 128:81 Ag 16 '47
Recent developments; cellulosic plastics. il Product Eng 18:[134] insert 22 Ap '47

CELLULOSE xanthate
Action of acrylonitrile on viscose; carboxylated rayons. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:929-30 Jl '47

CELLULOSE zincate
Cellulose zincate solution G,2,01; patent. Am Dyestuff Rep 36:546 S 22 '47
Cellulose zincate solutions used in transparentizing printing operations; patents. Am Dyestuff Rep 36:367 Je 30 '47

CELLURONIC acids
Investigation of the properties of cellulose oxidized by nitrogen dioxide; evolution of carbon dioxide from uronic acids and polyuronides. E. W. Taylor and others. bibliog Am Chem Soc J 69:342-7 F '47
Investigation of the properties of cellulose oxidized by nitrogen dioxide; reaction of the carboxyl groups of polyuronides with calcium acetate. P. A. McGee, W. F. Fowler, jr. and W. O. Kenyon. bibliog Am Chem Soc J 69:347-9 F '47

CEMENT
Air-entraining cement for structural concrete. il Am Bld 69:138-9 F '47
Augmentation de la résistance des ciments à l'hydrogène sulfuré par l'addition de ciment ferrique et de pouzzolane. Génie Civil 123:300 N 1 '46
Cement-aggregate reaction in concrete. D. McConnell and others. il map diag Am Concrete Inst J 19:93-128 bibliog(p127-8) O '47
Cement replaces bolts in anchoring machines. A. Demsky. il Factory Management 104: 106-7 N '46
Directory of materials for the construction of chemical equipment. Chem Eng 53:116-17 N '46
Latex/hydraulic cement flooring mixtures. L. H. Griffiths. Chem & Ind p578-80 S 20 '47; Discussion. p15 Ja 4 '47
Portland cements in the oil industry. N. C. Ludwig. Oil & Gas J 46:101-2+ Ag 9 '47
Sawdust-cement and other sawdust building products. T. W. Parker. Chem & Ind p593-6 S 27 '47
Shape of particles in finely ground powders. A. R. Steinherz. bibliog diags Soc Chem Ind J 65:314-20 O '46
Should portland cement be dispersed? T. C. Powers. bibliog diags Am Concrete Inst J 17:117-40 N '45; Discussion. il 18:140[1]-140[63] pt 2 D '46
Some recent advances in our understanding of the chemistry of portland cement. R. H. Bogue. bibliog(46 ref) J Res Nat Bur Stand 39:177-90 Ag '47
See also
Concrete
Gunite

Alumina cement
Inutilité des ciments alumineux dans les pays chauds. Génie Civil 124:136-7 Ap 1 '47
New method for building open-hearth flues; use of refractory concrete made with lumnite cement. W. F. Conlin. il Steel 120:94+ Ja 20 '47
Synthetic bauxite; wartime emergency material for the production of aluminous cement. A. V. Hussey. flow sheet Chem & Ind p635-8+ O 18 '47

Analysis
A.S.T.M. standards on cement (with related information) prepared by A. S. T. M. committee C-1 on cement, specifications, chemical analysis, physical tests. il diags pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
Rapid control method for the determination of slag in portland-blast furnace slag cement. W. J. McCoy. Rock Prod 50:106-7 O '47
Spectrographic analysis of portland cement. Am Cer Soc Bul 26:260 Ag 15 '47; Excerpt. il Civil Eng 17:245 My '47
Spectrographic determination of minor elements in portland cement. A. W. Helz and B. F. Scribner. bibliog diags J Res Nat Bur Stand 38:439-47 Ap '47

Fineness
New methods of determining the fineness of cement; abstract. F. Guye. Am Cer Soc J 30 (Cer A):135-6 Jl 1 '47

Hydration
Solubility of $Ca(OH)_2$ and $CaSO_4 \cdot 2H_2O$ in dilute alkali solutions; application to portland cement pastes. W. C. Hansen and E. E. Pressler. bibliog Ind & Eng Chem 39: 1280-2 O '47
Studies of the physical properties of hardened portland cement paste. T. C. Powers and T. L. Brownyard. bibliog il diags Am Concrete Inst J 18:101-32, 249-336, 469-504, 549-602, 669-712, 845-80, 933-92 O '46-Ap '47
System CaO-SiO_2-H_2O and the hydration of the calcium silicates. H. H. Steinour. Chem R 40:391-460 bibliog(191 ref, p455-60) Je '47

Manufacture
Cement works at Tura, Egypt; high standard of product. il diag Chem Age (Lond) 55: 637-8 N 23 '46
Corrosion resistant cement production; automatic controls to produce formaldehyde resins for anti-corrosion cements. il Chem Eng 54:110-11 Je '47
Designing a five-component mix. R. A. Loveland. Rock Prod 50:92-8 S '47; Discussion. L. A. Dahl. 50:114-15 O '47
Fuel economy with slurry dryer. H. Kronstad. diags Rock Prod 49:94+ N '46
Long kiln saves fuel, improves clinker; Lawrence portland cement co. B. Nordberg. il Rock Prod 50:70-3+ Mr '47
Long kiln vs. short kiln performance; Lone star cement corporation. B. Nordberg. il Rock Prod 50:122-5 Ag '47
Longest dry process cement kilns; Lawrence portland cement co. B. Nordberg. il plan diags Rock Prod 50:86-91 Je '47
Mathematical problems of proportioning raw materials. R. W. Hubbs. Rock Prod 50:132-3+ Ag '47
Moisture control of portland cement raw mix slurry. C. J. Knickerbocker. diags Rock Prod 50:86-7 Jl '47
Problem of proportioning portland cement raw mixtures. L. A. Dahl. Rock Prod 50: 109+ Ja; 107-8+ F; 92-4+ Mr; 122+ Ap '47
Raw mix blending calculated graphically. J. E. Berrocal. Rock Prod 49:87+ N '46
Trends in cement manufacture. B. Nordberg. il Rock Prod 50:116-21+ Ag '47
See also
Cement kilns

Prices
Supreme court hears arguments on cement basing point system. Iron Age 160:97 O 23 '47
U.S. asks Court review of cement basing point case; Federal trade commission anxious for ruling on legality of basing point systems. il Iron Age 159:101 Ja 30 '47
Why Appeals court reversed FTC's attack on price system; refused to declare basing point price system illegal. G. H. Montague. Ptr Ink 217:73-4+ D 6 '46

Setting
Chemical processes in the hardening of portland cement; abstracts. R. Hedin. Am Concrete Inst J 18:347-8 N '46; Am Cer Soc J 30 (Cer A):135 Jl 1 '47
Étude de l'action du sulfate de calcium sur la prise des ciments. L. Chassevent and P. Stiglitz. bibliog Chimie & Ind 57:535-9 Je '47

Testing
A.S.T.M. standards on cement (with related information) prepared by A.S.T.M. committee C-1 on cement, specifications, chemical analysis, physical tests. il diags pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
Crack control in portland cement plaster panels. B. A. Hall. il diags Am Concrete Inst J 19:129-40 O '47

CEMENT—*Continued*

Transportation

Barge haulage and new terminals extend cement markets; Missouri portland cement co. il plans diags Rock Prod 50:126-31+ Ag '47

Marquette adds to water fleet. il Concrete 55:40 Ag '47

CEMENT, Effect of sea water on

Cements resistant to sea water; experiments by Gino Gallo. Chem Age (Lond) 57:318 S 6 '47

CEMENT clinkers

Heats of solution of solid solutions of hexacalcium dialumino ferrite and dicalcium ferrite. E. S. Newman. bibliog J Res Nat Bur Stand 38:661-4 Je '47

Theory of the cause of ring formation. M. Lintz. Rock Prod 50:75 Je '47

CEMENT dust

Effect of portland cement dust on the lungs with special reference to susceptibility to lobar pneumonia. A. M. Baetjer. bibliog J Ind Hygiene 29:250-8 Jl '47

CEMENT handling

Barge haulage and new terminals extend cement markets; Missouri portland cement co. il plans diags Rock Prod 50:126-31+ Ag '47

Cement handling and storage plant. il Mech Handling 34:349-51 Jl '47

Handle large volume of cement exports with bulk loading plants; Permanente cement co. il Rock Prod 50:108-9 O '47

CEMENT industry and trade

Basing-point price case in high court. Oil Paint & Drug Rep 151:3+ Ja 27 '47

Demand for cement and concrete in construction. E. M. Artenberg. il Dom Comm 34: 47-52 D '46

Price boost promises bigger cement industry earnings. S. G. Ebert. Barron's 27:11 S 15 '47

Supreme court hears arguments on cement basing point system. Iron Age 160:97 O 23 '47

Securities

1948 outlook for cement companies. H. S. Coffin. il Mag of Wall St 81:87-9+ O 25 '47

Statistics

Cement output in 1946 totaled approximately 164 million barrels. Concrete 55:28 Mr '47

Germany

Observations of war damage to concrete and to cement industry properties in Germany. M. A. Swayze. il Am Concrete Inst J 18: 617-27 F '47

Great Britain

Cement monopoly; acquittal, or not proven? Economist 152:861-2 My 31 '47

Virtuous monopolist; comments on the inquiry into organisations dominating the manufacture of cement and of textile machinery. Economist 153:54-5 Jl 12 '47

Mexico

Cement production. For Comm W 26:28 Ja 18 '47

Southern states

Cement, the barometer. C. Walker. il Manuf Rec 116:35+ My '47

Sweden

Double the capacity of Sweden's most modern cement plant; Skanska cement co. il Rock Prod 50:142-4+ Ag '47

CEMENT kilns

Double the capacity of Sweden's most modern cement plant; Skanska cement co. il Rock Prod 50:142-4+ Ag '47

Erecting 426-ft. long cement kiln at Tampa. il Concrete 55:34 O '47

Industrial gun breaks up clinker rings. il diag Product Eng 18:103 Ja '47

Insulation in rotary kilns. W. R. Cliffe. diags Rock Prod 50:145-7+ Ag '47

Long kiln saves fuel, improves clinker; Lawrence portland cement co. B. Nordberg. il Rock Prod 50:70-3+ Mr '47

Long kiln vs. short kiln performance; Lone star cement corporation. B. Nordberg. il Rock Prod 50:122-5 Ag '47

Longest dry process cement kilns; Lawrence portland cement co. B. Nordberg. il plan diags Rock Prod 50:86-91 Je '47

Removing clinker rings from rotary kilns. Am Concrete Inst J 19:177-8 O '47

Theory of the cause of ring formation. M. Lintz. Rock Prod 50:75 Je '47

Trends in cement manufacture. B. Nordberg. il Rock Prod 50:117-18 Ag '47

CEMENT lined pipe

Cement linings for cast-iron pipe. T. F. Wolfe. N E Water Works Assn J 60:389-94 D '46; Abstract. Water & Sewage Works 93:419 N '46

Cleaning and lining cast-iron pipe with shop-built equipment. il Eng N 139:325-7 S 4 '47

CEMENT plants

Marquette buys two Tennessee plants. il Concrete 55:13 F '47

Producing agricultural limestone as cement by-product; Oregon portland cement co. il diag Rock Prod 50:94-5 Je '47

Equipment

Brown and sons double-reduction gear with barring mechanism. il diags Engineering 163:32-3 Ja 10 '47

Double the capacity of Sweden's most modern cement plant; Skanska cement co. il Rock Prod 50:142-4+ Ag '47

Electric welding equipment for the cement industry. A. Smith and W. J. Campbell. il Concrete 55:6-9+ Ja '47

From aluminum to cement manufacture; Ideal cement co. converts aluminum plant at Mobile, Ala. il plans Rock Prod 50:138-41+ Ag '47

Fuel economy with slurry dryer. H. Kronstad. diags Rock Prod 49:94+ N '46

Handle large volume of cement exports with bulk loading plants; Permanente cement co. il Rock Prod 50:108-9 O '47

High efficiency in stack dust recovery; Universal atlas cement company. B. Nordberg. il Rock Prod 50:134-7 Ag '47

Trends in cement manufacture. B. Nordberg. il Rock Prod 50:116-21+ Ag '47

What is in the future for grinding? J. M. Wolfe. diags Rock Prod 50:119-23+ Ja '47

See also
Cement kilns

Power

Supercharging gas-burning Diesel yields maximum performance; Lehigh portland cement co. il diags Power 91:396-8 Je '47

Safety measures

Marquette celebrates world record for safety in cement making. Concrete 55:32 Ja '47

CEMENT research

Heats of solution of solid solutions of hexacalcium dialumino ferrite and dicalcium ferrite. E. S. Newman. bibliog J Res Nat Bur Stand 38:661-4 Je '47

Recherches sur le broyage dans l'eau des liants hydrauliques. L. Chassevent. Chimie & Ind 57:327-30 Ap '47

Some recent advances in our understanding of the chemistry of portland cement. R. H. Bogue. bibliog(46 ref) J Res Nat Bur Stand 39:177-90 Ag '47

Studies of the physical properties of hardened portland cement paste. T. C. Powers and T. L. Brownyard. bibliog il diags Am Concrete Inst J 18:101-32, 249-336, 469-504, 549-602, 669-712, 845-80, 933-92 O '46-Ap '47

CEMENTING

See also
Petroleum—Well cementing and plugging

CEMENTS

Cement repairs vinyon filter cloths. J. Karslo. Chem Eng 54:156-7 My '47

Hydromite, a new cement-resin combination for casting. Rubber Age 60:320 D '46

Plasters and gypsum cements for the ceramic industry; alpha-gypsum. J. S. Offutt and C. M. Lambe. bibliog il Am Cer Soc Bul 26:29-36 F 15 '47

CEMENTS—*Continued*
Plastics as optical cements. H. W. Coles and others. bibliog il diags Mod Plastics 24:141-8+ Je '47
Uni-bond process of relining brakes for motor vehicles. il Rubber Age 61:196 My '47
Use of cyclewelding will be expanded. Bsns W p60 D 21 '46
See also
Adhesives

CEMESTO board. See Wall board

CENERAZZO, Walter W.
Portrait. Fortune 35:198 Ja '47

CENSORSHIP
Government control of sources of information. K. E. Mundt. Ann Am Acad 250:26-31 Mr '47

CENSUS
United States
Government modernizes questionnaires for complete census of manufactures. S. E. Cohen. Ind Marketing 32:51-2 S '47

CENSUS bureau. See United States—Census, Bureau of

CENSUS of the Americas
Vital facts for businessmen. J. C. Capt. For Comm W 27:12+ Ap 12 '47

CENTER of gravity. See Center of mass

CENTER of mass
Finding the center of gravity of irregular figures; data sheet. diags Foundry 75:140 My '47
Unsymmetrical sections; simple procedure facilitates calculation of properties. A. B. Cox. il diags Machine Design 19:129-32 F '47

CENTERING (machine work)
Adcock and Shipley duplex centring machine. il Automobile Eng 37:107 Mr '47
Adjustable center drill cuts to accurate depth. D. A. Baker. diag Am Mach 91:110 Ja 30 '47
Centering pilot for Landis receding-chaser pipe-threading and cutting-off machines. il Mach 53:200 F '47
Floating center drill locates rod centers. H. F. Schick, jr. diag Am Mach 91:109-10 Jl 31 '47
Optical drill chuck. il diag Engineering 164:8 Jl 4 '47; Abstract. Mech Eng 69:775-6 S '47
Telescoping support centers boring bars. E. J. Rogers. diags Am Mach 91:101 F 27 '47
Universal V-block jig establishes hole centers. G. Wenke. diag Am Mach 91:111 Jl 31 '47

CENTRAL AMERICA
Steps toward federation. map Bsns W p104 Mr 29 '47

CENTRAL and south west corporation
Common stock offered. Comm & Fin Chr 165: 679 F 3 '47
Public utility securities. Comm & Fin Chr 165:272 Ja 16 '47

CENTRAL and south west utilities company
Exchange plan. Comm & Fin Chr 165:69 Ja 6 '47
Merger plan upheld. Comm & Fin Chr 165:204 Ja 13 '47

CENTRAL Arizona light and power company
Preferred stock offered. Comm & Fin Chr 165:3163 Je 16 '47

CENTRAL banks. See Banks and banking—Central banks

CENTRAL electric and gas company
Stock offered. Comm & Fin Chr 165:1312 Mr 10 '47

CENTRAL EUROPE
In Russia's Europe. il map Fortune 35:78-83+ F '47

CENTRAL Illinois electric and gas company
Big expansion. Barron's 26:6 D 2 '46

CENTRAL manufacturing district. See Chicago—Central manufacturing district

CENTRAL railroad of New Jersey
Files new rate plan. Comm & Fin Chr 165: 2132 Ap 21 '47
Jersey Central doing more business for less. R. E. Bedingfield. Barron's 27:19 S 8 '47
Jersey Central works self in better shape. D. B. Loveman. 2d. Barron's 27:6 Ja 27 '47
Reorganization plan filed. Comm & Fin Chr 165:2273-4 Ap 28 '47

CENTRAL railroad of Pennsylvania
Equipment trusts offered. Comm & Fin Chr 165:3276 Je 23 '47

CENTRAL states electric corporation
Central States leverage loss dumps Young plan. J. H. Falvey. Barron's 27:9 Ag 18 '47
Supreme court clears way for suit; group to file reorganization plan. Comm & Fin Chr 165:3281-2 Je 23 '47

CENTRAL valley, California
Place of Central valley in the social prospect of southern California. P. S. Taylor. Ann Am Acad 248:214-19 N '46

CENTRAL Valley project, California
Billion-dollar waterway in California; Central Valley project, the Friant-Kern canal. O. H. Barnhill. il map Explosives Eng 25:50-2+ Mr '47
Central Valley project; canals come next. il map Eng N 138:442-7 Mr 20 '47
Repayment plans for Central valley; cost data. R. L. Boke. Eng N 138:945 Je 12 '47
Who will pay for the Central Valley project of California? A. D. Angel. bibliog J Land & Pub Util Econ 22:266-72 Ag '46; Reply. J. S. Moulton; R. A. Wehe. 23:86-8; Rejoinder (That temporary contract). 88-90 F '47

CENTRALIZED traffic control. See Railroads—Signals

CENTRIFUGAL casting. See Casting, Centrifugal

CENTRIFUGAL compressors. See Compressors

CENTRIFUGAL force
Biological papers involving work in which a centrifuge is used. D. P. Costello. Science 105:474 My 2 '47
Description of centrifuge operations in terms of duration and speed. H. C. Knauss. Science 106:265 S 19 '47
Effect of centrifugal force in axial-flow turbines. B. Pochobradsky. diags Engineering 163:205-7 Mr 21 '47; Discussion. A. D. S. Carter. 163:388 My 9 '47; Reply. 164:160 Ag 15 '47

CENTRIFUGAL pumps. See Pumps, Centrifugal

CENTRIFUGES
Approximate solution of the differential equation of the ultracentrifuge. W. J. Archibald. bibliog J Ap Phys 18:362-7 Ap '47
Centrifugation. J. O. Maloney. bibliog Ind & Eng Chem 39:16+ Ja '47
Centrifuges; new equipment. J. C. Smith. il Chem Ind 61:417-18 S '47
Centrifuging of latex. G. J. Van Der Bie. India Rubber World 115:209-14 N '46
Demonstration of some new methods of determining molecular weights from the data of the ultracentrifuge. W. J. Archibald. J Phys & Colloid Chem 51:1204-14 S '47
Description of centrifuge operations in terms of duration and speed. H. C. Knauss. Science 106:265 S 19 '47
Explosion of a rotor in an analytical air-driven ultracentrifuge. E. B. Sanigar and J. H. Hambleton. il diags Franklin Inst J 244:234-40 S '47
Methods for measuring the speed of centrifuges. F. R. Hunter and J. F. Hoffman. diag Science 105:529 My 16 '47
New filtering centrifuge; De Laval Purifilter. il Diesel Power 24:1446 D '46
Process equipment cost estimation; centrifugal separator costs. H. Eckhardt. Chem Eng 54:121-3 My '47
Recovery of barite from rotary drilling mud by centrifugal separation. C. A. Lindsay. il diags Oil & Gas J 45:92+ D 14 '46
Selection of centrifuges for chemical processing. J. C. Smith. il diags Ind & Eng Chem 39:74-9 Ap '47
Single flashlight source for ultracentrifuge research. L. L. Lipschultz and K. G. Stern. bibliog il diag Science 105:395-6 Ap 11 '47
Speed control for the air driven centrifuge. J. W. Beams and others. bibliog diag R Sci Instr 18:57-60 Ja '47

CENTRIFUGES—*Continued*
Starch dervish; centrifugal separation for starch production; Merco system. il Chem Ind 61:378-9 S '47

CEPHALIN
Synthesis of cephalin. W. G. Rose. bibliog Am Chem Soc J 69:1384-7 Je '47

CERAMIC art
Development of ceramic compositions suitable for the production of porcelain type artware. B. W. Thorngate. bibliog il diag Florida Eng and Industrial Exp Sta [Gainesville] Bul 11:1-72 '46
Hobby gives Louisiana its second commercial pottery; Angells' pottery. il Cer Ind 48:80+ F '47
Survival of American ceramic-artware market seriously threatened by foreign manufacturers. S. L. Gordon. Am Cer Soc Bul 26:212 Jl 15 '47

See also
Ceramic sculpture
Glass, Ornamental
Glassware—Decoration
Pottery—Decoration

Exhibitions

Art center offers better ideas for living; Walker art center, Minneapolis. il Cer Ind 47:88 N '46
California gift and art show, Los Angeles. il Cer Ind 48:110+ Mr '47
California gift and art show, 25th, Los Angeles, July 27-Aug. 1. il Cer Ind 49:110+ S '47
Cleveland makes history with 29th annual May show. il Cer Ind 48:44-5+ Je '47

CERAMIC industries
Coming competition. J. E. Hansen. Am Cer Soc Bul 26:87 Mr 15 '47
Men and imagination make Electro a key supplier to our industry. il Am Cer Soc Bul 26:275-7 S 15 '47
We can have a terrific boom in ceramics. il Cer Ind 48:52-3 Ja '47
What merchandisers are looking for in ceramic products. Cer Ind 49:45 Jl '47

See also
Brick industry and trade
Cement industry and trade
Color in the ceramic industries
Enamel and enameling
Glass trade
Pottery industry
Refractory materials

Exhibitions

National ceramic exhibition. il Am Cer Soc Bul 25:491-2 D 15 '46; Cer Ind 47:84-6 D '46
Standards well above average at San Francisco show; Western gift, jewelry and housewares show. Z. A. Battu. Cer Ind 49: 106+ S '47

See also Ceramic art—Exhibitions

Denmark

Present status of ceramic industry. Am Cer Soc Bul 26:185-6 Je 15 '47

Germany

How Germans make high temperature refractories and ceramics. Brick & Clay Rec 110:64+ Ap '47
Technical progress reports of government sponsored agencies; abstracts. Cer Ind 48: 114+ Ap '47

Japan

Ceramic industry of Japan. E. A. Thomas. Am Cer Soc Bul 26:95-9 Mr 15 '47

CERAMIC laboratories
Locke Insulator dedicates two research laboratories. il Elec World 128:89 O 11 '47; Same. Edison Elec Inst Bul 15:398 N '47

CERAMIC materials
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48:71-4 Ag '47
Ceramic materials; a complete directory with details of their properties and functions in various ceramic bodies. Cer Ind 48:62-8+ Ja '47
Ceramics as engineering materials; abstract. F. Singer and H. Thurnauer. Materials & Methods 26:120 Ag '47
Development of cordierite ceramic bodies with sierralite; a new ceramic material. R. S. Lamar. Cer Ind 49:90 Ag '47
Directory of materials for the construction of chemical equipment. Chem Eng 53:117 N '46
How Germans make high temperature refractories and ceramics. Brick & Clay Rec 110:64+ Ap '47
Metallizing glass and ceramic materials. A. J. Monack. Glass Ind 28:21-5+ Ja '47
Metals and ceramics able to withstand higher stresses and temperatures being developed; abstract. C. E. Williams. Steel 121:48-9 S 8 '47
New ceramic combines ceramic materials and powdered metals. H. H. Hausner. il diags Cer Ind 47:87-8+ O; 90+ N '46; Discussion. L. R. McCreight. 48:110 Ap '47
New industrial grinding wheel; Carborundum company's ceramic bonded wheel. il Mod Plastics 24:216-17 My '47
Petroleum products in ceramic processing operations. H. T. Van Horn. Am Cer Soc Bul 26:229-31 Ag 15 '47
Predicting temperature-time curve for the burning of ceramic products. P. Munier. Brick & Clay Rec 111:58+ Ag; 60+ S '47
Use of ceramics in gas turbine design. S. W. G. Foster. Roy Aeronautical Soc J 50:893-5 N '46

See also
Bricks
Clay
Enamel and enameling
Feldspar
Kyanite
Opacifiers
Refractory materials
Silica
Silicates
Steatite
Stoneware
Talc

Analysis

Spectrochemical analysis of ceramics and other non-metallic materials. E. K. Jaycox. Opt Soc Am J 37:162-5 Mr '47; Abstract. Glass Ind 28:307+ Je '47

Electric properties

Alkaline earth porcelains possessing low dielectric loss. M. D. Rigterink and R. O. Grisdale. Am Cer Soc J 30:78-81 Mr 1 '47
Fabrication of thin ceramic sheets for capacitors. G. N. Howatt and others. il diags Am Cer Soc J 30:237-42 Ag 1 '47
High dielectric ceramics. il Am Cer Soc Bul 26:294-5 S 15 '47
High dielectric ceramics for limited space capacitors; research at the National bureau of standards. il Product Eng 18:147-8 Je '47
Microscopic and X-ray investigation of some steatite bodies. M. D. Rigterink. bibliog il Am Cer Soc J 30:214-18 Jl 1 '47
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47
Semiconducting ceramic materials. H. H. Hausner. bibliog Am Cer Soc J 30:290-6 S 1 '47

Joining to metal

Metal-ceramic brazed seals for microwave tubes. R. J. Bondley. il Electronics 20:97-9 Jl '47

See also
Sealing

Testing

Ceramic coatings for high-temperature protection of steel. W. N. Harrison and others. il J Res Nat Bur Stand 38:293-307 Mr '47
Stress-strain relations in ceramic materials. J. O. Everhart and M. Lassettre. il Ohio State U Eng Exp Sta Bul 126:1-23 '46 (pa 50c)
Stress strain relations in dinnerware bodies; abstract. J. O. Everhart. Cer Ind 48:60 Ja '47
Suppression of radiations at high temperatures by means of ceramic coatings. D. G. Bennett. bibliog il diag Am Cer Soc J 30: 297-305 O 1 '47
Transverse-strength machine based on chain-omatic principle. C. R. Amberg. diags Am Cer Soc J 30:256-9 Ag 1 '47

CERAMIC patents
Ceramic composition for making glass-like articles; patent. Glass Ind 28:520 O '47

CERAMIC research
Basic research related to ceramics in progress at the Midwest research institute. G. W. Ward. Am Cer Soc Bul 26:6-7 Ja 15 '47
Bell Telephone improves ceramic insulators. M. D. Rigterink. il Cer Ind 48:81-3 My '47
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47
Report of committee on research. bibliog Am Cer Soc Bul 26:192-8 Je 15 '47
Translucency meter for use in whiteware research. N. L. Haldy and others. il diags Am Cer Soc J 30:153-9 My 1 '47

CERAMIC sculpture
Goldscheiders' American venture in eighth year of prosperity. il Cer Ind 49:98+ S '47

CERAMICS
Abstracts of papers at American ceramic society 49th annual meeting, Atlantic City. Brick & Clay Rec 110:49-50, 62+ My; 54+ Je '47
Abstracts of papers at American ceramic society 49th annual meeting, Atlantic City. Cer Ind 48:56-7+ Je '47
ACS division meetings; whiteware, materials and equipment, design; abstracts of papers. Cer Ind 47:82+ N '46
Black light, fluorescence, and ceramics. F. C. Arrance. bibliog il diag Am Cer Soc J 30:250-5 Ag 1 '47
Ceramic batches. Cer Ind 48:130+ Ja '47
Designing small ceramic parts; abstract. J. Wallich. diags Product Eng 18:131-3 Jl '47
Plasters and gypsum cements for the ceramic industry; alpha-gypsum. J. S. Offutt and C. M. Lambe. bibliog il Am Cer Soc Bul 26:29-36 F 15 '47
Technical progress reports of government sponsored agencies; abstracts. Cer Ind 48: 114+ Ap '47

See also
Brickmaking
Cement
Clay
Clay products
Enamel and enameling
Fire brick
Glass
Glass manufacture
Glazes
Kilns
Porcelain
Pottery
Refractory materials
Slips (ceramics)
Stoneware
Tiles

Bibliography
American ceramic society bulletin; author index and subject index; volume 25, 1946. Am Cer Soc Bul 25:495-516 D 15 '46
Ceramic abstracts; compiled by the American ceramic society; author and subject indexes for 1946. Am Cer Soc J 29 (Cer A):207-56 D 1 '46
Ceramic abstracts section. Published in monthly numbers of American ceramic society journal

Study and teaching
Mills college ceramic guild is cooperative project under guidance of Carlton Ball. il Cer Ind 49:94+ Ag '47

CEREAL chemists
Modern trends in cereal chemistry in America and elsewhere; abstract. D. W. Kent-Jones. Chem & Ind p276 My 17 '47

CEREAL chemists, American association of. See American association of cereal chemists

CEREALS. See Grain

CEREALS, Prepared
New breakfast-food industry established in Chile. For Comm W 28:33 Ag 9 '47
Premium panel pays; Ralston purina co. analyzes use of whole package face for spoon offer. il Mod Packaging 20:121 Jl '47

Advertising
How General Foods uses premiums to push sales; national advertising combined with premiums at point of sale. P. Lillard. il Adv & Sell 40:48+ Jl '47

Analysis
Determination of the moisture content of cereals by measurement of specific inductive capacity. L. G. Groves and J. King. bibliog diags Soc Chem Ind J 65:320-4 O '46

CEREBRAL cortex. See Brain

CEREBROSPINAL fluid
Chromatolytic effect of cerebrospinal fluid following cerebral concussion. E. A. Spiegal and others. Science 105:208 F 21 '47
Ultraspectrophotometric studies on cerebrospinal fluids. M. Spiegel-Adolf and H. T. Wycis. bibliog J Phys Chem 50:447-52 N '46
Ultraviolet absorption spectrum of cerebrospinal fluid: ascorbic versus nucleic acid. L. A. Strait and others. bibliog Science 106:64-5 Jl 18 '47

ČERENKOV radiation. See Radiation

CERIUM alloys
Magnesium-cerium-zirconium alloys; properties at elevated temperatures. A. J. Murphy and R. J. M. Payne. il Engineering 163: 485-7 Je 6 '47

CERIUM fluorides
Metallic fluorides in fluorocarbon synthesis; manganese trifluoride, ceric fluoride, etc. as alternates for cobalt trifluoride. R. D. Fowler and others. il Ind & Eng Chem 39:343-5 Mr '47

CERIUM oxide
Telescoptics. A. G. Ingalls. Sci Am 176:189-92 Ap '47

CERIUM sulfate
Application of the principle of the concentration cell to kinetic studies; oxidation of oxalic acid by ceric sulfate. S. D. Ross and C. G. Swain. Am Chem Soc J 69:1325-6 Je '47

ČERNOSVITOV, Leo, 1902-1945
Sketch. G. F. Pickford. Science 105:36 Ja 10 '47

CERTIFICATES of deposit
Alternate payee of time deposit certificate not entitled to proceeds upon death of payee; Reese v. First national bank of Bellville. Banking Law J 64:8-14 Ja '47
Negotiable time deposit certificate. C. R. Rosenberg, jr. Burroughs Clearing House 31:52+ D '46

CERTIFICATES of stock. See Stocks—Certificates

CERTIFICATION of products. See Products, Certification of

CERVI, Eugene Sisto, 1906-
Old dynamite. por Fortune 36:116+ Ag '47

CESIUM
Fatigue of Ag-Cs_2O, Ag-Cs photoelectric surfaces. S. Pakswer. bibliog J Ap Phys 18:203-6 F '47
Free fall of atoms and the measurement of the velocity distribution in a molecular beam of cesium atoms. I. Estermann and others. diags Phys R 71:238-49 F 15 '47
Mean free paths of cesium atoms in helium, nitrogen, and cesium vapor. I. Estermann and others. diags Phys R 71:250-7 F 15 '47
Modulation of the resonance lines in a cesium arc. J. M. Frank and others. il diags Opt Soc Am J 37:718-25 S '47

Isotopes
Disintegration by consecutive orbital electron captures $_{56}Ba^{131} \rightarrow _{55}Cs^{131} \rightarrow _{54}Xe^{131}$. F. Yu and others. Phys R 71:382 Mr 15 '47

CESIUM fluoride
Electric resonance method of radiofrequency spectroscopy; moment of inertia and electric dipole moment of CsF. H. K. Hughes. bibliog diag Phys R 72:614-23 O 1 '47

CESIUM hydroxide
Laboratory preparation of alkali metal hydroxides by electrolysis. A. F. Winslow, H. A. Liebhafsky and H. M. Smith. diags J Phys & Colloid Chem 51:967-72 Jl '47

CESIUM oxide
Fatigue of Ag-Cs_2O, Ag-Cs photoelectric surfaces. S. Pakswer. bibliog J Ap Phys 18:203-6 F '47

CESIUM vapor electric lamps. See Electric lamps, Cesium vapor

CEYLON

See also
Chemical industries—Ceylon

Commercial policy

Withdrawal of open general license. For Comm W 28:17 S 27; 29:12 O 18 '47

Economic conditions

News by countries. For Comm W 26:12 F 1 '47

Economic policy

Ceylon's agricultural economy moves toward diversification. D. J. Steinberg. il For Comm W 28:6-10+ Ag 16 '47

Industries and resources

Ceylon's agricultural economy moves toward diversification; new industries projected, helpful shifts envisaged. D. J. Steinberg. il For Comm W 28:6-10+ Ag 16 '47

CHAIN banking. See Banks and banking—Chain banking

CHAIN conveyors. See Conveying machinery—Chain conveyors

CHAIN gear

Care and maintenance of conveyors and elevators. J. Carruthers. diags Mech Handling 34:417-25 Ag '47

Graphic method of selecting roller chain drives for multiple speed transmissions. W. Brown. Pet Eng 18:156+ N '46

Heavy-duty chain drives for marine propulsion service. N. C. Bremer. il diags A S M E Trans 69:441-7 Jl '47; Same cond. Machine Design 18:150-2+ S '46; Discussion. A S M E Trans 69:447-52 Jl '47

Noise reduction in textile machinery due to the substitution of gears by chain drives. A. L. Mayor. Textile Inst J 37:P522-5 N '46

Typical layouts of shoes and idlers. Power Pl Eng 50:110 N '46

CHAIN stores

A & P decision. R. L. Klein. J Retailing 23: 16-22 F '47

Chains stage a comeback. Bsns W p55-6+ Ja 25 '47

Colonial's rooster; unique trademark pulls attention to Colonial Stores' private brands. il Mod Packaging 21:112-15 O '47

Food chain extends meat-packing trend. Bsns W p56 D 14 '46

For a buyers' market: a tested formula for profitable sales promotions; Good House Stores laboratory, Philadelphia. H. B. Brown. Sales Management 58:46+ F 15 '47

Puckett of Allied Stores. il map Fortune 35: 122-5+ Mr '47

Small storekeepers who kept growing; Bert Gamble and Phil Skogmo. E. Whitmore. il Am Bsns 17:20-2+ Jl; 22-4+ Ag '47

See also
Department stores—Variety chains
Grant, W. T., company
Great Atlantic and Pacific tea company
Kroger company
Marketing—Chain store outlets
National tea company
Penney, J. C., company

Advertising

How W. T. Grant uses sales promotion. J. R. Rowen. il Adv & Sell 40:46+ O '47

Kroger promotes for profit; grocery chain advertising national brands. il Bsns W p62+ O 11 '47

Pep boys—Manny, Moe & Jack. R. Cole. Adv & Sell 40:36+ Ap '47

Personnel recognition promotion pays dividends; Lucky stores, inc. D. Murphy. Ptr Ink 219:94+ My 23 '47

Stars for sales; Kroger promotion of national brands. il Sales Management 59:56+ O 15 '47

Employees

Gearing salaries of nation-wide chains to the geographical structure of wages. S. L. Balmer and J. Dean. J Bsns 20:96-115 Ap '47

Finance

Expenses and profits of limited price variety stores in 1946; chains and independents. E. A. Burnham. (Bur. of business research bul. 127) 42p pa $2 Harvard univ. Graduate school of business administration, Div. of research, Soldiers Field, Boston 63, '47

Sales drop may cut variety chains' margins; one solace, they outdo department stores; study by Harvard university. E. A. Burnham. Barron's 27:33 S 22 '47

Mail order stores

Inventory control; Montgomery Ward automatic sales tabulation in retail outlets. Bsns W p73-4 Je 7 '47

Ward's earnings, assets priced lower than Sears'. Barron's 27:34 S 22 '47

Management

Cashiers' errors. L. Derrick. J Bsns 20:9-13 Ja '47

Managers

Golden touch; Kroger's district manager Bracy. Bsns W p17-18 Ja 25 '47

Incentive plan for chain stores. R. L. Urban. N A C A Bul 28:1086-90 My 1 '47

Securities

Divergent trends in merchandising and chain store shares; with statistics on leading stocks. P. Dobbs. Mag of Wall St 80:490-2+ Ag 2 '47

Diverse outlook for merchandise shares; with statistics on leading stocks. G. S. Kent. Mag of Wall St 79:489-92+ F 1 '47

Statistics

News and views of investments; November sales totals for 23 chains and mail order firms. Barron's 26:1 D 23 '46

Pattern of chain store sales in retail distribution. C. Winston and R. L. Osborne. Survey of Cur Bsns 27:11-16+ Je '47

Retail sales pattern emerges; chains vs. independents, 1945, 1946. Bsns W p55-6+ F 22 '47

Stock

National brands now get full recognition in Kroger chain. J. B. Hall. il Sales Management 59:42-4 Ag 1 '47

Survey shows drug chains now push national brands; study of Madison (Wis.) market. L. J. Houfek. Ptr Ink 217:40-2 N 22 '46

Taxation

Chain tax out. Bsns W p52+ D 14 '46

Kentucky chain store tax invalidated. Comm & Fin Chr 164:3269 D 19 '46

CHAINS

Chain and its applications in pulp and paper mills. W. M. Hufnagel. Paper Ind 29:591-3 Jl '47

Hoisting chain. il Nat Safety N 55:110+ Mr '47

See also
Chain gear

Manufacture

Chain welding. J. F. Davies. Elec R (Lond) 140:809-10 My 16 '47

Mechanism for interrupting a feeding device at adjustable predetermined positions; window-sash chain-forming machine. C. F. Smith. plan diags Mach 53:187-9 F '47

Testing

Tension testing of chain links. il Steel 119: 98 N 25 '46

CHAINS, Chemical

Isomeric chlorinated long-chain esters. H. H. Guest. Am Chem Soc J 69:300-2 F '47

Organosilicon polymers; open chain dimethylsiloxanes with trimethylsiloxy end groups. M. J. Hunter and others. bibliog Am Chem Soc J 68:2284-90 N '46

Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47

Statistical properties of networks of flexible chains. H. M. James. J Chem Phys 15:651-68 S '47

CHAIRMEN
How a good chairman handles departmental or other meetings. E. Mottershead. Bankers Mo 64:478-9 O '47
How to introduce a speaker. J. F. Bender. Sales Management 58:95-6 Je 1 '47
Mr Chairman; conduct of technical meetings. R. W. Crum. Am Concrete Inst J 18:613-16 F '47
12 tips to presiding officers. L. Lewis. Banking 40:30 Ag '47
What every chairman should know. W. Weir. Ptr Ink 220:31 S 5 '47

CHAIRS
See also
High chairs
Stools, Stepladder

CHAIRS, Steel
Making a tubular steel chair. il diags Sheet Metal Worker 38:67+ S '47

CHALCONES
Spectra of the *p*-dimethylaminochalcones and of their ions. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1615-19 Jl '47

CHALLENGE machinery company
Grand old man of the printing industry, J. Edgar Lee, president. O. T. Gylleck. Inland Ptr 118:31-3 Mr '47

CHAMBER of commerce of the state of New York. See New York (state) Chamber of commerce

CHAMBER of commerce of the United States
Annual meeting, 35th, New York, April 28-May 1. Bsns W p 19-20 My 3 '47; Oil Paint & Drug Rep 151:5+ My 5 '47; Steel 120:85 My 12 '47

Insurance department
New members of committee. East Underw 48:23 Jl 25 '47

CHAMBERS of commerce
See also
International chamber of commerce

China
Chinese federation of Chambers of commerce established to aid reconstruction. For Comm W 25:14 N 23 '46

CHAMFERING
How to cut a corner chamfer. F. W. Brady. diag Am Mach 91:152 Je 19 '47
Undulated bushing guides tool for chamfering elliptical holes. I. Herman. diags Am Mach 91:143 Jl 17 '47

CHANDRASEKHAR, Subrahmanyan, 1910-
Astrophysicist, appointed distinguished service professor at University of Chicago. Science 104:535 D 6 '46

CHANGE houses. See Mine buildings

CHAPELS
Children's chapel, Brooklyn; Crypt chapel, Latrobe, Pa.; Chapel for Pennsylvania industrial school. il plans diag Arch Rec 102: 97-8, 106 S '47

CHAPLAINS, Industrial
Corporations can have a soul. Trusts & Estates 84:580 Je '47

CHARCOAL
Kinetics of absorption of gases from an air stream by granular reagents. C. J. Danby and others. Chem Soc J p918-34 O '46

Manufacture
Charcoal production in Britain. Chem Age (Lond) 57:461-2 O 4 '47
Continuous wood distillation gives better, cheaper charcoal. R. S. Aries. il diag Chem Ind 60:968-9 Je '47

CHARCOAL, Activated. See Carbon, Activated

CHARGE accounts (retail trade)
Retail credit survey, 1946. Fed Res Bul 33: 820-6 Jl '47
Volume via credit; Gimbels' plan for small income groups. Bsns W p72+ Mr 8 '47
Will credit sales help my business? R. D. Stith. Dom Comm 34:17-22 N '46

CHARGING machines
Brosius charging machines. il Blast F & Steel Pl 35:1248-9 O '47
Wellman Smith Owen furnace box charger. il diags Engineer 183:supp 1-2 My 2 '47

CHARITABLE trusts. See Trusts and trustees—Charitable trusts

CHARITIES
Liability of charitable corporation to resident of home contracting typhoid fever. J. L. Roesch. Spectator (Property ed) 13:10-11+ Ag 7 '47
See also
Community trusts

CHARITIES, Business. See Corporations—Charities

CHARLESTON, West Virginia
Kanawha boulevard extended at Charleston. il map Eng N 139:181-3 Ag 7 '47

Industries
Chemical wealth in the Kanawha valley; South Charleston plant of Carbide and carbon chemicals corporation. T. R. Ragland. il Manuf Rec 116:78-9+ Ag '47

Water supply
Ground water conditions at Charleston, W.Va. R. M. Jeffords and R. L. Nace. diags Am Water Works Assn J 38:1309-14 N '46

CHARTERED buses. See Motor buses—Chartering

CHARTERED insurance institute
British educational body today has membership of over 27,000. H. A. L. Cockerell. il East Underw 48:19-20 My 23 '47
Inherent greatness of Insurance Institute in Great Britain. C. E. Golding. East Underw 48:18 Ag 29 '47

CHARTERED life underwriters, American society of. See American society of chartered life underwriters

CHARTERED property and casualty underwriters. See American institute for property and liability underwriters

CHARTS
Peacetime radar; towboat traffic on narrow inland waterways expedited. B. B. Talley. il maps Electronics 20:113-15 O '47
River-mapping by radar. Electronics 20:166+ S '47

CHARTS (calculating)
Alignment chart for calculating allowable vapor velocity in plate towers. W. C. Frishe. Pet Refiner 26:110-11 Jl '47
Card and quantity-chart system controls 32,000-item inventory. W. F. Lent. il Am Mach 91:121-4 Mr 13 '47
Chart determines ore values. A. F. Horle. Eng & Min J 148:71 S '47
Chart determines pole size required for transverse load. F. A. Kendig. Elec World 127:124 Mr 15 '47
Chart facilitates determination of unit weights of soils. E. H. Harlow. Eng N 139: 394-5 S 18 '47
Chart for calculating reaction time changes. J. G. Harrison, Jr. and W. E. Setzler. Chem Eng 54:125-6 Ap '47
Chart for determination of equivalent pipes. J. R. Arbuthnot. Water & Sewage Works 94:R42-3 Jl '47
Chart for determining the section modulus of annular sections; reference book sheet. G. Larri. fold chart(p168a) Product Eng 18:167 Mr '47
Chart for dimensioning strap clamps; reference book sheet. P. H. Winter. Am Mach 91:167 F 13 '47
Chart for selection of guy strand; engineering reference sheet. H. F. Ostman. Elec World 128:63 Ag 30 '47
Chart for stringing catenaries, using stainless steel, ⅝-in., 1 x 7 strand. V. H. Godfrey. Elec World 127:128 Mr 15 '47
Charts for canal flow computations. G. G. Commons and L. B. Griffith. Eng N 137: 664-5 N 14 '46
Charts for capacity of 60° and 90° V-notch and rectangular weirs. Water & Sewage Works 94:R272-3 Jl '47
Charts for circular diaphragm design; reference book sheet. G. P. Sutton. diag Product Eng 18:167, 169 Ja '47

CHARTS (calculating)—*Continued*
Charts for resonant frequencies of cavities. R. N. Bracewell. Inst Radio Eng Proc 35: 830-41 Ag '47
Charts help to solve lighting problems. E. I. Franks. Heating-Piping 19:103-5 S '47
Constructing a multiple exposure chart for X-rays. Steel 120:103-4+ Ap 28 '47
Correct blowdown setting keeps boiler and steam clean, saves fuel dollars. W. D. Turner. Power 91:28-9 Ja '47
Design chart for distribution secondary. F. W. Nimmer. Elec World 127:78-9 Mr 29 '47
Electronic heating requirements. A. P. Bock. Electronics 20:126 Ja '47
Evaluation of absorber operating efficiency. E. G. Ragatz and J. A. Richardson. Oil & Gas J 45:89+ N 23 '46; Same. Pet Refiner 25:148-52 N '46; Same. Pet Eng 18:53-6+ D '46; 110+ Ja '47
Fatigue strength of steel parts. P. O. Johnson and C. Lipson. Product Eng 18:144-6 O '47
Flexible pavement evaluation chart. D. Lee. Civil Eng 17:164 O '47
Fuel-air ratio required for constant-pressure combustion of hydrocarbon fuels. N. A. Hall. S A E J 54:32-6 D '46
General pressure-volume-temperature correlation for mixtures of California oils and gases. M. B. Standing. Oil & Gas J 46:95-7+ My 17 '47
How to determine heat recovery with boiler continuous blowdown system; chart. M. C. McKeown. Elec World 128:79 Ag 2 '47
Influence charts for computation of vertical displacements in elastic foundations. N. M. Newmark. fold charts Ill U Eng Exp Sta Bul 367:1-11 '47 (pa 40c)
Internal pressure chart for round stainless steel tubing; reference book sheet. B. Ostlind. Product Eng 18:177 S '47
Loss of head in pipes and fittings. diags Water & Sewage Works 94:R45-54 Jl '47
Machinability versus physical properties; use of charts. M. E. Merchant. il diags Metal Prog 50:1013-19 N '46
Master charts for the design of vessels under external pressure. D. F. Windenburg. bibliog A S M E Trans 69:345-51 My '47
New temperature-total heat-entropy chart for gases with variable specific heats; for exploring performance of gas turbine plants. J. R. Finniecome. fold chart Inst Mech Eng J & Proc 155 (War emergency issue no 17): 117-19 bibliog(p118); Discussion. 120-4 '46
One way to find generator reserve; chart. E. J. Keough. Elec World 127:71+ Je 21 '47
Output transformer impedance matching; simplified chart. R. B. Tomer. Radio N 38: 60 Jl '47
Plane-of-vein maps used to settle stope contracts. G. C. Waterman. diags Eng & Min J 148:72-5 S '47
Propeller charts for the determination of the rotational speed for the maximum ratio of the propulsive efficiency to the specific fuel consumption. S. Biermann and R. N. Conway. bibliog diags U S Nat Advisory Com for Aeronautics 1942:373-90 '46
Proposed spacing ratio chart. T. W. Rolph. Illum Eng 41:775-80 N '46
Simple quadrant speeds complex number conversion. L. Bruh. Elec World 128:128 O 11 '47
Simplified charts for petroleum process calculations. E. G. Scheibel. bibliog diag Pet Refiner 26:94-102 Mr '47
Standard rural lines; sag-tension charts for solid copper conductors. J. McCombe. Elec R (Lond) 140:938-41 Je 6 '47
Temperature charts for induction and constant-temperature heating. M. P. Heisler. bibliog A S M E Trans 69:227-36 Ap '47
Voltage-drop charts for selecting insulated aluminum cable. F. A. Gunther. Elec World 128:114-17 S 13 '47
See also
Nomography

CHARTS, Aeronautic. See Air navigation—Charts

CHASE, Edward Everett
Portrait. Bsns W p16 D 28 '46

CHASE national bank of New York
Annual report to stockholders. W. W. Aldrich. Comm & Fin Chr 165:494 Ja 23 '47

CHATTANOOGA university
Industrial research institute
Chattanooga research institute expands operations. R. B. Seymour. il Chem & Eng N 25:2979 O 13 '47

CHATTEL mortgages
Bank's right to offset indebtedness by application of mortgagor's credit on deposit in bank. Banking Law J 64:313-21 Ap '47
Chattel mortgage and real estate law; sale of heating equipment. L. T. Parker. Heat & Ven 44:97-9 Jl '47
Chattel mortgage; liabilities of parties; finding of Federal district court for Iowa. Banking 40:70-2 Ag '47

CHAYNE, Charles A.
Portrait. Fortune 36:93 N '47

CHECK books
Improved checkbook in wire-ring binder form. il Burroughs Clearing House 31:6 Mr '47

CHECK cashing companies
Check cashers. S. Moritz, jr. Weekly Underw 156:1155-7, 1213-17+ Ap 26-My 3 '47; Abstract. Nat Underw 51:14 F 27 '47
Pass bill restricting check cashiers in New York. Nat Underw 51:30 Mr 20 '47

CHECKER brick. See Fire brick

CHECKOFF system
Extent of collective bargaining and union recognition, 1946. P. Marquardt. Mo Labor R 64:768-9 My '47
How practical personnel men think the labor law will work; check-off procedure. E. J. Lyons. Factory Management 105:95-6 Ag '47
Rand labor-relations formula at work; Ford motor company of Canada. Factory Management 105:94-6 Mr '47

CHECKS
Check usage soars. Bsns W p84+ S 20 '47
Hobby in old checks; W. T. A. Durand collection, Rochester, N.Y. R. R. McGuire. il Banking 40:16-17 S '47
24 pound paper considered standard weight for checks. W. T. Eldredge. Bankers Mo 63:619 D '46
See also
Advertising mediums —Checks
Overdrafts
Collection
Laws do not prevent delayed return of dishonored items. map Bankers Mo 64:121-3 Mr '47
22 more clearing houses return items the following day. Bankers Mo 64:220-1 My '47
See also
Banks and banking —Collection charges
Design
Amounts read accurately when cents is spelled out. H. K. Humphrey and others. il Bankers Mo 64:64-5 F '47
British check designs. il Burroughs Clearing House 32:6+ O '47
Examples of poorly designed checks. Bankers Mo 64:82 F '47
Missorts reduced 75% because check sorters read no signature; customer's name and a sorting number printed on check. L. Heaton. Bankers Mo 63:539-41 N '46
This bank is trying to improve customer's checks; Citizens bank of Michigan City, Ind. W. H. Marshall and L. K. Arthur. il Bankers Mo 64:432-3 S '47
Wanted; first aid for the bookkeeper. Bsns W p58 My 31 '47
Indorsement
Bank not liable for striking out rubber stamp endorsement of cashier's check held by bearer. Banking Law J 64:283-5 Ap '47
Endorsement by an impostor. Banking 39: 63-5+ Ja '47
Payee-indorser estopped to set up defense of non-delivery against holder in due course. Banking Law J 64:557-9 Jl '47

CHECKS—*Continued*

Law

Bank not liable for proceeds of checks which fiduciary endorsed and deposited in his personal account. Banking Law J 64:185-8 Mr '47

Bank not liable to depositor for proceeds of checks misapplied by corporate officer of depositor. Banking Law J 63:899-903 D '46

Delay of twenty days in presentment of check for payment held unreasonable delay precluding recovery. Banking Law J 63: 849-54 N '46

Payee-indorser estopped to set up defense of non-delivery against holder in due course. Banking Law J 64:557-9 Jl '47

Purchasers of war savings bonds not guilty of forgery for signing checks with names of original owners. Banking Law J 64:387-92 My '47

Stop that check; bank's liability. J. L. Griffiths and W. J. Papenbrock. Bankers Mo 64: 119 Mr '47

See also
Checks—Indorsement
Checks, Fraudulent

Par payment

See Banks and banking—Collection charges

Protection

Control of payroll funds. G. W. Adlam. J Account 83:124-8 F '47

Register checks

Department store outlet for register checks. W. Petersen. il Burroughs Clearing House 32:20-1+ O '47

Stop payment

Five customer responsibilities on stop payment orders; system of Hibernia national bank, New Orleans. G. J. Ruhlman. Bankers Mo 64:363-4 Ag '47

Laws can reduce stop payment work. Bankers Mo 64:311-13 Jl '47

Stop payment work reduced. W. Miller and others. Bankers Mo 64:450-2 S '47

Stop payment work simplified. Bankers Mo 64:480-2 O '47

Stop that check; bank's liability. J. L. Griffiths and W. J. Papenbrock. Bankers Mo 64:119 Mr '47

CHECKS, Canceled

Short-cut method of sorting canceled checks. J Account 84:342-3 O '47

CHECKS, Forged. See Checks, Fraudulent

CHECKS, Fraudulent

Bank depositor need not examine indorsements on returned checks but recovery limited by statute of limitations. Banking Law J 64:679-88 S '47

Bank guaranteeing endorsements which were forged held liable. Banking Law J 64:1-8 Ja '47

Bank liable to depositor for payments on forged checks of depositor's employee; R. H. Kimball, inc. v. Rhode Island hospital national bank. Banking Law J 63:819-32 N '46

Bank not liable if not notified of check forgeries within one year. Banking Law J 64: 382-6 My '47

Cashing raised check. C. R. Rosenberg, jr. Burroughs Clearing House 31:64-5 Ag '47

Collecting bank liable to payee of check bearing forged indorsement. Banking Law J 63:911-14 D '46

Depositor barred from recovery against bank for loss where check signed in blank. Banking Law J 64:553-7 Jl '47

Drawee banks not liable to makers charged with actual knowledge that payee's endorsements were forged. Banking Law J 64:488-96 Je '47

Drawer credulous, not negligent; bank liable for checks that depositor gave confidence men for charity. Nat Underw 50:18 D 19 '46

Endorsement by an impostor. Banking 39:63-5+ Ja '47

Fictitious payees; liability of bank for payment. Banking 39:78+ F '47

How I caught a forger. V. Brown. Bankers Mo 64:286-7 Je '47

Illinois appellate court holds for bank in check forgery in whisky deal. Nat Underw 51:20+ Jl 10 '47

Indorsement by impostor not forgery and drawee bank may pay upon such indorsement. Banking Law J 64:232-8 Mr '47

CHECKS, Government

Bank guaranteeing endorsements which were forged held liable. Banking Law J 64:1-8 Ja '47

Government check payment procedure; Act of July 11, 1947. Banking 40:122 Ag '47

CHEESE

Biological stability of cheese and butter. A. T. R. Mattick. Chem & Ind p421-3 Jl 12 '47

Box for pliofilm-cured cheese. J. V. Ziemba. il Food Ind 19:457 Ap '47

Camembert in clear molded plastic. il Mod Packaging 21:140 S '47

Cheese threat; Wisconsin makers are worried. Bsns W p44+ F 8 '47

Cheese; what should our policy be? abstract. J. G. Davis. Chem & Ind p537-8 Ag 30 '47

Dehydrating cheese; patent. Food Ind 19:117 Ja '47

F&DA order on cheese prescribes treatment. Food Ind 19:1254-5 S '47

Hand processing for the carriage trade; Leavitt cheese. L. Haystead. Fortune 34: 239+ D '46

Studies on the susceptibility of certain cheese cultures to the action of bacteriophage; abstract. F. J. Babel. Food Ind 19:1446+ O '47

Analysis

Determining volatile fatty acids in cheese. K. L. Smiley, F. V. Kosikowsky and A. C. Dahlberg. Food Ind 18:1801 N '46

Simplified extraction-distillation method for the determination of the volatile fatty acids of cheese; abstract. K. L. Smiley, F. V. Kosikowsky and A. C. Dahlberg. Food Ind 18:1801 N '46

Manufacture

Electric heat for cheese processing. Elec World 128:94+ S 27 '47

Factors influencing acid production by cheese cultures; influence of bacteriophage on acid production in the manufacture of Cheddar and cottage cheese; abstract. F. J. Babel. Food Ind 18:1962 D '46

Swiss cheese by electricity. M. Marsh. il diags Food Ind 19:1352-3 O '47

Moisture content

Quick moisture determination; calcium carbide, heated with finely grated cheese, gives off acetylene. E. R. Shemin and J. W. Wagner. Food Ind 19:1230+ S '47

CHEESE factories

Sanitation in cheese factories. C. R. White. Soap & San Chem 23:147 F '47

CHELATION

Oxygen-carrying synthetic chelate compounds. M. Calvin and others. bibliog diags Am Chem Soc J 68:2254-78, 2612-18 N-D '46

Oxygen-carrying synthetic chelate compounds; preparation. R. H. Bailes and M. Calvin. Am Chem Soc J 69:1886-93 Ag '47

Polarographic study of the restriction of the tautomerism of amidines by hydrogen bonding. M. E. Runner, M. L. Kilpatrick and E. C. Wagner. bibliog Am Chem Soc J 69: 1406-10 Je '47

Preparation and properties of the iodohistidines. K. L. Brunings. bibliog Am Chem Soc J 69:205-8 F '47

CHELIDAMIC acid

N-aralkyl derivatives of 4-pyridone and chelidamic acid. S. K. Freeman, W. F. Ringk and P. E. Spoerri. bibliog Am Chem Soc J 69:858-9 Ap '47

CHEMICAL abstracts (periodical)

American chemical society publications. Chem & Eng N 25:527-8 F 24 '47

Five miles of index; fourth decennial index to Chemical abstracts. E. J. Crane. Chem & Eng N 25:1188-9 Ap 28 '47

Periodical list of periodicals. E. J. Crane. Chem & Eng N 25:2075 Jl 21 '47

CHEMICAL abstracts (periodical)—*Continued*
Punched card method for the bibliography, abstracting, and indexing of chemical literature. C. D. Gull. il J Chem Educ 23:500-7 O '46
Sharp rise in chemical publication; abstracts of papers in Chemical abstracts from 1907 thru 1946, with prediction for 1947; graph. Chem & Eng N 24:3353 D 25 '46

CHEMICAL apparatus
Aluminum heat conductor. A. B. Hubbard and K. E. Stanfield. diag Anal Chem 19:434 Je '47
Apparatus for continuous delivery of liquid at constant rate. A. R. Richards. diag Anal Chem 19:281 Ap '47
Apparatus for rapid electrometric titration of acid; determination of pH and measurement of turbidity in microbiological assays. L. B. Rockland and M. S. Dunn. bibliog diags Anal Chem 19:812-13 O '47
Apparatus for studying crystal formation. R. M. Garrels and others. diag Science 105: 46 Ja 10 '47
Automatic determination of aniline point of petroleum products. C. W. Brown. bibliog il diag Ind & Eng Chem Anal ed 13:739-41 D '46
Complete apparatus for determination of osmotic molecular weights. G. D. Sands and B. L. Johnson. bibliog il diag Anal Chem 19:261-4 Ap '47
Dean and Stark apparatus. K. A. Murdoch. Chem & Ind p399 N 2 '46
Determination of carbon and hydrogen by combustion; unitized dual apparatus and improved procedure. D. D. Tunnicliff and others. bibliog il diags Ind & Eng Chem Anal ed 18:710-18 N '46
Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47
Determination of the boiling-points of liquids of low vapour pressure. G. Burrows. bibliog diag Soc Chem Ind J 65:360-5 N '46
Efficient apparatus for leaching samples with water. R. L. Holmes and H. W. Robbins. diag Anal Chem 19:808-9 O '47
Improved apparatus for determining vapor-liquid equilibrium. J. W. Rogers and others. diags J Chem Educ 24:491-3 O '47
Improvised hot-stage melting-point apparatus. W. Klyne and J. Rankeillor. diags Chem & Ind p 224-5 Ap 26 '47
Infra-red absorption cell for quantitative analysis. N. B. Colthup. diags R Sci Instr 18:64-5 Ja '47
Simple apparatus to demonstrate Walden inversion. C. R. Noller. diag J Chem Educ 24:277 Je '47
Simple micro-melting-point apparatus. E. J. Hewitt. diag Chem & Ind p42 Ja 18 '47
Topics of interest to analytical chemists discussed at instrumentation conference. R. H. Müller. Anal Chem 19:sup25A-6A S '47

See also
Agitators
Autoclaves
Capillarimeter
Centrifuges
Chemical plants—Equipment
Distillation apparatus
Electric heaters, Laboratory
Emulsifiers
Evaporators
Filters and filtration (technical chemistry)
Gases—Apparatus
Grease kettles
Lyophile apparatus
Osmometers
Pipets
Vacuum pumps
Viscosimeters

CHEMICAL bank and trust company
Annual report. Comm & Fin Chr 165:318 Ja 16 '47

CHEMICAL biological coordination center. See National research council—Chemical biological coordination center

CHEMICAL bonds
Atomic radii and interatomic distances in metals. L. Pauling. bibliog Am Chem Soc J 69:542-53 Mr '47
Bond distances in OCS from microwave absorption lines. T. W. Dakin and others. bibliog Phys R 71:640-1 My 1 '47
Bond energies in polyatomic molecules. G. B. Kistiakowsky. Chem & Eng N 25:770-1 Mr 17 '47
Bond energy in diatomic molecules from the force constants, nuclear distances, and classical model theory. M. A. Cook. bibliog J Phys & Colloid Chem 51:407-14 Mr '47
Bond energy relation for multiple bonds. H. J. Bernstein. J Chem Phys 15:339 My '47
Bonding in dimetalated diphenylethane. G. S. Myers, H. H. Richmond and G. F. Wright. Am Chem Soc J 69:710-11 Mr '47
Coördination compounds of boron trichloride; systems with the propyl chlorides. D. R. Martin and A. S. Humphrey. bibliog J Phys & Colloid Chem 51:425-30 Mr '47
Dependence of bond order and of bond energy upon bond length. W. Gordy. bibliog J Chem Phys 15:305-10 My '47
Determination of the interatomic distances in silver molybdate, Ag_2MoO_4. bibliog J. Donohue and W. Shand, jr. Am Chem Soc J 69:222-3 F '47
Electric moment of *n*-butyllithium and the nature of the lithium-carbon bond. M. T. Rogers and A. Young. bibliog Am Chem Soc J 68:2748 D '46
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47
Evidence for the homolytic bond fission of positive halogen compounds. A. Robertson and W. A. Waters. Chem Soc J p492-7 Ap '47
Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of group 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47
Influence of neighbor bonds on additive bond properties in paraffins. J. R. Platt. J Chem Phys 15:419-20 Je '47
Magnetic study of the type of bonding existing in some complexes of ferric iron with sulfonated pyrocatechol. A. L. Jones and L. B. Yeatts. bibliog Am Chem Soc J 69: 1277-80 Je '47
Microwave spectra of linear molecules. C. H. Townes and others. bibliog Phys R 72:513-14 S 15 '47
Nature of the non-porphyrin bonding in derivatives of ferriheme. J. G. Erdman and A. H. Corwin. bibliog Am Chem Soc J 69:750-5 Ap '47
Parabolic relation between bond-order and interatomic distance. J. K. Kavanau. bibliog Am Chem Soc J 69:1827-8 Jl '47
Properties of the silicon-hydroxyl bond in trialkylsilanols. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore. bibliog Am Chem Soc J 68:2282-4 N '46
Relation between bond multiplicity and interatomic distance. R. T. Lagemann. J Chem Phys 14:743 D '46
Relation between bond order and covalent bond distance. H. J. Bernstein. bibliog J Chem Phys 15:284-9 My '47; Correction. 15: 688 S '47
Relation between the force constant and the interatomic distance of a diatomic linkage; a modified Huggins relation. C. K. Wu and S. C. Chao. Phys R 71:118-21 Ja 15 '47
Relations between carbon-carbon bond energy, order, and interatomic distance J. K. Kavanau. bibliog J Chem Phys 15:77-8 Ja '47
Resonance energies from thermal data. T. L. Cottrell and L. E. Sutton. bibliog J Chem Phys 15:685-6 S '47
Spectrophotometric investigations of the interactions of proteins with organic anions. I. M. Klotz. bibliog Am Chem Soc J 68: 2299-304 N '46
Stability of multiply-bonded molecular addition compounds. R. K. Iler. Am Chem Soc J 69:724-5 Mr '47
Strain in non-tetrahedral carbon atoms. C. A. Coulson and W. E. Moffitt. bibliog J Chem Phys 15:151 Mr '47
Thermal reaction of hexafluoroethane with quartz. L. White, jr. and O. K. Rice. bibliog Am Chem Soc J 69:267-70 F '47
Unsolved problems of structural chemistry; Richards medal address. L. Pauling. bibliog Chem & Eng N 25:2970-3+ O 13 '47

See also
Double bonds
Molecular association
Triple bonds
Valence

CHEMICAL chains. See Chains, Chemical

CHEMICAL corps (formerly Chemical warfare service). See United States—Chemical corps

CHEMICAL corps association
Annual meeting, 2d, Edgewood Arsenal, Md. May 23-24. Chem & Eng N 25:1666 Je 9 '47

CHEMICAL education
A.C.S. committee on professional training; report. Chem & Eng N 25:1369-70 My 12 '47
Chemical education at American institutions; Princeton university. H. S. Taylor. il J Chem Educ 24:470-5 O '47
Chemical education from the viewpoint of a petroleum refiner. F. C. Lantz. Can Chem & Process Ind 30:51-3 D '46
Graduate training at the doctorate level; condensed summary of the main report of the Committee on professional training. E. M. Billings. Chem & Eng N 25:1934-6. 2010-13, 2076-81 Jl 7-21 '47
Let's have a two-way street. L. H. Reyerson. Chem & Eng N 24:3035 N 25 '46
Progress report no. 14 of the committee on professional training. Chem & Eng N 24: 3301-2+ D 25 '46
Progress report no. 15 of the committee on professional training, American chemical society. Chem & Eng N 25:2369-70 Ag 18 '47
Revision of chemistry and chemical engineering curricula. L. L. Quill and others. J Chem Educ 24:369-88 Ag '47
Training and status of chemists. Chem Age (Lond) 57:456 O 4 '47

See also
Chemistry—Study and teaching

France
Le cinquantenaire de l'Institut de chimie de Paris. M. Vasselin. il Chimie & Ind 57:78-81 Ja '47

CHEMICAL elements
Crystallography of the chemical elements; tabulated by W. Hume-Rothery; modified by H. C. Vacher; data sheets. Metal Prog 50:847-9 N '46
Elements 43, 85, and 87 receive names; technetium, astatine, francium. Chem & Eng N 25:431+ F 17 '47
Experimental method for the estimation of the age of the elements. H. Brown. bibliog Phys R 72:348 Ag 15 '47
55-hour element 61 formed in fission. M. G. Inghram and others. Phys R 71:743 My 15 '47
5.3 day isotope in element 61. G. W. Parker and others. Phys R 72:85 Jl 1 '47
Naming of element 61. R. F. Gould. bibliog Chem & Eng N 25:2555-6 S 8 '47
Naming of new elements. L. H. Cragg. bibliog Can Chem & Process Ind 31:455+ My '47
Production and isotopic assignment of a 90-day activity in element 43. E. E. Motta and others. Phys R 71:210 F 1 '47
Promethium for element 61. Chem & Eng N 25:2889 O 6 '47
Pure americium compound isolated. Chem & Eng N 24:3041 N 25 '46
Radioactive isotopes of Mo and Tc (technetium, element 43). J. E. Edwards and M. L. Pool. bibliog il Phys R 72:384-9 S 1 '47
Relative abundance of some light nuclear species as determined from the composition of stony meteorites. H. Brown and C. Patterson. bibliog Phys R 72:456-7 S 15 '47
Search for element 87. H. Hulubei. Phys R 71:740-1 My 15 '47

See also
Atoms
Isotopes
Periodic system
Transmutation (chemistry)
Transuranium elements
Valence

also names of elements, e.g. Americium; Carbon; Oxygen; Plutonium; Sulfur

CHEMICAL engineering
Achieving process improvements; Chem. & Met. report. F. H. Swezey. bibliog il Chem Eng 54:121-8 Je '47
Celanese establishes annual chemical engineering award. Oil Paint & Drug Rep 152: 7+ S 29 '47
Chemical engineering in the tar industry; abstract. R. Scott. Chem & Ind p396 N 2 '46
Chemicals from the Dead sea. Z. Halperin. flow diag il Chem Eng 54:94-6 Je '47
Eighth chemical engineering award goes to Merck for work on streptomycin. Chem Eng 54:179 O '47
Fluidization in chemical reactions; method for developing design data. J. C. Kalbach. flow diag Chem Eng 54:105-8 Ja '47
How to reduce chemical production costs. M. Sittenfield. il Chem Ind 61:230-1 Ag '47
Production of ethylene from ethane, propane. H. C. Schutt. bibliog flow diag il Chem Eng Prog 43:103-15; Discussion. 115-16 Mr '47

See also
Chemical plants
Chemistry, Technical
Cooling, Industrial
Distillation
Drying
Evaporation
Extraction processes
Feed water purification
Filters and filtration (technical chemistry)
Food factories
Metallurgy
Mixing
Petroleum refineries
Refrigeration and refrigerating machinery
Refuse disposal
Sewage disposal
Unit processes
Water purification

also American chemical society—Industrial and engineering chemistry division

Apparatus and supplies
Chem. & Met. report on process equipment cost estimation. il diags Chem Eng 54:107-38 My '47 [reprints 25c]
Chemical engineering materials of construction; review of literature from start of World war II. bibliog il diags Ind & Eng Chem 39:1193-264 O '47
Equipment and design; office on wheels as demonstration showroom, pilot plant, or small production unit. C. O. Brown. Ind & Eng Chem 39:sup73A-4A Jl '47
High vacuum technology. R. S. Morse. bibliog il diags Ind & Eng Chem 39:1064-71 S '47
Ratio flow and metered control in chemical processing. D. M. Considine and S. D. Ross. il diags Chem Eng Prog 43:497-504; Discussion. 504 S '47
Selecting chemical pumps. C. A. Richardson. bibliog il diags Chem Eng Prog 43:sup 17-20 F '47

See also
Agitators
Autoclaves
Centrifuges
Chemical plants—Equipment
Concentrators
Distillation apparatus
Drying apparatus
Emulsifiers
Evaporators
Extraction apparatus
Granulators
Heat exchangers
Homogenizers
Pressure vessels
Proportioning equipment

Bibliography
Index to Chemical engineering reports, 1926-1946 and pictured flow sheets, 1939-1946. Chem Eng 53:156+ D '46

Estimates
Data for equipment cost estimates. H. Bliss. Chem Eng 54:126-38 My; 100-2 Je '47
Determining costs of tanks, spheres and drums. R. A. Dickson. Chem Eng 54:122 Ag '47
Engineering approach to preliminary cost estimates. H. J. Lang. Chem Eng 54:130-3 S; 117-21 O '47
Estimating installations of chemical equipment. J. R. Behrens. Chem Eng 54:106-7 Jl '47
Estimating magnesia insulation costs. F. C. Otto. Chem Eng 54:126-9+ S '47
Estimating mineral wool insulation. F. C. Otto. Chem Eng 54:102-6 Jl '47
Estimation of field-erected tanks; correction for material, location, type of construction and other factors. L. E. Fox. Chem Eng 54: 100-1+ Ag '47
Needed; standard cost estimating data for the process industries. H. Eckhardt. Chem Eng 53:104-5 S '46; Discussion. 53:156-7 N '46

CHEMICAL engineering—Estimates—*Cont.*
Pricing new products for maximum profit; break-even chart. R. Williams, jr. Chem Ind 61:622-4+ O '47
Process equipment cost; standardizing cost data on process equipment. R. Williams, jr. Chem Eng 54:102-3 Je '47
Process equipment cost; vibrating screen estimation. H. L. Bullock. Chem Eng 54:97-9 Je '47

History

Samuel P. Sadtler, 1847-1923; first president of American institute of chemical engineers. Chem Eng Prog 43:333-4 Jl '47

Nomenclature

Standard symbols and abbreviations for chemical engineering. J. H. Perry. Chem Eng Prog 43:sup20-1 Mr '47; Same. Ind Stand 18:60-2 Mr '47
Standardization of chemical engineering letter symbols. J. H. Perry and others. bibliog Ind & Eng Chem 39:438-9 Ap '47; Chem Eng 54:112-13 Je '47

Periodicals

Soviet monthly devoted to chemical engineering. Chem Eng 54:204+ O '47

Study and teaching

Chemistry and chemical engineering curricula in the postwar era. W. J. Murphy. J Chem Educ 24:376-9 Ag '47
Industrial training of chemical engineers. L. B. Hitchcock. bibliog il Chem Eng Prog 43:509-14 O '47
New developments in chemical engineering curricula. H. F. Johnstone. J Chem Educ 24:384-6 Ag '47; Excerpt. Chem Eng 54: 284+ Ap '47
On-the-job training for chemical engineers. L. P. Scoville. il Chem Ind 60:213-16 F '47

Tables, calculations, etc.

Handling solids-gas reactions by fluidization. J. C. Kalbach. flow diag Chem Eng 54: 136-8 F '47
Power absorption in mixers. R. B. Olney and G. J. Carlson. bibliog il diag Chem Eng Prog 43:473-80 S '47
Predicting commercial heat transfer coefficients. E. P. Breidenbach and H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42: 761-76 O-D '46; Same. Pet Eng (Ref annual) 18:191-2+ Jl 1 '47
Rectangular coordinates for three variables; to plot data for three-component system. A. S. Smith. diag Chem Eng 54:123 Mr '47; Discussion and reply. 54:196+ Jl '47

CHEMICAL engineering laboratories
Design of laboratories for chemical engineering instruction. H. C. Weber. il plans diags J Chem Educ 24:341-6 Jl '47
Functions of an instrument development laboratory. V. F. Hanson. il Chem Eng Prog 43:379-82 Jl '47
Process engineering research laboratory; Dorr company, Westport, Conn. G. M. Darby, E. J. Roberts and J. D. Grothe. il Ind & Eng Chem 39:453-6 Ap '47
Unit process building for chemical engineering research. W. B. Wade and L. Champlin, jr. il Chem & Eng N 25:2629-30 S 15 '47

CHEMICAL engineering literature
Chemical engineering literature. T. H. Chilton. Chem Eng Prog 43:507-8 O '47

CHEMICAL engineers
Chemical engineer in reconstruction. C. S. Garland. Inst Chem Eng Trans 21:sup13-16 '43
Chemical engineering; question of unionization of engineers and chemists. C. G. Kirkbride. Chem Eng Prog 43:451-2 S '47
Economic chemical engineer; study by Bureau of labor statistics and Engineers joint council. Chem Eng Prog 43:sup 18-19 S '47
Engineer in a free economy. C. M. A. Stine. Chem Eng Prog 43:sup 12-13 S '47
Engineer training methods; Magnolia petroleum company. C. O. Buttrill. Pet Refiner 26:123 My '47
Illusion of success. W. T. Nichols. Chem Eng Prog 43:sup 15-19 Mr '47
Industrial contributions to the professional development of the junior engineer; policies of ten companies. S. D. Kirkpatrick. il Chem Eng Prog 43:327-32 Je '47
Industrial training of chemical engineers. L. B. Hitchcock. bibliog il Chem Eng Prog 43:509-14 O '47
Industry's responsibility for technical education. F. J. Curtis. Chem Eng Prog 43:389-90 Ag '47
Junior engineers and Institute membership; what should they receive? R. L. Teeter. Chem Eng Prog 43:449-50 Ag '47
On-the-job training for chemical engineers. L. P. Scoville. il Chem Ind 60:213-16 F '47
Professional chemical engineering pays off; 1946 survey. A. Fraser. map Chem & Eng N 25:3068-70+ O 20 '47
Professional guidance in Detroit. H. G. Donnelly. Chem Eng Prog 43:505-6 S '47
Utilization of chemists and chemical engineers in World war II. Chem & Eng N 25: 2206-8 Ag 4 '47

See also
Lewis, Warren Kendall
Sadtler, Samuel P.

Salaries

Salaries for young chemical engineers. E. C. Fetter. Chem Eng 54:109 Je '47; Excerpt (chart). Chem Ind 60:946 Je '47

CHEMICAL equations
Ions, substances, and substantial equations. A. Standen. J Chem Educ 24:189 Ap '47
Mathematical approach to reaction mechanisms. J. Thie. bibliog J Phys & Colloid Chem 51:540-56 Mr '47
Practical value of empirical equations. V. A. Kalichevsky. Pet Refiner 26:106-8 Je '47
Useful convention for consecutive reactions. C. R. Noller. J Chem Educ 24:114 Mr '47

Study and teaching

Balancing equations for organic oxidation-reduction reactions. L. N. Ferguson. bibliog J Chem Educ 23:550-4 N '46

CHEMICAL equilibrium
Aniline formate and its changes on keeping. J. R. Pound. J Phys & Colloid Chem 51: 378-82 Mr '47
Calculation of equilibrium constants for isotopic exchange reactions. J. Bigeleisen and M. G. Mayer. J Chem Phys 15:261-7 My '47
Calculation of the equilibrium composition of systems of many constituents. S. R. Brinkley, jr. bibliog J Chem Phys 15:107-10 F '47
Catalyzing the approach to equilibrium. J. H. Hildebrand. J Chem Educ 23:589-92 D '46
Equilibria between linear and cyclic polymers in methylpolysiloxanes. D. W. Scott. bibliog il Am Chem Soc J 68:2294-8 N '46
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Investigations on the equilibria in the system V_2O_4, V_2O_5, $VOSO_4$, SO_2, SO_3. H. Flood and O. J. Kleppa. bibliog il diags Am Chem Soc J 69:998-1002 My '47
Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthols into naphthylamines. W. A. Cowdrey. Chem Soc J p 1046-50 N '46
Oxygen-carrying synthetic chelate compounds; equilibrium in solution. O. L. Harle and M. Calvin. diags Am Chem Soc J 68:2612-18 D '46

See also
Phase rule and equilibrium

CHEMICAL formulas
Table of azeotropes and nonazeotropes. L. H. Horsley. Anal Chem 19:508-600 bibliog(172 ref, p599-600) Ag '47

CHEMICAL industries

Chemical exports on upswing. C. C. Concannon. Chem & Eng N 25:80-2 Ja 13 '47

Chemical industry; its production vital to national economy; its growth in World war II. Index 26 no 4:73-82 [D] '46

Chemical miracles will soon move into practical realm. S. B. Self. Barron's 27:3+ Ja 6 '47

Chemists in manufacturing should help solve problems of product design, redesign, and packaging. W. von Pechmann. Ind & Eng Chem 39:sup 105A-6A O '47

Critical chemicals and new chemical developments. J. Oostermeyer. Paint Oil & Chem R 110:16+ Je 26 '47

Curtailed expansion of chemical industry will prolong shortages, check profits rise. Barron's 27:25 Je 9 '47

Development and profitable exploitation of new organic chemicals. H. M. Corley. Chem & Eng N 25:424-7 F 17 '47

Forefront of chemical progress; significant developments of 1946 as noted from corporation annual reports. J. H. Sprague, jr and P. A. Singleton. Chem Ind 61:52-5 Jl '47

Heavy chemical industry in 1946. P. Parrish. bibliog il plan diags Chem Age (Lond) 56: 37-59 Ja 11 '47

How chemical market research functions. J. G. Park. Ind Marketing 32:49-50+ Je '47

Information sources for chemical market research. R. M. Lawrence and others. bibliog il Chem Ind 57:1058-61; 58:62-5+, 252-5+, 429-32+, 582-5+, 795-800+, 967-9; 59: 75-80+, 663-8, 1021-4; 60:60-3+, 223-5, 614-17, 794-6, 970-2+; 61:58-9, 235-6 D '45-Jl, O, D '46-F, Ap-Ag '47

Merck means over twelve hundred fine chemicals. il Fortune 35:104-11+ Je '47

Organic chemical industry; Britain's opportunity. H. D. McGowan. Chem Age (Lond) 56:98-9 Ja 11 '47

Organized commercial chemical development. J. H. Boyd and others. Chem & Eng N 24: 3314-37 D 25 '46

Petro-chemicals, threat or promise? chemical and petroleum industries. H. W. Fisher; G. L. Parkhurst. Chem Eng 54:95 Jl '47

Plan for promoting new chemicals; American cyanamid company. F. S. Swackhammer and J. M. Rogers. il Chem Ind 61:62-4 Jl '47

Problems confront chemist or chemical engineer who wants to start manufacturing business. W. von Pechmann. Ind & Eng Chem 38:sup87-8 D '46

Recent expansion moves by process industries. Chem Eng 53:180+ D '46

Significant realignment of international chemical trade; with statistics for selected years, 1939-1947. C. C. Concannon. For Comm W 29:3-5+ O 25 '47; Excerpt. Oil Paint & Drug Rep 152:3+ O 27 '47

Some factors in starting small chemical enterprises. W. R. Koster. il Dom Comm 35:49-54 F '47

U.S. '47 chemical exports may hit $700 million peak. Barron's 27:8 Ag 18 '47

Utilization of natural gas in the chemical field. R. S. Child. Pub Util 40:500-6 O 9 '47

Vast expansion under way in newer chemicals. J. V. Sherman. Barron's 27:9-10 S 15 '47

What industry expects of the chemist. C. J. T. Cronshaw. Chem & Ind p442-4 D 14 '46

What's ahead? F. H. Swezey. Chem Eng 54: 99 Ag '47

What's happening in world markets? J. F. Chapman. map Chem Eng 54:98-9 F '47

See also

Alcohol industry
Brewing industries
Chemical workers
Chemicals
Chemistry, Technical
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Rubber industry and trade
Salt
Silicones
Soap
Soap industry and trade
Solvents
Sugar industry and trade
Tanning
Tanning materials
Textile industry

Accounting

Active participation in cost estimating is recommended for production executives in chemical industry. W. von Pechmann. Ind & Eng Chem 39:93a-94a Ja '47

Compromise cuts pilot plant costs. G. F. Schlaudecker. il Chem Ind 61:221-2 Ag '47

Data for equipment cost estimates. H. Bliss. Chem Eng 54:126-38 My; 100-2 Je '47

Needed; standard cost estimating data for the process industries. H. Eckhardt. bibliog Chem Eng 53:104-5 S '46; Discussion. 53:156-7 N '46

Obsolescence is your business. C. W. Balch. il Chem Ind 60:952-3 Je '47

Advertising

Chemical formulas in copy penetrate special markets; B. F. Goodrich chemical co. G. B. Koch. Ptr Ink 217:43 N 22 '46

Directories

Buyers guidebook number, 22d annual revision. R. L. Taylor, ed. Chem Ind 59:1-925 pt 2 (Buyers guidebook no) N '46 (pa $2)

Exhibitions

At the B.I.F.; chemicals section reflects progress. il Chem Age (Lond) 56:554-6, 593-601 My 3-10 '47

Eight major British achievements featured at the Chemical research exhibition in London. Can Chem & Process Ind 30:58-9 N '46

1947 Pacific chemical exposition, San Francisco, Oct. 21-25. Chem & Eng N 25:2723+ S 22 '47

Pacific chemical exposition will help integrate industrial economy of East and West. J. R. Callaham. Chem Eng 54:116-18 S '47

Finance

Chemical companies report record earnings in 1946. M. Pescatello. Chem Ind 60:772-5 My '47

Chemical corporations 1944 incomes reported. Oil Paint & Drug Rep 151:4 Mr 31 '47

Corporation income and taxes in 1943 for chemical, petroleum and allied industries: tabulation. Oil Paint & Drug Rep 150:69 N 4 '46

History

British chemical industry a century ago. il Chem Age (Lond) 56:63-70 Ja 11 '47

Century of chemistry; commemoration of first meeting of Chemical society. Chem Age (Lond) 56:283-4 Mr 8 '47

Chemical review of 1946; chemical industry under postwar conditions, 1946-1947. C. S. Munson and others. il Chem & Eng N 25: 76-97 Ja 13 '47

Growth of an American aromatic chemical industry. R. M. Stevenson. Am Dyestuff Rep 35:625+ D 2 '46

75 years of American chemical progress; chronology of the industry's outstanding developments. L. W. Bass and W. Haynes. Chem Eng 54:96-7+ Jl '47

Wood chemicals meet synthetic competition. W. Haynes. bibliog J Chem Educ 24:109-13 Mr '47

Securities

Chemical industry; with statistics analyzing position of individual companies. J. C. Clifford. il Mag of Wall St 80:11-15+ Ap 12 '47

Outlook for chemicals under keener competition; with financial survey of leading producers. J. C. Clifford. il Mag of Wall St 80:652-4+ S 13 '47

Statistics

Chemical companies report record earnings in 1946. M. Pescatello. Chem Ind 60:772-5 My '47

Chemical exports in 1946. Chem Age (Lond) 56:192-3 F 1 '47

CHEMICAL industries—Statistics—*Continued*
Chemical industry very active in 1946. H. McLeod. Can Chem & Process Ind 31:396-406+ My '47
Chemical production reached all-time high in 1943-45. C. C. Concannon and F. M. Hoffheins. il Dom Comm 34:52-6 Ag; 31-8 O; 60-6 N '46
Drugs and fine chemicals. Published in weekly numbers of Oil, paint and drug reporter
Fermentation industry during World war II. C. S. Boruff and J. M. Van Lanen. bibliog Ind & Eng Chem 39:934-7 Ag '47
Foreign trade in chemicals and allied materials; exports and imports by principal products, 1939-1946. Chem Eng 54:122-3 F '47
Heavy chemicals. Published in weekly numbers of Oil, paint and drug reporter
1946 chemical output hits all-time high. C. C. Concannon and F. M. Hoffheins. il Chem Ind 61:614-17 O '47
Statistical analysis and interpretation of chemical market research data. E. H. Jurkat. Chem Ind 59:1021-4 D '46
Synthetic chemicals 1945 sales reported. Oil Paint & Drug Rep 152:5 S 1 '47
Synthetic organic chemicals; U. S. production, 1939-1945. Chem Eng 54:112-13 F '47
Value of United States exports of chemicals and allied products by groups, areas, and principal countries of destination, 1939, 1945 and Jan.-Sept. 1946. Chem Eng 54: 124 F '47

Alabama

Lamex buys Swann plant in Birmingham, Ala., to expand fine chemical production. il Chem & Eng N 25:2212+ Ag 4 '47

Australia

Australian chemical industry, expanded in war years, is being further increased. Chem Eng 54:226+ My '47
Australian chemical industry is expanding despite labor and material shortages. Chem Eng 54:208+ F '47
Chemical output up, down under. il Chem Ind 61:224-7 Ag '47; Same cond. Chem Age (Lond) 56:671-3 My 24 '47
International outlook. H. Leopold. Chem Eng 54:107 F '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:799 Mr 17 '47

Brazil

World wide chemistry. C. E. Nabuco de Araujo, jr. Chem & Eng N 24:2970, 3097, 3408; 25:720-1, 2460 N 10-25, D 25 '46, Mr 10, Ag 25 '47

Canada

Builders of the Canadian chemical industry. G. W. Huggett. Chem & Ind p267-71 My 17 '47
Canadian chemical data gathering described. Oil Paint & Drug Rep 151:7+ F 3 '47
Canadian chemical expansion described in government report. Oil Paint & Drug Rep 151:40 Je 16 '47
Canadian chemical industry. Chem Age (Lond) 56:806-7 Je 21 '47
Canadian chemistry. S. J. Cook. Chem & Eng N 25:634, 1146 Mr 3, Ap 21 '47
Canadian expansion; abstract. G. W. Huggett. Chem Age (Lond) 56:225 F 8 '47
Canadian newsletter. Chem & Ind p565-6 S 13 '47
Chemical industry very active in 1946. H. McLeod. Can Chem & Process Ind 31:396-406+ My '47
Industrial utilization of agricultural products; Prairie regional laboratory, Saskatoon, Sask. R. K. Larmour. Can Chem & Process Ind 31:853-4+ S '47

Ceylon

Acid plant for Ceylon; abstract. D. H. Balfour. Chem Age (Lond) 57:66 Jl 12 '47
Chemical projects in Ceylon. Chem Age (Lond) 56:439 Ap 12 '47

China

International outlook. A. W. Jessup. Chem Eng 54:103 F '47

Congo, Belgian

Belgian Congo industry. W. G. Cass. Chem & Eng N 25:721 Mr 10 '47

Czechoslovakia

Chemical production in Czechoslovakia geared to top the volume turned out in 1937. Chem Eng 54:200+ O '47
Czech national enterprises; synthetic fuel from Stalin works. Chem Age (Lond) 55: 679 N 30 '46

Detroit

American institute of chemical engineers 40th annual convention, Detroit, Nov. 9-13, 1947. Chem Eng Prog 43:sup 16-19+ O '47

Europe

Chemical industry's recovery in Europe. C. C. Concannon. Oil Paint & Drug Rep 152:5 S 15 '47

Finland

World wide chemistry. W. G. Cass. Chem & Eng N 25:50 Ja 6 '47

France

French and British chemical plants rebuilding. Chem Ind 60:230-1 F '47
French chemical finance. Chem Age (Lond) 56:268 F 15 '47
French chemical industry modernization plan set. Oil Paint & Drug Rep 151:5+ Mr 10 '47
French chemical process industries make progress in face of many unfavorable factors. Chem Eng 54:194+ Ja '47
General survey of the chemical industry. M. Vasselin. Chem & Ind p404 N 9 '46
International outlook. M. Marsh. Chem Eng 54:102 F '47
Newsletter from France. Y. Prax. Chem & Ind p525 Ag 23 '47
Newsletter from France. Y. Prax. Chem & Ind p644-5 O 18 '47
La statistique dans les industries chimiques. H. Fournier. Chimie & Ind 57:494-6 My '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:390, 876, 2172 F 10, Mr 24, Jl 28 '47

Germany

British and German chemical industries; abstract. J. D. Pratt. Chem Age (Lond) 57: 427-8 S 27 '47
Chemical output in Germany, 1938 average, quarterly figures 1946 and 1949 estimates. Oil Paint & Drug Rep 151:39 F 24 '47
Chemical producers in western Germany become more active in trade with outside countries. Chem Eng 54:204+ Ap '47
Farbenindustrie officials indicted as war criminals. Rubber Age 61:211 My '47
Few German chemical exports. Chem Age (Lond) 57:49 Jl 12 '47
Future of the German coal-oil industry. Chem Age (Lond) 56:537 Ap 26 '47
German chemical industries. Chem Eng 53: 240+ N '46; 54:204+ Ja '47
German chemical industries hampered by coal shortage. Chem Age (Lond) 56:352 Mr 22 '47
German chemical industry, past and present. R. L. Kenyon. Chem & Eng N 25:1437-9 My 19 '47
German chemical output set at 98 per cent of 1936 level. Oil Paint & Drug Rep 152:3+ S 8 '47
German high-temperature coal-tar industry. E. O. Rhodes. 8pls U S Bur Mines Information Circ 7409:1-117 '47
German manufacture of polyvinyl ethers. G. M. Kline. flow diags Chem Ind 59:1018-20 D '46; Same. Mod Plastics 24:159-60+ Ja '47
Higher chemical outputs permitted in Germany. Chem Eng 54:182+ O '47
I. G. Farben's post-war activities. Chem Age (Lond) 57:361 S 13 '47
International outlook. J. C. Christie. Chem Eng 54:106 F '47
Interrogation of Dr Pier and staff, I. G. Farbenindustrie A. G., Ludwigshafen and Oppau; supplement II, report on investigations by the Fuels and lubricants teams. W. F. Faragher and W. A. Horne. 9pls U S Bur Mines Information Circ 7376:1-27 '46

CHEMICAL industries—Germany—*Continued*
Report on the investigation by Fuels and lubricants teams at the I. G. Farbenindustrie A. G. Leuna works, Merseburg, Germany. R. Holroyd, ed. 48pls U S Bur Mines Information Circ 7370:1-135 '46
Report on the investigation by Fuels and lubricants teams at the Wintershall A. G., Lützkendorf, near Mücheln, Germany. H. Hollings. 7pls U S Bur Mines Information Circ 7369:1-21 '46
Scale of reparations announced; Britain's small allocation of chemical plants. Chem Age (Lond) 57:559-60 O 25 '47
Technical investigations in Germany. Chem & Ind p587-9 S 27 '47

Bibliography
Where to find information on the German chemical industry. L. W. Greene. 40p pa $1 Office of technical services, Washington, D.C. '46

Glasgow
Early struggles of the St Rollox chemical works; abstract. E. W. D. Tennant. Chem & Ind p628 O 11 '47

Great Britain
Association of British chemical manufacturers, council's report. Chem Age (Lond) 57:528-30+ O 18 '47
British and German chemical industries; abstract. J. D. Pratt. Chem Age (Lond) 57: 427-8 S 27 '47
British association for advancement of science 1st postwar meeting, Dundee, Scotland. Chem & Eng N 25:3106-7 O 20 '47
British chemical industry a century ago. il Chem Age (Lond) 56:63-70 Ja 11 '47
Census of industry; chemicals, dyestuffs and drugs included. Chem Age (Lond) 56:15 Ja 4 '47
Chemical expansion programs in Great Britain face labor and plant site problems. Chem Eng 53:218+ N '46
Chemical exports in 1946. Chem Age (Lond) 56:192-3 F 1 '47
Chemical industry to-day. J. D. Pratt. Chem Age (Lond) 56:703-7 My 31 '47
Chemicals in the production drive. Economist 152:1033-5 Je 28 '47
Control of the chemical industry. Chem Age (Lond) 56:127-8 Ja 18 '47
Further drop in coal supplies has forced sharp decline in British chemical outputs. Chem Eng 54:196+ F '47
General cut in fuel supply forces curtailment in British chemical production. Chem Eng 54:186+ Ja '47
Great Britain increased exports of chemicals to United States in first half of this year. Chem Eng 54:196+ S '47
Great Britain launches productivity drive. Chem Eng 53:184+ D '46
Great Britain's new industrial program calls for large increase in chemical exports. Chem Eng 54:196+ O '47
International outlook. F. R. Brewster. Chem Eng 54:104 F '47
More than one-half of British chemical capacity closed because of coal shortage. Chem Eng 54:194+ Mr '47
Parliament and the chemical industry in 1946. Chem Age (Lond) 56:89-92 Ja 11 '47
Post-war chemical production; home and export supplies compared. Chem Age (Lond) 57:385 S 20 '47
Science and industry; two-way traffic. D. T. A. Townend. Chem & Ind p139-40, 142-4 Mr 22 '47
World wide chemistry. G. Abrahamson. Chem & Eng N 24:3097+, 3236+; 25:192, 330+, 1004-5, 1218, 1292+, 1629-30, 1892-3, 2226-7, 2522-4, 2930+ N 25-D 10 '46, Ja 20, F 3, Ap 7, 28-My 5, Je 2, 30, Ag 4, S 1, O 6 '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:557-8, 636-7, 1826+, 2108+, 2848, 3172-3 F 24-Mr 3, Je 23, Jl 21, S 29, O 27 '47

See also
Imperial chemical industries, limited

Great Britain (colonies)
Chemistry and the colonies. J. L. Simonsen. Chem Age (Lond) 57:319-24 S 6 '47

Hawaiian Islands
Chemistry in Hawaii; pineapples and sugar, around which Hawaiian industry has grown up. R. C. Brasted. il Chem & Eng N 25:495-8 F 24 '47

Hungary
Chemical industry in Hungary. Chem Age (Lond) 56:323 Mr 15 '47
Hungary's chemical industry; slow but successful recovery. Chem Age (Lond) 55:568 N 9 '46
World wide chemistry. W. G. Cass. Chem & Eng N 25:390 F 10 '47

India
Chemical import duties increased by India. Oil Paint & Drug Rep 151:5 Ja 6 '47
Chemical industry of India; abstract. K. A. Hamied. Chem Eng 54:286+ My '47
Enterprise in India. Chem Age (Lond) 56: 225 F 8 '47
Indian chemical industry. Chem Age (Lond) 56:653 My 17 '47
International outlook. J. K. Van Denburg, jr. il Chem Eng 54:105 F '47
Marine chemicals in India. Chem Age (Lond) 56:405-6, 431-3 Ap 5-12 '47
West meets East in unique engineering project; Indian government imports American engineering skill to design and construct unusual ammonium sulphate plant. J. V. Van Denburg, jr. flow chart il diag Chem Eng 54:92-5 Ag '47
World wide chemistry. Chem & Eng N 24: 2970+ N 10 '46
World wide chemistry. W. G. Cass. Chem & Eng N 25:559, 1075 F 24, Ap 14 '47
World wide chemistry. A. P. Som. Chem & Eng N 25:1628-9 Je 2 '47
World wide chemistry. V. S. Swaminathan. Chem & Eng N 25:931 Mr 31 '47

Ireland
Production of war-short materials in Eire. D. Reilly. Chem & Eng N 25:2426-8 Ag 25 '47

Italy
Italy's recovery. Chem Age (Lond) 56:225-6 F 8 '47
World wide chemistry. R. Sansone. Chem & Eng 25:1537-9, 3526-8, 3674 My 26, N 24, D 8 '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:262-3, 557, 3598 Ja 27, F 24, D 1 '47

Japan
Chemical production, Japan. Chem Age (Lond) 57:334 S 6 '47

Latin America
Sulfuric-acid industry's development in Latin America. W. R. Koster. il For Comm W 28: 3-4+ Ag 9 '47

Mexico
International outlook. E. Hediger. Chem Eng 54:101 F '47
Mexican chemical boom. Chem & Ind p545 S 6 '47
Mexican market. A. W. Evans. Chem Age (Lond) 56:226 F 8 '47
New penicillin plant now operating in Mexico. il Chem Eng 54:108-9 O '47

Netherlands
Dutch nitrogen plant. Chem Age (Lond) 57:56 Jl 12 '47
Holland's rising production. Chem Age (Lond) 56:262 F 15 '47

Norway
Chemical aspects of Norwegian industry today. il Chem Age (Lond) 56:440-3, 469-72 Ap 12-19 '47
World wide chemistry. V. S. Swaminathan. Chem & Eng N 25:2395-6 Ag 18 '47

Pacific coast
Agricultural chemicals in the West. J. J. Jacobs. bibliog il Chem & Eng N 25:2712-14 S 22 '47

CHEMICAL industries—Pacific coast—*Cont.*
Industrial inorganic chemicals of the Pacific coast. G. L. Allen, jr. il Chem & Eng N 25:2699-701 S 22 '47; Same. Chem Age (Lond) 57:543-5 O 18 '47

Palestine

Reorganisation needed after the boom period. Chem Age (Lond) 55:678 N 30 '46

See also
Dead sea

Poland

Les industries chimiques polonaises. C. de Kownacki. Chimie & Ind 58:194-6 Ag '47
Polish chemical industry. Chem Age (Lond) 56:747-8 Je 7 '47

Puerto Rico

Chemistry in Puerto Rico. F. Fromm. il Chem & Eng N 25:2626-7 S 15 '47

Russia

International outlook. R. Magidoff. Chem Eng 54:100-1 F '47
Russian chemical industry. Chem Age (Lond) 56:125 Ja 18 '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:193-4 Ja 20 '47

Scandinavia

Scandinavian research and industry tour. H. Vagtborg. il Chem & Eng N 25:588-92 Mr 3 '47

South Africa

Chemicals in South Africa. Chem Age (Lond) 56:777 Je 14 '47
Scarcity of raw materials restricts activities. Chem Eng 53:226+ N '46
Sea contamination by mustard gas. Chem Age (Lond) 55:573 N 9 '46
South African chemical industry. W. L. Speight. Chem & Eng N 25:261-2 Ja 27 '47
South African chemical notes. Chem Age (Lond) 56:130, 350, 808 Ja 18, Mr 22, Je 21 '47
South African chemical plants developing new processes in soap production from sludge. Chem Eng 54:202+ F '47
South African newsletter. F. W. Quass. Chem & Ind p225-6 Ap 26 '47
South Africa's new chemical industries. Chem Age (Lond) 57:38 Jl 12 '47
World wide chemistry. W. L. Speight. Chem & Eng N 25:2588 S 8 '47

Southern states

Southern chemical manufacture ranks third and is still growing. C. Walker. il Manuf Rec 116:32-3+ My '47

Southwestern states

Boom in the Southwest. il map Chem Ind 60:397-406 Mr '47

Spain

World wide chemistry. W. G. Cass. Chem & Eng N 25:1467-8, 2036 My 19, Jl 14 '47

Sweden

Sweden issues embargo list; chemical products affected. Oil Paint & Drug Rep 151:3+ Ap 14 '47
Swedish chemical industries increased facilities of research laboratory during war years. Chem Eng 54:198+ Ap '47
Swedish chemical industry. T. H. Vaughn. il Chem & Eng N 25:760-4 Mr 17 '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:1467 My 19 '47

Switzerland

Switzerland is handicapped; lack of raw materials. Chem Age (Lond) 56:263 F 15 '47

Tennessee

Rock salt used at Memphis to produce chemicals; benzol products to be added; Heyden chemical corporation. Z. Cook. il Manuf Rec 116:39+ Ap '47

Texas

Chemical expansion in southwest Texas; Celanese Corporation plant at Bishop. il Chem Eng 54:110-11 Ap '47

United States

Chemical industry under postwar conditions, 1946-1947. C. S. Munson. Chem & Eng N 25:76-8 Ja 13 '47
Chemicals; prospects for 1947. C. C. Concannon. Dom Comm 35:22-8 Ja '47
Chemicals requirements for Marshall plan set. Oil Paint & Drug Rep 152:4 O 20 '47
Organized commercial chemical development; chemical market research. M. E. Clark. Chem & Eng N 24:3318-22 D 25 '46
Sell and produce abroad for profit; export of technology to build foreign plants for the production of products which cannot be exported. A. Rooseboom. il Chem Ind 60: 605-6 Ap '47
What's ahead for American business. J. D. Wilson and D. M. Keezer. Chem Eng 54: 94-7 F '47
Why organized commercial chemical development. C. F. Prutton. Chem & Eng N 24: 3316-18 D 25 '46

See also
Du Pont de Nemours, E. I., and company
General aniline and film corporation
Heyden chemical corporation
Manufacturing chemists' association of the United States
Synthetic organic chemical manufacturers association

Western states

Chemical industry development on Pacific coast. W. Hirschkind. il Chem Eng Prog 43:145-7 Ap '47
Chemical marketing group surveys position of West coast in industry. Oil Paint & Drug Rep 152:5+ O 27 '47
New western chemical industries; symposium. W. Hirschkind and others. flow sheets il Chem Eng Prog 43:144-82 Ap '47
Pacific progress report no. 5. il maps Chem Eng 54:91-115 S '47

CHEMICAL industry medal
Chemical industry medal awarded to G. W. Merck. Oil Paint & Drug Rep 152:5 O 6 '47
Society of chemical industry medal awarded to Dow. Chem & Eng N 24:3030-1 N 25 '46; Chem Eng 53:154-5 N '46
Willard Dow receives SCI medal. Chem Ind 59:1028 D '46

CHEMICAL institute of Canada
Annual general meeting, 30th, Banff, Alberta, June 8-11. Chem & Eng N 25:1856-8 Je 30 '47; Can Chem & Process Ind 31:621-5+ Jl '47
Canadian rubber division meets at Banff on June 8-11; abstracts of papers. Rubber Age 61:205 My '47; India Rubber World 116:217-18 My '47
C.I.C. must start setting the pattern for human relations. W. R. S. Fraser. Can Chem & Process Ind 31:733-4 Ag '47
Economic status and job analysis survey. R. P. Graham. Can Chem & Process Ind 31:421 My '47
Elections, 1947-48; sketches and portraits of candidates. Can Chem & Process Ind 31: 222-4 Mr '47
Local sections and the head office. G. T. Page. Can Chem & Process Ind 31:729-31 Ag '47
Proceedings and reports of sections. Can Chem & Process Ind 31:536-7+ Je '47
Proceedings and reports of sections; with abstracts of technical papers. Can Chem & Process Ind 31:637-47 Jl '47
Publications and the Institute. W. A. Mohun. Can Chem & Process Ind 31:36-7 Ja '47
Report of the chairman of the Board of directors to Council. Can Chem & Process Ind 31:33-5 Ja '47
Report on membership. J. C. Honey. Can Chem & Process Ind 31:419-21 My '47

CHEMICAL laboratories
Chemistry and a life insurance company. S. H. Roberts. bibliog J Chem Educ 23:568-71 N '46
Construction and design of research laboratories; symposium. L. A. Watt and others. il plans Ind & Eng Chem 39:440-61 Ap '47
D.S.I.R. chemical research laboratory. Engineer 184:103 Ag 1 '47

CHEMICAL laboratories—*Continued*
G. G. Henderson memorial laboratory. il Chem & Ind p476-7 Ag 2 '47
Paraffine companies, inc. new research laboratory on West coast. Chem & Eng N 25:3084 O 20 '47
Snell opens new laboratories. Chem & Eng N 25:2630 S 15 '47
Some aspects of the design of radiochemical laboratories. H. A. Levy. il diags Chem & Eng N 24:3168-73 D 10 '46
Sterling-Winthrop research institute will have a new chemical and biological research laboratory. Science 106:82 Jl 25 '47
Symposium on design and construction of college and university chemistry laboratories. H. F. Lewis and others. il plans diags J Chem Educ 24:320-53 Jl '47

See also
Pharmaceutical laboratories
Rubber laboratories
Textile laboratories

Equipment
Analytical laboratory; Massachusetts institute of technology. G. G. Marvin. il plan J Chem Educ 24:329-32 Jl '47
Glasses for the laboratory. I. C. P. Smith. il diags Chem Age (Lond) 56:386-8, 712-16; 57:19-22, 431-3 Mr 29, My 31, Jl 5, S 27 '47
Laboratory apparatus for catalytic oxidations in the vapor phase. E. E. O'Banion. diags J Chem Educ 24:287-8 Je '47
Portable conductance and Faraday's law apparatus for general chemistry. R. B. Conklin and others. il J Chem Educ 24:393-4 Ag '47
Recording and controlling variables in laboratory processes. R. H. Munch. Ind & Eng Chem 39:sup81A-2A My '47
Safety control device for use with glass cloth heating mantles. H. I. Schiff. diag Anal Chem 19:503 Jl '47
System for rapid evaluation of catalysts for production of butadiene from ethanol. M. H. Whitlock, G. J. Haddad and E. E. Stahly. flow diag il diags Anal Chem 19: 767-70 O '47
Transference numbers by the moving boundary method. P. Bender and D. R. Lewis. il diag J Chem Educ 24:454-6 S '47

CHEMICAL libraries
Chicago chemical library foundation. L. D. Wilson. il Chem & Eng N 25:776+ Mr 17 '47
Research and chemical information. N. C. Hill and others. Chem & Eng N 25:970 Ap 7 '47

CHEMICAL literature
British chemical publications. F. P. Dunn. Chem & Ind p3-12 Ja 4 '47
Compendium of German technology. Chem & Eng N 25:1025 Ap 14 '47
Japanese publications in Chemical abstracts; need for interchange of information. E. J. Crane. Chem & Eng N 25:3176 O 27 '47
OTS translation clearinghouse. J. C. Green. Chem & Eng N 25:1335-6 My 12 '47
Older chemical literature may deserve reexamination; some Russian papers. J. G. Tolpin and others. J Chem Educ 24:513 O '47
Research and chemical information. N. C. Hill and others. Chem & Eng N 25:970 Ap 7 '47

CHEMICAL market research association
Meeting, New York, June 5. Oil Paint & Drug Rep 151:4 Je 9 '47
Meeting, Wilmington, April 17. Oil Paint & Drug Rep 151:5+ Ap 21 '47; Chem & Eng N 25:1263 My 5 '47
Organized commercial chemical development. J. H. Boyd. Chem & Eng N 24:3314-15 D 25 '46

CHEMICAL marketing association
Meeting, New York, Dec. 12. Oil Paint & Drug Rep 150:3+ D 16 '46

CHEMICAL patents
Abstracts of Canadian patents, collected from original sources and edited. Chem Ind 59: 958-9 N '46 [cont monthly]
Abstracts of U.S. chemical patents, from Official gazette, July 9-August 6, 1946. Chem Ind 59:945-57 N '46 [cont monthly]
Charting a patent course for chemical engineers; abstract. F. J. Larkin. Chem Eng Prog 43:sup30 S '47
Collaboration; key to success for the inventor-attorney team. G. H. Young. Chem & Eng N 25:594-7 Mr 3 '47
Many German patents remain locked up. Mod Plastics 24:98 Jl '47
New patents. Soap & San Chem 22:81+ N '46 [cont monthly]
Patent investigations. G. Egloff and R. F. Davis. Chem & Eng N 25:1046-8 Ap 14 '47
Patentability of organic compounds. I. J. Fellner. J Chem Educ 23:555-8 N '46
Patentability of uses in the chemical field. I. P. Tashof. Chem & Eng N 25:491-4 F 24 '47
Patents for chemists. I. J. Fellner. Chem & Eng N 25:490-1 F 24 '47
Patents on the reactions of sugars. A. Guttag. (Technological report ser. no. 1) 108p Sugar research foundation, 52 Wall st, New York 5 '47
Problems of classifying chemical patents. M. C. Rosa. J Chem Educ 24:93-8 F '47

See also
Chromium plating—Patents
Drugs—Patents
Glass manufacture—Patents
Paper making—Patents
Petroleum refining—Patents
Rubber, Artificial—Patents
Textile patents

CHEMICAL plant manufacturers' association, British. See British chemical plant manufacturers' association

CHEMICAL plants
Armour building plant to make fractionated fatty acids and chemicals derived from fatty oils and fats. Chem & Eng N 25:1874 Je 30 '47
Carbide plans research center. il Chem & Eng N 25:1054-5 Ap 14 '47
Chemical expansion in southwest Texas; Celanese Corporation plant at Bishop. il Chem Eng 54:110-11 Ap '47
Chemical plant expansion. D. P. Morgan. Chem & Eng N 25:78-80 Ja 13 '47
Chlorates and perchlorates; Western electrochemical co., Los Angeles. J. C. Schumacher. flow sheet il Chem Eng Prog 43: 177-9 Ap '47
Commercial scale manufacture of allyl chloride and allyl alcohol from propylene; Shell development company, Emeryville, Calif. A. W. Fairbairn, H. A. Cheney, and A. J. Cherniavsky. bibliog flow diags il Chem Eng Prog 43:280-90 Je '47
Construction under way for Monsanto. Chem & Eng N 25:1054 Ap 14 '47
Equipment and design; comparison between 1911 and now. C. O. Brown. Ind & Eng Chem 39:sup75A-6A My '47
Machines, men, money; tailor-made textile, chemical equipment plus technicians for foreign customers. il Bsns W p93-4+ Jl 12 '47
Most outstanding U.S. organic chemical development now in high gear; plants in Gulf Coast region. A. L. Foster. il Oil & Gas J 46:205-6+ My 31 '47
Pennsalt opens Oregon plant after 20 years of planning. il Paper Tr J 125:20+ Jl 10 '47
Plant yield studies cut losses. G. F. Schlaudecker. il Chem Ind 60:408-10 Mr '47
Production of chemicals from petroleum; Shell plant at Thornton-le-Moors. Engineering 163:248 Mr 28 '47
Quinone vapors and their harmful effects; corneal and conjunctival injury. J. H. Sterner and others. flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73, 84) Mr '47
Scale of reparations announced; Britain's small allocation of chemical plants. Chem Age (Lond) 57:559-60 O 25 '47
Shell Chemical announces plans for one of the largest chemical plants in world. il Chem & Eng N 24:2926 N 10 '46
Story of Commonwealth. Am Dyestuff Rep 35:sup50-1 D 2 '46
West meets East in unique engineering project; Indian government imports American engineering skill to design and construct unusual ammonium sulphate plant. J. V. Van Denburg, jr. flow chart il diag Chem Eng 54:92-5 Ag '47

CHEMICAL plants—*Continued*
Winthrop opens dustless ampoule building. Chem & Eng N 25:854 Mr 24 '47

See also
Alcohol—Manufacture
Canneries
Cement plants
Clay products plants
Drug factories
Food factories
Glass factories
Paper mills
Petroleum refineries
Rubber, Artificial—Manufacture
Rubber factories
Soap factories
Varnish factories

Accounting

See Chemical industries—Accounting

Construction

Process equipment cost estimation; buildings costs; unit costs; design, location. Chem Eng 54:111-17 My '47
Steel-frame Calco plant has concrete exterior. il Eng N 138:786 My 8 '47

Costs

Chem. & Met. report on process equipment cost estimation. il diags Chem Eng 54:107-38 My '47 [reprints 25c]
Data for equipment cost estimates. H. Bliss. Chem Eng 54:126-38 My; 100-2 Je '47
Economic process operation; method for determination of optimum operating conditions. W. D. Harbert. Ind & Eng Chem 39: 940-4 Ag '47
Engineering approach to preliminary cost estimates. H. J. Lang. Chem Eng 54:130-3 S; 117-21 O '47
Estimating chemical engineering equipment costs and other items in engineering economics. J. Happel, R. S. Aries and W. J. Borns. Chem Eng 53:99-102 O; 97-100 D '46
Estimating chemical piping costs. R. J. Schrader. Chem Eng 54:109-10 Ja '47
Estimating installations of chemical equipment. J. R. Behrens. Chem Eng 54:106-7 Jl '47
Estimating magnesia insulation costs. F. C. Otto. Chem Eng 54:126-9+ S '47
Estimating mineral wool insulation. F. C. Otto. Chem Eng 54:102-6 Jl '47
Estimation of instrument costs. D. M. Considine. Chem Eng 54:108-9+ Jl '47
Investments and the engineer. R. A. Kinckiner. diags Chem Eng Prog 43:183-7; Discussion. 187-8 Ap '47
Large-scale production of oxygen; economic aspects. D. D. Howat. bibliog Chem Age (Lond) 56:835-7 Je 28 '47
Process equipment cost; standardizing cost data on process equipment. R. Williams, jr. Chem Eng 54:102-3 Je '47

Design

Plant design for minimum cost. G. A. Bryant. diags Chem Eng 54:113-16 My '47

Electric equipment

Electric positioning systems of high accuracy for industrial use. D. E. Garr. il diags Gen Elec R 50:17-24 Jl '47

Employees

See Chemical workers

Equipment

Acetic acid and chlorine vs. materials of chemical plant construction. Chem Eng 54: 241-2+ My '47
Acetic acid vs. materials of chemical plant construction. flow sheet il Chem Eng 53: 253-4+ N; 205-6+ D '46
Analysis of rigid knee-braced bents used in petroleum and chemical plants. W. H. Blank. il diags Pet Refiner 25:111-18 D '46
Automatic control in the chemical industry; abstracts. J. W. Broadhurst and others. Chem Age (Lond) 56:708-9 My 31 '47; diags Engineer 184:130-2 Ag 8 '47
B.I.F. in full swing; chemical section. il diag Chem Age (Lond) 56:557-8, 593-601 My 3-10 '47
Building flexibility into semi-works; B. F. Goodrich chemical co. experiment station at Avon Lake. il Chem Eng 54:107 Ag '47
Chemical and heat resistance of gasket materials; tabulation. H. H. Dunkle and E. C. Fetter. diags Chem Eng 53:102-9 N '46
Chem. & Met. report on process equipment cost estimation. il diags Chem Eng 54:107-38 My '47 [reprints 25c]
Chemical engineering materials of construction; review of literature from start of World war II. bibliog il diags Ind & Eng Chem 39:1193-264 O '47
Chemical porcelain. H. Seymour. Chem Age (Lond) 57:355-6+ S 13 '47
Construction materials in Mannheim HCl plant; non-metallics meet demand for good heat transfer plus resistance to acids; Ethyl corp., Baton Rouge plant. W. F. Armstrong. il diag Chem Eng 54:96-8 Ag '47
Continuous separation of fatty acids; Emersol process; flow sheet. il Chem Eng 53:168-71 N '46
Corrosion resistant chemical equipment of stainless steel. W. R. Meyer and H. L. Maxwell. Steel 121:131-2 N 3 '47
Corrosion testing; evaluation of metals for process equipment. A. Wachter and R. S. Treseder. bibliog il diags Chem Eng Prog 43:315-26 Je '47
Data for equipment cost estimates. H. Bliss. Chem Eng 54:126-38 My; 100-2 Je '47
Diaphragm control valves; construction materials and designs for corrosive and high-temperature service in the chemical industries. A. J. Koch. il diag Chem Eng 54: 207-8+ Je '47
Directory of materials for the construction of chemical equipment. Chem Eng 53:110-19 N '46
Economics of materials demands consideration in chemical plant construction. M. G. Fontana. Ind & Eng Chem 39:sup83A-4A F '47
Equipment and design; proper evaluation and comparison of riveting, casting, and welding. C. O. Brown. Ind & Eng Chem 39: sup81A-82A Ag '47
Equipment makers cope with expansion needs. il Chem Ind 61:408-25 S '47
Estimating installations of chemical equipment. J. R. Behrens. Chem Eng 54:106-7 Jl '47
Estimation of instrument costs. D. M. Considine. Chem Eng 54:108-9+ Jl '47
Ethylene purification by absorption process; Monsanto chemical co.'s plant at Texas City. L. Kniel and W. H. Slager. flow sheets il Chem Eng Prog 43:335-42 Jl '47; Same cond. Pet Processing 2:769-72+ O '47
Fans for the chemical industry. Chem Age (Lond) 57:537-8 O 18 '47
Fluidization in chemical reactions; method for developing design data. J. C. Kalbach. flow diag Chem Eng 54:105-8 Ja; 136-8 F '47
High temperature corrosion of metals under alternate carburization and oxidation. H. K. Ihrig. bibliog il Electrochem Soc Trans 91 (preprint 23):333-44 '47
How two men store and distribute millions of gallons of liquids; centralized tank storage with underground pipe line distribution. Hoffmann-La Roche, inc. J. E. Meyer. il Factory Management 105:98-101 Ja '47
Industrial process control. J. G. Ziegler and N. B. Nichols. bibliog diags Chem Eng Prog 43:309-14; Discussion. 314 Je '47
Modern alkyd resin processing equipment. R. E. Nelson. il Can Chem & Process Ind 31: 210-13 Mr '47
Obsolescence is your business. C. W. Balch. il Chem Ind 60:952-3 Je '47
Organizing an instrument department; Monsanto chemical company. C. S. Comstock and H. U. Fisher. il Chem Eng Prog 43: 303-8 Je '47
Pipeline tunnels for upkeep economy and continuous service; Liquid carbonic corp. A. L. Ramp. il diag Factory Management 105:128-9 F '47
Power absorption in mixers. R. B. Olney and G. J. Carlson. bibliog il diag Chem Eng Prog 43:473-80 S '47
Precipitated calcium carbonate; limestone becomes a fine chemical; Wyandotte plant. R. L. Taylor. il diag Chem Ind 60:954-7 Je '47
Process equipment cost; standardizing cost data on process equipment. R. Williams, jr. Chem Eng 54:102-3 Je '47

CHEMICAL plants—Equipment—*Continued*
Process equipment cost; vibrating screen estimation. H. L. Bullock. Chem Eng 54:97-9 Je '47
Progress in instrumentation; current technique in German chemical plants. Chem Age (Lond) 56:528 Ap 26 '47
Recent developments in alloys as construction materials for severe corrosion services and uses. M. G. Fontana. Ind & Eng Chem 39:sup 101A-2A O '47
Save on new plant start-up time; perfecting mechanical features before attempting production. F. N. Joyce. il Chem Ind 60:610-11 Ap '47
Selection of boiler plant for chemical works il Chem Age (Lond) 56:376-8 Mr 29 '47
Selection of centrifuges for chemical processing. J. C. Smith. il diags Ind & Eng Chem 39:474-9 Ap '47
Semi-technical chemical plant; equipment for the prototype installation. il diag Chem Age (Lond) 56:519-26 Ap 26 '47
Solvent extraction of vegetable oils. S. E. Tray and C. W. Bilbe. flow sheet (p160-3) il Chem Eng 54:139-41+ My '47
Some case histories of corrosion problems in chemical process equipment. W. Z. Friend and F. L. La Que. Am Inst Chem Eng Trans 42:849-62 O-D '46; Same. Pet Eng (Ref annual) 18:212+ Jl 1 '47
Some new types of plant auxiliaries. C. O. Brown. il Ind & Eng Chem 39:sup71A-2A F '47
Special materials solved corrosion problems at Oak Ridge. R. J. Schrader and A. De Haan. il diags Chem Eng 53:96-101 N '46
Steam ejector air pumps for chemicals. il Engineer 182:553 D 13 '46
Sulphur dioxide vs. materials of chemical plant construction; symposium. il Chem Eng 54:221-2+ Jl; 209-10+ Ag; 209-10+ S '47
Variations in design suggested by nature of construction material. C. O. Brown. Ind & Eng Chem 39:sup89A-90A O '47
Vinyl acetate; process and equipment at Hoechst, Germany. L. W. Greene. flow sheet il Chem Eng 54:98-9 Jl '47
Wartime alumina plant now making ammonium sulphate. R. L. Taylor. il diag Chem Ind 59:830-3 N '46
Wet and dry chlorine vs. materials of chemical plant construction. il Chem Eng 54:211-12+ Ja; 219-20+ F; 213-14+ Mr '47

See also
Agitators
Autoclaves
Concentrators
Distillation apparatus
Evaporators
Heat exchangers
Pressure vessels

Experimental plants

Aspects of pilot plant development. C. E. Rowe. Chem & Ind p60-1 Ja 25 '47
Circulating HTS as a pilot plant heat transfer medium. W. B. Johnson and W. M. Nagle. diags Ind & Eng Chem 39:971-4 Ag '47
Compromise cuts pilot plant costs. G. F. Schlaudecker. il Chem Ind 61:221-2 Ag '47
Going to full scale with fewest headaches; Chem. & Met. report. F. H. Swezey. bibliog Chem Eng 54:131-8 O '47
Goodrich Chemical centralizes semi-works development; new general experimental plant at Avon Lake, Ohio. F. K. Schoenfeld. il Chem Ind 60:958-9 Je '47
Pilot plant production of diacetate 2,3-butylene glycol. H. W. Grubb. bibliog flow diag il diags Chem Eng Prog 43:437-48 Ag '47
Pilot plant production of 2,3-dimethylbutane. C. Holloway, jr. and W. S. Bonnell. bibliog flow sheet il diag Ind & Eng Chem 38:1231-8 D '46
Production of iron-free alum. E. A. Gee, W. K. Cunningham and R. A. Heindl. il plans diags Ind & Eng Chem 39:1178-88 S '47
What is a pilot plant for? il Chem Ind 60: 601 Ap '47

Fires and fire protection

Chemical plant flash fire. Safety Eng 94:48 O '47

Floors

How to select safety flooring for chemical plants. C. L. Jones. bibliog il Chem Ind 60:414-17 Mr '47

Management

Clarification of several terms used in the chemical industry pertaining to organization and/or management. W. von Pechmann. Ind & Eng Chem 39:sup95A-6A Mr '47
Economic process operation; method for determination of optimum operating conditions. W. D. Harbert. Ind & Eng Chem 39:940-4 Ag '47
How to reduce chemical production costs. M. Sittenfield. il Chem Ind 61:230-1 Ag '47
Organisation rationnelle d'un service d'entretien. M. Teper. Chimie & Ind 57:597-601 Je '47
Organized commercial chemical development; management. F. J. Curtis. Chem & Eng N 24:3335-7 D 25 '46
Plant management. Published in monthly numbers of Industrial and engineering chemistry
Production control systems pare specialty costs. D. W. Thomas. il Chem Ind 60:964-6 Je '47
Speed is often a dubious asset. C. O. Brown. Ind & Eng Chem 39:sup75A-76A Je '47
Statistical and quality control methods in industrial chemistry; second Westman memorial lecture. A. E. R. Westman. bibliog diags Can Chem & Process Ind 31:716-25+ Ag '47
Time and motion study in the chemical process industries. H. Rossmore and R. S. Aries. bibliog diags Chem & Eng N 25:3142-4 O 27 '47

Pilot plants

See Chemical plants—Experimental plants

Power

Increased power resources of this country are available at lower cost. C. O. Brown. Ind & Eng Chem 39:sup79A-80A Mr '47
Large rectifier station practice; operation in metallurgical and chemical plants. A. G. Dickinson. il Elec Eng 66:960-2 O '47
Power absorption in mixers. R. B. Olney and G. J. Carlson. bibliog il diag Chem Eng Prog 43:473-80 S '47
Power plant services for synthetic gasoline manufacture. G. Roberts, jr. and J. A. Phinney. diags Power Pl Eng 51:108-11 Ag '47
Power sales to chemical companies are reduced; Pacific Gas & Electric forced to limit sales. Elec World 128:36 Ag 30 '47
Revised electrical distribution for greater flexibility; Liquid carbonic corp., Chicago. R. B. Burton. il diag Factory Management 104:96-9 D '46

Safety measures

Alkali inspector sums up. W. A. Damon. Chem Age (Lond) 57:217-18, 257-8 Ag 16-23 '47
Amenity as a feature of chemical plant. J. Creevey. Chem Age (Lond) 55:7-8, 201-2, 351-2, 601-2, 773-4 Jl 20, Ag 17, S 21, N 16, D 21 '46
Explosions in chemical works; methods of minimising the results. Chem Age (Lond) 55:639-40 N 23 '46
Fire and explosion; inflammable concentrations and ignition temperatures; abstract. J. H. F. Smith. Chem Age (Lond) 55:571 N 9 '46
First aid for chemical eye injuries. P. M. Van Arsdell. bibliog(54 ref) Ind Med 16: 188+ Ap '47
Government issues data on benzene hazards. Chem Ind 60:662 Ap '47
Handling corrosive and toxic materials; Dow chemical co. F. C. Amstutz. il Safety Eng 93:16-17+ My; 42-3+ Je '47
How to select safety flooring for chemical plants. C. L. Jones. bibliog il Chem Ind 60:414-17 Mr '47
Industrial handling of fluorine. R. Landau and R. Rosen. bibliog flow diag Ind & Eng Chem 39:281-6 Mr '47

CHEMICAL plants—Safety measures—*Cont.*
Protection against industrial poisons. H. C. Stephenson. Chem Age (Lond) 55:701-2 D 7 '46
Safety first in chemical laboratories and works; review. F. Barillet. Chem Age (Lond) 56:266 F 15 '47
See also
Solvents—Safety measures

Waste

Analysis and disposal of fluorine. S. G. Turnbull and others. il diags Ind & Eng Chem 39:286-8 Mr '47
Industrial wastes; a chemical engineering approach to a national problem. bibliog flow sheets il diags Ind & Eng Chem 39:557-682 My '47
River pollution; effects of chemical works on fisheries. Chem Age (Lond) 57:353-4+ S 13 '47
Smoke, dust, fumes, and their fellow travelers. P. Sadtler. Chem & Eng N 25:2827-8 S 29 '47

Bibliography

Bibliography on chemical wastes; wastes from the chemical industry in relation to water pollution, 1937 to the present. R. W. Hess. Ind & Eng Chem 39:676-82 My '47

CHEMICAL pumps. See Pumps

CHEMICAL reaction
2-Butyne-1 : 4-diol; reactions of the hydroxyl groups. A. W. Johnson. Chem Soc J p 1009-14 N '46
Certain fundamental concepts relating to non-polar mechanisms in olefinic systems. E. H. Farmer. bibliog Soc Chem Ind J 66:86-93 Mr '47
Electric activation of chemical reactions. W. J. Cotton. bibliog diags Electrochem Soc Trans 91 (preprints 34A-H):489-628 '47
Encyclopedia of chemical reactions. Science 104:442 N 8 '46
Halogen-metal interconversion reaction and its application to the synthesis of nicotinic acid labeled with isotopic carbon. A. Murray, 3d and others. Science 106:277 S 19 '47
Mathematical approach to reaction mechanisms. J. Thie. bibliog J Phys & Colloid Chem 51:540-56 Mr '47
Preparation of 4-aminophenyl sulphones; reaction between aromatic sulphinic acids and quinones or quinoneimines. S. Pickholz. Chem Soc J p685-7 Ag '46
Reaction between cellulose nitrate and sodium acetylide in liquid ammonia. P. C. Scherer and G. A. Saul. bibliog Rayon 28: 474-5, 537-8 S-O '47
Reactions of alkyl*iso*formanilides; with phenols. E. B. Knott. Chem Soc J p976-8 Jl '47
Reactions of the hydroxyl radical. W. H. Rodebush and others. bibliog Am Chem Soc J 69:538-40 Mr '47
Reactivity of hydrous alumina toward acids. R. P. Graham and A. W. Thomas. bibliog Am Chem Soc J 69:816-21 Ap '47
Study of the reaction of alcohols with thionyl chloride. W. E. Bissinger and F. E. Kung. bibliog Am Chem Soc J 69:2158-63 S '47
Useful convention for consecutive reactions. C. R. Noller. J Chem Educ 24:114 Mr '47
See also
Addition compounds
Antigens and antibodies
Bromination
Cannizzaro reaction
Catalysis
Catalysts
Chemical equilibrium
Chlorination
Condensation, Chemical
Darzens-Claisen reaction
Dehydration
Dehydrogenation
Diels-Alder reaction
Doebner reaction
Electrolysis
Esterification
Etherification
Freund reaction
Friedel-Crafts reaction
Grignard reagents
Hydrogenation
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Komarowski reaction
Mannich reaction
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Neutralization, Heat of
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Precipitation
Reduction, Chemical
Reformatsky reaction
Sandmeyer reaction
Substitution (chemistry)
Synthesis
Unit processes
Wibaut-Arens reaction
Widman-Stoermer reaction
Willgerodt reaction
Wolff-Kishner reaction

Velocity

Application of the principle of the concentration cell to kinetic studies; oxidation of oxalic acid by ceric sulfate. S. D. Ross and C. G. Swain. Am Chem Soc J 69:1325-6 Je '47
Aromatic substitution; the cleavage of diphenylmercury. A. H. Corwin and M. A. Naylor, jr. bibliog Am Chem Soc J 69:1004-9 My '47
Catalysis of the reaction of chlorine and oxalic acid; complexes of trivalent manganese in solutions containing oxalic acid. H. Taube. bibliog Am Chem Soc J 69:1418-28 Je '47
Chart for calculating reaction time changes. J. G. Harrison, jr. and W. E. Setzler. Chem Eng 54:125-6 Ap '47
Chemical constitution and reactivity; decomposition of o-methoxybenzenediazonium chloride. M. L. Crossley and others. bibliog Am Chem Soc J 69:1160-4 My '47
Constant temperature cell bath for use with the Spekker photoelectric absorptiometer. B. R. Ingle Finch and C. A. Parker. il Chem & Ind p257 My 10 '47
Conversion of liquid white phosphorus to red phosphorus; kinetics of the reaction. T. W. DeWitt and S. Skolnik. diag Am Chem Soc J 68:2305-9 N '46
Decomposition of benzoyl peroxide. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-55 Jl '47
Determination of the kinetics mechanism of a catalytic reaction. J. L. Tschernitz and others. bibliog flow chart pl diag Am Inst Chem Eng Trans 42:883-903; Discussion. 903-5 O-D '46
Direct and sensitized photochemically induced reaction of chlorine and oxalic acid; comparison with the chemically induced reaction. I. L. Hochhauser and H. Taube. Am Chem Soc J 69:1582-9 Jl '47
Electric activation of chemical reactions; production of nitrogen oxides; critical reaction frequencies. W. J. Cotton. bibliog Electrochem Soc Trans 91 (preprint 34B): 501-18 '47
Electronic interpretation of the reaction of olefins with organic per-acids. D. Swern. bibliog Am Chem Soc J 69:1692-8 Jl '47
Generalized form of the reaction-rate law for homogeneous reactions. S. R. Brinkley, jr. and S. Weller. bibliog Am Chem Soc J 69: 1319-21 Je '47
Kinetic study of the urea-formaldehyde reaction. L. E. Smythe. bibliog J Phys & Colloid Chem 51:369-78 Mr '47
Kinetics and mechanism of the reaction of hydrogen bromide with ethanol. E. Grunwald and S. Winstein. bibliog Am Chem Soc J 69:2051-3 Ag '47
Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47
Kinetics of development by catechol. T. H. James. bibliog Am Chem Soc J 69:1217-19 My '47
Kinetics of dissolution of cadmium in hydrochloric acid. J. F. Zimmerman and H. J. McDonald. bibliog diags J Phys & Colloid Chem 51:857-68 My '47
Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives. I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47
Kinetics of halogen addition to unsaturated compounds; the halogeno-ethylenes. B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47
Kinetics of homogeneous gaseous reactions in flow systems. G. M. Harris. bibliog J Phys & Colloid Chem 51:505-12 Mr '47
Kinetics of nitrous gas absorption in aqueous nitric acid. K. G. Denbigh and A. J. Prince. diag Chem Soc J p790-801 Je '47

CHEMICAL reaction—Velocity—*Continued*
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46
Kinetics of the alkaline dehydrochlorination of the benzene hexachloride isomers; mechanism of second-order elimination reactions. S. J. Cristol. bibliog Am Chem Soc J 69:338-42 F '47
Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46
Kinetics of the reaction between tin and solutions of bromine and iodine in organic solvents. A. F. Trotman-Dickenson and E. J. F. James. Chem Soc J p736-8 Je '47
Kinetics of the reaction of methanol with 3,3'-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47
Low pressure explosive limits in the hydrogen-oxygen combination. F. Brescia. bibliog J Chem Educ 24:289-91 Je '47
Mechanism of aromatic side-chain reactions with special reference to the polar effects of substituents; kinetic examination of the reaction of aryl *iso*cyanates with methyl alcohol. J. W. Baker and J. B. Holdsworth. Chem Soc J p713-26 Je '47
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthols into naphthylamines. W. A. Cowdrey. Chem Soc J p 1046-50 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthylamines into naphthols. W. A. Cowdrey and C. N. Hinshelwood. Chem Soc J p 1036-41 N '46
Mechanism of the Bucherer reaction; kinetics of the reaction between naphtholsulphonic acids and sodium hydrogen sulphite. W. A. Cowdrey. Chem Soc J p 1044-5 N '46
Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46
Nitration in sulphuric acid; kinetics of the nitration of 2 : 4-dinitrotoluene. G. M. Bennett and others. Chem Soc J p474-92 Ap '47
Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47
Oxidation processes; a classification of reactions on the basis of the semiquinone theory. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1567-75 Jl '47
Oxygen-carrying synthetic chelate compounds; rates of oxygenation of the solid compounds. C. H. Barkelew and M. Calvin. diags Am Chem Soc J 68:2257-62 N '46
Physical and chemical properties of organometallic compounds; oxidation of zinc alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p688-95 Ag '46
Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47
Rate constants of the steps in addition polymerization. K. Nozaki, P. D. Bartlett and C. G. Swain. bibliog Am Chem Soc J 68: 2377-86 N '46
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Rate of the thermal isomerization of α-pinene in the liquid phase. R. E. Fuguitt and J. E. Hawkins. bibliog Am Chem Soc J 69:319-22 F '47
Reversible esterification of carboxylic acids with isobutene and trimethylethylene; quantitative studies and synthetic applications. R. Altschul. bibliog Am Chem Soc J 68:2605-9 D '46
Solvent effect in the Curtius rearrangement of benzazide. M. S. Newman, S. H. Lee, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:113-16 Ja '47
Some observations on present day chemical kinetics. C. N. Hinshelwood. Chem Soc J p694-701 My '47
Some preliminary investigations of the phenol-formaldehyde reaction. T. T. Jones. diags Soc Chem Ind J 65:264-75 S '46
Structure in liquids and the relation between the parameters of the Arrhenius equation for reactions in the condensed phase. C. E. Waring and P. Becher. bibliog J Chem Phys 15:488-96 Jl '47
Studies on the mechanism of the Cannizzaro reaction. E. R. Alexander. bibliog Am Chem Soc J 69:289-94 F '47
Study of reaction intermediates by means of a mass spectrometer. G. C. Eltenton. bibliog diags J Chem Phys 15:455-81 Jl '47
Study of the kinetics of the reaction between nitrogen pentoxide and nitric oxide. J. H. Smith and F. Daniels. bibliog diag Am Chem Soc J 69:1735-41 Jl '47
Theory of the racemization of optically active derivatives of diphenyl. F. H. Westheimer and J. E. Mayer. J Chem Phys 14:733-8 D '46
Unimolecuar reactions and radioactive transformations. G. Antonoff. bibliog J Phys & Colloid Chem 51:513-16 Mr '47

CHEMICAL reagents
Lithium aluminum hydride, aluminum hydride and lithium gallium hydride, and some of their applications in organic and inorganic chemistry. A. E. Finholt, A. C. Bond, jr. and H. I. Schlesinger. bibliog Am Chem Soc J 69:1199-1203 My '47
Recommended specifications for analytical reagent chemicals. E. Wichers and others. Anal Chem 19:210-15 Mr '47
Reduction of organic compounds by lithium aluminum hydride; aldehydes, ketones, esters, acid chlorides and acid anhydrides. R. F. Nystrom and W. G. Brown. Am Chem Soc J 69:1197-9 My '47
Specific group reagents for proteins. H. S. Olcott and H. Fraenkel-Conrat. bibliog (357 ref) Chem R 41:151-97 Ag '47

See also
Dithiane
Grignard reagents
Nessler's reagent
Solvents

CHEMICAL research
American association for the advancement of science 113th meeting, Boston, Dec. 26-31. Chem & Eng N 25:154-6 Ja 20 '47
Application of low temperatures to chemical research. J. G. Aston and H. L. Fink. bibliog(287 ref) il diags Chem R 39:357-96 D '46
British state-aided chemical research. V. S. Swaminathan. Chem & Eng N 25:2772-3 S 22 '47
Chemical research again surges upward. il Chem Ind 61:286-95+ S '47
Chemical research and corrosion control: some recent contributions of a corrosion research group. W. H. J. Vernon. bibliog Soc Chem Ind J 66:137-42 My '47
Chemical research for Scottish industry; abstract. W. M. Cumming. Chem & Ind p258 My 10 '47
Chemical research in Scotland; abstract. J. W. M'David. Chem & Ind p257-8 My 10 '47
Chemistry and autarchy. R. P. Linstead. Chem & Ind p417-20 Jl 12 '47
Chemistry and the colonies. J. L. Simonsen. Chem Age (Lond) 57:319-24 S 6 '47
Chicago production conference, March 17-19; chemical research discussion. Chem & Eng N 25:968-9 Ap 7 '47
Construction and design of research laboratories; symposium. L. A. Watt and others. il plans Ind & Eng Chem 39:440-61 Ap '47
Contributions of virus research to chemistry and physics. M. A. Lauffer. bibliog il diags Chem & Eng N 24:2896-9 N 10 '46
Crossley awarded AIC medal for research achievements. il Chem & Eng N 25:1332-3 My 12 '47
Eight major British achievements featured at the Chemical research exhibition in London. Can Chem & Process Ind 30:58-9 N '46
Future research in hydrocarbons; abstracts. M. E. Spaght. Chem & Eng N 25:1122 Ap 21 '47; Chem & Ind p241-2 My 3 '47
Graduate training at the doctorate level; condensed summary of the main report of the Committee on professional training; information from chemical industrial research directors and executives. E. M. Billings. Chem & Eng N 25:2076-81 Jl 21 '47

CHEMICAL research—*Continued*
How to increase research profits. il diag Chem Ind 60:421-2 Mr '47
Importance of the chemist in industry. W. M. Rand. Chem & Eng N 25:2490-1 S 1 '47
Industrial chemical research and the theory of inquiry. R. Frankl. J Chem Educ 24:399-403 Ag '47
Influence de la recherche scientifique de laboratoire sur le progrès industriel. E. C. Dodds. Chimie & Ind 58:15-16 Jl '47
Mellon Institute enters the postwar era. il Chem & Eng N 25:1265-70 My 5 '47
Merck means over twelve hundred fine chemicals. il Fortune 35:104-11+ Je '47
National defense; abstract. H. L. Derby. Chem Eng 54:250+ Ag '47
New specialties exploit chemical research. il Chem Ind 61:396-407 S '47
Organized commercial chemical development; application research and technical service. W. H. Harding. Chem & Eng N 24:3329-33 D 25 '46
Organized commercial chemical development; market and product development; illustrated by Hercules powder co.'s vinsol, anethole and resin 731. J. H. Long. Chem & Eng N 24:3325-9 D 25 '46
Round table discussion; indexing and classifying results of chemical research in relation to punched-card investigations. J. W. Perry and others. J Chem Educ 24:71-4 F '47
Some applications of punched-card methods in research problems in chemical physics. G. W. King. J Chem Educ 24:61-4 F '47
Technical investigations in Germany. Chem & Ind p587-9 S 27 '47
Trends in coal chemical research. P. J. Wilson, jr. Blast F & Steel Pl 34:1537-9 D '46

See also
Electron microscope
Gas research
Metallurgical research
Paint research
Paper research
Petroleum research
Pharmaceutical research
Rubber, Artificial—Research
Rubber research
Textile research

also Franklin institute—Biochemical research foundation; Fulmer research institute

History

Historic researches (cont). Engineer 183:256-7, 278-9, 302-4, 324-6 Mr 28-Ap 18 '47

Reports

German research reports (cont). Oil Paint & Drug Rep 150:7 N 18; 61 N 25 '46
How American Cyanamid handles its research reports. H. C. E. Johnson. Chem Ind 60:217-18 F '47

CHEMICAL research conferences (formerly Gibson Island research conferences)
Chemical research conferences, 1947, Colby junior college, New London, New Hampshire, June 16-August 22. W. G. Parks. Science 105:275-6 Mr 14 '47; Revised program. 105:468-70 My 2 '47

CHEMICAL Russian. See Russian language—Chemical Russian

CHEMICAL societies
British chemical publications. F. P. Dunn. Chem & Ind p3-12 Ja 4 '47
Proposal for joint membership with the Society of chemical industry and/or the Chemical society. Can Chem & Process Ind 31:734 Ag '47

See also
American chemical society
American institute of chemical engineers
Andersonian chemical society
Chemical institute of Canada

CHEMICAL society, London
Celebration of the centenary. Chem Age (Lond) 57:109-20+ Jl 26 '47; Chem & Ind p453-8, 467+ Jl 26-Ag 2 '47; Can Chem & Process Ind 31:726-8 Ag '47
Centenary celebrations. C. N. Hinshelwood. Chem & Ind p396-7 Jl 12 '47
Centenary celebrations; industry's debt to science. J. Baddiley. Soc Dyers & Col J 63: 206-8 Jl '47
Chronological list of events. Chem & Ind p401-2+ Jl 12 '47
Conferment of degrees in London university. il Chem & Ind p468-70 Ag 2 '47
100th anniversary. W. J. Murphy. il Chem & Eng N 25:2198-2201+ Ag 4 '47
Overseas chemists for centenary celebrations. Chem Age (Lond) 56:669 My 24 '47; Same. Chem & Ind p288 My 24 '47

CHEMICAL stability
Mechanism of ammonia stabilization of cellulose nitrate. R. E. Reeves and J. E. Giddens. bibliog Ind & Eng Chem 39:1306-9 O '47
Stability and light absorption of the complex ion $FeSCN^{++}$. H. S. Frank and R. L. Oswalt. bibliog Am Chem Soc J 69:1321-5 Je '47
Stabilization of cellulose nitrate with ammonia. R. E. Reeves and J. E. Giddens. bibliog diag Ind & Eng Chem 39:1303-6 O '47

CHEMICAL stoneware. See Stoneware

CHEMICAL symbols
Application of a new notation to petroleum hydrocarbons. G. M. Dyson. bibliog Inst Pet J 33:356-62 Je '47

CHEMICAL warfare
Chemical warfare on Bataan and Corregidor. A. F. Torrisi. Chem & Eng N 25:2557-8 S 8 '47
Disposal of chemical warfare ammunition at sea. il Engineer 184:135 Ag 8 '47
Penicillin aerosol; contribution of the Chemical warfare service to medicine. R. W. Hufferd. bibliog Science 104:498-9 N 29 '46
Possibility of moving the Army chemical center from Edgewood, Md., to Huntsville, Ala. A. Leggin. Chem & Eng N 25:3135 O 27 '47

See also
Mustard gas

CHEMICAL workers
Chemical hazards in the electrical industry. C. B. Fagan. Chem Age (Lond) 56: 809 Je 21 '47
Employment of physically handicapped workers in the chemical industry is good business. W. von Pechmann. Ind & Eng Chem 39:sup93A-94A Je '47
Hourly wages in the chemical industry, 1946. D. L. Helm. Chem Ind 60:596-8+ Ap '47
Psychological tests aid personnel selection in the chemical industry. D. W. Cook. diag Chem Ind 59:997-1000 D '46
Qualifications and training of personnel. L. W. Bass. Chem & Eng N 24:3333-4 D 25 '46
Systematic interviewing of prospective workers ensures a good working staff. W. von Pechmann. Ind & Eng Chem 39:sup87A-8A Ap '47
Testing aptitude for simple tasks is just as important as determining the ability of new employees to carry out more specialized jobs. W. von Pechmann. il Ind & Eng Chem 39:sup91A-2A Jl '47
Wage structure of the industrial chemical industry, January 1946. D. L. Helm. Mo Labor R 63:744-9 N '46
You're wrong about older employees. E. W. Fair. Chem Eng 53:108-9 D '46

See also
Chemical engineers

CHEMICAL writing
American Standard letter symbols; uniform language for chemical engineering. J. H. Perry. Ind Stand 18:60-2 Mr '47; Same. Chem Eng Prog 43:sup20-1 Mr '47
Chemical report writing. S. J. Cook. Can Chem & Process Ind 30:43-5 N '46; Same. J Chem Educ 24:190-2 Ap '47
Essentials of a good report. F. E. Wall. bibliog J Chem Educ 24:129-40 Mr '47
Standardization of chemical engineering letter symbols. J. H. Perry and others. bibliog Ind & Eng Chem 39:438-9 Ap '47; Chem Eng 54:112-13 Je '47

CHEMICALS
Ambitious Shell petroleum co.'s program; chemicals from petroleum bases. G. Abrahamson. Chem & Eng N 25:1218 Ap 28 '47
Application of the atmospheric tray dryer to the drying of chemical products. A. S. White. Chem Age (Lond) 55:597-8 N 16 '46

CHEMICALS—*Continued*

Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il Pet Refiner 25:97-102 D '46; Same abr. Oil & Gas J 45: 59-60+ D 21 '46

Cautionary note regarding some chemicals used for transition indication in wind tunnels. R. C. Pankhurst. bibliog Roy Aeronautical Soc J 51:651-2 Jl '47

Chemical producing industries. Chem Eng 54:96-105 S '47

Chemical research again surges upward. il Chem Ind 61:386-95+ S '47

Chemical resistance of constructional metals and non-metals; table showing resistance of materials to 24 common and troublesome chemicals. Chem Eng 53:120-50 N '46

Chemical utilization of peat. C. W. Davis. Can Chem & Process Ind 30:86+ D '46

Chemicals and raw materials buying section; alphabetical list of chemicals and natural raw materials, with their formulas, uses, physical and chemical properties, as well as a buyer's guide of manufacturers and distributors. Chem Ind 59:47-538 pt 2 (Buyers guidebook no) N '46

Chemicals from fats. A. W. Ralston. Chem & Eng N 25:836-8 Mr 24 '47

Chemicals from petroleum. J. E. Bludworth. flow sheet il Oil & Gas J 45:76-7+ Ap 12 '47; Same. Pet Refiner 26:120-4 Ap '47

Chemicals from petroleum and natural gas. G. Egloff. Oil & Gas J 46:88-9+ Ag 30 '47

Chemicals produced commercially in the West since 1941. Chem Eng 54:105 S '47

Chemistry, foundation of good packaging; Dow's packaging products and their uses. L. Barnett. Chem & Eng N 25:258 Ja 27 '47

Critical chemicals and new chemical developments. J. Oostermeyer. Paint Oil & Chem R 110:16+ Je 26 '47; Same cond. il Pet Processing 2:651-4 S '47

Critical chemicals; basic chemical shortages; abstract. J. Oostermeyer. Chem Eng 54: 246+ O '47

Details of German chemicals; surface-active agents, synthetic waxes, etc. Chem Age (Lond) 56:614-15 My 10 '47

Development and profitable exploitation of new organic chemicals. H. M. Corley. Chem & Eng N 25:424-7 F 17 '47

Difficult chemicals; Pennsalt packaging and labeling division. il Mod Packaging 20:126-31 My '47

Do your labels protect you? L. Gordon. Chem Ind 60:412-13 Mr '47

Electro-organic chemical preparations. S. Swann, jr. bibliog tables Electrochem Soc Trans 88 (preprint 23):237-54 '45; Same. Ill U Eng Exp Sta Reprint Ser 36:103-20 '47 (pa 25c)

First aid for chemical eye injuries. P. M. Van Arsdell. bibliog(54 ref) Ind Med 16: 188+ Ap '47

Gas production and the chemical industry. J. S. van Aken. Chem Age (Lond) 57:423-4, 457-8+ S 27-O 4 '47

Gas, raw material for chemicals; underground gasification. Mech Eng 69:670 Ag '47

Interrogation of Dr Pier and staff, I. G. Farbenindustrie A. G., Ludwigshafen and Oppau; supplement II, report on investigations by the Fuels and lubricants teams. W. F. Faragher and W. A. Horne. 9pls U S Bur Mines Information Circ 7376:1-27 '46

New chemicals for industry; catalog. il Chem Ind 61:430-2+ S '47

New specialties exploit chemical research. il Chem Ind 61:396-407 S '47

Packaging chemicals in paper bags. T. P. Callahan. il Chem Ind 59:878+ N '46

Petroleum as a base material for chemical industry. J. C. G. Boot. Inst Chem Eng Trans 21:41-5; Discussion. 45-7 '43

Plastic makers look to petroleum chemicals for raw materials. B. H. Weil. bibliog il diags Pet Processing 2:215+ Mr '47

Progress in petrochemical manufacture. W. L. Nelson. Oil & Gas J 45:100 Ap 12 '47

Synthetic aliphatic industry. H. B. McClure and R. L. Bateman. Chem & Eng N 25: 3208-14, 3286-9 N 3-10 '47

Utilization of natural gas for chemical products. H. M. Smith and W. C. Holliman. bibliog(218 titles) 12 pls U S Bur Mines Information Circ 7347:1-24 '47; Same, without bibliog. Pet Refiner 26:75-84 Ap '47

Weights per cubic foot of dry chemicals used in water and sewage works; table. Water & Sewage Works 94:R64 Jl '47

See also

Acids
Alcohols
Catalysts
Chemical industries
Chemical reagents
Chemistry, Technical
Cleaning compositions
Drugs
Drying agents
Dyes and dyeing—Chemistry
Glycerin
Glyoxal
Hydrogen peroxide
Insecticides
Ion exchangers
Mercaptoacetic acid
Mothproofing preparations
Oil and fats
Paint materials
Paper chemicals
Plasticizers
Refrigerants
Rubber chemicals
Sanitary chemicals
Solvents
Tanning materials
Tariff—United States—Chemicals
Textile chemicals

also National research council—Chemical-biological coordination center

Prices

Basic chemicals join price parade. Bsns W p 18 S 20 '47

Chemical market prices, January 3, 1947; compiled from weekly current price listings in the Oil, paint and drug reporter. Chem & Eng N 25:128-9 Ja 13 '47 [cont monthly]

Chemicals, oils, and drugs price records: 1939-1940, 1942, 1945-1946; tabulation. Oil Paint & Drug Rep 151:7 Ja 13 '47

Current market quotations, chemicals and related materials. Published in weekly numbers of Oil, paint and drug reporter

Standards

Creating world chemical standards; aims of current meetings of the International Union. Chem Age (Lond) 57:91-2 Jl 19 '47

Statistics

Digest of statistics. Chem Age (Lond) 56:126 Ja 18 '47

Inorganic chemical production, 1945 and 1946; tabulation. Oil Paint & Drug Rep 151:64 F 24 '47

1945 chemical production down. Chem Ind 59: 827, 856 N '46

Organic chemicals production in 1946. Oil Paint & Drug Rep 151:58 Mr 17 '47

Petroleum chemicals showed marked gains in 1945. Pet Processing 1:245-6 D '46

Synthetic organic chemicals production. Chem & Eng N 24:3205 D 10 '46

Synthetic organic chemicals; U.S. production, 1939-1945. Chem Eng 54:112-13 F '47

Synthetic organics output off in 1946; sales gain; with figures for 1945. Oil Paint & Drug Rep 152:7+ O 6 '47

United States production of chemicals. Chem & Eng N 25:318 F 3 '47

Storage

How two men store and distribute millions of gallons of liquids; centralized tank storage with underground pipe line distribution; Hoffmann-La Roche, inc. J. E. Meyer. il Factory Management 105:98-101 Ja '47

Storage tank design; low pressure tanks for liquid chemical storage. J. G. Henderson. diags Chem Eng 54:104-7+ Mr '47

Transportation

How to handle and store fiber drums. il Chem Ind 59:842-4 N '46

I.C.C. admits new type drum. T. P. Callahan. Chem Ind 60:656+ Ap '47

I.C.C. regulations amended. T. P. Callahan. Chem Ind 59:1058+ D '46

Metal containers for chemicals; nickel, aluminum and steel drums. R. W. Lahey. Chem & Eng N 25:808 Mr 17 '47

Packaging and shipping improvements cut costs. il Chem Ind 61:426-9 S '47

Regulations for transportation of dangerous articles. R. W. Lahey. Chem & Eng N 24: 3406 D 25 '46

CHEMICALS—Transportation—*Continued*
Shipping research needed. R. T. Baldwin. il Chem Ind 60:462 Mr '47
Transportation of dangerous articles; ICC amendments. R. W. Lahey. Chem & Eng N 25:1545-6 My 26 '47

See also
Railroads—Rates—Chemicals

Uses

Industrial application of chemicals (cont). Oil Paint & Drug Rep 150:7 N 18; 7 N 25; 7+ D 2; 7 D 9; 7 D 16; 7+ D 23; 7 D 30 '46; 151:7 Ja 6; 45 Ja 13; 7 Ja 20; 7 Ja 27; 7 F 3; 7+ F 10; 7 F 17; 7 F 24; 7 Mr 3; 7 Mr 10; 7 Mr 17; 7+ Mr 24; 7 Mr 31; 7 Ap 7; 7+ Ap 14; 7+ Ap 21; 7+ Ap 28; 7+ My 19; 7 My 26; 7 Je 2; 7 Je 9; 7+ Je 16; 7+ Je 23; 7 Je 30; 152:7 Jl 7; 7 Jl 14; 7 Jl 21; 7 Jl 28; 7 Ag 4; 7+ Ag 11; 7 Ag 18; 7 Ag 25; 7 S 1; 7 S 8; 7 S 15; 7 S 22; 7 S 29; 7 O 6; 7 O 13; 7+ O 20; 7+ O 27 '47

CHEMISCHE berichte (periodical)
Chemische berichte. R. L. Kenyon. Chem & Eng N 25:462 F 17 '47

CHEMISTRY
Chemistry and human affairs. W. F. Zimmerli. Chem & Eng N 25:2070-3 Jl 21 '47
Divisional program at the American chemical society Atlantic City meeting. Chem & Eng N 25:1244-61 My 5 '47
Scientific and utilitarian value of fluorine chemistry. J. H. Simons. bibliog Ind & Eng Chem 39:238-41 Mr '47

See also
Acids
Atoms
Bases (chemistry)
Biological chemistry
Catalysis
Chemical reaction and other headings beginning Chemical
Chemicals
Chemists
Colloids
Color
Combustion
Condensation, Chemical
Crystallization
Crystallography
Dyes and dyeing—Chemistry
Electrochemistry
Electrolysis
Electrolytes
Electrons
Evaporation
Explosives
Fermentation
Food—Chemistry
Gases
Geochemistry
Hydrolysis
Ions
Liquids
Metallurgy
Metals
Molecules
Oxidation
Photochemistry
Photographic chemistry
Poisons
Poisons, Industrial
Radioactive substances
Reduction, Chemical
Rubber—Chemistry
Rubber, Artificial—Chemistry
Salt
Salts
Solids
Solution (chemistry)
Solvents
Spectrum
Stereochemistry
Synthesis
Textile chemicals
Textile chemistry
Thermochemistry
Waxes
Wood—Chemistry

Classification

Coding and sorting chemical compounds by means of punched cards. J. A. Morgan and D. E. H. Frear. J Chem Educ 24: 58-61 F '47

Definition

Chemistry and the lexicographer. F. G. Sawyer. Chem & Eng N 25:3080 O 20 '47

Dictionaries

Russian-English technical and chemical dictionary. L. I. Callaham. 794p $10 John Wiley & sons, 440 4th av, New York '47

Experiments

Experiments with ash. F. Fromm. J Chem Educ 24:231 My '47

History

Chemical personalities a century ago. J. Read. Engineering 164:163-4, 174-5 Ag 15-22 '47
History of chemistry in Russia prior to 1900. H. M. Leicester. bibliog J Chem Educ 24: 438-43 S '47
Jan Baptist van Helmont. H. S. van Klooster. J Chem Educ 24:319 Jl '47
New horizons in science; introducing dusts, germs, molecules, and atoms. W. J. Wiswesser. bibliog il J Chem Educ 24:21-7 Ja '47
Smithson Tennant, equestrian chemist. M. Schofield. Chem & Ind p506-7 Ag 16 '47
Story of atomic energy. F. Soddy. il diags Engineering 164:313-17, 361-4, 409-11 O 3, 17, 31 '47
William Prout, 1785-1850. S. Glasstone. J Chem Educ 24:478-81 O '47

See also
Chemistry, Physical and theoretical—History

Nomenclature

A.C.S. Committee on nomenclature, spelling and pronunciation; report. Chem & Eng N 25:1363-4 My 12 '47
Chemical Russian, self-taught. J. W. Perry. bibliog J Chem Educ 23:116-22; 24:28-45, 79-83 Mr '46, Ja-F '47
Naming of element 61. R. F. Gould. bibliog Chem & Eng N 25:2555-6 S 8 '47
Naming of new elements. L. H. Cragg. bibliog Can Chem & Process Ind 31:455+ My '47

See also
Chemical engineering—Nomenclature
Chemical symbols
Chemistry—Terminology
Chemistry, Organic—Nomenclature
Sugars—Nomenclature

Periodicals

American chemical society publications. Chem & Eng N 25:527-32 F 24 '47
Periodical list of periodicals. E. J. Crane. Chem & Eng N 25:2075 Jl 21 '47

Study and teaching

Bicentenary at Glasgow; two centuries of chemistry in the University. A. Kent. il Chem Age (Lond) 56:636-7 My 17 '47
Catalysis and the elementary chemistry course. J. A. Campbell. J Chem Educ 23: 582 D '46
Challenge in high-school chemistry. E. R. Harrington. J Chem Educ 24:295-6 Je '47
College chemistry programs. R. B. Conklin. J Chem Educ 24:269-72 Je '47
Critical temperature. F. Brescia. bibliog diag J Chem Educ 24:123-8 Mr '47
Cultural by-products of laboratory instruction. T. D. Cope. J Chem Educ 24:193-4 Ap '47
Department of chemistry at McMaster university. R. P. Graham and L. H. Cragg. bibliog il Can Chem & Process Ind 31: 822-4 S '47
Department of chemistry, University of Saskatchewan. S. Basterfield. il Can Chem & Process Ind 30:46-8 N '46
Hints on laboratory technique. M. M. Graff. diags J Chem Educ 24:132-5 Ap '47
Industrial and high-school chemists can cooperate. A. S. Brown, J. J. Dudleston and R. Hoffman. J Chem Educ 24:404-5 Ag '47
New angles on familiar demonstrations. E. C. Weaver. J Chem Educ 24:48-9 Ja '47
Problem of teaching electrolysis in the course in general chemistry. J. A. Timm. diags J Chem Educ 24:160-5 Ap '47
Revision of chemistry and chemical engineering curricula. L. L. Quill and others. J Chem Educ 24:369-88 Ag '47
Selecting a graduate school for training in chemistry. J. R. Sampey. J Chem Educ 23:583+ D '46
Student assistants in the high-school laboratory. G. A. Lehmann. J Chem Educ 24: 354 Jl '47
Two hundred years of chemistry at the University of Glasgow. J. C. Speakman. Chem & Ind p219-20 Ap 26 '47
Use of history in teaching chemistry. G. Wakeham. bibliog J Chem Educ 24:247-9 My '47
Useful convention for consecutive reactions. C. R. Noller. J Chem Educ 24:114 Mr '47

Tables, calculations, etc.

Calculation of the equilibrium composition of systems of many constituents. S. R. Brinkley, jr. bibliog J Chem Phys 15:107-10 F '47

CHEMISTRY—Tables, calculations, etc.—*Cont.*
Handbook of chemistry. N. A. Lange and G. M. Forker, comps. 6th ed rev & enl 1766p, 271p $7 Handbook publishers, Sandusky, Ohio '46
Importance of the normality basis and equivalents in the teaching of volumetric analysis. C. C. Meloche. bibliog J Chem Educ 24:475-7 O '47

Terminology

Chemistry and the lexicographer. F. G. Sawyer. Chem & Eng N 25:3080 O 20 '47

See also
Chemistry—Nomenclature
Russian language—
Chemical Russian

Great Britain

Applications of microchemistry in Great Britain. C. L. Wilson. Chem & Ind p353-5 Je 21 '47
British state-aided chemical research. V. S. Swaminathan. Chem & Eng N 25:2772-3 S 22 '47

Russia

History of chemistry in Russia prior to 1900. H. M. Leicester. bibliog J Chem Educ 24: 438-43 S '47

CHEMISTRY, Analytic
Agricultural chemists discuss analytical methods. Chem & Eng N 24:2909 N 10 '46
Analysis of external deposits from boilers. H. E. Crossley, A. H. Edwards and D. Flint. bibliog Soc Chem Ind J 65:251-7 S '46
Chemistry in quality control. R. B. Faurote. il Aero Digest 55:78+ Jl '47
Development of standards for analytical filter papers. B. W. Scribner and W. K. Wilson. bibliog J Res Nat Bur Stand 39:21-7 Jl '47
Instrumentation in chemical analysis; technical training course. R. H. Lambert. J Chem Educ 23:610-12 D '46
Melting point calorimeter for purity determinations. J. G. Aston and others. bibliog il diag Anal Chem 19:218-21 Ap '47
Methods of measuring pH. N. E. Swanson. Oil & Gas J 46:107 Ag 30; 109-10 S 6 '47
Rapid chemical comparisons by X-ray photometer. il diag Chem Eng Prog 43:sup 16 Ag '47; Chem Age (Lond) 57:291+ Ag 30 '47
Resonating nuclei reveal their chemical composition in a magnetic field. F. Bloch. Sci Am 176:222 My '47
Second annual analytical symposium, sponsored by Analytical division, Pittsburgh section, American chemical society. Anal Chem 19:284-5 Ap '47

See also
Acidity
Chromatographic analysis
Colorimetric analysis
Combustion analysis
Electrographic analysis
Fluorometric analysis
Gas analysis
Gravimetric analysis
Iodometry
Metallurgical analysis
Microanalysis
Mineralogical analysis
Oil analysis
Plants—Chemical analysis
Polarographic analysis
Spectrum analysis
Sugar analysis
Textile analysis
Varnish analysis
Volumetric analysis

also subdivision Analysis under names of substances, e.g.
Chlorine—Analysis
Paper—Analysis
Petroleum—Analysis
Steel—Analysis
Water—Analysis

Qualitative

Apparatus and techniques for practical chemical identification by X-ray diffraction. C. S. Smith and R. L. Barrett. bibliog il J Ap Phys 18:177-91 F '47
Charts for computation of *d*-values in X-ray diffraction chemical analysis. O. E. Brown. J Ap Phys 18:191-3 F '47
Fluorescence spectrography as an aid in the identification of compounds. I. Berenblum and R. Schoental. pl Chem Soc J p 1017-18 N '46
Identification of acidic oxycellulose by means of aromatic amines and diamines; new qualitative method. M. Krajčinovič and M. Krajčinovič. bibliog Textile Inst J 38: T11-12 Ja '47
Identification of organic compounds by use of chromium target X-ray diffraction powder patterns. F. W. Matthews and J. H. Michell. bibliog il Ind & Eng Chem Anal ed 18:662-5 N '46
Precipitation of mercuric chloride with dithiane. J. B. Schroyer and R. M. Jackman. J Chem Educ 24:146-8 Mr '47
Tabulation of X-ray diffraction powder data for chemical analysis. F. W. Matthews and A. O. McIntosh. bibliog Can Chem & Process Ind 31:63-4+ Ja '47

Study and teaching

Chromatographic adsorption in qualitative analysis. H. H. Fillinger. J Chem Educ 24:444-5 S '47

Quantitative

Adapting basic spectrographic equipment to precision quantitative analysis. P. H. Brotzman and H. E. Hemker. il Steel 121: 83+ Jl 14 '47
Analysis of diazo compounds, particularly diazodinitrophenol. W. E. Shaefer and W. W. Becker. bibliog diag Anal Chem 19: 307-10 My '47
Chemistry and a life insurance company. S. H. Roberts. bibliog J Chem Educ 23:568-71 N '46
Continuous recording ultraviolet spectrophotometer; application to butadiene analysis. E. J. Rosenbaum and L. Stanton. il diags Anal Chem 19:794-8 O '47
Conversion of organic sulfur to hydrogen sulfide for analysis. E. Field and C. S. Oldach. bibliog Ind & Eng Chem Anal ed 18:668-9 N '46
Determination of carboxymethylcellulose in paper. R. W. Eyler and R. T. Hall. Paper Tr J 125:59-62 O 9 '47
Estimation of moisture in solventless double-base powders; desiccation, cone-and-dish, carbon tetrachloride distillation, and Karl Fischer procedures. J. Hardy, W. D. Bonner, jr. and R. M. Noyes. bibliog Ind & Eng Chem Anal ed 18:751-3 D '46
Identification of sulfur compounds in gas mixtures. C. S. Oldach and E. Field. bibliog diags Ind & Eng Chem Anal ed 18:669-72 N '46; Same. Pet Eng (Ref annual) 18: 226+ Jl 1 '47
Infrared spectrometric quantitative analysis of multicomponent liquid hydrocarbon mixtures. J. W. Kent and J. Y. Beach. bibliog Anal Chem 19:290-3 My '47
Molecular distillation as a step in the chemical determination of total and gamma-tocopherols. M. L. Quaife and P. L. Harris. bibliog diag Ind & Eng Chem Anal ed 18: 707-8 N '46
New differential X-ray absorption method for elementary chemical analysis. A. Engström. diag R Sci Instr 18:681-2 S '47
Quantitative analysis with the X-ray spectrometer. J. C. Redmond. Anal Chem 19: 773-7 O '47
Semimicro methods for quantitative analysis. S. Gaddis and G. F. Breckenridge. il J Chem Educ 24:241-3 My '47
Source of error in the Gutzeit method for arsenic. N. I. Goldstone. bibliog diags Ind & Eng Chem Anal ed 18:797-9 D '46
Spectrochemical analysis of ceramics and other non-metallic materials. E. K. Jaycox. Opt Soc Am J 37:162-5 Mr '47

See also
Colorimetric analysis
Gravimetric analysis
Iodine number
Iodometry
Microanalysis
Polarographic analysis
Turbidimetric analysis
Volumetric analysis

Study and teaching

Electron micrographs as an aid in teaching gravimetric analysis. R. B. Fischer. il J Chem Educ 24:484-6+ O '47
Importance of the normality basis and equivalents in the teaching of volumetric analysis. C. C. Meloche. bibliog J Chem Educ 24:475-7 O '47

CHEMISTRY, Analytic— Quantitative — Study and teaching—*Continued*

Library problem in quantitative analysis. M. G. Mellon. bibliog J Chem Educ 24:283-6 Je '47

Quantitative analysis for premedical students. E. M. Baker. J Chem Educ 23:567 N '46

Study and teaching

Analytical laboratory; Massachusetts institute of technology. G. G. Marvin. il plan J Chem Educ 24:329-32 Jl '47

Influence of the elementary quantitative analysis course on analytical chemistry as a profession. J. F. Corwin. Anal Chem 19:619 S '47

New approach to analytical chemistry as taught at Louisiana state university. A. R. Choppin, A. L. LeRosen and P. W. West. Anal Chem 19:640-2 S '47

Simple method of demonstrating flame tests. H. Anderson and J. F. Corwin. J Chem Educ 24:443 S '47

CHEMISTRY, Industrial. See Chemical industries; Chemistry, Technical

CHEMISTRY, Inorganic

Vapor pressure of pure substances; inorganic compounds; tables [p541-6]. D. R. Stull. bibliog(499 ref) Ind & Eng Chem 39:540-50 Ap '47

CHEMISTRY, Medical and pharmaceutical

See also

Alkaloids
Analgesics
Anesthetics
Anesthetics, Local
Antiseptics
Antispasmodics
Chemotherapy
Disinfection and disinfectants
Drugs
Hormones
Hypnotics
Immunity
Mydriatics
Narcotics
Pharmaceutical research
Vaccines
Vitamins

CHEMISTRY, Organic

Action of elementary fluorine upon organic compounds. L. A. Bigelow. bibliog(108 ref) diags Chem R 40:51-115 F '47

Action of elementary fluorine upon organic compounds; vapor phase addition to certain deactivated or condensed aromatic rings. R. Y. Tompson, P. Tarrant and L. A. Bigelow. bibliog diag Am Chem Soc J 68:2187-92 N '46

Electronic interpretations of organic chemistry; interpretation of the solubility of organic compounds. S. R. Palit. bibliog J Phys & Colloid Chem 51:837-57 My '47

Electro-organic chemical preparations. S. Swann, jr. bibliog tables Electrochem Soc Trans 88 (preprint 23):237-54 '45; Same. Ill U Eng Exp Sta Reprint Ser 36:103-20 '47 (pa 25c)

How the organic chemist can best serve the food field. R. E. Kremers. il Food Ind 19: 601-2+ My '47

Most outstanding U.S. organic chemical development now in high gear; plants in Gulf Coast region. A. L. Foster. il Oil & Gas J 46:205-6+ My 31 '47

Physical and chemical properties of organometallic compounds; oxidation of zinc alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p688-95 Ag '46

Review papers feature organic symposium. Chem & Eng N 25:2008-9 Jl 14 '47

Robert B. Woodward; contribution to organic chemistry. R. L. Demmerle. Chem & Eng N 25:2137+ Jl 28 '47

Some developments in the general methods of organic chemistry; abstract. F. S. Spring. Chem & Ind p452 D 21 '46

Synthetic aliphatic industry. H. B. McClure and R. L. Bateman. Chem & Eng N 25: 3208-14, 3286-9 N 3-10 '47

Twenty-five years progress in the organic chemical industry. E. G. Robinson. Am Dyestuff Rep 35:613-14 D 2 '46

Vapor pressure of pure substances; organic compounds; tables [p518-36]. D. R. Stull. bibliog(494 ref) Ind & Eng Chem 39:517-40 Ap '47; Correction. 39:1684 D '47

See also

Acids, Fatty
Alcohols
Aldehydes
Alkaloids
Amines
Carbon
Cellulose
Condensation, Chemical
Cyclic compounds
Essential oils
Esterification
Esters
Ethers
Grignard reagents
Hydrocarbons
Ketones
Polymerization
Proteins
Stereochemistry
Sugars

also Synthetic organic chemical manufacturers association

Nomenclature

Chemical Russian, self-taught; Russian organic chemical nomenclature. J. W. Perry. J Chem Educ 24:28-45 Ja '47

Fluorine nomenclature. Ind & Eng Chem 39: 241-2 Mr '47

New notation and enumeration system for organic compounds, by G. M. Dyson. Review, by C. H. Giles. Soc Dyers & Col J 63:270-1 Ag '47

New notation for organic chemistry. G. G. S. Dutton. Chem Age (Lond) 56:251-4 F 15 '47

New notation for organic chemistry proposed. Chem & Eng N 25:847+ Mr 24 '47

Nomenclature of carotenoid pigments. L. Zechmeister. Chem & Eng N 25:463-4 F 17 '47

Notation of carotenes. R. D. Kleene. Chem & Eng N 25:1766-7 Je 16 '47

Study and teaching

High-school course in organic chemistry. H. J. Abrahams. J Chem Educ 24:244 My '47

Organic laboratory. C. D. Hurd. il J Chem Educ 24:333-7 Jl '47

Tables, calculations, etc.

Liquid methylpolysiloxane systems. D. F. Wilcox. bibliog Am Chem Soc J 69:477-86 Mr '47

CHEMISTRY, Photographic. See Photographic chemistry

CHEMISTRY, Physical and theoretical

Indiana section holds physiochemical symposium. Chem & Eng N 24:3347 D 25 '46

New horizons in science; introducing dusts, germs, molecules, and atoms. W. J. Wiswesser. bibliog il J Chem Educ 24:21-7 Ja '47

Physical chemistry of lubricating oils. A. Bondi. bibliog diags Pet Refiner 25:121-6 Je; 119-32 Jl; 119-29 Ag '46; 26:126-34 Mr; 116-22 Je '47

Unsolved problems of structural chemistry; Richards medal address. L. Pauling. bibliog Chem & Eng N 25:2970-3+ O 13 '47

See also

Absorption
Adsorption
Atoms
Azeotropes
Azeotropy
Catalysis
Catalysts
Chemical bonds
Chemical equilibrium
Chemical reaction
Colloids
Compressibility
Condensation, Chemical
Crystallization
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Electrochemistry
Electrolysis
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Ionization, Gaseous
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Isosterism
Isotopes
Melting points
Mixtures
Molecular rearrangements
Molecular weights
Molecules
Osmotic pressure
Phase rule and equilibrium
Photochemistry
Polymers
Precipitation
Quantum theory
Solids
Solubility
Solution (chemistry)
Stereochemistry
Surface tension
Thermodynamics
Thixotropy
Valence
Vapor pressure
Wave mechanics

History

Work of the Royal institution in physical chemistry. E. K. Rideal. Engineering 164: 211-12 Ag 29 '47; Abstract. Chem Age (Lond) 57:267-8 Ag 23 '47

Study and teaching

Laboratories for physical chemistry. L. O. Case. J Chem Educ 24:338-40 Jl '47

CHEMISTRY, Physical and theoretical—*Cont.*

Tables, calculations, etc.

Antoine vapor-pressure equation for mononuclear aromatic hydrocarbons. N. Corbin, M. Alexander and G. Egloff. J Phys & Colloid Chem 51:528-40 Mr '47

CHEMISTRY, Physiological. See Physiological chemistry

CHEMISTRY, Technical

American chemical society symposium; papers on industrial and engineering chemistry. Chem Age (Lond) 57:501-2 O 11 '47

Chem. & Met. report on ion exchange. il diags Chem Eng 54:123-30 Jl '47

CIC meeting; abstracts of technical papers. Can Chem & Process Ind 31:644-7 Jl '47

Chemical research again surges upward. il Chem Ind 61:386-95+ S '47

Chemistry and autarchy. R. P. Linstead. Chem & Ind p417-20 Jl 12 '47

Congress of the French society of industrial chemistry, 20th, Paris, Sept. 22-28. Chem & Eng N 25:167 Ja 20 '47

Fluidization in chemical reactions; method for developing design data. J. C. Kalbach. flow diag Chem Eng 54:105-8 Ja; 136-8 F '47

Importance of the chemist in industry. W. M. Rand. Chem & Eng N 25:2490-1 S 1 '47

Industrial catalysis. B. B. Corson. il J Chem Educ 24:99-103, 150-5 F-Mr '47

Interrogation of Dr Pier and staff, I.G. Farbenindustrie A. G., Ludwigshafen and Oppau; supplement II, report on investigations by the Fuels and lubricants teams. W. F. Faragher and W. A. Horne. 9pls U S Bur Mines Information Circ 7376:1-27 '46

Mellon Institute enters the postwar era. il Chem & Eng N 25:1265-70 My 5 '47

New specialties exploit chemical research. il Chem Ind 61:396-407 S '47

Recent advances in the use of high pressures. E. W. Comings. Ind & Eng Chem 39:948-52 bibliog(164 ref, p950-2) Ag '47

Salts of the earth; address at Chemistry industry medal award. W. H. Dow. Chem & Ind p19-21 Ja 11 '47

World developments in chemical processes. Chem Age (Lond) 56:634-5 My 17 '47

See also

Acid resisting materials
Alcohol
Alloys
Ammonia
Bleaching
Cellulose
Cement
Ceramics
Chemical engineering
Chemical industries
Chemical patents
Chemicals
Chemurgy
Clay
Coal distillation
Coal tar products
Corrosion and anticorrosives
Cosmetics
Dehydration
Distillation
Drying
Dyes and dyeing—Chemistry
Emulsions
Essential oils
Explosives
Extraction processes
Fertilizers
Filters and filtration (technical chemistry)
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Gas
Gas manufacture
Glass manufacture
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Gums and resins
Ion exchangers
Lacquer and lacquering
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Oils and fats
Ore treatment
Paint
Paper
Paper making
Paper making materials
Petroleum—Chemistry
Petroleum distillation
Petroleum refining
Plastic materials
Pottery
Rayon
Refractory materials
Refrigerants
Resinous products
Rubber
Rubber—Chemistry
Soap
Soap, Metallic
Soap manufacture
Solvents
Soybeans
Sugar
Sulfuric acid
Synthesis
Tanning
Tanning materials
Textile chemistry
Unit processes
Varnish and varnishing
Vulcanization
Water purification
Wood—Chemistry
Wood distillation
Wood preservation

Bibliography

Documentation. Published in monthly numbers of Chimie et industrie

Recent books and pamphlets. Published in monthly numbers of Chemical engineering

Where to find information on the German chemical industry. L. W. Greene. 40p pa $1 Office of technical services, Washington, D.C. '46

Patents

See Chemical patents

CHEMISTRY buildings

Architect in his relation to the chemistry-department building committee. H. R. Dowswell. J Chem Educ 24:350-3 Jl '47

CHEMISTRY students

Objective method of evaluating student grades. S. P. Marion. J Chem Educ 24:232-3 My '47

CHEMISTS

Akron questionnaire on professional status. Chem & Eng N 25:1787 Je 23 '47

Apathetic chemist. Chem Age (Lond) 55: 657-9 N 30 '46

Careers in the gas industry; opportunities for would-be chemists. il Chem Age (Lond) 56:228-31 F 8 '47

Changing relations of science and industry; abstract. M. P. Applebey. Chem & Ind p26 Ja 11 '47

Chemical personalities a century ago. J. Read. Engineering 164:163-4, 174-5 Ag 15-22 '47

Chemistry, a profession. F. D. Snell. Chem & Eng N 25:2358-9 Ag 18 '47

Chemists are lousy speakers. C. J. Koenig. Chem & Eng N 25:2081-2 Jl 21 '47

Chemist's possibilities and responsibilities. H. N. Holmes. J Chem Educ 24:292-4 Je '47

Chemists status discussed by A.I.C. Oil Paint & Drug Rep 151:5+ My 5 '47; Chem & Eng N 25:1117-18 Ap 21 '47

Code of ethics for chemists. Chem & Eng N 25:2562-3 S 8 '47

Current problems in professional and economic status. A. L. Elder. Chem & Eng N 25:2139 Jl 28 '47

XIth International congress of pure and applied chemistry; biographical notes on hon. presidents of sections. Chem & Ind p412+ Jl 12 '47

Employer-employee relationships for professional men. J. J. Healy, jr. Chem & Eng N 25:2142-3 Jl 28 '47

Importance of the chemist in industry. W. M. Rand. Chem & Eng N 25:2490-1 S 1 '47

Let's have a two-way street. L. H. Reyerson. Chem & Eng N 24:3035 N 25 '46

Professional status. R. B. Fox and others. Chem & Eng N 25:1832-3 Je 23 '47

Scarcity of inorganic chemists. E. G. Rochow. J Chem Educ 24:490 O '47

Trade or profession; a realistic approach to the problem. C. W. Ransom. Chem & Eng N 25:2356-7 Ag 18 '47

Unionization of professional engineers and chemists. H. R. Northrup. 52p pa $1.50 Industrial relations counselors, New York '46

United States newsletter; chemists singled out for notable accomplishments. C. J. Krister. Chem & Ind p370-2 Je 28 '47

Utilization of chemists and chemical engineers in World war II. Chem & Eng N 25: 2206-8 Ag 4 '47

What industry expects of the chemist. C. J. T. Cronshaw. Chem & Ind p442-4 D 14 '46

What industry expects of the chemistry graduate. C. K. Calvert. J Chem Educ 24:450-2 S '47

See also

Cereal chemists
Chemical education
Chemical engineers
Women as chemists
also names of chemists, e.g.
Balke, Clarence William
Bolton, Elmer K.
Curie, Pierre
DuBois, Gaston
Hoffman, James Irvin
Lind, Samuel Coville
McBain, James William
Moyes, Henry
Reid, E. Emmet
Rutherford, Ernest
Stine, Charles Milton Atland
Tennant, Smithson
Tucker, Charles William

CHEMISTS—*Continued*

Licenses

Consulting chemists debate licensing. Chem & Eng N 24:2916 N 10 '46; Discussion. J. M. Weiss. 24:3425 D 25 '46
Interim report on licensing of chemists. M. R. Foran. Can Chem & Process Ind 31:732-3 Ag '47
Licensing for chemists. A. B. Bowers. Oil Paint & Drug Rep 151:34+ Ja 13 '47
Licensing of chemists. A. E. MacRae. Can Chem & Process Ind 31:219-20 Mr '47
Ohio registration bill. Chem & Eng N 24:3349 D 25 '46
Professional and economic status; A.C.S. committee report. Chem & Eng N 25:1367-9 My 12 '47
Some essentials of a licensing act. Can Chem & Process Ind 31:309 Ap '47
Summary of results from the licensing-registration-certification poll; with tabulation of data. K. B. Fleer. Chem & Eng N 25: 2360-5 Ag 18 '47
Why not national certification? E. L. Luaces. Chem & Eng N 24:3184-5 D 10 '46

Salaries

Starting salaries. Chem Ind 60:769 My '47

Canada

Canadian graduate students in U.S.A.; appeal for opportunity in Canada. J. G. Ross and others. Can Chem & Process Ind 31: 422 My '47
C.I.C. elections, 1947-48; sketches and portraits of candidates. Can Chem & Process Ind 31:222-4 Mr '47
Economic status and job analysis survey. R. P. Graham. Can Chem & Process Ind 31:421 My '47

France

L'union nationale des associations d'anciens élèves des écoles et instituts de chimie. J. Boisseau. Chimie & Ind 57:602-3 Je '47

Great Britain

Thumbnail biographies of some London chemists. S. Miall and P. C. Bell. Chem & Ind p399-400+ Jl 12 '47
Training and status of chemists. Chem Age (Lond) 57:456 O 4 '47

CHEMISTS, American institute of. See American institute of chemists

CHEMISTS, Analytic

Analytical chemist. Anal Chem 19:361-3 Je '47
Profession of analytical chemist. Anal Chem 19:145 Mr '47; Same. Chem & Eng N 25: 1171 Ap 28 '47

CHEMOTHERAPY

Anti-allergy drugs. Chem Ind 60:941 Je '47
Attempts to find new chemotherapeutic amidines. J. O. Harris. Chem Soc J p690-2 My '47
Attempts to find new chemotherapeutic amidines; some aliphatic monoamidines. G. Newbery and W. Webster. Chem Soc J p738-42 Je '47
Better health through science; abstract. E. H. Volwiler. Chem & Eng N 25:3148 O 27 '47
Chemotherapeutic investigations of cyanine dyes. L. G. S. Brooker and L. A. Sweet. Science 105:496 My 9 '47
Chemotherapy of phenanthridine compounds. L. P. Walls. bibliog Soc Chem Ind J 66:182-7 Je '47
New potential chemotherapeutic agents; basically-substituted *iso*alloxazines. F. E. King and R. M. Acheson. Chem Soc J p681-5 Ag '46
New potential chemotherapeutic agents; derivatives of 1 : 3-diaza-acridine. F. E. King and T. J. King. Chem Soc J p726-34 Je '47
New potential chemotherapeutic agents; experiments on the synthesis of 8-aminopurines. F. E. King and T. J. King. Chem Soc J p943-8 Jl '47
Reaction of iodonium salts with thiol compounds. R. B. Sandin and others. Am Chem Soc J 69:1550 Je '47
Reflection on the mechanism of action of chemotherapeutic drugs. J. K. Frenkel. bibliog Science 105:575 My 30 '47
Search for chemotherapeutic amidines. H. J. Barber, R. Slack and others. Chem Soc J p82-9 Ja '47
Some amino-derivatives of dihydro-β-quinindene and tetrahydroacridine. V. Petrow. Chem Soc J p634-7 My '47
Some basically substituted diaryl sulfides and sulfones. H. Gilman and H. S. Broadbent. bibliog Am Chem Soc J 69:2053-7 Ag '47
Studies in chemotherapy; amides of pantoyltaurine. R. Winterbottom and others. bibliog Am Chem Soc J 69:1393-401 Je '47
Study of the properties of fluorine-substituted 5-aminoacridines and related compounds; monofluoro-5-aminoacridines. J. H. Wilkinson and I. L. Finar. Chem Soc J p759-62 Je '47
Surface chemotherapy. M. A. Phillips. Chem & Ind p133-4 Mr 15 '47
Tuberculostatic compounds; ethers of 2-hydroxy-5-aminopyridine. H. L. Friedman and others. Am Chem Soc J 69:1204-6 My '47

See also
Antibiotic substances
Penicillin
Streptomycin
Sulfanilamide
Sulfonamides

CHEMOZINE

Therapeutic chemicals; treatment of anaplasmosis in cattle. Chem Eng 54:167 F '47

CHEMURGIC council, National farm. See National farm chemurgic council

CHEMURGY

Ark-La-Tex chemurgic conference, Shreveport, La. Chem & Eng N 25:2556 S 8 '47
Ark-La-Tex conference on chemurgy. Chem & Eng N 24:3050 N 25 '46
Chemurgists' meeting stresses plant fibers. Chem & Eng N 25:1123-4 Ap 21 '47
Chemurgy program for power; Idaho power company's adventure in community enterprise. R. E. Gale. Pub Util 39:766-9 Je 5 '47
Industrial utilization of agricultural products; Prairie regional laboratory, Saskatoon, Sask. R. K. Larmour. Can Chem & Process Ind 31:853-4+ S '47
Industry looks to the soil; conversion of agricultural products into industrial raw materials. Bsns W p80-2 Ap 26 '47
New uses for desert plants. F. Kutnewsky. il Comp Air Mag 52:121-3 My '47
Texas chemurgic council seeks charter. il Chem & Eng N 25:598, 610-11 Mr 3 '47
L'utilisation industrielle des matières premières agricoles. H. T. Herrick. il Chimie & Ind 57:431-40 My '47; Abstract (Chemicals from farm and forest). Chem Age (Lond) 57:335 S 6 '47

CHENILLE

Chenille industry on the road back. Bsns W p 16 Ag 23 '47

CHERENKOV radiation. See Radiation

CHERRY gum

Constitution of cherry gum; products of hydrolysis of methylated cherry gum. J. K. N. Jones. Chem Soc J p 1055-9 Ag '47

CHERT

Diagenetic origin of chert lenses in limestone at Soyatal, State of Queretaro, Mexico. D. E. White. diags Am J Sci 245:49-55 Ja '47

CHESAPEAKE and Ohio railway

Annual report. Comm & Fin Chr 165:1996 Ap 14 '47
Ask I.C.C. approval of C. & O.-N.Y.C. tie. Ry Age 122:759-60 Ap 12 '47
Asks permission to pay dividend in Nickel Plate stock. Comm & Fin Chr 166:664 Ag 18 '47
Becomes largest single stockholder in New York central railroad. Comm & Fin Chr 165:935 F 17 '47
C.&O.-Central decision now in ICC's hands. Bsns W p82 S 27 '47
C.&O.-P.M. merger approved. Ry Age 122: 704-5 Ap 5 '47
Equipment trusts offered. Comm & Fin Chr 165:536, 1312, 1724, 2132; 166:155, 1476 Ja 27, Mr 10, 31, Ap 21, Jl 14, O 13 '47

CHESAPEAKE and Ohio railway—*Continued*
Invitation for tenders of common stock of New York central railroad. Comm & Fin Chr 165:680 F 3 '47
It's up to ICC; Robert Young wants C. & O. to be allowed to vote its stock in N.Y. Central. Bsns W p90-1 Ap 19 '47
Merger of Pere Marquette railway into C.&O. effective. Comm & Fin Chr 165:3163 Je 16 '47
Mr Young and his C. & O. il maps Fortune 35:96-103+ My '47
See no N.Y.C. gain in tie with C. & O. Ry Age 123:537+ S 27 '47

CHESNUTT, James Graham
Winner of 1946 AAAS-George Westinghouse science writing award. Science 104:571 D 13 '46

CHEST
Community-wide chest X-ray surveys. F. J. Weber. Pub Health Rep 62:652-8 My 2 '47
Mass chest survey at Douglas Aircraft plant. E. C. Armes. il Ind Med 16:225-7 My '47
X-ray screens out chest cases in hiring and placing employees; Caterpillar tractor company. il Factory Management 105:140-2 Ja '47

CHEWING gum
Advertising
Car card slogan, devised in wartime, still good; Topps gum. M. M. Levin. il Ptr Ink 218:42 F 7 '47

CHI square
Relation of control charts to analysis of variance and chi-square tests. H. Scheffé. Am Stat Assn J 42:425-31 S '47

CHIANG KAI-SHEK, 1887-
Trouble with China is Confucius. H. Maurer. Fortune 35:124-31+ Ap '47

CHICAGO
Chicago OK's engineers' salary raises. Eng N 138:25 Ja 9 '47
Chicago plans magnificent mile; upper Michigan ave. il Concrete 55:14 My '47
Convention city. il Am Dyestuff Rep 36:592-3+ O 20 '47
Port of Chicago. M. W. Oettershagen. Western Soc E J 52:34-42 Mr '47
Where to look for big buyers in Chicago. il Sales Management 59:44-6 Jl 1 '47
See also
Banks and banking—Chicago
Building laws and regulations—Chicago
Labor and laboring classes—Chicago
Central manufacturing district
Organized industrial districts. R. L. Wrigley, jr. maps J Land & Pub Util Econ 23:180-98 My '47
Clearing industrial district
Organized industrial districts with special reference to the Chicago area. R. L. Wrigley, jr. maps J Land & Pub Util Econ 23:180-98 My '47
Description
Chicago; camera exploration of the huge, energetic urban sprawl of the midlands. il Fortune 35:112-21 F '47
Hotels
Chicago revises hotel fire code provisions. Eng N 138:92 Ja 16 '47
Industries
Petroleum industry in the Chicago area. G. Egloff. Western Soc E J 52:16-27 Mr '47
Railroads
Famous station undergoes operation; Dearborn passenger terminal remodeled and redecorated. il plans Ry Age 123:94-8 Jl 19 '47
Rapid transit
As-if-and-when transit and civic opera. R. Schram. Mass Transportation 43:286+ Jl '47
Chicago bond issue fails to jell. Mass Transportation 43:335 Ag '47
Chicago needs 10c fare to sell bonds. Mass Transportation 43:188-9 My '47
Chicago rapid transit company; effect of fare increase. Mass Transportation 43:10 Ja '47
Chicago transit board. Mass Transportation 43:492-3 O '47
New transit try. Bsns W p71-2+ Ag 16 '47
Traction bonds oversold! Chicago transit authority. R. Schram. Mass Transportation 43:372-4 S '47
Transit body takes over Chicago lines. Eng N 139:497 O 9 '47
Transit hopes; latest Chicago plan to unify street surface and El lines. Bsns W p44+ Je 28 '47
Sewerage
Chicago's sewer construction program. T. S. Ford and A. L. Tholin. plan diags Western Soc E J 51:161-75 D '46
Streets
Air entrainment control; test project completed. C. J. Chambers. Roads & Sts 90: 73+ Ag '47
Chicago begins installation of model safety islands. il Eng N 138:200 F 6 '47
Chicago mile; realtors plan $200 million more glamor for glittering Michigan avenue. il Arch Forum 86:12-13 My '47
Magnificent mile for Windy city. il Arch Rec 101:96-9 Je '47
More residents for Chicago dream street; upper Michigan ave. il Bsns W p18 Ap 19 '47
Suburbs
Klutznick plans $70,000,000 housing project adjacent to Chicago for 25,000 middle-income persons. il map Am Bld 68:91 D '46; Arch Forum 85:14+ D '46; Arch Rec 100: 14+ D '46
Water supply
Chicago's South District filtration plant nears completion. W. W. DeBerard and others. plans diags Western Soc E J 51:120-35 S '46
Divers dam Chicago water tunnel to confine tremie concrete plug. il plan diags Eng N 139:332-5 S 4 '47
High-rate water filtration meeting practical tests at Chicago; South District filtration plant. il Eng N 139:44-8 Jl 10 '47
Odor removal at Chicago's South District filtration plant; abstract. J. R. Baylis. Water & Sewage Works 94:178 My '47
Testing and inspection of materials and equipment; water works system. H. P. Hagedorn and W. W. DeBerard. il Am Water Works Assn J 39:722-8 Ag '47
Underground leakage work. J. B. Eddy. Am Water Works Assn J 39:713-21 Ag '47
Water treatment and filtration plant at Chicago. E. E. R. Tratman. il diags Engineer 183:88-9, 112-14, 138-40 Ja 24-F 7 '47

CHICAGO and eastern Illinois railroad
Equipment trusts offered. Comm & Fin Chr 166:1576 O 20 '47
John M. Budd new president. Ry Age 122: 1081 My 24 '47

CHICAGO and north western railway
Equipment trusts offered. Comm & Fin Chr 166:51, 155 Jl 7, 14 '47

CHICAGO board of trade
Board of trade digs its way out of a mess. Bsns W p22 D 7 '46
Board of trade wins. Bsns W p40+ Jl 12 '47
Outside delivery; multiple delivery points for exchanges. Bsns W p38+ Je 21 '47

CHICAGO board of underwriters
Company members withdraw. Nat Underw 51:3 Ap 10 '47
New structure is adopted. Nat Underw 51:2 Ap 17 '47
Takes on casualty jurisdiction. Nat Underw 51:34 S 11 '47

CHICAGO, Burlington and Quincy railroad
1946 reviewed. Comm & Fin Chr 165:2795 My 26 '47

CHICAGO chemical library foundation
Chicago chemical library foundation. L. D. Wilson. il Chem & Eng N 25:776+ Mr 17 '47

CHICAGO federated advertising club
CFAC presents awards in annual competition. il Ind Marketing 32:51 Je '47

CHICAGO, Indianapolis and Louisville railway
Aspirin for a Hoosier headache; Monon showing signs of new life. il Bsns W p18 Mr 29 '47
Equipment trust certificates. Comm & Fin Chr 165:2663 My 19 '47
Equipment trusts offered. Comm & Fin Chr 165:1996 Ap 14 '47
Monon is 100 years young; centennial celebration. il Ry Age 123:245-6 Ag 9 '47

CHICAGO, Milwaukee, St Paul and Pacific railroad
Buford succeeds Scandrett as Milwaukee president. Ry Age 122:1082-3 My 24 '47
Equipment trust certificates offered. Comm & Fin Chr 166:1352 O 6 '47

CHICAGO, Rock Island and Pacific railway
Approval of reorganization plan ordered by Appeals court. Comm & Fin Chr 165:1185 Mr 3 '47
Await high court ruling on Rock Island recap plan. Barron's 27:34 S 29 '47
Court confirms plan; creditors' attorneys charge judge ignored mandate. Comm & Fin Chr 165:3048-9 Je 9 '47
Plan upheld by court. Comm & Fin Chr 166: 1680 O 27 '47
Rock Island bondholders ask appeals court to oust judge and one trustee. Ry Age 122: 1215-16+ Je 14 '47

CHICAGO, St Paul, Minneapolis and Omaha railway
Equipment trusts. Comm & Fin Chr 165:204, 680 Ja 13, F 3 '47

CHICAGO stock exchange
Elects officers; committees appointed. Comm & Fin Chr 165:3243 Je 19 '47
Sees Chicago stock exchange aiding Midwest financing. J. E. Day. Comm & Fin Chr 165:2734 My 22 '47

CHICAGO sun
Field retrenches. Bsns W p32+ N 16 '46
Home for the Sun. Bsns W p20 Ag 16 '47

CHICAGO surface lines
Chicago transit authority bonds all sold; what bondholders will receive under plan. Comm & Fin Chr 166:852 S 1 '47
Unbroken series of favorable decisions for Chicago transit authority. Comm & Fin Chr 166:756 Ag 25 '47

CHICAGO technical societies council
Chicago production conference, March 17-19; chemical research discussion. Chem & Eng N 25:968-9 Ap 7 '47

CHICAGO times
Home for the Sun. Bsns W p20 Ag 16 '47

CHICAGO tribune
Chicago tribune lights 100 candles. Sales Management 59:96 Jl 1 '47

CHICAGO university
Chicago U. is nucleonic leader. R. M. Hutchins. Iron Age 160:127 Ag 28 '47

Astronomy department
Department of astronomy of the University of Chicago. R. M. Hutchins. Science 106:195 S 5 '47

CHICKENS. See Poultry

CHIGGERS
Chigger repellents. F. M. Snyder and F. A. Morton. Soap & San Chem 22:133+ N '46

CHILD birth. See Birth rate; Obstetrics

CHILD labor
Great Britain
Juvenile employment. Economist 152:963-4 Je 21 '47
Juvenile recruitment. Economist 151:783 N 16 '46

CHILDREN
See also
Clothing and dress—Children

Care and hygiene
Services and visits in a children's dental clinic. I. Altman. Pub Health Rep 62:113-30 Ja 24 '47

See also
Day nurseries

Employment
See Child labor

Law
Payments to minors; another advance by life insurance. J. Barker. East Underw 48:118 pt 2 O 3 '47

CHILDREN, Photography of. See Photography of children

CHILDREN'S books
It's a tough market but this old-timer cracked it; research, advertising and merchandising of ads; Encyclopaedia Britannica children's books. H. E. Green. il Ptr Ink 219:38-9 My 2 '47

CHILDREN'S hats. See Hats, Children's

CHILDS company
Modification of plan agreed on. Comm & Fin Chr 165:3282 Je 23 '47
Recap satisfies claim of old preferred. Barron's 27:35 Ag 11 '47
SEC finds plan feasible; summary of trustee's revised plan. Comm & Fin Chr 166:852 S 1 '47

CHILE
See also
Engineering—Chile

Commercial policy
Import licensing suspended for wide variety of products. For Comm W 29:10-11 O 4 '47

Economic conditions
Chile's economy in 1946; diverse factors shape course. P. L. Green. For Comm W 27:6-7+ Je 14 '47
News by countries. Published in Foreign commerce weekly

Industries and resources
Chile builds new industries. Bsns W p105-6+ D 7 '46

CHILEAN nitrate. See Sodium nitrate

CHILLED iron
Modern improvements in the chilled car wheel. L. H. Rudesill. il diag Foundry 75: 84-7+ F '47

CHIMNEYS
Chimney calculations; table of sizes for natural-draft chimneys. Power Pl Eng 51:100 My '47
Chimney liner corrosion resulting from gas-fired furnaces. G. B. Johnson. Gas Age 100: 29-32+ Jl 10 '47
Draft in 100-ft. stacks; tables. W. L. Nelson. Oil & Gas J 45:103 Ap 12 '47
Preventing chimney trouble. diag Brick & Clay Rec 110:34 Mr '47
Stack size, furnace draft. W. L. Nelson. Oil & Gas J 45:135 Ap 19 '47
Theoretical stack draft; table. W. L. Nelson. Oil & Gas J 45:101 Mr 15 '47

Wrecking
Felling a chimney with dynamite. il diag Eng N 139:538 O 16 '47

CHIMNEYS, Brick
Brick needed for chimneys; table. Brick & Clay Rec 110:30 My '47
Material quantities for various size chimneys; table. Brick & Clay Rec 110:27 Je '47

CHIMNEYS, Concrete
Repair
Repair of concrete chimneys with a minimum of interference with operation of boilers. W. M. Bassett and M. N. Clair. diags Am Concrete Inst J 18:653-67 F '47

CHIMNEYS, Steel
Concrete linings in steel stacks. G. T. Haddock. il diags Power Pl Eng 51:116+ Ap '47
50-ft. steel stacks; draft calculations. W. L. Nelson. Oil & Gas J 45:177 Mr 29 '47
Pressure under cylindrical stack computed by trial and error. G. B. Podger. Eng N 138: 738 My 1 '47

CHIMPANZEES
Development of visual perception in man and chimpanzee. A. H. Riesen. Science 106:107-8 Ag 1 '47
Rh and Hr factors in chimpanzees. A. S. Wiener and M. Wade. bibliog Science 102: 177 Ag 17 '45; Discussion, 104:277, 578-9 S 20, D 13 '46

CHINA
See also
Airlines—China
Land—China
Lumber trade—China
Manchuria
Petroleum—China
Petroleum industry and trade—China
Public works—China

Civilization
Trouble with China is Confucius. H. Maurer. il Fortune 35:124-31+ Ap '47; Discussion. B. H. Kizer. 36:34+ Jl '47

Commerce
Asia's not-so-open door. B. G. Davis. il Banking 40:40-2+ S '47
Exchange crisis; China will have to cut imports. Bsns W p106+ Mr 22 '47
Exports including reexports, and general imports by principal countries and commodities, 1935-1940 and 1946; net imports of UNRRA for 1946; tabulations. For Comm W 25:14-15 D 21 '46
Foreign trade association of China launches new monthly trade journal; China trade monthly. For Comm W 27:12 My 24 '47
Possibilities for U.S. trade with China. For Comm W 25:10 N 23 '46
Principal U.S. exports to China in 1946; principal U.S. imports from China and Hongkong in 1946; tables. Mag of Wall St 80: 700-1 S 27 '47
Prospects for expanding China-American trade. V. K. W. Koo. Comm & Fin Chr 164:2810 N 28 '46
Trade paralysis in China. Economist 152:382 Mr 15 '47
See also
Chambers of commerce—China

Commercial policy
China's check on imports. Economist 152:679 My 3 '47
Financing of imports; consolidated commodity tax extended. For Comm W 25:20 N 9 '46
Foreign exchange regulations and summary of revised trade-control regulations of November 17, 1946. For Comm W 26:12-18 Ja 4 '47
Foreign exchange to be sold to importers only on presentation of import license; trade-control regulations revised. For Comm W 25:27-8 D 7 '46
Import control in Shanghai. Economist 152: 23-4 Ja 4 '47
Interport movement of native goods; import of automobiles as personal effects. For Comm W 26:18 Mr 15 '47
Regulations provide for the import of personal and household effects without license; other regulations. For Comm W 26:15-17 Mr 1 '47
Revised foreign-exchange controls announced. For Comm W 28:11-12 S 20 '47
Revised regulations issued concerning applications for foreign exchange for non-import requirements. For Comm W 28:11 S 13 '47
Temporary regulations with regard to foreign-exchange transactions; text. For Comm W 26:23-5 Ja 25 '47
Transshipment of south China imports prohibited. For Comm W 28:13 Ag 9 '47
Unfreezing Chinese exchange. Economist 153: 339 Ag 23 '47
U.S. rules on China's subsidy plan. Comm & Fin Chr 165:1168 F 27 '47

Economic conditions
China and Japan; their economic position today and tomorrow. V. L. Horoth. il Mag of Wall St 80:699-701+ S 27 '47
China's economy since the Japanese surrender. J. Stenhouse. il For Comm W 25: 4-7+ D 14 '46
Chinese economy near chaos. Bsns W p77-8+ D 28 '46
News by countries. For Comm W 27:20-2 Ap 12; 15-16 Ap 19; 29:15-16 O 25 '47

Economic policy
New Chinese economic council and foreign exchange committee created. For Comm W 27:18 Je 21 '47

Foreign relations
One of the five; importance of China as a factor in international affairs. map Economist 153:626-7 O 18 '47

United States
Truman states America's China policy. Comm & Fin Chr 165:54 Ja 2 '47

Industries and resources
Industrial future of China. V. K. W. Koo. il Elec Eng 66:131-5 F '47; Same cond. Ind Stand 18:4-5+ Ja '47
Production goals for 1947 and 1949 announced. For Comm W 27:16 Ap 26 '47

Politics and government
Conflict in China. map Economist 152:574-5 Ap 19 '47

Sanitary affairs
Report on China's sanitation progress. A. B. Morrill. il Eng N 139:260-1 Ag 21 '47

CHINESE tallow tree
Stillingia tree as a source of drying oil. W. M. Potts. il Paint Oil & Chem R 109:16+ D 12 '46
Stillingia tree studied as drying oil source. Oil Paint & Drug Rep 152:7 S 29 '47; Discussion. A. Eisenstein. 152:24+ N 10 '47

CHING, Cyrus Stuart, 1876-
New approach to mediation. Bsns W p77-8 Ag 16 '47
Sketch. por(cover) Bsns W p8 Ag 16 '47

CHINN, Armstrong, 1894-
Elected head of terminal of St Louis. por Ry Age 121:1003 D 14 '46

CHINOOK salmon. See Salmon

CHIPPER knives. See Knives, Chipper

CHIROPODY
Chiropody and industry. N. D. Foote. Ind Med 16:355-6 Jl '47

CHISELS
Correct usage and care of chisels. il Paper Ind 28:1489-90 Ja '47

CHITIN
Organization of arthopod cuticle. A. G. Richards. Science 105:170 F 14 '47

CHLORAL
Some phenol-chloral condensations. J. B. Niederl and A. A. Bothner-By. bibliog Am Chem Soc J 69:1172-3 My '47
Synthesis of DDT with chlorosulfonic acid as condensation agent. W. A. Cook, K. H. Cook and W. H. C. Rueggeberg. bibliog Ind & Eng Chem 39:868-70 Jl '47

CHLORAMINE
Methylenechloroamine; prepared by the action of monochloroamine on formaldehyde. M. Lindsay and F. G. Soper. Chem Soc J p791-2 S '46
Preparation of alkyldichloramines. L. K. Jackson, G. N. R. Smart and G. F. Wright. Am Chem Soc J 69:1539-40 Je '47

Analysis
Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47

CHLORAMINE-B
Some *p*-alkoxybenzenesulphonamides and their N-chloro-derivatives. W. E. Hanby and H. N. Rydon. Chem Soc J p865-6 O '46

CHLORATES
Chlorates and perchlorates; Western electrochemical co., Los Angeles. J. C. Schumacher. flow sheet il Chem Eng Prog 43: 177-9 Ap '47

Analysis
Determination of halates in sodium hypochlorite. S. Atkin. Anal Chem 19:816 O '47

CHLORDANE
Newer synthetic insecticides. E. F. Knipling. Soap & San Chem 23:127+ Jl '47

CHLOREX. See Dichloroethyl ether

CHLORIDES
Rearrangement in preparation of ester acid chlorides. J. Cason. Am Chem Soc J 69:1548 Je '47

CHLORIDES—*Continued*
Rectification of neutral salt baths; Neutra-Gas process. P. H. Kramer. il Iron Age 160:52-4 O 23 '47

See also
Aluminum chloride
Ammonium chloride
Butyl chloride
Calcium chloride
Carbon tetrachloride
Potassium chloride
Salt
Sulfonyl chlorides
Vinyl chloride

Analysis
Chloride determination by mercurous iodate. K. Avaliani. Chem Age (Lond) 56:518 Ap 26 '47

CHLORIMET. See Nickel alloys

CHLORINATION
Absorption and purification of hydrogen chloride from chlorination of hydrocarbons. C. F. Oldershaw and others. flow sheet il diag Chem Eng Prog 43:371-7; Discussion. 378 Jl '47
Catalysis of the reaction of chlorine and oxalic acid; complexes of trivalent manganese in solutions containing oxalic acid. H. Taube. bibliog Am Chem Soc J 69:1418-28 Je '47
Chlorination of aqueous phenol. B. Y. Walker and T. Hayes. Soc Chem Ind J 66:215 Jl '47
Chlorination of methyldi-2-(chloroethyl)amine and related compounds. C. W. Crane and others. Chem Soc J p827-30 S '46
bis-(2-Chloroethylmercapto)-alkanes. T. P. Dawson. Am Chem Soc J 69:1176 My '47
Commercial scale manufacture of allyl chloride and allyl alcohol from propylene; Shell development company, Emeryville, Calif. A. W. Fairbairn, H. A. Cheney, and A. J. Cherniavsky. bibliog flow diags il Chem Eng Prog 43:280-90 Je '47
2,3-Dichloro-1,4-dioxane. F. A. Gunther and R. L. Metcalf. bibliog Am Chem Soc J 68: 2406 N '46
Epsilon isomer of 1,2,3,4,5,6-hexachlorocyclohexane. K. C. Kauer, R. B. DuVall and F. N. Alquist. bibliog diags Ind & Eng Chem 39:1335-8 O '47
Fluorinated derivatives of diethylbenzene. E. T. McBee and others. Ind & Eng Chem 39: 395-7 Mr '47
Fluorinated derivatives of ethane. E. T. McBee and others. bibliog Ind & Eng Chem 39:409-12 Mr '47
Fluorinated derivatives of *p*-ethyltoluene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:397-9 Mr '47
Fluorinated derivatives of *p*-isopropyltoluene and isopropylbenzene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:399-401 Mr '47
Fluorinated derivatives of mesitylene. E. T. McBee and R. E. Leech. Ind & Eng Chem 39:393-4 Mr '47
Fluorinated heterocyclic compounds; methylpyridines. E. T. McBee, H. B. Hass and E. M. Hodnett. bibliog Ind & Eng Chem 39:389-91 Mr '47
Fluorination of polychloroterphenyls. F. B. Stilmar, W. S. Struve and W. V. Wirth. Ind & Eng Chem 39:348-50 Mr '47
Fluorine as a halogen; reaction with a highly deactivated aromatic nucleus. L. A. Bigelow, R. Y. Tompson and P. Tarrant. bibliog diags Ind & Eng Chem 39:360-4 Mr '47
How to use chlorinated solvents. Safety Eng 93:60+ Mr '47
Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott. bibliog Am Chem Soc J 68:2291-4 N '46
Isomeric chlorinated long-chain esters. H. H. Guest. Am Chem Soc J 69:300-2 F '47
Kinetics of halogen addition to unsaturated compounds; the halogeno-ethylenes. B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47
Pentachlorophenyl derivatives; the β-chlorination of ethylpentachlorobenzene and the preparation of pentachlorostyrene. S. D. Ross, M. Markarian and M. Nazzewski. bibliog Am Chem Soc J 69:1914-17 Ag '47
Photosensitization in chlorination. W. T. Anderson, jr. bibliog il Ind & Eng Chem 39:844-6 Jl '47
Pilot plant preparation of polychloropolyfluoroheptane. J. H. Babcock, W. S. Beanblossom and B. H. Wojcik. flow sheet diags Ind & Eng Chem 39:314-19 Mr '47
Preparation and properties of 2-chloroalkyl esters of boric, silicic, and phosphoric acids. W. J. Jones and others. Chem Soc J p824-7 S '46
Preparation of bis(trifluoromethyl)benzenes. E. T. McBee and others. il diag Ind & Eng Chem 39:298-301 Mr '47
Preparation of chloro-bis(trifluoromethyl) benzenes. E. T. McBee and others. Ind & Eng Chem 39:387-8 Mr '47
Preparation of chlorofluoro derivatives of ethylbenzene. E. T. McBee and others. Ind & Eng Chem 39:384-6 Mr '47
Preparation of fluorine-containing polyhalo heptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47
Preparation of perfluoroheptane and chloroperfluoroheptanes. E. T. McBee and others. diag Ind & Eng Chem 39:310-13 Mr '47
Preparation, properties, and chlorination products of carbon diselenide. D. J. G. Ives, R. W. Pittman and W. Wardlaw. diag Chem Soc J p 1080-3 Ag '47
Production of bis(trifluoromethyl)benzene. R. L. Murray, W. S. Beanblossom and B. H. Wojcik. diags Ind & Eng Chem 39:302-5 Mr '47
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Some *p*-alkoxybenzenesulphonamides and their N-chloro-derivatives. W. E. Hanby and H. N. Rydon. Chem Soc J p865-6 O '46
Synthesis of halobutanes. E. T. McBee and W. R. Hausch. bibliog Ind & Eng Chem 39: 418-20 Mr '47
2,2,3,3-Tetrachloro-1,4-dioxane. R. K. Summerbell, R. R. Umhoeffer and G. R. Lappin. bibliog Am Chem Soc J 69:1352-4 Je '47

See also
Paper making—Chlorination
Sewage disposal—Chlorination
Water purification—Chlorination
Wool—Chlorination

CHLORINE
Acetic acid and chlorine vs. materials of chemical plant construction. Chem Eng 54: 241-2+ My '47
Bleaching pulp with mixtures of chlorine dioxide and chlorine. G. P. Vincent. Paper Tr J 124:53-5 Je 26 '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 131-2 N '46
Cleaning sand filters with chlorine at Hamilton, Ontario. D. H. Matheson. il Water & Sewage 85:85+ My '47
Cleavage of organic sulfides with chlorine. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 68:2636-9 D '46
Corrosion by chlorine and by hydrogen chloride at high temperatures. M. H. Brown, W. B. DeLong and J. R. Auld. diags Ind & Eng Chem 39:839-44 Jl '47
Direct and sensitized photochemically induced reaction of chlorine and oxalic acid; comparison with the chemically induced reaction. I. L. Hochhauser and H. Taube. Am Chem Soc J 69:1582-9 Jl '47
Gas fluxing in production of secondary aluminum. G. W. Birdsall. il Steel 121:88-9+ Ag 4; 86-8+ Ag 11 '47
Handling and measurement of chlorine gas in the laboratory. J. H. Young. diags Chem & Ind p576-7 S 20 '47
Heavy chemicals; abstract. J. P. Baxter. Chem & Ind p397 N 2 '46
How chlorine kills ammonia in boiler feedwater. Power Pl Eng 51:126+ Je '47
How special blending improves cutting fluids. J. T. Beard, jr. il Mach 53:156-60 D '46
Mode of action of chlorine. D. E. Green and P. K. Stumpf. Am Water Works Assn J 38:1301-5 N '46
Quadrupole moments and spins of Br, Cl, and N nuclei. C. H. Towns and others. bibliog Phys R 71:644-5 My 1 '47

CHLORINE—*Continued*
Reclamation of aircraft aluminum; chlorine gas fluxing; Reynolds metals co. G. W. Birdsall. il diag Metal Prog 50:1235-8 D '46
Some new extreme pressure (e.p.) lubricating oil additives containing chlorine and sulphur. W. Davey. Inst Pet J 33:527-30 Ag '47
Treating cyanide waste from metalworking plants; use of chlorine. J. G. Dobson. il plans Steel 121:92-3+ S 15 '47
Wet and dry chlorine vs. materials of chemical plant construction. il Chem Eng 54: 211-12+ Ja; 219-20+ F; 213-14+ Mr '47

See also
Sewage disposal—Chlorination
Water purification—Chlorination

Analysis
Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47
Automatic residual chlorine analyzer. S. C. Gray and D. V. Moses. flow diag il diags Am Water Works Assn J 39:693-700 Jl '47
Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46
Colorimetric determination of free chlorine with methyl orange. M. Taras. Anal Chem 19:342-3 My '47
Determination of available chlorine. W. H. Birchard. Pulp & Pa of Can 48:62 F '47
Determination of chlorine in DDT insecticides. G. W. Fiero. Soap & San Chem 23:147+ O '47
Determination of fluorine and chlorine in organic compounds. R. H. Kimball and L. E. Tufts. bibliog diags Anal Chem 19:150-3 Mr '47
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Estimation of DDT in milk by determination of organic chlorine. R. H. Carter. Anal Chem 19:54 Ja '47
Note on an enzymatic method of estimating chlorine. P. K. Stumpf and D. E. Green. Am Water Works Assn J 38:1306-8 N '46
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47
What is available chlorine? R. C. Griffin. Pulp & Pa of Can 48:97-8 My '47

Isotopes
Absorption spectrum of InCl. H. M. Froslie and J. G. Winans. bibliog il diag Phys R 72:481-91 S 15 '47
Concentration of isotopes of chlorine by the countercurrent electromigration method. S. L. Madorsky and S. Straus. bibliog il diags J Res Nat Bur Stand 38:185-9 F '47
Disintegration of $_{17}Cl^{34}$. H. Zah-Wei. Phys R 70:782-3 N 1 '46

Manufacture
Chemist in Singapore under the Japanese. J. F. Clark. il diags Chem & Ind p99-102 F 15 '47
Diaphragm vs. amalgam cells for chlorine-caustic production. R. B. MacMullin. bibliog il Chem Ind 61:41-50 Jl '47
Hydrochloric acid electrolysis. W. C. Gardiner. diags Chem Eng 54:100-1 Ja '47
Mercury cell. Chem Eng 54:148 S '47
Pacific Northwest gets new DDT, chlorine-caustic plants; Pennsalt's expansion program at Portland, Oregon. il Chem Ind 61: 60-1 Jl '47; Paper Tr J 125:20+ Jl 10 '47; Chem Eng 54:182+ Ag '47
Rock salt used at Memphis to produce chemicals; Heyden chemical corporation. Z. Cook. il Manuf Rec 116:39+ Ap '47

Safety measures
Handling and use of chlorine. bibliog il diags Water & Sewage Works 94:253-8 Jl '47; Same. Water & Sewage 85:38-41+ S; 44-6 N '47

Statistics
Alkali production fails to meet requirements, Chem Eng 54:110-11 F '47

Transportation
New tank barges for transportation of chlorine. il Marine Eng 52:79-80 O '47

CHLORINE as disinfectant. See Water purification—Chlorination

CHLORINE compounds
Antimalarials; 6- and 7-chloro-α-(dialkylaminomethyl)-4-quinolinemethanols. R. E. Lutz, J. F. Codington and N. H. Leake. bibliog il Am Chem Soc J 69:1260-3 Je '47
Attempts to find new antimalarials; some derivatives of 3 : 4 : 2′ : 3′-pyridoacridine substituted in the 2-position. W. C. Hutchison and W. O. Kermack. Chem Soc J p678-81 My '47
Chemistry of 1-azanthraquinone; chloro-derivatives of 2 : 4-dimethyl-1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p545-9 Ap '47
Polarographic characteristics of chloro complexes of +5 antimony. J. J. Lingane and F. Nishida. bibliog Am Chem Soc J 69: 530-3 Mr '47

See also
Carbon tetrachloride

CHLORINE dioxide. See Chlorine oxides

CHLORINE institute
Reelects officers. Oil Paint & Drug Rep 151:5 F 10 '47

CHLORINE number
Relation between chlorine number and permanganate number of kraft pulps. C. R. Mitchell and F. H. Yorston. Pulp & Pa of Can 48:83-4 Ag '47

CHLORINE oxides
Bactericidal properties of chlorine dioxide. G. M. Ridenour and R. S. Ingols. Am Water Works Assn J 39:561-7 Je '47
Bleaching pulp with mixtures of chlorine dioxide and chlorine. G. P. Vincent. Paper Tr J 124:53-5 Je 26 '47
Chlorine dioxide use in plants on the Niagara border. R. N. Aston. Am Water Works Assn J 39:687-90 Jl '47
Experience with chlorine dioxide treatment. A. G. Davenport. il Water & Sewage Works 93:424-5 N '46
Rotational structure of some electronic bands of chlorine dioxide. J. B. Coon. bibliog il diags J Chem Phys 14:665-86 N '46
Theory of taste and odor reduction by chlorine dioxide. H. A. Faber. Am Water Works Assn J 39:691-2 Jl '47
Use of chlorine dioxide in water treatment; abstract. R. N. Aston. Water & Sewage Works 93:477 D '46

CHLORIS gayana. See Rhodes grass

CHLOROACETIC acid
Preparation of 2,4-D(2,4-dichlorophenoxyacetic acid) from phenol and monochloracetic acid. E. Ebel and others. J Chem Educ 24: 449 S '47

CHLOROACETOPHENONE
History of a melting point. R. Macy. J Chem Educ 24:222 My '47
Hydrolysis by carbitolic caustic. R. Macy. Science 105:527-8 My 16 '47

CHLOROAMINE. See Chloramine

CHLOROAMINOACETOPHENONE
Cinnolines; preparation of 4-chloro-2-aminoacetophenone and related 4-hydroxycinnolines. C. M. Atkinson and J. C. E. Simpson. Chem Soc J p232-7 F '47

CHLOROARSINE
Aliphatic chloroarsines. C. K. Banks and others. Am Chem Soc J 69:927-30 Ap '47

CHLOROBENZALACETOPHENONE
o-Chlorophenylbenzoylacetylene. C. L. Bickel. bibliog Am Chem Soc J 69:73-4 Ja '47

CHLOROBENZENE
Acid-base catalysis in non-aqueous solvents; isomerisation of methyl mesityl oxide oxalate in chlorobenzene solution at 99°. R. P. Bell and S. M. Rybicka. Chem Soc J p24-31 Ja '47

CHLOROBENZENE—*Continued*
Pentachlorophenyl derivatives; the β-chlorination of ethylpentachlorobenzene and the preparation of pentachlorostyrene. S. D. Ross, M. Markarian and M. Nazzewski. bibliog Am Chem Soc J 69:1914-17 Ag '47
Phenol from monochlorobenzol. J. A. Lee. bibliog il diag Chem Eng 54:122-4 S '47
Synthesis of aromatic phosphonic acids and their derivatives; the derivatives of benzene, toluene and chlorobenzenes. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 69:2020-1 Ag '47
Synthesis of DDT with chlorosulfonic acid as condensation agent. W. A. Cook, K. H. Cook and W. H. C. Rueggeberg. bibliog Ind & Eng Chem 39:868-70 Jl '47
Synthetic phenol and chlorobenzene. Chem Age (Lond) 57:463 O 4 '47
Vinyl aromatic compounds; i-propenylchlorobenzenes. D. T. Mowry, W. F. Huber and E. L. Ringwald. bibliog Am Chem Soc J 69:851-2 Ap '47

CHLOROCHOLESTANE
Steroids and the Walden inversion; derivatives of androstane and cholestane. C. W. Shoppee. Chem Soc J p 1138-47 D '46

CHLOROCYANOQUINOLINE
Synthesis of 4-hydroxyquinolines; 4-chloro-7-cyanoquinoline and 4-chloro-5-cyanoquinoline. C. C. Price and others. Am Chem Soc J 69:374-6 F '47

CHLORODIFLUOROMETHANE
Synthesis of tetrafluoroethylene; pyrolysis of monochlorodifluoromethane. J. D. Park and others. bibliog flow diag Ind & Eng Chem 39:354-8 Mr '47

CHLORODIMETHYLPROPANE
Hydrogen-halogen exchange reactions of triethylsilane; new rearrangement of neopentyl chloride. F. C. Whitmore, E. W. Pietrusza and L. H. Sommer. bibliog Am Chem Soc J 69:2108-10 S '47

CHLOROETHYLAMINE
Chemistry of 2-chloroalkylamines; preparation and general reactions. W. E. Hanby and H. N. Rydon. Chem Soc J p513-19 Ap '47
Chemistry of 2-chloroalkylamines; reactions of tertiary 2-chloroalkylamines in water. W. E. Hanby and others. Chem Soc J p519-27 Ap '47
Chemistry of 2-chloroalkylamines; the dimerisation and hydrolysis of 2 : 2′ : 2′′-trichlorotriethylamine. C. W. Crane and H. N. Rydon. Chem Soc J p527-30 Ap '47

CHLOROETHYL sulfide
Nature of the 2-chloroethyl chlorovinyl sulphide isomers. R. C. G. Moggridge. Chem Soc J p 1105-8 D '46

CHLOROETHYLENE
Contrast in the dimerization of polychloro- and polyfluoro-ethylene. A. L. Henne and R. P. Ruh. Am Chem Soc J 69:279-81 F '47

CHLOROFLUOROBUTANE
Synthesis of halobutanes. E. T. McBee and W. R. Hausch. bibliog Ind & Eng Chem 39:418-20 Mr '47

CHLOROFLUOROCARBONS
Fluorination of polychloroterphenyls. F. B. Stilmar, W. S. Struve and W. V. Wirth. Ind & Eng Chem 39:348-50 Mr '47
Preparation of chlorofluorocarbons; fluorination of Prins-type condensation products. M. Couper and others. bibliog Ind & Eng Chem 39:346-8 Mr '47

CHLOROFLUOROETHANE
Low polymers of chlorotrifluoroethylene; preparation and utilization in chlorofluorocarbon lubricants. W. T. Miller, jr. and others. bibliog Ind & Eng Chem 39:333-7 Mr '47

CHLOROFLUOROHEPTANE
Pilot plant preparation of polychloropolyfluoroheptane. J. H. Babcock, W. S. Beanblossom and B. H. Wojcik. flow sheet diags Ind & Eng Chem 39:314-19 Mr '47
Preparation of fluorine-containing polyhaloheptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47
Preparation of perfluoroheptane and chloroperfluoroheptanes. E. T. McBee and others. diag Ind & Eng Chem 39:310-13 Mr '47

CHLOROFLUOROHEPTENE
Preparation of fluorine-containing polyhaloheptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47

CHLOROFLUOROMETHANES
Comparative engineering data on refrigerants given in new tables. Heating-Piping 17:616-18 D '45; 18:91-3 Mr; 83-5 My; 91-3 Ag; 99-101 N '46

CHLOROFLUOROMETHYLTRIAZINE
Fluorinated heterocyclic compounds (perhaloalkyl)triazines. E. T. McBee, O. R. Pierce and R. O. Bolt. Ind & Eng Chem 39: 391-2 Mr '47

CHLOROFLUOROPROPANE
Fluorinated derivatives of propane. E. T. McBee and others. bibliog Am Chem Soc J 69:944-7 Ap '47

CHLOROFORM
Blending of water with organic solvents by detergents. S. R. Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47
Chlorinated hydrocarbons in solvent mixtures. Paint Oil & Chem R 110:26 F 20 '47
Olive oil as a solvent for certain organic vapors. R. Macy and B. Gehauf. Science 106:274-5 S 19 '47
Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47
Raman apparatus for quantitative polarization measurements. B. L. Crawford, jr. and W. Horwitz. bibliog diags J Chem Phys 15:268-74 My '47
Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47

Analysis
Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37:798-803 O '47
Sensitive confirmatory test for bromine. S. Weiner. J Chem Educ 24:501 O '47

CHLOROGENIC acid
Chlorogenic acid and respiration of sweet potatoes. G. O. Rudkin and J. M. Nelson. bibliog Am Chem Soc J 69:1470-5 Je '47

CHLOROHEXENYNE
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46

CHLOROHYDRINDENE
Isolation of indene from heavy naphthas. R. D. Haworth, C. Lindley and D. Woodcock. Chem Soc J p369-70 Mr '47

CHLOROHYDROXYQUINOLINE
Derivatives of 5-chloro-8-hydroxyquinoline. M. Weizmann and E. Bograchov. Am Chem Soc J 69:1222-3 My '47
Synthesis of 7-chloro-4-hydroxyquinoline derivatives employing oxalacetic ester. G. F. Lisk and G. W. Stacy. Am Chem Soc J 68:2686-8 D '46

CHLOROMERCAPTOPROPIONIC acid
Addition of thio-compounds to olefins; reactions of thiolacetic and mono-, di-, and tri-chlorothiolacetic acids. J. I. Cunneen. Chem Soc J p 134-41 F '47

CHLOROMETHANE. See Methyl chloride

CHLOROMETHYL silicane
Intramolecular rearrangement of chloromethyltrimethylsilane. F. C. Whitmore, L. H. Sommer and J. Gold. bibliog Am Chem Soc J 69:1976-7 Ag '47

CHLOROMETHYL siloxanes
Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott. bibliog Am Chem Soc J 68:2291-4 N '46

CHLOROMETHYLATION
Production of benzyl chloride by chloromethylation of benzene; laboratory and pilot plant studies. A. Ginsburg and others. Ind & Eng Chem 38:478-85 My '46; Correction. W. H. C. Rueggeberg and others. 38:1322 D '46

CHLORONITROBENZONITRILE
6-(and 7-)-chloro-4-(1-diethylamino-4-pentylamino)-2- (*p*-methoxyphenyl)- quinazoline dihydrochlorides. R. L. McKee, M. K. McKee and R. W. Bost. bibliog Am Chem Soc J 69:940-2 Ap '47

CHLOROPHENYLBENZOYLACETYLENE
o-Chlorophenylbenzoylacetylene. C. L. Bickel. bibliog Am Chem Soc J 69:73-4 Ja '47

CHLOROPHENYLFURAN
Synthesis of 2-arylfurans. A. W. Johnson. Chem Soc J p895-9 O '46

CHLOROPHYL
Chlorophyll-sensitized photoöxidation of phenylhydrazine by methyl red. R. Livingston, D. Sickle and A. Uchiyama. bibliog J Phys & Colloid Chem 51:775-86 My '47
Green stuff. Fortune 36:120+ Jl '47
Organic compounds of magnesium and phosphorus in relation to chlorophyll formation. J. H. C. Smith. Am Chem Soc J 69:1492-6 Je '47
Phosphorescence of chlorophyll and some chlorin derivatives. M. Calvin and G. D. Dorough. Science 105:433-4 Ap 25 '47
Polarographic studies on extracted chlorophylls. P. Van Rysselberghe and others. bibliog Am Chem Soc J 69:809-14 Ap '47
Properties of adsorbed chlorophyll. H. C. Eyster. Science 105:523-4 My 16 '47
See also
Chloroplasts

Analysis
Fluorometric method for estimating small amounts of chlorophyll a. R. H. Goodwin. bibliog Anal Chem 19:789-94 O '47

CHLOROPICRIN
Rate of adsorption of phosgene and chloropicrin on charcoal. M. Dole. bibliog J Chem Phys 15:447-54 Jl '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46

Analysis
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47

CHLOROPLASTS
Redox potentials and photoreduction by chloroplast granules. S. Aronoff. bibliog Science 104:503-5 N 29 '46

CHLOROPRENE
Copolymerization of vinyl compounds with dienes. T. Alfrey, jr., A. I. Goldberg and W. P. Hohenstein. bibliog Am Chem Soc J 68:2464-7 D '46
Elasticity measurements on polychloroprenes. P. Kinell. bibliog diag J Phys & Colloid Chem 51:70-9 Ja '47

CHLOROPROPANE. See Propyl chloride

CHLOROPROPENE. See Allyl chloride

CHLOROPROPIONITRILE
Convenient synthesis of β-chloropropionitrile. R. Stewart and R. H. Clark. Am Chem Soc J 69:713-14 Mr '47

CHLOROQUINOLINE
Preparation of 3-halo-4-dialkylaminoalkylaminoquinoline derivatives. A. R. Surrey and R. A. Cutler. bibliog Am Chem Soc J 68:2570-4 D '46
Some 7-chloroquinolines patterned as open models of atebrin. H. Gilman and R. A. Benkeser. bibliog Am Chem Soc J 69:123-4 Ja '47
Synthesis of 4-hydroxyquinolines; some halogen containing 4-aminoquinoline derivatives. H. R. Snyder and others. Am Chem Soc J 69:371-4 F '47

CHLOROSILICANE
Ethyl trichlorosilane [and other alkyl trichlorosilanes] and its fluorination products. H. S. Booth and others. bibliog diag Am Chem Soc J 68:2650-65 D '46
Peroxide-catalyzed addition of trichlorosilane to 1-octene. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore. bibliog Am Chem Soc J 69:188 Ja '47

CHLOROSTANNIC acid
Cobaltammines and chlorostannic acid. T. P. McCutcheon and E. L. d'Ouville. Am Chem Soc J 69:989-90 My '47

CHLOROSULFINATE
Study of the reaction of alcohols with thionyl chloride. W. E. Bissinger and F. E. Kung. bibliog Am Chem Soc J 69:2158-63 S '47

CHLOROSULFONATES
Mesamoll plasticizers for polyvinyl chloride. Mod Plastics 24:154-6+ Mr '47

CHLOROSULFONIC acid
Synthesis of DDT with chlorosulfonic acid as condensation agent. W. A. Cook, K. H. Cook and W. H. C. Rueggeberg. bibliog Ind & Eng Chem 39:868-70 Jl '47

CHLOROTOLUENE
Production of benzyl chloride by chloromethylation of benzene; laboratory and pilot plant studies. A. Ginsburg and others. Ind & Eng Chem 38:478-85 My '46; Correction. W. H. C. Rueggeberg and others. 38:1322 D '46

CHLOROTRIFLUOROETHANE
Fluorinated derivatives of ethane. E. T. McBee and others. bibliog Ind & Eng Chem 39:409-12 Mr '47

CHLOROTRIFLUOROETHYLENE
Low polymers of chlorotrifluoroethylene; preparation and utilization in chlorofluorocarbon lubricants. W. T. Miller, jr. and others. bibliog Ind & Eng Chem 39:333-7 Mr '47

CHLOROTRIFLUOROMETHYLBENZENE
Fluorine as a halogen; reaction with a highly deactivated aromatic nucleus. L. A. Bigelow, R. Y. Tompson and P. Tarrant. bibliog diags Ind & Eng Chem 39:360-4 Mr '47
Preparation of chloro-bis(trifluoromethyl)-benzenes. E. T. McBee and others. Ind & Eng Chem 39:387-8 Mr '47

CHLOROVINYLDICHLOROARSINE. See Lewisite

CHLOROVINYL sulfide
Nature of the 2-chloroethyl chlorovinyl sulphide isomers. R. C. G. Moggridge. Chem Soc J p 1105-8 D '46

CHOCOLATE
Estimation of the fineness of grinding of chocolate; abstract and discussion. H. F. Bamford and H. M. Mason. Chem & Ind p421 N 23 '46
How German chocolate ration was made for wehrmacht. W. T. Clarke. il diags Food Ind 18:1695-8 N '46
New chocolate kettle overcomes sanitary defects of conventional ones. J. Feiner. il diags Food Ind 19:1044-7 Ag '47
Nutritional value of cocoa and chocolate. W. B. Walker. Chem & Ind p521 Ag 23 '47

CHOLANE
Basic derivatives of cholane and norcholane; synthesis of certain basic nitrogen derivatives of cholane and norcholane. S. P. James and others. Chem Soc J p665-70 Ag '46

CHOLECYSTECTOMY. See Gall bladder

CHOLENALDEHYDE
Derivatives of bisnor-5-cholenaldehyde. F. W. Heyl, A. P. Centolella and M. E. Herr. bibliog Am Chem Soc J 69:1957-61 Ag '47

CHOLESTADIENE
Δ^6-*i*-Cholestadiene. B. Riegel, G. P. Hager and B. L. Zenitz. bibliog Am Chem Soc J 68:2562-4 D '46

CHOLESTADIENOL
Attempted preparation of a hydroxylated provitamin-D. V. A. Petrow and W. W. Starling. Chem Soc J p749-51 Ag '46

CHOLESTANE
Steroids and the Walden inversion; derivatives of androstane and cholestane. C. W. Shoppee. Chem Soc J p 1138-47 D '46

CHOLESTENE
Enolic derivatives of 3 : 6-diketo-Δ^4-cholestene. W. C. J. Ross. Chem Soc J p737-40 Ag '46
Steroids and the Walden inversion; derivatives of Δ^5-cholestene and Δ^5-androstene. C. W. Shoppee. Chem Soc J p 1147-51 D '46

CHOLESTENONE
Radioactive cholestenone. R. B. Turner. Am Chem Soc J 69:726-7 Mr '47

CHOLESTEROL
Cholesterol to be made from wool grease. Chem & Eng N 25:1128 Ap 21 '47; Oil Paint & Drug Rep 151:4 My 5 '47
3(β) : 6(β)-Dihydroxycholanic acid, an epimeride of hyodeoxycholic acid. J. S. Moffatt. Chem Soc J p812-15 Je '47
Synthesis of estradiol and 1-methylestradiol from cholesterol. A. L. Wilds and C. Djerassi. bibliog Am Chem Soc J 68:2125-33 N '46

Analysis
Determination of egg yolk in egg white. J. H. Cook and V. C. Mehlenbacher. Ind & Eng Chem Anal ed 18:785-8 D '46

CHOLESTERYL malonic acid
Preparation of isomeric cholesteryl malonic acids; isolation of i-cholesterylmalonic acid. J. J. Svarz and E. Kaiser. Am Chem Soc J 69:847-8 Ap '47

CHOLIC acid
See also
Hyodesoxycholic acid

CHOLINE
Absence of a macrocytic anemia in dogs fed choline or choline plus fat. M. F. Clarkson and C. H. Best. Science 105:622-3 Je 13 '47
Evidence that the hemolytic anemia caused by fat and choline is not due to lipotropic action. J. E. Davis. bibliog Science 105:43 Ja 10 '47
Lipoid substance in the cells of proximal convoluted tubules of the kidneys of young rats on a choline-deficient diet. W. S. Hartcroft and C. H. Best. Science 105:315 Mr 21 '47
Phosphorylcholine. E. Baer. Am Chem Soc J 69:1253-4 Je '47
See also
Doryl

CHOLINE picrate
Properties of electrolytic solutions; conductance of choline and related picrates in ethylene chloride at 25°. D. J. Mead and others. Am Chem Soc J 69:528-30 Mr '47

CHOLINESTERASE
Whole-blood cholinesterase determinations in some hematologic dyscrasias; low cholinesterase values in the leucoses. R. D. Barnard and others. Science 104:449 N 8 '46

CHONDRODENDRON
Curare alkaloids; alkaloids from chondrodendron tomentosum R. and P. H. King. Chem Soc J p936-7 Jl '47

CHRISTENSEN, Frank A.
Honored for WDC endeavors. por Nat Underw 51:1, 4 Jl 3 '47; East Underw 48: 15, 20-1 Jl 4 '47

CHRISTIAN trade unions, International confederation of. See International confederation of Christian trade unions

CHRISTMAS
Safety and welfare; Hans Hummer and miners' Christmas. H. B. Hicks. il Can Min J 67:1125-8 D '46

CHRISTMAS business
Attracting the holiday trade; Christmas decorations help sell available items, boost oil, gasoline sales. F. C. Sturtevant. il Nat Pet N 38:27-8 N 20 '46
Christmas spending, 1930-1946. Economist 151: 1057 D 28 '46
See also
Christmas lighting

CHRISTMAS clubs
Christmas funds in mutual savings; Xmas club distribution. Comm & Fin Chr 164: 2491, 2534 N 14 '46

CHRISTMAS gifts
Is your product hard to merchandise for Christmas? gift certificate for Breier sports jackets. C. S. Leeds. il Ptr Ink 221:44-5 O 24 '47
Selects 100 perfect gifts to simplify shopping. Ptr Ink 217:134+ N 15 '46
Survey sheds new light on gift-buying habits. Sales Management 57:68 D 1 '46
What folks want for Christmas; autos, appliances most popular; brand preferences. il Sales Management 59:50+ N 1 '47
See also
Package goods—Gift packages

Advertising
Big fourth-quarter schedules in hard lines will spearhead drive for holiday business. W. H. Davis. Ptr Ink 221:98 O 3 '47

Business gifts
Business gifts. Am Bsns 17:51-6 O '47

CHRISTMAS lighting
Christmas lights return. M. L. Gordon. Elec West 97:76 D '46

CHRISTMAS parties, Employees'
Bigness no excuse for lack of Christmas party; Seaboard finance co. has three parties. Ptr Ink 217:81 N 15 '46

CHRISTMAS printing
Unusual Christmas greetings. il Inland Ptr 118:36-7 Mr '47

CHRISTMAS tree decorations
Merry Xmas with plastics. F. A. Abbiati. il Mod Plastics 24:90-3 D '46
Santa Claus diversifies; Noma electric corp. expands into year-round market. Bsns W p56+ D 28 '46

Rating
Christmas tree lights. il Consumers Res Bul 18:23 D '46

CHRISTMAS trees
Farmers in the gift market. L. Haystead. Fortune 34:234+ D '46
Question of the month; fire protection for Christmas tree. il diags Dom Eng 169:112+ Ja '47
Trees by box; Seattle firm prepackages, ships Christmas trees direct to customers; Giftree. il Bsns W p70-1 O 25 '47

CHROMATES
Chromate corrosion inhibitors in air conditioning waters. M. Darrin. bibliog Pub Works 78:27-8 Je '47
Chromate finishes to protect zinc surfaces. G. Black. il Materials & Methods 25:113-16 Ap '47
Electrometric study of the reaction between chromate and indium ions. A. Palm. Am Chem Soc J 69:224-5 F '47
See also
Dichromates

CHROMATOGRAPHIC analysis
Analytical methods for carotenes of lycopersicon species and strains. F. P. Zscheile and J. W. Porter. bibliog Anal Chem 19:47-51 Ja '47
Carotenoids of stored dehydrated carrots. G. Mackinney and W. E. Fratzke. bibliog Anal Chem 19:614-15 Ag '47
Catechins of green tea. A. E. Bradfield, M. Penney and W. B. Wright. Chem Soc J p32-6 Ja '47
Chemical nature of coal hydrogenation products; initial resolution by chromatography on alumina. M. B. Neuworth. bibliog diag Am Chem Soc J 69:1653-7 Jl '47
Chromatographic adsorption in qualitative analysis. H. H. Fillinger. J Chem Educ 24: 444-5 S '47
Chromatographic and spectral characteristics of some polythienyls. J. W. Sease and L. Zechmeister. bibliog Am Chem Soc J 69: 270-3 F '47
Chromatographic determination of carotene; kieselguhr as a chromatographic adsorbent. J. B. Wilkes. bibliog Ind & Eng Chem Anal ed 18:702-7 N '46
Chromatographic spot tests. P. P. Hopf. Chem Soc J p785-6 S '46
Chromatography of sugars and their derivatives. L. W. Georges, R. S. Bower and M. L. Wolfrom. bibliog diags Am Chem Soc J 68:2169-71 N '46
Determination of carotene in alfalfa; studies on methods for meals and fresh leaves. F. P. Zscheile and R. A. Whitmore. bibliog Anal Chem 19:170-2 Mr '47

CHROMATOGRAPHIC analysis—*Continued*
Preparation and chromatographic separation of *p*-phenylazophenyl polyacetylglycosides. C. D. Hurd and R. P. Zelinski. bibliog Am Chem Soc J 69:243-6 F '47
Quantitative chromatography of silk hydrolysate. A. Polson and others. Science 105:603-4 Je 6 '47
Standardization of chromatographic adsorbents; rate of flow of developing solvent. A. L. LeRosen. bibliog Anal Chem 19:189-90 Mr '47
Use of a fluorescent adsorbent for the chromatography of colorless compounds. J. W. Sease. Am Chem Soc J 69:2242-4 S '47

CHROMATOGRAPHY
Radial chromatography in industry. P. P. Hopf. diag Ind & Eng Chem 39:938-40 Ag '47
Rate of movement of a chromatographic zone as a function of column position, initial concentration and initial volume. A. L. LeRosen. bibliog Am Chem Soc J 69:87-90 Ja '47
Recovery of sucrose from cane blackstrap and beet molasses. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 69:664-5 Mr '47

CHROME dyes. See Dyes and dyeing

CHROMEL A. See Chromium alloys

CHROMIC acid
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 132-3 N '46
Chemical surface treatment of magnesium alloy sheet for spot welding. W. F. Hess and others. Welding J 26:sup170-90 Mr '47
Chromic acid electrolyte for a magnesium primary cell. H. A. Barbian and R. E. McNulty. il Electrochem Soc Trans 91 (preprint 7):109-26 '47
Dyeing of wool with chrome dyes; the chroming of wool. P. W. Carlene, F. M. Rowe and J. B. Speakman. bibliog Soc Dyers & Col J 62:329-38 N '46
Study of the mechanism of oxidation with chromic acid. W. A. Waters. Chem Soc J p 1151-4 D '46
Use of plastic chips in the control of chromic acid mist. J. E. Molos. Ind Med 16:404-5 Ag '47

Analysis
Rapid method for the determination of chromic acid mist in air. L. Silverman and J. F. Ege, jr. bibliog diag J Ind Hygiene 29:136-9 Mr '47

CHROMITE
Beneficiation of chromite ores from western United States. J. V. Batty and others. U S Bur Mines Rep of Invest 4079:1-26 '47
Chromiferous sand deposits in the Coos Bay area, Coos county, Oregon. R. J. Hundhausen. bibliog 6 pls U S Bur Mines Rep of Invest 4001:1-13 '47
Chromite-bearing sands of the southern part of the coast of Oregon. A. B. Griggs. bibliog map diags U S Geol S Bul 945-E:113-50, fold maps(pl 41-51); pa 55c Supt. of doc. '45
Chromite deposits near Red Lodge, Carbon county, Montana. H. L. James. maps plan diags U S Geol S Bul 945-F:151-89, pl 52-64; pa $1.75 Supt. of doc. '46
Chromite, 1946. E. K. Jenckes. Eng & Min J 148:88-9 F '47

CHROMIUM
Identification of organic compounds by use of chromium target X-ray diffraction powder patterns. F. W. Matthews and J. H. Michell. bibliog il Ind & Eng Chem Anal ed 18:662-5 N '46

Analysis
Determination of chromium by oxidation with perchloric acid. S. Schuldiner and F. B. Clardy. bibliog diag Ind & Eng Chem Anal ed 18:728-9 N '46
Measurement of the intensity ratios of spectral lines with electron multiplier phototubes. K. G. Kessler and R. A. Wolfe. bibliog diags Opt Soc Am J 37:133-44 Mr '47
Modified colorimetric determination of chromium in ferrous materials. E. H. Baker. Foundry 75:92+ Ja '47
Separation of small amounts of chromium from vanadium with ethyl acetate. M. D. Foster. In U S Geol S Bul 950:15-18 '46
Stable colorimetric reagent for chromium. J. F. Ege, jr. and L. Silverman. bibliog Anal Chem 19:693-4 S '47

CHROMIUM alloys
B-W digesters to be chrome-alloy lined. Paper Tr J 124:26 Ap 3 '47; Same. Paper Ind 29:86-7 Ap '47
Chromium-base alloys. Sci Am 176:17 Ja '47
Chromium base alloys for high temperature service; abstract. J. W. Freeman and others. Materials & Methods 26:121-2 S '47
Color change reveals temperatures in gas turbines. Sci Am 175:268 D '46
Fabricates caskets of chromium-nickel weldments; Ryan aeronautical co. il Steel 120: 112 Je 2 '47
Heat treatment of some chromium-nickel alloys. H. A. Campbell. bibliog il Iron Age 159:74-9 Je 5 '47
Neutral density filters of Chromel A. M. Banning. Opt Soc Am J 37:686-7 S '47
Nickel-chromium alloys for gas-turbine service. C. A. Crawford. A S M E Trans 69: 609-12 Ag '47
Observations on the failure of 80 nickel-20 chromium alloy at excessive temperatures. H. D. Holler. bibliog Electrochem Soc Trans 92 (preprint 7):101-7 '47

See also
Chromium steel
Iron alloys—Chromium alloys
Stellite
Tantung
Worthite

Analysis
X-ray analysis of chromium-molybdenum and chromium-tungsten alloys. W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47

CHROMIUM compounds
Chromium complexes of azo dyes derived from acylacetonitriles. R. S. Long. bibliog Am Chem Soc J 69:990-5 My '47
Dyeing of wool with chrome dyes; the chroming of wool. P. W. Carlene, F. M. Rowe and J. B. Speakman. bibliog Soc Dyers & Col J 62:329-38 N '46
Nature of the dye-chromium-fibre complex in the case of wool dyed with certain chrome mordant dyes. E. Race and others. bibliog Soc Dyers & Col J 62:372-6+ D '46
Studies in wool dyeing; comparison of methods for applying chrome dyes. G. L. Royer and others. bibliog il pl Soc Dyers & Col J 63:214-23 Jl '47; Same. Am Dyestuff Rep 36:425-37 Ag 11 '47; Discussion. Soc Dyers & Col J 63:223-4 Jl '47
Vapor pressures of chromic salt solutions. N. O. Smith. bibliog Am Chem Soc J 69:91-3 Ja '47

CHROMIUM hexacarbonyl
Synthesis of chromium hexacarbonyl. B. B. Owen and others. bibliog Am Chem Soc J 69:1723-5 Jl '47

CHROMIUM metallurgy

Electrometallurgy
Problems in cell design for electrolytic chromium. R. R. Lloyd. il diag Eng & Min J 148:95-7 Jl '47

CHROMIUM molybdenum steel
Corrosion and oxidation experiences in high pressure and high temperature steam service. P. M. Brister and J. B. Romer. bibliog il diags Electrochem Soc Trans 91 (preprint 17):249-72 '47; Abstract. Blast F & Steel Pl 35:578+ My '47
Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels. N. A. Ziegler and W. L. Meinhart. il diag Am Soc for Metals Trans 37:360-99 bibliog(49 titles, p397-9); Discussion. 399-401 '46
Effect of variations in composition and heat treatment on some properties of 4 to 6 per cent chromium steel containing molybdenum and titanium. G. F. Comstock. bibliog il Am Soc for Metals Trans 36: 81-110 '46; Conclusions. Steel 118:130-1 Ja 28 '46; Discussion. Am Soc for Metals Trans 36:110-15 '46

CHROMIUM molybdenum steel—*Continued*
Materials for high temperature piping; abstract. J. J. Kanter. Heating-Piping 19: 90-1 Je '47
Steels for use at elevated temperatures. C. Sykes. bibliog Iron & Steel Inst J 156:321-9 Jl '47
Welding power piping with chromium-molybdenum electrodes. O. T. Barnett. il Steel 120:88-90+ My 26 '47

CHROMIUM nickel steel
Determination of phosphorus in austenitic chromium-nickel steels. Iron & Steel Inst J 155:373-91 Mr '47
Effect of stabilizing and stress relief; heat treatment for 18-8 stainless. W. G. Hubbell. il Steel 121:86-8+ Ag 25 '47; Abstract. Materials & Methods 24:1266+ N '46
18-8 steel in exhaust systems. W. G. Hubbell. il Aero Digest 54:92+ My '47; Same cond. Steel 119:86+ D 30 '46
Heat treatment of some chromium-nickel alloys. H. A. Campbell. bibliog il Iron Age 159:74-9 Je 5 '47
How to solder stainless steel fittings; illustrated instructions. Power 91:57 Ja '47
Investigation of a type of failure of 18-8 stabilized stainless steel. W. Kahn and others. il Am Soc for Metals Trans 37: 567-82; Discussion. 582-5 '46
Service life of austenitic alloy furnace tubes. C. S. Pugsley, jr. Pet Refiner 26:119-20 O '47; Abstract. Pet Processing 2:881 N '47
Starts standardization of stainless pipe and fittings. Heating-Piping 19:89-90 Mr '47

See also
Steel, Stainless

Testing
Attempt to select a suitable specimen for the study of corrosion cracking in 18-8 steel. M. H. Springer and others. il diags Welding J 26:sup530-8 S '47
Mechanism of failure of 18 Cr-8 Ni cracking still tubes. C. L. Clark and J. W. Freeman. il Am Soc for Metals Trans 35:298-326 '45; Same. Nat Pet N 36 pt 2: R854-6+ D 6 '44; Discussion. Am Soc for Metals Trans 35:326-30 '45
Nature and mechanism of passivity of 18-8S stainless steel. M. G. Fontana and F. H. Beck. il diag Metal Prog 51:939-44 Je '47

CHROMIUM ores
Chrome-iron ratio chart. C. O. Wraith. Eng & Min J 148:108 Je '47

See also
Chromite

CHROMIUM oxides
Adsorption of hydrogen and nitrogen on chromium oxide gel. P. H. Emmett and M. Cines. bibliog Am Chem Soc J 68:2535-6 D '46
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Susceptibility-composition isotherm for the chromium-aluminum oxide catalyst system. R. P. Elischens and P. W. Selwood. Am Chem Soc J 69:1590-4 Jl '47
X-ray diffraction studies in the system Fe_2O_3-Cr_2O_3. W. O. Milligan and L. Merten. bibliog J Phys & Colloid Chem 51:521-8 Mr '47

See also
Chromite

CHROMIUM plating
Automatic handling aids plating success; Daystrom corporation. M. E. Kilroy. flow chart il Am Mach 91:84-7 Mr 27 '47
Barrel chromium plating; abstract. G. Dubpernell and S. M. Martin. Iron Age 160:77+ Ag 21 '47
Bright chromium plating and temperature control. M. G. Herbach and C. W. Bowden, jr. diags Metal Prog 51:257-9 F '47
Chrome plating to reduce wear; survey of fleet operators' experience. H. O. Mathews. S A E J 55:33-5 O '47
Chromium plating bath blanket. il Metal Finishing 45:86-7 My '47
Development of chrome plated piston rings for aircraft engines; abstracts. J. B. Minnich. il S A E J 55:69-70 Ja '47; Automotive & Aviation Ind 96:35 Ja 1 '47
Hard chrome plating finds wide use at Ford. H. Chase. il Iron Age 159:51-3 Ja 30 '47
Hard chromium; abstract. D. Chambaud. Materials & Methods 25:128 Ja '47
Improved chromium plate. A. L. Peach. il Metal Finishing 44:531-3+ D '46
Life of parts lengthened by chrome plating. D. B. McPherson. il Textile World 96:139+ D '46
Metal surfacing by hard chromium plating. E. H. Halvorsen. il Metal Finishing 45:71-6 Jl '47
Plastic tubes cut plating solution loss; floated on chrome bath solution. Iron Age 159: 44 Je 26 '47
Semi-quantitative method for measuring the ductility of chromium electrodeposits. M. R. J. Wyllie. bibliog il diags Electrochem Soc Trans 92(preprint 5):63-80 '47
Use of plastic chips in the control of chromic acid mist. J. E. Molos. Ind Med 16:404-5 Ag '47; Excerpts. Safety Eng 93:66 Je '47

Patents
Chromium plating patents decision. Metal Finishing 45:80 Mr '47

Testing
Magnetic particle inspection of chromium-plated tools. M. H. Mueller and W. E. Yeast. il diags Metal Prog 51:420-5 Mr '47

CHROMIUM poisoning
Toxicity of chemicals in electroplating; chromium and its compounds. P. M. Van Arsdell. il Metal Finishing 45:60 Ag; 79-80 S '47

CHROMIUM steel
Behaviour of a chromium steel in the Jominy hardenability test. W. I. Pumphrey. bibliog 2pls Iron & Steel Inst J 157:27-30 S '47
Furnace brazing; 12 per cent chromium low carbon steel. T. H. Gray. il diags Steel 121:104-6+ Jl 21 '47
High chromium-irons. H. D. Newell. il Metal Prog 51:617-26 Ap '47
Influence of carbon content upon the transformations in 3 per cent chromium steel. T. Lyman and A. R. Troiano. il Am Soc for Metals Trans 37:402-44 bibliog(p444); Discussion. 444-8 '46
Requirements of steels for high temperature service. C. L. Clark. il Metal Prog 50:897-903, 1199-203 N-D '46
Welding alloy steel piping. E. R. Seabloom. il diags Heating-Piping 18:81-4 N '46
X-ray diffraction studies of chrome-steel slags. G. P. Chatterjee and S. S. Sidhu. diag J Ap Phys 18:519-21 Je '47

See also
Chromium molybdenum steel
Chromium nickel steel
Chromium vanadium steel
Steel, Stainless

Testing
Chromium steels of low-carbon content. R. Franks. il Am Soc for Metals Trans 35: 616-36; Discussion. 636-8 '45

CHROMIUM sulfate
Experimental arguments against the concept of chrome tanning as an adsorption process. K. H. Gustavson. bibliog J Phys & Colloid Chem 51:1181-8 S '47

CHROMIUM thiosulfate
Thiosulphate complexes of the tervalent metals, iron, aluminium, and chromium. N. Uri. Chem Soc J p335-6 Mr '47

CHROMIUM vanadium steel
Chromium-vanadium carburizing steels and their modifications; abstract. F. F. Franklin and B. B. Beckwith. Product Eng 18:147 Ap '47

CHROMOPHORES
Studies in light absorption; auxochromic properties and the periodic system. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p948-52 O '46

CHROMOSOMES
Chromatin diminution. R. B. Goldschmidt and T. P. Lin. Science 105:619 Je 13 '47
Chromosome structure under the electron microscope. J. T. Buchholz. bibliog il Science 105:607-10 Je 13 '47
Invisible chromosome. M. Kodani and C. Stern. il Science 104:620-1 D 27 '46
Nucleus in relation to heredity and sex. E. C. Jeffrey. il Science 106:305-8 O 3 '47

CHRONOGRAPH
Spiral chronograph for measurement of single millisecond time intervals with microsecond accuracy. R. J. Emrich. il diags R Sci Instr 18:150-7 Mr '47

CHRONOSCOPE
Millisecond chronoscope. R. S. J. Spilsbury and A. Felton. il diags Inst E E J 94 pt 2: 316-22; Discussion. 322-4 Ag '47; Electrician 137:1753 D 20 '46

CHRYSLER corporation
Annual report. Comm & Fin Chr 165:1724-5 Mr 31 '47
Thumbnail stock appraisal. Mag of Wall St 79:420 Ja 18 '47

CHUBB, Lewis Warrington, 1882-
L. W. Chubb, 1947 John Fritz medalist; presentation by M. W. Smith; response by L. W. Chubb. por Elec Eng 66:261-4 Mr '47

CHUCKING machines
Acme-Gridley Chuck-matic. il Product Eng 18:160 S '47
Hardinge multi-operation chucking machine. il Mach 53:195-6 Ap '47; Am Mach 91:141-2 Mr 27 '47; Automotive & Aviation Ind 96:47 Ap 1 '47; diags Product Eng 18:92-3 S '47
Multiple-spindle automatics speed up Dodge piston production. C. H. Wick. il plan Mach 53:154-60 My '47
New Britain double-end six-spindle chucking machine and precision contour boring and turning machine. il Mach 53:172-4 Ag '47

CHUCKS
Basic automatic chuck holds different parts. F. Hartley. diags Am Mach 91:127 Jl 3 '47
Centered bronze lap trues universal chucks. C. M. King. diag Am Mach 91:140 Ap 10 '47
Eccentric pivot bars made in square-bored adapter chuck. S. Framurz. diags Am Mach 91:123 Ag 14 '47
Hex-body collet chuck. C. M. Huntley. diags Am Mach 91:112 Ap 24 '47
How to remove a heavy lathe chuck. A. E. Lynch. diag Am Mach 91:145 Mr 13 '47
Optical drill chuck. il diag Engineering 164:8 Jl 4 '47; Abstract. Mech Eng 69:775-6 S '47
Small plastic blocks clamped with vacuum chuck. H. W. Heacock. diag Am Mach 91: 113 Ja 30 '47
Spring-shank chuck gives uniform feed. C. Kidwell. diag Am Mach 91:112 Ap 24 '47

CHURCH
See also
Preaching

CHURCH advertising
Agency and special group to run Episcopal campaign. Ptr Ink 219:108 My 16 '47

CHURCH and labor
See also
Chaplains, Industrial

CHURCH and social problems
Action from the pulpit. R. A. Burkhart. Ann Am Acad 250:76-81 Mr '47
Church economic conference; comments on Federal council of churches, Pittsburgh meeting. Trusts & Estates 84:276 Mr '47

CHURCH architecture
Architecture of St Patrick church, Corpus Christi, Tex. R. L. Vogler. il Brick & Clay Rec 111:28 Jl '47
Little white church, brickbuilt and decorated; St Matthew's Church in Phoenix, Arizona; illustrations. Brick & Clay Rec 110:30 Ja '47
Religious buildings; building types study; with time-saver standards. E. M. Conover. il plans diags Arch Rec 102:89-116, 123+ S '47
See also
Chapels
Synagogs

Designs and plans
Church in Mayville, N.Y.; Chautauqua county Methodists build a dignified, modern church. il plans diags Arch Forum 86:78-80 Ja '47
Prize-winning church designs. il plans Arch Rec 101:114-17 My '47

Cuba
Episcopal cathedral, Havana. il plan Arch Rec 102:111 S '47

Mexico
Church of La Purísima, Monterrey. il plan Arch Rec 102:104-5 S '47

CHURCH lighting
Fluorescent lighting in a church. il Light & Lighting 40:77 Ap '47

CHURCHES
Acoustics of churches. C. M. Swan. il Arch Rec 102:113-15 S '47
Church sound systems; time-saver standards. plans diags Arch Rec 102:123+ S '47
Mormon Tabernacle reroofed with aluminum. il Sheet Metal Worker 38:57-8+ Ag '47
Subtle sound-reinforcement; Centenary Methodist church, Winston-Salem, N.C. il Arch Rec 102:116 S '47
Unusual copper roofing work; Orthodox Catholic edifice in Bridgeport, Conn. il diags Sheet Metal Worker 38:39-41+ My '47
See also
Church architecture

Heating and ventilation
Heating problems in old churches. R. H. Emerick. il plans Heat & Ven 44:73-5 S '47

Insurance requirements
Church burglary, robbery, theft and larceny policy. Rough Notes 90:62 Ja '47
Insurance on your church. Rough Notes 90: 38+ Mr '47

CHUTES
Improved chute design. diag Can Min J 67: 1029 N '46
Pattern for diagonal grain chute. O. W. Kothe. diags Sheet Metal Worker 37:42+ N '46
Spiral chute at Dodworth colliery. diags Can Min J 68:658-9 S '47

CIBA company
Report. Chem Age (Lond) 56:617 My 10 '47

CIDER
Nitrogen content of apple juice and its importance in cider making. D. W. Steuart. Chem & Ind p55-6 Ja 25 '47

CIGAR factories

Employees
Wage structure of the cigar manufacturing industry, January 1946. K. B. Mohn. Mo Labor R 64:45-52 Ja '47

CIGAR industry and trade
Three-phase prosperity ahead for cigar makers. H. M. Wootten. Barron's 27:9 F 24 '47

CIGARET industry and trade
Birth of Alligators. il Mod Packaging 20:144 Jl '47
Cigarette industry shows phenomenal growth. A. H. Carroll. il Dom Comm 34:38-42 N '46
Machine as salesman; the Rowe corp. automatic cigarette dispensing. il Fortune 35: 116-21+ Mr '47

Advertising
Lucky Strikes save the Florida's crew. E. E. Calkins. Adv & Sell 40:58 Ja '47

Statistics
Big 3 gain in cigarette sales; all others lose. H. M. Wootten. Ptr Ink 218:36-8+ Ja 31 '47
Cigarette trend reversed, big three increase their lead. Bsns W p38+ F 8 '47

Netherlands
Dutch cigarette market poses acute problems. A. H. Carroll. For Comm W 26:3+ Ja 25 '47
Netherlands grants token imports of American cigarettes. For Comm W 25:23 N 23 '46

CIGARET industry and trade—*Continued*

Netherlands Indies

Cigarette manufacture and consumption, Java. For Comm W 29:27+ N 1 '47

CIGARET lighters

Lighter making involves many metalworking procedures. il Steel 121:77-8 O 27 '47

CIGARETS

Army bans cigarette shipments to Germany to stop their use as currency. Comm & Fin Chr 165:3028 Je 5 '47

Pocket 40's; new Old Gold cigaret package. il Mod Packaging 20:150-1 Mr '47

Tobacco standard; cigarette currency. Economist 152:526-7 Ap 12 '47; Same. Iron Age 159:113+ My 29 '47; Same cond. Fortune 35:42+ Je '47

Prices

Price cut for cigarettes. Bsns W p19 F 22 '47

CIGARS

Cigars in cans. il Mod Packaging 20:172 Ag '47

CINCHOMERONIC acid

5-Substituted cinchomeronic acids. L. J. Reed and W. Shive. Am Chem Soc J 68:2740-1 D '46

CINCHONA

Cinchona control continuance asked. C. M. Anderson. Oil Paint & Drug Rep 151:4+ Ap 28 '47

Cinchona in East Indies unharmed by Japanese. Oil Paint & Drug Rep 151:5+ Mr 10 '47

Cinchona situation in the Philippine Islands. For Comm W 25:25 D 28 '46

Control of cinchona and products discontinued, United Kingdom. For Comm W 29:27 O 4 '47

Cinchona situation in Netherlands Indies. For Comm W 29:23 N 1 '47

CINCHONINALDEHYDE

Cinchoninaldehyde and aliphatic amines; preparation of some lepidylamines. A. P. Phillips. Am Chem Soc J 69:865-6 Ap '47

Cinchoninaldehyde; benzoin and Cannizzaro reactions. A. P. Phillips. Am Chem Soc J 68:2568-9 D '46

CINCHONINE

Synthesis of potential antimalarials; reaction of organic lithium compounds with quinolinemethanols. J. F. Mead, M. M. Rapport and J. B. Koepfli. bibliog Am Chem Soc J 68:2704-5 D '46

CINCHONINIC acid

α-(2-Piperidyl)-2-aryl-4-quinolinemethanols. R. F. Brown and others. bibliog Am Chem Soc J 68:2705-8 D '46

α-Piperidyl-4-quinolinemethanols substituted in the 2-position. S. Winstein and others. Am Chem Soc J 68:2714-18 D '46

Potential antimalarials; additional (2-phenylquinolyl-4)-α-piperidylcarbinols. E. R. Buchman and D. R. Howton. bibliog Am Chem Soc J 68:2718-20 D '46

Synthesis of potential antimalarials; 2-alkyl-α-(2-piperidyl)-4-quinolinemethanols. J. F. Mead, A. E. Senear and J. B. Koepfli. bibliog Am Chem Soc J 68:2708-10 D '46

Synthesis of potential antimalarials; 7-chloro-α-(2-piperidyl)-4-quinolinemethanol. A. E. Senear and others. bibliog Am Chem Soc J 68:2695-7 D '46

Synthesis of potential antimalarials; 2-phenyl-α-(2-piperidyl)-4-quinolinemethanols. M. M. Rapport and others. bibliog Am Chem Soc J 68:2697-703 D '46

Tolylmercaptopropanones and their condensation with isatins. O. Newell and P. K. Calaway. Am Chem Soc J 69:116-17 Ja '47

CINCINNATI

Riverfront development in Cincinnati. il plan Arch Forum 86:13 Ja '47

See also

Floods—Cincinnati

Hotels

Terrace Plaza; penthouse hotel for Cincinnati is built on two big stores. il plans diags Arch Forum 85:100-8 D '46

Politics and government

Charlie Taft's big chance as the first lay leader of U.S. Protestantism. map Fortune 36:84-7+ Ag '47

CINCINNATI, New Orleans and Texas Pacific railway

Equipment trusts offered. Comm & Fin Chr 165:536 Ja 27 '47

CINDER concrete. See Concrete—Cinder concrete

CINDERS

Cinder and fly-ash factors when burning small anthracite coal on traveling-grate stokers. C. S. Gladden. bibliog diag A S M E Trans 69:191-8 Ap '47; Excerpts. Power Pl Eng 50:124 D '46; Discussion. A S M E Trans 69:198-202 Ap '47

Prevention of cinder cutting; report of Master boiler makers' assn. Ry Mech Eng 121: 568-9 O '47

CINEMATOGRAPHY. See Moving picture photography

CINEOL

Insecticidal component of eugenia haitiensis identified as 1,8-cineol. M. Jacobson and H. L. Haller. bibliog Am Chem Soc J 69: 709-10 Mr '47

CINEROLONE

Synthesis of dihydrocinerolone. S. B. Soloway and F. B. LaForge. Am Chem Soc J 69:979-80 Ap '47

CINERONE

Experiments on the synthesis of the pyrethrins; structure of cinerone. S. H. Harper. Chem Soc J p892-5 O '46

CINNAMAL chloride. See Dichloropropenyl benzene

CINNAMALDEHYDE

Allylidene halides; structure and reactivity of cinnamal chloride. L. J. Andrews and S. L. Linden. bibliog Am Chem Soc J 69: 2091-4 S '47

CINNAMIC acid

Electrolytic reduction of cinnamic acid; structure of the products. C. L. Wilson. Electrochem Soc Trans 92 (preprint 11):137-43 '47

Substituted styrenes; the decarboxylation of substituted cinnamic acids. C. Walling and K. B. Wolfstirn. bibliog Am Chem Soc J 69:852-4 Ap '47

CINNAMON oil

Ceylon's exports of cinnamon oil. For Comm W 26:27 Mr 15 '47

Study of cinnamon oil substitutes; abstract. C. Bordenca. Food Ind 18:1957 D '46

CINNAMONITRILE

Unsaturated nitriles; the preparation of *trans*-cinnamonitrile and methacrylonitrile by oxime dehydration. D. T. Mowry and R. R. Morner. bibliog Am Chem Soc J 69: 1831 Jl '47

CINNAMYLMAGNESIUM chloride

Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47

CINNOLINE

Cinnoline; further observations on the Widman-Stoermer reaction. J. C. E. Simpson. Chem Soc J p673-5 Ag '46

Cinnolines; esters of 4-hydroxy-cinnoline- and -quinoline-3-carboxylic acids. J. C. E. Simpson. Chem Soc J p 1035-6 N '46

Cinnolines; 4-methylcinnolines. C. M. Atkinson and J. C. E. Simpson. Chem Soc J p808-12 Je '47

Cinnolines; 8-nitro-4-hydroxycinnoline. J. C. E. Simpson. Chem Soc J p237-8 F '47

Cinnolines; preparation of 4-chloro-2-aminoacetophenone and related 4-hydroxycinnolines. C. M. Atkinson and J. C. E. Simpson. Chem Soc J p232-7 F '47

Cinnolines; the preparation of some 6 : 7- and 7 : 8-disubstituted-4-hydroxycinnolines. J. R. Keneford and J. C. E. Simpson. Chem Soc J p227-32 F '47

Synthetic antimalarials; cinnolines; synthesis and antimalarial action of 4-aminoalkylaminocinnolines. J. R. Keneford and J. C. E. Simpson. Chem Soc J p917-20 Jl '47

CIRCUIT breakers, Electric. See Electric circuit breakers

CIRCUS
Big top battle. Bsns W p24+ Je 14 '47
Circus; next-greatest show on earth is the feat of transporting the Ringling troupe. il diag Fortune 36:106-13+ Jl '47
Ringling wrangling; three sets of heirs squabble for control of the circus. Fortune 36:114-15+ Jl '47

Fires and fire protection
Ringling circus paying $4,000,000 fire claims. Weekly Underw 156:32 Ja 4 '47

CIRRHOSIS of the liver. See Liver—Diseases

CITIES and towns
Moving the masses in the city of tomorrow. H. N. Oliphant. Pub Util 39:399-405, 473-9 Mr 27-Ap 10 '47

See also
City planning
Market areas
Municipal bonds and other headings beginning Municipal

Cleanliness
Clean up, paint up, fix up; a good business builder. J. Judkins. Dom Comm 35:3-5 Ap '47

Industries
Cities take inventory. il Bsns W p21-2 Ja 4 '47
Industry-town planning; a protection for people, business and investments. J. J. Watson. il Trusts & Estates 84:277-80 Mr '47
Selective selling averts city's post-war slump; Huntsville, Ala. advertises. Sales Management 58:81 Mr 1 '47
Southern lure; small towns plan for stable economic future. Bsns W p37 Ja 25 '47

United States
Sales and advertising experts pick the best test markets of the country in three population groups for a 25-cent mass item to be distributed nationally through drug, variety and department stores. Sales Management 59:108+ S 1 '47

CITIES and towns, Company. See Company towns

CITIES service company
Amends plan. Comm & Fin Chr 165:1068, 1313 F 24, Mr 10 '47
Annual report. Comm & Fin Chr 165:2409 My 5 '47
Files plan to retire preferred stocks and dividend arrearages through debenture issue; to retire outstanding debt. Comm & Fin Chr 164:2828 D 2 '46
Investment audit of Cities Service. G. L. Merton. Mag of Wall St 81:82-4+ O 25 '47
Public utility securities. Comm & Fin Chr 164:3016 D 12 '46
Role of seer forced on Cities Service. Barron's 27:7 F 24 '47
To end utility operation. Barron's 26:6 D 9 '46

CITIZENS radio service
Citizens' band opening nears; individuals will be able to use small radio receiver-transmitters for private purposes. Radio N 38: 107 S '47
Sponsors Citizens radio project; program of research, underwritten by publishers of Electronics, to develop equipment and test potentialities. il Electronics 20:80-3 N '47
Transmitter for the Citizens radio service. W. C. Hollis. il diags Electronics 20: 84-9 N '47

CITIZENSHIP
Address to the graduates; leaders need to resolve difficulties through objective, analytical thinking. K. T. Compton. Tech R 49:531-2+ Jl '47
Women as citizens. K. H. Stone. Ann Am Acad 251:79-86 My '47

CITRAL
Isomeric citrylideneacetic acids. E. E. Royals. bibliog Am Chem Soc J 69:841-4 Ap '47

CITRIC acid
Citric acid fermentation of beet molasses; abstract. P. Gerhardt and others. Food Ind 19:1296+ S '47
Citric acid in saliva. I. Zipkin. bibliog Science 106:343 O 10 '47
Improvement of the citric-acid solubility of basic open-hearth slags containing fluorspar. T. F. Pearson. Iron & Steel Inst J 152:441-53; Discussion. 453-6 no 2 '45

Manufacture
Production of citric acid in submerged culture. E. O. Karow and S. A. Waksman. bibliog Ind & Eng Chem 39:821-5 Jl '47

CITRINE, Walter McLennan, 1887-
Portrait. Bsns W p92 N 16 '46
Sketch. por Electrician 139:602 Ag 29 '47
Who is Lord Citrine? por Elec R (Lond) 141: 95 Jl 18 '47

CITRININ
Citrinin as an antibiotic. Yu Wang and others. bibliog Science 106:291-2 S 26 '47

CITRONELLA oil
Ceylon citronella industry reported. Oil Paint & Drug Rep 152:63 Jl 14 '47
Citronella oil duty free decision upheld. Oil Paint & Drug Rep 150:7+ N 11 '46
Citronella oil exports, Ceylon; citronella cultivation, Guatemala. For Comm W 28:24-5 Jl 12 '47

CITRONELLAL
Isomer of citronellal. C. C. Price and S. L. Meisel. bibliog Am Chem Soc J 69:1497-8 Je '47

CITRUS fruit
Citrus at new crossroads. S. Parker. Food Ind 19:1358+ O '47
Citrus faces gloomy outlook. il Bsns W p30+ D 28 '46
Citrus-fruit production, Lebanon. For Comm W 26:37 Ja 25 '47
Consumption of citrus fruits is on the increase. A. J. Mullen. il Dom Comm 35:67-72 Mr '47
Economic and housing survey of the Orlando, Florida, metropolitan region. H. Hoyt. map J Land & Pub Util Econ 23:219-27 My '47
How Henry Cobbs used advertising to turn $10 into $2,000,000; markets citrus fruit by mail, through own stores and through independent retail stores. J. A. Murphy. il Adv & Sell 40:35+ F '47
Spain's citrus-fruit crops and markets. For Comm W 29:21 N 1 '47

See also
Grapefruit
Oranges

Analysis
Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47

By-products
Acidic isolation of low-ester pectinic acids. R. M. McCready and others. bibliog Ind & Eng Chem 38:1254-6 D '46
Industrial wastes; citrus canning industry. R. R. McNary. bibliog flow sheet Ind & Eng Chem 39:625-7 My '47

CITRUS fruit juices

Analysis
Rapid dissolved oxygen test for fresh citrus juices. J. R. Lindquist. bibliog il diag Food Ind 19:182-3+ F '47

CITRUS seed oil
Citrus seed oil produced in Florida. Chem & Eng N 25:2908 O 6 '47

CITRYLIDENEACETIC acid
Isomeric citrylideneacetic acids. E. E. Royals. bibliog Am Chem Soc J 69:841-4 Ap '47

CITY bank farmers trust company
Celebrates 125th anniversary. Trusts & Estates 84:336 Mr '47

CITY directories. See Directories

CITY improvement. See Municipal improvement

CITY planning
Air transport and the London plan. Engineering 162:405 O 25 '46
American versus German city planning. M. Wagner. J Land & Pub Util Econ 22:321-38 N '46; Critique. B. J. Hovde. 23:239-43 Ag '47

CITY planning—*Continued*
Annie doesn't live here any more; gas sales departments can influence and help arrest trend toward decentralization. B. T. Franck. Am Gas Assn Mo 29:210-11+ My '47
Britain's planned towns to change face of nation. W. H. Millgate. Barron's 27:13 Ap 28 '47
Chicago mile; realtors plan $200 million more glamor for glittering Michigan avenue. il Arch Forum 86:12-13 My '47
Cities take inventory. il Bsns W p21-2 Ja 4 '47
City planners and business leaders must guide communities' economic growth. N. C. Farr. il Civil Eng 17:262-4 My '47
City planning problems concern officials. Eng N 138:710 Ap 24 '47
District heating in relation to town and country planning. W. G. Holford. Gas J (Lond) 249:35-6 Ja 1 '47
Express highway planning in metropolitan areas. J. Barnett. il maps Am Soc C E Proc 72:287-305 Mr '46; Discussion. 72:722-4, 1057-69, 1247-70; 73:533-40 My, S, N '46, Ap '47
Extensive street improvements planned for Montreal. C. E. Campeau. il maps plans Roads & Bridges 85:78-82+ O '47
Flushing $50,000,000 retail center. il maps plans Arch Forum 85:100-5 N '46
Focus for urban planning. M. C. Branch, jr. J Land & Pub Util Econ 23:228-30 My '47
Giant show; architect Stonorov makes Philadelphia city plan come alive. il Arch Forum 87:12 O '47
Greater London is planned. map Eng N 139: 34-5 Jl 10 '47
Guide for development of Kansas City provided by new master plan. Eng N 137:668 N 14 '46
Highway improvement advocated by Toronto planning board. plans diag Roads & Bridges 85:36-9+ Ja '47
Highway improvements included in Etobicoke's 30-year plan. E. G. Faludi. il maps Roads & Bridges 85:76-9+ Ap '47
Importance of a master plan. J. W. Follin. Roads & Bridges 85:111 Ja '47
Industry-town planning; a protection for people, business and investments. J. J. Watson. il Trusts & Estates 84:277-80 Mr '47
Lidice reborn. il plans Arch Forum 85:12 N '46
London planning proposals. Engineering 163: 258 Ap 4 '47; Engineer 183:273 Mr 28 '47
Magnificent mile for Windy city; city plan proposal for upper Michigan avenue, Chicago. il Arch Rec 101:96-9 Je '47
Major thoroughfare plan for Greater Winnipeg. il plans diags Roads & Bridges 85: 64-7+ F; 146+ Ap '47
Organized industrial districts with special reference to the Chicago area. R. L. Wrigley, jr. maps J Land & Pub Util Econ 23:180-98 My '47
Philadelphia story; better Philadelphia exhibition to sell city planning. R. A. Protheroe. il Sales Management 59:118+ O 15 '47
Planners' opportunity; Town and country planning bill. Economist 152:701-2 My 10 '47
Planners' progress; financial district of London; illustrations with text. Arch Forum 87:15-16 Ag '47
Planning for more flexible land use. R. C. Weaver. J Land & Pub Util Econ 23:29-41 F '47
Regina and Stratford have 30-year program of civic development. E. G. Faludi. il plans Roads & Bridges 84:66-9+ N '46
Revolution in land; Britain's Town and country planning bill. il map plan Arch Forum 86:14-16 F '47
Riverfront development in Cincinnati. il plan Arch Forum 86:13 Ja '47
Riverfront redevelopment for Cincinnati; proposed metropolitan master plan. il diags Arch Rec 101:66-75 F '47
Rye, New York, plans, remodels its business district. il diags Am Bld 68:68-71 N '46
Street improvements included in 30-year plan for development of Peterborough. il map plans Roads & Bridges 85:48-52+ Ja '47
They planned it that way; Zlin Czechoslovakia. J. Pokorny and E. Hird. il plans Arch Rec 102:68-75 Ag '47
Town and country planning; how the new bill affects statutory undertakers. L. F. Stemp. Elec R (Lond) 140:317-20 F 14 '47
Two important civic improvements approved by Toronto ratepayers; housing redevelopment and construction of civic square. plans Roads & Bridges 85:44-5+ Ja '47
What kind of group design? possibilities and preventions. A. C. Holden. il plans Arch Rec 101:94-8 Mr '47

See also
Building laws and regulations
Business districts
Housing
Industrial districts
Rapid transit
Regional planning
Shopping centers
Street traffic
Streets
Suburban development

Climatic aspects
Microclimatology; facts for architects, realtors and city planners on climatic conditions at the breathing line. il Arch Forum 86:114-19 Mr '47

CIVETONE
Biological derivation of civetone and muscone. R. W. Moncrieff. Can Chem & Proces Ind 31:123-4 F '47

CIVIC centers. See Municipal centers

CIVIC improvement. See Municipal improvement

CIVIL aeronautics administration
CAA and airlines versus GCA. W. Kroger. il diags Air Transport 5:30-3+ Mr '47
CAA budget cut $5,613,306 for 1948. Aviation W 47:15 Jl 14 '47
CAA is reversing stand on red tape. Aviation N 6:19 N 18 '46
Organization chart. Aviation W 47:45 S 15 '47

CIVIL engineering
American society of civil engineers 94th annual meeting, New York, Jan. 15-17. Eng N 138:95-9 Ja 23 '47; Civil Eng 17: 92-9 F '47
American society of civil engineers spring meeting, Phoenix, April 23-24. Civil Eng 17:235-9 My '47; Concrete 55:20+ My '47
Civil engineering in 1946. il map Engineer 183:27-9, supp 7, 49-51, 64-7 Ja 3-17 '47
Engineering opportunities in soil conservation. A. W. Emerson. il Eng N 138:1014-17 Je 26 '47
Garrison preconstruction contracts inaugurate 75,000,000-cu. yd. embankment project. il Civil Eng 17:240-3 My '47
Geology in civil engineering. R. Rhoades. Engineering 163:329, 377-8 Ap 25, My 9 '47
Modern airports depend on technical skill of engineer for safety, adequacy and economy. A. J. Ryan. il Civil Eng 17:246-9 My '47
Plant organisation and maintenance for civil engineering contractors. H. O. Parrack. Engineering 160:430, 456-7, 465 N 23-D 7 '45; Same. plan Inst Mech Eng J & Proc 154:Proc 285-94; Discussion. 294-302 D '46; Engineer 180:395-7 N 16 '45
State bureaus of maps and surveys aid planning of engineering projects; Ohio coordinate system. O. J. Marshall and M. T. Jones. il map Civil Eng 17:198-201 Ap '47
Survey and forecast, 1946-1947. il Eng N 138:263-74 F 20 '47

See also
Airports
Airways
Aqueducts
Blasting
Bridges
Building
Cofferdams
Dams
Drainage
Drilling and boring (earth and rocks)
Dry docks
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Flood control
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Hydraulic engineering
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Moving of structures
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CIVIL engineering—See also—*Continued*
Sanitary engineering
Sewerage
Soil mechanics
Steel construction
Strains and stresses
Strength of materials
Structural engineering
Surveying
Tunnels and tunneling
Water supply engineering

Bibliography

Current periodical literature. Published in monthly numbers of Civil engineering
Engineering societies library compiles list of important books for civil engineers. Civil Eng 17:162 Mr '47

Study and teaching

Construction industry needs specially trained civil engineers. H. W. Richardson. il Civil Eng 17:74-6 F '47
Hydrographic surveying in the civil engineering curriculum. M. O. Schmidt. J Eng Educ 37:727-9 My '47
Mathematics in civil engineering. H. E. Wessman. J Eng Educ 37:378-82 Ja '47
Progress reports of the Society's professional committee on engineering education for 1944 and 1945. Am Soc C E Proc 72:375-96 Mr '46; Discussion. 72:913-16, 1023-8; 73:55-8 Je-S '46, Ja '47
Survey shows civil engineer students form 11 percent of total enrollment. Eng N 138: 418-19 Mr 13 '47

CIVIL engineers
Civil engineering; a profession. G. A. Sampson. Boston Soc C E J 34:27-31 Ap '47
Construction industry needs specially trained civil engineers. H. W. Richardson. il Civil Eng 17:74-6 F '47

CIVIL rights
Civil rights group set up by President. Comm & Fin Chr 165:583 Ja 27 '47

CIVIL service
Civil service comes to Alexandria. D. P. Moriarty. Water & Sewage Works 94:104 Mr '47
Civil service employment. R. Weller. Mech Eng 69:865-6 O '47

See also
Government employees

Examinations

Exam for sheet metal workers; aid for those contemplating entering competitive civil service examinations. C. McGraw. Sheet Metal Worker 38:59-60+ Ag '47

Great Britain

Demand for juveniles. Economist 152:139 Ja 25 '47
Public or private service. Economist 151: 572-3, 613-14, 703-4 O 12-19, N 2 '46
Size of the civil service. Economist 151:1041 D 28 '46

CIVIL service commission

Advisory committee on scientific personnel

Science training group in the Washington area. P. N. Powers. Science 104:477-8 N 22 '46
U.S. Civil service boards of expert examiners. M. H. Trytten. Science 105:359 Ap 4 '47

CIVILIAN production administration. See United States—Civilian production administration

CIVILIZATION
Diversity and progress. H. B. Phillips. Tech R 49:220+ F '47
Human relations in industrial civilization. P. Meadows. il Tech R 49:341-4+ Ap '47

CLAD steel. See Steel, Clad

CLAIMS

See also
Damages
Insurance—Adjustment of claims
Railroads—Claims
Release (law)
Shipping—Claims
World war, 1939-1945—Claims

CLAIMS, Freight. See Freight and freightage—Claims

CLAISEN acylation. See Acylation

CLAISEN condensation. See Condensation, Chemical

CLAMPS
Chart for dimensioning strap clamps; reference book sheet. P. H. Winter. Am Mach 91:167 F 13 '47
Graded block sets aid clamping buildups. S. Framurz. diags Am Mach 91:146 Mr 13 '47
How to palletize produce without using pallets; new clamp-lift device handles boxes of fruits and vegetables. il Food Ind 19: 1202-3 S '47
Pneumatic clamps for stack cutting. il Ry Mech Eng 121:27-8 Ja '47
Serrated cam clamps light castings in multiple drill jig. F. Peragine. diag Am Mach 91:102-3 Ja 2 '47
Tunnel clamp for use in controlling infusion rates. S. E. Bradley. diags Science 105: 214-15 F 21 '47
Universal clamp extends surface gage applications. H. Tate. diags Am Mach 91:139 N 6 '47
Why Buick uses clamp toolholders for carbide shapes. R. Le Grand. il diags Am Mach 91: 90-3 O 9 '47

CLARIFIERS
Dual clarifier and filter structures simplify high-rate treatment process. A. J. Fischer. flow sheet il Eng N 139:64-6 Jl 10 '47

CLARINET
Analyses of the tones of wooden and metal clarinets. S. E. Parker. bibliog il Acoustical Soc Am J 19:415-19 My '47
Clarinet of machined extruded phenolic. il Mod Plastics 25:110-11 S '47
From music to plastics; saxophone and clarinet parts, other products made by Arnold Brilhart, ltd. A. S. Park. il Comp Air Mag 52:167-73 Jl '47

CLARK, Anson
Who was Anson Clark? disappearance of early American electrical inventor raises historical search; plea for information. C. Perry. Edison Elec Inst Bul 15:343 S '47

CLARK, Bruce Lawrence, 1880-1945
Memorial. C. L. Camp. por(pl 5) Geol Soc Proc 1946:149-53 bibliog(p151-3) Jl '47

CLARK, Charles Patton, 1879-
Sketch. East Underw 48:6 Ag 8 '47

CLARK, George H.
New president of Society of the plastics industry. por Bsns W p 16 My 17 '47

CLARK Hill dam. See Hydroelectric plants—Georgia

CLARKSVILLE, Tennessee
Bill Bailey and the four pillars; Clarksville cooperates in making motion picture. il Banking 39:56-7 D '46

CLARY multiplier corporation
Debentures offered. Comm & Fin Chr 166:368 Jl 28 '47

CLASSIFICATION
A.E.S. library takes the plunge; Agricultural experiment station library, Purdue university. C. C. Campbell. Special Lib 37:315-17 D '46
Book-notation for special libraries. K. Larsen. J Doc 3:20-3 Je '47
Classification of patents. N. T. Ball. Special Lib 38:11-16 Ja '47
Classifying chemical market data. G. D. Little and A. J. Thoroughgood. bibliog il Chem Ind 61:58-9 Jl '47
Manual of book classification and display for public libraries. E. A. Savage. 240p 12s 6d George Allen & Unwin, Ruskin House, 40 Museum st, London, W.C.1 '46
Round table discussion; indexing and classifying results of chemical research in relation to punched-card investigations. J. W. Perry and others. J Chem Educ 24: 71-4 F '47
Tabulation of librarianship; classified tables for the arrangement of all material relating to library economy. J. D. Stewart. 195p Grafton & co, Coptic house, 51 Great Russell st, London, W.C. 1 '47

CLASSIFIED advertisements. See Advertisements, Classified

CLASSIFIED catalogs. See Catalogs, Classified

CLASSIFIERS
Centrifugal ball-mill classifier. C. E. Wuensch. il diag Min Cong J 33:22-5+ S '47

CLASSIFIERS—*Continued*
Fourteen classifiers on sand dredge. il diags Rock Prod 49:64-5+ N '46
Recent progress in sand classification. N. C. Rockwood. il diags Rock Prod 50:100-4+ Je '47
Sand separation; unique method of adjusting weir length increases capacity. N. C. Rockwood. diags Rock Prod 50:90-1 S '47

CLASSROOMS
Classroom fields of vision. A. S. Turner and A. A. Brainerd. bibliog il plans Illum Eng 42:488-99; Discussion. 499-502 Ap '47
Integrated lighting for classrooms. R. L. Biesele, jr. bibliog il plans diags Illum Eng 41:805-25; Discussion. 825-7 D '46

CLAVATOL
Structure of clavatol, a metabolic product of aspergillus clavatus. C. H. Hassall and A. R. Todd. Chem Soc J p611-13 My '47

CLAY, Lucius du Bignon, 1897-
Deputy military governor of the U.S. zone in Germany. por(cover) Bsns W p8 D 28 '46

CLAY
Acylation studies in the thiophene and furan series; natural and synthetic silica-metal oxide catalysts. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1014-16 My '47
Aluminum from clay; hydrochloric-acid extraction process and alkaline extraction. flow sheets Mech Eng 69:600-2 Jl '47
Aluminum-silicon alloys by electrothermal reduction of clay with coke. M. M. Striplin, jr. and W. M. Kelly. bibliog il diags Chem Eng Prog 43:569-78 O '47
Cracking sulfur stocks with natural catalyst. R. C. Davidson. bibliog diags Pet Refiner 26:79-88 S '47
Development of a hydrochloric acid process for the production of alumina from clay. J. I. Hoffman and others. flow sheets diags J Res Nat Bur Stand 37:409-28 D '46; Summary. Iron Age 159:68 Mr 13 '47
Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61: 232-4 Ag '47
Dispersion of coating clays; its relation to the flow properties of clay slips and coating colors. B. K. Asdell. Paper Ind 29:1035-42 O '47
Effect of urea resins on starch clay coating compositions. P. S. Hewett and others. il Paper Tr J 124:45-50 Je 12 '47
Engineer looks at sand problems. E. E. Woodliff. il diag Foundry 75:66-7+ F '47
Extraction of aluminium from clay; hydrochloric-acid process and alkaline process. il diags Engineering 164:265-6, 292-3 S 19-26 '47
Gray clay treating process to reduce gum-forming tendencies of gasoline. flow diag Oil & Gas J 45:170 Mr 22 '47
Low-cost thickener; clay plants of Edgar brothers co. C. D. Frobes. il diag Eng & Min J 148:81-2 S '47
Production of alumina from clay by a modified Pedersen process. T. P. Hignett. bibliog flow sheet il plans diags Ind & Eng Chem 39:1052-60 Ag '47; Correction. 39:1334 O '47
Properties of natural alunitic clays. J. O. Knížek and H. Fetter. bibliog il map Am Cer Soc J 29:308-13 N 1 '46
Reaction of clays with organic cations in producing refractory insulation. R. E. Grim and others. Am Cer Soc J 30:142-5 My 1 '47
Reaction of different clay minerals with some organic cations. R. E. Grim and others. bibliog Am Cer Soc J 30:137-42 My 1 '47
Relation of clay mineralogy to origin and recovery of petroleum. R. E. Grim. bibliog il Am Assn Pet Geologists Bul 31:1491-9 Ag '47
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K. Kelley and others. bibliog U S Bur Mines Tech Pa 688:1-104; pa 20c Supt. of doc. '46

See also
Attapulgite
Bentonite
Bricks
Ceramic industries
Ceramic materials
Fire clay
Foundation soils
Montmorillonite
Pottery
Refractory materials
Soils

Analysis
Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:305, pl 5 O '46
Identification and estimation of the montmorillonite group of minerals, with special reference to soil clays. D. M. C. MacEwan. bibliog Soc Chem Ind J 65:298-304, pl 3-4 O '46
Multiple thermal analyses. J. L. Kulp and P. F. Kerr. diag Science 105:413-14 Ap 18 '47

Deaeration
Solving some of the common problems that occur in de-airing clay. il Brick & Clay Rec 111:62+ Jl '47

Drying
See Clay drying

Moisture content
Effect of exchangeable cations on hydrophilic nature of kaolin and bentonite. A. C. Siefert and E. C. Henry. bibliog il diag Am Cer Soc J 30:37-48 F 1 '47

Testing
Hot-strength characteristics of moulding sands. W. Davies and W. J. Rees. diags Iron & Steel Inst J 152:61-70 no 2 '45; Same abr. Engineering 161:190-2 F 22 '46
Testing of clays for paper machine and brush coating. I. L. Lester and S. C. Lyons. bibliog il Paper Tr J 125:49-55 O 23 '47
Testing of southern clays for lightweight aggregate. T. A. Klinefelter and H. P. Hamlin. bibliog Am Cer Soc Bul 26:119-21 Ap 15 '47

Great Britain
British bonding clays. W. Davies and W. J. Rees. Iron & Steel Inst J 152:117-25 no 2 '45

Tennessee
Clarksburg kaolin area of Carroll county. G. I. Whitlatch and B. Gildersleeve. bibliog map Econ Geol 41:841-50 D '46

Trinidad
Application of the principles of clay chemistry to problems encountered when drilling in Trinidad clays. H. C. H. Darley. bibliog Inst Pet J 33:219-29 Ap '47

CLAY drying
China clay; special technique for drying. C. R. Love. Chem Age (Lond) 55:598-9 N 16 '46

CLAY industries
Cheap oxygen; will it change clay products and refractories industry? Brick & Clay Rec 111:62 O '47

See also
Brick industry and trade
Brickmaking
Ceramics industries
Clay products
Fire brick
Glazes
Pottery
Refractory materials

Germany
British report on the manufacture of heavy clay products in Germany. il Brick & Clay Rec 111:53-4 S '47

CLAY mines and mining
See also
Ocher

CLAY pipe manufacturers, inc., National. See National clay pipe manufacturers, inc.

CLAY products
Comment on structural clay products industry. M. W. Blair. Am Cer Soc Bul 26:191 Je 15 '47

See also
Brickmaking
Ceramics
Enamel and enameling
Fire brick
Pottery
Stoneware
Tiles

CLAY products—*Continued*

Manufacture

British report on the manufacture of heavy clay products in Germany. il Brick & Clay Rec 111:53-4 S '47

Predicting temperature-time curve for the burning of ceramic products. P. Munier. Brick & Clay Rec 111:58+ Ag; 60+ S '47

System for scheduling and controlling production. S. J. McDowell. Am Cer Soc Bul 25:468-71 D 15 '46

CLAY products plants

Cloud Ceramics in operation. Brick & Clay Rec 109:33 D '46

Colombia sewer pipe plant has electrically controlled presses. il Brick & Clay Rec 111: 40 S '47

Northwestern terra cotta corp. improving plant for straight-line production. il Brick & Clay Rec 110:58+ My '47

Producing more uniform products with automatic controls at lower cost. il diags Cer Ind 49:48-50 S '47

Two ceramic plants keep busy with Nancy Ann dolls. il Cer Ind 49:102+ Jl '47

Employees

Investment in incentive plan yields one plant 455%; saves another $68,500. P. C. Laborde. il Brick & Clay Rec 110:48+ F '47

Equipment

Metropolitan makes 40 tons modular tile daily in new tunnel kiln. il Brick & Clay Rec 110:57-8 Mr '47

Reducing metal wear with abrasion-resisting castings. J. S. Vanick. il Am Cer Soc Bul 26:109-16 Ap 15 '47

Shop hints; efficient operating methods, new and improved equipment; illustrations with text. Brick & Clay Rec 109:50-1 N; 40-1 D '46; 110:50-1 Ja; 40-1 F; 50-1 Mr; 50-1 Ap; 46-7 My; 46-7 Je; 111:44-5 Jl; 42-3 Ag; 44-5 S; 44-5 O; 50-1 N '47

Management

Letters to a new superintendent. P. S. Trowbridge. Brick & Clay Rec 111:47-8 Jl; 45+ Ag; 50+ S; 49+ O; 52-3 N '47

What's ahead for clay products plants; confusion, or profits and lower costs? C. W. Risberg. il Brick & Clay Rec 109:38-9 D '46

CLAYTON, Henry Helm, 1861-1946

Sketch. S. P. Fergusson and C. F. Brooks. Science 105:248-9 Mr 7 '47

CLEAN-up campaigns. See Cities and towns—Cleanliness

CLEANERS' shops

Employees

Health problems in laundry industry. H F. Wilson. Safety Eng 94:80-1 O '47

CLEANING

Cleaning and polishing cloths. M. A. Lesser. bibliog Soap & San Chem 23:129-31+ F '47

Mothproofing with DDT during drycleaning. A. C. Smith. il diags Soap & San Chem 23: 122-5 My '47

Studies on detergent power. J. P. Sisley and P. J. Wood. bibliog(53 ref) diags Am Dyestuff Rep 36:457-65 Ag 25 '47

See also

Boiler cleaning
Car cleaning
Coal cleaning
Degreasing
Dishwashing
Dyes and dyeing
Floor cleaning
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Soap

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Peas
Pipes
Silverware
Spinning machinery
Steam turbines

CLEANING and dye house workers, International association of. See International association of cleaning and dye house workers

CLEANING compositions

Alkyl aryl sulfonates. L. H. Flett. il Soap & San Chem 22:46-8+ D '46

Breeze and Tide; two new packaged detergents. Chem Ind 60:942 Je '47

Canadian soap industry; statistical study of soaps, washing compounds, and cleaning preparations, 1944-1945. Soap & San Chem 23:46-9 O '47

Cation-active agents. J. Ripert and J. Sisley. Soap & San Chem 23:145 Mr '47

Cryoscopic evidence for micellar association in aqueous solutions of non-ionic detergents. E. Gonick and J. W. McBain. bibliog Am Chem Soc J 69:334-6 F '47

Detergents and instruments in German laundries. Chem Age (Lond) 56:606 My 10 '47

Development of Mersol. Soap & San Chem 23: 81+ Ap '47

Discuss soaps, detergents and metal cleaners at New York A.C.S. meeting; abstracts of papers. Soap & San Chem 23:41-3+ O '47

Dishwashing detergents; formulas for detergents used in manual washing, in mechanical dishwashers, and in sanitizing dishes. M. A. Lesser. bibliog Soap & San Chem 23:43-6+ Je '47

Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47

Evaluation of synthetic washing agents. Rayon 28:563 O '47

Floor soaps and cleaners. M. A. Lesser. bibliog Soap & San Chem 23:36-9+ Jl '47

Formulation of spot cleaners. I. Reich. il Chem Ind 60:423-4 Mr '47

Housewife's library; carrier packs for cleaning fluids. il Mod Packaging 20:128-9 N '46

How Rumford pre-tests new home cleaner; Noctil. il Sales Management 57:101 D 1 '46

How to clean metals. H. S. Wharen. diags Am Mach 91:111-17 N 6 '47

Improved street sanitation with a synthetic detergent; Nacconol NR. O. M. Morgan. il Water & Sewage 85:66-8+ O '47

Mersolate detergents; their production and blending with soaps. H. Groninger. Soap & San Chem 23:40-2+ Jl '47

Modern aids to cleanliness; industrial, public and personal. O. M. Morgan. il Am Dyestuff Rep 36:601-8 O 20 '47

New industrial detergent; Oronite detergent, new surface active agent of the alkyl aryl sulfonate type. Chem Ind 59:858 N '46

New specialties exploit chemical research; household cleaners. D. A. Neidig. Chem Ind 61:398-9 S '47

New specialties exploit chemical research; industrial cleaners. D. Price. Chem Ind 61: 399-400 S '47

New textile detergent; Clavodene. Soap & San Chem 23:71 Ja '47

No soap; synthetic detergents. Fortune 36: 148 O '47

Non-ionic detergents as association colloids giving long X-ray spacings in aqueous solution. J. W. McBain and S. S. Marsden, jr. J Chem Phys 15:211-12 Ap '47

Outlook for synthetic detergents; abstract. F. D. Snell. Chem Eng 54:266+ Ap '47

Propose new federal specs for metal cleaners. Soap & San Chem 23:77 Je '47

Propose new specification for dishwashing compound. Soap & San Chem 23:36-7 My '47

Recent trends in glass cleaner formulations and markets. D. A. Neidig. il Chem Ind 60:53-5 Ja '47

Soap plant observer; synthetic detergent products. Soap & San Chem 23:44-5 Ag '47

Soapless soaps clean up in industrial uses. S. G. Ebert. Barron's 27:7 Ja 13 '47

Soaps face a fight; use of synthetic detergents rising. il Bsns W p60+ S 27 '47

Solubilization in textile processing. J. W. Creely. bibliog diags Am Dyestuff Rep 36: 411-12+ Jl 28 '47

Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47

Studies on detergent power. J. P. Sisley and P. J. Wood. bibliog(53 ref) diags Am Dyestuff Rep 36:457-65 Ag 25 '47

Study in detergency; presented by the Northern New England section. Am Dyestuff Rep 36:91-6 F 24 '47

Superlative synthetics. il Chem Ind 61:33-4 Jl '47

Synthetic detergents. G. L. Parkhurst. Soap & San Chem 23:37-8 Mr '47

CLEANING compositions—*Continued*
Synthetic detergents and surface activity. C. T. Snell. J Chem Educ 24:505-11 O '47
Synthetic detergents; what are soapers doing and planning to do about them? Soap & San Chem 23:45-7+ Ap '47
Unusual fatty acids, Lauryma. Soap & San Chem 23:73 Jl '47
Washroom sanitation specialties. M. A. Lesser. bibliog il Soap & San Chem 23:139+ O '47
What are these new soapless soaps? H. Manchester. il Adv & Sell 39:62+ D '46
Why Atlas Paper gives shirt sleeve demonstration before each sale. H. A. Finn. il Sales Management 57:78-80 N 20 '46

See also
Polishing materials
Shampoos

Advertising

For dad's neckties. Sales Management 58: 90 Mr 15 '47
How Gray-Mills promotion turns prospects into customers. R. Hollis. il Sales Management 57:91-2+ N 10 '46
New product introduced despite small budget; cooperative newspaper and direct-mail advertising; Kleen Flush. D. Markstein. Ptr Ink 218:74 F 21 '47

Manufacture

Comments on sanitary supply plant layout; Grace-Lee products company. E. G. Thomssen. il Soap & San Chem 23:118-21 Jl '47

Standards

New federal spec for painted surface cleaner. Soap & San Chem 23:43 Ag '47

Testing

Detergency comparator. Am Dyestuff Rep 36: 203-4 Ap 21 '47
Evaluating dishwashing detergents. W. D. Tiedman. il Soap & San Chem 23:48-50+ Ap '47
Evaluation of synthetic detergents. Soap & San Chem 23:69+ My '47
Improved apparatus and method for measuring dispersion power. M. Z. Poliakoff. il Anal Chem 19:140-1 F '47
Simple laboratory method for evaluation of detergency. A. J. Kelly and D. H. Gunther. il diag Am Dyestuff Rep 36:455-6 Ag 11 '47
Synthetic detergent tests. Soap & San Chem. 23:94 F '47

CLEANING industry
Sales channels and costs in the dry cleaning industry. L. H. Mantell. Dom Comm 35: 35-8 Jl '47
Shortcomings of the dyeing industry as seen by the launderer, dry cleaner and garment dyer. S. C. Turner. Soc Dyers & Col J 63: 105-6 Ap '47

Advertising

I learned that single-theme copy sells personal service. M. Hessman. Ptr Ink 218: 60+ F 14 '47

Insurance requirements

Cleaners' service charge opined illegal in California. Nat Underw 51:10 My 1 '47

Labor conditions

Union agreements; power laundries, cleaning and dyeing. C. Sorenson. Mo Labor R 65: 158-66 Ag '47

CLEANING machinery
Dry cleaning with synthetic solvents. L Gordon. il Nat Safety N 56:98-9+ O '47
Heavy-duty cleaner vacuums, blows, dries, and sprays. il Sci Am 177:175 O '47
Wanted; cleaning and polishing machine. F. H. Lee, jr. il Air Transport 5:62-3 Mr '47

See also
Bottle cleaning machines
Dishwashing machines
Floor cleaning machines
Washing machines

CLEANLINESS

See also
Cities and towns—Cleanliness
Factories—Cleanliness
Foundries—Cleanliness
Gasoline service stations—Cleanliness

CLEARANCE of bridges. See Bridges—Clearance

CLEARING houses
22 more clearing houses return items the following day. Bankers Mo 64:220-1 My '47

See also
Bank clearings

CLEARING industrial district. See Chicago—Clearing industrial district

CLEARING machine corporation
Better stampings, bigger sales. il Bsns W p62+ Je 28 '47

CLEARING of land
Diesel willow-dozing in Missouri; machine cuts down willows on farm land. J. L. Simpson. il Diesel Power 25:44+ O '47

CLEARY, Michael J. 1877-1947
Sketch. por East Underw 48:7+ F 28 '47; Nat Underw (Life ed) 51:1+ F 28 '47
Sketch. C. Axman. por East Underw 47:3-4+ D 13 '46

CLERGY

See also
Chaplains, Industrial
Preaching

Pensions

See also
Rabbis—Pensions

CLERICAL workers. See Office workers

CLEVELAND
Cleveland market data handbook. H. W. Green. (1947 ed) 77p pa $2.50 Real property inventory of metropolitan Cleveland, 1001 Huron rd, Cleveland 15 '47

See also
Real estate business—Cleveland

Industries

Cleveland area absorbs war-born plants; builds others. il Steel 120:78-9 Mr 17 '47
Cleveland: magnet for industry. Bsns W p28+ Ja 25 '47

Rapid transit

Cleveland; four years, four months, and four days of municipal ownership. Mass Transportation 42:483-5 N '46

Water supply

To meet growing industrial demands Cleveland expands water system. Eng N 139:52 Jl 10 '47

CLEVELAND-CLIFFS iron company
Fight over Cliffs. Bsns W p17 Ja 4 '47
Merger effective. Comm & Fin Chr 166:155-6 Jl 14 '47

CLEVELAND electric illuminating company
Common shares offered. Comm & Fin Chr 166:156 Jl 14 '47
New customers for Cleveland Electric. Barron's 27:27 Mr 3 '47
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:215-16 My 24 '47
Otis victory? Cleveland Electric puts off financing deal. Bsns W p86+ O 25 '47
Public utility securities. Comm & Fin Chr 165:1252 Mr 6 '47
Will recover about $4,000,000 impounded in rate suits. Comm & Fin Chr 165:2795-6 My 26 '47

CLEVELAND security traders association
Annual dinner, 11th, March 28th; portraits. Comm & Fin Chr 165:1810-11 Ap 3 '47

CLEVELAND terminals building company
Vans' real estate reorganized; main assets are downtown Cleveland buildings. il Bsns W p80+ O 18 '47

CLIFF, Vincent D. 1866-
Sketch. por East Underw 47:38 D 27 '46

CLIFFS corporation
Cliffs fight settled. Bsns W p19-20 Mr 1 '47
Cliffs merger set if stockholders approve. Bsns W p68 My 3 '47
Fight over Cliffs. Bsns W p17 Ja 4 '47
Merger to improve earnings for Cliffs corp. common. Barron's 27:32 Mr 10 '47

CLIMATE
Climate; the mysterious X in your regional sales potentials? J. H. White. map Sales Management 59:122-4+ O 15 '47
Use of climatological data in heating and cooling design. H. E. Landsberg. Heating-Piping 19:121-5 S '47

See also
Atmospheric temperature

CLIMATOLOGY
Weather analysis; aid to business planning; applied climatology. W. C. Jacobs. il Dun's R 55:15-18 Mr '47

See also
Microclimatology

CLIMAX molybdenum company
New moly uses sought to offset export sales drop. Barron's 27:34 Jl 21 '47

CLINIC trains. See Railroads—Clinic trains

CLINICS
Suburban clinic in Seattle; Crown Hill medical and dental clinic. il plan diags Arch Forum 86:104-5 Ap '47

CLINICS, Dental. See Dental clinics

CLINICS, Industrial
Wisconsin in-plant clinics. P. A. Brehm. Ind Med 16:376+ Jl '47

CLINKERS
Methods suggested for preventing formation of clinkers. Consumers Res Bul 19:10-11 Ap '47

CLINKERS, Coal. See Coal ash

CLINTON laboratories. See Clinton national laboratories

CLINTON national laboratory
Biological research of Clinton laboratories. Chem & Eng N 24:3060 N 25 '46
Clinton goes back to U of C. il Bsns W p46+ O 4 '47; Chem & Eng N 25:2908 O 6 '47; Elec World News ed 128:13 O 4 '47; Science 106:365-6 O 17 '47; Power Pl Eng 51:108-9 N '47

CLIPPERS, Hedge. See Hedge clippers

CLOCK paradox. See Relativity (physics)

CLOCKS
Market for clocks in Tanganyika. For Comm W 29:24-5 O 25 '47
Monthly or monthly average clock and watch production and consumption, United Kingdom, 1935, 1943-1946. For Comm W 26:26-7 Mr 8 '47
New beauty in clocks through plastics. il Mod Plastics 24:108-9 F '47
Sales of clocks and watches nearly half billion dollars. S. Y. Scrogin. il Dom Comm 35: 60-4 S '47

Manufacture

Bench shapers are versatile tools for broaching and knurling; Telechron, inc. il diag Am Mach 91:106-7 Ag 14 '47
Color makes the clock tick! transforming idle plant into efficient productive unit; William L. Gilbert clock corp, H. E. Cleveland. Safety Eng 93:15+ My '47

Rating

Alarm clocks (mechanical). il Consumers Res Bul 20:16-17 Ag '47

CLOCKS, Electric
Automatic control of synchronous clocks. Engineer 184:157 Ag 15 '47

Rating

Some post-war clocks. il Consumers Res Bul 20:13-16 Ag '47

CLOPAY corporation
Stock offered. Comm & Fin Chr 165:3392 Je 30 '47

CLOSE corporations. See Corporations—Close corporations

CLOSED shops. See Open and closed shop

CLOSSET, Andre
Light for Belgium; U.S. method sells fluorescent lights. por Bsns W p86+ Ag 30 '47

CLOSURES (containers)
Reseal can for dried food products and drugs. il Mod Packaging 20:99 Ap '47
Stripping threaded molded closures; oil can closures. il Mod Plastics 24:228-32 Ap '47
Thermoplastics in tin cans. il Mod Plastics 24:188+ Ag '47

CLOTHES dryers
Hamilton clothes dryer. il Am Gas J 167:43 Ag '47
How Philadelphia gas works assisted distributor in first promotion. il Gas Age 98:13+ D 26 '46

CLOTHES hangers
Baby hangers; package has plenty of gift appeal. il Mod Packaging 20:101 F '47

CLOTHESPINS, Plastic
Wartime clothespins banish washday blues. il Sales Management 57:94-5 N 20 '46

CLOTHING, Protective
Labor-relations viewpoint on personal protection for the worker. W. J. Niederaur. il Safety Eng 93:18-19+ Je '47
Personal protective equipment. E. E. White. il Safety Eng 92:38-41 O '46
Safety clothing. il Nat Safety N 55:64+ Mr '47

See also
Aviators—Clothing
Gloves, Rubber
Hats, Safety
Shoes, Safety

CLOTHING and dress
Physical properties of fibres and textile performances. A. B. D. Cassie. bibliog Textile Inst J 37:P154-67 Jl '46
Why don't advertising men dress better? D. Houghton. Ptr Ink 218:148 Ja 24 '47

See also
Aviators—Clothing
Clothing, Protective
Fashion
Garters
Hosiery
Neckties
Textile fabrics

Children

Nylon's possibilities in children's wear. P. D. Atwood. Rayon 28:492-3 S '47

Hygienic aspects

Loose versus close-fitting clothing for work in tropical heat. C. P. Yaglou and M. N. Rao. J Ind Hygiene 29:140-2 Mr '47
Protective value of clothing. W. H. Rees. bibliog il Textile Inst J 37:P132-53 Jl '46

Prices

Garment prices going up. il Bsns W p46+ D 14 '46

CLOTHING stores
Clothing store in Tulsa, Okla. il plan diags Arch Forum 86:124-5 Ap '47
Cluett, Peabody helps dealers modernize dated stores. E. M. Kelly. il Sales Management 59:42-4 O 1 '47
Miracle (and mecca) on 34th street; new headquarters for Crawford stores in Hotel McAlpin. il plans Arch Rec 102:90-5 Jl '47

See also
Men's stores
Women's apparel shops

CLOTHING trade
Bond decentralizes to beat labor shortage. Bsns W p69 Ja 18 '47
Clothes by mail; McMahon & Cremins distress merchandize at low prices by mail order. Bsns W p34+ S 13 '47
Developments in the textile and apparel industries. L. J. Atkinson. charts Survey of Cur Bsns 27:14-20 My '47
Garment prices going up. il Bsns W p46+ D 14 '46
Is your product hard to merchandise for Christmas? gift certificate for Breier sports jackets. C. S. Leeds. il Ptr Ink 221:44-5 O 24 '47
Kodachrome fashion show jumps gun on market trips. il Sales Management 58:95-6 My 1 '47
Sales outlook for textile clothing; markets are growing in new America; American wool council analyzes effect of population and income shifts. Sales Management 57: 64+ D 1 '46

See also
Dress industry
Fashion
Raincoats
Sportswear

CLOTHING trade—*Continued*

Advertising

California's challenge to Seventh avenue. J. H. Collins. il Sales Management 58:42-4 Ap 1 '47

Design replaces art work; advertising men's apparel in spring campaign of F. Jacobson & sons. il Ptr Ink 218:82 Mr 28 '47

Koret adds new twist to Hollywood fashion tie-ins. il Sales Management 58:76+ Ap 15 '47

Men's clothing manufacturers planning hypoed fall advertising campaigns. N. Kelne. Ptr Ink 220:87 Ag 8 '47

Negative appeal pays in copy for men's clothing. C. A. Lipman. il Ptr Ink 218:36 Ja 3 '47

Sold: 50,000 pieces of ready-to-wear in seven days; Koret of California. E. Gidlow. il Sales Management 59:44-6 O 15 '47

Zareh Garabed Thomajan; proprietor of high-priced haberdashery in downtown Boston. Fortune 36:148 N '47

See also
Hats—Advertising

Statistics

Indexes of clothing and footwear output for civilians, 1939-47; with charts and tabulations. L. Bridge. Survey of Cur Bsns 27: 17-23 Je '47

Production of civilian clothing and footwear, 1939-1947; graph. Dom Comm 35:68 Jl '47

California

California's challenge to Seventh avenue. J. H. Collins. il Sales Management 58:42-4 Ap 1 '47

Great Britain

Heavy clothing report. Economist 152:468 Mr 29 '47

Non-utility prices; is control desirable? maximum prices for men's non-utility made-to-measure outer wear. Economist 153:456 S 13 '47

Rising clothing sales. Economist 153:128 Jl 19 '47

Hawaiian Islands

How Koret is cashing in on sales potentials in Hawaii. E. Gidlow. il Sales Management 59:80+ S 1 '47

CLOTHS, Polishing. See Polishing cloths

CLOUD chambers

Cloud-chamber studies of electronic and nuclear stopping of fission fragments in different gases. J. K. Bøggild and others. bibliog il Phys R 71:281-7 Mr 1 '47

Cloud-chamber study of multiple scattering of protons in air. E. A. Luebke and others. bibliog il Phys R 71:657-60 My 15 '47

Mass and the disintegration products of the mesotron. C. D. Anderson and others. bibliog il Phys R 72:724-7 O 15 '47

Mass of cosmic-ray mesotrons. W. B. Fretter. bibliog il diags Phys R 70:625-32 N 1 '46

Multiple scattering and the mass of the meson. H. A. Bethe. bibliog diags Phys R 70:821-31 D 1 '46

Pressure coefficient of surface tension and the expansion ratio of high pressure cloud chambers. T. H. Johnson. Phys R 72:86 Jl 1 '47

Synchronization of auxiliary apparatus with a betatron. G. C. Baldwin and others. diags R Sci Instr 18:121-4 F '47

See also
Wilson cloud chamber

CLOUDBURSTS. See Rain and rainfall

CLOUDS

Device records cloud height and density to improve flying safety; General Electric ceilometer. il Iron Age 159:140+ My 1 '47; Gen Elec R 50:50 My '47

Liquid-water content and droplet size in clouds of the atmosphere; study of aircraft icing conditions. G. W. Brock. bibliog A S M E Trans 69:769-70 O '47

Provocation de la pluie par de la neige carbonique lancée par avion sur les nuages. Génie Civil 124:357-8 S 15 '47

CLOVE

Clove arrivals, exports, and purchases, Zanzibar. For Comm W 28:25 Jl 26 '47

CLUBHOUSES

ACA headquarters building, Buenos Aires; three provincial clubs. il map plans diag Arch Forum 86:111-14 F '47

Malibu quarterdeck club. il plans Arch Forum 85:82-7 D '46

CLUBS

See also
Business men's clubs
Drysalters club of New England

CLUBS, Merchandizing

Of-the-month clubs hypo advertising, distribution for established manufacturers. N. Kelne. Ptr Ink 217:150+ N 15 '46

Pioneering proves profitable; Book of the month club. Bsns W p76-8+ Ap 5 '47

CLUETT, Peabody and company

Patent end may cut royalty income. Barron's 27:32 O 13 '47

Preferred stock offered. Comm & Fin Chr 166: 1576 O 20 '47

CLUTCHES

Forces and stresses in clutch and brake bands. A. C. Rasmussen. diags Product Eng 18:152-5 My '47

Internal floating friction shoes; analysis and application. A. C. Rasmussen. diags Product Eng 18:106-10 Jl '47

Internal friction blocks and shoes; analyses and applications. A. C. Rasmussen. diags Product Eng 18:133-8 Mr '47; Discussion. 18:161-2 Jl '47

Modern rotary drilling; draw-works clutch system. J. Zaba. diags Oil & Gas J 46:111 My 17 '47

Overload clutch disengages rotating elements by introduction of lubricant. Sci Am 176: 126 Mr '47

Overload devices for machine protection. A. F. Gagne, jr. il diags Machine Design 19: 95-100+ O '47

Smooth load action for power shovels; air-operated disk-type clutch. diags Steel 120: 83 Mr 31 '47

Two-way spring clutch, capable of driving in each direction and overrunning in both directions. diags Machine Design 19:91 Ja '47

V-belt clutch. il diags Sci Am 177:36 Jl '47

Walters and Dobson automatic clutch for presses. diags Engineer 183:319 Ap 11 '47

See also
Automobiles—Clutches

CLUTCHES, Magnetic

Eddy-current clutches for variable-speed drives. R. L. Jaeschke. il diags Machine Design 19:151-4 Ap '47

Electric eddy current machinery. J. B. Winther. il diags Elec Eng 66:643-6 Jl '47

Electromagnetic control; Z.F. actuation of an orthodox layshaft gear box. E. M'Ewen. il diags Automobile Eng 37:141-4 Ap '47

Magnetic overrunning clutch; patent assigned to Lockheed aircraft corp. diag Machine Design 18:174 D '46

Warner electric brake and clutch. il Automotive & Aviation Ind 96:47+ Je 15 '47

COAGULATION

Activated silica; new chemical engineering tool. R. C. Merrill and H. L. Bolton. bibliog flow diags il Chem Eng Prog 43:sup27-32 Ja '47

Stability of synthetic rubber dispersions; coagulation of neoprene latices by freezing. H. W. Walker. bibliog diag J Phys & Colloid Chem 51:451-60 Mr '47

See also
Agglutination
Blood—Coagulation
Colloids
Emulsions
Rubber
Sewage disposal—Coagulation
Water purification—Coagulation

COAL

Burning low-grade Midwestern coals on spreader stokers with continuous ash discharge; Iowa Falls station of Central states electric co. J. M. Drabelle. il diags A S M E Trans 69:203-8; Discussion. 208-12 Ap '47

COAL—*Continued*

Coal and the gas turbine road locomotive. J. I. Yellott and C. F. Kottcamp. Engineering 164:319, 341-2 O 3-10 '47

Coal-chemical transformation. Chem Age (Lond) 55:725-6 D 14 '46

Coal, petroleum and their newer derivatives; symposium arranged by the Royal institute of chemistry. Chem & Ind p437-9+, 450-2 Jl 19-26 '47

Coal utilisation research. R. W. Foot. Engineer 182:567 D 20 '46

Fuel technology in 1946. G. E. Foxwell. Chem Age (Lond) 56:85-8 Ja 11 '47

Heat pump; new coal outlet? il diags Coal Age 52:74-8 S '47

Inorganic constituents of coal. H. E. Crossley. Gas J (Lond) 248:1000 D 4 '46

Inorganic constituents of coal; abstract. H. E. Crossley. Chem & Ind p60 Ja 25 '47

Iron substitutes in openhearth charges. R. R. Fayles. il Iron Age 159:57-9 Ja 23 '47

Know coal and its selection for smokefree combustion. L. N. Rowley and J. C. McCabe. il Power 91:758-61 N '47

Locomotive fuel; job for both railroads and operators. R. L. Ireland. il Coal Age 52:93-4 Ap '47

Possibilities of coal economies in gas-works. Gas J (Lond) 249:515-16 Mr 12 '47

Production and preparation of coal for the market, coal for gas manufacture. H. F. Hebley. Am Gas Assn Proc 1946:395-400

Synthetic fuels, the new frontier? excerpts from Pittsburgh consolidation coal company booklet. Pub Util 40:518-19 O 9 '47

Synthine process; use of coal and natural gas. B. H. Weil and J. C. Lane. bibliog il map Pet Refiner 25:153-64 N '46

Wartime experience in combustion of wide variety of coals is applied in peacetime. J. E. Tobey. Min & Met 28:108-9 F '47

What is coal? R. Thiessen. 11pls U S Bur Mines Information Circ 7397:1-53 '47

What size coal for locomotives? report of Railway fuel and traveling engineers' assn. Ry Mech Eng 121:549-50 O '47

See also

Boilers—Firing
Clinkers
Coal burning equipment and other headings beginning Coal
Lignite
Torbanite

Analysis

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

Bibliography

Bibliography of Bureau of mines investigations of coal and its products, 1940 to 1945. A. C. Fieldner and others. U S Bur Mines Tech Pa 698:1-53; pa 15c Supt. of doc. '47

Blending

Robena coal blended seven times in making of coke. W. L. McMorris, jr. Blast F & Steel Pl 35:356+ Mr '47; Same. Iron Age 159:145-7 Mr 13 '47

Chemistry

Chemical nature of coal hydrogenation products; initial resolution by chromatography on alumina. M. B. Neuworth. bibliog diag Am Chem Soc J 69:1653-7 Jl '47

Chemistry of coal and petroleum; representatives of many nations at St Andrews symposium. Chem Age (Lond) 57:39-47, 78-80 Jl 12-19 '47

Coal; its constitution and utilization as a chemical raw material; first Westman memorial lecture. S. G. Ward. bibliog(68 ref) Can Chem & Process Ind 31:626-36 Jl '47; Abstract. Chem & Eng N 25:1856-7 Je 30 '47

Inorganic constituents of coal; occurrence and industrial significance. H. E. Crossley. bibliog Chem Age (Lond) 55:629-36 N 23 '46

Solvent extraction of humic acids from nitric acid; treated bituminous coal. T. S. Polansky and C. R. Kinney. bibliog Ind & Eng Chem 39:925-9 Jl '47

Source of acetic acid obtained by oxidation of coal. C. R. Kinney. bibliog Am Chem Soc J 69:284-9 F '47

Cleaning

See Coal cleaning

Freezing

Freezeproofing: what it accomplishes and how to do it. W. A. Staab. Coal Age 51:95-7 N '46

Moisture content

Clogging of bituminous coal in bunkers. R. F. Legget. bibliog il diags A S M E Trans 69:525-31; Discussion. 531-3 Jl '47

Determination of moisture content of coal by means of pulverizer heat balance. T. J. Finnegan and H. L. Smith. A S M E Trans 69:635-40; Discussion. 640-2 Ag '47

Prices

Bituminous coal, a price problem. P. W. Graff. bibliog il Coal Age 51:70-5 N '46

Competitive fuel prices; trends favor use of petroleum fuels. A. J. McIntosh. il Min & Met 28:447-50 S '47

Delay coal price increase. H. S. Truman. Comm & Fin Chr 166:227 Jl 17 '47

Oil's price advantage over coal gains. A. J. McIntosh. Nat Pet N 39:34+ Ap 9 '47

Price of coal responds immediately to the Lewis victory for miners on wage boost. Barron's 27:12 Jl 14 '47

Sulfur content

Washing characteristics of the Pittsburgh coal in a high-sulfur area in Greene county, Pa. T. Fraser and W. L. Crentz. flow diag fold charts maps U S Bur Mines Tech Pa 689:1-85; pa 15c Supt. of doc. '46

Swelling

Investigation of a laboratory test for determination of the free-swelling index of coal. W. A. Selvig and W. H. Ode. bibliog U S Bur Mines Rep of Invest 3989: 1-8, pl 1-3 '46

Practical experiences in the coking of dangerous low-ash coals. D. T. Barritt. Gas J (Lond) 250:33-4 Ap 2 '47

Testing

Carbonizing properties of Elkhorn no. 3-bed coal from Wheelwright mine, Floyd county, Ky. D. A. Reynolds and others. 5pls U S Bur Mines Tech Pa 697:1-41 bibliog (p39-41) '47 (pa 15c)

Carbonizing properties of Hill-bed coal from Hickey no. 1 mine on Lookout mountain, Cherokee county, Ala. J. D. Davis and others. bibliog il U S Bur Mines Tech Pa 703:1-40; pa 15c Supt. of doc. '47

Carbonizing properties of Velva lignite from Ward county, N.Dak, and Monarch coal from Sheridan county, Wyo. D. A. Reynolds and others. U S Bur Mines Tech Pa 695:1-41; pa 10c Supt. of doc. '46

Carbonizing properties of western coals. D. A. Reynolds and others. bibliog il U S Bur Mines Tech Pa 692:1-79; pa 20c Supt. of doc. '46

Investigation of a laboratory test for determination of the free-swelling index of coal. W. A. Selvig and W. H. Ode. bibliog U S Bur Mines Rep of Invest 3989: 1-8, pl 1-3 '46

Survey of carbonizing properties of American coals; Bureau of mines coal carbonization laboratory, 1945-1946. J. D. Davis and D. A. Reynolds. Am Gas Assn Proc 1946: 426-41

Transportation

Baltimore & Ohio taps new coal field; converts light traffic lines into stabilizers of coal traffic. il map Ry Age 121:1075-9 D 28 '46

Freezeproofing; what it accomplishes and how to do it. W. A. Staab. Coal Age 51: 95-7 N '46

Mr Young and his C.&O. il maps Fortune 35:96-103+ My '47

COAL—Transportation—*Continued*
Plea to get rid of complacency; reasons why good coal is scarce. R. L. Ireland. Ry Age 123:532-3 S 27 '47

See also
Coal cars
Coal handling

Weighing

See Coal weighing

Alabama

Carbonizing properties of Hill-bed coal from Hickey no. 1 mine on Lookout mountain, Cherokee county, Ala. J. D. Davis and others. bibliog il U S Bur Mines Tech Pa 703:1-40; pa 15c Supt. of doc. '47
Coking coal deposits on Lookout mountain, Dekalb and Cherokee counties. D. M. Coulter. 8pls U S Bur Mines Rep of Invest 4030:1-89 '47

Alaska

Exploration of coal deposits of the Point Barrow and Wainwright areas, northern Alaska. R. S. Sanford and H. C. Pierce. U S Bur Mines Rep of Invest 3934:1-17, pl 1-5 '46
Exploration of leasing block no.28 in the Nenana coal field, Alaska. H. Marstrander and others. bibliog U S Bur Mines Rep of Invest 3951:1-21, pl 1-6 '46

Arizona

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

California

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

Colorado

Investigation of coal deposits in the Coal Creek district, Gunnison county. A. L. Toenges and others. map fold pl U S Bur Mines Rep of Invest 4104:1-19 '47

France

French coal and power; modernisation and development plans. Chem Age (Lond) 56: 351 Mr 22 '47
French resources of lignite. W. G. Cass. Chem & Eng N 24:3408+ D 25 '46
Fuel and power in France; development of lignite. E. G. Voiret. Chem Age (Lond) 56:129 Ja 18 '47
Les lignites des Pyrénées françaises. map Génie Civil 124:58-9 F 1 '47

See also
Coal mines and mining—France
Coal supply—France

Georgia

Exploration of Lookout Mountain and Sand Mountain coal deposits, Dade and Walker counties, Georgia. J. R. Troxell. 6pls U S Bur Mines Rep of Invest 3960:1-10 '46

Great Britain

Distribution of ash in British coals and its bearing on the economics of coal cleaning. E. S. Grumell and A. C. Dunningham. Gas J (Lond) 248:935 N 27 '46

See also
Coal miners—Great Britain
Coal mines and mining—Great Britain
Coal supply—Great Britain
Coal trade—Great Britain

Idaho

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

Kansas

Coal resources of the Wabaunsee group in eastern Kansas. W. H. Schoewe. maps State Geological Survey of Kansas [Lawrence] Bul 63:1-144, pl 1-5 bibliog(p138-40) '46 (pa 25c)

Kentucky

Carbonizing properties of Elkhorn no. 3-bed coal from Wheelwright mine, Floyd county. D. A. Reynolds and others. 5pls U S Bur Mines Tech Pa 697:1-41 bibliog(p39-41) '47 (pa 15c)

Nevada

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

Newfoundland

Newfoundland tries again. R. Jackson. Can Min J 68:574 Ag '47

Oregon

Analyses of Arizona, California, Idaho, Nevada, and Oregon coals. bibliog maps U S Bur Mines Tech Pa 696:1-83; pa 25c Supt. of doc. '47

Pennsylvania

Washing characteristics of the Pittsburgh coal in a high-sulfur area in Greene county, Pa. T. Fraser and W. L. Crentz. flow diag fold charts maps U S Bur Mines Tech Pa 689:1-85; pa 15c Supt. of doc. '46

See also
Coal mines and mining—Pennsylvania
Coal trade—Pennsylvania

Scotland

Coal survey in Scotland; abstract. W. J. Skilling. Chem & Ind p178 Ap 5 '47

United States

Coal, our no. 1 natural resource, and the base of our industrial civilization. il maps Fortune 35:85-95+ Mr; 98-105+ Ap '47

See also
Coal miners—United States
Coal mines and mining—United States
Coal supply—United States
Coal trade—United States

Utah

Coke and iron practice in Utah. C. L. Waggoner. il Steel 120:112-14 Ap 21 '47

Western states

Carbonizing properties of western coals. D. A. Reynolds and others. bibliog il U S Bur Mines Tech Pa 692:1-79; pa 20c Supt. of doc. '46

Wyoming

Carbonizing properties of Velva lignite from Ward county, N.Dak, and Monarch coal from Sheridan county, Wyo. D. A. Reynolds and others. U S Bur Mines Tech Pa 695:1-41; pa 10c Supt. of doc. '46

COAL, Pulverized
Coal-fired gas-turbine locomotive. J. I. Yellott and C. F. Kottcamp. diags Ry Age 121:552-4 O 5 '46; Same. Ry Mech Eng 120: 616-18 N '46
Determination of moisture content of coal by means of pulverizer heat balance. T. J. Finnegan and H. L. Smith. A S M E Trans 69:635-40; Discussion. 640-2 Ag '47
Powdered coal offers automatic home heat. diag Coal Age 52:104 Ja '47

See also
Boilers—Pulverized coal firing

Preparation

Coal pulverized by steam jet; Blaw-Knox pulverizer. il Blast F & Steel Pl 35:470-2 Ap '47; Heat & Ven 44:87 F '47; Chem Eng 54:150+ Ap '47; Elec World News ed 126: 20 D 28 '46; Iron Age 159:144-6 Ap 3 '47; Power Pl Eng 51:101 Jl '47
Grinding of anthracite for pulverized fuel; abstract. C. H. Frick. Power Pl Eng 50:125 D '46
Pneumatic mill grinds coal in Russian plant. M. L. Kiselhof. diags Comp Air Mag 52: 254-5 O '47

COAL ash
Determines coal ash without burning; General Electric X-ray photometer. Heat & Ven 44:88 S '47

COAL ash—*Continued*
Distribution of ash in British coals and its bearing on the economics of coal cleaning. E. S. Grumell and A. C. Dunningham. Gas J (Lond) 248:935 N 27 '46
Low ash coal in carbonization. Gas J (Lond) 250:36+, 91+ Ap 2-9 '47
Use of compressed air tools in clinker removal from water gas generators. K. H. Wolf. Am Gas J 166:25+ Mr '47
See also
Clinkers

COAL bins
Why foresight in coal-bunker design pays off in trouble-free operation. E. Hahn. diags Power 91:320-1 My '47

COAL bins, Concrete
Clogging of bituminous coal in bunkers. R. F. Leggett. bibliog il diags A S M E Trans 69:525-31; Discussion. 531-3 Jl '47
Construction of concrete coal facility in narrow gorge; coal washing plant at Gary mine of United States coal and coke co. il Concrete 55:10-11+ Ag '47

COAL breakers
Treatment of acid mine water for breaker use in the anthracite region of Pennsylvania. L. H. Johnson. bibliog 5pls U S Bur Mines Information Circ 7382:1-14 '46

COAL burning equipment
Testing
Testing of solid fuel domestic appliances. E. A. C. Chamberlain and J. A. Toole. Gas J (Lond) 249:206 Ja 22 '47

COAL cars
Effect of heating sheds on air brakes; damage to air-brake parts caused by heating sheds to thaw coal. K. E. Carey. Ry Mech Eng 121:535-6 O '47
Electric shaker speeds unloading of railroad cars at Carbon fuel storage and barge plant. il Coal Age 51:90-1 D '46

COAL cleaning
Cleaning bituminous coal by heavy-media separation; abstract. G. B. Walker. Coal Age 52:136 Ag '47
Cleaning small coals. J. H. Griffiths. Gas J (Lond) 249:217 Ja 22 '47
Coal miners budget millions for washing. il Bsns W p54 Jl 12 '47
Distribution of ash in British coals and its bearing on the economics of coal cleaning. E. S. Grumell and A. C. Dunningham. Gas J (Lond) 248:935 N 27 '46
For cleaner industrial coal; suspension of magnetite in water as heavy medium. Bsns W p42+ F 15 '47
Full seam mining with mechanical loading. R. L. Anderson. Min Cong J 33:41-4 My '47
Mechanical cleaning for full seam mining. il Min Cong J 32:24-5 D '46
Oil flotation cleans silt cheaply and efficiently; Susquehanna collieries co. flowsheet il diag Coal Age 52:82-5 Jl '47
See also
Coal washing

COAL cutters
Bug dusters on shortwall cutters; abstract. R. Perry. Min Cong J 33:72 Je '47
Changing shortwalls to top cutters improves mining. il Coal Age 52:114 Jl '47
Design and operation of the coal planer, Ruhr district, Germany. J. W. Buch. 34pls U S Bur Mines Information Circ 7377:1-20 '46
Mavor and Coulson hydraulic roof coal cutter. il Mech Handling 33:712-13 N '46
Mechanisation of collieries. F. S. Anderson. il Engineering 164:381-4 O 17 '47; Abstract. Engineer 184:295-6 S 26 '47
Mining machines need skill and care. D. L. Moran. Coal Age 52:102 My '47
Tire-mounted cutting machines for trackless mining; abstract. G. R. Higinbotham. Min Cong J 33:72-3 Je '47

COAL distillation
Carbonizing properties of Elkhorn no. 3-bed coal from Wheelwright mine, Floyd county, Ky. D. A. Reynolds and others. 5pls U S Bur Mines Tech Pa 697:1-41 bibliog (p39-41) '47 (pa 15c)
Carbonizing properties of Hill-bed coal from Hickey no. 1 mine on Lookout mountain, Cherokee county, Ala. J. D. Davis and others. bibliog il U S Bur Mines Tech Pa 703:1-40; pa 15c Supt. of doc. '47
Carbonizing properties of Velva lignite from Ward county, N.Dak, and Monarch coal from Sheridan county, Wyo. D. A. Reynolds and others. U S Bur Mines Tech Pa 695:1-41; pa 10c Supt. of doc. '46
Carbonizing properties of western coals. D. A. Reynolds and others. bibliog il U S Bur Mines Tech Pa 692:1-79; pa 20c Supt. of doc. '46
Coal logs processes for coal carbonization. G. W. Carter. il Chem Eng Prog 43:180-2 Ap '47
Coal, shale and petroleum as sources of chemical products. W. M. Cumming. Chem Age (Lond) 57:41-6 Jl 12 '47
German use of low-grade fuel with rich oxygen. D. D. Howat. bibliog diags Chem Age (Lond) 55:661-9, 729-34 N 30, D 14 '46
High pressure gasification of coal in Germany. H. M. Weir. bibliog flow diags il Ind & Eng Chem 39:48-54 Ja '47
Partial devolatilization of coal by the fluidization process. A. D. Singh. flow diag Am Gas Assn Proc 1946:400-9
Survey of carbonizing properties of American coals; Bureau of mines coal carbonization laboratory, 1945-1946. J. D. Davis and D. A. Reynolds. Am Gas Assn Proc 1946:426-41
What coal fluidization may do for the power plant of tomorrow. A. D. Singh. diag Power Pl Eng 51:112-14+ O '47
Yields and properties of gases from BM-AGA carbonization tests at 900° C. D. E. Wolfson and D. A. Reynolds. U S Bur Mines Tech Pa 693:1-12; pa 5c Supt. of doc. '46

COAL drying
Coal drier; turbine-type German coal drier. Mech Eng 69:31 Ja '47

COAL dust
Centralia blast caused by coal-dust ignition. Coal Age 52:132+ My '47
Have you a powder keg under your plant that is about to explode? causes and prevention of gas and dust explosions. W. G. Hudson. il diags Power 91:774-5 N '47
Prevention of coal dust explosions; the effect of manner of distribution of stone dust. Engineering 164:14 Jl 4 '47
Sampling and analysis of fine dust in suspension in coal mines; abstract. D. G. Skinner and A. G. Withers. J Ind Hygiene 29:sup 104 S '47
Use of rock dust and water under the federal mine safety code in limiting coal-dust explosions. J. J. Forbes and C. W. Owings. bibliog U S Bur Mines Information Circ 7421:1-12 '47

COAL handling
Automatic decking plant at Bold pit. il diag Engineer 184:320-2 O 3 '47
Coal handling at Dalmarnock. F. H. Slade. il plan Can Min J 67:1123-4 D '46
Coal handling equipment travels road or rail. il Elec World 127:96 Mr 29 '47
Coal handling plant at a London power station. il diag Mech Handling 34:175-85 Ap '47
Coal handling plant at Hams Hall. il plan diag Mech Handling 34:72-81 F '47
Coal handling; Sanford-Day drop-bottom cars. il diag Mech Handling 34:553+ O '47
Coal handling; use of bulldozers at generating stations. M. P. Henzell. il Elec R (Lond) 139:835 N 22 '46
Coal handling with earth-moving equipment; synthetic-rubber of Polymer corporation. R. L. Hearn and R. F. Legget. il plan diag Mech Eng 69:559-63 Jl '47
Coal silo increases boiler-room efficiency; Dixie mercerizing co. E. D. White. il diags Textile World 97:139+ S '47
Coal washing; spiral concentrator and preclassified table feed; Robena mine. W. L. McMorris, jr. il Steel 120:96+ Ja 27 '47
Crushing coal for the power plant. W. G. Hudson. il diags Power Pl Eng 51:73-5+ Jl '47
Earley power station; coal, ash and dust handling equipment. il plan diags Mech Handling 34:27-36 Ja '47

COAL handling—*Continued*
Electric shaker speeds unloading of railroad cars at Carbon fuel storage and barge plant. il Coal Age 51:90-1 D '46
Electric truck for power station fuel recovery. il Mech Handling 34:379-80 Jl '47
Mechanized handling of domestic fuel. il Mech Handling 34:375-8 Jl '47
New ideas in power plant coal handling. W. G. Hudson. il Power Pl Eng 51:118+ Je '47
Pipeline transportation of ores. C. E. Wuensch. flow sheet Min Cong J 33:77-80 Ap '47
Robins shakeout taps new industrial market. A. E. Conover. il Sales Management 58:58+ Ap 15 '47
Scraper equipment stockpiles coal for utility. il Power 91:184 Mr '47
Stores and reclaims coal at low cost; Atlantic coast line stock-piles standby supplies with electrically-operated drag-scraper equipment. il Ry Age 122:230-1 Ja 25 '47
See also
Coaling stations

COAL lands
Strip farming for profit; Pittsburg & Midway coal mining co. F. J. Foresman. il Coal Age 52:86-9 S '47
Unleveled spoil brings good return as farming project. J. H. Edwards. il Coal Age 52:92-7 F '47
See also
Coal mines and mining

COAL liquefaction
Coal; a raw material for gasoline; flow sheet. Fortune 35:92-3 Mr '47
Coal and chemistry; foundations for new industries. il Coal Age 52:72-4 My '47
Coal and oil giants join hands; cooperative research by Pittsburgh Consolidation and Standard of New Jersey. Bsns W p48+ Ap 5 '47
Fischer-Tropsch process. C. C. Hall. Chem Age (Lond) 56:115-24 Ja 18 '47; Same cond. Engineering 163:30, 54-5, 79 Ja 10-24 '47
Oil and waxes from coal. C. C. Hall. Engineering 162:448 N 8 '46
Operation and development of the Fischer-Tropsch and similar processes in Germany. C. C. Hall. diags Chem & Ind p67-74; Discussion. 74-5 F 1 '47
Petroleum substitutes; past and present research, development and economics. H. H. Power. bibliog Pet Eng 18:70+ F '47
Pittsburgh Consolidation announces program to make oil and gas from coal. J. Pursglove, jr. Coal Age 52:130+ Ap '47
Pittsburgh consolidation coal co. and Standard oil development co. announce program for making gasoline and gas fuel from bituminous coal. Chem & Eng N 25:976 Ap 7 '47
Pittsburgh to have gasification plant; editorial analysis. il Chem Eng Prog 43:sup11+ My '47
Possibilities of liquid fuel from coal; abstract. A. C. Fieldner. Oil & Gas J 45:60 D 7 '46
Processing coal into liquid products may be practicable in a few years; joint program of Standard oil co. (N.J.) and Pittsburgh consolidation coal co. W. F. Bland. Pet Processing 2:325-7 My '47
Progress in hydrogenation of coal and tar. K. Gordon. diags Chem Age (Lond) 55:761-70, 795-804 D 21-28 '46; Abstract. Gas J (Lond) 249:269 Ja 29 '47
Synthetic production of petroleum. K. Gordon. Chem Age (Lond) 57:221-2, 269-70 Ag 16-23 '47

COAL loading machines
Coal mine power costs. G. B. Southward. il Min Cong J 33:25-8 Ja '47
Development crew loads 25 tons per man in 42-in. coal; Virginia no. 14 mine of the L.C.S. colliery. il plan Coal Age 52:76-9 My '47
Effect of large capacity mine cars on loading machine performance; abstract. J. D. Reilly. Min Cong J 33:70 Je '47
Full seam mining with mechanical loading. R. L. Anderson. Min Cong J 33:41-4 My '47
High production from track loaders and large cars; Osage mine in northern West Virginia. H. Hines. il diags Min Cong J 33: 25-7 My '47
Mechanical loading with large crews and high tonnages; abstract. G. N. McLellan. Min Cong J 33:67-8 Je '47
Mechanisation of collieries. F. S. Anderson. il Engineering 164:384 O 17 '47; Abstract. Engineer 184:295-6 S 26 '47
Mining and loading; past progress and future prospects. il diags Coal Age 52:89-92 Je '47
Mining methods with power duckbills; abstract. J. Pschirrer. Min Cong J 33:66 Je '47
Mining methods with Shortwaloaders; abstract. C. E. Hough. Min Cong J 33:66-7 Je '47
Prefabricated track boosts track-loader tonnage at Norco. R. R. Richart. il plans diags Coal Age 51:83-9 D '46
Pre-fabricated track for mobile loading; abstract. S. S. Lanier, 3d. Min Cong J 33:71 Je '47
Successful mechanical loading requires attention to fundamentals. H. Northover. Coal Age 52:116 Ap '47
Time studies to improve mechanical operation. D. R. Mitchell and R. L. Ash. Min Cong J 33:26-30 Jl '47
Vital parts for coal loader unit are fabricated by automatic welding arc. C. W. Lytton. il diag Welding J 26:698-9 Ag '47

COAL miners
Industrial relations and safety. C. J. Flippen. il Min Cong J 33:42-4+ Mr '47
Second session of the I.L.O. Coal mines committee. Int Labour R 55:404-9 My '47
Sharing the facts; anthracite's road to better relations. W. A. Stanbury, jr. Coal Age 52:80-3 My '47
Training; key to better coal mining. W. A. Stanbury, jr. il Coal Age 52:74-81 O '47

Diseases and hygiene
Medical survey of the bituminous-coal industry. Mo Labor R 64:997-1002 Je '47

Belgium
Recruiting and training men at a Belgian coal operation. J. C. White. il plan Coal Age 52:92-5 S '47

Germany
Mood of the Ruhr miners. map Economist 152:720 My 10 '47

Great Britain
Coal board. Economist 153:468-9 S 20 '47
Miners' hours and wages. Economist 153:653 O 18 '47
Unions in nationalized industries; Britain's National union of mineworkers. Bsns W p92+ N 16 '46

United States
Coal and the coal miner. Coal Age 51:67-82 D '46
Coal contracts; labor-monopoly products. il Coal Age 52:74-6 Ag '47
Coal faces another crisis. Bsns W p82+ Ja 18 '47
Coal prospect; Lewis' talks with federal officials. Bsns W p100 N 9 '46
Coal wage agreement reached. Elec World News ed 128:4-5 Jl 12 '47
Discipline and democracy. Iron Age 158:111+ D 26 '46
Government mine operation ends June 30 after contract negotiations break down. Coal Age 52:125-6 Jl '47
How much will it hurt? business executives figure what coal wage hike will mean in costs and prices. Bsns W p15-16 Jl 19 '47
John L. Lewis earns his $25,000; that is the way miner John Allshouse feels. il Fortune 35:96-9+ Mr '47
John Lewis keeps his date; U.M.W. walkout to protest Centralia disaster. il Bsns W p96-9 Ap 5 '47
Lewis demands broader, permanent welfare fund. Nat Underw (Life ed) 51:3 Ap 18 '47; Same abr. Nat Underw 51:22 Ap 17 '47
Miners go back to pits. il Bsns W p80-2 Jl 12 '47

COAL miners—United States—*Continued*
New bituminous contract signed July 8; anthracite revisions adopted July 10; complete text of bituminous agreement. il Coal Age 52:119-20, 144+ Ag '47
Prepaid care plan urged for coal mining industry. Nat Underw (Life ed) 51:5 Ap 25 '47
Union relations. Coal Age 52:56-60 Ja '47
Welfare; problem and opportunity. il Coal Age 52:74-7 Je '47
You and your coal mining job; article for companies and supervisors, to aid in stimulating miner cooperation and good will. Coal Age 52:74-81 Jl '47 [preprints 15c each for 999 copies or less; 12c each for 1,000-1,999 copies; and 10c each for 2,000 or more]

See also
Coal strikes

Utah

Sunnydale, a model mining town. W. C. Walker. il Min Cong J 33:40-3 Je '47

COAL mines and mining
American mining congress, Coal division annual conference of committees, Uniontown, Pa. Nov. 21. Min Cong J 33:42-4 Ja '47
American mining congress, Coal division annual meeting, Cleveland, May 12-15. Coal Age 52:97-107 Je '47; Min Cong J 33:54-76 Je '47
Annual report of research and technologic work on coal, fiscal year 1946. A. C. Fieldner and P. M. Ambrose. bibliog 11pls U S Bur Mines Information Circ 7417:27-60 '47
Central Appalachian A.I.M.E. meeting, Fairmount, W.Va. Nov. 8-9. Coal Age 51:138+ D '46
Central Appalachian section, American institute of mining and metallurgical engineers, meeting, Lexington, Ky., July 25-26. Coal Age 52:124+ S '47
Dust control in anthracite mining operations. R. E. Doherty. il diag Coal Age 52:105-8 Ap '47
Mining and preparation subjects at ninth joint meeting of Coal division of American institute of mining and metallurgical engineers and Fuels division of American society of mechanical engineers. Coal Age 51:122+ D '46
Rocky mountain coal mining institute 43d meeting, Salt Lake City, May 26-28. Coal Age 52:142-4+ Jl '47
Underground main line haulage. Min Cong J 33:39-40 Jl '47
West Virginia coal mining institute annual meeting, Fairmont, June 20. Coal Age 52:130+ Ag '47
West Virginia coal mining institute, 39th annual meeting, Bluefield, Nov. 15. Coal Age 51:128+ D '46

See also
Coal breakers
Coal miners
Coal mining machinery

Accidents and explosions

Black death; coal mine fatalities in the U.S. and Britain. Bsns W p112 Ap 19 '47
Centralia blast caused by coal-dust ignition. Coal Age 52:132+ My '47
Coal mine compensation cover increased after Centralia loss. Nat Underw 51:21 Ap 10 '47
Coal mine first-aid facilities; data sheet. il Nat Safety N 56:104-6 O '47
Coal mine haulage accidents. A. J. Bartlett. Min Cong J 33:53-5 O '47
Essential facts about accidents. Coal Age 52:104 S '47
How atmospheric pressure affects safety of entombed men. diags Coal Age 52:110+ F '47
How explosions are caused in a coal mine. T. Gettings. il Safety Eng 94:16-17+ O '47
John Lewis keeps his date; U.M.W. walkout to protest Centralia disaster. il Bsns W p96-9 Ap 5 '47
Lewis orders holiday in coal mines as memorial to victims of Centralia, Ill. disaster. Comm & Fin Chr 165:1843 Ap 3 '47
Men and companies win heroism and safety awards of Joseph A. Holmes safety association. Coal Age 52:150+ Jl '47
Mine administrator answers Lewis; will open all mines not on list as dangerous. N. H. Collisson. Comm & Fin Chr 165:1981 Ap 10 '47
Mine haulage accidents. A. J. Bartlett. Min Cong J 33:42 Jl '47
Mine safety sets new record in 1946. F. T. Moyer. Coal Age 52:87-8 F '47
This hazardous mining business. E. H. Robie. Min & Met 28:244-5 My '47

See also
Coal mines and mining—Fires and fire protection
Coal mines and mining—Safety measures

Accounting

Mechanizing payroll preparation; the Rich Run mine of the Elk River coal & lumber co. il Coal Age 52:79-81 S '47

Blasting

Drilling and shooting practices in anthracite strip mining; abstract. G. A. Schnee. Min Cong J 33:74 Je '47
Efficiency in coal shooting; proper mediums and methods. il Coal Age 52:102+ S; 108+ O '47
Mining anthracite underground. J. M. Bray. il Explosives Eng 25:45-7 Mr '47
Tests made by the U.S. Bureau of mines with gelatin explosives; abstract. H. P. Greenwald and I. Hartmann. diags Coal Age 52:120+ Ja '47

See also
Coal mines and mining—Explosives

Costs

Coal mine haulage; joint report of the Conveyor and the Haulage roads committees; cost data. Min Cong J 33:47-50 Ag '47
Coal mine power costs. G. B. Southward. il Min Cong J 33:25-8 Ja '47
Foreman and costs. Coal Age 52:102 My '47
Some phases of labor and economics in the coal industry. C. J. Potter. il Min Cong J 33:33-5+ Je '47

Electric equipment

Cable protection with automatic circuit breakers. R. G. Gehlsen. il diag Coal Age 52:97-9 Ap '47
Cables and grounding surveyed at Beckley joint meeting. Coal Age 52:122+ My '47
Colliery reconstruction; advantages and cost. F. W. Maynard. il Elec R (Lond) 139:931-4 D 6 '46
Dynamic braking promotes efficiency in slope hoisting. J. A. Setter. il diags Coal Age 52:98-104 Jl '47
English Electric colliery motors. il Engineer 183:156 F 7 '47
Ground faults; new protection for 2,300-volt cables. L. Wilson. il plan Coal Age 52:84-6 My '47
Ground protection for a.c. circuits around coal mines. J. W. Harris. diags Coal Age 52:83-4 Je '47
Grounding stripping units with high and low voltages. J. J. Huey. diags Coal Age 52:79-83 Ag '47
Heat, a source of electrical troubles; what can be done about it. Coal Age 52:124+ Je '47
Operating an oil circuit breaker. diags Coal Age 52:112 Jl '47
Portable electric drills for coal. il Engineering 164:33 Jl 11 '47
Symposium on frame grounding of d.c. underground machinery. Coal Age 52:136+ Ag '47
Trailing-cable and machine protection. W. C. Painter. il diag Coal Age 52:98-100 Ag '47
Two-way radio offers efficient communication at Pando. il Coal Age 51:98-9 N '46

See also
Coal mines and mining—Power
Electric locomotives, Mine

Equipment

Advance mechanization designed to offset increased labor cost in coal mining. R. D. Snouffer. il Min & Met 28:156 Mr '47
Automatic decking plant at Bold pit. il diag Engineer 184:320-2 O 3 '47

COAL mines and mining—Equipment—*Cont.*
Auxiliary ventilation for better mechanical mining. J. H. Dickerson. il diags Coal Age 52:96-101 O '47
Bituminous haulage marked by locomotive and conveyor rise; with statistical data. W. H. Young and R. L. Anderson. Coal Age 52:78-82 Ja '47
Bussey strip mine solves its problems by unusual methods. il diags Coal Age 51:92-5 D '46
Coal washing; spiral concentrator and preclassified table feed; Robena mine. W. L. McMorris, jr. il Steel 120:96+ Ja 27 '47
Diesel locomotive, coming underground coal hauler? il Coal Age 52:94-7 Ag '47
Elevator for men tops new Willow Grove portal. il plans Coal Age 52:78-82 Je '47
Equipment progress highlighted at Cleveland exposition. il Coal Age 52:108-22 Je '47
Mechanization in the world's largest coal mine; U.S. Steel's Robena mine; illustrations with text. Iron Age 159:105 Mr 27 '47
Mechanized mining in eastern Ohio; Rail and river coal company. A. F. Whitt and E. F. Maurer. il plan Min Cong J 32:35-8 O '46
Multiple headings and planning boost development coal. J. H. Edwards. il diags Coal Age 52:89-93 Jl '47
Pins and jacks facilitate face timbering at Arkwright. F. H. Brooks. il Coal Age 52:64-5 Ja '47
Portal relocation paces mining improvements at Hubbard mine. il plan Coal Age 52:79-84 Mr '47
Powder-powered tools: the firedamp safety of devices for splicing cables and punching rails. A. R. T. Denues. 2pls U S Bur Mines Rep of Invest 4105:1-11 '47
Reopening an abandoned coal operation. G. B. Southward. il diags Min Cong J 33:34-8+ Ap '47
Robena, world's largest coal mine. il plans diags Min Cong J 33:22-34 Mr '47
Role of safety equipment in reducing coal mine accidents. D. Harrington and R. G. Warncke. il Min Cong J 32:20-3 N; 41-3 D '46
Rubber-tired tractor performs many jobs. T. W. Pearson. il Coal Age 52:126 Ap '47
Sand drying modernized at Hudson's Loree colliery. il Coal Age 51:92-4 N '46
Skip winding; installation at Bickershaw colliery. Mech Handling 33:769-70 D '46
Spiral chute at Dodworth colliery. diags Can Min J 68:658-9 S '47
Spiral plant converts silt into better boiler fuel. flow sheet il diags Coal Age 52:85-8 Je '47
Timbering machines cut cost and promote safety at Isabella. R. R. Richart. il plans diag Coal Age 52:102-5 F '47
Tooling up the coal mines. Bsns W p66-8 Ag 16 '47
Topsoil reclaimed by stripper; Rothey bros., inc. il plan Coal Age 52:88-91 O '47
Welding, flame cutting for efficient maintenance and low cost. A. D. Stout, jr. il Coal Age 51:94-8 S; 97-100 O; 100-4 N '46
World's largest coal mine; Robena mine of H. C. Frick coke company. il plans Min Cong J 32:28-9 O '46

See also
Coal cars
Coal cutters
Coal loading machines
Coal mining machinery
Coal tipples
Mine cars

Explosives

Explosives accidents in bituminous-coal mines; coal-mine accident-prevention course. bibliog il plans diags U S Bur Mines Miners' Circ 58:1-82; pa 20c Supt. of doc. '47

Fires and fire protection

Cable protection with automatic circuit breakers. R. G. Gehlsen. il diag Coal Age 52:97-9 Ap '47
Fire protection includes door switch. il Coal Age 51:114 N '46
Mine fires, their prevention and control; abstract. E. F. Maurer. Min Cong J 33:65 Je '47

Gas generation

Coal, the Pitt Consol adventure; Pittsburgh Consolidation Coal. il map Fortune 36:96-105+ Jl '47
Conducts experiment to produce coal gas by bombing a coal mine. Iron Age 159:120 F 6 '47
Experiment in underground gasification of coal, Gorgas, Ala. J. J. Dowd and others. 29pls U S Bur Mines Rep of Invest 4164:1-62 '47
First U.S. test made in underground gasification of coal. Am Gas J 166:31 F '47
Fuel revolution. il Fortune 35:98-105+ Ap '47
Gas from burning coal mine providing a new type heat source; abstract. R. C. Allen. Iron Age 159:140+ Ap 3 '47
Gas from coal in the ground; Russian experiments. il Comp Air Mag 52:95-6 Ap '47
Gasification of coal. Comp Air Mag 52:73 Mr '47
Gasification of coal underground. L. C. McCabe. il plan diags Min Cong J 33:42-5 Ag '47
Gasifying coal underground. J. V. Hightower. il plan Chem Eng 54:107-9 Ap '47; Same. Elec World 127:45-7 Ap 26 '47; Same cond. Coal Age 52:74-5 My '47
La gazéification souterraine de l'anthracite de Djérada (Maroc). Génie Civil 124:238 Je 15 '47
How coal is burned in the mine to produce power and synthesis gas. C. R. Earle. il plan diag Power Pl Eng 51:74-7 S '47
Mine gasification at Gorgas proves successful beyond expectations. Heat & Ven 44:120+ S '47
Setting coal mine afire; Gorgas mine test. Pub Util 40:170-1 Jl 31 '47
Le transport par pipe-lines du gaz obtenu par gazéification des lignites. E. G. Voiret. map Génie Civil 124:158-9 Ap 15 '47
Underground coal gasification. G. E. Stedman. il Gas Age 99:13-15+ Mr 20 '47
Underground gasification. Mech Eng 69:408-9 My '47
Underground gasification of coal at Gorgas. M. H. Fies. il plans Pub Util 40:486-99 O 9 '47
Underground gasification of coal reported. M. H. Fies. Chem & Eng N 25:1331 My 12 '47
Underground gasification of coal; several variations of procedure; abstract. Heating-Piping 19:107 S '47
U.S. tests underground gasification. H. B. Hinton. Am Gas Assn Mo 29:12 Ja '47
Unmined coal will be burned for gas; Alabama power co. diag Bsns W p17 N 16 '46; Same cond. Heat & Ven 43:116 D '46; Abstract. Pet Processing 2:88 F '47

Government ownership

Lewis brings danger of nationalization closer. C. H. Grattan. Barron's 27:10 Ap 7 '47

Haulage

See Mine haulage

Lighting

See Mine lighting

Longwall system

Description of the Eickhoff-Schrämlader longwall coal-cutting and loading machine. E. M. Arentzen. 5pls U S Bur Mines Information Circ 7390:1-5 '46
Design and operation of the coal planer, Ruhr district, Germany. J. W. Buch. 34pls U S Bur Mines Information Circ 7377:1-20 '46

Management

Checker-playing mine foremen. J. J. Rutledge. Explosives Eng 25:54-5 Mr '47
Coal mine maintenance organization. J. F. Mazza. il Min Cong J 32:30-1 N '46
Coal, the Pitt Consol adventure; Pittsburgh Consolidation Coal. il map Fortune 36:96-105+ Jl '47
Cutting cost in coal mining. il Coal Age 52:82-92 Ap '47
Cutting cost of materials and supplies; how the foreman can do his part. Coal Age 52:102+ Ag '47

COAL mines and mining—Management—*Cont.*
Human relations; key coal factor. Coal Age 52:56-60 Mr '47
Mañana mine foreman. J. J. Rutledge. Explosives Eng 25:117-18+ Jl '47
Mine foreman of a small mine. J. J. Rutledge. Explosives Eng 24:182-3 N '46
Modern methods put Piney Fork in high efficiency class. R. R. Richart. il plans diags Coal Age 51:76-89 N '46
Modernizing to increase coal production; Vesta properties of the Jones & Laughlin steel corporation. G. B. Southward. il map diag Min Cong J 33:39-45 O '47

See also
Coal miners

Methods

Belt pulls shuttle-car output up seven-percent grade at Standard. il plan diag Coal Age 52:82-5 S '47
Deep-mining highlights; abstracts of annual meeting papers, American mining congress, Coal division. Coal Age 52:98-102 Je '47
Development crew loads 25 tons per man in 42-in. coal; Virginia no. 14 mine of the L.C.S. colliery. il plan Coal Age 52:76-9 My '47
Drilling cost cut by mounted unit with hydraulic controls; Isabella mine of the Weirton coal co. il plans Coal Age 52:61-4 Mr '47
Full seam mining with mechanical loading. R. L. Anderson. Min Cong J 33:41-4 My '47
Haulage for efficiency with conveyor mining. J. H. Dickerson. plans diag Coal Age 52: 90-4 My '47
High production from track loaders and large cars; Osage mine in northern West Virginia. H. Hines. il diags Min Cong J 33: 25-7 My '47
Higher recovery follows change in Monarch mining plan. il plans diags Coal Age 52: 61-3 Ja '47
Highwall mining. G. B. Southward. il Min Cong J 33:26 Ag '47
Improved scow-mining system; Jewel mining co. G. W. Reitz. il diags Coal Age 52:92-5 O '47
Low-cost mechanical operation; Rosedale coal company. F. O. Johnson. il plan Min Cong J 33:27-9 Ag '47
Mechanical cleaning for full seam mining. il Min Cong J 32:24-5 D '46
Mechanical loading with large crews and high tonnages; abstract. G. N. McLellan. Min Cong J 33:67-8 Je '47
Mechanisation of collieries. F. S. Anderson. il Engineering 164:381-4 O 17 '47
Mining and loading; past progress and future prospects. il diags Coal Age 52:89-92 Je '47
Mining anthracite underground; Locust coal company. J. M. Bray. il map diags Explosives Eng 25:7-10+, 45-9+ Ja-Mr '47
Mining methods with power duckbills; abstract. J. Pschirrer. Min Cong J 33:66 Je '47
Mining methods with Shortwaloaders; abstract. C. E. Hough. Min Cong J 33:66-7 Je '47
Modern methods put Piney Fork in high efficiency class. R. R. Richart. il plans diags Coal Age 51:76-89 N '46
Multiple headings and planning boost development coal. J. H. Edwards. il diags Coal Age 52:89-93 Jl '47
Pillar recovery; committee report. diags Min Cong J 33:41 Jl; 46-8 S '47
Pillar recovery in thin seam mining. il plans Min Cong J 32:91-4 O '46
Productivity lifted by shuttle cars and new mining method; Clayton coal co. il plans Coal Age 52:76-8 Mr '47
Profitable coal production by continuous face mining. R. A. Suppes. il Min Cong J 32: 41-2 N '46
Safety and efficiency cited for pillar plan. J. H. Justice. diags Coal Age 52:124 Ap '47
Safety and production lead improvements at Royalton. A. L. Roberts and R. R. Richart. il diags Coal Age 52:84-9 Ag '47
Shaker conveyors for block carving. R. W. Thomas. il diags Min Cong J 32:20-3+ D '46
Time studies to improve mechanical operation. D. R. Mitchell and R. L. Ash. Min Cong J 33:26-30 Jl '47
Tire-mounted drills for trackless mining; abstract. C. M. Shott. Min Cong J 33:73 Je '47
What roof conditions permit pillar recovery? H. P. Greenwald. il Min Cong J 33:56-7 Mr '47

See also
Coal mines and mining—Longwall system
Coal mines and mining—Stripping operations

Power

Coal mine power costs. G. B. Southward. il Min Cong J 33:25-8 Ja '47
Large rectifier station practice; operation in mines. C. G. Marshall. Elec Eng 66:962-3 O '47
Three-wire system ups d.c. voltage at Gay mining co. il map diags Coal Age 52:86-8 Jl '47

Rock dusting

Prevention of coal dust explosions; the effect of manner of distribution of stone dust. Engineering 164:14 Jl 4 '47
Use of rock dust and water under the federal mine safety code in limiting coal-dust explosions. J. J. Forbes and C. W. Owings. bibliog U S Bur Mines Information Circ 7421:1-12 '47

Safety measures

Bankhead mine wins Sentinels of safety trophy. Explosives Eng 25:107+ Jl '47
Benham mines win safety award. R. L. Talbert. il Explosives Eng 25:112-15+ Jl '47
Cables in mines; types used and method of installation. C. C. Barnes. Elec R (Lond) 141:89-90 Jl 18 '47
Carbon monoxide in the mine; how to keep it from following you. diags Coal Age 52: 84+ Ja '47
Chance taking worked for safety; safety prizes awarded by Union Pacific coal company. il Nat Safety N 54:36-7+ D '46
Coal mine hazards. Sci Am 176:30 Ja '47
Education for accident prevention discussed by Coal-mining section of the National safety council; 34th annual congress, Chicago, Oct. 7-10. Coal Age 51:136+ N '46
Expanding safety to meet accelerated production in coal and ore mining. S. H. Mooney. il Safety Eng 93:21+ My '47
Explosives accidents in bituminous-coal mines; coal-mine accident-prevention course. bibliog il plans diags U S Bur Mines Miners' Circ 58:1-82; pa 20c Supt. of doc. '47
Greater safety in the mining of coal theme of 37th annual convention of the Mine inspectors' institute of America. Coal Age 52:132-4+ Jl '47
Greater social consciousness by management needed to reduce accidents. R. Maize. il Min & Met 28:111-12 F '47
Haulage safety device for steep grades; method of automatically removing friction shoes from beneath the wheels of mine cars. L. L. Maus. il diags Min Cong J 33:28-31 S '47
Industrial relations and safety. C. J. Flippen. il Min Cong J 33:42-4+ Mr '47
Installation of a model man cage at the Avoca shaft of the Heidelberg coal co. Avoca, Luzerne county, Pa. E. H. McCleary and J. V. Mather. 18pls U S Bur Mines Information Circ 7407:1-5 '47
Making mining safer; abstracts of annual meeting papers, American mining congress, Coal division. Coal Age 52:106-7 Je '47
Making mining safer. il Coal Age 52:96s-96d Ap '47
Mine management's problems. J. Hyslop. Nat Safety N 54:29+ D '46
Mine safety; long, hard job. il Bsns W p41-2+ My 24 '47
Mine safety program and organization. il Safety Eng 93:22-3+ Mr '47
Mine ventilation improved by proper auxiliary equipment. J. H. Dickerson. diags Coal Age 51:96-8 D '46

COAL mines and mining—Safety measures—*Continued*
Miscellaneous accidents in bituminous-coal mines; coal-mine accident-prevention course, section 7. bibliog il U S Bur Mines Miners' Circ 60:1-83; pa 25c Supt. of doc. '47
Modern mine must keep up with changing working conditions. H. M. Moses. il Safety Eng 94:24-5+ O '47
Providing bleeder headings for ventilating gob areas. G. H. Sambrook. diag Coal Age 52:90-1 Ag '47
Quiz-O-Gram gets the answers at Coal mining institute session. Coal Age 52:90+ Mr '47
Role of safety equipment in reducing coal mine accidents. D. Harrington and R. G. Warncke. il Min Cong J 32:20-3 N; 41-3 D '46
Rope-haul follow-up motor has safety stop. il Coal Age 52:114 S '47
Safer mining achieved by strong program; Northwestern improvement co. W. E. Crane. il diags Coal Age 52:95-8 My '47
Safety code for bituminous-coal and lignite mines of the United States; abstract. M. J. Ankeny. Coal Age 51:132+ D '46
Safety progress in coal mining; abstract. C. G. Brehm. Min Cong J 33:65 Je '47
Safety topics hold the stage at Kentucky Institute meeting. Coal Age 52:110+ Ja '47
Safety with auxiliary fans. diags Coal Age 51:104+ S; 106+ O; 110+ N '46
Separate splits for sections help double air supply; Barnes & Tucker co. il diag Coal Age 52:105-7 Jl '47
Stoppings sealed with plastic. il Coal Age 52:112+ O '47
Symposium on frame grounding of d.c. underground machinery. Coal Age 52:136+ Ag '47
Trailing-cable and machine protection. W. C. Painter. il diag Coal Age 52:98-100 Ag '47

See also
Brattice cloth
Coal mines and mining—Rock dusting

Statistics

Bituminous haulage marked by locomotive and conveyor rise; with statistical data. W. H. Young and R. L. Anderson. Coal Age 52:78-82 Ja '47
Coal round the world; production figures. Coal Age 52:78 F '47

Steel company ownership

Coal for steel. Bsns W p45-6 O 18 '47

Stripping operations

Air breaker supplements Mansfield strip facilities. H. Wilber. il Coal Age 52:109-11 Ap '47
Armor plate steels used in huge coal stripping dipper. il Steel 119:84-6 N 18 '46
Bussey strip mine solves its problems by unusual methods. il diags Coal Age 51:92-5 D '46
Coal-stripping progress; abstracts of annual meeting papers, American mining congress, Coal division. Coal Age 52:102-5 Je '47
Effects of coal strip mining upon water supplies. R. H. Snyder. Am Water Works Assn J 39:751-6; Discussion. 756-69 Ag '47
Exploration, reserves, bed characteristics and strip-mining possibilities of a lignite deposit near Toledo, Lewis county, Wash. A. L. Toenges and others. pl fold maps U S Bur Mines Tech Pa 699:1-55; pa 35c Supt. of doc. '47
Grounding stripping units with high and low voltages. J. J. Huey. diags Coal Age 52:79-83 Ag '47
Move houses by rail to clear strip area; Jeddo-Highland coal co. il Coal Age 52:98-100 S '47
New Ohio strip mining law. Min Cong J 33:67 O '47
Onakawana lignite development. D. C. McLaren. flow sheet il maps Can Min J 67:1013-22 N '46
Open cast mining in Britain. A. Bray. il Can Min J 68:17-19 Ja '47
Open pit mining of bituminous coal. W. L. Burt. il Min Cong J 33:51-2 F '47
Pay rise spurs strip mining. il Bsns W p16-17 Jl 19 '47
Reforestation solves strip-spoil problem in Indiana. V. Sappenfield. il Coal Age 52:112-14 Ap '47
Scraper stripping at Big Horn. il Coal Age 52:102-6 O '47
Scraper stripping provides flexibility with high tonnage. il plan diag Coal Age 52:69-72 Mr '47
Strip farming for profit; Pittsburg & Midway coal mining co. F. J. Foresman. il Coal Age 52:86-9 S '47
Strip mining; abstracts of papers, American mining congress, Coal division. Min Cong J 33:74-6 Je '47
Tandem shovels increase stripping depth at Clearco. il diags Coal Age 52:87-9 My '47
Topsoil reclaimed by stripper; Rothey bros., inc. il plan Coal Age 52:88-91 O '47
25-yd. dragline extends life of Trevorton stripping. R. R. Richart. il diags Coal Age 52:71-7 Ja '47
Two-pass method extends shovel's range at Buckeye. R. R. Richart. il diag Coal Age 52:94-7 Jl '47
Unleveled spoil brings good return as farming project. J. H. Edwards. il Coal Age 52:92-7 F '47
Use of scrapers and other light earth-moving equipment in bituminous coal strip mining. L. A. Turnbull and others. 15pls U S Bur Mines Rep of Invest 4033:1-37 '47
With planned stripping, 12 men get 900 tons on first day. il Coal Age 52:93-6 Je '47

Study and teaching

See Mining schools and education

Terminology

Glossary of current and common bituminous coal mining terms. rev ed 26p gratis Bituminous coal institute, 815 Southern bldg, Washington 5, D.C. '47

Waste

Problems in mineral concentration; abstract. A. Wedgwood. Chem & Ind p389-90 O 26 '46
Washer reclaims bank coal. flow sheet il Coal Age 52:92-3 Ag '47

Waste disposal

Acid mine drainage. J. R. Hoffert. bibliog il Ind & Eng Chem 39:642-6 My '47
Coal industries aid clean-stream program. Eng N 138:956 Je 12 '47
Effects of coal strip mining upon water supplies. R. H. Snyder. Am Water Works Assn J 39:751-6; Discussion. 756-69 Ag '47
Rock dump features efficiency and safety. il Coal Age 52:94+ Mr '47
Role of microorganisms in acid mine drainage; a preliminary report. A. R. Colmer and M. E. Hinkle. bibliog Science 106:253-6 S 19 '47

See also
Coal waste

Australia

Australia's new $47,000,000 coal project. For Comm W 26:28 Mr 1 '47
Victoria brown coal under development. L. Barker. il Coal Age 52:164+ Ag '47

Belgium

Recruiting and training men at a Belgian coal operation. J. C. White. il plan Coal Age 52:92-5 S '47

Canada

Policy for coal. Bsns W p104 F 1 '47

Europe

Operating Diesel locomotives underground in European mines. J. H. East, jr. U S Bur Mines Information Circ 7378:1-13 '46

France

French coal mines rise to prewar output. Barron's 27:32 My 26 '47
Les petits bassins houillers français. V. Charrin. maps Génie Civil 123:326-7 D 1 '46
Recovery in the French coal industry. W. R. Gordon. Can Min J 67:1035-8 N '46

COAL mines and mining—*Continued*

Germany

British miner in the Ruhr. Economist 153: 368 Ag 30 '47
Coal preparation practice in western Germany. T. Fraser and M. G. Driessen. 30pls U S Bur Mines Information Circ 7389:1-70 '46
Design and operation of the coal planer, Ruhr district, Germany. J. W. Buch. 34pls U S Bur Mines Information Circ 7377:1-20 '46
Ruhr coal and European recovery. M. S. Szymczak. Comm & Fin Chr 166:815+ Ag 28 '47
Saar and its coal. Economist 153:22-3 Jl 5 '47
What to do with the Ruhr? il Bsns W p85-6 Ag 2 '47

Great Britain

British vs. American coal mining. E. McAuliffe. Coal Age 52:96-7 S '47
Coal and industry; experiment of the five-day week. Economist 152:723-4, 772 My 10-17 '47
Coal board. Economist 153:468-9 S 20 '47
Coal nationalisation in Britain. W. R. Gordon. Can Min J 68:245-9 Ap '47
Coal; the target examined. Economist 152: 338-9 Mr 8 '47
Industrial crisis and the prospective national output of coal. R. A. S. Redmayne. Engineer 183:232-4 Mr 21 '47
Nationalised mines and the coal supply situation. R. A. S. Redmayne. Engineer 183: 35-6, 62-4 Ja 10-17 '47
Nationalization no help in British coal crisis. A. M. Sakolski. Comm & Fin Chr 165: 1120+ F 27 '47
Open cast mining in Britain. A. Bray. il Can Min J 68:17-19 Ja '47
Trade union participation in the British coal industry. Int Labour R 54:198-200 S-O '46

See also
Coal miners—Great Britain
Coal supply—Great Britain
Coal trade—Great Britain

Kentucky

New coal preparation plant of Inland steel company. il Min Cong J 33:26-7 S '47

Manchuria

Coal mines of northeast China. For Comm W 29:24 O 4 '47

Ohio

Mechanized mining in eastern Ohio; Rail and river coal company. A. F. Whitt and E. F. Maurer. il plan Min Cong J 32:35-8 O '46

Ontario

Onakawana lignite development. D. C. McLaren. flow sheet il maps Can Min J 67: 1013-22 N '46

Pennsylvania

Flood-prevention projects at Pennsylvania anthracite mines; progress report for 1945. S. H. Ash and others. 28pls U S Bur Mines Rep of Invest 4109:1-64 bibliog(p62-4) '47

See also
Pittsburgh consolidation coal company

South Africa

South Africa's first borehole; historical note. E. Rosenthal. Can Min J 68:742-3 O '47

Spain

Information on coal mining in Spain. J. H. East, jr. 3pls U S Bur Mines Information Circ 7396:1-27 '47
Spain doubles coal output. Chem & Eng N 25:1144 Ap 21 '47

United States

Anthracite; annual review and forecast. J. L. G. Weysser. il map Min Cong J 33: 57-62 F '47
Anthracite industry stresses efficiency and research; review of 1946. il Coal Age 52: 84-6 F '47
Bituminous coal; annual review and forecast. C. M. Smith. il Min Cong J 33:53-6 F '47
Bituminous coal during the first year of peace. R. L. Trisko. il Dom Comm 34:34-9 D '46
Bituminous progress involves labor and cost problems; review of 1946. il Coal Age 52: 76-83 F '47
Coal faces another crisis. Bsns W p82+ Ja 18 '47
Coal industry; review of 1946. H. F. Hebley and others. Min & Met 28:106-12 F '47
Coal, our no. 1 natural resource, and the base of our industrial civilization. il maps Fortune 35:85-95+ Mr; 98-105+ Ap '47
Navy balks at court order, keeps mine. Bsns W p96-7 Mr 22 '47
U.S. caught with low coal stocks. Bsns W p16 Ap 12 '47

See also
Coal trade—United States

Washington (state)

Exploration, reserves, bed characteristics and strip-mining possibilities of a lignite deposit near Toledo, Lewis county, Wash. A. L. Toenges and others. pl fold maps U S Bur Mines Tech Pa 699:1-55; pa 35c Supt. of doc. '47

West Virginia

Baltimore & Ohio taps new coal field; converts light traffic lines into stabilizers of coal traffic. il map Ry Age 121:1075-9 D 28 '46

COAL mining institute of America
Annual meeting, 60th, Pittsburgh, Dec. 5-6. Coal Age 52:114+ Ja '47

COAL mining machinery
Air breaker supplements Mansfield strip facilities. H. Wilber. il Coal Age 52:109-11 Ap '47
Anthracite moves to increase colliery productivity; four new machines. il diags Coal Age 52:65-8 Mr '47
Bituminous progress involves labor and cost problems; review of 1946. il Coal Age 52: 80-1 F '47
Consolidated pneumatic tool co.'s coal drilling equipment. il Electrician 138:1247-8 My 9 '47; Engineer 183:402-3 My 9 '47
Cutting cost in moving trackless-mining units. J. H. Edwards. il Coal Age 52:82-7 O '47
Deep-mining highlights; abstracts of annual meeting papers, American mining congress, Coal division. Coal Age 52:98-102 Je '47
Demand for mining machinery becomes world-wide in scope. W. L. Beck. il Dom Comm 35:26-34 Ag '47
Description of the Eickhoff-Schrämlader longwall coal-cutting and loading machine. E. M. Arentzen. 5pls U S Bur Mines Information Circ 7390:1-5 '46
Drilling cost cut by mounted unit with hydraulic controls; Isabella mine of the Weirton coal co. il plans Coal Age 52:61-4 Mr '47
Fuel revolution. il Fortune 35:98-105+ Ap '47
Home-made horizontal drill for highwall work. il Coal Age 52:112 S '47
Improved scow-mining system; Jewel mining co. G. W. Reitz. il diags Coal Age 52:92-5 O '47
Leveler boosts unit output 2,000 tons per month. il Coal Age 52:120 F '47
Loading and cleaning featured by heavy equipment purchases. W. H. Young and R. L. Anderson. Coal Age 52:89-91 F '47
Machine timbering promotes high efficiency at Gay mines. J. H. Edwards. il plan Coal Age 52:100-4 Ap '47
Machines do the heavy work at world's largest coal mine; Robena, southwestern Pennsylvania. il Bsns W p 18-19 Jl 26 '47
Mechanical mucking in inclines; with cost data. C. A. Fitch, jr. il Min Cong J 33:29-31 Ja '47
Mechanization in coal mining. D. L. McElroy. il Min Cong J 33:31-5 F '47
Mine mechanization accelerated. V. Bell. il Steel 121:43-5 S 8 '47

COAL mining machinery—*Continued*
Past year registers large increases in sales of coal mine equipment. W. H. Young and R. L. Anderson. Min Cong J 33:44-6 F '47
Pinning machine readies coal for loading. il Coal Age 52:108 S '47
Safety and production lead improvements at Royalton. A. L. Roberts and R. R. Richart. il diags Coal Age 52:84-9 Ag '47
Take a look at coal mining. il diags Eng & Min J 148:91 Jl '47
Thin-coal mechanical-mining method and the equipment; abstract. J. J. Snure. il plans Coal Age 52:114+ Ja '47
Trailing-cable and machine protection. W. C. Painter. il diag Coal Age 52:98-100 Ag '47

See also
Coal cutters
Coal loading machines
Excavating machinery

Conveyors

Belt capacities; abstract. W. L. Wearly. Coal Age 52:130+ Ag '47
Belt conveyors for main haulage. R. J. Perin. il Mech Handling 33:624-8 O '46
Belt pulls shuttle-car output up seven-percent grade at Standard. il plan diag Coal Age 52:82-5 S '47
Bituminous haulage marked by locomotive and conveyor rise; with statistical data. W. H. Young and R. L. Anderson. Coal Age 52:78-82 Ja '47
Coal mine haulage; joint report of the Conveyor and the Haulage roads committees; cost data. Min Cong J 33:47-50 Ag '47
Haulage for efficiency with conveyor mining. J. H. Dickerson. plans diag Coal Age 52: 90-4 My '47
Mavor and Coulson 200 h.p. coal conveyor drive. il diag Engineer 183:311 Ap 11 '47
New belt will raise 600 tons of coal per hour to 715-ft height. Iron Age 159:165 My 1 '47
Shaker conveyors for block carving. R. W. Thomas. il diags Min Cong J 32:20-3+ D '46
Shop aids belt maintenance; Panther coal co. il Coal Age 52:90-1 S '47
Training conveyor belts. Coal Age 52:120 O '47
Underground belt haulage; how and why. C. W. Thompson. il plan Min Cong J 32: 30-3+ D '46; 33:32-3+ Ja '47

Exhibitions

Exposition preview; Coal division, American mining congress. Min Cong J 33:53-64 Ap '47

Lubrication

Grease truck saves time and money at Galloway. il Coal Age 52:95-6 Ap '47
Modern lubrication assures higher production at lower cost. M. B. Lawton. il diag Coal Age 52:66-70 Ja '47

Maintenance and repair

Coal mine maintenance organization. J. F. Mazza. il Min Cong J 32:30-1 N '46
High productivity goal in maintenance at Kenilworth mine. il plan Coal Age 52:98-101 F '47
Metallizing salvages material and cuts maintenance; Kemmerer coal co. il Coal Age 51:90-1 N '46
Shop aids belt maintenance; Panther coal co. il Coal Age 52:90-1 S '47

COAL oiling
Carbonization of coal sprayed with oil. P. C. Mayfield. Blast F & Steel Pl 35:833-5 Jl '47

COAL preparation
Coal preparation practice in western Germany. T. Fraser and M. G. Driessen. 30pls U S Bur Mines Information Circ 7389: 1-70 '46
Coal preparation; progress in anthracite and bituminous methods. A. C. Richardson. il Min Cong J 33:42-3 F '47
Crushing coal for the power plant. W. G. Hudson. il diags Power Pl Eng 51:73-5+ Jl '47
Locomotive fuel performance; special coal should be prepared for locomotive use. E. C. Payne. il Min Cong J 33:42-5 S '47
Modern coal preparation in Indiana; Blackfoot coal and land corporation. flow sheet il Min Cong J 33:82-6 Ap '47
New anthracite preparation facilities in 1946; tabulation. Coal Age 52:86 F '47
New bituminous preparation facilities in 1946; tabulation. Coal Age 52:82 F '47
New coal preparation plant of Inland steel company. il Min Cong J 33:26-7 S '47
Preparation refinements; abstracts of annual meeting papers, American mining congress, Coal division. Coal Age 52:105-6 Je '47
Production and preparation of coal for the market, coal for gas manufacture. H. F. Hebley. Am Gas Assn Proc 1946:395-400
Research and development in coal preparation center on fine sizes. J. Griffen and others. Min & Met 28:107-8 F '47
Spiral plant converts silt into better boiler fuel. flow sheet il diags Coal Age 52:85-8 Je '47

See also
Coal, Pulverized—Preparation
Coal breakers
Coal cleaning
Coal screening
Coal sizing
Coal tipples
Coal washing

COAL products
Active research continues on development of many new products from coal. C. Kinney. il Min & Met 28:109-10 F '47
Coal and chemistry; foundation for new industries. il Coal Age 52:72-4 My '47
Coal chemical demand high. Bsns W p52+ Jl 19 '47
Coal chemical industry trends and problems. P. J. Wilson, jr. and J. H. Wells. il Chem Eng 53:110-14 D '46
Coal; its constitution and utilization as a chemical raw material; first Westman memorial lecture. S. G. Ward. bibliog(68 ref) Can Chem & Process Ind 31:626-36 Jl '47
Coal logs processes for coal carbonization. G. W. Carter. il Chem Eng Prog 43:180-2 Ap '47
Coal, petroleum and their newer derivatives; symposium arranged by the Royal institute of chemistry. Chem & Ind p450-2 Jl 26 '47
Coal, shale and petroleum as sources of chemical products. W. M. Cumming. Chem Age (Lond) 57:41-6 Jl 12 '47
Fats from coal seen deficient. F. H. Rein. Food Ind 19:1353+ O '47
Fischer-Tropsch process. C. C. Hall. Chem Age (Lond) 56:115-24 Ja 18 '47; Same cond. Engineering 163:30, 54-5, 79 Ja 10-24 '47
Huge project will convert coal to gas; collaboration between Pittsburgh consolidation coal co. and Standard oil development co. Am Gas Assn Mo 29:167+ Ap '47
Is plastics' future tied to coal? Mod Plastics 24:89-93+ Mr '47
New plant will turn coal into gasoline and gas fuel. P. A. Johnston. Barron's 27:6 Mr 31 '47
Oils and waxes from coal; recent German work on catalysts. C. C. Hall. Chem Age (Lond) 55:569-70 N 9 '46
Operation and development of the Fischer-Tropsch and similar processes in Germany. C. C. Hall. diags Chem & Ind p67-74; Discussion. 74-5 F 1 '47
Pittsburgh Consolidation announces program to make oil and gas from coal. J. Pursglove, jr. Coal Age 52:130+ Ap '47
Pittsburgh consolidation coal co. and Standard oil development co. announce program for making gasoline and gas fuel from bituminous coal. Chem & Eng N 25:976 Ap 7 '47; Abstract. Iron Age 159:104 Mr 27 '47
Plant projected to convert coal into motor fuel and gas; Standard oil development co. and Pittsburgh consolidation coal co. plans. Oil & Gas J 45:46 Ap 5 '47
Processing coal into liquid products may be practicable in a few years; joint program of Standard oil co. (N.J.) and Pittsburgh consolidation coal co. W. F. Bland. Pet Processing 2:325-7 My '47; Abstract. Nat Pet N 39:23-4 Ap 2 '47
Revising an empire; Koppers co. Bsns W p71-2+ Jl 19 '47

See also
Coal distillation
Coal liquefaction
Coal tar products
Coke
Coke manufacture—By-products
Gas

COAL purchasing
How to buy coal. il Power Pl Eng 51:108-9 S '47

COAL research
Analysis of external deposits from boilers; methods in use at British coal utilisation research association. A. H. Edwards and D. Flint. Soc Chem Ind J 65:256-7 S '46
Annual report of research and technologic work on coal, fiscal year 1946. A. C. Fieldner and P. M. Ambrose. bibliog 30pls U S Bur Mines Information Circ 7417:1-142 '47
Applications of science to industry. J. G. King. bibliog Chem & Ind p462-6 D 28 '46
Fluidization now being applied to coal coking. Pet Processing 1:166 N '46
Many millions now being spent on coal research here and abroad. H. J. Rose. il Min & Met 28:110-11 F '47
Report of the committee on research on coal of the Society of economic geologists. Econ Geol 42:509-12 Ag '47
Research on coal utilisation. R. W. Foot. Engineering 163:7 Ja 3 '47; Same cond. Engineer 182:567 D 20 '46; Abstract. Chem Age (Lond) 55:811 D 28 '46
Trends in solid-fuel research. H. J. Rose. bibliog Mech Eng 69:823-6 O '47

Bibliography

Bibliography of Bureau of mines investigations of coal and its products, 1940 to 1945. A. C. Fieldner and others. U S Bur Mines Tech Pa 698:1-53; pa 15c Supt. of doc. '47

COAL sampling
Development in the theory of coal sampling. E. H. M. Badger. Gas J (Lond) 251:34-8 Jl 2 '47

COAL screening
Coal screening and dewatering with vibrating units. J. E. Dunn. il plan Coal Age 52:73-5 Mr '47
Making a coal screen. J. F. Slavinsky. il Power Pl Eng 51:101 Ag '47

COAL sizing
Sizing and grading of coal; discussion. J. C. Gridley. Engineer 182:389-91 N 1 '46

COAL storage
Stores and reclaims coal at low cost; Atlantic coast line stock-piles standby supplies with electrically-operated drag-scraper equipment. il Ry Age 122:230-1 Ja 25 '47
Why foresight in coal-bunker design pays off in trouble-free operation. E. Hahn. diags Power 91:320-1 My '47

COAL strikes
Basic question; power and monopoly. Nat City Bank p133-7 D '46
Bituminous-coal stoppage, June 1947. Mo Labor R 65:71-2 Jl '47
Coal and the coal miner. Coal Age 51:67-82 D '46
Coal strike's impact at home and abroad. P. M. Hauser. Comm & Fin Chr 164:2888+ D 5 '46
Controversies and significant developments, November 1946; bituminous coal strike. Mo Labor R 63:967-9 D '46
Discipline and democracy. Economist 151:952, 997-8 D 14-21 '46; Same abr. Iron Age 158: 111+ D 26 '46; 159:115+ Ja 9 '47
Federal agencies act to keep electric utilities in operation. Elec World News ed 126:3 N 30 '46
How's business? battle with John L. Lewis. Barron's 26:1 N 25 '46
In the Lewis wake. il Bsns W p15-16 D 14 '46
Lewis ends bituminous stoppage as contempt case goes higher. Coal Age 51:119-20 D '46
Lewis fined: U.S. starts paying. Bsns W p15-16 D 7 '46
Only yesteryear; John Lewis; perennial embodiment of labor difficulties. A. W. May. Comm & Fin Chr 164:2749+ N 28 '46
Panther valley, Pa. anthracite stoppage. Mo Labor R 64:494 Mr '47
Problem for the Nation; Lewis' actions in coal dispute. Bsns W p15-16 N 30 '46
Should tolerate no strikes against government. H. F. Byrd. Comm & Fin Chr 164: 2759+ N 28 '46
Soft coal mines close; brown outs ordered. Comm & Fin Chr 164:2811 N 28 '46
Strike's impact on industry; where, when, how hard. il Bsns W p16 N 30 '46
Supreme court upholds government in Lewis coal strike case. Comm & Fin Chr 165: 1430+ Mr 13 '47

COAL supply
Fuel economy conference. Engineering 164: 281, 328-9 S 19, O 3 '47
How coal supplies look. Bsns W p38 N 23 '46

Canada

Canada's coal problem. Engineer 183:401-2 My 9 '47
Coal problems in Canada. Economist 152: 284-5 F 15 '47
Royal commission on coal, 1946; report. Can Min J 68:185-7 Mr '47

Europe

Coal must come first. Economist 153:266-7 Ag 16 '47
Food and coal hold key to Old World's dilemma. E. Blair. Barron's 27:14 S 15 '47
What U.S. coal means to Europe; a statistical review. R. L. Trisko. il For Comm W 25: 12-13+ D 14 '46

France

Economy in the French coal industry. Engineer 182:512 D 6 '46
French fuel and power under the Monnet plan. Electrician 138:1601-2 Je 13 '47

Germany

German coal usage. H. A. Herder. Mech Eng 69:38 Ja '47

Great Britain

British are given first real analysis of coal crisis. S. Cripps. Iron Age 159:116-17 Ap 3 '47
British coal production so far this year up 3 million tons. Iron Age 159:129-32 My 29 '47
Coal and oil resources; abstract. C. A. Carlow. Chem Age (Lond) 57:39-41 Jl 12 '47
Coal consequences. Economist 152:289-90 F 15 '47
Coal prospect now. Economist 153:454 S 13 '47
Coal shortage cuts production; famine conditions in the North-West. Chem Age (Lond) 56:169-70 Ja 25 '47
Coal stocking for the winter. Economist 153: 333-4 Ag 23 '47
Coal utilisation; report on some urgent problems. M. P. Price. Engineer 184:18-19 Jl 4 '47
Coal utilization; report submitted to Minister of fuel and power and Lord President of the Council. Gas J (Lond) 251:514-16 S 3 '47
Commons debates coal. Elec R (Lond) 140: 299-300 F 14 '47
Comparisons between gas and electricity on the basis of coal economy. P. Schiller. bibliog Inst E E J 94 pt 1:355-63; Discussion. 364-70 Ag '47
Danger of fuel restrictions; abstract. R. Renwick. Electrician 138:564 Mr 7 '47
Double meaning in coal crisis. Bsns W p109-10+ F 15 '47
Effects of the coal cuts. Chem Age (Lond) 56:194-5 F 1 '47
Electricity and coal; interim report of Parliamentary and scientific committee. Electrician 139:51-2 Jl 4 '47
Electricity, coal and economics; abstract. R. A. S. Thwaites. Electrician 139:1067 O 10 '47
Fuel and the future conference; report by W. R. Gordon. Can Min J 68:177-9 Mr '47
Fuel crisis day by day. Gas J (Lond) 249: 446+ Mr 5 '47
Fuel crisis; how coal was saved. Electrician 138:548-50 Mr 7 '47
Fuel crisis; statement on rising electricity demand. E. Shinwell. Electrician 138:496-7 F 14 '47
Gas-works routine and coal conservation. D. B. Laws. Gas J (Lond) 249:149-50 Ja 15 '47
Grid, coal and electricity. R. W. Biles. Inst E E J 94 pt 1:107-10 F '47

COAL supply—Great Britain—*Continued*
Mr Micawber's crisis. Economist 152:265-7 F 15 '47
Nationalised mines and the coal supply situation. R. A. S. Redmayne. Engineer 183: 35-6, 62-4 Ja 10-17 '47
Poor coal is hampering industries. Chem Age (Lond) 56:700 My 31 '47
Towards the all-electric idea; a review and a forecast. V. Z. de Ferranti. Inst E E J 94 pt 1:21-5 Ja '47; Same cond. Engineer 182:317-19 O 11 '46; Same cond. Engineering 162:430-2 N 1 '46; Abstract. Electrician 137:985-7 O 11 '46; Discussion. Inst E E J 94 pt 1:25 Ja '47
Trend in British coal utilization today. W. R. Gordon. Can Min J 67:1114-18 D '46
Winter coal supplies. Economist 153:651-2 O 18 '47

Italy
Italy's coal quandary; dire need, diverse efforts. J. H. East, jr. il For Comm W 26:6-7+ F 15 '47

United States
Coal for steel. Bsns W p45-6 O 18 '47
Coal reserves in U.S. can last 1500 years. H. J. Rose. Iron Age 160:130+ Jl 10 '47; Excerpt. Comm & Fin Chr 165:3388 Je 26 '47
National fuel reserves; relation to the future supply of liquid fuels. A. C. Fieldner. bibliog maps Mech Eng 69:221-6+ Mr '47; Same cond. Ry Age 122:142-5 Ja 11 '47; Discussion. Mech Eng 69:866-7 O '47
Our fuel supply; a look ahead. S. B. Flagg. il Mech Eng 69:131-4 F '47
Plea to get rid of complacency; reasons why good coal is scarce. R. L. Ireland. Ry Age 123:532-3 S 27 '47
U.S. coal exports supply world; old sources fail. E. R. Abrams. Barron's 27:4 S 1 '47

COAL tar
See also
Road tar

COAL tar products
Chemical research again surges upward; coal tar chemicals G. D. Bieber. Chem Ind 61:390 S '47
Coal chemical industry trends and problems. P. J. Wilson, jr. and J. H. Wells. il Chem Eng 53:110-14 D '46
Experiments on the production of toluene from coal tar products and other sources. C. M. Cawley and others. bibliog flow diags plan Inst Pet J 32:660-83 N '46
Further drop in coal supplies has forced sharp decline in British chemical outputs. Chem Eng 54:196+ F '47
German high-temperature coal-tar industry. E. O. Rhodes. 8pls U S Bur Mines Information Circ 7409:1-117 '47
Manufacture of coal-tar products, Chile. For Comm W 26:24 Mr 8 '47
New bases from coal-tar. G. D. Bieber. il Chem Ind 61:51 Jl '47
Oil companies invading coal-tar chemical field. S. B. Self. Barron's 27:32 Ag 18 '47
Trends in coal chemical research. P. J. Wilson, jr. Blast F & Steel Pl 34:1537-9 D '46
See also
Benzene
Benzol (commercial benzene)
Coal distillation
Creosote

Statistics
Average monthly quotations in 1946. Steel 120:322 Ja 6 '47
Coaltar chemicals. Published in weekly numbers of Oil, paint and drug reporter
Coaltar chemicals output, 1946 and comparison with 1945. Oil Paint & Drug Rep 151: 42 F 17 '47

COAL tipples
Robena, world's largest coal mine. il Min Cong J 33:30-4 Mr '47

COAL trade
Securities
Fuel industry in transition; with financial statistics on leading companies. H. S. Coffin. il Mag of Wall St 79:306-8+ D 21 '46

Statistics
What U.S. coal means to Europe; a statistical review. R. L. Trisko. il For Comm W 25:12-13+ D 14 '46

Germany
Setting Ruhr coal policy. il Bsns W p 109-10 S 20 '47

Great Britain
Britain's coal; excerpts from Parliamentary debate. H. F. C. Crookshank and others. Comm & Fin Chr 165:1006 F 20 '47
See also
Coal supply—Great Britain

Netherlands
Production and consumption, first half of 1947. For Comm W 28:22 S 27 '47

Pennsylvania
Eastern Pennsylvania's anthracite industry optimistic. L. B. Sisson. Barron's 27:34-5 My 19 '47

Southern states
Petroleum and coal products; South's fourth largest industrial group. C. R. Walker. Manuf Rec 116:40+ Je '47

United States
Bituminous coal, a price problem. P. W. Graff. bibliog il Coal Age 51:70-5 N '46
Bituminous coal during the first year of peace. R. L. Trisko. il Dom Comm 34:34-9 D '46
Bituminous progress involves labor and cost problems; review of 1946. il Coal Age 52: 76-83 F '47
Blue ribbon railroads; C.&O., N.&W., and Virginian make big money by hauling soft coal. il Bsns W p70-2+ My 24 '47
Coal industry; review of 1946. H. F. Hebley and others. Min & Met 28:106-12 F '47
Coal looks ahead. G. H. Love. Power Pl Eng 51:73+ Ag '47
Coal, our no. 1 natural resource, and the base of our industrial civilization. il maps Fortune 35:85-95+ Mr; 98-105+ Ap '47
Future supply of coal for gas-making. W. R. Cameron. Am Gas Assn Proc 1946:42-4
New horizons for coal; coming multi-million fuel industry? S. Devlin. il Mag of Wall St 80:93-5+ Ap 26 '47
Ore and coal in 1946. W. A. Lloyd. Iron Age 159:131-3 Ja 2 '47
Painful shifts ahead among coal producers. A. L. Jackson. Barron's 27:11 F 10 '47
Some phases of labor and economics in the coal industry. C. J. Potter. il Min Cong J 33:33-5+ Je '47
Why good coal is hard to get. R. L. Ireland. Ry Mech Eng 121:539-41 O '47
See also
Coal strikes

COAL washing
Clarification of washery water in closed circuits; abstract. S. M. Parmley. Min Cong J 33:64 Je '47
Coal washery plants. W. J. Parton. flow diags il Ind & Eng Chem 39:646-52 My '47
Coal washing; spiral concentrator and preclassified table feed; Robena mine. W. L. McMorris, jr. il Steel 120:96+ Ja 27 '47
Construction of concrete coal facility in narrow gorge; coal washing plant at Gary mine of United States coal and coke co. il Concrete 55:10-11+ Ag '47
Laboratory control of washing plants; abstract. J. M. Bishop. Min Cong J 33:63-4 Je '47
New washery equipment, method outlined. H. C. Medley. Coal Age 52:108+ Ja '47
Treatment of acid mine water for breaker use in the anthracite region of Pennsylvania. L. H. Johnson. bibliog 5pls U S Bur Mines Information Circ 7382:1-14 '46
Washer reclaims bank coal. flow sheet il Coal Age 52:92-3 Ag '47
Washing characteristics of the Pittsburgh coal in a high-sulfur area in Greene county, Pa. T. Fraser and W. L. Crentz. flow diag fold charts maps U S Bur Mines Tech Pa 689:1-85; pa 15c Supt. of doc. '46

COAL waste
Coal washery plants. W. J. Parton. flow diags il Ind & Eng Chem 39:646-52 My '47
Recovery of commercial coal from mine and tipple refuse; abstract. A. F. Castonoli. Min Cong J 33:63 Je '47
Spiral plant converts silt into better boiler fuel. flow sheet il diags Coal Age 52:85-8 Je '47
See also
Culm

COAL weighing
Coal weighing tenders on the L.M.S. il Engineer 183:341 Ap 18 '47; Engineering 164:129-30 Ag 8 '47
Weighing coal in the power plant. W. G. Hudson. diags Power Pl Eng 51:101-3 S '47

COALING stations
Coal station operating requirements; report of Railway fuel and traveling engineers' association. Ry Age 123:567-8 O 4 '47
Coaling stations keep step with modern steam power on the C.&O.; two structures built to serve new steam-turbo-electric locomotives. il Ry Age 122:1204-6 Je 14 '47

COAST and geodetic survey. See United States—Coast and geodetic survey

COAST changes
Wave erosion along the southern California coast. F. P. Shepard and U. S. Grant, 4th. bibliog Geol Soc Bul 58:919-26, pl 1-5 O '47

COAST counties gas and electric company
Offering of preferred stock. Comm & Fin Chr 166:156, 564 Jl 14, Ag 11 '47

COAST guard. See United States—Coast guard

COASTAL plains
Atlantic coastal plain floor and continental slope of North Carolina. W. F. Prouty. map diag Am Assn Pet Geologists Bul 30: 1917-20 N '46
Cenozoic deposits of Central Gulf coastal plain. G. E. Murray. bibliog maps diags Am Assn Pet Geologists Bul 31:1825-50 O '47
Equilibrium of form and forces in tidal basins of coast of Texas and Louisiana. W. A. Price. bibliog maps Am Assn Pet Geologists Bul 31:1619-63 S '47
Geomorphology of depositional surfaces. W. A. Price. maps Am Assn Pet Geologists Bul 31:1784-800 O '47

COATED fabrics. See Textile fabrics—Coating

COATED paper. See Paper, Coated; Paper coating

COAXIAL cables. See Electric cables; Radio lines; Telephone cables—Coaxial cables; Television cables

COBALT
Cobalt, 1946. H. W. Davis. Eng & Min J 148:81 F '47
Hydrocarbon synthesis in the presence of cobalt catalysts at medium pressures. C. C. Hall and S. L. Smith. flow diag Inst Pet J 33:439-59 Jl '47
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47

Analysis

Colorimetric determination of cobalt using nitroso-R salt. H. H. Willard and S. Kaufman. Anal Chem 19:505 Jl '47
Colorimetric method for the determination of cobalt in stainless steel. H. M. Putsché and W. F. Malooly. bibliog Anal Chem 19: 236-8 Ap '47
Explosion in determination of cobalt as potassium cobaltinitrite. D. B. Broughton, M. E. Laing and R. L. Wentworth. Anal Chem 19:72 Ja '47
Formation of explosive derivatives in determination of cobalt as potassium cobaltinitrite. J. E. de Paiva Netto and R. A. Catani. bibliog Anal Chem 19:818 O '47
Volumetric determination of cobalt. A. J. Hall and R. S. Young. Chem & Ind p394-5 N 2 '46

Isotopes

Angular distribution of gamma-rays in Na^{24}, Co^{60}, Y^{88}. W. M. Good. bibliog Phys R 70: 978-9 D 1 '46
Cobalt 61 radioactivity. T. J. Parmley and B. J. Moyer. Phys R 72:82 Jl 1 '47
Magnetic-lens electron spectrometer; radiations from 5.3 year cobalt^{60}. L. C. Miller and L. F. Curtiss. diags J Res Nat Bur Stand 38:359-64 Mr '47

Physiological effect

Cobalt. L. T. Fairhall. Ind Med 15:694+ D '46

COBALT, Powdered
Crystalline aggregation of cobalt powder. J. T. McCartney and R. B. Anderson. il J Ap Phys 18:902-3 O '47

COBALT alloys
As-cast and aged structures of Cr-Co alloys; photomicrographs; data sheet. Metal Prog 52:4008 S '47
Cobalt-base and nickel-base alloys for ultra-high temperature. F. S. Badger, jr. and F. C. Kroft, jr. il Metal Prog 52:394-400+ S '47
Graphite formation in cast irons and in nickel-carbon and cobalt-carbon alloys. H. Morrogh and W. J. Williams. il Iron & Steel Inst J 155:359-63 Mr '47; Discussion. il 156:491-6; 157:193-7 Ag, O '47
Limitations on precision cast parts. N. J. Grant. il Iron Age 160:62-6 Ag 7 '47
Precision drop forging of high temperature alloys. S. G. Demirjian. il Materials & Methods 26:68-71 S '47
See also
Iron alloys—Cobalt alloys
Stellite
Tantung

Analysis

Determination of nickel in cobalt steels and alloys. H. Kirtchik. bibliog Anal Chem 19:95-6 F '47

COBALT ammines. See Cobalt compounds

COBALT arsenides
Higher mineral arsenides of cobalt, nickel, and iron. R. J. Holmes. diags tables Geol Soc Bul 58:299-391, pl 1-5 bibliog(p385-91) Ap '47

COBALT carbide
Preparation and X-ray diffraction studies of a new cobalt carbide. L. J. E. Hofer and W. C. Peebles. bibliog il Am Chem Soc J 69:893-9 Ap '47

COBALT compounds
Cobaltammines and chlorostannic acid. T. P. McCutcheon and E. L. d'Ouville. Am Chem Soc J 69:989-90 My '47
Electrodeposition of cobalt and nickel from coordination compounds; cobalt ammines and nickel ammines. M. D. Kramer and others. bibliog Electrochem Soc Trans 90 (preprint 27):339-45 '46
Oxygen-carrying synthetic chelate compounds. M. Calvin and others. bibliog diags Am Chem Soc J 68:2254-78, 2612-18 N-D '46
See also
Salcomine

COBALT disalicylal ethylene diamine. See Salcomine

COBALT fluorides
Fluorination of petroleum oils in liquid phase with silver difluoride. W. S. Struve and others. diag Ind & Eng Chem 39:352-4 Mr '47
Fluorination of petroleum oils in vapor phase with cobalt trifluoride. C. F. Irwin and others. diag Ind & Eng Chem 39:350-2 Mr '47
Fluorocarbons by fluorination of hydrocarbons with cobalt trifluoride. R. G. Benner and others. bibliog diag Ind & Eng Chem 39:329-33 Mr '47
Low polymers of chlorotrifluoroethylene; preparation and utilization in chlorofluorocarbon lubricants. W. T. Miller, jr. and others. bibliog Ind & Eng Chem 39:333-7 Mr '47
Pilot plant syntheses; perfluoro-*n*-heptane, perfluorodimethylcyclohexane, and high boiling fluorocarbon oils. W. B. Burford, 3d and others. flow sheet il diags Ind & Eng Chem 39:319-29 Mr '47
Production of polyperfluorovinyl chloride. E. A. Belmore, W. M. Ewalt and B. H. Wojcik. flow sheets diag Ind & Eng Chem 39:338-42 Mr '47

COBALT fluorides—*Continued*
Synthesis of fluorocarbons. R. D. Fowler and others. bibliog diag Ind & Eng Chem 39: 292-8 Mr '47

COBALT metallurgy

Electrometallurgy

Electrolytic cobalt, a commercially feasible process. F. K. Shelton and others. flow sheet Electrochem Soc Trans 91 (preprint 4):55-71 '47

COBALT mines and mining

Idaho

Blackbird cobalt deposits, Lemhi county. G. C. Reed and J. A. Herdlick. 25pls U S Bur Mines Rep of Invest 4012:1-14 '47

Ontario

Cobalt returns. il J Chem Educ 23:522-4 N '46

COBALT molybdate
Catalytic desulfurization of high-sulfur stocks by the cobalt molybdate process. C. Berg and others. flow sheets il Chem Eng Prog 43:1-12 Ja '47; Discussion. 43:134 Mr '47
Cobalt molybdate desulfurization process; Union oil company of California. flow diag il Pet Refiner (Process Handbook sec) 26: 124-5 Ap '47

COBALT ores
Cobalt mineralization in the Blackbird district, Lemhi county, Idaho. A. L. Anderson. bibliog il map Econ Geol 42:22-46 Ja '47
Exploration of a nickel-copper-cobalt deposit at Funter bay, Admiralty island, Alaska. S. P. Holt and J. M. Moss. flow sheet U S Bur Mines Rep of Invest 3950: 1-15, pl 1-6 '46

COBALT oxide
Studies in the distribution of temperature through molten glasses in a tank melting furnace; the effect of cobalt oxide. R. Halle and W. E. S. Turner. Glass Ind 28: 523+ O '47

COBALT plating
Deposition of nickel and cobalt by chemical reduction; abstract. A. Brenner and G. Riddell. Metal Finishing 45:49 Ag '47
Electrodeposition of cobalt and nickel from coordination compounds; cobalt ammines and nickel ammines. M. D. Kramer and others. bibliog Electrochem Soc Trans 90 (preprint 27):339-45 '46
Electroless plating of nickel, cobalt on metals by chemical reduction. il Sci Am 177:172-3 O '47
No electric current used in new method of plating nickel and cobalt on metal surface. A. Brenner and G. E. Riddell. il diag Steel 121:84+ Jl 28 '47; Same. Chem Age (Lond) 57:156-7 Ag 2 '47; Same, without il. Mech Eng 69:767-8 S '47; Same cond. Automotive Ind 97:90 O 15 '47; Same cond. Product Eng 18:150 O '47; Abstracts. Comp Air Mag 52: 281 N '47; Can Min J 68:908 D '47

COBALT steel
Mass temperature effects on quenching 36 per cent cobalt magnet steel. B. Falk. bibliog Am Soc for Metals Trans 37:192-212; Discussion. 212-15 '46

COCA-COLA company
Coca-Cola, a saga of southern enterprise. J. Mebane. Manuf Rec 116:35+ F '47
Twelve full ounces, that's a lot. Fortune 35: 143 Ja '47

COCCIDIOIDOMYCOSIS
Infectiousness of coccidioidomycosis. S. R. Rosenthal and J. B. Routien. Science 104: 479 N 22 '46

COCKPITS. See Airplanes—Cockpits

COCKROACHES
DDT for control of roaches. L. S. Henderson. Soap & San Chem 22:121-3+ N '46
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47
Techniques of application and the control of roaches and bedbugs with DDT. R. L. Stenburg. bibliog Pub Health Rep 62:669-81 My 9 '47

COCOA
Cocoa cuts own market. Barron's 27:37 O 6 '47
Cocoa users squeezed in short supplies. Barron's 27:7 Ja 20 '47
Controls continued over sale of cocoa from West Africa. G. C. Clarke. il Can Chem & Process Ind 31:323 Ap '47
Higher cocoa price for growers. Economist 153:458 S 13 '47
Nutritional value of cocoa and chocolate. W. B. Walker. Chem & Ind p521 Ag 23 '47
Second thoughts on cocoa. Economist 151:828 N 23 '46
Trade eyes cocoa monopoly warily. Barron's 26:9 D 9 '46

COCONUT, Dried
Drying coconut meat; patent. Food Ind 19: 706 My '47

COD-liver oil
Icelandic exports of cod-liver oil in 1946; table. For Comm W 27:27 Je 21 '47

COENZYMES
Estimation of coenzyme I through the uptake of oxygen. P. S. Krishnan. Science 105:295 Mr 14 '47
Interference by ATP in the estimation of coenzyme I. P. S. Krishnan. bibliog Science 105:604-5 Je 6 '47
Nucleotides; muscle adenylic acid and adenosine diphosphate. J. Baddiley and A. R. Todd. Chem Soc J p648-51 My '47

COFFEE
Changing to heat seals for coffee bags. Mod Packaging 21:154 O '47
Code-dating; Chase & Sanborn new jar-label marker. il Mod Packaging 21:110-11 S '47
Coffee concentrate; abstract. R. Gane. Food Ind 19:705 My '47
Measurement and analysis of gases in vacuum-packed food containers. L. C. Cartwright. bibliog diags Ind & Eng Chem Anal ed 18:779-85 D '46
Nicotinic acid content of coffee. E. B. Hughes and R. F. Smith. bibliog Soc Chem Ind J 65:284-6 O '46
Ottawa test sand; evaluation of gas permeability of sealed flexible packages. L. C. Cartwright. bibliog il diag Mod Packaging 20:145-7+ My '47; Same. Paper Tr J 124: 51-3 Je 19 '47
Reseal can. il Mod Packaging 20:99 Ap '47

COFFEE, Soluble
New products through research; soluble coffee and special food for aged developed by Borden's New products research laboratory. F. L. Seymour-Jones. il Food Ind 19:299-301+ Mr '47

COFFEE brewers
Buyers' market is still big; Silex co.'s market saturation test in Peoria area. il Bsns W p54+ Je 14 '47
How Silex built acceptance for a new idea. C. J. Swan. il Ptr Ink 219:31-3 My 30 '47
Policy changes that zoomed the sale of Cory coffee makers; improved product, expanded line; new dealer and distributor policies. L. B. Colby. il Sales Management 58:37-40 Ja 1 '47

COFFEE dispensers
Cast phenolic houses coffee-tea unit. il Mod Plastics 24:109 Je '47

COFFEE percolators, Electric. See Electric coffee percolators

COFFEE pots
One-cup coffee makers. il Mod Plastics 25: 208+ O '47
Three plastics add to beauty, usefulness of cookware line. il Mod Plastics 25:106-8 S '47

Rating

Coffee makers. il Consumers Res Bul 20:5-7 S '47

COFFEE trade
Coffee bows to hard facts. Barron's 27:29 Je 9 '47

Finance

Dollar problem and world trade; difficulties to coffee trade. A. H. Temple. Comm & Fin Chr 166:1411+ O 9 '47

COFFEE trade—*Continued*

Ecuador

Production and exports in 1946 and 1947 outlook. For Comm W 27:25 Je 14 '47

Haiti

National coffee office created; excess-profit tax established. For Comm W 26:12 F 15 '47

Peru

Export prohibition and government control of distribution lifted. For Comm W 26:22 Mr 8 '47

COFFERDAMS

Ingenious flashboard replacement on old concrete dam; Shawmut dam at Fairfield, Me. H. B. Fleming. il Eng N 139:582-4 O 30 '47

Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

COFFIN foundation

Charles A. Coffin award is reinstated after war-time suspension. il Edison Elec Inst Bul 14:356 O '46

New York state electric & gas corp. receives Coffin award. il Edison Elec Inst Bul 15: 220 Je '47

COFFINS

All-welded metal casket; Ryan aeronautical co. W. P. Brotherton. il Welding J 26: 786-7 S '47

Fabricates caskets of chromium-nickel weldments; Ryan aeronautical co. il Steel 120: 112 Je 2 '47

COG railway. See Rack railroads

COHEN, Frank

Tractor tyro; Empire Ordnance's F. Cohen. Bsns W p21 Ag 16 '47

COHU, La Motte T. 1895-

Cohu succeeds Frye as president of Transcontinental & western air, inc. por Bsns W p73 My 3 '47

New president of TWA. Aviation N 7:44-5 My 5 '47

COILS, Electric. See Electric coils

COILS, Inductance. See Inductance coils

COILS, Pipe

Coil selection for air conditioning units. J. E. York. diags Heat & Ven 44:66-75 Mr '47

Heat transfer from ground to water in buried coils. W. F. King and M. S. Martus. plan Heat & Ven 44:71-4 Jl '47

Length of pipe for radiant heating coils; reference data. Heat & Ven 44:96a-96b S '47

Pipestill coil design. W. D. Harbert. Pet Refiner 26:122-7 S '47

COIN changing machines

Coin changing machines new advertising medium. il Ptr Ink 217:69 N 29 '46

COIN machines. See Radio receiving apparatus —Coin operation; Vending machines

COINAGE

See also

United States—Mint

COINCIDENCE counting

Electronics for cosmic-ray experiments. B. Howland and others. diags R Sci Instr 18: 551-6 Ag '47

COINS

Nation's pocket money. Economist 152:732 My 10 '47

COKE

Aluminum-silicon alloys by electrothermal reduction of clay with coke. M. M. Striplin, jr. and W. M. Kelly. bibliog il diags Chem Eng Prog 43:569-78 O '47

Beating the coke shortage. Foundry 74:77+ N '46; Discussion (How to use less coke). 75:78-80+ Mr '47

Iron substitutes in openhearth charges. R. R. Fayles. il Iron Age 159:57-9 Ja 23 '47

Saving foundry coke. J. A. Bowers. il Foundry 75:72-3+ Je '47

Survey of foundry coke characteristics; abstract. D. E. Krause and H. W. Lownie, jr. Iron Age 159:85 My 8 '47

Use of carbon in the blast furnace and heat balances. T. L. Joseph and K. Neustaetter. Blast F & Steel Pl 35:824-31, 944-8 Jl-Ag '47

See also

Boilers—Coke firing

Petroleum coke

Prices

Furnace and foundry coke, Connellsville; monthly, 1929-1946; tabulation. Iron Age 159:248 Ja 2 '47

COKE and coal chemicals institute, American. See American coke and coal chemicals institute

COKE breeze

Burning coke breeze on a chain grate stoker. F. X. Gilg. diags Blast F & Steel Pl 35: 1252-4+ O '47

Enameled screen gives best results in screening coke breeze and damp materials. F. J. Geyer. il Blast F & Steel Pl 34:1529-30 D '46

COKE burning equipment

Good heating unit. Chem Age (Lond) 57:196 Ag 9 '47

Testing of solid fuel domestic appliances. E. A. C. Chamberlain and J. A. Toole. Gas J (Lond) 249:206 Ja 22 '47

COKE handling

Experiences with a new type of coke extractor on vertical retorts. W. W. Chisholm. il Gas J (Lond) 250:141-2+ Ap 16 '47; Discussion. 250:196 Ap 23 '47

COKE industry

Coke, a key industrial material. W. H. Voskuil. J Land & Pub Util Econ 22:339-45 N '46

Coke and coal chemical materials in 1946. Blast F & Steel Pl 35:983-4 Ag '47

Great Britain

Coke ovens under nationalisation. Chem Age (Lond) 55:757-8 D 21 '46

Midland counties coke association 9th annual general meeting, Birmingham, March 27. Gas J (Lond) 250:183-4 Ap 23 '47

1945 coke oven statistics. Gas J (Lond) 248: 772-4 N 6 '46

Problems before the coke oven industry. G. A. Phillipson. Gas J (Lond) 248:768-70 N 6 '46

Yorkshire gas coke association 6th annual meeting, Leeds, May 29. Gas J (Lond) 250: 719-20 Je 25 '47

COKE manufacture

Carbonization and gasification; abstracts of papers at meeting of International congress of pure and applied chemistry. Am Gas J 167:15-18 S '47

Carbonization of coal sprayed with oil. P. C. Mayfield. Blast F & Steel Pl 35:833-5 Jl '47

Coke and gas industry; waste disposal problems. H. A. Gollmar. bibliog flow diags il Ind & Eng Chem 39:596-601 My '47

Coke and iron practice in Utah. C. L. Waggoner. il Steel 120:112-14 Ap 21 '47

Fuel economy in coal carbonization. T. C. Finlayson. bibliog Gas J (Lond) 252:43-6 O 1 '47

Gas industry vis à vis the coke oven industry. Gas J (Lond) 249:571-2 Mr 19 '47

La gazéification intégrale des combustibles par le procédé Koppers. J. Barral. diags Chimie & Ind 57:441-3 My '47

German coking process; Krupp-Lurgi. Chem & Eng N 25:1210+ Ap 28 '47

Low ash coal in carbonization. Gas J (Lond) 250:36+, 91+ Ap 2-9 '47

Low-temperature coke by the Krupp-Lurgi process. L. D. Schmidt. 8 pls U S Bur Mines Information Circ 7395:1-18 '47

Low-temperature coke oven; Pittsburgh Consolidation Coal to make coke by Disco process. Bsns W p66+ Je 14 '47

Low temperature coke to be processed in plant and tar refinery to be built by the Disco co. il Heat & Ven 44:112 Ag '47

Modern developments in coal carbonization. C. A. Poulson. diags Gas J (Lond) 249:29-32 Ja 1 '47

New field for coal, low-temperature coke; manufacture of smokeless fuel by the Disco co. il Steel 121:124+ O 6 '47

COKE manufacture—*Continued*
Observations on coke oven and blast furnace practice at the Geneva plant. C. L. Waggoner. Blast F & Steel Pl 35:325-8 Mr '47
Partial devolatilization of coal by the fluidization process. A. D. Singh. flow diag Am Gas Assn Proc 1946:400-9
Practical experiences in the coking of dangerous low-ash coals. D. T. Barritt. Gas J (Lond) 250:33-4 Ap 2 '47
Robena coal blended seven times in making of coke. W. L. McMorris, jr. Blast F & Steel Pl 35:356+ Mr '47; Same. Iron Age 159:145-7 Mr 13 '47
Survey of carbonizing properties of American coals; Bureau of mines coal carbonization laboratory, 1945-1946. J. D. Davis and D. A. Reynolds. Am Gas Assn Proc 1946:426-41
See also
Coke ovens

By-products
Analysis of sludges from benzole recovery plants using petroleum oils. T. A. Dick, G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 66:238-48 Jl '47
Coal chemical industry trends and problems. P. J. Wilson, jr. and J. H. Wells. il Chem Eng 53:110-14 D '46
Coke, a key industrial material. W. H. Voskuil. J Land & Pub Util Econ 22:339-45 N '46
Cokeoven byproducts, 1946; tabulation. Oil Paint & Drug Rep 152:50 Jl 21 '47
Cyanide salvage. Chem Ind 60:947 Je '47
Trends in coal chemical research. P. J. Wilson, jr. Blast F & Steel Pl 34:1537-9 N '46
See also
Coke-oven gas
Coke plants, By-product

COKE-oven gas
Coal chemical industry trends and problems. P. J. Wilson, jr. and J. H. Wells. il Chem Eng 53:110-14 D '46
Cold enrichment with LP-gas; Boston consolidated gas co. experience with mixture of coke-oven gas, carburetted water gas and propane. J. Penney and W. Churchill. Gas Age 98:30-1+ N 28 '46
Fuel utilization in iron and steel works. N. H. Turner and F. A. Gray. Blast F & Steel Pl 34:1408-12+ N '46
Gas industry vis à vis the coke oven industry; supply of coke oven gas to public utilities. Gas J (Lond) 250:237-8 Ap 30 '47
Gas production and the chemical industry. J. S. van Aken. Chem Age (Lond) 57:423-4, 457-8+ S 27-O 4 '47
Operation of open-hearth furnaces with coke-oven gas and pitch-creosote. D. Kilby. pl diags Iron & Steel Inst J 155:3-20 Ja '47; Same. Blast F & Steel Pl 35:563-70, 707-13 My-Je '47; Discussion. Iron & Steel Inst J 156:501-4 Ag '47

Storage
Storage of coke-oven gas in sandstone strata; removal of vapor phase gum. J. R. Bircher. bibliog flow sheet il map diag Chem Eng Prog 43:453-8; Discussion. 458 S '47

COKE ovens
Efficient operation of coke ovens. Engineering 162:422 N 1 '46
From the plant constructor's angle; consideration of bulletins of Fuel efficiency committee of the coking industry. D. T. Barritt and T. C. Finlayson. Gas J (Lond) 248:939-40+ N 27 '46
Gas industry vis à vis the coke oven industry. Gas J (Lond) 249:311, 364+, 452, 571-2, 626-7; 250:35-6, 87-8, 237-8 F 5-12, Mr 5, 19-Ap 9, 30 '47
Inland Steel acquires blast furnaces and coke ovens. W. Sykes. Blast F & Steel Pl 34:1526 D '46
Low-temperature coke by the Krupp-Lurgi process. L. D. Schmidt. 8 pls U S Bur Mines Information Circ 7395:1-18 '47
National open hearth steel committee and coke oven, blast furnace and raw materials committee 30th conference program. Blast F & Steel Pl 35:23-4+ Ap '47
1945 coke oven statistics. Gas J (Lond) 248: 772-4 N 6 '46
Operation Morgantown; restoring Wilputte coke ovens to service. P. B. McCoy. il diags Blast F & Steel Pl 34:1396-403+ N '46
Rehabilitation of coke ovens at Brooklyn Union. il Am Gas J 166:40 F '47

COKE plants

Electric equipment
Protection for gas-compressor motor insures against unexpected failures. G. Lindgren. il diags Power 91:258-60+ Ap '47

COKE plants, By-product
First coke pushed from new Lorain by-product ovens; Lorain works, National tube co. Steel 121:98 O 20 '47
Much activity in by-product coke industry in 1946. W. C. Rueckel. il Blast F & Steel Pl 35:83-4 Ja '47
Operation Morgantown; restoring Wilputte coke ovens to service. P. B. McCoy. il diags Blast F & Steel Pl 24:1396-403+ N '46

COKE research
Research into coal carbonisation. Engineering 162:397-8 O 25 '46

COKE screening
Enameled screen gives best results in screening coke breeze and damp materials. F. J. Geyer. il Blast F & Steel Pl 34:1529-30 D '46

COLCHICINE
Colchicine and related compounds; 3 : 4 : 5 : 6-dibenz*cyclo*hepta-1 : 3 : 5-triene. J. W. Cook, G. T. Dickson and J. D. Loudon. Chem Soc J p746-50 Je '47

COLD
Designing for extreme cold. A. Raines. il Machine Design 19:103-6 My '47
See also
Cooling
Refrigeration and refrigerating machinery
Temperature—Physiological effect
Temperature, Low

Therapeutic use
Refrigeration in trauma of the extremities. P. Pernworth. il Ind Med 16:3-5 Ja '47
Refrigeration surgery. L. W. Crossman and F. M. Allen. Mech Eng 69:502-3 Je '47

COLD (disease)
Experimental studies with the agent of the common cold. M. Pollard and C. D. Caplovitz. Science 106:243-4 S 12 '47
Two cold cures. Consumers Res Bul 20:29-30 O '47

COLD cathode lamps. See Electric lamps, Fluorescent—Cold cathode

COLD creams. See Cosmetics

COLD rooms. See Testing laboratories—Cold rooms

COLD storage
Cold-storage pail uses fiberglas-plastics insulating liner. il Sci Am 177:34 Jl '47
Cold storage rooms converted to quick freezers. J. F. Stone. il diags Food Ind 19:462-3 Ap '47
Details of a cooling room. F. H. Stebbins. plan diags Sheet Metal Worker 38:80+ F '47
Features of new cold storage and blending laboratory; U.S. Bureau of mines petroleum experiment station, Bartlesville. il Oil & Gas J 46:78+ Ag 2 '47
Refrigeration aids bone transplants. Refrig Eng 54:32+ Jl '47
Refrigeration of peanuts and peanut products. J. G. Woodroof and others. il Refrig Eng 53:124-8+ F '47
See also
Apples—Storage
Refrigeration and refrigerating machinery

COLD storage locker plants
Freezer lockers. il Fortune 36:92-5+ S '47
Freezer lockers in Georgia. D. N. Harrell. il Refrig Eng 54:235-6 S '47
Frozen food report no. 2; key to rural markets is the locker plant. C. R. Havighorst and H. C. Diehl. Food Ind 19:159-60 F '47

COLD storage locker plants—*Continued*
Locker plant operators have many troubles becoming food processing plants. N. Orr. il Food Ind 19:760-2 Je '47
Prefabricated steel locker plant in Stanton, N.J. il Am Bld 69:156 Je '47
Refrigeration, present and future. D. H. Anderson. Edison Elec Inst Bul 15:83-5 Mr '47

Insurance requirements
Fire hazards of locker plants. H. I. Hawlick. Weekly Underw 157:270-2 Ag 2 '47

COLD storage lockers
Frozen food report no. 2; warehousing. C. R. Havighorst and H. C. Diehl. il plan Food Ind 19:18-26 Ja '47
See also
Food, Frozen—Cabinets

COLD storage warehouses
Frozen food report no. 2; warehousing. C. R. Havighorst and H. C. Diehl. il plan Food Ind 19:18-26 Ja '47

COLD treatment of steel. See Steel, Cold treatment of

COLD working of metals. See Metals, Cold working of; Steel, Cold working of

COLEMAN, D'Alton Corry, 1879-
Coleman to retire as C.P.R. president; will be succeeded by W. M. Neal. por Ry Age 122:182+ Ja 18 '47

COLEMAN company, Wichita, Kansas
John L. Lewis, salesman. Fortune 35:146+ Je '47

COLGATE, Reginald Thomas
Presentation of the Society of chemical industry medal. por Chem & Ind p499 Ag 16 '47

COLLAGEN
Chemistry of collagen. J. R. Kanagy. bibliog il U S Nat Bur Stand Circ C458:1-26; pa 10c Supt. of doc. '47
Structure of protein fibers. F. R. Senti. bibliog il diags Am Dyestuff Rep 36:230-7 My 5 '47

COLLECTING of accounts
Carefully kept records will simplify routine for collection of those delinquent accounts. A. C. Kiechlin. Inland Ptr 119:67-9 Ap '47
Collection without tears. O. S. Dibbern. Credit & Fin Management 49:8-10+ Ag '47
Don't let collection letters unsell your customers. W. H. Butterfield. Ptr Ink 218:42-3 Ja 10 '47
Effective credit letters. M. Howell. Credit & Fin Management 48:38-9 N '46
Good letter can collect and not lose goodwill. F. Dickman. il Ptr Ink 218:38-9 Mr 21 '47
Guide to debt-collection; what to do before you file suit. D. A. Pomeroy. Credit & Fin Management 48:19-21 D '46
How to collect installment payments more promptly, and more cheaply. J. A. Sachs. Bankers Mo 64:21-2 Ja '47
Joint administration and collection of water and sewer accounts; discussion. L. N. Thompson and others. bibliog Am Water Works Assn J 38:1347-55 D '46
Putting the tact in contact by mail. W. H. Butterfield. Ptr Ink 220:30-2 Jl 4 '47
System that hastens turnover; efficient collection records keep accounts young. F. M. Cooper. il Credit & Fin Management 48:22 N '46
Visiting by proxy; good collection letters are just good letters. C. Forward. Credit & Fin Management 49:28-30 F '47
See also
Billing
Credit

COLLECTION laws
Guide to debt-collection; what to do before you file suit. D. A. Pomeroy. Credit & Fin Management 48:19-21 D '46

COLLECTIVE bargaining
Bonneville Power and labor. O. S. Beyer. Pub Util 39:575-8 Ap 24 '47
Collective bargaining in the public service. S. D. Spero. Ann Am Acad 248:146-53 N '46
Collective bargaining on the Pacific coast. C. Kerr. Mo Labor R 64:650-74 Ap '47
Collective bargaining with associations and groups of employers. R. M. Patterson. Mo Labor R 64:397-410 Mr '47
Economics of collective bargaining. E. P. Schmidt. Personnel J 25:294-8 Mr '47
Engineers' organizations for collective bargaining. S. S. Green. Am Water Works Assn J 39:855-62 S '47
Extent of collective agreements in seven European countries. J. A. Flexner and others. Mo Labor R 64:1019-28 Je '47
Extent of collective bargaining and union recognition, 1946. U S Bur Labor Statistics Bul 909:1-11; pa 5c Supt. of doc. '47; Same cond. Mo Labor R 64:765-9 My '47
Federation of employee-engineers; collective bargaining rights established. Water & Sewage 84:32+ N '46
Fortune survey; should employer be required by law to bargain collectively with whatever union is elected by majority of his workers? Fortune 35:18+ Mr '47
Four-engine pilot pay case. E. M. Fitch. Air Transport 5:37-9 Jl; 28-30+ Ag '47
Free collective bargaining or government intervention? E. C. Brown. Harvard Bsns R 25 no2:190-206 [Ja] '47
Has collective bargaining failed? G. W. Taylor. Ann Am Acad 248:154-60 N '46
How practical personnel men think the labor law will work; collective bargaining negotiations. J. Tanham. Factory Management 105:86-7 Ag '47
How practical personnel men think the labor law will work; determining bargaining units. L. C. Bajork. Factory Management 105:89-91 S '47
How practical personnel men think the labor law will work; employee voting procedures. R. C. Smyth. Factory Management 105:84-6 S '47
How to make collective bargaining more effective. Management R 36:372-4 Jl '47
Industrial peace by contract. N. C. Rockwood. Rock Prod 50:91+ My '47
Industry-wide bargaining. R. C. Smyth and M. J. Murphy. Personnel J 26:109-15 S '47
Is the load dispatcher management or labor? J. P. Paschall. Elec World 126:74 N 23 '46
It's everyone's job to make collective bargaining work. C. S. Ching. il Ptr Ink 221: 86-7+ O 31 '47
Jobs covered by collective bargaining, U.S. offshore merchant marine, February 1946. H. M. Sturm. Mo Labor R 64:257-61 F '47
Labor-management conference as an aid to collective bargaining. G. W. Taylor. Ann Am Acad 250:53-8 Mr '47
Labor-management problem. H. R Hosea. Mass Transportation 43:220-2 Je '47
Leadership of ASCE in collective bargaining is hailed. Civil Eng 17:28 Ja '47
Little things that count in personnel relations. E. M. Fitch. Air Transport 5:43-5 Ap '47
Management's stake in collective bargaining. G. W. Taylor. Am Gas Assn Proc 1946: 89-92
Negotiating the collective bargaining agreement. R. C. Smyth and M. J. Murphy. Personnel J 26:136-43, 184-98 O-N '47
No contract? typographers warn Chicago publishers they might not sign. Bsns W p90+ Ag 16 '47
Organized labor and economic stabilization. E. G. Nourse. Comm & Fin Chr 165:2729+ My 22 '47
Pittsburgh Chamber of commerce offers industrial peace plan. Iron Age 159:140+ Ap 24 '47
Postwar collective bargaining and prosperity. L. B. Schwellenbach. Comm & Fin Chr 164:2753+ N 28 '46
Relations with employees. W. H. Ogden. Am Water Works Assn J 39:42-5 Ja '47
Reports of the committee on professional recognition on collective bargaining for engineers. bibliog Inst Radio Eng Proc 35:58-60 Ja '47
Restoring equality in collective bargaining. S. S. Ball. Comm & Fin Chr 164:2611+ N 21 '46
Should ASCE be purely professional; discussion. Civil Eng 17:37-8 Ja '47
Tables turned; C.I.O. longshoremen get demands from California warehouse operators. Bsns W p96+ My 24 '47

COLLECTIVE bargaining—*Continued*
Techniques of bargaining. E. N. Canon. Mass Transportation 43:223-5 Je '47
Techniques of negotiation. L. W. Horning. Ry Age 121:955-6; Discussion. 956-7 D 7 '46
Unionism and collective bargaining. D. R. Yarnall. Mech Eng 69:80-1 Ja '47
U.S. conciliation and collective bargaining. E. L. Warren. Comm & Fin Chr 165:649+ Ja 30 '47
Voluntary umpire system. T. W. Kheel. Ann Am Acad 248:91-6 N '46
See also
Employees' representation in management
Trade agreements
Trade unions—Jurisdictional disputes

COLLECTIVISM
Free enterprise vs. authoritarian planning. G. V. Cox. J Bsns 20:59-66 Ap '47
Fundamental issue; free enterprise vs. collectivism. A. E. Grauer. Edison Elec Inst Bul 15:71-3 Mr '47

COLLEGE airports. See Airports, College

COLLEGE architecture
Architecture speaking for itself; library and administration building, Illinois institute of technology. il plans diags Arch Rec 100: 85-90 D '46
See also
Chemistry buildings
Gymnasiums

COLLEGE buildings
College building plans total millions. Eng N 138:256 F 20 '47
Harvard university's science city. Science 104: 485-6 N 22 '46; Same cond. Mech Eng 69: 149 F '47
Symposium on design and construction of college and university chemistry laboratories. H. F. Lewis and others. il plans diags J Chem Educ 24:320-53 Jl '47
University or college laboratory. C. S. Adams. bibliog il plans Ind & Eng Chem 39:457-61 Ap '47
See also
Chemistry buildings
College libraries
Dormitories

Air conditioning
Air conditioned University of Omaha. Heat & Ven 44:98 O '47
Big university enrollments stress advantages of air conditioning. il Heating-Piping 19: 93-4 F '47

Heating and ventilation
Expand central heat at Pittsburgh U. il plan Eng N 138:248 F 13 '47

COLLEGE education
Many children forced to forego college education because parents neglect to plan. Weekly Underw 156:563 F 22 '47
University training for the staff man. S. Berge. Ry Age 123:400-2 S 6 '47

COLLEGE graduates
Cooperation with universities; A.R.E.A. committee report. Ry Age 122:612-13 Mr 22 '47
Industry and graduates. Economist 151:993 D 21 '46
Survey of professional openings. Can Chem & Process Ind 31:831-5 S '47
Why we engage college graduates for our organization; Wagner electric corporation. G. A. Waters. J Eng Educ 37:214-15 N '46
See also
Engineering graduates

COLLEGE hospitals. See Hospitals, College

COLLEGE housing projects. See Housing projects, College

COLLEGE inn food products company
What's cooking at College Inn; chicken, chili, fatter quotas. P. F. Tevis. il Sales Management 58:37-9 Mr 15 '47

COLLEGE libraries
Classified list of reference books and periodicals for college libraries. W. S. Hoole, ed. rev ed 111p $2 Southern assn. of colleges and secondary schools, Commission on institutions of higher education, 2041 21st av, South, Birmingham, Alabama '47
University libraries; building types study. bibliog(p114) il plans diags Arch Rec 100: 97-114 N '46
Wreck of matter and the crush of worlds; philosophic basis for Charles Hayden memorial library. J. E. Burchard. il Tech R 49:25-8+ N '46
See also
Harvard university—Libraries
Iowa university—Library
Massachusetts institute of technology—Hayden memorial library
Princeton university—Library

Architecture
See Library architecture

COLLEGE professors and instructors
Forgotten man in higher education. A. A. Potter. J Eng Educ 37:777-9 Je '47
See also
Engineering colleges—Professors and instructors

Salaries
Report on present-day salaries of members of the instruction staffs of engineering schools in United States and Canada. J Eng Educ 38:39-56 S '47
Salary survey indicates engineering teachers are underpaid. A. P. Richmond. Civil Eng 17:552 S '47

COLLEGE radio broadcasting stations. See Radio broadcasting stations, College

COLLEGE students
Are collegians warming up in their attitudes toward selling? poll of Commerce freshmen at Ohio State. H. H. Maynard. Sales Management 59:90+ O 15 '47
See also
Medical service, College

Housing
See Housing projects, College

COLLEGES and universities
See also
Engineering colleges
Journalism schools
Consult Education index for additional material

Accidents
See also
Bleachers—Accidents

Accounting
Depreciation accounting for educational institutions. J Account 83:329-30 Ap '47

Cooperative courses
Experiment in educational techniques; Connecticut college students work 12 weeks in a department store. C. G. Woodhouse. Ann Am Acad 251:153-6 My '47

Curriculum
Accounting course for technical and non-technical students. D. Lipsky and E. R. Young. J Account 82:494-500 D '46
College chemistry programs. R. B. Conklin. J Chem Educ 24:269-72 Je '47
Instrumentation. D. F. Miner. J Eng Educ 37:216-21 N '46
Pity the ignorant engineer; non-engineering curricula. D. J. Mack. J Eng Educ 37:837-9 Je '47
Revision of chemistry and chemical engineering curricula. L. L. Quill and others. J Chem Educ 24:369-88 Ag '47
University and labor education. E. E. Witte. Mo Labor R 65:36-40 Jl '47
See also
Engineering colleges—Curriculum

Employees
New collective plan by Teachers insurance and annuity association. East Underw 47:13 D 6 '46; Nat Underw (Life ed) 50:19 D 6 '46; Weekly Underw 155:1377 D 7 '46

COLLEGES and universities—Employees—*Continued*
Remarkable advance in providing retirement plans for college teaching staffs. R. M. Lloyd. Weekly Underw 155:1566 D 28 '46; Same abr. East Underw 47:14 D 27 '46
Training in employee relations; University of Illinois course. G. Carter. Personnel J 25: 271-2 F '47

Enrollment

More than 2,000,000 students. Science 104:593 D 20 '46

Finance

Bequest opportunities; college graduating classes may insure each member with alma mater as beneficiary. Life Ins Courant 51: 547-8 D '46
Colleges full, and poor. il Bsns W p22+ Ag 16 '47
Nonprofit profits; New York university gets big stake in Mueller co.; earnings tax-free. Bsns W p89-90 O 18 '47
Vassar plan for stock investments. Comm & Fin Chr 166:107+ Jl 10 '47
Yield of college endowments exceeds that of insurance funds; study by Scudder, Stevens and Clark. Comm & Fin Chr 166:1216 S 25 '47; Same abr. Trusts & Estates 85:550 D '47

Gifts

Grants and awards. Science 105:250 Mr 7 '47

Graduate work

Colleges and universities offering graduate courses leading to master's and doctor's degrees, 1940-1945. E. V. Hollis and H. C. Mayer, comps. 15p U.S. Office of education, Federal security agency, Washington 25 '47
Graduate training at the doctorate level; condensed summary of the main report of the Committee on professional training. E. M. Billings. Chem & Eng N 25:1934-6, 2010-13, 2076-81 Jl 7-21 '47

Insurance requirements

Insurance in action for Princeton university; blanket cover aids replacement of burned gymnasium; liability cover for reunions. W. Hay. il Weekly Underw 156:1616-17 Je 14 '47
Non-profit opportunities; hospitals, colleges, and other non-profit institutions may insure lives of donors. Life Ins Courant 51: 507-8 N '46

Placement service

Let's have a two-way street. L. H. Reyerson. Chem & Eng N 24:3035 N 24 '46

Research

Commercial research by universities threatens science and education. H. A. Toulmin, jr. il Product Eng 18:81-3 Je '47; Discussion. 18:174-5 S; 156-7 O '47
Research opportunities offered by U.S. colleges; many scholarships, assistantships, and fellowships in mineral technology available. S. P. Wimpfen. il Min & Met 28:504-7 O '47
School tests sewerage for Florida towns. D. L. Emerson, jr. il Eng N 139:292-3 Ag 28 '47
Scientific projects sponsored at Princeton. Chem & Eng N 25:3099 O 20 '47
Washington university research foundation, St Louis, Mo. Manuf Rec 116:62 S '47

See also
Chattanooga university—Industrial research institute

Great Britain

Total number of full-time university students, Great Britain, 1938-39 and autumn term, 1946-47. Economist 151:979 D 14 '46
University progress. Economist 152:789-90, 835-6 My 24-31 '47

Latin America

Latin American universities; a directory, 1947. 55p pa 15c Pan American union, Division of intellectual cooperation, Washington, D.C. '47

Poland

Poland in the world of science. I. Zlotowski. Science 106:308-9 O 3 '47

COLLETS
Anchored collet inserts. J. S. Curtiss. diag Am Mach 91:130 Jl 3 '47
It's a collet; transparent top tells the story. il Mod Packaging 20:173 Mr '47
Visibility and versatility in one package; transparent molded styrene cover and phenolic base for collets. il Mod Plastics 24:105 Ap '47

COLLIER, Harry
Portrait. Fortune 35:143 My '47

COLLIMATORS
Autocollimator for precise measurement of the flange focal distance of photographic lenses. M. G. Townsley and P. C. Foote. il diags Opt Soc Am J 37:42-6 Ja '47

COLLINGS, William R.
Portrait. Fortune 35:107 My '47

COLLINS and Aikman corporation
Larger net expected. Barron's 27:6 F 3 '47

COLLISION phenomena
Collision of neutrons with deuterons and the reality of exchange forces. H. S. W. Massey and R. A. Buckingham. Phys R 71:558 Ap 15 '47
Validity of the Franck-Condon principle in collisions of the second kind. R. E. Meyerott. Phys R 71:553 Ap 15 '47

COLLISIONS at sea
Commissioner and District court on amount recoverable when ship value is under repair costs. East Underw 48:30 Je 20 '47
Determination and division of loss resulting from collision at sea. East Underw 48:34 Mr 28 '47
Fixing fault and damage in each of two sinkings of same scow. East Underw 48:27 Mr 21 '47
Two vessels collide on a curve in New York bay; both at fault. East Underw 48:24 Ag 1 '47
U.S. circuit court rules on valuation of constructive total losses of vessels in war. East Underw 48:33+ Ap 11 '47

COLLODION
Electrochemistry of permselective collodion membranes. K. Sollner and H. P. Gregor. bibliog J Phys Chem 50:470-6 N '46; [cont as] J Phys & Colloid Chem 51:299-311 Ja '47
Stopping power of various substances for fission fragments. E. Segrè and C. Wiegand. diag Phys R 70:808-11 D 1 '46
Use of membrane electrodes in the study of soap solutions. C. W. Carr, W. F. Johnson and I. M. Kolthoff. bibliog J Phys & Colloid Chem 51:636-44 My '47

COLLOIDS
Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. B. Working. J Phys & Colloid Chem 51:974-80 Jl '47
Application of colloid chemistry to the manufacture of inflated articles. L. W. Isom. il J Chem Educ 23:620-3 D '46
Colloid chemistry of the clay mineral attapulgite. C. E. Marshall and O. G. Caldwell. il J Phys & Colloid Chem 51:311-20 Ja '47
Colloidal aluminum oxide. A. A. Vernon. bibliog J Phys & Colloid Chem 51:768-70 My '47
Determination of the particle size of monodispersed systems by the scattering of light. I. Johnson and V. K. La Mer. bibliog diags Am Chem Soc J 69:1184-92 My '47
Effect of freezing on the stability of colloidal dispersions; silica sols; preliminary report. F. Hazel. bibliog diag J Phys & Colloid Chem 51:415-25 Mr '47
Equilibrium properties of high polymer solutions and gels. G. Gee. Chem Soc J p280-8 F '47
Heterogeneous catalytic activity of colloidal silver in the reduction of silver acetate. B. Krishna and S. Ghosh. bibliog J Phys & Colloid Chem 51:1130-7 S '47
Improved method for measurement of gel strength and data on starch gels. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39:29-37 Jl '47; Abstracts. Paper Ind 29:843 S '47; Textile World 97:234+ O '47
Inhibition of hard scale in boilers, and the action of static charges upon colloids. K. J. B. Willey. bibliog il diag Soc Chem Ind J 65:433-6 D '46

COLLOIDS—*Continued*
Instrument for measuring rheological properties of elastic fluids. H. Goldberg and O. Sandvik. bibliog diags Anal Chem 19:123-31 F '47
Investigation of flow in liquids by use of birefringent colloidal solutions of vanadium pentoxide. P. Ullyott. bibliog il A S M E Trans 69:245-9; Discussion. 249-51 Ap '47
Morphology of lyogels. E. A. Hauser and D. S. le Beau. bibliog il J Phys & Colloid Chem 51:278-85 Ja '47
Penicillin aerosol; contribution of the Chemical warfare service to medicine. R. W. Hufferd. bibliog Science 104:498-9 N 29 '46
Photoelectric instrument for comparing the concentrations of very dilute aerosols, and measuring low light intensities. F. T. Gucker, jr., H. B. Pickard and C. T. O'Konski. bibliog diags Am Chem Soc J 69:429-38 F '47
Some recent work in colloid science. W. H. Banks. Chem Age (Lond) 56:81-4 Ja 11 '47
Spectroturbidimetric study of the proteins of milk. A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51:460-73 Mr '47
Stability of synthetic rubber dispersions; low-temperature thickening of neoprene latex. H. K. Livingston. bibliog J Phys & Colloid Chem 51:443-50 Mr '47
Study of anhydrous conditions in the preparation of lyophobic organosols. H. A. Nelson. bibliog diags J Phys & Colloid Chem 51: 1103-11 S '47
System CaO-SiO_2-H_2O and the hydration of the calcium silicates. H. H. Steinour. Chem R 40:391-460 bibliog(191 ref, p455-60) Je '47
Theory of the stability of lyophobic colloids. E. J. W. Verwey. bibliog J Phys & Colloid Chem 51:631-6 My '47
Theory regarding the osmotic pressure of colloids in membrane equilibrium. S. G. Chaudhury. bibliog J Phys Chem 50:486-8 N '46
Twenty first National colloid symposium. Chem & Eng N 25:1942-3 Jl 7 '47

See also
Adsorption
Brownian movements
Catalysis
Coagulation
Dispersion
Electrophoresis
Emulsions
Gelation
Micelles
Polysaccharides
Silica gel
Thixotropy

COLLYER, John Lyon, 1893-
Business advisory council of Dept. of commerce, chairman. por(cover) Bsns W p8 F 1 '47
Trouble in synthetic rubber. por Fortune 35: 115-19+ Je '47

COLOMBIA
Colombia in the United nations. E. de Holte-Castello. Ann Am Acad 252:66-70 Jl '47

See also
Aeronautics, Commercial—Colombia
Architecture—Colombia
Commercial law—Colombia
Insurance, Social—Colombia

Commerce
Canada may sell many products in stable Colombian market. H. W. Richardson. Can Chem & Process Ind 31:230-1+ Mr '47
Colombia to purchase U.S. surplus property. For Comm W 25:26 D 14 '46

Commercial policy
Applications for import licenses for all commodities resumed; changes in import procedure decreed. For Comm W 27:14 My 24 '47
Latin American exchange- and import-control developments. C. F. Carson and J. J. Magurn. For Comm W 28:5 Jl 12 '47

Economic conditions
Colombia, in first postwar year, scored advances, faced problems. H. T. Hoffman. il map For Comm W 26:6-9+ Mr 1 '47
News by countries. For Comm W 26:14-15 F 1; 10-11 F 15; 27:14-15 Ap 5; 17 Ap 26; 16-18 Je 28; 28:15-16 Jl 26; 16-17 S 6; 29: 12-13 O 4 '47

COLONIAL airlines
Stock offered. Comm & Fin Chr 165:1186 Mr 3 '47

COLONIAL life insurance company of America
50th anniversary year. East Underw 48:9 Mr 21 '47

COLONIAL sand and stone company
Stock offered. Comm & Fin Chr 165:807 F 10 '47

COLONIES
Nationalism in south-east Asia. map Economist 153:348-50 Ag 30 '47

COLOR
Application of I.C.I. color system to development of all-sulfide white television screen. A. E. Hardy. bibliog RCA R 8:554-63 S '47
Ceremonial use of color. B. Brown. Rayon 28:233-5 Ap '47
Changes in hue, lightness, and saturation of surface colors in passing from daylight to incandescent-lamp light. H. Helson and J. Grove. bibliog Opt Soc Am J 37:387-95 My '47
Color and chemical structure. I. H. Godlove. Rayon 28:289-91, 339-40, 390-1, 444-6, 561-2, 612-14, 665-6 My-Ag, O-D '47
Colour and constitution; abstract. A. Maccoll. Soc Dyers & Col J 63:242-3 Jl '47
Colour and constitution; the absorption of light by chemical compounds; the fourth John Mercer lecture. E. J. Bowen. diags Soc Dyers & Col J 63:281-7 S '47
Color formation in furfural systems. R. G. Rice, Z. I. Kertesz and E. H. Stotz. bibliog Am Chem Soc J 69:1798-800 Jl '47
Color fundamentals. R. Mansell. Textile Col 69:20-1+ Jl '47
Colour harmony; abstract. T. Vickerstaff. Light & Lighting 40:89 My '47
Colour in illuminating engineering. W. D. Wright. Light & Lighting 40:5-6 Ja '47
Colour index; new second edition. Am Dyestuff Rep 36:34-5 Ja 27 '47
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Color technology of fluorescent lamps. G. B. Buck, 2d and R. N. Thayer. bibliog diags Illum Eng 42:415-34 Ap '47
Coloring power of pigments. H. L. Beakes. Paint Oil & Chem R 110:15+ My 1 '47
Light and colour and their application; abstract. E. J. A. Weller. Light & Lighting 40:90 My '47
Limitation of color. W. D. Wright. Rayon 27:313-16, 558-9, 612-13; 28:337-8, 387-8 Je, O-N '46, Je-Jl '47
Limiting colors due to ideal absorption and transmission bands. I. H. Godlove. bibliog Opt Soc Am J 37:778-91 O '47
Man learns about color. B. Brown. Rayon 28:48-9 Ja '47
Notes on W. S. Stiles' paper entitled, A modified Helmholtz line-element in brightness-colour space. L. Silberstein. Opt Soc Am J 37:292-5 Ap '47
Number of distinct chromaticities. D. L. MacAdam. Opt Soc Am J 37:308-9 Ap '47
Planned lighting; color in lighting. il diags Elec World 128:111-14 O 25 '47
Practical color harmony with fluorescent light sources. R. R. Wythe. diag Illum Eng 41:847-58 D '46
Silberstein on intrinsic properties of the color domain. R. H. Sinden. Opt Soc Am J 37: 396-8 My '47
Spectrophotometric investigation of the interaction between ions of different oxidation states of an element. J. Whitney and N. Davidson. Am Chem Soc J 69:2076-7 Ag '47
Wine industry draws publicity dividend from wine color promotions. E. Gidlow. il Sales Management 58:75-6+ F 1 '47
Woman looks at color. K. E. Krenning. Rayon 28:557-8 O '47
X-ray diffraction studies of color variation of iron oxide pigments. H. Birnbaum and others. il J Ap Phys 18:27-9 Ja '47

See also
Camouflage
Colorimeters and colorimetry
Colorimetric analysis
Colors
Discoloration
Dyes and dyeing
Glass, Colored
Light, Colored
Moving pictures, Colored
Nail polishes
Pigments
Television—Color

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Psychology

Color dynamics in aviation. H. Quinn. il Aero Digest 55:88+ O '47

Paint can be functional as well as beautifying. F. M. Hillhouse. il Dom Comm 35:23-6 My '47

Standards

Can factory painting be effectively standardized? C. B. Ryder. diags Ind Stand 18:216-19, 252-6 S-O '47

Chromaticities of Lovibond glasses. G. W. Haupt and F. L. Douglas. bibliog Opt Soc Am J 37:698-706 S '47; Same. J Res Nat Bur Stand 39:11-20 Jl '47

Committee asks comments on safety color definitions. Ind Stand 18:92-3 Ap '47

COLOR blindness

Colour blindness in industry. Engineering 163: 172 Mr 7 '47

Use of a monochromatic colorimeter for the study of color blindness. J. A. Van den Akker and others. bibliog diags Opt Soc Am J 37:363-87 My '47

See also
Color sense

COLOR card association, Textile. See Textile color card association

COLOR cards

New multi-color printing process may revolutionize production of color cards. il Inland Ptr 118:48 F '47

COLOR codes

Coded colors show which power outlets to use; RCA Victor division. J. H. Duncan. il Factory Management 105:89-90 Je '47

Safety color code for drilling rigs. W. B. Cox. Oil & Gas J 46:94+ Ag 9 '47

COLOR fastness. See Dyes, Fastness of

COLOR filters. See Light filters

COLOR in advertising

American bazaar; gallery of art of American salesmanship. il Fortune 36:108-21 N '47

Color often increases results of direct mail. E. N. Mayer, jr. Ptr Ink 217:38-9 D 20 '46

Color photography in advertising. K. J. Evans. Ind Marketing 32:124+ Mr '47

Economy in two-color reproduction. H. B. Peck. il Ptr Ink 219:112 Ap 18 '47

Greenfield marks 75th anniversary by changing from kodachromes to historical full color paintings. il Ind Marketing 32:42+ Mr '47

Heavyweight color of mailing pieces need not always be black. G. J. Church. il Inland Ptr 119:55 Je '47

Use of magazine color ads nears new high. B. Tolk. il Ptr Ink 217:149 N 15 '46

What's happening in color in advertising today? H. B. West. Adv & Sell 40:33-4+ Ap '47

COLOR in architecture

Color takes its cue from the roof; choosing the right exterior house colors. il Am Bld 68:98-9 D '46

COLOR in house decoration

Furniture colors; Basic home furnishings color program. Bsns W p56 Je 28 '47

COLOR in industry

Can factory painting be effectively standardized? C. B. Ryder. diags Ind Stand 18:216-19, 252-6 S-O '47

Canada adopts color and lighting code for industry. Safety Eng 93:38-9 Je '47

Coded colors show which power outlets to use; RCA Victor division. J. H. Duncan. il Factory Management 105:89-90 Je '47

Colour affects costs. B. J. McGuire. Pulp & Pa of Can 48:70-1 Je '47

Color code for piping identifications aids in training refinery operators. W. C. Uhl. Pet Processing 2:210-11+ Mr '47

Color dynamics in railway cars. Sci Am 176: 221-2 My '47

Color engineering. F. H. Rahr. Paper Tr J 125:37-9 S 4 '47

Color improves working conditions in a railroad shop; Diesel repair shop of the Burlington lines. Mach 53:167 D '46

Colour in factories; abstract. H. D. Murray. Light & Lighting 40:49-50 Mr '47

Color makes the clock tick! transforming idle plant into efficient productive unit; William L. Gilbert clock corp. H. E. Cleveland. Safety Eng 93:15+ My '47

Color prevents accidents. H. G. Lamb. il Safety Eng 92:44-8 O '46

Color punches the time clock. L. Stouffer. Management R 36:452-4 S '47

Committee asks comments on safety color definitions. Ind Stand 18:92-3 Ap '47

English foundry and machine shop make functional use of colors; David Brown & sons ltd. il Steel 121:114 Jl 7 '47

Factory lighting; annual report of the chief inspector of factories, 1945. H. E. Chasteney. Light & Lighting 40:28-30 F '47

Industrial use of colour should be scientifically calculated. Pulp & Pa of Can 48:97 S '47; Same. Paint Oil & Chem R 110:26 O 2 '47

Light and colour in factories. W. Robinson. Electrician 138:1011 Ap 18 '47

Paint can be functional as well as beautifying. F. M. Hillhouse. il Dom Comm 35:23-6 My '47

Paint can cut your production costs. A. W. Gray. il Inland Ptr 119:48-50 Jl '47

Paint saves more than the surface. il Nat Safety N 55:20+ Mr '47

Painted the plant in colors, here's how; Gillette safety razor company. W. J. L. Roop. il Factory Management 105:91-3 Je '47

Power of color; abstract. G. D. Gaw. Ry Age 123:561-2 O 4 '47

See also
Machinery—Painting

COLOR in plastic materials

Color marking process. il Mod Plastics 25: 184 O '47

Finishes for plastics. H. W. Dell. il Iron Age 158:46-7 D 26 '46

Getting the right color by spray coating. il Mod Plastics 24:148-9 N '46

Plastic monofilaments are on their way. il Mod Plastics 24:91-3 Ag '47

Two-color thermosetting moldings. il Mod Plastics 25:148 O '47

Using 3 dimensions of color in plastics. G. W. Ingle. bibliog diag Mod Plastics 24:131-3 My '47

Why and how of dyeing plastics. il Mod Plastics 24:124-6 Ag '47

COLOR in the ceramic industries

Achieving varied color effects through simple control of slips and glazes. M. M. French. Cer Ind 48:156+ Ja '47

Availability of ceramic stains and materials. J. E. Eagle. Cer Ind 47:61-2 D '46

New color washing process completed in a few hours. diag Cer Ind 48:50 Je '47

Project in copper blue glazes. Cer Ind 48:88+ My '47

Use of color terms in the ceramic industry; abstract. R. S. Hunter. Cer Ind 48:64 Je '47

See also
Glass, Colored
Glassware—Decoration
Glazes

COLOR in the textile industries

Color vision in the textile industry. W. D. Schweisheimer. Textile Col 69:41+ Ja '47

Consumers select rayon fabric colors. Rayon 28:438 Ag '47

Illumination for textile color matching. F. J. O'Neil. Am Dyestuff Rep 36:329-30 Je 16 '47

Radiant energy reflectance of men's wear colors; abstract. H. F. Greenler and F. J. O'Neil. Am Dyestuff Rep 36:335 Je 16 '47

Subtle for rayons; sophisticated for woolens; fall colors. M. H. Rorke. Textile Col 69:28-9 Mr '47

Watch green this spring. Textile Col 68:37 O '46

See also
Dyes and dyeing
Textile printing

COLOR lighting. See Light, Colored

COLOR matching

Illumination for textile color matching. F. J. O'Neil. Am Dyestuff Rep 36:329-30 Je 16 '47

COLOR matching—*Continued*
Nomogram to help in the dyeing of fine and coarse filament rayons and spun rayons to the same shade; matching the depth of shade of dyeings on highly oriented rayons. F. Fothergill. Soc Dyers & Col J 62:319 O '46
Notes on W. S. Stiles' paper entitled, A modified Helmholtz line-element in brightness-colour space. L. Silberstein. Opt Soc Am J 37:292-5 Ap '47
Standard daylight lamps suggested for color matching. diag Textile World 97:234 O '47
See also
Color measurement

COLOR measurement
American association of textile chemists and colorists; committee on color transference. Am Dyestuff Rep 36:205-6 Ap 21 '47
Changes in hue, lightness, and saturation of surface colors in passing from daylight to incandescent-lamp light. H. Helson and J. Grove. bibliog Opt Soc Am J 37:387-95 My '47
Color of petroleum oils. V. A. Kalichevsky. Pet Refiner 26:119-22 F '47
Control of color on amber container ware during production. W. H. Manring. Am Cer Soc J 30:27-31 Ja 1 '47
Metameric formulation. R. H. Morris. Opt Soc Am J 37:669 Ag '47
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47
Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials. W. S. Plymale, jr. diags Opt Soc Am J 37:399-402 My '47
See also
Color matching

Study and teaching
Spectrophotometry for chemists. R. S. Casey. bibliog diag J Chem Educ 24:446-9 S '47

COLOR of flowers
Biochemistry of plant pigments. W. D. Bancroft. bibliog J Phys & Colloid Chem 51: 1078-87 S '47

COLOR photography
New York photofinisher. Fortune 34:178+ D '46
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47
Photosensitive glass developed by Corning. Chem & Eng N 25:1822 Je 23 '47
Preparation of food for illustration. A. Given. Am Gas Assn Proc 1946:200-1
Spectral variations of the intermittency effect for some panchromatic plates. W. Hopwood and J. D. Craggs. bibliog diag Opt Soc Am J 37:560-5 Jl '47
See also
Moving pictures, Colored

COLOR printing
Colors plastic sheets. Inland Ptr 118:53 Mr '47
Electronic computer for printing control; speed of a multicolor web printing press tripled by application of electronic-hydraulic system. J. W. Ludwig. il diags Electronics 20:108-11 N '47
Foolproof registration; optical device preregisters multi-color plates. il Mod Packaging 20:162-3 Mr '47
Four-color fibre can. il Mod Packaging 20: 88-9 Ag '47
Four colors prove cheaper than three. il Inland Ptr 120:73 O '47
Heavyweight color of mailing pieces need not always be black. G. J. Church. il Inland Ptr 119:55 Je '47
How to get extra color at no additional cost; proper use of screen tints. H. Bauer. il Ptr Ink 220:44-5 S 19 '47
It could happen to you. J. Kovec. Inland Ptr 119:61 Je '47
Like red, another tricky second color is orange. G. J. Church. il Inland Ptr 118:73 D '46
Machine for preprinted color insert in newspapers. il Inland Ptr 118:75 F '47
Mottle. Inland Ptr 118:55-6 F '47
New multi-color printing process may revolutionize production of color cards. il Inland Ptr 118:48 F '47
Pre-registering machine. Inland Ptr 119:50 Je '47
Pressmen aren't ink chemists. C. F. King. diags Inland Ptr 118:51-3 Mr '47; Discussion. 119:43-5 S '47
Printing 72 colours at one impression; the McCorquodale process. Soc Dyers & Col J 63:148 My '47
Robot for register; mechanical brain holds high-speed multicolor printing within 0.001-in. limits. J. W. Ludwig. diags Mod Packaging 20:150-2 Je '47
See what an unusual second color such as magenta can do! G. J. Church. il Inland Ptr 118:59 Ja '47
When production problems faze, use your head. C. V. Morris. Ptr Ink 218:60 Mr 7 '47

COLOR sense
Changes in hue, lightness, and saturation of surface colors in passing from daylight to incandescent-lamp light. H. Helson and J. Grove. bibliog Opt Soc Am J 37:387-95 My '47
Color-blindness as a handicap in an accounting career. J Account 83:71 Ja '47
Color vision in industry. G. A. Strebel, jr. Ind Med 15:425-6 Jl '46; Abstract. Nat Safety N 54:54+ D '46
Color vision in the textile industry. W. D. Schweisheimer. Textile Col 69:41+ Ja '47
Defective colour vision in industry. Light & Lighting 40:6-7 Ja '47
International conference on colour vision; abstracts of papers. Light & Lighting 40:140-1 Ag '47
See also
Color blindness

COLOR signals. See Light signals

COLOR television. See Television—Color

COLOR temperature
Colour temperature of light sources; abstract. H. G. W. Harding. Light & Lighting 40:132 Jl '47
Illumination for textile color matching. F. J. O'Neil. Am Dyestuff Rep 36:329-30 Je 16 '47

COLOR vision. See Color sense

COLORADO
See also
Zinc mines and mining—Colorado

Industries and resources
Colorado seeks more industrial payrolls. il Am Bsns 17:23-4+ F '47

COLORADO-BIG THOMPSON project
Big Thompson project, Colorado; unit prices. Eng N 138:844-5 My 15 '47
Colorado-Big Thompson project progresses. C. H. Vivian. il maps diag Comp Air Mag 51:314-20 D '46
Construction features of Colorado-Big Thompson project. R. M. Sensintaffar. il map Elec World 127:54-5 Je 21 '47
Four earthfill dams create 1,873-acre Horsetooth reservoir in Colorado. F. C. Walker. il map diags Civil Eng 17:310-13+ Je '47
Lining of the Alva B. Adams tunnel. R. J. Willson. il diags Am Concrete Inst J 18:209-38 N '46
Water through mountains; Alva B. Adams tunnel. Comp Air Mag 52:178 Jl '47

COLORADO 9. See Insecticides

COLORADO river
Colorado river; the Southwest's greatest natural resource. S. B. Morris. bibliog il maps Am Water Works Assn J 39:945-67 O '47; Abstract. Water & Sewage Works 94:317-19 S '47
Davis dam completes storage regulation of Colorado river below Boulder. L. R. Douglass. il Civil Eng 17:14-17 Ja '47
How old is the Colorado river. C. R. Longwell. bibliog maps diags Am J Sci 244: 817-35, pl 1-6 D '46

COLORADO river—*Continued*
Proposed projects develop power and irrigation potentials of Colorado River system. H. F. McPhail. il map Civil Eng 17:459-63+ Ag '47
West still fighting on Colorado water split. Bsns W p 18 S 13 '47
Yuma and the Colorado river. C. G. Ekstrom. il Am Water Works Assn J 39:245-52 Mr '47

Hoover Dam project

Arizona utilities act to bring Boulder Dam power to state. Elec World 126:90 N 23 '46
Boulder dam again becomes Hoover dam. Comm & Fin Chr 165:2530 My 8 '47
Boulder Dam's birthday. Comp Air Mag 51: 304 N '46

COLORADO school of mines
Petroleum engineering schools. il Oil & Gas J 46:127-8 O 18 '47

COLORADO university
Solar house heater yields 20% fuel saving in University of Colorado experimental installation; with excerpts from research report. il diags Arch Forum 86:121-2, 124+ F '47

COLORED glass. See Glass, Colored

COLORED light. See Light, Colored

COLORED moving pictures. See Moving pictures, Colored

COLORIMETERS and colorimetry
Accuracy of colorimetric instruments in dye strength determinations. O. L. Davies and others. Soc Dyers & Col J 63:80-3 Mr '47
Chromaticities of Lovibond glasses. G. W. Haupt and F. L. Douglas. bibliog Opt Soc Am J 37:698-706 S '47; Same. J Res Nat Bur Stand 39:11-20 Jl '47
Colorimeter aids in standardizing fluorescent light quality. Sci Am 176:172-3 Ap '47
Colorimetric method for evaluating dispersing agents. G. C. Tesoro and others. Rubber Age 60:319-20 D '46
Colorimetry in television. W. H. Cherry. bibliog diag RCA R 8:427-59 S '47
Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69: 1296-301 Je '47
Notes on W. S. Stiles' paper entitled, A modified Helmholtz line-element in brightness-colour space. L. Silberstein. Opt Soc Am J 37:292-5 Ap '47
Use of a monochromatic colorimeter for the study of color blindness. J. A. Van den Akker and others. bibliog diags Opt Soc Am J 37:363-87 My '47

See also
Colorimetric analysis
Spectrophotometers

Nomenclature

Study of photometric nomenclature. P. Moon and D. E. Spencer. bibliog Opt Soc Am J 36:666-75 N '46

COLORIMETRIC analysis
Adaptation of the Beckman quartz spectrophotometer for measurement of vitamin A by the Carr-Price reaction. G. I. Jones and others. diags Anal Chem 19:142-3 F '47
Adaptation of the silicomolybdic acid method for the estimation of morphine to the photoelectric colorimeter. F. E. Shideman and A. R. Kelly. Science 106:298-9 S 26 '47
Analysis of anhydrous hydrogen fluoride. C. D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47
Application of reflectance spectrophotometry to quantitative microanalysis. J. Sendroy, jr. and W. C. Granville. bibliog Anal Chem 19:500-1 Jl '47
Aqueous lead dithizone color standards. L. Silverman. bibliog Anal Chem 19:698 S '47
Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46
Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46
Capillary absorption cells in spectrophotometry. P. L. Kirk, R. S. Rosenfels and D. J. Hanahan. bibliog diags Anal Chem 19:355-7 My '47
Color reaction given by streptomycin. J. V. Soudi and others. Science 104:486-7 N 22 '46
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Colorimetric determination of acetophenetidin. E. F. Degner and L. T. Johnson. bibliog Anal Chem 19:330-1 My '47
Colorimetric determination of antimony in copper-base alloys. A. C. Holler. bibliog Anal Chem 19:353-5 My '47
Colorimetric determination of carbon tetrachloride using a modified Fujiwara reaction. G. W. Rogers and K. K. Kay. bibliog J Ind Hygiene 29:229-32 Jl '47
Colorimetric determination of certain primary and tertiary aromatic amines. F. L. English. bibliog Anal Chem 19:457-9 Jl '47
Colorimetric determination of cobalt using nitroso-R salt. H. H. Willard and S. Kaufman. Anal Chem 19:505 Jl '47
Colorimetric determination of DDT in milk and fatty materials. M. S. Schechter, M. A. Pogorelskin and H. L. Haller. bibliog Anal Chem 19:51-3 Ja '47
Colorimetric determination of free chlorine with methyl orange. M. Taras. Anal Chem 19:342-3 My '47
Colorimetric determination of iron in brass and bronze. W. Goodman. bibliog Anal Chem 19:141-2 F '47
Colorimetric determination of iron, manganese, phosphate, and silicic acid; abstract. W. Teichert. Am Water Works Assn J 39:595 Je '47
Colorimetric determination of phosphorus in steels. U. T. Hill. bibliog Anal Chem 19: 318-19 My '47
Colorimetric determination of red lead (minimum). M. H. Swann. Anal Chem 19:191 Mr '47
Colorimetric determination of sulfur dioxide. W. M. Grant. Anal Chem 19:345-6 My '47
Colorimetric determination of titanium with disodium-1,2-dihydroxybenzene-3,5-disulfonate. J. H. Yoe and A. R. Armstrong. bibliog Anal Chem 19:100-2 F '47
Colorimetric determination of uranium with thiocyanate. J. E. Currah and F. E. Beamish. Anal Chem 19:609-12 Ag '47
Colorimetric method for determination of traces of carbon dioxide in air. N. A. Spector and B. F. Dodge. Anal Chem 19:55-8 Ja '47
Colorimetric method for the determination of cobalt in stainless steel. H. M. Putschē and W. F. Malooly. bibliog Anal Chem 19: 236-8 Ap '47
Colorimetric method for the estimation of 2 : 2-bis-(*p*-chlorophenyl)-1 : 1 : 1-trichloroethane (DDT). F. R. Bradbury and others. Soc Chem Ind J 66:65-8 Mr '47
Colorimetric microdetermination of antimony with rhodamine B. T. H. Maren. bibliog Anal Chem 19:487-91 Jl '47
Colorimetric micromethod for determination of formic acid. W. M. Grant. bibliog Anal Chem 19:206-7 Mr '47
Colorimetric phosphate tests for boiler waters containing tannin. L. Goldman and R. N. Love. U S Bur Mines Rep of Invest 3983:1-11, pl 1-2 '46; Same. Power Pl Eng 50:76-9 N '46
Colorimetry and photometry in water analysis. M. G. Mellon. bibliog Am Water Works Assn J 39:341-51 Ap '47
Determination and nature of leaf sterols. M. E. Wall and E. G. Kelley. bibliog Anal Chem 19:677-83 S '47
Determination of bismuth, copper, and lead in aluminum alloys. G. Norwitz, S. Greenburg and F. Bachtiger. bibliog Anal Chem 19:173-5 Mr '47
Determination of carboxymethylcellulose in paper. R. W. Eyler and R. T. Hall. Paper Tr J 125:59-62 O 9 '47
Determination of cystine and cysteine in altered human hair fibers. D. Sanford and F. L. Humoller. bibliog Anal Chem 19:404-6 Je '47

COLORIMETRIC analysis—*Continued*
Determination of degree of substitution of sodium carboxymethylcellulose. R. W. Eyler, E. D. Klug and F. Diephuis. bibliog diag Anal Chem 19:24-7 Ja '47
Determination of egg yolk in egg white. J. H. Cook and V. C. Mehlenbacher. Ind & Eng Chem Anal ed 18:785-8 D '46
Determination of ergonovine; method described using Evelyn photoelectric colorimeter. W. M. Bachinsky and M. G. Allmark. bibliog Can Chem & Process Ind 30: 83-5 D '46
Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47
Determination of hydrogen sulfide in gases. E. Field and C. S. Oldach. diag Ind & Eng Chem Anal ed 18:665-7 N '46
Determination of iodide in developers. G. I. P. Levenson. bibliog Soc Chem Ind J 66:198-200 Je '47
Determination of mercury in air. E. C. Barnes. bibliog J Ind Hygiene 28:257-61 N '46
Determination of nitrogen in ferro-alloys and other materials by direct Nesslerisation without distillation. W. C. Newell. bibliog Iron & Steel Inst J 152:333-7 no 2 '45; Same cond. Engineering 160:505 D 14 '45; Discussion. Iron & Steel Inst J 152:337-9 no 2 '45
Determination of residual silica on cotton in peroxide bleaching. B. DuBose and V. B. Holland. Am Dyestuff Rep 36:227-8 My 5 '47
Determination of small amounts of carbon monoxide in air by various reference methods. M. Shepherd. bibliog J Res Nat Bur Stand 38:351-8 Mr '47
Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
Determination of vitamin A in fish liver oils with activated glycerol dichlorohydrin; comparison with spectrophotometric and antimony trichloride methods. A. E. Sobel and H. Werbin. bibliog Anal Chem 19:107-12 F '47
Direct colorimetric method for phosphorus in all types of steel. H. L. Katz and K. L. Proctor. Anal Chem 19:612-14 Ag '47
Evaluating pickling acid inhibitors; colorimetric test method. E. L. Colichman and others. bibliog Iron Age 159:55-7 Ap 24 '47
Extraction methods applied to the analysis of electroplating baths and the determination of zinc and other impurities in nickel solutions; abstract. E. J. Serfass and W. S. Levine. Metal Finishing 45:51 Ag '47
Extremely sensitive carbon monoxide indicator developed by Bureau chemists. Franklin Inst J 242:325-6 O '46; Same cond. Heat & Ven 43:114+ D '46
Field test for vanadium. J. M. Axelrod. In U S Geol S Bul 950:19-23 '46
Hemoglobin in meat scraps and tankage. R. Reiser. bibliog Anal Chem 19:114-18 F '47
Improved dithizone method for determination of lead; mixed-color micromethod at high pH. L. J. Snyder. bibliog Anal Chem 19: 684-7 S '47
Influence of phosphates on zirconium-alizarin method of fluoride determination. D. M. Taylor and R. E. Frazier. Am Water Works Assn J 39:52-6 Ja '47
Komarowski reaction. F. R. Duke. bibliog Anal Chem 19:661-2 S '47
Leaching rate tests on anti-fouling compositions; testing method for inland stations. N. W. Hanson and R. F. Jervis. diag Soc Chem Ind J 65:329-33 N '46
Mixed color method for the determination of cadmium in air and biological samples by the use of dithizone. F. W. Church. bibliog J Ind Hygiene 29:34-40 Ja '47
Modified colorimetric determination of chromium in ferrous materials. E. H. Baker. Foundry 75:92+ Ja '47
Photocolorimetric method for determination of quaternary ammonium salts. E. L. Colichman. Anal Chem 19:430-1 Je '47
Quinone vapors and their harmful effects; plant exposures associated with eye injuries. F. L. Oglesby and others. J Ind Hygiene 29:74-8 Mr '47
Rapid determination of small amounts of carbon monoxide; preliminary report on the NBS colorimetric indicating gel. M. Shepherd. Anal Chem 19:77-81 F '47
Rapid digestion method for determination of calcium. O. E. Stamberg and D. W. Bolin. Anal Chem 19:695-6 S '47
Rapid method for the determination of chromic acid mist in air. L. Silverman and J. F. Ege, jr. bibliog diag J Ind Hygiene 29: 136-9 Mr '47
Rapid test for ferricyanide bleach exhaustion. L. E. Varden and E. G. Seary. Soc Motion Picture Eng J 47:450-2 D '46
Solid polyethylene glycols (carbowax compounds); quantitative determination in biological materials. C. B. Shaffer and F. H. Critchfield. bibliog Anal Chem 19:32-4 Ja '47
Spectral changes in some dye ions and their relation to the protein error in indicators. I. M. Klotz and F. M. Walker. bibliog J Phys & Colloid Chem 51:666-80 My '47
Spectrophotometric determination of fluorine in glass. M. C. Parrish and others. bibliog Anal Chem 19:156-7 Mr '47
Stable colorimetric reagent for chromium. J. F. Ege, jr. and L. Silverman. bibliog Anal Chem 19:693-4 S '47
Starches and starch fractions; the intensity of the colour of starch-iodine-iodide solutions as an index of the amylose-amylopectin ratio. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:142-7 My '47
Studies on the peroxide method for determining vanadium in minerals and ores. M. D. Foster. In U S Geol S Bul 950:7-13 '46
Study of methods for the determination of vanadium. V. North. bibliog In U S Geol S Bul 950:83-9 '46
Study of the reaction of some nitrosoamines with α-naphthylamine hydrochloride; suitable for the quantitative determination of these nitrosoamines. C. A. Parker. Chem Soc J p772-5 S '46
Synthesis of taurine and *N*-methyltaurine. J. W. Schick and E. F. Degering. flow sheet bibliog Ind & Eng Chem 39:906-9 Jl '47
Tetraethylenepentamine as a colorimetric reagent for copper. T. B. Crumpler. Anal Chem 19:325-6 My '47

COLORING matter
See also
Dyes and dyeing
Glass, Colored
Pigments
Stains and staining (microscopy)

COLORING matter in food
Belgium; regulations for food-coloring matter. For Comm W 29:8-9 O 4 '47

COLORS
Effect of color on the eye and mind of the beholder. W. Schweisheimer. Textile Col 68:43+ D '46
See also
Color
Orange (color)
Pigments

COLOWICK, Sidney Paul, 1916-
Eli Lilly and company award to S. P. Colowick. por Chem & Eng N 25:2811 S 29 '47
Eli Lilly award in biological chemistry. por(cover) Chem & Eng N 25:1176 Ap 28 '47

COLUMBIA broadcasting system, inc.
Record unit offsets CBS broadcasting drop. Barron's 27:28 My 12 '47

COLUMBIA gas and electric corporation
Accounting adjustments. Comm & Fin Chr 165:70 Ja 6 '47
Annual report. Comm & Fin Chr 165:1862 Ap 7 '47
Bigger supplies to lift earnings. Barron's 27: 27 Je 2 '47
Columbia Gas system. Pub Util 40:40-1 Jl 3 '47

COLUMBIA river
Grand Coulee dam
Concrete surgery at Grand Coulee; cutting generator foundations with compressed air. S. E. Hutton. il Comp Air Mag 51:331-3 D '46

COLUMBIA river—Grand Coulee dam—*Cont.*
Grand Coulee; 3,000,000-hp hydroelectric power project; with cost data. il map diags Power 91:738-42 N '47

Power utilization

BPA surplus power will aid in Canadian shortage. Elec World 128:35 Ag 30 '47
More superlatives at Grand Coulee; illustrations with text. Elec World News ed 128: 16-17 Jl 26 '47
Power of twenty million horses flows down the Columbia river. il map Power 91:666-9 O '47
Power on the Columbia. il Elec West 98:94-8 Je '47

COLUMBIA steel company
U.S. moves to block Consolidated sale. Steel 120:88 Mr 3 '47

COLUMBIA university
Columbia university starts course in standardization. Ind Stand 18:56 Mr '47

COLUMBIAN carbon company
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:330-1 Je 21 '47

COLUMBIUM
Geochemistry of columbium. K. Rankama. bibliog Science 106:13-15 Jl 4 '47
Hyperfine structure and nuclear moments of columbium. W. W. Meeks and R. A. Fisher. bibliog Phys R 72:451-5 S 15 '47
Refractory metal industry since 1914. A. L. Percy. il Metal Prog 52:600-2 O '47
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47

COLUMBIUM nitride
Cold columbium nitride acts as radio detector. Chem & Eng N 24:3361 D 25 '46
Superconducting bolometer for infrared measurements. R. M. Milton. bibliog il diags Chem R 39:419-33 D '46
Superconductive radio-frequency detector. il Electronics 20:142+ F '47

COLUMBUS and southern Ohio electric company
Annual report. Comm & Fin Chr 165:2409-10 My 5 '47

COLUMNS
Analysis of stepped-column mill bents. D. S. Ling. diags Am Soc C E Proc 73:1271-92 O '47
Approximate formulæ for beam-columns. R. O. Whiting. diag Engineering 164:25-6 Jl 11 '47
Column characteristics of sandwich panels having honeycomb cores. W. W. Troxell and H. C. Engel. il diag J Aeronautical Sci 14:413-20; Discussion. 420-1 Jl '47
Column paradox. F. R. Shanley. J Aeronautical Sci 13:678 D '46
Creep deflections in columns. J. Marin. il diags J Ap Phys 18:103-9 Ja '47
Flat slabs on cast-iron columns increase usable space; hog-cooler building for a meat-packing plant; Wilson & co. il diags Eng N 138:216-17 F 6 '47
Inelastic column theory. F. R. Shanley. bibliog il diag J Aeronautical Sci 14:261-7; Discussion. 267-8 My '47
Rational explanation of column behavior. F. L. Ryder. Am Soc C E Proc 73:311-41 Mr '47; Discussion. 73:756-8, 969-72 My-Je '47

COLUMNS, Concrete
Column and beam spacing considered for economy in steel bar lengths. C. L. Dayton. Civil Eng 17:36 Ja '47
Design of rectangular tied columns subject to bending. G. H. Dell. Am Concrete Inst J 18:89-91 S '46; Discussion. F. E. Richart. 18:337-8 N '46
Reinforced concrete columns under combined compression and bending. H. E. Wessman. diags Am Concrete Inst J 18:1-8 S '46; Discussion. 18:8[1]-8[8] Je '47
Simplified formula is based on effect of plastic flow in reinforced concrete. B. W. Boguslavsky. diag Civil Eng 17:87+ F '47

Testing

Structural effectiveness of protective shells on reinforced concrete columns. F. E. Richart. bibliog Am Concrete Inst J 18:353-63 D '46

COLUMNS, Steel
Precast fireproofing on used steel reinforces columns for re-use; building for Cuneo press. il Eng N 139:464-5 O 2 '47

COMANCHE series. See Paleontology—Cretaceous

COMBINES. See Threshing machines

COMBING machines
Improved method of dabbing on the Noble comb. T. F. Griffin. il Textile Inst J 38:P91-5 Mr '47

COMBS, Plastic

Manufacture

New comb finisher; Carlson comb crowning and cutting machine. il Mod Plastics 25: 196+ O '47

COMBUSTION
Characteristics of basic gas combustion equipment. D. A. Campbell. diags Steel 121:78-9+ S 22 '47
Combustion calculations for hydrocarbon fuels. H. R. Linden and D. F. Othmer. bibliog charts Chem Eng 54:115-19 Ap; 148-53 My '47
Combustion of coke deposit on synthetic-bead cracking catalyst. W. A. Hagerbaumer and R. Lee. bibliog flow diag il diags A S M E Trans 69:779-83 O '47; Same. Oil & Gas J 45:76-8+ Mr 15 '47; Same. Pet Refiner 26:123-8 Je '47
Experimental furnace for the investigation of open-hearth-furnace combustion problems. A. H. Leckie and others. bibliog il diags Iron & Steel Inst J 155:392-422 Mr '47; Discussion. 156:501-4; 157:201-6 Ag, O '47
Extent of gas flame impingement allowable for satisfactory combustion. Am Gas J 167: 55 O '47
Fuel-air ratio required for constant-pressure combustion of hydrocarbon fuels. N. A. Hall. S A E J 54:32-6 D '46
How fuel burns; start of pollution and its remedy. L. N. Rowley and J. C. McCabe. diags Power 91:525-7 Ag '47
Hydrogen-fluorine torch. H. F. Priest and A. V. Grosse. bibliog il diag Ind & Eng Chem 39:431-3 Mr '47
Oxygen-accelerated combustion in open-hearth furnaces. S. T. W. Bailey. diags Steel 121: 94+ Ag 11 '47
Recherches sur la catalyse d'oxydation. J. Ternisien and H.-F. Mélot. il diag Chimie & Ind 57:11-21 Ja '47
Research in combustion meetings held at Johns Hopkins university. Chem & Eng N 25:1124 Ap 21 '47
Symposium on combustion. Gas J (Lond) 250:500+ Je 4 '47
Total air for combustion; chart; data sheet. J. Hyam. Power 91:797 N '47
Why fires burn; basic facts about combustion. E. J. Kehoe. il Nat Safety N 55:34-5+ My '47

See also

Boilers—Firing
Firing
Flames
Fuel
Gas burners
Locomotive boilers—Firing
Matches—Testing
Oxidation
Spontaneous combustion

COMBUSTION, Heat of
Determination of the heat of combustion of nitroglycerin and the thermochemical constants of nitrocellulose. J. Taylor and C. R. L. Hall. bibliog diags J Phys & Colloid Chem 51:593-611 Mr '47
Heat of combustion of tungsten carbide, WC. L. D. McGraw, H. Seltz and P. E. Snyder. bibliog Am Chem Soc J 69:329-31 F '47
Heats of combustion and isomerization of six nonanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 38:419-22 Ap '47
Heats of combustion and isomerization of the eight C_8H_{16} alkylcyclohexanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 39:49-52 Jl '47
Heats of combustion and solution of liquid styrene and solid polystyrene, and the heat of polymerization of styrene. D. E. Roberts and others. bibliog(40 ref) J Res Nat Bur Stand 38:627-35 Je '47

COMBUSTION, Heat of—*Continued*
Heats of combustion of cyclopentane, cyclohexane, cycloheptane and cyclooctane. R. Spitzer and H. M. Huffman. bibliog Am Chem Soc J 69:211-13 F '47
Thermal data on organic compounds; modern combustion data for fourteen hydrocarbons and five polyhydroxy alcohols. G. S. Parks and others. bibliog Am Chem Soc J 68: 2524-7 D '46
Thermochemistry of propellent explosives. J. Taylor, C. R. L. Hall and H. Thomas. bibliog J Phys & Colloid Chem 51:580-92 Mr '47

COMBUSTION analysis
Automatic microdetermination of carbon and hydrogen. R. O. Clark and G. H. Stillson. il diag Anal Chem 19:423-6 Je '47
Determination of carbon and hydrogen by combustion; unitized dual apparatus and improved procedure. D. D. Tunnicliff and others. bibliog il diags Ind & Eng Chem Anal ed 18:710-18 N '46
Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47
Determination of carbon in low-carbon steel; low-pressure gasometric method. C. E. Nesbitt and J. Henderson. bibliog il diags Anal Chem 19:401-4 Je '47
Determination of sulfur by combustion in a vertical tube. D. B. Hagerman. bibliog il diags Anal Chem 19:381-3 Je '47
Determination of traces of fluorine in organic compounds. W. B. Huckabay, R. H. Busey and A. V. Metler. bibliog il diags Anal Chem 19:59-63 Ja '47
Estimation of small quantities of total sulphur in benzoles. K. H. V. French and G. Claxton. bibliog diags Soc Chem Ind J 65:344-8 N '46
Microdetermination of halogens and sulfur using the Grote combustion apparatus. O. C. Sundberg and G. L. Royer. bibliog il diags Ind & Eng Chem Anal ed 18:719-23 N '46
Quantitative determination of paraffins and naphthenes in gasolines by the lamp method. S. G. Hindin and A. V. Grosse. bibliog Anal Chem 19:42-7 Ja '47
Semimicrodetermination of carbon and hydrogen. E. C. Horning and M. G. Horning. bibliog il Anal Chem 19:688-90 S '47
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47

COMBUSTION research. See Internal combustion engines—Combustion research

COMETS
Auger showers and the comets. V. Rojansky. Phys R 71:552 Ap 15 '47

COMICS (books, strips, etc.)
Industrial comics get big circulation boost with signing of three important advertisers. D. Bruner. il Ptr Ink 221:87 O 10 '47

COMICS magazine publishers, Association of. See Association of comics magazine publishers

COMMERCE
Dollar problem and world trade. A. H. Temple. Comm & Fin Chr 166:1411+ O 9 '47
Foreign trade developments. Survey of Cur Bsns 27:3-5 O '47
Look at international trade. W. Ward. Comm & Fin Chr 165:1928 Ap 10 '47
Meditations on foreign trade. H. Gluck. Comm & Fin Chr 166:1001+ S 11 '47
Our opportunities in world commerce. W. A. Harriman. Comm & Fin Chr 164:2464+ N 14 '46
Postwar foreign trade; report of Bank for international settlements. Fed Res Bul 33: 1234-7 O '47
Role of the United States in world trade. M. S. Rosenthal. Ann Am Acad 252:35-44 Jl '47
Transportation and world trade. G. Metzman. Comm & Fin Chr 166:1638+ O 23 '47
Two-way world trade; will it be a dream or a reality? W. S. Lockwood. Sales Management 57:37-9 D 1 '46
World trade and America's future. C. E. Calder. Comm & Fin Chr 164:2465+ N 14 '46
World trade week's meaning to world-welfare and stability. W. A. Harriman. For Comm W 27:3 My 17 '47
World trade's postwar progress; the achievement and the outlook. S. L. Deese. For Comm W 26:3-9+ F 22 '47

See also
Aeronautics, Commercial
Balance of payments
Banks and banking
Business
Commercial policy
Commercial statistics
Competition
Credit
Exhibitions
Export trade
Foreign exchange
Free trade and protection
Imports
Insurance, Marine
International trade organization (proposed)
Interstate commerce
Interstate commerce commission
Marketing
Merchandizing
Merchant marine
Money
Ports
Prices
Purchasing
Shipment of goods
Shipping
Stock exchange
Stocks
Tariff
Trade marks
Transportation
Trusts, Industrial—International trusts
Waterways

Interstate commerce
also subdivision Commerce under names of countries, regions, etc. e.g. Europe—Commerce; Great Britain—Commerce; St Louis—Commerce; United States—Commerce

also World commerce corporation

Bibliography
Guides for new world traders. E. F. Becker and C. Cloyes. U S Dept of Commerce, Economic Ser 59:15-26; pa. 10c Supt. of doc. '46

Dictionaries
Dictionary of foreign trade. F. Henius. 2d ed rev & enl 959p $12.50 Prentice-Hall, 70 Fifth av, New York 11 '47

COMMERCE and production, Inter-American council of. See Inter-American council of commerce and production

COMMERCIAL aeronautics. See Aeronautics, Commercial

COMMERCIAL and trade organization executives, National institute for. See National institute for commercial and trade organization executives

COMMERCIAL buildings
See also
Store buildings

COMMERCIAL correspondence
Better coverage for business letters. R. W. Smiley. East Underw 48:41-2 pt 2 Je 20 '47
Collection without tears. O. S. Dibbern. Credit & Fin Management 49:8-10+ Ag '47
Effective credit letters. M. Howell. Credit & Fin Management 48:38-9 N '46
Good form in business correspondence, one way to build your firm's prestige. G. J. Church. Inland Ptr 119:70 Jl '47
Good letter can collect and not lose goodwill. F. Dickman. il Ptr Ink 218:38-9 Mr 21 '47
Improving your letters. K. B. Horning. Rough Notes 90:28+ Ja '47
Let's keep St Valentine out of business letters. J. E. Miller. Ptr Ink 218:108 Ja 3 '47
Memo to Jekyll-Hyde advertisers. H. J. Janis. Ptr Ink 219:132 My 2 '47
Prepare to win lawsuits involving correspondence. L. T. Parker. Ind Marketing 32:37-8+ F '47
Putting the tact in contact by mail. W. H. Butterfield. Ptr Ink 220:30-2 Jl 4 '47
Ten rules for good letters. E. N. Mayer, jr. Ptr Ink 220:66+ S 26 '47
Thoughtful letters help to build customer good-will. W. H. Butterfield. Ptr Ink 219: 76+ Ap 11 '47
Three-cent public relations. C. Rider. Ptr Ink 221:60+ O 3 '47
Touches of tact that take the sting out of adjustments. W. H. Butterfield. Sales Management 57:106-8 D 15 '46

COMMERCIAL correspondence—*Continued*
Visiting by proxy; good collection letters are just good letters. C. Forward. Credit & Fin Management 49:28-30 F '47
Write as you talk, customers like it. C. L. Sullivan. Edison Elec Inst Bul 15:165-8 My '47; Same. Am Gas Assn Mo 29:285-7+ Je '47

See also
Applications for positions
Business cards
Collecting of accounts
Complaints
Inquiries
Letterheads
Mail order business
Sales letters

Form letters
Beware the bedbug letter. E. N. Mayer, jr. Ptr Ink 218:38-9 F 21 '47
When you need to write more letters; experience of R. L. Polk & company direct mail division, with 100 automatic typewriters. R. G. French. il Am Bsns 17:18-19+ O '47

COMMERCIAL credit company
Annual report. Comm & Fin Chr 165:1068 F 24 '47
Baltimore credit concern started its industrial financing in the South. Manuf Rec 116:32+ Je '47

COMMERCIAL investment trust financial corporation
C.I.T. biggest retailer of installment credit is signing them up again. Fortune 36:86-91+ S '47
Reviving auto financing to boost C.I.T. earnings. Barron's 27:31 Je 16 '47

COMMERCIAL law
Did you know these answers? lawyers' terms can be very perplexing. C. B. Everberg. Credit & Fin Management 49:14 Ap; 16-17 My '47

See also
Advertising—Laws and regulations
Agency (law)
Banking law
Bills of lading
Carriers
Checks—Law
Corporation law
Debtor and creditor
Foreign exchange
Government regulation of industry
Income tax
Indorsement
Insurance law
Moratorium
Mortgages
Negotiable instruments
Patent laws and legislation
Payment
Prices—Regulation
Promissory notes
Public utilities—Law
Sales
Trade marks
Trusts, Industrial
Trusts and trustees
Vendors and purchasers
Warranty

Examinations
American institute of accountants examination in commercial law, Nov. 8, 1946. J Account 83:313-19 Ap '47
Answers to uniform certified public accountant examination in commercial law, May 1947. S. Gordon. J Account 84:318-27 O '47

Colombia
Commercial travelers license required. For Comm W 29:16 O 25 '47

Sweden
Swedish imports; license-free goods. Chem Age (Lond) 56:538 Ap 26 '47

COMMERCIAL paper
Commercial paper and bankers' acceptances outstanding, Aug. 1945-Nov. 1946. Fed Res Bul 33:62 Ja '47 [cont monthly]
Commercial paper market; characteristics and volume. L. Upham. Dun's R 55:21-3+ My '47
Rise of commercial paper. H. E. Dickhuth. Banking 39:47 Ap '47

See also
Bills of exchange
Negotiable instruments
Promissory notes
Warehouse receipts

COMMERCIAL policy
Achievements of Geneva parley called little short of miracle; radio address from Paris. W. L. Clayton. For Comm W 28:5+ S 20 '47
American industry supports worldwide economic freedom. H. H. Schell. Comm & Fin Chr 164:2899+ D 5 '46
Current trends in foreign trade policies; review of 1946. H. Chalmers. For Comm W 26:3-7+ F 8 '47
Europe and the Geneva conference. Comm & Fin Chr 165:1840, 2057+ Ap 3, 17 '47
Foreign trade; why it's a two-way business. A. J. Wieland. Sales Management 59:146+ S 15 '47
Free international markets essential to peace and prosperity. I. Wright. Comm & Fin Chr 166:421+ Jl 31 '47
Free trade possible only if we buy it. Barron's 27:1+ Ag 25 '47
Freer trade vs. control. Fortune 35:2-4 F '47
Freer two-way world trade keynotes Chicago conference; abstracts of addresses. G. C. Payne. For Comm W 26:10-11+ Mr 8 '47
Interim report on Geneva. Economist 152:941-2 Je 14 '47
International agreements and international trade; address before Academy of political science, New York city. W. I. Thorp. Comm & Fin Chr 165:2199+ Ap 24 '47
International economic policy. W. W. Aldrich. Comm & Fin Chr 164:1989+ O 17 '46; Same. Credit & Fin Management 48:4-5+ N '46
Iron curtain issues in world trade. J. Abbink. Comm & Fin Chr 165:997+ F 20 '47
Myth of Uncle Sap. Fortune 34:126-7+ D '46
Prelude to Geneva. Economist 152:444-5 Mr 29 '47
Scope for multilateralism. Economist 153:410-12 S 6 '47
Trade barriers must be reduced. W. W. Aldrich. Comm & Fin Chr 164:2521+ N 14 '46
Wants international trade on multilateral, non-discriminatory basis; National foreign trade council. Comm & Fin Chr 165:14+ Ja 2 '47

See also
Commercial treaties and agreements
Free trade and protection
Reciprocity
Tariff
also subdivision Commercial policy under names of countries, e.g. Great Britain—Commercial policy; United States—Commercial policy

COMMERCIAL products
See also
Chemicals
Dairy products
Farm produce
Products, New
Raw materials

COMMERCIAL solvents corporation
Big gain in Commercial Solvents net. Barron's 27:6 Ja 6 '47

COMMERCIAL statistics
Future of foreign trade; a Printers' Ink market exploration. W. P. Burn. Ptr Ink 218:41 Mr 7 '47
International yearbook of agricultural statistics, 1941-42 to 1945-46. v2 570p pa $3 International institute of agriculture, Villa Borghese, Rome '47
Statistics of world trade, by countries and by commodities; 1936-38 monthly average and monthly figures Nov. 1945-Oct. 1946. For Comm W 26:6-8 Ja 25 '47 [cont monthly]
U.S. foreign-trade statistics; some immediate questions posed. J. E. Ely. For Comm W 26:5-6+ Mr 15; 7+ Mr 22 '47
United States foreign trade; total trade, distribution by countries and areas and by leading commodities, and figures for private relief shipments; 1936-38 monthly average and monthly figures, Nov. 1945-Oct. 1946. For Comm W 26:10-14 Ja 25 '47 [cont monthly]
U.S. ocean-borne world trade far exceeds prewar tonnages. J. E. Ely and N. Habib. il For Comm W 26:3-5 Mr 1 '47
World trade's postwar progress; the achievement and the outlook. S. L. Deese. For Comm W 26:3-9+ F 22 '47

See also
Balance of payments
Export trade—Statistics
Imports—Statistics

COMMERCIAL travelers
Colombia; commercial travelers license required. For Comm W 29:16 O 25 '47

See also
Salesmen

COMMERCIAL travelers insurance organizations, International federation of. See International federation of commercial travelers insurance organizations

COMMERCIAL treaties and agreements

Anglo-Argentine monetary and trade agreement; text. Comm & Fin Chr 164:2476+ N 14 '46

Anglo-Brazilian commercial understanding; exchange of notes of Sept. 21. Comm & Fin Chr 165:16+ Ja 2 '47

Anglo-Russian trade agreement. Economist 153:119 Jl 19 '47

Announcements under Reciprocal trade agreements act; trade agreement calendar. Published in Foreign commerce weekly

Argentina commercial and financial agreement signed with Czechoslovakia. For Comm W 28:14-15 Ag 30 '47

Argentina signs trade agreement with Spain. For Comm W 26:10-11 F 1 '47

Argentina signs trade agreement with Switzerland. For Comm W 26:14-15 F 22 '47

Argentina signs trade and financial agreement with Chile. For Comm W 26:12 Ja 18 '47

Argentina; special agreement on nitrates signed with Chile. For Comm W 28:16 S 27 '47

Argentine-Brazilian trade agreement signed. For Comm W 25:16 N 30 '46

Argentine-Chilean trade pact won't affect copper imports. Elec World News ed 127:4 Ja 11 '47

Austria; trade and payments agreement providing exchange of goods with Poland effective. For Comm W 27:12 My 10 '47

Austria; trade and payments agreement with Belgium providing exchange of goods; Austrian-French trade and payments agreements signed. For Comm W 27:12-13 Ap 5 '47

Belgium; modus vivendi, commercial agreement and payments agreement with Turkey effective. For Comm W 27:12 My 31 '47

Belgium signs commercial agreement for exchange of goods with Netherlands. For Comm W 29:14 O 25 '47

Belgium; trade agreement concluded with Finland. For Comm W 26:10 F 15 '47

Bolivia signs trade and financial agreement with Argentina. For Comm W 26:10 Mr 29 '47

Bolivia taken into Argentine trade bloc. Bsns W p116 Ap 5 '47

Bolivia; trade and financial agreement signed with Argentina. For Comm W 27:12 My 24 '47

Brazil signs commercial treaty, financial agreement, and commodity import protocol with Czechoslovakia. For Comm W 25:17 N 9 '46

Brazil signs economic and trade agreement with United Kingdom. For Comm W 25:18 N 30 '46

Bulgaria; commercial agreement for exchange of goods with France signed. For Comm W 29:11-12 O 11 '47

Bulgaria; compensation agreement providing for exchange of goods with Poland signed. For Comm W 29:11 N 1 '47

Bulgaria signs trade agreement with Denmark providing exchanges of goods and payments. For Comm W 28:14 Jl 26 '47

Chile commercial agreements signed with Brazil. For Comm W 28:15-16 Ag 30 '47

Chile; most-favored-nation commercial agreement signed with Czechoslovakia. For Comm W 27:16 Je 28 '47

Chile; textile agreement signed with Brazil. For Comm W 26:12 F 8 '47

Czech-Polish agreement on trade, power, transport. Bsns W p96-7 Jl 12 '47

Czechoslovakia and United States exchange notes embodying agreement on commercial policy, compensation for nationalized properties, etc. For Comm W 25:49 D 21 '46

Czechoslovakia economic agreements with Poland announced. For Comm W 28:16-17 Ag 30 '47

Czechoslovakia signs commercial agreement for exchange of goods with Turkey. For Comm W 27:16 Ap 19 '47

Czechoslovakia signs trade agreement for exchange of goods with Norway. For Comm W 28:17-18 S 6 '47

Czechoslovakia signs trade agreement with Egypt for development of trade relations. For Comm W 26:17 Mr 1 '47

Danish food agreement with the United Kingdom. Economist 152:348 Mr 8 '47

Denmark signs agreement with Finland and agreement concerning trade and payments with government of French zone in Germany. For Comm W 26:12 Ja 11 '47

France; new commercial agreement for exchange of goods with Poland signed. For Comm W 29:13 N 1 '47

France; new trade and payment agreements with Italy effective. For Comm W 27:17-18 My 3 '47

France signs new commercial agreement with the Netherlands. For Comm W 28:16-17 Jl 26 '47

Future foreign trade and the Geneva negotiations. J. R. Custer. Automotive & Aviation Ind 96:33 Mr 1 '47

Glassware industry disputes ill-timed action on reciprocal trade agreements; committee for reciprocity information for American glassware association. Glass Ind 28:78-80+ F '47

Greece, agreement with Switzerland concerning commercial exchanges and transfer of payments effective. For Comm W 27:19 Je 21 '47

Greece; provisional commercial and payments agreements signed with Italy. For Comm W 27:18 Je 14 '47

Hungary's trade agreements; tabulation. U. L. Horoth. Mag of Wall St 80:323 Je 21 '47

International agreements and international trade; address before Academy of political science, New York city. W. I. Thorp. Comm & Fin Chr 165:2199+ Ap 24 '47

Italo-Hungarian trade arrangement concluded. For Comm W 26:21 F 1 '47

Italy; commercial and payments agreements effective with Turkey. For Comm W 27:18 Je 14 '47

Italy concludes trade and payments agreement with Uruguay. For Comm W 27:18 Ap 19 '47

Italy; new Italo-Swedish trade and payments agreement. For Comm W 26:19-20 Mr 8 '47

Largest reciprocal trade agreement reflects tariff cuts. Iron Age 158:113-14 N 21 '46

Netherlands; additional trade agreements with various European countries concluded; existing agreements supplemented. For Comm W 26:20-1 Mr 15 '47

Nicaragua signs most-favored-nation commercial agreement with Canada. For Comm W 26:17 Mr 29 '47

Norway; payment and trade agreements concluded with Switzerland. For Comm W 28:19-20 S 27 '47

Our tariff policy in crisis. H. Burnstein. bibliog Comm & Fin Chr 165:989+ F 20 '47

Philippine Islands; agreement between the United States and the Republic of the Philippines proclaimed. For Comm W 26:24+ Mr 1 '47

Poland signs trade agreement for exchange of goods with Norway. For Comm W 27:19-20 My 10 '47

President's statement on trade-agreement proposals and related documents. For Comm W 25:3-5 N 16 '46

Reciprocal trade; a consistent bi-partisan policy; statement before House Ways and means committee. W. A. Harriman. Comm & Fin Chr 165:2335+ My 1 '47

Reciprocal trade agreements; their importance to this country and the world. Index 27 no 1:13-22 [Mr] '47

Reciprocal trade pacts invite war. S. Hamlin. Comm & Fin Chr 165:1429+ Mr 13 '47

Secretary Clayton vs. Sen. Butler on reciprocal trade agreements; exchange of correspondence. Comm & Fin Chr 16:598+ Ja 30 '47

Statement by the President of the United States concerning reciprocal trade agreements program and text of executive order prescribing procedures for administration of program. For Comm W 26:34-5 Mr 29 '47

Statements relative to reciprocal trade agreements. Paper Ind 28:1640-1 F '47

Sweden and Soviet Union conclude credit and trade agreements. G. Olson. il For Comm W 25:9-11 D 21 '46

COMMERCIAL treaties and agreements—*Continued*
Sweden commercial treaty ratified with Yugoslavia. For Comm W 28:19 Ag 23 '47
Swiss-Swedish trade agreement revised. For Comm W 27:20 Ap 5 '47
Switzerland; commercial agreement for exchange of goods with France effective. For Comm W 29:20 O 4 '47
Switzerland; trade and payments agreement with Czechoslovakia effective. For Comm W 27:20 My 10 '47
Tariff program saved by Senators' compromise; Vandenberg-Millikin proposals for reciprocal trade agreements. Comm & Fin Chr 165:917+ F 13 '47
Trade agreements program believed in no danger. H. M. Bratter. Comm & Fin Chr 165:8+ Ja 2 '47
Truman inserts escape clause in trade pacts. Oil Paint & Drug Rep 151:3+ Mr 3 '47
Turkey; modus vivendi and commercial and payment agreement with France effective. For Comm W 25:20-1 D 14 '46
Union for trade; combined customs tariff for Netherlands, Belgium and Luxemburg. Economist 152:150-1 Ja 25 '47
U.S.S.R.-Yugoslavia; credit agreement and agreement on trade and payments signed. For Comm W 28:17 S 20 '47
U.S. gives formal notice of plans to negotiate trade agreements. W. L. Clayton. Comm & Fin Chr 164:2462+ N 14 '46
Yugoslavia; economic coordination treaty with Albania effective. For Comm W 27:23 My 17 '47

COMMISSION for international educational reconstruction
Summary report of National conference on international educational reconstruction. S. S. Steinberg. J Eng Educ 37:730-1 My '47

COMMISSIONS
See also
Advertising agencies—Commissions
Brokers—Commissions

COMMITTEE for economic development
Business and economic research. J. M. Cleary. Paper Ind 29:889-90+ S '47
Challenge to leadership. R. Rubicam. il Ind Marketing 32:35-6+ Je '47
CED seeks ways to prevent strikes during disputes. Am Bsns 16:18-19+ N '46
CED tackles problems of labor and small business. Sales Management 58:107 F 1 '47
C.E.D.'s formula. Bsns W p80+ Mr 1 '47
High employment and increasing productivity goal of research program. Comm & Fin Chr 164:2533 N 14 '46
Plan for labor peace. Factory Management 105:77 Ap '47
Rubicam now chairman CED Research and policy committee; other officers. Comm & Fin Chr 165:319 Ja 16 '47

COMMODITY control
Back to WPB? Marshall plan may strain economy. Bsns W p23 O 11 '47
British proposal for commodity stabilization. H. Wilson. Comm & Fin Chr 164:2764 N 28 '46
See also
Prices—Regulation
Rationing

COMMODITY credit corporation
Sugar beet support program bond designed for Commodity credit corp. Nat Underw 51:11 Jl 17 '47

COMMODITY exchanges. See Exchanges

COMMON trust funds. See Trusts and trustees—Common trust funds

COMMONWEALTH and southern corporation
Best seller. Fortune 35:140+ Ja '47
C. & S. preferred gets better offer. Barron's 27:1 F 17 '47
Georgia commission opposed to plan. Comm & Fin Chr 165:680 F 3 '47
New C.&S. offer about equals preferred claim. Barron's 27:35 Ag 18 '47
New plan filed. Comm & Fin Chr 166:464 Ag 4 '47
Offers new plan. Comm & Fin Chr 165:807 F 10 '47
Plan stresses intrinsic value. O. Ely. Pub Util 40:652-3 N 6 '47
Reorganization proposal conditionally approved by SEC. Comm & Fin Chr 165:335 Ja 20 '47
SEC approves plan to transfer operating utilities. Comm & Fin Chr 166:564 Ag 11 '47
Value of preferred offer. Barron's 26:6 N 25 '46

COMMONWEALTH color and chemical company
Story of Commonwealth. Am Dyestuff Rep 35:sup50-1 D 2 '46

COMMONWEALTH fund
1946 annual report. Science 105:121-2 Ja 31 '47

COMMUNICATION, Electric. See Electric communication; Radio communication; Telegraph; Telephone

COMMUNICATION, International
Communications hurdles; status of services to countries formerly under enemy control; table. Bsns W p116 Mr 15 '47
Language barrier to international understanding. M. Graves. Ann Am Acad 250:12-16 Mr '47

COMMUNICATION, Military
High-sensitivity photoconductive cell. C. W. Hewlett. il diags Gen Elec R 50:22-5 Ap '47
Infra-red equipment for military purposes. Engineering 163:258 Ap 4 '47; Electrician 138:933-4 Ap 11 '47
See also
Radio communication, Military

COMMUNICATION and traffic
Communication and social action. W. H. Yeager and W. E. Utterbach, eds. Ann Am Acad 250:1-129 Mr '47
Free and responsible press; a general report on mass communication: newspapers, radio, motion pictures, magazines, and books by the Commission on freedom of the press. Fortune 35:supp 1-21 Ap '47
Reducing communication costs; abstract. Management R 36:12-13 Ja '47
See also
Airlines
Airways
Factory communication
Highway transportation
Motor vehicles
Radio communication
Railroads
Rapid transit
Roads
Shipping
Street railroads
Street traffic
Telegraph
Telephone
Teletype
Television
Transportation
Waterways

International aspects
See Communication, International

Arabia
Saudi Arabia to improve communications systems. For Comm W 27:28+ Je 7 '47

Bulgaria
Bulgaria approves 1947 communications plan. For Comm W 28:27 Jl 5 '47

Poland
Telecommunications in Poland. For Comm W 29:32 O 4 '47

Spanish Guinea
Telecommunications monopoly for Spanish Guinea. For Comm W 28:30-1 S 6 '47

COMMUNICATIONS workers of America
C.W.A. is born. Bsns W p90+ N 23 '46
C.I.O. rejected; phone workers vote for an independent, centralized union. Bsns W p85 Je 21 '47
Independents set; phone union's resurgence in fight against C.I.O. Bsns W p92-3 S 6 '47
Labor heads gather in Washington. Pub Util 40:513 O 9 '47

COMMUNISM
Class conflict idea; a threat to freedom. W. A. Irwin. Comm & Fin Chr 165:2905+ My 29 '47
Collectivism challenges Christianity, by V. P. Kaub; review. Pub Util 39:645-6 My 8 '47
Comintern to Cominform. Economist 153:605-6 O 11 '47
Commerce vs. communism. C. B. Luce. Comm & Fin Chr 165:2478+ Mr 8 '47

COMMUNISM—*Continued*
Communism in eastern Europe. Economist 152:893-4, 942-3 Je 7-14 '47
Eastern Europe in 1947; Communists and nationalism. map Economist 152:799-801 My 24 '47
Enslavement of labor. M. Woll. Comm & Fin Chr 164:3207+ D 19 '46
Fortune survey; Russia and U.S. communism. Fortune 36:5-6 O '47
Great delusion; where Marx went wrong. C. E. Wilson. Mech Eng 69:658-60 Ag '47
Heritage of America; danger of spread of communism. J. S. Lawrence. Comm & Fin Chr 166:1321+ O 2 '47
How Comintern plans to divide, conquer. Barron's 27:1+ O 13 '47
How should we celebrate the first hundred years of communism? G. E. Jackson. Pulp & Pa of Can 48:52-6 Ja '47
Indictment of Soviet policies. L. Budenz. Comm & Fin Chr 165:1796+ Ap 3 '47
U.S. vs. communism in one world; radio address. H. E. Stassen. Comm & Fin Chr 166:209+ Jl 17 '47
We must fight for freedom. E. F. Hutton. Comm & Fin Chr 165:3227+ Je 19 '47
What do the Communists really want? radio addresses. R. Thompson; E. Lyons. Comm & Fin Chr 166:919-20 S 4 '47

Italy

Italy: East or West? G. Burck. il Fortune 36:74-83+ Ag '47

COMMUNIST party (United States)
American patience short toward Communist activity here; Gallup poll. Iron Age 159:107 My 1 '47
Communism menaces the mining industry. R. H. Ramsey. il Eng & Min J 148:74-81 Jl '47

COMMUNITY advertising
Play a leading role in your community. K. W. F. Cooper. Inland Ptr 119:44-5 S '47
San Francisco's Bay area pushes promotion to sell packaged market; nine counties combine resources to speed region's industrial development. Sales Management 59: 60 O 1 '47
Selective selling averts city's post-war slump; Huntsville, Ala. advertises. Sales Management 58:81 Mr 1 '47
States and cities seek tourists, industries. Adv & Sell 40:45-6 Ja '47

COMMUNITY centers
New roof completed for Westchester county center. Eng N 138:11 Ja 2 '47

See also
Community schools

COMMUNITY forum. See Forum, Open

COMMUNITY gas and power company
Change approved in merger. Comm & Fin Chr 165:335 Ja 20 '47

COMMUNITY property
Community property and principal and income acts of Pennsylvania. E. C. S. Highley. Trusts & Estates 85:255-6 S '47
Community-property taxation. Economist 152: 146-7 Ja 25 '47
Effect of Pennsylvania community property statute; abstract. C. C. Jones and R. W. Hamilton. Nat Underw (Life ed) 51:20 S 5 '47
Income tax detour; community property laws. Bsns W p34-5 D 21 '46
Life insurance policies under the Texas community property law. J. R. Wood. Nat Underw (Life ed) 51:31 O 10 '47
Tax problems incident to community and jointly owned property. W. L. Nossaman. Trusts & Estates 85:295-302 O '47

COMMUNITY schools
Small high school in Grayslake, Ill. doubles as farm community center. il plans diags Arch Forum 86:90-1 Ap '47

COMMUNITY trusts
Community trust idea. E. L. Ryerson. Trusts & Estates 85:240-3 S '47

COMMUTATORS
Bearing oil causes commutator to fail. C. R. Anderson. Power 91:780-1 N '47
Capacitative commutator. S. A. Scherbatskoy and others. bibliog il diags R Sci Instr 18: 415-21 Je '47
Commutator setting and connections for fractionals. C. C. Hermann. diag Power Pl Eng 51:89 My '47
How to undercut a commutator; illustrated instructions. Power 91:792 N '47
Inside of electrical machines. R. H. Robinson. il diags Electrician 137:1509-13 N 29 '46
Maintenance of d.c. commutators and brush gear. il Mech Handling 34:150-3+ Mr '47
Maintenance of railway motor commutators. R. E. Kelly. il diag Ry Mech Eng 121:258-61 My '47
Turning the commutators. il Paper Ind 29:251 My '47

See also
Brushes (electric machinery)

COMMUTERS. See Railroads—Commuter service

COMPACTS (cosmetics)
Cutting compacts from acrylic sheet. il Mod Plastics 24:131-2 F '47
Elgin compacts climb on the fashion ensemble bandwagon. W. D. Evans. il Sales Management 59:130+ O 15 '47
Ingenuity in finding outlets pays off; beauty shops led to department stores for Glamor Kit. il Mod Plastics 25:87-8 S '47

COMPANY anniversaries. See Anniversaries, Company

COMPANY names. See Corporate names

COMPANY schools. See Corporation schools

COMPANY stores
Company stores make good. il Bsns W p61-2 Ap 19 '47

COMPANY towns
Water-supply and sewerage facilities at Marathon townsite. S. A. Purvis. il Water & Sewage 84:24-5+ D '46

See also
Mining towns

COMPANY unions
How practical personnel men think the labor law will work; company-dominated unions. G. Gardiner. Factory Management 105:94-5 S '47

COMPARATORS
Cornelius electronic comparators. il Automobile Eng 37:206-8, 271-2, 310-12 Je-Ag '47
Inspecting turbosupercharger blades by optical projection comparator; Pant-O-Jector. E. C. Polidor. il diags Iron Age 159:40-4 Ja 16 '47
Jones & Lamson optical comparator inspects turbine blades. il diags Am Mach 91:133 S 25 '47
Merton magnetic comparator. il Sci Am 176: 270 Je '47
Optical comparator; Pant-O-Jector. il Machine Design 19:106 F '47
Sheffield horizontal external comparator. il Mach 53:201 F '47
Testing of flatness by the beam comparator method. R. Marriner and W. O. Jennings. il Engineer 184:164-5 Ag 22 '47

COMPASS
Cathode-ray compass used in connection with autopilot. R. T. Squier. il diags Electronics 20:121-3 Ap '47
Cathode tube improves compass. il diag Aviation 46:80-1 My '47
Compass bearings by electronics. il Bsns W p72 F 1 '47
Compasses for the motor car. Consumers Res Bul 19:26 Je '47
Correction of ships' magnetic compasses for the effects of degaussing. H. C. Wassell and D. A. Turner. diags Inst E E J 93 pt 1:518-22; Discussion. 522-4 N '46
Electron-gun compass. il diag Machine Design 19:106 Mr '47
Magnetic compass with a cathode-ray sensing element. W. H. Kliever and R. R. Syrdal. diags Product Eng 18:132-4 Ag '47
Three plastics make new compass possible. il Mod Plastics 25:113-15 S '47

COMPENSATION (law)

See also
Workmen's compensation

COMPETITION
Better look now! an old competitor eyes your markets. M. Adams. Sales Management 58:88+ Ap 1 '47
Fire more shots at more targets to beat greater competition; profitable marketing, merchandising and advertising strategy calls for recognition of three vital multiples. H. L. Roth. Ptr Ink 219:35-7+ Ap 4 '47
How to meet competition with industrial research. C. E. Ziegler. il Ind Marketing 32: 62+ O '47
See also
Price fixing
Trusts, Industrial

COMPETITIVE bidding. See Contracts, Letting of; Securities—Marketing

COMPLAINTS
Capitalizing on customer complaints; abstract. Management R 35:527-9 D '46
Nash keep 'em sold plan. R. G. French. il Am Bsns 16:12-13+ N '46
Salesman's corner; handling complaints. F. Rundell. Inland Ptr 119:50-1 My '47
Touches of tact that take the sting out of adjustments. W. H. Butterfield. Sales Management 57:106-8 D 15 '46
See also
Gas companies—Complaints
Motor bus lines—Complaints

COMPLEMENT fixation
Elimination of the false positive reaction with human sera in complement fixation tests. G. C. Brown. bibliog Science 106:43 Jl 11 '47
Quantitative study of the complement-hemolysin relation. J. F. Kent. bibliog Science 105:316-17 Mr 21 '47

COMPLEX numbers. See Numbers, Complex

COMPLEX variables. See Variables, Complex

COMPO shoe machinery corporation
Adds new outlets in men's field. Barron's 27:32 Je 30 '47

COMPOUND words
H-y-p-h-e-n-i-t-i-s! A. R. Hasley. Ptr Ink 220:132 Jl 25 '47

COMPOUNDS, Aromatic. See Aromatic compounds

COMPRESSED air
Blows hot and cold; Hilsch's tube. Fortune 34:180+ D '46; Sci Am 177:29-30 Jl '47
Compressed air at work (cont). il Comp Air Mag 52:16-17, 226-7, 252-3 Ja, S-O '47
Compressed air does cleaning job. F. Rudolph. il Power 91:192 Mr '47
Compressed-air systems need close attention. diags Textile World 97:116-17+ O '47
Compressed air to prevent freezing in open-air filter plant units. Eng N 139:403 S 18 '47
Cost of delivering compressed air. Heat & Ven 44:97-8 O '47
Designing for pneumatics. J. L. Dooley. il diags Machine Design 19:115-20 Ap; 117-22 My; 122-7 Je; 130-5 Jl '47
Explosive dissociation for processing of cereals. il Food Ind 19:759+ Je '47; Same cond. Comp Air Mag 52:128 My '47
Hot and cold running air; laboratory tool developed by Westinghouse research engineers. il Refrig Eng 53:524 Je '47
Leak in prestressed tank located by compressed air. diags Eng N 138:1030 Je 26 '47
Maintaining the correct pressure in a compressed-air system. Mach 54:160-1 O '47
Moistened moving webs by air sprays. il diags Comp Air Mag 52:45-6 F '47
NACA balanced diaphragm dynamometer-torque indicator. C. S. Moore and others. diags Automotive & Aviation Ind 96:41+ Je 1 '47
Pressure gasometer aids in industrial health studies. il Comp Air Mag 52:255 O '47
Product that couldn't explode; explosion of ammonium nitrate evaporator. C. Field. il Chem Eng 54:146-7 My '47
Rotors clean compressed air through centrifugal force; Aridifier. il diags Product Eng 18:97 Je '47
Small compressors serve local areas; McQuay, inc., Minneapolis. il Factory Management 105:127-8 My '47
Spare parts and a little headwork lick an air-cooling problem. J. D. Constance. diags Power 90:853-4 D '46
Tube both heats and cools air; invented by R. Hilsch. il Comp Air Mag 52:131 My '47; Same. Iron Age 159:145-6 My 8 '47; Same. Power 91:480 Jl '47; Same. Power Pl Eng 51:87 Ag '47; Discussion. P. A. Baumeister. Comp Air Mag 52:206 Ag '47
Uses of compressed air in TVA hydroelectric plants. H. J. Petersen. il diag Comp Air Mag 52:13-15 Ja '47
See also
Air compressors
Air receivers
Pneumatic control
Pneumatic machinery
Pneumatic tools

Moisture content
Compressed air isn't all wet. G. B. Comfort. diag Foundry 74:102-3+ D '46

COMPRESSED air lines
Air-line answers; unusual adaptations of air line respirators and masks in production of fissionable materials. J. M. Brown and R. T. Bartnett. il Safety Eng 92:60+ O '46
Don't strangle pneumatic devices. J. Mayo. diags Am Mach 91:106-7 Ja 30 '47
Eliminate air leaks. P. C. Ziemke. Rock Prod 50:82-3 Ap '47
Grounded air hose protects drillers from punctured electric conduits. Eng N 137: 879 D 26 '46
How to cut the cost of air operated tools. R. C. Manning. il Iron Age 160:60-2 S 25 '47
Insulation of air lines saves $33,000. il Comp Air Mag 52:97-8 Ap '47
Piping the shop for air. il diag Sheet Metal Worker 38:55-6 F '47
Planning and installing an efficient compressed-air system. il Mach 53:148-52 Ag '47
Separator cures their compressed-air troubles. F. Cowan. diags Power 91:44 Ja '47

COMPRESSED gas manufacturers' association
Meeting, 34th, New York, Jan. 27-28. Oil Paint & Drug Rep 151:7+ F 3 '47

COMPRESSED wood. See Wood, Compressed

COMPRESSIBILITY
Adiabatic compressibility of liquids. M. R. Rao. bibliog J Chem Phys 14:699 N '46
Compressibilities of gas mixtures. J. Joffe. bibliog Ind & Eng Chem 39:837-8 Jl '47
Compressibility of liquid hydrocarbons. E. W. Jacobson and others. bibliog Oil & Gas J 44:109-10 Mr 23 '45; Same. Am Pet Inst Proc 25(4):39-41 '45
Compressibility of liquids as it affects design of high-pressure pumps and hydraulic equipment. R. L. Schmoyer. il diags Machine Design 19:134-7 Ag '47
High speed compression tests on copper. M. Greenfield and E. T. Habib. il diags J Ap Phys 18:645-50 Jl '47
Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H. H. Reamer and others. Ind & Eng Chem 39:206-9 F '47
Pressure-volume-temperature relations of benzene. E. J. Gornowski, E. H. Amick, jr. and A. N. Hixson. bibliog diag Ind & Eng Chem 39:1348-52 O '47
Pressure-volume-temperature relations of 2,2,3,3-tetramethylbutane. W. A. Felsing, A. M. Cuellar and W. M. Newton. bibliog Am Chem Soc J 69:1972-4 Ag '47
Studies on the aging of precipitates and co-precipitation; compressibility of silver bromide powders. I. Shapiro and I. M. Kolthoff. bibliog diags J Phys & Colloid Chem 51:483-93 Mr '47
Use of residue theory for treating the subsonic flow of a compressible fluid. C. Kaplan. U S Nat Advisory Com for Aeronautics 1942:39-47 '46
See also
Elasticity

COMPRESSORS
Analysis of internal flow machinery. S. H. Christensen. J Ap Phys 18:587-8 Je '47
Crankshaft positioning alleviates compressor vibration. G. Spillane. diag Elec World 127:55-6 Mr 1 '47

COMPRESSORS—*Continued*
How to design and erect a stable compressor foundation. G. Steven. il diags Power 91: 111-14 F '47
Internal efficiency of centrifugal pumps and compressors. G. G. McDonald. bibliog Engineer 184:121-2 Ag 8 '47
New developments in compressors for petroleum industry applications; abstracts. J. N. MacKendrick. Oil & Gas J 45:95 O 12 '46; Pet Processing 1:170 N '46
Pressed fit on crankshaft stops overhung-flywheel wobble. E. Sterrett. il diag Power 91:612-13 S '47
Process engineer's guide to the centrifugal compressor. I. J. Karassik. il diags Chem Eng 54:110-14 O '47 (to be cont)
Pumps, compressors and expanders; new equipment. J. F. Skelly. il Chem Ind 61: 411-12 S '47

See also
Air compressors
Ammonia compressors
Gas compressors

Lubrication

F-2 lubricator for air compressors. G. Ferguson. Ry Mech Eng 121:529-30 O '47
Lubricants for refrigerator compressors. F. L. Johnston. il Heat & Ven 44:74-6 Ag '47

Manufacture

Finished products story; precision machine work done at Chattanooga compressor plant; Borg-Warner's Norge Rollator. il Manuf Rec 116:36-7+ Ap '47

Testing

Compressor capacity determination by split discharge system and thin plate orifice. A. D. Sullivan. diags Refrig Eng 54:243-5+ S '47

COMPTON, Karl Taylor, 1887-
Receives 1947 Washington award. por Elec World 127:44 Mr 1 '47
Urges science foundation in accepting Washington award. pors Chem & Eng N 25:765 Mr 17 '47
Washington award for 1947. Western Soc E J 52:50-61 Je '47

COMPULSORY insurance. See Insurance, Compulsory

COMPUTERS. See Calculating machines

CONANT, James Bryant, 1893-
American contemporary. A. D. McFadyen. por Chem & Eng N 25:2004+ Jl 14 '47

CONCENTRATION
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47

CONCENTRATION camps
Internment-camp electrochemics. T. Haden. diags Chem & Ind p625-7 O 11 '47

CONCENTRATION cells
Application of the principle of the concentration cell to kinetic studies; oxidation of oxalic acid by ceric sulfate. S. D. Ross and C. G. Swain. Am Chem Soc J 69:1325-6 Je '47

CONCENTRATORS
Chemico drum-type sulfuric acid concentrator. J. H. Berger and A. J. Gloster. il diag Chem Eng Prog 43:225-36 My '47
Concentration of sulfuric acid under vacuum. J. F. Burke and E. Mantius. diags Chem Eng Prog 43:237-46 My '47

CONCILIATION service. See United States—Conciliation service

CONCRETE
A.S.T.M. 50th annual meeting; abstracts of papers on concrete. Concrete 55:6-9+ Jl '47
Demand for cement and concrete in construction. E. M. Artenberg. il Dom Comm 34: 47-52 D '46
Differences in characteristics of concrete in the wet and the dry state. F. L. Fitzpatrick. Am Concrete Inst J 18:339-42 N '46; Discussion. R. D. Terzaghi. 18:1147-51 Je '47
Do you make good concrete? il Concrete 55: 5-7+ S '47
Encasing bridge piles in concrete. W. H. Johnson and C. J. Beer. il diags Concrete 55:3-5 Jl '47
Future of precast concrete. D. A. Stewart. Engineering 164:51-2 Jl 18 '47
Integral waterproofing materials for concrete. W. E. Parker. Am Concrete Inst J 19:77-9 S '47
Maintenance and reconstruction of concrete tunnel linings with treated mortar and special concrete. B. D. Keatts. il diags Am Concrete Inst J 18:813-26 Mr '47
Pressure of plastic concrete in forms. C. Macklin. Concrete 55:7-9 Mr '47
Properties of prepakt concrete. R. E. Davis. il Roads & Bridges 85:80-4+ Ag '47

See also
Bridges, Concrete
Cement
Concrete, Reinforced
Concrete construction
Concrete lining
Grouting
Gunite
Pavements, Concrete
Roads, Concrete

Aggregate

Aggregate division meetings, National concrete masonry association, Feb. 17. Rock Prod 50:144-5 Mr '47
Aggregate production at Center Hill. J. P. Dealy. il diags Eng N 138:570 Ap 17 '47
A.S.T.M. standards on concrete and concrete aggregates; specification, methods of testing, definitions. 149p pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
Build gravel plant to meet requirements for ready mixed concrete; Diamond washed gravel co. il Rock Prod 50:78-80 Jl '47
Build products plant to reduce material handling; Ladd lumber and mercantile co., Pueblo, Colo. produces it own scoria aggregate. il Rock Prod 50:126-7 S '47
Cement-aggregate reaction in concrete. D. McConnell and others. il map diag Am Concrete Inst J 19:93-128 bibliog(p127-8) O '47
Chart for pumice-concrete beams. A. E. Niederhoff. Eng N 139:389-90 S 18 '47
Concrete mix design; a modification of the fineness modulus method. M. A. Swayze and E. Gruenwald. Am Concrete Inst J 18:829-43 Mr '47; Discussion. 19:844[1]-844[17] pt 2 D '47
Do you make good concrete? il Concrete 55: 6-7 S '47
Durability of concrete as affected by aggregates; abstract. T. E. Stanton. Rock Prod 50:104+ Ap '47
From the movies to lightweight aggregates; AleXitE engineering division of Alexander film co. develops two lightweight aggregates; manufactures concrete brick. W. B. Lenhart. il Rock Prod 50:155-6+ O '47
Gravity flow of materials cuts handling costs; Schory cement block co. uses slag for aggregates. il diag Rock Prod 50:133 Jl '47
Handling equipment for Loch Sloy dam. Mech Handling 34:131-2 Mr '47
Highway specifications; Minnesota. H. E. Swanson and N. C. Rockwood. Rock Prod 49:77 N '46
Highway specifications; North Carolina. H. E. Swanson and N. C. Rockwood. Rock Prod 50:130+ Ja '47
Influence of grading on strength of concrete. B. Wilk. Rock Prod 50:169-70 F '47
Lightweight aggregates for concrete. Pub Works 78:16 My '47
Lightweight aggregates in ready-mixed concrete; abstract. P. M. Woodworth. Rock Prod 50:133-4 My '47
Lightweight aggregates; scoria for concrete block; Edgar D. Otto & son. W. B. Lenhart. il Rock Prod 50:130-1+ Jl '47
Making concrete that floats; lightweight aggregate from obsidian; Continental basic materials corp. L. G. Clapp. il Rock Prod 50:130-1 My '47
Manufacture perlite concrete block; Chemicote perlite corp. W. B. Lenhart. il Rock Prod 50:172-3 O '47
New vibratory aggregate screen. il Concrete 55:52 F '47
Nomograph chart aids pumice-concrete slab design. A. E. Niederhoff. Civil Eng 17:613 O '47
Portland plant makes pumice block. il Concrete 55:20+ Ag '47

CONCRETE—Aggregate—*Continued*
Problems in use of pumice for aggregate. Rock Prod 50:93 Je '47
Processing aggregates for big dam; Cumberland quarries, inc. D. Mocine. flow sheet il Rock Prod 50:106-10 Ag '47
Pumalite, a lightweight block; Western pumistone products co. W. B. Lenhart. il Rock Prod 50:145+ Je '47
Sales promotion builds up future markets; Richland lime co. increases production of agricultural limestone and concrete aggregates. il Rock Prod 50:76-7+ My '47
Shade-shed for cool aggregate. il Eng N 139: 448-9 O 2 '47
Steam plus hot air for preshrinking; Builder's supply co., Phoenix, Ariz., makes its own perlite aggregate. W. B. Lenhart. il Rock Prod 50:198-9+ Ag '47
Study of the influence of thermal properties on the durability of concrete. A. Weiner. bibliog il Am Concrete Inst J 18:997-1008 My '47
Supplying ready mix and concrete block market; Fontana gravel co. W. B. Lenhart. il Rock Prod 50:111 Ag '47
Testing chemical reactivity of concrete aggregate. R. C. Mielenz and D. McConnell. Rock Prod 50:112-13+ O '47
Testing of southern clays for lightweight aggregate. T. A. Klinefelter and H. P. Hamlin. bibliog Am Cer Soc Bul 26:119-21 Ap 15 '47
Travelling aggregate batcher fed by five bins; F. E. Breckenridge materials co. H. E. Swanson. il plan diag Rock Prod 49:72-3 D '46

See also
Concrete—Cinder concrete

Air entrainment

Air-entrained concrete delivered in special haulage units; Kolinski concrete co. E. R. Cushing. il diag Rock Prod 49:82-3+ N '46
Air entraining admixtures included in Public roads administration specifications. il Eng N 137:656-8 N 14 '46
Air-entraining cement for structural concrete. il Am Bld 69:138-9 F '47
Air entrainment control; test project completed in Chicago. C. J. Chambers. Roads & Sts 90:73+ Ag '47
Air entrainment gage. il Rock Prod 49:61 N '46
Air entrainment in concrete; practice of the Ontario Department of highways. D. O. Robinson. Roads & Bridges 85:111+ S '47
Air entrainment proves its value. il Concrete 55:3-5 My '47
Air in ready mixed concrete; Pacific coast aggregates, inc. E. L. Howard and G. W. Greene. il Concrete 55:16-18 Ag '47
A.S.T.M. 50th annual meeting; abstracts of papers on concrete. Concrete 55:6-9 Jl '47
Camera lucida method for measuring air voids in hardened concrete. G. J. Verbeck. il Am Concrete Inst J 18:1025-39 My '47; Discussion. 19:1040[1]-1040[5] pt 2 D '47
Control of quantity of entrained air in concrete; abstracts. S. Walker. Rock Prod 50: 170-1 Ap '47; Concrete 55:11-12 Ap '47
Development and study of apparatus and methods for the determination of the air content of fresh concrete. C. A. Menzel. il diags Am Concrete Inst J 18:1053-72 My '47; Discussion. 19:1072[1]-1072[5] pt 2 D '47
Entrained air in concrete; a symposium. W. A. Cordon and others. il diags Am Concrete Inst J 17:601-99 Je '46; Discussion. 18:700[1]-700[12] pt 2 D '46
Entrained air in concrete; summary of A.S.T.M. papers. Rock Prod 50:154 Ag '47
Four years' experience delivering air-entrained concrete in non-agitating equipment; plant of J. A. Nicholson. B. Nordberg. il diag Rock Prod 50:157-9+ O '47
Haulage of air-entrained concrete. J. W. Shaver. il diags Concrete 55:8-11+ Je; 10-13 Jl '47

Analysis

Analysis of freshly mixed concrete; abstract. R. H. Kirkham. Chem & Ind p130-1 Mr 15 '47

Cinder concrete

Preparing cinders for concrete block; Cinder block co. il Rock Prod 50:128-9 My '47

Cracks

Cracks in concrete. B. W. Steele. Am Concrete Inst J 18:629-33 F '47

Curing

Curing concrete with sealing compounds. R. F. Blanks and others. Am Concrete Inst J 17:493-512 Ap '46; Discussion. 18:512[1]-512[7] pt 2 D '46
Curing; most efficient methods determined by tests. G. A. Mansfield. il Rock Prod 50:154-7+ F '47
Do you make good concrete? il Concrete 55: 11-12 S '47
High-temperature high-humidity speeds up curing cycle; Barnes & Cone, inc. B. Nordberg. il Rock Prod 50:171-3+ Ja '47

Cutting

Concrete surgery at Grand Coulee; cutting generator foundations with compressed air. S. E. Hutton. il Comp Air Mag 51:331-3 D '46

Durability

Durability of concrete as affected by aggregates; abstract. T. E. Stanton. Rock Prod 50:104+ Ap '47
Study of the influence of thermal properties on the durability of concrete. A. Weiner. bibliog il Am Concrete Inst J 18:997-1008 My '47; Discussion. 19:1008[1]-1008[9] pt 2 D '47

Expansion and contraction

Contraction joint grouting of large dams. A. W. Simonds. plans diags Am Concrete Inst J 18:637-52 F '47; Discussion. il 19: 652[1]-652[10] pt 2 D '47
Creep and skrinkage in reinforced concrete. K. Hajnal-Kónyi. Engineering 164:375-6 O 17 '47
Creep and shrinkage in reinforced-concrete structures. H. B. Seed. diag Engineering 164:309-11 S 26 '47
Effect of gypsum content and other factors on shrinkage of concrete prisms. G. Pickett. Am Concrete Inst J 19:149-75 O '47
Shrinkage and plastic flow of pre-stressed concrete. H. R. Staley and D. Peabody, jr. Am Concrete Inst J 17:229-43 Ja '46; Discussion. 18:244[1]-244[4] pt 2 D '46
Shrinkage and temperature reinforcement in solid slab construction. R. S. Pulido y Morales. Am Concrete Inst J 18:605-6 Ja '47

Failure

Corrosion of concrete caused by sulphur-oxidising bacteria. C. B. Taylor and G. H. Hutchinson. bibliog il Soc Chem Ind J 66: 54-7 F '47

See also
Concrete—Cracks

Freezing

Asbestos-felt blanket protects thin concrete dam from frost; Florence Lake dam in California. il Eng N 138:802-4 My 15 '47
Deterioration of concrete in brine storage tanks. I. Lyse. il Am Concrete Inst J 19: 141-7 O '47
Frost protection for concrete at elevation 9,050; Gem Lake dam. il diags Eng N 139: 610-12 O 30 '47
Studies of the physical properties of hardened portland cement paste; freezing of water in hardened portland cement paste. T. C. Powers and T. L. Brownyard. bibliog il diags Am Concrete Inst J 18:933-92 Ap '47
Volume changes in concrete during freezing and thawing observed by new dilatometric method. Franklin Inst J 242:330-1 O '46; Same. Am Concrete Inst J 18:715-16 F '47

Painting

Painting exterior concrete surfaces with special reference to pretreatment. G. E. Burnett and A. L. Fowler. il Am Concrete Inst J 18:1077-86 Je '47
Painting interior concrete surfaces. T. H. Chisholm. Am Concrete Inst J 18:913-16 Ap '47
Tests on paints for masonry walls. il Concrete 55:14-15+ O '47

CONCRETE—*Continued*

Prestressing

Analysis and design of elementary prestressed concrete members. H. Schorer. diags Am Concrete Inst J 18:49-87 bibliog (p86-7) S '46; Discussion. 18:88[1]-88[9] Je '47

Prestressed concrete bridge beams being tested in England. R. L. M'Ilmoyle. il diags Ry Age 123:478-82 S 20 '47

Prestressing concrete pipe. F. L. Fitzpatrick. diag Concrete 55:38 S '47

Shrinkage and plastic flow of pre-stressed concrete. H. R. Staley and D. Peabody, jr. Am Concrete Inst J 17:229-43 Ja '46; Discussion. 18:244[1]-244[4] pt 2 D '46

Protection

Welded wrought iron channels used to cover spalled concrete spandrels. il Steel 119:84 D 30 '46; Same. Civil Eng 17:197 Ap '47

See also

Dams, Concrete—Protection

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See Concrete—Expansion and contraction

Specifications

Air entraining admixtures included in Public roads administration specifications. il Eng N 137:656-8 N 14 '46

Standards

A.S.T.M. standards on concrete and concrete aggregates; specification, methods of testing, definitions. 149p pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46

Strength

Influence of grading on strength of concrete. B. Wilk. Rock Prod 50:169-70 F '47

Order of mixing affects concrete strength. Eng N 139:390 S 18 '47

Studies of the physical properties of hardened portland cement paste; relation of physical characteristics of the paste to compressive strength. T. C. Powers and T. L. Brownyard. Am Concrete Inst J 18:845-64 bibliog(p857) Mr '47

Temperature

Five-year temperature record of a thin concrete dam. S. D. Burks. Am Concrete Inst J 19:65-76 S '47

Temperature effects

Radiant heating by reinforced concrete; question examined whether embedment of warm water pipes in structural concrete would endanger integrity of concrete. J. R. Nichols. Am Concrete Inst J 17:513-16 Ap '46; Discussion. diags 18:516[1]-516[11] pt 2 D '46

Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72:759-80 Je '46; Discussion. 72:1321-4; 73:79-84, 383-4, 915-22 N '46, Ja, Mr, Je '47

Study of the influence of thermal properties on the durability of concrete. A. Weiner. bibliog il Am Concrete Inst J 18:997-1008 My '47; Discussion. 19:1008[1]-1008[6] pt 2 D '47

Testing

A.S.T.M. standards on concrete and concrete aggregates; specification, methods of testing, definitions. 149p pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46

Camera lucida method for measuring air voids in hardened concrete. G. J. Verbeck. il Am Concrete Inst J 18:1025-39 My '47; Discussion. 19:1040[1]-1040[6] pt 2 D '47

Concrete mix design; a modification of the fineness modulus method. M. A. Swayze and E. Gruenwald. Am Concrete Inst J 18:829-43 Mr '47; Discussion. 19:844[1]-844[17] pt 2 D '47

Development and study of apparatus and methods for the determination of the air content of fresh concrete. C. A. Menzel. il diags Am Concrete Inst J 18:1053-72 My '47

Effect of gypsum content and other factors on shrinkage of concrete prisms. G. Pickett. Am Concrete Inst J 19:149-75 O '47

Erosion of concrete by cavitation and solids in flowing water. W. H. Price. bibliog il Am Concrete Inst J 18:1009-23 My '47

Research laboratories of the Reclamation bureau; selection of construction materials. E. B. Wood and W. H. Price. il Eng N 139:472-5 O 2 '47

Shrinkage and plastic flow of pre-stressed concrete. H. R. Staley and P. Peabody, jr. Am Concrete Inst J 17:229-43 Ja '46; Discussion. 18:244[1]-244[4] pt 2 D '46

Transportation

Transporting concrete in dump-trucks. J. A. Nicholson. il Eng N 138:201-3 F 6 '47

What size truck chassis for ready mix haulage? abstract. H. F. Thomson. Rock Prod 50:210 Ag '47

Vibration

High-speed form vibrators improve concrete pipe manufacture. il Eng N 138:459-60 Mr 20 '47

New concrete vibratory equipment. il Concrete 55:32 F '47

Waterproofing

See Waterproofing

X ray absorption

Blocking the X-rays; National bureau of standards studies use of concrete as barrier. il Nat Safety N 56:26-7+ Ag '47; Abstract. Mech Eng 69:668-9 Ag '47

Concrete against X-rays. il Sci Am 177:168-70 O '47

Relative thickness of lead, concrete, and steel required for protection against narrow beams of X-rays. G. Singer and others. bibliog diag J Res Nat Bur Stand 38:665-72 Je '47

Wall thicknesses for X-ray protection. Elec World 127:66+ Ja 4 '47

X-ray protection. Elec Eng 66:982 O '47

CONCRETE, Effect of alkalies on

Cement-aggregate reaction in concrete. D. McConnell and others. il map diag Am Concrete Inst J 19:93-128 bibliog(p 127-8) O '47

Effect of gypsum content and other factors on shrinkage of concrete prisms. G. Pickett. Am Concrete Inst J 19:149-75 O '47

Testing chemical reactivity of concrete aggregate. R. C. Mielenz and D. McConnell. Rock Prod 50:112-13+ O '47

CONCRETE, Effect of sulfates on

Effect of gypsum content and other factors on shrinkage of concrete prisms. G. Pickett. Am Concrete Inst J 19:149-75 O '47

CONCRETE, Porous

Chemical cleaning of porous concrete wells; Wood River refinery. G. N. Andrews. Am Water Works Assn J 39:729-33 Ag '47

Toe drain system, Sardis dam; collection ditch of porous concrete. il Concrete 55: 28-9 Ap '47

CONCRETE, Ready-mixed. See Concrete mixing—Ready-mixed concrete

CONCRETE, Refractory

Heat-resistant concrete; B & W Kaocast. Chem Ind 60:636 Ap '47; Same. Chem & Eng N 25:1138 Ap 21 '47; Same. Mech Eng 69:407 My '47; Same, with table. Iron Age 159:45 Mr 20 '47

New method for building open-hearth flues; use of refractory concrete made with lumnite cement. W. F. Conlin. il Steel 120:94+ Ja 20 '47

Refractory concrete is used in brick plants on kilns, dryers, car tops. F. E. Lobaugh. il Brick & Clay Rec 109:52+ D '46

Topaz as an admixture in refractory concrete. F. E. Lobaugh. Blast F & Steel Pl 35:868-9 Jl '47; Abstract. Iron Age 160:44 Jl 31 '47

CONCRETE, Reinforced

Creep and shrinkage in reinforced-concrete structures. H. B. Seed. diag Engineering 164:309-11 S 26 '47; Discussion. K. Hajnal-Kónyi. 164:375-6 O 17 '47

Detector for locating reinforcing bars in concrete. L. T. Cleaver. il Am Concrete Inst J 19:178-81 O '47

CONCRETE, Reinforced—*Continued*
Precast concrete structures. A. Amirikian. plan diags Am Concrete Inst J 18:365-79 D '46; Discussion. 18:380[1]-380[4] Je '47
Reinforced concrete columns under combined compression and bending. H. E. Wessman. diags Am Concrete Inst J 18:1-8 S '46; Discussion. 18:8[1]-8[8] Je '47
Simplified formula is based on effect of plastic flow in reinforced concrete. B. W. Boguslavsky. diag Civil Eng 17:87+ F '47

See also
Pavements, Concrete—Reinforcement
Steel, Reinforcing

Standards

ACI standard building code requirements for reinforced concrete (ACI 318-47). Am Concrete Inst J 19:1-64 S '47
Proposed revision of building regulations for reinforced concrete (ACI 318-41). diags Am Concrete Inst J 18:401-66 D '46

Testing

Comparative bond efficiency of deformed concrete reinforcing bars. A. P. Clark. il diags Am Concrete Inst J 18:381-400 D '46; Same. J Res Nat Bur Stand 37:399-407 D '46; Same cond. Concrete 55:33-6 Je '47; Discussion. Am Concrete Inst J 18:400[1]-400[9] Je '47
Corrosion of reinforcing steel in cracked concrete. B. Tremper. il Am Concrete Inst J 18:1137-44 Je '47
Distribution of bond stress in concrete pull-out specimens. D. Watstein. il diags Am Concrete Inst J 18:1041-52 My '47
Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72:759-80 Je '46; Discussion. W. A. Conwell. 73: 915-22 Je '47
Structural effectiveness of protective shells on reinforced concrete columns. F. E. Richart. bibliog Am Concrete Inst J 18:353-63 D '46

CONCRETE blocks
Advertising sign made of concrete block. il Concrete 55:22 O '47
Concrete block used for canal lining. il Eng N 138:529 Ap 3 '47
Develops new markets with concrete block and ready mix; Hedberg-Friedheim and co. il Rock Prod 50:123+ My '47
Handling concrete blocks in yard by air hoist. il Comp Air Mag 52:202 Ag '47
Mansions or cottages with concrete block. il diags Am Bld 69:127-9 Ag '47
Tuskegee institute starts project to provide southern farmers with low-cost concrete masonry homes. il Concrete 55:30-1 My '47
When building with concrete masonry, let these PCA instructions guide you; drawings. Am Bld 69:112-13 Mr '47
Wisconsin concrete products men take steps to hold large market. Concrete 55:12+ Mr '47
Ytong, a Swedish lightweight building unit. F. O. Anderegg. Rock Prod 50:110 Ag '47

Manufacture

Advanced methods of aggregates handling and concrete proportioning; Damine builders supply co. B. Nordberg. il plan diags Rock Prod 50:122-6 Jl '47
Austin Crabbs builds new plant on unit production basis. il Concrete 55:24+ S '47
Block business booming in the Pacific Northwest; Overlake concrete products co. W. B. Lenhart. il Rock Prod 50:193+ Ag '47
Build products plant to reduce material handling; Ladd lumber and mercantile co., Pueblo, Colo. produces its own scoria aggregate. il Rock Prod 50:126-7 S '47
Concrete block makers report on advantages of calcium chloride. Concrete 54:28-9 N '46
Concrete blocks automatically formed. il diags Product Eng 18:94-5 Ap '47
Curing; most efficient methods determined by tests. G. A. Mansfield. il Rock Prod 50:154-7+ F '47
Design highly mechanized plant to make a variety of products; Anchor concrete products co. B. Nordberg. il Rock Prod 50:146-50 Je '47
Design of Seattle block plant; Layrite concrete products. il Concrete 55:6-7 My '47
Gravity flow of materials cuts handling costs; Schory cement block co. uses slag for aggregates. il diag Rock Prod 50:133 Jl '47
How progress has been made in concrete block production. M. Hultmark. il Brick & Clay Rec 109:58+ N '46
Improved concrete products by proper proportioning; Oscar Roberts & co. H. E. Swanson. il Rock Prod 49:146+ D '46
Labor requirements for construction materials; concrete masonry units. A. W. Collier and C. Stone. il U S Bur Labor Statistics Bul 888-2:1-16; pa 10c Supt. of doc. '47; Same abr. Mo Labor R 63:681-7 N '46
Largest products plant on West coast; Wailes-Bageman, inc. il Rock Prod 50: 147-9 F '47
Lightweight aggregates; scoria for concrete block; Edgar D. Otto & son. W. B. Lenhart. il Rock Prod 50:130-1+ Jl '47
Make concrete block on the site with special machine; Nelson construction co. W. B. Lenhart. il Rock Prod 50:160+ O '47
Making masonry units is an established art. il Concrete 55:14+ S '47
Manufacture both pipe and block; plant of Basalite division, Basalt rock co. W. B. Lenhart. il Rock Prod 50:130-2 S '47
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Mass production of concrete blocks. il Comp Air Mag 52:180 Jl '47
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Modernize block plant; Best block co. D. Mocine. il Rock Prod 50:128-9 S '47
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Plant layout for economical operation; Hoke concrete works. H. E. Swanson. il plan Rock Prod 50:129-31 Mr '47
Portland plant makes pumice block. il Concrete 55:20+ Ag '47
Poston makes 15,000 units daily in new concrete block plant. il Brick & Clay Rec 110:58+ F '47
Preparing cinders for concrete block; Cinder block co. il Rock Prod 50:128-9 My '47
Production line block manufacture; North end materials co. W. B. Lenhart. il Rock Prod 50:157 Je '47
Pumalite, a lightweight block; Western pumistone products co. W. B. Lenhart. il Rock Prod 50:145+ Je '47
Rapid handling of block to curing rooms and storage; Burnet & Craig. M. W. Messer. il Rock Prod 49:121-2 N '46
Ready mix practice in block plant design; Alatex concrete products, inc. R. A. Latimer. il Rock Prod 50:161-2 O '47
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Steam plus hot air for preshrinking; Builder's supply co., Phoenix, Ariz., makes its own perlite aggregate. W. B. Lenhart. il Rock Prod 50:198-9+ Ag '47

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Reduce delivery costs with carrier unit; Eureka concrete building products co. W. B. Lenhart. il Rock Prod 50:119-20 S '47

CONCRETE bricks

Manufacture

From the movies to lightweight aggregates; AleXitE engineering division of Alexander film co. develops two lightweight aggregates; manufactures concrete brick. W. B. Lenhart. il Rock Prod 50:155-6+ O '47

CONCRETE bridges. See Bridges, Concrete

CONCRETE buildings
Blockhouse for V-2 rocket tests. il diag Engineering 163:31, 36 Ja 10 '47

CONCRETE buildings—*Continued*
New concrete test houses accommodate 30-ft propellers. il Civil Eng 17:129 Mr '47
Precast concrete storehouses. A. Amirikian. il diags Am Concrete Inst J 18:1097-1116 Je '47; Discussion. il 19:1116[1]-1116[12] pt 2 D '47
Prefabricated concrete structures test new design concepts and construction techniques; two storehouses at the Naval supply depot, Mechanicsburg, Pa. A. Amirikian. il diags Civil Eng 17:383-6 Jl '47
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CONCRETE chimneys. See Chimneys, Concrete

CONCRETE coal bins. See Coal bins, Concrete

CONCRETE conduits. See Conduits, Concrete

CONCRETE construction
Air-entraining cement for structural concrete. il Am Bld 69:138-9 F '47
Army map service gets a new home in Washington, D.C. il Eng N 138:367-70 Mr 6 '47
Atlantic City boardwalk rebuilt with precast concrete piles and joists. il diags Eng N 137:799-800 D 12 '46
Le bombardement de Rotterdam, ses effets sur les constructions en béton armé; la reconstruction du port et du théâtre municipal. A. Bijls. il plans diags Génie Civil 124:325-8 S 1 '47
Chicago designer builds formless concrete houses; method invented by R. J. Sipchen. il Concrete 55:20-2 Je '47
Close scheduling speeds housing project; Brownsville houses in Brooklyn, N.Y.; with cost data. il Eng N 139:272-4 Ag 21 '47
Concrete precast panels used in building Vermont dormitories. A. D. Campbell. il Concrete 55:30+ Ag '47
Concreting from the top down on Texas building; type of concrete form construction called the D.C. system. il Eng N 139: 506 O 16 '47
Construction of concrete coal facility in narrow gorge; coal washing plant at Gary mine of United States coal and coke co. il Concrete 55:10-11+ Ag '47
Construction of West Coast building proves economical use of pumped concrete; use of Pumpcrete machines. S. Perliter. il Civil Eng 17:306-9 Je '47
D.C. (descimbrar cimbrando) system has just crossed Mexican border; pouring starts at sixth floor of Houston building. il Arch Forum 87:11 Ag '47
Driving 3,850 piles for 60-ton loads; concrete building for Lakeside press, Chicago. il Eng N 137:722-3 N 28 '46
Earthquakeproof design of Rexall world headquarters in Los Angeles. H. J. Brunnier. il Concrete 55:3-5 O '47
Engineers design giant concrete hangar for Rapid City bomber base. Concrete 55:22+ Je '47
Factory designed for residential area; clothing factory and store for Bond stores, inc. in Rochester. il diags Eng N 138:511-13 Ap 3 '47
Flat slabs on cast-iron columns increase usable space; hog-cooler building for a meat-packing plant; Wilson & co. il diags Eng N 138:216-17 F 6 '47
High test cell walls and roof concreted as a monolith; Hamilton standard propeller division of United aircraft corp. R. F. Egelhoff. diags Concrete 55:3-5 Ja '47
How much wall is effective in stiffening a concrete beam? A. H. Brownfield. diag Am Concrete Inst J 19:80-1 S '47
Improved concreting techniques facilitate grain elevator construction. il plan diag Eng N 139:320-4 S 4 '47
New means of precasting concrete; vacuum mats hasten curing; use of vacuum lifter. A. M. Hoffmann. il diag Comp Air Mag 52: 152-3 Je '47
Observations of war damage to concrete and to cement industry properties in Germany. M. A. Swayze. il Am Concrete Inst J 18: 617-27 F '47
Precast frame for two-story plant erected like structural steel. il diag Eng N 139: 184-6 Ag 7 '47
Pumpcrete profitably used in general building construction. S. Perliter. il Concrete 54:3-6 N '46
Stadium roof hung from hollow girder; Seattle's high school memorial stadium. il Concrete 55:7 O '47
Steel-frame Calco plant has concrete exterior. il Eng N 138:786 My 8 '47
Stove building at linoleum plant is itself part of production process. il Heat & Ven 44: 83-4 Mr '47
Les travaux en béton; du canal d'Amsterdam au Rhin. A. Bijls. map Génie Civil 124:132-4 Ap 1 '47
When building with concrete masonry, let these PCA instructions guide you; drawings. Am Bld 69:112-13 Mr '47
See also
Bridges, Concrete
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Cost
Precast concrete warehouse construction; with cost data. L. P. Corbetta. Am Concrete Inst J 18:1117-24 Je '47

Design
Analysis and design of elementary prestressed concrete members. H. Schorer. diags Am Concrete Inst J 18:49-87 bibliog (p86-7) S '46; Discussion. 18:88[1]-88[9] Je '47
Construction of wide-span concrete hangars. A. Tedesko. il diag Western Soc E J 51: 155-61 D '46
Hipped plate construction. G. Winter and Minglung Pei. bibliog il diags Am Concrete Inst J 18:505-31 Ja '47
Precast concrete structures. A. Amirikian. plan diags Am Concrete Inst J 18:365-79 D '46; Discussion. 18:380[1]-380[4] Je '47
Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72:759-80 Je '46; Discussion. 72:1321-4; 73:79-84, 383-4, 915-22 N '46, Ja, Mr, Je '47
Simplified formula is based on effect of plastic flow in reinforced concrete. B. W. Boguslavsky. diag Civil Eng 17:87+ F '47
Some problems in structural framing of precast concrete houses. A. Amirikian. il plans diags Am Concrete Inst J 18:797-810 Mr '47

Fire resistance
Low-cost repairs restore concrete hangar to design strength. A. Tedesko. il diags Civil Eng 17:9-12 Ja '47

Forms
Adjustable all-steel form for concrete steps. il Eng N 137:809-10 D 12 '46
Cleanouts for forms. C. Macklin; R. F. Blanks. diag Am Concrete Inst J 18:338-9 N '46
High-speed form vibrators improve concrete pipe manufacture. il Eng N 138:459-60 Mr 20 '47
Pressure of plastic concrete in forms. C. Macklin. Concrete 55:7-9 Mr '47
Slip forms for million-bushel elevator for soybeans. H. R. Straight. il plan diags Eng N 137:728-30 N 28 '46
Steel forms speed construction of long bridge approach. il Eng N 138:525-7 Ap 3 '47
Use of steel forms for concrete house production. W. J. Brooking. il Iron Age 159: 57-62 F 13 '47

Joints
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Pipe embedding
Construction notes on embedding radiant heating pipe in concrete. il diag Concrete 54:6-9 D '46
Panel radiant heating in hospitals. G. D. Lain. Am Concrete Inst J 18:1145-7 Je '47

CONCRETE construction—Pipe embedding—*Continued*
Pipe coils embedded in concrete mat heat tank. H. J. Lang. il Heating-Piping 19:94 Ag '47
Radiant heating by reinforced concrete; question examined whether embedment of warm water pipes in structural concrete would endanger integrity of concrete. J. R. Nichols. Am Concrete Inst J 17:513-16 Ap '46; Discussion. diags 18:516[1]-516[11] pt 2 D '46
Temperatures and heat flow for a concrete slab with imbedded pipes. C. F. Kayan. bibliog diags Refrig Eng 54:143-51; Discussion. 151 Ag '47

Repair

Low-cost repairs restore concrete hangar to design strength. A. Tedesko. il diags Civil Eng 17:9-12 Ja '47
Restoration work prolongs life of concrete structures; hydroelectric plants of the Minnesota light & power co. A. C. Giesecke. il Civil Eng 17:588-92+ O '47

Standards

ACI standard building code requirements for reinforced concrete (ACI 318-47). Am Concrete Inst J 19:1-64 S '47
Modular coordination simply explained. diags Concrete 55:3-7 Mr '47
Proposed revision of building regulations for reinforced concrete (ACI 318-41). diags Am Concrete Inst J 18:401-66 D '46

CONCRETE construction, Subaqueous
Divers dam Chicago water tunnel to confine tremie concrete plug. il plan diags Eng N 139:332-5 S 4 '47
Drydock for a giant flying boat. il Eng N 138:730-2 My 1 '47
Floating caissons form pier foundations for Anacostia River bridge. K. C. Cox. il Civil Eng 16:532-5 D '46
Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

See also
Concrete piling

CONCRETE construction, Underground

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CONCRETE floors. See Floors, Concrete

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CONCRETE houses
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Balloon house now being mass produced; Pasadena, Calif. house designed by W. Neff. il plan Am Bld 69:125 S '47
British firm uses line production methods in precasting house panels; Tarran prefabricated concrete house. il diags Concrete 55: 3-9+ Ag '47
Building houses using large precast sections; Normac, inc. W. B. Lenhart. il diag Rock Prod 50:206-7 Ag '47
Chicago designer builds formless concrete houses; method invented by R. J. Sipchen. il Concrete 55:20-2 Je '47.
Concrete houses; current construction practice; with cost data. il diags Concrete 54: 10-12+ My; 10-13 Je; 8-9+ Jl; 6-7+ Ag; 31-4+ S; 13+ D '46
Concrete houses mass-produced; Normac units. il Am Bld 69:152 Je '47
Concrete used in a new way; semi-fireproof houses at North Shore acres, Glen Head, L.I. il plan diag Am Bld 69:80-1 Jl '47
Dampney precast concrete slabs. H. B. Fletcher. il Concrete 55:32-3 My '47
Design concrete house for radiant heating. D. Mocine. il diags Rock Prod 50:163 O '47
Lightweight concrete in monolithic walls. il Concrete 55:20 O '47
Mansions or cottages with concrete block. il diags Am Bld 69:127-9 Ag '47
Mass methods produce homes speedily, Tucson, Ariz. il Concrete 55:12 My '47
Monocrete prefabricated slabs. H. B. Fletcher. il Concrete 55:30-1 Jl '47
Navy builds precast concrete houses for dependents of enlisted personnel stationed at Guam. il Concrete 55:18 O '47
Some problems in structural framing of precast concrete houses. A. Amirikian. il plans diags Am Concrete Inst J 18:797-810 Mr '47; Excerpt. Concrete 55:18-19 O '47; Discussion. Am Concrete Inst J 19:812[1]-812[3] pt 2 D '47
Tech Home; the steel and concrete house. il plan diags Am Bld 69:118-19 Ag '47
Tuskegee institute starts project to provide southern farmers with low-cost concrete masonry homes. il Concrete 55:30-1 My '47
Use of steel forms for concrete house production. W. J. Brooking. il Iron Age 159: 57-62 F 13 '47
Vacuum-processed concrete houses; abstract. K. P. Billner and B. M. Thorud. il Eng N 138:506 Ap 3 '47
We sold 13 over Sunday; Seattle builders offer small house of concrete, radiant heated, delux equipment; Permatherm homes. il plans diags Am Bld 69:114-17 S '47

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See also
Concrete products industry

Advertising

Merchandising ready mixed concrete; booklet issued by Whitney ready mixed concrete. il Concrete 55:9+ O '47

CONCRETE lining
Concrete linings in steel stacks. G. T. Haddock. il diags Power Pl Eng 51:116+ Ap '47
Hydraulic structure maintenance using pneumatically placed mortar. W. L. Chadwick. il Am Concrete Inst J 18:541-7 Ja '47
Lining of the Alva B. Adams tunnel. R. J. Willson. il diags Am Concrete Inst J 18: 209-38 N '46
Low cost linings for irrigation canals. W. R. Young. il Eng N 138:192-6 F 6 '47
Maintenance and reconstruction of concrete tunnel linings with treated mortar and special concrete. B. D. Keatts. il diags Am Concrete Inst J 18:813-26 Mr '47
Pneumatic concrete placers speed lining of small tunnels of the San Diego aqueduct. il diags Eng N 138:502-4 Ap 3 '47
Reclamation laboratories develop new joint-sealing compound. M. R. Spindler. il Concrete 55:25-6 F '47
Repairing unlined portions of tunnel involves difficult transportation job. il Eng N 139: 202-4 Ag 7 '47
Slip form places wasteway canal concrete. il Civil Eng 17:543 S '47
Tunnel trouble and how to correct it; repair of concrete linings. W. W. Morrison and E. E. Seelye. il diags Ry Age 122: 412-14 F 22 '47

See also
Concrete construction in mines
Gunite

CONCRETE masonry association, National. See National concrete masonry association

CONCRETE mixers
Adaptation of concrete mixers for other work. il Engineer 183:339 Ap 18 '47
Compact concrete mixer has chain drive on drum. il Product Eng 17:98 D '46
LeTourneau truck mixer of unusual design. il Concrete 55:42 F '47

Safety measures

Concrete mixers and pavers; hazards and precautions. il plans Nat Safety N 55:38-40+ Ap '47

CONCRETE mixing
Air entrainment control; test project completed in Chicago. C. J. Chambers. Roads & Sts 90:73+ Ag '47
Building products department store; Pacific coast aggregates co. W. B. Lenhart. il plan Rock Prod 50:123-5 S '47

CONCRETE mixing—*Continued*
Concrete. V. S. Wigmore. Engineer 183:180 F 14 '47
Concrete mix design; a modification of the fineness modulus method. M. A. Swayze and E. Gruenwald. Am Concrete Inst J 18: 829-43 Mr '47; Discussion. 19:844¹-844¹⁷ pt 2 D '47
Concrete mixture design exercises. S. Walker. Concrete 55:36-8 Ag '47
Construction of West Coast building proves economical use of pumped concrete; use of Pumpcrete machines. S. Perliter. il Civil Eng 17:306-9 Je '47
Design of concrete mixes. R. E. Robb. diag Rock Prod 50:158-9+ F; 140-2 Mr; 126-7 My; 152-3+ Je '47
Do you make good concrete? il Concrete 55: 7+ S '47
Influence of grading on strength of concrete. B. Wilk. Rock Prod 50:169-70 F '47
Lining of the Alva B. Adams tunnel. R. J. Willson. il diags Am Concrete Inst J 18: 212-21 N '46
Measuring, mixing and placing concrete. D. O. Robinson. il Roads & Bridges 84:67-8+ D '46
Nomograph for design of various concrete mixes. A. T. Smith. Concrete 55:9-10 Mr '47
Order of mixing affects concrete strength. Eng N 139:390 S 18 '47
Should portland cement be dispersed? T. C. Powers. bibliog diags Am Concrete Inst J 17:117-40 N '45; Discussion. il 18:140¹-140³² pt 2 D '46
Travelling aggregate batcher fed by five bins; F. E. Breckenridge materials co. H. E. Swanson. il plan diag Rock Prod 49: 72-3 D '46

See also
Concrete—Aggregate

Ice addition

Mixing a concrete highball; iced concrete makes better dams. il Bsns W p56 O 25 '47

Ready-mixed concrete

Air-entrained concrete delivered in special haulage units; Kolinski concrete co. E. R. Cushing. il diag Rock Prod 49:82-3+ N '46
Air in ready mixed concrete; Pacific coast aggregates, inc. E. L. Howard and G. W. Greene. il Concrete 55:16-18 Ag '47
Automatic bin controls; Triangle certified concrete, inc. W. B. Lenhart. il Rock Prod 50: 139 Mr '47
Automatically controlled ready-mix plant; Arizona sand and rock co. W. B. Lenhart. il Rock Prod 50:151+ Je '47
Classifying ready-mix concrete plants. L. D. Long. Eng N 137:790-2 D 12 '46
Combine three plants into one; Terry Carpenter, ltd., operates sand and gravel, ready mixed concrete, and concrete products plants. W. B. Lenhart. il Rock Prod 50:88-91 O '47
Develops new markets with concrete block and ready mix; Hedberg-Friedheim and co. il Rock Prod 50:123+ My '47
Electronic controls speed up batching; Consolidated rock products co. W. B. Lenhart. il Rock Prod 50:166-7 O '47
Four years' experience delivering air-entrained concrete in non-agitating equipment; plant of J. A. Nicholson. B. Nordberg. il diag Rock Prod 50:157-9+ O '47
Grand opera sells ready mixed concrete; Albuquerque gravel products co. uses radio and newspaper promotion. W. B. Lenhart. il Rock Prod 50:202-4 Ag '47
Gravity flow ready mix plant; Service rock and sand co. W. B. Lenhart. il Rock Prod 50:143 Mr '47
Haulage of air-entrained concrete. J. W. Shaver. il diags Concrete 55:8-11+ Je; 10-13 Jl '47
Large bulk cement capacity cuts plant costs. il Rock Prod 50:124-5 My '47
Lightweight aggregates in ready-mixed concrete; abstract. P. M. Woodworth. Rock Prod 50:133-4 My '47
Merchandising ready mixed concrete; booklet issued by Whitney ready mixed concrete. il Concrete 55:9+ O '47
Prescription concrete; W. E. Anderson sons co. il Rock Prod 50:178-9 Ja '47
Profitable small city ready mix plant; Custom concrete co. W. R. Miller. il Rock Prod 49:81+ D '46
Ready mix furnished in building power plant structural concrete; Venice no. 2 plant for Union electric power co. il diag Concrete 55:10+ Ja '47
Ready mix plant designed to overcome operating difficulties; Arrow sand and gravel co. B. Nordberg. il plan diags Rock Prod 50:127-9+ Jl '47
Ready mixed concrete a premium product. Concrete 55:17 S '47
Ready-mixed concrete specifications; report of A.S.T.M. committee C-9. Rock Prod 50: 154+ Ag '47
Transporting concrete in dump-trucks. J. A. Nicholson. il Eng N 138:201-3 F 6 '47
Travelling aggregate batcher fed by five bins; F. E. Breckenridge materials co. H. E. Swanson. il plan diag Rock Prod 49: 72-3 D '46
What size truck chassis for ready mix haulage? abstract. H. F. Thomson. Rock Prod 50:210 Ag '47

CONCRETE pavements. See Pavements, Concrete

CONCRETE piling
Atlantic City boardwalk rebuilt with precast concrete piles and joists. il diags Eng N 137:799-800 D 12 '46
Causeway built of precast units. il Eng N 137:710-13 N 28 '46
High capacity piles on Chicago hardpan; General Motors building. H. Caudill. diags Eng N 139:315-17 S 4 '47
Illinois city constructs combination pier and sewer. R. L. Anderson. il plan diags Pub Works 78:27-8 Ja '47
Pieux en béton armé en deux pièces. M. Lohman. diags Génie Civil 123:349 D 15 '46

CONCRETE pipes. See Pipes, Concrete

CONCRETE placing
Construction of West Coast building proves economical use of pumped concrete; use of Pumpcrete machines. S. Perliter. il Civil Eng 17:306-9 Je '47
Four-lane bridge replaces hazardous structure at Tansley, Ont. H. Robertson. il diags Roads & Bridges 85:85-90+ Ag '47
Hydraulic structure maintenance using pneumatically placed mortar. W. L. Chadwick. il diags Am Concrete Inst J 18:533-47 Ja '47
Measuring, mixing and placing concrete. D. O. Robinson. il Roads & Bridges 84:67-8+ D '46
Mine concrete poured with portable machines; Climax molybdenum co. L. D. Anderson. diags Eng & Min J 148:87-9 O '47
Pneumatic concrete placers speed lining of small tunnels of the San Diego aqueduct. il diags Eng N 138:502-4 Ap 3 '47
Pumpcrete profitably used in general building construction. S. Perliter. il Concrete 54:3-6 N '46
Pumping job; cutoff wall for South Lake dam. il plan diag Concrete 55:11+ O '47
Pumping ready mixed concrete. il Concrete 55:58-9 F '47
Work resumed on Center Hill dam. il diags Eng N 138:568-70 Ap 17 '47

See also
Concrete construction, Subaqueous
Concrete lining

CONCRETE plants
Automatic batching of sacked dry mixes; Harry T. Campbell sons' corporation. R. F. Porter and A. C. Avril. il Rock Prod 49:88-9 N '46
Classifying ready-mix concrete plants. L. D. Long. Eng N 137:790-2 D 12 '46

See also
Concrete construction
Concrete mixing—Ready-mixed concrete
Concrete placing
Concrete products plants

Equipment

Air-entrained concrete delivered in special haulage units; Kolinski concrete co. E. R. Cushing. il diag Rock Prod 49:82-3+ N '46

CONCRETE plants—Equipment—*Continued*
Automatic bin controls; Triangle certified concrete, inc. W. B. Lenhart. il Rock Prod 50: 139 Mr '47
Automatically controlled ready-mix plant; Arizona sand and rock co. W. B. Lenhart. il Rock Prod 50:151+ Je '47
Building products department store; Pacific coast aggregates co. W. B. Lenhart. il plan Rock Prod 50:123-5 S '47
Electronic controls speed up batching; Consolidated rock products co. W. B. Lenhart. il Rock Prod 50:166-7 O '47
Large bulk cement capacity cuts plant costs. il Rock Prod 50:124-5 My '47
1948 buyers' directory; equipment and materials used in production, handling, use and transportation of concrete, concrete products and ready-mixed concrete. Concrete 55:53-64 S '47
Prescription concrete; W. E. Anderson sons co. il Rock Prod 50:178-9 Ja '47
Profitable small city ready mix plant; Custom concrete co. W. R. Miller. il Rock Prod 49:81+ D '46
Ready mix plant designed to overcome operating difficulties; Arrow sand and gravel co. B. Nordberg. il plan diags Rock Prod 50:127-9+ Jl '47
Travelling aggregate batcher fed by five bins; F. E. Breckenridge materials co. H. E. Swanson. il plan diag Rock Prod 49: 72-3 D '46

CONCRETE poles. See Poles, Concrete

CONCRETE products
Future of precast concrete. D. A. Stewart. Engineering 164:51-2 Jl 18 '47

See also
Concrete blocks
Concrete bricks
Concrete piling
Concrete slabs
Pipes, Concrete

Manufacture

Anchor Concrete's new products plant is monument to one man's persistence. J. W. Shaver. il plan Concrete 55:14-18+ Je '47
Greenhouse trays made of concrete. il diags Concrete 55:32+ Je '47
High-temperature high-humidity speeds up curing cycle; Barnes & Cone, inc. B. Nordberg. il Rock Prod 50:171-3+ Ja '47
Mass production without sacrificing quality of products; Plasticrete corporation. B. Nordberg. il Rock Prod 50:174-7+ Ja '47

CONCRETE products industry
Big year for concrete products; prospects for 1947. Rock Prod 50:180-1+ Ja '47
Building third modern block plant; Basalt rock co. W. B. Lenhart. il Rock Prod 50: 163-5 Ap '47
Concrete masonry manufacturers association of Southern California 2d annual meeting, Los Angeles, March 28. Rock Prod 50:137-8+ My '47
Products men in Southeast prepare for competitive buyers' market. J. W. Shaver. Concrete 54:22-5 D '46
Wisconsin concrete products men take steps to hold large market. Concrete 55:12+ Mr '47

Advertising

Advertising; success story of a products plant; Chase building products. G. W. Linn. il Concrete 55:10-11 F '47
Grand opera sells ready mixed concrete; Albuquerque gravel products co. uses radio and newspaper promotion. W. B. Lenhart. il Rock Prod 50:202-4 Ag '47

Statistics

Concrete products output summarized for 1946. Rock Prod 50:208 Ag '47

CONCRETE products plants
Combine three plants into one; Terry Carpenter, ltd., operates sand and gravel, ready mixed concrete, and concrete products plants. W. B. Lenhart. il Rock Prod 50:88-91 O '47
Manufacture both pipe and block; plant of Basalite division, Basalt rock co. W. B. Lenhart. il Rock Prod 50:130-2 S '47
Manufacture concrete stave silos; Gastonia concrete products co. diversifies its production. il Rock Prod 50:165 Ap '47
Pipe manufacturer diversifies; Elk River concrete products co. making cattle passes for highways, railroad crossing planks, reflector curbing and manholes. H. E. Swanson. il Rock Prod 49:144-5 D '46

Accounting

Production cost accounting for the concrete products plant. P. M. Clement. Concrete 55:30-2 Je '47

Employees

Labor requirements data for concrete pipe; study by U.S. Dept. of labor. A. W. Collier and C. Stone. Rock Prod 50:200-1 Ag '47

Equipment

Advanced methods of aggregates handling and concrete proportioning; Domine builders supply co. B. Nordberg. il plan diags Rock Prod 50:122-6 Jl '47
Anchor Concrete's new products plant is monument to one man's persistence. J. W. Shaver. il plan Concrete 55:14-18+ Je '47
Austin Crabbs builds new plant on unit production basis. il Concrete 55:24+ S '47
Cement handling and storage plant. il Mech Handling 34:349-51 Jl '47
Design highly mechanized plant to make a variety of products; Anchor concrete products co. B. Nordberg. il Rock Prod 50:146-50 Je '47
Design of Seattle block plant; Layrite concrete products. il Concrete 55:6-7 My '47
Develops new markets with concrete block and ready mix; Hedberg-Friedheim and co. il Rock Prod 50:123+ My '47
Equipment and materials; the manufacturer is doing his best. il Concrete 55:5-8 F '47
Hard facing welding. R. Reiner. Rock Prod 50:137+ Mr '47
High-temperature high-humidity speeds up curing cycle; Barnes & Cone, inc. B. Nordberg. il Rock Prod 50:171-3+ Ja '47
Hydraulic operation simplifies pipe manufacture; Fresno concrete pipe co. il Rock Prod 50:122 S '47
Largest products plant on West coast; Wales-Bageman, inc. il Rock Prod 50: 147-9 F '47
Mass production without sacrificing quality of products; Plasticrete corporation. B. Nordberg. il Rock Prod 50:174-7+ Ja '47
Meeting big demand for lightweight units; Empire building material co. il Rock Prod 50:164-5 O '47
Modernize block plant; Best block co. D. Mocine. il Rock Prod 50:128-9 S '47
Mortar cement with air-entrained for watertight block; Westport building material co. il Rock Prod 49:123 N '46
1948 buyers' directory; equipment and materials used in production, handling, use and transportation of concrete, concrete products and ready-mixed concrete. Concrete 55:53-64 S '47
One machine replaces battery of small machines; General concrete products co. il Rock Prod 50:121+ S '47
Plant layout for economical operation; Hoke concrete works. H. E. Swanson. il plan Rock Prod 50:129-31 Mr '47
Poston makes 15,000 units daily in new concrete block plant. il Brick & Clay Rec 100:58+ F '47
Rapid handling of block to curing rooms and storage; Burnet & Craig. M. W. Messer. il Rock Prod 49:121-2 N '46
Ready mix practice in block plant design; Alatex concrete products, inc. R. A. Latimer. il Rock Prod 50:161-2 O '47
Steam plus hot air for preshrinking; Builder's supply co., Phoenix, Ariz., makes its own perlite aggregate. W. B. Lenhart. il Rock Prod 50:198-9+ Ag '47

CONCRETE pumping. See Concrete placing

CONCRETE research
Cement-aggregate reaction in concrete. D. McConnell and others. il map diag Am Concrete Inst J 19:93-128 bibliog(p 127-8) O '47
Concrete highway research yields better guidance for contractors; laboratory of the Public roads administration. il Concrete 55:8-9+ My '47

CONCRETE research—*Continued*
Engineering laboratories of the Bureau of reclamation. J. W. Shaver. Concrete 55:20-2 S '47
Some observations on using theoretical research. T. C. Powers. diags Am Concrete Inst J 18:1089-94 Je '47
Study of the influence of thermal properties on the durability of concrete. A. Weiner. bibliog il Am Concrete Inst J 18:997-1008 My '47

CONCRETE reservoirs. See Reservoirs, Concrete

CONCRETE roads. See Roads, Concrete

CONCRETE sidewalks. See Sidewalks, Concrete

CONCRETE slabs
Bendability added to other advantages of these precast concrete-base units; Modern Crete. il Concrete 54:32+ D '46
British firm uses line production methods in precasting house panels; Tarran prefabricated concrete house. il diags Concrete 55:3-9+ Ag '47
Causeway built of precast units. il Eng N 137:710-13 N 28 '46
Cracking tendencies in brick or stone masonry walls at the structural slab. Am Concrete Inst J 18:606-8 Ja '47
Dampney precast concrete slabs. H. B. Fletcher. il Concrete 55:32-3 My '47
Development of concrete revetments on the lower Mississippi. R. H. Haas. il plan diags Concrete 55:3-8+ Ap; 16-18+ My '47
Hipped plate construction. G. Winter and Minglung Pei. bibliog il diags Am Concrete Inst J 18:505-31 Ja '47
Monocrete prefabricated slabs. H. B. Fletcher. il Concrete 55:30-1 Jl '47
Nomograph chart aids pumice-concrete slab design. A. E. Niederhoff. Civil Eng 17: 613 O '47
Precast floor slabs for UN housing. L. F. Booth. il diags Eng N 138:455-7 Mr 20 '47
Precast floor slabs speed U.N. housing project. il diag Civil Eng 17:18-19 Ja '47
Precast floor system for apartments. il plan diag Arch Rec 101:110-11 Mr '47
Results of experiments to improve asphalt subsealing methods. H. L. Cooper and W. R. Lovering. Pub Works 78:25-6 Ja '47
Temperatures and heat flow for a concrete slab with imbedded pipes. C. F. Kayan. bibliog diags Refrig Eng 54:143-51; Discussion. 151 Ag '47

CONCRETE stairways. See Stairways, Concrete

CONCRETE storehouses. See Storehouses, Concrete

CONCRETE walks. See Walks, Concrete

CONCRETE walls. See Walls, Concrete

CONCRETE water pipes. See Water pipes, Concrete

CONCUSSION. See Brain—Injuries

CONDEMNATION of land. See Eminent domain

CONDENSATE wells. See Gas, Natural—Distillate wells

CONDENSATION
Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15:314-32 My '47

CONDENSATION, Chemical
Action of sodium hydride on certain carbonyl compounds; condensations and reductions. F. W. Swamer and C. R. Hauser. bibliog Am Chem Soc J 68:2647-9 D '46
Acylations of esters with esters to form β-keto esters using sodium amide. J. C. Shivers, M. L. Dillon and C. R. Hauser. bibliog Am Chem Soc J 69:119-23 Ja '47
Alkaline condensation of fluorinated esters with esters and ketones. A. L. Henne and others. Am Chem Soc J 69:1819-20 Jl '47
Claisen condensation by a primary Grignard reagent. S. B. Soloway and F. B. LaForge. bibliog Am Chem Soc J 69:2244-5 S '47
Claisen condensation by *t*-butylmagnesium chloride. H. D. Zook, W. J. McAleer and L. Horwin. bibliog Am Chem Soc J 68: 2404 N '46
Condensation of acetylene with acetone and other ketones. C. D. Hurd and W. D. McPhee. bibliog Am Chem Soc J 69:239-41 F '47
Condensation of aldehydes and amines with nitrogenous five-atom ring systems. G. B. Bachman and L. V. Heisey. bibliog Am Chem Soc J 68:2496-9 D '46
Condensation of certain esters by means of diethylaminomagnesium bromide. C. R. Hauser and H. G. Walker, jr. bibliog Am Chem Soc J 69:295-7 F '47
Condensation of 1,1-diarylethylenes with maleic anhydride. F. Bergmann, J. Szmuszkowicz and G. Fawaz. bibliog Am Chem Soc J 69:1773-7 Jl '47
Condensation of nitromethane with D- and L-arabinose: preparation of L-glucose and L-mannose. J. C. Sowden and H. O. L. Fischer. Am Chem Soc J 69:1963-5 Ag '47
Condensation of saturated halides with unsaturated compounds; condensation of *t*-butyl chloride with cyclohexene. L. Schmerling. bibliog Am Chem Soc J 69:1121-5 My '47
Condensation of substituted benzaldehydes with creatinine; influence of substituents. V. Deulofeu and M. Fondovila. Chem Soc J p 1108-10 D '46
Contributions to the chemistry of pyridine; condensation of β-hydroxypyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 1104-5 D '46
Dehydrogenation of 9-aminofluorene and fluorenol by unsaturated compounds; Michael condensation. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 68:2739-40 D '46
Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S. Johnson, J. W. Petersen and W. P. Schneider. bibliog Am Chem Soc J 69:74-9 Ja '47
Malonic ester synthesis with styrene oxide and with butadiene oxide. R. R. Russell and C. A. VanderWerf. bibliog Am Chem Soc J 69:11-13 Ja '47
Preparation and properties of thionaphthindoles. C. E. Dalgliesh and F. G. Mann. Chem Soc J p653-8 My '47
Preparation of N^4-carboxyacylsulphonamides; reactions of succinimidobenzenesulphonyl chloride and succinylsulphanilyl chloride. C. W. Picard, E. Reid and D. E. Seymour. Chem Soc J p751-3 Ag '46
Preparation of certain primary amines. R. Brown and W. E. Jones. Chem Soc J p781-2 S '46
Production of coumarin derivatives by condensation of *o*-hydroxy-aldehydes with Δβγ-angelicalactone. D. H. Marrian and P. B. Russell. Chem Soc J p753-4 Ag '46
Some phenol-chloral condensations. J. B. Niederl and A. A. Bothner-By. bibliog Am Chem Soc J 69:1172-3 My '47
Some steroid mercaptols. H. Hauptmann. bibliog Am Chem Soc J 69:562-6 Mr '47
Stobbe condensation with methyl *p*-tolyl ketone; a synthesis of cadalene. W. S. Johnson and A. R. Jones. bibliog Am Chem Soc J 69:792-4 Ap '47
Synthesis of β-(3 : 4-dihydroxyphenyl)-*N*-methylserine (adrenalinecarboxylic acid). C. E. Dalgliesh and F. G. Mann. Chem Soc J p658-62 My '47
Tolylmercaptopropanones and their condensation with isatins. O. Newell and P. K. Calaway. Am Chem Soc J 69:116-17 Ja '47
Trinitro-phenylethyl amines from TNT. H. A. Bruson and G. B. Butler. bibliog Am Chem Soc J 68:2348-50 N '46

CONDENSERS
Condensation and subcooling inside an inclined tube. J. B. Tepe and A. C. Mueller. bibliog diags Chem Eng Prog 43:267-76; Discussion. 276-8 My '47
Condensation of Freon-12 with finned tubes. D. L. Katz and others. flow diags il diags Refrig Eng 53:211-17, 315-19+ Mr-Ap '47
Condenser bypass improves tower pressure control. L. J. Governale. diag Chem Eng 54:126 Ap '47
Electronic timing device and reflux ratio controller. G. O. Thacker and B. Y. Walker. il diags Soc Chem Ind J 65:259-61 S '46

CONDENSERS—*Continued*
Evaporative condenser scale control. R. M. Westcott. bibliog il Refrig Eng 54:15-17+; Discussion. 66+ Jl '47
Graphite heat exchangers. C. E. Ford. il diags Chem Eng 54:132-5 F '47
Study of the corrosion of copper alloy condenser tubes. N. W. Mitchell. Pet Processing 1:176 N '46
Variations in design suggested by nature of construction material. C. O. Brown. Ind & Eng Chem 39:sup89A-90A O '47

See also
Condensers (steam)

Manufacture

Automatic forming and assembling of condenser fins. C. H. Wick. il diags Mach 53:165-71 Mr '47

CONDENSERS (electricity)
Automatic switching schemes for capacitors. W. H. Cuttino. diags Power Pl Eng 51: 101-3+ Je '47
Bank of capacitors reinforces 132-kv. grid. L. F. Ferri and C. S. Dayton. il diags Elec World 127:66-9 Mr 29 '47
Bosch process. il Chem & Eng N 24:3356-7 D 25 '46
Capacitance stability of ruby muscovite mica. W. Schick. bibliog diag Inst E E J 94 pt 1: 371-6 Ag '47
Capacitative commutator. S. A. Scherbatskoy and others. bibliog il diags R Sci Instr 18: 415-21 Je '47
Capacitor rental encourages power factor correction. H. W. Meeks. Elec World 128:92+ S 27 '47
Capacitor slows up brake action. O. C. Miles. diag Power 91:266 Ap '47
Capacitors can cause motors to reverse. H. Van Horn. diags Elec World 127:136+ Mr 15 '47
Capacitors for power factor correction. R. E. Marbury. il diags Power Pl Eng 51:108-13 Mr '47
Capacitors improve traction voltage; New Haven railroad. S. Withington. il diag Elec World 128:66 Ag 16 '47
Capacitors start 800-hp. motor with 750-kw. generator. J. M. Evans. il diag Elec World 127:86-7 Ap 12 '47
Capacitors switched by bus tie breaker. A. A. Straub. il diag Elec World 128:45-6 Ag 30 '47
Capacity improve load characteristics. Elec World 127:62 Ja 4 '47
Characteristics and errors of capacitors used for measurement purposes. C. G. Garton. diags Inst E E J 93 pt 2:398-408 bibliog(p406) O '46; Abstract. Elec R (Lond) 138:333 Mr 1 '46; Discussion. Inst E E J 93 pt 2:408-14 O '46; Electrician 136:543-4 Mr 1 '46; Elec R (Lond) 138:333-4 Mr 1 '46
Effect of semiconducting liquids on the dielectric properties of cellulose insulation; development of new capacitor. F. M. Clark. il Gen Elec R 50:9-17 F '47
Fabrication of thin ceramic sheets for capacitors. G. N. Howatt and others. il diags Am Cer Soc J 30:237-42 Ag 1 '47
General Electric large synchronous condenser. il Elec R (Lond) 140:354 Mr 7 '47
High dielectric ceramics. il Am Cer Soc Bul 26:294-5 S 15 '47
How to mount static capacitors. diags Elec World 126:132+ D 7 '46
Mobile capacitor unit permits emergency electrical power supply step-up. Chem Ind 60:466 Mr '47
New instrument adjusts capacitor potential devices; Grand Coulee power plant. F. R. Schleif. il diags Elec World 128:74-5 Ag 16 '47
Nomogram for energy, voltage, capacitance relationship; reference book sheet. Product Eng 18:179 S '47
Relay oscillator and related devices. R. L. Ives. il diags Franklin Inst J 242:243-77 O '46
Remote reading tachometer utilizes capacitor circuit. C. B. Cunningham. il diags Machine Design 19:127-8 Ja '47
Series capacitor corrects compressor-motor flicker. C. A. Scammon. il Elec World 128: 115+ O 11 '47
Series capacitors for improving voltage regulation on circuits supplying power to resistance-welder loads. W. C. Bloomquist and R. C. Wilson. il diags Gen Elec R 50: 21-3 Je '47; Abstract. Elec World 128:82 Ag 16 '47
Signal power transmission. H. C. Towers. il diags Electrician 137:1287-9 N 8 '46
Spot welders with series capacitors; with cost data. F. L. Brandt. il Welding J 26: 499-503 Je '47
Vacuum impregnation of cables and capacitors. B. W. Whitehurst. diag Elec World 127:49 Ap 26 '47
Variable capacitor for measurements of pressure and mechanical displacements; a theoretical analysis and its experimental evaluation. J. C. Lilly and others. bibliog il diags J Ap Phys 18:613-28 Jl '47
Vector chart for determining capacitor KVAR required to increase power factor to any desired value. Power Pl Eng 51:106 Ja '47

See also
Radio condensers

Manufacture

Capacitor manufacture; United insulator co. il Elec R (Lond) 140:911-12 My 30 '47

CONDENSERS (steam)
Analysis of surface condenser performance. R. W. Haywood. diags Engineer 183:370-2, 407-9 My 2-9 '47
Solder stops steel tube-sheet corrosion; applied as coating to condenser tube sheets at the Long Beach steam plant. E. R. Stauffacher. il Elec World 128:67 Ag 16 '47
Use of radioactive tracer in measuring condenser water flow. S. Karrer and others. il diag Power Pl Eng 50:118-20 D '46
Water know-how cures cooling-tower headache. G. C. W. Golem. il diags Power 91: 115-17 F '47

Cleaning

Balloon baffle assists chemical cleaning. il diag Power Pl Eng 51:101 Ap '47
Cleaning surface condensers. M. P. Henzell. il diag Elec R (Lond) 141:26-8 Jl 4 '47
How to operate and maintain water tube cleaners for boilers, heat exchangers, condensers and evaporators. il diag Power Pl Eng 51:78-9+ S '47

Cost

Process equipment cost estimation; ejectors and condensers. D. H. Jackson. Chem Eng 54:123-4 My '47

CONDIMENTS
Nutritive value of vinegar, pickles and condiments. H. Sarson. Chem & Ind p187-8 Ap 12 '47

CONDON, Edward Uhler, 1902-
Protest against attack on Dr Condon by J. P. Thomas, I. Langmuir and others. Science 106:241 S 12 '47

CONDUCTIVITY, Electric. See Electric conductivity

CONDUCTOMETRIC titration. See Volumetric analysis

CONDUITS
Installation notes for underground steam piping. R. H. Emerick. diags Dom Eng 169: 120-1+ Ja '47
Shape of conduits for structural efficiency. S. U. Benscoter. diags Western Soc E J 51:180-2 D '46
Underground conduits; an appraisal of modern research. M. G. Spangler. bibliog diags Am Soc C E Proc 73:855-84 Je '47

See also
Aqueducts
Culverts
Pipe lines
Sewers
Steam pipe lines
Water conduits

CONDUITS, Concrete
Pipeline tunnels for upkeep economy and continuous service; Liquid carbonic corp. A. L. Ramp. il diag Factory Management 105:128-9 F '47
Venice has success with prefabricated duct line. M. Stoppoloni. il diags Elec World 126: 80-1 N 23 '46

CONDUITS, Electric. See Electric conduits

CONEY ISLAND
Its architecture is the stuff that people's dreams are made of. il Arch Forum 87:82-7 Ag '47

CONFECTIONERY
See also
Candy
Ice cream

Moisture content
Keeping properties of confectionery as influenced by its water vapour pressure. D. W. Grover. bibliog Soc Chem Ind J 66:201-5 Jl '47

CONFERENCE on nuclear chemistry
Conference, Hamilton, Ontario. Can Chem & Process Ind 31:530-4, 542+ Je '47

CONFERENCE on theoretical physics
Conference, 9th, Washington, D.C. Oct. 31-Nov. 2. Science 104:574 D 13 '46

CONFERENCES
See also Business conferences; Conventions; Sales conferences

CONFERENCES, International. See International conferences

CONFLICT of laws
Is a uniform statute on insurable interest desirable? R. H. Hollenberg. Weekly Underw 157:127-9 Jl 12 '47
Problems of the conflict of laws in relation to binding receipts. P. B. McHaney. Weekly Underw 156:1655-7+, 1701-3 Je 14-21 '47

CONFUCIUS and Confucianism
Trouble with China is Confucius. H. Maurer. il Fortune 35:124-31+ Ap '47; Discussion. B. H. Kizer. 36:34+ Jl '47

CONGLOMERATE
Black Hand sandstone and conglomerate in Ohio. K. Ver Steeg. bibliog maps Geol Soc Bul 58:703-27, pl 1 Ag '47

CONGO, Belgian
See also
Mines and mineral resources—Congo, Belgian

CONGOLEUM-NAIRN, inc.
Big five in floor coverings. R. Colston. Mag of Wall St 81:33 O 11 '47
Big sales gain likely. Barron's 27:7 F 17 '47

CONGRESS. See United States—Congress

CONGRESS of industrial organizations
Annual meeting, Boston. Iron Age 160:93 O 23 '47
CIO and wages. P. Murray. Comm & Fin Chr 164:2609+ N 21 '46
C.I.O. faces severest test. Bsns W p79+ N 30 '46
C.I.O. leaves a door open; second-round wage strategy. Bsns W p82+ D 21 '46
C.I.O. left-wing under fire. Bsns W p64+ D 28 '46
C.I.O. leftists under heavier pressure. Bsns W p 104 S 20 '47
C.I.O. right wing perks up. Bsns W p94+ S 13 '47
C.I.O. split widens. Bsns W p56+ Ja 4 '47
How CIO and AFL stand on current issues. Factory Management 104:286+ O '46
Interfederation warfare and its prospects. A. Levenstein. Ann Am Acad 248:44-53 N '46
Labor law tends to widen CIO-AFL rift. H. Davenport. Barron's 27:11 Ag 25 '47
Left-right issue dominates C.I.O. meeting. Bsns W p94 Mr 22 '47
Objectives of CIO. P. Murray. Comm & Fin Chr 164:2937+ D 5 '46
Operation Dixie slows up. Bsns W p 19-20 O 25 '47
Outlook for merger dims. Bsns W p81-2 My 10 '47
Profits without responsibility; comment on CIO-Nathan report. S. Hamlin. Comm & Fin Chr 164:3224+ D 19 '46
Significant shift; right-winger as publicity head. Bsns W p70-1 Ag 2 '47
Solidarity on the right; C.I.O. locals organize to fight Communists in New York City unions. Bsns W p94+ Mr 15 '47
Taft law rocks the C.I.O.; non-Communist affidavit ruling. Bsns W p96-7 O 18 '47
Unions begin '48 campaign. Bsns W p94+ O 25 '47
Wage policy for 1947 prepared for CIO by Robert R. Nathan associates; text. Comm & Fin Chr 164:3209+ D 19 '46

Political action committee
Putting P.A.C. together again. Bsns W p90 N 23 '46

CONGRESS on industrial health. See American medical association—Council on industrial health

CONGRESSMEN
How to get a good press, publish it. pors Bsns W p18 Mr 15 '47
These congressmen have met a payroll. Bsns W p 18-19 Jl 5 '47
Watch the new congressmen. Bsns W p15-16 Ja 4 '47
See also
Senators

CONIC sections
Generation of the conic sections with machine tools; theorems from projective geometry can be duplicated by kinematic linkages. R. T. Hinkle. diags Product Eng 18:162-5 Ag '47

CONIFERS
See also
Douglas fir
Pine
Spruce

CONLON-MOORE corporation
Bonds offered. Comm & Fin Chr 166:1353 O 6 '47

CONNECTICUT
See also
Roads—Connecticut

CONNECTICUT agricultural experiment station
Library
Agricultural research library. R. H. Giandonato. Special Lib 38:111-14 Ap '47

CONNECTICUT light and power company
Preferred stocks offered. Comm & Fin Chr 165:2274-5 Ap 28 '47

CONNECTICUT river
Adjust income to river flow; Western Massachusetts electric co. Elec World 128:81-2 Jl 19 '47
Geologic features of the Connecticut valley, Massachusetts, as related to recent floods. R. H. Jahns. maps diags U S Geol S Water-supply Pa 996:1-158, pl 1-33 bibliog(p144-55); pa $1.75 Supt. of doc. '47

CONNECTING rods
Manufacture
High-production broaching of automobile connecting-rods. il Mach 53:160 Mr '47
Three and one broaching on one dual-ram machine; automobile connecting rods. il Steel 120:123 Ap 14 '47

Testing
Connecting rod design improved through brittle lacquer testing. W. T. Bean, jr. il Product Eng 17:128-30 D '46

CONNECTORS, Electric. See Electric connectors

CONNECTORS, Timber. See Wood construction—Failures

CONSCRIPTION. See Military service, Compulsory

CONSERVATION of resources
Conservation of raw material reserves is national problem. C. G. Davidson. Iron Age 158:168+ D 19 '46
Depletion of mineral resources. C. L. Sagui. Econ Geol 41:851-3 D '46
Economic effects of waste; wartime shortages emphasize need for conservation. Index 27 no 3:61-70 [S] '47
Mineral resources of the United States; some important reserves depleted by war. Index 26 no4:83-96 [D] '46
See also
Gas, Natural—Conservation
Minerals—Stockpiling
Petroleum—Conservation
Soil conservation
Water conservation

CONSIST (term)
Consist; a useful noun. S. M. Schlegel. Science 104:579 D 13 '46

CONSISTOMETERS
Keeping paper stock consistent; Brammer control equipment. il plan diag Comp Air Mag 52:174-5 Jl '47
New consistometer for starch pastes and some results obtained with it. R. S. Higginbotham. bibliog il diags Textile Inst J 38:T131-50 Mr '47

CONSOLIDATED Edison company of New York
Bonds offered. Comm & Fin Chr 165:2410 My 5 '47
Bonds oversubscribed. Comm & Fin Chr 165:3164 Je 16 '47
Debt program. Barron's 27:29 Mr 17 '47
$100,000,000 bonds awarded and sold; Annual report. Comm & Fin Chr 165:1586-7 Mr 24 '47
Preferred savings to offset common dilution. Barron's 27:35 S 29 '47
Selected stocks. Mag of Wall St 80:428-9 Jl 19 '47
Thumbnail stock appraisal. Mag of Wall St 79:416 Ja 18 '47

CONSOLIDATED electric and gas company
New plan filed. Comm & Fin Chr 165:1997 Ap 14 '47
SEC approves plan. Comm & Fin Chr 166:1048 S 15 '47

CONSOLIDATED gas, electric light and power company of Baltimore
Debentures sold. Comm & Fin Chr 165:2796 My 26 '47

CONSOLIDATED gas utilities corporation
Bonds placed privately. Comm & Fin Chr 166:947 S 8 '47

CONSOLIDATED natural gas company
Annual report. Comm & Fin Chr 165:1998 Ap 14 '47
New stock won't dilute Consolidated natural gas co. net. Barron's 27:6 F 24 '47

CONSOLIDATED statements
Treatment of gain to parent on sale of stock of subsidiary and loss to consolidation. J Account 84:65-6 Jl '47
What to eliminate in the preparation of consolidated balance sheets. G. J. Nowak. J Account 84:35-9 Jl '47

CONSOLIDATED steel corporation
U.S. moves to block Consolidated sale. Steel 120:88 Mr 3 '47

CONSOLIDATED Vultee aircraft corporation
Atlas corp. acquires control of Convair. Aviation W 47:18 S 15; 37 S 22 '47
Consolidated Vultee changes to buses and home appliances at Nashville plane plant. B. L. Clark. il Manuf Rec 116:32-3+ Jl '47
Convair holdings segregated in corporate financial twist; details of plan placing non-aviation properties in new Nashville corp. S. Altschul. Aviation W 47:48 N 3 '47
To segregate non-aviation assets; Nashville corp. to acquire assets. Comm & Fin Chr 166:1476 O 13 '47

CONSOLIDATIONS, Business. See Business consolidations

CONSTRUCTION equipment
Birth of mechanized construction. C. S. Hill. il diags Eng N 137:786-9 D 12 '46
Construction-equipment financing. H. K. Glidden. Roads & Sts 89:100+ O '46
Equipment and materials; the manufacturer is doing his best. il Concrete 55:5-8 F '47
Extending precision methods to construction field; Warner and Swasey multi-purpose earth mover. W. B. Fiske. il Ind Marketing 32:40-2+ S '47
Home builder's own power equipment does the heavy work; Albert Balch of Seattle, Wash. il Am Bld 69:108-11 Ag '47
How to originate and maintain a photo file; system developed by large construction equipment manufacturer, La Plant-Choate. C. E. Parks. il Ptr Ink 218:36-8 Ja 17 '47
Light-weight trucks increase pay load. Civil Eng 17:140 Mr '47
Like a super-man on your payroll; Ross lift truck in construction. H. E. Getman. il Brick & Clay Rec 110:33-4 Ja '47
1947 profits will be a matter of timing. Roads & Sts 89:80-1 D '46
Tomorrow's construction machines. V. B. Smith. il Eng N 138:305-10 F 20 '47
Whirler cranes build Bluestone dam. il diags Eng N 139:106-11 Jl 24 '47

See also
Cranes, derricks, etc.
Excavating machinery
Hoisting machinery
Roads—Construction equipment
Tractors

Length of service
Depreciation schedule, U.S. Bureau of internal revenue; length of life of buildings and equipment, construction equipment, bridges, waterworks, gas and electric plants. Eng N 138:635+ Ap 17 '47

Maintenance and repair
How Guy F. Atkinson company services 70 big rigs. il Roads & Sts 90:105-8 S '47
Plant organisation and maintenance for civil engineering contractors. H. O. Parrack. Engineering 160:430, 456-7, 465 N 23-D 7 '45; Same. plan Inst Mech Eng J & Proc 154:Proc 285-94; Discussion. 294-302 D '46
Servicing a $2,000,000 earth-moving fleet. il Roads & Sts 90:106-8 Ap '47

Prices
Index of construction machinery prices. Eng N 138:640 Ap 17 '47

Rental prices
Construction equipment rental rates. Eng N 138:643 Ap 17 '47

Surplus equipment
Equipment industry continues to face surplus impact; abstract. W. A. Danner. Roads & Sts 90:96-7 Ap '47

Transportation
Lightweight all-welded steel trailer for transporting heavy construction equipment. C. W. Lytton. il Welding J 26:770 S '47

CONSUMER bankers association (formerly Morris plan bankers association)
Association for bank consumer credit men. Burroughs Clearing House 31:13-15 D '46

CONSUMER loans. See Loans, Bank—Small loans; Loans, Small

CONSUMER panels
Consumer purchase panels serve advertisers, agencies and media. R. H. Ganly and R. D. Crisp. Ptr Ink 220:29-30+ Ag 8; 41-2+ Ag 15; 39-41 Ag 22; 42+ S 12 '47
Family panel; a technique for diagnosing sales ills. D. D. Patterson and A. J. McAnally. Sales Management 59:134-6 O 1 '47
How a large agency uses the consumer purchase panel; J. Walter Thompson co. gives clients picture of market characteristics and behavior. R. H. Ganly and R. D. Crisp. il Ptr Ink 220:50-1+ S 19 '47
How would you like to measure the sales power of your advertising? R. H. Ganly and R. D. Crisp. Ptr Ink 220:44+ S 26 '47
Knoxville's first continuous consumer data released. Ptr Ink 220:86 Ag 22 '47

CONSUMERS
Consumer irritations are causing a sales slow-down. F. E. Fehlman. Ptr Ink 220:124 Jl 11 '47
Consumers are sore. G. E. DeNike. il Radio N 37:53+ F '47
Fortune survey; Fortune consumer outlook. E. Roper. Fortune 36:5-6+ N '47
What about a buyers' strike? A. M. Sakolski. Comm & Fin Chr 164:2745+ N 28 '46
What the consumer wants in standardization. C. W. Moffett. Ind Stand 18:6-8+ Ja '47

See also
Buying habits
Consumer panels

CONSUMERS' contests. See Advertising—Prize contests

CONSUMERS' credit. See Credit; Instalment plan; Loans, Bank—Small loans

CONSUMERS power company
Bonds offered. Comm & Fin Chr 166:1252 S 29 '47

CONSUMERS power company—*Continued*
Common stock offered. Comm & Fin Chr 164: 2688-9 N 25 '46
Offering successful. O. Ely. Pub Util 38:763 D 5 '46

CONSUMPTION (economics)
Consumer buying still going up; relation of sales volume to consumers' income, needs indicates fears of decline unfounded. V. L. Bassie. Barron's 27:31-2 Ap 21; 23-4 My 5 '47
Consumer-spendable income, spending, savings, credit. R. S. Tucker. Comm & Fin Chr 164:3214+ D 19 '46
Consumers have the money; but will they spend it? Bsns W p 15-16 Je 14 '47
Demand performance and the stock market. G. A. Haas and J. J. Quinn. Comm & Fin Chr 165:1781+ Ap 3 '47
Factors governing the length of inventory cycles. L. A. Metzler. R Econ Stat 29:1-15 F '47
Farm family budgets; a moving picture. W. W. Cochrane. R Econ Stat 29:189-98 Ag '47
Financial position and buying plans of consumers, July 1947. D. M. Holthausen. Fed Res Bul 33:1212-15 O '47
How will changing price and income levels affect you? J. H. White. Sales Management 59:52-4 Jl 15 '47
Money on a spree. W. Gates. il Mag of Wall St 81:75-7+ O 25 '47
New horizons for American business through selling and advertising. il Ptr Ink 221:39-178 O 31 '47
Price outlook and consumer purchasing power. J. Hirsch. Comm & Fin Chr 165:2728+ My 22 '47
Question of purchasing power. K. Johnson. Comm & Fin Chr 165:649+ Ja 30 '47
Redemption of armed forces leave bonds. Survey of Cur Bsns 27:7-8+ Ag '47
Relationship between consumers' expenditures, savings, and disposable income discussion (Five views on the consumption function), by G. Katona and others. W. S. Woytinsky. R Econ Stat 28:197-224 N '46
Sales records. Bsns W p37+ Ag 16 '47
Values and limitations of consumer financial surveys for economic research. R. A. Young and D. M. Holthausen. Fed Res Bul 33:244-52 Mr '47
When trend of mass purchasing power may change; Administration will try to stem any decline but might aggravate it in the end. J. Hirsch. Barron's 27:7-8 Je 30 '47

See also
Buying habits
Consumers
Market research
Prices
Purchasing
Supply and demand

Statistics
Consumer spending during 1946. Comm & Fin Chr 165:1167 F 27 '47
Methods of measuring the marginal propensity to consume. T. Haavelmo. Am Stat Assn J 42:105-22 Mr '47
Recent shifts in consumer spending, graphs Survey of Cur Bsns 27:1, 3-5 Ap '47
Retail sales and consumer income. Survey of Cur Bsns 27:9-11 Jl '47
Sampling for the 1947 survey of consumer finances. R. Goodman. Am Stat Assn J 42: 439-48 S '47
Spending spree. Bsns W p20 Ja 4 '47
Survey of consumer finances. D. M. Holthausen. Fed Res Bul 33:647-63, 788-802, 951-62 Je-Ag '47; Abstract. (pt 1-2) Mo Labor R 65:329-31 S '47

CONTACT angle
Surface studies of glass; contact angles. L. A. Spitze and D. O. Richards. bibliog il J Ap Phys 18:904-11 O '47

CONTACTS, Electric. See Electric contacts

CONTAINER corporation of America
Preferred stock offered. Comm & Fin Chr 165:2133 Ap 21 '47

CONTAINER industry
Container industry; wartime developments contribute to its progress. Index 27 no 2: 36-46 [Je] '47
Demand for containers still exceeds the supply. C. C. Gartland. il Dom Comm 35:48-51 Je '47
How Robert Gair blazed a trail for modern packaging. Sales Management 57:82 D 15 '46
Industry's stake in the freight classification revision; abstract. W. B. Lincoln, jr. Mod Packaging 20:145-6 Ap '47

Advertising
Merchandising an innovation; integrated promotion won acceptance for square milk bottle. G. A. Mellor. Ptr Ink 219:54+ Je 20 '47

Finance
Realistic re-appraisal; American Can vs. Continental Can. R. Carleson. il Mag of Wall St 79:743-5 Mr 29 '47

Great Britain
Bottlenecks in containers. Economist 152: 948-9 Je 14 '47

CONTAINER research
American Can opens new research labs. Food Ind 19:70 Ja '47

CONTAINERS
Aerosols shoot for mass market with low pressure propellants, cheap containers. L. D. Goodhue, F. S. Schultz and P. H. Wilkins. bibliog il Chem Ind 60:602-4 Ap '47
Beer cans for aerosol dispensing. W. W. Rhodes; L. D. Goodhue. Soap & San Chem 23:122-3+ O '47
Compact cleaner; package for Lewyt vacuum cleaner, made of hinged panels of solid fibre serves as permanent storage receptacle. il Mod Packaging 20:111 Jl '47
Dear Mr Packager; opinion sampling to prevent costly errors. H. A. Trumbull. il map Mod Packaging 20:100-5 Ap '47
Difficult chemicals; Pennsalt packaging and labeling division. il Mod Packaging 20:126-31 My '47
Finishes for metal containers; abstract. M. G. Gardner. Product Eng 18:130-1 Mr '47
Hobbyist's herb garden and how it grew. il Sales Management 58:119-21 Je 1 '47
Reseal can for dried food products and drugs. il Mod Packaging 20:99 Ap '47
Shelf containers; Centaur applies NWDA recommendations. J. D. Bohan. il Mod Packaging 20:94-6+ F '47
Toy salesman; new carton for play phones designed for display and protection. il Mod Packaging 21:134-5 O '47

See also
Bags
Bottles
Cans
Closures (containers)
Container industry
Cotton bags
Food containers
Glass containers
Hoppers
Labels
Oil containers
Package design
Package goods
Paper bags
Paper boxes
Paper containers
Pressure vessels
Tanks
Tin cans

Re-use
Blow-gun package; Swift telescoping, refillable paper tube functions as spray gun. il Mod Packaging 20:100-3 My '47
Camembert in clear molded plastic. il Mod Packaging 21:140 S '47
G-E builds campaign around new re-usable package; improved heating pads. il Ptr Ink 220:47 S 19 '47
Plastics make good reuse packages. il Mod Plastics 24:94-5 D '46
Polystyrene razor box; protective re-use case. il Mod Packaging 20:129 F '47
Western style; Reid's ranch sells Arizona delicacies direct to consumers. il Mod Packaging 20:124-6 Je '47

CONTAINERS (for air transport)
Air freight handling. J. H. Davis. il Mech Handling 33:619-22 O '46
Miles' new M.68 has roadable cargo-hold; British light air-freighter has fuselage readily detachable for use as trailer. il Aviation W 47:22 S 29 '47

CONTAINERS (for shipping)
Application of wood and fiber to industrial packing. J. A. DeLuca. il diags A S M E Trans 69:163-76 F '47

CONTAINERS (for shipping)—*Continued*
Container trends; new equipment for chemical industries. T. P. Callahan. il Chem Ind 61:427-8 S '47
Corrugated drum; with joints locked by wire strapping. il Mod Packaging 21:118-19 O '47
Development of standards for flexible caselining materials. B. W. Scribner and others. il diags U S Nat Bur Stand Misc Pub M182:1-23; pa 10c Supt. of doc. '46
Disposable icebox; shipping container using dry ice. il Bsns W p34-5 Ja 11 '47
Do fiber box shipping practices need modification? T. P. Callahan. il Chem Ind 60: 100+ Ja '47
Dravo develops new shipping container. il Marine Eng 52:102+ S '47; Excerpts. Iron Age 160:149 Ag 7 '47
Export pack; better protection at lower cost is the justification of the package engineering section. W. H. Wilson. il Mod Packaging 20:134-5 Ap '47
G.E. shipping packs; specifications and procedure. P. O. Vogt. il Mod Packaging 20: 140-4+ D '46
How to handle and store fiber drums. il Chem Ind 59:842-4 N '46
Industry's stake in the freight classification revision; abstract. W. B. Lincoln, jr. Mod Packaging 20:145-6 Ap '47
I.C.C. admits new type drum. T. P. Callahan. Chem Ind 60:656+ Ap '47
Material handling, a profit factor. R. W. Mallick and J. H. Sansonetti. il Mech Handling 34:317-22 Je '47
Metal packages committee meets. Chem & Eng N 24:2968 N 10 '46
New aluminum container for l.c.l. il Ry Age 123:406 S 6 '47
Reynolds 30-gallon all-aluminum drum. il Welding J 26:812+ S '47
Shipping box fight; Eastern railroads try to return to prewar standards. Bsns W p36 Ja 11 '47
Shipping container clinic. Mod Packaging 20:147-50 Ap '47
Standardization of containers and packages; abstract. W. E. Braithwaite. Ry Age 122: 936 My 10 '47
U. P. container engineering a boon to customer relations. il Ry Age 122:500-1 Mr 8 '47
Welded steel container. T. M. Fallon. il Welding J 26:793 S '47
White fir crates; a test of wood for fruit and vegetable shipping containers. R. S. Kurtenacker. il Mod Packaging 20:152-5 My '47
Working for the railroad; Union Pacific package engineer to investigate and eliminate failures. il Mod Packaging 20:124-5 My '47

See also
Barrels
Containers (for air transport)
Containers, Steel
Packing for shipment

Re-use

Re-use shippers; collapsible corrugated containers, with expendable pallets for Donaldson co. industrial products. il Mod Packaging 21:141 S '47

Size

Determination of container sizes; abstract. W. R. James. Mod Packaging 20:146-7 Ap '47

Testing

Boxes put to test by the Army-navy joint packaging board. Bsns W p41 O 25 '47
Container strength measured by a new puncture tester. C. J. Falk. il Food Ind 19: 454-5+ Ap '47
Performance standards for shipping container testing; abstract. J. H. Toulouse. Management R 36:102-3 F '47

CONTAINERS, Aluminum
New aluminum container for l.c.l. il Ry Age 123:406 S 6 '47
Reynolds 30-gallon all-aluminum drum. il Welding J 26:812+ S '47

See also
Boxes, Aluminum

CONTAINERS, Food. See Food containers
CONTAINERS, Paper. See Paper containers

CONTAINERS, Plastic
Acetate containers. il Mod Plastics 24:196 Ap '47
It's a collet; transparent top tells the story. il Mod Packaging 20:173 Mr '47
Pen encased in acrylic. il Mod Packaging 20: 102 Ja '47
Plastic drill cases. il Mod Packaging 20:115 Jl '47
Plastic pencil case; molding company, launching a series of consumer products, applies engineering know-how to polystyrene boxmaking. il Mod Packaging 20:144 Je '47
Plastics make good reuse packages. il Mod Plastics 24:94-5 D '46
Plastics sell as well as hold cosmetics. il Mod Plastics 24:96-8 D '46
Plastics with velvets build acceptance for jewelry packages. il Mod Packaging 20:104-6 D '46
Razor edge; Gem injection-molded plastic packages and displays. il Mod Packaging 20:122-3 Je '47
Redesigning talcum container for plastic. il Mod Plastics 24:99 F '47
Stripping threaded molded closures; oil can closures. il Mod Plastics 24:228-32 Ap '47
Visibility and versatility in one package; transparent molded styrene cover and phenolic base for collets. il Mod Plastics 24: 105 Ap '47

See also
Bottles, Plastic
Boxes, Plastic
Containers, Transparent

CONTAINERS, Steel
Hard-faced dies make drums. J. A. Gallaher. il diags Am Mach 91:101-4 Mr 27 '47
Metal containers for chemicals; nickel, aluminum and steel drums. R. W. Lahey Chem & Eng N 25:808 Mr 17 '47
Welded steel container. T. M. Fallon. il Welding J 26:793 S '47

See also
Boxes, Steel
Tanks, Steel

Manufacture

Electric-furnace brazing for Aer-a-sol insecticide bomb. A. T. Cole and H. M. Webber. il diag Gen Elec R 50:25-31 Je '47
Furnace brazing steel insecticide bombs; Bridgeport brass co. A. T. Cole and H. M. Webber. il diag Steel 120:70-3+ Ja 27 '47
In welding stainless steel containers, distortion can be controlled. L. K. Stringham. il diags Sheet Metal Worker 38:51-2 Ag '47
Resistance welders mass-produce containers; Durabilt mfg. co.; illustrations with text. Am Mach 91:104-5 Ja 30 '47

CONTAINERS, Transparent
Camembert in clear molded plastic. il Mod Packaging 21:140 S '47
Flexible vacuum package. il Mod Packaging 20:100-1+ Je '47
Polystyrene boxes. T. C. Willson, jr. and E. S. Marsh. il Mod Packaging 21:149-52+ O '47
Valves in windows; one acetate-and-paperboard package serves for six Thermotron valves; sold only to repairmen. il Mod Packaging 20:111 Ap '47
X design for transparent plastic boxes. il Mod Plastics 24:146-7 Ap '47; Same. Mod Packaging 20:170-2 Mr '47

Manufacture

Automatic machine for making plastic set-up boxes. il Mod Packaging 20:102-9 Je '47
Contoured; sheet plastic containers, formed as fast as 1,000 an hour. il Mod Packaging 20:102-3+ F '47
Transparent containers, mass produced. il Mod Packaging 20:126-8+ Mr '47

CONTAINERS, Vacuum. See Vacuum containers
CONTAINERS, Wood. See Wood containers
CONTEMPLATION of death (law)

See also
Gifts (law)

CONTESTS. See Advertising—Prize contests; Safety contests and awards; Sales contests
CONTINENTAL can company
Annual report. Comm & Fin Chr 165:1863 Ap 7 '47

CONTINENTAL can company—*Continued*
Continental Can has offset to drop in vegetable packs. Barron's 27:27 My 26 '47
Realistic re-appraisal; American Can vs. Continental Can. R. Carleson. il Mag of Wall St 79:743-5 Mr 29 '47

CONTINENTAL drift. See Continents

CONTINENTAL oil company
Diversified stake in dynamic oil industry. H. L. Blackburn. Mag of Wall St 80:92 Ap 26 '47
Higher prices, bigger output lift Continental Oil's net. Barron's 27:31 Ap 28 '47

CONTINENTAL shelf
Coarse sediments on the edge of the continental shelf. R. W. Fairbridge. bibliog diag Am J Sci 245:146-53 Mr '47
Continental shelf exploration. Oil & Gas J 46:119 Jl 5 '47
Engineering characteristics of the Gulf Coast continental shelf; Marine construction. M. B. Willey and others. diag Oil & Gas J 46:130-1 O 18 '47
Great oil potentialities on continental shelf and slope. W. E. Pratt. map Oil & Gas J 45:62 D 7 '46
Petroleum on continental shelves. W. E. Pratt. Am Assn Pet Geologists Bul 31:657-72 Ap '47
Petroleum on the continental shelves. W. E. Pratt. Econ Geol 42:33-5 Ja '47

CONTINENTAL-United industries company
Stock offered. Comm & Fin Chr 165:3050 Je 9 '47

CONTINENTS
Distribution of oceans and continents; a suggestion. W. G. Woolnough. il maps diag Am Assn Pet Geologists Bul 30:1981-2012 D '46; Discussion. 31:1300-4 Jl '47

CONTINUOUS rails. See Rails

CONTRACT bonds. See Insurance, Surety and fidelity—Contract bonds

CONTRACTORS
Avoid patent law suits. L. T. Parker. Heat & Ven 44:100-2 S '47
Contractors die, too. R. L. Moore. il Nat Safety N 55:30-1+ Ap '47
Legal decisions of interest to contractor-dealers. Dom Eng 170:116+ S '47
Legal status of independent contractors. L. T. Parker. Heat & Ven 44:99-100 Je '47
Plant organisation and maintenance for civil engineering contractors. H. O. Parrack. Engineering 160:430, 456-7, 465 N 23-D 7 '45; Same. plan Inst Mech Eng J & Proc 154:Proc 285-94; Discussion. 294-302 D '46; Discussion. Engineer 180:395-7 N 16 '45
What one paving contractor does in winter; Denton construction co. il Roads & Sts 90: 103-5 Ja '47

See also
Building contracts
Construction equipment
Electric contractors
Subcontracting
also Associated general contractors of America

Accounting

Accurate cost control systems ensure economical construction operations. A. O. Babb. il Civil Eng 17:467-71 Ag '47

Directories

Contractors, Canada; roadbuilding, earthmoving, engineering construction. Roads & Bridges 85:126+ Je '47

CONTRACTORS' equipment floater insurance. See Insurance, Contractors' equipment floater

CONTRACTORS' offices
Modern office for veteran builder; Heggen construction co., Seattle. il plans Am Bld 68:79 N '46
Progressive builder develops unique office; F. R. McAbee of Seattle. il plan diag Am Bld 69:88-9 Ja '47

CONTRACTORS' public liability insurance. See Insurance, Contractors' public liability

CONTRACTS
Contract void for lack of mutual obligation. Adv & Sell 40:98 O '47
Law of contracts simplified; review of court decisions involving heating and air conditioning engineers. L. T. Parker. Heat & Ven 44:84-94 Ap '47
When is a contract not a contract? A. W. Gray. Sales Management 59:150+ O 15 '47

See also
Agency (law)
Bills of lading
Building contracts
Engineering contracts
Mortgages
Negotiable instruments
Partnership
Roads—Contracts
Sales
Subcontracting

CONTRACTS, Engineering. See Engineering contracts

CONTRACTS, Government
Huge volume continues in government contracts for textile, apparel products; labor provisions of Public contracts act. Rayon 28:408-9 Ag '47
Industry-military link forged; army-navy appropriations for research bring development contracts. il Bsns W p20-2+ N 16 '46
Military procurement in peacetime. J. P. Miller. Harvard Bsns R 25 no 4:444-62 [Jl] '47
Payment bonds on government work. F. V. Bonzagni and J. Reich. Eng N 139:258-60 Ag 21 '47
Seller's delay on government contract not excused by strike. M. M. Shipman. Oil Paint & Drug Rep 150:7+ D 16 '46
Supreme court makes finding unfavorable to general contractors; case of United States v. Howard P. Foley company, inc. G. R. Shields. Eng N 138:110 Ja 23 '47
U.S. supply prospects improve; rigid contracts an obstacle. H. D. Ralph. Oil & Gas J 46:82+ Je 28 '47

See also
Purchasing, Government

Insurance aspects

Bond protection and claim collection procedure on public and private contracts. C. G. Roth. Weekly Underw 157:999-1001+, 1055-7, 1110-11 O 18-N 1 '47; Abstract. Credit & Fin Management 49:11-14 O '47
Contract agents oust judicial control. H. Heron. East Underw 47:36 D 20 '46
Relation of U.S. surety and contractor under bond. Nat Underw 51:27-8 Ap 17 '47
Three sureties join on huge Mississippi River bond; Locks 27 job. East Underw 48:25+ Ag 1 '47
Truman's order limiting civil works to affect contract bonds. East Underw 47:32 D 27 '46
War projects rating program is rescinded; still available on foreign contracts. East Underw 48:25+ Jl 11 '47; Same cond. Nat Underw 51:17 Jl 10 '47

Termination

State income taxes as a cost in termination of subcontracts. J Account 83:90 Ja '47

CONTRACTS, Letting of
Contracts for engineering services do not require calling for bids. Pub Works 78:14 My '47
Factors in selecting and purchasing deep well pumps. F. E. Harley. plan diags Pub Works 77:17-18+ D '46
Is it a fair bid? Arkansas highway department system of unit cost analysis. A. E. Johnson. Roads & Sts 90:51-4+ Je '47

CONTRACTS, Municipal
Law of municipal contract liability. L. T. Parker. Heat & Ven 44:78-81 Ag '47

CONTRACTS, Sales. See Sales

CONTROL, Electric. See Electric control

CONTROL, Hydraulic. See Hydraulic control

CONTROL, Pneumatic. See Pneumatic control

CONTROL, Radio. See Radio control

CONTROL boards
Controlling material supply and inventories. B. W. Kinderman. N A C A Bul 29:201-12 O 15 '47
Increasing production efficiency through visual control. K. Kern. il Rubber Age 61: 195-6 My '47

CONTROL boards—*Continued*
Simple board and four-part form control materials flow; Kittinger co., Buffalo. J. Batson. il Factory Management 105:100-1 Mr '47
Visual control system. il Chem Ind 61:624 O '47

CONTROL charts
Applying control chart methods to taste testing. S. Marcuse. bibliog il Food Ind 19: 316-18 Mr '47
Charts help diagnose quality progress. E. Goddess. Am Mach 91:96-100 Je 5 '47
Gang process charts in work simplification; Armstrong Cork. J. V. Valenteen. Factory Management 104:125-7 N '46
Positive weight control; electronic device flashes signals to govern adjustment of filling machine; Lipton tea co. il Mod Packaging 20:130-4 Mr '47

CONTROL equipment
Adapting a differential pressure controller to wide-range interface control. J. G. Kirkpatrick. diag Chem Eng 54:121-2 Mr '47
Annual engineering review; instrumentation and control. Materials & Methods 25:110 Ja '47
Application of automatic controls to gasoline plant and refinery processing. E. H. Reynolds and others. diags Pet Refiner 26: 132-6 Ap '47; Same abr. Oil & Gas J 45: 66-7+ Ap 5 '47
Application of conventional industrial instruments to power plant control; abstract. W. H. Fortney. Pet Processing 2:750-1 O '47
Automatic control in the chemical industry; abstracts. J. W. Broadhurst and others. Chem Age (Lond) 56:708-9 My 31 '47; diags Engineer 184:130-2 Ag 8 '47
Automatic control of processing is product quality insurance. R. H. Wehrle. il Pet Processing 2:365-6+ My '47
Automatic control on Portland-Montreal pipe line. C. D. Batchelder and R. A. Rockwell. il diag Oil & Gas J 46:74-6+ S 27 '47
Automatic controls increase quality and production. Rayon 28:225-7 Ap '47
Automatic operation of electric boilers. M. Eaton. il diags Elec Eng 66:991-5 O '47
Control of chemical reactions on a large scale; fluid catalyst process of oil refining; catalytic and gas-solid reactions. J. G. King. Chem Age (Lond) 56:795-7 Je 21 '47
Control of light hydrocarbon fractionators subject to variations in feed composition and quantity. E. D. Mattix. flow diag diags Pet Refiner 26:130-4 S '47
Designing automatic controllers by electrical analogues. il Electronics 20:136 S '47
Diaphragm control valves; construction materials and designs for corrosive and high-temperature service in the chemical industries. A. J. Koch. il diag Chem Eng 54:207-8+ Je '47
Ease of control should be an important consideration in the original design of process equipment. R. H. Munch. il Ind & Eng Chem 39:sup81A-82A Je '47
Engineers' symposium; interesting drive and control features embodied in specific machines. K. H. Pond and others. il diags Machine Design 19:109-14 Ap '47
Industrial process control. J. G. Ziegler and N. B. Nichols. bibliog diags Chem Eng Prog 43:309-14; Discussion. 314 Je '47
Installation and use of instruments on open-hearth melting furnaces. R. C. Baker. il diags Iron & Steel Inst J 157:81-8 S '47
Instrumentation and control of the vertical kiln. V. J. Azbe. diags Rock Prod 49:90-2 N '46; 50:69 Mr '47
Instrumentation and process control; new equipment. R. W. Cermak. il Chem Ind 61: 414-16 S '47
Instrumentation, measurement, and control; papers presented at the first National instrument conference. A. Klemin. il Sci Am 176:122-4 Mr '47
Instruments in process control. E. D. Mattix. flow diags Oil & Gas J 46:83-4+ Ag 23 '47
Locke insulator makes wide usage of industrial instruments. C. W. Bowden, jr. il Cer Ind 49:86+ S '47
Modern slasher room features automatic controls; Seminole mills. P. M. Thomas. il Textile World 97:135+ S '47
Multiple-element controls. H. H. Gorrie. diags Mech Eng 69:239-41 Mr '47
Principles of automatic control as applied to natural gas operations. L. W. Parten. il diags Pet Refiner 26:121-8 O '47
Process unit control instruments, their installation and initial operation. H. F. Moore. Pet Processing 1:219-20+ N '46
Producing more uniform products with automatic controls at lower cost. il diags Cer Ind 49:48-50 S '47
Progress in automatic control in the waterworks and sewage-treatment fields. W. S. Mills. il diags Water & Sewage 85:21-6+ Jl '47
Quantitative analysis of single- and multiple-capacity plants. P. G. Kaufmann. bibliog diags Inst Mech Eng J Proc 153 (War emergency issue no 8):237-46; Discussion. 247-8 '45
Ratio flow and metered control in chemical processing. D. M. Considine and S. D. Ross. il diags Chem Eng Prog 43:497-504; Discussion. 504 S '47
Recording and controlling variables in laboratory processes. R. H. Munch. Ind & Eng Chem 39:sup81A-2A My '47
Refining processes and their automatic control; thirty-one flow diagrams of modern processes, with descriptive data. Oil & Gas J 45:149-80 Mr 22 '47
Remote control engineering of stock preparation equipment. J. W. Coutre. diags Paper Ind 29:576-8 Jl '47
Review of power and mechanical equipment; controls. il Power 90:894-7 Mid-D '46
Robot for register; mechanical brain holds high-speed multicolor printing within 0.001-in. limits. J. W. Ludwig. diags Mod Packaging 20:150-2 Je '47
Theory of automatic control; regulator equations. P. G. Kaufmann. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 8):249-57; Discussion. 258-9 '45
Three newly released instruments for automatic control. R. H. Munch. il Ind & Eng Chem 39:sup79A-80A Jl '47
Typical applications of the bellows unit in control assemblies; diagrams. Product Eng 18:116-17 My '47
Versatile capacity-sensitive circuit; Thermocap relay. R. H. Müller. il diags Anal Chem 19:sup21A-2A O '47

See also
Carrier current control
Electric control
Electric motors
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Magnetic control
Pneumatic control
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also subdivision Control under special subjects, e.g.
Airplanes
Distillation apparatus
Filling machines
Machine tools
Steam turbines

Symbols
Unified symbolism for regulatory controls. G. A. Philbrick. bibliog A S M E Trans 69: 47-58; Discussion. 58-67 Ja '47

CONTROLLERS
Commercial archivist aids the controller. J. B. Kaiser. J Account 83:304-7 Ap '47

CONTROLLERS, Electric. See Electric controllers

CONVENTIONS
Conventions and trade shows featured by associations. C. J. Judkins. Dom Comm 34: 16-18 D '46

See also
Chairmen
Dealer conventions
Sales conventions

CONVERSION tables
Centigrade-Fahrenheit conversions. Aviation 46:71 F; 66 Ap '47
Conversion factors (general). Aviation 45:91 S; 97 O; 87 N; 119 D '46; 46:80 Ja '47
Conversion tables for lengths; data sheet. C. Hering. Metal Prog 50:802 N '46
Petroleum conversion units. W. L. Nelson. Oil & Gas J 46:101 O 4; 203 O 11 '47

CONVERSION tables—*Continued*
Quick reference tables of conversion factors. Power Pl Eng 51:100 Mr '47
Temperature conversions; data sheet. Metal Prog 50:803 N '46

CONVERTERS
Blowing high manganese metal in a side blown converter. J. H. Hall. Foundry 75: 85+ O '47
Control of Tropenas-converter blowing by a direct-vision spectroscope. S. T. Jazwinski. Iron & Steel Inst J 152:9-12, pl 1 no 2 '45; Same. Blast F & Steel Pl 33:1113-15 S '45; Abstract. Iron Age 156:63 N 15 '45; Discussion. Iron & Steel Inst J 152:12-13 no 2 '45
First report of the converter refractories subcommittee. 3pls diags Iron & Steel Inst J 155:235-69 F '47; Discussion. 157:100-3 S '47
First report of the side-blown converter practice sub-committee. diags Iron & Steel Inst J 155:33-50 Ja '47; Discussion. 157:104-14 S '47
Side-blown converter practice; report and discussion of British iron and steel research association committees. Engineer 183:307-8 Ap 11 '47
Spectrographic control of the converter blow. S. T. Jazwinski. diags Iron Age 159:50-7 My 29 '47

Lining
Refractory life in side-blown converters. T. Bishop. Metal Prog 52:105 Jl '47

CONVERTERS, Electric. See Electric converters

CONVERTIBLE stocks. See Stocks, Preferred—Convertible stocks

CONVEYING machinery
Anchor Hocking ware transfer patent; to transfer a row of articles from one moving conveyor to another. diags Glass Ind 28:362+ Jl '47
Automatic conveyors for electroplating. A. Bregman. il Iron Age 159:68-74 Je 19; 58-64 Je 26 '47
Automatic handling aids plating success; Daystrom corporation. M. E. Kilroy. flow chart il Am Mach 91:84-7 Mr 27 '47
Body conveyor suspended from ceiling; Buick-Oldsmobile-Pontiac assembly plant; illustrations with text. Automotive & Aviation Ind 96:23 Ja 1 '47
Buick cylinder blocks now machined on first unitized transfer line. J. Geschelin. il plan Automotive & Aviation Ind 96:20-7+ F 1 '47
Care and maintenance of conveyors and elevators. J. Carruthers. diags Mech Handling 34:417-28 Ag '47
Cement handling and storage plant. il Mech Handling 34:349-51 Jl '47
Chip-removal and coolant-temperature regulating system; Chevrolet gear & axle division of the General motors corporation. il diags Mach 53:151-4 D '46
Complete car bodies built on Big Bertha conveyor. il Automotive Ind 97:32-3 S 15 '47
Conveyance of drums. il Mech Handling 34: 455-8 S '47
Conveyor cuts handling and saves floor space. H. R. Moore. il Textile World 97:143+ Jl '47
Conveyor steamer developed by Mathieson alkali works. R. L. Carr. Manuf Rec 116: 46 Mr '47
Conveyorized automatic heat treatment. A. F. Holden. il diags Iron Age 158:70-4 N 14 '46
Conveyorized handling pays its way in 60 days. W. H. Ziegler. il diag Factory Management 105:124-5 S '47
Conveyorized operation raises man-hour output; Kitchen cabinet division, Lyon metal products. H. G. Knuth. il diag Factory Management 105:54-6 Ap '47
Conveyors aid the production of electric cleaners; Messrs Hoover, ltd. il plans diag Mech Handling 34:232-44+ My '47
Duplicate conveyor system promotes efficiency; Triangle rock and gravel co. il Rock Prod 50:102-3+ F '47
Earley power station; coal, ash and dust handling equipment. il plan diags Mech Handling 34:27-36 Ja '47
Evaluating materials handling layouts. W. G. Hudson. il diags Chem Eng 54:110-12 Ag '47
Flat car conveyor system serves 66-inch hot strip mill; Weirton steel co. il Steel 120:98 Je 16 '47
Full automatic hot zinc galvanizing of tanks. R. F. Ledford. il diag Iron Age 160:56-60 Jl 31 '47
Handling by conveyor in a multi-story plant; Randolph Laboratories. A. Boal, jr. il Factory Management 104:138-9 D '46
Handling equipment for Loch Sloy dam. Mech Handling 34:131-2 Mr '47
Handling in a food factory; J. Lyons & co. ltd. il Mech Handling 34:461-4 S '47
Handling in the manufacture of refrigerators. il plan Mech Handling 34:116-24, 204-5 Mr-Ap '47
Handling in the printing trade. il Mech Handling 34:353-6 Jl '47
Handling of wood chips. il Mech Handling 33:629-30 O '46
Handling system need not be expensive. E. D. White. il Textile World 97:120-1 O '47
Heat and sound insulation; modern materials handling in glass fibre production. il Elec R (Lond) 140:963-7 Je 13 '47
Heat treatment; recent developments in G.W.B. electric furnaces and handling equipment. il Automobile Eng 36:573-82 D '46
Improved handling repays initial cost in 10 months; Steel strapping company, Chicago. C. L. Dryden. il Factory Management 104: 112-15 N '46
Looped conveyor saves space. A. Ristow. il diags Am Mach 91:106-8 N 6 '47
Lowering production costs of bumpers and springs; United States spring & bumper co. H. Laurent. il Automotive Ind 97:24-6+ Ag 1 '47
Materials handling in multi-storey buildings. H. M. Harman. il Mech Handling 34:519-22 O '47
Mechanized furnaces. H. D. Hendrick. il diag Mech Handling 34:357-67, 448-9 Jl-Ag '47
Mechanized goods dept; Consolidated freightways, inc. H. G. Jarman. il Mech Handling 34:370-3 Jl '47
Mechanized sand plant; foundry at Richmond gas stove co. il plans Mech Handling 34: 58-65 F '47
Modern material handling ideas for cutting costs. N. L. Davis. il Iron Age 158:68-71 D 5 '46
Modern methods characterize mass production in Bendix brake plant. J. Geschelin. il Automotive & Aviation Ind 96:26-30+ F 15 '47
New enameling system; Dodge division of Chrysler corp. il Steel 120:92-3+ F 17 '47
New ideas in conveyorized assembly. C. S. Ricker. il diags Am Mach 91:96-100 O 9 '47
Non-stop production via conveyors; Zenith radio corporation, Chicago. il Factory Management 105:97-9 Je '47
Performance record of flight conveyor. A. L. Roots. Pulp & Pa of Can 48:95-6 S '47
Perpetual motion; conveyor system handles 1½-million lb. at freight terminal; Consolidated freightways inc. il Steel 120:124 Ap 28 '47
Production clinic. E. G. Thomssen. diag Soap & San Chem 23:71, 73 S; 79+ O '47
Production firsts at Plymouth's enlarged plant. J. Geschelin. il plan Automotive & Aviation Ind 96:28-32+ Ap 1 '47
Production increased three times by use of overhead conveyor; London pressed hinge co. il Mech Handling 34:436-7 Ag '47
Roller conveyors increase efficiency of small enameling plant. il plan Cer Ind 49:58+ Jl '47
Sand reclamation and distribution; conveying equipment in a modern steel foundry. il Mech Handling 33:601-6 O '46
Seven conveyors in new layout return cost in four years; Westherhead company, Cleveland. F. M. Bock. il plan diag Factory Management 105:73-6 My '47
Solution to a difficult conveying problem; electric vibrating conveyors. J. H. Whitelock. il Mech Handling 34:523-7 O '47

CONVEYING machinery—*Continued*
Surface and overhead conveyors; Kalamazoo stove & furnace co. il Steel 120:92-3 Ap 7 '47
Turntables aid assembly-line testing; production of Hotpoint electric dishwashers. B. C. Brosheer. il plan Am Mach 91:129-32 F 13 '47
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Underground conveyors handle ammunition. il Mech Handling 33:607-11 O '46
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What is best way to build coal conveyor? diags Power 91:268-70 Ap '47

See also
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Belt conveyors

Belt conveyor capacity chart. Power Pl Eng 51:106 Ag '47
Belt conveyors for main haulage. R. J. Perin. il Mech Handling 33:624-8 O '46
Bulk material handling installation at Ball bros. Okmulgee plant. il Cer Ind 48:86 Mr '47
Coal handling plant at a London power station. il diag Mech Handling 34:175-85 Ap '47
Collis powered conveyor units. il Mech Handling 34:39-40 Ja '47
Conveyor idler. il Blast F & Steel Pl 34:1436 N '46
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Fit the belt to the job. W. E. Johnson. diags Rock Prod 50:95+ My '47
G.W.B. belt conveyor furnaces. il Mech Handling 34:98-9 F '47
Long concrete tunnel under stockpile serves both trucks and conveyor; Arizona sand and rock co. W. B. Lenhart. il Rock Prod 50:92-3 Je '47
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Mechanical aids to fertiliser manufacture; Ipswich factory of Messrs Fison ltd. il plan diags Mech Handling 33:612-19 O '46
Open new plant at lower quarry level; Granite rock company's screening and crushing plant and quarry. R. E. Fowle. il Rock Prod 50:91-2+ Ap '47
700,000 cu.yd. roadway excavation belted across busy arterial; relocating and widening California road. il Roads & Sts 90:77-8 Ag '47
Underground belt haulage; how and why. C. W. Thompson. il plan Min Cong J 32:30-3+ D '46; 33:32-3+ Ja '47
Underground iron ore haulage by belt conveyor; Inland Steel's Sherwood mine. P. D. Pearson. il plan diags Min Cong J 33:20-5 Ag '47
Wire conveyer belt. Mech Eng 69:677-8 Ag '47
Wire conveyor belt aids foundry labour. il Mech Handling 34:352 Jl '47

Chain conveyors

Applying electrified drives to conveyors. S. Reibel. il diags Product Eng 18:84-9 O '47
Conveyors reduce process lag; General instrument corp. T. E. Keller and S. A. Karch. flow chart il Am Mach 91:74-7 F 27 '47
New attachment for pulpwood conveyor chains. K. F. Wrangell. il Pulp & Pa of Can 48:66-7 Mr '47
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Control

Automatic safety stops improve conveyor efficiency. J. Boden. il diags Am Mach 91:104-5 S 25 '47

Lubrication

Pressure greasing for conveyors. il Mech Handling 34:554-5 O '47

Manufacture

Welding small cables for conveyors. H. W. Young. il Mech Handling 34:206+ Ap '47

CONVEYING machinery, Portable
Elevator hod carrier lets two men do work of four and saves builder $150 a week. il Brick & Clay Rec 111:33-4 O '47
Materials handling made easy with tractor-conveyor. il Food Ind 19:922-3 Jl '47
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CONVULSIONS
Minimal electroencephalographic response to metrazol as a method for measuring the convulsive threshold for use in human beings. E. Ziskind and others. Science 104:462 N 15 '46
Prevention of respiratory embarrassment in therapeutic curarized convulsions. M. Brody. bibliog Science 105:285-6 Mr 14 '47

See also
Anticonvulsants

COOK, Henry Earl
New FDIC board member. por Bsns W p54 Ap 19 '47

COOKERY
Specific heats of foods in cooking. W. O. Ordinanz. Food Ind 18:1869 D '46

See also
Bakers and bakeries
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Camp cookery
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COOKIES
Cookies nationwide, in folding paper boxes. il Mod Packaging 20:103 N '46

COOKING schools
Friendly talks with homemakers build goodwill and sales for P G & E. M. Fenner. il Sales Management 59:37-9 S 1 '47
How sales and service personnel benefit from courses in gas cooking. R. Soule. il Gas Age 98:28-9+ N 28 '46

COOKING ware
Effect of design factors on thermal-shock resistance of cooking ware. C. R. Amberg and J. Hartsook. diags Am Cer Soc Bul 25:448-52 N 15 '46

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COOLING
Air conditioning in Iran; simple but practical means that have been used for many centuries. il Heat & Ven 44:93-4 Je '47
Air conditioning turbine-propelled aircraft. H. J. Wood. il diags Aviation 46:49-52 F; 56-8 Ap '47; Abstract. S A E J 55:58-62 F '47
Aircraft refrigerating expansion turbine; Lockheed 649 Constellation. il Refrig Eng 52:417+ N '46
Can't see radiant cooling. W. D. Sampson. diags Heating-Piping 19:91-2 Mr '47; Discussion. 19:96-7 Ap '47
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Crane cab cooling poses new personnel problem in steel mill operation. il Blast F & Steel Pl 35:76+ Ap '47
Don't neglect humidity control. Heating-Piping 19:96-7 Je '47
Evaporative cooling. M. E. Marsalis. Sheet Metal Worker 38:66 Jl '47
Heat pump for comfort heating and cooling. E. R. Ambrose. diags Min Cong J 33:37-40 My '47

COOLING—*Continued*
Heat pump; new coal outlet? il diags Coal Age 52:74-8 S '47
Heat pump; the choice and cost of various systems. S. P. Goethe. diags Refrig Eng 54:24-8+ Jl '47
Lazy zoning causes heating, cooling troubles. S. Lewis. Heating-Piping 19:86-7 Jl '47
Losses in the cycle of a heat pump using a ground coil. R. A. Budenholzer. diag Dom Eng 170:103-5+ Ag; 110-13+ S '47
Minimal replenishment air required for living spaces, under conditions of mechanical cooling and removal of odors; ship's berthing space. W. V. Consolazio and L. J. Pecora. bibliog plan diag Heating-Piping 19:103-14 Mr '47
Night cooling for day comfort. L. F. Peterson. il Sci Am 177:70-1 Ag '47
Night cooling industrial plants. il Steel 120: 80 Je 30 '47
Progress report on the heat pump. E. R. Ambrose; E. N. Kemler and others. il plan diags Heat & Ven 43:67-82 D '46; Discussion. 44:136-8 F '47
Radiant cooling. C. B. Yaglou. Heat & Ven 44:102+ My '47
Reversing the refrigerating cycle. A. J. Mellish. diags Sheet Metal Worker 38:70+ Mr '47
Review of some heat-pump installations; with cost data. E. B. Penrod. bibliog(42 titles) flow diags il diags Mech Eng 69: 639-47 Ag '47
Roof cooling. R. Pepper. Mech Eng 68:1081 D '46
Temperatures and heat flow for a concrete slab with imbedded pipes. C. F. Kayan. bibliog diags Refrig Eng 54:143-51; Discussion. 151 Ag '47
Use of climatological data in heating and cooling design. H. E. Landsberg. Heating-Piping 19:121-5 S '47
Use of the expansion of gases in a centrifugal field as cooling process. R. Hilsch. diags R Sci Instr 18:108-13 F '47

See also
Air conditioning
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Tables, calculations, etc.

Coil selection for air conditioning units. J. E. York. diags Heat & Ven 44:66-75 Mr '47
Determination of outside design temperatures; method of using Weather bureau temperature records. W. L. Holladay. bibliog Heating-Piping 19:117-22 Jl '47; Discussion. 19:131 Ag '47
Mechanism of heat transfer panel cooling; heat storage. C. S. Leopold. bibliog diags Refrig Eng 54:33-41; Discussion. 41+ Jl '47
Performance of small mechanical draft cooling towers. W. M. Simpson and T. K. Sherwood. bibliog diags Refrig Eng 52:535-43+ D '46

COOLING, Industrial
Air-cooled heat exchangers; their advantages, disadvantages and application. D. P. Thornton, jr. il Pet Processing 2:775+ O '47
Condensation and subcooling inside an inclined tube. J. B. Tepe and A. C. Mueller. bibliog diags Chem Eng Prog 43:267-76; Discussion. 276-8 My '47
Cooling Banbury mixers and rubber mills. J. Partington, jr. il diag Heat & Ven 44: 91-4 O '47
Cooling rates of plates and rounds; Jominy end-quenched specimens; data sheet. A. L. Boegehold and E. W. Weinman. Metal Prog 51:96b Ja '47
Homemade cooler conditions lube oil. J. A. Coulden. diag Power 91:119 F '47
Spare parts and a little headwork lick an air-cooling problem. J. D. Constance. diags Power 90:853-4 D '46
Water scarce; natural gasoline plant uses air for 80% of required cooling. D. P. Thornton, jr. flow diag il Pet Processing 2:52+ Ja '47
Wet-dry cooler for beverages; developed by Canada Dry. il diag Food Ind 19:1363-4 O '47

See also
Cold storage
Cooling towers
Cooling water
Metals, Cold treatment of
also subdivision Cooling under various subjects, e.g.
Airplane engines
Internal combustion engines
Steel, Quenching of
Testing laboratories—Cold rooms

COOLING equipment
Luminaire-lamp, sterilizer, air conditioner. il Refrig Eng 53:400 My '47

See also
Oil coolers

COOLING of fruits and vegetables
Biological aspects of precooling fruits and vegetables; heat of respiration can spoil perishables. W. T. Pentzer. bibliog Refrig Eng 53:511-13+ Je '47
Cooling after water and electronic blanching. J. C. Moyer and K. C. Holgate. il Food Ind 19:1370-1+ O '47
Handling raw materials for food processing. H. Campbell. bibliog il Refrig Eng 52:428-32+ N '46
Precooling practices in California. J. C. Rear. il diag Refrig Eng 53:503-6 Je '47
Refrigeration of oranges in California. H. M. Hendrickson and J. R. MacRill. plans Refrig Eng 54:1-10 sec 2 S '47
Refrigeration of prepackaged fruits and vegetables. C. O. Bratley. il Refrig Eng 52: 516-20+ D '46
Temperature reduction in sugar beet storage. R. D. Barmington. il Refrig Eng 54:339-41 O '47

COOLING of water
Diesel cooling equipment. flow diag il plan diags Diesel Power 25:34-41 O '47
Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69: 771-7; Discussion. 777-8 O '47

See also
Cooling towers

COOLING towers
Determining the efficiency of cooling towers, spray ponds, or similar cooling devices; chart. W. F. Schaphorst. Water & Sewage Works 94:252 Jl '47
Diesel cooling equipment. flow diag il plan diags Diesel Power 25:34-41 O '47
Evaluating cooling tower performance. J. G. De Flon. il diags Pet Eng 18:55-60+ Ap '47; Same. Oil & Gas J 45:129-32+ Mr 29 '47; Same. Pet Refiner 26:109-16 Ap '47; Same. Pet Processing 2:249-52, 433+ Ap, Je '47; Same. Heat & Ven 44:73-7 Je; 77-80 Jl '47; Same. Power Pl Eng 51:104-7 Je; 76-9 Jl '47; Same abr. Chem Eng 54:112-16 Jl '47; Same cond. Comp Air Mag 52:142-8 Je '47
Flexible cooling tower. il Chem Eng 54:152 S '47
Hydraulic controls used for flow rate and liquid level in cooling tower sump. A. Krieg. diag Pet Processing 2:419 Je '47
Performance of small mechanical draft cooling towers. W. M. Simpson and T. K. Sherwood. bibliog diags Refrig Eng 52:535-43+ D '46
Shield over section of cooling tower basin speeds up removal of oil from water. R. Elo. diags Pet Processing 1:177 N '46
Water know-how cures cooling-tower headache. G. C. W. Golem. il diags Power 91: 115-17 F '47

COOLING towers, Concrete
Corrosion of concrete caused by sulphur-oxidising bacteria. C. B. Taylor and G. H. Hutchinson. bibliog il Soc Chem Ind J 66: 54-7 F '47

COOLING water
Cleaning device maintains water-cooled burners at maximum efficiency. D. E. Richardson and F. C. Arrance. diags Chem Eng 54:128-9 O '47
Cooling Banbury mixers and rubber mills. J. Partington, jr. il diag Heat & Ven 44:91-4 O '47

COOLING water—*Continued*
Determination of chlorinated phenol derivatives in treated cooling waters. C. E. Headington and W. A. Sassaman. il Pet Refiner 26:124-6 My '47
Determining the efficiency of cooling towers, spray ponds, or similar cooling devices; chart. W. F. Schaphorst. Water & Sewage Works 94:252 Jl '47
Elements of water treatment. W. L. Nelson. Oil & Gas J 46:106 Ag 23 '47
Floating pumphouse in river channel supplies refinery with cooling water. il Pet Processing 2:657 S '47
How to control marine growths in circulating water systems. J. G. Dobson. il Power Pl Eng 50:70-5 Ag; chart 86 D '46
Keep cooling systems clean. B. F. Heye. il diags Power 91:699-702 O '47
Scale and corrosion control in cooling-water systems. Oil & Gas J 45:73 F 1 '47
Study of the clarification of compressor station recycle cooling water. E. G. Hammerschmidt. il Pet Eng 18:147+ Mr '47
Use of radioactive tracer in measuring condenser water flow. S. Karrer and others. il diag Power Pl Eng 50:118-20 D '46
What is best way to save engine cooling water? diags Power 91:711-13+ O '47

See also
Cooling towers

COONEY, John R.
Honored by National Board; heads executive committee. por East Underw 48:14 Jl 4 '47

COOPER, Thomas, 1759-1839
Old dyers, old books and old methods; remarks on the history of dyeing and finishing. S. M. Edelstein. Am Dyestuff Rep 36: 528-30 S 22 '47

COOPERATION

See also
Advertising, Cooperative
Apartment houses—Cooperative ownership
Banks and banking, Cooperative
Benefit societies
Building and loan associations
Cooperative associations
Credit unions
Department stores, Cooperative
Electric plants, Cooperative
Electric service, Rural—Cooperative lines
Farmers' cooperative associations
Insurance, Mutual
Medical service—Group and prepayment plans
Petroleum cooperative associations
Profit sharing

Canada

Co-operative trends in Canada. A. Faucher. Ann Am Acad 253:184-9 S '47

Pacific coast

Cooperatives in the Pacific states. F. E. Parker. Mo Labor R 64:688-95 Ap '47

Russia

Consumer cooperatives. For Comm W 28: 20 Ag 23 '47

Decree on cooperatives stresses competition. For Comm W 27:20-1 Je 28 '47

Southern states

Cooperatives in the South. F. E. Parker. Mo Labor R 63:583-6 O '46

United States

Co-op to pay taxes so it can expand; Consumers cooperative association of Kansas City. Bsns W p76+ S 13 '47

Developments in the consumers' cooperative movement in 1946. F. E. Parker. Mo Labor R 64:472-82 Mr '47; Same, with additional data. U S Bur Labor Statistics Bul 904:1-37; pa 15c Supt. of doc. '47

COOPERATION, International. See International cooperation

COOPERATIVE associations
Co-op effort meets outside offensives; Plumbers merchandising corporation of the District of Columbia. il Dom Eng 169:100-3 Ja '47

Co-op o.k.'d; decision of Kansas Supreme court. Bsns W p24+ Jl 19 '47

Pros and cons of co-ops as a threat to private business discussed on Town meeting of the air. Nat Pet N 39:42 Ap 23 '47

See also
Credit unions
Electric service, Rural—Cooperative lines
Farmers' cooperative associations
International cooperative petroleum association
Petroleum cooperative associations

Directories

Directory of consumers' cooperatives in the United States. rev ed U S Bur Labor Statistics Bul 750:1-119; pa 30c Supt. of doc. '47

Statistics

Operations of consumers' cooperatives in 1945. U S Bur Labor Statistics Bul 890: 1-16 pa 10c Supt. of doc. '46; Abstract. Mo Labor R 63:750-3 N '46
Operations of consumers' cooperatives in 1946. F. E. Parker. Mo Labor R 65:456-9 O '47

Taxation

Consumers cooperative assn. to pay taxes on earnings from trade with nonmembers. Nat Pet N 39:17 Jl 23 '47
Co-op tax brawl. Bsns W p58+ D 7 '46
Co-op tax exemption; a threat to free enterprise. P. W. Shafer. Pub Util 40:267-77 Ag 28 '47
Co-op tax issue again. Pub Util 40:435-6 S 25 '47
Co-op to pay taxes so it can expand; Consumers cooperative association of Kansas City. Bsns W p76+ S 13 '47
Cooperatives as your competitor; how tax-free plan works. F. Lewis, jr. Credit & Fin Management 49:14-16 Je '47
Do foreign co-ops pay taxes? A. Haines. Pub Util 39:290-5 F 27 '47
Fight on co-op tax proposal will be a three-way skirmish. H. Ridder. Nat Pet N 39: 39+ Ja 15 '47
Fight over co-ops' taxes puts Knutson in middle. H. Davenport. Barron's 27:11 Jl 28 '47
More leftist thunder behind efforts to keep co-ops from being subjected to same rules and taxes as business. Elec West 98:99-101 Je '47
National tax equality assn. answers co-ops' claims regarding taxation. Nat Pet N 39: 42-3 F 19 '47
Rising opposition to co-op tax exemption. J. J. Hassett. Pub Util 39:830-3 Je 19 '47
Taxation of cooperatives. W. L. Bradley. Harvard Bsns R 25 no 4A:576-86 [O] '47

COOPERATIVE associations, Wholesale
Small grocers fight back; New York group revives idea of wholesale warehouses owned cooperatively. Bsns W p70+ Ap 12 '47

COOPERATIVE banking. See Banks and banking, Cooperative

COOPERATIVE committee on science teaching. See American association for the advancement of science

COOPERATIVE department stores. See Department stores, Cooperative

COOPERATIVE education. See Colleges and universities—Cooperative courses; Engineering education—Cooperative plan; Industrial education—Cooperative plan

COOPERATIVE insurance. See Insurance, Cooperative

COOPERATIVE petroleum association, International. See International cooperative petroleum association

COOPERATIVE stores, Trade union
Union-run co-op stores fight rising prices. il Bsns W p24-6 O 11 '47

COPELAND, Dorothy R.
Policy in the ranks; research study on policy manuals. por Bsns W p78-80 My 17 '47

COPENHAGEN, Denmark

Architecture

Copenhagen broadcasting center; Denmark's public radio gets a new home. il plans diag Arch Forum 86:69-73 Je '47

COPENHAGEN, Denmark—*Continued*

Harbor

Sheet pile corrosion at port of Copenhagen. M. Blach and A. Rogberg. diags Engineer 183:348-50 Ap 25 '47

Sewerage

Faulted rock passed by grouting on Copenhagen sewer tunnel. K. Pilgaard. il plan diags Eng N 138:40-2 Ja 9 '47

COPOLYMERIZATION. See Polymerization

COPPER

Aluminum versus copper. H. A. Knight. il Materials & Methods 25:61-4 F '47

America needs a million tons of copper. C. D. Dallas. il Sci Am 177:52-5 Ag '47

Annual engineering review. Materials & Methods 25:93 Ja '47

Antifouling paints; inactivation of highly pigmented antifouling films applied to steel. A. L. Alexander and R. L. Benemelis. il Ind & Eng Chem 39:1028-32 Ag '47

Chemical engineering materials of construction; review of literature from start of World war II; wrought copper and copper-base alloys. C. L. Bulow. bibliog(40 ref) Ind & Eng Chem 39:1204-10 O '47

Copper reserves in U.S. sufficient for three years. Oil Paint & Drug Rep 152:3 S 29 '47

Government copper stockpile almost gone. Bsns W p46 Mr 8 '47

Influence of crystal face on the electrochemical properties of a single crystal of copper. H. Leidheiser, jr. and A. T. Gwathmey. bibliog il Electrochem Soc Trans 91 (preprint 6):97-108 '47

Investigation of oxidation of copper by use of radioactive Cu tracer. J. Bardeen and others. bibliog J Chem Phys 14:714-21 D '46

Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47

Practical copper reduction on non-conductors. H. Narcus. bibliog Metal Finishing 45:64-7+ S '47

Predicting creep strength of metals; electrolytic tough pitch copper. K. Sproule. Metal Prog 51:441-2 Mr '47

Recent developments in the physical metallurgy of copper and copper alloys, and in equipment and practice. H. L. Burghoff and W. D. France. il Min & Met 28:79-84 F '47

Some effects of copper in nickel plating solutions; abstracts. D. T. Ewing and W. D. Gordon. Metal Finishing 45:52 Ag '47; Iron Age 160:136-7 S 25 '47

Spectrochemical analysis by the copper spark method. M. Fred and others. bibliog il Opt Soc Am J 37:279-88 Ap '47

Welding of copper and the copper-rich alloys; abstract. M. Cook and E. Davis. Engineering 163:378 My 9 '47

See also

Copper alloys
Copper metallurgy
Tariff—United States—Copper

Analysis

Determination of bismuth, copper and lead in aluminum alloys. G. Norwitz, S. Greenberg and F. Bachtiger. bibliog Anal Chem 19:173-5 Mr '47

Leaching rate tests on anti-fouling compositions; testing method for inland stations. N. W. Hanson and R. F. Jervis. diag Soc Chem Ind J 65:329-33 N '46

Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47

Spectrochemical analysis of high copper in cast iron and steel. W. R. Kennedy. Opt Soc Am J 37:154-8 Mr '47

Tetraethylenepentamine as a colorimetric reagent for copper. T. B. Crumpler. Anal Chem 19:325-6 My '47

Blackening

Finishing copper by oxidation with sodium chlorite. W. R. Meyer and G. P. Vincent il Metal Finishing 45:61-3+ Mr '47

Isotopes

Gamma-rays from Cu^{64}, annihilation of swift positrons, and experiments on orbital-electron capture. M. Deutsch. Phys R 72:729-30 O 15 '47

Isotopic composition of meteoritic copper. H. Brown and M. G. Inghram. bibliog Phys R 72:347 Ag 15 '47

Radioactivity of Cu^{60}. C. E. Leith and others. Phys R 72:732-3 O 15 '47

Relative abundance of the copper isotopes and the suitability of the photometric method for detecting small variations in isotopic abundance. H. E. Duckworth and B. G. Hogg. bibliog Phys R 71:212 F 1 '47

Metallography

Microstructure of wrought non-arsenical phosphorus-deoxidised copper containing small quantities of bismuth. T. H. Schofield and F. W. Cuckow. il Engineering 164:190-1 Ag 22 '47

Observations on the rate and mechanism of recrystallisation in copper; abstract and discussion. M. Cook and T. L. Richards. Engineer 183:280 Ap 4 '47

Physiological effect

Copper and health. bibliog Ind Med 16:368+ Jl '47

Toxicity of chemicals in electroplating; copper and copper salts. P. M. Van Arsdell. Metal Finishing 45:80-1 S '47

Prices

Copper price again increased. Economist 152: 346-7 Mr 8 '47

Electrolytic copper, Conn. valley; monthly, 1929-1946; tabulation. Iron Age 159:242 Ja 2 '47

Is copper too dear? Economist 153:206-7 Ag 2 '47

One-price copper returns. Barron's 27:36 Je 16 '47

Testing

High speed compression tests on copper. M. Greenfield and E. T. Habib. il diags J Ap Phys 18:645-50 Jl '47

Mechanism of the embrittlement of deoxidised copper by bismuth; abstracts. E. Voce and A. P. C. Hallowes. Engineer 183: 493 Je 6 '47; Engineering 163:540 Je 27 '47; Metal Prog 52:432+ S '47; Discussion. Engineer 183:493-4 Je 6 '47; Engineering 163:540 Je 27 '47

COPPER, Powdered

Copper-base powder metallurgy parts. H. Chase. il diags Materials & Methods 24: 1439-44 D '46

Rate of sintering of copper powder. A. J. Shaler and J. Wulff. Phys R 72:79-80 Jl 1 '47

COPPER acetate

Determination of beta-dicarbonyl compounds. W. Seaman, J. T. Woods and C. A. Massad. bibliog Anal Chem 19:250-1 Ap '47

COPPER alloys

Alloys for marine propellers; abstract. R. Beeching. Engineer 183:470-1 My 30 '47

Annual engineering review. Materials & Methods 25:93 Ja '47

Arc welding of copper and copper-base alloys. F. E. Garriott. il diags Welding J 26:907-15 O '47

Beryllium copper formed parts; advantages of fixture heat-treatment. il diags Product Eng 18:118-21 F '47

Chemical engineering materials of construction; review of literature from start of World war II; wrought copper and copper-base alloys. C. L. Bulow. bibliog(40 ref) Ind & Eng Chem 39:1204-10 O '47

Copper-beryllium-alloy castings; Navy department specification 46C11. Foundry 75: 121-2 Je '47

Copper-manganese-aluminium alloys. Engineer 183:470 My 30 '47

Corrosion of copper alloy condenser tubes; table. Oil & Gas J 46:149 O 18 '47

COPPER alloys—*Continued*

Distinguishing the Be-Cu alloys. F. C. Bennett, jr. Metal Prog 52:250 Ag '47

Electric arc-welding of copper-base alloys. H. Hose. il Mach 53:178-81 F '47

Forging practice; copper and its alloys. A. Ashburn. diags Am Mach 91:127-9 My 8 '47

Industrial wastes; brass and copper industry. W. S. Wise, B. F. Dodge and H. Bliss. flow sheets Ind & Eng Chem 39:632-6 My '47

Influence of macrostructure upon segregation. L. Northcott. Metal Prog 51:132+ Ja '47

Minimum physical properties of R.W.M.A. alloys (Resistance welder manufacturers association); comparable alloys for electrodes; reference book sheet. Am Mach 91: 163, 165 F 13 '47

New metallographic etchant for aluminum bronze and copper-beryllium alloys. W. C. Coons and D. J. Blickwede. bibliog il Am Soc for Metals Trans 35:284-97 '45

Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47

Physical properties and temper-hardening characteristics of copper-nickel-manganese alloys; abstracts. M. Cook and W. O. Alexander. Engineer 182:296-7 O 4 '46; Engineering 162:330 O 4 '46; Metal Prog 51: 810+ My '47

Precipitation hardening. L. Sanderson. Chem Age (Lond) 56:202-4, 412-14, 741-3; 57:13-15 F 1, Ap 5, Je 7, Jl 5 '47

Recent developments in the physical metallurgy of copper and copper alloys, and in equipment and practice. H. L. Burghoff and W. D. France. il Min & Met 28:79-84 F '47

Stress-relief-hardening of beryllium copper. R. W. Carson. il Mech Eng 69:651-4 Ag '47

Study of the corrosion of copper alloy condenser tubes. N. W. Mitchell. Pet Processing 1:176 N '46

Welding of copper and the copper-rich alloys; abstract. M. Cook and E. Davis. Engineering 163:378 My 9 '47

Wrought copper alloys with high silicon. A. G. H. Andersen. il Metal Prog 50:839-43 N '46

See also

Aluminum bronze
Bronze
Brass
Monel metal
Brazing

Analysis

Colorimetric determination of antimony in copper-base alloys. A. C. Holler. bibliog Anal Chem 19:353-5 My '47

Rapid determination of tin in copper base alloys; use of Stanreduce. M. Sherman. Steel 120:102 My 19 '47

COPPER bromides

Crystal structure of anhydrous cupric bromide. L. Helmholz. bibliog Am Chem Soc J 69:886-9 Ap '47

COPPER chlorides

Cuprous chloride derivatives of C_8 diolefins. A. L. Ward and E. C. Makin, jr. bibliog Am Chem Soc J 69:657-9 Mr '47

Interpretation of the Sandmeyer reaction; decomposition of diazonium salts by cupric chloride in neutral and acid solution. H. H. Hodgson. Chem Soc J p745-6 Ag '46

COPPER chromite

Synthesis of racemic menthol. W. R. Brode and R. W. Van Dolah. bibliog Ind & Eng Chem 39:1157-60 S '47

COPPER compounds

Cupriethylenediamine disperse viscosity of pulp; TAPPI suggested method T 230 sm-46. bibliog diags Paper Tr J 124:37-41 Ja 2 '47

Italy finds copper compound substitutes. G. B. Marini-Bettolo. Chem Age (Lond) 56: 670 My 24 '47

Morpholine hydrochloride complexes of cuprous and cupric chloride. W. H. C. Rueggeberg, G. N. Jarman and R. B. Wearn. Am Chem Soc J 69:1222 My '47

Nomographic treatment of the results from the cupriethylenediamine method of determining the viscosity of cellulose. G. Beall. Paper Tr J 124:37-8 My 15 '47

Toxicity of chemicals in electroplating; copper and copper salts. P. M. Van Arsdell. Metal Finishing 45:80-1 S '47

Analysis

Polarographic determination of cupric glycinate and cupric alaninate complex ions. R. M. Keefer. bibliog Am Chem Soc J 68: 2329-31 N '46

COPPER cyanide

Action of cuprous cyanide on *p*-methoxybenzyl chloride. S. Wawzonek and H. Hsu. Am Chem Soc J 68:2741 D '46

COPPER halides

Sandmeyer reaction. H. H. Hodgson. bibliog(72 ref) Chem R 40:251-77 Ap '47

See also

Copper bromides
Copper chlorides

COPPER industry and trade

Argentine-Chilean trade pact won't affect copper imports. Elec World News ed 127:4 Ja 11 '47

Asks repeal of excise tax on copper imports. Steel 120:79+ F 3 '47

Cates assails FTC copper report. Elec World 127:41 Mr 29 '47

Copper price again increased. Economist 152: 346-7 Mr 8 '47

Copper probe? Bsns W p58 Mr 1 '47

Copper report; FTC assesses blame for world copper crisis. Bsns W p24+ Mr 22 '47

Copper shortage wanes. Barron's 27:37 S 29 '47

Copper trade's dilemma. Barron's 27:5+ Ja 27 '47

Federal trade commission attacks copper producers. Eng & Min J 148:106-7 Ap '47

FTC blames copper scarcity on heads of leading firms. Elec World News ed 127:3-4 Mr 22 '47

FTC moves to restrict brass, copper control by producers. Iron Age 159:109-10 Mr 27 '47

Industry viewpoint of metal subsidies, tariffs and stockpiling. E. R. Lovell; E. Just. Min Cong J 32:65-6 O '46

Is copper too dear? Economist 153:206-7 Ag 2 '47

Kennecott resumes firm pricing of copper. Bsns W p34+ Ap 5 '47

Prospects for copper, lead, and tin in 1947. J. Levin. il Dom Comm 35:46-50 Mr '47

300,000-ton copper surplus in foreign markets this year. J. Anthony. Iron Age 159: 105 Ap 3 '47

World economic problems of copper, lead and zinc. J. Douglas. Min Cong J 32:60 O '46

Statistics

Copper in 1946. J. Douglas. il Min Cong J 33:63-6 F '47

Copper, 1946. H. H. Wanders. Eng & Min J 148:70-1 F '47

United States

Copper shortage threatens early run-up of price. Barron's 27:5 F 24 '47

Coppers, on import basis, may improve status. W. J. Nolle. Barron's 27:25 Jl 7 '47

COPPER metallurgy

Chino copper. L. A. Luther. il Comp Air Mag 51:289-91 N '46

Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46

Non-ferrous metallurgists cut costs and slag losses. C. R. Hayward. il Eng & Min J 148:112-14 F '47

Outokumpu's copper smelter doubles output during war. P. Bryk and others. il Eng & Min J 148:68-72 Ja '47

See also

Copper, Powdered

Electrometallurgy

Electric smelting points way to lower cost. M. Sem and F. C. Collin. il diag Eng & Min J 148:86-90 Ag '47

COPPER mines and mining

Alaska

Exploration of the copper-sulfur deposit, Khayyam and Stumble-On properties, Prince of Wales island, Alaska. E. L. Fosse. 5pls U S Bur Mines Rep of Invest 3942:1-8 '46

COPPER mines and mining—Alaska—*Cont.*
Ward copper deposit, Seward peninsula, Alaska. W. S. Wright. 3pls U S Bur Mines Rep of Invest 4110:1-3 '47

Arizona

Ajo mining district, Arizona. J. Gilluly. maps diags U S Geol S Professional Pa 209:1-112, pl 1-27 '46
Amargosa (Esperanza) molybdenum-copper property, Pima county. S. L. Tainter. 3 pls U S Bur Mines Rep of Invest 4016:1-15 '47
Apex copper property, Coconino county. S. L. Tainter. 3 pls U S Bur Mines Rep of Invest 4013:1-23 '47
Arizona tests promise copper supply. Chem & Eng N 25:3084+ O 20 '47
Bagdad copper adopts open-pit-mining; with cost data. E. R. Dickie. Min & Met 28:9 Ja '47
Hydrothermal alteration in the Castle Dome copper deposit, Arizona. N. P. Peterson and others. maps diag Econ Geol 41:820-40 D '46
Kilowatts mine copper; Castle Dome open pit mine near Miami, Arizona. il Elec West 99:74 O '47
Old reliable copper mine, Pinal county. T. C. Denton. 7pls U S Bur Mines Rep of Invest 4006:1-9 '47
San Manuel, another big copper mine-to-be. Min & Met 28:455 S '47
San Manuel copper deposit, Pinal county, Ariz. T. L. Chapman. 7pls U S Bur Mines Rep of Invest 4108:1-93 '47
Sullivan copper mine, Cochise county. C. A. Kumke. 3pls U S Bur Mines Rep of Invest 4015:1-4 '47
Truck haulage, Castle Dome open pit. B. R. Coil. il plan Min Cong J 33:50-4 Mr '47
Zonia copper mine, Yavapai county. C. A. Kumke. 7pls U S Bur Mines Rep of Invest 4023:1-6 '47

Finland

Outokumpu's copper smelter doubles output during war. P. Bryk and others. il Eng & Min J 148:68-72 Ja '47

Montana

Bull Run copper prospects, Silver Bow county. R. N. Roby. 2pls U S Bur Mines Rep of Invest 4038:1-5 '47
Exploration of the Moffet-Johnston copper property, Madison county, Montana. R. N. Roby. 6pls U S Bur Mines Rep of Invest 3939:1-12 '46
Exploration of the Queen Mary copper project, Missoula county. W. H. Brinton. U S Bur Mines Rep of Invest 3973:1-4, pl 1-2 '46

Nevada

Rio Grande copper deposit, Elko county, Nev. E. J. Matson. 8pls U S Bur Mines Rep of Invest 4120:1-6 '47

New Mexico

Atwood copper group, Lordsburg district, Hidalgo county. M. G. Huntington. 10pls U S Bur Mines Rep of Invest 4029:1-9 '47
Chino copper. L. A. Luther. il map Comp Air Mag 51:286-91 N '46
Copper King mine, Taos county. R. J. Holmquist. map U S Bur Mines Rep of Invest 4046:1-4 '47
Stauber copper mine, Guadalupe county. R. J. Holmquist. pl U S Bur Mines Rep of Invest 4026:1-7 '47

South Africa

Nababeep and East O'okiep; from African copper mines, U.S. engineers are taking substantial profits. il map Fortune 36:76-81+ Jl '47; Same cond. Min & Met 28:440-3 S '47
O'okiep, an integrated copper mining enterprise. M. D. Banghart and E. N. Pennebaker. flow sheet il Eng & Min J 148:79-83 Ja '47

United States

Production costs under premium price plan. J. L. Maury. Eng & Min J 148:86-7 Jl '47

Wisconsin

Copper deposits of Douglas county, Wis. M. C. Smith. 2pls U S Bur Mines Rep of Invest 4088:1-7 '47

COPPER naphthenate
Effect of fungicides on natural and synthetic rubber. J. L. Stief, jr. and J. J. Boyle. Ind & Eng Chem 39:1136-8 S '47

COPPER ores
Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47
Exploration of a nickel-copper-cobalt deposit at Funter bay, Admiralty island, Alaska. S. P. Holt and J. M. Moss. flow sheet U S Bur Mines Rep of Invest 3950: 1-15, pl 1-6 '46
Foreign ore reserves of copper, lead, and zinc. W. P. Shea. Eng & Min J 148:53-8 Ja '47
Hydrothermal alteration in the Castle Dome copper deposit, Arizona. N. P. Peterson and others. maps diag Econ Geol 41:820-40 D '46
Hydrothermal alteration in the porphyry copper deposits. G. M. Schwartz. bibliog il map Econ Geol 42:319-52 Je '47
Metalliferous geochemical zones of Australia. E. S. Hills. maps Econ Geol 42:478-91 Ag '47
Nickel-copper prospect near Spirit mountain, Copper River region, Alaska. J. Kingston and D. J. Miller. maps U S Geol S Bul 943-C:49-57; pa 10c Supt. of doc. '45

COPPER oxides
Charging industrial truck batteries by means of copper-oxide rectifiers. J. J. Buckley. il Gen Elec R 50:27-35 Ap '47
Rectifiers; selenium and copper-oxide. W. H. Falls. il diags Gen Elec R 50:34-8 F '47

COPPER plating
Bright copper plating. L. E. Browne. il Steel 120:108+ Mr 17 '47
Bright copper plating process. Metal Finishing 45:86-7 Ap '47
Bright plating with cyanide copper. Sci Am 176:152 Ap '47
Electroplating zinc base die castings. C. F. Nixon. Metal Finishing 45:58-60 Mr '47; Same cond. Mach 53:180-2 Mr '47; Same cond. Am Mach 91:149+ Jl 3 '47
Industrial plating of zinc base die castings. C. Temple. il Metal Finishing 45:82-3 Jl '47
Mirror bright copper plating. J. Anthony. il Iron Age 159:54-5 F 13 '47
New process for bright copper plating. H. Leever. il Materials & Methods 25:82-4 Ja '47

COPPER pyrophosphate
Cupric pyrophosphate and ethylenediamine. T. P. McCutcheon and S. Raymond. Am Chem Soc J 69:276 F '47

COPPER roofing. See Roofing, Copper

COPPER sulfate
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47
Copper sulphate clears tree roots from sewers. Consumers Res Bul 19:24 Je '47
Copper sulphate distributing craft. S. S. Anthony. il Water & Sewage Works 94: 343-4 S '47
Influence of crystal face on the electrochemical properties of a single crystal of copper. H. Leidheiser, jr. and A. T. Gwathmey. bibliog il Electrochem Soc Trans 91 (preprint 6):97-108 '47

COPPER sulfide
Copper sulphide-catalysed dimerisation of *iso*butylene. A. Wassermann and W. T. Weller. Chem Soc J p250 F '47
Magnesium copper sulphide rectifiers; their operation and characteristics. R. O. Whitesell. il diags Product Eng 18:84-9 Je '47

See also
Wittichenite

COPPER tubes. See Tubes, Copper

COPPERWORK
Arc welding of copper and copper-base alloys. F. E. Garriott. il diags Welding J 26: 907-15 O '47
Carbon brazes copper parts. W. Scott. il Am Mach 91:98-100 N 6 '47
Centrifugal casting copper-spun rotors. G. A. Anderson. il Steel 120:96-7+ Ap 28 '47
Copperspun squirrel-cage rotor, cast of copper by a centrifugal process. G. R. Anderson. il diags Elec Eng 66:980-2 O '47
Forging practice; copper and its allows. A. Ashburn. diags Am Mach 91:127-9 My 8 '47

COPPERWORK, Architectural
Artistic copper work; hand-hammered plaques and trim; Armstrong's Gay 90's cafe. il Sheet Metal Worker 38:41+ Jl '47
See also
Roofing, Copper

COPRA
Copra production and exports, Netherlands Indies in 1946. For Comm W 27:25 Ap 5 '47

COPRECIPITATION. See Precipitation

COPROSTANETETROL
Preparation of C-27 steroids from bile acids; coprostanetetrol-3(α),7(α),12(α),25. W. H. Pearlman. bibliog Am Chem Soc J 69: 1475-6 Je '47

COPYING processes
Effective copying of kymographic records. O. S. Gibbs. il Science 105:438-9 Ap 25 '47
Labor saving through duplicating with modern equipment. W. R. La Due. il plan Water & Sewage Works 94:332-3 S '47
Lower costs for credit records; American trust company, South Bend, Ind. uses Ditto master copy. P. Eastman. il Am Bsns 17:12-13+ Jl '47
Simplified labeling speeds shipments; stencil duplicating label process at Kalamazoo vegetable parchment company. M. G. Wilson. il Am Bsns 17:14-15+ My '47
See also
Microfilms
Mimeograph
Photographic records
Photomechanical processes
Photostat

COPYRIGHT

Advertisements
Copyright protection for advertising in periodicals. H. G. Henn. Ptr Ink 220:42+ Ag 22 '47

Designs
New fight against design piracy. Textile Col 68:14-15+ O '46

CORAL reefs and islands
Coral reefs of the East Indies. J. H. F. Umbgrove. maps diags Geol Soc Bul 58:729-77, pl 1-7 bibliog(p773-7) Ag '47

CORALS
Corals from the Gulf of California and the North Pacific coast of America. J. W. Durham. (Memoir 20) 68p, pl 1-4 bibliog(p45-6) Geological soc. of America, 419 W. 117th st, New York '47

CORALS, Fossil
Corals from the Gulf of California and the North Pacific coast of America. J. W. Durham. (Memoir 20) 68p, pl 1-14 bibliog(p45-6) Geological soc. of America, 419 W. 117th st, New York '47

CORDAGE
Cordage-supply situation as seen by State department. For Comm W 28:35 Ag 9 '47
Not enough cordage fibers. Bsns W p28+ Ag 9 '47; Discussion. E. R. Metcalf. p 111 O 11 '47

CORDIERITE
Development of cordierite ceramic bodies with sierralite; a new ceramic material. R. S. Lamar. Cer Ind 49:90 Ag '47

CORDS, Rayon. See Rayon cords

CORDUROY
Cotton is a winter fabric. M. Herzog. il Textile Col 69:24-5 O '47

CORE ovens
Electronic core baking; use of synthetic resin binder. R. W. Crannell. il diag Foundry 75:66-9+ Jl '47
Horizontal type core oven installation. il Foundry 75:166 Ag '47

CORE sampling. See Petroleum—Well drilling—Sampling

CORES
Blowing cores on a mass production basis; Ferro machine & foundry co. M. F. Degley. il plan Foundry 75:72-4+ Ag '47
Cores, sands and binders. O. J. Myers. il Foundry 75:74-5+ Je '47
Dielectric baking of foundry cores; abstract. R. W. Weld. Chem Eng 53:248 D '46
Electronic core baking; use of synthetic resin binder. R. W. Crannell. il diag Foundry 75:66-9+ Jl '47
Matchplates provide both core and mold. diags Foundry 74:162 D '46
Mechanized core shop in a gas-cooker factory. il plan diag Mech Handling 34:3-6 Ja '47
New binders improve core performance. H. L. Gebhardt. il Iron Age 158:66-8 D 26 '46
New coreroom is model of efficiency; Cleveland foundry co. P. Dwyer. il plan Foundry 75:66-71+ O '47
New production machine automatically coats cylinder block cores. il Automotive & Aviation Ind 96:39 Ap 15 '47
Quick-action pneumatic core blower. il Comp Air Mag 52:74 Mr '47
Tellurium corewashes. J. O. Vadeboncoeur. il Am Soc for Metals Trans 37:303-7 '46; Abstract. Iron Age 157:73 F 14 '46; Discussion. Am Soc for Metals Trans 37:307-8 '46
Use of exothermic cores in pouring stainless steel; Induction electric foundry. M. Beam. il Foundry 75:140+ N '47
Why metal penetrates cores and molds. D. M. Bachelor. il Foundry 75:80-1+ Je '47
See also
Molds (for casting)

CORI, Carl Ferdinand, 1896-
Coris awarded Nobel prize in medicine. por Chem & Eng N 25:3228 N 3 '47
Wins sugar research prize. por Chem & Eng N 25:1375 My 12 '47

CORK
Chemical composition of barks. E. F. Kurth. bibliog Chem R 40:33-49 F '47
Elastic properties of cork; hydrostatic and ordinary load-compression curves for cork. S. L. Dart and others. diag J Ap Phys 18:474-8 My '47
Elastic properties of cork; stress-temperature relationship of compressed cork. S. L. Dart and E. Guth. J Ap Phys 18:470-3 My '47
Exports and prices, Portugal. For Comm W 25:23 D 14 '46
Process equipment cost estimation; estimating cold insulation costs. F. C. Otto. Chem Eng 54:118-20 My '47

CORLEY, Michael J.
Agency man. E. Doherty, jr. por Air Transport 4:44-5 D '46

CORN
Corn planting deadline finds yield in doubt, but favorable factors are many. Barron's 27:34 Je 30 '47
Effect of temperature on the growth and sterility of maize. D. F. Jones. Science 105:390-1 Ap 11 '47
Organic compounds of magnesium and phosphorus in relation to chlorophyll formation. J. H. C. Smith. Am Chem Soc J 69: 1492-6 Je '47
Threat of smaller corn crop partly offsets continued improvement in wheat outlook. Barron's 27:36 Je 16 '47
Treatment of hybrid seed corn with Goodrite polyethylene polysulfide. Chem & Eng N 25:2844 S 29 '47

Drying
Corn drying; crop saver, money maker. Bsns W p38 Jl 12 '47
Corn-drying equipment needed to save '47 crop. Elec World News ed 128:14 Jl 26 '47
Corn drying requires 175 kwhr per 1,000 bu. il Elec World 128:138+ O 11 '47

CORN gluten. See Gluten

CORN oil
Penetration of air-borne particulates through the human nose. H. D. Landahl and S. Black. bibliog flow diag J Ind Hygiene 29: 269-77 Jl '47
Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47

CORN picking machinery. See Harvesting machinery

CORN products
Corn products trust charged. Oil Paint & Drug Rep 151:5+ Je 30 '47
Outlook for companies in corn products field; with analysis of selected firms. E. A. Barnes. Mag of Wall St 80:217-19+ My 24 '47
See also
Cornstarch

CORN products refining company
Income at record levels. Barron's 27:7 F 10 '47
Outlook for companies in corn products field. E. A. Barnes. Mag of Wall St 80:217-19+ My 24 '47
Thumbnail stock appraisal. Mag of Wall St 79:259 D 7 '46

CORN sirup
How to handle corn sirup. A. E. Filippon. il diags Food Ind 18:1686-7+ N '46

CORNCOBS
Nylon from corncobs; du Pont's electrochemicals department develops adiponitrile from furfural. S. D. Kirkpatrick. il Chem Eng 54:100-1 Ap '47
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47
Synthetic liquid motor fuel from farm residues. il diag Chem Eng 53:104-5 D '46

CORNELL university
Dormitory of fire-resistant construction. il Eng N 138:371-2 Mr 6 '47
New navy research contract for development of a synchrotron. Science 105:280 Mr 14 '47

College of engineering

Cornell aeronautical laboratory. il Aero Digest 54:59-61+ Mr '47

CORNICES
Better detail plate; simplified detailing adaptable to present day modes; cornice construction, exterior mouldings, and interior trim members. diags Am Bld 68:112-13 D '46
Overhang roof and cornice studies. diags Brick & Clay Rec 110:28 My '47

CORNING glass works
How Corning glass works merchandises company facts; policy meetings. C. D. La Follette. il Adv & Sell 40:33-4+ O '47
Preferred stock offered. Comm & Fin Chr 165:1725-6 Mr 31 '47

CORNS, Marshall
Bank laboratory; to serve as model and source of advice for country banks. por Bsns W p100 D 7 '46

CORNSTARCH
Crystalline derivatives of 6-α-D-glucopyranosido-β-D-glucose from starch. E. M. Montgomery, F. B. Weakley and G. E. Hilbert. Am Chem Soc J 69:2249-50 S '47
Improved method for measurement of gel strength and data on starch gels. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39:29-37 Jl '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47
Recording viscometer for starches; corn industries viscometer. C. C. Kesler and W. G. Bechtel. bibliog il diag Anal Chem 19: 16-21 Ja '47

Manufacture

Industrial wastes; cornstarch processes. R. E. Greenfield, G. N. Cornell and W. D. Hatfield. bibliog flow sheets Ind & Eng Chem 39:583-8 My '47

CORNUDAS mountain
Polished rocks of Cornudas mountain, New Mexico. W. B. Lang. Science 105:65 Ja 17 '47

CORONA (electricity)
Cold cathode rectifier. W. H. Bennett. bibliog il J Ap Phys 18:479-82 My '47
Corona from fine positive points. W. N. English. il Phys R 71:638-9 My 1 '47
Electrostatic discharges for aircraft. W. C. Hall. bibliog il diags J Ap Phys 18:759-65 Ag '47
Inside of electrical machines; effect of corona upon insulation. R. H. Robinson. il diags Electrician 138:780-3 Mr 28 '47
Mechanism of the negative point corona at atmospheric pressure in relation to the first Townsend coefficient. L. B. Loeb. bibliog Phys R 71:712-14 My 15 '47
Negative corona in freon-air mixtures. G. L. Weissler and E. I. Mohr. bibliog Phys R 72:289-94 Ag 15 '47
Positive corona in freon-air mixtures. E. I. Mohr and G. L. Weissler. Phys R 72:294-7 Ag 15 '47

CORONA (sun). See Anti-corona; Sun—Corona

CORONAGRAPH
Sun and earth; coronagraphic research. W. O. Roberts. il diag Tech R 49:33-6+ N '46

CORONENE
Magnetic anisotropy of coronene, naphthazarin, and other crystals. M. T. Rogers. bibliog diags Am Chem Soc J 69:1506-8 Je '47

CORONET (periodical)
Ads in Coronet. Bsns W p21-2 Mr 1 '47

CORPORATE names
How and why United Drug changed its name to Rexall. L. F. Thomann. il Ptr Ink 219:37+ My 30 '47
So you want to change your company name! Sunshine biscuits, inc. H. Main. Sales Management 58:65-6+ Je 15 '47
When brand name is better known than company name. J. J. Nance. il Ptr Ink 219: 44-5 My 16 '47

CORPORATION law
See also
Banking law
Holding companies—Laws and regulations
Insurance law
Public utilities—Law
Railroad law
Securities—Law
Trusts, Industrial

Great Britain

Companies bill. Economist 151:958-9 D 14 '46; Discussion. W. A. Anderson. 152:61 Ja 11 '47

Poland

Licensing procedure for establishing new enterprises in branches of industry and transport subject to nationalization. For Comm W 27:20 My 10 '47

Sweden

New Swedish companies act. H. Melin. J Account 83:48-56 Ja '47

CORPORATION schools
Education for business life; Johnson & Johnson collaborates with employees and schools. il Trusts & Estates 84:576-8 Je '47
Training center; Standard of N.J.'s new school. il Nat Pet N 39:31-3 F 19 '47
Utility employee training program of educational courses of Commonwealth Edison company. G. E. Trulock. Pub Util 40:205-10 Ag 14 '47
You and business; Pennsylvania Bell Telephone's demonstration class. il Trusts & Estates 83:429-32 N '46

CORPORATIONS
Big business organization; are they man's greatest invention? A. W. Robertson. Pub Util 39:573-5 Ap 24 '47
Management; basis of prosperity; America's best-managed companies. Am Bsns 17:10-11+ Ja; 20-2 F; 18+, 19 Je '47
See also
Banks and banking
Building and loan associations
Corporation law
Electric utilities
Gas companies
Government corporations
Insurance companies
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Proxies
Public utilities
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CORPORATIONS—*Continued*

Accounting

Accounting treatment of emergency facilities in three corporations. J Account 83:415-16 My '47

Appropriation, not charges, recommended to cover inflated replacement cost; A.I.A. committee statement. J Account 84:289-90 O '47

Are small prior period adjustments necessary? C. H. Brook. J Account 84:303 O '47

Auditee speaks. J. A. Dowling. N A C A Bul 28:669-72 F 1 '47

Best laid plans of corporations to avoid inflationary profits going awry. Barron's 27:25-6 Mr 31 '47

Capital stock and earned surplus in financial statements. C. G. Blough. J Account 83: 327-8 Ap '47

Certain phases of merger accounting. W. M. Black. J Account 83:214-20 Mr '47

Curtiss-Wright incentive compensation plan; testimony presented by George O. May. J Account 83:265-7 Mr '47

Figures that show profit trends. Am Bsns 17:8-9+ Mr '47

Financial statements for corporate annual reports; Caterpillar tractor co. W. Blackie. J Account 83:191-207 Mr '47

Phantom profits worry foresighted managements; stockholders must be taught to see red ink through the black. A. Cotter. Barron's 27:7-8 Ag 11 '47

Price and cost; restatement of fully amortized war facilities. J. L. Dohr. J Account 83: 11-15 Ja '47

Securities and exchange commission twelfth annual report; text of section entitled Activities of the Commission in accounting and auditing. J Account 83:348-53 Ap '47

Swift and company; LIFO held down 1946 profit. Barron's 27:24 Ja 27 '47

Tax accounting incongruities. J. K. Lasser. bibliog J Account 83:221-8 Mr '47

Use of reserves to equalize corporate income. E. A. Carlson. N A C A Bul 29:3-12 S 1 '47

Valuation of corporate common stock. W. R. Ginder. J Account 82:473-6 D '46

Wages and prices; a case study. H. H. Wein. R Econ Stat 29:108-23 My '47

See also

Bank accounting
Consolidated statements
Cost accounting
Financial ratios
Financial statements
Inventories—Accounting
Public utilities—Accounting
Surplus

Charities

Central charity fund eases good-will headaches. Sales Management 58:115 Je 15 '47

Close corporations

Death, taxes and your business. G. J. Laikin. Trusts & Estates 85:372-4 O '47

New stocks in old established companies. H. S. Coffin. Mag of Wall St 79:367-8+ Ja 4 '47

Directors

Board of directors that is streamlined. E. H. Taylor. Pub Util 39:644-5 My 8 '47

Salaries

Salaries paid directors. J Account 82:519 D '46

Directors, Junior

Accounting for people; employee interest stimulated by management plan; McCormick and company, Baltimore. T. R. Reid. Trusts & Estates 83:436-8 N '46

Junior boards of management; McCormick system of training junior staff for executive positions. Electrician 138:1455-7 My 30 '47

Multiple management, a tool to stimulate productivity. Factory Management 104:145-52 O '46

Finance

Before and after; profit of 189 large industrial corporations. Fortune 35:139 F '47

Billion-dollar club is biggest ever. Bsns W p71 Ag 16 '47

Character and grouping of new corporate issues in the United States for the 12 months ended Dec. 31 for five years. Comm & Fin Chr 165:531 Ja 27 '47

Companies in strong competitive positions; with analysis of selected companies. S. Devlin. Mag of Wall St 80:203-5 My 24 '47

Companies paying progressively higher dividends. H. S. Coffin. Mag of Wall St 79: 537-9+ F 15 '47

Corporate cost of living. A. Slater. Comm & Fin Chr 166:126-7 Jl 10 '47

Corporate dividend box score. Bsns W p74 F 22 '47

Corporate earnings in 1946; with table giving net income of leading corporations by industrial groups for the years 1945 and 1946. Nat City Bank p45-7 Ap '47; Excerpt. Trusts & Estates 84:414 Ap '47

Corporate profits in 1946; with figures for other years. Survey of Cur Bsns 27:9-10+ Je '47

Corporate profits in the first half of 1947. Survey of Cur Bsns 27:9+ O '47

Corporate profits, 1929-1946; table and chart. Automotive & Aviation Ind 96:79 Mr 15 '47

Corporate profits, payrolls and taxes of manufacturing industries; chart. Automotive & Aviation Ind 96:73 Mr 15 '47

Corporate profits, postwar pattern. Bsns W p37-44 N 30 '46; Discussion. p24 Ja 4 '47

Corporate working capital at new high in fourth quarter of 1946; analysis by Securities and exchange commission; with table showing current assets and liabilities of U.S. corporations, 1939-1946. Comm & Fin Chr 165:2487 My 8 '47

Corporation income and taxes in 1943 for chemical, petroleum and allied industries; tabulation. Oil Paint & Drug Rep 150:69 N 4 '46

Deferred demand for productive facilities still large; commercial groups' spending must close huge wartime gap. J. V. Sherman. Barron's 27:32 Je 16 '47

Dividend harvest. Bsns W p70+ N 30 '46

Earnings and dividends of large corporations, annual, 1939-1945 and quarterly 1943-1946. Fed Res Bul 33:66 Ja '47 [cont monthly]

Federal trade commission's corporation reports. W. H. England. Am Stat Assn J 42: 22-4 Mr '47

Financial position of manufacturing and trade in relation to size and profitability, 1946. A. R. Koch and C. H. Schmidt. Fed Res Bul 33:1091-102 S '47

Financing corporations. J. M. Killpack. Comm & Fin Chr 165:2249+ Ap 24 '47

Financing the postwar business expansion. Fed Res Bul 33:487-97 My '47; Excerpt. Comm & Fin Chr 165:3132 Je 12 '47

First-quarter comparisons exaggerate rise in annual earning power of corporations. Barron's 27:39 Ap 21 '47

First quarter earnings of leading corporations. Nat City Bank p52-5 My '47

First-quarter earnings of medium-size firms. Bsns W p 16 My 31 '47

Half year's earnings. Nat City Bank p86-8 Ag '47

High corporate income put in proper focus when measured by current value of dollar. Barron's 27:33 Ag 25 '47

How first-quarter earnings compare with 1946; tabulation. Bsns W p 16 My 3 '47

Industrial corporation earnings; with table giving preliminary summary of manufacturing earnings in 1945 and 1946. Nat City Bank p31-4 Mr '47

Industry's current assets rise, but debts go up faster, and may force widespread financing. Barron's 27:26 Jl 7 '47

I.B.A. Industrial securities committee foresees heavy financing. Comm & Fin Chr 164:3050+ D 12 '46

Leaders and laggards in corporate profits. H. S. Coffin. Mag of Wall St 80:79-81+ Ap 26 '47

Letter from the president to all employees; Pitney-Bowes, inc. W. H. Wheeler, jr. Personnel J 26:23-6 My '47

Many loans placed privately. Bsns W p80+ D 14 '46

More ready money needed. Bsns W p 19-20 My 24 '47

CORPORATIONS—Finance—*Continued*
Need for more funds in industry indicates some 1946 dividends paid out of capital. A. K. Stricker, jr. Barron's 27:31 Ap 28 '47
New capital issues; with table giving 1945 total, monthly average and monthly figures, Jan.-Sept. 1946. Survey of Cur Bsns 26: 5-6 N '46
New corporate security issues; proposed uses of proceeds, yearly 1934-1945, monthly Aug. 1945-Nov. 1946. Fed Res Bul 33:65 Ja '47 [cont monthly]
New money need. Bsns W p76+ N 16 '46
1946; boom despite itself. Bsns W p15-16 F 1 '47
1947 special re-appraisals of values, earnings and dividend forecasts. Mag of Wall St 79: 488-501+, 548-61+, 608-21+, 668-79+; 80: 489-97+, 541-51+, 591-606+, 645-59+ F 1-Mr 15, Ag 2-S 13 '47
Postwar financial position of business; with tabulation showing composite balance sheet and income statement, 1944 and 1945, 2,708 manufacturing and trade concerns by broad industries and asset size of business. A. R. Koch and E. J. Stockwell. Fed Res Bul 32:1335-44 D '46
Profits still ride high; second-quarter earnings. Bsns W p 15-16 Ag 2 '47
Realistic approach to corporate finances today. W. Gates. Mag of Wall St 80:364-6+ Jl 5 '47
Report profits in '46 normal in relation to the national income. J. Backman and M. R. Gainsbrugh. Iron Age 159:154+ Mr 6 '47
Reports doubted; only 41 per cent of public think corporations tell the truth about profits. Bsns W p44+ My 17 '47
SEC report shows why dividends last year didn't rise as rapidly as earnings. Barron's 27:29 Je 16 '47
SEC survey of profits and operations of listed corporations, 1936 to 1945. Comm & Fin Chr 165:2654 My 15 '47
Significant corporate statements. J. C. Clifford. Mag of Wall St 79:486-7+, 546-7+ F 1-15 '47
Six companies forging ahead in their fields. Mag of Wall St 80:378-81 Jl 5 '47
Term lending to business by commercial banks in 1946; with tabulations. D. M. Holthausen. Fed Res Bul 33:498-517 My '47
Three year study of business income, its concepts and terminology, started by Institute. P. F. Brundage. J Account 84:116-17 Ag '47
Treasure hunt for growth companies; with statistics on selected stocks. G. W. Mathis. Mag of Wall St 80:155-6+ My 10 '47
Varying new trends in corporate profit margins. S. Devlin. Mag of Wall St 81:67-9+ O 25 '47
What first half corporate reports reveal. J. D. C. Weldon. Mag of Wall St 80:528-9+, 586-7, 618-19, 638-9+ Ag 16-S 13 '47
Which companies will need new financing. W. A. Howell. Mag of Wall St 80:477-9 Ag 2 '47
Which companies will need refinancing in period ahead; with tabulation showing comparative current position of fifty selected companies. G. W. Mathis. Mag of Wall St 79:727-9+ Mr 29 '47
Why many large corporations are now seeking new capital. J. D. C. Weldon. Mag of Wall St 79:236-8+ D 7 '46
Working capital now needed more than new plants, securities sales show. Barron's 27: 33 Jl 28 '47

See also
Contracts, Government
Dividends
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Public utilities—Finance
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Reorganization

Recapitalization with stock and obligations. J Account 83:59 Ja '47
Recapitalizations. J Account 84:227-8 S '47

See also
Railroads—Receiverships

Reports and yearbooks

AMA studies annual reports to set basis for best presentation. Iron Age 158:189-93 N 14 '46
Annual report grows up. J. C. Gries. il Ind Marketing 31:33-4+ N '46
Annual reports get a face lifting; Caterpillar tractor company. Am Bsns 17:18-19+ Ap '47
Chesapeake & Ohio railway wins financial world's Oscar. il Ind Marketing 31:60 N '46
Even good corporate reports leave many stockholder questions unanswered. Barron's 27:13 Mr 24 '47
Figures that show profit trends. Am Bsns 17:8-9+ Mr '47
Financial reports can be written so people can understand them. J. M. Lambie, jr. J Account 84:40-5 Jl '47
Financial statements for corporate annual reports; Caterpillar tractor co. W. Blackie. J Account 83:191-207 Mr '47
Graphics, color, language, humanize annual reports. M. S. Rukeyser. il Elec World News ed 128:16-17 Jl 12 '47
How to get maximum benefit from your annual report; employees, opinion-molding groups even barber shops should get books. G. Kerr. Adv & Sell 40:56+ Ja '47
How to merchandise your annual report; Borden co. uses it as public relations tool. V. Dallaire. il Ptr Ink 219:40-1 Je 13 '47
Making annual reports attractive. J. Silberman. Comm & Fin Chr 164:3348+ D 26 '46
Penn Mutual Life puts 1947 annual report on film. il Sales Management 58:45 Ap 1 '47
People doubt financial reports. D. Hennessy. Trusts & Estates 84:579 Je '47
Prize winning reports. Sales Management 59: 101 O 15 '47
Public opinion is many private opinions; public relations policy of Flintkote company. L. R. Walter. Paper Ind 28:1315 D '46
Simplicity predominates in 1946 industrial annual report booklets. A. Bernstein. il Ind Marketing 32:70+ Ap '47
Trends and techniques in stockholder relations; abstract. Management R 36:106-7 F '47
Who writes the annual report? abstract. Trusts & Estates 83:435 N '46
Who's working for who? new kind of report issued by Harrisburg Railways. Bus Transportation 26:57 S '47

See also
Electric utilities—Reports
Insurance companies—Reports

Size

Defense of big business. P. D. Reed. Comm & Fin Chr 166:626+ Ag 14 '47
Today's business giants; little businesses grown up. A. W. Robertson. il Dun's R 55: 15-19+ Ap '47

Taxation

Corporate undistributed income on spot. J. P. Reeves. Barron's 27:9 Je 16 '47
Corporation income and taxes in 1943 for chemical, petroleum and allied industries; tabulation. Oil Paint & Drug Rep 150:69 N 4 '46
Corporations should be taxed as such; abstract. M. Woll. Comm & Fin Chr 164:3025 D 12 '46
Declining balance depreciation can work under T.D. 4422 plus I.T. 3818. W. L. Ashbaugh. J Account 83:394-401 My '47
Does tax system discourage business? abstract. W. L. Hearne. Comm & Fin Chr 164: 3028 D 12 '46
Double taxation of corporate profits; abstract. R. Goode. Comm & Fin Chr 164:3029 D 12 '46
Finance and tax program for small business. J. C. Dockeray. Dom Comm 35:10-14 F '47
Foreign trade taxwisely; when should corporations be organized in the United States and when should they be formed abroad to do business in foreign countries? J. K. Lasser and H. Silverson. Dun's R 54:17-18+ D '46; Abstract. Management R 36:107-10 F '47

CORPORATIONS—Taxation—*Continued*
Guide to corporate relief. Bsns W p28+ D 21 '46
Imminent revival of an unsound tax; undistributed profits taxation. A. W. May. Comm & Fin Chr 164:2885+ D 5 '46
Light on the profits tax, and on bonus issues. Economist 152:726, 772-4 My 10-17 '47; Discussion. 152:975-6 Je 21 '47
Look for hidden tax liabilities; credit aspects. R. M. Swisher. Credit & Fin Management 49:48 Ap '47
Needed; a tax structure to restore incentives; statement before Senate Finance committee. E. M. Voorhees. Comm & Fin Chr 165: 2469+ My 8 '47
New industrial enterprises in Mexico exempted from taxation. For Comm W 27: 12 Ap 26 '47
Penalty tax on retained earnings. M. E. Richardson. Comm & Fin Chr 164:3353+ D 26 '46
Personalized tax manual for your corporation. H. C. Weber. N A C A Bul 28:1280-5 Je 15 '47
Proposed remedies for defects in corporate taxation; abstract. J. L. Connolly. Comm & Fin Chr 164:3024 D 12 '46
Sale of corporate assets; Fairfield Steamship case. bibliog J Account 84:140-1 Ag '47
Section 736 (a). T. G. Thurston. J Account 84:229-30 S '47
Shadow of 102 on dividend policies; with emphasis on the immediate tax problems of small corporations. E. B. George and R. J. Landry. Dun's R 55:sup7-34 [Ap] '47
Tax revisions for small business. J. F. Newcomb. Comm & Fin Chr 165:746+ F 6 '47; Same, with table (Comparative schedule of income taxes, Revenue acts of 1918 to 1945, p42) Credit & Fin Management 49:4-7+ O '47
Taxation, no check to monopoly; abstract. A. G. Buehler. Comm & Fin Chr 164:3027 D 12 '46
What you can deduct for advertising costs in your income tax returns. J. K. Lasser. Adv & Sell 39:58+ D '46

See also
Excess profits tax
Insurance companies —Taxation
Public utilities—Taxation

CORPORATIONS, Government. See Government corporations

CORPULENCE
Hereditary obesity and efficient food utilization in mice. G. E. Dickerson and J. W. Gowen. bibliog Science 105:496-8 My 9 '47

CORPUS CHRISTI, Texas

Industries
Corpus Christi industrial expansion to involve $30,000,000 this year. C. Roster. il Manuf Rec 116:40-1+ Mr '47

CORRELATION (geology)
Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2 pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46; Discussion. P. B. King. bibliog 31:774-7 Ap '47
Drill-hole correlation as an aid in exploration of magnetite deposits of the Jersey Highlands, New York and New Jersey. H. E. Hawkes and P. E. Hotz. bibliog map diags U S Geol S Bul 955-A:1-17, pl 1-2; pa 25c Supt. of doc. '47
New gastropods and trilobites critical in the correlation of lower Ordovician rocks. J. Bridge and P. E. Cloud, jr. bibliog map Am J Sci 245:545-59, pl 1-2 S '47
Revised correlation of Jurassic formations of parts of Utah, Arizona, New Mexico, and Colorado. A. A. Baker and others. map Am Assn Pet Geologists Bul 31:1664-8 S '47
Spectrochemical sample logging of limestones. L. L. Sloss and S. R. B. Cooke. bibliog diag Am Assn Pet Geologists Bul 30:1888-98 N '46; Same. Pet Eng 18:145+ Ag '47
Terminology for insoluble residues. H. A. Ireland and others. bibliog fold chart Am Assn Pet Geologists Bul 31:1479-90 Ag '47

CORRELATION (statistics)
Computation of partial correlation coefficients. F. V. Waugh. Am Stat Assn J 41:543-6 D '46
Factors affecting basic open-hearth operating rates. R. H. Ede. Steel 121:94+ S 8 '47
Some applications of multivariate analysis to economic data. G. Tintner. bibliog Am Stat Assn J 41:472-500 D '46

CORRESPONDENCE principle
Correspondence principle analysis of double-photon emission. J. A. Wheeler. Opt Soc Am J 37:813-17 O '47

CORRESPONDENCE schools and courses

Advertising
Position and near-by editorial matter; 50-year records of ICS. P. V. Barrett. Ptr Ink 218:48-9 Mr 14 '47
Prophecy, 1922; International correspondence schools aviation copy. P. V. Barrett. Ptr Ink 219:47 Ap 11 '47
Which ad pulled best? P. V. Barrett. il Ptr Ink 218:42-3 Mr 28 '47

CORRESPONDENT banks. See Banks and banking—Correspondent banks

CORRESPONDING states, Law of

See also
Equation of state

CORROON, Richard A. 1882-1946
Sketch. por Nat Underw 50:3+ N 21 '46

CORROSION and anti-corrosives
Acid-cleaning of boilers and auxiliary equipment. S. T. Powell. il A S M E Trans 68: 905-11; Discussion. 911-17 N '46
Attack of superheated steam atmospheres upon aluminum bronze alloys; abstract. A. P. C. Hallowes and E. Voce. Product Eng 17:138 D '46
Chimney liner corrosion resulting from gas-fired furnaces. G. B. Johnson. Gas Age 100:29-32+ Jl 10 '47
Corrodibility of some common metals and alloys; tabulation, comp. by J. Strauss; revised (1946) by E. E. Thum; data sheet. Metal Prog 50:884b N '46
Corrosion. M. G. Fontana. Published in monthly numbers of Industrial and engineering chemistry
Corrosion and growth of lead-calcium alloy storage battery grids as a function of calcium content. U. B. Thomas and others. bibliog il Electrochem Soc Trans 92 (preprint 12):145-57 O '47
Corrosion classified into eight different forms based on appearance of corroded metal. M. G. Fontana. il Ind & Eng Chem 39: sup81A-2A Ap '47
Corrosion forum. E. C. Fetter, ed. Published in monthly numbers of Chemical engineering
Corrosion in boiler feedwater treating systems. L. F. Collins. bibliog diag Power Pl Eng 51:74-6 O '47 (to be cont)
Corrosion in the tropics. K. G. Compton. il Electrochem Soc Trans 91 (preprint 35): 629-38 '47
Corrosion in vertical turbine pumps. T. E. Larson. il Water & Sewage Works 94:117-21 Ap '47
Corrosion of copper alloy condenser tubes; table. Oil & Gas J 46:149 O 18 '47
Corrosion of plant equipment by steam and water. R. C. Ulmer. il Power Pl Eng 50: 72-5+ O; 90-2 N '46; 51:108-9+ Ja '47
Corrosion of some magnesium-base alloys (high and normal purity) in contact with other metals; abstracts and discussion. F. A. Fox and J. K. Davies. Engineer 184:358-9 O 17 '47; Engineering 164:379 O 17 '47
Corrosion resistant bearing alloys; abstract. C. H. Meyer. Materials & Methods 26: 128-9 Jl '47
Corrosion; $6 billion headache. il Bsns W p72+ Ap 19 '47
Designing to prevent corrosion; abstract. R. B. Mears and R. H. Brown. Metal Prog 51: 996+ Je '47
Development of additives and lubricating oil compositions. D. C. Atkins, jr. and others. bibliog Ind & Eng Chem 39:491-7 Ap '47
Effect of carbide structure on corrosion resistance of steel. R. W. Manuel. il Steel 121: 82-4+ O 13 '47

CORROSION and anti-corrosives—*Continued*
Electrical deaeration licks corrosion in this plant. V. Rodwell. diags Power 91:324-6 My '47
Erosion-corrosion is destructive. M. G. Fontana. il Ind & Eng Chem 39:sup87A-8A Je '47
Experience shows amines stop corrosion. R. S. Moncrief and M. E. Dreyfus. il Power 91:19-21 Ja '47
Extent and importance of the corrosion problem. M. G. Fontana. Ind & Eng Chem 39: sup89A-90A Ja '47
Field studies and data on corrosion problems in southeastern New Mexico. J. L. Laudermilk. il Oil & Gas J 45:105-6+ D 7 '46
First University conference on corrosion and metal protection at the Museum of science and industry, Chicago, June 11-13. Chem & Eng N 25:1859 Je 30 '47
Fundamental factors in corrosion control. H. H. Uhlig. bibliog diags Chem & Eng N 24: 3154-8 D 10 '46; Excerpts. Heating-Piping 19:98 Ja '47; Abstract. Mech Eng 69:161 F '47
Fundamentals of corrosion control; engineering reference sheet. G. A. Mills. diags Elec World 128:86-7 Ag 16 '47
Graphitic corrosion of cast iron. L. M. Leedom. Am Water Works Assn J 38:1392-7 D '46
High temperature corrosion of metals under alternate carburization and oxidation. H. K. Ihrig. bibliog il Electrochem Soc Trans 91 (preprint 23):333-44 '47
Is corrosion taking $ $ from your pocket? chemical treatment protects oil well equipment. B. J. Cotey. il diag Oil & Gas J 46: 68+ My 10 '47
Magnesium sheet. P. T. Stroup and others. il Am Soc for Metals Trans 35:202-9 '45
Modified type 405 stainless iron, satisfactory lining for petroleum refinery vessels. M. A. Scheil. il Metal Prog 52:91-102 Jl '47
National association of corrosion engineers annual meeting, Chicago, April 7-10. Oil & Gas J 45:66-7+ Ap 19 '47
New theory for corrosion of carbon steel; discussion of Effect of carbide structure on corrosion resistance of steel, by R. W. Manuel. W. C. Uhl. Pet Processing 2:405-8 Je '47
Nitrogen-containing organic inhibitors of corrosion. S. Ch'iao and C. A. Mann. bibliog diags Ind & Eng Chem 39:910-19 Jl '47
Passivating treatment improves cadmium plate coatings; abstract. E. E. Halls. Materials & Methods 25:131 Mr '47
Plastic coating inside surface of drill pipe to combat corrosion fatigue failures. L. E. Trishman. il Pet Eng 18:194+ N '46
Prevention of corrosion by fluorine and by hydrofluoric acid requires quite special apparatus. M. G. Fontana. Ind & Eng Chem 39:sup91A-2A Mr '47
Quantitative implications of Hanawalt's theory of corrosion of magnesium-base alloys; abstracts. C. J. Bushrod. Engineer 184:358 O 17 '47; Engineering 164:379 O 17 '47; Discussion. Engineer 184:359 O 17 '47; Engineering 164:379 O 17 '47
Rate of corrosion of lead by hydrocarbon solutions of organic acids. D. Turnbull and D. R. Frey. bibliog diags J Phys & Colloid Chem 51:681-704 My '47
Rating dynamic dehumidification equipment; preventing corrosion of equipment on naval vessels on the inactive list. E. R. Queer and E. R. McLaughlin. il diag Heating-Piping 19:103-8 Ja '47
Relative corrodability of metals and alloys; tabulation; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 24: 1501 D '46
Role of algae in corrosion. H. C. Myers. Am Water Works Assn J 39:322-4 Ap '47
Scale and corrosion control in cooling-water systems. Oil & Gas J 45:73 F 1 '47
Sodium chromate used in Permian basin drilling to combat salt-water corrosion. G. Weber. il Oil & Gas J 45:103 D 7 '46
Some case histories of corrosion problems in chemical process equipment. W. Z. Friend and F. L. La Que. Am Inst Chem Eng Trans 42:849-62 O-D '46; Same. Pet Eng (Ref annual) 18:212+ Jl 1 '47
Some important factors in corrosion. Pulp & Pa of Can 48:84 Ag '47
Steam power plant corrosion problems; abstract. J. A. Keeth. Elec World 127:87 Mr 1 '47
Use of corrosion inhibitors in products pipe lines. I. M. Parker. bibliog Am Pet Inst Proc 26(5):26-36 '46; Excerpt. Oil & Gas J 45:255-6+ N 16 '46
Use of formaldehyde to inhibit corrosion; injected into oil wells. J. A. Clay, jr. il diag Pet Eng 18:111-12+ N '46
Variation in corrosion properties over two magnesium alloy sheets; abstracts. E. R. W. Jones and M. K. Petch. Engineer 184: 358 O 17 '47; Engineering 164:379 O 17 '47; Discussion. Engineer 184:359 O 17 '47; Engineering 164:379 O 17 '47

See also
Acid resisting materials
Aluminum—Protection
Boilers—Corrosion
Brass—Corrosion
Corrosion research
Corrosion resisting materials
Electrolytic corrosion
Gas, Natural—Distillate wells—Corrosion problem
Metal protection
Paint, Protective
Petroleum refineries—Corrosion
Pipe coating
Pipe lines—Protection
Steel—Protection
Tarnishing of metals
Water pipes—Corrosion
Water purification—Corrosion control
also National association of corrosion engineers

Terminology

Glossary of corrosion terms. Chem Ind 60: 619-20 Ap '47

Testing

Attempt to select a suitable specimen for the study of corrosion cracking in 18-8 steel. M. H. Springer and others. il diags Welding J 26:sup530-8 S '47
Co-operation hits corrosion. T. C. Du Mond. il Sci Am 177:210-12 N '47
Copper-strip corrosion tests. J. A. Bolt. Oil & Gas J 46:99-100 Ag 9 '47; Same. Pet Refiner 26:118-20 Ag '47
Corrosion by chlorine and by hydrogen chloride at high temperatures. M. H. Brown, W. B. DeLong and J. R. Auld. diags Ind & Eng Chem 39:839-44 Jl '47
Corrosion-erosion of boiler feed pumps and regulating valves. H. A. Wagner and others. il diags A S M E Trans 69:389-97; Discussion. 397-403 My '47
Corrosion in storage tanks for crude sulphate turpentine. S. G. Norton and others. Paper Tr J 124:34-5 My 1 '47
Corrosion of reinforcing steel in cracked concrete. B. Tremper. il Am Concrete Inst J 18:1137-44 Je '47
Corrosion of water heaters. N. Booth and others. bibliog il Gas J (Lond) 248:1047-50+, 1090 D 11-18 '46; Discussion. 249:96-8+ Ja 8 '47
Corrosion resistance of magnesium and certain of its alloys under various accelerated atmospheric conditions. R. R. Rogers and others. il diag Electrochem Soc Trans 90(preprint 25):315-22 '46; Abstract. Steel 120:91 Ja 20 '47
Corrosion testing; evaluation of metals for process equipment. A. Wachter and R. S. Treseder. bibliog il diags Chem Eng Prog 43:315-26 Je '47
Corrosion tests in distillation equipment. W. Z. Friend and J. F. Mason, jr. il Pet Eng 18:192+ My '47; Correction. 18:155 Ag '47
18-8 steel in exhaust systems. W. G. Hubbell. il Aero Digest 54:92+ My '47; Same cond. Steel 119:86+ D 30 '46
Electro-tinplate. R. Kerr, R. M. Angles and K. W. Caulfield. il Soc Chem Ind J 66:5-11 Ja '47
Evaluation of water-resistance properties of lubricating greases. T. G. Roehner and E. S. Carmichael. Oil & Gas J 46:107+ O 25 '47
Gamma ray detection of internal corrosion. L. R. Keller. il diags Pet Eng 18:211-14 S '47
General corrosion and stress corrosion of spot-welded magnesium alloy sheet. W. F. Hess and others. bibliog il diags Welding J 26:sup539-44 S '47
Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159:67-70 Mr 6 '47

CORROSION and anti-corrosives—Testing— *Continued*
Is cast iron superior in corrosion resistance to steel? R. W. White. il Materials & Methods 26:82-5 Ag '47
Preliminary investigation of the spot welding of scaly and rusty structural steel. W. D. Doty and W. J. Childs. il diag Welding J 26:sup358-62 Je '47
Selection of protective coatings for metals. K. G. Compton. il Steel 121:90-1+ N 3 '47
Selective corrosion of phosphor bronze in hot-water service. W. D. Clark. il Engineering 164:214-16 Ag 29 '47; Abstract. Engineer 183:257 Mr 28 '47; Discussion. Engineering 163:280 Ap 11 '47; Engineer 183:257-8 Mr 28 '47
Sheet pile corrosion at port of Copenhagen. M. Blach and A. Rogberg. diags Engineer 183:348-50 Ap 25 '47
Substitution of blackplate for tinplate in cans for fruit and vegetables. W. B. Adam and D. Dickinson. bibliog Iron & Steel Inst J 152:195-205 no 2 '45
Surface layers on steel in natural gas condensate wells. N. Hackerman and D. A. Shock. bibliog il diags Ind & Eng Chem 39:863-7 Jl '47
Tests at cycling project demonstrate possibilities of new corrosion inhibitor; Kontol 115. W. H. Justice and E. N. Jones. diag Oil & Gas J 45:86-7+ N 9 '46
Tuberculation measurement as an index of corrosion and corrosion control. E. W. Barbee. il diag Am Water Works Assn J 39:220-30 Mr '47; Same. Water & Sewage Works 94:R155-8 Jl '47

Underground corrosion

Cathodic protection of underground systems. J. Frink. Am Gas J 167:27-9 S '47
Corrosion of buried pipes; action of sulphate-reducing bacteria. Engineer 183:425 My 16 '47
Corrosion surveys; measuring soil resistivity. M. E. Parker, jr. diag Pet Eng (Ref annual) 18:270+ Jl 1 '47
Experience with underground lines. M. C. Alcorn. Pet Eng 18:130+ Mr '47
Half cell for measuring corrosion potentials. J. M. Standring. diags Elec World 127:182+ Ja 18 '47
Magnesium anode protection of transformer tanks. L. J. Gorman. diags Elec World 127:74 Mr 29; 111-12 Ap 12 '47
Magnesium anodes for the cathodic protection of underground structures; abstract. H. A. Robinson. Metal Prog 51:814+ My '47
Protecting pipe in open systems; protection against action of sulfate-reducing bacteria. M. D. Appleman. bibliog Am Gas Assn Mo 29:194-6 Ap '47

CORROSION engineers, National association of. See National association of corrosion engineers

CORROSION research
Chemical research and corrosion control: some recent contributions of a corrosion research group. W. H. J. Vernon. bibliog Soc Chem Ind J 66:137-42 My '47
Companies unite against ravages of salt water in research at Kure Beach ocean laboratory. W. W. Burns. il Oil & Gas J 46:107-8+ Je 28 '47
Co-operation hits corrosion. T. C. Du Mond. il Sci Am 177:210-12 N '47
Corrosion and oxidation experiences in high pressure and high temperature steam service. P. M. Brister and J. B. Romer. bibliog il diags Electrochem Soc Trans 91 (preprint 17):249-72 '47; Abstract. Mech Eng 69:500-1 Je '47
Corrosion rates of metals determined by extensive tests at Kure Beach. il Mach 53: 164-6 Jl '47
Corrosion studies for the petroleum refining industry. F. A. Rohrman. diags Pet Refiner 26:85-90 Je; 93-8 Jl; 109-13 Ag '47
Corrosion testing facilities expanded at Kure Beach. R. K. Lotz. il diags Steel 121: 88-90+ Jl 14 '47
Effect of anions on the performance of sacrificial anodes; study of cathodic protection. K. M. Wight and R. F. Hadley. bibliog diag Am Gas Assn Proc 1946:304-20
Marine lab aids corrosion research; Kure Beach project. E. W. Feller. il Power 91: 544-5 Ag '47
Mechanism of corrosion fatigue of steel in acid solution. M. T. Simnad and U. R. Evans. bibliog diag Iron & Steel Inst J 156:531-9 Ag '47
Nature and mechanism of passivity of 18-8S stainless steel. M. G. Fontana and F. H. Beck. il diag Metal Prog 51:939-44 Je '47
Outdoor laboratory provides information on effects of marine corrosion; Kure Beach, N.C., sea water corrosion testing station. il Civil Eng 17:598-600+ O '47
Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47
Remedies studied for freakish corrosion occurring in some condensate fields. D. P. Thornton, jr. bibliog il Pet Processing 2: 273+ Ap '47
Review of N.G.A.A. research on gas-condensate-well corrosion. T. S. Bacon. bibliog il diag Oil & Gas J 46:257-8+ Jl 26 '47
Sea water corrosion tests yield valuable data for industry; marine exposure test station at Kure Beach. il Iron Age 159:101-2 Je 26 '47; Same cond. Marine Eng 52:89-94 Jl '47
Some experiments on corrosion of steel by boiling water. A. J. Gould and U. R. Evans. bibliog diag Iron & Steel Inst J 155:195-200 F '47
Use of wetting agents in conjunction with acid inhibitors; abstract. P. H. Cardwell and L. H. Eilers. Oil & Gas J 46:124-5 Je 28 '47

CORROSION resisting materials
Acetic acid and chlorine vs. materials of chemical plant construction. Chem Eng 54: 241-2+ My '47
Alloys for heat and corrosion-resistant castings; reference book sheet. Am Mach 91:215 Ja 16 '47
Aluminum alloy condenser tubes; abstract. R. B. Mears. Materials & Methods 25:125 Ja '47
Anti-corrosive materials; wide use of plastics of the Vinidur and Oppanol type. Chem Age (Lond) 55:605-6 N 16 '46
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48:71-4 Ag '47
Chemical and heat resistance of gasket materials; tabulation. H. H. Dunkle and E. C. Fetter. diags Chem Eng 53:102-9 N '46
Chemical resistance of constructional metals and non-metals; table showing resistance of materials to 24 common and troublesome chemicals. Chem Eng 53:120-50 N '46
Correct materials make feed pumps immune to corrosion-erosion. H. L. Ross. il diag Power 91:464-6 Jl '47
Corrosion resistance of nickel base alloys and applications in processing equipment. R. B. Long. Steel 121:132+ N 3 '47
Corrosion resistance of steel and cast iron. A. W. Spitz. Chem Eng 54:135 F '47
Corrosion resistance of 27% chrome alloy recorded high in plant service tests. H. D. Newell. bibliog il Pet Processing 2:116-17+ F '47
Corrosion-resistant alloys; Chlorimet no. 2 and Chlorimet no. 3; Duriron co. Chem Ind 59:876 N '46
Economics of materials demands consideration in chemical plant construction. M. G. Fontana. Ind & Eng Chem 39:sup83A-4A F '47
Effect of small lead and silver additions on the corrosion resistance of castings of magnesium and certain of its alloys at elevated temperature and high humidity. R. R. Rogers and W. Dingley. il Electrochem Soc Trans 91 (preprint 13):203-12 '47
Fabrication notes on corrosion resistant alloys; abstract. J. C. Holmberg. Oil & Gas J 45:53 Mr 8 '47
Hydrogen peroxide; structural materials, manufacture and uses. J. S. Reichert and R. H. Pete. il Chem Eng 54:213-14+ Ap '47
Materials and finishes for tropical service. C. D. Cook and C. Merritt, jr. il Materials & Methods 25:77-80 My '47

CORROSION resisting materials—*Continued*
New strong, nonmagnetic spring material has high corrosion resistance; Elgiloy, announced by Elgin national watch co. il Materials & Methods 25:94-5 Ap '47
Nickel and high nickel alloys; corrosion. N. E. Woldman. Materials & Methods 24:1488-9 D '46
Recent developments in alloys as construction materials for severe corrosion services and uses. M. G. Fontana. Ind & Eng Chem 39:sup 101A-2A O '47
Rustless coupling for asbestos-cement pipe. F. Squires. il diags Pet Eng 18:178+ Ag '47
Scaling at high temperatures in sulfur dioxide, oxygen and nitrogen-containing atmospheres. J. H. Nicholson and E. J. Kwasney. Electrochem Soc Trans 91 (preprint 28): 419-29 '47
Selection of materials and design important for controlling galvanic or two-metal corrosion. M. G. Fontana. Ind & Eng Chem 39:sup85A-6A Jl '47
Sodium chloride versus construction materials; symposium. il Chem Eng 54:211-12+ O '47 (to be cont)
Special materials solved corrosion problems at Oak Ridge. R. J. Schrader and A. De Haan. il diags Chem Eng 53:96-101 N '46
Submerged melt welding of corrosion-resistant metals. R. J. Anderson and H. J. Roberts. il diags Welding J 26:338-42 Ap '47; Same cond. Materials & Methods 26: 89-92 Jl '47
Wet and dry chlorine vs. materials of chemical plant construction. il Chem Eng 54: 211-12+ Ja; 219-20+ F; 213-14+ Mr '47

See also
Acid handling
Acid resisting materials
Bakelite
Chemical plants—Equipment
Chromium nickel steel
Chromium steel
Corrosion and anticorrosives
Monel metal
Paint, Protective
Steel, Corrosion resisting
Steel, Stainless
Stoneware

Testing
Effect of artificial aging on tensile properties and resistance to corrosion of 24S-T aluminum alloy. H. L. Logan, H. Hessing and H. E. Francis. bibliog il charts J Res Nat Bur Stand 38:465-89 My '47

CORTICOSTERONE
Partial synthesis of dehydrocorticosterone acetate. L. H. Sarett. bibliog Am Chem Soc J 68:2473-83 D '46

See also
Desoxycorticosterone

CORUNDUM
Bear Trap corundum deposit, Madison county, Montana. J. B. Hopkins and J. Taber. 2pls U S Bur Mines Rep of Invest 4039:1-6 '47
Buck Creek corundum, Clay county, N.C. T. J. Ballard. 5pls U S Bur Mines Rep of Invest 4052:1-34 '47
Corundum Hill mine, Macon county, N.C. T. J. Ballard. 3pls U S Bur Mines Rep of Invest 4042:1-10 '47
Gallatin corundum deposit, Gallatin county, Mont. R. D. O'Brien. 4pls U S Bur Mines Rep of Invest 4113:1-9 '47
Retreatment of corundum tailings at Craigmont. A. G. Roach. bibliog flow sheet il Can Min J 68:563-8 Ag '47

CORVETTES. See Warships

CORY corporation
Stock offered. Comm & Fin Chr 165:1453 Mr 17 '47

COSMETICS
Adaptable filler; cosmetic maker develops own machine. il Mod Packaging 20:118-19 My '47
Alginates; their use as emulsifiers and thickeners in soaps and cosmetics. N. J. Federici. Soap & San Chem 23:35+ My '47
Beauty enhanced by increased sales of face preparations. M. D. Hall. Dom Comm 35: 80-3 Ag '47
Cosmetic chemists meet. Chem & Eng N 24: 3337 D 25 '46
Cosmetic chemists study irritation. Chem & Eng N 25:1667 Je 9 '47
Cosmetic preview. il Mod Packaging 21:93-8+ S '47
Cosmetic slump. Bsns W p65-7 My 10 '47
Cosmetic tests on rabbits, rats and guinea pigs. H. Hilfer. Oil Paint & Drug Rep 151:72 F 3 '47
Cosmetics formulas of Germans described. Oil Paint & Drug Rep 151:64 F 24 '47
Cosmetics tax repeal urged by beauty and barber shop supply manufacturers and drug producers. Oil Paint & Drug Rep 151:5+ Je 16 '47
Effect of fungi on cosmetics; abstract. G. Carroll. Oil Paint & Drug Rep 150:7+ D 9 '46
Epidermal application of diethylene glycol monoethyl ether (carbitol) and some other glycols; absorption, toxicity and visceral damage. P. J. Hanzlik and others. il J Ind Hygiene 29:325-41 S '47
Plastics sell as well as hold cosmetics. il Mod Plastics 24:96-8 D '46
Private line cosmetics; Ohrbach's launches own popular-price brand. il Mod Packaging 20:97 F '47
Rise of Revlon. H. Golby. il Adv & Sell 40: 105-6+ Mr '47
Sales of skin creams mount to new highs. M. D. Hall. il Dom Comm 35:44-8 F '47
Say it with flowers; AMC's new cosmetic private brand floral design. il Mod Packaging 20:139 Jl '47
Survey shows use of beauty aids by Iowa farm women. Ptr Ink 221:70 O 24 '47
Toiletries tax revision opposed by Treasury. Oil Paint & Drug Rep 152:5+ O 13 '47
Trans-World promotion wins splashy retail support for Dorothy Gray; new fabric color, new lipstick color, tie in with dress designs. B. Carpenter. il Sales Management 58:42-4 Mr 15 '47

See also
Hair preparations
Lotions
Nail polishes
Toilet goods association

Study and teaching
Business publication trains retail sales personnel; Beauty Fashion magazine establishes a cosmetic school. E. M. Housman. Ptr Ink 217:46-7 N 22 '46
Cosmetic chemistry courses urged; abstract. C. P. Wimmer. Oil Paint & Drug Rep 150: 5+ D 9 '46

COSMIC physics

See also
Astrophysics
Universe

COSMIC rays
Additional cosmic ray measurements with the V-2 rocket. S. E. Golian and others. Phys R 70:776-7 N 1 '46
All-metal fast Geiger counters for cosmic-ray research. V. H. Regener. diags R Sci Instr 18:267-70 My '47
Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46
Compatibility of primary protons with the atom-annihilation hypothesis. H. Turner. Phys R 72:512-13 S 15 '47
Cosmic radiation and cancer. F. H. J. Figge. Science 105:323-5 Mr 28 '47; Discussion. S. A. Korff. 105:645 Je 20 '47
Cosmic radiocarbon and natural radioactivity of living matter. A. V. Grosse and W. F. Libby. Science 106:88-9 Jl 25 '47
Cosmic ray measurements. Electronics 19: 214+ D '46
Determination of the sign and the energy spectrum of primary cosmic radiation. M. S. Vallarta and others. bibliog Phys R 71: 393-8 Ap 1 '47
Distribution of neutrons in the atmosphere. H. M. Agnew and others. bibliog Phys R 72:203-6 Ag 1 '47
Electronics for cosmic-ray experiments. B. Howland and others. diags R Sci Instr 18: 551-6 Ag '47
Further cosmic-ray experiments above the atmosphere. S. E. Golian and E. H. Krause. diag Phys R 71:918-19 Je 15 '47

COSMIC rays—*Continued*
Geiger-Mueller counter detection of light radiation from the paths of high energy articles. P. B. Weisz and B. L. Anderson. diags Phys R 72:431-2 S 1 '47
Inyokern cosmic ray studies. Chem & Eng N 25:299 F 3 '47
Magnetic field of the Milky way and its effect on cosmic radiation. M. S. Vallarta. Phys R 72:519 S 15 '47
Mass and the disintegration products of the mesotron. C. D. Anderson and others. bibliog il Phys R 72:724-7 O 15 '47
Mass of cosmic-ray mesotrons. W. B. Fretter. bibliog il diags Phys R 70:625-32 N 1 '46
Mass of the mesotron as determined by cosmic-ray measurements. D. J. Hughes. bibliog Phys R 71:387-92 Ap 1 '47
Non-primary cosmic-ray electrons above the earth's atmosphere. G. J. Perlow and J. D. Shipman, jr. Phys R 71:325-6 Mr 1 '47
Primary cosmic-ray protons and the atom-annihilation hypothesis. R. A. Millikan and others. Phys R 72:513 S 15 '47
Production of cosmic-ray mesotrons by primary protons. M. Schein and J. Steinberger. Phys R 72:734-5 O 15 '47
Production of helium in meteorites by cosmic radiation. C. A. Bauer. Phys R 72:354-5 Ag 15 '47
Production of nucleons by the cosmic radiation. S. A. Korff and B. Hamermesh. bibliog Phys R 71:842-5 Je 15 '47
Production process of mesons. V. F. Weisskopf. Phys R 72:510 S 15 '47
Proposed focusing cosmic-ray telescope. W. T. Harris. diags Phys R 71:310-13 Mr 1 '47
Pulse timing circuit for cosmic-ray research. H. K. Ticho. il diags R Sci Instr 18:271-8 My '47
Radiocarbon from cosmic radiation. E. C. Anderson and others. Science 105:576-7 My 30 '47
Solar magnetic field and diurnal variation of cosmic radiation. H. Alfvén. bibliog Phys R 72:88-9 Jl 1 '47
Three unusual cosmic ray increases possibly due to charged particles from the sun. S. E. Forbush. bibliog Phys R 70:771-2 N 1 '46
Transition effects of the soft component of cosmic rays. S. N. Vernov and O. N. Vavilov. bibliog diag Phys R 70:769-70 N 1 '46
Two-meson hypothesis. R. E. Marshak and H. A. Bethe. bibliog Phys R 72:506-9 S 15 '47

See also
Mesotrons

Azimuthal effect

Azimuthal variations of cosmic radiation at Lahore. P. S. Gill. Phys R 71:398-9 Ap 1 '47

Components

Disintegration of slow mesons stopped in an iron plate. M. Conversi and O. Piccioni. bibliog diags Phys R 70:874-81 D 1 '46
Note on the proton hypothesis of the primary component of cosmic rays. N. Arley. bibliog Phys R 70:975-6 D 1 '46
Origin of the soft component of cosmic radiation. W. Heitler and S. Power. bibliog Phys R 72:266-72 Ag 15 '47

Intensity

Barometric coefficient of cosmic-ray intensity. M. Kidnapillai. Phys R 72:518 S 15 '47
Fine structure of zenithal curves of the cosmic radiation. G. Cocconi and V. Tongiorgi. bibliog Phys R 70:850-2 D 1 '46
Latitude effect of the hard component as a function of altitude. P. S. Gill and others. bibliog diag Phys R 72:733 O 15 '47

Ionization effects

Generation in paraffin of ionizing penetrating particles by a neutral component of the cosmic radiation. C. Milone and V. Tongiorgi. diags Phys R 72:735-6 O 15 '47
Transition effect for large bursts of cosmic-ray ionization; chamber covered by thin plates of lead, iron, and magnesium. C. G. Montgomery and D. D. Montgomery. bibliog Phys R 72:131-4 Jl 15 '47

Showers

Altitude dependence of high energy atmospheric showers. H. L. Kraybill and P. J. Ovrebo. Phys R 72:351 Ag 15 '47
Auger showers and the comets. V. Rojansky. Phys R 71:552 Ap 15 '47
Burst production by penetrating cosmic-ray particles. H. Bridge and others. diag Phys R 72:257-8 Ag 1 '47
Cosmic-ray bursts in an unshielded chamber and under one inch of lead at different altitudes. H. Bridge and B. Rossi. Phys R 71:379-80 Mr 15 '47
Density spectrum and the origin of extensive atmospheric cosmic-ray showers. G. Cocconi. Phys R 70:975 D 1 '46
Density spectrum of the extensive cosmic-ray showers of the air. G. Cocconi and others. diags Phys R 70:841-6 D 1 '46
Energy spectrum of cascade electrons. I. Tamm and S. Belenky. bibliog Phys R 70:660-4 N 1 '46
Experimental and theoretical evaluation of the density spectrum of extensive cosmic ray showers. G. Cocconi and others. Phys R 70:846-9 D 1 '46
Lateral extension of Auger showers. D. V. Skobeltzyn and others. diag Phys R 71:315-17 Mr 1 '47
Penetrating cosmic ray bursts. E. P. George and L. Janossy. diag Phys R 70:773 N 1 '46
Penetrating particles in air showers. G. Cocconi and others. diags Phys R 70:852-4 D 1 '46
Showers of penetrating particles at altitude of 26,000 feet. G. Wataghin. diag Phys R 71:453 Ap 1 '47
Theoretical evaluation of the size-frequency curve of extensive cosmic-ray showers. G. Cocconi. bibliog Phys R 72:350-1 Ag 15 '47
Transition effect for large bursts of cosmic-ray ionization; chamber covered by thin plates of lead, iron, and magnesium. C. G. Montgomery and D. D. Montgomery. bibliog Phys R 72:131-4 Jl 15 '47

COST
Cost reductions needed to bar additional price increases. Iron Age 160:100-1+ Jl 31 '47

See also
Cost accounting
Cost of living
Factory costs
Labor cost
Power cost
Sales costs
also subdivision Cost, Cost of operation, and Costs under special subjects, e.g. Building—Cost; Locomotives—Cost of operation; Marketing—Cost; Railroads—Costs

COST accounting
Accountants ignore economic costs. A. R. Wells. Comm & Fin Chr 165:2977+ Je 5 '47
Accounting in the shoe manufacturing industry. L. E. Zraick. J Account 82:482-9 D '46
Accurate cost control systems ensure economical construction operations. A. O. Babb. il Civil Eng 17:467-71 Ag '47
Active participation in cost estimating is recommended for production executives in chemical industry. W. von Pechmann. Ind & Eng Chem 39:sup93A-4A Ja '47
Budgetary control of manufacturing and commercial expense. J. B. Heckert. N A C A Bul 28:869-80 Mr 15 '47
Calculating payout time for equipment investments. W. H. Buell. Chem Eng 54:97 O '47
Concepts of cost, past and present. T. Lang. N A C A Bul 28:1377-90 Jl 15 '47
Continuous information on net income development. H. Meyerheim. Dun's R 55:18-20+ My; 18-20+ Je '47
Control of major maintenance expense. T. F. Bradshaw. N A C A Bul 28:747-56 F 15 '47
Control system helps cut operating costs; Spartan petroleum co. F. C. Sturtevant. il Nat Pet N 38:23-4+ N 27 '46
Cost accounting for contract drilling; accounting objectives of American association of oilwell drilling contractors. L. Breckenridge. N A C A Bul 28:438-51 D 1 '46
Cost accounting for food processors. W. E. Mayhew. N A C A Bul 28:647-68 F 1 '47
Cost accounting plan for county roads. Roads & Sts 90:97-9 Ag '47

COST accounting—*Continued*
Cost accounting retail grocery stores. J. R. Bromell. Dom Comm 35:23-8 F '47
Cost accounting's role in management. F. J. Carr. N A C A Bul 28:962-70 Ap 1 '47
Cost control for motor carrier operations. A. C. Kahl. N A C A Bul 29:213-22 O 15 '47
Cost keeping, a barometer of expense for truck operators. H. Ridder. Nat Pet N 39: 26-7+ My 28 '47
Costs for management decisions. E. M. Hicks. N A C A Bul 28:1471-83 Ag 1 '47
Costs for planning purposes. W. A. Holt. N A C A Bul 28:1532-6 Ag 15 '47
Costs for plans and policies. W. W. Miller. N A C A Bul 29:55-64 S 15 '47
Costs in relation to production runs. R. E. Staunton. N A C A Bul 28:1117-27 My 15 '47
Current trends in cost accounting. F. E. H. Gates. Pulp & Pa of Can 48:65-7 Je '47
Detail expense reports that spotlight excess spending. J. Turner. il Am Bsns 17:12-13+ Ag '47
Developments in cost control. W. P. Fiske. N A C A Bul 29:65-73 S 15 '47
Does cost finding pay the agency? L. W. Ellis. Ptr Ink 220:34-5 Ag 22 '47
Establishing a normal operation in a gray iron jobbing foundry. A. E. Grover. Foundry 75:92-3+ Ag '47
Estimating costs of economic changes. E. M. Voorhees. Comm & Fin Chr 164:2665+ N 21 '46
Graphic system to control costs; Cribben & Sexton company. J. Turner. il Am Bsns 17: 8-9+ Ap '47
How modified cost systems vary agency overhead. L. W. Ellis. Adv & Sell 40:64+ S '47
How to sell advertising to management; prove that advertising techniques can reduce distribution costs. C. S. Wilkinson. Ptr Ink 217:35-7 N 22 '46
How we developed control of research and development costs. G. L. Smith. N A C A Bul 29:279-89 N 1 '47
Keeping maintenance costs in line with forecasts; Hercules powder company. J. G. Christfield. il Factory Management 105:129-32 Ja '47
Methods of distribution cost analysis. H. I. Arenson. N A C A Bul 29:13-24 S 1 '47
Picturing production costs; a formula approach; determining machine-hour rates without the use of a burden ledger. H. Kilborn. il diags Dun's R 55:16-19+ F '47
Post-war future of the cost accountant. F. E. Wood. Pulp & Pa of Can 48:68-9 S '47
Price and cost; restatement of fully amortized war facilities. J. L. Dohr. J Account 83:11-15 Ja '47
Principal factors in the costing of papermaking. C. H. Barker. Pulp & Pa of Can 48:50-8 Ag '47
Process equipment cost estimation; indexes in the plant cost picture. Chem Eng 54: 109-11 My '47
Production cost accounting for the concrete products plant. P. M. Clement. Concrete 55:30-2 Je '47
Profit-volume relationship. C. H. Gleason. N A C A Bul 28:1330-51 Jl 1 '47
Profits aren't that high; compute profits on replacement rather than actual costs. M. J. Wasserman. Comm & Fin Chr 166:1105+ S 18 '47
Research, experimental, and patent development expenses. J Account 83:499-500 Je '47
Research; the key to improved industrial accounting. R. P. Marple. N A C A Bul 28: 531-9 Ja 2 '47
Should unusual costs be allocated to period rather than product? H. T. McAnly. J Account 83:426-35 My '47
Simplified cost-accounting check system for drilling contractors. R. E. White. Oil & Gas J 46:153-4+ O 11 '47
Study on estimating and bidding; company engaged in iron and steel fabrication for the construction industry. Dom Comm 35: 77-9 F '47
Teaching the break-even chart. C. E. Bullinger. J Eng Educ 37:228-33 N '46
Teamwork; accounting and management; paper converting plant. K. H. Bergstrom. N A C A Bul 28:550-9 Ja 2 '47
That sleeping giant in your cost system can do a big job for you. W. L. Liggett. Inland Ptr 119:46-7 S '47
Three-form cost control; Illinois tool works, Chicago. E. F. Sharpe. Factory Management 104:98-9 O '46
Variable budgets in the control of costs. T. D. Foy. N A C A Bul 29:267-78 N 1 '47
What cost accounting means to a production executive. W. K. Bailey. N A C A Bul 28: 851-8 Mr 15 '47
What foremen should know about costs. R. J. Spence. Am Mach 91:130 My 22 '47
What is packaging cost? il Mod Packaging 20: 100-3 D '46

See also
Budget, Business
Contracts, Government—Accounting
Depreciation
Factories—Accounting
Foundry accounting
Inventories—Accounting
Labor cost—Accounting
Machinery, Replacement of
Material control
Obsolescence
Payrolls—Accounting
Power plants—Accounting
Sales costs—Accounting

Bibliography

Classified cost accounting bibliography. A. L. Prickett, comp. (Indiana business studies, 29) 463p pa $2 Indiana univ, School of business, Bloomington '46

History

Quarter century of cost accounting progress. J. H. Jackson. N A C A Bul 28:1201-9 Je 1 '47

Standard costs

Controlling expenses and losses by cost accounting. T. R. Hosick. J Account 83:308-12 Ap '47
Needed; standard cost estimating data for the process industries. H. Eckhardt. Chem Eng 53:104-5 S '46; Discussion. 53:156-7 N '46
Standard cost system, postwar model. W. E. Perry. N A C A Bul 28:941-61 Ap 1 '47
Standard costs fundamentals. Factory Management 105:146, 148 Jl '47

COST of living
Adjustment of wages to changes in the cost of living. F. Lutz. Mo Labor R 63:733-43 N '46
Cost of living. Nat City Bank p134-7 D '46
Half of voters fix blame for today's high prices; Gallup poll. Iron Age 159:117 Je 19 '47
Most of us keep places on inflation treadmill; rise in income holds costs of essentials down to prewar proportions. M. B. Roberts and O. Fuerst. Barron's 27:7 O 13 '47
Relation of water rates to living costs. F. C. Tolles. Am Water Works Assn J 39:115-18 F '47
What the factory worker really thinks about the cost of living, wages, and strikes; third annual survey. Factory Management 104: 81-8 O '46

See also
Budget, Household
Food—Prices
Prices
Rent
Standard of living

Statistics

Consumers' price index at 26 year high National conference board reports. Comm & Fin Chr 165:1364 Mr 10 '47
Consumers' price index, 1941-March, 1947; graphs. Survey of Cur Bsns 27:2 My '47
Cost of living; passing of the 33-year old index number. Economist 152:447 Mr 29 '47
Cost of living, United States, Canada, United Kingdom, Germany, Netherlands, Switzerland, 1934-1945 and monthly Dec. 1945-Nov. 1946. Fed Res Bul 33:111 Ja '47 [cont monthly]
Economic theory of cost of living index numbers. M. J. Ulmer. Am Stat Assn J 41:530-42 D '46
Index falls behind; BLS will be two months late. Bsns W p 18 S 27 '47

COST of living—Statistics—*Continued*

Index numbers of cost of living and food prices in various countries, yearly 1929-1945; monthly Dec. 1945-Dec. 1946. Int Labour R 55:168-75 Ja-F '47 [cont quarterly]

New yardstick for cost of living. Economist 152:971 Je 21 '47; For Comm W 28:17 Ag 9 '47; Mo Labor R 65:195-6 Ag '47

Prices and cost of living. Published in Monthly labor review

What's happening to the cost of living; monthly statistics. Published in Business week

Canada

Cost of living index numbers for Canada, 1913-1946. 17p pa 25c Canada. Dominion bur. of statistics, Ottawa '47

China

Living costs in Shanghai show continued rise. For Comm W 28:13 Ag 9; 17 S 27 '47

Latin America

Latin American price indexes. For Comm W 26:33 Ja 4 '47 [cont monthly]

Philippine Islands

Living costs as of the end of January 1947. For Comm W 27:19 Ap 5 '47

San Francisco

Food for four income levels; prices for San Francisco, September 1946. R. Okey and others. 45p pa 75c Univ. of Calif, Heller committee for research in social economics, Berkeley '46

Quantity and cost budgets for dependent families or children; prices for San Francisco, September 1946. 56p pa 75c Univ. of Calif, Heller committee for research in social economics, Berkeley '46

Southern states

Living costs in large cities in the South. F. C. Mann. Mo Labor R 63:526-34 O '46

United States

C. of L. restudied in Labor dept. survey. Bsns W p78 Ag 30 '47

Housing and fuel expenditures of city families. D. I. South. Mo Labor R 64:868-77 My '47

Money and real weekly earnings during defense, war, and reconversion periods. M. Derber and S. Netreba. Mo Labor R 64:983-96 Je '47

National industrial conference board reports 0.5% rise in consumers price index. Comm & Fin Chr 166:817 Ag 28 '47

COST of living bonus. See Wage payment plans—Cost of living bonus

COSTA RICA

Commercial policy

Regulations substituting commercial invoices for consular invoices to be rigidly enforced. For Comm W 26:12-13 Mr 29 '47

Economic conditions

News by countries. For Comm W 25:21 N 9; 28-9 D 7 '46; 26:18-19 Ja 4; 12-13 F 8; 16-17 Mr 8; 27:13-14 Je 7; 28:14 Ag 9; 29:12 O 11 '47

COSTAIN, Richard, limited

Statement by the chairman. R. R. Costain. Economist 152:693 My 3 '47

COSTUME

Costume institute reopens at the Met. Textile Col 68:24+ D '46

COSTUME jewelry. See Jewelry

COTTAGES

See also
Country houses

COTTER pins

Valve split cotters; unusual tooling on Wickman five-spindle automatics. il diag Automobile Eng 37:337-8 S '47

COTTON

Cotton production more efficient because of machinery-chemical teamwork. Sci Am 176:159-60 Ap '47

Effect of vat dyes on the rate of oxidation of cotton by hypochlorite solutions. D. A. Clibbens and A. H. Little. Textile Inst J 37:T219-26 O '46

Outer wall of cotton and its influence on fibre properties; abstract. T. Kerr. Soc Dyers & Col J 62:356 N '46

Place of cotton as a textile raw material. J. W. Wright. Textile World 96:149+ N '46

Production and characteristics of the world's cotton crops. E. Lord. bibliog maps Textile Inst J 37:T151-79; 38:T167-211 Ag '46, Ap '47

See also
Bleaching—Cotton
Cellulose
Cotton carding and other headings beginning Cotton
Cottonseed oil
Dyes and dyeing—Cotton
Vulcanized fiber

Analysis

Determination of residual silica on cotton in peroxide bleaching. B. DuBose and V. B. Holland. Am Dyestuff Rep 36:227-8 My 5 '47

Fires and fire protection

Cutting cotton bale fires; dusting surfaces with sodium bicarbonate powder. W. E. Peterson. East Underw 48:22 Ag 15 '47; Same cond. Nat Underw 51:9 Ag 14 '47

Mineral content

How the mineral content of cotton can affect beam dyeing with vat colors. Am Dyestuff Rep 36:104-7 Mr 10 '47

Moisture content

Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65:Trans 791-7 D '46

Prices

Cotton prices being pressed down, but may rebound. Barron's 27:28 Ap 14 '47

Testing

New dye technique shows maturity of cotton. C. F. Goldthwait and others. il Textile World 97:105-8+ Jl '47

Uses

See also
Cotton fabrics—Uses

Egypt

Production and characteristics of the world's cotton crops. E. Lord. bibliog maps Textile Inst J 38:T167-211 Ap '47

COTTON, Effect of light on

Action of light on dyed and undyed cotton. G. S. Egerton. bibliog diags Soc Dyers & Col J 63:161-7 Je '47; Same. Am Dyestuff Rep 36:561-7 O 6 '47; Discussion. Soc Dyers & Col J 63:167-71 Je '47; Am Dyestuff Rep 36:567-70+ O 6 '47

COTTON, Insulating

See also
Cellulose—Electric properties

COTTON bags

Increased popularity of paper shipping sacks. R. W. Lahey. Chem & Eng N 25:2854 S 29 '47

Paper vs. cotton bags. Bsns W p44-5 S 13 '47

Salvaging bags by air cleaning. il diags Sheet Metal Worker 38:49-52 O '47

Textile bags; plastic treatment and laminations. il Mod Packaging 20:140-2 My '47

COTTON carding

Carding details need close attention; spring meeting of the Textile operating executives of Georgia. Textile World 97:137+ My '47

Carding techniques are undergoing change; meeting of Alabama textile operating executives. Textile World 97:127+ F '47

Cotton mills analyze card-stripping methods. il diag Textile World 97:141+ Mr '47

Erwin mechanizes card-room cleaning. E. M. Holt. il Textile World 96:125+ D '46

COTTON cleaning
Effect of cleaning on grade and color of cotton. D. Nickerson. Textile World 97: 130-1+ Ag '47
See also
Cotton scouring

COTTON combing
Cotton comber, a blueprint to quality. C. D. Welch. il Textile World 97:108-10+ My '47

COTTON cords
Moisture transfer to and from tire cords encased in GR-S. W. J. Lyons and others. il India Rubber World 116:199-204+ My '47

COTTON dust
Air contamination in cotton textile processes. L. Silverman. il Nat Safety N 55:24-6+ Ap '47
Byssinosis in the cotton trade; abstract. C. I. C. Gill. Nat Safety N 56:58 S '47

COTTON exchanges
Government limits cotton futures holdings. Comm & Fin Chr 165:1981 Ap 10 '47
Government's case for reducing cotton futures speculative limits. Comm & Fin Chr 164:3266 D 19 '46
See also
New York cotton exchange

COTTON fabrics
Construction of fabrics for specific purposes. G. E. Collins. fold pl Textile Inst J 37: P392-402 Jl '46
Cooperation in cottons important to fabric houses. W. J. Fullerton. Textile Col 69:25 Ag '47
Cotton is a winter fabric. M. Herzog. il Textile Col 69.24-5 O '47
Maid of cotton goes to France. il Textile Col 69:26-7+ My '47
Pilot-plant bleaching of cotton fabrics. J. H. Kettering and W. N. Berard. bibliog il Am Dyestuff Rep 36:552-4 O 6 '47
Resin treatment of fabric for shrink prevention and permanent starching; Koloc and Kandar. G. R. Vila. il Mod Plastics 24:118-20 Ap '47
What news of printed cotton shirtings? D. Langenzen. Textile Col 67:18-19 F '47
See also
Cotton bags
Cotton finishing
Cotton weaving
Duck (textile)
Dyes and dyeing—Cotton
Terry fabrics
Tire fabrics

Protection
Composition and function of flame-resistant treatments for textiles. R. W. Little. Am Dyestuff Rep 36:135-9 Mr 24 '47
Determination of hexachlorocyclohexane in impregnated cloth. J. Goldenson and S. Sass. Anal Chem 19:320-2 My '47
Determination of 1,2,3,4-tetrahydro-2-naphthol in impregnated clothing. J. Goldenson and S. Sass. bibliog Anal Chem 19:322-4 My '47
Factors affecting the development of mould on cotton fabrics and related materials. W. I. Illman and M. W. Weatherburn. bibliog il Am Dyestuff Rep 36:343-4+ Je 30 '47
Fire-resistant agents reduce flame danger in cottons. R. J. Taylor and M. Dishman. il Textile World 97:113+ Ap '47
Flameproofing of cotton fillers in plastic laminates. S. Williams and others. Mod Plastics 24:151-3+ Mr '47
Fundamental aspects of the prevention of the microbiological degradation of cotton textiles. R. G. H. Siu. Am Dyestuff Rep 36: 320-3 Je 16 '47

Rayon mixtures
See Rayon fabrics—Cotton mixtures

Shrinkage
Dimensionally stable cellulosic fabrics. G. Landells. il Textile Inst J 37:P317-29; Discussion. P330-6 Jl '46
Shrinkproofing cellulosic fabrics; patent. Am Dyestuff Rep 36:337 Je 16 '47

Testing
Accelerated ageing of cotton textiles. K. H. Barnard. Am Dyestuff Rep 36:33-4 Ja 27 '47
Degradation of untreated cotton fabrics exposed to weather in a sub-tropical climate. J. D. Dean and R. K. Worner. bibliog il Am Dyestuff Rep 36:405-10+ Jl 28 '47
Puncture and tearing tests for heavy fabrics intended for wagon covers. J. Hayes. diags 2pl Textile Inst J 38:T1-10 Ja '47
Recent advances in abrasion testing of textiles. F. R. Dean. bibliog Textile Inst J 37:P380-9; Discussion. P389-91 Jl '46
Water repellency of cotton fabrics permeable to air; report on a study of the Bundesmann test. Textile Inst J 38:S5-14 F '47

Uses
Cotton fabric in bituminous construction. P. F. Critz. il Pub Roads 24:251-60 O '46; Same cond. Roads & Bridges 84:59-64+ D '46
Textile development and its application to laminated plastics. R. A. Bettridge. Textile Inst J 37:P226-37 Jl '47

Water resistance
Evaluation of various water repellent treatments on twenty-three cotton fabrics. G. Smith and H. A. Wellington. Rayon 28: 332-4, 371-3, 423-6 Je-Ag '47
New rain tester. il Rayon 28:235 Ap '47
Preparation of substituted acetoxy silanes. H. A. Schuyten, J. W. Weaver and J. D. Reid. bibliog Am Chem Soc J 69:2110-12 S '47
Some chemical aspects of the application of velan PF to cotton fabrics. F. V. Davis. Soc Dyers & Col J 63:260-3 Ag '47
Water repellency of cotton fabrics permeable to air; report on a study of the Bundesmann test. Textile Inst J 38:S5-14 F '47

COTTON fibers
Density and refractivity of cellulose fibres in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47
Fiber properties determine combed-yarn quality. R. W. Webb and H. B. Richardson. Textile World 97:145+ O '47
Instrument for measurement of forces operating between fibres during drafting. J. G. Martindale. il diags Textile Inst J 38:T151-66 Mr '47
Microbalance for weighing textile fibres. E. Lord. il Textile Inst J 38:T84-92; Discussion. T92-3 F '47
New dye technique shows maturity of cotton. C. F. Goldthwait and others. il Textile World 97:105-8+ Jl '47

Testing
Mill technicians can use fiber-test data. P. M. Thomas. Textile World 97:120-2 Je '47
Photo-electric method for measuring the staple length of cotton. E. Lord. diag Textile Inst J 37:T237-59, pl 1-2 N '46

COTTON finishing
Cellulose zincate solutions used in transparentizing printing operations; patents. Am Dyestuff Rep 36:367 Je 30 '47
Electronic straighteners use two different systems. D. Eldred. il diags Textile World 97:123+ O '47
Fabric finishing. R. W. Powell. Textile World 96:218+ N '46
Materials-handling used in extracting and drying. il Textile World 97:143 O '47
100 years of cotton finishing. R. Corby. il Textile Col 69:24-5+ My '47
Process cuts wrinkling in cotton fabrics; Monsanto's Resloom C. Bsns W p43 S 6 '47
Resin treatment of fabric for shrink prevention and permanent starching; Koloc and Kandar. G. R. Vila. il Mod Plastics 24: 118-20 Ap '47
Some chemical aspects of the application of velan PF to cotton fabrics. F. V. Davis. Soc Dyers & Col J 63:260-3 Ag '47
Some trends in the continuous processing of cellulosic textiles. R. G. Fargher. Textile Inst J 38:P219-22 Jl '47
Starchless finish cottons. J. T. Miller. Textile Col 69:30-1 My '47
Treating cotton. S. Coppick. Textile World 97:197-8 Ja '47
See also
Cotton sizing

COTTON futures. See Cotton exchanges

COTTON growing
Special cottons for specific end-uses through research. T. R. Richmond. Rayon 28:373-5 Jl '47

COTTON insurance. See Insurance, Cotton

COTTON linters
Nitrations of swollen and collapsed cotton linters. R. K. Brown and C. B. Purves. bibliog Pulp & Pa of Can 48:100-7 My '47

COTTON machinery
Mile-a-minute traveler must be right. S. Carter. il diags Textile World 97:161+ S '47
New machine dyes, sizes, beams continuously. diags Textile World 97:143 Ag '47
Uniform yarns are made by modern machines. J. J. Mills. il Textile World 97:143+ Je '47
Warp costs cut by continuous dyeing slasher. W. A. Newell. il Textile World 97:155+ S '47

See also
Cotton combing
Cotton picking machines

COTTON manufacture
Carding details need close attention; spring meeting of the Textile operating executives of Georgia. Textile World 97:137+ My '47
Cotton flow chart. Textile World 97:101-20 Ja '47
Denkendorf reports disclose advanced German technology. diags Textile World 97:135+ Mr '47
Visit to U.S.A. H. G. Greg and A. F. W Coulson. Textile Inst J 38:P15-23 Ja '47

See also
Cotton carding
Cotton combing
Cotton finishing
Cotton mills
Cotton sizing
Cotton spinning
Cotton weaving
Cotton yarn

COTTON mills
Carded yarn makers move to maintain orderly market. J. A. Daly. Manuf Rec 115:42+ N '46
New method cuts time to install loom parts. il Textile World 97:118-19 O '47

Accidents
Accident frequency as related to a good safety record. C. A. Anderson. Textile World 96:127+ N '46
Systematic records and follow-up in accident-prevention work; Brandon corp. A. C. Phelps. Textile World 96:129+ N '46

Accounting
Labor cost determination and control in a cotton textile mill. J. D. Duskin. N A C A Bul 29:131-44 O 1 '47

Air conditioning
Air conditioning and dust and fly control. C. V. Ward. Textile Inst J 38:P442-3 S '47
Air conditioning pays off in four southern mills. il Textile World 97:111-13 Ag '47
Air contamination in cotton textile processes. L. Silverman. il Nat Safety N 55:24-6+ Ap '47
Modern humidification installed in Lonsdale mills. il Textile World 96:118-19 N '46
Pacolet refrigerates spinning room air-conditioning. C. M. Bowden. il Textile World 97:120-1+ Jl '47

Cleaning
Erwin mechanizes card-room cleaning. E. M. Holt. il Textile World 96:125+ D '46
What are the qualifications of card-room cleaners? Textile World 97:178+ O '47

Costs
Materials-handling cost offers opportunity for savings. C. M. Bowden. il diag Textile World 97:121-3+ Ja '47

Electric equipment
Electronic warper drive gives constant yarn speed. R. J. Demartini. il diag Textile World 97:121+ Ap '47

Employees
Byssinosis in the cotton trade; abstract. C. I. C. Gill. Nat Safety N 56:58 S '47
Hygiene problems in the textile industry. J. W. Hammond. il Safety Eng 93:66-9 My '47
Textile mills start manhunt; cotton firms flourishing. Bsns W p21 F 8 '47
Union agreements in the cotton-textile industry. il U S Bur Labor Statistics Bul 885: 1-64; pa 20c Supt. of doc. '46; Same cond. Mo Labor R 62:413-23 Mr '46
Wage structure in cotton-textile mills, April-May, 1946. K. B. Mohn. Mo Labor R 64:454-61 Mr '47

Equipment
Better handling methods offer large savings. W. B. McGuire. diags Textile World 97: 117+ F '47
Coal silo increases boiler-room efficiency: Dixie mercerizing co. E. D. White. il diags Textile World 97:139+ S '47
Conveyor cuts handling and saves floor space. H. R. Moore. il Textile World 97:143+ Jl '47
Conveyor steamer speeds preparation of cotton goods. C. N. Rabold. il diag Textile World 97:104+ Jl '47
Efficiency and flexibility offered by finishing ranges. C. N. Rabold. diags Textile World 97:106-11 O '47
Improvements and new buildings highlight textile projects. il Textile World 97:123+ Mr '47
Materials-handling used in extracting and drying. il Textile World 97:143 O '47
Mechanical handling saves money and labor; Avondale mills. P. M. Thomas. il diags Textile World 96:118-21 D '46
New opener room designed for best cleaning; Swift mfg. co. E. A. Bentley. il diag Textile World 97:104-5+ Ap '47
Textiles move on wheels; American yarn processing co.'s motor division. C. M. Bowden. il Textile World 97:131+ F '47
Twist-setting installation improves mill's weaving; Pacolet mfg. co. C. M. Bowden. il diag Textile World 97:116+ My '47

Fires and fire protection
Cotton-storage practices contribute to fire losses. A. L. Brown. il Textile World 97: 100-1 Ap '47

Heating and ventilation
Hygiene problems in the textile industry. J. W. Hammond. il Safety Eng 93:66-9 My '47
Progress report on ventilation for cotton textile processes. L. Silverman and F. J. Viles, jr. il diags Heat & Ven 44:83-90 O '47

Management
Technical control means better tire cord. C. M. Bowden. il diag Textile World 96: 122-3+ N '46

Power
Electric power in the cotton industry. S. A. Bobe. il Elec Eng 66:662-6 Jl '47
Power distribution in textile plants. J. D. McConnell. Elec Eng 66:667-9 Jl '47
Small duct change triples fan life, raises steam output 24%. J. Cassie. diags Power Pl Eng 51:78-80+ Mr '47

COTTON picking machines
Allis-Chalmers goes South; Rust cotton-picker. Bsns W p 18 My 24 '47
Cotton mechanization goes to work on the South. J. V. Sherman. Barron's 27:11 F 24 '47

COTTON printing. See Calico printing

COTTON research
Action of light on dyed and undyed cotton. G. S. Egerton. bibliog diags Soc Dyers & Col J 63:161-7; Discussion. 167-71 Je '47
Construction of fabrics for specific purposes. G. E. Collins. fold pl Textile Inst J 37: P392-402 Jl '46
Dan River completes research organization. C. M. Bowden. il plan Textile World 97: 104-6 Mr '47
Density and refractivity of cellulose fibres in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47
Fundamental aspects of the prevention of the microbiological degradation of cotton textiles. R. G. H. Siu. Am Dyestuff Rep 36: 320-3 Je 16 '47

COTTON research—*Continued*
Improved equipment and methods for fluidity measurements of cellulose and cellulose acetate. D. S. Lyle and F. K. Ray. bibliog il diags Am Dyestuff Rep 36:123-7 Mr 10 '47
Special cottons for specific end-uses through research. T. R. Richmond. Rayon 28:373-5 Jl '47

COTTON scouring
Conveyor steamer speeds preparation of cotton goods. C. N. Rabold. il diag Textile World 97:104+ Jl '47

COTTON sizing
Alabama mill men explore slashing practices. il Textile World 97:139+ Jl '47
Can improve slashing and weaving, Georgia mill men say. il Textile World 96:133+ D '46
Permanent sizes approved by test in QM project at ITT. il Textile World 97:122-3 F '47
Warp costs cut by continuous dyeing slasher. W. A. Newell. il Textile World 97:155+ S '47

COTTON spinners
Interim report of the joint advisory committee of the cotton industry; mule spinners' cancer and automatic wiping-down motions. diags Textile Inst J 38:P5-14 Ja '47
Oiling of mule spindles. W. S. Moore. Textile Inst J 38:P1-5 Ja '47

COTTON spinning
Effects of accessory influences on ring spinning of cotton and spun rayon. E. Honegger and A. Fehr. bibliog il diags Textile Inst J 38:P353-79; Discussion. P379-80 Ag '47
Fixers should know how to set builder. F. H. Gunther and M. Gross. diags Textile World 97:139+ O '47
Instrument for measurement of forces operating between fibres during drafting. J. G. Martindale. il diags Textile Inst J 38:T151-66 Mr '47
Long draft must retain fiber control. S. Carter. diags Textile World 97:108-10 Je '47
New drafting system spins yarn from card sliver. P. M. Thomas. il diag Textile World 97:126-7 Ag '47
Pacolet refrigerates spinning room air-conditioning. C. M. Bowden. il Textile World 97:120-1+ Jl '47
Pneumatic pickers speed spinning-roll cleaning. E. G. Hubbard, jr. il Textile World 96:120-1 N '46
Spinning refinements favored by Alabama mill men; meeting of Alabama textile operating executives. Textile World 97:135+ F '47
Spinning technology advanced by Georgia mills. Textile World 97:155+ My '47

COTTON textile institute
Annual meeting, New York, Oct. 23-24. Textile World 96:135+ N '46

COTTON thread
Spools of thread; shelf container a merchandising tool. M. McVickar. il Mod Packaging 21:120-2 S '47

COTTON trade
Anderson addresses Cotton Council. Chem & Eng N 25:429 F 17 '47
Bolt in cotton textiles. il Fortune 36:61-7+ Jl '47
Carded yarn makers move to maintain orderly market. J. A. Daly. Manuf Rec 115:42+ N '46
Cooperation in cottons important to fabric houses. W. J. Fullerton. Textile Col 69:25 Ag '47
Cotton balance. Bsns W p28+ Jl 5 '47
Cotton blame; Secretary Anderson says speculation caused price break. Bsns W p36+ N 23 '46
Cotton dives, but it isn't fatal. Bsns W p42+ S 13 '47
Cotton may be cheaper and more plentiful next year; squeeze is still on now. Barron's 27:28-9 Je 23 '47
Cotton prices being pressed down, but may rebound. Barron's 27:28 Ap 14 '47
Cotton retreats grudgingly. Barron's 27:37 S 8 '47
Cotton squeeze in prospect. Barron's 27:21 Mr 3 '47
Cotton-textile industry launches public-relations program. Textile World 97:149 My '47
Cotton's competition will be keen. J. L. Severance. Textile Col 69:32-3+ My '47
Little business can grow big; building a business on the products of raw cotton. R. McDaniel. il Am Bsns 17:10-11+ S '47
Plan for exports to Japan; U.S. will set up corporation to resume nearly normal cotton trade. Bsns W p 116-17 S 13 '47
Textiles battle for the consumer dollar; the part played by cotton. J. M. Reeves. Textile Col 69:16-17+ O '47

See also
Cotton exchanges
Insurance, Cotton

Advertising
How Durene achieves yarn identity in finished textile products; business papers and direct mail campaigns. il Sales Management 59:76+ S 15 '47

Exhibitions
Memphis' cotton carnival. R. Talley. il Manuf Rec 116:34-5, 69 Je '47

Securities
Fewer spindles turn faster for textile profits; investors judge today's stock values by past disasters. R. M. Bleiberg. Barron's 27:29-30 S 22 '47

Statistics
Cotton and cottonseed production, 1946. Comm & Fin Chr 165:2393 My 1 '47
Cotton ginned from crops of 1946, 1945 and 1944. Comm & Fin Chr 165:2787 My 22 '47
Ten years of cotton textiles. W. R. Bell. Rayon 28:313 Je '47

Terminology
What the raw-cotton man means; when he says—. H. P. Smith. il Textile World 96:224+ D '46

Australia
Australian cotton textile industry. Textile Inst J 38:p 125 Mr '47

Canada
Canadian cotton statistics. For Comm W 29:25 O 18 '47

Chile
Imports and domestic manufacture in 1946. For Comm W 27:28 My 24 '47
Situation in Chile. For Comm W 29:25 O 18 '47

Egypt
Egyptian cotton industry and trade. For Comm W 29:29 O 25 '47
Egyptian market conditions. For Comm W 26:26 F 8 '47

Great Britain
Can the Empire supply Lancashire? Economist 153:531-3 S 27 '47
Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46
Cotton bill debate. Economist 151:920 D 7 '46
Cotton export pattern. Economist 152:295 F 15 '47
Cotton export queries. Economist 153:338 Ag 23 '47
Cotton programme elaborated. Economist 153:494 S 20 '47
Lancashire looks up. Economist 153:248-9 Ag 9 '47
Light on spinning re-equipment. Economist 151:1012 D 21 '46
Raw cotton prices increased. Economist 153:80+ Jl 12 '47
Spinning machinery register. Economist 153:33 Jl 5 '47
State monopoly for cotton; Cotton (centralised buying) bill. Economist 151:875-6 N 30 '46

India
Cotton-industry statistics, 1946-47 season. For Comm W 28:26 Ag 9 '47
Mother India is rearing a modern textile industry. W. B. Dall. Textile World 97:107-9 S '47

COTTON trade—India—*Continued*
Report from India on textile-industry developments. J. K. Van Denburg, jr. maps Textile World 97:108-12+ S '47
Supply situation, India. For Comm W 26:29 Mr 22 '47

Italy

Cotton import regulations revised. For Comm W 29:17 N 1 '47

Southeastern states

Textile mills start manhunt; cotton firms flourishing. Bsns W p21 F 8 '47

Southern states

Cotton mechanization goes to work on the South. J. V. Sherman. Barron's 27:11 F 24 '47
Memphis' cotton carnival. R. Talley. il Manuf Rec 116:34-5, 69 Je '47

Spain

Spain has one really modern textile mill. C. S. Underwood. il map Textile World 97: 101-3 Jl '47

United States

Cotton surplus in sight. Barron's 27:37 Ag 11 '47
Disturbing factors ahead for textile industry. W. P. Jacobs. Comm & Fin Chr 166:338 Jl 24 '47
Export expansion strengthens the textile price structure. N. S. W. Vanderhoef. Textile Col 69:23 Ag '47
Must history repeat itself? S. F. Dribben. Textile Col 69:30+ S '47
Textile integration has been over estimated. Bsns W p18-19 Ap 5 '47

National cotton week

Pick cotton promotion. C. K. Everett. Textile Col 69:28-9 My '47

COTTON weaving
Attention to details can improve weaving. Textile World 97:151+ F '47
Better weaving is aim of Alabama men. Textile World 97:127+ Jl '47
Can improve slashing and weaving, Georgia mill men say. il Textile World 96:133+ D '46
Even the simple terry towel requires considerable calculation. T. Hargreaves. Textile World 96:143+ D '46
New method cuts time to install loom parts. il Textile World 97:118-19 O '47
Test of warp size is in the weaving. P. V. Seydel. il Textile World 97:125+ Je '47
Twist-setting installation improves mill's weaving; Pacolet mfg. co. C. M. Bowden. il diag Textile World 97:116+ My '47

COTTON week. See Cotton trade—United States—National cotton week

COTTON workers
Case of byssinosis. R. Bogan. Ind Med 15: 635 N '46

See also
Cotton mills—Employees

COTTON yarn
Carded yarn makers move to maintain orderly market. J. A. Daly. Manuf Rec 115:42+ N '46
Cotton comber, a blueprint to quality. C. D. Welch. il Textile World 97:108-10+ My '47
Effect of integration on combed yarns. C. T. Murchison. Textile Col 68:20-1 O '46
Fiber properties determine combed-yarn quality. R. W. Webb and H. B. Richardson. Textile World 97:145+ O '47
How Durene achieves yarn identity in finished textile products; business papers and direct mail campaigns. il Sales Management 59:76+ S 15 '47
Knitting yarns require skillful preparation. R. M. McNeal. Textile World 97:116-17+ Mr '47
New hot-air slasher installed at Avondale mills. W. E. Williams. il diags Textile World 97:133+ O '47
Plied selvage yarn aids slashing and weaving. E. G. Hubbard, jr. il Textile World 97:152+ Ja '47
Uniform yarns are made by modern machines. J. J. Mills. il Textile World 97:143+ Je '47

COTTONSEED
Cotton and cottonseed production, 1946. Comm & Fin Chr 165:2393 My 1 '47
Cottonseed extraction with isopropanol; abstract. W. D. Harris. Chem Eng 54:256+ Ag '47
Germination and free fatty acid in individual cotton seeds. C. L. Hoffpauir and others. Science 106:344-5 O 10 '47
Pigments of cottonseed; gossycaerulin, a blue quinonoid gossypol derivative occurring in cooked cottonseed. C. H. Boatner and others. bibliog Am Chem Soc J 69:668-72 Mr '47
Pigments of cottonseed; gossyfulvin, a native cottonseed pigment related to gossypol. C. H. Boatner and others. bibliog il Am Chem Soc J 69:1268-73 Je '47

Statistics

Cottonseed received and crushed and production of cottonseed products, Aug. 1-Dec. 31, 1946. Oil Paint & Drug Rep 151:73 Ja 20 '47

COTTONSEED oil

Manufacture

Arkansas plant uses solvent to extract oil from cotton seed; Delta products co. il Manuf Rec 116:41+ Ap '47
Cottonseed process developed; solvent extraction of oil. Oil Paint & Drug Rep 151: 7+ Mr 10 '47
Oil by solvent. Bsns W p68+ Je 28 '47
Solvent extraction process applied to cottonseed. N. H. Moore. flow sheet il Food Ind 19:471-3 Ap '47
Solvent extraction processes for cottonseed oil. Chem & Eng N 25:1000 Ap 7 '47
Vegetable oil; flowsheet and photographs of Delta products co, Wilson, Ark. Chem Eng 54:160-3 My '47

COTTONWOOD
Wood treatment with urea resin-forming systems (comparison with phenolic resins for making compreg). M. A. Millett and A. J. Stamm. Mod Plastics 24:159-60+ F '47

COTTRELL precipitator. See Electric precipitation

COUMARIN
Coumarins from 2-hydroxy-3-methoxybenzaldehyde. E. C. Horning and M. G. Horning. Am Chem Soc J 69:968-9 Ap '47
Effect of flavonols on the bacteriostatic action of dicoumarol. J. Naghski and others. bibliog Science 105:125 Ja 31 '47
Production of coumarin derivatives by condensation of *o*-hydroxy-aldehydes with Δβγ-angelicalactone. D. H. Marrian and P. B. Russell. Chem Soc J p753-4 Ag '46

COUMARONE. See Benzofuran

COUNCIL for inter-American cooperation, inc.
Inter-American cooperation council with Foreign Trade group; plan of affiliation. Comm & Fin Chr 165:2529 My 8 '47

COUNCIL of commerce and production, Inter-American. See Inter-American council of commerce and production

COUNCIL of economic advisers. See United States—Council of economic advisers

COUNCIL of foreign bondholders of London
Bondholders' fate; comments on annual report. Economist 152:257-8 F 8 '47

COUNTER-gravity casting. See Foundry practice

COUNTERS (electrons, ions, etc.)
Čerenkov radiation counter. R. H. Dicke. diag Phys R 71:737 My 15 '47
Counter for use in scattering and disintegration experiments. P. G. Koontz and T. A. Hall. diag R Sci Instr 18:643-6 S '47
Decade-ring scaling circuit. L. Seren. il diags R Sci Instr 18:654-9 S '47
Design of a proportional counter for gamma rays. B. B. Benson. diags R Sci Instr 17: 533-6 D '46
Diamond as a gamma-ray counter. L. F. Curtiss and B. W. Brown. diag Phys R 72: 643 O 1 '47
Diamonds used to detect atomic radiation. il Chem & Eng N 25:3100+ O 20 '47
Duralumin window beta-ray counter. W. M. Good. diags R Sci Instr 18:133 F '47

COUNTERS (electrons, ions, etc.)—*Continued*
Electronic X-ray counter. Mech Eng 69:241-2 Mr '47; il Machine Design 19:107 Mr '47
Energy sensitivity of fast neutron counters. H. H. Barschall and H. A. Bethe. R Sci Instr 18:147-9 Mr '47
Frequency meter for random or uniformly spaced pulses. H. L. Schultz. diags R Sci Instr 18:223-5 Ap '47
Gamma-ray studies of potassium salts and associated geologic formations. H. C. Spicer. In U S Geol S Bul 950:143-61, pl 3-5 '46
Hydrogen recoil proportional counter for neutron detection. J. H. Coon and R. A. Nobles. diags R Sci Instr 18:44-7 Ja '47
Integrating-difference circuit. A. Krumbein and M. Swetnick. diags R Sci Instr 18: 524-5 Jl '47
Libby screen wall counter. R Sci Instr 18:683-4 S '47
Mass spectroscopic analysis of the polyatomic gases in a fast counter. S. S. Friedland. Phys R 71:377-8 Mr 15 '47
Mean life of slow mesons. M. Conversi and O. Piccioni. bibliog diags Phys R 70:859-73 D 1 '46
Measurement of radioactive tracers; particularly C^{14}, S^{35}, T, and other longer-lived low-energy activities. W. F. Libby. bibliog diags Anal Chem 19:2-6 Ja '47
Neutron detector having uniform sensitivity from 10 Kev to 3 Mev. A. O. Hanson and J. L. McKibben. bibliog diags Phys R 72: 673-7 O 15 '47
Rise of the wire-potential in counters. S. A. Korff. bibliog Phys R 72:477-81 S 15 '47
Scattering of protons by deuterons. R. Sherr and others. bibliog diags Phys R 72:662-72 O 15 '47
Self-quenching halogen counters. R. D. Present. bibliog Phys R 72:243-4 Ag 1 '47

See also
Geiger Müller counters

COUNTING machines and devices
Batching by electronics. V. Zeluff. il diags Sci Am 176:153-5 Ap '47
Blinking lamps count operations by electronics. il Sci Am 176:121 Mr '47
Changes in load current record performance. il diag Product Eng 17:94 D '46
Electronic counters. I. E. Grosdoff. il diags RCA R 7:438-47 S '46; Abstract. Product Eng 18:131 Mr '47
Forging production readings; Flame-eye photoelectric unit. il diag Steel 120:112 Je 23 '47
Metal parts counted by electronic method. A. T. Hatton. il diag Elec World 126:130 N 9 '46
New photoelectric particle counter. Science 105:570 My 30 '47
New technique for sampling the density of housefly populations. H. I. Scudder. Pub Health Rep 62:681-6, pl 1 My 9 '47
Particle counter detects dust and bacteria in air. Sci Am 177:37-8 Jl '47; Chem Ind 60: 796 My '47
Photoelectric actuator. il Sci Am 177:80 Ag '47
Plastic makes ideal counter. il Food Ind 19: 1364 O '47
Predetermined counters. J. J. Wild. il diags Electronics 20:120-3 Mr '47
Television counters; circuits used to produce horizontal and vertical sweep frequencies at the television transmitter. E. M. Noll. diags Radio N 38:52-3+ S '47
Veeder-Root opens new plant addition. il Rayon 28:13-14 Ja '47
Wolsey photocell counting control. il Mech Handling 34:493 S '47

COUNTRY bank operations commission. See American bankers association—Country bank operations commission

COUNTRY banks. See Banks and banking—Country banks

COUNTRY houses
Built into a hillside; country house in Forestville, Va. il plans Arch Forum 86:94-7 Je '47
Connecticut hay barn remodeled into country house pleasantly free of affectation or cliché. B. Kehm. il plans Arch Forum 87: 80-2 Jl '47
Country house in the Midwest. il plans diags Arch Forum 87:104-7 O '47
House in Connecticut. il plans Arch Forum 85:88-90 D '46
House in Virginia; in-line plan achieves simplicity without monotony. il plan diag Arch Forum 85:94-5 N '46
House near Ossining, N.Y. il plans Arch Forum 87:75-7 Ag '47
Modern country home, Netarts Bay, Ore. il plans Am Bld 69:104-5 My '47
Overlooking an Indiana lake. il plans Arch Rec 100:73 D '46
Skillful additions expand a country cottage for year-round living; Ipswich, Mass. il plan Arch Forum 86:94-6 F '47
Year round house strikes urbane note in country living; Woodcliff Lake, N.J. il plans Arch Forum 87:88-92 Jl '47

COUNTRY stores

See also
Retail trade—Small town stores

COUNTY airports. See Airports, County

COUNTY engineering
County operated quarry and crusher save $30,000 yearly; Sebastian county, Ark. E. J. Roths. il Pub Works 78:15-16 My '47
New bridges pay for themselves in ten years in reduced maintenance costs; Tarrant county, Texas. il Pub Works 78:28-9 Ap '47

COUNTY engineers

Directories
County engineers, Canada. Roads & Bridges 85:154 Je '47

COUNTY roads. See Roads, County

COUPLERS, Car. See Car couplings

COUPLINGS
Flexible shafts and couplings protect high-speed gears. R. L. Benford. il diag Power 91:477-8 Jl '47
Gear-tooth couplings. R. L. Benford. il diags Machine Design 18:114-18+ D '46
How to check a shaft's coupling joints; illustrated instructions. Power 91:276 Ap '47
Overload devices for machine protection. A. F. Gagne, jr. il diags Machine Design 19: 95-100+ O '47
Small hydraulic couplings. diag Automotive & Aviation Ind 96:45 Ja 1 '47
Two indicators check coupling alignment. R. Nanni. diag Power 91:558 Ag '47
Typical methods of coupling rotating shafts. diags Product Eng 17:124-5 N; 112-13 D '46

See also
Car couplings
Hose couplings
Joints, Universal

COURTESY
Dividends from friendliness; Southern Pacific public relations campaign. J. J. O'Rourke. il Am Bsns 16:18-20+ D '46

See also
Tact

COURTS

See also
Jurisdiction

COURTS, Industrial
Courts for labor? bill to establish special judiciary is introduced in Senate. Bsns W p88 Mr 29 '47
Federal labor court; is it needed? D. R. Richberg. Comm & Fin Chr 165:605+ Ja 30 '47
New industrial relations act in Ireland. Int Labour R 54:367-8 N '46
We can and must have industrial peace; plan of a labor court. J. C. Knox. Comm & Fin Chr 165:605+ Ja 30 '47

COURTS, Motor. See Tourist camps, hostels, etc.

COVERDALE, William Hugh, 1871-
American export lines. por Fortune 36:88-93+ Ag '47

COVERLETS
Bedspread Boulevard; tufted textile manufacturing companies. J. Mebane. il Manuf Rec 115:38-9+ D '46

COVERS (printing)
Typographic clinic. J. E. Helmer. Inland Ptr 119:69-70 Je '47

COWLINGS. See Airplane engines—Cowlings

COWS
Health of dairy cows unaffected by DDT; abstract. N. N. Allen and others. Food Ind 19:130 Ja '47

COX, H. Roxbee
President of the Royal aeronautical society; portrait. Roy Aeronautical Soc J 51:785 O '47

COZZENS, Charles O.
Sketch. por Safety Eng 93:38 Mr '47

CRACKER JACK. See Popcorn

CRACKNYL. See Nylon fabrics

CRACKS in concrete. See Concrete—Cracks

CRAFT, Edward Beech, 1881-1929
SMPE honor roll awards; pioneers in development of talking moving pictures. Soc Motion Picture Eng J 48:440-3 My '47

CRAFTSMANSHIP
Pride in craftsmanship. W. H. Birks. il diags Inst Mech Eng J & Proc 156:Proc 39-42 Je '47

CRAGIN, Donald Brett, 1875-1947
Sketch. por Nat Underw (Life ed) 51:11 Jl 18 '47

CRAIG, Cornelius Abernathy, 1868-
Nashville's tribute presented by mayor. East Underw 47:1 N 29 '46

CRAMER, Kenneth Frank, 1894-
Executive to Guard. por Bsns W p72 Ag 16 '47

CRANBERRIES
Bagged cranberries; Ocean Spray turns out 165 a minute. il Mod Packaging 21:107+ S '47

CRANBERRY sauce, Frozen
How jellied cranberry sauce is preserved by freezing. M. M. Boggs and G. Johnson. il Food Ind 19:1067-9+ Ag '47

CRANE, Bobette
Portrait. Sales Management 57:41 D 15 '46

CRANES, Floating
Large floating crane solves many problems. D. Rebbeck. il Mech Handling 34:7-13 Ja '47; Discussion. 34:94-5+ F '47
100-ton 80-ft. radium floating crane. il diags Engineering 163:470-4, 476 Je 6 '47

CRANES, derricks, etc.
Aluminum alloy derrick weighs ⅓ that of steel. N. P. Carlson. il Elec World 127:62 F 1 '47
Aluminum crane. il Mech Handling 34:53 Ja '47
Cargo handling with crane gear. A. C. Rohn and others. il Marine Eng 52:72-4+ O '47
Crane cab cooling poses new personnel problem in steel mill operation. il Blast F & Steel Pl 35:76+ Ap '47
Foundry crane has rubber tires. il Coal Age 51:122 N '46
Grapple-equipped crane transfers pulpwood from river bank into stream. il Paper Ind 29:372 Je '47
Lift trucks and crane handle all pipe sizes at Cannelton plant. il Brick & Clay Rec 110:52+ Ja '47
L.M.S. steam breakdown cranes. il Mech Handling 33:705 N '46
Manganese wheels for cranes. il Mech Handling 34:41 Ja '47
Mechanization of freight station simplifies l.c.l. handling. il Ry Age 123:438-40 S 13 '47
Neal and company 10-cwt. three-wheel traveling crane. il diag Engineering 164:195 Ag 29 '47
Overhead crane at naval yard capable of lifting 500 tons. il Steel 120:87 F 3 '47
Overhead cranes can be used with scove, tunnel and continuous kilns. il plans Brick & Clay Rec 109:47-9 N '46
Portable yard crane handles materials economically; Fremont foundry co. R. H. Herrmann. il Foundry 75:73+ S '47
Self propelled Diesel and Diesel electric deck whirleys. il Diesel Power 25:50-2 Mr '47
Shipyard hydraulic gantry; moving to new site. D. Rebbeck. il Mech Handling 33:733-7 D '46
Special gantry crane. A. J. G. Smith. il Mech Handling 34:458-60 S '47
Track renewal by cranes on the L.M.S. plan Engineer 184:132 Ag 8 '47
Truck crane eliminates plant bottleneck. il Chem Eng 54:133 Ja '47
Wellman Smith Owen 15-ton level-luffing portal crane. il diags Engineering 164:217-18 S 5 '47

See also
Hoisting machinery

Electric equipment
A.c. and d.c. drives for steelworks cranes and ore bridges; discussion. Iron & Steel Inst J 155:271-88 F '47
Crane reconditioning; large hammerhead crane with modern controls. il Elec R (Lond) 141:385-9 S 12 '47
Electric crane equipment. il diags Mech Handling 33:545-9, 671-6; 34:22-6, 325-9 S, N '46, Ja, Je '47
Electric mobile crane for material handling. il Electrician 139:1160 O 17 '47
Festooned cable feed for electric runways and cranes. G. Pallett. diags Mech Handling 34:368-70 Jl '47
Johnson all-electric mobile crane. il Mech Handling 34:491-2 S '47
Mobile crane. il Elec R (Lond) 141:515 O 3 '47

Maintenance and repair
Crane maintenance program that cut cost 30 per cent; Aluminum company of America. A. S. Lucas. il Factory Management 105: 132-3 F '47

Safety measures
Instruction guide for safe crane operation. il Safety Eng 93:18-19+ Ap '47
Tipping & capacity tests for safe crane operation. il Safety Eng 93:32-3 Ja '47
20 years of crane safety; Black-Sivalls & Bryson, inc. M. J. Kunert. il Safety Eng 92:14-15 N '46

CRANKCASES
Diesel crankcase explosion. Ry Mech Eng 121:178-9 Ap '47
Effect of crankcase ventilation on engine deposits; abstract. H. L. Moir and H. L. Hemingway. diags Automotive & Aviation Ind 96:34-5 Ja 1 '47

Manufacture
Autocar installs special machine for boring crankcases. il Automotive & Aviation Ind 96:42 Je 1 '47
Forging alloy steel radial engine crankcases; illustrations with text. A. J. Pepin and A. L. Rustay. Metal Prog 50:1023-8 N '46

Testing
Car frame and crankcase improved by brittle coating tests. diags Automotive Ind 97: 31+ Jl 1 '47
Flowmeter for testing crankcase ventilation. B. G. Brown. il diag Automotive & Aviation Ind 95:38-9+ N 15 '46
Flowmeter measures crankcase ventilation. il diag Machine Design 18:153-4 D '46

CRANKPINS

Manufacture
Tools revolve about work in turning large crankshafts. il diags Steel 121:84-5+ Ag 25 '47

CRANKSHAFTS
Crankshaft positioning alleviates compressor vibration. G. Spillane. diag Elec World 127:55-6 Mr 1 '47
Dry sand alloy steel castings recommended for crankshafts. H. L. Day. Steel 120:217 Ja 6 '47
Increasing life of crankshafts. il Rayon 27: 675 D '46
Pressed fit on crankshaft stops overhung-flywheel wobble. E. Sterrett. il diag Power 91:612-13 S '47
Preventing accidents to ammonia compressor crankshafts. H. J. Vander Eb. diag Locomotive 46:141-4 Ja '47

CRANKSHAFTS—*Continued*
Repairing crankshafts; Bingham sleeving process. il Diesel Power 25:56-7 S '47

Manufacture

Machine-shop operations in producing light aircraft-engine crankshafts. M. F. Colburn. il Mach 54:146-50 O '47
New molding technique improves cast crankshaft at Ford Rouge plant. il Automotive & Aviation Ind 96:33 My 15 '47

Testing

Crankshaft bending vibration. E. F. Critchlow and W. T. Bean, jr. il S A E J 55: 33-4 Mr '47
How the Hartford steam boiler straingage is used in safeguarding engines; reprinted from Locomotive of April 1934. H. J. Vander Eb. il diags Locomotive 46:167-73 Ap '47
Is beefing up the wrong answer? strength of piece can be increased by removing instead of adding metal. W. T. Bean, jr. diags Am Mach 91:132-3 Ap 10 '47
Line-wear and crankshaft alignment indicator. diags Engineering 162:512 N 29 '46
Magnaflux machine permits continuous inspection of heavy-duty crankshafts. il Automotive & Aviation Ind 96:52+ Je 1 '47
New crankshaft micrometer. il Diesel Power 25:51 O '47
Self-synchronous transmitters electrically couple machine tools; balancing machine presets drilling unit for correcting unbalance in crankshafts. il diags Product Eng 18:92-5 Ja '47
Unique torquemeter. K. W. Miller. il diags Automotive & Aviation Ind 96:36-7 Je 1 '47
X-ray inspection promotes casting quality control. E. H. Grimm. il Foundry 75:94-6+ O '47; Same. Steel 120:110-12+ My 12 '47; Same cond. Automotive & Aviation Ind 96:36-8+ My 15 '47

CRATERS
Origin and development of craters. T. A. Jaggar. (Memoir 21) 508p, pl 1-87 bibliog(p419-25) Geological soc. of America, 419 W. 117th st, New York 27 '47

CRATES
Application of wood and fiber to industrial packing. J. A. DeLuca. il diags A S M E Trans 69:167-70 F '47
Figuring heat losses for two drying kilns; plant making veneer crates and hampers. Heating-Piping 19:96 Ja '47
White fir crates; a test of wood for fruit and vegetable shipping containers. R. S. Kurtenacker. il Mod Packaging 20:152-5 My '47

CRATON (term)
Geosynclinal nomenclature and the craton. M. Kay. bibliog map Am Assn Pet Geologists Bul 31:1289-93 Jl '47

CRAWFORD, Frederick Coolidge, 1891-
Fred Crawford's company; neat balance between auto parts and aircraft components. pors Fortune 34:146-51+ D '46

CRAWFORD, Ralston
Bikini; documentary photographs, abstract paintings, and meteorological charts. il Fortune 34:156-61 D '46

CREAMS, Cleansing. See Cosmetics

CREASING of textiles
Control of shrinkage and crease resistance of viscose rayon fabrics. H. F. Creegan. Am Dyestuff Rep 35:514-18 N 4 '46; Same cond. Rayon 27:588-9 N '46; Same cond. Textile World 96:139+ N '46
Crease resistant finishes; polysulfones as curing agents; patent. Am Dyestuff Rep 36:281 My 19 '47
Creaseproofing textiles; boroorganic compounds as catalysts; patent. Am Dyestuff Rep 36:466-7 Ag 25 '47
Creaseproofing textiles; thiocyanate as curing agent; patent. Am Dyestuff Rep 36:248 My 5 '47
Creaseproofing with methylolmelamine; quaternary ammonium condensates; patent. Am Dyestuff Rep 36:578 O 6 '47
Identification of urea resins in wrinkle-proof fabrics. J. C. Pfeiffer. Rayon 27:651-2 D '46
Modern fibres and modern processes. G. R. Perdue. Textile Inst J 38:P203-7 Je '47
Process cuts wrinkling in cotton fabrics; Monsanto's Resloom C. Bsns W p43 S 6 '47

CREATININE
Condensation of substituted benzaldehydes with creatinine; influence of substituents. V. Deulofeu and M. Fondovila. Chem Soc J p 1108-10 D '46
Creatinuria in diabetics and an evaluation of methods for determining total creatinine. S. Caspe and others. bibliog Science 106: 371-2 O 17 '47
Results of creatinine, hippurate, and inulin clearance estimations in rates. J. A. Shannon and others. Science 106:127 Ag 8 '47; Replies. 106:265, 341 S 19, O 10 '47

CREDIT
Accountancy in credit work; auditing experience is a basic factor. A. S. Burton. Credit & Fin Management 49:7+ My '47
Adaptability breeds success; your good credit risk moves with the times. J. E. Bullard. Credit & Fin Management 49:24-9 O '47
Assignments and bankruptcies. W. Rohs. Paint Oil & Chem R 110:22+ Je 12 '47
Average balance sheets will avoid present danger to credit grantors. J. B. Gordon. J Account 84:49-50 Jl '47
Bill paying lags. Bsns W p 100-1 O 4 '47
Business man, watch your step; working man, watch yours, too. E. S. Horwitz. Credit & Fin Management 49:15-17+ O '47
Business outlook and consumer credit. M. R. Neifeld. Comm & Fin Chr 165:2389+ My 1 '47
Business today; production, employment, incomes all depend on credit. D. S. Thompson. Credit & Fin Management 49:19-21+ Jl '47
Commercial credit company sees consumer credit far below prewar level. Comm & Fin Chr 166:924 S 4 '47
Constructive aid to customers; well-informed merchant is best credit risk. F. L. Whitmarsh. Credit & Fin Management 49:7-8 Jl '47
Consumer credit boom. H. F. Travis. Mag of Wall St 80:253-5+ Je 7 '47
Consumer credit in 1947; sound terms are the essence of prosperity. F. G. Anger. Credit & Fin Management 49:13-15+ My '47
Consumer credit; summary of addresses at National consumer and installment credit conference, St Louis. H. V. Odle. Burroughs Clearing House 31:17-21 F '47
Consumer debt growing at record rate; study by Northwestern National Life. Weekly Underw 155:1316 N 30 '46; Same abr. Comm & Fin Chr 164:2806 N 28 '46
Course of consumer credit. D. M. Holthausen. Comm & Fin Chr 165:54 Ja 2 '47
Credit and economic stability; address before National association of credit men. M. Woll. Credit & Fin Management 49:17-22 Je '47
Credit controls relaxed. Bsns W p21-2+ N 23 '46
Credit information is important again. A. B. Buckeridge. J Retailing 23:99-102 O '47
Credit men and the recession; how they may help to minimize it. J. K. Heyman. Credit & Fin Management 48:19-21 N '46
Credit men will try to educate the public. Bsns W p84 Je 28 '47
Credit, past and future; address before NACM Golden anniversary congress. H. H. Heimann. Credit & Fin Management 49: 4-6+ My '47
Credit problems return with expansion of consumer debt. H. W. Ketchum. Dom Comm 35:3-8 S '47
Credit to irresponsibles; are agreements to refuse credit lawful? W. R. Montgomery. Credit & Fin Management 49:10-13 Je '47
Credit; yesterday, today, tomorrow; character will always be the decisive factor. R. L. Griffiths. Credit & Fin Management 49:19-20+ Ag '47
Credits at home and abroad. A. N. Gentes. Credit & Fin Management 49:16-18+ Ja '47
Current costs and credit; balance sheet will not show whole picture in 1947. W. L. McGrath. Credit & Fin Management 49:8-11+ Ja '47

CREDIT—*Continued*
Dealers and credit managers in the period ahead. K. J. Howe. Paint Oil & Chem R 110:12-13 Je 12 '47
Debtors need coaching; creditor is businessman's best friend. J. E. Bullard. Credit & Fin Management 49:24-5+ My '47
Does consumer credit cause business fluctuations? R. J. Saulnier. Comm & Fin Chr 165: 1977+ Ap 10 '47
General quiz for credit men of all ages. E. C. Vorlander. Credit & Fin Management 49:15 Ap '47
Halt consumer credit expansion? A. A. Friedrich. Banking 39:49+ F '47
How labor costs affect credit; boosting of wage scales important to economy. J. E. LeRossignol. Credit & Fin Management 49: 20+ S '47
Human relations and credit. R. V. McNally. Credit & Fin Management 49:30-1 F '47
Industrial relations and credit; employee morale can be a guide to credit risks. K. R. Bailey. Credit & Fin Management 49:6-7 Ja '47
Keep turnover high; postwar periods are always dangerous for creditors. J. E. Bullard. Credit & Fin Management 49:28-32+ Jl '47
Look for hidden tax liabilities; credit aspects. R. M. Swisher. Credit & Fin Management 49:48 Ap '47
New credit byword: beware. Bsns W p 15-16 My 10 '47
Ounce of prevention; educate your customers in proper merchandising. I. H. Bander. Credit & Fin Management 49:11-12 Jl '47
Pleasing people pays; firm with good public relations is a good credit risk. J. E. Bullard. Credit & Fin Management 49:22-5 Mr '47
Readjusting credit files; postwar experiences show need for changes. C. J. Wagner. Credit & Fin Management 49:30-1 S '47
Realism in consumer credit; retailer's credit system of vital interest to wholesaler. C. F. Sheldon. Credit & Fin Management 49: 22+ F '47
Record consumer credit as spur to business. H. M. Tremaine. il Mag of Wall St 79: 311-12+ D 21 '46
Reliable measure of liquidity; ratio of debt cycle to trading cycle advocated. I. Epton. Credit & Fin Management 49:11-13 S '47
Revised consumer credit series; with monthly figures, 1930-May 1947. Fed Res Bul 33: 830-5 Jl '47
Selling marginal risks; with help they may become healthy outlets. F. C. Heath. Credit & Fin Management 48:12-13+ N '46
Some danger signals on credit. Management R 36:280-2 My '47
Trends in consumer credit. E. I. H. Bennett. Credit & Fin Management 48:26-30 D '46
We had depressions before consumer credit. R. J. Saulnier. Banking 39:32 My '47
What does the consumer know about consumer credit? results of survey of two hundred families in Richmond, Va. and Kansas City, Mo. Banking 39:34-5+ Mr '47

See also
Accounts receivable
Advertising and credit
Agricultural credit
Assignment of book accounts
Banks and banking
Billing
Charge accounts (retail trade)
Collecting of accounts
Collection laws
Credit, Bank
Credit unions
Discount, Cash
Finance companies
Instalment plan
Insurance—Credit aspects
Insurance, Credit
Inventories—Credit aspects
Loans
Loans, Bank—Collateral
Loans, Small
Promissory notes
Railroads—Passenger credit service
Salesmen and credit

also National association of credit men

Bibliography

Distribution; for cash or credit? (Business literature v. 19, no. 4) p53-4 Business library. Newark public lib, Newark, N.J. D '46

Economic aspects

Domestic credit problems and international financial policy. M. S. Szymczak. Comm & Fin Chr 166:1734+ O 30 '47

Law

See also
Bankruptcy
Collection laws
Debtor and creditor
Payment

Statistics

Consumer credit statistics, total credit, by major parts; consumer instalment loans; 1929-1945 and monthly Oct. 1945-Nov. 1946. Fed Res Bul 33:84 Ja '47 [cont monthly]
Consumer instalment sale credit; consumer instalment credits of commercial and industrial banks and of industrial loan companies; furniture store statistics and ratio of collections to accounts receivable; tabulations for selected periods, 1929-Nov. 1946. Fed Res Bul 33:85-6 Ja '47 [cont monthly]

Latin America

Declines recorded in Latin American credits and collections; 38th semi-annual survey; with tables. P. J. Gray. Credit & Fin Management 49:32-3 S '47
Export credit information on Latin American countries. For Comm W 29:18 O 4 '47
Latin-American credit good; 37th semi-annual survey; with tables. P. J. Gray. Credit & Fin Management 49:16-17, 28, 30 Mr '47

CREDIT, Agricultural. See Agricultural credit

CREDIT, Bank
Bank credit fashions; checklist for aspiring long-term borrowers. H. Spero. Credit & Fin Management 49:16+ F '47
Banker tells how to get capital. R. H. Clark. Management R 36:485-6 S '47
Credit group at work; Connecticut bank credit association continues aid to small business postwar plans. Banking 39:39 D '46
Problem of over expanding post war credit. E. A. Krauss. Mag of Wall St 81:65-6+ O 25 '47

See also
Agricultural credit
Federal reserve board—Credit policy
Loans, Bank

CREDIT, Foreign
Credit and foreign trade; some of the hazards that the exporter must expect. J. H. Schwoon. Credit & Fin Management 49:30-1+ Ag '47
Discrimination in world trade; priority rights to local creditors in insolvency cases; need for creditor equality clause in I.T.O. charter. K. H. Nadelmann. Credit & Fin Management 49:28-9 Ap '47
Outlook for foreign credits; export trade should be stepped up at once. R. M. Binney. Credit & Fin Management 49:5-7 F '47

CREDIT, International
Pattern of postwar international indebtedness. M. A. Kriz. Comm & Fin Chr 165: 1929+ Ap 10 '47

CREDIT, Letters of. See Letters of credit

CREDIT and insurance. See Insurance—Credit aspects

CREDIT and salesmen. See Salesmen and credit

CREDIT associations
Credit association is organized at Sydney; aids Australian firms. A. W. Crooks. Credit & Fin Management 49:44 O '47

See also National association of credit men

Directories

Credit associations affiliated with NACM; listed by cities. Credit & Fin Management 49:36-7 Ja '47

CREDIT bureaus
Credit information is important again. A. B. Buckeridge. J Retailing 23:99-102 O '47

CREDIT cards, Passenger. See Railroads—Passenger credit service

CREDIT departments
Advantages of credit control. C. A. Maguire. Credit & Fin Management 49:26+ Jl '47
Credit department organization. J. H. Jones. Credit & Fin Management 48:4-6+ D '46
Effective credit letters. M. Howell. Credit & Fin Management 48:38-9 N '46
Need for merchandising credits. D. H. Hotchkiss. Credit & Fin Management 49:4-6+ S '47
Old word takes on new meaning; credit must be ready for greater responsibility. R. L. Galloway. Credit & Fin Management 49:6-7 Ag '47
Simplifying credit procedures; how to increase efficiency and economy in management. W. V. Farr. Credit & Fin Management 49:32+ Ag '47
Training credit personnel. C. M. Mathewson. Credit & Fin Management 49:17-19 S '47
What must management, sales and credit do to help each other? addresses delivered at forum of Chicago association of credit men. W. Jacobs; W. A. Linfeld; O. O. Lewis. Credit & Fin Management 49:4-8+ Ap '47

Records

See also
Accounts, Statements of

CREDIT insurance. See Insurance, Credit

CREDIT managers
Compleat credit manager; background, education, understanding are essential. R. B. Rucker. Credit & Fin Management 49:12+ Ag '47
Control of credit; far-sighted policy will help industrial progress. A. W. Hill. Credit & Fin Management 49:14-15+ Mr '47
Credit man, sales promoter; good public relations job builds sales. C. T. Blackmore. Credit & Fin Management 49:4 F '47
Credit managers I have met. L. Sorenson. Credit & Fin Management 48:11+ D '46
Credit manager's job. R. L. Henry. Credit & Fin Management 49:12-14 F '47
Credit man's responsibilities. K. J. Krause. Credit & Fin Management 49:26-32 Ja '47
I like this business; job ahead presents challenge to credit men. W. J. Gerwe. Credit & Fin Management 49:23+ Ja '47
Management views credit men. D. G. Mitchell. Credit & Fin Management 49:4-6+ Jl '47
Objectives of a credit executive. F. G. Phillips. Credit & Fin Management 49:48 Ap '47
Professional credit manager. A. F. Pahle. Paint Oil & Chem R 110:18-19+ My 29 '47; Same. Credit & Fin Management 49:7-10 S '47
Profit-minded credit manager. I. D. Dawes. Credit & Fin Management 48:7-9+ D '46
This should be you; what management expects of the credit man. C. Foster. Credit & Fin Management 49:19-20 Ja '47

CREDIT men, National association of. See National association of credit men

CREDIT unions
Activities of credit unions in 1945. Mo Labor R 63:962-6 D '46; Same, with additional data. U S Bur Labor Statistics Bul 894:1-13; pa 5c Supt. of doc. '47

CREEP of materials
Creep and relaxation. B. Gross. bibliog J Ap Phys 18:212-21 F '47
Creep and shrinkage in reinforced-concrete structures. H. B. Seed. diag Engineering 164:309-11 S 26 '47; Discussion. K. Hajnal-Kónyi. 164:375-6 O 17 '47
Creep deflections in columns. J. Marin. il diags J Ap Phys 18:103-9 Ja '47
Creep, long-time tensile and flexural fatigue properties of melamine and phenolic-plastics. D. Telfair and others. bibliog A S M E Trans 69:789-93 O '47; Same. Mod Plastics 24:151-2+ My '47
Elastic behavior and creep of refractory bricks under tensile and compressive loads. L. E. Mong. bibliog diags J Res Nat Bur Stand 38:229-40 F '47; Same. Am Cer Soc J 30:69-78 Mr 1 '47
Plastic flow, creep, and stress relaxation. C. Mack. bibliog diag J Ap Phys 17:1093-107 D '46
Rate of creep at elevated temperatures of four sillimanite tank blocks. Glass Ind 28: 85 F '47

CREEP of metals
Abnormal creep in carbon steels; effect of manganese, silicon and molybdenum. J. Glen. il Iron & Steel Inst J 155:501-12 Ap '47; Abstract. Metal Prog 52:280+ Ag '47
Comparison of some carbon steels on the basis of various creep limits. A. E. Johnson and H. J. Tapsell. Inst Mech Eng J & Proc 153 (War emergency issue no 6): 169-79 '45
Creep data for nonferrous metals and high alloy irons; chart; data sheet. K. Sproule. Metal Prog 51:440b Mr '47
Creep in hot valve springs. A. Oreffice and L. Locati. diag Metal Prog 51:269-70 F '47
Creep strength of pipe still tubes. W. L. Nelson. Oil & Gas J 45:283 Ja 25 '47
Creep strength of steels; chart. W. L. Nelson. Oil & Gas J 45:103 N 9 '46
Creep testing unit; abstract. G. T. Harris. Materials & Methods 25:126 Ja '47
Dislocation theory as applied by N.A.C.A. to the creep of metals. A. S. Nowick and E. S. Machlin. bibliog J Ap Phys 18:79-87 Ja '47
Experimental evidence of the viscous behavior of grain boundaries in metals. T. Kê. bibliog diags Phys R 71:533-46 Ap 15 '47; Abstract. Engineer 184:196-7 Ag 29 '47
Interpretation of creep and stress-rupture data. F. B. Foley. il Metal Prog 51:951-8 Je '47; Iron Age 159:76 Ap 10 '47
Investigations on delay-action fuses; operated by creep, under stress of lead or lead alloy. J. McKeown. diags Engineering 164: 97-101 Ag 1 '47
Observations on conducting and evaluating creep tests; heat-resistant alloys used in the construction of gas turbines. W. Siegfried. bibliog il diags Iron & Steel Inst J 156:189-207 Je '47; Abstracts. Engineer 184: 97 Ag 1 '47; Engineering 164:113 Ag 1 '47; Discussion. Iron & Steel Inst J 157:382-4 N '47; Engineer 184:97 Ag 1 '47; Engineering 164:113 Ag 1 '47
Predicting creep strength of metals; electrolytic tough pitch copper. K. Sproule. Metal Prog 51:441-2 Mr '47
Screw-driven creep-rupture testing machine. M. J. Manjoine. il Metal Prog 50:1100-1 N '46
Stresses in turbine disks at high temperatures. E. P. Popov. bibliog Franklin Inst J 243:365-89 My '47

Bibliography

Bibliography on creep- and heat-resisting steels, covering the period 1937 to 1947. C. Sykes. Iron & Steel Inst J 156:338-69 Jl '47

CREOSOTE
Creosote burn treatment. Safety Eng 92:95 O '46

CRESOL
Experiments on the production of toluene from coal tar products and other sources. C. M. Cawley and others. bibliog flow diags plan Inst Pet J 32:660-83 N '46
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Production of cresylic acids from petroleum. il diag Chem Ind 60:48-9 Ja '47

CRESOLBENZEIN
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

CRESOLS

Analysis

Quantitative analysis of isomeric cresols and cresol-phenol mixtures by ultraviolet absorption spectra of vapors. W. W. Robertson, N. Ginsburg and F. A. Matsen. bibliog il Ind & Eng Chem Anal ed 18:746-50 D '46

CRESYLIC acid. See Cresol

CRIME and criminals
Describes crime wave in detail; Newark detective explains relationship of police work and insurance. F. O'Neill. Nat Underw 51:26 Mr 13 '47
Good defense against crime loss; public awareness of problem; program of Citizens trust company, Summit, N.J. W. J. Knowles. Banking 39:16 My '47
Major crime every 18 seconds in 1946. J. E. Hoover. Weekly Underw 156:657+ Mr 8 '47
Murder by telephone; illegal use of telephone. F. X. Welch. Pub Util 39:543-9 Ap 24 '47
See also
Embezzlement
Forgery
Fraud
Prisoners
Punishment

CRIMINAL law
See also
Evidence (law)

CRIMINAL psychology
Symptoms of the psychopath. H. Cason. Pub Health Rep 61:1833-53 D 20 '46

CRIMMINS, Thomas L.
Moles award for 1947. por Explosives Eng 25: 19 Ja '47
Wins Moles' construction awards. por Comp Air Mag 52:20 Ja '47

CRINOIDEA, Fossil
Three new genera of inadunate crinoids from the lower Mississippian. E. Kirk. bibliog Am J Sci 245:287-303, pl 1 My '47

CRISTOBALITE
Conversion of silica during ignition; possible source of error in analysis of powdered samples. D. A. Bailey. bibliog il J Ind Hygiene 29:242-9 Jl '47

CRITICAL constants
Critical temperature. F. Brescia. bibliog diag J Chem Educ 24:123-8 Mr '47
Distillation properties of aromatic hydrocarbons. J. Griswold and J. A. May. bibliog il Pet Refiner 26:85-8 Mr '47
Pressure-volume-temperature relations of benzene. E. J. Gornowski, E. H. Amick, jr. and A. N. Hixson. bibliog diag Ind & Eng Chem 39:1348-52 O '47
Pseudo-critical temperature of gases. J. C. Calhoun, jr. Oil & Gas J 46:103-4 O 4 '47
Vapor pressures and saturated liquid and vapor densities of cyclopentane, methylcyclopentane, ethylcyclopentane and methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69:1273-7 Je '47

CRITICAL point
Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15:314-32 My '47; Correction. 15:615 Ag '47
Critical points of S.A.E. 4340 steel as determined by the dilatometric method. D. Niconoff. il Am Soc for Metals Trans 37:337-53; Discussion. 353-9 '46
See also
Phase rule and equilibrium

CRITICAL solution temperature
See also
Aniline point

CRITTALL, Richard, and company, limited
Statement by the chairman. J. L. Musgrave. Economist 153:39 Jl 5 '47

CRITTENDEN, Eugene Casson, 1880-
I.E.S. medal presented to E. C. Crittenden at convention. por Illum Eng 41:696-8 N '46

CROMPTON PARKINSON, limited
Statement by the chairman at annual general meeting. A. Parkinson. Economist 152: 44-5 Ja 4 '47

CROMWELL, Jarvis, 1896-
Portrait. Fortune 36:91 S '47

CROP dusting. See Airplanes in insect control

CROP insurance. See Insurance, Agricultural

CROP insurance corporation, Federal. See Federal crop insurance corporation

CROPS
Bumper crops at stake. il Bsns W p 17 Je 7 '47
Farm crop outlook bright. Bsns W p18 Ap 5 '47
Forecasting productivity of irrigable lands. W. C. Muldrow. Am Soc C E Proc 73:97-101 F '47; Discussion. 73:729-32, 947-8, 1305-6, 1414-16, 1547-8 My-Je, O-D '47
Weather; key to the cupboard. map Bsns W p 19-20 S 27 '47
See also
Corn
Grain
Vegetables

Statistics
Agricultural department general crop report by months. Comm & Fin Chr 164:3397-8; 165:583, 920-1, 2394, 3218-19 D 26 '46, Ja 27, F 13, My 1, Je 16 '47
General crop report of the U. S. Department of agriculture for 1946. Comm & Fin Chr 165:1300-2 Mr 6 '47
Problem of plot size in large-scale yield surveys. P. V. Sukhatme. bibliog Am Stat Assn J 42:297-310 Je '47; Correction. 42:460 S '47
Prospective plantings for 1947 as of March 1. Comm & Fin Chr 165:2182-3 Ap 21 '47

CROSBY, Bing (Harry Lillis Crosby) 1904-
Great throat. pors Fortune 35:128-35+ Ja '47

CROSS, Roy, 1884-1947
Sketch. por Chem & Eng N 25:991 Ap 7 '47

CROSS connections. See Water distribution—Cross connections

CROSS ties. See Railroad ties

CROSSARMS. See Electric lines—Crossarms

CROSSER act. See Railroad law; Railroads—Pensions

CROSSHEADS. See Locomotives—Crossheads

CROSSLEY, Moses Leverock, 1884-
Awarded AIC medal for research achievements. por(cover) Chem & Eng N 25:1332-3 My 12 '47

CROSSTIES. See Railroad ties

CROTONALDEHYDE
Allylidene halides; dichlorobutene prepared from crotonaldehyde. L. J. Andrews. bibliog Am Chem Soc J 68:2584-7 D '46
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69: 593-9 Mr '47
Production of butadiene from alcohol. W. J. Toussaint, J. T. Dunn and D. R. Jackson. il Ind & Eng Chem 39:120-5 F '47
Reaction of hydrogen sulfide with acrylonitrile acrylic ester and crotonaldehyde. L. L. Gershbein and C. D. Hurd. bibliog Am Chem Soc J 69:241-2 F '47

CROWN manufacturing company
Proving that there is a lot in a name il Bsns W p42 Ag 9 '47

CROWN ZELLERBACH corporation
Annual report. Comm & Fin Chr 166:757 Ag 25 '47

CRUCIBLE steel company of America
Bonds offered. Comm & Fin Chr 164:2542 N 18 '46

CRUCIBLES
Precision weighing of porcelain crucibles. R. E. Thiers and F. E. Beamish. Anal Chem 19:434 Je '47

CRUM, Roy Winchester, 1885-
Sketch. por(p550) Civil Eng 16:552 D '46

CRUMMEY, John D. 1878-
Portrait. Fortune 35:116 Ap '47

CRUSHED bricks. See Bricks, Crushed

CRUSHED stone. See Stone, Crushed

CRUSHING
Contamination of silicate samples crushed in steel mortars. E. B. Sandell. Anal Chem 19:652-3 S '47
Crushing and grinding. L. T. Work. bibliog Ind & Eng Chem 39:11+ Ja '47
Fine grinding mica. il Rock Prod 50:92-3 Jl '47
Pectin studies; the effect of dry grinding. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:157-60 My '47
Recherches sur le broyage dans l'eau des liants hydrauliques. L. Chassevent. Chimie & Ind 57:327-30 Ap '47

CRUSHING machinery
Automatic sequence control for stone plant; Granite rock co. il diag Rock Prod 50:81-2 Jl '47
Crushing coal for the power plant. W. G. Hudson. il diags Power Pl Eng 51:73-5+ Jl '47
Engineering problems in the preparation of ores for blast-furnaces. D. C. Hendry. plans diags Iron & Steel Inst J 155:121-35 Ja '47; Discussion. il 156:415-28 Jl '47
Grinding; new equipment. S. B. Kanowitz. il Chem Ind 61:418-19 S '47
Mechanizing quarry and plant to step up production; with cost data. G. R. Lacy. il Rock Prod 50:84-7 My '47
Open new plant at lower quarry level; Granite rock company's screening and crushing plant and quarry. R. E. Fowle. il plan Rock Prod 50:86-92+ Ap '47
Primary and secondary crushers in quarry; Linwood stone products co. H. E. Swanson. il Rock Prod 49:86-7 D '46
Processing aggregates for big dam; Cumberland quarries, inc. D. Mocine. flow sheet il Rock Prod 50:106-10 Ag '47
Processing stone for rotary lime kilns and sugar rock for beet sugar industry; United States lime products corp. L. N. Grindell. flow sheet il Rock Prod 50:82-3 My '47
Producing riprap mechanically; Bussen quarries, inc. H. E. Swanson. flow sheet il Rock Prod 49:68-9 N '46
Reducing large boulders to aggregate; Palmer crushing co. D. Mocine. il plan diag Rock Prod 50:78-80 S '47
Sales promotion builds up future markets; Richland lime co. increases production of agricultural limestone and concrete aggregates. il Rock Prod 50:76-7+ My '47
Three-stage crushing and screening; West Lake quarry and material co. il Rock Prod 49:74-6 D '46

See also
Ball mills
Tube mills
Wood grinders

CRYOGENIC laboratories
Ohio state university's low temperature laboratory. H. L. Johnston. il diags Refrig Eng 52:421-4 N '46

CRYOLITE
Cryolite as a detoxifying agent for lead arsenate on plants and animals. S. Marcovitch. bibliog il J Ind Hygiene 29:175-7 My '47
German reflection reducing coatings for glass. H. A. Tanner and L. B. Lockhart, jr. diags Opt Soc Am J 36:701-6 D '46
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47

CRYOSTATS
Helium cryostat. S. C. Collins. il diags R Sci Instr 18:157-67 Mr '47
New cryogenic methods of using liquid hydrogen. W. DeSorbo and others. il diags Chem R 39:403-17 D '46
Progress in low temperature refrigeration; research at M.I.T. S. C. Collins. diags Tech R 49:162+ Ja '47

CRYSTAL detector. See Radio detectors

CRYSTAL diode
Crystal diode applications. J. C. Hoadley. il diags Radio N 37:43+ Ja '47
Crystal diode reduces probe size; signal tracing of small receivers. A. Bein. il diags Radio N 37:52+ F '47
Crystal valves for radar; discussion of paper by B. Bleaney and others. diags Inst E E J 94 pt 3:339-43 S '47
Sensitive crystal voltmeter. diag Radio N 37:116 Ja '47
Sensitive probe uses crystal diode. R. P. Turner. il diags Radio N 37:68 My '47
Silicon and germanium rectifiers; tabulations. Electronics 20:146-7 (Buyers' guide) Mid-Je '47
Simple modulation and field strength meter; uses crystal diode. R. Frank. il diag Radio N 37:46+ Ap '47
Universal voltmeter; uses crystal diodes. J. H. Carlisle. il diag Radio N 37:64+ Je '47
Variable time constant; multivibrator employing diode crystals. T. Petrides. diags Electronics 20:138 O '47

CRYSTAL oscillators. See Oscillators, Crystal

CRYSTAL palace, London
Palace, the Bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. il Arch Forum 87:88-95 O '47

CRYSTAL rectifiers. See Radio rectifiers

CRYSTALLIZATION
Analysis of particle formation and growth by size-frequency determinations of the silver halide precipitations of photographic emulsions. R. P. Loveland and A. P. H. Trivelli. bibliog J Phys & Colloid Chem 51:1004-27 Jl '47
Artificial willemite needles. E. Ingerson and O. F. Tuttle. diag Am J Sci 245:313-19 My '47
Crystallisation; address to chemical engineers. H. Griffiths. Chem Age (Lond) 56: 571-5 My 3 '47
Crystallisation of high polymers and its effect on their mechanical properties; abstract. G. Gee. Chem Age (Lond) 57:287-8 Ag 30 '47
Effect of magnesia and alumina on rate of crystal growth in some soda-lime-silica glasses. H. R. Swift. bibliog il Am Cer Soc J 30:170-4 Je 1 '47
Enzyme crystallisation. J. B. Sumner. Chem Age (Lond) 56:71 Ja 11 '47
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2. J. F. Schairer and N. L. Bowen. bibliog diags Am J Sci 245: 193-204 Ap '47
Mixed unsaturated glycerides of liquid fats; low-temperature crystallisation of rape oil. T. P. Hilditch, P. A. Laurent and M. L. Meara. Soc Chem Ind J 66:19-22 Ja '47
Movement of mineralizing solutions in the Picher field, Oklahoma-Kansas. R. E. Stoiber. il map Econ Geol 41:800-12 D '46
Observations on the rate and mechanism of recrystallisation in copper; abstract and discussion. M. Cook and T. L. Richards. Engineer 183:280 Ap 4 '47
Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47
Pressure welding of light alloys without fusion; work undertaken for Joint committee on recrystallisation welding. R. F. Tylecote. bibliog il diags Welding J 26:sup88-103 F '47
Solubility and melting point as functions of particle size; induction period of crystallization. L. Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47
Some experiments on crystal growth and solution in glasses. H. R. Swift. bibliog il diags Am Cer Soc J 30:165-9 Je 1 '47
Temperature of crystallization of a fluorite crystal from Luna county, New Mexico. W. S. Twenhofel. bibliog diags Econ Geol 42:78-82 Ja '47
Thermodynamics of crystallization in high polymers; crystallization induced by stretching. P. J. Flory. bibliog J Chem Phys 15:397-408 Je '47
Thermodynamics of crystallization in high polymers; dependence of melting points of polyesters on molecular weight and composition. R. D. Evans and others. J Chem Phys 15:685 S '47
Thermodynamics of crystallization in high polymers, simplified derivation of melting-point relationships. P. J. Flory. J Chem Phys 15:684 S '47

CRYSTALLIZERS
Crystallization; new equipment. H. B. Caldwell. il Chem Ind 61:418 S '47

CRYSTALLOGRAPHY
Apparatus for studying crystal formation. R. M. Garrels and others. diag Science 105:46 Ja 10 '47
Crystal and molecular structure of certain dicarboxylic acids. J. D. Dunitz and J. M. Robertson. diags Chem Soc J p 142-54 F '47
Crystal pattern synthesis by an approximate summation of Fourier series. J. S. Lukesh. J Ap Phys 18:493-8 Je '47
Crystal structure of anhydrous cupric bromide. L. Helmholz. bibliog Am Chem Soc J 69:886-9 Ap '47

CRYSTALLOGRAPHY—*Continued*
Crystal structure of pyrene; a quantitative X-ray investigation; abstract. J. M. Robertson and J. G. White. Chem & Ind p390-1 O 26 '46
Crystal structure of sodium iodate. I. Náray-Szabó and J. Neugebauer. bibliog diag Am Chem Soc J 69:1280-3 Je '47
Crystal structures of trimethylplatinum chloride and tetramethylplatinum. R. E. Rundle and J. H. Sturdivant. bibliog il Am Chem Soc J 69:1561-7 Jl '47
Crystallography of the chemical elements; tabulated by W. Hume-Rothery; modified by H. C. Vacher; data sheets. Metal Prog 50:847-9 N '46
Derivative crystal structures. M. J. Buerger. bibliog diags J Chem Phys 15:1-16 Ja '47
Direct determination of stacking disorder in lay structures. W. H. Zachariasen. Phys R 71:715-17 My 15 '47
Evidence for the ionic nature of certain crystal lattices. H. B. Friedman and K. E. Shuler. bibliog J Chem Educ 24:11-18 Ja '47
Machine for the application of sand in making Fourier projections of crystal structures. D. McLachlan, jr. and E. F. Champaygne. bibliog il diags J Ap Phys 17: 1006-14 D '46
Magnetic anisotropy of coronene, naphthazarin, and other crystals. M. T. Rogers. bibliog diags Am Chem Soc J 69:1506-8 Je '47
Man-made snow; production of ice crystals in a cloud of supercooled water droplets. V. J. Schaefer. il Mech Eng 69:32-3 Ja '47; Same abr. Science 104:457-9 N 15 '46
Observations of crystal structure and particle shape in electron micrographs of several carbon blacks. J. H. L. Watson. il diags Electrochem Soc Trans 92 (preprint 4):49-61 '47
Properties of monoclinic crystals. W. P. Mason. diags Phys R 70:705-28 N 1 '46
Semi-polar form of Fourier series and its use in crystal structure analysis. J. S. Lukesh. J Ap Phys 18:321-6 Mr '47
Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47
Symmetrical arrangement of atoms in aluminosilicates and random arrangement of two kinds of objects in a regular array. W. G. Schlecht. bibliog In U S Geol S Bul 950:35-82, pl 1 '46
Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47
Use of punched cards in molecular structure determinations; crystal structure calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:648-58 N '46
When metal atoms wander. E. L. Cady. il diag Sci Am 177:15-17 Jl '47

See also
Crystallization
Polymorphism
Solutions, Solid

Models

Model to aid in the explanation of interference figures. M. E. Willard. diags Am J Sci 245:518-21, pl 1-2 Ag '47

X ray studies

Application of single crystals to the study of tempered martensite. G. Kurdjumov and L. Lyssak. bibliog il Iron & Steel Inst J 156:29-36 My '47
Band theory of graphite. P. R. Wallace. diags Phys R 71:622-34 My 1 '47
Chemistry of sodium phosphates. O. T. Quimby. bibliog(140 ref) Chem R 40:141-79 F '47
Crystal structure of *m*-dinitrobenzene. N. W. Gregory and E. N. Lassettre. bibliog diags Am Chem Soc J 69:102-8 Ja '47
Crystal structure of *p*-dinitrobenzene. F. J. Llewellyn. diags Chem Soc J p884-90 Jl '47
Crystal structure of hydrazinium dichloride, $N_2H_6Cl_2$. J. Donohue and W. N. Lipscomb. bibliog diag J Chem Phys 15:115-19 Mr '47
Crystal structure of lithium borohydride $LiBH_4$. P. M. Harris and E. P. Meibohm. Am Chem Soc J 69:1231-2 My '47
Crystal structure of pentaerythritol tetranitrate. A. D. Booth and F. J. Llewellyn. diags Chem Soc J p837-46 Je '47
Crystal structure of pyrene; a quantitative X-ray investigation. J. M. Robertson and J. G. White. pl diags Chem Soc J p358-68 Mr '47
Crystal structure of sodium borohydride. A. M. Soldate. Am Chem Soc J 69:987-8 My '47
Crystal structure of strontium azide. F. J. Llewellyn and F. E. Whitmore. diags Chem Soc J p881-4 Jl '47
Crystal structure of the orthorhombic modification of 1 : 2 : 5 : 6-dibenzanthracene; a quantitative X-ray investigation. J. M. Robertson and J. G. White. diags Chem Soc J p 1001-10 Ag '47
Cyclo-diphenylsiloxanes. J. F. Hyde and others. bibliog il Am Chem Soc J 69:488-92 Mr '47
Determination of the interatomic distances in silver molybdate, Ag_2MoO_4. J. Donohue and W. Shand, jr. bibliog Am Chem Soc J 69:222-3 F '47
Determination of X-ray diffraction line widths. C. G. Shull. bibliog Phys R 70:679-84 N 1 '46
Electronic computer for X-ray crystal structure analyses. R. Pepinsky. il diag J Ap Phys 18:601-4 Jl '47
High temperature X-ray diffraction apparatus. L. S. Birks and H. Friedman. bibliog il diag R Sci Instr 18:576-80 Ag '47
High-temperature X-ray diffraction apparatus; furnace for use with Geiger-counter X-ray spectrometer. A. Van Valkenburg, jr. and H. F. McMurdie. bibliog il diags J Res Nat Bur Stand 38:415-18 Ap '47; Same. Am Cer Soc Bul 26:139-42 My 15 '47; Abstract. Iron Age 160:51+ Jl 10 '47
Infra-red spectra of solid and liquid alkylphenols. T. A. Kletz and W. C. Price. Chem Soc J p644-8 My '47
Oxygen-carrying synthetic chelate compounds; equilibrium with the solid compounds. E. W. Hughes, W. K. Wilmarth and M. Calvin. Am Chem Soc J 68:2273-8 N '46
Patterson-Harker maps of molecular crystals. A. D. Booth and D. Wrinch. diag J Chem Phys 15:416-17 Je '47
Physical properties and cation arrangement of oxides and spinel structures. E. J. W. Verwey and others. bibliog J Chem Phys 15:174-87 Ap '47
Recrystallization of amorphous cellulose. P. H. Hermans and A. Weidinger. bibliog il Am Chem Soc J 68:2547-52 D '46
Review of X-ray work on long chain compounds; abstract. T. Malkin. Chem & Ind p147 Mr 22 '47
Significance of internal structure in gelatinizing silicate minerals. K. J. Murata. bibliog In U S Geol S Bul 950:25-33 '46
Two calculating machines for X-ray crystal structure analysis. A. D. Booth. il diag J Ap Phys 18:664-6 Jl '47
X-ray crystallographic data for sodium 1-decanesulfonate hemihydrate. L. H. Jensen and E. C. Lingafelter. Am Chem Soc J 68: 2730 D '46
X-ray diffraction study of the silver-magnesium alloy system. H. R. Letner and S. S. Sidhu. bibliog il J Ap Phys 18:833-7 S '47
X-ray study of some DDT analogs. M. Schneider and I. Fankuchen. bibliog Am Chem Soc J 68:2669-70 D '46

CRYSTALS
Anisotropic oscillations in the hexamethylenetetramine crystal. P. A. Shaffer, Jr. Am Chem Soc J 69:1557-61 Jl '47
Application of single crystals to the study of tempered martensite. G. Kurdjumov and L. Lyssak. bibliog il Iron & Steel Inst J 156:29-36 My '47
Bent crystal neutron spectrometer and its application to neutron cross-section measurements. R. B. Sawyer and others. bibliog diags Phys R 72:109-15 Jl 15 '47
Calculation of the shear elastic constants of the alkali halides. W. J. Price. bibliog Phys R 72:514-15 S 15 '47

CRYSTALS—*Continued*
Crystalline aggregation of cobalt powder. J. T. McCartney and R. B. Anderson. il J Ap Phys 18:902-3 O '47
Decoloration of natural fluorite crystals. R. Herman and S. Silverman. Opt Soc Am J 37:871-2 O '47
Defense of the Cauchy relations. C. Zener. Phys R 71:323 Mr 1 '47
Diamond as a gamma-ray counter. L. F. Curtiss and B. W. Brown. diag Phys R 72: 643 O 1 '47
Diffraction of neutrons by a single crystal. W. H. Zinn. il diag Phys R 71:752-7 Je 1 '47
Direction of domain magnetization in powder patterns. bibliog il Phys R 71:646-7 My 1 '47
Direction of maximum crystal elongation during metal cutting. G. H. Townend. J Ap Phys 18:489-90 My '47
Dynamics of a square lattice. E. W. Montroll. J Chem Phys 15:575-91 Ag '47
Dynamics of the RbI crystal. T. A. Hoffmann. Phys R 70:981-2 D 1 '46
Elastic constants of sodium chlorate. S. Bhagavantam and D. Suryanarayan. Phys R 71:553 Ap 15 '47
Elastic properties of lattices. P. S. Epstein. bibliog Phys R 70:915-22 D 1 '46
Energy additivity in oxygen-containing crystals and glasses. M. L. Huggins and K. Sun. bibliog J Phys Chem 50:319-28 Jl '46: [cont as] J Phys & Colloid Chem 51:438-43 Mr '47
Finding and mining optical calcite crystals. C. R. King. Eng & Min J 148:94-6 Je '47
Finite elastic strain of cubic crystals. F. Birch. bibliog Phys R 71:809-24 Je 1 '47
Hexagonal slip in beryllium crystal. L. Tarnopol. il Metal Prog 52:391 S '47
High energy ions in crystal lattices. A. H. W. Aten, jr. Phys R 71:641-2 My 1 '47
High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays. J. W. M. DuMond. bibliog il diags R Sci Instr 18:626-38 S '47
Inelastic scattering of neutrons in crystals. O. Halpern. Phys R 72:260-1 Ag 1 '47
Influence of crystal face on the electrochemical properties of a single crystal of copper. H. Leidheiser, jr. and A. T. Gwathmey. bibliog il Electrochem Soc Trans 91 (preprint 6):97-108 '47
Interference phenomena of slow neutrons. E. Fermi and L. Marshall. bibliog diags Phys R 71:666-77 My 15 '47
Internal friction of zinc single crystals. I. H. Swift and J. E. Richardson. bibliog J Ap Phys 18:417-25 Ap '47
Isotropic crystals. G. Antonoff. J Phys Chem 50:488 N '46
Length changes in metals under torsional overstrain. H. W. Swift. diags Engineering 163:253-7 Ap 4 '47
Magnetic dipole fields in unstrained cubic crystals. L. W. McKeehan. Phys R 72:78 Jl 1 '47
Measurement of neutron cross sections with a crystal spectrometer. W. J. Sturm. bibliog diags Phys R 71:757-76 Je 1 '47
New bridge photo-cell employing a photoconductive effect in silicon; some properties of high purity silicon. G. K. Teal and others. bibliog diag J Ap Phys 17:879-86 N '46
Nucleation of ice formation by silver iodide. B. Vonnegut. J Ap Phys 18:593-5 Jl '47
Nucleus as a crystalline solid. J. G. Winans. Phys R 72:435-6 S 1 '47
Orientation of electrical breakdown paths in single crystals. J. W. Davisson. bibliog il diags Phys R 70:685-98 N 1 '46
Origin of low frequency Raman lines in organic crystals. A. Kastler and A. Rousset. bibliog Phys R 71:455-6 Ap 1 '47
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47
Precision method of generating circular cylindrical surfaces of large radius of curvature for use in the curved-crystal spectrometer. J. W. M. DuMond and others. il diags R Sci Instr 18:617-26 S '47
Properties of welded contact germanium rectifiers. H. Q. North. il diags J Ap Phys 17: 912-23 N '46
Quartz crystal deposits in the state of Goiaz, Brazil. D. F. Campbell. il maps diags Econ Geol 41:773-99 D '46
Resonance absorption by nuclear magnetic moments in a single crystal of CaF_2. E. M. Purcell and others. Phys R 70:988 D 1 '46
Selection rules for ionic crystals. L. Couture. J Chem Phys 15:153 Mr '47
Single crystal electron diffraction by microcrystalline materials. N. Davidson and J. Hillier. bibliog il diags J Ap Phys 18:499-511 Je '47
Spectral location of the absorption due to color centers in alkali halide crystals. H. F. Ivey. bibliog Phys R 72:341-3 Ag 15 '47
Stress induced preferential orientation of pairs of solute atoms in metallic solid solution. C. Zener. bibliog Phys R 71:34-8 Ja 1 '47
Tensile strength of metals; why theory and practice conflict. Chem Age (Lond) 57:17 Jl 5 '47
Theory of dipole interaction in crystals. J. M. Luttinger and L. Tisza. bibliog diags Phys R 70:954-64 D 1 '46; Correction. 72: 257 Ag 1 '47
Theory of the refraction and the diffraction of neutrons by crystals. M. L. Goldberger and F. Seitz. bibliog Phys R 71:294-310 Mr 1 '47
Theory of the structure of ferromagnetic domains in films and small particles. C. Kittel. bibliog diags Phys R 70:965-71 D 1 '46
Transmission of slow neutrons through microcrystalline materials. E. Fermi and others. bibliog Phys R 71:589-94 My 1 '47
Unsolved problems of structural chemistry; Richards medal address. L. Pauling. bibliog Chem & Eng N 25:2970-3+ O 13 '47

CRYSTALS, Liquid. See Liquid crystals

CRYSTALS, Piezoelectric
Approximate determination of piezoelectric properties by measurements on small crystals. E. Burstein. bibliog diags R Sci Instr 18:317-27 My '47
Artificial electrical twinning in quartz crystals. J. J. Vormer. il Inst Radio Eng Proc 35:789-90 Ag '47
Culturing crystals. il Electronics 20:144 N '47
Electrical characteristics of quartz-crystal units and their measurement. W. D. George and others. bibliog diags J Res Nat Bur Stand 38:309-28 Mr '47
Electromechanical properties of Rochelle salt at the lower Curie point. R. M. Lichtenstein. bibliog diags Phys R 72:492-501 S 15 '47
Electronic position pickup; used to transmit position of altimeter hand to distant station. D. W. Moore, jr. il diags Electronics 20:100-1 Ja '47
First and second order equations for piezoelectric crystals expressed in tensor form. W. P. Mason. diags Bell System Tech J 26:80-138 Ja '47
High intensity ultrasonics; the power output of a piezoelectric quartz crystal. L. F. Epstein and others. bibliog Acoustical Soc Am J 19:248-53 Ja '47
Measurement of the viscosity and shear elasticity of liquids by means of a torsionally vibrating crystal. W. P. Mason. bibliog il diags A S M E Trans 69:359-67; Discussion. 368-70 My '47
Mercury memory tanks in new EDVAC computer. diag Electronics 20:168+ My '47
Nature and use of piezoelectricity. W. G. Cady. il diags Elec Eng 66:758-62 Ag '47
New low-coefficient synthetic piezoelectric crystals for use in filters and oscillators. W. P. Mason. bibliog diags Inst Radio Eng Proc 35:1005-12 O '47
New pressure indicator design; piezoelectric type combined with spark plug. F. M. Mayes and M. A. Lindeman. il diags Automotive & Aviation Ind 96:38-9+ My 1 '47
Properties of monoclinic crystals. W. P. Mason. diags Phys R 70:705-28 N 1 '46
Recording and reproduction of sound; crystal pickup. O. Read. il diags Radio N 38:51-3+ O '47

CRYSTALS, Piezoelectric—*Continued*
Ultrasonic measurements on single crystals. H. B. Huntington. bibliog diag Phys R 72: 321-31 Ag 15 '47
See also
Radio frequency—Crystal control

Bibliography
Radio progress during 1946; piezoelectric crystals. bibliog Inst Radio Eng Proc 35: 420-1 Ap '47

CUBA
See also
Poultry industry and trade—Cuba
Railroads—Cuba

Economic conditions
News by countries. Published in Foreign commerce weekly

Industries and resources
Cuba's pineapple industry, garlic imports, sugar production and exports. For Comm W 28:24-5 Ag 30 '47

CUBA railroad
Principal and interest payments. Comm & Fin Chr 164:3289 D 23 '46

CUBAN Atlantic sugar company
Big sinking fund slash due in preferred. Barron's 27:34 S 29 '47
Profit to rise with higher prices. Barron's 27:29 Ap 7 '47

CUCUMBERS
Characteristics of lactic acid bacteria from commercial cucumber fermentations; abstract. J. H. Etchells and I. D. Jones. Food Ind 19:418+ Mr '47

CUDAHY packing company
Annual report. Comm & Fin Chr 165:205 Ja 13 '47
Big four in meat packing. R. Colston. Mag of Wall St 80:441 Jl 19 '47
Bonds offered. Comm & Fin Chr 165:2544-5 My 12 '47

CULLEN, Vincent, 1884-
Portrait. Fortune 36:91 S '47

CULM
Triple sedimentation employed to condition culm laden water at Norristown, Pa. S. I. Zack. il plans Eng N 139:115-17 Jl 24 '47

CULTURAL relations. See subdivision Cultural relations under names of countries, e.g. Latin America—Cultural relations; United States—Cultural relations

CULTURE
See also
Civilization

CULTURE mediums
Technique for aeration of sterile liquid culture medium. G. E. Hunt. diags Science 105:184 F 14 '47
See also
Bacteriology—Culture mediums
Tissues—Culture mediums
Viruses—Culture mediums

CULVERTS
Corrugated plate pipe culvert carries 61 ft. of fill; U.S. 40, in Colorado. il Roads & Sts 90:92 Ja '47
Culvert design factors. R. R. Rowe. diags Pub Works 78:21-2 My '47
Seventeen arches in this pipe culvert on the Sunset highway. il diags Roads & Sts 90: 80+ Je '47
Siphon culvert of Oswego lock gives long service; New York state barge canal. D. A. Watt. il diags Eng N 137:872-4 D 26 '46

CULVERTS, Concrete
Concrete pipe culvert practice in California; abstract. R. R. Rowe. Rock Prod 50:173-4 Ap '47

CUMENE
Fluorinated derivatives of *p*-isopropyltoluene and isopropylbenzene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:399-401 Mr '47
Production of cumene by vapor- and liquid-phase alkylation processes. S. H. McAllister, J. Anderson and E. F. Bullard. bibliog flow diags Chem Eng Prog 43:189-95; Discussion. 195-6 Ap '47

CUMENE hydroperoxide
Cold rubber; new catalyst. Chem Ind 61:607 O '47

CUMMINS engine company
Stock offered. Comm & Fin Chr 166:1477 O 13 '47

CUNINECARBOXYLIC acid
Strychnine and brucine; cuninecarboxylic acid. H. L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p908-10 O '46

CUPOLA furnaces
Beating the coke shortage. Foundry 74:77+ N '46; Discussion (How to use less coke). 75:78-80+ Mr '47
Behavior of cupola charge. N. E. Rambush and G. B. Taylor. Metal Prog 51:472+ Mr '47
Cupola melts above rated capacity; Forest City foundries co. P. Dwyer. il Foundry 74: 98-101+ D '46
Discuss cupola operation at gray iron shop course; abstracts of A.F.A. papers. Foundry 75:142+ Je '47
Shapes and sizes of cupola tuyeres. G. Joly. Iron Age 158:50 D 26 '46
Some problems in cast iron. E. Piwowarsky. diags Iron Age 159:58-9 Ja 9 '47

Air supply
Hot blast cupola. M. Bader. bibliog diag Foundry 74:104-7+ D '46

Charging
Saving foundry coke. J. A. Bowers. il Foundry 75:72-3+ Je '47

Lining
Cupola refractories. R. A. Witschey. Foundry 75:120-3+ Ap; 94-5+ My '47
Desulphurisation and dephosphorisation of iron; meeting of Iron and steel Institute, Institute of British foundrymen and British iron and steel research association, London, March 19-20. Engineer 183:259-61 Mr 28 '47

CUPRAMMONIUM solution
Cuprammonium-2,3-butanediol complexes. R. E. Reeves. Am Chem Soc J 69:1836 Jl '47

CUPRENE
Electron microscope examination of the microphysical properties of the polymer cuprene. J. H. L. Watson and K. Kaufmann. bibliog il diag J Ap Phys 17:996-1005 D '46
Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diag J Phys & Colloid Chem 51: 654-61 My '47
Rate of oxygen absorption by alpha ray cuprene. G. Glockler and C. A. Hollingsworth. Electrochem Soc Trans 92 (preprint 1):1-9 '47

CUPRIETHYLENEDIAMINE. See Copper compounds

CUPS
Handles applied to cups more accurately with automatic machine; patent. il diags Cer Ind 47:86+ D '46

CURARE
Curare alkaloids; alkaloids from chondrodendron tomentosum R. and P. H. King. Chem Soc J p936-7 Jl '47
Curare for polio sufferers; abstract. D. L. Tabern. Chem Eng 54:262 F '47

Bibliography
Curare intocostrin. 292p E. R. Squibb & sons, 745 5th av, New York '46

CURBS
Curbs built of asphaltic concrete to cut highway maintentnce costs; U. S. route 1 in Maryland; with cost data. il Eng N 138:810-11 My 15 '47
These machines saved labor in forming integral street curb. il Roads & Sts 89:89-90+ O '46

CURIE, Pierre, 1859-1906
Pierre Curie; appreciation of his scientific achievements. H. S. Klickstein. bibliog(58 titles) pors J Chem Educ 24:278-82 Je '47

CURIE point
Electromechanical properties of Rochelle salt at the lower Curie point. R. M. Lichtenstein. bibliog diags Phys R 72:492-501 S 15 '47

CURIUM
Plutonium and other transuranium elements. G. T. Seaborg. il Chem & Eng N 25:358-60+ F 10 '47

CURLEE clothing company, St Louis, Missouri
Preferred stock offered. Comm & Fin Chr 165:2796 My 26 '47

CURLING of paper. See Paper—Curling

CURRANTS
Stability of ascorbic acid in blackcurrant syrup. A. Pollard and others. Chem & Ind p402-3 N 9 '46

CURRENCY. See Money

CURRENT collecting devices
Improvements in London underground coaches; fluorescent lighting and collector-shoe gear. il Engineering 163:391 My 9 '47

CURTICE, Harlow Herbert, 1893-
Ubiquitous Buick. por Fortune 36:86-93+ N '47

CURTIS, Francis J.
Sketch. por(p2901) Chem & Eng N 25:2902 O 6 '47

CURTIS publishing company
To show best profit since 1936. Barron's 27:34 O 6 '47

CURTISS-WRIGHT corporation
Little chance of higher net in 1947. Barron's 27:34 Ag 18 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:275 Je 7 '47
Upheld in suit concerning incentive pay and company retirement system. Comm & Fin Chr 164:3141 D 16 '46

CURTIUS rearrangement. See Molecular rearrangements

CURVE plotting
Application of the log-log plot to fractionation problems. F. C. Fowler. Pet Eng 18:57-8 S '47
Curve for determining flow in components of parallel pipe systems. J. J. Baffa. Water & Sewage Works 94:R39-41 Jl '47
Finding the low point on the cost curve. W. E. Howland. diags Am Water Works Assn J 39:630-6 Jl '47
Graphical methods for evaluating Fourier integrals. W. J. Cunningham. bibliog J Ap Phys 18:656-64 Jl '47
Plotting back pressure open flow curves. W. F. Martin. flow chart Pet Eng 18:78+ Mr '47
Save hours of calculation by using energy-load and load duration curves. G. C. Boyer. Power 91:385-8 Je '47
Strength and ductility. M. Gensamer. bibliog il Am Soc for Metals Trans 36:30-60 '46; Excerpts. Iron Age 157:66-71 F 14 '46; Metal Prog 49:731-4 Ap '46
Tailored logarithmic scale. A. A. Merrill. charts Gen Elec R 50:45-7 My '47

CURVED surfaces. See Surfaces

CURVES
Drawing of accurate curves; with time-saver standards. S. M. Palm. Arch Rec 102: 122-3+ Jl '47

CURVES in engineering
Transition curve trigonometry; the ellipse. F. T. Murray. Engineering 162:409-11 N 1 '46; Discussion. 162:544; 163:40, 88, 139-40 D 6 '46, Ja 10, 24, F 7 '47

See also
Roads—Curves

CUSTODIANS. See Janitors

CUSTOMER relations
Consumers are sore. G. E. DeNike. il Radio N 37:53+ F '47
Customers furnish ideas to sell 400 items; help Burgess battery co. discover uses for variety of merchandise. C. L. Anson. il Adv & Sell 40:64 O '47
Don't underestimate your customers. Elec West 98:80 Mr '47
Factory rebuilding can be good-will building. D. Ross. Ptr Ink 220:76 Jl 25 '47
Pleasing people pays; firm with good public relations is a good credit risk. J. E. Bullard. Credit & Fin Management 49:22-5 Mr '47
Proctor's fourth factor in selling; the department of customer satisfaction. R. M. Oliver. il Sales Management 57:37-9 D 15 '46
Thoughtful letters help to build customer good-will. W. H. Butterfield. Ptr Ink 219: 76+ Ap 11 '47

See also
Banks and banking—Customer relations
Complaints
Electric utilities—Customer relations
Gas companies—Customer relations

CUSTOMS service
Penny wise, pound foolish. Fortune 35:150 Je '47
Raw sugar; sampling, mixing, and testing. E. F. Kenney. bibliog Ind & Eng Chem Anal ed 18:684-8 N '46

CUSTOMS unions
United States of Europe; proposed economic and customs union in Europe. R. Lann. Comm & Fin Chr 166:1202+ S 25 '47
Western customs union? Economist 153:307-8 Ag 23 '47

See also
Benelux Union

CUTLER, Theodore H.
University of Denver Bureau of industrial relations. por Bsns W p88 F 8 '47

CUTLERY

See also
Knives

History
Anglo-Saxon cutlery. H. R. Schubert. bibliog il Iron & Steel Inst J 157:22-6 S '47

CUTTING

See also
Electric cutting
Gear cutting
Glass cutting
Metal cutting
Milling
Oxyacetylene cutting
Plastic materials—Cutting
Steel cutting
Textile fabrics—Cutting
Thread cutting

CUTTING, Electric. See Electric cutting

CUTTING, Oxyacetylene. See Oxyacetylene cutting

CUTTING machines
Cutting compacts from acrylic sheet. il Mod Plastics 24:131-2 F '47
Hilshear small hand shearing machine. diag Engineer 183:205 Mr 7 '47
Machining huge aluminum slabs on scalper of unusual design. il Mach 53:150 D '46

See also
Cutting tools
Food cutters
Gear cutting machines
Metal cutting
Milling cutters
Oxyacetylene cutting
Pipe cutting machines
Reamers
Saws
Screw machines
Shears (machines)

CUTTING of metals. See Metal cutting

CUTTING off machines
Cutting off machines have had Cinderella-like promotion into the aristocracy of modern machine tools. G. Hubbard. il Steel 121:92-4+ Ag 4 '47
Machine tool show in print; cut-off and filing. il Am Mach 91:273-4 S 11 '47
Manifolding provides a compact hydraulic control panel; Model 51 automatic abrasive cutoff machine. il diags Product Eng 18: 92-3 O '47

CUTTING oils. See Lubrication and lubricants (cutting and grinding)

CUTTING tools
Cutting angles for high-speed-steel tools; table. H. S. Wharen. Am Mach 91:120 Ag 28 '47
How to sharpen cutting tools; illustrations with text. H. S. Wharen. Am Mach 91: 101-20 Ag 28 '47

CUTTING tools—*Continued*
How to sharpen single-point tools; illustrations with text. H. S. Wharen. Am Mach 91:116-20 Ag 28 '47
Internally grooving castings with a special tool. R. Mawson. diags Steel 121:80 S 1 '47
Liquid nitriding increases tool life. G. A. Roberts. Am Mach 91:134-6 F 13 '47
Magnetic particle inspection of chromium-plated tools. M. H. Mueller and W. E. Yeast. il diags Metal Prog 51:420-5 Mr '47
Metal cutting techniques. O. W. Boston. il diags Iron Age 160:185-9 S 11 '47
Metal surfacing by hard chromium plating. E. H. Halvorsen. il Metal Finishing 45:71-6 Jl '47
New equipment. il Iron Age 159:73-8 F 6 '47
Special cutters. J. DeEulis. il Steel 121:88-91+ S 15 '47
Specific studies pertaining to tool wear, chip characteristics, and surface finish of free-cutting steels. G. P. Witteman. flow chart il diags A S M E Trans 69:643-56 Ag '47
Tantung, what it is, how to use it. D. I. Brown. il diags Iron Age 158:76-81 N 14 '46
Templet guides tapered helix cutting tool. N. Brackett. diags Am Mach 91:145 F 13 '47
Tool materials. J. E. Attwood. Inst Mech Eng J & Proc 155 (War emergency issue no 20): 260-1 '46; Same. Engineering 161:596 Je 21 '46

See also
Forming tools
Milling cutters
Recessing tools

Nomenclature

Nomenclature of the cutting edge. M. Kurrein and F. C. Lea. il diags Inst Mech Eng J & Proc 156:Proc 126-33; Discussion. 133-4 S '47

Standards

New tests for tool life. O. W. Boston. diags Ind Stand 17:308-12 D '46; Same. Steel 120: 112+ F 3 '47
Standardization of tools for machinability tests. C. H. Booth. Inst Mech Eng J & Proc 155 (War emergency issue no 20):246-7 '46; Same. Engineering 161:595-6 Je 21 '46

Testing

Hardened and tempered microstructure of high-speed tool steel as a factor in tool performance. W. H. Wooding. il diags A S M E Trans 69:281-306 My '47
Measurement of tool-tip temperature. B. A. Crowder. diag Engineering 162:435-6 N 8 '46

CUTTING tools, Carbide
Carbide dies cut laminations; Lincoln Park industries, inc. R. Le Grand. il diags Am Mach 91:96-100 Ag 14 '47
Carbide planer tools. il Sci Am 176:32 Ja '47
Carbides hob non-metallic gears. L. W. Reuland. il Am Mach 91:96-8 Jl 3 '47
Carbides on railroad jobs. C. Edgar. il Ry Mech Eng 121:189-91, 242-5 Ap-My '47
Cemented hard carbide and gear making; abstract. P. M. McKenna. Iron Age 159: 104 Je 12 '47
Centerless grinder work blade life lengthened; Clifco blade. il diags Iron Age 160: 79 S 4 '47
Design considerations for carbide sheet metal dies. E. Glen. il Steel 121:75-6+ S 22 '47
Devised; better method for sharpening carbide face mills. G. W. Sharp. il diags Am Mach 91:108-10 Mr 13 '47
Effect of microstructure on machinability of cast irons. M. Field and E. E. Stansbury. il A S M E Trans 69:665-82 Ag '47
Effect of varying relief angles when face-milling cast iron with sintered-carbide-tipped cutters. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:657-63 Ag '47
Ejector type carbide tool reduces machining costs. il Mach 53:155 Jl '47
Fitting carbides to small tools. J. Safhill. diags Am Mach 91:117 O 9 '47
Herbert milling cutters. il Automobile Eng 37:302 Ag '47
Herbert tipped tool lapping machine. il Engineer 184:298 S 26 '47
High-speed photos show cutting tool breaking. il Iron Age 160:84 Ag 7 '47
How to attach carbide tips to tools; illustrated instructions. Power 91:129 F '47
How to design carbide blanking dies. E. Glen. diags Am Mach 91:137-9 Jl 17 '47
How to grind carbide die parts. R. Le Grand. il diags Am Mach 91:85-96 S 25 '47
How to set up carbide milling jobs. H. A. Frommelt. il diags Am Mach 91:77-100 Ap 24 '47
How to specify machine tools for carbides. H. A. Frommelt. il Am Mach 91:134-7 My 8; 108-9 My 22; 120-3 Je 5 '47
How to use carbide cutters for milling. H. A. Frommelt. il diags Iron Age 159:44-9 F 13; 48-53 F 20; 47-52 F 27; 74-8 Mr 6; 52-6 Mr 13; 56-9 Mr 20; 58-62 Mr 27; 78-81 Ap 10; 58-63 Ap 17; 58-62 Ap 24; 75-9 My 8; 62-5 My 15; 77-9 My 22, 80-3 Je 5; 65-8 Je 12; 77-80 Je 19; 160:69-72 Jl 3; 66-8 Jl 10; 61-4 Jl 17; 68-70 Jl 24 '47
Influence on tool life and power of nose radius, chamfer, and peripheral-cutting-edge angle when face-milling a 40,000-psi cast iron. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:117-24 F '47
Life of carbide-tipped turning tools. F. F. P. Bisacre and G. H. Bisacre. bibliog il diags Engineer 183:153-6; Discussion. 151-2 F 7 '47
Mechanism of tool vibration in the cutting of steel. R. N. Arnold. il diags Inst Mech Eng J & Proc 154:Proc 261-76 bibliog(p276), pl 1-4 D '46; Same cond. Engineer 180:355-6, 379-80 N 2-9 '45; Abstract. Metal Prog 50:700+ O '46; Discussion. Inst Mech Eng J & Proc 154:Proc 276-84, pl 5-6, 429-32 D '46, Mr '47
Metal cutting techniques. O. W. Boston. il diags Iron Age 160:185-7 S 11 '47
Negative-rake carbide-tipped milling cutters. il Engineering 164:297 S 26 '47
New holder cuts carbide tool costs. il diag Bsns W p74 O 18 '47
Planing cast iron with carbide tools. il Steel 119:108 D 16 '46
Practice and theory in carbide milling; abstract. M. Field. Steel 121:100 S 29 '47
Principles of design for carbides and some unusual applications. il diags Iron Age 159: 56-7 Mr 27 '47
Processes have families; industrial developments initiate series of inventions, refinements, and modifications. E. L. Cady. il Sci Am 176:249-51 Je '47
Production methods aid carbide control; Jack & Heintz. H. L. Flynn. il plan diags Am Mach 91:125-8 Mr 13 '47
Report of committee on shop tools; Locomotive maintenance officers' assn. il diags Ry Mech Eng 121:580-2 O '47
Research makes milling cutters behave. A. O. Schmidt. il Am Mach 91:83 Jl 31 '47
Some face-milling observations. A. O. Schmidt. Am Mach 91:106 My 22 '47
Speeds and feeds recommended for boring, turning and facing with carbide tools; tables. Iron Age 160:50-1, 54 Jl 31 '47
Tool wear as a measure of machinability. C. Eatough. diag Inst Mech Eng J & Proc 155 (War emergency issue no 20):255-7, pl 4 (p240) '46; Same. Engineering 161:622-3 Je 28 '46
Why Buick uses clamp toolholders for carbide shapes. R. Le Grand. il diags Am Mach 91:90-3 O 9 '47
Wickman carbide tool sharpening machine. il Engineer 184:157-8 Ag 15 '47

Manufacture

Low versus high pressure in making cemented carbide tools. A. Niedzwiedski. Metal Prog 52:104 Jl '47

Testing

Single indicator setting tests inserted cone cutters. E. Anderson. diags Am Mach 91: 135 Ap 10 '47

CUTWORMS
New disease of the variegated cutworm, peridroma margaritosa (Haw.) E. A. Steinhaus. Science 106:323 O 3 '47

CYANAMIDE
Mechanism for the hydrolysis of cyanamide in acid solution. M. L. Kilpatrick. bibliog Am Chem Soc J 69:40-6 Ja '47

CYANIDE poisoning
Precautions in handling cyanide, with notes on first aid; data sheet. Metal Prog 50: 1010 N '46
Toxicity of chemicals in electroplating. P. M. Van Arsdell. Metal Finishing 45:77+ O '47

CYANIDE process of hardening. See Case hardening

CYANIDES
Amidines; preparation of amidines from cyanides and ammonium thiocyanate or substituted ammonium thiocyanates. M. W. Partridge and W. F. Short. Chem Soc J p390-4 Mr '47
Amidines; preparation of amidines from cyanides and substituted aminomagnesium halides. R. P. Hullin, J. Miller and W. F. Short. Chem Soc J p394-6 Mr '47
Amidines; preparation of cyanides, amides and amidines from carboxylic acids. P. Oxley and others. Chem Soc J p763-71 S '46
Amidines; preparation of 2-substituted 4 : 5-dihydroglyoxalines and ring homologues from cyanides and alkylenediamines. P. Oxley and W. F. Short. Chem Soc J p497-505 Ap '47
Direct replacement of the mesyloxy group by cyanide. M. Zief, H. G. Fletcher, jr. and H. R. Kirshen. Am Chem Soc J 68:2743-4 D '46
Disposal of cyanide wastes. J. G. Dobson. bibliog il Metal Finishing 45:78-81 F; 68-71 Mr '47
Electric moments of some aliphatic-fluorides, cyanides and amines. M. T. Rogers. bibliog Am Chem Soc J 69:457-9 F '47
Infra-red spectra and molecular structure of certain isomeric diazocyanides. N. Sheppard and G. B. B. M. Sutherland. Chem Soc J p453-6 Ap '47
Treating cyanide waste from metalworking plants; use of chlorine. J. G. Dobson. il plans Steel 121:92-3+ S 15 '47
Treatment works for plating wastes containing toxic metals and cyanides. G. E. Barnes. flow sheet il plan diag Water & Sewage Works 94:267-71 Ag '47

See also
Acrylonitrile

Analysis
Detection and estimation of microquantities of cyanide. A. O. Gettler and L. Goldbaum. diags Anal Chem 19:270-1 Ap '47
Determination of cyanides. T. R. Haseltine. bibliog flow diag il Water & Sewage Works 94:187-91 My '47
Estimation of microquantities of cyanide. J. Epstein. bibliog Anal Chem 19:272-4 Ap '47

CYANINES
Chemotherapeutic investigations of cyanine dyes. L. G. S. Brooker and L. A. Sweet. Science 105:496 My 9 '47
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47
New class of antifilarial compounds. A. D. Welch and others. Science 105:486-8 My 9 '47; Discussion. M. Silverman. 106:316 O 3 '47
Production of phenocopies in drosophila using visible light and a photodynamic dye. C. A. Villee and G. I. Lavin. bibliog Science 105:188-9 F 14 '47
Some heterocyclic methylene bases and their anilomethyl derivatives. F. M. Hamer, R. J. Rathbone and B. S. Winton. Chem Soc J p954-9 Jl '47
Some trinuclear cyanine dyes; the synthesis of neocyanines; abstract. F. M. Hamer and others. Chem & Ind p374 Je 28 '47

CYANITE. See Kyanite

CYANOETHYLATION
Cyano-ethylation of arsines, and the preparation of amidino-alkyl-arsines and carboxy-alkyl-arsines. R. C. Cookson and F. G. Mann. Chem Soc J p618-24 My '47

CYANOGEN
Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diags J Phys & Colloid Chem 51:654-61 My '47

CYANOGEN bromide
Millimeter-wave spectra; hyperfine structure of BrCN and ICN. W. Gordy and others. bibliog Phys R 72:259-60 Ag 1 '47

CYANOGEN chloride
Hydrolysis and chlorinolysis of cyanogen chloride. C. C. Price and others. Am Chem Soc J 69:1640-4 Jl '47
Microwave spectra of linear molecules. C. H. Townes and others. bibliog Phys R 72:513-14 S 15 '47

CYANOGEN iodide
Millimeter-wave spectra; hyperfine structure of BrCN and ICN. W. Gordy and others. bibliog Phys R 72:259-60 Ag 1 '47

CYANOGUANIDINE
Guanidine nitrate from dicyandiamide and ammonium nitrate by pressure reaction. J. H. Paden, K. C. Martin and R. C. Swain. bibliog flow sheet diags Ind & Eng Chem 39:952-8 Ag '47

CYANOPIPERIDONE
Preparation of 3-cyano-4-piperidone. G. B. Bachman and R. S. Barker. Am Chem Soc J 69:1535 Je '47

CYANURIC acid
Absorption spectra and tautomerism of cyanuric acid, melamine and some related compounds. I. M. Klotz and T. Askounis. bibliog Am Chem Soc J 69:801-3 Ap '47

CYCLEWELD cements. See Cements

CYCLIC compounds
Aromatic cyclodehydration; elimination of alkyl groups in cyclizations of the olefin oxide type. C. K. Bradsher, L. Rapoport and P. Anderson. bibliog Am Chem Soc J 68:2152-4 N '46
Barbituric acids and related compounds containing alicyclicalkyl groups. W. Braker, E. J. Pribyl and W. A. Lott. bibliog Am Chem Soc J 69:866-9 Ap '47
Condensation of aldehydes and amines with nitrogenous five-atom ring systems. G. B. Bachman and L. V. Heisey. bibliog Am Chem Soc J 68:2496-9 D '46
Course of cyclisation in the formation of alicyclic rings; effect of alkyl groups on the cyclisation of esters of polycarboxylic acids. R. N. Chakravarti. Chem Soc J p 1028-9 Ag '47
Cyclization of N-succinylglycine dimethyl ester. H. Werbin and P. E. Spoerri. bibliog Am Chem Soc J 69:1681-4 Jl '47
Cyclization studies in the benzoquinoline and naphthoquinoline series. W. S. Johnson, E. Woroch and F. J. Mathews. bibliog Am Chem Soc J 69:566-71 Mr '47
Cyclo-diphenylsiloxanes. J. F. Hyde and others. bibliog il Am Chem Soc J 69:488-92 Mr '47
Equilibria between linear and cyclic polymers in methylpolysiloxanes. D. W. Scott. bibliog il Am Chem Soc J 68:2294-8 N '46
Experiments on the synthesis of purine nucleosides; improved method for the cyclisation of 4-glycosidamino-5-thioformamidopyrimidines. G. W. Kenner and A. R. Todd. Chem Soc J p852-5 O '46
Fluorescence spectrography as an aid in the identification of compounds. I. Berenblum and R. Schoental. pl Chem Soc J p 1017-18 N '46
Higher hydrocarbons; six phenyleicosanes and six cyclohexyleicosanes. F. C. Whitmore and others. Am Chem Soc J 69:235-7 F '47
Introduction of the angular methyl group; alkoxymethylene blocking group. W. S. Johnson and H. Posvic. bibliog Am Chem Soc J 69:1361-6 Je '47

CYCLIC compounds—*Continued*
Metabolism of polycyclic compounds; configuration of the dihydroxydihydroanthracenes produced from anthracene. E. Boyland and C. W. Shoppee. Chem Soc J p801-4 Je '47
New synthetic method for many-membered carbon rings. A. T. Blomquist and R. D. Spencer. Am Chem Soc J 69:472-3 F '47
Polycyclic aromatic hydrocarbons; 2′-methoxy- and 2′-methoxy-9 : 10-dimethyl-1 : 2-benzanthracene. G. M. Badger. Chem Soc J p940-3 Jl '47
Preparation of fused-ring fluorocarbons. E. T. McBee and L. D. Bechtol. bibliog il diags Ind & Eng Chem 39:380-4 Mr '47
Some observations on Friedel-Crafts reactions involving unsaturated ketones; 9-keto-4b,5,6,7,8,8a,9,10-octahydrophenanthrene. C. D. Gutsche and W. S. Johnson. bibliog Am Chem Soc J 68:2239-45 N '46
Studies in the terpene series; destructive hydrogenation of bicyclic dihydroterpenic hydrocarbons. V. N. Ipatieff, H. Pines and M. Savoy. bibliog Am Chem Soc J 69:1948-52 Ag '47
Synthesis of condensed ring compounds; dimethylsteradienones. A. M. Gaddis and L. W. Butz. Am Chem Soc J 69:1203-4 My '47
Synthesis of condensed ring compounds; new 9-methyloctalone. A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69:117-19 Ja '47
Synthesis of condensed ring compounds; the addition of quinones to a dienyne. L. W. Butz, A. M. Gaddis and E. W. J. Butz. bibliog Am Chem Soc J 69:924-5 Ap '47
Synthesis of condensed ring compounds; total synthesis of a 10a-methyldodecahydrochrysene-1,4-dione (a 10-methyl-D-homosteradiene-15,17a-dione). A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69: 1165-70 My '47
Synthesis of 3,4-dihydro-10-hydroxy-1,2-benzanthracene and derivatives. H. E. Zaugg. bibliog Am Chem Soc J 68:2492-4 D '46
Synthesis of 1-keto-$\Delta^{4a,10a}$-dodecahydrophenanthrene, *cis*-9-methyl-1-decalone, and other cyclic ketones. W. E. Bachmann and N. L. Wendler. bibliog Am Chem Soc J 68:2580-4 D '46
Synthesis of tetrafluoroethylene; pyrolysis of monochlorodifluoromethane. J. D. Park and others. bibliog flow diag Ind & Eng Chem 39:354-8 Mr '47
Tetrahydrothiophene (thiophane) derivatives. R. B. Woodward and R. H. Eastman. bibliog Am Chem Soc J 68:2229-35 N '46
See also
Cyclohexane
Cyclopentane
Cyclopropane

CYCLOCITRAL
Polyenes; the structure of cyclocitrylidenecyanoacetic acid and the purity of β-cyclocitral. W. G. Young and S. L. Linden. bibliog Am Chem Soc J 69:2072 Ag '47

CYCLOCITRYLIDENECYANOACETIC acid
Polyenes; the structure of cyclocitrylidenecyanoacetic acid and the purity of β-cyclocitral. W. G. Young and S. L. Linden. bibliog Am Chem Soc J 69:2072 Ag '47

CYCLOHEPTANE
Heats of combustion of cyclopentane, cyclohexane, cycloheptane and cyclooctane. R. Spitzer and H. M. Huffman. bibliog Am Chem Soc J 69:211-13 F '47

CYCLOHEXANE
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47
Epimeric alcohols of the *cyclo*hexane series; the optically active 3-methyl*cyclo*hexanols. A. K. Macbeth and J. A. Mills. Chem Soc J p205-8 F '47
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Heat capacity of gaseous cyclopentane, cyclohexane and methylcyclohexane. R. Spitzer and K. S. Pitzer. Am Chem Soc J 68: 2537-8 D '46
Heats of combustion and isomerization of the eight C_8H_{16} alkylcyclohexanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 39:49-52 Jl '47
Heats of combustion of cyclopentane, cyclohexane, cycloheptane and cyclooctane. R. Spitzer and H. M. Huffman. bibliog Am Chem Soc J 69:211-13 F '47
Heats of formation and isomerization of the eight C_8H_{12} alkylcyclohexanes in the liquid and gaseous states. E. J. Prosen and others. bibliog J Res Nat Bur Stand 39:173-5 Ag '47
Infrared absorption spectra of seven cyclopentanes and five cyclohexanes. E. K. Plyler and others. bibliog il charts J Res Nat Bur Stand 38:211-28 F '47
Infra-red spectrometry from 15 to 25μ. E. K. Plyler. Opt Soc Am J 37:746-53 O '47
Motions of molecules in condensed systems; infra-red spectra for cyclohexane solid II, solid I, liquid and vapor in the range from 3 to 15μ. G. B. Carpenter and R. S. Halford. bibliog J Chem Phys 15:99-106 F '47
Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47
Tautomerism in cyclohexane derivatives; reassignment of configuration of the 1,3-dimethylcyclohexanes. K. S. Pitzer and C. W. Beckett. Am Chem Soc J 69:977-8 Ap '47

CYCLOHEXANEDIOL
Separation of *cis* and *trans* diacetates of cyclohexane-1,4-diol. T. D. Perrine and W. C. White. il Am Chem Soc J 69:1542-3 Je '47

CYCLOHEXANE valeric acid
γ-Isopropyl and γ-cyclohexyl valeric acids. N. Levin, D. Papa and E. Schwenk. Am Chem Soc J 69:1830-1 Jl '47

CYCLOHEXANOL
Anomalous densities of 1-*n*-alkyl-cyclohexanols. H. B. Williams and W. R. Edwards, jr. Am Chem Soc J 69:336-8 F '47
α-*cyclo*Hexyl-β-propylacrylic acid from *cyclo*hexanol. C. Weizmann, M. Sulzbacher and E. Bergmann. Chem Soc J p772-3 Je '47
Dehydration of a hindered tertiary alcohol. R. B. Carlin and D. A. Constantine. bibliog Am Chem Soc J 69:50-2 Ja '47
Equilibrium studies on the dehydrogenation of primary and secondary alcohols; cyclohexanols. A. H. Cubberley and M. B. Mueller. Am Chem Soc J 69:1535-6 Je '47
Hydrogenation of lignin over Raney nickel. J. F. Saeman and E. E. Harris. bibliog Am Chem Soc J 68:2507-9 D '46

CYCLOHEXENE
Addition of thio-compounds to olefins; reactions of thioglycollic acid, thiophenol, and *iso*pentanethiol. J. I. Cunneen. Chem Soc J p36-40 Ja '47
Addition of thio-compounds to olefins; reactions of thiolacetic and mono-, di-, and tri-chlorothiolacetic acids. J. I. Cunneen. Chem Soc J p 134-41 F '47
Condensation of saturated halides with unsaturated compounds; condensation of *t*-butyl chloride with cyclohexene. L. Schmerling. bibliog Am Chem Soc J 69: 1121-5 My '47
Methoxymercuration of cyclohexene. J. Romeyn and G. F. Wright. Am Chem Soc J 69:697-701 Mr '47

CYCLOHEXENONE
Aromatization studies; palladium dehydrogenation of arylcyclohexenones to phenols. E. C. Horning and M. G. Horning. bibliog Am Chem Soc J 69:1359-61 Je '47
Aromatization studies; synthesis of alkylanilines from alkylcyclohexenones. E. C. Horning and M. G. Horning. Am Chem Soc J 69:1907-8 Ag '47

CYCLOHEXYLAMINE
Preparation of some primary and secondary β-cyclohexylalkylamines. B. L. Zenitz, E. B. Macks and M. L. Moore. bibliog Am Chem Soc J 69:1117-21 My '47

CYCLOHEXYLBENZENES. See Phenyl cyclohexane

CYCLOHEXYLEICOSANE
Higher hydrocarbons; six phenyleicosanes and six cyclohexyleicosanes. F. C. Whitmore and others. Am Chem Soc J 69:235-7 F '47

CYCLOHEXYL group
Antispasmodics; cyclohexyl and Δ²-cyclohexenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1854-7 Ag '47

CYCLOHEXYLPROPYLACRYLIC acid
α-*cyclo*Hexyl-β-propylacrylic acid from *cyclo*hexanol. C. Weizmann, M. Sulzbacher and E. Bergmann. Chem Soc J p772-3 Je '47

CYCLONE burner. See Burners

CYCLONE spray towers
Gas absorption and humidification in cyclone spray towers. H. F. Johnstone and H. E. Silcox. bibliog il diags Ind & Eng Chem 39:808-17 Jl '47

CYCLOÖCTANE
Heats of combustion of cyclopentane, cyclohexane, cycloheptane and cycloöctane. R. Spitzer and H. M. Huffman. bibliog Am Chem Soc J 69:211-13 F '47

CYCLOÖCTATETRAENE
Cycloöctatetraene; potentially profit-making chemical. Chem Ind 60:591 Ap '47
1,2,5,6-Dibenzcycloöctatetraene. L. F. Fieser and M. M. Pechet. bibliog Am Chem Soc J 68:2577-80 D '46
Heat of combustion and formation of 1,3,5,7-cycloöctatetraene and its heat of isomerization to styrene. E. J. Prosen, W. H. Johnson and F. D. Rossini. bibliog Am Chem Soc J 69:2068-9 Ag '47
Synthesis of cycloöctatetraene from pseudopelletierine. A. C. Cope and C. G. Overberger. bibliog Am Chem Soc J 69:976 Ap '47
X-ray examination of cyclooctatetraene. H. S. Kaufman and others. J Chem Phys 15: 414-15 Je '47

CYCLOPENTADIENE
Metal sulphide catalysis of a simple cracking reaction. B. S. Khamabata and A. Wassermann. Chem Soc J p 1090-1 N '46
Preparation of hexachlorocyclopentadiene and certain derivatives. J. A. Krynitsky and R. W. Bost. bibliog Am Chem Soc J 69: 1918-20 Ag '47
Reaction between gaseous cyclopentadiene and benzoquinone. A. Wassermann. Chem Soc J p 1089-90 N '46

CYCLOPENTANE
Heat capacity of gaseous cyclopentane, cyclohexane and methylcyclohexane. R. Spitzer and K. S. Pitzer. Am Chem Soc J 68:2537-8 D '46
Heats of combustion of cyclopentane, cyclohexane, cycloheptane and cycloöctane. R. Spitzer and H. M. Huffman. bibliog Am Chem Soc J 69:211-13 F '47
Hydrocarbons in the 102° to 108° C fraction of petroleum. A. R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38: 621-6 Je '47
Infrared absorption spectra of seven cyclopentanes and five cyclohexanes. E. K. Plyler and others. bibliog il charts J Res Nat Bur Stand 38:211-28 F '47
Infra-red spectrometry from 15 to 25μ. E. K. Plyler. Opt Soc Am J 37:746-53 O '47
Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47
Solid solution studies; equilibria in the binary systems 2,2-dimethylbutane-2,3-dimethylbutane and 2,2-dimethylbutane-cyclopentane. H. L. Fink and others. Am Chem Soc J 69:1501-6 Je '47
Thermal properties of cyclopentane and its use as a standard substance in low temperature thermal measurements. G. J. Szasz and others. bibliog J Chem Phys 15:562-4 Ag '47
Vapor pressures and saturated liquid and vapor densities of cyclopentane, methylcyclopentane, ethylcyclopentane and methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69:1273-7 Je '47

CYCLOPENTYL group
Antispasmodics; cyclopentyl and Δ²-cyclopentenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1849-54 Ag '47

CYCLOPROPANE
Preparation and identification of alkylcyclopropanes; 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane. J. D. Bartleson, R. E. Burk and H. P. Lankelma. bibliog Am Chem Soc J 68:2513-18 D '46

CYCLOTRON
Accelerators under construction at Berkeley. M. L. Kastens. il diag Chem & Eng N 25: 224-7 Ja 27 '47
Atomic artillery; principles and mechanisms of electron and ion accelerators. J. Stokley. il diags Gen Elec R 50:9-19 Je '47
Cyclotron at Carnegie Tech. Chem & Eng N 25:1756 Je 16 '47
Cyclotron in atomic energy developments. I. Perlman. Chem & Eng N 24:3032-5+ N 25 '46
Eight full open hearth heats used in 1100-ton magnet for navy super cyclotron. il Steel 120:126 My 12 '47
F-M cyclotron to be used in atomic energy research. il Electronics 20:119 Mr '47
Giant cyclotron produces 22 fragments from single nucleus. il Chem & Eng N 25:2144 Jl 28 '47
Initial performance of the 184-inch cyclotron of the University of California. W. M. Brobeck and others. Phys R 71:449-50 Ap 1 '47
Internal cyclotron targets. A. F. Reid. R Sci Instr 18:501-3 Jl '47
Metaborate compounds for internal cyclotron targets. A. S. Weil and others. R Sci Instr 18:556-8 Ag '47
Physico-chemical institute, University of Uppsala, Sweden, has started construction of a cyclotron laboratory. Science 105:429 Ap 25 '47
Sliding vacuum gate for the cyclotron. G. A. Boyd. il diags R Sci Instr 18:250 Ap '47
Technique of bombarding organic compounds with deuterons. R. E. Honig. bibliog il diags R Sci Instr 18:389-94 Je '47
Theory of the synchro-cyclotron. D. Bohm and L. L. Foldy. bibliog Phys R 72:649-61 O 15 '47
Thermistors at high frequencies; impedance measurements on cyclotron models. J. Walker. Wireless Eng 24:28 Ja '47

CYCLOVERSION process. See Gasoline—Manufacture

CYLINDERS
Compound cylinder and the strength problem. C. W. MacGregor and L. F. Coffin, jr. Franklin Inst J 243:391-421 My '47
Instrument for checking bore diameters in long cylinders. D. E. McDonald. Mach 52: 192 D '45; Discussion. C. H. Borneman. 54:182 O '47
Torsion of a rubber cylinder. R. S. Rivlin. il diags J Res Nat Bur Stand 38:637-42 Je '47

CYLINDERS (engines, etc.)
Analysis of the lubrication between the piston rings and cylinder wall of a running engine. J. S. Courtney-Pratt and G. K. Tudor. bibliog il diag Inst Mech Eng J & Proc 155 (War emergency issue no 21):293-9 '46; Same. Engineering 161:69-71 Ja 18 '46; Same cond. Engineer 180:469-71 D 7 '45; Discussion. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):306-20 '46; Engineer 180:459-60, 480 D 7-14 '45

CYLINDERS (engines, etc.)—*Continued*
Hydraulic O-ring packing for sealing cylinders and pistons. R. E. Allen. diags Product Eng 18:163-6 Jl '47
Increased efficiency of heat transfer; aluminum cylinder barrel cast on thin-wall steel liner. il Machine Design 19:107 Je '47
New finish to end lube trouble; abstract. H. M. Bramberry. S A E J 55:81-3 O '47

Lining

Austempered cast iron serves as cylinder liners. C. W. Ohly. il Materials & Methods 25:89-91 My '47
Casting of a gray iron Diesel engine liner. N. A. Kahn and B. N. Ames. il Foundry 75:66-71+ Ag '47

Manufacture

Automotive cylinder bore size automatically controlled by Micromatic hone corp.'s honing tool and head. il diag Steel 120:96+ My 19 '47; Iron Age 159:66 My 15 '47; Am Mach 91:162 My 22 '47; Mach 53:190-1 Jl '47
Buick modernizes cylinder bore production. H. E. Linsley. il Iron Age 158:65-8 N 21 '46
Cylinder production for the Wasp Major engine; Pratt & Whitney. T. J. Crowley and F. J. Carney. il Mach 53:152-9 Je '47
Precision cast finned cylinders; using refractory molds. E. I. Valyi. il Materials & Methods 24:1450-1 D '46

Testing

Editorial citation to Buick div., General motors corp. for achievement in precision air gaging of metal parts. il Materials & Methods 24:1174-5 N '46

Wear

Cylinder wear in Diesels. B. M. Berry and others. S A E J 55:31-2+ O '47
Indentation method for measuring wear. S. A. McKee. il diags J Res Nat Bur Stand 39:155-61 Ag '47
Minute amounts of cylinder wear are measured with a microscope; abstract. C. S. Bruce and J. T. Duck. Automotive & Aviation Ind 96:33 F 1 '47
New accuracy attained in gaging metal wear; McKee wear gage. il diags Aviation W 47: 21-2 Ag 4 '47; Mech Eng 69:672-4 Ag '47; Product Eng 18:172 S '47; Mach 54:158 N '47
Some problems of cylinder-bore wear. W. A. Robotham. Engineering 163:392-6 My 9 '47

CYLINDROMETER. See Measuring instruments

CYMENE
Fluorinated derivatives of *p*-isopropyltoluene and isopropylbenzene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:399-401 Mr '47

CYPRESS
Cypress domes. R. O. Vernon. bibliog il Science 105:97-9 Ja 24 '47

CYPRUS

Politics and government

Deadlock in Cyprus. Economist 153:158-9 Jl 26 '47

CYSTEINE
Effect of cysteine—hydrogen peroxide treatments on the electrophoretic and immunological assay behavior of human gamma globulin. H. F. Deutsch. bibliog Am Chem Soc J 68:2625-8 D '46
New syntheses of the selenium analogs of *dl*-cystine and cysteine derivatives. E. P. Painter. bibliog Am Chem Soc J 69:229-32 F '47

Analysis

Determination of cystine and cysteine in altered human hair fibers. D. Sanford and F. L. Humoller. bibliog Anal Chem 19:404-6 Je '47

CYSTINE
New syntheses of the selenium analogs of *dl*-cystine and cysteine derivatives. E. P. Painter. bibliog Am Chem Soc J 69:229-32 F '47

Analysis

Determination of cystine and cysteine in altered human hair fibers. D. Sanford and F. L. Humoller. bibliog Anal Chem 19:404-6 Je '47

CYTIDINE
Synthesis of cytidine. G. A. Howard, B. Lythgoe and A. R. Todd. Chem Soc J p 1052-4 Ag '47

CYTOCHROMES
Current interest in the therapeutic use of cytochrome C. V. R. Potter. Science 106: 342 O 10 '47; Reply. S. Proger, G. Schmidt and D. Decaneas. 106:367 O 17 '47
Effects of cytochrome C in anoxia. I. H. Scheinberg and H. O. Michel. bibliog Science 105:365-6 Ap 4 '47

CZECHOSLOVAKIA

See also
Glass trade—Czechoslovakia
Metal working industries—Czechoslovakia
Radio broadcasting—Czechoslovakia

Commerce

Czech trade with Germany arranged. Comm & Fin Chr 165:1134 F 27 '47
Czechoslovakia in 1946; graph. Economist 152:71 Ja 11 '47
Czechoslovakia's export trade. Economist 152: 543 Ap 12 '47
Czechoslovakia's trade aims. H. Ripka. Comm & Fin Chr 166:119+ Jl 10 '47
Foreign trade during first half of 1947. For Comm W 28:13 S 13 '47
Government promotion of foreign trade. For Comm W 28:17 Ag 16 '47
Preliminary statistics of Czechoslovakia's foreign trade for 1946. For Comm W 27: 15 Ap 5 '47
Trade lists for Czechoslovakia available. For Comm W 26:13 Mr 1 '47

Commercial policy

Agencies to be formed to implement trade agreement between Czechoslovakia and Poland. For Comm W 29:13 N 1 '47
Documentation of shipments including air express. For Comm W 28:17 S 27 '47
Foreign trade; licensing procedure established. For Comm W 27:14-15 My 10 '47
Summary of Czechoslovakia's postwar trade arrangements with other countries. For Comm W 27:18 Je 21 '47

Economic conditions

News by countries. For Comm W 27:18 My 17; 28:13 S 13 '47

Economic relations

Czechoslovakia and her neighbours. Economist 153:112 Jl 19 '47
Economic collaboration with Rumania strengthened. For Comm W 29:12 O 11 '47

Industries and resources

Czech compromise; nationalized industries run on democratic principles. il Bsns W p105-6 Mr 8 '47
Industrial problems in Czechoslovakia. Engineering 164:149-50 Ag 15 '47
Machines from a shoe factory; Czechoslovakia's famed Bata plant. il Bsns W p 113-14 O 18 '47
Nationalisation and the Czech two-year plan. Economist 152:24 Ja 4 '47; Discussion. 152: 277-8 F 15 '47
Organization of industry; names and addresses of economic groups. For Comm W 25:13 N 23 '46
Skoda works; progress of reconstruction reviewed. il Chem Age (Lond) 55:562-3 N 9 '46

Politics and government

Czechoslovakia in 1946. Economist 152:71-2 Ja 11 '47; Same. Iron Age 159:109+ Ja 23 '47

D

DDT (dichlorodiphenyltrichloroethane)
Catalytic decomposition of DDT. A. L. Flenner. Am Chem Soc J 68:2399 N '46
Control of houseflies by DDT sprays. W. C. Baker and others. Pub Health Rep 62:597-612, pl 1-2 Ap 25 '47
Control of rat ectoparasites with DDT. R. G. Ludwig. diags Pub Health Rep 62:77-84, pl 13 Ja 17 '47
DDT against Dutch elm disease. Chem & Eng N 25:1140 Ap 21 '47
DDT emulsion concentrates. H. A. Jones and others. Soap & San Chem 22:15+ D '46
DDT for control of roaches. L. S. Henderson. Soap & San Chem 22:121-3+ N '46
DDT for insect control in industrial plants. H. I. Scudder. bibliog il Safety Eng 93: 58-63 F '47
DDT for powder-post beetle control in bamboo. H. K. Plank. Science 106:317 O 3 '47
DDT residues; their toxicity to houseflies on various surfaces and materials. H. A. U. Monro and others. il Soap & San Chem 23:123+ Ag '47
DDT whitewash. A. W. Fuchs. Sci Am 177:80 Ag '47
Excellent results obtained by large-scale DDT spraying in Zululand; abstract. Smit. Chem & Ind p160 Mr 29 '47
Inhibition of catalysed thermal decomposition of DDT. F. A. Gunther and L. R. Tow. bibliog Soc Chem Ind J 66:57-9 F '47
Insect killer; precautions. Safety Eng 93:74 Ap '47
Insecticidal tests with analogues of DDT J. R. Busvine. bibliog Soc Chem Ind J 65: 356-60 N '46
Insecticides; chemical constitution and toxicity. H. Martin. bibliog Soc Chem Ind J 65:402-5 D '46
Insecticides modernes; genèse de la découverte du D.D.T.; études le concernant. A. Kling. Chimie & Ind 57:22-30 Ja '47
Isolation of the *o,o'*-DDT isomer from technical DDT. S. J. Cristol, S. B. Soloway and H. L. Haller. bibliog Am Chem Soc J 69:510-15 Mr '47
Modern chemistry controls forest insect outbreak. D. S. Hoffman and R. H. Forbes. il Chem & Eng N 25:2499-500 S 1 '47
Municipal insect control, an aid to health and comfort. R. S. Taggart and J. V. Osmun. il Pub Works 77:29-30+ N '46
Outlook for DDT and DDT insecticides. Soap & San Chem 23:114-15+ S '47
Preliminary studies on the control of blowflies with DDT. W. C. Baker and L. G. Schwartz. pl Pub Health Rep 62:800-7 My 30 '47
Present position of DDT in the control of insects of medical importance; abstract. F. C. Bishopp. Am Water Works Assn J 39:704-5 Jl '47
Products containing DDT for controlling flies. Consumers Res Bul 20:24-5 S '47
Rearrangement of 1,1,1,2-tetrachloro-2,2-bis-(*p*-chlorophenyl)-ethane, chloro-DDT, to 1,1,2,2-tetrachloro-1,2-bis-(*p*-chlorophenyl)-ethane. W. L. Walton. bibliog Am Chem Soc J 69:1544-5 Je '47
Techniques of application and the control of roaches and bedbugs with DDT. R. L. Stenburg. bibliog Pub Health Rep 62:669-81 My 9 '47
Thermal decomposition of 1 : 1 : 1-trichloro-2:2-di-(4-chlorophenyl) ethane (D.D.T.) and some of its phase equilibria. P. G. Scholefield and others. bibliog diag Soc Chem Ind J 65:354-6 N '46
USDA recommendations on DDT use. Soap & San Chem 23:163 Je '47
Use of DDT insecticides; hazards and precautions. Nat Safety N 56:39-40+ Ag '47
Use of DDT to control murine typhus fever in San Antonio, Texas. D. E. Davis. Pub Health Rep 62:449-63 Mr 28 '47
Viscosity and density of four liquefied-gas aerosol solutions containing DDT. L. D. Goodhue and A. C. Hazen. diags Anal Chem 19:248-50 Ap '47
Work with residual DDT spray in Puerto Rico. P. A. Stephens and H. D. Pratt. Science 105:32-8 Ja 10 '47
X-ray study of some DDT analogs. M. Schneider and I. Fankuchen. bibliog Am Chem Soc J 68:2669-70 D '46

Advertising

Seeing is believing: movies show use of Pestroy DDT and Weed-No-More 2,4-D. C. Toll. il Sci Am 177:160-1 O '47

Analysis

Colorimetric determination of DDT in milk and fatty materials. M. S. Schechter, M. A. Pogorelskin and H. L. Haller. bibliog Anal Chem 19:51-3 Ja '47
Colorimetric method for the estimation of 2 : 2-bis-(*p*-chlorophenyl)-1 : 1 : 1-trichloroethane (DDT). F. R. Bradbury and others. Soc Chem Ind J 66:65-8 Mr '47
DDT determinations; abstract. R. L. Wain and A. E. Martin. Soap & San Chem 23: 153 S '47
Determination of chlorine in DDT insecticides. G. W. Fiero. Soap & San Chem 23:147+ O '47
Determination of 1-trichloro-2,2-bis(*p*-chlorophenyl)ethane in DDT dusts and oil solutions. J. B. LaClair. bibliog Ind & Eng Chem Anal ed 18:763-6 D '46
Estimation of DDT in milk by determination of organic chlorine. R. H. Carter. Anal Chem 19:54 Ja '47
Solubility as a criterion of purity. D. Thorp. Soc Chem Ind J 65:414-19 D '46

Bibliography

Second digest of the literature on DDT (May 1, 1944, to Dec. 31, 1944). R. C. Roark and N. E. McIndoo. 71p U.S. Dept. of agric, Washington '46
Second list of publications on DDT. R. C. Roark. 27p U.S. Dept. of agric, Washington '45
Third list of publications on DDT, Jan. through June 1945. R. C. Roark. 28p U.S. Dept. of agric, Washington '46

Manufacture

Pacific Northwest gets new DDT, chlorine-caustic plants; Pennsalt's expansion program at Portland, Oregon. il Chem Ind 61: 60-1 Jl '47
Synthesis of DDT with chlorosulfonic acid as condensation agent. W. A. Cook, K. H. Cook and W. H. C. Rueggeberg. bibliog Ind & Eng Chem 39:868-70 Jl '47

Mosquito control

Comparative residual toxicity of DDT to anopheles quadrimaculatus when applied on different surfaces. J. M. Clapp and others. Pub Health Rep 62:158-70 Ja 31 '47
Comparative studies of DDT dusts, DDT-oil sprays, and paris-green dusts used routinely in anopheline larvae control. W. V. Mathis and others. Pub Health Rep 62:95-103 Ja 17 '47
Comparative toxicity of DDT isomers and related compounds to mosquito larvae and fish. J. M. Ginsburg. Science 105:233-4 F 28 '47
Control of anopheline mosquito larvae by use of DDT-oil mists. F. F. Ferguson and others. bibliog Pub Health Rep 62:296-302 F 28 '47
DDT in oil as a larvicide in an area ordinarily considered difficult to treat. H. A. Johnson and M. W. Yates. Pub Health Rep 62:1085-95 Jl 25 '47
DDT in oil as a mosquito larvicide. H. A. Johnson and W. L. Goodman. Pub Health Rep 62:1191-8 Ag 15 '47
Duration of toxicity of several DDT residual sprays under conditions of malaria-control operations. F. L. Knowles and C. S. Smith. Pub Health Rep 61:1806-10 D 13 '46
Effectiveness against anopheles albimanus. H. Trapido. Science 105:432 Ap 25 '47
Effects of DDT mosquito larviciding on wildlife; effects of routine airplane larviciding on bird and mammal populations. A. B. Erickson. Pub Health Rep 62:1254-62 Ag 29 '47

DDT (dichlorodiphenyltrichloroethane) — Mosquito control—*Continued*
Effects of DDT mosquito larviciding on wildlife; effects on surface organisms of the routine hand application of DDT larvicides for mosquito control. C. M. Tarzwell. fold table Pub Health Rep 62:525-54, pl 1-2 Ap 11 '47
Effects of DDT mosquito larviciding on wildlife; the effects on the plankton population of routine larviciding with DDT. E. L. Bishop. Pub Health Rep 62:1263-8, pl 1 Ag 29 '47
Epidemic control with DDT, ANTU and 1080. H. Elishewitz. Soap & San Chem 23:127-9+ My; 153+ Je '47
Extended laboratory investigations on the toxicity of DDT residues to adults of anopheles quadrimaculatus. R. W. Fay and others. Pub Health Rep 62:149-58 Ja 31 '47
Inactivation of DDT used in anopheline mosquito larvicides. W. M. Upholt. bibliog Pub Health Rep 62:302-9 F 28 '47
Mosquito larvicide tests; a résumé of tests of compounds related to DDT against larvae of anopheles quadrimaculatus. C. C. Deonier and others. bibliog Soap & San Chem 22:118-19+ N '46
Observations on the nighttime resting and biting habits of anopheline mosquitoes in DDT-treated and -untreated buildings. C. M. Tarzwell and F. W. Fisk. Pub Health Rep 62:84-94 Ja 17 '47

Moth control

Cloth treatment; preventing moth damage by impregnating with DDT. il Mech Eng 69:153-4 F '47; Excerpt. Chem Ind 60: 244, 252 F '47
Clothes moth control; abstract. D. L. Collins and R. D. Glasgow. Soap & San Chem 22: 161 D '46
DDT moth control process; Erustomoth. il Chem & Eng N 25:384 F 10 '47
Mothproofing with DDT during drycleaning. A. C. Smith. il diags Soap & San Chem 23:122-5 My '47

Physiological effect

Comparative toxicity of DDT and four analogues to goldfish, gambusia, and culex larvae. E. P. Odum and W. T. Sumerford. bibliog Science 104:480-2 N 22 '46
Health of dairy cows unaffected by DDT; abstract. N. N. Allen and others. Food Ind 19:130 Ja '47
Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:312-14 Mr 15 '47
Skin-sensitizing properties of DDT for the guinea pig. J. E. Dunn and others. bibliog Pub Health Rep 61:1614-20 N 8 '46

Standards

Propose new federal specs for DDT and DDT emulsion concentrates. Soap & San Chem 23:137+ Ag '47

Testing

Aerosol technique provides plant-scale insect control. E. C. Barnes and others. bibliog il diags Chem Ind 60:238-40+ F '47
Fly larvicide tests. A. H. Madden and others. Soap & San Chem 23:141+ Mr '47
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47

DFDT. See Difluorodiphenyltrichloroethane

DADE brothers
Dade bros. getting set for increased plane exports. E. J. Bulban. il Aviation N 7:21 My 26 '47

DAIRIES
What's ahead in milk processing. M. E. Parker and E. S. Stateler. il plan diag Food Ind 19:609-11 My '47

See also
Dairy waste

Sanitation

Testing quaternary ammonium sanitizers as used in the dairy industry. W. S. Mueller and others. bibliog Soap & San Chem 23:123+ S '47

DAIRY farms
Case history of pasture development. D. R. Francis. il Banking 39:45+ My '47

DAIRY machinery

See also
Pasteurizers, Electric

DAIRY products
Dairy industry's earnings are vulnerable; sales show good growth, but costs grow faster. S. G. Ebert. Barron's 27:31 N 3 '47
Evaluating investment status of food and dairy companies; with statistics on leading processors. S. Devlin. Mag of Wall St 80:495-7+ Ag 2 '47
What's ahead in milk processing. M. E. Parker and E. S. Stateler. il plan diag Food Ind 19:333-5+, 468-70+, 609-11 Mr-My '47

See also
Butter
Casein
Cheese
Milk

Statistics

Manufactured dairy products; revisions in production data and utilization of milk in manufactured products; monthly figures, 1944-1945. Survey of Cur Bsns 27:16 Ap '47
Manufactured dairy products; revisions in production data and utilization of milk in manufactured products; monthly figures, 1944-1946. Survey of Cur Bsns 27:23 O '47

Testing

Pasteurization test. Chem & Eng N 25:2651 S 15 '47

DAIRY products improvement institute
New dairy institute gets wide approval. Food Ind 19:1242 S '47

DAIRY waste
Dairy waste disposal. H. A. Trebler and H. G. Harding. bibliog flow sheet il diags Chem Eng Prog 43:255-66 My '47
Industrial wastes; dairy industry. H. A. Trebler and H. G. Harding. bibliog flow sheet il diags Ind & Eng Chem 39:608-13 My '47
Treatment of strong wastes. A. W. Banister and R. J. Ellison. Pub Works 78:26-7+ S '47

DAIRYING

See also
Milk
Milk plants
Milk trade

Exhibitions

Dairy exposition highlights. il Food Ind 18: 1849 D '46

Argentina

Dairy products; exports from Argentina during July 1947. For Comm W 29:20 N 1 '47

Cuba

Dairy products; situation in Cuba. For Comm W 29:20-1 O 18 '47

Philippine Islands

Imports into the Philippines. For Comm W 28:28 Jl 19 '47

Scandinavia

Scandinavian dairy industries emerge from War's disruptions. A. J. Mullen. il For Comm W 28:3-5+ Ag 30 '47

United States

Dairy industry's earnings are vulnerable; sales show good growth, but costs grow faster. S. G. Ebert. Barron's 27:31 N 3 '47

Venezuela

Dairying industry in Venezuela using seaplanes. For Comm W 25:40 D 7 '46

DALLAS

See also
Housing—Dallas
Retail trade—Dallas

Industries

Region-builders; Dallas in wonderland. J. J. McCann. il Banking 39:28-30+ Ja '47

DALLAS—*Continued*

Sanitary affairs

Dallas builds own garbage trucks. il Eng N 138:45-6 Ja 9 '47

DALLAS power and light company
To amend charter. Comm & Fin Chr 165: 1313 Mr 10 '47

DALLAS railway and terminal company
Bonds placed privately. Comm & Fin Chr 165:71 Ja 6 '47

DALLO, Erwin
Converting on two continents. por Textile Col 69:28-9+ Ap '47

DALRYMPLE, Sherman Harrison, 1889-
Portrait. Bsns W p98 N 16 '46

DAMAGES
Seller of water heater liable for explosion damage to home of buyer. East Underw 47: 27 D 20 '46

See also
Employers' liability
Municipal liability
Negligence
Personal injuries
Workmen's compensation

DAMPING. See Vibration

DAMPNESS in buildings
Avoiding wet walls in high humidity industrial plants. G. R. Morgan. Heat & Ven 43: 74-9 N '46
Condensation problems serious with indoor swimming pools. S. Lewis. il Heating-Piping 19:99-100 My '47
Glass house for Duplan insulates for nylon throwing; Foamglas in side walls and roof protects against condensation. il Textile World 97:114-15 My '47
Heat and moisture transfer in all-metal houses. F. G. Hechler and others. il Heat & Ven 44:69-74 Ap '47
How to calculate heat transmission coefficients and vapor condensation temperatures of concrete masonry walls. diags Concrete 55:28-9 Ja '47
Moisture control and its effect on home heating service. V. Pearson. Gas Age 98: 49-51+ D 12 '46
Paper mill insulating problems; use of Foamglas. V. Sanders. il Paper Ind 29:531-3 Jl '47
Vapor pressure; what it is and does. E. R. Queer and E. R. McLaughlin. il Heating-Piping 19:78-80 Ag '47

DAMS
Le barrage en enrochements sur le San Gabriel (Californie). plan diag Génie Civil 124:277-8 Jl 15 '47
Bids to be called soon for start on Garrison dam; details of construction program. plan diag Eng N 139:217+ Ag 14 '47
California's Santa Fe dam completed after war halt. il Eng N 138:485 Mr 27 '47
Cincinnati's Mill Creek flood control project. H. B. McDermid. il map diags Power Pl Eng 50:82-5 D '46
Correction of tailwater erosion at Prairie du Sac dam. C. N. Ward and H. J. Hunt. il Am Soc C E Proc 72:1077-89 O '46; Discussion. 73:709-17 My '47
David dam completes storage regulation of Colorado river below Boulder. L. R. Douglass. il Civil Eng 17:14-17 Ja '47
Earth and rock excavation for Stewartville dam. il map plan Roads & Bridges 85:70-6+ My '47
Four earthfill dams create 1,873-acre Horsetooth reservoir in Colorado. F. C. Walker. il map diags Civil Eng 17:310-13+ Je '47
Garrison Dam project; abstract. W. W. Wanamaker. Civil Eng 17:446 Ag '47
Garrison preconstruction contracts inaugurate 75,000,000-cu.yd. embankment project. il Civil Eng 17:240-3 My '47
Hazard checked; sled mounted drill for slope quarrying; material for Blue Mountain dam. W. C. Coe. il Nat Safety N 55:24-5+ My '47; Same cond. Comp Air Mag 52:126-7 My '47
Heavy rock work on British Columbia power development; Bridge River hydro-electric development. il Roads & Bridges 85:46-9 Jl '47
High earth fill dam ordered for Ft. Randall. Eng N 139:303 S 4 '47
International treaty authorizes flood control structures on lower Rio Grande. L. M. Lawson and R. F. MacGregor. il map Civil Eng 17:117-20 Mr '47
Investigation of drainage rates affecting stability of earth dams. F. H. Kellogg. diags Am Soc C E Proc 73:1065-88 S '47
Ladybower reservoir; electrical features in construction and operation of the dam. il Elec R (Lond) 139:815-20 N 22 '46
Landslide investigation and correction; seepage forces in an earth dam. D. P. Barnes. diags Am Soc C E Proc 72:1387-90 D '46
Large dam projects are beginning in various areas of U.S. and Canada. il Eng N 139: 290-1 Ag 28 '47
Marathon Dam-Souli Springs scheme, Greece. il Engineer 182:395 N 1 '46
Progress on Rhone hydro-power project; Genessiat hydroelectric project. il map Bsns W p98 Je 21 '47
Proposed projects develop power and irrigation potentials of Colorado River system. H. F. McPhail. il map Civil Eng 17:459-63+ Ag '47
Railroad relocated above Conemaugh dam. il map diags Eng N 139:176-80 Ag 7 '47
Reclamation's biggest earthfill dam; Anderson Ranch dam in Idaho. D. S. Walter. il diags Eng N 139:396-402 S 18 '47
Toe drain system, Sardis dam; collection ditch of porous concrete. il Concrete 55:28-9 Ap '47
Work resumed on Center Hill dam. il diags Eng N 138:568-73 Ap 17 '47

See also
Colorado river—
Hoover dam project
Columbia river—
Grand Coulee dam
Hydroelectric plants
Irrigation
Reservoirs
Spillways

Cost

Grenada dam, Mississippi; unit prices. Eng N 138:466+ Mr 20 '47
Main embankment of the Garrison dam, Bismarck, N.D.; unit prices. Eng N 139:617-18 O 30 '47
Many economic factors fix market value of engineering specialties. D. M. Baker. il Civil Eng 17:126-9+ Mr '47
Potholes dam, Columbia Basin project, Washington; unit prices. Eng N 138:156+ Ja 23 '47
Tully dam, Royalston, Mass.; unit prices. Eng N 138:1032+ Je 26 '47

Design

Davis Dam structures revised to cope with bad rock conditions. il plans Eng N 138: 948-9 Je 12 '47
Development and hydraulic design, Saint Anthony Falls stilling basin. F. W. Blaisdell. il diags Am Soc C E Proc 73:123-59 bibliog(p 157-9) F '47; Discussion. 73:1093-118 S '47
Experiments on effective uplift area in gravity dams. S. Leliavsky. bibliog il diags Am Soc C E Proc 71:1474-517 D '45; Discussion. 72:889-900; 73:349-59 Je '46, Mr '47
Model study develops stepped transition for Mt Morris Dam stilling basin. G. F. Sowers. il Civil Eng 17:130-1 Mr '47
Rupperswil-Auenstein dam, Switzerland. il diags Engineer 183:174-6 F 14 '47
Sazillism; its origin and evolution. S. Leliavsky. diags Engineer 183:374-6, 394-5, 416-18, 440-1, 462-3 My 2-30 '47
Stress-distribution in gravity dams; abstract. O. C. Zienkiewicz. Am Water Works Assn J 39:814-15 Ag '47
Thrust exerted by expanding ice sheet. E. Rose. bibliog Am Soc C E Proc 72:571-85 My '46; Discussion. 72:1391-1400; 73:975-80 D '46, Je '47

Flashboards

Ingenious flashboard replacement on old concrete dam; Shawmut dam at Fairfield, Me. H. B. Fleming. il Eng N 139:582-4 O 30 '47
New flashboard improves flood control; Central Maine Power's Shawmut station dam. diags Elec World 128:108 O 11 '47

DAMS—*Continued*

Foundations

Cleaning and grouting of limestone foundations, Tennessee Valley authority. A. L. Pauls; T. F. Taylor. il map plan diags Am Soc C E Proc 72:1330 D '46; Discussion. 73:391-6, 923-35 Mr, Je '47

Davis Dam structures revised to cope with bad rock conditions. il plans Eng N 138: 948-9 Je 12 '47

Theory and practice of foundation grouting. V. L. Minear. diags Am Concrete Inst J 18:917-31 Ap '47; Abstract. Eng N 138:505-6 Ap 3 '47; Discussion. Am Concrete Inst J $19:932^{1}-932^{16}$ pt 2 D '47

Ice protection

Safeguarding hydro plants against the ice menace. P. E. Gisiger. il diag Civil Eng 17:24-7 Ja '47

Protection

Relief wells for dams and levees. T. A. Middlebrooks and W. H. Jervis. diags Am Soc C E Proc 72:781-98 Je '46; Discussion. 72:1165-72, 1407-10; 73:59-78, 231-5, 735-55, 907-14 O, D '46-F, My-Je '47

Spillway energy dissipated on the face of a dam; Loskop and Vaalbank dams in South Africa. D. F. Roberts. il diags Eng N 137:783-5 D 12 '46

Vertical relief wells reduce uplift on Sardis and Fort Peck dams. il diags Eng N 139: 246-50 Ag 21 '47

Repair

Joint leakage stopped at Marshall Ford. W. B. Bierce. il diags Eng N 138:892-4 My 29 '47

Uplift pressure

Experiments on effective uplift area in gravity dams. S. Leliavsky. bibliog il diags Am Soc C E Proc 71:1474-517 D '45; Discussion. 72:889-900; 73:349-59 Je '46, Mr '47

Relief wells for dams and levees. T. A. Middlebrooks and W. H. Jervis. diags Am Soc C E Proc 72:781-98 Je '46; Discussion. 73:59-78, 231-5, 735-55, 907-14 Ja-F, My-Je '47

Vertical relief wells reduce uplift on Sardis and Fort Peck dams. il diags Eng N 139: 246-50 Ag 21 '47

DAMS, Concrete

Blasting vibration measurements indicate no danger to green concrete in Ross dam. F. Neumann. il Civil Eng 17:32-3; Discussion. H. A. Coombs. 33-4 Ja '47

Blasting work begins on $36 million California Pine Flat dam. Eng N 138:782 My 8 '47

Claerwen dam, South Wales. il map plan diags Engineer 182:512-13 D 6 '46

Cleaning and grouting of limestone foundations, Tennessee Valley authority; Douglas dam. T. F. Taylor. il plan diags Am Soc C E Proc 72:1352-69 D '46

Davis Dam structures revised to cope with bad rock conditions. il plans Eng N 138: 948-9 Je 12 '47

Experiments on effective uplift area in gravity dams. S. Leliavsky. bibliog il diags Am Soc C E Proc 71:1474-517 D '45; Discussion. 72:889-900; 73:349-59 Je '46, Mr '47

Five-year temperature record of a thin concrete dam. S. D. Burks. Am Concrete Inst J 19:65-76 S '47

Handling equipment for Loch Sloy dam. Mech Handling 34:131-2 Mr '47

Ingenious flashboard replacement on old concrete dam; Shawmut dam at Fairfield, Me. H. B. Fleming. il Eng N 139:582-4 O 30 '47

Keokuk Dam's thirty-three-year service record reviewed. P. L. Mercer. il Civil Eng 17:110 F '47

Large-scale construction operations on Mississagi development. F. Grosvenor. il plans Roads & Bridges 85:78-9+ Ag '47

Mixing a concrete highball; iced concrete makes better dams. il Bsns W p56 O 25 '47

Pumping concrete on small dam. il diag Concrete 55:10-11 O '47

Spillway bridge of Shasta dam. il diag Engineering 163:325-7, 336 Ap 25 '47

Sungari River dam declared a hazard. il Eng N 139:453 O 2 '47

Whirler cranes build Bluestone dam. il diags Eng N 139:106-11 Jl 24 '47

Wolf Creek dam ready for concrete. il plan Eng N 138:346 F 27 '47

Work resumed on Center Hill dam. il diags Eng N 138:568-72 Ap 17 '47

Joints

Asbestos-felt blanket protects thin concrete dam from frost; Florence Lake dam in California. il Eng N 138:803-4 My 15 '47

Contraction joint grouting of large dams. A. W. Simonds. plans diags Am Concrete Inst J 18:637-52 F '47; Discussion. il 19: $652^{1}-652^{10}$ pt 2 D '47

Horizontal joint put in arch dam in effort to prevent cracking; Lake Loveland dam, on the Sweetwater river, Calif. plan diags Eng N 137:884-5 D 26 '46

Protection

Asbestos-felt blanket protects thin concrete dam from frost; Florence Lake dam in California. il Eng N 138:802-4 My 15 '47

Frost protection for concrete at elevation 9,050; Gem Lake dam. il diag Eng N 139: 610-12 O 30 '47

Repair

Gun resurfaces spall-eroded dam. il Elec World 128:71 Ag 16 '47

Hydraulic structure maintenance using pneumatically placed mortar. W. L. Chadwick. il diags Am Concrete Inst J 18:533-41 Ja '47

Nature provides lab for maintenance studies on hydroelectric plant structures; weathering of concrete in southern California. R. W. Spencer. il Civil Eng 17:132-5+ Mr '47

Restoration work prolongs life of concrete structures; hydroelectric plants of the Minnesota light & power co. A. C. Giesecke. il Civil Eng 17:588-92+ O '47

Resurface upstream face of Barker dam. il Eng N 138:782 My 8 '47

Sliding scaffold speeds repair of dam; Tugalo dam in Georgia. il diag Eng N 138:1010-11 Je 26 '47

Speedy repairs save Waco Dam spillway. C. S. Adams. il diag Eng N 138:439-41 Mr 20 '47

Unique methods used to restore old power dam; Barker dam; illustrations with text. Comp Air Mag 52:113-17 My '47

DAMS, Movable

La reconstruction du barrage mobile de Kembs (Haut-Rhin). il diags Génie Civil 124:295-7 Ag 1 '47

DANA, Arnold Guyot, 1862-1947

Sketch. Comm & Fin Chr 166:822 Ag 28 '47

DANA, Leo I. 1895-

Receives Schoellkopf medal. pors Chem & Eng N 25:1575-6 Je 2 '47

DANIELS, Farrington, 1889-

Portrait. Bsns W p34 Mr 22 '47

DANUBIAN countries

Danubian outlook. Economist 152:6-7, 54-5, 132-4, 182-3 Ja 4-11, 25-F 1 '47

DAREX copolymer X-34. See Rubber chemicals

DARZENS-CLAISEN reaction

Darzens-Claisen reaction. M. S. Newman and B. J. Magerlein. Am Chem Soc J 69:469-70 F '47

DATED products

Code-dating; Chase & Sanborn new jar-label marker. il Mod Packaging 21:110-11 S '47

DATES (fruit)

Basra dates; relationship between ripening and sugar content of twelve varieties. A. J. Cavell. il Soc Chem Ind J 66:195-8 Je '47

DAVIES, Fred A.

Man credited with finding oil under Arabia's sands. por(cover) Bsns W p8 Ap 5 '47

DAVIES, Paul Lewis, 1899-

Food machinery; study in growth. por Fortune 35:114-19+ Ap '47

DAVIES, Ralph Kenneth, 1897-

Drive for foreign crude headed by Davies. por Bsns W p 19 Ag 30 '47

DAVIS, John R.
Portrait. Fortune 35:89 My '47

DAVIS, Shelby Cullom, 1909-
Leaves New York insurance department. por East Underw 48:6 Ap 18 '47; Weekly Underw 156:1186 My 3 '47

DAVIS, Smith
Smitty; newspaper and radio-station broker. por Fortune 36:142+ N '47

DAY nurseries
Keeping the kids while mother works; John Swisher & son cigar company. il Factory Management 105:81 Ap '47

DAYLIGHT
Brightness and polarization of the daylight sky at various altitudes above sea level. R. Tousey and E. O. Hulburt. Opt Soc Am J 37:78-92 F '47

Industrial problems of natural lighting. P. J. Waldram. Light & Lighting 40:85-6 My '47

DAYLIGHT, Artificial
See also
Sunlight, Artificial

DAYLIGHT saving
Daylight saving time in N.Y. city April 27. Comm & Fin Chr 165:1434, 2233 Mr 13, Ap 24 '47

DAYTON power and light company
Preferred stock offered. Comm & Fin Chr 165:3165 Je 16 '47

DEAD reckoning indicators. See Nautical instruments

DEAD sea
Chemicals from the Dead sea. Z. Halperin. flow diag il Chem Eng 54:94-6 Je '47

DEAERATION of clay. See Clay—Deaeration

DEAF
Cathode-ray tube for displaying speech waves; teaching aid for deaf children. il Electronics 20:142 F '47

Increased aid to the deaf; cooperative arrangement between Office of vocational rehabilitation, Federal security agency, and the National fraternal society of the deaf. Nat Safety N 55:78-9 Ap '47

Employment

When hearing fails. C. Fish. il Nat Safety N 55:28-9 Je '47

DEAF, Instruments for. See Hearing aids, Mechanical

DEAFNESS
Evaluation of some factors in the development of occupational deafness. W. R. MacLaren and A. L. Chaney. bibliog diags Ind Med 16:109-15 Mr '47; Abstract. Nat Safety N 55:52+ Je '47

Short duration auditory fatigue as a method of classifying hearing impairment. M. B. Gardner. bibliog il Acoustical Soc Am J 19:178-90 Ja '47

See also
Noise

DEALER conventions
Candid wire recordings put new life into IGA dealer meetings. H. R. Gerhard. il Sales Management 59:118+ Ag 15 '47

DEALER helps
Chevrolet edits news letter for dealers; published bi-weekly. Sales Management 58:50 Ja 1 '47

Cluett, Peabody helps dealers modernize dated stores. E. M. Kelly. il Sales Management 59:42-4 O 1 '47

Frigidaire ouija board shows dealers how to pay salesmen. E. Gilbert. il Sales Management 58:37-9 Je 1 '47

GE's dealer helps are angled at the consumer. F. R. Metcalf. il Ptr Ink 220:40-1 Jl 25 '47

Glidden focuses training at the retail sales level. L. S. Fulton. il Sales Management 58:50+ F 15 '47

Help your dealers sell. G. N. Robinson. Ptr Ink 220:68+ S 19 '47

How Lever helps retailers become better merchants; booklets on grocer problems. J. Brownell. il Ptr Ink 218:37-8 F 7 '47

How to help retailers avoid overstocking. Ptr Ink 219:44-5 Ap 11 '47

Keeping independent banners flying; plan used by General Motors to finance and counsel independent automobile dealers. F. C. Sturtevant. Nat Pet N 39:28-9 S 17 '47

Lever retailers' kit gives 1947-model selling ideas. il Sales Management 58:143 F 15 '47

Merchandise your sales helps, and dealers will pay for them; experience of Williams oil-o-matic. J. H. Read. il Ptr Ink 217: 40-1 D 13 '46

Merchandising helps stores attract better customers; Gerber provides service to help food stores serve young mothers. E. J. Dever, jr. il Ptr Ink 218:44-5 F 28 '47

Profits-in-boats plan swells ranks of Socony marine dealers. E. Kinney. il Sales Management 59:44-6 Jl 15 '47

Promotion package helps retailers do a better job; Sel-Mor slips. B. Merrill. il Ptr Ink 219:42+ My 30 '47

Pure Oil's folksy sales manual tells principles of successful service station operation. L. Colby. Sales Management 58:45-6+ Je 15 '47

Simplify your literature library for retailers and distributors; Winchester repeating arms company policy. W. S. Allen. il Ptr Ink 221:46-7 O 10 '47

Sorry! we're out of stock on that item; Gartner & Bender, greeting card manufacturers, stock control plan. R. J. Bender. il Sales Management 59:60+ Jl 15 '47

Spools of thread; shelf container a merchandising tool. M. McVickar. il Mod Packaging 21:120-2 S '47

Teach dealers how to set up a department for your line; display of related merchandise in one place increases sales and profits. Ptr Ink 219:52+ Je 27 '47

Ten selling musts in modern food merchandising; prepackaging, preparing, precooking, precleaning, preselling by the manufacturer to stimulate self-service and impulse purchasing. F. L. McKibbin, jr. il Ptr Ink 220:31-3+ Ag 8 '47

These dealer aids build business all along the line; Socony-Vacuum oil co.'s reseller program. J. D. Edwards. il Ptr Ink 219:33-5+ Ap 25 '47

These manufacturers really help their retail outlets. J. Lorin. il Ptr Ink 219:44-5 Ap 18 '47

See also
Advertising—Dealer helps
Advertising, Point-of-sale

DEALER relations
Cinderella product scores; cooperation with suppliers and retailers helps establish new rainwater line, Aquatogs. E. M. Housman. il Ptr Ink 218:43 Ja 24 '47

Diamond Match lifts dealers' sights on sales potentials. V. R. Kendall. il Sales Management 59:102+ O 15 '47

Five-point sales platform pulls Magnavox from red ink to riches; direct to dealer sales, highly selective distribution, firm price policies, quality production. L. B. Colby. il Sales Management 59:75-6+ Ag 1 '47

New applications for market research; measuring acceptance of merchandising plan. W. Alderson. Sales Management 58:46 Ap 1 '47

Service under the sales department; Proctor electric company. Am Bsns 17:34+ Ja '47

Skelly battles untidy washrooms with approved service plan. H. S. Byrne. il Sales Management 59:110+ S 15 '47

Sunkist man: adviser, idea man and diplomat. il Sales Management 58:109-10 F 1 '47

Why Admiral unveils Dual-Temp with region-by-region showings; 76 consecutive-distributor-dealer meetings. W. C. Johnson. il Sales Management 57:40-2 N 10 '46

See also
Advertising—Dealer cooperation
Dealer helps
Electric utilities—Dealer relations
Gas companies—Dealer relations
Retail trade
Sales policies
Voluntary chain system

DEALER schools
Bring retailers to plant to learn facts of production; Lees carpet marketing clinic. il Ptr Ink 220:30-1 Jl 11 '47

DEALER schools—*Continued*
Dealer meetings that click pay out for Universal mills. Sales Management 59:54+ Ag 15 '47

Glidden focuses training at the retail sales level. L. S. Fulton. il Sales Management 58:50+ F 15 '47

How to make home owners happy with a furnace. Sales Management 58:60+ Mr 1 '47

Trailers take Sun Oil training to dealers. Sales Management 58:81 F 1 '47

DEALERS' contests. See Sales contests, Dealers'

DEALERS' signs. See Signs, Dealers'

DEAMINATION
Deamination of 2 : 6-dichloro-4-nitroaniline. D. Ridge. Chem Soc J p734-6 Je '47

DEAMINOCOLCHINOL methyl ether
Colchicine and related compounds; 3 : 4 : 5 : 6-dibenz*cyclo*hepta-1 : 3 : 5-triene. J. W. Cook, G. T. Dickson and J. D. Loudon. Chem Soc J p746-50 Je '47

DEAN, Albert Flandreau, 1842-1933
Dean schedule marked new era in rating of fire insurance. Nat Underw 50th anniv no:74+ 1947

DEAN, John P.
Portrait. Sales Management 59:40 N 1 '47

DEAN, William Friske
Portrait. Bsns W p 114 O 25 '47

DEARBORN motors corporation
Ford tractor sales setup; the who, the why and the how. F. R. Pierce. il Sales Management 59:48+ Ag 15 '47

DEATH benefits
How an employee and his beneficiary are taxed on death benefits. S. Prerau. J Account 82:424 N '46; Same. Trusts & Estates 84:127 Ja '47

Some tax aspects of death benefits under annuity and pension plans. W. D. Freyburger. Weekly Underw 156:1052-3, 1098-100 Ap 12-19 '47; Same. Life Ins Courant 52: 221-4 Je '47; Same. Spectator (Life ed) 155:54-5 Jl; 31-2+ Ag '47

DEATH rate. See Mortality—Statistics

DEBT
Institute of life insurance notes rise in individual debt. Comm & Fin Chr 165:1008 F 20 '47; Same cond. Weekly Underw 156: 501 F 15 '47

Personal debt hits new peak. Bsns W p75-6 S 27 '47

Public and private debt in 1946; with tabulations for selected years, 1916-1946. E. T. Bonnell. Survey of Cur Bsns 27:9-17 S '47

U.S. debt, public and private over 400 billion. Comm & Fin Chr 164:2670 N 21 '46

See also
Bankruptcy
Credit

DEBTOR and creditor
Agent's indebtedness for balance of premiums after deduction of commissions not dischargeable in bankruptcy. Weekly Underw 156:722 Mr 8 '47

American Dental; reviewing status of cases dealing with cancellation of obligations. W. H. Friedman. J Account 83:247-8 Mr '47

Discrimination in world trade; priority rights to local creditors in insolvency cases; need for creditor equality clause in I.T.O. charter. K. H. Nadelmann. Credit & Fin Management 49:28-9 Ap '47

Rights of spouse and creditor in inter vivos trusts. R. P. Goldman. bibliog Trusts & Estates 85:305-11 O '47

Trust receipts; legal device can be a hazard to unwary credit men. C. B. Everberg. Credit & Fin Management 49:18+ O '47

See also
Moratorium
Payment

DEBTS, Public
Consolidated balance-sheet for a democracy. C. R. Noyes. J Account 83:100-12 F '47
Debt and prices. Bsns W p52-3 Ag 9 '47
Public debt and social institutions. D. B. Woodward. Comm & Fin Chr 165:593+ Ja 30 '47

See also
Bonds, Government
Municipal bonds
Municipal finance

Argentina

Buenos Aires calls dollar bonds of 1976 for Aug. 1 payment. Comm & Fin Chr 166:336 Jl 24 '47

Chile

Chile debt service. Comm & Fin Chr 165:186 Ja 9 '47; Economist 152:39 Ja 4 '47

China

China's debt problem. Economist 152:946-8 Je 14 '47

United States

All-powerful Treasury assumes society's duties; public debt creates restraint. D. B. Woodward. Nat Underw (Life ed) 51:3 Ja 31 '47

America has lost much of its good form. P. Millians. Comm & Fin Chr 165:590+ Ja 30 '47

Bankers' responsibility in debt management. D. W. Bell. Comm & Fin Chr 165:2981+ Je 5 '47

Debt Committee takes stand; cutting government down to size is big need of day. Nat Underw (Life ed) 51:1 Ag 1 '47

Debt retirement and bank credit. Fed Res Bul 33:775-87 Jl '47; Same. Comm & Fin Chr 166:438+ Jl 31 '47

Debt retirement vs. tax reduction. R. A. Foulke. Dun's R 55:15-17+ My '47

End of 1946 debt retirement program. Nat City Bank p9-11 Ja '47

Federal debt, end of fiscal year, 1940-1947; chart. Survey of Cur Bsns 27:1 Jl '47

Federal debt, 1900-1946; tabulation. Automotive & Aviation Ind 96:79 Mr 15 '47

Federal fiscal policy and debt management. A. G. Lanston. Comm & Fin Chr 165:3112+ Je 12 '47

Federal reserve policy and the national debt during the war years. E. C. Simmons. J Bsns 20:84-95 Ap '47

Federal taxation and debt management. B. Ruml. Comm & Fin Chr 166:1651 O 23 '47

Flexible public debt policy. D. W. Bell. Comm & Fin Chr 166:217+ Jl 17 '47

How dangerous is the big debt? E. S. Adams. Banking 39:40+ Ap '47

Management of the public debt. D. W. Bell. Comm & Fin Chr 165:1648+ Mr 27 '47

National debt and savings banks. H. Bruere. Comm & Fin Chr 165:2475+ My 8 '47

National debt; bank problem no. 1. M. M. Townsend. Comm & Fin Chr 165:2738+ My 22 '47

National debt, interest rates and the saver. W. R. Burgess. Comm & Fin Chr 165:1374+ Mr 13 '47

National debt; its implications for our economy. R. F. Clark. Am Inst Banking Bul 29:15+ Jl '47

Nation's expanded money supply called major problem; study by Committee on public debt policy. Comm & Fin Chr 165:748 F 6 '47; Same. Banking 39:116-17 Mr '47

N.Y. Reserve bank reports changes in national debt ownership. Comm & Fin Chr 165:143 Ja 9 '47

Our national debt; its status after great wars; study by Committee on public debt policy. L. P. Ayres. Comm & Fin Chr 164: 3351+ D 26 '46

Program for debt management; address before U.S. Chamber of commerce. W. R. Burgess. Comm & Fin Chr 165:2329+ My 1 '47

Program for public debt management; statement before Joint congressional committee on the economic report. W. R. Burgess. Comm & Fin Chr 166:326+ Jl 24 '47

Proper debt management key to currency and price stability. J. T. Madden. Comm & Fin Chr 165:1125+ F 27 '47

Public and private debt in 1946; with tabulations for selected years, 1916-1946. E. T. Bonnell. Survey of Cur Bsns 27:9-17 S '47

DEBTS, Public—United States—*Continued*
Public debt and national income. A. J. Wickens. Comm & Fin Chr 165:865+ F 13 '47
Reduce debt, reduce taxes; Committee on public debt policy. Banking 40:123 S '47
Sees no check on debt monetization; C. F. Childs and co. Comm & Fin Chr 165:3356 Je 26 '47
Should have no fear of national debt. A. P. Lerner. Comm & Fin Chr 165:1795+ Ap 3 '47
Statutory debt limitation as of July 31, 1946. Comm & Fin Chr 164:2947 D 5 '46
United States government debt, volume and kind of securities, June and Dec. 1940-1945 and Jan.-Dec. 1946. Fed Res Bul 33: 67 Ja '47 [cont monthly]
Voters prefer to use tax money to cut public debt; Gallup poll. Iron Age 159:107 Je 12 '47
See also
Bonds, Government —United States

DEBYE characteristic temperature
Superconductivity and the Debye characteristic temperature. J. de Launay and R. L. Dolecek. Phys R 72:141-3 Jl 15 '47

DEBYE'S equation
Application of ultrasonic waves to the study of electrolytic solutions; a modification of Debye's equation for the determination of the masses of electrolytic ions by means of ultrasonic waves. J. Bugosh and others. bibliog J Chem Phys 15:592-7 Ag '47

DECAHYDRONAPHTHALENE. See Decalin

DECALCOMANIA
Are you applying and firing decals properly? Cer Ind 48:92 My '47
Reactions occurring in decoration of vitrified chinaware using underglaze decalcomania method. A. M. Flannigan. Am Cer Soc J 30:125-9 Ap 1 '47

DECALIN
Angular aryl group; 10-phenyldecahydroquinoline and 9-phenyldecalin. V. Boekelheide. bibliog Am Chem Soc J 69:790-2 Ap '47

Analysis
Analysis of naphthalene-tetralin-decalin mixtures. W. J. Cerveny, J. A. Hinckley, jr. and B. B. Corson. bibliog il diag Anal Chem 19:82-6 F '47

DECANE
Decenes formed from *t*-amyl alcohol and from 2-methyl-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47
Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W. N. Lacey. bibliog diag Ind & Eng Chem 39:77-82 Ja '47

DECARBETHOXYLATION. See Carbethoxy group

DECARBOXYLATION. See Carboxyl group

DECARBURIZATION of steel. See Steel—Decarburization

DECATRIENE
Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69:633-4 Mr '47

DECCA navigation system
Decca system of air traffic control. D. H. Toller-Bond. il Air Transport 5:57-8 Ja '47

DECCA records, inc.
Net doubles best prewar year. Barron's 27:6 Ja 20 '47

DECEDENTS' estates. See Estates, Decedents'

DECENE
Decenes formed from *t*-amyl alcohol and from 2-methyl-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47

DECENTRALIZATION in industry. See Industry—Decentralization

DECHERT, Robert, 1895-
President of Association of life insurance counsel. por Nat Underw (Life ed) 50:5 D 27 '46

DECIBEL (transmission unit)
DB gain-loss calculator. L. A. Lohr. Electronics 20:134 F '47

DECIMAL system
Decimal dimensioning finds growing favor in aeronautical industry. Sci Am 176:222 My '47
Decimalism; aviation industry adopts streamlined dimensioning. P. J. Hayes, jr. diag Air Transport 5:48-9 My '47
80 per cent of aero industry favors decimal use. S A E J 55:82 Mr '47
Why not a decimal system? C. L. Bates. Aero Digest 54:32 My '47
See also
Metric system

DECLARATORY judgments
Right to a declaratory judgment; multiplicity of suits; American indemnity company v. Hale. J. L. Roesch. Spectator (Property ed) 13:10-11+ S 25 '47

DECOLORIZATION
Decoloration of natural fluorite crystals. R. Herman and S. Silverman. Opt Soc Am J 37:871-2 O '47
Decolorization of petroleum waxes by adsorbent percolation. W. A. Johnson. bibliog diags Pet Processing 2:673-4+ S '47
Decolorizing with soaps; patent. F. M. Sullivan. Soap & San Chem 23:73 My '47

DECOMPOSITION
Activation in unimolecular reactions. O. K. Rice. bibliog J Chem Phys 15:689-90 S '47
Chemical constitution and reactivity; decomposition of *o*-methoxybenzenediazonium chloride. M. L. Crossley and others. bibliog Am Chem Soc J 69:1160-4 My '47
Decomposition and analysis of organic compounds containing fluorine and other halogens. J. F. Miller, H. Hunt and E. T. McBee. bibliog il Anal Chem 19:148-9 Mr '47
Decomposition of benzoyl peroxide. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-55 Jl '47
Decomposition of methylated sprucewood. F. E. Brauns and J. J. Yirak. bibliog Paper Tr J 125:55-60 S 18 '47
Decomposition of organic compounds by ionizing radiations. W. M. Garrison. J Chem Phys 15:613-14 Ag '47
Decomposition reactions of the aromatic diazo-compounds; mechanism of formation of azo-compounds, polyaryls, and aryl sulphides. K. H. Saunders and W. A. Waters. Chem Soc J p 1154-6 D '46
Effects of high-energy radiation on organic compounds. M. Burton. bibliog J Phys & Colloid Chem 51:786-97 My '47
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47
Kinetics of the decomposition of certain salts of trichloroacetic acid in ethanol-water mixtures. G. A. Hall, jr. and F. H. Verhoek. bibliog Am Chem Soc J 69:613-16 Mr '47
Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46
Mechanism of decomposition of hydrogen peroxide solutions with manganese dioxide. D. B. Broughton, R. L. Wentworth and M. E. Laing. Am Chem Soc J 69:741-7 Ap '47
Mechanism of nitrogen pentoxide decomposition. R. A. Ogg, jr. J Chem Phys 15:337-8 My '47
Metal sulphide catalysis of a simple cracking reaction. B. S. Khamabata and A. Wassermann. Chem Soc J p 1090-1 N '46
Some observations on decomposition voltages. J. O. Bockris and S. Ignatowicz. bibliog diag Electrochem Soc Trans 92 (preprint 9):115-22 '47
Study of reaction intermediates by means of a mass spectrometer; the thermal decomposition of some lower hydrocarbons. G. C. Eltenton. bibliog J Chem Phys 15:465-74 Jl '47
Thermal decomposition of 2 : 2′-dichlorodiethyl sulphide. A. H. Williams. Chem Soc J p318-20 Mr '47

DECOMPOSITION—*Continued*
Thermal decomposition of 2 : 3-dihydro-γ-pyran; new preparation of acraldehyde. J. G. M. Bremner, D. G. Jones and S. Beaumont. Chem Soc J p 1018-22 N '46

Thermal decomposition of 1 : 1 : 1-trichloro-2:2-di-(4-chlorophenyl) ethane (D.D.T.) and some of its phase equilibria. P. G. Scholefield and others. bibliog diag Soc Chem Ind J 65:354-6 N '46

Thermal reaction of hexafluoroethane with quartz. L. White, jr. and O. K. Rice. bibliog Am Chem Soc J 69:267-70 F '47

See also
Electrolysis
Hydrolysis

DECORATION and ornament

See also
Christmas tree decorations
Glassware—Decoration
House decoration
Interior decoration
Pottery—Decoration
Ship decoration

DECORATION and ornament, Architectural
L'emploi des sgraffites pour la décoration des maisons de la cité-jardin du Wylergut, près de Berne, Suisse. il Génie Civil 124: 77 F 15 '47

See also
Brick work
Glass sculpture

DECORATIVE lighting. See Lighting, Decorative

DEEDS of trust
Interest on past-due interest not allowed; Mississippi valley trust co. v. Oklahoma railway co. Banking Law J 64:325-30 Ap '47

Resolution of bank directors not necessary in foreclosing trust deed securing notes; Texas Pacific coal and oil co. v. Mulvihill, Supreme court of Mississippi. Banking Law J 64:202-10 Mr '47

DEERE and company
Annual report. Comm & Fin Chr 165:1187 Mr 3 '47

Low costs to help Deere when its backlog shrinks. Barron's 27:26 My 5 '47

DEERFIELD packing corporation
Securities offered. Comm & Fin Chr 165: 1187 Mr 3 '47

DEFALCATION. See Embezzlement

DEFENSE loans. See Loans, Bank—Defense loans

DE FERRANTI, Vincent Ziani, 1893-
Portrait. Inst E E J 94 pt 1:front Ja '47

DEFERRED compensation
Deferred compensation under employment contracts. R. W. Hamilton. East Underw 48:136 pt 2 O 3 '47

Special aspects of deferred compensation problems. G. Simons. East Underw 48:18 Ap 11 '47

DEFERRED payment. See Instalment plan

DEFERRED payment insurance. See Insurance, Deferred payment

DEFICIT spending. See Government expenditures

DEFLATION (finance)
Balance between deflation and inflation? H. M. Tremaine. Mag of Wall St 79:532-4+ F 15 '47

Deflation in Britain? P. Einzig. Comm & Fin Chr 165:1660+ Mr 27 '47

Deflation threat in new inflation spiral. E. A. Krauss. il Mag of Wall St 81:8-10, 55 O 11 '47

Inflations and deflations of my eighty years. I. Fisher. Comm & Fin Chr 165:1377+ Mr 13 '47

Truman can't afford sharp deflation move. Barron's 27:1+ N 3 '47

DEFLECTION of beams. See Beams and girders

DEFLUORINATION
Fused tricalcium phosphate; production by defluorination of rock phosphate in a shaft furnace. T. P. Hignett and T. N. Hubbuch. bibliog il plan diags Ind & Eng Chem 38:1208-16 D '46

DE FOREST, Lee, 1873-
Awarded Edison medal for 1946. Elec Eng 66:191 F '47
1946 Edison medal; presentation by D. Sarnoff; response by L. de Forest. por Elec Eng 66:254-7 Mr '47
Portrait. Inst Radio Eng Proc 35:642 Jl '47
Sketch. Special Lib 38:138-9 My-Je '47

DEFORMATION (mechanics)
Additional data on the recovery of wet pulp mats from compressive deformation. C. O. Seborg and F. A. Simmonds. il diags Paper Tr J 125:63-7 O 9 '47

Application to shaping processes of Hencky's laws of equilibrium. E. Siebel. bibliog diags Iron & Steel Inst J 155:526-34 Ap '47; Discussion. diags 156:511-22 Ag '47

Deformation in relation to time, pressure and temperature. P. G. Nutting. Franklin Inst J 242:449-58 D '46

Deformation of metals during single and repeated tensile impact. J. A. Pope. bibliog il diags Iron & Steel Inst J 157:31-54 S '47

Elastic deformation of piston rings. H. W. Swift. Engineering 163:161-5 Mr 7 '47

Measuring stresses and deformations in solid materials; abstract. N. Hast. Am Concrete Inst J 18:348-9 N '46

Moment of active deformation; hot pressing of metal powders. H. L. Strauss, jr. il Metal Prog 51:254-5 F '47

Normal-pressure tests of circular plates with clamped edges. A. E. McPherson and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:269-85 '46

Operation of large turbo-alternators to reduce rotor winding deformation. R. H. Coates and B. C. Pyle. il diags Inst E E J 93 pt 2:192-204 bibliog(p204) Ap '46; Discussion. 93 pt 2:204-12; 94 pt 2:92-8, 155-7 Ap '46, F, Ap '47

Organic films capable of deformation; abstract. H. F. Sarx. Metal Prog 50:720+ O '46

Shaping and forming. W. Trinks. diags Blast F & Steel Pl 35:964-70+ Ag '47

Strength and ductility. M. Gensamer. Am Soc for Metals Trans 36:47-59 '46

See also
Creep of materials
Creep of metals
Elasticity
Plasticity
Strains and stresses
Torsion

DEGAUSSING. See Demagnetization

DEGREASING
Causes for high toxic vapor dispersion from degreasing installations. B. F. Postman. Heat & Ven 44:98 Ap '47

Degreasers and their dangers. H. L. Krieger. Ind Med 16:403-4 Ag '47

Degreasing of fabrics; abstract. A. Lassieur. Soap & San Chem 22:91+ D '46

How to clean metals. H. S. Wharen. diags Am Mach 91:112-14 N 6 '47

Infrared degreasing. il diag Steel 119:104+ N 18 '46

Optimus metal parts vapor degreaser. il Metal Finishing 45:106 Je '47

DEHAAS-VAN ALPHEN effect
DeHaas-van Alphen effect in a single crystal of zinc. J. A. Marcus. Phys R 71:559 Ap 15 '47

DEHUMIDIFIERS
Air drying for preservation. il Sci Am 176: 171-2 Ap '47

Colvin announces new Cargocaire unit. il Marine Eng 52:92 Je '47

Control of humidity in cargo spaces. O. D. Colvin and S. J. Duly. plans diags Marine Eng 52:80-3 My '47

Dehumidification machine helps navy's Operation Zipper. il Refrig Eng 53:217 Mr '47

Dehumidification methods and applications. J. Everetts, jr. flow diag Heating-Piping 18:121-4 D '46; Abstract. Heat & Ven 44: 105-6 F '47

Humidor bag; protecting dehumidifying powder uses aluminum foil, glassine and kraft. il Mod Packaging 21:133 O '47

Laying up the American navy. il plans Engineer 183:162-5 F 14 '47

Putting fighting ships in moth balls. R. G. Skerrett. il Comp Air Mag 52:136-41 Je '47

DEHUMIDIFIERS—*Continued*
Rating dynamic dehumidification equipment; preventing corrosion of equipment on naval vessels on the inactive list. E. R. Queer and E. R. McLaughlin. il diag Heating-Piping 19:103-8 Ja '47; Abstract. Heat & Ven 44:104 F '47
Sorbents regulate humidity by soaking up the moisture in air. J. Everetts, jr. flow diag il diag Power 91:748-51 N '47
Tank breather reduces damage to tank and contents by moist air. il Sci Am 176:35 Ja '47

DEHYDRATION
Aromatic cyclodehydration; elimination of alkyl groups in cyclizations of the olefin oxide type. C. K. Bradsher, L. Rapoport and P. Anderson. bibliog Am Chem Soc J 68:2152-4 N '46
Aromatic cyclodehydration; use of intermediates obtained by the diene addition reaction. C. K. Bradsher and L. J. Wissow. bibliog Am Chem Soc J 68:2149-51 N '46
Dehydration by high vacuum. H. Weingartner. Refrig Eng 53:222+ Mr '47
Dehydration of a hindered tertiary alcohol. R. B. Carlin and D. A. Constantine. bibliog Am Chem Soc J 69:50-2 Ja '47
Dehydration of water gas tars. Am Gas Assn Mo 29:389-90 S '47
Dehydration with activated alumina. Chem Age (Lond) 56:285-6 Mr 8 '47
Design and operation of a light hydrocarbon distillation drier. G. C. Gester, jr. bibliog il diag Chem Eng Prog 43:117-21; Discussion. 121-2 Mr '47
High vacuum and its process applications. B. W. Whitehurst. diags Chem Eng 54: 98-102 O '47
Intermolecular dehydrations by means of phosphorus pentoxide; preparation of substituted acetophenones. G. M. Kosolapoff. Am Chem Soc J 69:1651-2 Jl '47
Isomeric esters produced by the dehydration of ethyl 3-hydroxy-2,3-dimethylbutanoate. R. C. Huston and G. L. Goerner. bibliog Am Chem Soc J 68:2504-6 D '46
Recovery of dried solubles from thin stillage. J. W. Spanyer, jr. il Chem Eng Prog 43: 423-6 O '47
Unsaturated nitriles; the preparation of *trans*-cinnamonitrile and methacrylonitrile by oxime dehydration. D. T. Mowry and R. R. Morner. bibliog Am Chem Soc J 69: 1831 Jl '47

See also
Drying
Drying (fruits and vegetables)
Evaporation
Gasoline—Dehydration
Oil fuel—Dehydration

DEHYDROABIETIC acid
Studies on resin acids; carbinols. H. H. Zeiss. Am Chem Soc J 69:302-3 F '47

DEHYDROCHLORINATION
Alkaline degradation of benzene hexachloride. F. A. Gunther and R. C. Blinn. bibliog Am Chem Soc J 69:1215-16 My '47
Determination of 1 trichloro-2,2-bis(*p*-chlorophenyl)ethane in DDT dusts and oil solutions. J. B. LaClair. bibliog Ind & Eng Chem Anal ed 18:763-6 D '46
Kinetics of the alkaline dehydrochlorination of the benzene hexachloride isomers; mechanism of second-order elimination reactions. S. J. Cristol. bibliog Am Chem Soc J 69:338-42 F '47

DEHYDROCORTICOSTERONE acetate
Partial synthesis of dehydrocorticosterone acetate. L. H. Sarett. bibliog Am Chem Soc J 68:2478-83 D '46

DEHYDROCYCLIZATION. See Aromatization

DEHYDROGENATION
Aromatic cyclodehydrogenation; synthesis of fluoranthene. M. Orchin and L. Reggel. bibliog Am Chem Soc J 69:505-9 Mr '47
Aromatization studies; palladium dehydrogenation of arylcyclohexenones to phenols. E. C. Horning and M. G. Horning. bibliog Am Chem Soc J 69:1359-61 Je '47
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Dehydrogenation of 9-aminofluorene and fluorenol by unsaturated compounds; Michael condensation. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 68:2739-40 D '46
Dehydrogenation of 1,5-pentanediol. L. E. Schniepp and H. H. Geller. bibliog Am Chem Soc J 69:1545 Je '47
Dow styrene process. flow diag Pet Refiner (Process Handbook sec) 26:140-1 Ap '47
Equilibrium studies on the dehydrogenation of primary and secondary alcohols; cyclohexanols. A. H. Cubberley and M. B. Mueller. Am Chem Soc J 69:1535-6 Je '47
Houdry dehydrogenation. flow diag Oil & Gas J 45:177 Mr 22 '47
Houdry dehydrogenation process. flow diag Pet Refiner (Process Handbook sec) 26:166-7 Ap '47
Oxidations and dehydrogenations with selenium dioxide. G. M. Badger. Chem Soc J p764-6 Je '47
Production of styrene in Germany. G. M. Kline and others. diags Mod Plastics 25: 151-3+ O '47
Pyrolytic dehydrogenation of ethylbenzene to styrene. G. A. Webb and B. B. Corson. bibliog flow diag diags Ind & Eng Chem 39:1153-6 S '47
Thiophene; new industrial chemical from butane and sulfur. H. E. Rasmussen and F. E. Ray. flow diag il Chem Ind 60:593-5+ Ap '47
Universal dehydrogenation. flow diag Oil & Gas J 45:179 Mr 22 '47
UOP catalytic dehydrogenation process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:282-3 Ap '47

DEHYDROHALOGENATION
Inhibition of catalysed thermal decomposition of DDT. F. A. Gunther and L. R. Tow. bibliog Soc Chem Ind J 66:57-9 F '47

DE-ICERS. See Airplanes—Ice protection

DE-INKING of paper. See Waste paper

DELAWARE aqueduct. See Aqueducts

DELAWARE, Lackawanna and western railroad
Equipment trust certificates. Comm & Fin Chr 164:3289 D 23 '46
Equipment trusts offered. Comm & Fin Chr 164:3141 D 16 '46
Equipment trusts offered. Comm & Fin Chr 166:565 Ag 11 '47
Merger ratified, new director elected; fixed charges lower. Comm & Fin Chr 165:2924-5 Je 2 '47

DELAWARE power and light company
Preferred stock offered. Comm & Fin Chr 165:1726 Mr 31 '47

DELAWARE river
Delaware anti-pollution work starts. Eng N 138:423 Mr 20 '47

DELAWARE River basin, Interstate commission on. See Interstate commission on the Delaware River basin

DELICATESSEN stores

Advertising
Humor highlighted in delicatessen advertising. C. B. Jellinghaus. il Adv & Sell 40:67 S '47

DELIVERY of goods
Namm quits U.P.S. Bsns W p63-4 O 18 '47

See also
Drivers as salesmen
Meat delivery
Milk delivery

Delivery to dealers
Delivery costs by the case; system devised by bottlers' association. Food Ind 19:476-7 Ap '47
Fifth wheel cuts loading time; trailer-tractor connections made from within driver's cab; Fisher Bros. deliveries of groceries from Cleveland warehouse to retail stores. il Food Ind 18:1714-15 N '46
Potato chips travel by truck. il Food Ind 19: 336-7 Mr '47
Semi-trailers speed up grocery deliveries; Tulsa wholesaler uses two trailers for each tractor. il map Food Ind 19:790-1 Je '47

DELIVERY of goods—Delivery to dealers—*Continued*
Use double bottoms on big unit deliveries; three vehicle train spreads heavy load on five axles. il Food Ind 19:194 F '47

DEL NORTE. See Steamboats

DELPHINIUM
Alkaloids of delphinium consolida L. L. Marion and O. E. Edwards. bibliog Am Chem Soc J 69:2010-14 Ag '47
Larkspurs, delphiniums, and chemistry. R. C. Kuder. bibliog(48 ref) il J Chem Educ 24:418-22 S '47

DELTA air lines
Visibility unlimited. J. Mebane. il Manuf Rec 116:49+ O '47

DELUSTERING
Delustering; urea-formaldehyde condensates; patent. Am Dyestuff Rep 36:366 Je 30 '47

DEMAGNETIZATION
Symposium of papers on degaussing. il diags Inst E E J 93 pt 1:429-52, 487-522 O-N '46; Abstracts. Engineering 161:343 Ap 12 '46; Electrician 136:953-7 Ap 12 '46; Elec R (Lond) 138:565-6 Ap 12 '46; Discussion. Inst E E J 93 pt 1:452-5, 522-4 O-N '46

DEMAND and supply. See Supply and demand

DEMAND meters
Demand meter servicing analyzed by utilities. Elec World 126:130+ N 9 '46
Uni-directional clutch for demand registers. H. O. Coggeshall. il Elec World 127:146+ My 24 '47

Testing
Demand register checker has changeable adapters. F. A. Redding. il Elec World 127: 74 Mr 1 '47
Demand registers tested at constant speed. M. D. Jester. il Elec World 128:80 Ag 16 '47
Procedure for testing mechanical demand meters. Elec World 128:95+ Jl 5 '47
Procedure for testing thermal demand meters. Elec World 128:103-4 Jl 19 '47

DEMETHYLATION
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments at atmospheric pressures. E. A. Coulson and others. bibliog diag Soc Chem Ind J 65:396-8 D '46
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments in metal reaction tubes, and with increase of pressure above atmospheric. E. A. Coulson and R. Handley. diag Soc Chem Ind J 65:398-402 D '46
Reactions of vanillin and its derived compounds; caustic fusion of vanillin. I. A. Pearl. Am Chem Soc J 68:2180-1 N '46
Reduction by dissolving metals. A. J. Birch. Chem Soc J p 102-5 Ja '47
Selective demethylation of paraffin hydrocarbons; preparation of triptane and neopentane. V. Haensel and V. N. Ipatieff. diag Ind & Eng Chem 39:853-7 Jl '47

DE MILLE, Cecil Blount, 1881-
Portrait. Fortune 35:93 Je '47

DEMOBILIZATION
Employment during the transition period, in prospect and retrospect. E. Schiff. R Econ Stat 28:231-6 N '46

DEMOBILIZATION, Industrial. See Industrial demobilization

DEMOCRACY
Discipline and democracy. Economist 151: 952, 997-8 D 14-21 '46; Same abr. Iron Age 158:111+ D 26 '46; 159:115+ Ja 9 '47
International poll of seven nations tells what countries are considered democracies. Iron Age 159:105+ My 15 '47
Total war and the preservation of democracy. A. W. Bromage. Ann Am Acad 249: 66-74 Ja '47

DEMOCRATIC party
Democratic administration's accomplishments and objectives; Jefferson day address. J. W. Snyder. Comm & Fin Chr 165:2068+ Ap 17 '47
Swing of voters turns sharply back to Democratic party; Gallup poll. Iron Age 159: 107+ Mr 13 '47

DEMODULATORS
Synchronization of oscillators. R. D. Huntoon and A. Weiss. diags J Res Nat Bur Stand 38:397-410 Ap '47

DEMOGRAPHY
Suggested principles of social physics. J. Q. Stewart. Science 106:179-80 Ag 29 '47

DEMONSTRATIONS. See Salesmanship—Demonstrations

DEMPSTER, John H. G.
Jack Dempster retires. por Nat Safety N 56:44 Ag '47

DENATURATION, Heat of
Heat of the inactivation of pepsin. M. Bender and J. M. Sturtevant. bibliog Am Chem Soc J 69:607-12 Mr '47

DENHAM, Robert N.
New NLRB team. por Bsns W p86+ Jl 26; 67-8 Ag 23 '47

DENIGÈS' reagent
Test for *tert*-butyl and isopropyl alcohols with Denigès' reagent. R. F. Robey and N. C. Robertson. bibliog Anal Chem 19:310-11 My '47

DENITRATION
Reductive acetolysis of nitrate esters. D. O. Hoffman, R. S. Bower and M. L. Wolfrom. bibliog Am Chem Soc J 69:249-50 F '47

DENMARK
Denmark. 280p Danish information office, 15 Moore st, New York 4 '47

Commerce
Danish balance-of-payments data for 1946. For Comm W 26:4 Mr 29 '47

Commercial policy
Anglo-Danish trade talks. Economist 153: 395 S 6 '47

Politics and government
Denmark before the polls. Economist 153:594 O 11 '47

DENNY, Charles Ruthven, Jr. 1912-
Television bigwigs battle over color, but 35-year-old FCC head steals the show. por Ptr Ink 218:93 F 14 '47

DENSITOMETERS
Density measurements; some forms of photoelectric apparatus. T. T. Baker. il diags Elec R (Lond) 140:80-2 Ja 10 '47
New light balancing circuit for the non-recording densitometer. R. O. Carpenter. bibliog diags Opt Soc Am J 36:676-8 N '46

DENSITY. See Specific gravity

DENTAL caries. See Teeth—Diseases and defects

DENTAL clinics
Services and visits in a children's dental clinic. I. Altman. Pub Health Rep 62:113-30 Ja 24 '47
Suburban clinic in Seattle; Crown Hill medical and dental clinic. il plan diags Arch Forum 86:104-5 Ap '47
Sydney, Australia, dental clinic combines treatment, surgery, research. il plans Arch Forum 85:114 D '46
Utility and beauty in dental clinic. il plans Am Bld 69:114-15 Jl '47

DENTAL hygiene
Simplified appraisal of dental-health programs. J. W. Knutson and others. bibliog Pub Health Rep 62:413-22 Mr 21 '47
See also
Teeth—Diseases and defects

DENTAL instruments and apparatus
See also
X rays in dentistry

DENTAL research
Use of radioactive iodine as a tracer in the study of the physiology of teeth. H. J. Bartelstone and others. bibliog il Science 106:132-3 Ag 8 '47

DENTAL service
Trends in dentist-population ratios. J. W. Mountin and others. bibliog(29 titles) Pub Health Rep 61:1689-701 N 22 '46

DENTAL service, Industrial
Dental relations in industrial health services. L. D. Heacock. bibliog Ind Med 16:5-9 Ja '47
Indusfrial dentistry. H. E. De Camp. Ind Med 16:401-3 Ag '47
Industry's toothache. E. Goldhorn. Ind Med 16:140+ Mr '47

DENTAL surveys
Effect of topically applied sodium fluoride on dental caries experience; report of findings with two, four and six applications. J. W. Knutson and others. bibliog Pub Health Rep 62:425-30 Mr 21 '47
Simplified appraisal of dental-health programs. J. W. Knutson and others. bibliog Pub Health Rep 62:413-22 Mr 21 '47

DENTIFRICES
Dentifrice compositions. C. F. Cabrera. Soap & San Chem 23:79 Jl '47
Lyons tooth paste packaging. il Mod Packaging 21:98-101 O '47
Oral hygiene preparations sales show broad advances. M. D. Hall. Dom Comm 35:56-9 Je '47

Advertising

Dr Lyons, powder leader, now seeks paste market. il Sales Management 59:50+ O 1 '47
National distribution for new product achieved almost overnight; Sterling Drug introducing Lyons toothpaste. C. J. Swan. il Ptr Ink 221:35-7 O 17 '47

DENTISTRY
Dental index headings; alphabetical plan. p317-54 American dental assn, 222 E. Superior st, Chicago 11 '46
See also
X rays in dentistry

Bibliography

Index to dental literature, three years, 1942-1944. 354p $10 American dental assn, 222 E. Superior st, Chicago '46

DENTISTS
Consumer credit; bank credit pays the dentist; relief from collection problems. Banking 40:33+ S '47
Trends in dentist-population ratios. J. W. Mountin and others. bibliog(29 titles) Pub Health Rep 61:1689-701 N 22 '46

DENTISTS' offices
Medical-dental center, Oklahoma City. il plans diag Arch Rec 101:74-5 Ja '47

DENVER, Colorado

Railroads

Burlington believes in Denver; large investments made to insure adequate facilities and efficient operation. il Ry Age 122:940-2 My 10 '47

DENVER and Rio Grande western railroad
ICC orders company to start court-approved reorganization; final decree signed returning road to private control. Comm & Fin Chr 165:1998 Ap 14 '47
New elections bring Western control to Rio Grande. Ry Age 122:843-4 Ap 26 '47
Reorganization plan effective; exchange of securities, etc. Comm & Fin Chr 165:2133-4 Ap 21 '47
Supreme court rejects appeal of Rio Grande. Ry Age 122:323+ F 8 '47
Supreme court vacates Appeals court order. Comm & Fin Chr 165:808 F 10 '47
Terms of exchange under plan. Comm & Fin Chr 165:2545 My 12 '47

DENVER post
Hoyt's formula; tradition plus. il Bsns W p17-19 Mr 15 '47

DENVER university
University of Denver Bureau of industrial relations. Bsns W p88 F 8 '47

DEODORIZATION
Air deodorizers. M. A. Lesser. bibliog Soap & San Chem 23:131+ My '47
Birth of advertising ideas; Odorono. J. D. Woolf. il Adv & Sell 40:43+ S '47
Glass-plastic dispenser; O-Cedar's air freshener also uses paper, metal, cork, foil and felt. il Mod Packaging 20:110-11 F '47
Hospital plane litter deodorizer. il Heat & Ven 43:83 N '46
Industry gets nosey. D. H. Killeffer. il Sci Am 177:113-15 S '47
Minimal replenishment air required for living spaces, under conditions of mechanical cooling and removal of odors; ship's berthing space. W. V. Consolazio and L. J. Pecora. bibliog plan diag Heating-Piping 19:103-14 Mr '47; Abstract. Heat & Ven 44:103 F '47
New odorless petroleum solvents synthesized; Soltrols. Nat Pet N 39:34 Ja 1 '47
Osmic enterprise. il Chem Ind 61:609-10 O '47
Railway car ventilation problem; activated carbon for odor removal. diags Sheet Metal Worker 38:67-8+ Je '47
Some unsaponifiable constituents of the deodorisation distillates of vegetable oils. H. Jasperson and R. Jones. bibliog Soc Chem Ind J 66:13-17 Ja '47
Washroom sanitation specialties. M. A. Lesser. bibliog il Soap & San Chem 23:139+ O '47
Why you should avoid housing construction on refuse landfills. R. Eliassen. il Eng N 138:756-60 My 1 '47

DEPARTMENT stores
Boston store expands; Jordan-Marsh co. il Bsns W p72 Ap 5 '47
Building types study. N. A. Owings. il plans diags Arch Rec 101:86-100 F '47
Chicago store's plan; Boston store back among leaders. Bsns W p52 F 1 '47
Department stores get ready; clear shelves of shoddy goods, reduce volume of orders outstanding. il Bsns W p60+ Je 21 '47
Plan for the ideal fabric department. E. P. Behles. il Textile Col 68:32-3+ O '46
Puckett of Allied Stores. il map Fortune 35: 122-5+ Mr '47
Stores with personality; Walter Hoving plans Bonwit Teller branch in Boston. il Arch Forum 86:15-16 Mr '47
See also
Charge accounts (retail trade)
Macy, R. H., and company
Marshall Field and company
Penney, J. C., company

Accounting

Testing of inventories in a department store. J Account 84:60-1 Jl '47

Advertising

Department store ads in national magazines. E. M. Housman. il Ptr Ink 219:32-3 Je 6 '47
Macy, Gimbels get together; promote new movie. Ptr Ink 219:116 My 23 '47

Air conditioning

Air conditioning a vital part of architectural design; requirements of Cincinnati's Terrace Plaza Hotel building. H. C. Hoffman. il plan diags Heating-Piping 19:71-7 O '47
Air conditioning of department stores. T. W. Reynolds. il diags Heat & Ven 44:65-73 Ag '47

Basements

See also
Basement stores

Branch stores

Department stores hurrying to suburbs. il Bsns W p24-6 O 4 '47
How to adjust retail service to changed living conditions; G. Fox & co., Hartford, opens farm service branch store. J. A. Murphy. il Ptr Ink 220:42-3 S 26 '47

Employees

Use of visual aids in department-store training. J. J. Gress. J Retailing 23:91-8+ O '47

Finance

Big retailers can do well in buyers' market; fears for department stores ignore past ability to move goods. W. S. Morris. Barron's 27:3+ Ja 27 '47
Composite statement of the country's ten largest department store organizations; year ended Jan. 31, 1947. Nat City Bank p66-7 Je '47

DEPARTMENT stores—Finance—*Continued*
Departmental merchandising results in small department stores, 1946, by month and for the year. E. H. Gault. (Report no. 13) 32p pa $1 Univ. of Mich, School of business administration, Bur. of business research. Ann Arbor, Mich. '47
Operating results of department and specialty stores in 1946. M. P. McNair. (Bur. of business research bul. no. 126) 50p pa $3.50 Harvard univ. Graduate school of business administration, Soldiers field, Boston 63 '47
Retailers unload real estate; life insurance companies and colleges lead among buyers. Bsns W p48+ Ja 4 '47
Why store executives worry. Bsns W p54+ Ag 9 '47

Insurance requirements

Department stores basing U. & O. estimates on no volume rise. Nat Underw 51:6 Ap 24 '47

Layout

Department store, garage and warehouse, built as a unit, permit mechanized system of stock handling, controlled customer traffic; Foley store in Houston, Tex. il plans diags Arch Forum 86:106-9 Ap '47
Economics of department store planning. N. A. Owings. il plans diags Arch Rec 101: 86-91 F '47
For a more efficient big volume store; Abraham & Straus, Brooklyn, N.Y.; free flow plan in a city store, Stern bros., New York. il plan Arch Rec 101:92-4 F '47
Intermediate floors for greater efficiency in storage and service. L. Parnes. plan diags Arch Rec 101:95-7 F '47
New store, new methods; Foley's, Houston Tex. il plan Bsns W p50+ O 18 '47

Lighting

Field study of the practical factors affecting illumination design for merchandising areas. W. F. Rooney. il diags Illum Eng 42:249-67 F '47

Management

Making it easy for customers to buy; Foley's department store, Houston, Texas. il Am Bsns 17:28 O '47
New store, new methods; Foley's Houston Tex. il plan Bsns W p50+ O 18 '47
That five-day problem. Bsns W p60+ My 10 '47

See also
Delivery of goods

Manufacturers' demonstrations

Elizabeth Arden loses demonstrator case. Oil Paint & Drug Rep 151:4 Ap 21 '47

Purchasing

Department store buyer, and how to reach him. J. C. Cumming. Sales Management 59:108+ O 15 '47

Records

Central records for department stores. Bsns W p68+ Mr 22 '47

Restaurants

For day and evening service in a department store; H. S. Manchester, inc., Madison, Wis. il plan Arch Rec 102:112-14 Jl '47

Securities

Divergent trends in merchandising and chain store shares; with statistics on leading stocks. P. Dobbs. Mag of Wall St 80:490-2+ Ag 2 '47
Diverse outlook for merchandise shares; with statistics on leading stocks. G. S. Kent. Mag of Wall St 79:489-92+ F 1 '47

Service

Department store outlet for register checks. W. Petersen. il Burroughs Clearing House 32:20-1+ O '47

Statistics

Department store sales, Atlanta Federal reserve district; monthly figures and annual index, 1919-1945. Survey of Cur Bsns 27: 23 My '47
Department store sales, New York Federal reserve district; revised series; monthly indexes, 1919-1945; tabulation. Survey of Cur Bsns 27:20 Ap '47
Department store sales, Philadelphia Federal reserve district; revised data, monthly, 1923-1946. Survey of Cur Bsns 27:17 S '47
Department stores; today nearly a ten-billion-dollar market. J. C. Cumming. Sales Management 59:118+ S 15 '47
Indexes of sales and stocks by Federal reserve districts, yearly 1939-1945, monthly Nov. 1945-Nov. 1946; Sales, stocks and outstanding orders, 1939-1945 average and monthly Mar. 1945-Nov. 1946; Weekly index of sales, May 1943-Jan. 1947; Sales and stocks by major departments, Oct. 1945 and Sept.-Oct. 1946. Fed Res Bul 33:81-3 Ja '47 [cont monthly]
Postwar regional department store sales patterns. C. Winston and M. L. Puglisi. Survey of Cur Bsns 27:18-23 S '47
Relationship between department store stocks and sales, 1922-May 1947; chart. Survey of Cur Bsns 27:7 Jl '47
Sales by Federal reserve districts and by cities in terms of percentage change from corresponding period of preceding year. Fed Res Bul 33:82 Ja '47 [cont monthly]
Sales, stocks, and outstanding orders of 296 department stores; 1940-1945 monthly average and monthly figures Jan.-Nov. 1946. Survey of Cur Bsns 27:4 Ja '47
Sales, stocks, and outstanding orders of 296 department stores, monthly average 1940-1946 and monthly figures, Jan. 1946-May 1947. Survey of Cur Bsns 27:6 Jl '47

Stock

Frozen food business is the department store's opportunity. W. Burston. J Retailing 23:23-8 F '47
Frozen foods and the department store. G. H. Sullivan. il diags Mod Packaging 20: 108-12+ D '46
Red carpet for new lines; Abraham & Straus bidding for business. Bsns W p58+ D 14 '46

Stockrooms

Department store, garage and warehouse, built as a unit, permit mechanized system of stock handling, controlled customer traffic; Foley store in Houston, Tex. il plans diags Arch Forum 86:106-9 Ap '47
Intermediate floors for greater efficiency in storage and service. L. Parnes. plan diags Arch Rec 101:95-7 F '47

Variety chains

Variety chain store; a view of what's ahead in retail merchandising; Grant's Syracuse store. J. Reiss. il Ptr Ink 220:27-9+ S 12 '47

DEPARTMENT stores, Cooperative
Filene's co-ops. Bsns W p65-6+ Ap 5 '47

DEPHOSPHORIZATION. See Steel—Phosphorus content

DEPILATORIES. See Hair, Removal of

DEPOLARIZATION of rays
Quenching and depolarization of mercury resonance radiation by nitrogen and oxygen. L. O. Olsen and G. P. Kerr, jr. Phys R 72:115-17 Jl 15 '47
Raman apparatus for quantitative polarization measurements. B. L. Crawford, jr. and W. Horowitz. bibliog diags J Chem Phys 15:268-74 My '47

DEPOLYMERIZATION
Depolymerization of butadiene dimer. T. F. Doumani, R. F. Deering and A. C. McKinnis. diag Ind & Eng Chem 39:89-92 Ja '47
Pectin studies; the effect of dry grinding. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:157-60 My '47
Trioxane as a source of formaldehyde. J. F. Walker and A. F. Chadwick. bibliog Ind & Eng Chem 39:974-7 Ag '47

DEPRECIATION
A-B-C of depreciation. J. H. Murdoch, jr. Water & Sewage Works 94:237-44 Jl '47
ABC of depreciation accounting. J. F. Blair. Ry Age 122:311-15 F 8 '47
Accelerated depreciation. J Account 84:329-30 O '47

DEPRECIATION—*Continued*
Accelerated depreciation and the Treasury's new declining balance method of computation; to permit increased depreciation of rental-housing dwellings. P. D. Seghers. J Account 83:113-16 F '47
Anatomy of depreciation by L. R. Nash; review. S. Ferguson. Pub Util 39:248-50 F 13 '47
Appropriation, not charges, recommended to cover inflated replacement cost; A.I.A. committee statement. J Account 84:289-90 O '47
Are we pricing goods too low? improving depreciation methods under present tax laws. J. Turner. Am Bsns 17:8-9+ O '47
Best laid plans of corporations to avoid inflationary profits going awry. Barron's 27: 25-6 Mr 31 '47
Calls for change in handling of depreciation reserves; abstract. C. R. Cox. Iron Age 160:134-5 O 9 '47
Check your depreciation. Inland Ptr 119:39 S '47
Dangers of highway bankruptcy. R. H. Baldock. Eng N 138:212 F 6 '47
Declining balance depreciation can work under T.D. 4422 plus I.T. 3818. W. L. Ashbaugh. J Account 83:394-401 My '47
Declining balance depreciation permitted by Internal Revenue is not realistic. P. T. Norton, jr. J Account 84:32-4 Jl '47
Depreciating assets replacement becoming most serious problem. Iron Age 160:237-40 O 16 '47
Depreciation accounting. E. W. Hart. N A C A Bul 28:540-9 Ja 2 '47
Depreciation accounting for educational institutions. J Account 83:329-30 Ap '47
Depreciation allowances are the liquid part of fixed assets. F. S. Blackall, jr. Bankers Mo 64:423-4 S '47
Depreciation and your income tax. H. J. Ashe. Radio N 37:112+ Ja '47
Depreciation dispersion factor. A. W. Hastings. Am Gas Assn Mo 29:347-9 Jl-Ag '47; Same. Edison Elec Inst Bul 15:289-92 Ag '47
Depreciation practices criticized in transit fare inquiry; Indianapolis railways. Pub Util 40:257-8 Ag 14 '47
Depreciation reserves in public utility balance sheets. H. A. Horne. Pub Util 40:574-7 O 23 '47
Depreciation schedule, U.S. Bureau of internal revenue; length of life of buildings and equipment, construction equipment, bridges, waterworks, gas and electric plants. Eng N 138:635+ Ap 17 '47
Effect of plant write-offs on utility investors. O. Ely. Pub Util 39:85-8 Ja 16 '47; Correction. 39:244 F 13 '47
Emergency facilities; accounting research bulletin no. 27. J Account 83:22-5 Ja '47
Fully depreciated assets. J Account 83:423-4 My '47
Let's have free depreciation. Am Mach 91:81 Je 5 '47
Live depreciation questions. C. O. Fisher. Pub Util 39:663-70 My 22 '47
Need for realistic depreciation of machine tools. H. H. Pease. Mach 53:137+ Ag '47
Property records and depreciation accounting on punched cards. J. G. Sidak. il N A C A Bul 28:1352-8 Jl 1 '47
Replacement and excess construction costs. J Account 84:333-6 O '47
Taxpayers have costly misconceptions of what may be acceptable as depreciations. H. J. Ashe. Inland Ptr 118:44 Ja '47
Temperature records as an aid in depreciation study. W. A. Tripp. Elec Eng 66:182-6 F '47
Under-depreciation of assets causes serious concern to industry. Iron Age 160:141-2 S 18 '47
Urges amortization of machine tools used in war output be given. G. S. Eaton. Iron Age 160:146-8 Jl 24 '47
We depreciate at ten per cent and reinvest the same year; Dodge mfg. corp. E. M. Carver. Am Mach 91:101-3 O 23 '47
What is accelerated depreciation? F. S. Blackall, jr. Am Mach 91:105-7 Jl 17 '47

See also
Obsolescence

DEPRECIATION insurance. See Insurance, Depreciation

DERAILMENTS. See Railroads—Accidents

DERMATITIS. See Skin—Diseases

DERN, Alfred L. 1885-1947
Sketch. por East Underw 48:9 Je 6 '47; Nat Underw (Life ed) 51:9 Je 6 '47

DERRICKS. See Cranes, derricks, etc.

DERRICKS, Oil well
Modern rotary drilling. J. Zaba. diags Oil & Gas J 45:175-6 F 22; 91 Mr 1; 95 Mr 8; 99 Mr 15 '47
Permian basin rigs moved on tracked units. G. Weber. il Oil & Gas J 46:152 O 11 '47
Rolling heavy rigs on wheels. G. Weber. il Oil & Gas J 46:58-9+ Ag 2 '47

Standards
Report of subcommittees of the committee on standardization of standard rigs and derricks. diag Am Pet Inst Proc 25(4):144-9 '45
Report of subcommittees of the committee on the standardization of standard rigs and derricks. diags Am Pet Inst Proc 26 (4):197-208 '46

DESALTING of sea water. See Sea water—Desalting

DESERT plants
New uses for desert plants. F. Kutnewsky. il Comp Air Mag 52:121-3 My '47

DESERTS
Australian practice favors water pipeline on the desert floor; conduit supplies water to Whyalla. il map Eng N 138:889-91 My 29 '47
Les condensations d'eau occultes dans les sols; leur mécanisme et leur influence dans les régions désertiques sahariennes. R. Leroy. Génie Civil 124:96 Mr 1 '47

DESIGN
Abstracts of ACS convention papers; Design division. Cer Ind 48:60+ Je '47
Advertisers get ideas from Metropolitan museum of art. C. J. Swan. il Ptr Ink 219:35-7 My 2 '47
Aluminum + plastics offers unusual design possibilities. J. D. Edwards. il Iron Age 160:46-8 O 23 '47
Design. E. T. Norris. Inst E E J 94 pt 1:91-4 F '47; Abstract. Electrician 137:931 O 4 '46
Design for selling. T. G. W. Nevell. il Ind Marketing 31:54-5 D '46
Designing for economy of material, tooling, labor. K. W. Schmidt. il diags Product Eng 18:132-6 Ja '47
Designing for extreme cold. A. Raines. il Machine Design 19:103-6 My '47
Designing for production; a problem in education. W. E. Johnson. Mech Eng 69:380-2 My '47
Exhibit brings product design before public; Society of industrial designers. il diags Product Eng 18:143-4 Mr '47
How the industrial designer works with the engineer. W. D. Teague. il Product Eng 18: 81-4 My '47
Importance of the retailer in the development of product design. P. Müller-Munk. J Retailing 23:8-13+ F '47
Industrial design. R. B. Farnum. Mech Eng 69:512-13 Je '47
Industrial design in new role; combines engineering with functional styling. il Bsns W p38+ Ja 11 '47
Industrial design, 1947; photographs. il Arch Forum 86:13 F '47
Measurements as an aid to design. F. G. Tatnall. Machine Design 19:194+ Ap '47
Optical illusions created by design. il Mod Packaging 20:113 N '46
Oxyacetylene pressure welding as it affects design. R. A. Kubli. il diag Product Eng 18:117-21 Mr '47
Practical design of thin-metal stampings. W. C. Mills. diags Am Mach 91:85-7 O 9; 94-7 O 23 '47
Psychological factors in the design of equipment. M. Haire. Mech Eng 69:399-400+ My '47
Putting plastics in its place; right plastics for the right job. il Sci Am 177:207-9 N '47
Styling a prerequisite to selling. J. G. Balmer, jr. il Mod Plastics 25:94-6 S '47

DESIGN—*Continued*
Surveys for design; good design depends on market conditions and consumer needs. W. D. Teague. il Adv & Sell 40:117-18 Mr '47
Vibration testing technique and its use in improving designs. J. A. Dickie. il diag Product Eng 18:115-19 Jl '47
Weight economy in engineering design. W. A. Semmion. il Materials & Methods 25:59-62 My '47

See also
American council of style and design
Architecture, Domestic—Designs and plans
also subdivision subjects, e.g.
Airplanes
Automobiles
Cars
Concrete construction
Bridge design
Fashion
Naval architecture—Designs and plans
Textile design
Design under special
Electric machinery
Machinery
Printing
Structural engineering

Protection
Agreement of members of Print group of the Textile distributors institute; voluntary system of design protection. Textile Col 69: 36+ My '47
Design patent protection. W. K. Rieber. il Product Eng 18:81-3 O '47
New fight against design piracy. Textile Col 68:14-15+ O '46

DESIGNERS
Design's bad boy; F. J. Kiesler. il Arch Forum 86:88-91+ F '47

DESIGNERS' offices
Design for demonstrating design; offices and laboratory for W. D. Teague, New York. il plans Arch Rec 101:95-9 My '47
Design for demonstrating plastics; quarters for industrial design staff, General electric plastics division. il Arch Rec 101:100-1 My '47
Industrial designer's offices belie location in dark, old building. il plan Arch Forum 86: 92-3 My '47

DE SITTER, Willem
Portrait. Fortune 35:124 Ja '47

DESK furnishings

See also
Desk pen sets

DESK pen sets
Plastics give desk sets color, finish, feel. il Mod Plastics 25:98-9 O '47
Polystyrene in a non-spill desk set. il Mod Plastics 24:104-5 Jl '47

DESKS
Butler brothers to build office desks. il Am Bsns 17:26 Jl '47
Molded plywood makes this desk. il Mod Plastics 24:103 F '47
New desks; tools of management. il Am Bsns 16:33-5 N '46

DESORPTION
Comparison of rectification and desorption in packed columns; desorption tests on carbon dioxide-water and oxygen-water, and rectification tests on isopropanol-water. D. W. Deed, P. W. Schutz and T. B. Drew. bibliog diags Ind & Eng Chem 39:766-74 Je '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46

DESOXYCHOLIC acid
Configuration of deoxycholic acid. C. W. Shoppee. bibliog Chem & Ind p109-12 F 22-Mr 8 '47

DESOXYCORTICOSTERONE
Protective action of desoxycorticosterone acetate against X-ray-induced liver changes. F. Ellinger. bibliog Science 104:502-3 N 29 '46

DESOXYPENTOSE nucleic acid
Highly polymerized desoxypentose nucleic acid from yeast. E. Chargaff and S. Zamenhof. Am Chem Soc J 69:975-6 Ap '47

DESOXYRIBONUCLEIC acid
Effect of specific nuclease and phosphoesterase on desoxyribonucleic acid prepared with the use of strong sodium hydroxide (method of Levene). C. A. Zittle. Franklin Inst J 243:334-6 Ap '47

DESOXYRIBOSE
3-Deoxy-l-xylose. S. Mukherjee and A. R. Todd. Chem Soc J p969-73 Jl '47

DESOXYSORBOSE
5-Desoxy-L-sorbose. P. P. Regna. bibliog Am Chem Soc J 69:246-9 F '47

DESOXYXYLOSE
3-Deoxy-l-xylose. S. Mukherjee and A. R. Todd. Chem Soc J p969-73 Jl '47

DESSER, Abraham A.
Arbitrator. por Bsns W p90 S 27 '47

DESTHIOBIOTIN
Reaction of aminoesters with ethyl isocyanate; open chain models of desthiobiotin. E. M. Schultz. bibliog Am Chem Soc J 69: 1056-7 My '47
Studies in the imidazolone series; synthesis of a lower and a higher homolog of desthiobiotin and of related substances. R. Duschinsky and L. A. Dolan. bibliog Am Chem Soc J 68:2350-5 N '46

DESUPERHEATERS
Furnace temperature control for large steam-generating units. O. de Lorenzi. Blast F & Steel Pl 35:725-6 Je '47

DETAILING. See Sales promotion

DETECTION of metals. See Metals—Detection

DETECTORS
Magnetic airborne detector employing magnetically controlled gyroscopic stabilization. V. Vacquier and others. il diags R Sci Instr 18:483-7 Jl '47
Pneumatic heat detector. H. A. Zahl and M. J. E. Golay. il diags R Sci Instr 17:511-15 N '46
Pneumatic infra-red detector. M. J. E. Golay. il diags R Sci Instr 18:357-62 My '47
Theoretical consideration in heat and infra-red detection, with particular reference to the pneumatic detector. M. J. E. Golay. diags R Sci Instr 18:347-56 My '47

See also
Flame detectors
Leak detectors
Radio detectors

DETECTORS, Crystal. See Radio detectors

DETERGENTS. See Cleaning compositions

DETONATION
Equation of state for gases at extremely high pressures and temperatures from the hydrodynamic theory of detonation. M. A. Cook. bibliog J Chem Phys 15:518-24 Jl '47
High explosives; mechanical theory of detonation. S. Paterson. Engineering 163:98-100 Ja 31 '47

DETONATORS, Electric
Electric blasting switches, underground mines, Lake Superior district. M. S. Petersen and F. E. Cash. 7pls U S Bur Mines Information Circ 7372:1-11 '46

DETROIT
Detroit in '47. K. G. Cone. il Am Inst Banking Bul 29:3-4+ Ja '47
Detroit pays; city officials are angered by 2.48% interest. Bsns W p90+ Mr 15 '47
Detroit, two in one; to beautify its waterfront and provide facilities for industrial exhibitions. il Bsns W p22 Ja 4 '47

Industries
American institute of chemical engineers 40th annual convention, Detroit, Nov. 9-13, 1947. Chem Eng Prog 43:sup 16-19+ O '47

Lighting
Street lighting; experience of Detroit; abstract. Elec West 97:64 D '46

Rapid transit
Detroit; audited report of the Department of street railways for the fiscal year ended June 30, 1946. Mass Transportation 42: 486-9+ N '46

DETROIT—Rapid transit—*Continued*
Ten cent fare lost riders; comparison of Detroit statistics. W. Jackson. Mass Transportation 42:524-7 D '46
What the 10c fare has done in Detroit. Mass Transportation 42:479 N '46

Water supply
Practical water works operation data. Pub Works 78:24-5+ S '47

DETROIT and Cleveland navigation company
Great Lakes ship line control shifts. Bsns W p89 O 25 '47

DETROIT Edison company
Bonds offered. Comm & Fin Chr 166:1048 S 15 '47

DETROIT-MICHIGAN stove company
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:230 My 24 '47

DETROIT steel corporation
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:216+ My 24 '47

DETROIT stock exchange
Regional marts do a job. il Bsns W p84+ S 13 '47

DEUSSEN, Alexander, 1882-
Sidney Powers memorial medalist; with list of publications. W. E. Pratt. Am Assn Pet Geologists Bul 31:829-35 My '47

DEUTERIUM
Angular distribution of 2.5-Mev neutrons scattered by deuterium. J. H. Coon and H. H. Barschall. bibliog diags Phys R 70: 592-6 N 1 '46
Differences in mass spectra of H_2 and D_2. N. Bauer and J. Y. Beach. bibliog J Chem Phys 15:150-1 Mr '47
Hyperfine structure of atomic hydrogen and deuterium. J. E. Nafe and others. bibliog Phys R 71:914-15 Je 15 '47
Hyperfine structure of the ground state of H and D atoms. O. Halpern. Phys R 72:245-6 Ag 1 '47
Isomerization of alkanes; deuterium exchange in the isomerization of *n*-butane. H. Pines and R. C. Wackher. bibliog diag Am Chem Soc J 68:2518-21 D '46
Joule-Thomson effects in deuterium at liquid air and at room temperatures. H. L. Johnston, C. A. Swanson and H. E. Wirth. diag Am Chem Soc J 68:2373-7 N '46
Mass spectra of hydrogen and deuterium. D. P. Stevenson. bibliog J Chem Phys 15:409-11 Je '47
Total scattering cross sections of deuterium and oxygen for fast neutrons. R. G. Nuckolls and others. bibliog Phys R 70:805-7 D 1 '46
Use of deuterium in the analysis of vibrational spectra. F. Halverson. bibliog(519 ref) il Rs Mod Phys 19:87-131 Ap '47
See also
Hydrogen—Isotopes

DEUTERIUM compounds
Electrolytic conductivity of NaOH in H_2O and of NaOD in D_2O at 25°; vacuum distilling apparatus for deuterium oxide. E. Hetland. diags Am Chem Soc J 68:2532-5 D '46
Infra-red spectra of monomeric formic acid and its deuterated forms. V. Williams. bibliog J Chem Phys 15:232-51 My '47
Use of deuterium in the analysis of vibrational spectra. F. Halverson. bibliog(519 ref) il Rs Mod Phys 19:87-131 Ap '47
See also
Water—Heavy water

DEUTERO-methane. See Methane—Heavy methane

DEUTERONS
Collision cross sections of carbon and hydrogen for fast neutrons. W. Sleator, jr. bibliog diag Phys R 72:207-19 Ag 1 '47
Collision of neutrons with deuterons and the reality of exchange forces. H. S. W. Massey and R. A. Buckingham. Phys R 71: 558 Ap 15 '47
Collision of neutrons with deuterons and the reality of exchange forces. J. H. Williams. Phys R 71:908 Je 15 '47
Disintegration of Li^7 by deuterons. W. E. Bennett and others. bibliog Phys R 71:11-14 Ja 1 '47
Energy levels in the nucleus Mn^{56}. A. B. Martin. bibliog diags Phys R 72:378-83 S 1 '47
Experimental yields with 14-Mev deuterons. E. T. Clarke and J. W. Irvine, jr. bibliog Phys R 70:893-4 D 1 '46
Formation of radium E and polonium by deuteron bombardment of bismuth. H. E. Tatel and J. M. Cork. Phys R 71:159-64 F 1 '47
Long range tensor forces and the magnetic moment of the deuteron. H. Primakoff. bibliog Phys R 72:118-19 Jl 15 '47
Magnetic moment of the deuteron. R. G. Sachs. bibliog Phys R 72:91-8 Jl 15 '47
Magnetic moments of the neutron and the deuteron. W. R. Arnold and A. Roberts. bibliog Phys R 70:766 N 1 '46
Magnetic moments of the neutron and the deuteron. W. R. Arnold and A. Roberts. diags Phys R 71:878-86 Je 15 '47
Metaborate compounds for internal cyclotron targets. A. S. Weil and others. R Sci Instr 18:556-8 Ag '47
Neutrons from C^{12} + D. W. E. Bennett and H. T. Richards. Phys R 71:565-7 My 1 '47
Proton-deuteron exchange between ammonia and ammoniated diborane. A. B. Burg. bibliog diags Am Chem Soc J 69:747-50 Ap '47
Protons from the deuteron bombardment of separated neon isotopes. F. K. Elder, jr. and others. bibliog Phys R 71:917-18 Je 15 '47
(*d-n*) Reactions at 15 Mev. R. B. Roberts and P. H. Abelson. bibliog Phys R 72:76 Jl 1 '47
Relativistic correction to the magnetic moment of the deuteron. G. Breit and I. Bloch. bibliog Phys R 72:135-40 Jl 15 '47
Scattering of fast neutrons by protons and deuterons. M. Ageno and others. bibliog diag Phys R 71:20-31 Ja 1 '47
Scattering of protons by deuterons. R. Sherr and others. bibliog diags Phys R 72:662-72 O 15 '47
Technique of bombarding organic compounds with deuterons. R. E. Honig. bibliog il diags R Sci Instr 18:389-94 Je '47

DEVALUATION of money. See Money—Devaluation

DEW points
Foxboro shows its dew point recorders. il Paper Tr J 125:26 O 30 '47
Vaporization of fuels for gas turbines; bubble-points and dew-points of liquid hydrocarbon fuels. B. P. Mullins. bibliog(62 ref) pl diags Inst Pet J 32:703-37 D '46

DEWEY, Thomas Edmund, 1902-
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47

DEXTRINS
Dextrins in flour and yeast raised bread. W. Cunliffe. Soc Chem Ind J 66:187-9 Je '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47

DEXTROSE. See Glucose

DEZINCIFICATION. See Brass—Corrosion

DIABETES
Creatinuria in diabetics and an evaluation of methods for determining total creatinine. S. Caspe and others. bibliog Science 106:371-2 O 17 '47
Effect of certain substances on the prevention of diabetogenic action of alloxan. S. Banerjee. bibliog Science 106:128-30 Ag 8 '47
Experimental diabetes and diet. B. A. Houssay and C. Martínez. Science 105:548-9 My 23 '47
Hexokinase activity and diabetes mellitus. R. H. Broh-Kahn and I. A. Mirsky. Science 106:148-9 Ag 15 '47
Oral efficacy of BAL in protecting rats against alloxan diabetes. A. Chesler and R. Tislow. Science 106:345 O 10 '47
Serum phosphatases and alloxan diabetes. M. M. Cantor and others. bibliog Science 105: 476-7 My 2 '47

DIACETYLETHYLENEDIAMINE
N,N'-diacetylethylenediamine nitrate. F. S. Prout and J. Cason. Am Chem Soc J 69: 1228-9 My '47

DIAGNOSIS
Better use of laboratory procedures for more accurate diagnosis in industrial medicine. W. C. Dreessen and R. F. Sievers. Ind Med 15:621-6 N '46

See also
Complement fixation

DIAGNOSIS, Radioscopic
Community-wide chest X-ray surveys. F. J. Weber. Pub Health Rep 62:652-8 My 2 '47
Comparison of the effectiveness, for tuberculosis case finding, of various roentgenographic and photofluorographic methods. Pub Health Rep 62:350-4 Mr 7 '47
Guide for disposition of persons with abnormal pulmonary findings on X-ray films. H. E. Hilleboe and J. Holm. fold pl Pub Health Rep 61:1759-69 D 6 '46
Inherent efficiency of the X-ray methods used in the detection of tuberculosis. R. H. Morgan and others. bibliog Pub Health Rep 62:201-11 F 7 '47
Mass radiography in general hospitals. H. E. Hilleboe. Pub Health Rep 62:629-31 My 2 '47
X-ray screens out chest cases in hiring and placing employees; Caterpillar tractor company. il Factory Management 105:140-2 Ja '47

DIAL telephones. See Telephone, Automatic

DIAMAGNETISM
Tetrahedral interactions and diamagnetic susceptibilities. J. R. Lacher. Am Chem Soc J 69:2067 Ag '47

DIAMIDINOSTILBENE
Photochemical instability of *cis-* and *trans-*4 : 4'-diamidinostilbene. A. J. Henry. Chem Soc J p 1156-64 D '46

DIAMINES. See Amines

DIAMINODIBENZOTHIOPHENE dioxide
Studies in the sulfone series; the preparation of 2,8-diaminodibenzothiophene-5-dioxide. C. R. Neumoyer and E. D. Amstutz. bibliog Am Chem Soc J 69:1920-1 Ag '47

DIAMINODIPHENYLSULFONE
Studies in the sulfone series; mono-N-heterocyclic derivatives of 4,4'-diaminodiphenylsulfone. E. D. Amstutz, E. A. Fehnel and J. W. Woods. bibliog Am Chem Soc J 69: 1922-5 Ag '47

DIAMINOPYRIDINE
Derivatives of 2,6-diaminopyridine. J. Bernstein and others. bibliog Am Chem Soc J 69:1151-8 My '47

DIAMINOPYRIMIDOPYRAZINE
Pyrimido[4,5-b]pyrazines; 2,4-diaminopyrimido[4,5-b]pyrazine and derivatives. M. F. Mallette, E. C. Taylor, jr. and C. K. Cain. bibliog Am Chem Soc J 69:1814-16 Jl '47

DIAMINOTHIAXANTHONE dioxide
Studies in the sulfone series; the preparation and properties of 2,8-diaminothiaxanthone- and 2,8-thiaxanthene-5-dioxides and some related compounds. E. D. Amstutz and C. R. Neumoyer. bibliog Am Chem Soc J 69: 1925-9 Ag '47

DIAMINOTRIPHENYLMETHANE
Absorption spectra of some N-acetyl derivatives *p,p'*-diaminotriphenylmethane dyes. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1978-85 Ag '47
Spectra of the doubly charged positive ions of some *p,p'*-diaminotriphenylmethane dyes. B. M. Tolbert and G. E. K. Branch. Am Chem Soc J 69:1083-91 My '47

DIAMOND dies. See Dies, Diamond

DIAMOND drilling. See Drilling and boring (earth and rocks)

DIAMOND match company
Recession resistant stocks. Mag of Wall St 80:158 My 10 '47

DIAMOND mines and mining

South Africa
Sampling diamond deposits in southern Africa. D. A. Pifer. il diag Eng & Min J 148:78-81 Mr '47

DIAMONDS
All's not diamond that glitters; new method of jewel setting. diags Bsns W p20 Ja 25 '47
Conductivity pulses induced in diamond by alpha-particles. D. E. Woolridge and others. Phys R 71:913 Je 15 '47
Diamond as a gamma-ray counter. L. F. Curtiss and B. W. Brown. diag Phys R 72: 643 O 1 '47
Diamonds used to detect atomic radiation. il Chem & Eng N 25:3100+ O 20 '47

DIAMONDS, Artificial
Experimental contribution to the problem of diamond synthesis. P. W. Bridgman. bibliog diags J Chem Phys 15:92-8 F '47
Possibility of a chemical synthesis of diamond. D. P. Mellor. bibliog J Chem Phys 15:525-6 Jl '47

DIAMONDS, Industrial
Diamond core drilling methods and problems. C. Deely. il Pet Eng 18:98+ Je '47
Diamond coring at Rangely, Colorado. R. W. Stuart. il Pet Eng 18:43-8 Ja '47
Diamond-die drilling; electrical method. il Mech Eng 69:416-17 My '47; Same abr. Iron Age 160:64-5 Jl 10 '47; Same abr. Product Eng 18:153-4 Jl '47; Excerpts. Machine Design 19:105-6 Jl '47
Diamond drilling and diamond bit investigation. L. Obert and others. bibliog 7pls U S Bur Mines Rep of Invest 4041:1-18 '47
Diamond grit for finishing operations. il Metal Finishing 45:85-6 My '47
Diamond powder increases polishing efficiency. il Iron Age 159:51 Mr 13 '47
Diamonds cut plastics with precision. diags Am Mach 90:101-3 D 19 '46
Electrical methods for diamond-die production. C. G. Peters and others. il diags J Res Nat Bur Stand 38:449-64 My '47
Hard materials; increased use of diamond substitutes. Chem Age (Lond) 56:259-60 F 15 '47
High-voltage spark replaces mechanical drilling of diamond dies. Mach 53:184 My '47
How diamonds draw ultra-fine wire. R. L. Zahour. il diags Am Mach 91:101-8 O 9 '47
Polishing metallographic specimens with diamond dust. G. C. Woodside and H. H. Blackett. il Metal Prog 51:945-7 Je '47
Use and care of diamond drill bits and shells. il Eng & Min J 148:78-81 Ag '47

DIAPHRAGMS
Charts for circular diaphragm design; reference book sheet. G. P. Sutton. diag Product Eng 18:167, 169 Ja '47
Theory of corrugated diaphragms for pressure-measuring instruments. A. Pfeiffer. diags R Sci Instr 18:660-4 S '47

See also
Membranes
Osmosis

DIASTROPHISM
Diastrophism during historic time in Gulf coastal plain. M. M. Sheets. bibliog Am Assn Pet Geologists Bul 31:201-26 F '47
Elements of diastrophic history of northeastern Venezuela. C. G. de Juana. bibliog map Geol Soc Bul 58:689-701 Ag '47

DIATHERMY
Diathermy unit. il R Sci Instr 18:379 My '47

DIATOMACEOUS earth
Chromatographic determination of carotene; kieselguhr as a chromatographic adsorbent. J. B. Wilkes. bibliog Ind & Eng Chem Anal ed 18:702-7 N '46
Diatomaceous filter aids for paper mill waters and effluents. G. G. Halvorsen. il Paper Tr J 125:37-41 O 30 '47
Diatomite filters offer advantages in industrial applications; abstract. E. G. Kominek. Eng N 137:719 N 28 '46
Diatomite filtration. R. E. Thompson. il Water & Sewage 85:31+ S '47

DIATOMITE. See Diatomaceous earth

DIAZO compounds
Chemical constitution and reactivity; decomposition of o-methoxybenzenediazonium chloride. M. L. Crossley and others. bibliog Am Chem Soc J 69:1160-4 My '47

DIAZO compounds—*Continued*
Decomposition reactions of the aromatic diazo-compounds; mechanism of formation of azo-compounds, polyaryls, and aryl sulphides. K. H. Saunders and W. A. Waters. Chem Soc J p 1154-6 D '46
Diazo reactions in the thiophene and furan series. C. D. Hurd and H. M. Priestley. Am Chem Soc J 69:859-64 Ap '47
Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; nitration and diazo-coupling. H. H. Hodgson and E. R. Ward. Chem Soc J p 1060-2 Ag '47

Analysis

Analysis of diazo compounds, particularly diazodinitrophenol. W. E. Shaefer and W. W. Becker. bibliog diag Anal Chem 19: 307-10 My '47

DIAZOCYANIDES
Infra-red spectra and molecular structure of certain isomeric diazocyanides. N. Sheppard and G. B. B. M. Sutherland. Chem Soc J p453-6 Ap '47
Magnetic optical rotatory powers and diamagnetic susceptibilities of the isomeric aromatic diazocyanides. D. Anderson, M. E. Bedwell and R. J. W. Le Fèvre. diag Chem Soc J p457-60 Ap '47
Structures of Hantzsch's isomeric diazocyanides. D. Anderson, R. J. W. Le Fèvre and J. Savage. Chem Soc J p445-53 Ap '47

DIAZODINITROPHENOL

Analysis

Analysis of diazo compounds, particularly diazodinitrophenol. W. E. Shaefer and W. W. Becker. bibliog diag Anal Chem 19:307-10 My '47

DIAZOMETHANE
Action of diazomethane on hydroxy-compounds and of diazomethane derivatives on phenanthraquinone. A. Schönberg and Mustafa. Chem Soc J p746-8 Ag '46
Experiments with diazomethane and its derivatives; action of diazomethane on hydroxyanils. A. Schönberg, A. Mustafa and M. K. Hilmy. Chem Soc J p 1045-8 Ag '47
Formation of phenanthroxazole by the action of diazomethane on phenanthraquinoneimine. A. Schönberg and W. I. Awad. Chem Soc J p651-3 My '47

DIAZONIUM chlorides
Chemical constitution and reactivity; decomposition of *o*-methoxybenzenediazonium chloride. M. L. Crossley and others. bibliog Am Chem Soc J 69:1160-4 My '47

DIAZONIUM compounds
General method for the preparation of solid aryldiazonium sulphates. H. H. Hodgson and A. P. Mahadevan. Chem Soc J p325-7 Mr '47
Interpretation of the Sandmeyer reaction; decomposition of diazonium salts by cupric chloride in neutral and acid solution. H. H. Hodgson. Chem Soc J p745-6 Ag '46
Interpretation of the Sandmeyer reaction; the behaviour of diazotised 2 : 4 : 6-trichloro- and 2 : 4 : 6-tribromoaniline towards the Sandmeyer reagent. H. H. Hodgson and A. P. Mahadevan. Chem Soc J p 173-4 F '47
Method for the synthesis of tertiary aromatic arsines. W. E. Hanby and W. A. Waters. Chem Soc J p 1029-31 N '46
Replacement of the diazonium by the nitro-group; extension of the method to nitronaphthylamines, benzidine and 3 : 3′-dichlorobenzidine. H. H. Hodgson and E. R. Ward. Chem Soc J p 127-9 Ja '47
Sandmeyer reaction. H. H. Hodgson. bibliog(72 ref) Chem R 40:251-77 Ap '47

DIAZOSULFONATES
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; derivatives of 4′-nitro-2′-methoxybenzene-2-naphthol-1-diazosulphonate. F. M. Rowe and E. J. Cross. Chem Soc J p461-8 Ap '47
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; derivatives of 2′ : 4′-dinitrobenzene-2-naphthol-1-diazosulphonate. F. M. Rowe and W. Osborn. Chem Soc J p829-37 Je '47
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; the stabilities of acrylic acid derivatives from sodium 1-arylazo-β-naphthaquinone-1-sulphonate and its derivatives, and an investigation of derived *iso*indolinones. F. M. Rowe, W. T. McFadyen and A. T. Peters. Chem Soc J p468-73 Ap '47

DIAZOTIZATION
General method for the preparation of solid aryldiazonium sulphates. H. H. Hodgson and A. P. Mahadevan. Chem Soc J p325-7 Mr '47

DIBENZACRIDINE
Reaction of β-naphthol, β-naphthylamine and formaldehyde; the dibenzacridine products. E. R. Blout and R. S. Corley. bibliog Am Chem Soc J 69:763-9 Ap '47

DIBENZANTHRACENE
Crystal structure of the orthorhombic modification of 1 : 2 : 5 : 6-dibenzanthracene; a quantitative X-ray investigation. J. M. Robertson and J. G. White. diags Chem Soc J p 1001-10 Ag '47
Synthesis of 1,2,5,6-dibenzanthracene labeled in the 9-position with carbon-14. C. Heidelberger, P. Brewer and W. G. Dauben. Am Chem Soc J 69:1389-91 Je '47

DIBENZOCYCLOHEPTATRIENE
Colchicine and related compounds; 3 : 4 : 5 : 6-dibenz*cyclo*hepta-1 : 3 : 5-triene. J. W. Cook, G. T. Dickson and J. D. Loudon. Chem Soc J p746-50 Je '47

DIBENZOCYCLOÖCTATETRAENE
1,2,5,6-Dibenzcycloöctatetraene. L. F. Fieser and M. M. Pechet. bibliog Am Chem Soc J 68:2577-80 D '46

DIBENZONAPHTHACENE
Studies on the structures of some dibenznaphthacenes. J. C. Nichol and others. bibliog Am Chem Soc J 69:376-80 F '47

DIBENZOPHENANTHRENE
1,2,3,4-Dibenzphenanthrene and its derivatives; synthesis of 1,2-dimethyl-3,4-benzphenanthrene. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69: 1367-70 Je '47

DIBENZOTHIOPHENE
Studies in the sulfone series; the preparation of 2,8-diaminodibenzothiophene-5-dioxide. C. R. Neumoyer and E. D. Amstutz. bibliog Am Chem Soc J 69:1920-1 Ag '47

DIBENZOYLETHYLENE
Some α-*t*-amino-s-dibenzoylethanes and 3-*t*-amino-2,5-diphenylfurans; preparation and reactions of dibenzoyl-N-morpholinoethylene. R. E. Lutz, P. S. Bailey and N. H. Shearer, jr. bibliog Am Chem Soc J 68: 2224-7 N '46

DIBENZYLCARBOXYLIC acids
Dialkylaminoalkyl esters of 4,4′-stilbenedicarboxylic and 4,4′-dibenzyldicarboxylic acid. L. S. Fosdick and K. F. Urbach. bibliog Am Chem Soc J 69:503-5 Mr '47

DIBENZYLIDENE xylitol
Dibenzylidene-xylitol and its reaction with tetraacetyl-D-glucosyl bromide; dibenzylidene-L-fucitol. M. L. Wolfrom, W. J. Burke and E. A. Metcalf. bibliog Am Chem Soc J 69:1667-8 Jl '47

DIBORANE. See Boron hydrides

DIBROMODICARBOXYDIPHENYL
Calculation of the energy of activation for the racemization of 2,2′-dibromo-4,4′-dicarboxydiphenyl. F. H. Westheimer. bibliog J Chem Phys 15:252-60 My '47

DIBROMOFLUORENE
Irritating effects of 9,9-dibromofluorene. J. R. Sampey and others. Science 105:621 Je 13 '47

DIBROMOMETHYLPENTANE
1,5-Dibromo-3-methylpentane. N. J. Leonard and Z. W. Wicks. Am Chem Soc J 68:2402 N '46

DIBROMOPROPYLAMINE
Investigation of the compound described as azacyclobutadiene. W. J. Gensler. bibliog il Am Chem Soc J 69:1966-8 Ag '47

DIBROMOSTIGMASTERYL acetate
Derivatives of bisnor-5-cholenaldehyde. F. W. Heyl, A. P. Centolella and M. E. Herr. bibliog Am Chem Soc J 69:1957-61 Ag '47

DIBUTYLAMINE
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47

DIBUTYL azelate
Binary mixture for evaluating low pressure distillation columns. F. E. Williams. bibliog diags Ind & Eng Chem 39:779-82 Je '47

DIBUTYLBENZENE
Alkylbenzenes from benzene and isobutene. D. I. Legge. bibliog Am Chem Soc J 69: 2079-90 S '47

Some *s*-butyl- and 1,4-di-*s*-butylbenzene derivatives. D. I. Legge. Am Chem Soc J 69: 2238-9 S '47

DIBUTYLCARBINOL
Vapor pressures and some other properties of di-*i*-butyl ketone and di-*i*-butylcarbinol. F. H. Stross, C. M. Gable and G. C. Rounds. bibliog Am Chem Soc J 69:1629-30 Jl '47

DIBUTYL ketone
Vapor pressures and some other properties of di-*i*-butyl ketone and di-*i*-butylcarbinol. F. H. Stross, C. M. Gable and G. C. Rounds. bibliog Am Chem Soc J 69:1629-30 Jl '47

DIBUTYL methylphenol
Physical properties supporting the phenolic nature of a certain hindered phenol; a synthesis of *t*-butyl *p*-tolyl ether. J. B. McKinley. bibliog Am Chem Soc J 69:1624-6 Jl '47

DIBUTYL phthalate
Binary mixture for evaluating low pressure distillation columns. F. E. Williams. bibliog diags Ind & Eng Chem 39:779-82 Je '47

Chigger repellents. F. M. Snyder and F. A. Morton. Soap & San Chem 22:133+ N '46

Determination of total volatiles in smokeless powder. W. E. Schaefer and others. diags Anal Chem 19:378-81 Je '47

Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47

DICARBAZYL dye
Kinetics of the reaction of methanol with 3,3'-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47

DICARBONYL compounds

Analysis

Determination of beta-dicarbonyl compounds. W. Seaman, J. T. Jones and E. A. Massad. bibliog Anal Chem 19:250-1 Ap '47

DICARBOXYLIC acids
Crystal and molecular structure of certain dicarboxylic acids. J. D. Dunitz and J. M. Robertson. diags Chem Soc J p 142-54 F '47

DICHLORAMINE T
Iodometric microtitration for mustard gas. V. E. Kinsey and W. M. Grant. Ind & Eng Chem Anal ed 18:794-7 D '46

DICHLORAMINES
Some dichloroamine derivatives. L. J. Lermit and R. C. G. Moggridge. Chem Soc J p530-3 Ap '47

DICHLOROACETONE. See Dichloropropanone

DICHLOROARSINE
Aliphatic chloroarsines. C. K. Banks and others. Am Chem Soc J 69:927-30 Ap '47

Nitroaryldichloroarsines and related compounds. J. F. Morgan and others. Am Chem Soc J 69:930-2 Ap '47

DICHLOROBENZENE
New mothproofing larvicide; mixture of hexachlorethane with paradichlorobenzene, or with naphthalene. N. M. Molnar. Soap & San Chem 23:143+ Jl '47

DICHLOROBENZIDINE
Replacement of the diazonium by the nitro-group; extension of the method to nitronaphthylamines, benzidine and 3 : 3'-dichlorobenzidine. H. H. Hodgson and E. R. Ward. Chem Soc J p 127-9 Ja '47

DICHLOROBUTENE
Allylidene halides; dichlorobutene prepared from crotonaldehyde. L. J. Andrews. bibliog Am Chem Soc J 68:2584-7 D '46

DICHLORODIETHYL sulfide. See Mustard gas

DICHLORODIFLUOROETHANE
Fluorinated derivatives of ethane. E. T. McBee and others. bibliog Ind & Eng Chem 39:409-12 Mr '47

DICHLORODIFLUOROMETHANE
Condensation of Freon-12 with finned tubes. D. L. Katz and others. flow diags il diags Refrig Eng 53:211-17, 315-19+ Mr-Ap '47

Determination of Freon-insolubles in pyrethrum extract. L. D. Goodhue. diag Soap & San Chem 23:133+ Ja '47

Inflammability of dimethyl ether-dichlorodifluoromethane-air mixtures. G. W. Jones and F. E. Scott. 2pls U S Bur Mines Rep of Invest 4125:1-4 '47

Negative corona in freon-air mixtures. G. L. Weissler and E. I. Mohr. bibliog Phys R 72:289-94 Ag 15 '47

Positive corona in freon-air mixtures. E. I. Mohr and G. L. Weissler. Phys R 72:294-7 Ag 15 '47

Preparation of chlorofluoromethanes by vapor-phase fluorination. E. T. McBee and others. bibliog diag Ind & Eng Chem 39: 404-9 Mr '47

Water content of Freon-12 reduced; new method advanced for measuring H_2O in refrigerants. W. W. Rhodes. Refrig Eng 53: 412+ My '47

DICHLORODIMETHYL butane
Friedel-Crafts reactions with organic dihalides. K. Sisido and H. Nozaki. bibliog Am Chem Soc J 69:961-4 Ap '47

DICHLORODIPHENYLDIACETYLENE
Dipole moments of two dichlorodiphenyldiacetylenes. G. E. Coates. Chem Soc J p838-9 S '46

DICHLORODIPHENYLTRICHLOROETHANE. See DDT (dichlorodiphenyltrichloroethane)

DICHLOROETHYL ether
Chlorex solvent refining process; Carbide and carbon chemicals corporation. il diag Pet Refiner (Process Handbook sec) 26:122-3 Ap '47

DICHLOROETHYLENE
Handling vinylidene chloride. R. C. Reinhardt. Chem & Eng N 25:2136 Jl 28 '47

Photosensitization in chlorination. W. T. Anderson, jr. bibliog il Ind & Eng Chem 39: 844-6 Jl '47

Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47

See also
Saran

DICHLOROHYDRIN, Glycerol. See Glycerin dichlorohydrin

DICHLOROMETHANE. See Methylene chloride

DICHLORONITROANILINE
Deamination of 2 : 6-dichloro-4-nitroaniline. D. Ridge. Chem Soc J p734-6 Je '47

DICHLOROPHENOXYACETIC acid
2,4-Dichlorophenoxyacetic acid; effective agent for the control of weed growth. Pub Works 78:22 My '47

2,4-D discussed in Farm and home research bimonthly bulletin, March-April. Consumers Res Bul 20:17 Jl '47

Effect of 2,4-D on bean progeny seedlings. A. M. S. Pridham. il Science 105:412 Ap 18 '47

Effects of 2,4-D on seed germination and respiration. Y. L. Hsueh and C. H. Lou. bibliog Science 105:283-5 Mr 14 '47

How advertising introduces an entirely new product; weed killer, 2,4-D. E. M. Housman. il Ptr Ink 218:40-1+ Mr 21 '47

Inactivation of 2,4-D by adsorption on charcoal. E. H. Lucas and C. L. Hamner. Science 105:340 Mr 28 '47

Preparation of 2,4-D(2,4-dichlorophenoxyacetic acid) from phenol and monochloracetic acid. E. Ebel and others. J Chem Educ 24: 449 S '47

Reaction of certain plant growth regulators with ion exchangers. R. J. Weaver. Science 106:268-70 S 19 '47

DICHLOROPHENOXYACETIC acid—*Cont.*
Relative sensitivity of dormant and germinating seeds to 2,4-D. J. W. Mitchell and J. W. Brown. bibliog Science 106:266-7 S 19 '47
Some effects of ultraviolet light on 2,4-D and related compounds. M. G. Payne and J. L. Fults. bibliog il Science 106:37-9 Jl 11 '47
Use of 2,4-D weed killers on woody weeds in Cuba. K. V. Thimann. Science 106:87 Jl 25 '47

Analysis
Determination of 2,4-dichlorophenoxyacetic acid and its compounds in commercial herbicides. H. A. Rooney. Anal Chem 19: 475-6 Jl '47

Physiological effect
Toxicity of 2,4 dichlorophenoxyacetic acid for experimental animals. E. V. Hill and H. Carlisle. bibliog J Ind Hygiene 29:85-95 Mr '47

DICHLOROPROPANONE
Derivatives of 2-amino-4-methylthiazole. J. M. Sprague, A. H. Land and C. Ziegler. bibliog Am Chem Soc J 68:2155-9 N '46
Studies in the thiazole series; the reaction between thiourea and *s*-dichloroacetone. J. Harley-Mason. Chem Soc J p323-5 Mr '47

DICHLOROPROPENE
cis-trans Isomers of 1,3-dichloropropene. L. J. Andrews and R. E. Kepner. bibliog Am Chem Soc J 69:2230-1 S '47

DICHLOROPROPENYL benzene
Allylidene halides; structure and reactivity of cinnamal chloride. L. J. Andrews and S. L. Linden. bibliog Am Chem Soc J 69: 2091-4 S '47

DICHLOROQUINOLINESULFONAMIDE
Cleavage of organic sulfides with chlorine. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 68:2646-9 D '46

DICHLOROTOLUENE
Allylidene halides; structure and reactivity of cinnamal chloride. L. J. Andrews and S. L. Linden. bibliog Am Chem Soc J 69:2091-4 S '47

DICHROMATES
Bichromate in anodized films: abstract. H. Fischer and N. Budiloff. Metal Prog 50: 718+ O '46

DICK, Arthur E. 1861-
Sketch. por Explosives Eng 24:166-7 N '46

DICKINSON, North Dakota

Water supply
Emergency water treatment plant for Dickinson. R. Boehlke. Pub Works 77:25 N '46

DICOUMAROL. See Coumarin

DICTATING machine operators
Bonus plans for dictation machine operators; abstract. T. Harvey. Management R 35:268-70 Jl '46; Discussion. 35:450 N '46

DICTATING machines
Unique dictating machine; Gray audograph. F. L. Moore and R. J. Schneider. il diags Machine Design 19:143-6 F '47
Yes, another; Gray audograph. Fortune 35: 148+ Mr '47

DICTATION
How to be a good dictator; abstract. F. Marsh. Management R 36:74-5 F '47

DICYANDIAMIDE. See Cyanoguanidine

DICYCLOHEXYL
Isomerization of dicyclohexyl. M. Orchin and J. Feldman. Am Chem Soc J 68:2737-8 D '46

DICYCLOPENTADIENE
Addition of formic acid to dicyclopentadiene. F. Bergmann and H. Japhe. Am Chem Soc J 69:1826-7 Jl '47
Metal sulphide catalysis of a simple cracking reaction. B. S. Khamabata and A. Wassermann. Chem Soc J p 1090-1 N '46

DIE casting
Analysis of surface quality of zinc base die castings. A. W. Sundwick. il Steel 121:94-5+ S 15 '47; Same abr. Am Mach 91:127, 129, 131 S 25 '47
Casting fastening hardware with dies and metal molds; J. Edward Ogden corp. H. Chase. il diag Steel 121:94-6+ Ag 18 '47
Casting magnesium in metal molds. H. Chase. il Iron Age 160:73-6 S 25 '47
Die-cast high melting point alloys; abstract. Product Eng 17:140 D '46
Die casting and plating operations; AC spark plug div., General motors corp. J. Geschelin. il Automotive & Aviation Ind 95:30-1+ D 15 '46
Editorial citation to Johnson motors co. for achievement in manufacturing aluminum alloy die castings. il Materials & Methods 24:1178-9 N '46
Electroplating zinc base die castings. C. F. Nixon. Metal Finishing 45:58-60 Mr '47; Same cond. Mach 53:180-2 Mr '47; Same cond. Am Mach 91:149+ Jl 3 '47
High-melting-point alloys; abstract. H. K. Barton and L. C. Barton. Product Eng 18: 129 My '47
High production of carburetor die-castings; Ford motor co. H. Chase. il Mach 53:158-63 Jl '47
Honorable mention to Jack & Heintz precision industries, inc. for achievement in use of light metal die castings. il Materials & Methods 24:1160-1 N '46
Industrial plating of zinc base die castings. C. Temple. il Metal Finishing 45:82-3 Jl '47
Lightweight gasoline engines made from die-castings; McCulloch motors corp. R. P. McCulloch. il Iron Age 159:52-6 My 15 '47
1,000,000 pounds of small die castings for automobile hardware items produced each month in Ternstedt plant. H. Chase. il Steel 119:56-8+ D 23 '46
Packaged die caster. il Sci Am 177:33 Jl '47
Plated zinc base die castings. E. J. Roehl. il Metal Finishing 45:63-7 O '47
Radiography reveals internal quality of die castings. R. W. Dively. il Steel 121:88-9+ N 3 '47
Requirements for die-casting alloys; reference book sheet. A. W. Sundwick. Am Mach 91:143 O 23 '47
Selecting steels for casting dies. H. Chase. il Steel 120:98+ Ja 13 '47
Selection of die castings; tabulations; data sheet. D. Basch. Metal Prog 50:930 N '46
Small quantity die casting; manufacture of metallizing guns; abstract. C. K. Wilson. Materials & Methods 24:1250 N '46
Use of die castings grows; abstracts. F. C. Ziesenheim. Steel 121:95 S 22 '47; Mech Eng 69:863-4 O '47
When parts should be die castings rather than stampings. H. Chase. il Materials & Methods 26:87-91 O '47
Zinc-alloy die foundry. il Engineer 182:440 N 15 '46

DIE casting machines
Die casting machine designed for zinc, aluminum and brass alloys. Materials & Methods 24:1292 N '46
Harvill die-casting machine. il Mach 53:204 F '47; Am Mach 91:176 F 13 '47; Materials & Methods 25:143 Mr '47
Harvill hydraulic die-casting unit. il Am Mach 91:160 Ag 14 '47; Mach 53:176-7 Ag '47
Optimum hydraulic pressure for minimum cylinder diameter. P. J. Lindner. il diags Product Eng 18:119-20 Je '47; Discussion. V. Tatarinov. 18:152-3 N '47
Pressure die-casting machines for general use. il Comp Air Mag 52:18 Ja '47
Reed-Prentice no. 2 die caster. il Am Mach 91:138 Jl 31 '47; Mach 53:187 Jl '47
34th annual review number; forming, casting, molding. il Am Mach 91:171-2 Ja 16 '47
Timer for diecasting machine. G. DeLong. il diag Electronics 20:110-11 Mr '47
Wickes high-speed automatic die-casting machine. il Mach 53:208 Je '47

DIE sinking machines
Reed-Prentice milling and die-sinking machine. il Mach 53:199-200 Ja '47

DIEBOLD, inc.
Expands bank and service divisions. Comm & Fin Chr 165:71 Ja 6 '47

DIECKMANN reaction
Course of cyclisation in the formation of alicyclic rings; effect of alkyl groups on the cyclisation of esters of polycarboxylic acids. R. N. Chakravarti. Chem Soc J p 1028-9 Ag '47
Tetrahydrothiophene (thiophane) derivatives. R. B. Woodward and R. H. Eastman. bibliog Am Chem Soc J 68:2229-35 N '46

DIELECTRIC constants
Brief absorption test index of dielectric condition. R. Blackway. il Elec World 127:101-3 Ap 12 '47
Conductances of lead chloride in ethylene glycol-water mixtures. J. W. Norman and A. B. Garrett. bibliog Am Chem Soc J 69:110-13 Ja '47
Determination of the moisture content of cereals by measurement of specific inductive capacity. L. G. Groves and J. King. bibliog diags Soc Chem Ind J 65:320-4 O '46
Dielectric and piezoelectric properties of barium titanate. S. Roberts. bibliog Phys R 71:890-5 Je 15 '47
Dielectric-constant measurements by the heterodyne-beat method. J. Chien. bibliog diags J Chem Educ 24:494-7 O '47
Dielectric identity test for plasticizers; polyvinyl chloride plastics type. M. A. Elliott, A. R. Jones and L. B. Lockhart. bibliog il diags Anal Chem 19:10-15 Ja '47
Dielectric studies; dipole moment of acetonitrile in solvents of unknown molecular weights. N. C. C. Li and T. Chu. Am Chem Soc J 69:558-9 Mr '47
Dielectrics and rheology of non-aqueous dispersions. A. Voet. bibliog il diag J Phys & Colloid Chem 51:1037-63 S '47
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47
Effect of field strength on dielectric properties of barium strontium titanate. H. L. Donley. bibliog diag RCA R 8:539-53 S '47
Electrical constants of a material loaded with spherical particles. L. Lewin. diag Inst E E J 94 pt 3:65-8 Ja '47
Metallized capacitor tests. P. Godley and J. C. Balsbaugh. il diag Electronics 20:112-15 Ap '47
Oscillograph study of dielectric properties of barium titanate. A. de Bretteville, jr. bibliog il diag Am Cer Soc J 29:303-7 N 1 '46
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47
Properties of monoclinic crystals. W. P. Mason. diags Phys R 70:705-28 N 1 '46
Resonant cavities for dielectric measurements. C. N. Works. bibliog il diags J Ap Phys 18:605-12 Jl '47
See also
Curie point

DIELECTRIC heating. See Electric heating, Industrial—High frequency heating

DIELECTRIC losses
Application of low frequency spectra to glass technology. P. Girard and P. Abadie. Glass Ind 27:609+ D '46
Dielectric behavior of solutions of electrolytes in solvents of low dielectric constant. A. H. Sharbaugh, jr. and others. bibliog diags J Chem Phys 15:47-64 Ja '47
Dielectric heating, the measurement of loss under rising temperature. J. B. Whitehead. diags Elec Eng 66:907-10 S '47
Improved re-entrant cavity for dielectric-loss measurements. S. I. Reynolds. il diags Gen Elec R 50:34-9 S '47

DIELECTRIC power factor. See Power factor, Dielectric

DIELECTRICS
Capacitance stability of ruby muscovite mica. W. Schick. bibliog diag Inst E E J 94 pt 1: 371-6 Ag '47
Discharges between electrode and dielectric at low voltages. Engineer 183:480 My 30 '47
Effect of semiconducting liquids on the dielectric properties of cellulose insulation; development of new capacitor. F. M. Clark. il Gen Elec R 50:9-17 F '47
Electric strength of paraffins and some high polymers. A. E. W. Austen and H. Pelzer. bibliog diags Inst E E J 93 pt 1:525-32 N '46
Experiments on the electric strength of air at centimetre wavelengths. R. Cooper. bibliog diags Inst E E J 94 pt 3:315-24 S '47
High dielectric ceramics for limited space capacitors; research at the National bureau of standards. il Product Eng 18:147-8 Je '47
Microscopic and X-ray investigation of some steatite bodies. M. D. Rigterink. bibliog il Am Cer Soc J 30:214-18 Jl 1 '47
Microwave dielectric measurements. T. W. Dakin and C. N. Works. bibliog diags J Ap Phys 18:789-96 S '47
Orientation of electrical breakdown paths in single crystals. J. W. Davisson. bibliog il diags Phys R 70:685-98 N 1 '46
Photodielectric analysis of materials. J. Delmonte. il diags Mod Plastics 24:163-4+ F '47
R.f. generator load; use of water-dielectric transmission line. F. M. Leslie. diags Wireless Eng 24:105-8 Ap '47
Recent developments in dielectric materials. W. Jackson. bibliog diags Inst E E J 94 pt 1:29-34 Ja '47; Same. Inst E E J 94 pt 3: 5-10 Ja '47; Absiracts. Engineering 162:427-8 N 1 '46; Elec R (Lond) 139:609 O 18 '46; Electrician 137:1065-6 O 18 '46
$TM_{0,1}$ mode in circular wave guides with two coaxial dielectrics. S. Frankel. J Ap Phys 18:650-5 Jl '47
Transmission in waveguides; cross-section partly of solid dielectric. A. M. Woodward. bibliog diags Wireless Eng 24:192-6 Jl '47
See also
Insulating materials
Insulation (electric)
Mica
Power factor, Dielectric

DIELS-ALDER reaction
Aromatic cyclodehydration; use of intermediates obtained by the diene addition reaction. C. K. Bradsher and L. J. Wissow. bibliog Am Chem Soc J 68:2149-51 N '46
Diels-Alder syntheses with hexachlorocyclopentadiene. E. A. Prill. Am Chem Soc J 69:62-3 Ja '47
Diene reaction of some furans. W. Herz. Am Chem Soc J 68:2732 D '46
Improved synthesis of *cis*-Δ^4-tetrahydrophthalic anhydride and *cis*-hexahydrophthalic acid. E. F. Jenkins and E. J. Costello. Am Chem Soc J 68:2733 D '46
Standoil; new discoveries on an old process. J. Petit. Paint Oil & Chem R 110:14+ S 4 '47

DIENES. See Olefins

DIEPPE, France
Harbor
Emergency repairs to continental ports. il map Engineering 164:337-8, 348 O 10 '47

DIES
Attaching carbide parts by threaded inserts. il Iron Age 159:56 Ap 17 '47
Auto brake disks produced with progressive dies. H. Chase. il diags Iron Age 160:80-2 S 4 '47
Carbide dies cut laminations; Lincoln Park industries, inc. R. Le Grand. il diags Am Mach 91:96-100 Ag 14 '47
Cemented carbide used for high production dies and punches; Lynn River works of General electric co. il Iron Age 160:64-6 Ag 28 '47
Cemented carbide wire straightening dies. il Iron Age 160:54 Jl 3 '47
Coax; don't hammer; mistreatment of dieheads. diags Am Mach 91:111 Mr 13 '47
Compound die for blanking and forming part with curled edge. J. E. Hallberg. diags Mach 53:193-4 Ap '47
Compound punch and die makes three washers. B. Menkin. diags Am Mach 91:119 O 23 '47
Design considerations for carbide sheet metal dies. E. Glen. il Steel 121:75-6+ S 22 '47
Die cushion utilizes rubber diaphragm. il diag Machine Design 19:156 F '47

DIES—*Continued*
Die design for aluminum alloys. E. W. Mason. il Am Mach 91:102-4 My 22 '47
Die steels for hot work; abstract. D. W. Rudorff. Materials & Methods 24:1510 D '46
Drawing and forming with zinc alloy dies. S. Menton. il Steel 120:92-3+ My 26; 104-5+ Je 2; 80-1+ Je 9; 94-6+ Je 16 '47
Effect of spacing between dies in the tandem drawing of tubular parts. G. Sachs and G. Espey. il diags A S M E Trans 69:139-43 F '47
Forming magnesium alloys. A. G. Gray. il diags Steel 120:91+ Ap 21; 105-6+ Ap 28 '47
14-station die makes tip clutches for pencils; Eversharp pencil. G. Murphy. il diag Am Mach 91:104-5 Jl 31 '47
Free machining die steel. Steel 120:104 F 10 '47
Grids improve drawing dies. A. Wolosianski. Am Mach 92:120-1 O 9 '47
Hard-faced dies make drums. J. A. Gallaher. il diags Am Mach 91:101-4 Mr 27 '47
High impact strength die steels provided by Latrobe process. il Steel 121:86 S 1 '47
High-production die for forming fine wires into ring-shaped parts. L. Segalle. diags Mach 53:182-3 My '47
How to design carbide blanking dies. E. Glen. diags Am Mach 91:137-9 Jl 17 '47
How to design carbide draw dies. E. Glen. diags Am Mach 91:101-3 Jl 31 '47
How to grind carbide die parts. R. Le Grand. il diags Am Mach 91:85-96 S 25 '47
How to select die blocks. R. G. Sartorius. Iron Age 159:51 Ja 23 '47
Ingenious work-transfer mechanism for progressive dies; designed by Ford engineers. C. O. Herb. il plan diags Mach 53:139-47+ D '46
Minimizing die-block distortion resulting from hardening. diags Iron Age 160:79 Ag 14 '47
Misaligned two-stage die saved by adjusting the guides. S. Framurz. diags Am Mach 90:137 N 21 '46
Piercing die used in vise. G. A. Soderberg. diag Am Mach 91:136 N 6 '47
Progressive die produces safety runway for freight cars. J. A. King. il diags Am Mach 91:128-32 N 6 '47
Proper selection of steel simplifies deep-drawing. G. B. Nisbet. il Materials & Methods 25:111-12 Ap '47
Six-stage progressive die operation; produces blade sections for multivane centrifugal blower wheels; Morrison products inc. il Steel 120:88-9+ Ap 21 '47
Supersonic waves locate die-block flaws. R. W. Snowdon. il Steel 120:95+ Ap 7 '47
Thread rolling, theory and practice. J. W. Batchelder. bibliog il diags Iron Age 158: 55-61 D 26 '46; 159:52-7 Ja 9 '47
Tool design streamlines drawing practice. G. W. Birdsall. il diags Am Mach 91:78-9 Mr 27 '47
Unconventional dies facilitate difficult forming operations; Knapp-Monarch co. G. E. Stedman. il Steel 121:78-9+ S 8 '47

Manufacture

Casting zinc alloy dies. S. Menton. il Foundry 75:76-9+ Je '47; Same. Steel 120:80-1+ Je 9 '47
Designing forming dies along natural flow lines; Sol-A-Die process. C. O. Herb. il diags Mach 53:131-6 Ag '47
Forming dies; new zinc-base alloy, Kirksite A. il Automobile Eng 37:139-40 Ap '47

DIES, Diamond
Electrical methods for diamond-die production. C. G. Peters and others. il diags J Res Nat Bur Stand 38:449-64 My '47
How diamonds draw ultra-fine wire. R. L. Zahour. il diags Am Mach 91:101-8 O 9 '47
New diamond die drilling method revolutionizes industry; small diamond dies used in drawing and shaping hard and fine wire. Franklin Inst J 243:424-8 My '47

DIES, Forging
Die steels and their treatments pace drop forge industry. A. F. Finkl. il Metal Prog 52:581-4 O '47
Fundamentals of forging; die materials and design. A. Ashburn. diags Am Mach 91: 120-4 Ap 10 '47

DIES, Rubber
Effective use of rubber forming dies. A. Schuneman. il Steel 121:126+ O 6 '47

DIESEL, Rudolph, 1858-1913
Sketch. por Diesel Power 25:72-3 My '47

DIESEL-electric locomotives. See Locomotives, Diesel-electric

DIESEL engine manufacturers association
Annual meeting, Chicago, Dec. 11. Diesel Power 25:56-7+ Ja '47

DIESEL engine plants. See Power plants—Diesel engine plants

DIESEL engine stations. See Electric plants (central stations)—Diesel engine stations

DIESEL engines
Accessories have changed, too; silencers, filters, coolers, etc. il diags Diesel Power 25:117-22 My '47
American precision products corp. heavy duty Diesel. il Diesel Power 25:42-3 Je '47
Burmeister and Wain, reversible Diesel. il diags Diesel Power 25:80-1 O '47
Diesel engine generator for railway passenger car air conditioning and electric current requirements. il diag Diesel Power 25:76-8 Ag '47
Diesel pile hammers used by Germans. il diags Eng N 138:522-4 Ap 3 '47
Diesel power comes of age. N. C. Dezendorf. il Sci Am 176:217-19 My '47
Diesel power plant for passenger car power supply. il Ry Mech Eng 121:434-5 Ag '47
Diesel powered log yarder. il Diesel Power 25: 39 S '47
Diesel's contribution to America. H. E. Hill. Diesel Power 25:68-9 My '47
Diesels help land airplanes. il Diesel Power 25:80-2 Ag '47
Diesels help make power shovel history. il Diesel Power 25:68-70 F '47
Diesels of the future. il Diesel Power 25: 123-5 My '47
Dining a la Diesel; dining car electrical equipment of Train of tomorrow powered by Diesel engine. il Diesel Power 25:54-5+ S '47
Emergency telephone power. F. K. Rowe. il Diesel Power 25:64-7+ F '47
Engine parts wartime packaging experience is basis of Detroit Diesel's new selling program. il Mod Packaging 20:126-9+ Ap '47
Fire hazard gone; replacement of steam boiler on hoisting machine with Diesel engine. il Diesel Power 25:71+ F '47
Fisk Diesel engine. il diag Diesel Power 24: 1436-7 D '46
Fuel injection engine with spark ignition; abstract. A. M. Starr. Pet Processing 2: 592-3 Ag '47
Hallett stationary Diesel engine. il Diesel Power 25:77+ F '47
Importance of engine hour readings; Hobbs engine hour meter. il Diesel Power 25:71 Ag '47
Individual Diesel units reduce rice growing risk. C. Ames. il Diesel Power 25:78-9+ O '47
Late trends in piston rings with special application to Diesel engines. H. G. Braendel. il diags Diesel Power 25:37-41 Je '47; Same cond. S A E J 55:61-2 My '47; Discussion. P. S. Lane. Diesel Power 25:51 S '47
Modern Diesel engine. J. Ostborg. il Power Pl Eng 51:84-6 Jl '47
Modern rotary drilling. J. Zaba. Oil & Gas J 46:115 S 27 '47
Les moteurs Diesel légers multiplex pour grandes puissances. L. Keuleyan. il diags Génie Civil 124:373-6 O 1 '47
Oil and gas power conference, 19th, Cleveland, May 21-24. Power Pl Eng 51:132 Jl '47
Oil engine and gas turbine developments at Winterthur. il Engineer 183:517 Je 13 '47
On the record; Buda Diesel model no. 6DC-844, operators' manual. A. B. Newell. il Diesel Power 25:64-6+ Jl '47
Outlook for the Diesel engine industry. Diesel Power 25:31+ Jl '47

DIESEL engines—*Continued*
Pittsburgh story; Diesel generator standby units in power strike. il Diesel Power 24: 1438-41 D '46
S.A.E. annual meeting; abstracts of papers. Oil & Gas J 45:40-1 Ja 18 '47
Standard practices for low and medium speed stationary Diesel engines; reprint of revised edition by Diesel engine manufacturers association. diags Diesel Power 24: 1347-50, 1462-5 N-D '46; 25:96-9 Ja; 86-9 F; 90-3 Mr; 102-5 Ap; 99-100+ Je; 58-61 Jl; 83-5 Ag; 77-9+ S; 82-5 O; 80+ N; 78-82 D '47; 26:83-7 Ja '48
Study of piston ring reasoning and design. il diags Diesel Power 25:52-7 O; 75-9 N '47
Survey of German Diesel-engine development. C. G. A. Rosen. il S A E J 54:58-9 N '46
Train of tomorrow; use of Diesel engines. il Diesel Power 25:92-6 Je '47
Two new International Harvester engines. il Diesel Power 25:49+ Je '47
Wartime Diesel advances call for improved fuels; abstract. C. G. A. Rosen. S A E J 55:111-12 F '47
Waukesha adds four new Diesel models. il Automotive & Aviation Ind 96:38-9 F 1 '47
Waukesha's new full Diesel engines. il Diesel Power 25:57-9 F '47
What do you know about buying a Diesel? il Power 91:30-2+ Ja '47
What is our competition. C. F. Kettering. Diesel Power 25:92-5+ Ja '47
Why we use Diesels in Link-Belt Speeder shovel-cranes. G. H. Olson. il Diesel Power 25:48-50+ S '47
WIND; Gary broadcasting station, Diesel generating set for standby power. J. E. Hubel. il Diesel Power 24:1435+ D '46

See also
Electric plants (central stations)—Diesel engine stations
Locomotives, Diesel
Power plants—Diesel engine plants
Sulzer engine

Bearings

Bearing metals for high-speed Diesel engines; abstract. P. T. Holligan. Materials & Methods 26:116 S '47
Bearing metals; possible causes of failure in high speed engines; abstract. B. C. Kroon. Automobile Eng 37:257 Jl '47
Large bearing design, application and operation. E. Crankshaw and G. W. LaPier. diags Diesel Power 25:42+ Jl '47

Control

Diesel engine governors. il diags Diesel Power 24:1320-2+, 1448+ N-D '46; 25:58-62+ Ja '47
Electrohydraulic control of Diesel-electric drives. C. B. Lewis and M. A. Edwards. il diags Mech Eng 68:953-5 N '46; Same. Diesel Power 25:72-4+ F '47
Massey's new governor for Diesel engines. il diag Diesel Power 25:55-6 Jl '47
Train-control governor for Diesels; for use with automatic train control equipment. il Ry Mech Eng 120:633-4 N '46

Cooling

Adjustable air cooling for Diesel engine. il Product Eng 18:101 Ap '47
Details of a small Diesel designed for air cooling. il diags Product Eng 18:88-90 Mr '47
Development of the air-cooled Diesel engine. J. C. Hoiby. il diags Pet Eng (Ref annual) 18:304-6 Jl 1 '47; Excerpts. S A E J 55:71 Ja '47; Automotive & Aviation Ind 96:39 Ja 1 '47
Diesel cooling equipment. flow diag il plan diags Diesel Power 25:34-41 O '47
Diesel joins the heat pump; power and air conditioning equipment for Wilton community center. il diag Diesel Power 25:54-9 Ag '47
Standard practices for low and medium speed stationary Diesel engines. diags Diesel Power 25:90-2 Mr '47
Supercharging and internal cooling cycle for high output. R. H. Miller. diag A S M E Trans 69:453-7; Discussion. 457-64 Jl '47
What is best way to save engine cooling water? diags Power 91:711-13+ O '47

Cost of operation

Economics of the application of Diesel power to farm tractor operation. H. F. Bryan. Diesel Power 25:80-3+ F '47; Abstract. Nat Pet N 38:34 S 25 '46
Heavy-oil engine working costs. W. A. Tookey. Engineering 163:124 F 7 '47
Value of supercharged Diesels shown by performance and cost comparisons. V. M. Holmes. Power 91:752-4+ N '47

Design

Details of a small Diesel designed for air cooling. il diags Product Eng 18:88-90 Mr '47
Development of the air-cooled Diesel engine. J. C. Hoiby. il diags Pet Eng (Ref annual) 18:304-6 Jl 1 '47
Development of the American Diesel; an historical panorama. il diags Diesel Power 25: 78-93 My '47
English Electric type K Diesel engine. il diags Diesel Power 24:1341-3+ N '46
Evolution of Diesel engine block weldment design and fabrication. J. W. Owens. il diags Welding J 26:240-7 Mr '47
Four-stroke industrial oil engine. B. Reed. il diag Engineer 182:498-501 N 29 '46
Proposed multiple effect Diesel. R. M. Tucker. Diesel Power 25:40-2 S '47
Slant mechanism; its fundamentals and application to Diesels for aircraft and other low-weight fields. T. L. Sherman. il diags S A E J 55:49-53 O '47

Directories

Diesel engine directory; manufacturers of engines and plant accessories. Diesel Power 25:66-85 Ja '47
Diesel engine directory; manufacturers of engines and plant accessories. Diesel Power 25:70-91 Je '47

Efficiency

Proposed multiphase high output Diesel; with gear coupled exhaust gas power turbine and steam waste heat turbine. R. M. Tucker. Diesel Power 25:52-4 Ja '47
Proposed multiple effect Diesel. R. M. Tucker. Diesel Power 25:40-2 S '47
Value of supercharged Diesels shown by performance and cost comparisons. V. M. Holmes. Power 91:752-4+ N '47
Volumetric efficiency of the Diesel; confused terminology. O. L. Adams. diag Pet Eng 18:108+ Mr '47

Exhaust

Diesel engines underground; use of Diesel locomotives in construction of the Delaware aqueduct; effect of exhaust gases upon quality of tunnel air. L. B. Berger and others. bibliog 2 pls U S Bur Mines Rep of Invest 4032:1-26 '47
Diesel equipment in underground mining. D. Harrington and J. H. East, jr. bibliog 13pls U S Bur Mines Information Circ 7406:1-87 '47; Same cond. Eng & Min J 148:70-6 Je '47
Diesel locomotive for underground haulage; elimination of exhaust hazards by use of gas conditioner. C. W. Plumb. il Min Cong J 32:27-8 D '46
Diesel truck haulage at the Paxson mine; solving exhaust gas problem. S. S. Clarke. il Eng & Min J 148:54-6 Mr '47
Fuel a major factor in the smokeless operation of a locomotive or a stationary Diesel? R. J. Bender. diag Diesel Power 25: 34-8 Jl '47
Must Diesel engines smoke? P. H. Schweitzer. bibliog diag Diesel Power 25:62-6+ Mr; 54-6+ Ap '47; Same cond. (pt 1) Power 91: 178-80+ Mr '47; Abstract. S A E J 55:67-8 My '47
Proposed multiphase high output Diesel; with gear coupled exhaust gas power turbine and steam waste heat turbine. R. M. Tucker. Diesel Power 25:52-4 Ja '47

Failure

Diesel crankcase explosion. Ry Mech Eng 121: 178-9 Ap '47

DIESEL engines—Failure—*Continued*
Failure of counterweight bolts causes heavy damage to Diesel engine. il Locomotive 46: 133-4 Ja '47
500 hp Diesel engine wrecked by piston seizure. Locomotive 46:215-16 Jl '47
Navy Diesel engine research. W. F. Joachim. il diags S A E J 55:24-6 Ag '47

Fuel

Diesel fuel oil situation; abstract. E. F. Miller. Nat Pet N 39:42 My 28 '47
Diesel fuel situation. E. F. Miller and F. L. Nelson. diag Oil & Gas J 46:82+ Je 21 '47; Same. Diesel Power 25:38-42 Jl '47
Diesel fuel study by Mines bureau unearths chemical composition data. Nat Pet N 38: 48 N 27 '46
Diesel fuels called oil's neglected stepchild by consumer spokesmen; API meeting. V. B. Guthrie. Nat Pet N 38:41-2+ N 20 '46
Dual-fuel engines for sewage-treatment plants. A. M. Boehm. il Water & Sewage 84:22+ N '46
Effect of the nitrogen and sulfur content of fuels on the rate of wear in Diesel engines; abstracts. C. C. Moore and W. L. Kent. Pet Processing 2:94 F '47; S A E J 55:70 Jl '47
Fuel a major factor in the smokeless operation of a locomotive or a stationary Diesel? R. J. Bender. diag Diesel Power 25:34-8 Jl '47
Ignition qualities of hydrocarbons in the Diesel fuel range; abstract. A. D. Puckett and B. H. Caudle. Pet Refiner 26:182+ Jl '47
Navy Diesel fuel; abstract. W. C. Latrobe. S A E J 55:63-4 Je '47
Navy's work in Diesel fuels; abstract. W. C. Latrobe. Pet Processing 2:95 F '47
New diet for Diesels? M. J. Waters. il Sci Am 176:21-3 Ja '47
Program for adding to Diesel fuel supply. W. E. Kuhn. Pet Processing 2:95-6 F '47
Standard practices; fuel oil characteristics and general specifications. Diesel Power 25:82-5 O '47
Standard practices; fuel oil storage and handling systems. diags Diesel Power 25:102-5 Ap '47
Supercharged dual fuel application. il diags Diesel Power 25:34-8 S '47
Synthetic Diesel fuel oils; results of recent work. Chem Age (Lond) 57:398+ S 20 '47
Terminal filtration of Diesel fuel. R. E. Coughlan. il Ry Age 122:363-4 F 15 '47

Fuel consumption

Fuel economy; nomograph. Diesel Power 25: 66 Ap '47

Fuel feeding

C.A.V. Pintaux nozzle. diags Engineer 184: 190-1 Ag 29 '47
Latest automatic machine methods; production of fuel injector parts; General Motors Diesel equipment division. J. Geschelin. il Automotive & Aviation Ind 96:18-21+ Mr 1 '47
Servicing Diesel fuel pumps. H. G. Jarman. il Diesel Power 24:1466-8 D '46
Supercharging gas-burning Diesel yields maximum performance; Lehigh portland cement co. il diags Power 91:396-8 Je '47

History

Lord Kelvin and the Diesel engine. Engineer 183:186-7, 210-11 Mr 7-14 '47
Twenty-fifth anniversary number. il diags Diesel Power 25:65-136 My '47

Ignition

Diesel ignition system of new design. A. J. Poole. diags Automotive Ind 97:42-3 Ag 1 '47
Flame temperature measurements; electronic solution of the temperature equations; abstract. P. S. Myers and O. A. Uyehara. diag S A E J 55:64 My '47
Ignition qualities of hydrocarbons in the Diesel fuel range; abstract. A. D. Puckett and B. H. Caudle. Oil & Gas J 46:125 Je 28 '47
Must Diesel engines smoke? P. H. Schweitzer. bibliog diag Diesel Power 25:62-6+ Mr; 54-6+ Ap '47; Same cond. (pt 1) Power 91: 178-80+ Mr '47

Lubrication

Constant pressure Diesel lubricating oil supply. diag Ry Mech Eng 121:261 My '47
Cylinder wear in Diesels. B. M. Berry and others. S A E J 55:31-2+ O '47
Diesel lube-oil specs, trap for the unwary? E. B. Nugent. diags Power 91:678-80+ O '47
Filtration of Diesel lubricating oils. J. A. Nelson. diags Power Pl Eng 51:122+ Ap '47
Heavy duty oils for petrol and Diesel engines. E. V. Paterson. il Automobile Eng 37:147-54 Ap '47
Lubrication elements. il diags Diesel Power 25:45-8 Je '47
New filtering centrifuge; De Laval Purifilter. il Diesel Power 24:1446 D '46
Oil cooler maintenance. il diags Diesel Power 25:71-3+ Mr '47
Oil filtration and its effect of engine wear; abstract. N. C. Penfold and D. S. Gray. S A E J 55:62 Mr '47
Standard practices for low and medium speed stationary Diesel engines. Diesel Power 25:92-3 Mr '47
Standard practices; lubricating oil characteristics and general specifications. Diesel Power 25:77-9+ S '47

Maintenance and repair

Care and maintenance of Diesel engines. T. M. Fahnestock. il Diesel Power 25:50-4+ Jl '47
Diesel engine maintenance. F. A. Westbrook. il Power Pl Eng 51:96-7 Ag '47
Diesel service shop expansion. il Diesel Power 25:53 Ag '47
Maintenance changes in twenty-five years. il diags Diesel Power 25:112-16+ My '47
Reading instruction books. A. B. Newell. diags Diesel Power 25:88-9+ Mr '47
Repairing crankshafts; Bingham sleeving process. il Diesel Power 25:56-7 S '47

Manufacture

Building high output Diesel engines; GMC Cleveland engine division. J. Geschelin. il Automotive & Aviation Ind 95:18-24+ D 1 '46
Casting of a gray iron Diesel engine liner. N. A. Kahn and B. N. Ames. il Foundry 75: 66-71+ Ag '47
Cleaning engine components; automatic washing machines; General motors corp. il diag Steel 119:108+ N 18 '46
Diesels on the assembly line. Bsns W p48+ Jl 26 '47; Discussion. J. W. Brown. p 103 N 1 '47
Fresh approach to machining Diesel engine parts. E. K. Morgan. il Steel 120:106-8+ Je 2 '47
Tools revolve about work in turning large crankshafts. il diags Steel 121:84-5+ Ag 25 '47
Unusual machining flexibility permits production of engines in different sizes and types; Buda co. il Automotive & Aviation Ind 96:39+ My 15 '47

Scavenging

Loop scavenge Diesel engine. H. D. Carter. diags Inst Mech Eng J & Proc 154:Proc 386-96, pl 1-4 Mr '47; Same abr. Engineer 181:297-9, 322 Mr 29-Ap 5 '46; Discussion. Inst Mech Eng J & Proc 154:Proc 396-411 Mr '47; Engineer 181:289-90, 317 Mr 29-Ap 5 '46

Specifications

Diesel engine specifications; data on engines manufactured by American Diesel engine builders. Diesel Power 25:65-93 Ap '47

Starting

Adjustments, tests and maintenance of engine cranking motors. il diag Diesel Power 25:60-3+ Ag '47
Cold starting Diesels. P. H. Schweitzer. il diags Automobile Eng 37:101-4 Mr '47
Oil engines; new device to facilitate cold starting. diag Automobile Eng 37:235 Je '47

Study and teaching

Detroit Diesel service school. il Diesel Power 25:64-5 Ag '47

DIESEL engines—*Continued*

Superchargers

Diesel and gas engine equipment. A. M. Boehm. il Water & Sewage Works 94:380-1 O '47

Diesel engine supercharging; abstract. C. R. Jones. S A E J 55:66 Jl '47

New Diesel drilling-engine developments field tested; turbosupercharging and dual-fuel operation. G. F. Noltein. il diag Oil & Gas J 46:188-90+ O 11 '47

Supercharged Diesel puts 500 kw in space originally provided for 300; new unit at No. 2 Park avenue, New York. il diags Power 91:461-3, 474-5 Jl '47

Supercharged dual fuel application. il diags Diesel Power 25:34-8 S '47

Supercharged intercooled Diesel unit goes into service; municipal power plant at Menasha, Wisconsin. il Diesel Power 25: 68-70 Ag '47

Supercharging and internal cooling cycle for high output. R. H. Miller. diag A S M E Trans 69:453-7; Discussion. 457-64 Jl '47

Supercharging gas-burning Diesel yields maximum performance; Lehigh portland cement co. il diags Power 91:396-8 Je '47

Value of supercharged Diesels shown by performance and cost comparisons. V. M. Holmes. Power 91:752-4+ N '47; Correction. 91:857 D '47

Temperature

Diesel combustion temperatures; the influence of operating variable; flame-temperature data obtained with the electro-optical pyrometer. O. A. Uyehara and others. bibliog il A S M E Trans 69:465-75; Discussion. 475-7 Jl '47

Minneapolis-Honeywell Diesel engine temperature control. diags Ry Mech Eng 121:267-8 My '47

Testing

How the Hartford steam boiler straingage is used in safeguarding engines; reprinted from Locomotive of April 1934. H. J. Vander Eb. il diags Locomotive 46:167-73 Ap '47

New pressure duration indicator for routine testing of multi-cylindered engines. K. J. De Juhasz. bibliog il diags Automotive & Aviation Ind 96:22-4+ Mr 1; 42-5 Ap 1 '47

Vibration

Limits of torsional vibration stress in marine oil-engine shafting. S. F. Dorey. Engineering 163:509-11 Je 13 '47; Abstract. Engineer 183:310 Ap 11 '47; Discussion. Engineering 163:366-7 My 2 '47; Engineer 183: 306 Ap 11 '47

DIESEL engines, Automotive

Albion CX.1 goods chassis. il diags Automobile Eng 37:279-81 Ag '47

Caterpillar Diesel has novel oil-pressure control. il Machine Design 19:152-3 Jl '47

Caterpillar starts production of new engine, tractor and grader. il Automotive Ind 97: 30-1 O 15 '47

Coordinating mobile Diesel equipment. W. A. Watts. Diesel Power 25:44-7+ S '47

Coventry Diesel engine. il diags Automobile Eng 37:307-9 Ag '47

Diesel engine requirements for farm tractors; abstracts. L. A. Gilmer. S A E J 55:71-2 Ja '47; Automotive & Aviation Ind 96:36 Ja 1 '47

Diesel engines and their fuel systems; abstract. L. R. Miller. S A E J 55:100+ Ag '47

Diesel for the Volkswagen. diags Automotive & Aviation Ind 96:54 Je 1 '47

Diesel truck haulage at the Paxson mine; solving exhaust gas problem. S. S. Clarke. il Eng & Min J 148:54-6 Mr '47

Diesel willow-dozing in Missouri; machine cuts down willows on farm land. J. L. Simpson. il Diesel Power 25:44+ O '47

Economics of the application of Diesel power to farm tractor operation. H. F. Bryan. Diesel Power 25:80-3+ F '47; Excerpts. Automotive & Aviation Ind 96:37-9 Ja 1 '47; Abstract. Nat Pet N 38:34 S 25 '46

Father Knickerbocker looks ahead; Diesel-powered equipment in construction of Idlewild airport; illustrations. Diesel Power 25: 88-91 Ja '47

GMC announces line of eight Diesel-powered models. il Automotive Ind 97:24-7+ Jl 1 '47

General Motors two-cycle Diesel engines for ordnance vehicles. F. G. Shoemaker. il diags A S M E Trans 69:11-20 Ja '47

Leyland heavy vehicles. il diags Automobile Eng 37:119-23 Ap '47

Magnesium aluminum bus; Kaiser's Diesel-powered articulated bus. il diags Diesel Power 25:83-4 Mr '47

Maintenance of heavy-duty Diesel trucks on highways. H. E. Larson. S A E J 55:53-4 Ap '47

Le réglage automatique de la puissance sur les véhicules Diesel électriques. A. Brunner. diags Génie Civil 124:12-14 Ja 1 '47

Report on Diesel traction. B. Reed. Engineer 183:44-5 Ja 10 '47

Shaw Transfer's Diesels. il Diesel Power 25: 98+ Je '47

Significant Diesel developments. C. G. A. Rosen. il diags Roads & Bridges 85:54-7+ Jl '47

See also
Locomotives, Diesel-electric

Specifications

Automotive Diesel and other heavy oil engines; tabulations. Automotive & Aviation Ind 96:156-9 Mr 15 '47

British Diesel and other heavy oil engines; tabulations. Automotive & Aviation Ind 96: 160-1 Mr 15 '47

DIESEL engines, Marine

Boston Diesel conference between members of Diesel engine manufacturers association and representatives of local shipowners. Marine Eng 52:75-6 O '47

Coventry 30-b.h.p. marine Diesel engine. il Engineering 164:32 Jl 11 '47

Diesel power is answer to U.S. trade supremacy. R. H. Morse, jr.; R. W. Bayerlein. Nat Pet N 38:32+ D 25 '46

Diesel power plants afloat. il plan Diesel Power 25:50-61+ Mr '47

Diesels move the earth; Warner company, producers of sand and gravel. il Diesel Power 25:69-70, 96 Mr '47

Limits of torsional vibration stress in marine oil-engine shafting. S. F. Dorey. Engineering 163:509-11 Je 13 '47; Abstract. Engineer 183:310 Ap 11 '47; Discussion. Engineering 163:366-7 My 2 '47; Engineer 183: 306 Ap 11 '47

Navy Diesel engine research. W. F. Joachim. il diags S A E J 55:24-6 Ag '47

New GM hydraulic reverse gear. il diag Automotive & Aviation Ind 96:36+ My 1 '47; Same. Marine Eng 52:100+ My '47

New Orleans Diesel conference arranged by the Diesel engine manufacturers association. Marine Eng 52:85-6 My '47

Submarine engines for the Turkish navy. il Engineer 183:79-81 Ja 17 '47

See also
Motor ships

DIESEL fuel. See Diesel engines—Fuel

DIESEL locomotives. See Locomotives, Diesel

DIESEL power and Diesel transportation (periodical)

Great faith is given voice; twenty-five years of publication. il Diesel Power 25:127-32 My '47

DIESTERS. See Esters

DIET

Digestible carbohydrates in the diet of human beings. J. R. Marrack. bibliog Chem & Ind p619-20 O 11 '47

Effect of protein and carbohydrate intake on liver injury produced in dogs by carbon tetrachloride. V. A. Drill and others. bibliog J Ind Hygiene 29:180-4 My '47

Effects of whole-wheat and white bread diets on susceptibility of mice to pneumococcal infection. G. H. Hitchings and E. A. Falco. Science 104:568-9 D 13 '46

DIET—*Continued*
Experimental diabetes and diet. B. A. Houssay and C. Martínez. Science 105:548-9 My 23 '47
Health in industry; importance of diet. Comp Air Mag 52:130 My '47
Influence of food on body heat; experiments at University of Illinois research hospital on sub-zero temperatures. Heat & Ven 43:79 N '46
Workers diet cited as industrial illness preventive. Safety Eng 93:62 F; 64 My '47
See also
Nutrition
Proteins

DIETERICI'S equation
Dieterici's equation modified. J. Joffe. bibliog Am Chem Soc J 69:1216-17 My '47

DIETHYLAMINOETHYLANILINE
Some N-(2-diethylaminoethyl)-anilines. M. A. Stahmann and A. C. Cope. Am Chem Soc J 68:2494-6 D '46

DIETHYLAMINOETHYL esters
Antispasmodics; cyclohexyl and Δ^2-cyclohexenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1854-7 Ag '47
Antispasmodics; cyclopentyl and Δ^2-cyclopentenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1849-54 Ag '47

DIETHYLAMINOMAGNESIUM bromide
Condensation of certain esters by means of diethylaminomagnesium bromide. C. R. Hauser and H. G. Walker, jr. bibliog Am Chem Soc J 69:295-7 F '47

DIETHYLAMINOPHENYLBUTYRIC acid
Anticonvulsants; esters of γ-diethylamino-α-phenylbutyric acid. J. H. Billman, W. T. Smith, jr. and J. L. Rendall. Am Chem Soc J 69:2058-9 Ag '47

DIETHYLAMINOPROPYLAMINO isoquinoline
(γ-Diethylaminopropylamino)-isoquinoline. R. A. Robinson. Am Chem Soc J 69:1942-5 Ag '47

DIETHYLBENZENE
Fluorinated derivatives of diethylbenzene. E. T. McBee and others. Ind & Eng Chem 39: 395-7 Mr '47

DIETHYL cellosolve. See Cellosolve

DIETHYL ether. See Ethyl ether

DIETHYLHEXYL phthalate
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. E. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47

DIETHYLHEXYL sebacate
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. E. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47

DIETHYLMALEATE
Vinyl polymers; reaction of benzoyl peroxide and maleic ester. C. S. Marvel, E. J. Prill and D. F. DeTar. bibliog Am Chem Soc J 69:52-8 Ja '47

DIETHYL sulfate
Sulphonating action of diethyl sulphate; abstract. V. N. Belov and M. Z. Finkelstein. Chem Eng 54:270+ Je '47

DIETHYLENE glycol
Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47
Diethylene glycol process for dehydrating natural gas. flow diag Pet Refiner (Process Handbook sec) 26:132-3 Ap '47
High purity natural gas by the glycol-amine process. W. F. Chapin. flow diag bibliog il Pet Refiner 26:109-12 Je '47

DIETHYLENE glycol monoethyl ether. See Carbitol

DIETZ, Arthur Orrie
Portrait. Fortune 36:86 S '47

DIFFERENCE equations
Least-square application to relaxation methods. O. L. Bowie. bibliog J Ap Phys 18: 830-3 S '47

DIFFERENTIAL equations
Approximate solution of the differential equation of the ultracentrifuge. W. J. Archibald. bibliog J Ap Phys 18:362-7 Ap '47
Asymptotic solutions for the normal modes in the theory of microwave propagation. C. L. Pekeris. bibliog J Ap Phys 17:1108-24 D '46
Dynamical analogue. N. Minorsky. bibliog diags Franklin Inst J 243:131-49 F '47
Numerical solution of axisymmetrical problems, with applications to electrostatics and torsion. G. Shortley, P. Darby and E. H. Gamble. J Ap Phys 18:116-29 Ja '47
Theory of automatic control; regulator equations. P. G. Kaufmann. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 8):249-57; Discussion. 258-9 '45
Use of symmetric functions in the solution of linear differential equations with constant coefficients. M. Goland and Y. L. Luke. Franklin Inst J 244:221-3 S '47
Vibrations of shallow spherical shells. E. Reissner. diags J Ap Phys 17:1038-42 D '46

Phase-integral method
Two notes on phase-integral methods. W. H. Furry. bibliog Phys R 71:360-71 Mr 15 '47

DIFFRACTION
Diffraction pattern of a circular aperture at short distances. C. L. Andrews. bibliog diags Phys R 71:777-86 Je 1 '47
Focal plane diffraction anomalies in telescopic systems. A. I. Mahan. bibliog il diag Opt Soc Am J 37:852-67 O '47
Light scattering by spherical particles. D. Sinclair. bibliog Opt Soc Am J 37:475-80 Je '47
Optical study of acoustic fields near diffracting edges. J. C. Hubbard and others. bibliog il diags Opt Soc Am J 37:832-6 O '47
Talbot's bands. F. B. Pidduck. diags Opt Soc Am J 37:55-8 Ja '47
See also
Electrons—Diffraction
X rays—Diffraction

DIFFRACTION gratings
Gratings as broad band filters for the infrared. J. U. White. bibliog il Opt Soc Am J 37:713-17 S '47
Use of echelette gratings in high orders. R. W. Wood. il Opt Soc Am J 37:733-7 O '47

DIFFUSERS, Air. See Air diffusers

DIFFUSION
Absorption of water by films of cellophane and polyvinyl alcohol. E. Greutz and R. R. Wilson. J Chem Phys 14:725-8 D '46
Application of radioactive isotopes to the problem of diffusion of electrolytes in aqueous solutions. L. B. Robinson and J. B. Drew. J Chem Phys 15:417-18 Je '47
Approximate diffusion calculations for the falling-rate phase of drying. W. B. Van Arsdel. Chem Eng Prog 43:13-24 bibliog(p21-2) Ja '47
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47
Determination of the molecular law of force from self-diffusion coefficients. I. Amdur. bibliog Phys R 72:642-3 O 1 '47
Determination of the self-diffusion coefficient of methane. E. B. Winn and E. P. Ney. Phys R 72:77-8 Jl 1 '47
Diffusion coefficient of potassium chloride in dilute aqueous solution. H. S. Harned and R. L. Nuttall. bibliog diags Am Chem Soc J 69:736-40 Ap '47
Diffusion in powdered metals. P. W. Selwood and J. Nash. diag Am Soc for Metals Trans 35:609-15 '45
Diffusion in wood. H. K. Burr and A. J. Stamm. bibliog il diags J Phys & Colloid Chem 51:240-61 Ja '47
Diffusion of plasticisers from polyvinyl chloride. P. A. Small. bibliog Soc Chem Ind J 66:17-19 Ja '47
Diffusion of vapors in films. P. E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47

DIFFUSION—*Continued*
Diffusion study of lignin sulfonic acids in sulfite waste liquor. D. Pennington and D. M. Ritter. bibliog Am Chem Soc J 69: 665-8 Mr '47
Enrichment of C^{13} and O^{18} by a countercurrent gaseous exchange process using thermal diffusion. T. I. Taylor and R. B. Bernstein. Am Chem Soc J 69:2076 Ag '47
Generalization in the diffusion theory. O. Lamm. bibliog J Phys & Colloid Chem 51: 1063-78 S '47
Heat flow through composite cylinders. S. S. Penner and S. Sherman. J Chem Phys 15: 569-74 Ag '47
Low temperature transport properties of gases; helium. I. Amdur. bibliog J Chem Phys 15:482-7 Jl '47
Micelle structure in aqueous solutions of colloidal electrolytes. R. J. Vetter. bibliog J Phys & Colloid Chem 51:262-77 Ja '47
Multistage separation processes. M. Benedict. bibliog diags Chem Eng Prog 43:41-60 F '47
New method for forming sharp boundaries in diffusion experiments. D. S. Kahn and A. Polson. bibliog il J Phys & Colloid Chem 51:816-25 My '47
Permeability of different rubbers to gases and its relation to diffusivity and solubility. G. J. van Amerongen. bibliog diags J Ap Phys 17:972-85 N '46
Quantitative aspect of diffusion in electrolyte solutions. H. S. Harned. il diags Chem R 40:461-522 bibliog(108 ref, p519-22) Je '47
Rate of diffusion of molybdenum in austenite and in ferrite. J. L. Ham. Am Soc for Metals Trans 35:331-55 bibliog(p354-5); Discussion. il 355-61 '45
Self-diffusion coefficient of uranium hexafluoride. E. P. Ney and F. C. Armistead. diag Phys R 71:14-19 Ja 1 '47
Theory of burning velocity; temperature and free radical concentrations near the flame front, relative importance of heat conduction and diffusion. C. Tanford. bibliog J Chem Phys 15:433-9 Jl '47
Thermal diffusion constant of helium and the separation of He^3 by thermal diffusion. B. B. McInteer and others. bibliog Phys R 72:510-11 S 15 '47
Thermal diffusion with boron trifluoride. W. W. Watson and others. bibliog diag Phys R 71:887-90 Je 15 '47
Unequal distribution of diffusible non-electrolytes across a membrane. C. L. Deasy. Science 104:388 O 25 '46; Discussion. D. I. Hitchcock. 105:360 Ap 4 '47

DIFFUSION pumps. See Vacuum pumps

DIFLUOROARSINE
Difluoroarsines. L. H. Long, H. J. Emeléus and H. V. A. Briscoe. Chem Soc J p 1123-6 D '46

DIFLUORODIPHENYLTRICHLOROETHANE
Preparation and chemical composition of difluoro-diphenyl-trichloroethane. H. L. Bradlow and C. A. VanderWerf. bibliog Am Chem Soc J 69:662-4 Mr '47

DIFRUCTOSE anhydride
Structure of difructose anhydride II. E. J. McDonald and A. L. Turcotte. bibliog diag J Res Nat Bur Stand 38:423-5 Ap '47

DIGESTERS (paper making)
B-W digesters to be chrome-alloy lined. Paper Tr J 124:26 Ap 3 '47; Same. Paper Ind 29:86-7 Ap '47
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48:71-4 Ag '47
Conductometric method of vapor saturation measurement as applied to automatic gas-off control of a kraft digester; progress report. R. D. Cowherd. diags Paper Tr J 123:52-8 N 21 '46
Heat balance in the digester; abstract. P. Goldsmid. Paper Ind 28:1816 Mr '47
Some observations on cooking and acid making problems resulting from increased chip packing. A. Christensen. flow sheets il Pulp & Pa of Can (Convention no) 48:110-14 [F] '47

DIGESTION
Ammonia nitrogen produced from isomeric peptides in kidney homogenate digests. J. M. Goncalves and others. bibliog Science 106:369-70 O 17 '47

DIGESTIVE organs
Diseases
Gastroenteritis aboard ship; common types encountered, and the prevention and control of outbreaks. W. A. Meyers. Pub Health Rep 61:1853-8 D 20 '46
Needs for new medication for gastrointestinal disorders; abstract. A. C. Ivy. Chem & Eng N 25:673 Mr 10 '47

DIGITALIS
Digitalis and the USP. E. F. Cook. Oil Paint & Drug Rep 150:38 N 11 '46

DIGITOXIGENIN
Synthesis of glucosides of digitoxigenin, digoxigenin and periplogenin. R. C. Elderfield, F. C. Uhle and J. Fried. Am Chem Soc J 69:2235-6 S '47

DIGITOXIN
Inhibition of the enzymatic hydrolysis of ATP by certain cardiac drugs. T. E. Kimura and K. P. DuBois. Science 106:370-1 O 17 '47

DIGLYCERIDES. See Glycerides

DIGNAM, Dorothy
Portrait. Ptr Ink 219:94 Ap 4 '47

DIGOXIGENIN
Synthesis of glucosides of digitoxigenin, digoxigenin and periplogenin. R. C. Elderfield, F. C. Uhle and J. Fried. Am Chem Soc J 69:2235-6 S '47

DIGUANIDE
Antiplasmodial action and chemical constitution; guanidines and diguanides. H. King and I. M. Tonkin. Chem Soc J p 1063-9 N '46
Synthetic antimalarials; some aryl-diguanide (-biguanide) derivatives. F. H. S. Curd and F. L. Rose. Chem Soc J p729-37 Ag '46

DIHYDROCARBAZOLE
Schmidt's so-called 1 : 4-dihydrocarbazole. B. M. Barclay, N. Campbell and R. S. Gow. Chem Soc J p997-9 N '46

DIHYDROCINEROLONE
Structure of dihydrocinerolone. F. B. LaForge and S. B. Soloway. Am Chem Soc J 69:186 Ja '47
Synthesis of dihydrocinerolone. S. B. Soloway and F. B. LaForge. Am Chem Soc J 69:979-80 Ap '47

DIHYDRONIQUIDINE
Synthesis of antimalarial compounds related to niquidine; alternative synthesis of dihydro-*x*-niquidine. T. S. Work. Chem Soc J p222-4 F '47

DIHYDROPENICILLIC acid
Compounds related to penicillic acid; synthesis of dihydropenicillic acid. R. A. Raphael. Chem Soc J p805-8 Je '47

DIHYDROPYRAN
Dihydropyrane addition products. G. F. Woods and D. N. Kramer. Am Chem Soc J 69:2246 S '47
Thermal decomposition of 2 : 3-dihydro-γ-pyran; new preparation of acraldehyde. J. G. M. Bremner, D. G. Jones and S. Beaumont. Chem Soc J p 1018-22 N '46

DIHYDROQUININDENE
Some amino-derivatives of dihydro-β-quinindene and tetrahydroacridine. V. Petrow. Chem Soc J p634-7 My '47

DIHYDROSTREPTOBIOSAMINE. See Streptobiosamine

DIHYDROSTREPTOMYCIN. See Streptomycin

DIHYDROXYCHOLANIC acid
3(β) : 6(β)-Dihydroxycholanic acid, an epimeride of hyodeoxycholic acid. J. S. Moffatt. Chem Soc J p812-15 Je '47

DIHYDROXYDICHLORODIPHENYL methane
Mildewproofing of paper mill felts; use of Preventol GD. F. A. Soderberg. Paper Tr J 122:153-4 Je 20 '46; Same. Pulp & Pa of Can 47:88-9 D '46; Same abr. Paper Ind 29: 582-4 Jl '47

DIHYDROXYDICHLORODIPHENYL methane —*Continued*
New chemical effective in controlling slime; Preventol G-D. R. E. Horsey. Paper Ind 29:676-7 Ag '47

DIHYDROXYPHENYLCYCLOHEXANE
Some derivatives of catechol and pyrogallol. R. D. Haworth and A. H. Lamberton. Chem Soc J p 1003-5 N '46

DIHYDROXYPHENYLPENTANE
Some derivatives of catechol and pyrogallol. R. D. Haworth and A. H. Lamberton. Chem Soc J p 1003-5 N '46

DIHYDROXYPYRIDINE
Structure of leucenol; synthesis of 2,5-dihydroxypyridine (5-hydroxy-2-pyridone). R. Adams and T. R. Govindachari. bibliog Am Chem Soc J 69:1806-8 Jl '47

DIISOCYANATES
Use of polymers to make wool unshrinkable; di*iso*cyanates. T. Barr and others. Soc Dyers & Col J 62:338-45 N '46

DIISOEUGENOL
Constituents of natural phenolic resins; structure of di*iso*eugenol. N. J. Cartwright and R. D. Haworth. Chem Soc J p948-52 Jl '47

DIISOPROPYL. See Dimethyl butane

DIKES (engineering)
La construction, l'entretien et le renforcement des digues aux Pays-Bas. De Bruijn. Génie Civil 124:231-3 Je 15 '47

DIKETENE
Pyrolysis of diketene. J. T. Fitzpatrick. bibliog Am Chem Soc J 69:2236 S '47

DILANTIN
Mesantoin vs. dilantin. Chem & Eng N 25: 1888 Je 30 '47

DILATOMETERS
Continuous recording dilatometer. il diags Machine Design 19:153-4 F '47
Controlling casting quality with a dilatometer. C. M. King. il Iron Age 160:73-4 Jl 3 '47
Critical points of S.A.E. 4340 steel as determined by the dilatometric method. D. Niconoff. il Am Soc for Metals Trans 37:337-53; Discussion. 353-9 '46

DILINOLEIN. See Linolein

DILUTION
Chart for making dilution calculations. W. C. Frishe. Pet Eng 18:182+ F '47
Dilution calculation nomograph. W. C. Frishe. Chem Ind 60:1009-10 Je '47

DILUTION, Heat of
Heats of dilution of aqueous solutions of four amino butyric acids at 25°. L. S. Mason and A. L. Robinson. bibliog Am Chem Soc J 69:889-93 Ap '47

DIMENSION stone. See Building stone

DIMENSIONAL analysis
Simple derivation of the limiting current with the dropping mercury electrode by dimensional analysis. O. Kanner. Electrochem Soc Trans 91 (preprint 10):157-9 '47
Summary of dimensional analysis. H. L. Langhaar. Franklin Inst J 242:459-63 D '46

DIMERCAPTOPROPANOL. See BAL

DIMERIZATION. See Polymerization

DIMETHOXYMETHYL phenanthrene
Possible route to the location of the nitrogen atom in morphine; the synthesis of 3,4-dimethoxy-9-methylphenanthrene. H. L. Holmes, C. C. Lee and A. Mooradian. Am Chem Soc J 69:1998-9 Ag '47

DIMETHYLACETOXYPROPIONAMIDE
Preparation of N,N-dimethylacrylamide by pyrolysis of N,N-dimethyl-α-acetoxypropionamide. W. P. Ratchford and C. H. Fisher. bibliog Am Chem Soc J 69:1911-14 Ag '47

DIMETHYLACRYLAMIDE
Preparation of N,N-dimethylacrylamide by pyrolysis of N,N-dimethyl-α-acetoxypropionamide. W. P. Ratchford and C. H. Fisher. bibliog Am Chem Soc J 69:1911-14 Ag '47

DIMETHYLAMINOCHALCONE
Spectra of the *p*-dimethylaminochalcones and of their ions. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1615-19 Jl '47

DIMETHYL aminomethyl phenols
Dimethylaminomethyl phenols. Chem Ind 61: 70 Jl '47

DIMETHYL aminostyrene
Substituted styrenes; preparation of *p*-iodo-, *p*-nitro- and *p*-dimethylaminostyrene and α-vinylthiophene. R. W. Strassburg, R. A. Gregg and C. Walling. bibliog Am Chem Soc J 69:2141-3 S '47

DIMETHYL aniline
Mechanism of the sulfonation of aromatic amines; sulfonation at elevated temperatures with sulfuric acid. E. R. Alexander. bibliog Am Chem Soc J 69:1599-602 Jl '47

DIMETHYL benzanthracene
New synthesis of 1,2-benzanthracene. M. S. Newman and R. T. Hart. bibliog Am Chem Soc J 69:298-300 F '47

DIMETHYL benzophenanthrene
1,2,3,4-Dibenzphenanthrene and its derivatives; synthesis of 1,2-dimethyl-3,4-benzphenanthrene. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1367-70 Je '47

DIMETHYL butadiene
Electrolytic reduction of acetone to pinacol. O. C. Slotterbeck. bibliog diag Electrochem Soc Trans 92 (preprint 10):123-35 '47

DIMETHYL butane
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Pilot plant production of 2,3-dimethylbutane. C. Holloway, jr. and W. S. Bonnell. bibliog flow sheet diag Ind & Eng Chem 38:1231-8 D '46
Solid solution studies; equilibria in the binary systems 2,2-dimethyl-butane-2,3-dimethylbutane and 2,2-dimethylbutane-cyclopentane. H. L. Fink and others. Am Chem Soc J 69:1501-6 Je '47

DIMETHYL carbostyril
1-Methyl-4-carbostyrilcarboxaldehyde and certain condensation products. D. J. Cook and M. Stamper. bibliog Am Chem Soc J 69:1467-8 Je '47

DIMETHYL chlorosilicane
Preparation and fluorination of dimethyl and trimethyl chlorosilanes. H. S. Booth and J. F. Suttle. bibliog Am Chem Soc J 68: 2658-60 D '46

DIMETHYL cyclohexane
Heats of combustion and isomerization of the eight C_8H_{16} alkylcyclohexanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 39:49-52 Jl '47
Relabeling of the cis and trans isomers of 1,3-dimethylcyclohexane. F. D. Rossini and K. S. Pitzer. bibliog Science 105:647-8 Je 20 '47
Tautomerism in cyclohexane derivatives; reassignment of configuration of the 1,3-dimethylcyclohexanes. K. S. Pitzer and C. W. Beckett. Am Chem Soc J 69:977-8 Ap '47

DIMETHYL ether
Inflammability of dimethyl ether-dichlorodifluoromethane-air mixtures. G. W. Jones and F. E. Scott. 2pls U S Bur Mines Rep of Invest 4125:1-4 '47

DIMETHYL ethylcyclopropane
Preparation and identification of alkylcyclopropanes; 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane. J. D. Bartleson, R. E. Burk and H. P. Lankelma. bibliog Am Chem Soc J 68:2513-18 D '46

DIMETHYL ethylenimine
Compounds derived from 2,2-dimethylethylenimine. D. S. Tarbell and D. K. Fukushima. bibliog Am Chem Soc J 68:2499-502 D '46

DIMETHYL ethynylcarbinol
Condensation of acetylene with acetone and other ketones. C. D. Hurd and W. D. McPhee. bibliog Am Chem Soc J 69:239-41 F '47

DIMETHYL glyoxime
Spectrographic examination of organic precipitates; nickel dimethylglyoxime. M. Griffing, T. De Vries and M. G. Mellon. Anal Chem 19:654-5 S '47

DIMETHYL hexane
Hydrocarbons in the 102° to 108°C fraction of petroleum. A. R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38:621-6 Je '47

DIMETHYL hexatriene
Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69:633-4 Mr '47

DIMETHYL maleate
Vinyl polymers; reaction of benzoyl peroxide and maleic ester. C. S. Marvel, E. J. Prill and D. F. DeTar. bibliog Am Chem Soc J 69:52-8 Ja '47

DIMETHYL naphthalene
Ten dimethylnaphthalenes, their physical properties, molecular compounds, and ultraviolet spectra. A. S. Bailey and others. Inst Pet J 33:503-26 bibliog(74 ref, p525-6) Ag '47

DIMETHYL pentane
Selective demethylation of paraffin hydrocarbons; preparation of triptane and neopentane. V. Haensel and V. N. Ipatieff. diag Ind & Eng Chem 39:853-7 Jl '47

DIMETHYL phthalate
Chigger repellents. F. M. Snyder and F. A. Morton. Soap & San Chem 22:133+ N '46

DIMETHYL phthalide
Preparation of 3,3-dimethylphthalide and several of its derivatives. C. H. Wang and others. bibliog Am Chem Soc J 69:1909-11 Ag '47

DIMETHYL propane
Evidence of rearrangement of polymethylol compounds related to neopentane. R. W. Brown and G. Dougherty. Am Chem Soc J 69:2232-3 S '47

Selective demethylation of paraffin hydrocarbons; preparation of triptane and neopentane. V. Haensel and V. N. Ipatieff. diag Ind & Eng Chem 39:853-7 Jl '47

DIMETHYL quinoxaline
Reaction between 4-methoxybenzaldehyde and 2,3-dimethylquinoxaline. R. L. McKee, M. K. McKee and R. W. Bost. Am Chem Soc J 69:468-9 F '47

DIMETHYL siloxanes
Organosilicon polymers; open chain dimethylsiloxanes with trimethylsiloxy and groups. M. J. Hunter and others. bibliog Am Chem Soc J 68:2284-90 N '46

DIMETHYL sulfolane
Manufacture of sulfolanes and use as selective solvents. H. G. Staaterman and others. flow diags il Chem Eng Prog 43:143-51 Ap '47

DIMETHYL sulfonamidostyrene
Preparation and polymerization of *p*-N,N-dimethylsulfonamidostyrene. G. E. Inskeep and R. Deanin. Am Chem Soc J 69:2237-8 S '47

DIMETHYLENE gluconic acid
Dimethylene-D-gluconic acid. C. L. Mehltretter and others. Am Chem Soc J 69:2130-1 S '47

Structure of 2,4;3,5-dimethylene-D-gluconic acid. M. Zief and A. Scattergood. bibliog Am Chem Soc J 69:2132 S '47

DIMETHYLOLUREA
Synthesis of tetrahydro-5-substituted-2(1)-*s*-triazones. W. J. Burke. bibliog Am Chem Soc J 69:2136-7 S '47

DINING cars
Adapting the dining car to electronic cooking. E. D. Campbell. il plans Ry Age 122:784-6 Ap 19 '47

Experimental restaurant cars on the L.M.S. il Engineer 183:432 My 16 '47

Improved lay-outs for L.M.S. dining cars. Engineering 163:429-30 My 23 '47

New methods of food preparation. O. Webber. il Ry Age 122:786-8 Ap 19 '47

Quick-frozen foods for diners. C. Kolb. Ry Age 122:791+ Ap 19 '47

Electric equipment

Dining a la Diesel; dining car electrical equipment of Train of tomorrow powered by Diesel engine. il Diesel Power 25:54-5+ S '47

DINING rooms
Better detail plate; kitchen and dinette cabinetwork. R. J. Alexander. plans diags Am Bld 69:144-5 F '47

DINITROBENZENE
Crystal structure of *m*-dinitrobenzene. N. W. Gregory and E. N. Lassettre. bibliog Am Chem Soc J 69:102-8 Ja '47

Crystal structure of *p*-dinitrobenzene. F. J. Llewellyn. diags Chem Soc J p884-90 Jl '47

Analysis

M-dinitrobenzene in blood; abstract. J. Roubal and others. J Ind Hygiene 29:sup98-9 S '47

DINITRODIPHENYL
Molecular compound formation in the polyphenyl series; some compounds formed by 4 : 4'-dinitrodiphenyl. W. S. Rapson, D. H. Saunder and E. T. Stewart. Chem Soc J p 1110-13 D '46

DINITRONAPHTHALENE
Theoretical discussion of further substitution in disubstituted naphthalenes; the further nitration of the dinitronaphthalenes. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:141-4 My '47

DINITROPHENOL
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 69:773-85 Ap '47

Oxynitration of benzene; studies relating to the reaction mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47

DINITROPHENYLHYDRAZONE
Identification and chromatography of androgens as their 2,4-dinitrophenylhydrazones. C. D. Johnston. Science 106:91 Jl 25 '47

DINITROPROPANE
Addition of dinitrogen tetroxide to olefins; propylene. N. Levy and C. W. Scaife. Chem Soc J p 1100-4 D '46

DINITROTOLUENE
Nitration in sulphuric acid; kinetics of the nitration of 2 : 4-dinitrotoluene. G. M. Bennett and others. Chem Soc J p474-92 Ap '47

DINNERWARE. See Tableware

DINOSAURIA
Reptilian fauna of the North Horn formation of central Utah. C. W. Gilmore. map diags U S Geol S Professional Pa 210-C:29-53, pl 3-14; pa 30c Supt. of doc. '46

DINUBA, California
Small farms aid small towns. Bsns W p17-18 Ap 12 '47

DIOCTYL phthalate
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. E. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47

DIOLEFINS. See Olefins

DIOLEIN. See Olein

DIOR, Christian
Interview with Christian Dior. pors Textile Col 69:36-7 O '47

DIORAMAS
Dioramas for travelers. Bsns W p64 Ag 23 '47

DIOXANE
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47

2,3-Dichloro-1,4-dioxane. F. A. Gunther and R. L. Metcalf. bibliog Am Chem Soc J 68:2406 N '46

Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47

DIOXANE—*Continued*
Products of the reaction of benzoyl peroxide with certain ethers. W. E. Cass. bibliog Am Chem Soc J 69:500-3 Mr '47

Reaction of the dioxane-sulfotrioxide reagent with aniline; classification of the sulfamic acids. C. D. Hurd and N. Kharasch. bibliog Am Chem Soc J 69:2113-15 S '47

DIP and strike, Determination of
Nomographic solutions of dip computation. W. A. Visser. Am Assn Pet Geologists Bul 31:1878-86 O '47

Technique of surveying diamond-drill holes with the Wright radiolite borehole-surveying instrument. J. W. Townsend and W. H. King. 6pls U S Bur Mines Rep of Invest 4061:1-7 '47

DIPALMITIN
Synthesis of cephalin. W. G. Rose. bibliog Am Chem Soc J 69:1384-7 Je '47

DIPENTAERYTHRITOL

Analysis

Determination of dipentaerythritol in mixtures of pentaerythritol and dipentaerythritol. J. A. Wyler. Ind & Eng Chem Anal ed 18:777-8 D '46

DIPHENYL
Calculation of the energy of activation for the racemization of 2,2′-dibromo-4,4′-dicarboxydiphenyl. F. H. Westheimer. bibliog J Chem Phys 15:252-60 My '47

Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H. Sisler and J. C. Cory. Am Chem Soc J 69:1515-19 Je '47

Molecular compound formation in the polyphenyl series; some compounds formed by 4 : 4′-dinitrodiphenyl. W. S. Rapson, D. H. Saunder and E. T. Stewart. Chem Soc J p 1110-13 D '46

Tetraethylbiphenyl from the ethylation of ethylbenzene. J. V. Karabinos and J. F. R. Kuck, jr. bibliog Am Chem Soc J 69: 1223-4 My '47

Theory of the racemization of optically active derivatives of diphenyl. F. H. Westheimer and J. E. Mayer. J Chem Phys 14:733-8 D '46

Physiological effect

Observations on the effects of diphenyl, *o*- and *p*-aminodiphenyl, *o*- and *p*-nitrodiphenyl and dihydroxyoctachlorodiphenyl upon experimental animals. W. B. Deichmann and others. bibliog il diag J Ind Hygiene 29:1-13 Ja '47

DIPHENYLACETIC acid
Antispasmodics; diarylacetic acid esters of some pyridyl and piperidyl alkanols. R. R. Burtner and J. M. Brown. Am Chem Soc J 69:630-3 Mr '47

Preparation of iodinated mono- and diphenyl-acetic and -propionic acids. J. W. Barnett, F. A. Robinson and B. M. Wilson. Chem Soc J p202-4 F '47

DIPHENYLADIPIC acid
Electrolytic reduction of cinnamic acid; structure of the products. C. L. Wilson. Electrochem Soc Trans 92 (preprint 11): 137-43 '47

DIPHENYLAMINE
Derivatives of diphenylamine as oxidation-reduction indicators in alkaline solution. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:167-70 Mr '47

Synthetic antimalarials; 3-dialkylamino- alkylaminodiphenylamines. F. G. Mann and J. W. G. Porter. Chem Soc J p910-14 Jl '47

DIPHENYLBUTADIENE
Some spectroscopic changes connected with the stereoisomerization of diphenylbutadiene. A. Sandoval and L. Zechmeister. bibliog diag Am Chem Soc J 69:553-7 Mr '47

DIPHENYLBUTANE
Friedel-Crafts reactions with organic dihalides. K. Sisido and H. Nozaki. bibliog Am Chem Soc J 69:961-4 Ap '47

Resolution of 2,3-diphenylbutane. H. H. Richmond and others. bibliog Am Chem Soc J 69:937-9 Ap '47

DIPHENYL carbazide
Stable colorimetric reagent for chromium. J. F. Ege, jr. and L. Silverman. bibliog Anal Chem 19:693-4 S '47

DIPHENYLCHLOROACETYL chloride
Synthetic mydriatics; diphenylchloroacetyl chloride as a reagent for the preparation of benzilic esters of tertiary amino-alcohols. F. E. King and D. Holmes. Chem Soc J p 164-8 F '47

DIPHENYLCHLOROARSINE
Action of heat on diphenylchloroarsine. G. D. Parkes, R. J. Clarke and B. H. Thewlis. Chem Soc J p429-31 Mr '47

DIPHENYLETHANE
Bonding in dimetalated diphenylethane. G. S. Myers, H. H. Richmond and G. F. Wright. Am Chem Soc J 69:710-11 Mr '47

DIPHENYLETHYLAMINE
Analgesics; N-alkylated-1,2-diphenylethylamines prepared by the Leuckart reaction. L. H. Goodson, C. J. W. Wiegand and J. S. Splitter. Am Chem Soc J 68:2174-5 N '46

DIPHENYLETHYLENE
Condensation of 1,1-diarylethylenes with maleic anhydride. F. Bergmann, J. Szmuszkowicz and G. Fawaz. bibliog Am Chem Soc J 69:1773-7 Jl '47

Polymerization; reaction of organosodium reagents with styrene and 1,1-diphenylethylene. A. A. Morton and H. C. Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47

DIPHENYLGUANIDINE
Synthetic antimalarials; dialkylaminoalkylaminodiphenylguanidines. F. G. Mann, F. T. Naylor and J. W. G. Porter. Chem Soc J p914-17 Jl '47

DIPHENYLKETENE
Constitution of the dimeric permanganate-coloured diphenylketen. A. Schönberg and A. Sina. Chem Soc J p 175-6 F '47

DIPHENYLPROPIONIC acid
Preparation of iodinated mono- and diphenyl-acetic and -propionic acids. J. W. Barnett, F. A. Robinson and B. M. Wilson. Chem Soc J p202-4 F '47

DIPHENYLTETRADECANE
High molecular weight hydrocarbons; five new hydrocarbons derived from sebacic acid. M. D. Soffer and others. bibliog Am Chem Soc J 69:1684-8 Jl '47

DIPHENYLTHIOCARBAZONE. See Dithizone

DIPHTHERIA
Antagonistic effect of corynebacterium diphtheriae gravis. J. N. DeLamater and R. J. Goodlow. il Science 105:261-2 Mr 7 '47

Pure diphtheria toxoid isolated. Chem & Eng N 25:998 Ap 7 '47

Purification of diphtherial toxoid. L. Pillemer and D. Toll. bibliog Science 105:102 Ja 24 '47

DIPOLE antenna. See Radio antennas

DIPOLE moment. See Electric moment

DIPOTASSIUM tartrate. See Potassium tartrate

DIQUINOLYLMETHANE
Diquinolylmethanes. C. E. Kaslow and R. A. Reck. Am Chem Soc J 69:864-5 Ap '47

DIRAC'S equation
Hyperfine structure of the ground state of H and D atoms. O. Halpern. Phys R 72: 245-6 Ag 1 '47

DIRECTION finding apparatus
Assistance by radio to lost civil pilots is widely available. CAA J 8:72 Je 15 '47

Atmospherics and their location; abstract. C. Clarke. bibliog Inst E E J 94 pt 1:54-5 Ja '47

Calculation of sound rays in the atmosphere. P. Rothwell. diags Acoustical Soc Am J 19:205-21 Ja '47

D-f for lost pilots. Electronics 20:250+ Jl '47

Design of directive broad-band antennas. R. Baum. diags Inst Radio Eng Proc 34:956-9 D '46

Design of electromagnetic radiogoniometers for use in medium-frequency direction-finding. J. H. Moon. bibliog diags Inst E E J 94 pt 3:69-77 Ja '47

DIRECTION finding apparatus—*Continued*
Improved azimuth indicating system for aircraft. E. E. Lynch and R. A. Pfuntner. bibliog il diags Elec Eng 65:Trans 806-12 D '46
Radio direction finding at 1.67-meter wavelengths. L. C. Yuan. il diags Inst Radio Eng Proc 34:752-6 O '46
Symposium of papers on direction-finding. R. L. Smith-Rose and others. bibliog il diags Inst E E J 94 pt 3:91-133 Mr '47; Abstract. Electrician 137:1213-15 N 1 '46; Discussion. Inst E E J 94 pt 3:133-40 Mr '47
Ultra-high-frequency radiosonde direction finding. L. C. Yuan. diags Inst Radio Eng Proc 34:852-7 N '46
See also
Compass
Hydrophone
Radio beacons
Testing
Maintenance testing of automatic direction finders. W. E. Price and E. M. Hassel. il diag Aviation 45:78-81 N '46
Site and path errors in short-wave direction-finding. W. Ross. Inst E E J 94 pt 3:103-14; Discussion. 133-40 Mr '47
Some experiments on conducting screens for a U-type spaced-aerial radio direction-finder in the frequency range 600-1200 mc/s. R. R. Pearce. diag Inst E E J 94 pt 3:115-17; Discussion. 133-40 Mr '47
DIRECTIONAL antennas. See Radio antennas—Directional antennas
DIRECTIVITY index
Simplified method for determining transducer directivity index. P. M. Kendig and R. E. Mueser. diags Acoustical Soc Am J 19:691-4 Jl '47
DIRECTORIES
Associations and their officers; directory of technical and trade associations in the field of electronics. Electronics 20:148 (Buyers' guide) Mid-Je '47
Classified boom; phone book advertising; city directories. Bsns W p32+ S 6 '47
See also
Advertising managers—Directories
Airplane industry and trade—Directories
Cooperative associations—Directories
Engineers—Directories
Laboratories—Directories
Libraries, Special—Directories
Marketing—Study and teaching—Directories
Petroleum refineries—Directories
Public health officers—Directories
Social work—Directories
Toy industry and trade—Directories
Trade directories
Trade journals—Directories
Waterworks—Directories
Consult Public affairs information service bulletin for list of directories
Bibliography
Industrial directories. Cleveland Pub Lib Business Information Bur Bul v 17, no 3: 9-12 N '46
DIRECTORS. See Bank directors; Corporations—Directors
DIRECTORS, Junior. See Corporations—Directors, Junior
DIRT, Street. See Street dirt
DISABLED
Disabled workers have good safety records. Nat Safety N 55:36 Ja '47
See also
Handicapped
Rehabilitation
British printers to train disabled men. Inland Ptr 119:89 Ag '47
Earning power restored through rehabilitation. Nat Safety N 56:78-9 S '47
Legal and administrative handicaps to a rehabilitation program. B. E. Kuechle. Ind Med 16:90+ F '47; Excerpts. East Underw 48:34 Ja 3 '47
Medical rehabilitation of the disabled. H. A. de Boer. Int Labour R 54:29-36 Jl '46
Operation of an urban sheltered workshop for the tuberculous. R. L. McNamara and A. W. Brewster. Pub Health Rep 62:971-91 Jl 4 '47
Physical restoration of the injured worker. Safety Eng 94:52+ Ag '47
Physically handicapped make good employees. M. Hutchison. il Food Ind 19:172-3+ F '47
Physically handicapped persons in the United States. Int Labour R 55:124-7 Ja-F '47
Physically impaired aided, industry survey shows. J. V. Grimaldi. Weekly Underw 155:1190 N 16 '46
Rehabilitating the tuberculous. H. E. Hilleboe. Pub Health Rep 62:969-71 Jl 4 '47
Training and employment of disabled persons in Great Britain. Int Labour R 55:301-4 Mr-Ap '47
Vocational rehabilitation of women. T. Copp. Ann Am Acad 251:174-7 My '47
See also
Veterans, Disabled—Rehabilitation
Directories
Directory of agencies and organizations concerned with rehabilitation and services to the handicapped. H. A. Rusk and E. J. Taylor, comps. 133p pa 10c New York Times co, 229 W. 43d st, New York 18 '47
DISABLED veterans. See Veterans, Disabled
DISABILITY insurance. See Insurance, Disability
DISARMAMENT
Decide atomic bomb, then disarm; address before United nations assembly. J. F. Byrnes. Comm & Fin Chr 164:3265+ D 19 '46
Disarmament. Economist 152:49-50 Ja 11 '47
Disarmament and security. A. Cadogan. Ann Am Acad 252:84-92 Jl '47
U.S. and Russian disarmament proposals can be harmonized. V. M. Molotov. Comm & Fin Chr 164:2473+ N 14 '46
Universal disarmament under international control essential to peace. N. Thomas. Comm & Fin Chr 165:3353+ Je 26 '47
Wants American leadership in disarmament proposals; letter to President. N. Thomas and others. Comm & Fin Chr 164:2763 N 28 '46
DISASTERS
Disaster councils prepare to cope with emergencies in San Francisco. Eng N 138:203 F 6 '47
Plan for disaster control. J. H. Hill. il Chem Eng Prog 43:sup 11-15 Jl '47
Ten-year survey of catastrophes; Metropolitan Life statistical bulletin. East Underw 48:8 Ap 25 '47
See also
Relief work in industry
DISCHARGE of electricity. See Electric discharges
DISCHARGED soldiers. See Veterans
DISCO company
Disco builds smokeless fuel plant. Chem & Eng N 25:1874 Je 30 '47
DISCOLORATION
Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Kertesz. bibliog Am Chem Soc J 68:2178-9 N '46
Partial characterization of a compound involved in the blackening of white potatoes. W. R. Lewis and D. M. Doty. bibliog Am Chem Soc J 69:521-3 Mr '47
Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47
DISCOUNT, Cash
Are discounts obsolete? R. L. Galloway. Credit & Fin Management 48:10 D '46; Discussion. 49:9-11 F '47
Cash discount must stay. O. Iber. Credit & Fin Management 49:24+ Je '47
Dealer squawks stymie cash discount reform. A. T. Boyd. Sales Management 58:102+ My 20 '47

DISCOUNT, Cash—*Continued*
More, but not all, on discounts; should terms and collection procedures be overhauled? A. F. Chapin. Credit & Fin Management 49:8-10+ Mr '47; Discussion. M. E. Pierson. 49:32+ My '47

DISCOUNT, Trade
American Can wins quantity discount case. Oil Paint & Drug Rep 151:5+ Ap 14 '47
Bigger cut asked; retail druggists want 40 per cent discounts from wholesalers and manufacturers. Bsns W p48-9 O 25 '47
Discount revision under way. Bsns W p55 Ja 11 '47
Retailers defend discounts. Bsns W p48+ F 1 '47

DISCOUNT companies
Discount company's loss. Economist 153:659 O 18 '47
Discount market activity. Economist 152:158 Ja 25 '47
London discount companies. Economist 151: sup20-1, 7 N 16 '46
National Discount capital. Economist 152:78 Ja 11 '47
New discount house; Clive discount company. Economist 151:1054-5 D 28 '46
New Lombard Street. Economist 152:290-2 F 15 '47

DISCOVERIES in science. See Inventions; Patents; Scientific research

DISCRIMINATION in employment. See Race discrimination

DISCUSSION
Political significance of group discussion. W. E. Utterback. Ann Am Acad 250:32-40 Mr '47
Town hall meetings for better human relations; Whiting corporation. S. H. Hammond. Factory Management 105:106-7 Ja '47
See also
Chairmen

DISEASES
See also
Dysentery
Edema
Heart—Diseases
Infectious diseases
Lungs—Diseases
Mortality
Public health
Rheumatism
Schistosomiasis
Sickness
Skin—Diseases
Tsutsugamushi disease
Tuberculosis
Tularemia
Typhoid fever
Typhus fever

Statistics
Sickness absenteeism among industrial workers, first quarter of 1946. W. M. Gafafer. Pub Health Rep 61:1664-6 N 15 '46
Sickness absenteeism among industrial workers, second and third quarters of 1946. W. M. Gafafer. Pub Health Rep 62:272-6 F 21 '47
Sickness absenteeism among industrial workers, fourth quarter of 1946. W. M. Gafafer. Pub Health Rep 62:1095-7 Jl 25 '47
Sickness absenteeism among male and female industrial workers during 1945, with a note on the respiratory epidemic of 1945-46. W. M. Gafafer. bibliog Pub Health Rep 61: 1620-30 N 8 '46
See also
Infectious diseases—Statistics
Mortality—Statistics
Tuberculosis—Statistics

DISEASES, Industrial
Industrial management and occupational cancer; abstract. W. C. Hueper. Nat Safety N 54:46 N '46
Medicolegal aspects of industrial medicine. C. O. Sappington. Ind Med 16:146+ Mr '47
See also
Coal miners—Diseases and hygiene
Hygiene, Industrial
Insurance, Workmen's compensation—Industrial diseases
Lead poisoning
Miners—Diseases and hygiene
Miners' nystagmus
Poisons, Industrial
Sickness
Silicosis
Skin—Diseases
Workmen's compensation

DISEASES, Infectious. See Infectious diseases

DISHONESTY insurance. See Insurance, Surety and fidelity

DISHWASHING
Dishwashing detergents; formulas for detergents used in manual washing, in mechanical dishwashers, and in sanitizing dishes. M. A. Lesser. bibliog Soap & San Chem 23:43-6+ Je '47
Dishwashing studied. Soap & San Chem 23: 79 My '47
Evaluating dishwashing detergents. W. D. Tiedman. il Soap & San Chem 23:48-50+ Ap '47
Germicidal dish washing. A. F. Guiteras and R. L. Shapiro. Soap & San Chem 23:69 Jl '47
Propose new specification for dishwashing compound. Soap & San Chem 23:36-7 My '47
Sanitary dishwashing in the plant cafeteria. R. C. Strong. il Safety Eng 94:36-7 O '47
Sanitation in food establishments. A. G. Macnab. Soap & San Chem 23:121-3+ Ja '47
Technique of depth interviewing; camera-action technique develops basic copy, merchandising and product ideas; dishwashing as illustration. W. A. Yoell. Ptr Ink 218: 33-5+ Ja 31 '47

DISHWASHING machines
Acrylic lid for dishwasher. il Mod Plastics 25:172+ S '47
Critical study of machine dishwashing; abstract. W. L. Mallmann and others. Nat Safety N 56:50 Ag '47
Dishwasher soap. Sci Am 176:59 F '47
Dishwashers are major load builders. il Elec World 128:96 S 27 '47
Motorless dish washer. il diag Machine Design 19:152-3 F '47

Manufacture
Turntables aid assembly-line testing; production of Hotpoint electric dishwashers. B. C. Brosheer. il plan Am Mach 91:129-32 F 13 '47

Rating
Dishwashing machines; a preliminary report. il Consumers Res Bul 20:18-20 Ag '47
Dishwashing machines in actual use. Consumers Res Bul 20:14-16 O '47

DISINFECTION and disinfectants
Action of substituted salicylaldehydes on bacteria and fungi. L. C. Felton and J. H. Brewer. Science 105:409-10 Ap 18 '47
Alkyl thiolsulfinates. L. D. Small, J. H. Bailey and C. J. Cavallito. Am Chem Soc J 69:1710-13 Jl '47
Antibacterial activity of *p*-aminobenzenephosphonous acid. I. M. Klotz and R. T. Morrison. Am Chem Soc J 69:473 F '47
Antiseptics and disinfectants as formulated for the British market. J. M. Vallance. bibliog il Soap & San Chem 23:127-9+ O; 133+ N '47
Citrinin as an antibiotic. Yu Wang and others. bibliog Science 106:291-2 S 26 '47
Conversion of sucrose into pyridazine derivatives; 3-sulphanilamido-6-methylpyridazine. W. G. Overend and L. F. Wiggins. Chem Soc J p239-44 F '47
Crystalline antibacterial substance from the lichen ramalina reticulata. A. Marshak. bibliog Pub Health Rep 62:3-19 Ja 3 '47
Crystalline disinfectant; Hyamine 1622. Chem & Eng N 25:2844-5 S 29 '47
Disinfectants and antiseptics; review of selected papers published during 1946. E. G. Klarmann. bibliog(100 ref) Soap & San Chem 23:125+ Ja; 139+ F '47
False disinfection velocity curves produced by quaternary ammonium compounds. E. C. McCulloch. Science 105:480-1 My 2 '47
Germicidal dish washing. A. F. Guiteras and R. L. Shapiro. Soap & San Chem 23:69 Jl '47
Highlights of NAIDM convention. Chem Ind 60:58-9 Ja '47
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 64:51-3; 66:48-50 F '45, F '47
Ionisation of acridine bases. A. Albert and R. Goldacre. bibliog Chem Soc J p706-13 Ag '46

DISINFECTION and disinfectants—*Continued*
Killing germs with lamps; disinfection by ultraviolet light. Consumers Res Bul 19: 19-24 F; 20:26 S '47
New medium for study of quaternary bactericides. E. H. Armbruster and G. M. Ridenour. bibliog Soap & San Chem 23:119-21+ Ag '47
New specialties exploit chemical research; household disinfectants. E. G. Klarmann. Chem Ind 61:398 S '47
New specialties exploit chemical research; industrial disinfectants. P. J. Amman. Chem Ind 61:402-3 S '47
Organic mercurials as disinfectants. J. P. O'Brien. bibliog Soap & San Chem 22:141+ D '46
Preparation and properties of some long-chain aliphatic amines. E. T. Borrows and others. Chem Soc J p 197-202 F '47
Preparation of 4-aminophenyl sulphones; reaction between aromatic sulphinic acids and quinones or quinoneimines. S. Pickholz. Chem Soc J p685-7 Ag '46
Properties and uses of surface-active cations. R. R. Ackley. Soap & San Chem 23:39-42+ Mr '47
Quaternary ammonium disinfectant; hyamine 1622. Chem Ind 61:644+ O '47
Quaternary ammonium germicidal treatment for jute-packed water mains. A. L. Sotier and H. W. Ward. bibliog il Am Water Works Assn J 39:1038-45 O '47
Quaternary ammonium germicides. C. A. Lawrence. il Chem Ind 60:44-7 Ja '47
Recent ozone investigations. A. W. Ewell. bibliog diag J Ap Phys 17:908-11 N '46
Soaps in reverse. H. C. E. Johnson. il Sci Am 177:21-3 Jl '47
Studies in slime control, 1946. J. W. Appling and others. bibliog Paper Tr J 124:143-54 My 29 '47
Studies in the sulfone series; mono-N-heterocyclic derivatives of 4,4'-diaminodiphenylsulfone. E. D. Amstutz, E. A. Fehnel and J. W. Woods. bibliog Am Chem Soc J 69:1922-5 Ag '47
Studies in the sulfone series; the preparation and properties of 2,8-diaminothiaxanthone- and 2,8-thiaxanthene-5-dioxides and some related compounds. E. D. Amstutz and C. R. Neumoyer. bibliog Am Chem Soc J 69:1925-9 Ag '47
Studies in the sulfone series; the preparation of 2,8- diaminodibenzothiophene- 5 -dioxide. C. R. Neumoyer and E. D. Amstutz. bibliog Am Chem Soc J 69:1920-1 Ag '47
Treatment of infected war wounds with a nitrofuran. N. C. McCullough. bibliog Ind Med 16:128+ Mr '47
Ultraviolet lamps to control fungi. R. Nagy. il Food Ind 19:928-9 Jl '47

See also
Antibiotic substances
Bacteriostasis
Chloramine
Chlorination
Formaldehyde
Fumigants
Insecticides
Mercury compounds
Mercury oxycyanide
Resorcinol
Sanitary chemicals
Sulfonamides
Water purification

Testing
Bacteriological evaluation of cationic germicides. A. S. DuBois. bibliog Soap & San Chem 23:139+ My '47
Increasing efficiency of FDA phenol-coefficient test. A. R. Cade. Soap & San Chem 23:131+ O '47
NAIDM-USDA report on quaternary ammonium testing; E typhosa and S aureus in various cultures. L. S. Stuart. Soap & San Chem 23:135+ S '47
Note on the problem of bacteriological evaluation of cationics; reply to A. S. Dubois. E. G. Klarmann and E. S. Wright. Soap & San Chem 23:151+ Jl '47
Postwar problems in testing disinfectants. L. S. Stuart. Soap & San Chem 23:129-31+ Mr '47
Quaternary ammonium germicides; methods for their evaluation. R. A. Quisno and others. Soap & San Chem 23:145+ Je '47
Revamping the F.D.A. method; quantitative study. A. R. Cade. bibliog Soap & San Chem 23:138-41+ Ap '47
Testing quaternary ammonium sanitizers as used in the dairy industry. W. S. Mueller and others. bibliog Soap & San Chem 23:123+ S '47
Testing the quaternary ammoniums; review of methods currently in use. A. S. DuBois. bibliog Soap & San Chem 22:125+ N '46
Toxicity of germicides. L. C. Barail. Am Dyestuff Rep 35:521-4 N 4 '46

DISINTEGRATION of mesotrons. See Mesotrons

DISKS, Rotating
Kinematics of disk cam and flat follower. A. H. Candee. il diags A S M E Trans 69: 709-18; Discussion. 718-24 O '47
Method for simplifying the calculations of the natural frequencies for a system consisting of *n* rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47
Rotating disks; stress calculations and analysis for disk profiles with external loading. A. H. Ehlinger. bibliog il diags Machine Design 19:132-7+ Mr '47
Stresses in turbine disks at high temperatures. E. P. Popov. bibliog Franklin Inst J 243:365-89 My '47

DISLOCATION, Theory of. See Creep of metals

DISMISSAL of employees. See Employees, Dismissal of

DISNEY, Walt, productions
Annual report. Comm & Fin Chr 165:380 Ja 20 '47

DISODIUM dihydroxybenzenedisulfonate
Colorimetric determination of titanium with disodium-1,2-dihydroxybenzene-3,5-disulfonate. J. H. Yoe and A. R. Armstrong. bibliog Anal Chem 19:100-2 F '47

DISPENSARIES, Industrial
Modernizing the dispensary; Heppenstall company. il Nat Safety N 55:22-3+ My '47

DISPENSING apparatus
Acrylics improve performance of industrial salter unit; calcium chloride dispenser. il Mod Plastics 24:114-15 My '47
Automatic store; will it change your package; Grand union co. Food-O-Mat. il Mod Packaging 20:134-6 D '46
New dispensing unit for packaged foods; Grand Union's Food-O-Mat. il Food Ind 18: 1861-2 D '46
Vinyl sheet formed into dispenser-display unit; Pepsi-Cola glass replica. il Mod Plastics 24:102-3 Ag '47

See also
Coffee dispensers

DISPERSING agents
Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61: 232-4 Ag '47

Testing
Colorimetric method for evaluating dispersing agents. G. C. Tesoro and others. Rubber Age 60:319-20 D '46

DISPERSION
Dielectrics and rheology of non-aqueous dispersions. A. Voet. bibliog il diag J Phys & Colloid Chem 51:1037-63 S '47
Dispersion of coating clays; its relation to the flow properties of clay slips and coating colors. B. K. Asdell. Paper Ind 29:1035-42 O '47
Improved apparatus and method for measuring dispersion power. M. Z. Poliakoff. il Anal Chem 19:140-1 F '47
Should portland cement be dispersed? T. C. Powers. bibliog diags Am Concrete Inst J 17:117-40 N '45; Discussion. il 18:140[1]-140[53] pt 2 D '46

DISPERSION of rays
Longitudinal dispersion of infrared rays in optically empty and turbid media, and molecular weights of substances. W. W. Lepeschkin. bibliog J Phys & Colloid Chem 51:875-84 My '47
Longitudinal dispersion of infrared rays in polystyrenes. W. W. Lepeschkin. il J Phys & Colloid Chem 51:868-75 My '47

DISPLAY of merchandize
Advertisers turn to study of display effectiveness. Ptr Ink 218:100 Ja 17 '47

DISPLAY of merchandize—*Continued*
Carded merchandise. il Mod Packaging 20: 93-8 Je '47
Cards act as salesmen in self-service outlets. C. J. Swan. il Ptr Ink 218:39-41 Ja 10 '47
Combines consumer education and retail sales training; Sherwin-Williams Pestroy and Weed-no-more film; paint display. E. M. Housman. il Ptr Ink 219:36-7 Je 13 '47
Counter card does neat sales job for tire kit. il Sales Management 57:105 N 20 '46
Design for displaying merchandise; fabrics, cosmetics, perfumes, candy, lamps, carpets, electrical appliances, yarns. il Arch Rec 101:78-84 Mr '47
Display; or visual merchandising? H. M. Cowee. J Retailing 23:48-52 Ap '47
Displays + parking = good business; Conrad Troll, Pasadena, Calif. il plan Am Bld 69: 124-5 Ag '47
Gear point-of-purchase promotion to modern super-market merchandising; improve store displays. F. L. McKibbin, jr. il Ptr Ink 220:34-6+ Jl 18 '47
Get them to see, pick up and read your package; 59 varieties of complementary ideas. F. L. McKibbin, jr. il Ptr Ink 221: 38-40 O 17 '47
Lighting the package for effective selling. C. M. Cutler. il Mod Packaging 20:138-40 Ja '47
Many-purpose design; cartons displayed in a catchy pattern. W. F. Howell. il Ptr Ink 217:42-3 D 27 '46
Merchandise display for simplified retail selling. C. H. Sevin. il Dom Comm 35:8-13 Mr '47
Merchandising helps stores attract better customers; Gerber provides service to help food stores serve young mothers. E. J. Dever, jr. il Ptr Ink 218:44-5 F 28 '47
Merchandising twist for atom era; photo presentation; Cinemart; proposal by Roderick Seidenberg. il plan Arch Rec 101:113 My '47
New arrangement for bringing the inside outside; Wiss jewelry store, East Orange, N.J. il plan Arch Rec 101:101 F '47
Product to the forefront in new displays; fewer merely decorative. C. J. Swan. il Ptr Ink 217:38-9 N 22 '46
Razor edge; Gem injection-molded plastic packages and displays. il Mod Packaging 20:122-3 Je '47
Store audits show efficiency of displays; case study made in 9 Cleveland chain drugstores. C. Margolis. il Ptr Ink 217:36-7 D 27 '46
Teach dealers how to set up a department for your line; display of related merchandise in one place increases sales and profits. Ptr Ink 219:52+ Je 27 '47
What's new in display; transparent materials for display, protection, prevention of theft. il Ptr Ink 219:45 My 30 '47

See also
Exhibits, Traveling
Show windows
Showrooms

DISSERTATIONS, Academic
Senior thesis in the undergraduate curriculum. M. A. Hunter. J Eng Educ 37: 483-6 Mr '47

Bibliography
Doctoral dissertations accepted by American universities, 1945-1946. A. H. Trotier, ed. 71p $1.50 H. W. Wilson co, New York '46

DISSOCIATION
Dissociation energy of CO. H. D. Hagstrum. bibliog Phys R 71:376-7 Mr 15 '47
Dissociation of the addition compounds of trimethylboron with the ethylamines; configuration of the ethylamines. H. C. Brown and M. D. Taylor. bibliog il diags Am Chem Soc J 69:1332-6 Je '47
Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47
Energy additivity in oxygen-containing crystals and glasses. K. Sun and M. L. Huggins. J Phys & Colloid Chem 51:438-43 Mr '47
Ionization and dissociation of *cis-* and *trans-*2-butene by electron impact. V. H. Dibeler. bibliog diag J Res Nat Bur Stand 38:329-36 Mr '47
Mass spectrometric study of CH_3D; dissociation probabilities of C—H and C—D bonds by electron impact. M. W. Evans and others. J Chem Phys 14:701-7 D '46
Molecular dissociation by electron bombardment; a study of $SiCl_4$. R. H. Vought. Phys R 71:93-101 Ja 15 '47

See also
Predissociation

DISSOCIATION, Electrolytic. See Ionization, Electrolytic

DISSOLVERS
Dissolver. il Chem Ind 59:872 N '46; Sci Am 175:274 D '46

DISTANCES
Measurement
Measuring distance precisely; relative phase relationship between continuous-wave radio signals used. il diag Electronics 20:186+ N '47

DISTILLATE wells. See Gas, Natural—Distillate wells

DISTILLATION
Carrier-distillation analysis of uranium. Chem & Eng N 25:777 Mr 17 '47; Same. il Chem Ind 60:668 Ap '47
Carrier-distillation method for spectrographic analysis and its application to the analysis of uranium-base materials. B. F. Scribner and H. R. Mullin. bibliog pl diags J Res Nat Bur Stand 37:379-89 D '46; Abstract. Mech Eng 69:311-12 Ap '47
Catalytic cracking of pure hydrocarbons; cracking of structural isomers. G. M. Good, H. H. Voge and B. S. Greensfelder. bibliog Ind & Eng Chem 39:1032-6 Ag '47
Commercial molecular distillation. K. C. D. Hickman. bibliog flow sheets il diags Ind & Eng Chem 39:686-94 Je '47
Correlation of vapor-liquid equilibria data for nonideal ternary systems. E. G. Scheibel and D. Friedland. bibliog Ind & Eng Chem 39:1329-34 O '47
Determination of water in caustic soda and other alkaline materials; a distillation-titrimetric method. H. R. Suter. bibliog diag Anal Chem 19:326-9 My '47
Distillation topic at I & E C symposium. Chem & Eng N 25:158-9+ Ja 20 '47
Distilling-plant economy. A. M. Impagliazzo. diags Mech Eng 69:387-90 My '47
Effect of uniform versus intermittent product withdrawal from distillation columns. D. M. Oldroyd and L. A. Goldblatt. bibliog diags Ind & Eng Chem Anal ed 18: 761-3 D '46
Extractive distillation-separation by C_4 hydrocarbons using furfural. J. Happel and others. il Am Inst Chem Eng Trans 42: 1001-7 O-D '46
Furfural extractive distillation for separation and purification of C_4 hydrocarbons. C. K. Buell and R. G. Boatright. bibliog il diags Ind & Eng Chem 39:695-705 Je '47
High temperature distillation. T. J. Walsh. bibliog Ind & Eng Chem 39:17-18+ Ja '47
High vacuum and its process applications. B. W. Whitehurst. diags Chem Eng 54:98-102 O '47
Large scale distillation of isoprene; emulsion copolymerization of isoprene with styrene. C. F. Fryling. bibliog Ind & Eng Chem 39:882-6 Jl '47
Molecular distillation. K. C. D. Hickman. bibliog il Ind & Eng Chem 39:19 Ja '47
Molecular distillation as a step in the chemical determination of total and gamma-tocopherols. M. L. Quaife and P. L. Harris. bibliog diag Ind & Eng Chem Anal ed 18: 707-8 N '46
Multi-column distillation of natural gasoline. F. J. Lockhart. bibliog diags Pet Eng 18: 111+ Ag '47; Same. Pet Refiner 26:104-8 Ag '47
Multistage separation processes. M. Benedict. bibliog diags Chem Eng Prog 43:41-60 F '47
Plate efficiencies of benzene-toluene-xylene systems in distillation. M. Nord. bibliog Am Inst Chem Eng Trans 42:863-81 O-D '46

DISTILLATION—*Continued*
Production of styrene in Germany. G. M. Kline and others. diags Mod Plastics 25: 151-3+ O '47
Semimicroanalysis of light hydrocarbon mixtures by multiisothermal distillation. L. S. Echols, jr. and E. Gelus. bibliog diags Anal Chem 19:668-75 S '47
Separation of butadiene by azeotropic distillation with ammonia. N. Poffenberger and others. bibliog flow sheets Am Inst Chem Eng Trans 42:815-26 O-D '46
Séparation par distillation d'un mélange de deux corps en présence d'un entraîneur. J. P. Zwilling. diag Chimie & Ind 57:336-40 Ap '47
Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses. L. W. Strock and G. E. Heggen. Opt Soc Am J 37:29-36 Ja '47

See also
Alcohol—Manufacture
Azeotropy
Coal distillation
Oil shales—Distillation
Petroleum distillation
Rectification
Tar distillation
Wood distillation

Steam distillation

Steam distillation of hydrocarbons and chlorohydrocarbons; nomograph. M. Nord. bibliog Chem Ind 59:884+ N '46

Tables, calculations, etc.

Batch distillation nomograph. M. Nord. Ind & Eng Chem 39:232 F '47
Batch distillation nomograph for binary or multicomponent mixtures. W. H. Stanton. Ind & Eng Chem 39:1042-3 Ag '47
Calculation of number of theoretical plates for rectifying column. A. E. Stoppel. bibliog Ind & Eng Chem 38:1271-2 D '46; Same. Pet Eng (Ref annual) 18:189-90 Jl 1 '47
Calculation of relative volatility from boiling points. F. W. Melpolder and C. E. Headington. bibliog Ind & Eng Chem 39: 763-6 Je '47
Calculation of theoretical plates in rectification. A. M. Eshaya. bibliog Chem Eng Prog 43:555-60 O '47
Effect of vapour composition on the assessment of fractionating columns in terms of heights of a transfer unit. J. A. Storrow. bibliog diags Soc Chem Ind J 66:41-8, 73-9 F-Mr '47
Evaluation of azeotropic entrainers. L. Berg and J. M. Harrison. bibliog Chem Eng Prog 43:487-96 S '47
Fractional distillation of ternary mixtures. A. J. V. Underwood. Inst Pet J 31:111-18; 32:598-613 Ap '45, O '46
Fractionation of binary mixtures in packed columns. J. A. Storrow and B. D. Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47
Laboratory low-temperature fractional distillation; optimum charging rates; samples analyzed by mass spectrometer. C. E. Starr, jr., J. S. Anderson and V. M. Davidson. bibliog Anal Chem 19:409-12 Je '47
Nomographs for distillation of low-boiling hydrocarbons. F. M. Nelsen, F. R. Brooks and V. Zahn. Anal Chem 19:814-15 O '47

DISTILLATION apparatus

Alternate method of cleaning mercury. L. Segal. diag Science 105:625 Je 13 '47
Apparatus for quantitative low-temperature vacuum distillation of milliliter volumes. diag Ind & Eng Chem Anal ed 18:729 N '46
Apparatus for the quantitative separation of volatile substances by fractionation and distillation. W. R. McGaughran and S. C. Werch. diags Science 105:130 Ja 31 '47
Automatic take-off for fractionating columns. A. W. Baker and O. G. Dixon. bibliog il diags Soc Chem Ind J 66:189-91 Je '47
Boiling coefficients for finned tubes. W. E. Zieman and D. L. Katz. bibliog flow diag il Pet Refiner 26:78-82 Ag '47
Centrifugal stills; new tool for separation of heavy molecules. A. W. J. Dyck. il diag Can Chem & Process Ind 31:22-3+ Ja '47
Comparison of rectification and desorption in packed columns; desorption tests on carbon dioxide-water and oxygen-water, and rectification tests on isopropanol-water. D. W. Deed, P. W. Schutz and T. B. Drew. bibliog diags Ind & Eng Chem 39:766-74 Je '47
Concentration of the isotopes of mercury by free evaporation in a 10-cell counter-current reflux still. A. K. Brewer and S. L. Madorsky. bibliog diags J Res Nat Bur Stand 38:129-35 Ja '47
Concentric-tube fractionating columns. C. K. Donnell and R. M. Kennedy. bibliog diags Am Pet Inst Proc 25(3):23-31 '46
Constant ratio still head. L. E. Lloyd and H. G. Hornbacher. bibliog diags Anal Chem 19:120-3 F '47
Constant-temperature steam-distillation apparatus for isolation of fluorine. W. B. Huckabay, E. T. Welch and A. V. Metler. bibliog il diag Anal Chem 19:154-6 Mr '47
Continuous steam distillation apparatus. W. A. Immerwahr. diag Chem & Ind p521 Ag 23 '47
Continuous still, developed for producing rosin, turpentine. il diag Manuf Rec 116:74-5+ Ja '47
Corrosion tests in distillation equipment. W. Z. Friend and J. F. Mason, jr. il Pet Eng 18:192+ My '47; Correction. 18:155 Ag '47
Creep strength of pipe still tubes. W. L. Nelson. Oil & Gas J 45:283 Ja 25 '47
Design and operation of a light hydrocarbon distillation drier. G. C. Gester, jr. bibliog il diag Chem Eng Prog 43:117-21; Discussion. 121-2 Mr '47
Distillation, absorption and extraction; new equipment. J. A. Hufnagel. il Chem Ind 61:409-10 S '47
Distilling-plant economy. A. M. Impagliazzo. diags Mech Eng 69:387-90 My '47
Effect of uniform versus intermittent product withdrawal from distillation columns. D. M. Oldroyd and L. A. Goldblatt. bibliog diags Ind & Eng Chem Anal ed 18:761-3 D '46
Effect of vapour composition on the assessment of fractionating columns in terms of heights of a transfer unit. J. A. Storrow. bibliog diags Soc Chem Ind J 66:41-8, 73-9 F-Mr '47
Efficient sleeve-type vacuum jackets for fractionating columns. L. Dostrovsky and T. R. Jacobs. diags Chem & Ind p627 O 11 '47
Electrolytic conductivity of NaOH in H_2O and of NaOD in D_2O at 25°; vacuum distilling apparatus for deuterium oxide. E. Hetland. diags Am Chem Soc J 68:2532-5 D '46
Evaluation of laboratory distillation apparatus; improved Oldershaw glass bubble-plate columns, automatic stillhead, and accessories. F. C. Collins and V. Lantz. bibliog diags Am Pet Inst Proc 26(3):72-9 '46; Same. Ind & Eng Chem Anal ed 18:673-7 N '46
Fractional analysis of hydrocarbon mixtures on a gallon scale. R. F. Marschner and W. P. Cropper. diags Am Pet Inst Proc 26(3):41-7 '46
Fractionation of binary mixtures in packed columns. J. A. Storrow and B. D. Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47
High-temperature fractional distillation, ½-in. Ewell column. C. R. Reed. diags Am Pet Inst Proc 26(3):14-17 '46
Improved trap for analytical distillations. F. L. Hahn. diag Anal Chem 19:811-12 O '47
Laboratory distilling columns of high efficiency used in the work of the API research project 6. C. B. Willingham and F. D. Rossini. bibliog diags Am Pet Inst Proc 26(3):63-71 '46
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. E. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47
Multistage molecular still. diag Chem Eng 54: 119 Ap '47
New counter-current reflux still. diags Pet Eng 18:69+ Ag '47; Same cond. R Sci Instr 18:374-5 My '47
New counter-current reflux still for isotope separation. Franklin Inst J 244:226-7 S '47

DISTILLATION apparatus—*Continued*
New head for laboratory fractionating columns. J. D. Bartleson, A. L. Conrad and P. S. Fay. diags Ind & Eng Chem Anal ed 18:724 N '46
New high efficiency column based on increasing rate of diffusion of gas molecules. il diag Pet Processing 2:539 Jl '47
New molecular distillation unit yields sharper separation and higher recovery. il Chem Ind 60:589-90 Ap '47
New rotary concentric-tube distilling column. diag Pet Refiner 26:139-40 Mr '47; Chem & Eng N 25:930 Mr 31 '47; R Sci Instr 18:256 Ap '47; Pet Eng 18:158+ Ag '47
Operating characteristics of Hypercal fractionating columns. P. L. Brandt and others. bibliog diag Am Pet Inst Proc 26(3):57-62 '46; Same. Oil & Gas J 45:86-8+ D 7 '46
Performance of McMahon packing; tests in a 6-inch-diameter fractionating column with benzene-ethylene dichloride mixtures. W. L. Forsythe, jr. and others. bibliog diag Ind & Eng Chem 39:714-18 Je '47
Precise laboratory fractionating column. H. J. Hall and F. L. Jonach. bibliog il diags Am Pet Inst Proc 26(3):48-56 '46; Same. Pet Refiner 26:92-7 Ag '47
Simplified still head with automatic control of reflux ratio. R. Kieselbach. diag Anal Chem 19:815 O '47
Spinning band column for high vacuum fractionation. S. F. Birch, V. Gripp and W. S. Nathan. bibliog diags Soc Chem Ind J 66: 33-40 F '47
Thin-skinned still; new spherical unit for vacuum distillation. Chem Ind 61:34-5 Jl '47
Use of a three-in.-diameter Stedman column for precise laboratory fractionation. W. J. Borns and others. bibliog il diags Am Pet Inst Proc 26(3):32-40 '46
Useful distilling head. R. R. Russell and C. A. VanderWerf. diag Anal Chem 19: 698 S '47
See also
Retorts

Control

Automatic reflux control and timer for pilot plant distillations. A. L. Grossberg and J. M. Roebuck. il diag Chem Eng 54:132-3 Ja '47
Control of light hydrocarbon fractionators subject to variations in feed composition and quantity. E. D. Mattix. flow diag diags Pet Refiner 26:130-4 S '47
Electronic timing device and reflux ratio controller. G. O. Thacker and B. Y. Walker. il diags Soc Chem Ind J 65:259-61 S '46
Electronically controlled apparatus for distillation of fluorine as hydrofluosilicic acid. H. H. Willard, T. Y. Toribara and L. N. Holland. diags Anal Chem 19:343-4 My '47
Miscellaneous fractionating techniques; typical fractionator control systems. J. J. Cicalese and others. diags Am Pet Inst Proc 26(3):195-8 '46; Same. Oil & Gas J 45:90-1+ N 30 '46; Same. Pet Processing 1:311-13 D '46; Same. Pet Refiner 26:151-3 Ap '47
Proportional flow controller for liquids. W. R. Wilkinson and H. A. Beatty. diags Ind & Eng Chem Anal ed 18:725-6 N '46; Same. Pet Eng 18:90+ Ag '47

Design

Analytical methods for binary distillation. R. R. White and W. T. Boyd. diags Pet Processing 1:319-22; 2:73-8 D '46-Ja '47
Application of matrices and finite difference equations to binary distillation. N. Amundson. Am Inst Chem Eng Trans 42:939-46 O-D '46
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Bubble plate column design. R. R. White. bibliog il diags Pet Processing 2:147+, 228-32+ F-Mr '47
Bubble tray hydraulics. J. A. Davies. bibliog diags Ind & Eng Chem 39:774-8 Je '47
Calculation of number of theoretical plates for rectifying column. A. E. Stoppel. bibliog Ind & Eng Chem 38:1271-2 D '46; Same. Pet Eng (Ref annual) 18:189-90 Jl 1 '47
Calculation of theoretical plates in rectification. A. M. Eshaya. bibliog Chem Eng Prog 43:555-60 O '47
Cascade-type tray introduces new fractionating principle. H. Litwin. flow chart il diags Oil & Gas J 45:237+ Mr 22 '47
Commercial molecular distillation. K. C. D. Hickman. bibliog flow sheets il diags Ind & Eng Chem 39:686-94 Je '47
Design of a pipe still. W. L. Nelson. Oil & Gas J 45:95 N 30 '46
Design of a two-bushel per day continuous alcohol unit. W. B. Altsheler and others. flow diags il Chem Eng Prog 43:467-72 S '47
Economic calculation of plate columns for two-component distillation. R. R. White. diag Pet Processing 1:230+ N '46
Effect of concentration gradient on plate efficiency. M. Nord. Chem Ind 60:106+ Ja '47
Efficient packing for rectifying columns; portable liquid air distillation plant. H. O. McMahon. il diag Ind & Eng Chem 39:712-14 Je '47
Extractive distillation-separation by C_4 hydrocarbons using furfural. J. Happel and others. il Am Inst Chem Eng Trans 42:1001-7 O-D '46
Graphical method for distillation calculations. W. D. Harbert. Pet Processing 2:610+ Ag '47
Liquid air fractionation; testing of both packed and tray-type towers. J. G. Aston, W. E. Lobo and B. Williams. bibliog il diags Ind & Eng Chem 39:718-31 Je '47
Miscellaneous fractionating techniques. J. J. Cicalese and others. diags Am Pet Inst Proc 26(3):180-221 '46; Same. Pet Refiner 26: 141-56 Ap; 127-43 My '47; Same abr. Pet Processing 1:296+ D '46
New rotary concentric-tube distilling column. Franklin Inst J 243:492-4 Je '47
Pipestill coil design. W. D. Harbert. Pet Refiner 26:122-7 S '47
Plate efficiency of fractionating columns and absorbers. H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42:741-55 Ag '46; Same. Pet Eng (Ref annual) 18:200+ Jl 1 '47
Rapid graphical method of estimating tower diameter and tray spacing of bubble-plate fractionators. W. L. Bolles. diags Pet Refiner 25:103-10 D '46
Rectification of benzene-toluene; effect of operating variables on plate efficiency. J. Griswold and P. S. Stewart. bibliog il diags Ind & Eng Chem 39:752-62 Je '47
Rectification of liquid air in a packed column. J. A. Weedman and B. F. Dodge. bibliog il diag Ind & Eng Chem 39:732-44 Je '47
Relationship of reflux to feed for a fractionating column. W. R. Pierce. bibliog Pet Refiner 26:92-7 S '47
Rotary concentric-tube distilling column. C. B. Willingham and others. bibliog diags Ind & Eng Chem 39:706-12 Je '47
Simple device for preventing the formation of hard deposits in laboratory stills fed with water partially softened by base-exchange treatment. U. R. Evans. diags Chem & Ind p434-5 D 7 '46
Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47
Theory of the performance of packed rectifying columns. J. R. Bowman and R. C. Briant. bibliog diags Ind & Eng Chem 39: 745-51 Je '47
Triple distilling apparatus. il J Chem Educ 23:565 N '46
Uniform flow controlled in column with internal reflux; patent. diag Pet Processing 1:264 D '46

Testing

Binary mixture for evaluating low pressure distillation columns. F. E. Williams. bibliog diags Ind & Eng Chem 39:779-82 Je '47
Evaluation of laboratory-batch fractionating columns. A. W. Goldsbarry and R. J. Askevold. bibliog diag Am Pet Inst Proc 26(3):18-22 '46

DISTILLATION apparatus—Testing—*Cont.*
Mechanism of failure of 18 Cr-8 Ni cracking still tubes. C. L. Clark and J. W. Freeman. il Am Soc for Metals Trans 35:298-326 '45; Same. Nat Pet N 36 pt 2:R854-6+ D 6 '44; Discussion. Am Soc for Metals Trans 35: 326-30 '45

Mercury seal facilitates measurement of molten salt flow in catalytic crackers. A. Krieg. diag Pet Processing 2:179 Mr '47

DISTILLED water. See Water, Distilled

DISTILLERIES

Equipment

Metal spray reconditions plug valves for longer life; Hiram Walker & sons, inc. B. L. Bailie. il Power 91:312-13 My '47

Waste

Distillery waste treatment works provides cattle feed and power byproducts. S. I. Zack. flow diag il Eng N 138:940-1 Je 12 '47

Recovery of dried solubles from thin stillage. J. W. Spanyer, jr. il Chem Eng Prog 43: 523-6 O '47

Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47

Treating distillery wastes and abating stream pollution; action by the American distilling company; abstract. C. W. Klassen. Pub Works 78:20 My '47

DISTILLING industries
Cheaper brands menace distillers' big earnings. Barron's 27:13-14 Mr 24 '47

Competition; liquor price key. Bsns W p50+ N 16 '46

Distillery problems; abstract. J. A. Engelhard. Chem Eng 54:258+ Ag '47

Distilling shutdown may end danger of whisky price war. Barron's 27:32 O 13 '47

First postwar slump of distillers may be near end. B. W. Corrado. Barron's 27:5 Jl 7 '47

Whisky jitters. Bsns W p76-8 Ap 12 '47

See also
Schenley distillers corporation
Whisky

Insurance requirements

Downward trend is setting in, in whisky market. Nat Underw 51:3 Ja 2 '47

Insurance crisis confronts distillers; may arrive at arrangement to escape coinsurance penalties. Nat Underw 50:2+ N 28 '46

Marine insurers may now cover whisky in Kentucky; inflated value emergency. Nat Underw 50:1+ N 21; 11 N 28 '46

Solution to insurance problem up to distillers. Nat Underw 50:15A D 12 '46

Securities

Another look at the liquors; with earnings analysis of distilling companies. G. W. Mathis. il Mag of Wall St 80:655-6+ S 13 '47

Re-valuing the liquors; with earnings analysis of distilling companies. P. Dobbs. Mag of Wall St 79:616-17+ Mr 1 '47

DISTRIBUTION (economics)
Applying engineering principles to distribution. F. B. Turck. il Ind Marketing 32:49-50+ My '47; Abstract. Mech Eng 60:415-16 My '47

Distribution to sustain expanded production. A. Schindler. Comm & Fin Chr 164:3215+ D 19 '46

Does distribution cost enough? role of distribution in U.S. economy of tomorrow. P. M. Mazur. Fortune 36:138-9+ N '47

More than sales needed to improve distribution. C. Downes. Ind Marketing 32:126+ F '47

New horizons for American business through selling and advertising. il Ptr Ink 221:39-178 O 31 '47

Problems of distribution in 1947. R. E. Wood. Comm & Fin Chr 165:867+ F 13 '47

Tackling our distribution problem. W. C. Hanson. Mag of Wall St 80:8-10+ Ap 12 '47

See also
Chain stores
Cooperation
Department stores
Jobbers
Marketing
Retail trade

Cost

Does distribution cost too much or too little? D. Francisco. il Dun's R 55:11-14+ Ap '47

Mass distribution; it can lick its own problems if it isn't made the whipping boy for our whole economy. V. Lebow. il Ptr Ink 221:48-9+ O 31 '47

See also
Marketing—Cost

DISTRIBUTION (term)
By way of definition. Aesop Glim. Ptr Ink 217:66 O 11; 107+ N 8; 56+ N 22 '46

DISTRIBUTION, Electric. See Electric distribution

DISTRIBUTION of gas. See Gas distribution

DISTRIBUTION of water. See Water distribution

DISTRICT bank, limited
Statement by the chairman. R. N. Barclay. Economist 152:123-5 Ja 18 '47

DISTRICT 50. See United mine workers of America—District 50

DISTRICT heating. See Heating from central stations

DISULFIDES
Oxidation-reduction potentials of thiol-dithio systems; thiourea-formamidine disulfide. P. W. Preisler and L. Berger. bibliog Am Chem Soc J 69:322-5 F '47

Plasticizing GR-S and natural rubber. A. R. Davis. bibliog Ind & Eng Chem 39:94-100 Ja '47

See also
Carbon disulfide

DITCHES
Ditch blasting in Iowa. W. T. Logsdon. il Explosives Eng 24:178 N '46

Ditch retards to prevent erosion. G. B. Finley. diags Pub Works 77:19-20+ D '46

Toe drain system, Sardis dam; collection ditch of porous concrete. il Concrete 55:28-9 Ap '47

DITHIANE
Precipitation of mercuric chloride with dithiane. J. B. Schroyer and R. M. Jackman. J Chem Educ 24:146-8 Mr '47

DITHIOLS
2 : 3-Dimercaptopropanol (British anti-lewisite) and related compounds. L. A. Stocken. Chem Soc J p592-5 My '47

DITHIOŏXALODIMORPHOLIDE
Studies on the Willgerodt reaction; anomalous synthesis of dithioöxalodimorpholide. F. H. McMillan and J. A. King. bibliog Am Chem Soc J 69:1207-8 My '47

DITHIOPROPANOL. See BAL

DITHIZONE
Determination of mercury in biological material. F. L. Kozelka. diag Anal Chem 19: 494-6 Jl '47

Improved dithizone method for determination of lead; mixed-color micromethod at high pH. L. J. Snyder. bibliog Anal Chem 19:684-7 S '47

Mixed color method for the determination of cadmium in air and biological samples by the use of dithizone. F. W. Church. bibliog J Ind Hygiene 29:34-40 Ja '47

Reaction between arsenicals and di-(*p*-biphenyl)-thiocarbazone. D. S. Tarbell and J. F. Bunnett. bibliog Am Chem Soc J 69:263-5 F '47

DITHYMOL diiodide. See Thymol iodide

DITOLUENE sulfonamidonaphthalene
Tetrazotisation of 1 : 5- and 1 : 8-naphthylenediamines and the tetranitration of 1 : 5- and 1 : 8-di-*p*-toluenesulphonamidonaphthalenes. H. H. Hodgson and J. S. Whitehurst. Chem Soc J p80-1 Ja '47

DIVERSIFICATION in industry
Call combats lightplane slump with diversified production. il Aviation W 47:16 Ag 25 '47

DIVERSIFICATION in industry—*Continued*
Continental Can emphasizes its diversification. Steel 121:60 S 1 '47
Distribution without frills at Philco. W. A. McGarry. il Am Bsns 17:22-4+ Mr '47
Diversified output knits Edo's production capacity. E. J. Bulban. il Aviation N 7:21 Je 2 '47
Extending precision methods to construction field; Warner and Swasey multi-purpose earth mover. W. B. Fiske. il Ind Marketing 32:40-2+ S '47
Fabricators must be versatile; Steiner mfg. co. acrylic items. il Mod Plastics 25:124-6 O '47
Line expansion lifts Minnesota Mining sales to $75,000,000. G. H. Halpin. il Sales Management 58:60+ F 1 '47
Santa Claus diversifies; Noma electric corp. expands into year-round market. Bsns W p56+ D 28 '46
We made 200 products but not many people knew us; Eagle-Picher co., Cincinnati. Ptr Ink 218:41 F 28 '47
What's in a name? shifts in the nature of corporate activities. E. A. Barnes. Mag of Wall St 80:30-2+ Ap 12 '47
Year-round line; F. L. Jacobs co., auto supply firm, integrating home appliances into its production setup. Bsns W p50 D 14 '46

DIVERSITY factor
Diversity factor underlies economical design. H. E. Campbell. Elec World 128:66-8 S 27; 106-7 O 11 '47

DIVIDENDS
Companies paying progressively higher dividends. H. S. Coffin. Mag of Wall St 79:537-9+ F 15 '47
Dividend harvest. Bsns W p70+ N 30 '46
Dividend longevity in listed stocks. Bsns W p66 Mr 1 '47
Dividend payments still ride high. Bsns W p92 O 25 '47
Dividend tally for first half of 1947. Bsns W p99 Jl 26 '47
Dividends in 1946. Comm & Fin Chr 165:1441 Mr 13 '47
Many dividend boosts seem to prove major firms' confidence in future. Barron's 27:11 Mr 3 '47
1947 dividend payments stage sharp climb. Bsns W p64 My 17 '47
1947 special re-appraisals of values, earnings and dividend forecasts. Mag of Wall St 79:488-501+, 548-61+, 608-21+, 668-79+; 80: 489-97+, 541-51+, 591-606+, 645-59+ F 1-Mr 15, Ag 2-S 13 '47
Publicly reported dividend payments: revised series; monthly figures for 1943 and 1944. Survey of Cur Bsns 27:31 F '47
Publicly reported dividends rose 12% in 1946. Bsns W p68 Mr 8 '47
Purchased dividend accruals. J Account 83: 498-9 Je '47
Reserves and dividends have an important relationship. H. M. Stillman. Bankers Mo 63:591-2 D '46
SEC report shows why dividends last year didn't rise as rapidly as earnings. Barron's 27:29 Je 16 '47
Shadow of 102 on dividend policies; with emphasis on the immediate tax problems of small corporations. E. B. George and R. J. Landry. Dun's R 55:sup7-34 [Ap] '47
Study of dividend trends; with data on selected companies. G. W. Mathis. Mag of Wall St 80:251+, 252 Je 7 '47

See also
Corporations—Finance
Profit
Securities
Stocks

DIVIDING machines
Drum prescribes ruling pattern for automatic dividing machine. il diags Product Eng 18:90-3 Je '47
Watts linear dividing engine. il diags Engineering 164:55-8 Jl 18 '47

DIVINYLACETYLENE
Ethoxy derivatives of divinylacetylene; abstract. A. L. Klebanskii, D. M. Krasinskaya and L. G. Saphonova. Chem Eng 54:298 My '47

DIVINYL benzene
Preparation of *m*-divinylbenzene. H. W. Johnston and J. L. R. Williams. Am Chem Soc J 69:2065 Ag '47

DIVORCE
Reconciliation and divorce; comments on report of Denning committee. Economist 152: 366 Mr 15 '47

DIXIE cup company
Paper shortage holds down sales and net. Barron's 27:33 Jl 14 '47

DIXIE distributors, inc. See National Dixie distributors, inc.

DOBBS houses, inc.
Stock offered. Comm & Fin Chr 164:3141 D 16 '46

DOBSON, Edgar F.
Automobile and motor boat racer; hobby of vice president of New Amsterdam Casualty. por East Underw 47:113 D 13 '46

DOCK labor. See Longshoremen

DOCKS
How Hoberg handles and stores pulpwood. R. C. Pratt. il map plan Paper Ind 29:214-17 My '47

See also
Dry docks
Harbors
Ore docks
Piers

DR PEPPER company
Mr O'Hara's nickel drink; after sixty-three snug years in the South, Dr Pepper company wants national distribution. il Fortune 36:108-11+ O '47

DOCUMENTARY films. See Moving pictures—Documentary films

DOCUMENTATION
Novice on documentation. E. N. Simons. J Doc 2:238-41 Mr '47

France
Documentation scientifique et technique en France. J. Wyart. Assn of Sp Lib & Inf Bur Proc 1946:84-5

Germany
Documentary resources of present-day Germany. K. Garside. Assn of Sp Lib & Inf Bur Proc 1946:91-8

Netherlands
Report on the present position of information services in the Netherlands. F. Steggerda. Assn of Sp Lib & Inf Bur Proc 1946:86-7

Switzerland
Swiss centre of documentation. W. Janicki. Assn of Sp Lib & Inf Bur Proc 1946:75-8

DODECAHYDROPHENANTHRENE
Synthesis of 1-keto-$\Delta^{4a,10a}$-dodecahydrophenanthrene, *cis*-9-methyl-1-decalone, and other cyclic ketones. W. E. Bachmann and N. L. Wendler. bibliog Am Chem Soc J 68: 2580-4 D '46

DODECANE
Assembly and testing of 52-foot laboratory adsorption column; separation of hydrocarbons by adsorption. B. J. Mair, A. L. Gaboriault and F. D. Rossini. bibliog plans diags Ind & Eng Chem 39:1072-81 S '47

DODECANESULFONIC acid
Critical concentration of dodecanesulfonic acid. H. F. Walton. bibliog Am Chem Soc J 69:469 F '47

DODECYLAMINE
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47

DODECYLAMMONIUM chloride
Electrical behavior of hexyl- and dodecylammonium chlorides in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. bibliog Am Chem Soc J 68:2460-4 D '46
Viscosities, densities and refractive indices of solutions of dodecylammonium chloride in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:1867-9 Ag '47

DODGE, Joseph Morrell, 1890-
Heads U.S. group at Vienna peace parley. por Banking 39:56 Je '47

DODGE, Joseph Morrell—*Continued*
New A.B.A. president. H. J. Boone. pors Burroughs Clearing House 32:17-19+ O '47
New president of the American bankers association. pors Banking 40:46-7+ O '47

DOEBNER reaction
8-Nitrocinchoninic acids and related substances. E. R. Buchman, C. M. McCloskey and J. A. Seneker. bibliog Am Chem Soc J 69:380-4 F '47

DOEHLER-JARVIS corporation
Production expanding. Barron's 27:7 F 3 '47

DOG food
Canned dog food starts come-back. Comm & Fin Chr 166:926 S 4 '47
Sales manual deals with all parts of a diverse market; Gaines dog food. J. A. Shellenberger. il Ptr Ink 219:43+ My 16 '47

Advertising
Return of cans touches off wet vs. dry dog food battle. M. Riddle. il Sales Management 58:42-4 Je 1 '47

DOG-tooth violet. See Erythronium americanum

DOGS
Beware of dog; he sells! Gillespie varnish co.'s real life trade-mark. il Sales Management 58:73 Ap 15 '47
Canada; dogs imported into Canada from the United States; requirements to be met. For Comm W 28:13 Jl 5 '47

DOHRMAN, Howard I.
Sketch. por East Underw 47:38 D 13 '46

DOLLS
Study of special bodies for doll heads; abstract. C. Shoemaker and J. F. McMahon. Cer Ind 48:63 Je '47

Manufacture
Two ceramic plants keep busy with Nancy Ann dolls. il Cer Ind 49:102+ Jl '47

DOLLS, Plastic
Nested dolls are now molded. il Mod Plastics 25:132-3 O '47

DOLOMITE
Desulphurisation and dephosphorisation of iron; meeting of Iron and steel institute, Institute of British foundrymen and British iron and steel research association, London, March 19-20. Engineer 183:259-61 Mr 28 '47
Dolomite linings for basic electric arc furnaces. E. C. Brampton and others. bibliog diags Iron & Steel Inst J 152:341-72, pl 36-9 no 2 '45; Excerpt. Blast F & Steel Pl 34: 412+ Mr '46; Abstracts. Engineer 180:442 N 30 '45; Engineering 160:453-4 N 30 '45; Iron Age 157:74 Ja 31 '46; Metal Prog 50: 146+ Jl '46; Discussion. Iron & Steel Inst J 152:372-83 no 2 '45; Engineer 180:442-3 N 30 '45; Engineering 160:454 N 30 '45
Industrial uses of limestone and dolomite. O. Bowles and N. C. Jensen. U S Bur Mines Information Circ 7402:1-19 '47

DOMAN FRASIER helicopters, Inc.
Stock offered. Comm & Fin Chr 165:1998 Ap 14 '47

DOME mines, limited
New mine shows ore richer than expectations. Barron's 27:26 Je 9 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:211+ My 24 '47

DOMES
Thin-shelled domes loaded eccentrically. W. C. Voss and others. il diags Am Soc C E Proc 73:1173-95 O '47

DOMESTIC appliances
Heavy advertising for home appliances is scheduled in face of uncertain demand. B. Tolk. Ptr Ink 220:86 Ag 1 '47
Washers wash, refrigerators cool, radios play, at United Distributors Boston showrooms. J. Mass. il Sales Management 57:74+ D 1 '46

See also
Dishwashing machines
Electric apparatus and appliances, Domestic
Freezers, Domestic
Gas appliances, Domestic
Washing machines
Water softeners, Domestic

Testing
Testing of solid fuel domestic appliances. E. A. C. Chamberlain and J. A. Toole. Gas J (Lond) 249:206 Ja 22 '47

DOMESTIC architecture. See Architecture, Domestic

DOMESTIC engineering (periodical)
Merchandising by Domestic engineering. Sales Management 59:132+ Jl 15 '47

DOMESTIC finance
Housing and fuel expenditures of city families. D. I. South. Mo Labor R 64:868-77 My '47

See also
Budget, Household

DOMESTIC relations
Reflections on the law of the family. H. S. Daggett. bibliog Ann Am Acad 251:120-7 My '47

DOMESTIC service. See Servants

DOMICILE
Double death taxes; abstract. A. S. Guterman. J Account 84:57-8 Jl '47
Double state inheritance. J Account 83:148 F '47

DOMINICAN REPUBLIC

See also
Mines and mineral resources—Dominican Republic

Economic conditions
News by countries. For Comm W 25:22 N 9; 29 D 7 '46; 26:19 Ja 4; 16 F 1; 17-18 Mr 1; 27:14-15 Je 7; 28:10 Jl 12; 15 Ag 2; 29:12-13 O 11 '47

DONALDSON, Thomas Blaine, 1876-1947
Sketch. por Nat Underw 51:19 My 22 '47

DONNAN equilibrium
Unequal distribution of diffusible non-electrolytes across a membrane. C. L. Deasy. Science 104:388 O 25 '46; Discussion. D. I. Hitchcock. 105:360 Ap 4 '47

DONUTRON. See Magnetron

DOOR fittings

See also
Latches
Locks and keys

DOOR frames
Mass producing hollow metal door frames; Diebold, inc. il Iron Age 160:71 S 4 '47

DOOR knobs
Doorknob production accelerated by ingenious tooling; Yale & Towne mfg. co. H. Chase. il diags Iron Age 160:56-61 Jl 24 '47
New press tooling speeds hardware production; Yale & Towne plant. W. J. Donaghey. il diags Iron Age 160:58-60 Ag 28 '47

DOOR-to-door selling. See Canvassing

DOORKEEPERS
Distinguished doorman; Marsh & McLennan functionary; Adam M. Beckley. C. M. Cartwright. Nat Underw (Life ed) 51:11+ S 19 '47; Same abr. Nat Underw 51:2+ S 11 '47

DOORMEN. See Doorkeepers

DOORS, Garage. See Garage doors

DOORS, Sliding
Set of modernfold doors made from vinyl coated fabric. il Mod Plastics 24:129 D '46

DOPPLER effect
Doppler effect in propagation. H. V. Griffiths. Wireless Eng 24:162-7 Je '47; Discussion. 24:248-9 Ag '47
Full-scale free-flight ballistic measurements of guided missiles. L. A. Delsasso, L. G. de Bey and D. Reuyl. plan Aviation W 47:28+ S 15 '47
Historical note on the rate of a moving atomic clock. H. E. Ives. bibliog diags Opt Soc Am J 37:810-13 O '47

DOREMUS, Frederick W., 1899-
New Eastern underwriters association manager. por Nat Underw 50:1+ D 19 '46

DORMAN, Long and company
Ordinary general meeting, 57th, London. Economist 151:975 D 14 '46

DORMITORIES
Concrete precast panels used in building Vermont dormitories. A. D. Campbell. il Concrete 55:30+ Ag '47
Dormitory of fire-resistant construction, Cornell university. il Eng N 138:371-2 Mr 6 '47
Overcrowded colleges and universities need new brick dormitories; views. Brick & Clay Rec 109:26-7 N '46

DORN, Herman William, 1911-
Chemist develops drugs in home laboratory; Sogenate. por Chem & Eng N 25:1042 Ap 14 '47

DORR company
Process engineering research laboratory; Dorr company, Westport, Conn. G. M. Darby, E. J. Roberts and J. D. Grothe. il Ind & Eng Chem 39:453-6 Ap '47

DORYL
Investigations on the influence of chemical constitution upon toxicity; compounds related to doryl. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 176-82 F '47

DOUBLE bonds
Absorption spectra of some benzene derivatives with unsaturated side chains. T. W. Campbell and others. Am Chem Soc J 69: 880-3 Ap '47
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S. L. Linden. Am Chem Soc J 69:2042-6 Ag '47
Re-evaluation of the covalent radii of some of the elements. W. Gordy. bibliog J Chem Phys 15:81-4 F '47
Sulfur bond in vulcanizates. S. R. Olsen, C. M. Hull and W. G. France. bibliog Ind & Eng Chem 38:1273-88 D '46
Ultraviolet absorption spectra of αβ-unsaturated ketones conjugated with an aromatic nucleus. A. L. Wilds and others. bibliog Am Chem Soc J 69:1985-94 Ag '47

DOUBLE refraction. See Refraction, Double

DOUBLE taxation. See Taxation, Double

DOUGH mixers
Hydraulic seal on sliding door of Baker Perkins dough mixing machine. il Machine Design 19:108 Ag '47

DOUGHERTY, Lee J. 1881-1947
Sketch. Spectator (Life ed) 154:38+ Je '47

DOUGHNUTS
Ball type friction ratchet meters feed; doughnut making device. il diag Product Eng 18:98 Mr '47

DOUGLAS, Lewis Williams, 1894-
Appointed ambassador to Great Britain. por Nat Underw (Life ed) 51:1 F 28 '47; East Underw 48:8 F 28 '47
High diplomatic missions. por(cover) Bsns W p8 Mr 8 '47
Named ambassador to Britain. Comm & Fin Chr 165:1295 Mr 6 '47

DOUGLAS, William Orville, 1898-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

DOUGLAS aircraft company
New Douglas? company may re-enter two-engine transport field with DC-9. Bsns W p51-2 Ag 16 '47

DOUGLAS fir
Engineering in wood. O. M. Saxton. Western Soc E J 52:43-6 Mr '47
New data on Douglas fir beams in Department of commerce report. Eng N 138:207 F 6 '47
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47

DOUGLAS oil company of California
Stock offered. Comm & Fin Chr 166:1048-9 S 15 '47

DOW, Willard Henry, 1897-
Receives SCI medal. por Chem Ind 59:1028 D '46
Salts of the earth; address at Chemistry industry medal award. Chem & Ind p19-21 Ja 11 '47
Society of chemical industry medal awarded to Dow. por Chem & Eng N 24:3030-1 N 25 '46; Chem Eng 53:154-5 N '46

DOW chemical company
Annual report. Comm & Fin Chr 166:565 Ag 11 '47
Convertible stock yields more than common. Barron's 27:27 Ag 4 '47
Pollution control at a large chemical works. I. F. Harlow and T. J. Powers. flow sheets il map Ind & Eng Chem 39:572-7 My '47
Preferred stock offered. Comm & Fin Chr 166:369-70 Jl 28 '47

DOW Corning corporation
Silicones; new class of synthetics. il Fortune 35:104-11+ My '47

DOW theory
Deflating prophets; forecasting errors. A. W. May. Comm & Fin Chr 166:1409+, 1633+, 1737+ O 9, 23, 30 '47; Discussion. 166:1632, 1736+ O 23, 30 '47

DRAFT
Causes of drafts, and how they are eliminated. L. R. Phillips. il Sheet Metal Worker 38:104+ S '47
Draft in 100-ft. stacks; tables. W. L. Nelson. Oil & Gas J 45:103 Ap 12 '47
50-ft. steel stacks; draft calculations. W. L. Nelson. Oil & Gas J 45:177 Mr 29 '47
Pressure control in tunnel kilns. W. H. Pugsley. Am Cer Soc Bul 26:209-12 Jl 15 '47
Stack size, furnace draft. W. L. Nelson. Oil & Gas J 45:135 Ap 19 '47
Theoretical stack draft; chart; data sheet. J. Hyam. Power 91:723 O '47
Theoretical stack draft; table. W. L. Nelson. Oil & Gas J 45:101 Mr 15 '47

DRAFT, Mechanical. See Mechanical draft

DRAFT, Military. See Military service

DRAFT gears
Introduces new light weight car draft gear; A. O. Smith corp. Steel 121:59 O 27 '47

DRAFTING room practice
Composite dimensioning speeds production and inspection. J. T. Bennett. diags Product Eng 18:141-3 O '47
Dimensions and tolerances. M. F. Spotts. bibliog diags Product Eng 18:160-4 Ja; 88-91 F '47
Drawing-change system. A. C. Wedge. diags Machine Design 19:101-4 Mr '47
Drawing office specification; surface finish. H. J. Griggs. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):339-40 '45; Same. Engineering 159:237 Mr 23 '45
Graphical solution to problem of connecting two lines by a third line which makes specified angles with each. P. O. Potts and H. J. Johnson. diags Machine Design 19: 114-16 My '47
Precision method of checking compound angles. J. Ahearn. diags Mach 53:178-81 Ja '47
Refrigerator door tool design simplified; mold drawings simplified. G. M. Bleakley. diags Am Mach 91:88 Jl 31 '47

See also
Airplanes—Manufacture—Drafting room practice
Engineering drawing

Standards
Abbreviations standardized for 2,000 terms for use on drawings. W. J. Kunz. Ind Stand 18:84-7 Ap '47
Basic standard drafting practice guarantees correct interpretation. G. E. Rowbotham. diags Product Eng 18:137-40 Jl '47; Same, with suggested standards for proposed manual. Ind Stand 18:212-16 S '47

DRAFTING rooms
Architectural offices in a small remodeled brownstone in Manhattan. il plans Arch Forum 86:89-91 My '47
Remodeled drafting room; better lighting, air conditioning. il Sci Am 177:26 Jl '47

Air conditioning
Big drafting room air conditioned; Austin co, il Heating-Piping 19:91 My '47

DRAFTING rooms—*Continued*

Lighting

Ceiling integrates lighting, acoustics and air conditioning; Austin co.'s drafting room, Cleveland. il diags Arch Forum 87:124 Jl '47

Lighting for drawing offices. L. C. Rettig. il Light & Lighting 40:108-11 Je '47

New lighting developments and their application to drafting rooms. R. C. Putnam. il diags J Eng Educ 37:389-401 Ja '47

Recommended practice of office lighting; report of committee of Illuminating engineering society. il Illum Eng 42:701-3 Jl '47

Something new in lighting and air conditioning; drafting room, Austin co. il Civil Eng 17:264 My '47

DRAGERTON, Utah

U.S. Steel and the disappearing town. il Bsns W p54 Je 7 '47

DRAGLINES. See Excavating machinery

DRAINAGE

Application of electrosmosis to soil drainage. A. H. D. Markwick and A. F. Dobson. il diags Engineering 163:121-3 F 7 '47

Blasting water ponds on North Dakota farms. il Explosives Eng 25:53 Mr '47

Consolidation of fine-grained soils by drain wells. R. A. Barron. bibliog il diags Am Soc C E Proc 73:811-35 Je '47

Draining coarse gravel with wellpoints; dewatering excavation for power plant on the Allegheny river. il diag Eng N 137:638-9 N 14 '46

Dynamite spells doom for insect menace; blasting drainage ditches. B. H. Ludwig. il Explosives Eng 25:119 Jl '47

Investigation of drainage rates affecting stability of earth dams. F. H. Kellogg. diags Am Soc C E Proc 73:1065-88 S '47

Past and prospective drainage reclamations in the coastal marshlands of the Mississippi River delta. R. W. Harrison and W. M. Kollmorgen. bibliog map J Land & Pub Util Econ 23:297-320 Ag '47

See also
Ditches

DRAINAGE, House

See also
Plumbing
Sewerage

DRAKE America corporation

Drake America takes over; purchase control in Mark Cross. il Bsns W p80+ S 13 '47

DRAKES, limited

Centenary of Drakes, of Halifax. Gas J (Lond) 251:92-3 Jl 9 '47

DRAPERY

Introduces product through limited store distribution; Everfast drapery. E. M. Housman. il Ptr Ink 219:40 Ap 18 '47

Modern decor. Textile Col 69:24 Ag '47

DRAPERY, Paper. See Paper drapery

DRAWBENCHES. See Metal drawing

DRAWBRIDGES. See Bridges, Bascule; Bridges, Lift

DRAWING

Graphical construction of perspective diagrams. G. D. Hobson. bibliog diags Am Assn Pet Geologists Bul 31:1886-93 O '47

See also
Engineering drawing
Graphic methods
Plumbing—Drawing

DRAWING, Geometrical. See Geometrical drawing

DRAWING compounds. See Lubrication and lubricants (metal drawing)

DRAWING paper

Squared drawing paper. diag Engineer 183: 171 F 14 '47

DRAWINGS

See also
Advertisements, Pictorial—Drawings
Airplanes—Drawings
Cartoons

DREDGES

Early horse-operated dredger. H. P. Spratt. il Engineering 163:208 Mr 21 '47

Fourteen classifiers on sand dredge. il diags Rock Prod 49:64-5+ N '46

Huge placer dredges to excavate tin-bearing sand and gravel off the Dutch East Indies. il Steel 121:90 Jl 28 '47

Large American-built tin dredgers for the East Indies. il Engineer 183:568-9 Je 27 '47

Tin dredge for Netherlands East Indies. Mech Eng 69:162-3 F '47

Tin-mining placer dredges. il Marine Eng 52:88-9 My '47

DREDGING

Army engineers complete dredged cutoff to control meander of Arkansas river. A. B. Smith. il Eng N 138:508-10 Ap 3 '47

Dredging; a specialized Dutch industry. For Comm W 26:23 Ja 11 '47

Dredging at Two Harbors, Minnesota; unit prices. Eng N 139:617 O 30 '47

Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

See also
Tin dredging

DREHER, Ray C.

Gallery; Ray Dreher. W. Weir. por Adv & Sell 40:90+, 131 Ag '47; Excerpts. East Underw 48:17 Ag 22 '47

DREPPERD, Carl W.

Advertising illustrations in Drepperd collection date back to 18th century. Ptr Ink 217:147 N 15 '46

DRESS industry

Dress buyers take what they get and really like it; Annie Laurie ships quotas every two weeks. L. Fitzmaurice. il Sales Management 57:74+ D 15 '46

New York's dress industry battles for its future. R. J. Masiello. Barron's 26:11 N 25 '46

Orderly orders; dress manufacturers and retailers may adopt standard order blank. Bsns W p78-9 Je 7 '47

DRESS shops

Dress shop; Fresno, Calif. and Philadelphia. il plans Arch Forum 87:108-13 Jl '47

DRESSEL, Walter

Sketch. por Nat Underw 51:27 Ja 16 '47

DRESSER industries, inc.

Annual report. Comm & Fin Chr 165:335-6 Ja 20 '47

Expects to benefit from natural gas crisis. Comm & Fin Chr 165:1392 Mr 13 '47

DRIED coconut. See Coconut, Dried

DRIED eggs. See Eggs, Dried

DRIED food. See Food, Dried

DRIED fruit. See Fruit, Dried

DRIED milk. See Milk, Dried

DRIED vegetables. See Vegetables, Dried

DRILLING and boring (earth and rocks)

Air-bored holes obviate trenching; Hydrauger. il Comp Air Mag 52:156 Je '47

Analysis of man-power efficiency in drilling procedures in the Tri-state mining district. J. D. Forrester and J. A. Fuller. bibliog Mo U Sch Mines & Met Bul tech ser v 17 no 1:1-54 '46

Appraising the hidden values in blasthole diamond drilling. C. H. Hopper. diags Eng & Min J 148:84-6 O '47

Billion-dollar waterway in California; Central Valley project, the Friant-Kern canal. O. H. Barnhill. il map Explosives Eng 25: 50-2+ Mr '47

Caliche presents excavating difficulties. il Comp Air Mag 52:99 Ap '47

CAA develops new high-speed core drill. il Civil Eng 17:63 F '47

Cleaning and grouting of limestone foundations, Tennessee Valley authority; Douglas dam. T. F. Taylor. il diags Am Soc C E Proc 72:1352-69 D '46

Cleaning and grouting of limestone foundations, Tennessee Valley authority; Fort Loudoun dam. A. L. Pauls. il diags Am Soc C E Proc 72:1332-51 D '46

Constructing the Shipshaw power development. W. M. Goodwin. il plan diags Comp Air Mag 52:2-7 Ja '47

Determining depth of sand and gravel. R. F. Mirick. il Rock Prod 50:88 Ja '47

DRILLING and boring (earth and rocks)—*Cont.*
Developments in underground drilling and blasting practice; National tunnel & mines co., Tooele, Utah. W. T. Warren. diags Min Cong J 32:39-41 O '46
Diamond drilling blast holes, Balmat mine, St Lawrence county, N.Y. M. Mosier. pl U S Bur Mines Information Circ 7408:1-6 '47
Diamond drilling blast holes, eastern magnetite Mine A. M. Mosier. U S Bur Mines Information Circ 7393:1-8 '46
Diamond-drilling blast holes, eastern magnetite Mine B; with cost data. M. Mosier. 2pls U S Bur Mines Information Circ 7401:1-8 '47
Diamond drilling of potash reserves in Eddy county, N. Mex. W. R. Storms. bibliog 7pls U S Bur Mines Rep of Invest 4098: 1-108 '47
Drilling and sampling with a wagon drill. J. H. Soulé. 4pls U S Bur Mines Rep of Invest 3984:1-7 '47
Exploration drilling at Pachuca. C. J. Barber. bibliog il plan diag Min Cong J 33:21-7 O '47
Fusion piercing for making blast holes in ore. il Can Min J 67:1043-5 N '46; Abstracts. Blast F & Steel Pl 35:59 Ja '47; Mech Eng 69:158 F '47; Civil Eng 17:73 F '47
Hard iron ore yields to fusion-piercing; rotating blowpipe burning oxygen and flux bearing fuel. A. W. Knoerr. il Eng & Min J 147:66-9 N '46
Hazard checked; sled mounted drill for slope quarrying; material for Blue Mountain dam. W. C. Coe. il Nat Safety N 55:24-5+ My '47; Same cond. Comp Air Mag 52:126-7 My '47
High-temperature flame makes blast holes in hard rock. il Roads & Bridges 85:84-5 My '47
Horizontal drilling; new strategy for working underground. il diags Fortune 36:96-101 S '47
Improved barrel and bit increases core recovery. L. J. Burrows. diags Eng & Min J 147:80-1 N '46
Midget aluminum spudder for drilling seismograph shot holes in Bahama islands. P. Reed. il Oil & Gas J 45:83 Ja 11 '47
1,400-ft. calyx holes for Peruvian hydro job. il plan Eng N 139:200-1 Ag 7 '47
Rock-drilling costs. Comp Air Mag 52:205 Ag '47
Rock drilling with flame. il Sci Am 176: 170-1 Ap '47
St Joseph lead enterprise; lead belt geology; diamond drilling. R. E. Wagner. il map Min & Met 28:366-8 Ag '47
Tungsten carbide bits; key to low-cost drilling. il Eng & Min J 148:102 Ap '47

See also
Mining methods
Petroleum—Well drilling
Quarries and quarrying
Rock drills
Shaft sinking
Tunnels and tunneling
Wells

DRILLING and boring (metal working, etc.)
Applying light drill presses to high-production jobs; Charles Marti co. C. Marti. il diags Mach 53:146-50 Jl '47
Carbide parts with drilled and tapped holes for fastening screws. il Mach 53:187-8 Ap '47
Diamond-die drilling; electrical method. il Mech Eng 69:416-17 My '47; Same. Iron Age 160:64-5 Jl 10 '47; Same abr. Product Eng 18:153-4 Jl '47; Excerpts. Machine Design 19:105-6 Jl '47
Drill jig with a window. R. Mawson. diag Materials & Methods 26:110 S '47
Drilling closely spaced multiple holes; Zagar drill head and index fixture. il Iron Age 158:71 D 5 '46
Drilling, tapping of carbide parts made possible by Carboloy process. il Am Mach 91: 161 Ap 10 '47; Steel 120:94 Mr 31 '47; Mach 53:187-8 Ap '47; Iron Age 159:56 Ap 17 '47
Electrical methods for diamond-die production. C. G. Peters and others. il diags J Res Nat Bur Stand 38:449-64 My '47
High-voltage spark replaces mechanical drilling of diamond dies. Mach 53:184 My '47
How to measure machinability in the shop. G. Schlesinger. bibliog il diags Am Mach 90:118-22 N 21 '46
Indexing drill jig simplifies machining of electrical housings. R. Mawson. diags Steel 121: 95 Ag 4 '47
Locating holes accurately with a precision drilling jig. R. Mawson. diags Steel 121:86 S 22 '47
Low cost drilling jig. R. Mawson. diag Materials & Methods 26:122 O '47
Machinability testing apparatus and tests carried out at Naval ordnance inspection department, Sheffield, including development of drill test. D. G. W. Curry. Inst Mech Eng J & Proc 155 (War emergency issue no 20):244-6, pl 2-3(p240) '46; Same. Engineering 161:597-8 Je 21 '46
Modern developments in precision boring practice. C. R. Alden. il Iron Age 160:50-5 Jl 31 '47
New method of spacing for hole drilling; Bullard Man-Au-Trol. T. C. Du Mond. il Materials & Methods 25:72-4 Ja '47
Power operated work table; Man-Au-Trol spacer. il Aero Digest 53:71 D '46
Quick acting drill jig. R. Mawson. diag Materials & Methods 26:134 Jl '47
Recommendations for drilling various materials; data sheet. Mach 53:223 Mr '47
Safe feeds and speeds for high-speed steel twist drills; data sheet. Mach 53:235 F '47
Save minutes, make more profit, jig boring; manufacture of multiple-spindle gearless drillheads. F. Zager. il diag Am Mach 91: 78-80 F 27 '47
Simple quick-acting drill jig. R. Mawson. diag Materials & Methods 25:132-3 My '47
Spirit level tee guides hand drill. E. A. Hoppe. diags Am Mach 91:137 N 6 '47
Telescoping valve retracts when pressure is off; application of coolant in boring job. A. F. Scoblic. diags Am Mach 91:125-6 Je 5 '47
Threaded drill bushing eliminates changing jigs. M. H. Ball. diag Am Mach 91:103 F 27 '47
Thrust, in pounds, required for drilling; data sheet. Mach 53:257 Je '47
Thrust loads in drilling various metals; table; reference book sheet. Am Mach 91:139 Mr 27 '47; Same. Materials & Methods 25: 147 Ap '47
What happens in using steel disintegrators? Elox equipment removes broken tools, also cuts and drills. H. V. Harding. il diag Mach 53:161-4 Mr '47
Work table hydraulically positioned; Man-Au-Trol spacer. il diag Product Eng 18:94 Mr '47

See also
Broaching
Drilling and boring machinery
Machine shop practice
Metal cutting
Reamers

DRILLING and boring machinery
Accurate concave spherical seats made in boring mill. F. G. Forquer. diags Am Mach 91:107-8 S 25 '47
Adcock and Shipley automatic drilling and reaming machine. il Engineer 184:254 S 12 '47
Adcock and Shipley five-spindle drilling machine. il Engineer 183:133 Ja 13 '47
Adcock and Shipley multi-spindle drilling machine. il Engineer 183:434 My 16 '47
Adjustable boring fixture for machining fillets to different radii. J. G. Goulette. diags Mach 53:177 Mr '47
Autocar installs special machine for boring crankcases. il Automotive & Aviation Ind 96:42 Je 1 '47
Automatic pneumatic indexing drilling jig. il diags Engineering 162:440-1 N 8 '46
Boring with modern machine tools. G. Hubbard. il Steel 120:98-100+ Je 23 '47
Churchill Tri-Tec universal drilling machines. il Mach 53:191-2 My '47
Cincinnati Hypro automatic car-wheel boring and turning machine. il Mach 53:183 1 '46
Cincinnati Planer's boring and turning mill has automatic operation; new chucking method. il Am Mach 90:161 N 21 '46

DRILLING and boring machinery—*Continued*
Davis & Thompson two-way boring machine. il Mach 53:202 Ap '47
De Vlieg precision jig-boring and milling machine. il Engineering 163:167-8 Mr 7 '47; Automobile Eng 37:98-100 Mr '47
Drilling with modern machine tools. G. Hubbard. il Steel 120:88-9+ Je 16 '47
Drillpress attachment rebores small motor end bells. G. Burnley. diag Am Mach 91: 154-5 Je 19 '47
Ex-Cell-O production grinders and precision boring machines. il Mach 54:180-1 S '47
Fosdick drilling machines and jig borers. il Mach 54:198 S '47
Herbert precision boring and milling machine. il Engineer 183:180 F 14 '47
How to sharpen drills; illustrations with text. H. S. Wharen. Am Mach 91:112-13 Ag 28 '47
Jig drills reduce capital outlay, eliminate setup time; Wright aeronautical corp. E. Prange. il Iron Age 159:42-5 Ja 9 '47
Jones and Shipman centring machine and electronically-controlled grinder. il Engineering 164:152 Ag 15 '47
Jones offset boring head. il Engineer 184: 300 S 26 '47
Kaukauna boring head designed for repetitive boring operations. il Materials & Methods 26:141 Jl '47
Kaukauna portable drilling machine will drill, tap work at any angle. il Am Mach 91:169 F 13 '47; Iron Age 159:51 Ja 9 '47; Mach 53:218+ Ja '47
Kearney and Trecker no. 2 Model C autometric precision boring machine. il diags Product Eng 18:146-7 S '47
Kearns boring machine with planer-type table. il Engineering 162:511, 516 N 29 '46; Automobile Eng 37:61-2 F '47
Large horizontal boring and milling machine. il Engineer 184:203-5 Ag 29 '47
Machine tool show in print; boring. il diag Am Mach 91:215-20 S 11 '47
Machine tool show in print; drilling. il Am Mach 91:227-35 S 11 '47
Moline Hole Hog drilling and boring machines. il Mach 54:169 S '47
Moline special multi-spindle automatic drilling machine. il Mach 54:254+ S '47
Moline special rail-drilling machine. il Mach 53:192 D '46
Multiple drilling attachment handles many different jobs. W. H. McCullough. diags Am Mach 91:135 N 6 '47
New Britain double-end six-spindle chucking machine and precision contour boring and turning machine. il Mach 53:172-4 Ag '47
Niles 48-in. automatic wheel borer. il Am Mach 91:181 Je 19 '47
Pacera high-speed drill. il Automobile Eng 37:106-7 Mr '47
Precision boring of cylinder blocks on Greenlee automatic transfer machine. il Mach 53:171-3 My '47
Precision turning on small drilling machines. il diags Mach 53:191-3 F '47
Production drilling of rail sections; American brake shoe co. il Steel 119:67+ N 25 '46
Production drilling with a Churchill universal machine. il Iron Age 160:66 Ag 7 '47
Production processes; their influence on design; precision boring. R. W. Bolz. il diag Machine Design 19:137-42 Jl '47
Quick-action boring fixture. D. A. Baker. diags Mach 53:181-2 Jl '47
Self-synchronous transmitters electrically couple machine tools; balancing machine presets drilling unit for correcting unbalance in crankshafts. il diags Product Eng 18:92-5 Ja '47
Sip large-size precision jig boring and milling machine. il Mach 53:185-6 My '47
Société Genevoise jig boring machines. il diag Engineer 184:15-16 Jl 4 '47
Taper attachment improves vertical boring mill. C. Smithyman. il diags Am Mach 91: 147 Jl 17 '47
Zagar multiple drill unit. il Sci Am 177:32 Jl '47
Zagar multiple-spindle drilling heads. il diag Machine Design 18:105 N '46
See also
Boring bars

DRILLS. See Drilling and boring machinery

DRILLS, Oil well
Bases for drilling units made more rigid. il Pet Eng 18:172 Ap '47
Mobile rotary drilling unit proves efficient in Rocky Mountain operations. N. Williams. il Oil & Gas J 45:50-1+ F 1 '47
Mobile rotary rig for South America. N. A. D'Arcy, jr. il Pet Eng 18:74+ Jl '47
Proper care of wire line increases life. E. McDaniel. il Pet Eng 18:88 Ap '47
Tool behind our oil supply; Hughes tool company, largest supplier of rock bit oil drills. il Manuf Rec 116:43, 52 Ap '47

Standards
Proposed API specification on rating of rotary-drilling hoisting equipment. diag Am Pet Inst Proc 25(4):264-7 '45
Report of committee on the standardization of rotary-drilling equipment. diags Am Pet Inst Proc 25(4):226-56 '45
Report of committee on the standardization of rotary-drilling equipment. diags Am Pet Inst Proc 26(4):276-96 '46

DRILLS, Rock. See Rock drills

DRINKING water, Packaging of
Canning drinking water; container and processing problems. W. J. Mutschler. flow sheet il Food Ind 18:1351-3 S '46; Abstract. Mech Eng 68:1069 D '46

DRINKING water systems
Drinking water, a year-round necessity. Nat Safety N 55:172 Mr '47
Fair and warmer; drinking water and salt requirements for hot weather work. Nat Safety N 55:26+ My '47

DRINKWATER, Terrell
Down to earth; T. C. Drinkwater pulls his Western air lines out of red. por Bsns W p31-2 S 13 '47

DRIVE-in and curb services
Drive-in bank designed to improve customer service; Exchange national bank, Chicago. il Am Bsns 16:24+ D '46
Drive-in service for the smaller bank. il Burroughs Clearing House 31:11 N '46
Expertly designed to attract motorists; drive-in coffee shop near Portland, Ore. il plans diags Am Bld 69:137-9 Ap '47
Practical view of auto banking. R. L. Schutt. il plan Burroughs Clearing House 31:26-8+ Ag '47

DRIVERS as salesmen
Time studies show how to reduce distribution costs; evaluation of milk distributor efficiency. A. Morrow. il Food Ind 19:794-6+ Je '47

DRIVEWAYS
Beware word of mouth agreements when building joint driveways. Am Bld 69:146 F '47
Snow melting by embedded pipe; photoelectric control for delivery of hot water to pipes. T. N. Adlam. il diags Heat & Ven 44:61-4 Ag '47
Steam pipes keep steep road clear of snow and ice. il Eng N 138:556 Ap 10 '47

DROP hammers. See Hammers, Drop

DROPPING mercury electrode. See Polarography

DROPS
Growth of drops formed in a Wilson cloud chamber. E. O. Barrett and L. S. Germain. il R Sci Instr 18:84-6 F '47
Simple devices for measuring out small quantities of liquid. F. C. Calkins. diags J Chem Educ 23:604-8 D '46

DROSOPHILA
Production of phenocopies in drosophila using visible light and a photodynamic dye. C. A. Villee and G. I. Lavin. bibliog Science 105: 188-9 F 14 '47
Theory of radiation-induced lethals in drosophila. U. Fano. Science 106:87-8 Jl 25 '47

DRUG, chemical and allied trades section. See New York board of trade—Drug, chemical and allied trades section

DRUG factories
Combining research and production; building in Rio de Janeiro for Productos Roche. il plans Arch Rec 101:74-7 Mr '47

DRUG factories—*Continued*
Designed for dust and germ control; Ampul building for Winthrop chemical co., Rensselaer, N.Y. il plan Arch Rec 102:100-2 Ag '47
How two men store and distribute millions of gallons of liquids; centralized tank storage with underground pipe line distribution; Hoffmann-La Roche, inc. J. E. Meyer. il Factory Management 105:98-101 Ja '47

Air conditioning

This building must be clean; Winthrop chemical co. il Heating-Piping 19:87-8 Ap '47; Eng N 138:555 Ap 10 '47; Chem & Eng N 25:854 Mr 24 '47; Brick & Clay Rec 110: 32 My '47

Electric equipment

Electricity keeps drug plant clean; Winthrop chemical co. il Elec World 128:46 Ag 30 '47
Making penicillin. il Elec R (Lond) 139:1007-11 D 20 '46

Equipment

Sterile filling; plastic hooded machine for bottling parenamine. il Mod Packaging 20: 134-5 Ja '47
Versatile lines; Grove laboratories demonstrate ingenuity in equipment. il Mod Packaging 20:104-7 F '47

Waste

Industrial wastes; pharmaceutical and biological plants. E. L. Knoedler and S. H. Babcock, jr. il Ind & Eng Chem 39:578-82 My '47

DRUG manufacturers association, American. See American drug manufacturers association

DRUG stores
Drug store headquarters of Rexall drug co., Los Angeles; illustrations with text. Arch Forum 87:15 O '47; Sales Management 59: 116 O 1 '47
How blitz crews seek 98,000 outlets for Sherwin-Williams non-paint chemical specialties. E. W. Windsor. il Sales Management 58:42-3 My 1 '47
Rexall Drug headquarters in Los Angeles. il Arch Rec 102:142-5 O '47
Store audits show efficiency of displays; case study made in 9 Cleveland chain drugstores. C. Margolis. il Ptr Ink 217:36-7 D 27 '46

DRUG trade
Bigger cut asked; retail druggists want 40 per cent discounts from wholesalers and manufacturers. Bsns W p48-9 O 25 '47
Coordinated marketing; puts the package in the spotlight. R. C. Brewster. il Mod Packaging 20:91-4+ N '46
Detailing: what is it, and how can it activate sales? first developed in drug field in work with doctors and dentists. E. McSweeney. Sales Management 58:108+ F 15 '47
Determination of container sizes; abstract. W. R. James. Mod Packaging 20:146-7 Ap '47
Drug business facts every agency should know. H. B. West. il Adv & Sell 40:33-4+ Je '47
Drug making controls; abstract. G. P. Larrick. Oil Paint & Drug Rep 152:54 O 20 '47
Drugs and toiletries; prospects for 1947. T. W. Delahanty. Dom Comm 35:28-30 Ja '47
Free goods offers, old device but still popular. Ptr Ink 217:50-1+ N 22 '46
General upswing in pharmaceutical production observed. H. Stenerson. Chem & Eng N 25:56 Ja 6 '47
Graphics pierce fog of medical jargon in Lederle training clinics; Hile-Damroth method for Ledinac. il Sales Management 58:42-3 Ap 15 '47
How and why United Drug changed its name to Rexall. L. F. Thomann. il Ptr Ink 219: 37+ My 30 '47
How do your packages check on these 7 points? R. C. Brewster. il Adv & Sell 40: 41+ F '47
NWDA head optimistic on 1947 sales; abstract. C. C. Caruso. Oil Paint & Drug Rep 151:59 Ja 6 '47
Packaging committee; Winthrop companies packs over 900 medicinal products. il Mod Packaging 20:130-3 Ap '47
Shelf containers; Centaur applies NWDA recommendations. J. D. Bohan. il Mod Packaging 20:94-6+ F '47
Survey shows drug chains now push national brands; study of Madison (Wis.) market. L. J. Houfek. Ptr Ink 217:40-2 N 22 '46
Where will profits come from? A. J. Gallager. Sales Management 58:94-6+ My 20; 128+ Je 15 '47

See also
American drug manufacturers association
American pharmaceutical manufacturers' association
Federal wholesale druggists association
National wholesale druggists' association
Proprietary association of America

Advertising

Health education campaign is good public relations; Sharp & Dohme information on immunization of children. E. J. Dever, jr. il Ptr Ink 218:44-5 Mr 14 '47
How much altruism? Aesop Glim. il Ptr Ink 221:76 O 10 '47
Move over, Fred Allen! manhandling by censors suffered by writer of radio commercials. P. Artzt. Adv & Sell 40:41+ Je '47
Pharmaceutical advertising outlay for '47 to reach $300,000,000. Ptr Ink 217:88 D 20 '46

Finance

Merck means over twelve hundred fine chemicals. il Fortune 35:104-11+ Je '47

Regulation

N.A.R.D. fined in New Jersey and New York trust suits. Oil Paint & Drug Rep 151:3 F 3; 4 F 10 '47

See also
Drugs—Laws and legislation

Securities

Are drug companies depression proof? with data on leading companies. R. Carleson. il Mag of Wall St 80:268-70+ Je 7 '47

Statistics

Botanical drugs, spices, gums. Published in weekly numbers of Oil, paint and drug reporter
Drug sales in 1946, Sales Management estimates. Sales Management 58:84, 108 My 10 '47
Drugs and fine chemicals. Published in weekly numbers of Oil, paint and drug reporter
United States exports of medicinal and pharmaceutical preparations, 1938-March 1947; chart. Dom Comm 35:72 Jl '47
U.S. 1947 drug sales to overseas markets seen at $180 million. Oil Paint & Drug Rep 151:3 Je 23 '47

Argentina

Pharmaceutical sale rules in Argentina set. Oil Paint & Drug Rep 151:55 F 17 '47
Shortages in some important items. For Comm W 27:22-3 My 24 '47

Australia

Australia's foreign trade. For Comm W 29:26 O 25 '47

Brazil

Brazil drug manufacturers form an association. Oil Paint & Drug Rep 152:69 O 27 '47
Pharmaceutical preparations; price control established. For Comm W 28:16 Ag 16 '47

Colombia

Drug import law revised by Colombia. Oil Paint & Drug Rep 152:51 Jl 7 '47

Dominican Republic

Pharmaceuticals, drugs, foodstuffs, cosmetics; law of 1938 modified. For Comm W 26:19-20 F 22 '47

DRUG trade—*Continued*

Germany

War and the German drug industry. C. F. Enloe, jr. il Chem & Eng N 24:3046-8 N 25 '46

Great Britain

Increased exports of drugs and medicinals in 1946. For Comm W 27:31-2 Ap 12 '47

Guatemala

Guatemala limits medicinal sales. Oil Paint & Drug Rep 157:66 Je 23 '47

New York (state)

Drug, chemical, paint firms dissolutions in N. Y. listed. Oil Paint & Drug Rep 151:7+ Ja 6 '47

Palestine

Palestine's growing pharmaceutical industry. E. Hardy. Chem Age (Lond) 56:651-2 My 17 '47

Panama

Medicinal, chemical, biological products subject to controls on importation and sale. For Comm W 28:16 Jl 12 '47; Same. Oil Paint & Drug Rep 152:60 Jl 21 '47

United States

U.S. medicinal export trade is sharply on the upgrade. T. W. Delahanty. For Comm W 27:3-5 Je 21 '47

World-trade role of U.S. drug wholesalers. T. W. Delahanty. il map For Comm W 25: 5-6+ N 30 '46

DRUGGISTS. See Pharmacists

DRUGS

Botanical drug crop drops in United States. Oil Paint & Drug Rep 152:5+ S 8 '47

Chemical research again surges upward; pharmaceuticals. E. H. Volwiler. Chem Ind 61:389-90 S '47

Detection of drugs in horse saliva; comparison of sensitivities of a chemical and a biological method. C. E. Morgan and A. Gellhorn. bibliog Anal Chem 19:806-8 O '47

Japanese pharmaceutical, Koha. Chem Eng 53:175 N '46

Nucleonics open new era for drug manufacturers; report of meeting of A.D.M.A. Chem & Eng N 25:1868-9 Je 30 '47

Pharmaceutical and medicinal developments in 1946. M. L. Moore. Chem & Eng N 25: 91-3 Ja 13 '47

Production problems discussed at A.P.M.A. eastern meeting. Oil Paint & Drug Rep 151: 7+ F 24 '47

Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:72-6, 185-91, 311-17, 477-81, 643-8 Ja 11, F 1, Mr 15, Ap 19, My 17 '47

Simple formulas for calculating percentage potency in three- and four-dose assay procedures. M. B. Sherwood. bibliog Science 106:152-3 Ag 15 '47

See also

Analgesics
Anesthetics
Anesthetics, Local
Antiseptics
Antispasmodics
Benzedrine
Chemotherapy
Chemozine
Medicines, Proprietary
Pavatrine
Penicillin
Pharmaceutical research
Poisons
Quinine
Rutin
Sogenate
Sulfonamides

Laws and legislation

Drug act tests. Bsns W p64-5 N 9 '46

Drug export laws modification opposed; abstract. L. D. Harrop. Oil Paint & Drug Rep 151:5 Ja 27 '47

Drug labeling problem posed by ruling of federal court; Food and drug administration against David V. Bush, of St Louis. Oil Paint & Drug Rep 152:3 Ag 11 '47

Drug law appeal of FDA submitted to Supreme court; Sullivan case. Oil Paint & Drug Rep 151:3+ Je 30 '47

Drug law application stops after first intrastate sale Rx liquid drugs; Sullivan case. Oil Paint & Drug Rep 151:3+ My 26 '47

Drug law discussed by legal specialists; abstract. C. W. Crawford and others. Oil Paint & Drug Rep 151:4+ Ja 27 '47

Drug law guaranty applies from origination; Supreme court decision in Kelp laboratories case. Oil Paint & Drug Rep 151: 3+ My 26 '47

Drug law revision urged by FDA. W. B. Miller. Oil Paint & Drug Rep 151:3+ Ap 28 '47

Export drugs labeling rules tightening studied. Oil Paint & Drug Rep 151:3+ Ja 13 '47

FDA amends rules on new drugs. Oil Paint & Drug Rep 151:7 Ja 27 '47

FDA reaction to Missouri drug labeling decision clarified. Oil Paint & Drug Rep 152:3 Ag 18 '47

FDA urges appeal to high court on drug law decision in Sullivan case; over-the-counter sales of dangerous or RX legend drugs. Oil Paint & Drug Rep 151:3 Je 9 '47

Urges uniform state food-drug laws. F. J. Cullen. Oil Paint & Drug Rep 150:60 N 11 '46

See also

Drug trade—Regulation

Patents

Drug patents and compulsory licensing. T. G. Klumpp. Chem & Eng N 24:3174-6 D 10 '46

Drugs patenting outside U.S. urged. Oil Paint & Drug Rep 152:7 Jl 7 '47

Prices

Chemicals, oils, and drugs price records: 1939-1940, 1942, 1945-1946; tabulation. Oil Paint & Drug Rep 151:7 Ja 13 '47

Drug prices stability credited to fair trade. F. J. Griffiths. Oil Paint & Drug Rep 152:55 S 15 '47

Testing

Bioassay by direct potency estimation. S. Loewe. Science 106:89-91 Jl 25 '47

Use of the hydra for pharmacological study. S. Norton and E. J. de Beer. Science 106: 328 O 3 '47

DRUNKENNESS

Record proves danger of pre-flight drinks. il CAA J 8:79 Jl 15 '47

DRY cleaning. See Cleaning industry

DRY docks

Development of dry docks. H. Ridenhalgh. Engineering 164:239-40 S 5 '47; Abstract. Engineer 184:224-5 S 5 '47

Drydock for a giant flying boat. il Eng N 138:730-2 My 1 '47

Floating caisson for graving dock at Le Havre. il plan Engineer 183:457 My 23 '47; maps diags Engineering 163:544-5, 548 Je 27 '47

Princess Elizabeth graving dock, East London, South Africa. il Engineer 183:522 Je 13 '47

DRY docks, Floating

ARD-33; largest floating drydock. il Diesel Power 25:56-8 Mr '47

Side-launching a 6000-ton dry dock. M. M. Lachowski. il diags Marine Eng 51:96-9+ N '46

DRY goods

Wholesaling on borrowed time; Ely & Walker. il Fortune 36:122-5+ N '47

See also

Department stores
Hosiery
Knit goods
Textile fabrics

Prices

Price tag quiz. Bsns W p52+ F 1 '47

DRY ice. See Carbon dioxide, Solid

DRYCLEANING. See Cleaning

DRYDEN, Ontario

Story of a pulp and paper town. D. E. Scott. il Pulp & Pa of Can 47:73-6 D '46

DRYING

Considérations sur le séchage. G. Bocher. Chimie & Ind 58:31-5 Jl '47

Determining tack of self polishing wax films; Touch controller. M. Fuld. il diags Soap & San Chem 23:126-7 F '47

DRYING—*Continued*
Drying. S. J. Friedman. bibliog(94 ref) Ind & Eng Chem 39:20-1+ Ja '47
Faster baking and drying with infrared heat. P. H. Goodell. il Elec World 127:58-60 Je 21; 128:72-4 Jl 5 '47
Freeze-drying as applied to penicillin, blood plasma and orange juice. E. W. Flosdorf. il Chem Eng Prog 43:343-8 Jl '47; Same cond. Refrig Eng 54:226-30+ S '47
Gas or electricity for infra-red drying; with cost data. G. R. Van Kampen. il Paper Tr J 125:34+ O 9 '47
Heat for drying; its application in the chemical and allied industries. Chem Age (Lond) 55:593-9 N 16 '46
Industrial application of activated alumina to adsorption drying; abstract. A. J. Carter. Chem & Ind p114 F 22-Mr 8 '47
Infrared halves drying time in banknote printing. il Elec World 127:142 Mr 15 '47
Method of drying partial protein hydrolysates and other hygroscopic materials for nutritional studies. R. J. Westfall and others. Science 105:530 My 16 '47
Spray and roller drying for the purpose of evaporating to dryness. E. H. Farmer and C. G. Six. Chem Age (Lond) 55:594-6 N 16 '46

See also
Clay drying
Drying apparatus
Electric machinery—Drying
Infrared rays—Industrial heating
Paint—Drying
Paper drying
Rubber—Drying
Soap—Drying
Textile drying
Wood drying

Tables, calculations, etc.

Approximate diffusion calculations for the falling-rate phase of drying. W. B. Van Arsdel. Chem Eng Prog 43:13-24 bibliog(p21-2) Ja '47

DRYING (crops)
Grain drying; processing and handling equipment. il plan Mech Handling 34:291-8 Je '47
Some heating jobs that can be sold down on the farm. R. H. Emerick. il diags Dom Eng 169:102-5+ F '47
Switch to oil heat for tobacco curing swells kerosine market in Southeast. F. C. Sturtevant. il plan Nat Pet N 39:26-8+ Je 11 '47

See also
Corn—Drying
Hay drying

DRYING (eggs)
Spray dried whole eggs improved with carbohydrates. E. H. Dawson and others. il Food Ind 19:483-6+ Ap '47

See also
Eggs, Dried

DRYING (food)
Desiccation of food; patent. Food Ind 18:1958 D '46
Electronics in the food industry; used in dehydrating foods and for thawing frozen foods. T. L. Swenson. Electronics 20:206+ F '47

See also
Food, Dried

DRYING (fruits and vegetables)
Approximate diffusion calculations for the falling-rate phase of drying. W. B. Van Arsdel. Chem Eng Prog 43:13-24 bibliog(p21-2) Ja '47
Drying of vegetables; effect of scalding in starch or sulphite solutions on the loss of carotene and the deterioration in culinary quality of dried carrot during storage. R. G. Tomkins, L. W. Mapson and H. G. Wager. bibliog Soc Chem Ind J 65:384-5 D '46
Drying of vegetables; loss of ascorbic acid in drying cabbage and potato in large-scale factory plants. R. J. L. Allen and L. W. Mapson. Soc Chem Ind J 66:166-8 My '47
Industrial hygiene survey of an onion dehydrating plant. B. Feiner and others. bibliog J Ind Hygiene 28:278-9 N '46
Vacuum drying of compressed vegetable blocks. W. C. Dunlap, jr. diag Ind & Eng Chem 38:1250-3 D '46

See also
Fruit, Dried
Vegetables, Dried

DRYING (meat)
Dehydrating meats; patent. Food Ind 18:1957 D '46

See also
Meat, Dried

DRYING agents
Design and use of adsorptive drying units. R. C. Amero, J. W. Moore and R. G. Capell. bibliog(126 ref) diags Chem Eng Prog 43:349-65; Discussion. 365-70 Jl '47
Metal drier. R Sci Instr 18:687 S '47

See also
Alumina
Calcium hydride
Drying oils
Silica gel

DRYING apparatus
Air cycle heat pump. T. F. Thomas. diags Engineer 184:180-1, 205-6 Ag 22-29 '47
Air-drying of fine papers. J. H. Miller. il diags Paper Ind 29:973-5 O '47
Apparatus for low-temperature drying. F. J. Reithel. diag J Chem Educ 24:286 Je '47
Application of the atmospheric tray dryer to the drying of chemical products. A. S. White. Chem Age (Lond) 55:597-8 N 16 '46
China clay; special technique for drying. C. R. Love. Chem Age (Lond) 55:598-9 N 16 '46
Compact heater for dehydrating system. il Comp Air Mag 52:23 Ja '47
Design and use of adsorptive drying units. R. C. Amero, J. W. Moore and R. G. Capell. bibliog(126 ref) diags Chem Eng Prog 43:349-65; Discussion. 365-70 Jl '47
Development of jacketed-type steel drier rolls. W. H. Funk. il diags Paper Tr J 123:26+ D 26 '46; Same. Welding J 26:314-19 Ap '47; Same cond. Paper Ind 28:1496-9 Ja '47; Same abr. Rayon 28:90-1 F '47
Drying 80,000 pounds of sanitaryware in 24 hours. il Cer Ind 49:81-2+ Ag '47
Drying; new equipment. J. W. Greene. il Chem Ind 61:420-1 S '47
Drying ovens with low temperature radiant panels for drying ceramic dishware; abstract. R. B. Grossman. Am Cer Soc J 30(Cer A):202 O 1 '47
Drying redwood bark; infrared installation to useful commercial by-products; Sequoia products co. il Elec West 98:88-9 Ap '47
Freeze-drying as applied to penicillin, blood plasma and orange juice. E. W. Flosdorf. il Chem Eng Prog 43:343-8 Jl '47; Same cond. Refrig Eng 54:226-30+ S '47
Fuel economy with slurry dryer. H. Kronstad. diags Rock Prod 49:94+ N '46
Gas-fired infrared dryer used with automatic jigger; Sterling china co. O. O. Todd. il Cer Ind 48:70+ F '47
High vacuum technics utilized for drying orange juice; frozen orange concentrate; Vacuum food corporation. L. V. Burton. flow sheet il Food Ind 19:617-22+ My '47
Hot-air apparatus dryer for general laboratory use. J. F. Corwin. diags Science 106: 353 O 10 '47
Multi-Louver dryer. il Chem Eng 54:150 O '47
New spray dryer pilot plant; Swenson evaporator company. flow sheet il Chem Ind 59: 1005 D '46
New Voit rubber production set-up utilizes radiant drying apparatus; manufacture of footballs, basket balls, and other balls which require rubber bladders. R. D. Holman. il Rubber Age 60:696-8 Mr '47
Process equipment cost estimation; estimating spray dryers. Chem Eng 54:125 My '47
Spray and roller drying for the purpose of evaporating to dryness. E. H. Farmer and C. G. Six. Chem Age (Lond) 55:594-6 N 16 '46
Study of dryer operation to determine cause of failures. H. M. Spring. il Paper Ind 29: 1042-5 O '47
Turbo-continuous drier. diag Food Ind 18: 1780+ N '46

DRYING apparatus—*Continued*
Use of conveyer oven in rapidly curing paints by radiant heating. A. M. Lehmann. Chem Age (Lond) 55:594 N 16 '46

See also
Clothes dryers
Electric heating, Industrial
Gas ovens
Infrared rays—Industrial heating

Textiles

Drying apparatus for textile fabrics. diag Am Dyestuff Rep 36:336 Je 16 '47
Drying fabrics, apparatus G, 3; U.S. patent. diag Am Dyestuff Rep 36:38 Ja 27 '47
Electronic control of cloth-drying machines. N. H. Chamberlain. diags Textile Inst J 37:P249-62 Jl '46
New hot-air slasher installed at Avondale mills. W. E. Williams. il diags Textile World 97:133+ O '47
Rug drying with warm air heaters. il diags Sheet Metal Worker 38:94+ S '47

DRYING oils
C-18 alcohol esters of orthosilicic acid. L. B. Falkenburg, H. M. Teeter and J. C. Cowan. Am Chem Soc J 69:486-7 Mr '47
Comparative oxidation of linseed and sardine oils. G. A. O'Hare and W. J. Withrow. bibliog Ind & Eng Chem 39:101-4 Ja '47
Drying of oils; abstract. P. Slansky. Paint Oil & Chem R 110:39 Jl 24 '47
Drying oil situation viewed at Minneapolis; symposium. Chem & Eng N 25:1120-1 Ap 21 '47
Linseed and tung oils entering a period of more normal competition. H. Stenerson. Chem & Eng N 25:2858 S 29 '47
Modern views on drying oil chemistry. C. P. A. Kappelmeier. bibliog Paint Oil & Chem R 110:5-6+ Jl 24 '47
New specialties exploit chemical research; protective coatings. G. M. Sutheim. Chem Ind 61:406-7 S '47
Oxidation and reduction of unsaturated oils; abstract. T. P. Hilditch. Paint Oil & Chem R 110:40 Je 12 '47
Phenol alcohols and their reaction with oils; abstract. W. Charlton and L. E. Perkins. Paint Oil & Chem R 110:36+ S 4 '47
Polymerization of drying oils and the influence of SO_2 upon this process. D. Cannegieter. bibliog Paint Oil & Chem R 110: 17-18+ F 20 '47
Reactions occurring during heat polymerization of unsaturated fatty acid esters. H. J. Lanson and P. E. Spoerri. bibliog diags Paint Oil & Chem R 110:13-16 Mr 20 '47
Stillingia tree as a source of drying oil. W. M. Potts. il Paint Oil & Chem R 109:16+ D 12 '46
Stillingia tree studied as drying oil source. Oil Paint & Drug Rep 152:7 S 29 '47; Discussion. A. Eisenstein. 152:24+ N 10 '47

See also
Linseed oil
Lumbang oil
Tall oil
Tung oil

DRYSALTERS club of New England
Drysalters club of New England. A. A. Claflin. Am Dyestuff Rep 35:631+ D 2 '46

DUAL banking. See Banks and banking—Dual system

DUBOIS, Gaston, 1880-
American contemporary. A. D. McFayden. por(cover) Chem & Eng N 25:234 Ja 27 '47

DUBUQUE, Iowa

Bridges

Mississippi River bridge at Dubuque. R. N. Bergendoff and J. Sorkin. il diags Am Soc C E Proc 73:761-82 Je '47; Discussion. 73: 1163-5, 1319-21 S-O '47

DUCE, James Terry
Portrait. Fortune 35:142 My '47

DUCK (textile)
Factors affecting the development of mould on cotton fabrics and related materials. W. I. Illman and M. W. Weatherburn. bibliog il Am Dyestuff Rep 36:343-4+ Je 30 '47

Testing

Puncture and tearing tests for heavy fabrics intended for wagon covers. J. Hayes. diags 2 pls Textile Inst J 38:T1-10 Ja '47

DUCK shooting
Guns plentiful, but are ducks? il Bsns W p42+ O 25 '47

DUGGAN, Laurence
Portrait. Chem & Eng N 25:972 Ap 7 '47

DUKE power company
Offering to common stockholders; sale of bonds privately. Comm & Fin Chr 166: 1785-6 N 3 '47

DULUTH, South Shore and Atlantic railway
Reorganization. Comm & Fin Chr 166:267 Jl 21 '47

DU MONT, Allen Balcom, 1901-
Annual advertising awards, 1946; television distinguished service. por Adv & Sell 40: 33 Mr '47

DUMP cars
Coal handling; Sanford-Day drop-bottom cars. il diag Mech Handling 34:553+ O '47

DUMPING appliances
Aveling-Barford 12-ton Diesel shuttle dumper. il diags Engineer 184:177-9 Ag 22 '47
Dumping applications in materials handling. il Mech Handling 33:692-7 N '46
Telehoist tipping gear for heavy vehicles. il Automobile Eng 36:505 N '46
Transporting concrete in dump-trucks. J. A. Nicholson. il Eng N 138:201-3 F 6 '47

See also
Car dumpers
Dump cars

DUNITE
Dunite-mylonites of St Paul's rocks (Atlantic). C. E. Tilley. bibliog Am J Sci 245: 483-91, pl 1-2 Ag '47

DUNLOP, Robert Galbraith, 1909-
President of Sun oil co. por(cover) Bsns W p8 Je 21 '47
Sketch. por Nat Pet N 39:26-7 Ap 16 '47
Sun's favorite son. por Bsns W p84 Mr 15 '47

DUNLOP rubber company
Statement by the chairman at ordinary general meeting. G. Beharrell. Economist 152: 957 Je 14 '47

DUODENUM

Ulcers

Duodenal ulcer following exposure to carbon tetrachloride; report of two cases. A. R. Smith. bibliog J Ind Hygiene 29:134-5 Mr '47

DUPLAN corporation
Duplan place in fine fabric industry. Rayon 28:312 Je '47

DUPLEX houses. See Architecture, Domestic—Two-family houses

DUPLEX process. See Steel metallurgy—Duplex process

DUPLICATING machines

See also
Mimeograph

DUPLICATING processes. See Copying processes

DU PONT de Nemours, E. I., and company
Annual report. Comm & Fin Chr 165:1314 Mr 10 '47
Du Pont opens Akron rubber lab. Chem & Eng N 24:3177 D 10 '46
DuPont reports progress in the South. H. O. Belleville. il Manuf Rec 116:31+ Jl '47
Du Pont; single-stock investment trust? H. S. Coffin. il Mag of Wall St 79:199-200+ N 23 '46
Preferred stock offered. Comm & Fin Chr 165:2411-12 My 5 '47

DUQUESNE light company
$75,000,000 bonds offered. Comm & Fin Chr 166:1253 S 29 '47

DURABLE goods
Capital goods for consumers. R. Cox. Comm & Fin Chr 164:3214+ D 19 '46
Growing importance of durable consumer goods in our economy. S. M. Livingston. Comm & Fin Chr 165:1784+ Ap 3 '47
Manufacturing activity; output of consumers' durable goods, 1946 and first quarter of 1947; with charts. Survey of Cur Bsns 27: 5-7 My '47

DURABLE goods—*Continued*
Survey of consumer finances; expenditures for durable goods and investments. D. M. Holthausen. Fed Res Bul 33:647-63 Je '47; Abstract. Mo Labor R 65:329-30 S '47

DURALUMIN
Duralumin window beta-ray counter. W. M. Good. diags R Sci Instr 18:133 F '47
Plastic adhesive, used to cement two pieces of duraluminum together. il Steel 119:90 D 30 '46
Theory of the age hardening of aluminium-copper alloys, based on vacant lattice sites; abstracts. F. Röhner. Engineer 183: 280 Ap 4 '47; Metal Prog 52:422+ S '47; Discussion. Engineer 183:280-1 Ap 4 '47

DURAND, William T. A.
Hobby in old checks. R. R. McGuire. por Banking 40:16-17 S '47

DURANT, William Crapo, 1861-1947
Sketch. Steel 120:59-60 Mr 24 '47

DURENE association of America
How Durene achieves yarn identity in finished textile products; business papers and direct mail campaigns. il Sales Management 59:76+ S 15 '47

DUREZ
Fast-drying resins. Chem & Eng N 25:1140-1 Ap 21 '47
Five reasons for phenolic in mangles. il Mod Plastics 24:107 Ag '47
Phenolic adapter rings solve motor bearing problem. il Mod Plastics 24:84-5 Jl '47

DURIMET. See Nickel alloys

DURKIN, William Austin, 1885-
Sketch. por Explosives Eng 25:68-9 My '47

DUST
Air-cleaning efficiency tested electronically. V. Zeluff. il diags Sci Am 176:57-9 F '47
Apparatus for dispersing finely divided dusts. L. S. Sonkin and others. diag J Ind Hygiene 28:273-5 N '46
Appraising exposures to silica dust. F. R. Holden and others. bibliog J Ind Hygiene 29:265-8 Jl '47
Are dust counts made by different laboratories comparable? abstract. P. D. Halley. J Ind Hygiene 29:sup19-20 Ja '47
Chart showing sizes and characteristics of dusts commonly encountered in industry. W. G. Fauk. Sheet Metal Worker 38:47 My '47
Cheap methods of reducing silica dust in unloading. il diag Cer Ind 48:75 My '47
Dust and its control as a means of disinfection of air; abstract. C. G. Loosli. J Ind Hygiene 29:sup 105 S '47
Dust control in industry; abstract. T. F. Hatch. Rock Prod 50:81 Mr '47
Dust control in the ceramic industries; abstract. W. C. L. Hemeon. Cer Ind 48:99-100 Je '47
Dust hazards in manufacture of manikins; abstract. J Ind Hygiene 29:sup28 Mr '47
Dust studies simplified by new laboratory duster. il Chem Ind 60:228-30 F '47
Faster dust-counter. Chem Ind 61:514 S '47
Findings from Foundation plant and laboratory researches. T. F. Hatch and others. Ind Med 16:80-2 F '47
Influence of calcium carbonate on settling characteristics of silica dust. M. W. First and L. Silverman. bibliog J Ind Hygiene 29:259-64 Jl '47
Keep air clean. C. H. Mehaffey. Am Mach 91:111-13 F 13 '47
Management's opportunity to advance occupational health. R. H. Pass. Ind Med 16: 82+ F '47
Penetration of air-borne particulates through the human nose. H. D. Landahl and S. Black. bibliog flow diag J Ind Hygiene 29: 269-77 Jl '47
Photoelectric dust meter. G. F. Barnett and A. L. Free. bibliog il diags Electronics 19: 116-19 D '46
Terminal velocity as the measurement of dust-particle characteristics. R. B. Foley. il A S M E Trans 69:101-7 bibliog(p106); Discussion. 107-8 F '47; Abstract. Heating-Piping 19:84 Ja '47

See also
Aluminum dust
Cadmium oxide dust
Cement dust
Cotton dust
Dust removal
Flue dust
Foundry dust
Hydroquinone dust
Mine dust
Paper dust
Silicosis

DUST collectors
Air recirculation from exhaust systems. J. M. Kane. il Heat & Ven 44:75-7 Ap '47
Cleaning electrical machinery on tube trains. il Engineering 164:225 S 5 '47
Design of exhaust systems; dust collecting equipment for granite cutting. F. H. Stebbins. diags Sheet Metal Worker 38:99-101 Ja '47
Design of exhaust systems; elimination of such dusts as gold, silver and platinum. F. H. Stebbins. il plan diags Sheet Metal Worker 37:48-50+ D '46
Dust collector at Peterborough power station. diags Engineer 182:442 N 15 '46
Dust collector for metallizing operations. E. F. Fisher. diags Am Mach 91:146 My 8 '47
Dust control by combined centrifugal and electrostatic principles. E. H. R. Pegg. il diags Heat & Ven 44:78-80 My '47
Dust control need not be expensive. G. E. Toles. il Am Mach 91:109 Mr 27 '47
Efficiency of small cyclones (aerotec) as a function of loading, temperature and pressure drop; coal-burning gas turbine for locomotive use. J. D. Parent. il diags Am Inst Chem Eng Trans 42:989-99 O-D '46
Electrical control for dust collector; wiring diagram. E. M. Diehl. Rock Prod 49:59 N '46
Elimination of lime stack losses with the type N Roto-clone; Southland paper mills. C. C. Porter and others. il Paper Tr J 124: 33-6 F 6 '47
Étude des appareils cyclonaires pour le dépoussiérage industriel. W. Muhlrad. Génie Civil 124:152-5 Ap 15 '47
Filter type dust collectors. L. J. Wieschhaus. il diags Chem Eng 54:113-15 Ag '47
Machines and auxiliary equipment for buffing and polishing. J. E. Hyler. il Steel 119:68-9+ D 30 '46
Magnesium-alloy dust-collecting equipment. il Engineering 162:464 N 15 '46
Pneu Mech dust collecting plant. il diag Engineer 182:576 D 20 '46
Pneumech automatic dust collector. il diags Engineering 163:236-8 Mr 28 '47
Recovering asbestos floats with dust collectors. L. J. Wieschhaus. il Rock Prod 50: 104-5+ Ag '47
Salvaging bags by air cleaning. il diags Sheet Metal Worker 38:49-52 O '47
Sliding sleeve seals dust discharge; drawings. F. Cunningham. Eng & Min J 148:110 Je '47
Upkeep program for dust and fume collectors. A. V. Bolt. il Factory Management 105:76-7 Ag '47
Ventilating screens, breakers, mullers. diags Foundry 75:76-7+ Mr '47

Manufacture
Spot welding under water. C. L. Coomer. il Welding J 26:217-18 Mr '47

DUST explosions
Dust explosion resonates resin plant; drug plant hazard. il Safety Eng 93:16+ Ja '47
Explosions during fire-fighting; case for establishment of a research agency. D. J. Price. Safety Eng 94:20+ Ag '47
Fire and explosion; inflammable concentrations and ignition temperature. J. H. F. Smith. Engineering 162:476 N 15 '46
For safety in the plastics industry; new standard tells how to prevent dust explosions. H. R. Brown. il Ind Stand 17:52-5 Mr '46; Same cond. Safety Eng 94:14-15+ Jl '47
Good housekeeping essential to control dust and prevent explosions; abstract. I. Hartmann. Steel 120:121 My 12 '47

DUST explosions—*Continued*
Have you a powder keg under your plant that is about to explode? causes and prevention of gas and dust explosions. W. G. Hudson. il diags Power 91:774-6 N '47
National fire codes; v. 2, Prevention of dust explosions, 1946. 224p $2; pa $1.50 National fire protection assn, 60 Batterymarch st, Boston 10 '46
Prevention of coal dust explosions; the effect of manner of distribution of stone dust. Engineering 164:14 Jl 4 '47
Use of rock dust and water under the federal mine safety code in limiting coal-dust explosions. J. J. Forbes and C. W. Owings. bibliog U S Bur Mines Information Circ 7421:1-12 '47
Why have dust explosions? abstract. I. Hartmann. Chem Ind 60:1009 Je '47

DUST removal
Air conditioning and dust and fly control. C. V. Ward. Textile Inst J 38:P442-3 S '47
Le dépoussiérage industriel des gaz. É. Prat. il Génie Civil 124:192-5 My 15 '47
Dust control by ventilation. J. M. Kane. il Safety Eng 92:62-3 N '46
Home dust precipitator. il Sci Am 177:128 S '47
Mine-dust control. M. I. Signer and others. bibliog il diags Colorado School of Mines [Golden] Quarterly 42 no 1:1-64 Ja '47 (pa $1)

See also
Air filters
Dust collectors
Electric precipitation
Exhaust systems
Flue dust
Gas, Natural—Dust problem

DUST sampling
Dust counting procedures explained. Safety Eng 93:65 Je '47
Modified cascade impactor; device for sampling and sizing aerosols of particles below one micron in diameter. L. S. Sonkin. il diag J Ind Hygiene 28:269-72 N '46

DUST separators. See Dust collectors

DUSTING cloths
Cleaning and polishing cloths. M. A. Lesser. bibliog Soap & San Chem 23:129-31+ F '47

DUTCH EAST INDIES. See Netherlands Indies

DUTCH GUIANA

Economic conditions
News by countries; Surinam. For Comm W 25:21 N 23; 34 D 21 '46; 26:34 Ja 25; 26 F 22; 28:20 S 27 '47

DUTTON, Dale D.
Portrait. Bsns W p63 Mr 1 '47

DYE analysis
Identification of unsulfonated azonaphthol AS dyes. L. Koch and R. F. Milligan. bibliog Anal Chem 19:312-13 My '47
Quantitative analysis of Igepon T. D. A. Shiraeff. Am Dyestuff Rep 36:313-14 Je 16 '47

DYE industry.
German dyes from China; Orient trading company and World war I. E. H. Killheffer. Am Dyestuff Rep 35:638-40 D 2 '46
Household dye fair trade rules studied. Oil Paint & Drug Rep 150:7 N 25 '46
Household dyes trade rules issued. Oil Paint & Drug Rep 151:5+ F 3 '47
Textiles battle for the consumer dollar; the part played by dyestuffs. Textile Col 69: 14-15+ Ag '47
World dye trade; opportunities and obligations face the U.S. F. B. Hillhouse. For Comm W 28:3-4+ S 20 '47

See also Silk and rayon printers and dyers association of America

History
Centenary celebrations of the Chemical society; industry's debt to science. J. Baddiley. Soc Dyers & Col J 63:206-8 Jl '47
Cooperation of the dyestuff industry with the government during World war II. E. K. Halbach. Am Dyestuff Rep 35:640 D 2 '46
Launching of the dyestuff industry in the United States. F. G. Zinsser. Am Dyestuff Rep 35:633-4 D 2 '46
Old-timer in the dyestuff industry reminisces. A. Merz. Am Dyestuff Rep 35:635-7 D 2 '46
Some reminiscences of early days. R. T. Baldwin. Am Dyestuff Rep 35:632+ D 2 '46

Statistics
Textile and leather chemicals. Published in weekly numbers of Oil, paint and drug reporter

Germany
German dyestuffs and dyestuff intermediates; azo and lake dyestuffs. J. Avery and others. Soc Dyers & Col J 63:115 Ap '47
I.G. Farbenindustrie A.-G., Leverkusen, constitution and methods of manufacture of dyestuffs. Soc Dyers & Col J 63:268-70 Ag '47

Great Britain
I.C.I. dyestuffs division. Chem Age (Lond) 57:107 Jl 26 '47

United States
Coaltar dye industry surveyed by Tariff board. Oil Paint & Drug Rep 150:5+ N 25 '46
Dye industry outlook; Tariff commission report. Chem Ind 60:70+ Ja '47
Dye rules reflect new FTC attitude. Bsns W p21 F 8 '47
General Aniline & Film is largest seized alien property. il Fortune 36:68-73+ Ag '47

See also American association of textile chemists and colorists

DYE manufacture
I.G. Farbenindustrie A.-G., Leverkusen, constitution and methods of manufacture of dyestuffs. Soc Dyers & Col J 63:268-70 Ag '47

See also
Indigo—Manufacture

History
Neversink dyeing company; Althouse chemical company. il Am Dyestuff Rep 35:sup12-18 D 2 '46

DYE patents
Acetate cellulose, dyeing with diazotized dyestuffs. Am Dyestuff Rep 36:16 Ja 13 '47
Discharges on insoluble azo-dyestuffs; sulfostilbene derivatives used. Am Dyestuff Rep 36:466 Ag 25 '47
Dyeing acetate cellulose; fumeproofing; patent. Am Dyestuff Rep 36:248 My 5 '47
Dyeing cellulose with acid dyestuffs; guanidine salts; patent. Am Dyestuff Rep 36: 367 Je 30 '47
Hexakisazo dyes; abstract. H. Ackroyd and A. E. James. Soc Dyers & Col J 62:354 N '46
Improving fastness of direct dyeings; substituted adipamides. Am Dyestuff Rep 36: 338 Je 16 '47
Printing solubilized vat dyestuffs; adding caffeine. Am Dyestuff Rep 36:219 Ap 21 '47
Vat dyes printing; alkyl carbamates added; patent. Am Dyestuff Rep 36:614 O 20 '47
Vat prints, stabilized by anthraquinoid compounds. Am Dyestuff Rep 36:37 Ja 27 '47

Bibliography
Review of the literature on color lakes. W. B. Blumenthal. bibliog(320 ref) Am Dyestuff Rep 35:529-38+ N 18 '46

DYE research
American association of textile chemists and colorists third annual report of executive committee on research. Am Dyestuff Rep 36:32-3 Ja 27 '47
American association of textile chemists and colorists; wash fastness committee report. Am Dyestuff Rep 36:196-9 Ap 21 '47
Application of microscopy to the textile field. G. L. Royer and C. Maresh. bibliog(52 ref) il 3pls diags Soc Dyers & Col J 63:287-93 S '47
Cellulose-dyestuff complex; effect of orientation on the reflection of polarised light. J. M. Preston and P. C. Tsien. bibliog il Soc Dyers & Col J 62:368-72 D '46
Chemical research again surges upward; dyes. B. L. West. bibliog Chem Ind 61: 393-5+ S '47

DYE research—*Continued*
Effect of dyestuffs on the temperature rise of fabrics exposed to light. bibliog il diags Am Dyestuff Rep 36:159-65 Ap 7 '47
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47
Heat resistant dyes reflect more infra-red radiation than other dyestuffs identical in color; research project. Heat & Ven 44:105-6 O '47
Kinetics of the reaction of methanol with 3,3′-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47
Present AATCC research program. H. W. Stiegler. Am Dyestuff Rep 35:586-7+ D 2 '46
Studies in viscose rayon dyeing: applications of the dyeometer. G. L. Royer and others. bibliog 2pls Soc Dyers & Col J 63:254-9 Ag '47
Studies on wool dyeing; crocking. H. E. Millson and others. il pl Am Dyestuff Rep 36:45-63+ F 10 '47

DYE testing
Accuracy to colorimetric instruments in dye strength determinations. O. L. Davies and others. Soc Dyers & Col J 63:80-3 Mr '47
Colorfastness of textiles to pleating; tentative test method. Am Dyestuff Rep 36:207 Ap 21 '47
Dyeometer measures rate dye leaves bath. il Textile World 96:115 D '46
Rubbing test. W. C. Durfee. Am Dyestuff Rep 35:591-2 D 2 '46

See also
Dyes, Fastness of
Fade-ometer

DYEHOUSES
California finishing plant expands 150% since 1941; National dyeing & finishing corp. R. L. Bean. il Textile World 97:137+ F '47

Equipment

Knit-cloth dyehouse thrives on diversity. I. Teplitz. il Textile World 97:121+ Mr '47
Saturated brine reduces costs at Dan River. N. Agnew. il Textile World 97:135+ Ag '47
Steam injection method of introducing dyes to dye kettles. diag Rayon 28:53 Ja '47
Wool raw stock processed in modernized dyehouse, Atlanta woolen mills. M. H. Hudson. il Textile World 97:112-13 My '47

See also
Dyeing machines

DYEING machines
New machines for the dyeing of viscose rayon cakes. C. M. Whittaker. il Textile Inst J 38:P273-8 Ag '47
Progress in finishing machinery exemplified by continuous bleaching and vat dyeing equipment. E. S. Pierce. Rayon 28:294 My '47
Some case histories of corrosion problems in chemical process equipment; effect of aeration on reduction of dyestuff. W. Z. Friend and F. L. La Que. Am Inst Chem Eng Trans 42:849-51 O-D '46; Same. Pet Eng (Ref annual) 18:212 Jl·1 '47
Twenty-five years progress in woolen and worsted dyeing and finishing machinery. W. Von Bergen. bibliog il diags Am Dyestuff Rep 35:662-8 D 2 '46
Williams unit; its use in textile processing. S. H. Williams. il diags Am Dyestuff Rep 36:256-62+ My 19 '47; Same cond. Textile World 97:143+ My '47; Abstract. Rayon 28: 222 Ap '47

DYES, Fastness of
American association of textile chemists and colorists; light fastness research. Am Dyestuff Rep 36:201-3 Ap 21 '47
American association of textile chemists and colorists; wash fastness committee report. Am Dyestuff Rep 36:196-9 Ap 21 '47
Colour changes of vat and azoic dyes by wet and dry heat. E. Kornreich. Soc Dyers & Col J 62:318 O '46
Fabric finishing. R. W. Powell. Am Dyestuff Rep 36:13-15+ Ja 13 '47
Metachrome dyeing; minimizing the adverse effect of iron on fastness of chrome colors. C. H. A. Schmitt. Am Dyestuff Rep 36: 238-44 My 5 '47
Perspiration effects on fabrics. L. C. Barail. il Rayon 28:496-8 S '47
Report of subcommittee on fastness to light. Am Dyestuff Rep 36:556 O 6 '47
Studies on wool dyeing; crocking. H. E. Millson and others. il pl Am Dyestuff Rep 36:45-63+ F 10 '47

DYES and dyeing
Absorption isotherm for direct dyes. J. Crank. bibliog Soc Dyers & Col J 63:293-6 S '47
Alphabetical list of new products developed since November, 1945. Am Dyestuff Rep 35: 673-87 D 16 '46
Dye absorption by textiles. A. J. Hall. diags Rayon 27:493-7, 609-11, 668-9; 28:98-100, 157-9 S, N-D '46, F-Mr '47
Dyeing, printing and finishing in relation to fabric construction. R. S. Greenwood and C. P. Atkinson. Soc Dyers & Col J 63:208-13 Jl '47
Dyeing process uses molten metal; fabric passed through molten-metal bath for aftertreatment. F. S. Richardson, comp. diag Textile World 97:133+ S '47
Dyeing under reduced pressure; French patent. diags Am Dyestuff Rep 35:717 D 30 '46
Dyeometer measures rate dye leaves bath. il Textile World 96:115 D '46
Effect of dyestuffs on the temperature rise of fabrics exposed to light. bibliog il diags Am Dyestuff Rep 36:159-65 Ap 7 '47
Heat resistant dyes reflect more infra-red radiation than other dyestuffs identical in color; research project. Heat & Ven 44: 105-6 O '47
Limitation of color. W. D. Wright. Rayon 27:558-9, 612-13; 28:337-8, 387-8 O-N '46, Je-Jl '47
Limiting colors due to ideal absorption and transmission bands. I. H. Godlove. bibliog Opt Soc Am J 37:778-91 O '47
Metachrome dyeing; minimizing the adverse effect of iron on fastness of chrome colors. C. H. A. Schmitt. Am Dyestuff Rep 36:238-44 My 5 '47
Shortcomings of the dyeing industry as seen by the launderer, dry cleaner and garment dyer. S. C. Turner. Soc Dyers & Col J 63: 105-6 Ap '47
Steam demand for dyeing. W. Goldstern. il diags Soc Dyers & Col J 62:301-7 O '46
Tell your dyer. A. J. Cohen. Textile Col 69: 26-7+ Ap '47
Textile production and dyeing in Sweden and Denmark. H. Boothroyd. Soc Dyers & Col J 63:77-80 Mr '47

See also
Bleaching
Color in the textile industries
Color matching
Color printing
Cyanines
Dye industry
Dyeing machines
Dyes, Fastness of
Indigo carmine
Lake colors
Orange OT
Pigments
Stains and staining (microscopy)
Textile printing

Bibliography

Review of the literature on color lakes. W. B. Blumenthal. bibliog(555 ref) Am Dyestuff Rep 35:529-38+ N 18 '46

Chemistry

Absorption spectra of some N-acetyl derivatives of *p,p′*-diaminotriphenyl-methane dyes. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1978-85 Ag '47
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*- butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47
Acid nature of vegetable fibres in relation to basic dye absorption. P. B. Sarkar and others. bibliog Soc Dyers & Col J 63:229-31 Jl '47
Aftertreatment of direct dyeings with formaldehyde. R. K. Fourness; C. M. Whittaker. Soc Dyers & Col J 63:178-9 Je '47
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47

DYES and dyeing—Chemistry—*Continued*

Centenary celebrations of the Chemical society; industry's debt to science. J. Baddiley. Soc Dyers & Col J 63:206-8 Jl '47

Chemical research again surges upward; dyes. B. L. West. bibliog Chem Ind 61: 393-5+ S '47

4-Chloro-2-aminophenol-5- and -6-sulphonic acids, their characterisation and differentiation. J. F. Gaunt and others. bibliog Soc Dyers & Col J 63:48-51 F '47

Chromium complexes of azo dyes derived from acylacetonitriles. R. S. Long. bibliog Am Chem Soc J 69:990-5 My '47

Color and chemical structure. I. H. Godlove. Rayon 28:289-91, 339-40, 390-1, 444-6, 561-2, 612-14, 665-6 My-Ag, O-D '47

Colour and constitution; the absorption of light by chemical compounds; the fourth John Mercer lecture. E. J. Bowen. diags Soc Dyers & Col J 63:281-7 S '47

Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47

Diazo reactions in the thiophene and furan series. C. D. Hurd and H. M. Priestley. Am Chem Soc J 69:859-64 Ap '47

Dyeing of wool with chrome dyes; the chroming of wool. P. W. Carlene, F. M. Rowe and J. B. Speakman. bibliog Soc Dyers & Col J 62:329-38 N '46

Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47

Friedel-Crafts reaction in the carbazole series. S. G. P. Plant and J. F. Powell. Chem Soc J p937-9 Jl '47

Identification of unsulfonated azonaphthol AS dyes. L. Koch and R. F. Milligan. bibliog Anal Chem 19:312-13 My '47

Indoaniline dyes; effect of multiple substitution on the absorption of phenol blue. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 69:152-5 Ja '47

Kinetics of the reaction of methanol with 3,3′-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47

Metachrome dyeing; minimizing the adverse effect of iron on fastness of chrome colors. C. H. A. Schmitt. Am Dyestuff Rep 36: 238-44 My 5 '47

Nature of the dye-chromium-fibre complex in the case of wool dyed with certain chrome mordant dyes. E. Race and others. bibliog Soc Dyers & Col J 62:372-6+ D '46

New pH indicators for determination of total alkalinity in water; disodium 4,4′-bis(*p*-dimethylaminophenylazo) -2,2′- stilbenedisulfonate and disodium 4,4′-bis(*o*-tolyltriazeno) 2,2′-stilbenedisulfonate. M. Taras. Anal Chem 19:389-41 My '47

Oils, waxes and resins; increasing uses in the dyeing industry. J. R. F. Jackson. Chem Age (Lond) 56:435 Ap 12 '47

Physical chemistry in the dyestuffs industries; the Ivan Levinstein memorial lecture. E. K. Rideal. Chem & Ind p386-7 O 26 '46

Preparation and some reactions of 4- nitrosothioanisole. H. H. Hodgson, D. D. R. Sibbald and E. W. Smith. Chem Soc J p851-2 Je '47

Reaction between cellulose nitrate and sodium acetylide in liquid ammonia. P. C. Scherer and G. A. Saul. bibliog Rayon 28:474-5, 537-8 S-O '47

Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; derivatives of 2′ : 4′-dinitro-benzene-2-naphthol-1-diazosulphonate. F. M. Rowe and W. Osborn. Chem Soc J p829-37 Je '47

Some heterocyclic methylene bases and their anilomethyl derivatives. F. M. Hamer, R. J. Rathbone and B. S. Winton. Chem Soc J p954-9 Jl '47

Some trinuclear cyanine dyes; the synthesis of neocyanines; abstract. F. M. Hamer and others. Chem & Ind p374 Je 28 '47

Spectra of the doubly charged positive ions of some *p,p′*-diaminotriphenylmethane dyes. B. M. Tolbert and G. E. K. Branch. Am Chem Soc J 69:1083-91 My '47

Spectral changes in some dye ions and their relation to the protein error in indicators. I. M. Klotz and F. M. Walker. bibliog J Phys & Colloid Chem 51:666-80 My '47

Spectrophotometric investigations of the interactions of proteins with organic anions. I. M. Klotz. bibliog Am Chem Soc J 68: 2299-304 N '46

Studies in wool dyeing; comparison of methods for applying chrome dyes. G. L. Royer and others. bibliog il pl Soc Dyers & Col J 63:214-23 Jl '47; Same. Am Dyestuff Rep 36: 425-37 Ag 11 '47; Discussion. Soc Dyers & Col J 63:223-4 Jl '47

Textile chemicals; Rexan O dyeing assistant. Chem Eng 54:168 Mr '47

Textile chemistry advanced by AATCC jubilee. Textile World 97:139+ Ja '47

Theoretical discussion of further substitution in disubstituted naphthalenes; a comparison of the sulphonation and nitration of polynitronaphthalenes, naphthalene polysulphonic acids and naphthalene nitrosulphonic acids. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:177-8 Je '47

Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; naphthalene and its sulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:46-8 F '47

Theory and practice in wool dyeing. F. L. Goodall. Am Dyestuff Rep 36:380-4; Discussion. 384-5 Jl 14 '47

Tippy dyeing of wool and its control. bibliog il Am Dyestuff Rep 36:486-506 S 8 '47

Cotton

Abbot-Cox process as applied to cotton. T. Richardson and E. R. Wiltshire. Soc Dyers & Col J 63:224-9 Jl '47

Action of light on dyed and undyed cotton. G. S. Egerton. bibliog diags Soc Dyers & Col J 63:161-7 Je '47; Same. Am Dyestuff Rep 36:561-7 O 6 '47; Discussion. Soc Dyers & Col J 63:167-71 Je '47; Am Dyestuff Rep 36:567-70+ O 6 '47

Aftertreatment of direct dyeings with formaldehyde. R. K. Fourness; C. M. Whittaker. Soc Dyers & Col J 63:178-9 Je '47

American association of textile chemists and colorists; wash fastness committee report. Am Dyestuff Rep 36:196-8 Ap 21 '47

California finishing plant expands 150% since 1941; National dyeing & finishing corp. R. L. Bean. il Textile World 97:137+ F '47

Cotton piece goods dyeing in the past twenty-five years. R. E. Rupp. il Am Dyestuff Rep 35:650-2 D 2 '46

Dyeing properties of direct cotton dyes. F. L. Goodall. Rayon 28:47 Ja '47

Efficiency and flexibility offered by finishing ranges. C. N. Rabold. diags Textile World 97:106-11 O '47

How the mineral content of cotton can affect beam dyeing with vat colors. Am Dyestuff Rep 36:104-7 Mr 10 '47

Minerals in cotton. Textile World 97:194 Ja '47

New dye technique shows maturity of cotton. C. F. Goldthwait and others. il Textile World 97:105-8+ Jl '47

Oxidation of cotton cellulose by solutions of potassium permanganate in the presence of a reduced vat dye. D. N. Mehta and H. A. Turner. Soc Dyers & Col J 63:15-20 Ja '47

Production of fast shades on knitted cotton fabrics, nets and lace. E. R. Wiltshire. Soc Dyers & Col J 62:313-18 O '46

Warp costs cut by continuous dyeing slasher. W. A. Newell. il Textile World 97:155+ S '47

Williams unit; its use in textile processing. S. H. Williams. il diags Am Dyestuff Rep 36:256-62+ My 19 '47; Same cond. Textile World 97:143+ My '47

See also
Calico printing
Dyes and dying —Wool—Cotton

DYES and dyeing—*Continued*

Cotton-rayon

Dyeing of hosiery in Germany; silk and cotton, rayon and cotton, and nylon. T. R. Smith. Am Dyestuff Rep 35:511 N 4 '46

History

Colors for textiles; ancient and modern. M. Bender. bibliog il J Chem Educ 24:2-10 Ja '47

Entire dyestuff industry developed since World war I. A. G. Brunier. il Textile World 96:106-7 D '46

Historical notes on dyeing. B. Brown. Rayon 28:500-1 S '47

Old dyers, old books and old methods; remarks on the history of dyeing and finishing. S. M. Edelstein. bibliog il Am Dyestuff Rep 36:523-31; Discussion. 531-2 S 22 '47

Hosiery

Dyeing of hosiery in Germany; silk and cotton, rayon and cotton, and nylon. T. R. Smith. Am Dyestuff Rep 35:511 N 4 '46

Hosiery dyeing and finishing in the past twenty-five years. R. H. Smith. Am Dyestuff Rep 36:187-8 Ap 21 '47

New nylon-hose dye shows good wash fastness. C. M. Bowden. il Textile World 97: 128-9 Ag '47

Knit goods

Production of fast shades on knitted cotton fabrics, nets and lace. E. R. Wiltshire. Soc Dyers & Col J 62:313-18 O '46

Luminescence

Fluorescent dyes. Rayon 28:52 Ja '47

Mordants

Nature of the dye-chromium-fibre complex in the case of wool dyed with certain chrome mordant dyes. E. Race and others. bibliog Soc Dyers & Col J 62:372-6+ D '46

Natural dyes

Colors for textiles; ancient and modern. M. Bender. il J Chem Educ 24:2-7 Ja '47

Nylon

Dyeing of hosiery in Germany; silk and cotton, rayon and cotton, and nylon. T. R. Smith. Am Dyestuff Rep 35:511 N 4 '46

Dyeing of nylon and nylon blends. P. J. Choquette. Rayon 28:31-3 Ja '47

New nylon-hose dye shows good wash fastness. C. M. Bowden. il Textile World 97: 128-9 Ag '47

Review of the dyeing of nylon. P. L. Meunier and A. K. Saville. Rayon 28:273-6, 323-4, 379-81 My-Jl '47

Some experiments on the dyeing of nylon yarn. J. Boulton. bibliog Soc Dyers & Col J 62:65-84 Mr '46; Abstract. Am Dyestuff Rep 35:311-12 Je 17 '46; Discussion. E. B. Abbot. Soc Dyers & Col J 63:112; Reply. 112-13 Ap '47

See also
Dyes and dyeing—Wool—Nylon

Package dyeing

Abbot-Cox process as applied to cotton. T. Richardson and E. R. Wiltshire. Soc Dyers & Col J 63:224-9 Jl '47

Plastics

Why and how of dyeing plastics. il Mod Plastics 24:124-6 Ag '47

See also
Color in plastic materials

Rayon

Acetate cellulose, dyeing with diazotized dyestuffs. Am Dyestuff Rep 36:16 Ja 13 '47

Cake dyeing of viscose rayon. J. A. Woodruff. bibliog il Am Dyestuff Rep 36:549-51+ O 6 '47

Cellulose acetate dyeing with vat dyestuffs. Am Dyestuff Rep 36:99-100 F 24 '47

Cellulose acetate dyeings; fumeproofing. Am Dyestuff Rep 36:17 Ja 13 '47

Cellulose-dyestuff complex; effect of orientation on the reflection of polarised light. J. M. Preston and P. C. Tsien. bibliog il Soc Dyers & Col J 62:368-72 D '46

Dye absorption by textiles. A. J. Hall. diags Rayon 27:493-7, 609-11, 668-9; 28:98-100, 157-9 S, N-D '46, F-Mr '47

Dyeing acetate cellulose; fumeproofing; patent. Am Dyestuff Rep 36:248 My 5 '47

Dyeing cellulose with acid dyestuffs; guanidine salts; patent. Am Dyestuff Rep 36:367 Je 30 '47

Dyeing of celanese locknit fabrics. L. C. Mitchell. Soc Dyers & Col J 63:102-5 Ap '47

Dyeing properties of some viscose rayons. J. Boulton and J. Wardle. diags Soc Dyers & Col J 63:8-15 Ja '47

Efficiency and flexibility offered by finishing ranges. C. N. Rabold. diags Textile World 97:106-11 O '47

Evaluation of the Kupensaure process. Am Dyestuff Rep 36:142-8 Mr 24 '47

Modern trends in rayon dyeing and mixed fabrics. R. W. Jacoby. Rayon 28:295-6 My '47

New dyeing assistant and scouring agent; Oridex D. M. Mytelka. Rayon 27:607-9 N '46

New machine for the dyeing of viscose rayon cakes. C. M. Whittaker. il Textile Inst J 38:P273-8 Ag '47

Nomogram to help in the dyeing of fine and coarse filament rayons and spun rayons to the same shade; matching the depth of shade of dyeings on highly oriented rayons. F. Fothergill. Soc Dyers & Col J 62:319 O '46

One-bath method of dyeing acetate developed black. L. S. Thompson. Rayon 28:495-6 S '47

Preparation, dyeing and finishing of the new fibres. C. C. Wilcock. Soc Dyers & Col J 63:41-5 F '47; Abstract. Am Dyestuff Rep 36:393 Jl 14 '47

Quarter century of progress in synthetic processing. W. F. Brosnan. il Am Dyestuff Rep 35:646-9+ D 2 '46

Some aspects of the dyeing and finishing of fibro, with special reference to spun-dyed fibro. H. A. Thomas. Soc Dyers & Col J 62:309-13 O '46

Some aspects of the saponification of acetate rayon; presented by South central section. il Am Dyestuff Rep 36:64-9 F 10 '47; Abstract. Rayon 28:20 Ja '47

Some experimental work on the dyeing of viscose rayon. C. C. Wilcock. bibliog Soc Dyers & Col J 63:136-40 My '47; Same. Am Dyestuff Rep 36:654+ N 17 '47

Studies in viscose rayon dyeing: applications of the dyeometer. G. L. Royer and others. bibliog 2pls Soc Dyers & Col J 63:254-9 Ag '47

See also
Dyes and dyeing—Wool—Rayon
Rayon printing
also Silk and rayon printers and dyers association of America

Rayon—cotton

See Dyes and dying—Cotton—rayon

Silk

See also
Silk printing

Synthetic fibers

Preparation, dyeing and finishing of the new fibres. C. C. Wilcock. Soc Dyers & Col J 63:41-5 F '47

Problems connected with dyeing and finishing synthetic fabrics. W. Helmus. Am Dyestuff Rep 36:2-5 Ja 3 '47; Abstract. Textile Col 68:22-3+ N '46

Synthetic fibers and their dyeing. E. Koester. Am Dyestuff Rep 36:189-92+ Ap 21 '47

See also
Dyes and dyeing—Rayon

Terminology

Dye nomenclature. W. H. Cady. bibliog Am Dyestuff Rep 36:253-4+ My 19 '47

DYES and dyeing—*Continued*

Vat dyes

Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47

Colour changes of vat and azoic dyes by wet and dry heat. E. Kornreich. Soc Dyers & Col J 62:318 O '46

Effect of vat dyes on the rate of oxidation of cotton by hypochlorite solutions. D. A. Clibbens and A. H. Little. Textile Inst J 37:T219-26 O '46

Evaluation of the Kupensaure process. Am Dyestuff Rep 36:142-8 Mr 24 '47

Fabric finishing. R. W. Powell. Am Dyestuff Rep 36:13-15+ Ja 13 '47

How the mineral content of cotton can affect beam dyeing with vat colors. Am Dyestuff Rep 36:104-7 Mr 10 '47

Oxidation of cotton cellulose by solutions of potassium permanganate in the presence of a reduced vat dye. D. N. Mehta and H. A. Turner. Soc Dyers & Col J 63:15-20 Ja '47

Production of fast shades on knitted cotton fabrics, nets and lace. E. R. Wiltshire. Soc Dyers & Col J 62:313-18 O '46

Vat and azoic colors preferred for printing. A. K. Saville. il Textile World 97:122-3+ Ag '47

Vat dyeing; indigoid dyes combined with acid dyes, applied on wool; patent. Am Dyestuff Rep 36:546 S 22 '47

Vat dyeing process; apparatus for pad steaming. diag Am Dyestuff Rep 36:419 Jl 28 '47

Vat dyes printing; alkyl carbamates added; patent. Am Dyestuff Rep 36:614 O 20 '47

Williams unit; its use in textile processing. S. H. Williams. il diags Am Dyestuff Rep 36:256-62+ My 19 '47; Same cond. Textile World 97:143+ My '47

Wool

Absorption of sulphur dioxide by worsted yarn. R. W. Moncrieff. Soc Dyers & Col J 63:51-2 F '47

Air bells can be eliminated in raw-stock dyeing. H. Thuemmel. il Textile World 97: 125+ Mr '47

Crocking of wool goods. Rayon 28:240 Ap '47

Dyeing of wool damaged by exposure to light. Rayon 28:499 S '47

Dyeing of wool with chrome dyes; the chroming of wool. P. W. Carlene, F. M. Rowe and J. B. Speakman. bibliog Soc Dyers & Col J 62:329-38 N '46; Abstract. Am Dyestuff Rep 36:282-3 My 19 '47

Dyeing of yarn blends containing wool as one component. O. W. Clark. il Am Dyestuff Rep 36:269-74 My 19 '47

Hot water heating of dye liquor. T. R. Smith. diag Am Dyestuff Rep 35:512 N 4 '46

Nature of the dye-chromium-fibre complex in the case of wool dyed with certain chrome mordant dyes. E. Race and others. bibliog Soc Dyers & Col J 62:372-6+ D '46

Re-dyeing of faded woollen garments. G. G. Simpson. bibliog Soc Dyers & Col J 63:171-5; Discussion. 176-7 Je '47

Studies in wool dyeing; comparison of methods for applying chrome dyes. G. L. Royer and others. bibliog il pl Soc Dyers & Col J 63:214-23 Jl '47; Same. Am Dyestuff Rep 36: 425-37 Ag 11 '47; Discussion. Soc Dyers & Col J 63:223-4 Jl '47

Studies on wool dyeing; crocking. H. E. Millson and others. il pl Am Dyestuff Rep 36:45-63+ F 10 '47

Textile chemistry advanced by AATCC jubilee. Textile World 97:139 Ja '47

Theory and practice in wool dyeing. F. L. Goodall. Am Dyestuff Rep 36:380-4; Discussion. 384-5 Jl 14 '47

Tippy dyeing of wool and its control. bibliog il Am Dyestuff Rep 36:486-506 S 8 '47

Twenty-five years progress in woolen and worsted dyeing and finishing machinery. W. Von Bergen. bibliog il diags Am Dyestuff Rep 35:662-8 D 2 '46

Vat dyeing; indigoid dyes combined with acid dyes, applied on wool; patent. Am Dyestuff Rep 36:546 S 22 '47

Wool; preparing, dyeing and finishing; discussions with I.G. personnel. H. Samuels and others. Soc Dyers & Col J 63:266-7 Ag '47

Wool raw stock processed in modernized dyehouse, Atlanta woolen mills. M. H. Hudson. il Textile World 97:112-13 My '47

Wool—artificial wool

Synthetic protein fibers dyeing uniformly with wool; patent. Am Dyestuff Rep 36: 283 My 19 '47

Wool—cotton

Dyeing of fast shades on piece goods containing cotton or viscose rayon mixed with wool. L. S. Thompson. Am Dyestuff Rep 36:265-6; Discussion. 275-6 My 19 '47

Wool—nylon

Dyeing of fast shades on piece goods where nylon and/or acetate are in mixtures containing wool. H. F. Clapham and G. R. Turner. Am Dyestuff Rep 36:267-8+; Discussion. 275-6 My 19 '47

Wool—rayon

Dyeing of fast shades on piece goods containing cotton or viscose rayon mixed with wool. L. S. Thompson. Am Dyestuff Rep 36:265-6; Discussion. 275-6 My 19 '47

Dyeing of fast shades on piece goods where nylon and/or acetate are in mixtures containing wool. H. F. Clapham and G. R. Turner. Am Dyestuff Rep 36:267-8+; Discussion. 275-6 My 19 '47

Dyeing of yarn blends containing wool as one component. O. W. Clark. il Am Dyestuff Rep 36:269-74 My 19 '47

DYES and dyeing, Photographic

Dye sensitization of photographic emulsions and the triplet state. W. T. Simpson. J Chem Phys 15:414 Je '47

Indoaniline dyes; some phenol blue derivatives with substituents in the phenol ring. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 68:2235-9 N '46

Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47

Photo-conductivity in photographic systems. W. West and B. H. Carroll. bibliog il diags J Chem Phys 15:529-43 Ag '47

Symmetrical tricarbocyanines having one or more methyl groups as substituents on the chain. F. M. Hamer and R. J. Rathbone. Chem Soc J p960-3 Jl '47

DYES as antiseptics and disinfectants

Chemotherapeutic investigations of cyanine dyes. L. G. S. Brooker and L. A. Sweet. Science 105:496 My 9 '47

Dye may cure disease; cyanine, Compound 863. Bsns W p88 Je 7 '47

DYKE, Ken R. 1897-

Amphibian of Manhattan. J. Lucas. por Adv & Sell 40:118+ F '47

DYNAMIC braking. See Braking, Dynamic

DYNAMIC condenser electrometers. See Electrometers

DYNAMICS

Analysis of problems in dynamics by electronic circuits. J. R. Ragazzini and others. bibliog il diags Inst Radio Eng Proc 35:444-52 My '47

See also

Aerodynamics
Electrodynamics
Hydrodynamics
Machinery—Design
Mechanics
Moments of inertia
Thermodynamics
Vibration

DYNAMOMETER cars

L.M.S. mobile testing plant. il Engineer 184: 144-6 Ag 15 '47; Same abr. Electrician 139: 473-4 Ag 15 '47; Same cond. Elec R (Lond) 141:290-2 Ag 22 '47

Testing locomotives on the track; L.M.S. railway. il Engineering 164:321-2, 324 O 3 '47

DYNAMOMETERS

Dynamometer as an aid in fleet maintenance. F. C. Patton. S A E J 55:57 F '47

Dynamometer as an aid in fleet maintenance; abstract. P. Oberreutter. S A E J 55:62 Ap '47

DYNAMOMETERS—*Continued*
Dynamometer reads cable winch pull. il Elec World 126:128 N 9 '46
Electric eddy current machinery. J. B. Winther. il diags Elec Eng 66:643-6 Jl '47
Electronic dynamometer. il Sci Am 176:59 F '47
How to measure machinability in the shop. G. Schlesinger. bibliog il diags Am Mach 90:126-8 N 21 '46
Let Dynah do it; use of dynamometers by Los Angeles transit lines. il Bus Transportation 26:55-7 Je '47
Mammoth trade dynamometer. Franklin Inst J 243:62 Ja '47
NACA balanced diaphragm dynamometer-torque indicator. C. S. Moore and others. diags Automotive & Aviation Ind 96:41+ Je 1 '47
1000 hp, 45 mph truck dynamometer. il Automotive & Aviation Ind 95:44 N 15 '46
Permanent-magnet eddy-current dynamometer. F. G. Spreadbury. il diags Engineering 164:26-7 Jl 11 '47
Photoelectric dynamometer load control; abstracts. M. R. Clapp. diags Automotive & Aviation Ind 96:31-2 F 1 '47; S A E J 55: 66-7 Je '47
Some power requirements studies with Ohio power-take-off dynamometer. G. W. McCuen. il S A E J 55:44-6+ Ja '47
Utilization of chassis dynamometers and maintenance records analysis to improve operating economies. E. J. Gay and H. T. Mueller. S A E J 55:36-9 O '47

DYNAMOS. See Electric generators, Direct current

DYNATRON
Negative resistance circuit element; dynatron at high radio frequencies. G. A. Hay. bibliog diags Wireless Eng 23:299-305 N '46

DYSENTERY
Bacillary dysentery and chronic ulcerative colitis in World war II. J. Felsen and W. Wolarsky. Science 105:213 F 21 '47
Coproantibody excretion during enteric infections. P. E. Harrison and J. Banvard. bibliog Science 106:188-9 Ag 29 '47

DYSMENORRHEA. See Menstruation

DYSPROSIUM
Neutron cross-section studies with the rotating shutter mechanism. T. Brill and H. V. Lichtenberger. bibliog diags Phys R 72: 585-90 O 1 '47
Neutron induced activities in lutecium, ytterbium, and dysprosium. M. G. Inghram and others. Phys R 71:270 F 15 '47
Total neutron cross section of dysprosium and neodymium. W. J. Sturm and G. P. Arnold. bibliog Phys R 71:556-7 Ap 15 '47

Isotopes

Nuclear isomerism in dysprosium 165. M. G. Inghram and others. Phys R 72:515-16 S 15 '47

E

EAGLE-PICHER company
Eagle-Picher president comments on company earnings and future outlook. il Paint Oil & Chem R 110:14-15 Jl 24 '47
Eagle-Picher; this lead and zinc house presents a case study in industrial transition. il Fortune 36:78-83+ S '47
More manufacturing brings sales rise. Barron's 27:40 Ap 21 '47

EAR
Observation of cochlear structures during the process of hearing. H. G. Kobrak. diags Acoustical Soc Am J 19:328-31 Mr '47
Theory as to the function of the scala tympani in hearing. L. A. de Rosa. bibliog diags Acoustical Soc Am J 19:623-8 Jl '47
Variation of phase along the basilar membrane with sinusoidal vibrations. G. v. Békésy. bibliog diags Acoustical Soc Am J 19:452-60 My '47

EARLHAM college
100th anniversary. Science 106:311 O 3 '47

EARPHONES
Physiological noise generated under earphone cushions. W. J. Brogden and G. A. Miller. il diags Acoustical Soc Am J 19:620-3 Jl '47
Why earphones? veteran pilot recommends speakers to replace them. C. A. Macatee. il Air Transport 5:27 O '47

EARTH
Problem of escape from the earth by rocket. F. J. Malina and M. Summerfield. bibliog J Aeronautical Sci 14:471-80 Ag '47

See also
Continents
Diastrophism
Geology
Geophysics
Ore deposits
Paleontology
Volcanoes
Water, Underground

Surface

Man as a geological force; engineering and agricultural operations are reshaping earth's surface. P. Cohen. il Tech R 49: 469-71+ Je '47

EARTH construction
See also
Pisé

EARTH movements
See also
Diastrophism
Landslides
Mine subsidences
Subsidences (earth movements)

EARTH pressure
Wall footing action poses enigmas. H. S. Woodward. diags Eng N 138:955-6 Je 12 '47; Discussion. V. R. Bergman. 139:891 D 25 '47

EARTH temperature
Geothermal gradients in Mid-continent and Gulf Coast oil fields. E. A. Nichols. map Pet Eng (Ref annual) 18:64+ Jl 1 '47
Heat flow value for a well in California. A. E. Benfield. bibliog map Am J Sci 245:1-18 Ja '47
Heat pump heat sources; earth as source of heat. E. N. Kemler. bibliog map diags Edison Elec Inst Bul 14:339-46 O '46; Same abr. Heating-Piping 18:84-6 D '46; 19:80-2 Ja '47
Heat transfer from ground to water in buried coils. W. F. King and M. S. Martus. plan Heat & Ven 44:71-4 Jl '47
House heating with earth heat pump. A. C. Crandall. il diag Elec World 126:94-5 N 9 '46
Losses in the cycle of a heat pump using a ground coil. R. A. Budenholzer. diag Dom Eng 170:103-5+ Ag; 110-13+ S '47; Excerpts. Heating-Piping 19:92-3 Je '47
Methods of earth heat recovery for the heat pump. E. N. Kemler. map diags Heat & Ven 44:69-72 S '47

EARTHQUAKES
Diastrophism during historic time in Gulf coastal plain. M. M. Sheets. bibliog Am Assn Pet Geologists Bul 31:201-26 F '47
Earthquakes from water storage. Eng N 138: 778 My 8 '47

EARTHQUAKES and building
Building on roller bearing foundations; Los Angeles anti-earthquake construction. il Steel 119:102 N 18 '46
California auto-assembly building has seismic and solar protection. il diags Eng N 138:53-5 Ja 9 '47
Earthquakeproof design of Rexall world headquarters in Los Angeles. H. J. Brunnier. il Concrete 55:3-5 O '47
Engineers to advise on 'quake effects. Eng N 138:708 Ap 24 '47
Floating building absorbs earthquake shock; Sears-Roebuck building, Los Angeles. il Civil Eng 16:539 D '46
Roller-bearing foundation. il Sci Am 176:30 Ja '47
Timber roundhouse defies earthquakes; structure recently built on Northern Pacific. il diags Ry Age 122:1298-300 Je 28 '47

EARTHWORK
Earthfill placing, Center Hill dam. R. W. McCall. il Eng N 138:572-3 Ap 17 '47
80-wagon fleet moves million yards per month; private haul road feature of airport job at San Francisco. H. J. McKeever. il map Roads & Sts 90:62-8 F '47
50,000 cu.yd. daily for Baltimore airport. il plan diag Eng N 139:532-5 O 16 '47
Graphical method locates point of breaking ground at crest of unstable slopes. R. G. Hennes. Civil Eng 17:333 Je '47
Investigation of drainage rates affecting stability of earth dams. F. H. Kellogg. diags Am Soc C E Proc 73:1065-88 S '47
Moving 178,000 cu. yd. of earth monthly for the Shirley highway. il Eng N 137:780-2 D 12 '46
Reclamation's biggest earthfill dam; Anderson Ranch dam in Idaho. D. S. Walter. il diags Eng N 139:396-402 S 18 '47

See also
Dams
Drainage
Drilling and boring (earth and rocks)
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Filling
Foundation soils
Foundations
Levees
Railroads—Earthwork
Roads—Grading
Roads—Subgrades
Soil mechanics
Tunnels and tunneling

Cost
Index to projects covered. Eng N 138:679+ Ap 17 '47

EARTHWORMS
Principle for maintaining earthworms in farm soils. H. Hopp and P. J. Linder. bibliog Science 105:663-4 Je 27 '47

EASEMENTS
Beware word of mouth agreements when building joint driveways. Am Bld 69:146 F '47

EAST coast electric company
Bonds awarded. Comm & Fin Chr 165:2797 My 26 '47
Offering of stock. Comm & Fin Chr 166:1577 O 20 '47

EAST coast public service company
Amended plan filed. Comm & Fin Chr 166:948 S 8 '47
Dissolution approved by the SEC. Comm & Fin Chr 165:1999 Ap 14 '47
Plans final liquidation. Comm & Fin Chr 165:809 F 10 '47

EAST Texas motor freight lines
Inside story of the East Texas case. W. T. Durant. J Account 82:460-9 D '46

EASTERN air lines, inc.
Likely to hold top spot. S. Altschul. Barron's 27:25 Ag 4 '47
Rickenbacker makes Eastern air lines pay. F. R. Walters. il map Mag of Wall St 80: 206-9+ My 24 '47

EASTERN New York power corporation
Bonds offered. Comm & Fin Chr 164:3289 D 23 '46
Merger plan approved. Comm & Fin Chr 164: 2956 D 9 '46

EASTERN stainless steel corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:230 My 24 '47
Showing profits again. Barron's 27:30 Je 16 '47

EASTMAN Kodak company
Appreciation in cash. Bsns W p19-21 N 23 '46
Consolidated income account years ended Dec. 28, 1946 and Dec. 29, 1945. Comm & Fin Chr 165:1314 Mr 10 '47
Eastman Kodachrome denied fair trade. Oil Paint & Drug Rep 150:49 D 30 '46
Larger distribution to common stockholders; wage dividend. Comm & Fin Chr 164:3142 D 16 '46
Photographic companies in new era. S. Devlin. Mag of Wall St 79:741-2 Mr 29 '47

EATON metal products company
Preferred stock offered. Comm & Fin Chr 166: 853 S 1 '47

EAVENSON, Howard Nicholas, 1873-
Portrait. Fortune 35:94 Mr '47

EBERBACH hardness tester. See Hardness—Testing

EBERTHELLA typhosa. See Typhoid fever

EBONITE. See Rubber

EBULLIOMETRY. See Boiling points

ECCLES, Marriner Stoddard, 1890-
Eccles says take it easy. por Bsns W p83-4+ Mr 15 '47

ECHELETTE gratings. See Diffraction gratings

ECHO
Reverberation time nomographs. R. C. Coile. Electronics 20:142+ Ap '47

ECHO sounding. See Sounding

ECKER, Frederick H., 1867-
80th birthday tribute from Metropolitan Life. East Underw 48:10+ S 5 '47; Nat Underw (Life ed) 51:4 S 5 '47

ECKER, Stanley Brady, 1899-
Portrait. Fortune 36:91 S '47

ECLIPSES, Solar
Astronomers and amateurs are planning expeditions to observe total solar eclipse, May 20. Science 105:231 F 28 '47
Ionosphere equipment for field use during a solar eclipse. G. H. Musselman. il diag Electronics 20:112-16 My '47

ECOLOGY
Importance of ecology in the training of engineers. P. B. Sears. Science 106:1-3 Jl 4 '47

See also
Botany—Ecology

ECONOMETRICS (term)
Keynes and statistics. J. A. Schumpeter. R Econ Stat 28:194-6 N '46

ECONOMIC and social council of United nations. See United nations—Economic and social council

ECONOMIC conditions
Bank for international settlements reports on world economic survey. Comm & Fin Chr 166:333+ Jl 24 '47
Current economic scene. W. A. Irwin. Comm & Fin Chr 166:1647+ O 23 '47
Dire economic predictions should be ignored. M. Winkler. Comm & Fin Chr 165:285 Ja 16 '47
Economic background of 1947 bond market. R. Rodgers. Comm & Fin Chr 165:123+ Ja 9 '47
Fortune survey; Fortune consumer outlook. E. Roper. Fortune 36:5-6+ N '47
Let's shrink our worries; comments on gloomy forecasts. F. W. Gehle. Comm & Fin Chr 165:2333+ My 1 '47
Obstacles to straight road ahead. C. Hinshaw. Comm & Fin Chr 164:2894+ D 5 '46
Our country's number one economic problem; growth and stabilization. J. D. Gill. Ind Marketing 32:37-8+ Jl '47
Prosperity dependent on steady capital goods production. A. R. Upgren. Comm & Fin Chr 166:328+ Jl 24 '47
Trends toward economic crisis in China, France, Britain, Canada. H. M. Tremaine. Mag of Wall St 79:663-4+ Mr 15 '47

See also
Business conditions
Business depression
Cost of living
Economic policy
Economic statistics
Food supply
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Prosperity
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also subdivision Economic conditions under names of countries and regions, e.g. France—Economic conditions; Germany—Economic conditions; United States—Economic conditions

ECONOMIC development, Committee for. See Committee for economic development

ECONOMIC forecasts. See Forecasts (economics)

ECONOMIC lot sizes. See Quantities (in production)

ECONOMIC maturity, Theory of. See Economics

ECONOMIC planning
Conditions of employment stabilization; promoting investment stability. B. Ohlin. Comm & Fin Chr 165:1381+ Mr 13 '47

ECONOMIC planning—*Continued*
Crisis according to plan; advocates of government planning promise security; in Britain they have thus far delivered endless confusion. J. Jewkes. Fortune 36:84-5+ S '47
Economic and social planning in India. Int Labour R 55:419-24 My '47
Economic control and political freedom. C. E. Wilson. Gen Elec R 50:11-15 Ag '47
Economic survey of the United Kingdom for 1947. Int Labour R 55:538-49 Je '47
Free enterprise vs. authoritarian planning. G. V. Cox. J Bsns 20:59-66 Ap '47
Management's professional responsibilities; public and private administration. A. G. Coons. Advanced Management 11:142-6 D '46
National economic plans in Europe. Fed Res Bul 33:1247-9 O '47
Planners and politicians; Plowden appointed Chief planner. Economist 152:443-4 Mr 29 '47
Planning in Britain. H. Morrison. Personnel J 25:228-35 Ja '47
Role of government in employment stabilization. B. Ohlin. Comm & Fin Chr 165:1515+ Mr 20 '47
Swedish anti-depression program. B. Ohlin. Comm & Fin Chr 165:1125+ F 27 '47
Swedish theory of unused resources. B. Ohlin. Comm & Fin Chr 165:869+ F 13 '47
See also
National planning association

ECONOMIC policy
Americans and British differ on part government should play in creating economic security; Gallup poll. Iron Age 160:119+ Ag 7 '47
America's opportunity. E. Schram. Comm & Fin Chr 164:2749+ N 28 '46
Bread and liberty; urges American participation in world recovery. H. R. Luce. Comm & Fin Chr 164:2607+ N 21 '46
Bureaucracy trend toward collectivism. J. C. O'Mahoney. Comm & Fin Chr 165:873+ F 13 '47
Critical tasks ahead. A. H. Vandenburg. Comm & Fin Chr 165:874+ F 13 '47
Current economic trends; their promise. D. B. Woodward. Comm & Fin Chr 165:2113+ Ap 17 '47; Abstract. Nat Underw (Life ed) 51:1+ Ap 18 '47
Economic policy in the transition. S. M. Livingston. R Econ Stat 29:20-4 F '47
Economic problems confronting the U.S.A.; an earnest warning. P. Cortney. Comm & Fin Chr 166:1305+ O 2 '47
Economic theory and the age we live in; appraisal of A. G. B. Fisher's Economic progress and social security. O. H. Taylor. R Econ Stat 29:102-7 My '47
Economics of the postwar period. O. Brewster. Comm & Fin Chr 165:1516+ Mr 20 '47
Foundations of a free economy. H. Hazlitt. Comm & Fin Chr 165:271+ Ja 16 '47
Free enterprise threatened by vulnerable Europe. R. E. Baldwin. Comm & Fin Chr 166:1539+ O 16 '47
Free markets and the free enterprise system. L. H. Haney. Comm & Fin Chr 165:1647+ Mr 27 '47
Freedom and economic progress; address before International chamber of commerce, Montreux, Switzerland, June 2, 1947. W. W. Aldrich. Comm & Fin Chr 165:2977+ Je 5 '47
Freedom of enterprise; slogan or reality? R. E. North. Comm & Fin Chr 165:647+ Ja 30 '47
Good economy and the science of economics. W. E. Spahr. Comm & Fin Chr 165:734+ F 6 '47
Higher prices and higher wages. T. I. Parkinson. Comm & Fin Chr 164:2758+ N 28 '46; Same cond. Weekly Underw 155:1320 N 30 '46
Ideas are Uncle Sam's most needed exports. C. Rheinstrom. Adv & Sell 40:38+ S '47
International and domestic economic problems. A. L. M. Wiggins. Comm & Fin Chr 166:1432-3+ O 9 '47
International chamber of commerce offers international stability plan. Comm & Fin Chr 165:134+ Ja 9 '47
Leading the world in achievement. W. F. Knowland. Comm & Fin Chr 166:726+ Ag 21 '47
Lessons from reconversion. G. A. Price. Comm & Fin Chr 166:1534+ O 16 '47
Let us keep our feet on the ground. D. E. Brown. Comm & Fin Chr 166:123 Jl 10 '47
Looks for lower government costs and reduced taxes as inflation safeguard. L. Saltonstall. Comm & Fin Chr 165:2490 My 8 '47
Mobilizing for world leadership. J. W. Bricker. Comm & Fin Chr 165:2850+ My 29 '47
Our major problems. H. L. Brooks. Comm & Fin Chr 164:3394+ D 26 '46
Perils of the free market, national and international. F. A. Harper. Comm & Fin Chr 166:713+ Ag 21 '47
Policy suggestions, January 1947-June 1948. E. B. George and R. J. Landry. R Econ Stat 29:24-8 F '47
Problem of planning. W. W. Townsend. Comm & Fin Chr 166:3+ Jl 3 '47
Program against reaction. C. Bowles. Comm & Fin Chr 165:139+ Ja 9 '47
Responsibilities of Republican Congress. J. W. Martin, jr. Comm & Fin Chr 165:1001+ F 20 '47
Return of slavery; politico-economic trend of our times. A. A. Mol. Barron's 27:7 S 29 '47
Role of businessman in dynamic economy defined. P. G. Hoffman. Factory Management 105:230+ Ag '47
Salvation in repeal of new deal policies. W. S. Baren. Comm & Fin Chr 165:2728+ My 22 '47
Self-reliance; from 1935 commencement address. P. S. Arkwright. Edison Elec Inst Bul 15:1-4 Ja '47
Social theories and progress. J. A. Howe. Comm & Fin Chr 166:1738+ O 30 '47
Some things we have learned. R. E. Flanders. Mech Eng 69:7-9 Ja '47
Strengthening economic system; address before Economic club of New York. A. P. Sloan, jr. Comm & Fin Chr 165:2057+ Ap 17 '47
Surveying the post-election scene. E. Schram. Comm & Fin Chr 164:3206+ D 19 '46
To explain U.S. economic system; joint A.N.A.-A.A.A.A. committee renders report. J. Smock. Adv & Sell 40:41+ My '47
Unity for progress. H. A. Wallace. Comm & Fin Chr 165:11+ Ja 2 '47
Way to prosperity. B. Ruml. Iron Age 159: 76-81 Ja 2 '47
We need markets big enough to absorb production. E. G. Nourse. il Ptr Ink 221:40-2+ O 31 '47
Western hemisphere in today's world. J. S. Kemper. Comm & Fin Chr 166:1108+ S 18 '47
What of America's future? J. W. Martin, jr. Comm & Fin Chr 166:722+ Ag 21 '47
What program for America? A. W. Barkley. Comm & Fin Chr 165:2980+ Je 5 '47
Whither America? H. Knutson. Comm & Fin Chr 166:522+ Ag 7 '47
Whither, America? address before NAM industrial conference, New York. H. Knutson. Comm & Fin Chr 165:2855+ My 29 '47
Why upset the apple cart? J. Ellis. Comm & Fin Chr 166:820, 839 Ag 28 '47
World economics; key to business stability. F. L. Crawford. Comm & Fin Chr 165: 2525+ My 8 '47
See also
Capitalism
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Totalitarianism
also subdivision Economic policy under names of countries, e.g. Great Britain—Economic policy; United States—Economic policy

ECONOMIC research
CED tackles problems of labor and small business. Sales Management 58:107 F 1 '47
Greater research urged. W. C. Mitchell. Comm & Fin Chr 165:2079 Ap 17 '47

ECONOMIC research—*Continued*
Measurement without theory; review of Measuring business cycles, by A. F. Burns and W. C. Mitchell. T. C. Koopmans. R Econ Stat 29:161-72 Ag '47
Relationship between consumer expenditures and savings; the contribution of survey research. G. Katona and R. Likert. R Econ Stat 28:197-9 N '46
Values and limitations of consumer financial surveys for economic research. R. A. Young and D. M. Holthausen. Fed Res Bul 33:244-52 Mr '47

ECONOMIC security. See Insurance; Insurance, Social; Pensions, Industrial; Saving; Unemployment—Relief measures

ECONOMIC statistics
Consolidated balance sheet for a democracy. C. R. Noyes. J Account 83:100-12 F '47
Contribution of psychological data to economic analysis. G. Katona. Am Stat Assn J 42:449-59 S '47
Economy in reconversion; national income and national product in 1946; with figures for other years. Survey of Cur Bsns 27:5-10 F '47
Expenditures, savings, and income. D. S. Brady. R Econ Stat 28:216-18 N '46
Relationship between consumers' expenditures, savings, and disposable income. I. Friend. R Econ Stat 28:208-15 N '46
Some applications of multivariate analysis to economic data. G. Tintner. bibliog Am Stat Assn J 41:472-500 D '46
Use of accounting in the interpretation of economic data. F. Eakin. J Account 84:126-30 Ag '47

See also
Business statistics
Consumption (economics)—Statistics
Employment—Statistics
Forecasts (economics)
Income—Statistics
Index numbers (economics)
Production—Statistics
Saving—Statistics
Wages—Statistics

ECONOMIC surveys
Sampling for the 1947 survey of consumer finances. R. Goodman. Am Stat Assn J 42: 439-48 S '47
Survey of consumer finances. D. M. Holthausen. Fed Res Bul 33:647-63, 788-802, 951-62 Je-Ag '47; Abstract (pt 1-2). Mo Labor R 65:329-31 S '47
Values and limitations of consumer financial surveys for economic research. R. A. Young and D. M. Holthausen. Fed Res Bul 33:244-52 Mr '47

ECONOMICS
Economic maturity; an industrial view. H. L. Towle. J Bsns 19:224-31 O '46
Good economy and the science of economics. W. E. Spahr. Comm & Fin Chr 165:734+ F 6 '47
Industrial productivity and economic equilibrium. J. D. Gill. Comm & Fin Chr 165: 1932+ Ap 10 '47
Keynes' contributions to economics; four views. R. F. Harrod and others. R Econ Stat 28:178-96 N '46
Keynesian and Swedish theories. B. Ohlin. Comm & Fin Chr 165:995+ F 20 '47
Swedish theory of unused resources. B. Ohlin. Comm & Fin Chr 165:869+ F 13 '47

See also
Advertising—Economic aspects
Agriculture—Economic aspects
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Capitalism
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Speculation
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Trade unions
Transportation
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Wage payment plans
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History
Place of the General theory of employment, interest, and money in the history of economic thought. G. Haberler. R Econ Stat 28:187-94 N '46

Psychology
Contribution of psychological data to economic analysis. G. Katona. Am Stat Assn J 42:449-59 S '47

Study and teaching
Econorama; three dimensional graphic portrayal of economic principles and business operations. il Trusts & Estates 85:183-6 S '47
Experiment in educational techniques; Connecticut college students work 12 weeks in a department store. C. G. Woodhouse. Ann Am Acad 251:153-6 My '47
Practical economics for engineers. C. E. Young. J Eng Educ 37:319-29 D '46
Teaching of economics. Economist 152:4-6 Ja 4 '47; Discussion. 152:62, 141 Ja 11, 25 '47

ECONOMISTS
Bargains in brains; job market at meetings of learned societies. Bsns W p 24+ F 1 '47

ECONOMISTS, Industrial
Business uses more economists; with portraits of ten typical industrial economists. Bsns W p21 F 15 '47

ECONOMISTS' national committee on monetary policy
Anderson elected president. Comm & Fin Chr 165:1293 Mr 6 '47

ECONOMIZERS, Fuel. See Fuel economizers

ECUADOR

Commercial policy
Changes in exchange controls. For Comm W 28:10-11 Jl 12 '47
Foreign-trade and exchange controls revised. For Comm W 28:15-16 Jl 5 '47

Economic conditions
News by countries. For Comm W 25:14 N 23; 29 D 21 '46; 26:16 F 1; 20 F 22; 27:15-16 My 3; 18 Je 28; 28:13-14 S 13; 12 S 20 '47

EDDINGTON, Arthur Stanley, 1882-
Portrait. Fortune 35:124 Ja '47

EDDY current brakes. See Brakes, Eddy current

EDDY currents
Approximate theory of eddy-current loss in transformer cores excited by sine wave or by random noise. D. Middleton. il diags Inst Radio Eng Proc 35:270-81 Mr '47
Eddy-current clutches for variable-speed drives. R. L. Jaeschke. il diags Machine Design 19:151-4 Ap '47
Electric eddy current machinery. J. B. Winther. il diags Elec Eng 66:643-6 Jl '47
Medium-frequency magnetization of sheet steel. R. Pohl. Inst E E J 94 pt 2:118-23 Ap '47
Method for predicting failure of metals; use of Du Mont Cyclograph. P. E. Cavanagh. bibliog il Pet Eng 18:120+; Discussion. 127-8 Ag '47
Permanent-magnet eddy-current dynamometer. F. G. Spreadbury. il diags Engineering 164:26-7 Jl 11 '47
Stress comparisons by correlation with high frequency magnetic and eddy current losses. P. E. Cavanagh. bibliog il diags Am Soc for Metals Trans 36:137-63; Discussion. 163-4 '46

EDELEANU process. See Petroleum refining—Edeleanu process

EDEMA
Edema. W. A. Swanker. Ind Med 15:636-7 N '46

EDISON, Thomas Alva, 1847-1931
Creator of an era. por Elec World News ed 127:17-20 F 8 '47
Edison and the AIEE. J. E. Housley. por Elec Eng 66:118 F '47
Edison and the mineral industry. Min & Met 28:20 Ja '47
Edison; boy printer and newspaper proprietor. A. Warren. Inland Ptr 119:41 Ap '47
Edison centennial; biographical note. il pors Comp Air Mag 52:39-42 F '47
Electric companies announce Edison centennial plans. C. L. Law. por Edison Elec Inst Bul 15:9-10 Ja '47
Electrical engineer. E. S. Lee. Elec Eng 66: 521-4 Je '47
He lighted the world's pathways. C. Fish. pors Nat Safety N 55:20-1+ F '47
Industry plans extensive celebration of Edison centennial. C. L. Law. por Edison Elec Inst Bul 14:405-8 D '46
Inquisitive Thomas Edison. E. R. Abrams. por Pub Util 39:134-42 Ja 30 '47
Nation honors Edison as exemplifying American spirit. Elec Eng 66:392-6 Ap '47
Philosophy of Thomas Edison. L. D. Farrar. Pub Util 39:201-9 F 13 '47
Prototype for American enterprise. F. M. Tait. Edison Elec Inst Bul 15:69-70+ Mr '47
Sketch. D. McNicol. por Inst Radio Eng Proc 35:106 F '47
Sketch of activities, 1874-1881. N. R. Speiden. il Science 105:137-41 F 7 '47
Spotlight shines on Edison. J. C. F. Coakley. pors Ind Marketing 32:36-7+ My '47
Thomas A. Edison and the founding of Science: 1880. Science 105:142-8 F 7 '47
Thomas A. Edison and the Naval research laboratory. A. H. Taylor. Science 105:148-50 F 7 '47
Thomas Alva Edison, born 100 years ago. por Power Pl Eng 51:105-7 F '47
Thomas A. Edison, inventor. A. E. Kennelly. pors Elec Eng 66:113-17 F '47
Tribute. por(cover) Illum Eng 42:141-2 F '47
What others think; side lights on Edison. Pub Util 39:246-7 F 13 '47

EDISON, Thomas Alva, foundation
Edison centennial becomes continuous research program. Ptr Ink 220:54+ Jl 18 '47

EDISON effect
Phenomena in incandescent lamps; paper read before the American institute of electrical engineers, at Philadelphia, October, 1884. E. J. Houston. diags Elec Eng 66: 119-21 F '47

EDISON electric institute
Annual meeting, Atlantic City, June 2-5. Elec World 127:72-3 Je 7 '47
Annual meeting, 15th, Atlantic City, June 2-5. Edison Elec Inst Bul 15:185-92+ Je '47
Annual meeting, 15th, Atlantic City, June 2-5; program. Edison Elec Inst Bul 15:97-102 Ap '47
Annual sales conference, 13th, Chicago, March 31-April 3. Edison Elec Inst Bul 15: 103-6 Ap '47; Pub Util 39:707-9 My 22 '47
EEI committees; pooling of talents, experiences and brains for a common purpose, a common goal. Edison Elec Inst Bul 15: 353-62 O '47
EEI committees work. Edison Elec Inst Bul 14:329-38, 369-74 O-N '46
Excerpts from addresses at annual convention. G. C. Neff and others. Pub Util 40: 44-51 Jl 3 '47
Institute's prize awards. Edison Elec Inst Bul 15:27-8 Ja '47
Personnel of committees for 1947-1948. Edison Elec Inst Bul 15:331-42 S '47

EDISON medal
Edison medal; origin; list of medalists. S. M. Dean. il Elec Eng 66:122 F '47
1946 Edison medal; presentation by D. Sarnoff; response by L. de Forest. Elec Eng 66:254-7 Mr '47

EDITING
Editing of scientific papers. R. W. Gerard. Science 106:289-90 S 26 '47

EDITORS
Recognition for editorial achievement; 10th annual business paper editorial awards sponsored by Industrial marketing. Ind Marketing 32:53 Je '47

EDRISAL
Edrisal in the management of dysmenorrhea. C. F. Long. Ind Med 15:679-81 D '46

EDUCATION
Retooling for education, 1948. W. A. Wittich. Soc Motion Picture Eng J 49:187-91 S '47

See also
Chemical education
College education
Colleges and universities
Commission for international educational reconstruction
Education of workers
Employees, Training of
Engineering—Study and teaching
Engineering education
Foundations, Charitable and educational
Humanities
Industrial education
Journalism schools
Learning, Psychology of
Liberal education
Libraries
Mining schools and education
Moving pictures in education
Technical education
United States—Army—Education
Vocational education
Consult Education Index for additional references

Bibliography
Education index, July 1944-June 1947. 1866p H. W. Wilson co, New York '47

Dictionaries
Dictionary of education. C. V. Good, ed. 495p $4 McGraw-Hill book co, 330 W. 42d st, New York '45

International aspects
See also
Foreign students in the United States

Periodicals
America's educational press; a classified list of educational publications issued in the United States with a listing of foreign journals; twenty-first yearbook. 36p pa 50c Educational press assn. of America, 1201 Sixteenth st, NW, Washington 6, D.C. '47
Classified list of educational publications issued in the United States with a limited listing of foreign journals; twentieth yearbook. M. Michels, comp. 32p pa 50c Educational press assn. of America, 1201 Sixteenth st, NW, Washington 6, D.C. '46

Arkansas
Featuring Arkansas. il Manuf Rec 116:118-20 Ag '47

Canada
Education in Canada. R. C. Wallace. Ann Am Acad 253:176-83 S '47

Great Britain
April school's day; raising of the school leaving age. Economist 152:485-6 Ap 5 '47

Missouri
Education in the hub state of the Nation. il Manuf Rec 116:121-3 Ja '47

EDUCATION, Cooperative. See Colleges and universities—Cooperative courses; Engineering education—Cooperative plan; Industrial education—Cooperative plan

EDUCATION and state
Pied Piper of Washington, S. 472; bill in aid of education. J. Bingham. Comm & Fin Chr 165:2905+ My 29 '47

EDUCATION of adults
No ceiling on education. W. E. Atkins. il Banking 39:25-7+ Je '47
Women and adult education. C. O. Houle. Ann Am Acad 251:178-85 My '47

EDUCATION of women
Education and employment opportunities for women. M. W. Zapoleon. Ann Am Acad 251:165-73 My '47

EDUCATION of women—*Continued*
What is women's education? K. E. McBride. Ann Am Acad 251:143-52 My '47

EDUCATION of workers
Easing road to education for oil company employes; six of 17 companies surveyed provide financial aid. F. Sturtevant. il Nat Pet N 39:37-8+ S 3 '47
General Electric spends $1,000,000 for employee education. Blast F & Steel Pl 35: 580-1 My '47
University and labor education. E. E. Witte. Mo Labor R 65:36-40 Jl '47

EDUCATIONAL advertising. See Advertising, Educational

EDUCATIONAL measurements
See also
Mathematics—Tests and scales

EDWARDS brothers, inc.
Preferred stock offered. Comm & Fin Chr 165:1188 Mr 3 '47

EFFICIENCY
Big shots and little shots. T. S. Harding. Ptr Ink 220:134 S 12 '47

EFFICIENCY, Industrial
Applying engineering principles to distribution. F. B. Turck. il Ind Marketing 32:49-50+ My '47; Abstract. Mech Eng 69:415-16 My '47
Better vision for greater efficiency. E. F. Richardson. il Factory Management 105: 109-16 S '47
Cases in work simplification; eight photographed improvements at Tonawanda. R. L. Dustman and D. R. Bell. Factory Management 105:97-9 S '47
Cases in work simplification; RCA tube department. il Factory Management 105:108-10 My '47
Doubled productivity by good handling. il Factory Management 104:133 D '46
Hersey variability. J. D. Weinland. Personnel J 25:211-14 D '46
Improving labor efficiency in day-work factories. H. R. Nissley. Mech Eng 69:572+ Jl '47
Increasing production through methods analysis. H. B. Maynard. Edison Elec Inst Bul 15:137-9 Ap '47
Making work simplification everybody's tool; Zenith radio corporation. W. S. Wheeler. il Factory Management 105:89-91 F '47
Plant yield studies cut losses. G. F. Schlaudecker. il Chem Ind 60:408-10 Mr '47
Production costs; method of reduction with maintenance of wage rates. J. W. Hendry. Automobile Eng 37:233-5 Je '47
Productivity in relation to costs. W. H. Franklin. N A C A Bul 28:859-68 Mr 15 '47
Visual skills versus employee efficiency. N. C. Kephart. il Iron Age 160:60-3 Jl 10 '47
What's happening to productivity. Factory Management 105:66-9 S '47

See also
Ability tests
Color in industry
Control charts
Employees—Rating
Employment management
Executives
Factories—Lighting
Factory management
Fatigue
Foundry management
Idleness, Industrial
Industrial engineering
Industrial management
Labor productivity
Machine shop management
Machinery, Replacement of
Machinery in industry
Mechanical handling
Music in industry
Office management
Planning
Production standards
Skill
Standardization
Time study

EFFLORESCENCE
What to do about efflorescing walls. il Brick & Clay Rec 110:41 Mr '47

EGERTON, Alfred, 1886-
Royal society medallists. Chem Age (Lond) 55:705 D 7 '46

EGG albumin. See Albumin

EGG beater
One-hand egg beater. il Consumers Res Bul 19:18 F '47

EGG trade
Egg and you; prices are up but not even farmers are happy. Bsns W p78-9 Ap 26 '47
Egg carton promotion, ad medium to sell eggs and many other products. il Mod Packaging 20:108-9+ Ag '47

Statistics
Egg production; monthly figures, 1940-1945; tabulation. Survey of Cur Bsns 27:24 Je '47

Australia
Australian shipments of eggs to United Kingdom. For Comm W 28:24 S 27 '47

Canada
Egg and meat production and consumption in 1947. For Comm W 28:22-3 S 13 '47
Exports of eggs from Canada, 1939-45 and first 9 months of 1946; table. For Comm W 25:37 D 21 '46

Cuba
Cuba's poultry and eggs; trade shows sharp shifts. For Comm W 26:7+ Ja 11 '47

EGG white. See Albumin

EGGS
Isolation of an unidentified spirochete from hen's eggs after inoculation with liver tissue from hens. E. A. Steinhaus and L. E. Hughes. Pub Health Rep 62:309-11 F 28 '47

Analysis
Determination of egg yolk in egg white. J. H. Cook and V. C. Mehlenbacher. Ind & Eng Chem Anal ed 18:785-8 D '46

Cleaning
Electric egg cleaner cuts labor in two. il Elec World 127:134 Je 7 '47

Preservation
Oiling egg shells; abstract. N. E. Gibbons and others. Food Ind 19:1147 Ag '47

Prices
U.S. and egg prices. Barron's 27:37 S 22 '47

Storage
Odor sources in egg storage and methods of removal. G. R. Gross and others. il Food Ind 19:919-21+ Jl '47

EGGS, Dried
Applying control chart methods to taste testing. S. Marcuse. bibliog il Food Ind 19:316-18 Mr '47
Baking quality of dried egg. D. W. Grover and J. R. Hawthorne. bibliog il Chem & Ind p458-62 D 28 '46
British and CCC help in dried egg buying. Food Ind 19:1248-9 S '47
Grind shells and all into powdered eggs. Food Ind 19:514+ Ap '47
Pathogenic organisms in dried eggs; abstract. M. D. Schneider; N. E. Gibbons and others. Food Ind 19:266 F '47
Spray dried whole eggs improved with carbohydrates. E. H. Dawson and others. il Food Ind 19:483-6+ Ap '47

EGGS, Frozen
Agriculture department reverses self, begins sale of frozen egg stocks. Barron's 27:36 N 3 '47

Storage
Liquid and frozen egg; some factors affecting the quality of stored frozen egg; abstract. J. E. Pearce and M. Reid. Food Ind 19:863 Je '47

EGLOFF, Gustav, 1886-
Portrait. Chem Age (Lond) 57:39 Jl 12 '47

EGYPT
See also
Floods—Egypt
Moving picture industry—Egypt
Petroleum—Egypt
Prices—Regulation—Egypt

Economic conditions
Problems of Egypt's population. Economist 151:793-4 N 16 '46

EICOSANE
Higher hydrocarbons; six phenyleicosanes and six cyclohexyleicosanes. F. C. Whitmore and others. Am Chem Soc J 69:235-7 F '47

EIFFEL, Alexandre Gustav, 1832-1923
Palace, the Bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. Arch Forum 87:88-95 O '47

EIFFEL tower
Palace, the Bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. il Arch Forum 87:88-95 O '47

EINSON-FREEMAN company
Point of purchase; Einson-Freeman co. specializes in lithographic store displays. il Fortune 36:147 N '47

EINSTEIN, Albert, 1879-
Portrait. Fortune 35:124 Ja '47

EINSTEIN theory
Eee equals em see squared; significance of the Einstein equation in production of atomic power; production of helium from hydrogen. A. W. Kramer. diags Power Pl Eng 51:80-5 F '47
Universe; 1947 models. Fortune 35:125+ Ja '47

EINSTEIN'S field equations. See Gravitation

EISENHOWER, Dwight David, 1890-
Eisenhower boom. C. Bargeron. Comm & Fin Chr 166:1007 S 11 '47
Eisenhower-for-president talk rises in both parties. H. Davenport. Barron's 27:11 S 1 '47
Eisenhower leads Truman in presidential popularity poll; Gallup poll. Iron Age 160: 121 O 9 '47
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47
Voters wonder about General Eisenhower for next election; Gallup poll. Iron Age 160:119-20 S 4 '47

EISENMAN, William Hunt, 1886-
Appreciation. D. F. Thum. por Metal Prog 52:556-8 O '47

EJECTING devices (machine work)
Ejection method depends on molded part. R. Kling. diags Am Mach 91:104-5 My 8 '47
Flit-gun vacuum principle ejects small slugs. W. C. Mills. diag Am Mach 91:113 Mr 27 '47

EJECTORS
Aircraft ejector performance. F. A. McClintock and J. H. Hood. J Aeronautical Sci 13:559-68 N '46
See also
Air ejectors
Steam jets

EKCO products company
Ekco products sales above prewar. Barron's 26:6-7 N 25 '46
Selected stocks. Mag of Wall St 80:429 Jl 19 '47

EKKO process. See Electrodeposition of metals

ELAIDIC acids
X-ray and thermal examination of the glycerides; glycerides of erucic, brassidic, oleic, and elaidic acids. M. G. R. Carter and T. Malkin. Chem Soc J p554-8, pl 1-2 Ap '47

ELASMOBRANCHII
Liver oils of elasmobranch fish of south Indian waters. U. S. Kini and K. Chidambaram. bibliog Soc Chem Ind J 66:233-8 Jl '47

ELASTICITY
Acoustic determination of the physical constants of rubber-like materials. A. W. Nolle. diag Acoustical Soc Am J 19:194-201 Ja '47
Aeroelastic problems at high speed. A. R. Collar. diags Roy Aeronautical Soc J 51:1-23 bibliog(p22-3); Discussion. 23-34 Ja '47
Le calcul et l'expérience en résistance des matériaux. P. Laurent. Génie Civil 124: 370-3 O 1 '47
Calculation of the shear elastic constants of the alkali halides. W. J. Price. bibliog Phys R 72:514-15 S 15 '47
Contributions to the theory of beta-phase alloys. C. Zener. bibliog Phys R 71:846-51 Je 15 '47
Creep and relaxation. B. Gross. bibliog J Ap Phys 18:212-21 F '47
Defense of the Cauchy relations. C. Zener. Phys R 71:323 Mr 1 '47
Elastic behavior and creep of refractory bricks under tensile and compressive loads. L. E. Mong. bibliog diags J Res Nat Bur Stand 38:229-40 F '47; Same. Am Cer Soc J 30:69-78 Mr 1 '47
Elastic constants of materials loaded with non-rigid fillers. J. M. Dewey. bibliog J Ap Phys 18:578-81 Je '47
Elastic constants of sodium chlorate. S. Bhagavantam and D. Suryanarayan. Phys R 71:553 Ap 15 '47
Elastic deformation of piston rings. H. W. Swift. Engineering 163:161-5 Mr 7 '47
Elastic losses in some high polymers as a function of frequency and temperature. H. S. Sack and others. bibliog il diags J Ap Phys 18:450-6 My '47
Elastic properties of cork; hydrostatic and ordinary load-compression curves for cork. S. L. Dart and others. diag J Ap Phys 18:474-8 My '47
Elastic properties of cork; stress-temperature relationship of compressed cork. S. L. Dart and E. Guth. J Ap Phys 18:470-3 My '47
Elastic properties of lattices. P. S. Epstein. bibliog Phys R 70:915-22 D 1 '46
Elastic properties of textile fibres. R. Meredith. diags Textile Inst J 37:P469-80 O '46
Elasticity explained. E. A. Hauser and D. S. le Beau. il diag Sci Am 177:204-6 N '47
Elasticity measurements on polychloroprenes. P. Kinell. bibliog diag J Phys & Colloid Chem 51:70-9 Ja '47
Elasticity of rubber-like materials. L. R. G. Treloar. bibliog Rubber Age 60:193-6+ N '46; Same. Can Chem & Process Ind 30: 33-6+ N '46
Expanding domain of aeroelasticity. A. R. Collar. bibliog(62 titles) Roy Aeronautical Soc J 50:613-36 Ag '46; Discussion (Mechanical vibration and aeroelasticity). P. B. Walker. 51:417-23 Ap '47
Finite elastic strain of cubic crystals. F. Birch. bibliog Phys R 71:809-24 Je 1 '47
Influence de la structure et de la composition des alliages métalliques sur leurs propriétés élastiques. L. Guillet. bibliog diags Génie Civil 124:45-50 F 1 '47
Instrument for measuring rheological properties of elastic fluids. H. Goldberg and O. Sandvik. bibliog diags Anal Chem 19:123-31 F '47
Low temperature characteristics of elastomers. S. D. Gehman, D. E. Woodford and C. S. Wilkinson, jr. bibliog il diag Ind & Eng Chem 39:1108-15 S '47
Low temperature transformation in lithium. C. S. Barrett. Phys R 72:245 Ag 1 '47
Measurement of elasticity in fluids of low viscosity. J. R. Van Wazer and H. Goldberg. diags J Ap Phys 18:207-11 F '47
Measurement of the dynamic stretch-modulus and hysteresis of tire cords. W. J. Lyons and I. B. Prettyman. bibliog diag J Ap Phys 18:586-7 Je '47
Measurement of the viscosity and shear elasticity of liquids by means of a torsionally vibrating crystal. W. P. Mason. bibliog il diags A S M E Trans 69:359-67; Discussion. 368-70 My '47
Method for simplifying the calculations of the natural frequencies for a system consisting of *n* rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47
New microscope technique unfolding elasticity secret; abstract. E. A. Hauser and D. S. le Beau. Rubber Age 61:457 Jl '47
Note on a boundary value problem of Reissner and Sagoci. I. N. Sneddon. bibliog J Ap Phys 18:130-2 Ja '47
Numerical methods for the calculation of elastic instability. B. A. Boley. bibliog il diags J Aeronautical Sci 14:337-48; Discussion. 348-50 Je '47
Plastic flow, creep, and stress relaxation; creep and elastic after-effect. C. Mack. bibliog diag J Ap Phys 17:1101-7 D '46
Rational explanation of column behavior. F. L. Ryder. Am Soc C E Proc 73:311-41 Mr '47; Discussion. 73:756-8, 969-72 My-Je '47
Relations between the elastic constants. D. S. McGregor. Engineering 164:76 Jl 25 '47

ELASTICITY—*Continued*
Statistical properties of networks of flexible chains. H. M. James. J Chem Phys 15:651-68 S '47
Stress-strain relations in ceramic materials. J. O. Everhart and M. Lassettre. il Ohio State U Eng Exp Sta Bul 126:1-23 '46 (pa 50c)
Theory of the increase in rigidity of rubber during cure. H. M. James and E. Guth. bibliog J Chem Phys 15:669-83 S '47
Torsion of a rubber cylinder. R. S. Rivlin. il J Ap Phys 18:444-9 My '47; Correction. 18: 837 S '47
Ultrasonic measurements on single crystals. H. B. Huntington. bibliog diag Phys R 72: 321-31 Ag 15 '47
Waves in elastic tubes; velocity of the pulse wave in large arteries. A. L. King. bibliog diags J Ap Phys 18:595-600 Jl '47

See also
Compressibility
Creep of materials
Deformations (mechanics)
Friction, Internal
Least work, Principle of
Photoelasticity
Plasticity
Poisson's ratio
Springs (mechanism)
Strains and stresses
Strength of materials
Torsion

ELDERTON, William Palin, 1877-
President of British Equitable. por East Underw 48:3 Jl 11 '47

ELECTION slogans. See Slogans, Election

ELECTIONS
How to cook an election. Economist 151: 1038-9 D 28 '46; Same. Iron Age 159:113+ Ja 16 '47

California
Cross filing of political candidates in California. D. E. McHenry. Ann Am Acad 248:226-31 N '46

United States
Democratic party and Republican congressional victory. Iron Age 158:115+ N 28 '46
Fortune survey; election, 1946. Fortune 35: 6+ Mr '47
Present analysis of voting shows very bright outlook for GOP in 1948 elections. Iron Age 158:121+ D 5 '46
Taft-Hartley foe loses; labor-backed candidate trounced by G.O.P. in Pennsylvania by-election. Bsns W p 17 S 13 '47

ELECTRIC alarms
Melamine helps protect transformers; eight-cavity transfer mold. il Mod Plastics 24: 119 My '47
System warns of overheated bearings. Steel 121:108 S 22 '47

ELECTRIC analogies. See Aerodynamics—Electric analogies; Heat transmission—Electric analogies; Mechanics—Electric analogies

ELECTRIC apparatus and appliances
Design. E. T. Norris. Inst E E J 94 pt 1:91-4 F '47; Abstract. Electrician 137:931 O 4 '46
Electrical and allied developments of 1946; appliances and construction materials. G. Bartlett. il Gen Elec R 50:49-50 Ja '47
Electrical developments. diags Power Pl Eng 51:81-3 Ja '47
Electrical engineering in 1946. il Engineer 183:55-7, supp 3, 69-70, 93-4, 115-16 Ja 10-31 '47
Integral hp. single-phase motors; their characteristics and uses. M. E. Cutten. il diags Product Eng 18:150-4 Ap '47
Unitized mercury cathode apparatus for electrolytic removal of metals. H. O. Johnson, J. R. Weaver and L. Lykken. bibliog il diags Anal Chem 19:481-3 Jl '47

See also
Airplanes—Electric equipment
Armatures
Commutators
Condensers (electricity)
Dynamometers
Electric apparatus industry
Electric cables
Electric circuit breakers
Electric coils
Electric controllers
Electric converters
Electric current limiters
Electric equipment
Electric furnaces
Electric fuses
Electric generators
Electric instruments
Electric inverters
Electric lamps
Electric machinery
Electric meters
Electric motors
Electric precipitation
Electric rectifiers
Electric switchgear
Electric transformers
Electricity in mining
Electricity on the farm
Electromagnets
Galvanometers
Photoelectric cells
Potentiometers
Radar
Radio apparatus
Refrigerators, Electric
Relays
Selsyn apparatus
Storage batteries
Voltage regulators

Exhibitions
Aircraft electrical equipment; exhibition held by the Society of British aircraft constructors. il Electrician 139:771-2 S 12 '47
British industries fair; electrical exhibits. il plan Elec R (Lond) 140:697-721, 787-801 My 2, 16 '47; Electrician 138:1151-5, 1233-41 My 2-9 '47
Electrical engineering show a success. il Elec World News ed 127:24-6 F 8 '47
Engineering and marine exhibition; Olympia exhibits reviewed. il Electrician 139:613-20 Ag 29 '47; Elec R (Lond) 141:353-4 S 5 '47
Glasgow technical exhibition; electrical equipment and appliances. il Electrician 137:1354-7 N 15 '46; Elec R (Lond) 139:834 N 22 '46
I.M.E.A. exhibition, Bournemouth. il Elec R (Lond) 140:1010-18 Je 20 '47; Electrician 138:1666-78 Je 20 '47
Industrial Wales exhibition. il Electrician 139:694 S 5 '47

Manufacture
Carbon brazes copper parts. W. Scott. il Am Mach 91:98-100 N 6 '47
Concentrated attack aims at 10 per cent lower cost; Lincoln electric company, Cleveland. C. E. Erickson. il Factory Management 105:71-4 Mr '47
Elaborate maintenance surveys key to plant fitness; Western Electric's Kearny works. H. L. Husson. il Factory Management 105: 80-3 My; 79-82 Je '47
General electric company; new plant at Tiffin, Ohio. il Factory Management 105:B49-53 pt 2 Ap '47
Nonmagnetic arc welding joints between mild steel plates. O. C. Frederick. il diags Steel 121:85+ O 13 '47
Production in South Wales; manufacture of switchgear and transformers. il Elec R (Lond) 139:797-8 N 15 '46
Some chemical hazards in the electrical industry; abstract. C. P. Fagan. Engineer 184:111 Ag 1 '47
Stepping-up production; new factory, Airedale electrical and manufacturing co. il Elec R (Lond) 140:453-4 Mr 21 '47
Unconventional dies facilitate difficult forming operations; Knapp-Monarch co. G. E. Stedman. il Steel 121:78-9+ S 8 '47

Merchandizing
Appliance market surveyed monthly; dealer report plan used by Indiana service corp. J. H. K. Shannahan. Elec World 127:134 Ap 12 '47
Appliance marketing problems. H. M. Kelley. Edison Elec Inst Bul 14:393-7 N '46
Electrical West sales guide. Published in monthly numbers of Electrical west
Farm market and how to use it. P. E. Miller. Edison Elec Inst Bul 15:127-9 Ap '47
Why are appliance sales reports? Washington water power company shows dealers new record plan. il Elec West 97:90-2 O '46

Testing
Appliance consumption checked by portable meter. C. W. Pinkel. il Elec World 128:72 Ag 30 '47

Transportation
Damaged in transit; who's to blame; problem of damage to refrigerators, ranges, radios, and washers en route from eastern plants to Pacific coast. il Elec West 99:99-102 S '47

ELECTRIC apparatus and appliances, Domestic
Electric cleaning of home air. il Sheet Metal Worker 38:84+ S '47
Electricity in new houses. J. I. Bernard. Elec R (Lond) 139:735 N 8 '46
General domestic electrical appliances; abstract. E. G. Batt. Elec R (Lond) 139:880 N 29 '46
Teaching electrical methods; Manchester's residential college for members of the forces, R. L. Hodgson. il Elec R (Lond) 139:803-4 N 15 '46

See also
Electric irons
Electric roasters
Electric stoves
Electric water heaters
Electricity in the home
Refrigerators, Electric
Washing machines

Exhibitions
Domestic appliance trends; British industries fair. il Elec R (Lond) 140:793-8 My 16 '47
Electric road show of Union Electric packs 'em in. Edison Elec Inst Bul 15:315+ S '47
Ideal home exhibition, Olympia. il Elec R (Lond) 140:398-400 Mr 14 '47; Electrician 138:711-12 Mr 21 '47
Paris fair. Elec R (Lond) 140:860 My 23 '47
Paris fair; exhibits in the domestic field. il Electrician 138:1447 My 30 '47
Significance of Market week in San Francisco; illustrations with text. Elec West 99: 96-8 S '47

Manufacture
Protective finishing of electrical equipment. F. Widnall and R. Newbound. Engineering 163:330 Ap 25 '47
South Wales venture. il Elec R (Lond) 139: 623-4 O 18 '46

Merchandizing
Appliance financing by commercial banks. L. J. Asterita. Radio N 38:50+ Ag '47
Be sure of quality before you sell. M. K. Brody. il Radio N 37:51+ Ja '47
Contractor combines appliance business with home building; Victor Carlson's sons, inc, Minneapolis. il plans Am Bld 69:112-13+ My '47
Dealers get the real low-down; San Diego's Bureau of radio and electrical appliances annual spring conferences. Elec West 99: 92+ Jl '47
Every home a bonanza! L. Bader. Radio N 38:49+ Ag '47
Financing and controlling credit sales of home appliances. R. D. Stith. Dom Comm 35:30-4 My '47
Go all electric, the modern way. J. R. Poteat. Edison Elec Inst Bul 15:119-22 Ap '47
Has wire got you choked; effect of inadequate wiring on appliance selling. Elec West 98: 71-4 Ja '47
It's a woman's intuition, plus. M. Fenner. Elec West 98:81-3 Mr '47
Memo for buyers' market; demonstrate to sell! Westinghouse Electric brings prospect to dealer's Laundromat demonstration room. il Sales Management 59:37-9 Jl 1 '47
Oil jobber adds appliance department; Staebler-Kempf oil co. F. C. Sturtevant. il Nat Pet N 38:26-7 D 18 '46
Safeway broadens sales with home appliances. Barron's 27:22 Mr 31 '47
Service under the sales department; Proctor electric company. Am Bsns 17:34+ Ja '47
To sell the complete kitchen. Elec West 99: 89-92 Ag '47

See also
Electric shops (retail trade)

Repair
New plan allows closer control over service; Proctor electric co. setting up a network of authorized service stations. V. J. Dallaire. il Ptr Ink 217:98+ D 13 '46

ELECTRIC apparatus industry
Ac-dc. Aesop Glim. Ptr Ink 219:104 My 23 '47
Ambitious electric campaign by NEMA to win small town-rural market. Pub Util 39:175-6 Ja 30 '47
Appliance business looking up; conference of Bureau of radio and electrical appliances of San Diego county. Elec West 98:64-5 Ja '47
Appliance market. Bsns W p50-1 F 8 '47
Electrical manufacturing leaders optimistic about business in 1947. R. S. Edwards. Elec World 127:34+ Ja 4 '47
Electrical products firms can look forward to near-record profits in 1947. Elec World News ed 128:21 Jl 26 '47
General Electric pricing policy. C. E. Wilson. Elec World 126:162 D 7 '46
G.E. shipping packs; specifications and procedure. P. O. Vogt. il Mod Packaging 20:140-4+ D '46
G.E.'s improved method for mass sales training. J. DeJen. il Ptr Ink 218:38-9+ Mr 28 '47
Hotpoint blossoms out. il Bsns W p72+ Ag 2 '47
How to turn a plant dedication into a trade and community event; Benjamin Electric publicizes outstanding laboratory design in advertising, house organs, plant visits. B. F. Stevens. il Ind Marketing 32:30-3+ Ja '47
Increases in wages followed by firming of industry prices. Elec World News ed 127:12-13 My 3 '47
Manufacturing; appliances lead in post-war production. Elec World 127:164-5 Ja 18 '47
Marketing, the next big job. D. G. Mitchell. Edison Elec Inst Bul 15:257-60 Jl '47; Excerpts. Elec World 127:88-9 Je 7 '47
Our compensation plan gives salesmen their own business; Sylvania Electric's prospector's plan. D. Mitchell. Ptr Ink 217: 35-7 D 13 '46
Power plant equipment in big demand. V. Bell. il Steel 120:61-3 Mr 31 '47
Proctor sales parley proves good theater pays off. T. Armstrong. il Sales Management 59: 90-2+ S 1 '47
Scientific plan builds retail salesmen; Kelvinator decides it's an all-company job. H. E. Green. il Ptr Ink 217:44-5 N 15 '46
So long, Easy street! here comes old-time pick and shovel selling! Hotpoint tells salesmen and dealers about buyers' market. L. C. Truesdell. il Sales Management 59:58+ Jl 1 '47
Washington's electrical shopping center where nothing is for sale. il Sales Management 57:55 D 15 '46
What twenty manufacturers told me. J. C. Chamberlain. Elec West 97:76-7 N '46

See also
General electric company
Noma electric corporation
Sylvania electric products, inc.

Advertising
Full-color art: $30,000; space: $40,000; results: fine; Electronic laboratories, Indianapolis. H. E. Green. il Ptr Ink 217:46-7 D 6 '46
Light treatment of copy and art in trade ads; Proctor Electric. il Ptr Ink 217:45 D 20 '46
Service is keystone of G-E's farm radio success. G. E. Markham. Ptr Ink 218:52+ Mr 14 '47

Directories
Directory of parts and service; electrical appliance manufacturers' authorized list for the 11 western states. Elec West 98:130-2+ Ap '47
Electronics buyers' guide. Electronics 20:D1-144 Mid-Je '47
Manufacturers' directory; with list of western branch offices or western representatives. Elec West 98:146+ Ap '47

Exhibitions
Planned store lighting is theme of G-E exhibit at modernization show. J. S. Harrington. il Ind Marketing 32:54+ Ag '47

ELECTRIC apparatus industry—*Continued*

Finance

Annual reports show effects of strikes, OPA pricing on manufacturers' returns; General Electric and Westinghouse. Elec World News ed 127:21 Mr 22 '47

Securities

Electrical equipments, today and tomorrow; with financial survey of stocks. J. M. Gordon. il Mag of Wall St 80:602-3, 622 Ag 30 '47

Varying prospects for electrical equipments; with financial survey of leading stocks. S. Devlin. il Mag of Wall St 79:560-1+ F 15 '47

Service

New plan allows closer control over service; Proctor electric co. setting up a network of authorized service stations. V. J. Dallaire. il Ptr Ink 217:98+ D 13 '46

Proctor's fourth factor in selling; the department of customer satisfaction. R. M. Oliver. il Sales Management 57:37-9 D 15 '46

Statistics

Electrical merchandising table shows unit and dollar sales of appliances, 1938, 1941, 1946. Ptr Ink 218:138 Ja 24 '47

Argentina

Argentine trade in electrical machinery in January-June 1945 compared with 1944; tabulation. For Comm W 25:31 N 16 '46

Australia

Australian electrical trade, 1945 and 1946 compared; tabulation. Elec R (Lond) 141:263-4 Ag 15 '47

Canada

Canadian overseas trade; 1944 and 1945 compared. Elec R (Lond) 139:808-9 N 15 '46

France

French electrical trade, 1946. Elec R (Lond) 141:182 Ag 1 '47

Great Britain

Electrical overseas trade, 1938, 1945 and 1946. Electrician 138:349-50 Ja 31 '47

Engineer and the export trade. J. F. Shipley. Inst E E J 94 pt 1:35-8 Ja '47; Abstract. Electrician 137:1135-6 O 25 '46

Engineering outlook. Engineering 163:136-9, 148-50 F 7-14 '47

Industrial close-down; how manufacturers were affected. il Electrician 138:553-5, 631-2 Mr 7-14 '47

Industrial position; how the crisis has affected electrical manufacturers. Elec R (Lond) 140:353-4 Mr 7 '47

Lighting fittings exports. Elec R (Lond) 141: 438-9 S 19 '47; Electrician 139:839-40 S 19 '47

Overseas electrical trade; record exports in 1946. Elec R (Lond) 140:213-15 Ja 31 '47

Progress in manufacture. il Elec R (Lond) 140:323-4, 339-41, 457-9, 499-500, 546 F 14, Mr 7, 21-Ap 4 '47

Railway goods charges; methods of minimizing costs. G. Saville. Elec R (Lond) 141: 469-70 S 26 '47

What manufacturers are doing. il Electrician 137:1834; 138:55-6, 128-9, 205-6, 287-8, 448, 951-2, 1023, 1321-2 D 27 '46, Ja 3-24, F 7, Ap 11-18, My 16 '47

India

India's import trade; 1944-45 compared with 1945-46. Elec R (Lond) 140:448 Mr 21 '47

Iraq

Electrical imports of Iraq; 1943 and 1944 compared. Elec R (Lond) 140:82 Ja 10 '47

Italy

Production capacity in Italian electrical industry in 1944. For Comm W 26:16 Ja 11 '47

Netherlands

Netherlands industry staging come back. For Comm W 27:25-6 My 17 '47

Pacific coast

Damaged in transit; who's to blame; problem of damage to refrigerators, ranges, radios, and washers en route from eastern plants to Pacific coast. il Elec West 99:99-102 S '47

Portugal

Portuguese imports; 1945 and 1946 compared. Elec R (Lond) 141:602 O 17 '47

Spain

Spain's electrical imports; 1944 and 1945 compared. Elec R (Lond) 139:758 N 8 '46

Switzerland

Swiss electrical trade; 1944 and 1945 compared. Elec R (Lond) 139:856-7 N 22 '46

Western states

Inland empire electrical dealers assn. goes to the root of factors that make or break an appliance business. Elec West 99:102-3 O '47

Still plenty rugged for 1947, but what a market! Elec West 98:88-107 F '47

ELECTRIC arc

Extinction of arcs in air-blast circuit-breakers. A. Allan and D. F. Amer. bibliog il diags Inst E E J 94 pt 2:333-50 Ag '47; Same cond. Engineering 163:70-2 Ja 17 '47; Discussion. Inst E E J 94 pt 2:362-70, 649-54 Ag, D '47

Magnetic rotation of the direct current arc in spectrographic analysis. A. T. Myers and B. C. Brunstetter. diag Anal Chem 19:71 Ja '47

Melting of molybdenum in the vacuum arc; abstract. R. M. Parke and J. L. Ham. diag Iron Age 158:65 N 28 '46

Noise and oscillations in hot cathode arcs. J. D. Cobine and C. J. Gallagher. bibliog Franklin Inst J 243:41-54 Ja '47

Spectral and modulation characteristics of the concentrated-arc. W. S. Huxford and J. R. Platt. bibliog il diags Opt Soc Am J 37:10-15 Ja '47

Study concerning characteristics of the high-voltage a.c. arc. E. A. Boettner and C. F. Tufts. bibliog il diags Opt Soc Am J 37: 192-8 Mr '47

Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses. L. W. Strock and G. E. Heggen. Opt Soc Am J 37:29-36 Ja '47

See also

Electric cutting—Oxyarc process
Electric lamps, Arc
Electric welding, Arc

ELECTRIC arc welding. See Electric welding, Arc

ELECTRIC associations

See also

American institute of electrical engineers
Edison electric institute
Illuminating engineering society
National electrical contractors association

ELECTRIC auto-lite company

Diversified stake in auto accessories. G. S. Kent. Mag of Wall St 80:165 My 10 '47

ELECTRIC batteries

Argentine firm seeks market for new battery; Inca. For Comm W 29:8-9 N 1 '47

Batteries; Eveready modernization program. il Mod Packaging 20:120-1+ Ag '47

Characteristics of the silver chloride-magnesium water activated battery. J. B. Mullen and P. L. Howard. Electrochem Soc Trans 90 (preprint 33):411-22 '46

Chromic acid electrolyte for a magnesium primary cell. H. A. Barbian and R. E. McNulty. il Electrochem Soc Trans 91 (preprint 7):109-26 '47

Discharge characteristics of the perchloric acid cell. J. C. White and others. il Electrochem Soc Trans 91 (preprint 2):15-35 '47

Dry cell dynamics: the bobbin. J. J. Coleman. diags Electrochem Soc Trans 90 (preprint 38):475-513 '46

Industrial salt-bridge junction tube. G. A. Perley. bibliog il diag Electrochem Soc Trans 92 (preprint 15):179-86 '47

ELECTRIC batteries—*Continued*
Magnesium in electrical batteries. H. A. Knight. diags Materials & Methods 24:1469-72 D '46
Novel batteries. Elec R (Lond) 140:571 Ap 11 '47
Plastic coating protects dry cells. W. J. Hamer, J. P. Schrodt and G. W. Vinal. Franklin Inst J 242:328 O '46
Preparation of a dry cell depolarizer by air oxidation of manganous hydroxide. L. C. Copeland and others. bibliog il Electrochem Soc Trans 92 (preprint 8):109-13 '47
Ruben cell, a new alkaline primary dry cell battery. M. Friedman and C. E. McCauley. il diags Electrochem Soc Trans 92 (preprint 6):81-100 '47
Service life of and gases evolved from dry batteries stored at 55° C (130° F). W. J. Hamer and others. il Electrochem Soc Trans 90 (preprint 30):367-82 '46
Study of equilibrium reactions in the Leclanché dry cell. H. F. McMurdie and others. Electrochem Soc Trans 90 (preprint 31): 383-401 '46

See also
Electrolytic cells
Photoelectric cells
Storage batteries

Manufacture

Adaptation of concrete mixers for other work; mixer for electric battery ingredients. il Engineer 183:339 Ap 18 '47

ELECTRIC blankets
Electric blankets are a warm profit item; sales guide. il Elec West 99:107-8 O '47
Plastic-sealed thermostats in electric comforter. il diags Product Eng 18:99 My '47

Rating

Three electrically heated blankets and the Westinghouse comforter; first report. Consumers Res Bul 19:8-11 F; 20:29-30 N '47

ELECTRIC bond and share company
Asset value well above market price. Barron's 27:27 Je 9 '47
New plan filed with SEC. Comm & Fin Chr 165:1999 Ap 14 '47
Plan approved by U.S. court. Comm & Fin Chr 164:3412 D 30 '46

ELECTRIC brakes. See Brakes, Electric

ELECTRIC brazing. See Brazing

ELECTRIC broilers

Rating

Electric stove-toaster and a broiler; Vogue kitchenette; Hollywood broiler, later model. il Consumers Res Bul 19:16-18 Ap '47

ELECTRIC cable reels
Bulldozer arms carry cable reel. il diags Elec World 127:72 Mr 29 '47
How to calculate capacity of cable shipping reels. diag Elec World 127:106 My 10 '47

ELECTRIC cables
Application of insulated aluminum wire and cable. C. W. Ange and E. E. McIlveen. il Elec World 128:104-13 S 13 '47
Cable puller support for manhole use. L. W. Toye. diag Elec World 128:84+ S 27 '47
Cables in mines; types used and method of installation. C. C. Barnes. Elec R (Lond) 141:89-90 Jl 18 '47
Capacity per unit length and characteristic impedance of coaxial cables with one slightly non-circular conductor. P. Parzen. diag J Ap Phys 18:774-6 Ag '47
Choice of cable and transformer size for portable spot welders. M. Zucker. Welding J 26:233-8; Discussion. A. C. Johnson. 238-9 Mr '47
Diameter, weight and resistance of standard annealed copper wire and bare stranded annealed copper cable, concentric lay; tables. Power Pl Eng 51:100 O '47
Economics of high-voltage transmission by underground cables; abstract and discussion. R. N. Berry. Electrician 138:710 Mr 21 '47
Festooned cable feed for electric runways and cranes. G. Pallett. diags Mech Handling 34: 368-70 Jl '47
Heating cable protects water systems. Elec World 128:116+ Jl 5 '47
High-impedance cable. H. E. Kallmann. diags Inst Radio Eng Proc 34:348-51 Je '46; Discussion. 35:1097-100 O '47
How to calculate cable diameters. Elec World 127:66 Ap 26 '47
How to remove covering and insulation from 600-volt station cable; engineering reference sheet. diags Elec World 128:128 S 13 '47
Impregnated pressure cables. il diags Engineering 162:606-7, 612 D 27 '47
Interconnecting facilities for television broadcasting. W. E. Bloecker. il diags Electronics 20:102-7 N '47
Low reactance flexible cable for induction heating. M. Zucker. bibliog diags Elec Eng 65:Trans 848-51 D '46
Messenger-supported wires serve without storm interruptions. L. E. McQueen. il Elec World 126:65-6 D 21 '46
Modern supertension cables. C. C. Barnes. il bibliog Electrician 139:189-91, 329-32, 397-9 Jl 18, Ag 1-8 '47
Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65:Trans 791-7 D '46
132-kv and 264-kv compression cables. il Engineering 162:485 N 22 '46
Power cables to-day. J. R. Harding. Electrician 137:1445-6 N 22 '46
Pressure and oil flow in oil-filled cables at load variations. H. L. Knudsen. bibliog diag J Ap Phys 18:545-62 Je '47
Primary aerial cable designs. A. S. Brookes. il Elec World 126:96-8 N 9 '46
Progress in electric-cable design. Engineering 163:14 Ja 3 '47
Reconditioning substation cable. diags Elec World 128:92 Ag 16 '47
Soil cable warms poultry house water. diag Elec World 127:90+ Mr 1 '47
Vacuum impregnation of cables and capacitors. B. W. Whitehurst. diag Elec World 127:49 Ap 26 '47
Views on gas-compression cables. il Electrician 137:1431-4 N 22 '46; Abstract. Elec R (Lond) 139:845-6 N 22 '46
Voltage-drop charts for selecting insulated aluminum cable. F. A. Gunther. Elec World 128:114-17 S 13 '47

See also
Electric conduits
Electric lines
Telephone cables

Installation

Adjustable cable puller saves $280 per day. E. W. Templin and I. L. Bateman. il Elec World 126:73-4 N 23 '46
Borehole cable installed to cut power bills; Silver King coalition mines co. L. J. Battey. il diag Eng & Min J 148:91-2 Je '47
Details for aerial cable installation. F. P. Gilpin. diags Elec World 128:140+ O 25 '47
Dynamometer reads cable winch pull. il Elec World 126:128+ N 9 '46
Five-mile Oilostatic cable installation in Atlanta. R. O. Loomis and P. B. Boyd. il diags Elec World 127:42-4 Ap 26; 84-6 My 10 '47
How to ground, bond and insulate cables, potheads and joints; engineering reference sheet. diag Elec World 128:122 O 11 '47
Power cables on brackets; methods of installation in railway work. P. E. Williams. Elec R (Lond) 140:1063-4 Je 27 '47
Responsibility in installing Oilostatic. P. B. Boyd. Elec World 127:59-60 Ap 26 '47
Supervision improves cable splicing operations. Elec World 128:123 O 25 '47
Templates aid cable placing in manholes. il diags Elec World 126:104 N 23 '46
Underground 132-kv. pressure cable. L. G. Brazier. Elec World 126:138 D 7 '46
Uphill cable solves problem; above-surface installation used on solid rock hill. R. G. Meyerand. il diags Elec World 127:62-3 Je 21 '47

Joints

How to ground, bond and insulate cables, potheads and joints; engineering reference sheet. diag Elec World 128:122 O 11 '47

ELECTRIC cables—Joints—*Continued*
Joints, sealing ends and accessories for pressure cable. L. G. Brazier. il diags Inst E E J 93 pt 2:415-27 bibliog(p427) O '46; Discussion. 93 pt 2:428-34; 94 pt 2:498-500 O '46, O '47; Elec R (Lond) 138:287-8 F 22 '46; Electrician 136:473-5 F 22 '46

Manufacture

Cable making in Wales. il Electrician 138: 41-3 Ja 3 '47
General Cable; big wiremaker is recharged with novel ideas. il Fortune 36:98-105+ O '47
Making rubber cables. il Elec R (Lond) 141: 278-83 Ag 22 '47

Protection

Cable protection with automatic circuit breakers. R. G. Gehlsen. il diag Coal Age 52:97-9 Ap '47
Composition of Somastic pipe-coating for pipe housing the Oilostatic cable. Elec World 127:150+ My 24 '47
Ground faults; new protection for 2,300-volt cables. L. Wilson. il plan Coal Age 52:84-6 My '47
Guide for manhole inspections. il Elec World 127:84+ Mr 29; 122+ Ap 12 '47
Limiter development and characteristics. J. Rogoff. Elec World 127:168-9 Ja 18 '47
Protecting cable sheaths. H. R. Stewart. diag Elec World 128:69 S 27 '47
Protecting power cables. C. C. Barnes. Electrician 138:201-3 Ja 17 '47

Sheathing

Aluminum for cable sheathing; abstract. Materials & Methods 24:1522 D '46
Lead-melting furnace for cable sheathing. G. Aldred. il Elec R (Lond) 140:899-900 My 30 '47
Lead melting furnace for manufacture of cable sheathing. il Engineer 184:255 S 12 '47
Protecting cable sheaths. H. R. Stewart. diag Elec World 128:69 S 27 '47
Sheath gap stops cable electrolysis. diags Elec World 127:131-2 My 24 '47

Specifications

Power-cable specifications. C. C. Barnes. Elec R (Lond) 140:20-3 Ja 3 '47

Terminals

Cable terminations. D. B. Irving. il diags Inst E E J 92 pt 2:73-84 Ap '45; Discussion. 92 pt 2:84-9, 510-12; 94 pt 2:123-8 Ap, O '45, Ap '47

See also
Potheads

Testing

Development of the gas-cushion cable system for the highest voltages. T. R. P. Harrison. bibliog il Inst E E J 94 pt 2:233-42 Je '47; Same cond. Engineer 182:526-7 D 6 '46; Abstracts. Electrician 137:1375-6 N 15 '46; Elec R (Lond) 139:782 N 15 '46; Discussion. Inst E E J 94 pt 2:242-6, 700-5 Je, D '47; Electrician 137:1439-41 N 22 '46; Elec R (Lond) 139:844 N 22 '46
Fault localization. G. W. Stubbings. diags Elec R (Lond) 139:603 O 18 '46
Field tests on 132-kV cable installation. il diag Engineer 184:231 S 5 '47; Engineering 164:259 S 12 '47
High-voltage cable testing at Birmingham power station. il diag Elec R (Lond) 141: 363-4 S 5 '47; Electrician 139:684-5 S 5 '47
H.V. impulse testing plant; W. T. Henley's telegraph works co. il Engineer 183:478-80 My 30 '47; Engineering 163:506-7 Je 13 '47; Elec R (Lond) 140:883-5 My 30 '47; Electrician 138:1448-51 My 30 '47
Joints, sealing ends and accessories for pressure cable. L. G. Brazier. il diags Inst E E J 93 pt 2:415-27 bibliog(p427) O '46; Discussion. 93 pt 2:428-34; 94 pt 2:498-500 O '46, O '47
Limits of accuracy set for wire and cable testing. G. Thompson. Elec World 127:48-9 Ap 26 '47
Voltage characteristics of polythene cables. R. Davis and others. bibliog Inst E E J 94 pt 3:154-65; Discussion. il 165-70 My '47

ELECTRIC cables, Submarine
Some modern techniques in ocean cable telegraphy. C. H. Cramer. diags Elec Eng 66:765-7 Ag '47

ELECTRIC capacity
Capacitance of synchronous-machine armature windings determined for high-potential test. R. W. Wieseman. il Gen Elec R 50: 26-30 Jl '47
Capacitance stability of ruby muscovite mica. W. Schick. bibliog diag Inst E E J 94 pt 1: 371-6 Ag '47
Capacity operated relays. R. G. Rowe. bibliog il diags Radio N 37:50-1+ F '47
H.f. resistance and self-capacitance of single-layer solenoids. R. G. Medhurst. diags Wireless Eng 24:35-43, 80-92 bibliog(p92) F-Mr '47

See also
Condensers (electricity)
Dielectric constants

ELECTRIC cells. See Electric batteries; Electrolytic cells; Photoelectric cells; Storage batteries

ELECTRIC charges
Deflection of charged particles in a ferromagnetic medium. G. H. Wannier. diags Phys R 72:304-12 Ag 15 '47
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47
Distribution of electric charge in nuclei. B. Davison and W. H. Watson. Phys R 71: 742 My 15 '47
Division of nuclear charge in fission. R. D. Present. bibliog Phys R 72:7-15 Jl 1 '47
Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47
Electrical charge on precipitation at various altitudes and its relation to thunderstorms. R. Gunn. Phys R 71:181-6 F 1 '47
Forces between moving charges. R. D. Sard. bibliog diags Elec Eng 66:61-5 Ja '47; Discussion. 66:518-19, 741-3 My, Jl '47
Formation of static electric charges on agitating petroleum products with air. C. M. Klaerner. bibliog Ind & Eng Chem 39:92-3 Ja '47
In-flight icing of highly electrified aircraft. R. Gunn. il J Aeronautical Sci 14:527-8 S '47
Newton's and Einstein's relations between mass and energy. J. J. Smith. bibliog Elec Eng 66:561-4 Je '47
Space charge frequency dependence of magnetron cavity. W. E. Lamb, jr. and M. Phillips. bibliog diag J Ap Phys 18:230-8 F '47

ELECTRIC circuit breakers
Cable protection with automatic circuit breakers. R. G. Gehlsen. il diag Coal Age 52:97-9 Ap '47
Capacitors switched by bus tie breaker. A. A. Straub. il diag Elec World 128:45-6 Ag 30 '47
Circuit recloser has inverse time characteristics. diag Elec World News ed 127:28 F 22 '47
Equipment modernized to cut fire risks. Elec World 128:102-3 Jl 19 '47
General Electric oil blast circuit breaker features. il Elec World 127:92 F 1 '47
German breaker couldn't cut clean. il Elec West 98:79 Ap '47
High-speed reclosure. J. R. Mortlock. diags Elec R (Lond) 141:275-7 Ag 22 '47
Inertial wheel absorbs shock. H. D. Dorfman. il Machine Design 19:111-12 Ap '47
Modern switchgear. R. N. Buttrey. il diags Electrician 137:1123-5, 1745-7; 138:433-5 O 25, D 20 '46, F 7 '47
Operating an oil circuit breaker. diags Coal Age 52:112 Jl '47

ELECTRIC circuit breakers—*Continued*
Performance of high-voltage oil circuit-breakers incorporating resistance switching. H. E. Cox and T. W. Wilcox. diags Inst E E J 94 pt 2:351-61 Ag '47; Abstracts. Engineering 162:620-1 D 27 '46; Engineer 182:469 N 22 '46; Elec R (Lond) 139:755-6 N 8 '46; Discussion. Inst E E J 94 pt 2:367-71, 55-62 Ag, D '47; Elec R (Lond) 139:785-6 N 15 '46; Electrician 137:1365-7 N 15 '46
Power circuit breakers. Power Pl Eng 51:73 Ap '47
Silver-molybdenum contacts used on circuit breakers. diag Elec World 127:170+ My 24 '47
Single-pole relaying and reclosing on a high-voltage system. J. J. Trainor and C. E. Parks. il map Elec Eng 66:467-70 My '47
Switching of large power. J. B. MacNeill. il Elec Eng 66:750-3 Ag '47
Trailing-cable and machine protection. W. C. Painter. il diag Coal Age 52:98-100 Ag '47

Control

Adequate control voltage from storage batteries. W. A. Holland. Elec World 127: 48-50 Mr 29 '47

Oilless

American ingenuity can improve German 220-kv. air breaker. il Elec World 127:53-5 Ap 26 '47
Extinction of arcs in air-blast circuit-breakers. A. Allan and D. F. Amer. bibliog il diags Inst E E J 94 pt 2:333-50 Ag '47; Same cond. Engineering 163:70-2 Ja 17 '47; Abstracts. Engineer 182:468-9 N 22 '46; Elec R (Lond) 139:755 N 8 '46; Discussion. Inst E E J 94 pt 2:362-70, 649-54 Ag, D '47; Elec R (Lond) 139:785-6 N 15 '46; Electrician 137:1365-7 N 15 '46
German breaker in tests performs satisfactorily. il Elec World 127:43 Mr 1 '47

Testing

Force characteristics of circuit breakers. K. Schiller. il diags Engineering 162:385-7 O 25 '46
Quick testing of CPS transformer breakers. il diag Elec World 128:104 Jl 19 '47

Tripping

Designing quick-acting latch releases. C. Thumim. diags Machine Design 19:110-15 S '47
New overcurrent tripping device for low-voltage circuit breakers. H. L. Rawlins and J. Sandin. il diags Power Pl Eng 51:71-3+ O '47

ELECTRIC circuits
Application of circuit theory to the design of servomechanisms. A. C. Hall. diags Franklin Inst J 242:279-307 O '46
Cathode-follower gate circuit. J. Kurshan. bibliog diags R Sci Instr 18:647-9 S '47
Check electrical characteristics of fluorescent lamp circuit. H. Reinhardt. Elec World 127:108 My 10; 138 My 24; 110 Je 7 '47
Decade-ring scaling circuit. L. Seren. il diags R Sci Instr 18:654-9 S '47
Design chart for distribution secondary. F. W. Nimmer. Elec World 127:78-9 Mr 29 '47
Electrical network for the solution of secular equations. R. H. Hughes and E. B. Wilson, jr. diags R Sci Instr 18:103-8 F '47
Equivalent circuit of the primitive rotating machine with asymmetrical stator and rotor. G. Kron. diags Elec Eng 66:369-72 Ap '47
Evaluation of simultaneous faults on three-phase systems; application of superposition principle. J. R. Mortlock. diags Inst E E J 94 pt 2:166-90 Je '47
Finding your way in electronic circuits. J. Fiske. diags Elec West 97:56-7 D '46
Mutual impedance between short earth-return circuits. R. O. Carter. Inst E E J 94 pt 1: 275-7 Je '47
Oscilloscope time-base circuit. H. den Hartog and F. A. Muller. diags Wireless Eng 24:287-92 O '47
Potentiometric secular equation computer. A. A. Frost and M. Tamres. bibliog il diag J Chem Phys 15:383-90 Je '47
Progress report of EEI-AEIC joint committee on branch circuit protection. Edison Elec Inst Bul 15:169-70 My '47
Pulse timing circuit for cosmic-ray research. H. K. Ticho. il diags R Sci Instr 18:271-8 My '47
Remote reading tachometer utilizes capacitor circuit. C. B. Cunningham. il diags Machine Design 19:127-8 Ja '47
Reversed phase rotation from single-phase load. M. D. Grems and others. bibliog diags Gen Elec R 49:30-4 N '46
Special control circuits for motors may aid machine performance. H. F. Littlejohn, jr. il diags Product Eng 18:106-11 Ag '47
Spray-installing electrical circuits. J. T. Collier. il Steel 121:96+ S 15 '47
Temperature-dependent resistors, use as electric circuit elements. W. H. B. Cooper and R. A. Seymour. il diags Wireless Eng 24: 298-306 O '47
Voltage regulation for three-phase circuits. C. J. Lake. il diags Gen Elec R 49:47-51 D '46

See also
Electric distribution
Radio circuits

Mechanical analogies

Some simple electrical analogies. diags Product Eng 18:126-30 Jl '47

Printed circuits

Mass-production wiring. V. Zeluff. il Sci Am 177:116-18 S '47
Materials and techniques for printed electrical circuits. K. Rose. il Materials & Methods 25:73-6 Mr '47
Printed circuits. C. Brunetti and P. J. Franklin. il Elec West 98:48-9 Mr '47; Abstract. Elec World 127:142+ My 24 '47
Printing electronic circuits. il Chem & Eng N 25:698-9 Mr 10 '47
Printing electronic circuits opens new production fields. il Dom Comm 35:13-17 Jl '47

ELECTRIC clocks. See Clocks, Electric

ELECTRIC codes
Canadian electrical code and provincial legislation. W. R. McCaffrey. Can Min J 68: 408-9 Je '47
Codes of practice; their origin, nature and contents. Elec R (Lond) 140:1033-4 Je 20 '47
Codes of wiring practice. Electrician 139: 1065-6 O 10 '47
Revision of code for electricity meters. A. J. Allen. Edison Elec Inst Bul 15:370 O '47
Views on the wiring codes. Electrician 138: 439-40 F 7 '47
Wartime change made permanent in code for electricity meters. H. Koenig. Ind Stand 18:241-2 O '47
Wiring in buildings. Electrician 138:268 Ja 24 '47

See also
National electrical code

ELECTRIC coffee percolators
Promotion is dynamo of selling, Silex test shows; market absorption survey in Peoria, Ill. Sales Management 58:100+ Ja 15 '47
What will normal sales be after market saturation? Silex company probes the Peoria area. J. M. Moore. Adv & Sell 40:62+ Ja '47

ELECTRIC coils
Charts for designing copper coils; reference book sheet. R. C. Hitchcock. Product Eng 18:163, 165 Je '47
Correction of ships' magnetic compasses for the effects of degaussing. H. C. Wassell and D. A. Turner. diags Inst E E J 93 pt 1: 518-22; Discussion. 522-4 N '46
Inside of electrical machines. R. H. Robinson. il diag Electrician 137:1361-3; 138:115-19+ N 15 '46, Ja 10 '47
Magnetic field of a ship and its neutralization by coil degaussing. W. C. Potts. diags Inst E E J 93 pt 1:488-95; Discussion. 522-4 N '46
Toroidal coils; improved winding machine. E. R. Brooke. il diag Elec R (Lond) 141: 319-20 Ag 29 '47

See also
Armatures
Electromagnets
Inductance coils
Petersen earth coil
Radio coils
Solenoids

ELECTRIC coils—*Continued*

Manufacture

Sidney heavy-duty coil-winding equipment. il Mach 53:199 F '47

Testing

Bridge indicates right coil selection. G. N. Burkhart. diag Elec World 127:70+ Ap 26 '47

ELECTRIC communication

Development and design of colonial telecommunication systems and plant. C. Lawton and V. H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47

General planning and organization of colonial telecommunication systems. C. Lawton and V. H. Winson. Inst E E J 94 pt 3:245-51; Discussion. 251-9 Jl '47

Measurements in communications; with table of units and scales used in communication engineering. N. B. Fowler. bibliog Elec Eng 66:135-40 F '47

Modulation in communication. F. A. Cowan. il diags Elec Eng 66:919-24 S '47

Technical co-ordination on an international basis in communication and allied fields. M. Deloraine. Inst Radio Eng Proc 34:872-3 N '46

Theory of communication. D. Gabor. bibliog il diags Inst E E J 93 pt 3:429-57 N '46

See also

Radio communication
Radio telegraph
Radio telephone
Telegraph
Telephone
Teletype
Television

ELECTRIC condensers. See Condensers (electricity)

ELECTRIC conductivity

Aging of precipitates and coprecipitation; low temperature conductivity of silver bromide. I. Shapiro and I. M. Kolthoff. bibliog diags J Chem Phys 15:41-6 Ja '47

Band theory of graphite. P. R. Wallace. diags Phys R 71:622-34 My 1 '47; Correction. 72: 258 Ag 1 '47

Conduction of electricity through cellulose. J. B. O'Sullivan. bibliog il diags Textile Inst J 38:T271-306 Jl '47

Conductivity of metallic surfaces at microwave frequencies. E. Maxwell. diags J Ap Phys 18:629-38 Jl '47; Correction. 18:928 O '47

Conductivity of sodium-ammonia solutions. D. K. C. MacDonald and others. Phys R 71:563-4 Ap 15 '47

Conductivity of some salts in moist acetone. K. J. Mysels. J Phys & Colloid Chem 51: 708-10 My '47

Conductivity pulses induced in diamond by alpha-particles. D. E. Woolridge and others. Phys R 71:913 Je 15 '47

Electrical conductivity of GR-S and natural rubber stocks loaded with Shawinigan and R-40 blacks. P. E. Wack and others. bibliog il J Ap Phys 18:456-69 My '47

Electrical conductivity of Na-ammonia solutions at low temperatures. L. Giulotto and A. Gigli. Phys R 71:211-12 F 1 '47

Historic researches; conduction of electricity through liquids. Engineer 184:380-1 O 24 '47

Magnetic quenching of superconductivity. M. J. Sienko and R. A. Ogg, jr. Phys R 71:319 Mr 1 '47; Discussion. J. W. Stout. bibliog 71:741 My 15 '47

Magnetic susceptibility of sodium in liquid ammonia solutions at low temperatures. R. B. Gibney and G. L. Pearson. bibliog Phys R 72:76-7 Jl 1 '47

Magnetic threshold curves of superconductors. J. G. Daunt. bibliog Phys R 72:89-90 Jl 1 '47

Les mélanges de nappes aquifères et leur résistivité électrique. A. Guillerd and A. Vibert. Génie Civil 124:110-12 Mr 15 '47

Metallic film formation at low temperatures. A. Goetz and others. bibliog diags Chem R 39:481-95 D '46

New effects in superconductivity; abstract. D. H. Andrews. Science 106:117-18 Ag 8 '47

Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47

Physical properties and cation arrangement of oxides with spinel structures; electronic conductivity. E. J. W. Verwey, P. W. Haayman and F. C. Romeijn. bibliog J Chem Phys 15:181-7 Ap '47

Refraction of plane non-uniform electromagnetic waves between absorbing media. L. Pincherle. Phys R 72:232-5 Ag 1 '47

Some e.m.f. and conductance measurements in concentrated solutions of zinc and calcium chlorides. R. A. Robinson and R. O. Farrelly. bibliog J Phys & Colloid Chem 51:704-8 My '47

Superconductivity and the Debye characteristic temperature. J. de Launay and R. L. Dolecek. Phys R 72:141-3 Jl 15 '47

Theory of dielectric breakdown in the alkali halides. G. Malmlöw and F. Seitz. bibliog Phys R 71:125 Ja 15 '47

Viscosities of aqueous solutions of amino-acids, with some conductivity values. A. E. Bell and W. M. Madgin. Chem Soc J p74-6 Ja '47

Water analyses by selective specific conductance. J. W. Polsky. Anal Chem 19:657-60 S '47

See also

Dielectric constants
Dielectrics
Electrolytes—Conductivity

ELECTRIC conductors

Aluminum conductors for interior wiring. F. Benz. il Elec West 98:47-9 Ja '47

Capacitance effect of conductor in magnetic field; combination of gaseous tube rectifier and a d-c motor. W. Richter. Elec Eng 66:784-6 Ag '47

Capacity per unit length and characteristic impedance of coaxial cables with one slightly non-circular conductor. P. Parzen. diag J Ap Phys 18:774-6 Ag '47

How to identify grounded conductor on customer's service connection. diags Elec World 127:64 Ap 26 '47

Inductance of wires and tubes. A. H. M. Arnold. Inst E E J 93 pt 2:532-40 D '46

Spray-installing electrical circuits. J. T. Collier. il Steel 121:96+ S 15 '47

Three-phase rectangular conductors; simplified reactance formula. W. H. Miller. bibliog Electrician 138:1681-2 Je 20 '47

See also

Busbars
Electric cables
Electric distribution
Electric wire
Radio conductors
Wave guides

Semi-conductors

Contact potential difference in silicon crystal rectifiers. W. E. Meyerhof. bibliog il diags Phys R 71:727-35 My 15 '47

Effect of semiconducting liquids on the dielectric properties of cellulose insulation; development of new capacitor. F. M. Clark. il Gen Elec R 50:9-17 F '47

Evidence for surface states on semiconductors from change in contact potential on illumination. W. H. Brattain. Phys R 72: 345 Ag 15 '47

Excess-defect semiconductor contacts. L. Sosnowski. bibliog diag Phys R 72:641-2 O 1 '47

Physics of electronic semiconductors. G. L. Pearson. diags Elec Eng 66:638-42 Jl '47

Properties and uses of thermistors; thermally sensitive resistors. J. A. Becker and others. bibliog il diags Elec Eng 65:Trans 711-25 N '46; Same. Bell System Tech J 26:170-212 Ja '47

Semiconducting ceramic materials. H. H. Hausner. bibliog Am Cer Soc J 30:290-6 S 1 '47

Surface states and rectification at a metal semi-conductor contact. J. Bardeen. bibliog diags Phys R 71:717-27 My 15 '47

Thermal ionization of impurity levels in semi-conductors. B. Goodman and others. diags Phys R 71:191-4 F 1 '47

Transition from classical to quantum statistics in germanium semiconductors at low temperature. V. A. Johnson and K. Lark-Horovitz. bibliog Phys R 71:374-5 Mr 15 '47

Temperature

Joints and hardware limit overhead conductor ratings. L. M. Olmsted. il Elec World 127:42-5 Ja 4; 58-61 F 1 '47

ELECTRIC conduits
House wiring; attributes of non-metallic Gilflex flexible conduit. il Elec R (Lond) 140: 1073-5 Je 27 '47
Photographing conduits with axial coordinates; to provide information as to locations in building floor slabs. F. L. Dennis. il Elec World 126:76 D 21 '46
Steel conduit continuity. Electrician 138:1231-2 My 9 '47

Safety measures
Grounded air hose protects drillers from punctured electric conduits. Eng N 137:879 D 26 '46

ELECTRIC connectors
Bus appearance favored by streamlined connectors. D. L. Greene. Elec World 126:98 N 23 '46

ELECTRIC contactors
Air-brake contactor starter for textile machinery. il Engineering 163:331 Ap 25 '47
High cost of building; contractors wondering if they are being priced out of business. Elec West 98:104-7 Je '47
High tension a.c. contactors. B. Feltbower. il Electrician 138:1228-30 My 9 '47
Temporary or defective? points raised in a recent legal case. F. E. Sugden. Elec R (Lond) 141:416-17 S 12 '47

See also
Brushes (electric machinery)

ELECTRIC contacts
Design of heavy-current contact, particularly for radio-frequency use. A. J. Maddock. il diag Inst E E J 94 pt 3:52-4 Ja '47
Modern switchgear. R. N. Buttrey. il Electrician 137:1585-7 D 6 '46
Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47
Silver-molybdenum contacts used on circuit breakers. diag Elec World 127:170+ My 24 '47
Some design considerations for electrical contact operation. R. B. Immel. il diags Product Eng 18:107-12 F '47

ELECTRIC contractors
Contractors and REA gives own stories on construction. Elec World News ed 127:11 Mr 22 '47

ELECTRIC control
Automatic control. J. E. O'Breen. diags Blast F & Steel Pl 35:236-8+, 366+ F-Mr '47
Automatic regulators and servo mechanisms; symposium. Engineering 163:494, 542-3 Je 13, 27 '47
Automatic sequence control for stone plant; Granite rock co. il diag Rock Prod 50:81-2 Jl '47
Clay levels in hoppers shown instantly and controlled by electrical instrument. A. Krieg. diag Pet Processing 2:580 Ag '47
La commande électrique par redresseurs d'un train de laminoirs non réversibles aux aciéries de Pompey. diags Génie Civil 124:351-3 S 15 '47
Demand control through supervision. E. G. Schlup. il diags Elec World 127:56-7 F 1 '47
Designing pneumatic and electric servos. H. Ziebolz. il diags Machine Design 19:132-8 S '47
Electric control for metalworking machines. J. Van Voast. il diags Am Mach 90:117-32 D 5 '46
Electric control of material handling plants. B. Feltbower. il plan diags Mech Handling 34:472-9 S '47
Electric positioning systems of high accuracy for industrial use. D. E. Garr. il diags Gen Elec R 50:17-24 Jl '47
Electrical control of dangerous machinery and processes. W. F. Cooper. diags Inst E E J 94 pt 2:216-27; Discussion. 227-32 Je '47
Electrical steering of ships; AEG Ward Leonard system. R. Beach. il diags Elec Eng 66:244-8 Mr '47
Electro-pneumatic loom is developed in Brazil. H. E. Reed. il diags Textile World 96:129+ My '46; Abstract. Comp Air Mag 51:334-5 D '46
Electronic control of cloth-drying machines. N. H. Chamberlain. diags Textile Inst J 37:P249-62 Jl '46
Indicating lamps simplify trouble-shooting in heating plant; Bell & Howell company, Chicago. B. Weaver. il diags Factory Management 105:86-8 F '47
I.E.E. servo convention. Electrician 138:1373-6 My 23 '47
Magslip transmission. il diags Engineer 183: 317-19 Ap 11 '47
Mechanised car park; electrical features. il Electrician 138:348 Ja 31 '47
Phantom pumper enables remote control of wells, tanks from a centralized panel. L. S. McCaslin, jr. il diag Oil & Gas J 46:60-1+ Ag 2 '47
Precision snap-acting switches; diversified industrial applications. A. L. Riche. il diags Product Eng 18:112-16 Mr '47
Proceedings at the convention on automatic regulators and servo mechanisms. Inst E E J 94 pt 1:299-302 Jl '47
Safety control device for use with glass cloth heating mantles. H. I. Schiff. diag Anal Chem 19:503 Jl '47
Saturable reactors for load control. P. A. Vance. diags Gen Elec R 50:17-21 Ag; 42-4 S '47
Theory of automatic control systems. M. A. Melvin. diags J Ap Phys 18:704-22 Ag '47
Thrustor lowering control system for a.c. crane hoists; abstract. E. L. Schwarz-Kast. Product Eng 18:134-6 Jl '47
Universal control of induction heater. A. B. Shields. il diag Machine Design 19:147-8 S '47

See also
Carrier current control
Electric controllers
Electric motors—Control
Electric switchgear
Electrohydraulic control
Magnetic control
Photoelectric cells—Control uses
Radio control
Rototrol
Selsyn apparatus
Thyratron
Vacuum tubes—Control uses
Voltage regulation

ELECTRIC controllers
Dashpot operates controller; electrically powered industrial trucks. B. I. Ulinski. il Machine Design 19:114 Ap '47
How to select and maintain motor controls. L. E. Markle. il Factory Management 105: 129-31 Je '47
Joystick control switches, by Brookhirst switchgear, ltd. il Mech Handling 34:331 Je '47
Plugging relays minimize motor reversing time. R. B. Immel. il diags Steel 120:106+ Ap 7 '47

ELECTRIC converters
Electronic recording instruments; d-c to a-c conversion systems. W. P. Wills. diag Elec Eng 66:39-40 Ja '47
Ignitron converters for induction heating. R. J. Ballard and J. L. Boyer. diag Elec World 127:114-15 Mr 15 '47
Rotary with reversed fields operates poorly. C. A. Scammon. Elec World 128:126 O 25 '47

ELECTRIC cooking
All-electric cooking in restaurant course. il Elec World 128:128 Jl 19 '47
Electric cooking cuts hotel operating costs. Elec World 128:147+ O 25 '47
Electrical cooking in veterans' hospitals checked by formula. Elec World News ed 127:20 Ap 19 '47
Facts about gas cooking; answer to General Electric-LaSalle course in electric appliance salesmanship. Gas Age 100:25-32 Ag 21 '47
Restaurant modernizes with electric cooking. R. H. Knox. il Elec World 127:68-9 Je 21 '47
Synthesizing cooking load. G. O. McLean. Elec R (Lond) 139:773-6 N 15 '46

See also
Electric roasters
Electric stoves
Electronic cooking

ELECTRIC cooperative associations. See Electric service, Rural—Cooperative lines
ELECTRIC coverlets. See Electric blankets
ELECTRIC current inverters. See Electric inverters

ELECTRIC current limiters
Impedance network for production-testing current-limiting reactors. S. C. Leonard. il diags Gen Elec R 50:31-5 O '47
Limiter applications to network systems. J. Rogoff. diag Elec World 127:123+ F 15 '47
Limiter development and characteristics. J. Rogoff. Elec World 127:168-9 Ja 18 '47
Over-current relays. A. Salzmann. diag Elec R (Lond) 141:505-8 O 3 '47

ELECTRIC currents
Aural current indicator. T. A. Benham. diags Electronics 20:164+ Jl '47
Current distribution for broadside arrays which optimizes the relationship between beam width and side-lobe level. C. L. Dolph. Inst Radio Eng Proc 34:335-48 Je '46; Discussion. 35:489-92 My '47
Dangerous electric currents. C. F. Dalziel. bibliog Elec Eng 65:Trans 579-85 Ag-S '46; Same cond. Power Pl Eng 50:78-81 D '46
End plate and side wall currents in circular cylinder cavity resonator. J. P. Kinzer and I. G. Wilson. il pl Bell System Tech J 26: 31-79 Ja '47
Fault-current measuring device. M. J. Lantz. il diags Elec Eng 65:Trans 839-42 D '46
Residual currents; method of calculation. G. W. Stubbings. Elec R (Lond) 141:224-5 Ag 8 '47
Star connected resistances, taking balanced currents. G. W. Stubbings. Electrician 139: 395-6 Ag 8 '47

See also
Eddy currents
Edison effect
Electric circuits
Electric conductivity
Electric distribution
Electric switchgear
Electric transformers
Electrodynamics

ELECTRIC currents, Alternating
Alternating current for auxiliary plants of merchant vessels; abstract. B. Fox and H. C. Coleman. Marine Eng 52:92-3; Discussion. 93-5 Ja '47
Long-distance a-c power transmission economics; with comparative costs. S. B. Crary and I. B. Johnson. bibliog diags Gen Elec R 50:32-40 Jl '47; Same cond. il Elec Eng 66:793-7 Ag '47

ELECTRIC cutouts
Trip-O-Link adapter converts old cutouts. il diags Elec World 128:70 Ag 30 '47

Testing

Set-up for testing 4,800-volt fuse cutouts. G. A. Stockwell. il diag Elec West 98:52-3 Mr '47

ELECTRIC cutting
Cutting glass piping electrically. B. W. Whitehurst. il diag Elec World 126:116 D 7 '46
Metal cutting; electroerosion process. T. P. Rekshinskaya. diag Mech Eng 69:780-1 S '47

See also
Metal cutting, Subaqueous

Oxyarc process

Cutting stainless steel and other metals with the electric arc; Oxyarc cutting. H. E. Linsley. il Iron Age 158:96-8 N 14 '46
Electric-arc-oxygen process speeds cutting of alloy steels. V. H. Laughner. il Mach 53:174-7 Ja '47
New oxygen-arc process for cutting ferrous and nonferrous alloys. H. R. Clauser. il Materials & Methods 25:78-81 Ja '47
Oxyarc cutting. il diag Engineer 184:317 O 3 '47
Oxygen-arc cutting. il Steel 119:116+ D 2 '46
Stainless steel cutting. H. G. Hughey. il diags Welding J 26:393-9 My '47
Theory of oxyarc cutting. H. C. Campbell. bibliog il diag Welding J 26:889-903 O '47
Underwater cutting and welding. C. Kandel. il Welding J 25:209-12 Mr '46; Abstract. Metal Prog 50:1030+ N '46

ELECTRIC detonators. See Detonators, Electric

ELECTRIC discharges
Attempt to verify the theory of the long spark of Loeb and Meek. L. H. Fisher. bibliog diags Phys R 72:423-8 S 1 '47
Characteristics of the pre-corona discharge and its use as a reference potential in voltage stabilizers. S. C. Brown. bibliog diag R Sci Instr 17:543-9 D '46
Corona from fine positive points. W. N. English. il Phys R 71:638-9 My 1 '47
Discharge mechanism of self-quenching Geiger-Mueller counters. S. H. Liebson. bibliog diags Phys R 72:602-8 O 1 '47
Discharges between electrode and dielectric at low voltages. Engineer 183:480 My 30 '47
Effect of direct-current potential on initiation of radiofrequency discharge. A. A. Varela. Phys R 71:124-5 Ja 15 '47
Effects of magnetic field on oscillations and noise in hot-cathode arcs. J. D. Cobine and C. J. Gallagher. J Ap Phys 18:110-16 Ja '47
Electric activation of chemical reactions. W. J. Cotton. bibliog diags Electrochem Soc Trans 91 (preprints 34A-H):489-628 '47
Electrical discharge through gases. L. B. Loeb. bibliog(90 ref) Inst E E J 94 pt 1: 349-54 Ag '47; Same. Science 106:229-36 S 12 '47; Abstract. Electrician 138:1162-4 My 2 '47
Electrodeless discharges and some allied problems. G. I. Babat. bibliog il diags Inst E E J 94 pt 3:27-37 Ja '47
Electrostatic ignitibility of various solvent vapour-air mixtures. A. R. Boyle and F. J. Llewellyn. bibliog diag Soc Chem Ind J 66:99-102 Mr '47
Electrostatic ills and cures of aircraft. R. Beach. bibliog il diags Elec Eng 66:325-34, 453-62 Ap-My '47
Fluctuations in gas discharges. H. Y. Loh and G. H. Dieke. bibliog diags Opt Soc Am J 37:837-48 O '47
Helium molecular energy states as detected by collisions of the second kind in helium. R. Meyerott. bibliog Phys R 70:671-9 N 1 '46
Localized afterglows observed with long sparks in various gases. J. D. Craggs and others. bibliog il diags J Ap Phys 18:919-28 O '47
Mechanism of the negative point corona at atmospheric pressure in relation to the first Townsend coefficient. L. B. Loeb. bibliog Phys R 71:712-14 My 15 '47
Minimum sparking potentials of barium, magnesium, and aluminum in helium. H. Jacobs and A. P. LaRocque. bibliog diags Electrochem Soc Trans 91 (preprint 20):297-310 '47
Nitrogen fixation by crossed discharge; abstract. W. J. Cotton. diag Chem Eng 54: 252+ S '47
Noise and oscillations in hot cathode arcs. J. D. Cobine and C. J. Gallagher. bibliog Franklin Inst J 243:41-54 Ja '47
Note concerning the motion of arc cathode spots in magnetic fields. R. L. Longini. bibliog Phys R 71:642-3 My 1 '47
Production of synthetic lubricating oils by the voltolization processes. G. G. Pritzker. bibliog and patent list Pet Processing 2: 291+ Ap '47

See also
Cathode ray tubes
Corona (electricity)
Electric arc
Ionization, Gaseous
Lightning
Vacuum tubes
X rays

ELECTRIC distribution
Advantages of 11-13kv class radial primary distribution for new urban loads. L. D. Cronin. Edison Elec Inst Bul 15:44+ F '47
Bank of capacitors reinforces 132-kv. grid. L. F. Ferri and C. S. Dayton. il diags Elec World 127:66-9 Mr 29 '47
Case for 240v. E. R. Wilkinson. Electrician 137:1749 D 20 '46
Chose high-tension service to solve power problem. J. Carnila. il diag Factory Management 104:116-17 O '46
Design of secondary manhole buses for use in heavy load areas. R. A. Moulthrop. il Elec West 98:50-1 Mr '47
Design of ship's service system and auxiliary power supply system. F. M. Starr. il diags Marine Eng 52:68-75 Ag '47
Development of public electricity distribution in Great Britain. W. H. Howard. Inst E E J 94 pt 1:138-40 Mr '47
Distribution in Lancashire. il map Elec R (Lond) 139:719-23 N 8 '46

ELECTRIC distribution—*Continued*
Distribution system economics for light load density areas. O. B. Falls, jr. Elec World 127:54-5 F 1; 105-7 F 15 '47
Dumfries rural network. il Electrician 138: 1663-4 Je 20 '47
Edison electric institute's transmission and distribution committee meeting, Philadelphia, Oct. 9-10. Elec World News ed 128:11 O 18 '47
Effect of automatically controlled motor-driven devices upon distribution feeder loads following power supply interruptions. E. W. Oesterreich. Edison Elec Inst Bul 15:11-13+ Ja '47
Electric systems for industrial plants. R. R. Nissley and H. Speight. il diags Eng N 139:454-6 O 2 '47
Electricity generation and wholesale distribution. J. Hacking. graph Electrician 138:1081-3 Ap 25 '47
Engineering news report. J. W. Parker. Edison Elec Inst Bul 15:252-6 Jl '47
Evolution of the French interconnection network. P. M. J. Ailleret. il map Inst E E J 93 pt 1:537-9 N '46
Factory distribution; Dunlop rubber factory at Speke. il diag Elec R (Lond) 140:835-40 My 23 '47
Fitting the primary to the regulator rating. Elec World 127:117-18 F 15 '47
Fuses replace circuit breakers on station feeders. A. M. deBellis. il diags Elec World 126:99-100 N 9 '46
Generation and wholesale distribution of electricity; abstract. J. Hacking. Elec R (Lond) 140:303-4 F 14 '47
Housing supplies; new estates at Bradford. il Elec R (Lond) 140:580 Ap 11 '47
Industrial supply scheme; power plant of Scottish oils, ltd. il diags Elec R (Lond) 139: 959-65 D 13 '46
Limiter applications to network systems. J. Rogoff. diag Elec World 127:123+ F 15 '47
London load building. il Elec R (Lond) 140: 6-12, 147-52, 243-9, 515-20, 647-52 Ja 3, 24, F 7, Ap 4, 25 '47
Mains extensions at York. map Electrician 139:341 Ag 1 '47
Major electrical connections of latest distribution substations on Philadelphia electric system. E. B. Shew. diags Edison Elec Inst Bul 15:49-51 F '47
Multiplication of substations found most economical. M. A. Polster. maps Elec World 127:109-11 Mr 15 '47
Oklahoma gas & electric company method for load determination on distribution transformers. P. Shelley. Edison Elec Inst Bul 15:17-19 Ja '47
Periodic secondary voltage tests. Elec World 127:74+ F 1 '47
Planning a rural system for twenty-five-fold growth; Clarke electric cooperative, inc. C. M. Stanley. maps Elec World 127:50-2 Ap 26 '47
Power distribution in textile plants. J. D. McConnell. Elec Eng 66:667-9 Jl '47
Power distribution systems for paper mills. W. C. Bloomquist. il diags Paper Tr J 124: 35-46 F 13 '47
Power distribution systems for pulp and paper mills; high-voltage power distribution. G. M. McHenry and J. L. McKeever. diags Elec Eng 66:985-90 O '47
Power distribution systems for pulp and paper mills; low-voltage systems. A. C. Bird and W. C. Bloomquist. diags Elec Eng 66:998-1004 O '47
Power factor correction controlled by time clocks; Wallace & Tiernan company. il diags Factory Management 105:111-13 Jl '47
Primary network operating problems. A. M. MacDonald and A. W. Funkhouser. diags Elec World 128:52-4 Ag 30 '47
Progress in engineering knowledge during 1946; power distribution. P. L. Alger and others. Gen Elec R 50:40-1 Mr '47
Regional transmission and distribution of electricity. Inst E E J 94 pt 1:87-90 F '47
Revamping electrical distribution systems. D. L. Beeman. il diags Factory Management 105:113-24 O '47
Revised electrical distribution for greater flexibility; Liquid carbonic corp., Chicago. R. B. Burton. il diag Factory Management 104:96-9 D '46
Rural electrification; the use of the single phase system of supply. J. S. Pickles and W. H. Wills. map diags Inst E E J 93 pt 2:501-10; Discussion. 510-16 D '46
Service continuity standards aid economical distribution planning. W. J. Lyman. Edison Elec Inst Bul 15:325-9+ S '47
Seven years' development of an urban distribution system. J. F. Wright. Inst E E J 94 pt 1:147-9 Mr '47
Three-wire system ups d.c. voltage at Gay mining co. il map diags Coal Age 52:86-8 Jl '47
Transformer load estimates. Elec World 127: 132-3 My 24; 118+ Je 7; 85+ Je 21 '47
Trends in electric power supply. H. S. Bennion. Power Pl Eng 51:75-6 Je '47
Unit substations for power distribution. A. B. Sinclair. Pulp & Pa of Can 48:83-4 Jl '47
Urban distribution; methods employed at Swansea; abstract. J. F. Wright. Elec R (Lond) 139:656 O 25 '46
Works supply; distribution from private plant and public supply in steelworks; John Summers & sons. il Elec R (Lond) 139:767-71 N 15 '46

See also
Boosters
Busbars
Electric cables
Electric circuit breakers
Electric conductors
Electric conduits
Electric fuses
Electric lines
Electric plants—Interconnection
Electric rectifiers
Electric service, Rural
Electric substations
Electric switchgear
Electric transformers
Electric transmission
Electric wiring
Voltage regulation

Change-over
Meter calibration for a system-wide frequency change; Southern California Edison co. il Elec World 127:52-3 F 1 '47
Phase conversion; deriving three phases from two lines and neutral of converted d.c. network. D. B. Corbyn. diags Elec R (Lond) 141:161-5 Ag 1 '47
Primary distribution reduces plant's power problems; Otis elevator co. W. G. Nutzel. diags Elec World 126:74-5 D 21 '46

Cost
Cost to serve heavier distribution load. J. W. Bennett. map Elec World 128:73-5 Ag 2 '47
Cost to serve house heating. H. G. Kelsey. Elec World 127:88+ Mr 29 '47
Economic advantages of higher industrial voltages. R. H. Kaufmann. diags Gen Elec R 49:35-8 N '46
Long-distance a-c power transmission economics; with comparative costs. S. B. Crary and I. B. Johnson. bibliog diags Gen Elec R 50:32-40 Jl '47; Same cond. il Elec Eng 66:793-7 Ag '47

Grounding
Cutting over to common neutral system. H. L. Whisler. diags Elec West 98:81-2 Ap '47
Earthing for low-voltage heavy-current installations; discussion. Inst E E J 93 pt 1: 457 O '46
Earthing high-voltage systems; abstract. G. H. Couvreur. Elec World 127:132 Ap 12 '47
Earthing problems. Electrician 139:467-8 Ag 15 '47
Ground protection for a.c. circuits around coal mines. J. W. Harris. diags Coal Age 52:83-4 Je '47
Grounding of instrument transformer secondary circuits. Elec Eng 66:335-7 Ap '47
Grounding stripping units with high and low voltages. J. J. Huey. diags Coal Age 52: 79-83 Ag '47
How to ground, bond and insulate cables, potheads and joints; engineering reference sheet. diag Elec World 128:122 O 11 '47
How to identify grounded conductor on customer's service connection. diags Elec World 127:64 Ap 26 '47
Installation matters; discussion on earthing. Electrician 137:659-60 S 6 '46; Discussion. 138:40, 113-14, 197-8 Ja 3-17 '47
Neutral-displacement protection; new type of relay. E. A. Burton. il diags Elec R (Lond) 139:1012-15 D 20 '46

ELECTRIC distribution—Grounding—*Cont.*
Neutral earthing of three-phase systems, with particular reference to large power stations; abstracts and discussion. J. R. Mortlock and C. M. Dobson. Elec R (Lond) 140:371-2 Mr 7 '47; Electrician 138:704 Mr 21 '47
Neutral grounding limits industrial system faults. R. L. Witzke. diags Elec World 127: 87-9 My 10 '47
Passing glance at a ground system; Perron gold mines. C. E. Dunlop. Can Min J 68: 649-50 S '47
Symposium on frame grounding of d.c. underground machinery. Coal Age 52:136+ Ag '47
Thorough grounding pays dividends in service. R. C. Stevenson, jr. il Elec World 127: 48-50 Ja 4 '47

Grounds and faults

Automatic sectionalizing applied to 4-kv; electronic timer control. H. C. Denison. diag Elec World 128:55 Ag 30 '47
Automatic switching with line switches. J. B. Hendricks. diags Elec World 128:114-15 O 11 '47
Clamp-on ammeter finds grounds on loaded circuits. S. B. Hoag. diag Elec World 127: 52 Ja 4 '47
Evaluation of simultaneous faults on three-phase systems; application of superposition principle. J. R. Mortlock. diags Inst E E J 94 pt 2:166-90 Je '47
Fault-current measuring device. M. J. Lantz. il diags Elec Eng 65:Trans 839-42 D '46
Fault locator for power lines. diag Electronics 19:198 D '46
Ground-fault neutralizer application; engineering reference sheet. N. E. Dillow. Elec World 128:128 O 25 '47
Ground faults; new protection for 2,300-volt cables. L. Wilson. il plan Coal Age 52:84-6 My '47
How Public service co. of N.J. handles trouble calls. T. L. Hall. il Edison Elec Inst Bul 15:321-3 S '47
Improved method of transmission line fault location; Tobe Telemetroscope. il Elec World 127:130+ Mr 15 '47
Interrupter aids fault location. diag Elec World 127:53 Ja 4 '47
Mobile detector locates faults on overhead lines. S. Freeman, jr. and H. Haas. il diags Elec World 128:76-7 Ag 16 '47
Panel demonstrates meter service faults. D. O. Merritt. il diag Elec World 126:115-16 N 9 '46
Pilot-cable faults; method of localization on telephone type cables suspended beneath power lines. F. K. Fowkes. diags Elec R (Lond) 141:392-3 S 12 '47
Relaying delta-wye transformers. S. L. Schaffer. diags Elec World 128:51-2 Ag 30 '47
Single-pole relaying and reclosing on a high-voltage system. J. J. Trainor and C. E. Parks. il map Elec Eng 66:467-70 My '47

Stability

Determination of required reserve generation capacity. W. J. Lyman. Elec World 127: 92-5 My 10 '47
Low-impedance transformers pay distribution dividends. Elec World 126:102-3 N 9 '46

Tables, calculations, etc.

Design chart for distribution secondary. F. W. Nimmer. Elec World 127:78-9 Mr 29 '47
Estimating three-phase power factor. G. W. Stubbings. diags Electrician 139:343-4 S 19 '47
Graphical methods for evaluating Fourier integrals. W. J. Cunningham. bibliog J Ap Phys 18:656-64 Jl '47
Machine computation of power network performance. L. A. Dunstan. diag Elec Eng 66:901-6 S '47
Residual currents; method of calculation. G. W. Stubbings. Elec R (Lond) 141:224-5 Ag 8 '47
Single-phase loads on a three-phase system. E. Holzer. Electrician 139:257-60 Jl 25 '47
Three-phase rectangular conductors; simplified reactance formula. W. H. Miller. bibliog Electrician 138:1681-2 Je 20 '47
Voltage-drop charts for selecting insulated aluminum cable. F. A. Gunther. Elec World 128:114-17 S 13 '47

ELECTRIC double layer
Surface states and rectification at a metal semi-conductor contact. J. Bardeen. bibliog diags Phys R 71:717-27 My 15 '47

ELECTRIC driving
All-electric flour mill. il Elec R (Lond) 140: 743-7 My 9 '47
Development of motor control-gear. D. Rudd. Inst E E J 92 pt 2:177-84 Je '45; Discussion. il 92 pt 2:184-9; 94 pt 2:75-8 Je '45, F '47
Eddy-current clutches for variable-speed drives. R. L. Jaeschke. il diags Machine Design 19:151-4 Ap '47
Effect of automatically controlled motor-driven devices upon distribution feeder loads following power supply interruptions. E. W. Oesterreich. Edison Elec Inst Bul 15:11-13+ Ja '47
Electrical control for dust collector; wiring diagram. E. M. Diehl. Rock Prod 49:59 N '46
Electrofluid drive. il Sci Am 176:134 Mr '47
Flexible control systems for tandem motor operation. J. E. Jones. il diags Product Eng 18:167-72 Jl '47
How we motorized 95 power presses; General instrument corp. S. A. Karch. il diag Factory Management 105:60-1 Ap '47
Integral hp. single-phase motors; their characteristics and uses. M. E. Cutten. il diags Product Eng 18:150-4 Ap '47
Interlocks; their use in machine controls. G. W. Heumann. il diags Machine Design 19:121-8 Ap '47
Ladybower reservoir; electrical features in construction and operation of the dam. il Elec R (Lond) 139:815-20 N 22 '46
Maintenance of production during the power cuts; improvisations in machine drives. il Engineering 163:166 Mr 7 '47
Match your motor to the driven machine. C. Bauman. il Power 91:444-6 Jl '47
Material-handling equipment. C. B. Risler. Mech Eng 69:591-2 Jl '47
Mechanical cold drawbenches for ferrous and non-ferrous tubes. G. W. Garwig and A. L. Thurman. il Blast F & Steel Pl 35:461-6, 549-52 Ap-My '47
Mechanized car park; electrically driven handling device. il Elec R (Lond) 140:277 F 7 '47
Metropolitan-Vickers electric sectional drive. il diags Engineer 183:448-9 My 23 '47
Modern rotary drilling; electrical power transmission. J. Zaba. Oil & Gas J 46:129 Je 14 '47
Motor h.p. at partial loads. A. N. D. Kerr. Electrician 139:403 Ag 8 '47
New equipment; power transmission. il Iron Age 159:67-72 Ja 30 '47
150,000 horsepower applied to aeronautical research; Ames aeronautical laboratory of the National advisory committee for aeronautics. J. A. White. il diags Elec Eng 65:Trans 833-8 D '46
Progress in engineering knowledge during 1946; industrial power applications. P. L. Alger and others. diags Gen Elec R 50:41-3 Mr '47
Special control circuits for motors may aid machine performance. H. F. Littlejohn, jr. il diags Product Eng 18:106-11 Ag '47
Swiss mechanised car parking system. C. F. Armstrong. il plan diags Engineer 183:554-6 Je 27 '47
Variable-speed drives. diags Factory Management 105:122-4 Ag '47
Variable-speed power drive. il diag Engineer 182:423 N 8 '46
What is the most economical drive for an air compressor? W. W. Gaylord. il Power Pl Eng 51:81-2 Mr '47
Your electric motor. J. F. MacPhearson. il diags Factory Management 105:113-24 Ja '47

See also
Cranes, derricks, etc.—Electric equipment
Electric motors
Hoisting machinery, Electric
Locomotives, Diesel-electric
Locomotives, Gas turbine-electric
Machine tools—Electric driving
Mine hoisting, Electric
Pumping machinery, Electric
Rototrol
Ship propulsion, Electric

ELECTRIC driving—*Continued*

Conveying machinery

A.c. and d.c. drives for steelworks cranes and ore bridges; discussion. Iron & Steel Inst J 155:271-88 F '47
Applying electrified drives to conveyors. S. Reibel. il diags Product Eng 18:84-9 O '47
Collis powered conveyor units. il Mech Handling 34:39-40 Ja '47
Electric control of material handling plants. B. Feltbower. il plan diags Mech Handling 34:472-9 S '47
Mavor and Coulson 200 h.p. coal conveyor drive. il diag Engineer 183:311 Ap 11 '47
Selective conveyor serves many stations; Standard telephones and cables, limited. il plan diags Mech Handling 34:512-19 O '47
Solution to a difficult conveying problem; electric vibrating conveyors. J. H. Whitelock. il Mech Handling 34:523-7 O '47

Machine tools

See Machine tools—Electric driving

Paper mills

Dandy roll drive for fine paper manufacture. H. D. Johnston. il diags Paper Tr J 125:53-6 Ag 7 '47; Same cond. Paper Ind 29:116+ Ap '47
Donnacona machine and its new electronic amplidyne drive. D. G. P. Sanderson. Pulp & Pa of Can 48:111-13 My '47
Electronic amplidyne sectional drive. W. A. Masservey. il diag Pulp & Pa of Can 48: 108-10 My '47
Heat balance and the paper machine drive. R. R. Baker. il diags Paper Tr J 125:41-4 Jl 3 '47
Motor application in the pulp and paper industry. W. L. Eliason. charts Pulp & Pa of Can (Convention no) 48:191-6 [F] '47; Same cond. Paper Ind 29:122-3 Ap '47
Multiple generator power for sectional paper machine drive. G. E. Plaisted. il diags Paper Ind 28:1447-52 Ja '47
Operational survey of electrical equipment in paper mills. L. E. Beck. il Paper Tr J 124: 66+ My 29 '47; Same cond. Paper Ind 29: 887-9 S '47
Power distribution systems for paper mills. W. C. Bloomquist. il diags Paper Tr J 124:35-46 F 13 '47
Sectional paper machine output increased with electronic regulator. V. B. Baker. il diags Paper Ind 29:987-91+ O '47
Spot conversion drives in paper mills. R. Nelson. Paper Tr J 125:53-6 S 11 '47

Potteries

Potters' mills; changing over to electrical operation. il diag Elec R (Lond) 139:559-63; 140:103-8 O 11 '46, Ja 17 '47

Power plant auxiliaries

Boiler draught control; abstract. D. D. Rayner. Electrician 139:1147 O 17 '47
How to couple high-speed motors to boiler feed pumps. A. E. Beardmore. diag Power 90:861 D '46
Power supply for generating station auxiliary services. W. Szwander. bibliog(36 titles) diags Inst E E J 94 pt 2:372-84 Ag '47; Abstract. Elec R (Lond) 139:967 D 13 '46; Discussion. Inst E E J 94:pt 2:384-400 Ag '47; Elec R (Lond) 139:967-8 D 13 '46; Electrician 137:1679-81 D 13 '46

Printing offices

Electronic drive for printing presses. Electronics 20:176 F '47

Rolling mills

British company installs cold reversing mill. Blast F & Steel Pl 35:262+ F '47
Cold reduction reversing strip mill. il Engineer 182:493 N 29 '46
La commande électrique par redresseurs d'un train de laminoirs non réversibles aux aciéries de Pompey. diags Génie Civil 124: 351-3 S 15 '47
Constant-tension reel drives. E. S. Murrah. il diags Blast F & Steel Pl 35:205-14 F '47
Electrical highlights in the rolling mill and auxiliary expansion during 1946. H. W. Poole. il Blast F & Steel Pl 35:85-8 Ja '47
Modernized control system increases blooming mill output. E. Frisch. il diags Steel 121:120+ S 15 '47
Motor selection for a rolling mill. L. H. Berkley. diags Elec Eng 66:444-7 My '47
New 80-inch cold mill installed by English steelmaker; John Summers & sons. il Steel 120:110+ F 3 '47
New tandem cold mill rolls strip at mile-a-minute. J. C. Sullivan. il Steel 120:118+ Je 2 '47
Rolling-mill drives. H. Neilson. Elec R (Lond) 140:308 F 14 '47
Variable voltage drives for blooming mill tables and feed rolls. Z. W. Whitehouse and A. F. Kenyon. il diags Steel 119:92-4+ D 30 '46
Weirton Steel starts mile-a-minute cold-reduction strip mill. il Iron Age 159:119 My 22 '47
Westinghouse produces drive for world's fastest steel mill. L. M. Gumm. Blast F & Steel Pl 35:734 Je '47

Rubber factories

Individual motors replace lineshafts to speed production; Davidson rubber co. il diag Power 91:41-3 Ja '47
Modern rubber mixing; Dunlop rubber factory at Speke. il diag Elec R (Lond) 141: 47-51 Jl 11 '47

Ships' auxiliaries

Design of ship's service system and auxiliary power supply system. F. M. Starr. il diags Marine Eng 52:68-75 Ag '47
Starting marine auxiliaries. il Electrician 138:1461 My 30 '47

Textile mills

Air-break contactor starter for textile machinery. il Engineering 163:331 Ap 25 '47
Development of loom drives. E. Fawthrop. il diags Textile Inst J 37:P526-8 N '46
Electric power in the cotton industry. S. A. Bobe. il Elec Eng 66:662-6 Jl '47
Electrical installation in a viscose rayon factory. C. F. Freeman and H. V. Mather. Engineering 163:470 Je 6 '47
Electronic warper drive gives constant yarn speed. R. J. Demartini. il diag Textile World 97:121+ Ap '47
Flax preparation; electricity's part in a new industry. il Elec R (Lond) 140:383-6 Mr 14 '47
Modern power transmission results in lower power costs. il Rayon 28:345-8 Je '47
Power distribution in textile plants. J. D. McConnell. Elec Eng 66:667-9 Jl '47
Small cores in warp beams are not unqualified benefit. R. J. Demartini. diags Textile World 97:133+ Ja '47
Wool textile industry; new reasons for encouraging electric drive. il Elec R (Lond) 141:85-8 Jl 18 '47

ELECTRIC engineering

American institute of electrical engineers Pacific coast meeting, San Diego. Elec Eng 66:1013-24 O '47
A.I.E.E. summer meeting, Montreal, June 9-13. Elec World 128:88-93 Jl 5 '47; Elec Eng 66:803-35 Ag '47; Power 91:553-4 Ag '47
American institute of electrical engineers winter meeting, New York, Jan. 27-31. Elec Eng 66:265-301 Mr '47; Elec World 127:108-15 F 15 '47
Electrical and allied developments of 1946. G. Bartlett. il diag Gen Elec R 50:12-53 Ja '47
Electrical engineering aspect of degaussing. I. S. Fraser and others. il diags Inst E E J 93 pt 1:496-507 N '46; Same cond. Engineer 181:563-5 Je 21 '46; Discussion. Inst E E J 93 pt 1:522-4 N '46
Electrical engineering in 1946. il Engineer 183: 55-7, supp 3, 69-70, 93-4, 115-16 Ja 10-31 '47
Electricity supply. T. E. Daniel. Inst E E J 94 pt 1:144-6 Mr '47
Engineering news report. J. W. Parker. Elec World 127:96 Je 7 '47
Great Lakes district meeting conference papers digested. Elec Eng 65:565-9 D '46
Photographic records and measuring devices in engineering. P. Philip. Inst E E J 94 pt 1:95-8 F '47
Physics today, engineering tomorrow. C. G. Suits. Elec Eng 66:241-3 Mr '47

ELECTRIC engineering—*Continued*
Progress in engineering knowledge during 1946. P. L. Alger and others. il diags Gen Elec R 50:12-50+ Mr '47
Synoptic review of electrical engineering progress, particularly during the last quarter century. J. D. Ferguson. Inst E E J 94 pt 1:73-81 F '47
What the electrical engineering department needs from the drawing department. W. A. Lewis. diag J Eng Educ 37:653-9 Ap '47

See also
Armatures
Electric apparatus and appliances and other headings beginning Electric
Electricity
Electricity in mining
Electricity in the petroleum industry
Electricity on the farm
Electricity supply
Hydroelectric plants
Insulation (electric)
Radio communication and other headings beginning Radio
Railroads—Electric equipment
Railroads—Electrification
Ship propulsion, Electric
Telephone
Voltage regulation

Bibliography

Accessions to the library (cont). Inst E E J 93 pt 1:428, 486; 94 pt 1:72, 162-4, 201, 298-9, 390 O-N '46, F, Ap-My, Jl, S '47
Bibliography; progress in engineering knowledge during 1946. P. L. Alger and others. Gen Elec R 50:52-5 Mr '47
E.E.I. publications and service material; list. Edison Elec Inst Bul 15:347-8 S '47
Library notes on articles in technical journals. Gen Elec R 50:70-1 Ja '47 (cont monthly)

Safety measures

See also
Electric codes
Electric equipment—Safety measures
Linemen's equipment
National electrical code

Study and teaching

Coordination in the teaching of mathematics to electrical engineers. L. V. Bewley. J Eng Educ 37:786-95 Je '47
Electric training for industry; war training programs conducted by the University of California in cooperation with the U.S. Office of education. C. F. Dalziel and others. J Eng Educ 37:520-30 Mr '47
Five-year curriculum engrosses education session; summer meeting, AIEE. Elec Eng 66:816-18 Ag '47
Mathematics and electrical engineering. G. F. Corcoran. J Eng Educ 37:818-20 Je '47
Practical training; joint committee's proposals for professional engineers. Elec R (Lond) 141:91-2 Jl 18 '47
Practical training of engineers; report of joint committee. Electrician 139:195-7 Jl 18 '47
Teaching electricity and magnetism. V. P. Hessler. Elec Eng 65:Trans 828-33 D '46
Teaching of the principles of electrical machine design; abstract and discussion. L. H. A. Carr. Electrician 138:443-5 F 7 '47

Tables, calculations, etc.

Energy export and import; use of the four-quadrant vector diagram. A. Salzmann. diags Elec R (Lond) 139:869-72 N 29 '46
Evaluation of simultaneous faults on three-phase systems; application of superposition principle. J. R. Mortlock. diags Inst E E J 94 pt 2:166-90 Je '47
Simplifying the calculation of vector resultants. C. O. vonDannenberg. Power Pl Eng 51:95 Mr '47
Tailored logarithmic scale. A. A. Merrill. charts Gen Elec R 50:45-7 My '47

See also
Electric distribution—Tables, calculations, etc.
Electric lines—Tables, calculations, etc.
Power factor

ELECTRIC engineering (periodical)
New AIEE publication policy becomes effective in January 1947. C. F. Wagner. Elec Eng 65:576-8 D '46

ELECTRIC engineers
Electrical engineer. E. S. Lee. Elec Eng 66: 521-4 Je '47
Electrical engineer in commerce; abstract. H. M. Speirs. Electrician 139:1222 O 24 '47
Has electronics eloped with engineers? attitude of college students toward career in electric utility industry. il Elec World 128: 103-5 O 11 '47
Help wanted; young engineers needed. F. E. Sanford. Elec World 127:90-1 My 10 '47
Professional activities subcommittee reports for 1946 on organization of engineering profession. Elec Eng 66:496-501 My '47

See also
Illuminating engineering society

ELECTRIC equipment
Electrical and allied developments of 1946. G. Bartlett. il diag Gen Elec R 50:12-53 Ja '47
Material-handling equipment. C. B. Risler. Mech Eng 69:591-2 Jl '47
Review of power and mechanical equipment; motors and switchgear, other electrical equipment. il Power 90:914-19 Mid-D '46

See also
Condensers (electricity)
Electric apparatus and appliances
Electric cables
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Drying

Dry flooded equipment with infrared lamps. C. W. Pinkel. il Elec World 127:131 My 24 '47

Maintenance and repair

Electrical maintenance pays. H. L. Huntley. il Food Ind 19:1348-51+ O '47
How Public service co. of N.J. handles trouble calls. T. L. Hall. il Edison Elec Inst Bul 15:321-3 S '47
How to maintain electrical meters and instruments. C. E. Fry. il Factory Management 105:96-8 O '47
Maintenance of industrial electronic equipment. il Power Pl Eng 50:92-3 S; 98-9 O; 94-5 N; 100-1 D '46; 51:94-6 Ja '47
Organization of industrial electrical maintenance. J. C. B. Nicol. bibliog Inst E E J 92 pt 2:166-71 Je '45; Discussion. 92 pt 2: 171-6, 593-609; 94 pt 2:159-64 Je, D '45, Ap '47

Manufacture

Ridge forming acrylic sheet. W. W. Farr and R. Tomlinson. il Mod Plastics 24:114-16 Jl '47

Protection

Protective finishing of electrical equipment; abstract and discussion. F. Widnall and R. Newbound. Electrician 138:641-2 Mr 14 '47

Rating

Sensible pattern of voltages for apparatus standardization. H. P. Seelye and A. C. Monteith. Elec World 127:88-90 Ap 12 '47

Safety measures

Correct electrical equipment minimized explosive hazards; United Chromium. F. G. Bauer. il Factory Management 104:142-4 O '46
Defects and malpractices that lead to electrical fires. C. F. Hedlund. il Factory Management 105:108-10 Jl '47
Electric equipment; current under control. il Nat Safety N 55:120+ Mr '47

ELECTRIC equipment—Safety measures—*Cont.*
Electrical control of dangerous machinery and processes. W. F. Cooper. diags Inst E E J 94 pt 2:216-27 Je '47; Abstracts. Electrician 137:1364 N 15 '46; Elec R (Lond) 139:836 N 22 '46; Discussion. Inst E E J 94 pt 2: 227-32 Je '47; Electrician 137:1443-4 N 22 '46; Elec R (Lond) 139:836-7 N 22 '46
High-voltage indication; instrument for use on 33-kV circuits. T. A. Ledward. diags Elec R (Lond) 141:351-2 S 5 '47
How to use electricity and electrical equipment more safely. il Roads & Sts 90:105-6+ Mr '47
Inspection and maintenance guide for electrical equipment hazards. G. E. Walters. Safety Eng 94:12-13+ Jl '47
Servant or menace? facts about equipment and operating methods. N. H. Davis, jr. il Nat Safety N 56:34-5+ Ag '47
Temporary installations need accident protection. il Elec World 127:104 My 10 '47
Unusual electrical fires, and why they occurred. C. F. Hedlund. il Factory Management 105:110-14 Mr '47

See also
Electric tools, Portable—Safety measures

Standards

Aspects of standardization; abstracts. P. Good. Elec R (Lond) 141:573 O 17 '47; Electrician 139:1137-8 O 17 '47
Marking of electric equipment. T. Powell. Elec Eng 66:349-51 Ap '47
NEMA formulates policy on testing and certification labeling. Ind Stand 18:63-6 Mr '47
Sensible pattern of voltages for apparatus standardization. H. P. Seelye and A. C. Monteith. Elec World 127:88-90 Ap 12 '47

Testing

Design load box for service testing. H. E. Arnold. il diag Elec World 127:110-11 Ap 12 '47
NEMA formulates policy on testing and certification labeling. Ind Stand 18:63-6 Mr '47

ELECTRIC fans
Cooling by blowing out vs. blowing in. il Sheet Metal Worker 38:94 O '47
How does a new product get a whirlwind start? B. Isely. il Sales Management 58:125-6+ Mr 15 '47
How to use a fan in the dog days. il Refrig Eng 54:153 Ag '47

Rating

Electric fans. Consumers Res Bul 19:9 Ap '47

ELECTRIC fans, Ventilating
Axial fans for marine ventilation. R. J. Purcell. il Marine Eng 52:88-92 Je '47
Cool breezes for hot summer days; attic ventilating fans. il diag Am Bld 69:99 Jl '47
Design of exhaust systems; trouble with fan blade and its correction. F. H. Stebbins. diags Sheet Metal Worker 38:68-9 S '47
Give your fan a chance. J. Cassie. il Heat & Ven 44:72-4 F '47
Hospital ventilation. G. H. Priestley. il Elec R (Lond) 140:163-4 Ja 24 '47
Night cooling industrial plants. il Steel 120: 80 Je 30 '47
Power for dairy barn ventilation. Elec World 127:72+ Ja 4 '47
Ten points to guide your attic fan installations. Sheet Metal Worker 38:55-6+ My '47
Unit heater and fan solve a launderette comfort problem. il diag Heating-Piping 19: 71 Jl '47

ELECTRIC field
Apparatus for the observation of the Kerr effect with microsecond electrical pulses. W. Kaye and R. Devaney. bibliog il diags J Ap Phys 18:912-18 O '47
Class of exact solutions of Einstein's field equations. S. D. Majumdar. Phys R 72:390-8 S 1 '47
Electron beam deflection. R. G. E. Hutter. bibliog il diags J Ap Phys 18:740-58, 797-810 Ag-S '47
Electron mechanics of induction acceleration. J. A. Rajchman and W. H. Cherry. bibliog diags Franklin Inst J 243:261-85, 345-64 Ap-My '47
Electrostatic field of a point charge inside a cylinder, in connection with wave guide theory. C. J. Bouwkamp and N. G. de Bruijn. bibliog J Ap Phys 18:562-77 Je '47
Flux plotting method for obtaining fields satisfying Maxwell's equations, with applications to the magnetron. P. D. Crout. bibliog il diags J Ap Phys 18:348-55 Ap '47
Forces between moving charges. R. D. Sard. bibliog diags Elec Eng 66:61-5 Ja '47; Discussion. 66:741-3 Jl '47
$TM_{0,1}$ mode in circular wave guides with two coaxial dielectrics. S. Frankel. J Ap Phys 18:650-5 Jl '47
Motional mass of the electron; reconsideration of views supporting Lorentz and Einstein equations. C. A. Boddie. diags Elec Eng 66:45-60 Ja '47; Discussion. 66:319-21, 420-2, 624-6 Mr-Ap, Je '47
Stresses in magnetic and electric fields. G. W. O. Howe. Wireless Eng 23:319-21 D '46
Transverse electric modes in coaxial cavities. R. A. Kirkman and M. Kline. diags Inst Radio Eng Proc 34:14P-17P Ja '46; Discussion. 35:931-5 S '47

See also
Stark effect

ELECTRIC filters
Quarter wave coupled wave-guide filters. W. L. Pritchard. bibliog diags J Ap Phys 18: 862-72 O '47

See also
Radio filters

ELECTRIC fires
Defects and malpractices that lead to electrical fires. C. F. Hedlund. il Factory Management 105:108-10 Jl '47
Equipment modernized to cut fire risks. Elec World 128:102-3 Jl 19 '47
Switch-door window aids fire extinction. J. W. St Andre. Elec World 127:64+ Ja 4 '47
Unusual electrical fires, and why they occurred. C. F. Hedlund. il Factory Management 105:110-14 Mr '47
Wood structure burning by leakage currents. P. M. Ross. il diags Elec Eng 66:472-4 My '47

See also
Electric transformers—Fires and fire protection

ELECTRIC fittings
Coded colors show which power outlets to use; RCA Victor division. J. H. Duncan. il Factory Management 105:89-90 Je '47
Design and installation of electrical accessories for domestic purposes. F. C. Fuke. il diags Inst E E J 92 pt 2:90-9 Ap '45; Discussion. 92 pt 2:100-6; 94 pt 2:68-70 Ap '45, F '47
Domestic wiring problems; some reactions to standardising of plugs and sockets. Electrician 139:193-4 Jl 18 '47
Fused plugs; new flat-pin specification. Elec R (Lond) 141:92 Jl 18 '47
New uses expand markets for stay put socket. il Sales Management 59:108+ O 1 '47
Plugs and sockets. Electrician 138:1527-8 Je 6 '47
Plugs and sockets. Electrician 139:925-6 S 26 '47
Pressed copper service boxes. il Engineer 183:527 Je 13 '47
13A fused plug and socket; new B.S. specification. Electrician 139:192 Jl 18 '47
Wiring accessories at British industries fair. il Elec R (Lond) 140:799-801 My 16 '47

ELECTRIC furnaces
Brazing in electric furnaces. S. DeDomenico and J. A. Comstock. il Metal Prog 52:71-6 Jl '47
Electric apparatus for three-phase arc-furnaces. N. R. Stansel and A. R. Oltrogge. il diags Electrochem Soc Trans 91 (preprint 25):363-74 '47
Electric-furnace brazing for Aer-a-sol insecticide bomb. A. T. Cole and H. M. Webber. il diag Gen Elec R 50:25-31 Je '47

ELECTRIC furnaces—*Continued*
Electric furnaces increase brazed parts production. Steel 121:112 S 22 '47
Electric radiation furnaces; abstract. H. George. Am Cer Soc J 30(Cer A):202-3 O 1 '47
Furnace brazing steel insecticide bombs; Bridgeport brass co. A. T. Cole and H. M. Webber. il diag Steel 120:70-3+ Ja 27 '47
Increased mold life may result from newly developed cleaning process; Ajax-Hultgren salt bath furnace. il Glass Ind 28:357+ Jl '47
Production of electric furnace electrodes; illustrations with text. L. C. Judson. Iron Age 160:62-4 Ag 14 '47

Atmosphere control

Furnace brazing; 12 per cent chromium low carbon steel. T. H. Gray. il diags Steel 121:104-6+ Jl 21 '47
Gas cyaniding. H. M. Parshall. il Steel 119: 86-8 D 16 '46

ELECTRIC furnaces, Annealing
Bright-annealing plant for steel strip. B. Jones and I. Jenkins. il diag Engineering 163:92-6 Ja 24 '47; Abstract. Elec R (Lond) 140:36 Ja 3 '47

ELECTRIC furnaces, Forging
Planning the forge shop. G. F. Applegate. il plan Steel 121:84-6+ Jl 14 '47

ELECTRIC furnaces, Foundry
Electronic frequency converters for induction melting furnaces. S. R. Durand. il Iron Age 160:64-7+ S 25 '47

ELECTRIC furnaces, Heat treating
Automatic heat treating machine. J. R. Morrison. il Metal Prog 50:952-4 N '46
Electric box furnaces use recirculating air draw principle. il Materials & Methods 26: 141 Jl '47
G.W.B. belt conveyor furnaces. il Mech Handling 34:98-9 F '47
Heat treatment; recent developments in G.W.B. electric furnaces and handling equipment. il Automobile Eng 36:573-82 D '46
Precision heat treatment; aero-engine works of Rolls-Royce. il Elec R (Lond) 141:311-15 Ag 29 '47
Salt baths for hardening high speed. W. E. Bancroft. bibliog il Metal Prog 50:941-7 N '46
Various types of heat treating handled in one installation; Dayton forging & heat treating co. il Steel 121:99+ Jl 21 '47
Wild-Barfield hairpin minor furnaces. il Automobile Eng 37:261-2 Jl '47

Control

Accurate control spells success in heat-treating. C. C. Roberts. il Am Mach 91:139-40 Jl 17 '47

ELECTRIC furnaces, Heating
General Electric rotary hearth electric furnace. il Engineer 182:402 N 1 '46

ELECTRIC furnaces, High frequency
Coreless induction furnaces. M. J. Marchbanks. il plan diags Inst E E J 93 pt 2:517-29; Discussion. 529-31 D '46
Electronic frequency converters for induction melting furnaces. S. R. Durand. il Iron Age 160:64-7+ S 25 '47
Ignitron converters for induction heating. R. J. Ballard and J. L. Boyer. diag Elec World 127:114-15 Mr 15 '47
Photoelectric pyrometer for a small high-frequency induction furnace. T. Land and H. Lund. il diags Iron & Steel Inst J 156: 75-7 My '47
Planning the forge shop. G. F. Applegate. il plan Steel 121:84-6+ Jl 14 '47
Properties of aluminum alloys melted in an induction heated crucible furnace. J. W. Poynter. Am Soc for Metals Trans 35:184-93; Discussion. 193-4 '45

ELECTRIC furnaces, Iron founding
Swedish high frequency furnace for cast iron. diag Iron Age 158:86 D 5 '46

ELECTRIC furnaces, Laboratory
G-E automatically controlled high-temperature laboratory furnace. il Mach 53:184 D '46
High temperature furnace for electron diffraction studies. E. A. Gulbransen. il diag R Sci Instr 18:546-50 Ag '47
High-temperature X-ray diffraction apparatus; furnace for use with Geiger-counter X-ray spectrometer. A. Van Valkenburg, jr. and H. F. McMurdie. bibliog il diags J Res Nat Bur Stand 38:415-18 Ap '47; Same. Am Cer Soc Bul 26:139-42 My 15 '47; Abstract. Iron Age 160:51+ Jl 10 '47
Laboratory experimental electric glass furnaces. W. A. Hedden and others. il diag Am Cer Soc J 30:48-51 F 1 '47

ELECTRIC furnaces, Metallurgical
Electric furnace practice in Canada. J. L. Balleny. il diags Elec Eng 66:774-8 Ag '47
Electric smelting. R. Durrer. Iron & Steel Inst J 156:257-60 Je '47
Electric smelting plant at Choindez. E. Gehrig. plan diag Iron & Steel Inst J 156:293-8 Je '47
Fernico from metal powders. E. E. Burger. il diag Gen Elec R 49:22-4 D '46
Producing high purity metals with vacuum. J. D. Nisbet. diags Iron Age 159:56-9 Je 19 '47

See also
Electric furnaces, Heat treating
Electric furnaces, High frequency
Electric furnaces, Steel making

Control

Automatic operation of the electric arc furnace; Rototrol regulator. H. G. Frostick. il diag Steel 121:104+ Ag 4 '47

ELECTRIC furnaces, Non-ferrous melting
Lindberg-Fisher continuous pouring induction melting furnace. il Iron Age 160:55 Jl 24 '47
Melting aluminum scrap in the low frequency induction furnace. M. Tama. il diag Iron Age 160:76-9 S 4 '47
Properties of aluminum alloys melted in an induction heated crucible furnace. J. W. Poynter. Am Soc for Metals Trans 35:184-93; Discussion. 193-4 '45

ELECTRIC furnaces, Steel making
Coreless induction furnaces. M. J. Marchbanks. il plan diags Inst E E J 93 pt 2: 517-29 D '46; Abstract. Engineering 161:404 Ap 26 '46; Discussion. Inst E E J 93 pt 2: 529-31 D '46; Elec R (Lond) 138:641 Ap 26 '46; Electrician 136:1035-6 Ap 19 '46
Economy in electric arc furnace operation. T. S. Winters. il Steel 120:108-10+ Ap 14 '47
Electric furnace steel committee, Iron and steel division. A.I.M.E. annual conference, Pittsburgh, Dec. 5-7. Steel 119:20+ D 16 '46; Iron Age 158:65-7 D 19 '46
Electric steel in the United States at forty-one. C. G. Merritt. Electrochem Soc Trans 91 (preprint 14):213-19 '47
Photo-electric pyrometer for a small high-frequency induction furnace. T. Land and H. Lund. il diags Iron & Steel Inst J 156: 75-7 My '47
Richard Sebastian Read, dean of electric furnace steel melters. H. J. Stagg. Metal Prog 50:670-2 O '46
Specially processed silicon carbide as a deoxidizing agent in the reducing slag of basic electric steelmaking. E. A. Loria and others. bibliog Electrochem Soc Trans 91 (preprint 18):273-83 '47

Control

Developments in the control of arc furnaces. E. H. Browning. il diags Blast F & Steel Pl 35:72-5 Ja '47

Lining

Dolomite linings for basic electric arc furnaces. E. C. Brampton and others. bibliog diags Iron & Steel Inst J 152:341-72, pl 36-9 no 2 '45; Excerpt. Blast F & Steel Pl 34: 412+ Mr '46; Abstracts. Engineer 180:442 N 30 '45; Engineering 160:453-4 N 30 '45; Iron Age 157:73 Ja 31 '46; Metal Prog 50: 146+ Jl '46; Discussion. Iron & Steel Inst J 152:372-83 no 2 '45; Engineer 180:442-3 N 30 '45; Engineering 160:454 N 30 '45
Rammed refractories in electric furnaces. R. H. Zoller. diags Brick & Clay Rec 110:72+ Mr '47

ELECTRIC furnaces, Vacuum melting
Practical furnace for vacuum melting. A. U. Seybolt. diags Metal Prog 50:1102-6 N '46
Vacuum melting and casting. A. G. Gray. il diags Steel 120:86-8+ Ap 14 '47
Vacuum melting in Germany. G. T. Motock il diags Iron Age 158:64-9 D 12 '46

ELECTRIC fuses
Box and paddle silverplates blades and clips. M. D. Pollock. diags Elec World 128:124+ O 25 '47
Branch circuit protection committee reports progress. Edison Elec Inst Bul 15:383 O '47
Flameproof switch and fuse unit. il Engineer 184:349-50 O 10 '47
Fuse-switches; selection of most suitable types. J. Shepherd and P. J. Shipton. il Elec R (Lond) 140:530-2 Ap 4 '47
Fuses protect 13.2-kv industrial service. H. W. Grate. il diag Elec World 128:80-1 Ag 16 '47
Fuses replace circuit breakers on station feeders. A. M. deBellis. il diags Elec World 126:99-100 N 9 '46
Transformer failures and fuse blowings; 1935-1944 experience of 21 electric utilities in Pennsylvania; tabulations. Elec World 127:61 Je 21 '47

Testing
Two 115-kv fuses can open 230 kv. il Elec World 128:65 S 27 '47

ELECTRIC-gas operating companies
Electric and gas operating company bank loans. J. F. Childs. Pub Util 39:678-86 My 22 '47

ELECTRIC generator sets
Caboose power supply; train communication equipment. G. R. Merz. il Ry Mech Eng 121: 138-9 Mr '47; Same. Ry Age 122:898-9 My 3 '47
Diesel engine generator for railway passenger car air conditioning and electric current requirements. il diag Diesel Power 25:76-8 Ag '47
Emergency telephone power. F. K. Rowe. il Diesel Power 25:64-7+ F '47
Engine-generator supplies emergency lighting. il Elec World 126:116+ N 23 '46
Generating plant for military equipment; abstract. K. H. Tuson. Engineering 163:545 Je 27 '47
No outage on standby throwover to normal power; engine-generator set installed in Federal building, San Francisco. il Elec World 128:102 Jl 19 '47
Power for passenger cars. A. J. Manson. diags Ry Mech Eng 121:427-31 Ag '47
Reflections on electrical power packs. J. C. MacFarlane and others. diags Engineer 182: 550-1 D 13 '46
Rock Island tries air-started caboose power-supply unit. il Ry Age 122:754 Ap 12 '47; Same, with additional diag. Ry Mech Eng 121:196-7 Ap '47
Transportable a.c. welding sets. il Engineer 183:227 Mr 14 '47
2000 horsepower gas turbine generator set; abstracts. T. J. Putz. il Blast F & Steel Pl 34:1548-50+ D '46; diag Elec World 126:109-11 D 7 '46; Iron Age 158:137+ D 12 '46; Pet Eng 18:180b+ D '46; Power 91:34-6 Ja '47
WIND; Gary broadcasting station, Diesel generating set for standby power. J. E. Hubel. il Diesel Power 24:1435+ D '46

ELECTRIC generators
Analysis of hunting by means of vector diagrams. B. Adkins. diags Inst E E J 93 pt 2:541-8 D '46
G-E turbine generators on order will increase power generating capacity by 3½ million kilowatts. C. S. Coggeshall. Blast F & Steel Pl 34:1519 D '46
How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:90-2 Ja; 94-7 F; 91-4 Mr '47
Medium frequency generators; abstract. A. Schnetzler. diags Elec World 127:82 F 1 '47
Miller saves time on generator reassembly alignment problem. il Elec World 126:124 D 7 '46
Modern railway passenger car auxiliary power equipment; abstracts. D. R. MacLeod and J. Hause. il Elec Eng 66:864-8 S '47; Ry Mech Eng 121:375-9 Jl '47
Multiple generator power for sectional paper machine drive. G. E. Plaisted. il diags Paper Ind 28:1447-52 Ja '47
Progress in engineering knowledge during 1946; motors and generators. P. L. Alger and others. diags Gen Elec R 50:28-9 Mr '47
Recent advances in 3,600-rpm turbine generators. il Elec Eng 66:352-4 Ap '47
Test 20 air motors per hour with system using electric generator voltage output. E. G. Griscom. Pet Processing 1:254 D '46
2½-million volt surge generator. il Engineer 183:273 Mr 28 '47; Electrician 138:783 Mr 28 '47
Will generator and motor start together? diags Power 91:564-5+ Ag '47

Bearings
Modern bearing practice for vertical water-wheel generators; abstract. C. M. Laffoon and R. A. Baudry. il diags Power 91:174-5 Mr '47

Cooling
Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69:771-7; Discussion. 777-8 O '47

Failure
Iron reinsulated for 35,000-kw. unit in record time. il Elec West 99:90 S '47

Roof installation
120-ton generator rises to the roof; Arkansas power and light co. generator installed on roof of Cecil Lynch station. il Power 91: 624-5 S '47

Standards
Standardized turbine-generator units. J. R. Carlson. il Power Pl Eng 51:126+ Mr '47

Tables, calculations, etc.
One way to find generator reserve; chart. E. J. Keough. Elec World 127:71+ Je 21 '47

Temperature
Effects of thermal characteristics of aircraft generators on load analysis. S. Rogers. diag Elec Eng 65:Trans 819-24 D '46
How to maintain temperature indicators for generators and large transformers. W. F. Dunkle. diag Elec World 128:106 Jl 19; 80 Ag 2; 90 Ag 16; 66 Ag 30; 132 S 13; 78 S 27 '47

Testing
Overvoltage tests on generators. J. H. Vivian. Elec West 98:42-4 Ja '47

Windings
Screw type coil puller removes stator winding. il Elec World 127:84 Mr 29 '47

ELECTRIC generators, Alternating current
A-c systems for large aircraft. J. D. Miner. il Aero Digest 55:40-2+ S '47
Feed heating cycle; influence on performance of turbo-alternators. G. Oldroyd. flow diag Elec R (Lond) 140:115-18 Ja 17 '47
How can we get more load on our generator? Power 91:124-5+ F '47
How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:91-4 Mr '47
Inside of electrical machines; application of insulation to turbo-alternators. R. H. Robinson. il Electrician 138:501-5 F 14 '47
Large generators prove themselves. C. M. Laffoon. il diag Power 91:597-9 S '47
Modern vehicle generating systems. A. D. Gilchrist. il diag Elec Eng 66:779-80 Ag '47
Power for passenger cars. A. J. Manson. diags Ry Mech Eng 121:427-31 Ag '47
Self-excited alternator; patent. diag Electrician 137:1831 D 27 '46
Short-circuit characteristics and load performance of inductor-type alternators. A. Mandl. il diags Inst E E J 94 pt 2:102-17 Ap '47
Special generator for the Flying Fortress; counter-radar apparatus. J. H. Walker and A. T. Stretton. il diags Engineer 182:413-14 N 8 '46
Variable-frequency alternator. il Elec R (Lond) 140:588 Ap 11 '47

ELECTRIC generators, Alternating current— *Continued*
What burns spots on generator sliprings? il Power 90:865-7 D '46

Cooling

Liquid cooling of turboalternators. C. J. Fechheimer. diags Elec Eng 66:969-74 O '47
Nine years' operating experience with hydrogen-cooled generators. D. S. Snell and L. P. Grobel. graphs Power Pl Eng 51:68-72 My; 78-82+ Je '47

Design

Alternator design; Hungarian crossed-coil system. Elec R (Lond) 140:397 Mr 14 '47
Variable-speed constant-frequency alternator. J. W. Crooks, jr. diags Elec Eng 66:882-4 S '47

Parallel operation

Parallel operation of aircraft alternators using frequency changers. O. E. Bowlus and P. T. Nims. il diags Elec Eng 66:463-6 My '47
Paralleling Diesel sets. diag Elec R (Lond) 141:131-2, 284-5 Jl 25, Ag 22 '47

Temperature

Temperature indicator for alternator rotors. il diags Engineering 164:391-2 O 24 '47

Windings

Damper windings for waterwheel and Diesel engine driven generators. W. L. Ringland. Elec World 128:81-2 Ag 16; 134+ S 13; 84 S 27; 126+ O 11; 138+ O 25; 126 N 8; 94+ N 22; 98-9 D 6 '47
Operation of large turbo-alternators to reduce rotor winding deformation. R. H. Coates and B. C. Pyle. il diags Inst E E J 93 pt 2:192-204 bibliog(p204) Ap '46; Discussion. 93 pt 2:204-12; 94 pt 2:92-8, 155-7 Ap '46, F, Ap '47

ELECTRIC generators, Direct current
Adaptation of automotive electrical equipment for personal aircraft; abstract. J. B. Hiday. diag Automotive & Aviation Ind 96:31 Je 1 '47
Direct-current arc-welding generators and systems. J. C. Macfarlane and others. bibliog diags Inst E E J 93 pt 2:603-16 D '46; Abstract. Elec R (Lond) 138:695 My 3 '46; Discussion. Inst E E J 93 pt 2:617-20 D '46; Elec R (Lond) 138:745-6 My 10 '46; Electrician 136:1248-50 My 10 '46
D.c. armature reaction chart. O. H. Hahn. diag Electrician 137:1582 D 6 '46
How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:94-7 F '47
Shock-proof caboose axle drive; generator for train communication service. il plans Ry Mech Eng 121:144-5 Mr '47
Shop care lights way to generator longevity; abstract. A. M. Baump. S A E J 55:81-2 F '47
Useful speed-time analyser; used in design of dynamos and other auxiliary equipment on automobiles. il diags Engineer 184:316-17 O 3 '47; Elec R (Lond) 141:450 S 19 '47
Vertical-axle generator drive. il diag Ry Mech Eng 121:484-5 S '47

See also
Amplidyne generator
Rototrol

Control

Integrated control system for aircraft d-c generators. A. T. McClinton. diag Elec Eng 66:362-4 Ap '47

ELECTRIC generators, Electrostatic
Electrostatic analyzer for selection of homogeneous ion beam. R. E. Warren and others. plan diags R Sci Instr 18:559-63 Ag '47
Electrostatic sources of electric power. J. G. Trump. bibliog il diags Elec Eng 66: 525-34 Je '47
Nuclear electrostatic generator. E. G. Linder. Phys R 71:129-30 Ja 15 '47
Particle accelerators; Van de Graaff generator. il diag Product Eng 18:151 Ja '47

ELECTRIC generators, Synchronous
Can synchronous generators run out-of-step with the system? A. A. Johnson. il Power 91:39-40 Ja '47
Parasitic losses in synchronous-machine damper windings. J. H. Walker. bibliog diags Inst E E J 94 pt 2:13-25 F '47

Testing

Capacitance of synchronous-machine armature windings determined for high-potential test. R. W. Wieseman. il Gen Elec R 50: 26-30 Jl '47
Electrical-angle measurement on motor and generator determines load limit. K. J. Granbois. il diags Power 91:154-6 Mr '47

ELECTRIC hardening. See Case hardening—Electric hardening

ELECTRIC heaters
All-electric unit heaters; Mountain City mill co. il Heat & Ven 44:96 Jl '47
Electric room-heaters; bowl heaters and other types. il Consumers Res Bul 19:5-8 Ja; 19-23 Ap '47
Hot foot; cold floor discomfort remedied by electric heat. Elec West 98:56 Mr '47
Portable heater uses forced-air system. il Sci Am 175:272 D '46

Rating

Portable electric room-heaters. il Consumers Res Bul 19:19-23 Ap '47

ELECTRIC heaters, Laboratory
Self-regulating electrolytic immersion heater. F. E. Holmes. diags J Chem Educ 24:166-8 Ap '47

ELECTRIC heating
Coefficient of performance of the heat pump. W. Parkerson. diags Heat & Ven 44:63-7 My '47
Cold snaps and power plant; study of load-duration curves. Elec R (Lond) 140:931-2 Je 6 '47
Commercial aspects of the heat pump. E. N. Kemler. Edison Elec Inst Bul 15:20-2 Ja '47
Comparisons between gas and electricity on the basis of coal economy. P. Schiller. bibliog Inst E E J 94 pt 1:355-63; Discussion. 364-70 Ag '47; Elec R (Lond) 140:433-4 Mr 21 '47; Electrician 138:709 Mr 21 '47
Designed for electric heat; house in Portland, Ore. il plan Am Bld 68:108 N '46
Domestic heating methods; smoke abatement conference. Electrician 139:1071-2 O 10 '47
Electric furnace is here. il Sheet Metal Worker 37:86 D '46
Electric home heating in Korea. E. A. Parrish. diags Elec World 128:76 Ag 30 '47
Electric home heating plant; Vap-O-Lec furnace. il diags Product Eng 18:96-7 My '47
Heat pump as a load builder. A. C. Crandall. il Edison Elec Inst Bul 15:114-18+ Ap '47
Heat pump for comfort heating and cooling. E. R. Ambrose. diags Min Cong J 33: 37-40 My '47
Heat pump prepares to compete for homes market. E. R. Abrams. Barron's 27:9 Je 30 '47
House heating by the heat pump method. S. W. Andrews. Edison Elec Inst Bul 14:419-23 D '46
House heating load characteristics as they affect wiring costs. J. B. Cochran. graphs Elec World 127:108-9+ Ap 12 '47
House heating with earth heat pump. A. C. Crandall. il diag Elec World 126:94-5 N 9 '46
Report on heat pumps. bibliog diags Elec West 98:61-5 My '47
Seattle City Light answers house heating questions. Elec World 127:138+ F 15 '47
Space heating; how economic planning might ease the burden. Elec R (Lond) 140:509-10 Mr 28 '47
Steam-electric furnace applied to house heating; Vap-O-Lek furnace. il Elec World 127:156+ My 24 '47
Superheating by electricity. il Chem Age (Lond) 57:363 S 13 '47

See also
Boilers, Heating—Electric heating
Electric heating elements
Electric heaters

Cost

Cost to serve house heating. H. G. Kelsey. Elec World 127:88+ Mr 29 '47
Electric heating means high costs; Seattle experiment. A. W. Ames. il Elec World 128:97-8 O 11 '47

ELECTRIC heating—*Continued*

Panel system

Conductive rubber ceilings used in radiant heating of Tennessee test residence. il Heat & Ven 44:100 My '47

Electrical radiant ceiling heat; experimental house at Knoxville, Tenn. il plan Am Bld 69:112-13 Ag '47

Electrified ceilings for house heating; heating element of conductive rubber. il Sheet Metal Worker 38:57+ Je '47

Furnace room no thicker than a sheet of cardboard made possible by new electric heating elements; U.S. Rubber's coilless panel and Crittall's radiant wallpaper. il diags Arch Forum 86:111-12 Je '47

ELECTRIC heating, Industrial

Annealing glass piping electrically. B. W. Whitehurst. il Elec World 126:110+ N 23 '46

Asphalt tanks are heated electrically. W. W. Pearce. il Elec West 99:86-7 O '47

Carbon brazes copper parts. W. Scott. il Am Mach 91:98-100 N 6 '47

Constant-length bar for outdoor use; temperature maintained by electrically heated sulfur dioxide. H. I. Andrews. il diags Engineering 163:25-6 Ja 10 '47

Electric heat for cheese processing. Elec World 128:94+ S 27 '47

Electric heat keeps tar from sticking. il Elec World 128:99 Ag 16 '47

Electric heater; consists of various metals embedded in pyrex or silica glass. R Sci Instr 18:591-2 Ag '47

Electric heating; committee report, A.A.R. Electrical section. il diag Ry Mech Eng 120: 598 N '46

Electric steam box for boat builders. M. M. Clayton. il diag Elec West 97:60 D '46

Electrically heated glove for determining local values of heat-transfer coefficients; used in designing anti-icing systems for airfoils. J. K. Goss. diags A S M E Trans 69:705-7; Discussion. il 707-8 Ag '47

Fusing of electrodeposited tin coatings. J. Falk. il Metal Finishing 45:63-5+ Ap '47

Gas or electricity for infra-red drying; with cost data. G. R. Van Kampen. il Paper Tr J 125:34+ O 9 '47

Heat control, metering molds permit long polystyrene parts; trim for Kelvinator refrigerators. W. F. Poupard. il diags Am Mach 91:117-20 Ag 14 '47

Heated jacket prevents heat loss from closed process vessels. A. A. Lynch and M. W. Rosch. diag Chem Eng 53:121 D '46

Improved production with electric heat. E. L. Kavanaugh. Edison Elec Inst Bul 15:293-6 Ag '47

Kilowatts dry ink for fast printing. E. D. Tillson. il Elec World 128:63-4 Ag 2 '47

Light metal extrusion; industrial heating applications. il Elec R (Lond) 140:923-8 Je 6 '47

Low frequency induction heating as applied to small scale chemical plant. G. O. Thacker and C. H. G. Hands. diags Soc Chem Ind J 66:211-15 Jl '47

Recent developments in glass-tank melting furnaces. W. E. S. Turner. Glass Ind 28: 363-4 Jl '47

Selector chart for induction heating and melting equipment. Iron Age 160:139 O 16 '47

Swiss cheese by electricity. M. Marsh. il diags Food Ind 19:1352-3 O '47

What happens in using steel disintegrators? Elox equipment removes broken tools, also cuts and drills. H. V. Harding. il diag Mach 53:161-4 Mr '47

See also

Case hardening—Electric hardening
Electric furnaces
Electric furnaces, Heat treating
Electric heating elements
Electric water heaters
Electric welding
Infrared rays—Industrial heating
Kilns—Electric heating
Thawing, Electric

High frequency heating

Basic requirements of materials for induction hardening. R. H. Lauderdale. il Product Eng 18:110-15 My '47

Brazing lawn mower rotors. il Electronics 20: 168+ S '47

Brazing three-piece assembly with induction heating unit; joining parts of lawn mower. il Mach 54:168 O '47

Case hardening wrist pins with induction heat. T. E. Lloyd. il Iron Age 159:54-6 Ja 30 '47

Coax coil for heating small holes. D. Baumoel. diag Electronics 20:160+ S '47

Combination induction and dielectric heater. il R Sci Instr 17:521-2 N '46

Continuous soldering of small motor rotors using high-frequency heat. W. L. Tesch and P. A. Greenmeyer. il Materials & Methods 25:94-6 Je '47

Cost analysis of dielectric preheating. T. N. Willcox. Mod Plastics 24:131-5 Mr '47

Data for high-frequency heating; tables. Elec World 126:120 N 9 '46

Demobilized microwaves. V. Zeluff. il diags Sci Am 176:252-5 Je '47

Designing for silver brazing with induction heating. J. B. Ross. il Iron Age 158:62-5 D 26 '46

Desoldering gas meters with induction heating. il Gas Age 99:33+ My 15 '47

Dielectric baking of foundry cores; abstract. R. W. Weld. Chem Eng 53:248 D '46

Dielectric heat used for continuous edge gluing. il Elec World 128:127 Jl 19 '47

Dielectric heating for plastics; abstract. C. Calvert. Chem Eng 53:256+ D '46

Dielectric heating; how to determine when dielectric heating is desirable and can be applied with profit. B. E. Rector. il diags Product Eng 18:158-62 O '47

Dielectric heating, the measurement of loss under rising temperature. J. B. Whitehead. diags Elec Eng 66:907-10 S '47

Dielectric preheating in the plastics industry. G. F. Leland and others. Elec World 126:126+ D 7 '46

Electronic core baking; use of synthetic resin binder. R. W. Crannell. il diag Foundry 75:66-9+ Jl '47

Electronic developments in the rubber industry. W. G. Routh. il Radio N 36:44-5+ D '46

Electronic drying of penicillin. Chem Age (Lond) 56:338 Mr 22 '47

Electronic heating requirements. A. P. Bock. Electronics 20:126 Ja '47

Electronic heating setup increases filter production; polymerizing resin-impregnated paper. il Automotive Ind 97:45 Jl 1 '47

Electronic sealing of thermoplastics; Thermatron. il Comp Air Mag 52:259 O '47

Electronic sterilization of canned foods? problems of localized overheating, heat losses, etc. J. M. Jackson. bibliog il Food Ind 19:634-6+ My '47

Electronics in the food industry; used in dehydrating foods and for thawing frozen foods. T. L. Swenson. Electronics 20:206+ F '47

Examples of metallurgical progress at International harvester co.; induction heating. il Metal Prog 52:616-19 O '47

Generator for small and medium soldering and brazing. Materials & Methods 25:141 Ja '47

Glass piping sealed by O-H high-frequency. B. W. Whitehurst. il Elec World 126:115 N 9 '46

Hardening shear blades. il Electronics 20: 164+ S '47

Heat gun makes possible new applications of induction heating. J. W. Williamson. il Mach 53:180-1 Ap '47

Heat sealing thermoplastics; abstract. W. D. Wenger. Product Eng 18:130 Mr '47

Heating by valve generators. Elec R (Lond) 139:882 N 29 '46

Heating with microwaves; suggested methods of utilizing waveguides. J. Marcum and T. P. Kinn. il diags Electronics 20:82-5 Mr '47

Hi-frequency heating conference. Elec West 97:86-8 O '46

High-frequency dielectric heating in heterogeneous catalysis. V. I. Komarewsky. il Science 105:291 Mr 14 '47

High-frequency heater interchanges oscillators for induction or dielectric use. Sci Am 175:274 D '46

High frequency heating in the radio spectrum. W. C. Rudd. il diag Elec Eng 66: 570-6 Je '47

ELECTRIC heating, Industrial—High frequency heating—*Continued*
High-frequency heating of nonconducting materials. F. J. Jolly. il diags A S M E Trans 69:155-62 F '47
High-frequency induction heating; with cost data. E. May. il Engineer 183:178-80 F 14 '47
High-frequency woodwelding speeds construction, helps reduce costs; illustrations with text. Arch Forum 87:128 O '47
How to use radio-frequency heating. B. E. Rector. Mach 53:173-4 F '47
Induction and dielectric heating. K. Pinder. bibliog diags Elec Eng 66:149-60 F '47
Induction hardening of steel. D. L. Martin and R. A. Gehr. bibliog il diags Steel 120: 78-81+ Ja 13; 74-8 Ja 20; 78-80+ Ja 27; 100-1+ F 3; 96-7+ F 10 '47
Induction hardening steel bars at Jones & Laughlin. J. F. Wilson. il Iron Age 159: 44-6 My 15 '47
Induction hardens tricky machine-tool parts; Jones & Lamson machine co. L. J. Sheehan. il diags Am Mach 91:89-92 Jl 3 '47
Induction heat tempers case-hardened screws; Screw machine products co. W. A. Gish. il Elec World 126:140+ N 9 '46
Induction heating steps up desoldering operations on gas meters. il Steel 121:96 S 22 '47
Induction soldering increases radiator production; tractor division of International harvester co. il Steel 119:96 N 18 '46
Induction soldering speeds kitchen utensil production. L. Gise and J. R. Stewart. il Welding J 25:1210-11 D '46; Same cond. Elec World 127:70 Ja 4 '47
Induction soldering stainless steel kitchen utensils; Adel precision products corp. il Steel 120:87+ Ja 13 '47
Localized heating of milk can necks. il Electronics 20:172+ Je '47
Long pieces can be induction-hardened progressively. F. W. Curtis. il diags Am Mach 91:102-4 Ag 14 '47
Low reactance flexible cable for induction heating. M. Zucker. bibliog diags Elec Eng 65:Trans 848-51 D '46
Magnetron oscillator for dielectric heating. R. B. Nelson. il diags J Ap Phys 18:356-61 Ap '47
Microwaves and their possible use in high frequency heating. J. Marcum. il diags Product Eng 18:137-40 Ja '47
Multiple-position coils speed induction heating. F. W. Curtis. il diags Am Mach 91: 90-3 O 23 '47
New principle in induction heating; Gordon Trigatron. T. E. Lloyd. il Iron Age 159: 46-8 Je 12 '47
Philips 50-kw radio-frequency induction heating generator. il Engineer 184:158 Ag 15 '47; Engineering 164:153-4 Ag 15 '47
Portable inductor for heating metal. J. W. Williamson. Metal Prog 51:270-1 F '47
Quick-frozen foods for diners. C. Kolb. Ry Age 122:791+ Ap 19 '47
Radio-frequency heating, with special reference to dielectric heating. J. H. Suker. Inst E E J 94 pt 1:55-6 Ja '47
Radio ovens for chemical industry. Chem Age (Lond) 57:169 Ag 2 '47
Resin adhesives for r-f heating. Electronics 19:202+ D '46
Silver alloy brazing and soldering; abstract. J. B. Ross. Chem Eng 53:252 D '46
Skin hardening; some aspects of the high-frequency induction process. R. J. Brown. Automobile Eng 37:389-90 O '47
Super high frequency heating for preparation of food. il Food Ind 18:1699-700 N '46
Temperature charts for induction and constant-temperature heating. M. P. Heisler. bibliog A S M E Trans 69:233-6 Ap '47
Temperature distribution in white-oak laminated timbers heated in a high-frequency electric field. M. E. Dunlap and E. R. Bell. il diag A S M E Trans 69:509-17 Jl '47; Abstract. Elec World 127:132+ F 15 '47; Discussion. A S M E Trans 69:517-18 Jl '47
Tooling requirements for induction heating. O. Weitmann. il Mach 53:167-70 My '47
Universal control of induction heater. A. B. Shields. il diag Machine Design 19:147-8 S '47
Vacuum drying of compressed vegetable blocks. W. C. Dunlap, jr. diag Ind & Eng Chem 38:1250-3 D '46
What to look for in high frequency heat sealing equipment. P. Weiss. Mod Plastics 24: 138-40 Ag '47

See also
Case hardening—
Electric hardening

ELECTRIC heating elements
Electric periodic kiln for temperatures of 1500° to 1600°C. M. S. Nelson and E. S. Huff. il plan diags Am Cer Soc Bul 26:175-9 Je 15 '47
Heating-element shortage. Elec R (Lond) 139:996 D 13 '46
Observations on the failure of 80 nickel-20 chromium alloy at excessive temperatures. H. D. Holler. bibliog Electrochem Soc Trans 92 (preprint 7):101-7 '47; Abstract. Steel 121:99 N 17 '47
Scale glass as substitute for mica. J. M. Stevels. Glass Ind 27:607-8+ D '46
Vacuum heating element. G. S. Lewin. diag Inst Radio Eng Proc 35:494 My '47

ELECTRIC heating pads. See Heating pads, Electric

ELECTRIC hoists. See Hoisting machinery, Electric; Mine hoisting, Electric

ELECTRIC hotbeds. See Hotbeds, Electric

ELECTRIC ignition
Speed and safety with ignition system for down fired, induced draft heaters. E. W. Griscom. diags Pet Processing 1:255-6 D '46

ELECTRIC industries
Being decent pays good dividends. R. D. Horning. Elec West 97:53-4 D '46
Electric utilities fight back; competition from bottled gas. Bsns W p64 N 23 '46
Grassroots leadership is what the electrical industry needs today. M. G. Sanders. Elec West 98:86-7 Je '47
In-service farm electrification training. P. T. Montfort. Edison Elec Inst Bul 14:390-2 N '46
Teamwork pays. K. L. Hampton. il Elec West 99:59-60 Ag '47

See also
Electric apparatus industry
Electric contractors
Electric engineering
Electric lighting
Electric plants (central stations)
Electric utilities
Electrometallurgy
Electroplating
Radio apparatus industry
also General cable corporation; General electric company

Advertising
Planned lighting means planned lighting; profitable load results from planned lighting. Elec World 127:62-3 Mr 29 '47

Electric homes exhibitions
Community center promotes home planning. il Elec World 128:94+ Ag 2 '47

Exhibitions
G-E lighting institute demonstrations educate utilities for commercial sales. il Ind Marketing 32:42-3 F '47

Materials
Electrical and allied developments of 1946; plastics and silicones. G. Bartlett. il Gen Elec R 50:47-8 Ja '47
Electrical and electronic components from powdered metals; abstract. E. I. Shobert, 2d. Iron Age 159:84-5 Je 5 '47
Electrical materials, 1946. Elec R (Lond) 140:31-3 Ja 3 '47
Growing importance of plastics in the electrical industry. G. Haefely. Inst E E J 94 pt 2:301-8 Ag '47; Abstract. Engineering 163:6 Ja 3 '47; Discussion. Inst E E J 94 pt 2:308-12 Ag '47; Electrician 137:1760-2 D 20 '46
Inside of electrical machines. R. H. Robinson. il diags Electrician 136:1085-8, 1239-43, 1371-4, 1515-18, 1659-63; 137:41-4, 169-72, 314-17, 447-50, 586-9, 787-91, 925-8, 1055-9, 1203-7, 1361-3, 1509-13, 1669-72, 1822-5; 138: 115-19+, 271-6, 501-5, 780-3 Ap 26, My 10, 24, Je 7, 21, Jl 5, 19, Ag 2, 16, 30, S 20, O 4, 18, N 1, 15, 29, D 13, 27 '46, Ja 10, 24, F 14, Mr 28 '47

ELECTRIC industries—Materials—*Continued*
Magnetic and electrical materials; properties, tables; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 26: 115, 117 Ag '47
Materials for wire-wound resistors, some recent developments. E. E. Marbaker. il Materials & Methods 25:83-8 My '47
Plastics in electrical industry; Tyseley works of Bakelite, ltd. T. J. Fielding. il diag Electrician 137:1196-9, 1281-5, 1370-4 N 1-15 '46
Tough new alloy for better electric motors; cobalt-iron-nickel alloy, Hiperco. il Bsns W p44 F 22 '47
What about silicone-glass laminates? Mod Plastics 24:184+ My '47

Statistics
Annual statistical issue. Elec World 127: 135-56 Ja 18 '47
Interstate differences in the saturation of wired homes, mechanical refrigerators and electric ranges, and their causes. H. G. Knaf. J Land & Pub Util Econ 22:386-92 N '46

Canada
Canadian electrical code and provincial legislation. W. R. McCaffrey. Can Min J 68: 408-9 Je '47

France
French electrical notes. Elec R (Lond) 140: 916 My 30 '47

Great Britain
British electrical development association sales management conference, London, May 7-9. Elec R (Lond) 140:819-20 My 16 '47
Change-over to peace. A. G. Connell. Inst E E J 94 pt 1:111-13 F '47
E.D.A. area conferences; Southport and Scarborough. Electrician 139:1005-6 O 3 '47
Electrical contractors' report. H. Drake. Elec R (Lond) 141:107-8 Jl 18 '47
Electricity sales in Great Britain; 1944-1946; tabulation. Electrician 137:1608 D 6 '46
Electricity supply. T. E. Daniel. Inst E E J 94 pt 1:144-6 Mr '47
Future of the E.D.A. and E.A.W.; abstract. W. M. Citrine. Electrician 139:1224 O 24 '47
I.M.E.A. annual meeting, Bournemouth, June 23-27. Engineer 184:14-15 Jl 4 '47; Engineering 164:18-19, 30 Jl 4-11 '47; Electrician 138:1736; 139:34-45 Je 27-Jl 4 '47; Elec R (Lond) 140:1047-50; 141:3-16 Je 27-Jl 4 '47
I.M.E.A. annual report. Elec R (Lond) 140: 1019 Je 20 '47; Electrician 138:1684 Je 20 '47
Industry and the House; twelve months' parliamentary retrospect. F. J. Erroll. Elec R (Lond) 139:527-8, 831-3, 923-4, 1053-5; 140:73-4, 295-6, 401-3, 487-8, 575-6, 665-6, 759-60, 853-4; 141:250-1 O 4, N 22, D 6, 27 '46, Ja 10, F 14, Mr 14, 28, Ap 11, 25, My 9, 23, Ag 15 '47
Supply engineer's view of some installation matters; abstract. R. H. Rawll. Electrician 139:1217-18 O 24 '47

India
Developments in India. Electrician 139:407, 540, 1227 Ag 8, 22, O 24 '47
Electrical notes from India. Electrician 139: 1227 O 24 '47
Power developments in India. Electrician 137: 1060 O 18 '46

Poland
Electrical industry in Poland. Electrician 139: 544-5 Ag 22 '47

South Africa
Electricity in South Africa. Electrician 139: 612 Ag 29 '47

Switzerland
Swiss conditions. J. M. Hawkins. Elec R (Lond) 140:179-80 Ja 24 '47

United States
Annual statistical issue. Elec World 127:135-56 Ja 18 '47

Western states
Electrical West annual review number. Elec West 98:65-107 F '47
Rocky Mountain electrical league annual convention, Casper, Wyo. Sept. 4-6. Elec West 99:92-4 O '47
Rocky Mountain electrical league 42d annual meeting, Estes Park, Colo. Sept. 5-7. Elec West 97:102-4 O '46

ELECTRIC instruments
Application of electrical technique to the service of some other industries; discussion of paper by H. C. Turner and G. M. Tomlin. Electrician 138:365-6 Ja 31 '47
Burden considerations in application of transformer type instruments. P. MacGahan. diags Power Pl Eng 50:80-2 N '46
Determination of the moisture content of cereals by measurement of specific inductive capacity. L. G. Groves and J. King. bibliog diags Soc Chem Ind J 65:320-4 O '46
Electrical and allied developments of 1946; testing and measuring. G. Bartlett. il Gen Elec R 50:32-7 Ja '47
Electrical indicating instruments. L. F. Parachini. diags Product Eng 18:123-31 Ja '47
Electrical measurements; Mullard potentiometric titration apparatus; moisture meter. il Chem Age (Lond) 56:529 Ap 26 '47
Electrical moisture meter. L. G. Toplis. il diag Elec R (Lond) 141:523-5 O 3 '47
Electrical sheet steel; research laboratories at Manor sheet iron works. Elec R (Lond) 139:648 O 25 '46; Electrician 137:1139-40 O 25 '46
How to maintain electrical meters and instruments. C. E. Fry. il Factory Management 105:96-8 O '47
Hunter night-visibility meter. diag R Sci Instr 18:684-5 S '47
Improved re-entrant cavity for dielectric-loss measurements. S. I. Reynolds. il diags Gen Elec R 50:34-9 S '47
Instruments needed for electronic maintenance. J. Fiske. Elec West 97:73 N '46
Latest developments in aircraft controls and instrumentation. R. A. Brown. il diags A S M E Trans 69:109-16 F '47
Mobile detector locates faults on overhead lines. S. Freeman, jr. and H. Haas. il diags Elec World 128:76-7 Ag 16 '47
New instrument adjusts capacitor potential devices; Grand Coulee power plant. F. R. Schleif. il diags Elec World 128:74-5 Ag 16 '47
Progress in engineering knowledge during 1946; measurement. P. L. Alger and others. diag Gen Elec R 50:36-7 Mr '47
Progress in instrument design. D. B. Fisk and J. M. Whittenton. il diags Gen Elec R 50:8-11 O '47
Sensitive direct current electrical integrator. R. W. Gilbert. diags R Sci Instr 18:328-31 My '47
Significance of functional analysis of measurements. H. C. Dickinson. diags Gen Elec R 50:13-16 O '47
Some aspects of instrumentation. D. C. Gall. Engineering 164:390 O 24 '47; Abstract. Electrician 139:1219 O 24 '47
Trend and development in meters and instruments. L. J. Matthews. diags Inst E E J 94 pt 1:39-44 Ja '47; Excerpt. Engineer 182: 414-15 N 8 '46

See also
Ammeters
Bolometers
Chronoscope
Dynamometers
Electric apparatus and appliances
Electric measurements
Electric meters
Electric testing
Gages, Electric
Galvanometers
Hearing aids, Mechanical
Oscillators
Photoelectric cells
Radio instruments
Recording instruments, Electric
Synchroscope
Vacuum tubes—Measurement uses
Voltmeters
Wheatstone bridge

Exhibitions
Physical society exhibition, South Kensington, April 9-12. il Electrician 138:847-9, 937-9, 1014-16 Ap 4-18 '47; Elec R (Lond) 140:559-65 Ap 11 '47; Engineer 183:309-10, 328-31, 352-3, 383-5 Ap 11-My 2 '47; Engineering 163:316-18, 341-3, 364-6 Ap 18-My 2 '47; Wireless Eng 24:150-4 My '47

ELECTRIC insulation. See Insulation (electric)

ELECTRIC inverters
Amplidyne inverters for Pennsylvania passenger cars. il Ry Mech Eng 121:88-9 F '47; Same abr. Ry Age 122:456-7 Mr 1 '47
Modern railway passenger car auxiliary power equipment; abstracts. D. R. MacLeod and J. Hause. Elec Eng 66:867-8 S '47; Ry Mech Eng 121:378-9 Jl '47

ELECTRIC irons
Flexible iron. il Mod Plastics 25:168-9 S '47
Marketing strategy for General Mills' first home appliance; Tru-heat iron. W. MacDonough. il Sales Management 57:37-9 N 20 '46
New electric iron; Yale & Towne Tip Toe. il Bsns W p65-7 Ap 19 '47
New household appliance carries old industrial trade-mark; Yale Tip Toe iron. A. B. Cassedy. il Ptr Ink 220:34-5 Jl 25 '47
Y & T first home appliance makes colorful debut; Tip Toe iron. il Sales Management 59:69 Jl 1 '47

Patents

Appliance shape and contour patents protect against unknown brands. J. Myers. il Elec World 127:114 Je 21 '47

Rating

Electric irons; two additional brands tested. il Consumers Res Bul 18:8-9 D '46
Three electric irons and a steam iron. il Consumers Res Bul 20:18-21 O '47

ELECTRIC laboratories
H.V. impulse testing plant; W. T. Henley's telegraph works co. il Engineer 183:478-80 My 30 '47; Engineering 163:506-7 Je 13 '47; Elec R (Lond) 140:883-5 My 30 '47; Electrician 138:1448-51 My 30 '47
Indian high-voltage laboratory. V. S. Swaminathan. Elec R (Lond) 140:758 My 9 '47
Locke Insulator dedicates two research laboratories. il Elec World 128:89 O 11 '47; Same. Edison Elec Inst Bul 15:398 N '47

Equipment

What we have learned about upkeep of pyrometric equipment; General Electric laboratory. P. L. Stapleton. il Factory Management 104:140-3 D '46

ELECTRIC lamps
Artificial sunshine; solarium design. G. F. Prideaux. bibliog il diag Gen Elec R 49: 40-4 N '46; Same. Illum Eng 41:762-74 N '46
Electrical and allied developments of 1946; lighting equipment, application. G. Bartlett. il Gen Elec R 50:51-3 Ja '47
Lamps for plant lighting. il Factory Management 105:115-18 Je '47
Lighting progress, 1946. Light & Lighting 40: 54 Mr '47
Lightolier unveils new showrooms. il Sales Management 58:45 F 1 '47
Planned lighting; layout and design data. il diags Elec World 128:95-122 O 25 '47
Progress in engineering knowledge during 1946; lighting. P. L. Alger and others. il Gen Elec R 50:48-50 Mr '47
Progress in light sources. R. G. Slauer and others. il diag Elec Eng 66:686-94 Jl '47
Les sources d'éclairage industriel. A. Gouffé. il diags Chimie & Ind 57:126-35 F '47
Sunlamps. il Consumers Res Bul 19:28-33 Mr '47
Sylvania Electric, out from under G.E.'s protective custody, is flourishing in electric lamp and radio business. il Fortune 35:112-15+ My '47
What causes early lamp burnouts. diag Ry Mech Eng 121:488-9 S '47

See also
Electric lamps, Mercury vapor
Electric lighting
Safety lamps, Electric
Ultraviolet rays—Lamps

Advertising

Lamp sales publicity. il Electrician 137:737, 808, 866, 934, 1077 S 13-O 4, 18 '46
Lamp sales publicity. il Electrician 139:776, 849, 937 S 12-26 '47

Flashing

Characteristics and application of flashtubes. F. E. Carlson and D. A. Pritchard. bibliog il diag Illum Eng 42:235-48 F '47
Considerations affecting the design of flashing signal filament lamps. R. W. Morris. il Illum Eng 42:625-35 Je '47
Flashtubes, potential illuminant for motion picture photography. F. E. Carlson. il diag Soc Motion Picture Eng J 48:395-404; Discussion. 405-6 My '47

Heat radiation

Charts help to solve lighting problems. E. I. Franks. Heating-Piping 19:103-5 S '47

Manufacture

See also
Electric lamps, Fluorescent—Manufacture
Electric lamps, Incandescent—Manufacture

Merchandizing

It's the season for lamp sales. il Elec West 97:77-9 D '46
Load building by lamp sales; New England Gas & Electric group. W. G. Keay. il Elec World 127:46-7 Ja 4 '47

Nomenclature

ASA undertakes broad program on glass bulb nomenclature. A. Brann and F. J. Gallogly. il Ind Stand 18:32-3 F '47
Nomenclature system for glass bulbs. A. Brann. Electronics 20:184+ My '47

Statistics

Electric lamp production, shipments and stocks for 1946-1945. Glass Ind 28:182-3 Ap '47

Testing

Lamp tests. T. A. Ledward. Elec R (Lond) 140:24 Ja 3 '47

ELECTRIC lamps, Arc
Characteristics and applications of concentrated-arc lamps for optical testing and demonstrating, microscopy, photographic enlarging and projection apparatus. W. D. Buckingham and C. R. Deibert. il diags Soc Motion Picture Eng J 47:376-99 N '46
Concentrated-arc lamp. Light & Lighting 39: 178 O '46
Concentrated-arc lamp as a source of modulated radiation. W. D. Buckingham and C. R. Deibert. il diags Soc Motion Picture Eng J 48:324-40; Discussion. 340-2 Ap '47
Concentrated-arc lamp in a light beam communication system. W. D. Buckingham and others. il diags Elec Eng 66:975-9 O '47
Concentrated-arc lamps. R. H. Müller. Anal Chem 19:sup25A My '47
Earliest street lighting with arc lamps? reproduction of letter written by A. Siemens on May 12, 1910. Light & Lighting 39:194 N '46
General electric co. arc lamp for film studios. il Electrician 137:1004 O 11 '46; Elec R (Lond) 139:624 O 18 '46
Increased light for projection of 16-mm film with carbon arcs. R. J. Zavesky and W. W. Lozier. bibliog Soc Motion Picture Eng J 48:447-53 My '47
Light generation by the high-intensity carbon arc. F. T. Bowditch. bibliog il diags Soc Motion Picture Eng J 49:209-17 S '47
Modulation of concentrated-arc lamp. Electronics 20:202+ F '47
Motion picture screen light as a function of carbon-arc-crater brightness distribution. M. T. Jones. il diags Soc Motion Picture Eng J 49:218-40 S '47
Recent developments of super-high-intensity carbon-arc lamps. M. A. Hankins. bibliog il Soc Motion Picture Eng J 49:37-47 Jl '47
Spectral and modulation characteristics of the concentrated-arc. W. S. Huxford and J. R. Platt. bibliog il diags Opt Soc Am J 37:10-15 Ja '47

See also
Electric lamps, Mercury vapor
Moving picture machines—Light sources

ELECTRIC lamps, Cesium vapor
Invisible talking by use of cesium lamps. il Sci Am 176:156 Ap '47
Lamp enables two-way talk over invisible searchlight beam. N. C. Beese. Franklin Inst J 242:339-40 O '46

ELECTRIC lamps, Cesium vapor—*Continued*
Modulation of the resonance lines in a cesium arc. J. M. Frank and others. il diags Opt Soc Am J 37:718-25 S '47

ELECTRIC lamps, Floor
Solid and slush type zinc alloy permanent mold castings. H. Chase. il Iron Age 159: 58-63 My 29 '47

ELECTRIC lamps, Fluorescent
Better lighting; better work; fluorescent fixtures for high levels of lighting. J. S. Walsh. il Food Ind 18:1705-7+ N '46
Causes of early loss of light output of fluorescent lamps. G. Meister and R. Nagy. bibliog il Opt Soc Am J 36:696-701 D '46
Check electrical characteristics of fluorescent lamp circuit. H. Reinhardt. Elec World 127: 108 My 10; 138 My 24; 110 Je 7 '47
Color technology of fluorescent lamps. G. B. Buck, 2d and R. N. Thayer. bibliog diags Illum Eng 42:415-34 Ap '47
Colorimeter aids in standardizing fluorescent light quality. Sci Am 176:172-3 Ap '47
Development of the fluorescent lamp. il diags Engineering 162:475, 500-1, 524-6 N 15-29 '46
Effect of external factors on light output of fluorescent sources. J. C. Forbes and R. J. Diefenthaler. bibliog diags Illum Eng 41:872-80 D '46
Experimental applications of tubular fluorescent lamps to street lighting; abstracts. L. J. Davies and W. D. Sinclair. il Electrician 137:732-4 S 13 '46; diags Elec R (Lond) 139:448-50 S 20 '46; Light & Lighting 39:201-3 N '46
First things first in school lighting. F. W. Ogden. il Elec World 127:92 Mr 29 '47
Fluorescent fixtures for Spartanburg's White Way. A. M. Miles. diags Elec World 126:78 D 21 '46
Fluorescent lamps. il diags Consumers Res Bul 19:5-7 F; 15-18 My '47
Fluorescent lighted car operating in New York subway. il Elec Eng 66:937-8 S '47
Fluorescent lighting; experimental tramcar installation at Sheffield. il plans diags Electrician 137:1293-4 N 8 '46; Abstract. Elec R (Lond) 139:756 N 8 '46
Fluorescent lighting for commercial airline interiors; abstracts. F. A. Rugge. Automotive & Aviation Ind 94:60+ Ja 1 '46; il diag S A E J 55:52-3 Ja '47
Fluorescent lighting in a church. il Light & Lighting 40:77 Ap '47
Fluorescent lighting in the domestic field. J. W. Strange and H. H. Ballin. Electrician 137:1209-11 N 1 '46; Abstract. Elec R (Lond) 139:710 N 1 '46
Fluorescent lighting installations. il Elec R (Lond) 140:321 F 14 '47
Fluorescent lighting on a Sheffield tramcar. il Light & Lighting 39:224 D '46
Fluorescent stage lighting. Electrician 137:1748 D 20 '46
Fluorescent street lighting; experimental installations in two London highways. il Electrician 137:1591-2 D 6 '46; Elec R (Lond) 139:981-2 D 13 '46
Fluorescent street lighting gets try-out in London. F. R. Brewster. il diag Elec World 128:58-60 S 27 '47
Fluorescent street lighting; London installations. Elec R (Lond) 141:395 S 12 '47
Functional store lighting development and application. F. C. Winkler. il plans diags Illum Eng 42:108-28; Discussion. 128-30 Ja '47
Further data on glare ratings. W. Harrison and P. Meaker. Illum Eng 42:153-68; Discussion. 169-79 F '47
Getting the most from fluorescent lighting. S. H. Eaton. il Textile World 96:116-17 D '46
Improved lighting in mines; future of the fluorescent lamp. C. T. McMillan. il diag Light & Lighting 40:156-61 S '47
Light for Belgium; U.S. method sells fluorescent lights. Bsns W p86+ Ag 30 '47
Lighting of seadromes. A. L. Lewis. il diags Aero Digest 53:50-2+ S '46; 54:66-7+ Ap '47
Lighting urban centres; tubular fluorescent lamps. J. G. Christopher. il Elec R (Lond) 140:427-32 Mr 21 '47
London transport experiments; new car lighting. Elec R (Lond) 140:397 Mr 14 '47
Mile of fluorescent lamps glow in UN council chambers. il Gen Elec R 49:54 D '46
New lamps for old; abstract. C. Paterson. Light & Lighting 40:15 Ja '47
New ultraviolet phosphors. H. C. Froelich. bibliog il Electrochem Soc Trans 91 (preprint 11):161-81 '47
Operating experience with fluorescent street lighting; supplements nos. 1-2 to 1945 report of committee on street and highway lighting. Illum Eng 42:774-80 S '47
Planned lighting; components. diags Elec World 128:118-19 O 25 '47
Planned lighting; selection of light sources; tabulated data on incandescent and fluorescent lamps. diags Elec World 128:98-9 O 25 '47
Practical color harmony with fluorescent light sources. R. R. Wylie. diag Illum Eng 41:847-58 D '46
Preliminary study of radio interference as caused by fluorescent lamps in the home. L. F. Shorey and S. M. Gray. diag Illum Eng 42:365-76 Mr '47
Progress in light sources. R. G. Slauer and others. il Elec Eng 66:690-4 Jl '47
Reduces glare from fluorescent lights 50%; Tulox tubing. Barron's 27:37 Je 16 '47
Report of the I.E.S. Committee on progress. il diags Illum Eng 42:58-85 Ja '47
Semicircular lamp. diag Mech Eng 69:770 S '47
Small fluorescent lamp. il Sci Am 177:176 O '47
Some fluorescent lamp parameters and their effect on lamp performance. E. F. Lowry and others. Illum Eng 41:859-71 D '46
Street lighting; possibilities of the fluorescent tube; abstract and discussion. C. C. Smith. Electrician 139:1005-6 O 3 '47
Ultraviolet phosphors and fluorescent sun tan lamps. R. H. Clapp and R. J. Ginther. Opt Soc Am J 37:355-62 My '47
Use of models in predicting illumination. G. P. Brewington. Illum Eng 42:636-40 Je '47
What kind of light costs least. Elec West 97:71 N '46

Cold cathode
Cold cathode for a drug store. il Elec West 98:53 Ja '47
Operation and maintenance of cold cathode fluorescent fittings. C. D. Brown. il diag Light & Lighting 40:127-9 Jl '47

Length of service
How to estimate replacements for fluorescent lamps. H. Reinhardt. Elec World 127:119 F 15 '47

Manufacture
General Electric method of making fluorescent lamps; patent. diag Glass Ind 28:248-9 My '47

Testing
Build your own fluorescent test equipment. W. B. Kennedy. diag Elec West 98:58-60 Mr '47
Fluorescent lamp delay timer. diag Electronics 20:184+ Mr '47
Measurement of fluorescent lamps and luminaires. W. F. Little and E. H. Salter. il diags Illum Eng 42:217-31; Discussion. 231-3 F '47

ELECTRIC lamps, Incandescent
Better lighting; better work; incandescent lamps advised for receiving and storage areas. J. S. Walsh. il Food Ind 18:1705-7+ N '46
Considerations affecting the design of flashing signal filament lamps. R. W. Morris. il Illum Eng 42:625-35 Je '47
Mercury-incandescent lighting for high bays. W. W. Wendelken. il diags Factory Management 105:128-31 Ag '47
Nomograms for incandescent lamp characteristics. E. W. Pike. R Sci Instr 18:191-2 Mr '47
Phenomena in incandescent lamps; paper read before the American institute of electrical engineers, at Philadelphia, October, 1884. E. J. Houston. diags Elec Eng 66:119-21 F '47
Planned lighting; selection of light sources; tabulated data on incandescent and fluorescent lamps. diags Elec World 128:98-9 O 25 '47

ELECTRIC lamps, Incandescent—*Continued*
Power losses from heated objects in still air. B. T. Barnes and others. Opt Soc Am J 37: 808-9 O '47
Total emissivity of various materials at 100-500°C. B. T. Barnes and others. diags Opt Soc Am J 37:804-7 O '47

See also
Electric lamps, Tungsten
Electric testing

Manufacture

Serial group for the manufacture of incandescent lamps. il Mech Handling 34:37 Ja '47

ELECTRIC lamps, Mercury vapor
Denverites like mercury street lighting. Elec World 127:138+ Ap 12 '47
Developments in mercury lamps for street lighting. F. J. Wellhouse. Elec West 97:65 D '46
High-pressure mercury-vapor discharge and its applications. V. J. Francis and W. R. Stevens. Light & Lighting 40:31-2 F '47; Discussion. Electrician 138:361-2 Ja 31 '47
Killing air-borne respiratory micro-organisms with germicidal energy. M. Luckiesh and others. bibliog il diags Franklin Inst J 244: 267-90 O '47
Mercury-incandescent lighting for high bays. W. W. Wendelken. il diags Factory Management 105:128-31 Ag '47
Mercury lighting costs less here; Continental foundry & machine co. J. W. O'Nan. il Elec World 128:74 Ag 30 '47
Mercury street lighting offers economies; abstract. A. F. Dickerson. Elec World 127: 128+ Je 7 '47
New developments in mercury lamps and their applications. E. W. Beggs. il diags Illum Eng 42:435-62; Discussion. 463-5 Ap '47
Photosensitization in chlorination. W. T. Anderson, jr. bibliog il Ind & Eng Chem 39:844-6 Jl '47
Planned lighting; components. diags Elec World 128:118-19 O 25 '47
Stability of phosphors under ultraviolet irradiation. G. Meister and R. Nagy. Opt Soc Am J 37:403 My '47
Today's mercury lamp for street lighting. R. M. Swetland. il Elec World 127:96-7 My 10 '47
Ultraviolet-transmitting glasses for mercury-vapor lamps. M. E. Nordberg. Am Cer Soc J 30:174-9 Je 1 '47

See also
Electric lamps, Fluorescent
Ultraviolet rays—Lamps

ELECTRIC lamps, Neon
Neon synchronizing light for timing magnetos. il diag Aero Digest 55:62-3 Jl '47

ELECTRIC lamps, Photoflash
Nature of the light emitter in photo-flash lamps. F. G. Brockman. il diag Opt Soc Am J 37:652-9 Ag '47
Special cameras and flash lamps for high-speed underwater photography. R. T. Knapp. il Soc Motion Picture Eng J 49:78-82 Jl '47

ELECTRIC lamps, Portable
Correlating portable lamp design with the Illuminating engineering society's performance recommendations. R. G. Slauer and L. L. Sutro. il diags Illum Eng 42:377-90; Discussion. 390-3 Mr '47
How certification works; specifications, tests, labels used to market better lamps. il Ind Stand 18:248-51 O '47

See also
Electric lamps, Floor

ELECTRIC lamps, Tungsten
Incandescent lamps as electrical load for testing. S. Keilien. il diags J Ap Phys 18:769-73 Ag '47

ELECTRIC light fixtures. See Lighting fixtures

ELECTRIC lighting
Best ways to sell best lighting; Electrical World report. F. R. Innes. Elec World 126: 91-106 S 28 '46; Discussion. J. L. Kamm. 126:166+ D 7 '46
City-wide school lighting promotion gets results in Birmingham, Ala. R. H. Knox. il Elec World 127:66-7 Mr 1 '47
Commercial lighting sales geared to field promotion. H. E. Carney. Elec World 126: 101 N 9 '46
Education is the foundation for lighting sales. H. Restofski. Edison Elec Inst Bul 15:107-8+ Ap '47
Electrical and allied developments of 1946; lighting equipment, application. G. Bartlett. il Gen Elec R 50:51-3 Ja '47
Glare factors and their significance. W. Harrison and P. Meaker. diags Gen Elec R 50: 31-7 Ag '47
Light pays off; examples of commercial lighting; illustrations with text. Elec West 99:72-9 S '47
Lighting looks to its future promise; IES regional conferences in Seattle, San Francisco and Los Angeles. Elec West 97:61-5 D '46; 98:76+ Ja '47
Mercury-incandescent lighting for high bays. W. W. Wendelken. il diags Factory Management 105:128-31 Ag '47
Newspaper advertising to commercial customers; New Orleans public service. D. Markstein. Elec World 127:90 Mr 1 '47
Planned lighting for profit load is theme of Institute sales program. Edison Elec Inst Bul 15:81-2 Mr '47
Planned lighting; layout and design data. il diags Elec World 128:95-122 O 25 '47
Planned lighting means planned lighting; profitable load results from planned lighting. Elec World 127:62-3 Mr 29 '47
Planned lighting program. il Elec World 128: 83-94 Jl 19 '47
Planned lighting program for the electric industry sponsored by Edison electric institute. Edison Elec Inst Bul 14:424 D '46
Planned lighting program for the electrical industry. J. S. Schuchert. Edison Elec Inst Bul 15:109-13 Ap '47
Progress in engineering knowledge during 1946; lighting. P. L. Alger and others. il Gen Elec R 50:48-50 Mr '47
Rôle of planned lighting. R. P. Wagner. Pub Util 39:751-6 Je 5 '47
Some factors affecting the design of electric lighting installations for building interiors. R. O. Ackerley. bibliog il diags Inst E E J 92 pt 2:365-80 Ag '45; Discussion. Inst E E J 92 pt 2:380-4; 94 pt 2:205-15 Ag '45, Je '47
Street lighting survey; abstracts. N. Boydell. Electrician 139:264 Jl 25 '47; Light & Lighting 40:144 Ag '47
Synoptic review of electrical engineering progress, particularly during the last quarter century. J. D. Ferguson. Inst E E J 94 pt 1:76-7 F '47
Three-dimensional lighting. F. G. W. Tree. diags Electrician 138:35-6 Ja 3 '47

See also
Airports—Lighting
Art galleries and museums—Lighting
Car lighting
Drafting rooms—Lighting
Electric lamps
Factories—Lighting
Nela Park, Cleveland
Office lighting
Street lighting

also International commission on illumination

Control

Three-way remote control for market lighting. il Elec World 126:144 D 7 '46

Cost

How to budget industrial lighting costs. J. C. Forbes and J. L. Tugman. il Steel 120: 102-5+ Je 23; 68-70+ Je 30 '47
Over-all light cost at lowest level; 14.5% of 1907. Elec World 127:84+ F 1 '47
What kind of light costs least. Elec West 97: 71 N '46

Exhibitions

G-E's lamp department performs architectural surgery at Nela Park, bringing lighting center up-to-date. il plans diags Arch Forum 86:101-5 Ja '47

Flicker

Series capacitor corrects compressor-motor flicker. C. A. Scammon. il Elec World 128: 115+ O 11 '47

ELECTRIC lighting, Decorative

See also
Light, Colored

ELECTRIC lines

Chart checks span with wire size and clearance. C. K. Jones. Elec World 128:77 Ag 2 '47

Development and design of colonial telecommunication systems and plant. C. Lawton and V. H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47

Highest line voltage on earth; transmission line high-voltage test project at Brilliant, Ohio. P. Sporn. Pub Util 40:588-91 O 23 '47

New Jersey limits lines crossing super-highways. Elec World News ed 128:12 Jl 12 '47

La 11e Session de la Conférence internationale des grands réseaux électriques, Paris 27 juin-6 juillet 1946. J. T. Laspière. Génie Civil 124:55-7, 68-70 F 1-15 '47

Super high voltage transmission research begins at Tidd 500-kv test project. il Edison Elec Inst Bul 15:371-4 O '47; Abstract. Elec World 128:84-6 O 11 '47

See also
Electric cables
Electric conduits
Electric plants—Interconnection
Electric railroads
Electric service, Rural
Electric transmission
Electric utilities
Electric wiring
Overvoltage (electric lines)
Radio lines
Trolley buses

Bird problem

Pigeons on the wires. K. Turmell. Pub Util 39:157-8 Ja 30 '47

Construction

Experience in contracting rural line construction. G. R. George. Elec World 126:93-4 N 23 '46

Total rural service; Sierra foothill project, Pacific gas and electric co. il map Elec West 97:63-6 N '46

See also
Electric lines—Overhead construction

Crossarms

Crossarm loading limits tabulated. H. F. Ostman. Elec World 128:100 Jl 5 '47

Pipe gin used for replacing crossarms. M. L. Monson. diag Elec World 126:114 N 23 '46

Rebuilding 44-kv. line for static installation. J. A. Sayre. diag Elec World 127:80+ Mr 1 '47

Ways to hoist and lower crossarms; engineering reference sheet. diags Elec World 128:75 S 27 '47

Damage from storms

Good anchoring is inexpensive guy insurance against storms; effect of soil moisture on holding power. D. C. Hubbard and B. O. Watkins. il Elec World 128:94-6 O 11 '47

Mutual assistance plan of Connecticut electric utilities and New England telephone company. W. A. Upham. Edison Elec Inst Bul 14:425-6+ D '46; Same abr. map Elec World 126:62-4 D 21 '46

Tornados and floods damage utilities in widespread areas. il Elec World News ed 127: 12 Je 14 '47

Twelve Public service company of Colorado employees received Matthews Valor award; prevented destruction of transmission line during blizzard. il Edison Elec Inst Bul 15:244-5 Je '47

Weather and electric power systems. J. S. Forrest and others. biblio g il map Inst E E J 93 pt 1:161-76 Ap '46; Discussion. maps 94 pt 1:49-53 Ja '47

Design

Radio-noise influence of 230-kv lines. H. L. Rorden. il map Elec Eng 66:884-7 S '47

Transmission line design simplified by graphical aids; engineering reference sheet. H. V. Wingfield. Elec World 128:119 O 11; 132 O 25; 120 N 8 '47

Ground return

Mutual impedance between short earth-return circuits. R. O. Carter. Inst E E J 94 pt 1: 275-7 Je '47

Inductive interference

Radio-noise influence of 230-kv lines. H. L. Rorden. il map Elec Eng 66:884-7 S '47

Telephone influence factor and what to do about it. G. L. Oscarson. il diags Pet Eng 18:100+ Ag '47

Telephone interference from power systems; abstract. P. B. Frost and E. F. H. Gould. Elec World 127:82 F 1 '47

Interconnection

See Electric plants—Interconnection

Maintenance and repair

Helicopter patrol for transmission line. il Elec West 99:91 S '47

Manning and functioning of the trouble department. Elec World 127:68-9 Mr 1 '47

Public relations along the right-of-way. E. S. Mathers. Edison Elec Inst Bul 15:41-3+ F '47

Transfer single-phase load without interruption. F. E. Wilterding. il diag Elec World 128:124 O 25 '47

See also
Linemen's equipment

Maps

Unifying Con-Edison gas and electric maps. il Gas Age 100:17+ Ag 21 '47

Work order drawings made from record maps. C. K. Jones. plan Elec World 128:75 Ag 2 '47

Overhead construction

Grid and its development. J. A. Lee. Inst E E J 94 pt 1:45-8 Ja '47; Same cond. Engineer 182:394 N 1 '46; Abstract. Electrician 137:1133-4 O 25 '46

Growing trend toward direct-bolting of transformers. diags Elec World 128:134+ O 25 '47

H.V. pole lines. Electrician 138:786 Mr 28 '47

How to design a 2-pole regulator platform. diags Elec World 127:103-4 Je 7 '47

How to mount static capacitors. diags Elec World 126:132+ D 7 '46

Improved transformer rack. G. Brunzell. il Elec World 128:118 O 11 '47

Joints and hardware limit overhead conductor ratings. L. M. Olmsted. il Elec World 127:42-5 Ja 4; 58-61 F 1 '47

Operational characteristics of modern h.v. wood-pole lines; abstract and discussion. G. T. Garwood. Electrician 138:639-40 Mr 14 '47

Outdoor primary metering with lightning protection. R. A. Markel. il Elec World 127: 106-7 Ap 12 '47

Papers dealing with overhead line construction at International high tension conference in Paris; abstracts. Electrician 137: 1841-3 D 27 '46

Pre-tab for self-supporting cable developed. il Elec World News ed 126:19 N 30 '46

Primary aerial cable designs. A. S. Brookes. il Elec World 126:96-8 N 9 '46

Recent progress in the design of the high-voltage overhead lines of the British grid system. W. J. Nicholls. il diags Inst E E J 93 pt 2:82-91 Ap '46; Discussion. pt 2: 91-6; 94 pt 2:78-83, 123-8 Ap '46, F, Ap '47

Right-of-way imposes many problems in seven-mile line serving flood prevention project in Cincinnati. W. R. Weise. il plan diag Elec World 128:112-13 O 11 '47

Rural electrification; the use of the single-phase system of supply. J. S. Pickles and W. H. Wills. map diags Inst E E J 93 pt 2:501-10 D '46; Abstract. Engineering 161: 390 Ap 26 '46; Discussion. Inst E E J 93 pt 2:510-16 D '46

Rural line construction. diag Elec World 127: 78 Je 21; 128:102 Jl 5 '47

Simple disconnect provided without switches. E. W. Hatz. diag Elec World 126:114 N 23 '46

See also
Electric lines—Crossarms

Poles and towers

Attachment for ground wire to tower leg. D. B. Clapp. diag Elec World 128:112 Jl 19 '47

ELECTRIC lines—Poles and towers—*Cont.*
Chart determines pole size required for transverse load. F. A. Kendig. Elec World 127:124 Mr 15 '47
Concrete poles. il Elec R (Lond) 139:753 N 8 '46
How to set an 80-ft. pole by aid of an ordinary truck derrick. il Elec World 127: 134 My 24 '47
Lightning and 60-cycle power tests on wood-pole line insulation. P. L. Bellaschi. il diag Elec Eng 66:672-7 Jl '47
Making concrete poles; new method for reducing cost and weight. P. F. Clark. il Electrician 138:1683 Je 20 '47
Mucking pump digs pole holes in 10 minutes. E. V. Stuart. il diags Elec World 127:64 F 1 '47
Overhead lines. T. Rich. il Electrician 137: 1588-90 D 6 '46
Performance of 115-kv. wood pole line; abstract. G. E. Tennant. Elec World 127:126 Je 7 '47
Pole lengths for minimum line clearances. Elec World 128:128+ O 11 '47
Power-line poles of reinforced concrete. il diag Elec R (Lond) 141:340 Ag 29 '47
Preserving poles; treating with oil mixtures; with cost data. D. L. Lindsley; W. H. Seaman. Elec West 99:58-61 Jl '47
Reinforced concrete poles. N. F. Marsh. il Elec R (Lond) 141:559-60 O 10 '47
Setting H-frames in soft soil. il Elec World 127:60 Ja 4 '47
Shaving and incising machines mechanize pole yard operations; Southern California Edison co. F. B. Doolittle. il Elec World 127:112-13 Mr 15 '47
Side mounting thwarts impulses and tree limbs. H. L. Hess. il diag Elec World 127: 84 Mr 1 '47
Steel towers reconditioned for $67 a ton. H. G. Silliman. il Elec World 127:121-2 Mr 15 '47
Testing a transmission line tower. il Engineer 183:238 Mr 21 '47
Testing transmission towers to failure. F. Mendel. il Eng N 139:255-6 Ag 21 '47
Three methods of erecting towers. J. Lummis. il Elec World 127:58 Ja 4 '47
Three-tower transmission structure successfully lowered by detonations. il Elec World 128:58 Ag 30 '47
Transformer bank mounted on line poles. R. H. MacKinnon. il Elec World 127:52 Ja 4 '47
Transmission tower tests. F. Mendel. il Elec West 98:80 Ap '47
Undercutting tool cones concrete tower footings. il Elec World 126:128+ N 9 '46
Wood structure burning by leakage currents. P. M. Ross. il diags Elec Eng 66:472-4 My '47

See also
Electric lines—
Crossarms

Protection

Apply line reclosers to cut costs. J. B. Hendricks. diag Elec World 128:71+ S 27 '47
It's smart public relations to tell the kids, go fly a kite! Pacific Gas & Electric safety program. E. Gidlow. Sales Management 58: 58+ My 1 '47
Lightning currents and potentials on overhead transmission lines. R. H. Golde. bibliog diags Inst E E J 93 pt 2:559-69 D '46
Lightning, grounds and fuses on rural lines. G. J. Williams. Elec World 127:188 Ja 18 '47
Lightning surges on transmission lines in Ireland. R. C. Cuffe. bibliog map diags Inst E E J 94 pt 2:270-7 Ag '47; Abstracts. Engineering 162:619 D 27 '46; Elec R (Lond) 139:1011 D 20 '46; Electrician 137:1763 D 20 '46; Discussion. Inst E E J 94 pt 2: 278-82 Ag '47; Electrician 137:1763-5 D 20 '46
Line shorting contactor betters service to dairy. D. R. Pattison. diag Elec World 126: 100 D 7 '46
Sleeve at tap prolongs life of conductor. J. Gossman. il Elec World 126:118 N 9 '46
Wash water tests prevent flashovers. G. L. Hill. il diag Elec World 127:133 My 24 '47

See also
Lightning arresters

River crossing

Conventional conductors used on 4,614-ft. span; Arkansas River crossing. F. P. Kaspar. il diags Elec World 127:62-3 Mr 1 '47
Heavy piling used for 66-kv. crossing. L. A. Edinborough. il Elec World 126:116+ N 9 '46
Mile-wide gorge spanned on guyed H-section masts. F. W. Packer and C. H. Schofer. il diag Elec World 128:78-80 Jl 19 '47

Safety measures

Grounding rules for deenergized lines. Elec World 127:72+ Ap 26 '47
Guide for obtaining clearances on lines and station apparatus. Elec World 127:82 Je 21 '47
Instructions for working on energized lines. Elec World 127:130+ F 15 '47
Insuring full coverage by danger signs. Elec World 128:88+ S 27 '47
Insuring safer overhead practice. Elec World 128:94-5 Jl 5 '47
Second 44-kv. circuit installed safely. il Elec World 127:62+ Ja 4 '47

Sleet problem

Safeguarding sleet thawing operations. H. R. Tomlinson. il Elec World 128:59+ Ag 30 '47

Tables, calculations, etc.

Characteristic impedance of lines; chart. K. Zimmermann. Elec World 126:92 O 26; 126 N 9; 102 N 23; 122 D 7; 82 D 21 '46
Chart for selection of guy strand; engineering reference sheet. H. F. Ostman. Elec World 128:63 Ag 30 '47
Chart for stringing catenaries, using stainless steel, 3/8-in., 1 x 7 strand. V. H. Godfrey. Elec World 127:128 Mr 15 '47
Lightning currents and potentials on overhead transmission lines. R. H. Golde. bibliog diags Inst E E J 93 pt 2:559-69 D '46
Method to determine percent voltage drop on 6,900-volt single-phase line; charts. N. H. Erlandson. Elec World 126:122 N 9 '46
Standard rural lines; sag-tension charts for solid copper conductors. J. McCombe. Elec R (Lond) 140:938-41 Je 6 '47
Transmission line impedance calculations. E. W. Hamlin and R. A. Galbraith. Elec Eng 66:743-4 Jl '47
Voltage calculation on multi-grounded rural lines. J. S. Francis. diag Elec World 127: 59-60 Mr 29 '47

Testing

500-kv line undergoing tests this week at Brilliant, Ohio. il Elec World News ed 128:4 O 4 '47
Mobile detector locates faults on overhead lines. S. Freeman, jr. and H. Haas. il diags Elec World 128:76-7 Ag 16 '47
Testing transmission line phases. B. Payne. diag Elec World 127:78+ Mr 1 '47

Tree problem

Messenger-supported wires serve without storm interruptions. L. E. McQueen. il Elec World 126:65-6 D 21 '46

Vibration

Installation data for armor rods on ACSR. diags Elec World 128:74 S 27 '47

England

Yorkshire tour. il Elec R (Lond) 141:423-7 S 19 '47; Electrician 139:841-2 S 19 '47

France

Evolution of the French interconnection network. P. M. J. Ailleret. il map Inst E E J 93 pt 1:537-9 N '46
251-mile line in France basis for 400-kv. system. il diag Elec World News ed 127:21 F 8 '47

ELECTRIC lines—*Continued*

Ireland

Lightning surges on transmission lines in Ireland. R. C. Cuffe. bibliog map diags Inst E E J 94 pt 2:270-7 Ag '47; Abstract. Engineering 162:619 D 27 '46; Discussion. Inst E E J 94 pt 2:278-82 Ag '47

Western states

$270,000,000 all-time high for added facilities in the West. Elec West 98:68-87 F '47

ELECTRIC lines, Cooperative. See Electric service, Rural—Cooperative lines

ELECTRIC locomotives

Comparisons of railway motive power in the Pacific Northwest; steam, Diesel-electric, and electric locomotives. T. M. C. Martin. Elec Eng 66:161-6 F '47

Diesel-electric and electric locomotives ordered from the General electric company in 1946; railroad and private car lines; for service in the United States and for export; tabulation. Ry Age 122:292-3 F 1 '47

Evaluation of railroad motive power. P. W. Kiefer. Ry Age 123:359-64+ Ag 30 '47

5000-hp electric locomotives for the Great northern railway. diag Mech Eng 69:771-2 S '47

Great Northern installs high-capacity electric locomotives. D. R. MacLeod. il plan Ry Age 123:277-81 Ag 16 '47

Great Northern single-cab 5,000-hp. electric locomotives. R. A. Williamson. il diag Ry Mech Eng 121:432-3+ Ag '47

Washer for electric locomotives. il Ry Age 123:452 S 13 '47; Same. Ry Mech Eng 121: 593-4 O '47

World's largest single-cab electric locomotives. il Gen Elec R 50:52 S '47

See also

Locomotives, Diesel-electric
Locomotives, Gas turbine-electric

Manufacture

Assembling electric locomotives. il Steel 120: 105 Ap 14 '47

ELECTRIC locomotives, Mine

Development of electric locomotives for use in coal mines; abstract. J. S. Beltz. Coal Age 51:134+ D '46

Lower haulage cost provided by new high-speed locomotives. G. H. Shapter. il Coal Age 52:106-8 F '47

Two-way radio offers efficient communication at Pando. il Coal Age 51:98-9 N '46

ELECTRIC logging. See Petroleum—Well logging

ELECTRIC losses

Approximate theory of eddy-current loss in transformer cores excited by sine wave or by random noise. D. Middleton. il diags Inst Radio Eng Proc 35:270-81 Mr '47

Transmission losses; assessment of their annual value. J. L. Taylor. Elec R (Lond) 139:657-8 O 25 '46

See also

Electric machinery—Losses
Electric transformers—Losses

ELECTRIC machinery

Analysis of hunting by means of vector diagrams. B. Adkins. diags Inst E E J 93 pt 2:541-8 D '46

Choosing electrical machines. Elec R (Lond) 139:645-7 O 25 '46

Electric eddy current machinery. J. R. Winther. il diags Elec Eng 66:643-6 Jl '47

Equivalent circuit of the primitive rotating machine with asymmetrical stator and rotor. G. Kron. diags Elec Eng 66:369-72 Ap '47

Inside of electrical machines. R. H. Robinson. il diags Electrician 136:1085-8, 1239-43, 1371-4, 1515-18, 1659-63; 137:41-4, 169-72, 314-17, 447-50, 586-9, 787-91, 925-8, 1055-9, 1203-7, 1361-3, 1509-13, 1669-72, 1822-5; 138:115-19+, 271-6, 501-5, 780-3 Ap 26, My 10, 24, Je 7, 21, Jl 5, 19, Ag 2, 16, 30, S 20, O 4, 18, N 1, 15, 29, D 13, 27 '46, Ja 10, 24, F 14, Mr 28 '47

Orientation of strain gages in stress analysis. A. W. Rankin. il diags Gen Elec R 50: 14-21 S '47

Selenium rectifiers; improved characteristics broaden field of application to machines. J. Lobenstein. il diags Machine Design 19: 112-14 Mr '47

See also

Brushes (electric machinery)
Commutators
Cranes, derricks, etc.—Electric equipment
Electric apparatus and appliances
Electric converters
Electric driving
Electric generators
Electric locomotives
Electric motors
Electric plants
Electric protective apparatus
Electric transformers
Electric welding machines
Electricity in mining
Electricity on the farm
Hydroelectric plants
Mine hoisting, Electric
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Voltage regulators

Design

Design. E. T. Norris. Inst E E J 94 pt 1:91-4 F '47

Medium-frequency magnetization of sheet steel. R. Pohl. Inst E E J 94 pt 2:118-23 Ap '47

Teaching of the principles of electrical machine design; abstract and discussion. L. H. A. Carr. Electrician 138:443-5 F 7 '47

Drying

Drying current from welding generators. R. G. Swisher. il diags Power 90:860 D '46

Losses

Parasitic losses in synchronous-machine damper windings. J. H. Walker. bibliog diags Inst E E J 94 pt 2:13-25 F '47

Stray losses in synchronous electrical machinery. P. Richardson. bibliog diags Inst E E J 92 pt 2:291-301 Ag '45; Discussion. Inst E E J 92 pt 2:301-4; 94 pt 2:190-3 Ag '45, Je '47

Tooth-ripple losses in unwound pole-shoes. W. J. Gibbs. bibliog Inst E E J 94 pt 2:2-12 F '47

Manufacture

Indexing drill jig simplifies machining of electrical housings. R. Mawson. diags Steel 121: 95 Ag 4 '47

Temperature

Temperature records as an aid in depreciation study. W. A. Tripp. Elec Eng 66:182-6 F '47

Transportation

Transporting large electrical alternator stator. il Engineer 182:426 N 8 '46

Vibration

Analysis of vibration problems. A. J. King. diags Inst E E J 93 pt 2:435-58 bibliog(p446, 458) O '46; Discussion. 93 pt 2:458-62 O '46; Elec R (Lond) 138:286-7 F 22 '46; Electrician 136:476-8 F 22 '46

Crankshaft positioning alleviates compressor vibration. G. Spillane. diag Elec World 127:55-6 Mr 1 '47

Windings

Parasitic losses in synchronous-machine damper windings. J. H. Walker. bibliog diags Inst E E J 94 pt 2:13-25 F '47

ELECTRIC measurements

Calibration of uniform-field spark-gaps for high-voltage measurement at power frequencies. F. M. Bruce. bibliog il diags Inst E E J 94 pt 2:138-49; Discussion. 149-54 Ap '47

Capacity per unit length and characteristic impedance of coaxial cables with one slightly non-circular conductor. P. Parzen. diag J Ap Phys 18:774-6 Ag '47

Characteristics and errors of capacitors used for measurement purposes. C. G. Garton. diags Inst E E J 93 pt 2:398-408 bibliog(p406) O '46; Discussion. 93 pt 2:408-14 O '46; Electrician 136:543-4 Mr 1 '46

Device for estimating the height of polarographic waves. J. K. Taylor. bibliog diag Anal Chem 19:478-80 Jl '47

ELECTRIC measurements—*Continued*
Dielectric-constant measurements by the heterodyne-beat method. J. Chien. bibliog diags J Chem Educ 24:494-7 O '47
Electrical-angle measurement on motor and generator determines load limit. K. J. Granbois. il diags Power 91:154-6 Mr '47
Electrical characteristics of quartz-crystal units and their measurement. W. D. George and others. bibliog diags J Res Nat Bur Stand 38:309-28 Mr '47
Fault-current measuring device. M. J. Lantz. il diags Elec Eng 65:Trans 839-42 D '46
Impedance network for production-testing current-limiting reactors. S. C. Leonard. il diags Gen Elec R 50:31-5 O '47
Inductance of wires and tubes. A. H. M. Arnold. Inst E E J 93 pt 2:532-40 D '46
Influence of magnetic materials on the welding characteristics of resistance welding machines. J. J. Riley and C. E. Smith. bibliog diags Elec Eng 65:Trans 852-60 D '46
Insulation resistance measurements. E. W. Greenfield. diags Elec Eng 66:698-703 Jl '47
Measurement of electromotive force of a microphone. R. K. Cook. diag Acoustical Soc Am J 19:503-4 My '47
Measurements in communications; with table of units and scales used in communication engineering. N. B. Fowler. bibliog Elec Eng 66:135-40 F '47
Measuring high potentials. M. R. Whitman. diag Electronics 20:172+ Ap '47
Method for measuring neutron-absorption cross sections by the effect on the reactivity of a chain-reacting pile. H. L. Anderson and others. Phys R 72:16-23 Jl 1 '47
Multiple resistances of *n* resistors. L. Dunbar. diags Inst E E J 93 pt 1:533-6 N '46
Reducing potentiometer loading error. L. A. Nettleton and F. E. Dole. diags R Sci Instr 18:332-41 My '47
Star voltages. G. W. Stubbings. Electrician 139:1211-12 O 24 '47
Trend and development in meters and instruments. L. J. Matthews. diags Inst E E J 94 pt 1:39-44 Ja '47; Excerpt. Engineer 182: 414-15 N 8 '46

See also
Dielectric constants
Dielectrics
Dynamometers
Electric engineering—Tables, calculations, etc.
Electric instruments
Electric meters
Electric resistance
Electric testing
Electrometers
Frequency measurement
Galvanometers
Magnetic measurements
Oscillographs
Overvoltage
Photoelectric cells—Measurement uses
Potential, Electric
Radio measurements
Vacuum tubes—Measurement uses
Voltmeters
Watt hour meters
Wheatstone bridge

ELECTRIC meters
Appliance consumption checked by portable meter. C. W. Pinkel. il Elec World 128:72 Ag 30 '47
Cyclometers or pointers? Elec R (Lond) 140: 629-30 Ap 18 '47
How to read an electric meter. P. C. Ziemke. il Can Min J 68:741-2 O '47
Inductance meter. il R Sci Instr 18:591 Ag '47
Meter dials; cyclometers versus pointers. W. B. Askew. il Elec R (Lond) 140:37-8 Ja 3 '47
Metering with transformer-loss compensators; abstracts. G. B. Schleicher. bibliog il diags Elec Eng 66:538-42 Je '47; Elec World 128:95-7 Jl 19 '47
Panel demonstrates meter service faults. D. W. Merritt. il diag Elec World 126: 115-16 N 9 '46
Reactive metering; analyses of meter connections. V. B. Shah. diags Elec R (Lond) 140: 979-83 Je 13 '47
Relay solves problem of reactive register. H. A. Hartwig. il diag Elec World 128:58-9 Ag 30 '47
Significance of functional analysis of measurements. H. C. Dickinson. diags Gen Elec R 50:13-16 O '47
Trend and development in meters and instruments. L. J. Matthews. diags Inst E E J 94 pt 1:39-43 Ja '47; Abstracts. Engineering 162:441-2 N 8 '46; Electrician 137:1225-6 N 1 '46; Elec R (Lond) 139:732 N 8 '46
Who does what in the meter department. Elec World 127:56-7 Je 21 '47

See also
Ammeters
Demand meters
Frequency meters
Ohmmeters
Potentiometers
Voltmeters
Watt hour meters
Wavemeters

Bearings
Design nomograms for meter pivot bearings. G. F. Shotter. Elec World 127:108 Je 7 '47
Oil-tight meter bearings assembled by fixtures. J. C. Humbel. il Elec World 128: 90 S 27 '47

Design
Planning the future electricity meter. G. E. Moore. Inst E E J 92 pt 2:107-15 Ap '45; Discussion. 92 pt 2:115-24; 93 pt 2:570-5 Ap '45, D '46

Installation
How to adapt socket meters to cabinets. O. H. Zamore. il Elec World 127:82+ Mr 29 '47
Outdoor meters recessed in wall. C. W. Minard. diags Elec World 127:118 My 10 '47
Standardizing outdoor meter installations. diag Elec World 128:136+ S 13 '47
Variable details in service rules have top importance. diags Elec World 127:101+ My 10 '47

Standards
Revision of code for electricity meters. A. J. Allen. Edison Elec Inst Bul 15:370 O '47
Wartime change made permanent in code for electricity meters. H. Koenig. Ind Stand 18:241-2 O '47

Testing
Adapt standard desk for meter test. J. S. Lineback. il Elec World 128:82 S 27 '47
Adapter test board accommodates all type A meters. H. D. Noren. il diag Elec World 127:167 Ja 18 '47
Better lighting for meter test board. C. C. Fields. il Elec World 127:102-3 Je 7 '47
Four uses of an ohmmeter in meter testing. J. Bowles. diags Elec World 127:174 Ja 18 '47
Gang board speeds tests of socket meters. il Elec World 127:54 Ja 4 '47
How meters are scheduled for test. Elec World 127:63-4 F 1 '47
Meter calibration for a system-wide frequency change; Southern California Edison co. il Elec World 127:52-3 F 1 '47
Meter tester switches load and coil simultaneously. A. F. Stilson. il diag Elec World 127:114+ My 10 '47
Test meters faster with rotating rack. il Elec World 128:126 O 11 '47

See also
Demand meters—Testing

ELECTRIC mine hoisting. See Mine hoisting, Electric

ELECTRIC mixers

Rating
Food mixer; KitchenAid, model 3-B. il Consumers Res Bul 20:19 Jl '47

ELECTRIC moment
Dielectric-constant measurements by the heterodyne-beat method. J. Chien. bibliog diags J Chem Educ 24:494-7 O '47
Dielectric studies; dipole moment of acetonitrile in solvents of unknown molecular weights. N. C. C. Li and T. Chu. bibliog Am Chem Soc J 69:558-9 Mr '47
Dipole moment of 1-nitrobutane. J. G. Miller and H. S. Angel. bibliog Am Chem Soc J 68:2358 N '46
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47
Dipole moments of two dichlorodiphenyldiacetylenes. G. E. Coates. Chem Soc J p838-9 S '46

ELECTRIC moment—*Continued*
Electric moment of *n*-butyllithium and the nature of the lithium-carbon bond. M. T. Rogers and A. Young. bibliog Am Chem Soc J 68:2748 D '46
Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47
Electric moments of some aliphatic fluorides, cyanides and amines. M. T. Rogers. bibliog Am Chem Soc J 69:457-9 F '47
Electric moments of some aromatic selenium compounds. M. T. Rogers and T. W. Campbell. Am Chem Soc J 69:2039-41 Ag '47
Electric moments of some unsaturated aldehydes, ethers and halogen compounds. M. T. Rogers. bibliog Am Chem Soc J 69:1243-6 Je '47
Electric resonance method of radio-frequency spectroscopy; moment of inertia and electric dipole moment of CsF. H. K. Hughes. bibliog diag Phys R 72:614-23 O 1 '47
Electrostatic field strengths in molecules and nuclear quadrupole moments. C. H. Townes. bibliog Phys R 71:909-10 Je 15 '47
Measurements of nuclear quadrupole moment interactions. W. A. Nierenberg and others. bibliog Phys R 70:773-5 N 1 '46
Millimeter-wave spectra; hyperfine structure of BrCN and ICN. W. Gordy and others. bibliog Phys R 72:259-60 Ag 1 '47
Nuclear and molecular constants from microwave spectra; methyl chloride and methyl bromide. W. Gordy and others. Phys R 72: 344-5 Ag 15 '47
Nuclear electric quadrupole spectrum of a homonuclear diatomic molecule in a magnetic field. H. M. Foley. Phys R 71:747-51 Je 1 '47
Nuclear moments of the bromine isotopes. S. B. Brody and others. bibliog Phys R 72: 258-9 Ag 1 '47
Nuclear quadrupole moment effects in the inversion spectrum of ammonia. R. J. Watts and D. Williams. il Phys R 72:263-5 Ag 15 '47
Nuclear quadrupole moment effects in the microwave spectrum of ammonia. R. J. Watts and D. Williams. Phys R 71:639 My 1 '47
Quadrupole moments and spins of Br, Cl, and N nuclei. C. H. Towns and others. bibliog Phys R 71:644-5 My 1 '47
Theory of dipole interaction in crystals. J. M. Luttinger and L. Tisza. bibliog diags Phys R 70:954-64 D 1 '46; Correction. 72: 257 Ag 1 '47

ELECTRIC motor generators
Special motor-generator; dual output unaffected by input fluctuation. diag Elec R (Lond) 140:79 Ja 10 '47

ELECTRIC motors
Audels electric motor guide, covering construction control and maintenance including armature winding. E. P. Anderson. 1018p $4 Theo. Audel & co, 49 W. 23d st, New York 10 '47
Electric equipment at the Langley memorial aeronautical laboratory. C. C. Clymer and W. G. Gardner. il Gen Elec R 50:20-5 F '47
Electric motors for aircraft. T. B. Holliday. il diag Product Eng 18:86-90 Ja '47
Electric tools; induction or universal motor? Electrician 137:1743-4 D 20 '46
Hermetic electric motors. B. O. Haun, jr. il diag Refrig Eng 54:135-8 Ag '47
How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:90-2 Ja; 94-7 F; 91-4 Mr '47
Match your motor to the driven machine. C. Bauman. il Power 91:444-6 Jl '47
Motor installation and maintenance. diags Elec R (Lond) 140:195-7, 572-4 Ja 31, Ap 11 '47
New magnetic alloy opens way for lightweight motors; Hiperco. Iron Age 159:59 F 27 '47; Same. Blast F & Steel Pl 35:358 Mr '47; Same. Mech Eng 69:319 Ap '47; Same. Product Eng 18:138 My '47
Pre-rotation motor for big plane wheels. Aviation N 6:20 D 2 '46
Progress in engineering knowledge during 1946; motors and generators. P. L. Alger and others. diags Gen Elec R 50:28-9 Mr '47
Reversed phase rotation from single-phase load. M. D. Grems and others. bibliog diags Gen Elec R 49:30-4 N '46
Selection of medium size motors; types available for use in the heating, ventilating and air conditioning fields. A. F. Lukens. il diags Heat & Ven 44:70-6 Ja '47
Simplified microwave afc; combinations of motor and electronic action for microwave oscillators; radio-relay system. F. A. Jenks. il diags Electronics 20:120-5 N; 132-6 D '47
Westinghouse high-temperature motor, silicone-insulated. il Mach 54:246C-246D S '47
Your electric motor. J. F. MacPhearson. il diags Factory Management 105:113-24 Ja '47

See also
Armatures
Commutators
Electric driving
Electric locomotives
Electric motors, Induction
Electric motors, Railway
Electric motors, Synchronous
Pumping machinery, Electric

Bearings
Model sleeve and ring bearings of Lucite for studying the flow of oil. J. Boyd. Metal Prog 51:969 Je '47
Motor installation and maintenance. diags Elec R (Lond) 140:196-7 Ja 31 '47

Care
Your electric motor; treat motor right. J. F. MacPhearson. Factory Management 105: 123-4 Ja '47

Cleaning
Cleaning traction motors. il diag Ry Mech Eng 120:677-8 D '46
Compressed air does cleaning job. F. Rudolph. il Power 91:192 Mr '47

Control
Basic procedures in motor control. G. W. Heumann. il diags Gen Elec R 50:23-34 My; 41-6 Je; 41-8 Jl; 40-51 Ag; 46-51 S '47
Centrifugal governor speed control for small motors. W. M. Yogerst. il diag Product Eng 18:138-9 Ag '47
Controlling speed of fractional horsepower motors. W. M. Yogerst. il diags Product Eng 18:130-4 My '47
Development of motor control-gear. D. Rudd. Inst E E J 92 pt 2:177-84 Je '45; Discussion. il 92 pt 2:184-9; 94 pt 2:75-8 Je '45, F '47
Flexible control systems for tandem motor operation. J. E. Jones. il diags Product Eng 18:167-72 Jl '47
How to select and maintain motor controls. L. E. Markle. il Factory Management 105: 129-31 Je '47
Motor starting and control. C. J. Schwarzer. il diags Heat & Ven 44:60-4 Mr '47
Reversible-motor controller. J. G. Stephenson. diag Electronics 20:93 S '47
Rotational control system; Rocon unit will stop motor of machine in case of mechanical failure. il Mech Handling 34:215-17 Ap '47
Special control circuits for motors may aid machine performance. H. F. Littlejohn, jr. il diags Product Eng 18:106-11 Ag '47

See also
Electric controllers
Electric motors, Alternating current—Control
Electric motors, Direct current—Control
Electric motors, Induction—Control

Cooling
Heat removal from electrical apparatus. T. W. Reynolds. diag Heat & Ven 44:78-82 Ap '47
Large motors have unusual surface cooler arrangement. diags Elec World 127:164 My 24 '47

Design
Redesign increases mill motor ratings. C. B. Hathaway. il Iron Age 160:78-9 Ag 21 '47
Torpedo motor may affect future conventional machine designs. R. E. Kelly. Elec World News ed 126:17 D 28 '46
Unique motor utilizes pancake design; axial air gap motor. G. R. Anderson. il diag Machine Design 19:138-41 Ag '47

ELECTRIC motors—*Continued*

Failure

Motor failure causes $83,000 loss. il Locomotive 46:134-6 Ja '47

Fractional horsepower

Commutator setting and connections for fractionals. C. C. Hermann. diag Power Pl Eng 51:89 My '47

Controlling speed of fractional horsepower motors. W. M. Yogerst. il diags Product Eng 18:130-4 My '47

Drillpress attachment rebores small motor end bells. G. Burnley. diag Am Mach 91: 154-5 Je 19 '47

Electrotor; very small unconventional d.c. motor. il diags Elec R (Lond) 140:663-4 Ap 25 '47; Electrician 138:1157-9 My 2 '47; Engineer 183:397 My 9 '47

Fractional-horsepower motors; matching design features with application requirements. W. M. Yogerst. il Machine Design 19:105-8 Ap '47

United Kingdom turns out tiny electric motors; Electrotors. For Comm W 27:25 My 17 '47; Iron Age 160:63 Jl 10 '47

Standards

Fractional-hp. motor standards; reference book sheet. diags Am Mach 90:145, 147 D 5 '46

NEMA sets new standards for fractional horsepower motors. Factory Management 104:131 O '46

New dimension standards for fractional horsepower motors. diags Product Eng 18: 91 Ja '47

New NEMA fractional-horsepower motor standards; their effect on refrigeration and pump applications. C. P. Potter. Elec Eng 66:337-9 Ap '47; Abstract. Product Eng 18: 140-1 Ja '47

New performance ratings in NEMA standards for small motors. il diags Ind Stand 17:279-81, 320 N-D '46; Abstracts. Elec World News ed 126:16-17 S 21 '46; Heat & Ven 43:106+ O '46; Mach 53:184 O '46; Product Eng 17:103-4 N '46; Machine Design 18:143-4 N '46; Steel 119:120+ D 2 '46

Standardizing f.h.p. motors. S. F. Philpott. diags Elec R (Lond) 141:347-50 S 5 '47

Lubrication

What degree of chemical stability is desirable in greases? H. A. McConville. il Gen Elec R 50:35-6 My '47

Maintenance and repair

Infra-red ray on the maintenance programme; mine motors. C. E. Dunlop. Can Min J 68:729-30 O '47

Manufacture

Continuous soldering of small motor rotors using high-frequency heat. W. L. Tesch and P. A. Greenmeyer. il Materials & Methods 25:94-6 Je '47

Is cast iron superior in corrosion resistance to steel? R. W. White. il Materials & Methods 26:82-5 Ag '47

Modern motor manufacturing methods; Westinghouse electric corp. H. E. Linsley. il Iron Age 159:68-71 My 8 '47

Motor a minute; Brook motors, ltd. il Elec R (Lond) 140:821-4 My 16 '47

Variable-speed press jumps output. J. I. Karash. il diag Am Mach 91:112-15 Mr 13 '47

Welded design simplifies motor construction. il Iron Age 159:63-4 Mr 20 '47

Westinghouse Life-Line motor. il Mech Eng 69:511-12 Je '47

Mounting

D flange mounting for electric motors; reference book sheet. diags Am Mach 91:175, 177 Je 19 '47; Same cond. Factory Management 105:132, 134 My '47; Excerpt. Iron Age 159:140+ Ap 17 '47

Protection

Electric motor enclosure. K. W. Jerome. Elec R (Lond) 139:879 N 29 '46

Motor control; maintenance of protective devices. Elec R (Lond) 140:129-31 Ja 17 '47

Protection for gas-compressor motor insures against unexpected failures. G. Lindgren. il diags Power 91:258-60+ Ap '47

Protection of motors and controls against moisture. H. V. Crawford. il Water & Sewage Works 94:R215 Jl '47

Selection of polyphase squirrel-cage motors; temperatures, loading, protection. N. H. Erlandson. Elec World 127:56-7 Mr 29 '47

Rating

Continuous maximum rating. A. N. D. Kerr. Elec R (Lond) 140:749-50 My 9 '47

Redesign increases mill motor ratings. C. B. Hathaway. il Iron Age 160:78-9 Ag 21 '47

Records

Motor records used by both production and maintenance. F. L. Smith. Factory Management 104:159 N '46

Schräge motor

See Electric motors, Induction

Specifications

Electric motor tolerances. A. N. D. Kerr. Elec R (Lond) 140:391-2 Mr 14 '47

Standards

Fractional-hp. motor standards; reference book sheet. diags Am Mach 90:145, 147 D 5 '46

How General Electric has benefited from standarization of motors. A. W. Bartling. il Ind Stand 17:281-2 N '46

New performance ratings in NEMA standards ratings for small motors. il diags Ind Stand 17:279-81, 320 N-D '46; Abstracts. Elec World News ed 126:16-17 S 21 '46; Heat & Ven 43:106+ O '46; Mach 53:184 O '46; Product Eng 17:103-4 N '46; Machine Design 18:143-4 N '46; Steel 119:120+ D 2 '46

Starting

Can you send a man out; notes on motor-starter troubles. Elec R (Lond) 139:683-4 N 1 '46

Development of motor control-gear. D. Rudd. Inst E E J 92 pt 2:177-84 Je '45; Discussion. il 92 pt 2:184-9; 94 pt 2:75-8 Je '45, F '47

Electric control for metalworking machines. J. Van Voast. diags Am Mach 90:125-7 D 5 '46

Motor starting and control. C. J. Schwarzer. il diags Heat & Ven 44:60-4 Mr '47

Plural starting of electric motors. il Engineer 183:570-1 Je 27 '47

Some design considerations for electrical contact operation. R. B. Immel. il diags Product Eng 18:107-12 F '47

Starting current rules vary over wide range. Elec World 127:68+ Ap 26 '47

Starting marine auxiliaries. il Electrician 138: 1461 My 30 '47

Will generator and motor start together? diags Power 91:564-5+ Ag '47

Testing

Motor h.p. at partial loads. A. N. D. Kerr. Electrician 139:403 Ag 8 '47

Motor installation and maintenance. diag Elec R (Lond) 140:572-4 Ap 11 '47

Torque checker for Warren motors. E. J. Norton. il Elec World 128:108 Jl 5 '47

Windings

Inside of electric machines. R. H. Robinson. il diags Electrician 137:1822-5 D 27 '46

Reconnecting motors for different voltages. C. C. Hermann. diags Power Pl Eng 50:99 D '46

ELECTRIC motors, Alternating current

Axial air-gap electric motors built by Fairbanks, Morse. il Am Mach 91:168 Jl 3 '47; Chem Eng 54:139 Ag '47

Capacitors can cause motors to reverse. H. Van Horn. diags Elec World 127:136+ Mr 15 '47

How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:91-4 Mr '47

How to apply ac motors economically. C. Bauman. il Power 91:317-19 My '47

Integral hp. single-phase motors; their characteristics and uses. M. E. Cutten. il diags Product Eng 18:150-4 Ap '47

ELECTRIC motors, Alternating current—*Cont.*
Production of new motor; Fairbanks-Morse axial air-gap motor. il diag Steel 120:90-2+ Je 16 '47; Same. Diesel Power 25: 71-3+ Jl '47; Same cond. Power Pl Eng 51:126+ S '47; Excerpt(illustrations). Iron Age 159:125 Je 5 '47; Abstract. Elec Eng 66:670-1 Jl '47
Repulsion motors. diags Elec R (Lond) 140: 895-8 My 30 '47
Scophony a.c. torque motor. diag Engineer 183:526 Je 13 '47
Single-phase repulsion motors. diags Elec R (Lond) 141:62-5 Jl 11 '47
See also
Electric motors, Induction
Electric motors, Synchronous

Control
High tension a.c. contactors. B. Feltbower. il Electrician 138:1228-30 My 9 '47
Motor control; installation and care of a.c. equipment. diag Elec R (Lond) 140:55-7, 129-31 Ja 10-17 '47

Starting
Air-break contactor starter for textile machinery. il Engineering 163:331 Ap 25 '47
A.c. motor starters. diags Elec R (Lond) 139:821-3, 974-6 N 22, D 13 '46

ELECTRIC motors, Direct current
Adjustments, tests and maintenance of engine cranking motors. il diag Diesel Power 25: 60-3+ Ag '47
Capacitance effect of conductor in magnetic field; combination of gaseous tube rectifier and a d-c motor. W. Richter. Elec Eng 66: 784-6 Ag '47
Causes of instability in d-c motors. J. A. Jackson. diag Power Pl Eng 51:124+ Jl '47
D-c motor operation with rectifier power supply. F. T. DeWolf. diags Gen Elec R 50:15-19 Ap '47
Dual fields in d-c motor provide simple eight to one speed control. R. W. Moore. diags Product Eng 18:166-9 Ag '47
Eight-to-one speed range for direct-current motors. diags Machine Design 19:107-8 F '47
Electrotor; very small unconventional d.c. motor. il diags Elec R (Lond) 140:663-4 Ap 25 '47; Electrician 138:1157-9 My 2 '47; Engineer 183:397 My 9 '47
How electrical machines function. R. Andriessen. il diags Power Pl Eng 51:94-7 F '47
Maintenance of d.c. commutators and brush gear. il Mech Handling 34:150-3+ Mr '47
Metallic rectifiers for operating constant-speed or adjustable-speed motors. il Machine Design 19:107-8 Ag '47
Oxide rectifiers as a power supply for d-c motors. F. L. Reed. il diags Elec Eng 66: 763-4 Ag '47
Redesign increases mill motor ratings. C. B. Hathaway. il Iron Age 160:78-9 Ag 21 '47
Spot conversion drives in paper mills. R. Nelson. Paper Tr J 125:53-6 S 11 '47

Bearings
Phenolic adapter rings solve motor bearing problem. il Mod Plastics 24:84-5 Jl '47

Control
Basic procedures in motor control. G. W. Heumann. il diags Gen Elec R 50:23-34 My; 41-6 Je '47
Constant-current systems for electronic control of d-c motors. O. W. Livingston. diags Gen Elec R 50:38-44 My '47; Same. Elec Eng 66:432-7 My '47
D.c. control equipments on British motor-coach trains. B. J. Prigmore. Inst E E J 93 pt 1:455 O '46
D.c. motor control; electronic system. il Elec R (Lond) 141:562 O 10 '47
D.c. motor speed by vibrating relays; abstract. diag Product Eng 17:140 D '46
D-c relays for motor control and how to apply them. R. N. Eck. diags Machine Design 19:117-21+ Je '47
Dynamic braking of d-c motors. J. D. Leitch. diags Elec Eng 66:694-7 Jl '47
Metropolitan-Vickers electric sectional drive. il diags Engineer 183:448-9 My 23 '47
Modernized control system increases blooming mill output. E. Frisch. il diags Steel 121:120+ S 15 '47
Motor speed control; mercury arc rectifiers and their applications. F. T. Cowley. Electrician 137:1752 D 20 '46
Philips electronic motor control. il Engineer 184:207 Ag 29 '47
Plugging relays minimize motor reversing time. R. B. Immel. il diags Steel 120:106+ Ap 7 '47
Speed control of d.c. motors. il diag Electrician 138:1458 My 30 '47
Will motor operate below normal speed? diags Power 91:784-6 N '47

ELECTRIC motors, Induction
All-steel electric motors. il Ry Age 122:416 F 22 '47
Copperspun squirrel-cage rotor, cast of copper by a centrifugal process. G. R. Anderson. il diags Elec Eng 66:980-2 O '47
Cut in motor size but not performance; Westinghouse Life-Line. il diags Comp Air Mag 52:43-4 F '47
Design of welded steel motor; novel manufacturing techniques. il Steel 120:80-1+ Mr 24 '47
Equations and circle diagrams of the Schräge motor. W. J. Gibbs. bibliog diags Inst E E J 93 pt 2:621-8 D '46
General Electric induction motor for pump drives. Blast F & Steel Pl 35:382-3 Mr '47
Induction motors and load shedding. J. W. Mulligan. Elec R (Lond) 140:970-2 Je 13 '47
Modern steel-fabricated motor. Q. Graham. il Power Pl Eng 51:88 Ag '47
Motor design and power factor. H. Sparke. Elec R (Lond) 141:129-30 Jl 25 '47
Motor selection for a rolling mill. L. H. Berkley. diags Elec Eng 66:444-7 My '47
Motors and controls for beam-well pumping. W. G. Taylor. il Oil & Gas J 46:86-7+ S 13 '47
New all-steel motor cuts size, adds strength. F. C. Rushing. il diags Rayon 27:618-20 N '46; Excerpts. Blast F & Steel Pl 34:1544 D '46; Abstract. Power Pl Eng 50:115-16 D '46
Output of induction motor depends on total active material. P. H. Trickey. il diag Product Eng 17:114-16 D '46
Reversing motor stator put thrust on bearing. C. Bauman. diags Power 91:635-6 S '47
Selection of polyphase squirrel-cage motors. N. H. Erlandson. Elec World 127:51-8 Mr 29 '47
Single-phase induction motor; theories used to explain and calculate behavior. A. F. Puchstein. Elec Eng 66:208-10 F '47
Tri-Clad motors feature stepless speed adjustment. il Blast F & Steel Pl 35:1268+ O '47
Vertical induction motors available up to 500 hp. il Elec World News ed 127:33 F 8 '47
Will a slipring motor pull this load? diag Power 91:270-1+ Ap '47

Control
Adjustable frequency control of high-speed induction motors. G. W. Heumann. diags Elec Eng 66:576-9 Je '47
Basic procedures in motor control. G. W. Heumann. diags Gen Elec R 50:40-51 Ag '47
Braking induction motors. B. Feltbower. Elec R (Lond) 140:260-3 F 7 '47
Electronic speed control for slip-ring motors; abstract. W. H. Elliot. diag Elec World 128: 44 Ag 30 '47
Electronic speed control of a.c. commutator motors; abstract. E. W. Forster and L. C. Ludbrook. diag Engineer 184:61-2 Jl 18 '47
Three-phase induction motors; views on starting, reversal and electrical braking. S. A. Vincze. bibliog diags Electrician 139: 541-3, 605-8, 689-93, 768-70+ Ag 22-S 12 '47

Design
Some aspects of polyphase motor design; design and properties of the magnetic circuit. T. C. Lloyd and H. B. Stone. diags Elec Eng 65:Trans 812-18 D '46

ELECTRIC motors, Induction—*Continued*

Starting

Capacitors start 800-hp. motor with 750-kw. generator. J. M. Evans. il diag Elec World 127:86-7 Ap 12 '47

Selection of polyphase squirrel-cage motors; starting, starters and voltage drops. N. H. Erlandson. Elec World 127:54-5 Mr 29 '47

Three-phase induction motors; views on starting, reversal and electrical braking. S. A. Vincze. diags Electrician 139:605-8 Ag 29 '47

Temperature

Induction-motor heating; current-time characteristics under abnormal conditions. K. S. Kuka. Elec R (Lond) 141:595-6 O 17 '47

Selection of polyphase squirrel-cage motors; temperatures, loading, protection. N. H. Erlandson. Elec World 127:56-7 Mr 29 '47

Windings

Amortisseur action of the squirrel cage. E. Bretch. diags Elec Eng 65:255-8 Je '46; Discussion. 66:110-11 Ja '47

Centrifugal casting copper-spun rotors. G. A. Anderson. il Steel 120:96-7+ Ap 28 '47

ELECTRIC motors, Railway

Development in traction motor gearing on L.P.T.B. rolling stock. Engineer 183:524-5 Je 13 '47

Light-weight traction motors for the Southern railway. il Engineering 163:439 My 23 '47

Lightweight traction motors on the Southern railway. il Engineer 183:430 My 16 '47; Electrician 138:1307-8 My 16 '47

Pressure arm lifter for Diesel traction motors. diags Ry Mech Eng 121:431 Ag '47

Bearings

Rock Island disposes of bearing trouble. il Ry Mech Eng 121:599 O '47

Gearing

Pinion advance indicator. il diags Ry Mech Eng 121:594 O '47

Maintenance and repair

Diesel electrical shop; Chicago, Burlington and Quincy. il Ry Mech Eng 121:140-3 Mr '47

Electrical design for reduced Diesel maintenance. A. H. Candee. Ry Mech Eng 121: 371-4+ Jl '47; Same cond. Ry Age 122:1259-62 Je 21 '47

Induction pinion puller. il Ry Mech Eng 121: 262-3 My '47

Maintenance of railway motor commutators. R. E. Kelly. il diag Ry Mech Eng 121:258-61 My '47

Stripping traction motor cases. il Engineer 183:527 Je 13 '47

ELECTRIC motors, Synchronous

Additional timing period of new motor-driven control increases gun welder speed. H. I. Stanback. il diags Welding J 25:1055-60 N '46

Crankshaft positioning alleviates compressor vibration. G. Spillane. diag Elec World 127:55-6 Mr 1 '47

Inert-gas-filled motors designed for hazardous areas. diags Elec World 127:136 Je 7 '47

New synchronous motor for radio-phonograph combination. H. H. Everett. il Radio N 37: 84+ F '47

Oblique-section rotor for lightweight synchro motor; Synchrotrol unit. il diag Product Eng 18:102-3 Ag '47

Parasitic losses in synchronous-machine damper windings. J. H. Walker. bibliog diags Inst E E J 94 pt 2:13-25 F '47

Synchronous motors; yesterday and today. A. G. Ferriss. il Power 91:770-2 N '47

Tachometric audio-frequency meter. E. Kasner. il diags Electronics 20:121-3 F '47

Watertight synchronous motor, built to withstand submersion during spring floods. il Gen Elec R 50:51 Jl '47

See also
Selsyn apparatus

Control

Basic procedures in motor control. G. W. Heumann. il diags Gen Elec R 50:46-51 S '47

Testing

Electrical-angle measurement on motor and generator determines load limit. K. J. Granbois. il diags Power 91:154-6 Mr '47

ELECTRIC network. See Electric circuits; Electric distribution

ELECTRIC oscillations. See Oscillations, Electric

ELECTRIC outages. See Electric power—Interruptions

ELECTRIC pasteurizers. See Pasteurizers, Electric

ELECTRIC plants

Prospectus on atomic power; with cost data; group of California scientists present a summary. Elec West 97:55-62 N '46

Structural design for nuclear power. diag Eng N 137:756 D 5 '46

See also
Electric generator sets
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Equipment

Electrical and allied developments of 1946; power generation, distribution, transmission. G. Bartlett. il Gen Elec R 50:15-22 Ja '47

Electrical developments. diags Power Pl Eng 51:81-3 Ja '47

Interconnection

Calibrated synchroscope predicts power flow. W. G. Parmenter. il diag Elec World 127: 126+ F 15 '47

Determination of required reserve generation capacity. W. J. Lyman. Elec World 127:92-5 My 10 '47

Electricity and the grid. E. R. Wilkinson. Engineer 182:597-8 D 27 '46

Energy export and import; use of the four-quadrant vector diagram. A. Salzmann. diags Elec R (Lond) 139:869-72 N 29 '46

English grid system. J. Wright. Pub Util 40:431-4 S 25 '47

Evolution of the French interconnection network. P. M. J. Ailleret. il map Inst E E J 93 pt 1:537-9 N '46

FPC OK's emergency ties in Connecticut and Texas. Elec World 128:37 Ag 30 '47

Interconnected system operation, planning, and performance. R. E. Pierce. Elec Eng 66:553-5 Je '47

London load building. il map Elec R (Lond) 140:147-52 Ja 24 '47

Southeast power pool. C. W. Mayott. map Elec Eng 66:166-70 F '47

Spare transformer switched hot. C. E. Plummer. il Elec West 99:68-9 Ag '47

Industrial plants

Electricity in the gas industry. G. M. Rimmer. Gas J (Lond) 250:723-5 Je 25 '47

Paper mill power ties. A. P. Schnyder. Elec Eng 66:983-4 O '47

Isolated plants vs. purchased power

Electric power in oil refining. W. H. Stueve. Oil & Gas J 45:73-5 D 21 '46

ELECTRIC plants (central stations)

Central-station industry. Power Pl Eng 51: 73 Mr '47

Engineering news report. J. W. Parker. Edison Elec Inst Bul 15:252-6 Jl '47

Power generation trend upward. H. A. Winne. Elec World 127:99-100 Ap 12 '47

Tidd generating station is both efficient and economical. P. Sporn. il maps plans Elec World 128:60-2 Ag 2 '47

Trends in electric power supply. H. S. Bennion. Power Pl Eng 51:72-4 Je '47

See also
Boiler plants
Electric distribution
Electric lines
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Construction

Draining coarse gravel with wellpoints; dewatering excavation for power plant on the Allegheny river. il diag Eng N 137:638-9 N 14 '46

ELECTRIC plants (central stations)—Construction—*Continued*
Ready mix furnished in building power plant structural concrete; Venice no. 2 plant for Union electric power co. il diag Concrete 55:10+ Ja '47

Costs

Coals to Newcastle; SPA power grid carries hydro output to gas fields. map Elec World 127:102-4 F 15 '47
Construction cost trends and implications. W. F. Ryan. Edison Elec Inst Bul 15:229-34 Je '47; Same. Power Pl Eng 51:116-20 Ag '47; Excerpts. Elec World 127:98-9 Je 7 '47
How to select units for a steam-electric station. C. D. Gibbs. Power Pl Eng 51:104-7 Jl '47; Correction. 51:107 S '47
Production costs for plant with topping unit. Elec World 127:72 F 1 '47
SPA hydro program, summary and fallacies; steam and hydro costs compared. map Elec World 125:60-3 Mr 30 '46; Discussion (Analysis of SPA report criticized). 127:51+ Ja 4 '47
Steam v. hydro power. J. P. Callahan. Pub Util 39:28-33 Ja 2 '47

Damage from air raids

Restoring power supply; experiences with the invading armies. Elec R (Lond) 139:936 D 6 '46

Design

Power station design, 1920-1946; abstract. J. P. Tucker. Electrician 139:1068 O 10 '47

Diesel engine auxiliaries

Diesel generation provides peak and emergency capacity. J. W. Howe. diag Elec World 127:120-1 Mr 15 '47
Northern States Power installs Diesels for peaks. Elec World News ed 128:6 Ag 23 '47

Diesel engine stations

Can medium speed Diesel engines take it? six year operating experience of Siloam Springs, Arkansas. il Diesel Power 25:54-5+ F '47
Diesel power replacing steam boosts town plant's earnings; Howard, S.D., municipal plant. T. J. Malone. il Diesel Power 25:78-9+ F '47
Elroy, Wisconsin, expands municipal Diesel plant. T. J. Malone. il Diesel Power 25:34-6 Je '47
Messina power station. plan diag Electrician 138:1591-2 Je 13 '47
Model plant pays well; Municipal light and power plant of Trenton, Missouri. A. R. Wright. il Diesel Power 24:1344-5 N '46
Operating data; Osage, Iowa municipal plant. Diesel Power 25:79 Ag '47
Supercharged intercooled Diesel unit goes into service; municipal power plant at Menasha, Wisconsin. il Diesel Power 25:68-70 Ag '47
21½ year operating record; Carthage, Mo. municipal power plant. il Diesel Power 25:44-7 Jl '47

Employees

Is the load dispatcher management or labor? J. P. Paschall. Elec World 126:74 N 23 '46

Equipment

Additional topping under way at Sherman Creek. R. T. Roberts; H. Knecht. il diags Power Pl Eng 51:108-12 F; 112-14+ Ap '47
Adequate control voltage from storage batteries. W. A. Holland. Elec World 127:48-50 Mr 29 '47
Coal handling at Dalmarnock. F. H. Slade. il plan Can Min J 67:1123-4 D '46
Coal handling plant at Hams Hall. il plan diag Mech Handling 34:72-81 F '47
Coal handling; use of bulldozers at generating stations. M. P. Henzell. il Elec R (Lond) 139:835 N 22 '46
Earley power station; coal, ash and dust handling equipment. il plan diags Mech Handling 34:27-36 Ja '47
Electric truck for power station fuel recovery. il Mech Handling 34:379-80 Jl '47
Electrical features of Springdale's new 80,000-kw unit. H. A. P. Langstaff. il Power Pl Eng 50:121-2 D '46
Fuses replace circuit breakers on station feeders. A. M. deBellis. il diags Elec World 126:99-100 N 9 '46
Heat insulation solves breeching and boiler troubles; Sayreville plant of the Jersey central power & light co. il Power Pl Eng 51:88-9 My '47; Same abr. Elec World 127:72+ F 1 '47
History and use of pulverized fuel at Detroit power stations; disposal and uses of fly ash and cinders. P. W. Thompson. il diags Power Pl Eng 51:108-10 O '47
How to select units for a steam-electric station. C. D. Gibbs. Power Pl Eng 51:104-7 Jl '47; Correction. 51:107 S '47
Littlebrook A; generating station of the Kent electric power company. il Elec R (Lond) 141:123-8 Jl 25 '47
Meaford power station. il Electrician 139:1209-10 O 24 '47
120-ton generator rises to the roof; Arkansas power and light co. generator installed on roof of Cecil Lynch station. il Power 91:624-5 S '47
Package units at Redondo gained a year. il Elec West 99:84-5 S '47
Plant design and standardisation; Central board's 1950 programme reviewed. J. Wright. diag Electrician 139:101-3 Jl 11 '47
Portable milling machine decreases down time of generators; used for realinement at Hell Gate generating station. il Mach 53:155-6 Ja '47
Power plant equipment in big demand. V. Bell. il Steel 120:61-3 Mr 31 '47
Power station construction; Meaford scheme of the North-west midlands joint electricity authority. il Elec R (Lond) 140:198-204 Ja 31 '47
Power station developments; British and foreign plans for meeting deficiency. J. Wright; A. G. Christie; A. Meyer. Elec R (Lond) 141:69-70 Jl 11 '47
Recent developments in power-station practice. F. W. Lawton. Engineering 164:79, 115, 127-8, 151 Jl 25-Ag 15 '47; Same cond. Electrician 138:1741-7 Je 27 '47; Abstracts. Engineer 184:14 Jl 4 '47; Elec R (Lond) 140:1053-5 Je 27 '47; Discussion. Engineering 164:19 Jl 4 '47; Elec R (Lond) 141:13-15 Jl 4 '47; Electrician 139:35-6+ Jl 4 '47
Redondo Beach steam station has new operating features. il diags Elec World 128:62-4 S 27 '47
Tidd plant electrical system advances new ideas. F. A. Lane. il diag Elec World 128:68-70 Ag 16; 48-50 Ag 30 '47
Tidd plant of the Ohio power company. S. N. Fiala and E. H. Krieg. il maps diags Power Pl Eng 51:68-73 Mr '47
Typical central stations installed and planned since September 1946; tabulation. B. G. A. Skrotzki, comp. Power 91:372-3 Je '47
Welding in power stations. M. P. Henzell. il diag Elec R (Lond) 140:907-8 My 30 '47

Extensions

Adapting metal-clad switchgear to plant addition; abstract. C. C. Dodge. diag Elec World 127:132+ Mr 15 '47
Added steam capacity cuts coal use by increasing hydroelectric generation; Nova Scotia light & power co. flow diag il diags Power 91:2-6+ Ja '47
Blackburn's 70 megawatt extension. il Electrician 138:627-30 Mr 14 '47
Bradford power station extensions. il Engineer 184:291 S 26 '47; Electrician 139:915-18 S 26 '47
Convenience in operation features plant extension; Dallas power & light co. F. C. Justice. il diags Elec World 127:116-19 Mr 15 '47
Electrical features of Springdale's new 80,000-kw unit. H. A. P. Langstaff. il Power Pl Eng 50:121-2 D '46
Extension of Balmain power station. il Elec R (Lond) 141:574-7 O 17 '47
Extensions at Birmingham. il Electrician 139:679-83 S 5 '47
Flexible bus and switching layout in plant extension; building the third section of Venice no.2 power station, St Louis. diag Elec World 127:70 Mr 1 '47
Kearsley extensions. il diag Elec R (Lond) 139:639-43 O 25 '46; Electrician 137:1126-9 O 25 '46; Engineering 162:402 O 25 '46

ELECTRIC plants (central stations)—Extensions—*Continued*
Mississippi power company increases capacity of Plant Eaton to 45,000 kw. il diags Power 91:764-8 N '47
More power for Boston. G. A. Orrok, jr. and W. P. Saunier. il plan diags Power Pl Eng 51:68-71+ Je '47
Sculcoates power station. il Electrician 137: 1662-5 D 13 '46; Elec R (Lond) 139:977-9 D 13 '46

Fires and fire protection

Prevention and extinguishing of insulating oil fires in power stations and substations. H. K. Sels. Edison Elec Inst Bul 15:379-81 O '47

Flood damage

Tornados and floods damage utilities in widespread areas. il Elec World News ed 127:12 Je 14 '47

Fuel

Basic principles of fuel clause design. il Elec World 128:76-7 Ag 2 '47
Boiler conversion eases fuel crisis; Fisk and Northwest stations of the Commonwealth Edison co., Chicago. P. B. Juhnke. il Elec World 127:57 Mr 1 '47
Burning low-grade Midwestern coals on spreader stokers with continuous ash discharge; Iowa Falls station of Central states electric co. J. M. Drabelle. il diags A S M E Trans 69:203-8; Discussion. 208-12 Ap '47
Coal handling plant at a London power station. il diag Mech Handling 34:175-85 Ap '47
Fuel-power outlook, Pacific Southwest. N. B. Hinson. il Elec West 99:69-71 O '47
Fuel returns; power station efficiencies in 1946; abstracts. Elec R (Lond) 141:178 Ag 1 '47; Electrician 139:337 Ag 1 '47
How Cleveland Company's rapid switch to oil was made during coal strike. D. R. Buschman. il Edison Elec Inst Bul 15:5-8 Ja '47

Gas turbine stations

Place of the gas turbine in future electricity generation; abstract. B. V. Poulston. Inst E E J 93 pt 1:577 D '46

Interconnection

See Electric plants—Interconnection

Load

Central electricity board winter operating conditions. Engineer 183:201 Mr 7 '47
Cold snaps and power plant; study of load-duration curves. Elec R (Lond) 140:931-2 Je 6 '47
Crisis and after; problem of cold-snap loads. Elec R (Lond) 140:335-7 Mr 7 '47
Customer records essential for commercial load building. R. Warren. Elec World 127: 64-5 Mr 29 '47
Diversity factor underlies economical design. H. E. Campbell. Elec World 128: 66-8 S 27; 106-7 O 11 '47
Domestic load; further check on after-diversity demands. H. A. P. Caddell and others. Elec R (Lond) 140:477-9 Mr 28 '47
Effect of automatically controlled motor-driven devices upon distribution feeder loads following power supply interruptions. E. W. Oesterreich. Edison Elec Inst Bul 15:11-13+ Ja '47
Electric boilers from the utility point of view. L. B. Stirling. Elec Eng 66:995-7 O '47
Frozen foods research develops new load; abstract. R. Coe. Elec World 127:134+ Ap 12 '47
Hay curing as a load builder; Central Vermont public service corp. Elec World 127: 65 Mr 29 '47
Heat pump as a load builder. A. C. Crandall. il Edison Elec Inst Bul 15:114-18+ Ap '47
Induction motors and load shedding. J. W. Mulligan. Elec R (Lond) 140:970-2 Je 13 '47
Lessons of the crisis. W. C. Parker. Electrician 138:857-8 Ap 4 '47
Load building by lamp sales; New England Gas & Electric group. W. G. Keay. il Elec World 127:46-7 Ja 4 '47
Plant shortage; Central board's review of the situation; abstracts. Elec R (Lond) 140: 302-3 F 14 '47; Electrician 138:498-9 F 14 '47
Prefabricated bungalows; investigation of load characteristics. Elec R (Lond) 140: 543-4 Ap 4 '47
Seasonal load spread; is it enough for maintenance? A. E. Knowlton. graphs Elec World 127:91-8 Ap 12 '47
Synthesizing cooking load. G. O. McLean. Elec R (Lond) 139:773-6 N 15 '46
Voltage reduction provides load relief but is unpopular; fall meeting of Systems operation committee of Pennsylvania electric association. Elec World News ed 128:5 N 1 '47
Water heater diversity and daily load curves. H. G. Knaf. Elec World 126:68-72 N 23 '46
Water pumping offers attractive long-hour load. Elec World 127:94 Je 21 '47

Load dispatching

New dispatching office has model communications. il Elec World 127:114 Je 7 '47
System board of aluminum uses colored-tape diagrams; load dispatching facilities of the Consolidated gas electric light & power co. of Baltimore E. S. Bailey. il plan Elec World 128:54-6 S 27 '47

Location

Le choix de l'emplacement des centrales thermiques et le refroidissement de l'eau de condensation. M. T. J. Guéritte. diags Génie Civil 124:17-19 Ja 1 '47

Maintenance and repair

Electrical maintenance. B. J. Prigmore and V. Ananin. Elec R (Lond) 140:622-4 Ap 18 '47
Seasonal load spread; is it enough for maintenance? A. E. Knowlton. graphs Elec World 127:91-8 Ap 12 '47

Records

No job for quiz kids; Nepsco services, inc.; data books. Elec World 128:84+ Ag 2 '47

Safety measures

Guide for obtaining clearances on lines and station apparatus. Elec World 127:82 Je 21 '47

Service

Aids for small business; power industry's interest. R. E. Turner. Power Pl Eng 51: 110-11 O '47

Statistics

Annual statistical issue. Elec World 127:135-56 Ja 18 '47
Over 6,000,000-kw new capacity planned for nation's steam-electric stations. B. G. A. Skrotzki. map Power 91:7-9 Ja '47

Steam distribution

District heating in Detroit. G. D. Winans. il map diags Heat & Ven 43:64-70 N '46
Meets increased central steam demands with 4800 ft tie line; Rochester gas & electric corp. J. J. Schenk and R. H. McCumber. il Heating-Piping 19:74-6 Ap '47
Serving a large Detroit hotel with purchased steam. C. B. Sprenger. diag Heat & Ven 43:71-2 N '46

Boston

More power for Boston. G. A. Orrok, jr. and W. P. Saunier. il plan diags Power Pl Eng 51:68-71+ Je '47

Cleveland

How Cleveland Company's rapid switch to oil was made during coal strike. D. R. Buschman. il Edison Elec Inst Bul 15:5-8 Ja '47

England

Blackburn's 70 megawatt extension. il Electrician 138:627-30 Mr 14 '47
Bradford power station extensions. il Engineer 184:291 S 26 '47; Electrician 139:915-18 S 26 '47
England expands a power plant; 300,000 kw at Hams Hall plant near Birmingham; illustrations. Elec World News ed 128:16-17 S 20 '47
Extensions at Birmingham. il Electrician 139: 679-83 S 5 '47

ELECTRIC plants (central stations)—England—*Continued*
Kearsley extensions. il diag Elec R (Lond) 139:639-43 O 25 '46; Electrician 137:1126-9 O 25 '46; Engineering 162:402 O 25 '46
Littlebrook A; generating station of the Kent electric power company. il Elec R (Lond) 141:123-8 Jl 25 '47
Meaford power station. il Electrician 139: 1209-10 O 24 '47
New power station at Poole. il Electrician 138:1679-80 Je 20 '47
Power station construction; Meaford scheme of the North-west midlands joint electricity authority. il Elec R (Lond) 140:198-204 Ja 31 '47
Riverside station at Poplar. il Electrician 139: 477 Ag 15 '47
Sculcoates power station. il Electrician 137: 1662-5 D 13 '46; Elec R (Lond) 139:977-9 D 13 '46
Wallasey electricity jubilee. il Electrician 138: 359-60 Ja 31 '47

Great Britain
Commissioners' fuel returns; statistics for 1945. Elec R (Lond) 140:612 Ap 18 '47; Electrician 138:1012 Ap 18 '47
Drive for generating plant. Economist 152: 727-8 My 10 '47
Electricity generation and wholesale distribution. J. Hacking. graph Electrician 138: 1081-3 Ap 25 '47
Plant design and standardisation; Central board's 1950 programme reviewed. J. Wright. diag Electrician 139:101-3 Jl 11 '47

Kuwait
Electricity in Persian gulf; power plant for Kuwait. Electrician 139:1074 O 10 '47; Engineering 164:366 O 17 '47

London
Bankside power station; H. J. Randall's reply to critics; Sir Leonard Pearce's statement. Elec R (Lond) 140:753-4 My 9 '47
Bankside power station; opposition to proposed construction plan. Electrician 138:195-6, 283-4 Ja 17-24 '47; Abstract. Elec R (Lond) 140:165-6 Ja 24 '47
Bankside station; panoramic model of the area produced. il Elec R (Lond) 140:845-6 My 23 '47
Coal handling plant at a London power station. il diag Mech Handling 34:175-85 Ap '47
London load building. il Elec R (Lond) 140: 6-12, 147-52 Ja 3, 24 '47

Messina, Italy
Messina power station. plan diag Electrician 138:1591-2 Je 13 '47

Mexico
New thermo-electric plant to serve Sonora, Mexico. For Comm W 26:30 Ja 18 '47

Missouri
Empire District embarks on $10,000,000 expansion; proposed $4,000,000, 30,000-kilowatt steam turbine plant. il Manuf Rec 116:41 S '47

Western states
$270,000,000 all-time high for added facilities in the West. Elec West 98:68-87 F '47

ELECTRIC plants, Cooperative
Iowa utility will manage new plant for REA co-op. Elec World 126:57 D 21 '46
Wisconsin utility and co-op end hydro project quarrel. Elec World 128:89 O 25 '47
See also
Electric service, Rural—Cooperative lines

ELECTRIC plants, Municipal
Argentine municipality of Rosario to expropriate power plant. For Comm W 27:26 My 31 '47
Diesel engines in municipal usage. R. H. Morse, jr. Water & Sewage Works 94:18 Ja '47
Elroy, Wisconsin, expands municipal Diesel plant. T. J. Malone. il Diesel Power 25: 34-6 Je '47
Model plant pays well; Municipal light and power plant of Trenton, Missouri. A. R. Wright. il Diesel Power 24:1344-5 N '46
Supercharged intercooled Diesel unit goes into service; municipal power plant at Menasha, Wisconsin. il Diesel Power 25:68-70 Ag '47
21½ year operating record; Carthage, Mo. municipal power plant. il Diesel Power 25: 44-7 Jl '47
Typical municipal plants installed and planned since April, 1946; tabulation. Power 91:376-7 Je '47

Finance
Diesel power replacing steam boosts town plant's earnings; Howard, S.D., municipal plant. T. J. Malone. il Diesel Power 25: 78-9+ F '47

ELECTRIC plants, Portable
Mobile substation; emergency unit for domestic utilities. il Sci Am 176:125 Mr '47
See also
Power plants, Floating

ELECTRIC potential. See Potential, Electric

ELECTRIC poultry scalders. See Poultry scalders, Electric

ELECTRIC power
Electric power in the cotton industry. S. A. Bobe. il Elec Eng 66:662-6 Jl '47
Electric power sources. L. W. Matsch and W. C. Brown. Elec Eng 66:880-1 S '47
Electrical and allied developments of 1946; power generation, distribution, transmission. G. Bartlett. il Gen Elec R 50:15-22 Ja '47
Electricity and atomic power. Electrician 138: 351-3 Ja 31 '47
Electrostatic sources of electric power. J. G. Trump. bibliog il diags Elec Eng 66:525-34 Je '47
Factors affecting relocation of industry; power needs. H. F. Rech. Edison Elec Inst Bul 15:274-6 Jl '47
Fuel economy conference; abstracts from papers read at the Hague. Electrician 139: 759-60, 847-8 S 12-19 '47; Elec R (Lond) 141:407-9 S 12 '47
Generation and wholesale distribution of electricity; abstract. J. Hacking. Elec R (Lond) 140:303-4 F 14 '47
Mobile capacitor unit permits emergency electrical power supply step-up. Chem Ind 60:466 Mr '47
Nuclear energy and electric power. A. W. Kramer. diags Power Pl Eng 51:104-7 Mr; 101-5 My '47
Power sessions, Pacific coast meeting, A.I.E.E. Elec Eng 66:1020-3 O '47
Power, where do we go from here? H. A. Winne. Blast F & Steel Pl 35:362+ Mr '47
Special-purpose power supply for 160/1500-volt operation; for such devices as klystron oscillators, phototubes and electron multipliers, cathode-ray tube circuits, and multistage direct-coupled amplifiers. P. W. Howells. il diags Gen Elec R 50:34-9 Je '47
Trends in electric power supply. H. S. Bennion. Power Pl Eng 51:72-7 Je '47
U.S. power shortage looms. il Bsns W p 17 Ag 9 '47
Use of electrical power by U.S. industries increases 81 pct over 1939. Iron Age 158:113 N 28 '46
See also
Chemical plants—Power
Coal mines and mining—Power
Electric distribution
Electric driving
Electric engineering
Electric plants
Electric plants (central stations)
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Electric welding—Power supply
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Petroleum engineering—Power
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Steel works—Power
Voltage regulation

International aspects
Electric power exchange; Pacific Northwest states and British Columbia. Bsns W p36 S 13 '47

Interruptions
C-r tube on power lines; use as synchroscope in making reconnections at points of circuit interruption. Electronics 20:158+ S '47

ELECTRIC power—Interruptions—*Continued*
Determination of required reserve generation capacity. W. J. Lyman. Elec World 127: 92-5 My 10 '47
Effect of automatically controlled motor-driven devices upon distribution feeder loads following power supply interruptions. E. W. Oesterreich. Edison Elec Inst Bul 15:11-13+ Ja '47
How Public service co. of N.J. handles trouble calls. T. L. Hall. il Edison Elec Inst Bul 15:321-3 S '47
Prolonging warmup time in home freezers during power outage. E. C. McCracken and others. Refrig Eng 54:335-8+ O '47
Service continuity standards aid economical distribution planning. W. J. Lyman. Edison Elec Inst Bul 15:325-9+ S '47

Rates

See Electric rates

Statistics

Electricity production in U.S. now at rate of 300 billion kwhr per year. Edison Elec Inst Bul 15:365-8+ O '47
Industrial use of electric energy, 1939-1946; chart. Pub Util 39:47 Ja 2 '47
New generating capacity installations; listed by companies, expected year of installation and manufacturer's nameplate rating of generator capacity in kilowatts. Edison Elec Inst Bul 15:369 O '47
Output, 1946; with tabulated data, 1932-1946. Elec World 127:138-9 Ja 18 '47
Power industry survey estimates five per cent margin of capacity above peak demands this winter. Edison Elec Inst Bul 15:364 O '47
Production of electric energy; revised series, yearly totals, 1920-1945; monthly totals and monthly averages, 1936-1945. Survey of Cur Bsns 27:32 F '47
World power; United States produces two-fifths. Edison Elec Inst Bul 14:404 D '46

See also
Electric plants (central stations)—Statistics
Electric utilities—Statistics

ELECTRIC power and light corporation
Aging improves EPL's preferred offer. Barron's 27:6 F 17 '47

ELECTRIC precipitation
Cleanliness is essential to quality winding; electrostatic cleaning of air; Dixie mercerizing co. P. M. Thomas. il Textile World 97:120-1 Ag '47
Cottrell precipitation installation at Ocean Falls. M. E. Patterson. il plan diag Pulp & Pa of Can 47:90-5 N '46
Dust control by combined centrifugal and electrostatic principles. E. H. R. Pegg. il diags Heat & Ven 44:78-80 My '47
Dust precipitators for air conditioning at Madison Square Garden. il Electronics 20: 162+ N '47
Electric cleaning of home air. il Sheet Metal Worker 38:84+ S '47
Electric filters and modulated heating in 20-room house. il plans diags Sheet Metal Worker 38:63-4+ O '47
Electrostatic filter cleans air for yarn-package drying; Adelaide mills. H. L. Dozier. il Textile World 97:135 Je '47
High efficiency in stack dust recovery; Universal atlas cement company. B. Nordberg. il Rock Prod 50:134-7 Ag '47
Investigation of a method for the analysis of smokes according to particle size. W. N. Lipscomb and others. diags J Ap Phys 18: 72-9 Ja '47
Oil mist can be eliminated; Precipitron electrostatic air cleaner. W. F. Herst and H. B. Heyl. il diag Am Mach 91:93 Ag 14 '47
What the power engineer should know about electrostatic precipitators. diags Power Pl Eng 51:80-2 S '47

ELECTRIC propulsion of ships. See Ship propulsion, Electric

ELECTRIC protective apparatus
Bank of capacitors reinforces 132-kv. grid. L. F. Ferri and C. S. Dayton. il diags Elec World 127:66-9 Mr 29 '47
Current and voltage transformers for protective-gear purposes; discussion. Electrician 137:1449 N 22 '46
Ground-fault neutralizer for Fort Peck, Montana, has novel design features to combat sixty degrees below zero F. Franklin Inst J 242:432-3 N '46
Ground faults; new protection for 2,300-volt cables. L. Wilson. il plan Coal Age 52:84-6 My '47
Progress report of EEI-AEIC joint committee on branch circuit protection. Edison Elec Inst Bul 15:169-70 My '47
Protection of powerhouse auxiliaries. diags Elec Eng 65:Trans 746-51 N '46; Same abr. Power Pl Eng 51:118+ Mr '47

See also
Electric circuit breakers
Electric distribution—Grounding
Electric fuses
Electric lines—Protection
Electric switchgear
Electric transformers—Protection
Lightning arresters
Lightning protection
Petersen earth coil
Relays

ELECTRIC pumping machinery. See Pumping machinery, Electric

ELECTRIC railroads

See also
Street railroads

Braking

Street-car braking improved; abstract. S. B. Cooper. Machine Design 19:182+ Jl '47

Cars

See Cars, Electric railroad

Current collecting devices

Retractable collector-shoe gear. il Engineer 183:295 Ap 4 '47

Overhead construction

Putting knee action in trolley systems. diags Coal Age 52:104 My '47

Power

Capacitors improve traction voltage; New Haven railroad. S. Withington. il diag Elec World 128:66 Ag 16 '47

Netherlands

Electric traction equipment; contract awarded by Netherlands Railways. il Electrician 139: 1145 O 17 '47

ELECTRIC rates
Basic principles of fuel clause design. il Elec World 128:76-7 Ag 2 '47
Cleveland Electric rate case. Comm & Fin Chr 165:1516 Mr 20 '47
Closed minds and complicated rates hamper power selling. L. A. Blackburn. Elec World 127:98-9 My 10 '47
Coal clause in electric rate schedule to be modified; Wisconsin public service corporation. Pub Util 38:782 D 5 '46
Combination utility ups gas rates, lowers electric; Norwich (Conn.) gas and electrical department. T. Braaten. Elec World 127:64 Je 21 '47
Confiscation question may be raised in injunction suit against rate order; Staten Island Edison corp. v. Maltbie et al. Pub Util 39:867 Je 19 '47
Cost versus price; a management problem. W. S. Leffler. Pub Util 40:217-25 Ag 14 '47
Demand for electricity. J. A. Nordin. bibliog J Land & Pub Util Econ 23:337-41 Ag '47
Electric heating means high costs; Seattle experiment. A. W. Ames. il Elec World 128:97-8 O 11 '47
Electricity supply costs. F. J. Elliott. Elec R (Lond) 140:1065-6 Je 27 '47
Estimated billings circumvent meter shortage. Elec World 128:148+ O 25 '47
Fair return for a sheltered utility; Safe Harbor water power case. O. Ely. Pub Util 39:309-10 F 27 '47
Highest New York court rules utility can enjoin commission; Staten Island Edison corp. wins suit. Elec World News ed 127: 13 My 31 '47
Must electric rates go up? L. S. Ready. Elec World 128:54 Ag 30 '47

ELECTRIC rates—*Continued*
Rate reduction publicity program does effective job. M. H. Frank. il Edison Elec Inst Bul 15:277-8 Jl '47
Rates, a challenge. G. M. Gadsby. Edison Elec Inst Bul 15:241-3 Je '47; Same cond. Comm & Fin Chr 165:3118+ Je 12 '47; Excerpts. Elec World 127:90 Je 7 '47
Recent rate trends and rate research committee activities. E. N. Strait. Edison Elec Inst Bul 15:249-51+ Jl '47
Seattle Council approves higher house-heating rate. Elec World 128:52 Ag 2 '47
Some electric rates are increasing. O. Ely. Pub Util 40:306-7 Ag 28 '47
Table for power factor and corrective capacity. G. F. Johnson. Elec World 126: 80-1 D 21 '46
Tariff considerations. F. W. Purse. Elec R (Lond) 139:921-2 D 6 '46
Television set free added to rates in Norwich, Conn. Elec World 127:106 My 24 '47
Utilities to get bulk of construction funds from consumers through depreciation charges. E. R. Abrams. Barron's 27:33 Ag 18 '47
Utility protest on rates allowed by N.Y. court; Staten Island Edison case. E. R. Abrams. Barron's 27:30 Je 2 '47
VEPCO rate reductions ordered by state board. Elec World News ed 128:5 Ag 23 '47
Wartime prices that fell; gas and electricity. I. Putnam. Pub Util 40:151-62 Jl 31 '47
What does the rate engineer do? G. C. Delvaille. Pub Util 39:818-22 Je 19 '47

ELECTRIC rectifiers
American rectifier practice. J. C. Read. Inst E E J 94 pt 1:183-4 Ap '47
Application of high-voltage steel-tank mercury-arc rectifiers to broadcast transmitters. P. A. T. Bevan. il diags Inst E E J 92 pt 2:469-89 O '45; Discussion. 92 pt 2: 490-4; 94 pt 2:299-300 O '45, Ag '47
Capacitance effect of conductor in magnetic field; combination of gaseous tube rectifier and a d-c motor. W. Richter. Elec Eng 66: 784-6 Ag '47
Charging industrial truck batteries by means of copper-oxide rectifiers. J. J. Buckley. il diags Gen Elec R 50:27-35 Ap '47
Cold cathode rectifier. W. H. Bennett. bibliog il J Ap Phys 18:479-82 My '47
Contact potential difference in silicon crystal rectifiers. W. E. Meyerhof. bibliog il diags Phys R 71:727-35 My 15 '47
Contact rectifiers. diag Power Pl Eng 51:107 Jl '47
D-c motor operation with rectifier power supply. F. T. DeWolf. diags Gen Elec R 50:15-19 Ap '47
Electrolytic valve action of zirconium. W. R. Carmody. bibliog diags Electrochem Soc Trans 91 (preprint 9):147-56 '47
Excess-defect semiconductor contacts. L. Sosnowski. bibliog diag Phys R 72:641-2 O 1 '47
Favorable selenium rectifiers. Elec World 127: 114 My 10 '47
Large rectifier station practice. D. I. Bohn and others. il Elec Eng 66:957-63 O '47
Magnesium copper sulphide rectifiers; their operation and characteristics. R. O. Whitesell. il diags Product Eng 18:84-9 Je '47
Mercury-arc rectifiers; incomplete control range of the grid-controlled type for battery charging. R. Wells. diag Elec R (Lond) 141: 220-4 Ag 8 '47
Mercury-pool rectifiers supply dc when and where you want it. S. R. Durand. il diags Power 91:614-16+ S '47
Metallic rectifiers for operating constant-speed or adjustable-speed motors. il Machine Design 19:107-8 Ag '47
Motor speed control; mercury arc rectifiers and their applications. F. T. Cowley. Electrician 137:1752 D 20 '46
Ore dock unloading capacity increased by installing rectifier stations; Gary works of the Carnegie-Illinois steel corp. H. E. Reinhold. il diags Steel 120:114+ F 10 '47
Oxide rectifiers as a power supply for d-c motors. F. L. Reed. il diags Elec Eng 66: 763-4 Ag '47
Phase-doubled rectifier connection; abstracts. J. C. Read. il diags Engineer 183:400-1 My 9 '47; Engineering 163:418-19 My 16 '47; Elec R (Lond) 140:654-5 Ap 25 '47
Rectifiers for electroplating. L. W. Reinken. il diags Metal Finishing 45:73-7 F; 58-62 Ap; 72-4+ My; 88-90 Je; 75-8 S '47
Rectifiers; selenium and copper-oxide. W. H. Falls. il diags Gen Elec R 50:34-8 F '47
Selenium rectifiers; improved characteristics broaden field of application to machines. J. Lobenstein. il diags Machine Design 19: 112-14 Mr '47
Steel plant and foundry application of mercury arc rectifiers. S. R. Durand. bibliog il Steel 121:102+ Jl 14 '47
Surface states and rectification at a metal semi-conductor contact. J. Bardeen. bibliog diags Phys R 71:717-27 My 15 '47
What you should know about industrial electronics; electronic rectifier equipment. diags Am Mach 90:138 O 10; 130 O 24; 138 N 7; 134 N 21 '46

See also
Ignitron
Radio rectifiers
Thyratron

ELECTRIC refrigerators. See Refrigerators, Electric

ELECTRIC research
British electrical and allied industries research association annual general meeting, London, Feb. 14. Elec R (Lond) 140:341-2 Mr 7 '47
Electrical and allied developments of 1946; research and laboratory investigations. G. Bartlett. il diag Gen Elec R 50:12-15 Ja '47
Inductance of wires and tubes. A. H. M. Arnold. Inst E E J 93 pt 2:532-4 D '46
National physical laboratory; investigations in the electricity division. il Electrician 138: 1763-4 Je 27 '47
Progress in engineering knowledge during 1946. P. L. Alger and others. il diags Gen Elec R 50:12-50+ bibliog(p52-5) Mr '47
Super high voltage transmission research begins at Tidd 500-kv test project. il Edison Elec Inst Bul 15:371-4 O '47; Abstract. Elec World 128:84-6 O 11 '47
Work of the E.R.A.; annual report. Electrician 138:441-2 F 7 '47; Engineer 183:193 Mr 7 '47; Engineering 163:299-300 Ap 11 '47

History
Historic researches. Engineer 184:380-1 O 24 '47

ELECTRIC resistance
Analysis of light alloys based on electrical resistivity. L. Rotherham and J. I. Morley. il diag Engineering 163:416-18 My 16 '47; Abstract. Metal Prog 51:1002+ Je '47
Carrier and radio frequency resistance for annealed bare copper wire; table. Elec World 127:116 Ap 12 '47
Cationic exchange reactions of cellulose and their effect on insulation resistance. H. F. Church. Soc Chem Ind J 66:221-6 Jl '47
Chart to determine temperature rise by change of resistance. L. Gorin. Elec World 127:68 F 1 '47
Corrosion surveys; measuring soil resistivity. M. E. Parker, jr. diag Pet Eng (Ref annual) 18:270+ Jl 1 '47
Effect of physical adsorption on the electrical resistance of activated carbon. R. McIntosh and others. bibliog diag J Chem Phys 15: 17-27 Ja '47
Electric logging; factors which affect true formation resistivity. S. J. Pirson. bibliog diags Oil & Gas J 46:76-7+ N 1 '47
Electric logging; resistivity curves. S. J. Pirson. diags Oil & Gas J 46:94-5+ O 25 '47
Electrical observations of the austenite-martensite transformation in steel. A. W. McReynolds. bibliog il diags J Ap Phys 17:823-33 O '46; Abstract. Metal Prog 51: 820+ My '47
Electrical resistivity an aid in core-analysis interpretation. G. E. Archie. diags pl Am Assn Pet Geologists Bul 31:350-66 F '47
Electrolytic behavior in the presence of a tension impulsion. L. B. Villaseca and C. G. Herrera. bibliog J Chem Phys 15:152 Mr '47
H.f. resistance and self-capacitance of single-layer solenoids. R. G. Medhurst. diags Wireless Eng 24:35-43, 80-92 bibliog(p92) F-Mr '47

ELECTRIC resistance—*Continued*
Insulation resistance measurements. E. W. Greenfield. diags Elec Eng 66:698-703 Jl '47
Length changes of activated carbon rods caused by adsorption of vapors. R. S. Haines and R. McIntosh. diags J Chem Phys 15:28-38 Ja '47
Measuring of surface and volume resistances. R. I. Witt and others. diags Mod Plastics 24:151-2+ Ap '47
Observations on the failure of 80 nickel-20 chromium alloy at excessive temperatures. H. D. Holler. bibliog Electrochem Soc Trans 92 (preprint 7):101-7 '47
Resistance-temperature relation and thermoelectric properties of uranium. A. I. Dahl and M. S. Van Dusen. diag J Res Nat Bur Stand 39:53-8 Jl '47
Star connected resistances, taking balanced currents. G. W. Stubbings. Electrician 139: 395-6 Ag 8 '47
True resistivity determination from the electric log; its application to log analysis. H. G. Doll and others. bibliog diags Oil & Gas J 46:297-8+ S 20 '47
Wash water tests prevent flashovers. G. L. Hill. il diag Elec World 127:133 My 24 '47

See also
Electric conductivity — Ohm's law
Insulation (electric) — Wheatstone bridge

ELECTRIC resistors
Alkaline earth porcelains possessing low dielectric loss. M. D. Rigterink and R. O. Grisdale. Am Cer Soc J 30:78-81 Mr 1 '47
Deposited carbon resistors. il R Sci Instr 18: 380 My '47
Maintenance of industrial electronic equipment. il Power Pl Eng 50:94 N '46
Materials for wire-wound resistors, some recent developments. E. E. Marbaker. il Materials & Methods 25:83-8 My '47
Multiple resistances of *n* resistors. L. Dunbar. diags Inst E E J 93 pt 1:533-6 N '46
Properties and uses of thermistors; thermally sensitive resistors. J. A. Becker and others. bibliog il diags Elec Eng 65:Trans 711-25 N '46; Same. Bell System Tech J 26:170-212 Ja '47
Semiconductors emerge in new device, the thermistor. R. H. Müller. il Anal Chem 19:sup29A-30A Ap '47
Speedy emergency repairs. diags Can Min J 68:179 Mr '47
Temperature-dependent resistors, use as electric circuit elements. W. H. B. Cooper and R. A. Seymour. il diags Wireless Eng 24:298-306 O '47
Thermistors at high frequencies; impedance measurements on cyclotron models. J. Walker. Wireless Eng 24:28 Ja '47
Thermo-variable resistors; glass-bulb Urdox resistor. C. C. Roloff. il diags Elec R (Lond) 140:315-16 F 14 '47

ELECTRIC roasters
Electric roaster features simplicity. il diags Machine Design 19:139-40 My '47
Roaster days are here again; sales guide. Elec West 98:117-20 Je '47

ELECTRIC safety lamps. See Safety lamps, Electric

ELECTRIC saws. See Saws, Electric

ELECTRIC service, Rural
Agricultural development clinic emphasizes promotion of farmers' welfare. Edison Elec Inst Bul 15:33-5+ F '47
Apply line reclosers to cut costs. J. B. Hendricks. diag Elec World 128:71+ S 27 '47
Area development by utilities called necessary at clinic. Elec World 127:41 F 1 '47
Chemurgy program for power; Idaho power company's adventure in community enterprise. R. E. Gale. Pub Util 39:766-9 Je 5 '47
Distribution in Lancashire. il map Elec R (Lond) 139:719-23 N 8 '46
Distribution system economics for light load density areas. O. B. Falls, jr. Elec World 127:54-5 F 1; 105-7 F 15 '47
Dumfries rural network. il Electrician 138: 1663-4 Je 20 '47
Edison electric institute defines policy on farm electrification. Edison Elec Inst Bul 14:357 O '46
Experience in contracting rural line construction. G. R. George. Elec World 126:93-4 N 23 '46
Farm electrification; the industry's next objective. F. R. Innes and J. D. Wilson. il map Elec World 127:111-30 My 24 '47
First farm development clinic attracts big attendance at Fairmont, West Virginia. Pub Util 39:441-3 Mr 27 '47
500-kva. unit substations adopted for Arizona system. il Elec World 127:118 F 15 '47
Five year rural electrification plan agreed on in United Kingdom. For Comm W 25: 31-2 D 28 '46
In-service farm electrification training. P. T. Montfort. Edison Elec Inst Bul 14:390-2 . N '46
It pays to cut core loss of rural transformers. M. W. Rothpletz. Elec World 127:178+ Ja 18 '47
Keeping rural right-of-way acquisition costs down. Elec World 127:167-8 Ja 18 '47
Lightning, grounds and fuses on rural lines. G. J. Williams. Elec World 127:188 Ja 18 '47
Line shorting contactor betters service to dairy. D. R. Pattison. diag Elec World 126: 100 D 7 '46
Our ten years' experience with territorial development; Monongahela power company. A. C. Spurr. Edison Elec Inst Bul 15:36-8 F '47
Power for farms of the nation. G. C. Neff. Pub Util 38:791-5 D 19 '46
Rural electrification and electroagriculture. M. M. Samuels. Elec Eng 66:20-5 Ja '47
Rural electrification; the use of the single-phase system of supply. J. S. Pickles and W. H. Wills. maps diags Inst E E J 93 pt 2:501-10 D '46; Abstract. Engineering 161:390 Ap 26 '46; Discussion. Inst E E J 93 pt 2:510-16 D '46; Elec R (Lond) 138:645-6 Ap 26 '46; Electrician 136:1031-3 Ap 19 '46
Rural line construction. diag Elec World 127: 78 Je 21; 128:102 Jl 5 '47
Rural lines; tabulated data, 1943-1946; 1947 estimated. Elec World 127:161 Ja 18 '47
Rural prosperity pays; agricultural development program of Portland general electric co. F. G. Mackaness. Elec West 98:93 Je '47
Scottish county scheme; Dumfriesshire rural development. il map Elec R (Lond) 140:1003-8 Je 20 '47
Standard rural lines; sag-tension charts for solid copper conductors. J. McCombe. Elec R (Lond) 140:938-41 Je 6 '47
Total rural service; Sierra foothill project, Pacific gas and electric co. il map Elec West 97:63-6 N '46
Voltage calculation on multi-grounded rural lines. J. S. Francis. diag Elec World 127: 59-60 Mr 29 '47
What is the pay off on agricultural development. C. H. Leatham. Edison Elec Inst Bul 15:39-40 F '47
What's the job in rural electrification. L. W. Gray and others. Edison Elec Inst Bul 15: 288 Ag '47

See also
Electricity on the farm — Rural electrification administration

Cooperative lines
Contract made for joint use of power facilities; Texas co-op and Southwestern Bell co. make five-year agreement. Elec World 128: 46 S 27 '47
Co-op turtle that wanted to fly; Missouri utility co-operative caught between financing and bookkeeping problems. E. R. Abrams. Barron's 26:7 D 23 '46
Dealing with organized labor major problem for REA co-ops. Elec World 127:129+ Ja 18 '47
Four co-ops will buy rural lines of Missouri Edison. Elec World News ed 127:20 My 17 '47
Municipal and co-op systems in Tennessee valley organize. Elec World News ed 127:5 Mr 22 '47
Planning a rural system for twenty-five-fold growth; Clarke electric cooperative, inc. C. M. Stanley. maps Elec World 127:50-2 Ap 26 '47
SPA seeks more customers for power from Denison dam. Elec World News ed 128:11 Jl 26 '47
Utilities buying transmission facilities of 2 cooperatives. Elec World 127:79 My 10 '47

ELECTRIC shavers
Hair-line precision in shaver making; illustrations with text. W. Rudolph. diag Am Mach 91:120-1 Je 19 '47

Rating

Electric shavers and a spring-wound shaving device. il diag Consumers Res Bul 20:11-13 Ag '47

ELECTRIC ship propulsion. See Ship propulsion, Electric

ELECTRIC shock. See Electricity, Injuries from

ELECTRIC shops (retail trade)
Consumers are sore. G. E. DeNike. il Radio N 37:53+ F '47

Dressed for selling. il Elec West 97:86 D '46

Good sense in business management. K. Hampton. il Elec West 96:77-8 Ja; 115-16 F; 77-8 Mr; 101-2 Ap; 79-80 My; 113-14 Je; 97:71-2 Jl; 85-6 Ag; 99-101 S; 96-7 O; 85-6 N; 80 D '46

It's not size that counts; shop of H. Abrams. il Elec West 98:106 My '47

Opportunity for success in radio and appliance stores. I. Carey. il Dom Comm 34:43-6 N '46

Retailing basics that pay off. L. Bader. il Radio N 37:42-3+ F '47

Stores with modern ideas; illustrations with text. Elec West 98:108 F '47

ELECTRIC signals
Remote indication by a Wheatstone bridge system; signaling system for sewage pumping system. I. M. E. Aitken. diags Inst E E J 94 pt 2:194-205 Je '47

See also
Railroads—Signals

ELECTRIC signs
Leigh's most spectacular spectaculars. il Bsns W p20 Ap 26 '47

ELECTRIC smelting. See Smelting, Electric

ELECTRIC spark
Electrostatic sparks. diags Coal Age 52:116+ Ap '47

High-voltage spark replaces mechanical drilling of diamond dies. Mach 53:184 My '47

Localized afterglows observed with long sparks in various gases. J. D. Craggs and others. bibliog il diags J Ap Phys 18:919-28 O '47

See also
Electric discharges
Spark gap

ELECTRIC standards
Electrical standardization and AIEE. H. E. Farrer. Elec Eng 66:768-71 Ag '47

Facets of international standardization studied at all-day conference; summer meeting, AIEE. Elec Eng 66:812-15 Ag '47

Field standards tested without sine wave set. F. Salmon. diag Elec World 128:120-1 S 13 '47

How international electrical standards work is done by the International electrotechnical commission. Ind Stand 18:196-7 Ag '47

Procedure for testing rotating standards. Elec World 128:92+ Ag 16 '47

Proposed frequency band designations. Elec Eng 66:471 My '47

Sign of reactive power; AIEE committee report on proposed change. diags Elec Eng 65:512-16 N '46; Discussion. 65:598; 66:107-10, 206-8, 321-3, 514-17 D '46-Mr, My '47

See also
Electric equipment—Standards
Electric motors—Standards

ELECTRIC storage battery company
Diversified stake in auto accessories. G. S. Kent. Mag of Wall St 80:166 My 10 '47

ELECTRIC stoves
Electric range line features automatic conveniences, new model for small spaces; Speedliner and Bantam. il Arch Forum 86: 184+ Ap '47

Improving electric cookers. P. G. C. Wilding. bibliog il Elec R (Lond) 140:445-7 Mr 21 '47

Interstate differences in the saturation of wired homes, mechanical refrigerators and electric ranges, and their causes. H. G. Knaf. J Land & Pub Util Econ 22:386-92 N '46

See also
Electric roasters

Manufacture

Conveyor line at Kalamazoo stove & furnace co.; illustrations with text. Cer Ind 48:94 Ap '47

Modern finishing methods; Landers Frary & Clark. L. A. Brown. il plans diags Am Mach 91:77-81 Ja 30 '47

Production line rustproofing; Banox process; Newark stove co. A. D. Stout, jr. il Iron Age 160:64-5 O 30 '47

Royal ordnance factories makes cookers. il Elec R (Lond) 140:879-82 My 30 '47

Merchandizing

Day will come. Elec West 98:109-12 F '47

Rating

Electric stove-toaster and a broiler; Vogue kitchenette; Hollywood broiler, later model. il Consumers Res Bul 19:16-18 Ap '47

Everhot electric table stove. il Consumers Res Bul 20:31 Jl '47

ELECTRIC substations
Analyzing substation structural weights. Elec World 127:169 Ja 18 '47

500-kva. unit substations adopted for Arizona system. il Elec World 127:118 F 15 '47

Large rectifier station practice. D. I. Bohn and others. il Elec Eng 66:957-63 O '47

Lightning strikes a Wisconsin substation; illustrations with text. Elec World News ed 128:16-17 O 4 '47

London load building. il map Elec R (Lond) 140:243-9 F 7 '47

Long Island adding four rectifier substations. il Ry Mech Eng 121:597-8 O '47

Major electrical connections of latest distribution substances on Philadelphia electric system. E. B. Shew. diags Edison Elec Inst Bul 15:49-51 F '47

Multiplication of substations found most economical. M. A. Polster. maps Elec World 127:109-11 Mr 15 '47

Planning a rural system for twenty-five-fold growth; Clarke electric cooperative, inc. C. M. Stanley. maps Elec World 127:50-2 Ap 26 '47

Powerhouse design for brickbuilders; illustrations. Brick & Clay Rec 109:22 D '46

Primary network operating problems. A. M. MacDonald and A. W. Funkhouser. diags Elec World 128:52-4 Ag 30 '47

Reducing foundation design work for substations. diag Elec World 127:74 Ap 26 '47

Unit substations main topic of P.E.A. committee meetings. Elec World 127:45 Mr 1 '47

Design

Design of indoor and outdoor substations; committee report, A.A.R. Electrical section. Ry Mech Eng 120:597 N '46

New substations at investment savings. M. R. Kimbrell, jr. il diags Power Pl Eng 51: 80-2 O '47

Package substation; with cost data. E. M. Hunter and others. il diags Gen Elec R 49: 10-18 D '46

Equipment

Capacitors switched by bus tie breaker. A. A. Straub. il diag Elec World 128:45-6 Ag 30 '47

Load-ratio control quipment for unit substations. R. E. Coates and E. M. Hunter. il diags Gen Elec R 49:8-12 N '46

Master unit substation relay and control arrangements. E. M. Hunter and J. W. Yetter. il diags Gen Elec R 50:24-8 S '47

Mercury-pool rectifiers supply dc when and where you want it. S. R. Durand. il diags Power 91:614-16+ S '47

Mobile hoist changes insulators. W. H. Blankmeyer. il Elec World 127:65 Je 21 '47

Reconditioning substation cable. diags Elec World 128:92 Ag 16 '47

Unit substations for power distribution. A. B. Sinclair. Pulp & Pa of Can 48:83-4 Jl '47

ELECTRIC substations—*Continued*

Fires and fire protection

Fire underwriting; electric light and power substations. W. O. Lincoln. Spectator (Property ed) 12:12 My 8 '47

Lessons of a high-tension substation fire. Elec World 127:121 Mr 15 '47

Prevention and extinguishing of insulating oil fires in power stations and substations. H. K. Sels. Edison Elec Inst Bul 15:379-81 O '47

Supervisory control

Four remote control centers supervise 46 substations. T. G. LeClair. il map plan Elec World 128:78-9 Ag 16 '47

Operational control of electricity supply systems. W. Kidd and E. M. S. McWhirter. bibliog il plans diags Inst E E J 92 pt 2: 311-22 Ag '45; Discussion. 92 pt 2:322-6; 94 pt 2:33-45 Ag '45, F '47

ELECTRIC substations, Outdoor

Build substations from unit assemblies. F. C. Brogan. il diags Elec World 128:57 S 27 '47

ELECTRIC substations, Portable

Mobile substation leads. il Elec World 128:47 Ag 30 '47

ELECTRIC switches. See Electric switchgear

ELECTRIC switchgear

Adapting metal-clad switchgear to plant addition; abstract. C. C. Dodge. diag Elec World 127:132+ Mr 15 '47

Adjustable autotransformer and knee switches for small tools. D. Campbell. diags Am Mach 91:141-2 Mr 13 '47

Automatic switching schemes for capacitors. W. H. Cuttino. diags Power Pl Eng 51: 101-3+ Je '47

Automatic switching with line switches. J. B. Hendricks. diags Elec World 128:114-15 O 11 '47

Box and paddle silverplates blades and clips. M. D. Pollock. diags Elec World 128:124+ O 25 '47

Crompton Parkinson 150-MVA switchgear for distribution systems. il Engineering 164:153 Ag 15 '47; Engineer 184:40 Jl 11 '47

Electric blasting switches, underground mines, Lake Superior district. M. S. Petersen and F. E. Cash. 7pls U S Bur Mines Information Circ 7372:1-11 '46

Five-way oil switch permits low-cost loop feed. O. O. Rands. il diag Elec World 128: 70 S 27 '47

Flameproof switch and fuse unit. il Engineer 184:349-50 O 10 '47

Fuse-switches; selection of most suitable types. J. Shepherd and P. J. Shipton. il Elec R (Lond) 140:530-2 Ap 4 '47

How to apply and maintain limit switches. W. H. Bloodworth. il Factory Management 105:97-9 Mr '47

Inexpensive 230-kv. sectionalizing switch. il Elec World 127:122+ Je 7 '47

Master switches; what they are and how to service them. L. J. Parkinson. il diag Factory Management 105:126-8 S '47

Mercury switch smooths loading at Sinclair's new terminal in Detroit. W. C. Uhl. il diags Nat Pet N 39:24+ Mr 12 '47

Modern switchgear. R. N. Buttrey. il diags Electrician 137:236-40, 457-60, 853-5, 1123-5, 1585-7, 1745-7; 138:433-5, 929-32 Jl 26, Ag 16, S 27, O 25, D 6, 20 '46, F 7, Ap 11 '47

Performance of high-voltage oil circuit-breakers incorporating resistance switching. H. E. Cox and T. W. Wilcox. diags Inst E E J 94 pt 2:351-61 Ag '47; Abstract. Engineering 162:620-1 D 27 '46; Discussion. Inst E E J 94 pt 2:367-71, 655-62 Ag, D '47

Precision snap-acting switches. A. L. Riche. il diags Product Eng 18:135-40 F; 112-16 Mr '47

Pressure-operated switch simplifies remote control of loading rack pumps. il diag Pet Processing 2:259 Ap '47

Pressure switch adapted for turbine unloader. G. F. Campau. diag Elec World 126: 118 N 9 '46

Spare transformer switched hot. C. E. Plummer. il Elec West 99:68-9 Ag '47

Switchboard model pilots substation operation; Wright aeronautical corporation, Wood-Ridge, N.J. J. St Andre. il diag Factory Management 105:110-11 F '47

Switchgear developments. F. O. Mason and L. H. Orton. diag Electrician 138:1523-4+ Je 6 '47

Switchgear developments; low voltage synchronous circuit-making unit. H. W. Baxter. il diags Electrician 138:1444-5 My 30 '47

Switchgear, old and new; abstract. J. B. Gwynne Lewis. Electrician 139:1223 O 24 '47

Switching of large power. J. B. MacNeill. il Elec Eng 66:750-3 Ag '47

Tiny electric switches; Switchette. il Gen Elec R 49:56 N '46

Transfer single-phase load without interruption. F. E. Wilterding. il diag Elec World 128:124 O 25 '47

See also

Electric circuit breakers
Electric contacts
Electric fuses

Control

Adequate control voltage from storage batteries. W. A. Holland. Elec World 127:48-50 Mr 29 '47

Manufacture

Air presses lighten the job; Arrow, Hart & Hegeman mfg. co. T. W. Shenton. diags Am Mach 91:95 Ag 28 '47

Effective layout and handling mean lower costs, more production; switchbox production at Square D. H. S. Wharen. diags Am Mach 91:114-15 Jl 17 '47

Flow production; specialized transformer and switchgear manufacture. il Elec R (Lond) 140:67-9 Ja 10 '47

Increasing production; success of bonus scheme at Twickenham switch factory. il Elec R (Lond) 139:1039 D 20 '46

Looped conveyor saves space. A. Ristow. il diags Am Mach 91:106-8 N 6 '47

Making special switches. il Elec R (Lond) 139:706 N 1 '46

New switchgear works of Erskine, Heap & co. il Elec R (Lond) 140:365-6 Mr 7 '47

Testing

Testing switchgear operation. V. Ananin and B. J. Prigmore. diags Elec R (Lond) 140: 3-5 Ja 3 '47

ELECTRIC symbols

Basic graphical language can expand for complex terms; new American standard graphical symbols for electric apparatus. Ind Stand 18:145-6 Je '47

Standardized symbols for electric power and control. diags Elec World 127:172 Ja 18; 70 F 1; 122 F 15 '47

See also

Electronics—Symbols

ELECTRIC testing

Incandescent lamps as electrical load for testing. S. Keilien. il diags J Ap Phys 18:769-73 Ag '47

Periodic secondary voltage tests. Elec World 127:74+ F 1 '47

Routine protection testing. V. Ananin. Elec R (Lond) 140:865-6 My 23 '47

Scheduling periodic primary circuit tests. Elec World 126:113+ D 7 '46

See also

Dynamometers
Electric instruments
Electric measurements
also subdivision Testing under special headings, e.g. Electric transformers; Insulation (electric)

ELECTRIC testing of metals

Metallurgy and electricity. L. Sanderson. Elec R (Lond) 140:725-7 My 2 '47

ELECTRIC thawing. See Thawing, Electric

ELECTRIC toasters

Rating

Automatic toasters. Consumers Res Bul 18: 21 D '46; 19:11-13 Ap; 6 Je '47

ELECTRIC tools

Adjustable autotransformer and knee switches for small tools. D. Campbell. diags Am Mach 91:141-2 Mr 13 '47

Electric tools; induction or universal motor? Electrician 137:1743-4 D 20 '46

Power-driven vibrating tools; health hazards. il Safety Eng 94:19+ S '47

ELECTRIC tools, Portable
Horsepower on the job cuts building costs; with list of manufacturers. il Am Bld 69: 74-81+ My '47
Ingersoll-Rand new multipurpose electric impact tool. il Comp Air Mag 52:176-7 Jl '47; Steel 121:108 Jl 7 '47; Iron Age 160:64 Jl 17 '47; Bsns W p70 Je 28 '47
Mechanized farms open new industrial market for Independent tools. Ind Marketing 32:48+ Ag '47
Portable electric drills for coal. il Engineering 164:33 Jl 11 '47

Safety measures
Electrical hazards of portable tools. V. H. Tousley. il Safety Eng 92:78+ O '46

ELECTRIC traction
Electrical and allied developments of 1946; land transportation. G. Bartlett. il Gen Elec R 50:44-6 Ja '47
Fly-wheel propulsion; Electrogyro system. il diag Engineer 183:524, 547 Je 13-20 '47; Engineering 163:540-1 Je 27 '47
Traction developments. J. H. Cansdale. il Electrician 138:699-700 Mr 21 '47
See also
Electric locomotives
Electric railroads
Electric trucks
Street railroads
Subways
Trolley buses

ELECTRIC tractors
Russians develop electric farm tractor. Elec World 127:80+ Ap 26 '47

ELECTRIC tractors, Industrial
Warehouse trains pick stock for retail grocery stores; National tea company. il plan Food Ind 19:53-5 Ja '47

ELECTRIC transformers
About transformers; design and construction. G. O. Castell. il diags Electrician 139: 462-6, 533-7, 998-1001, 1140-4 Ag 15-22, O 3, 17 '47 (to be cont)
Better welding transformers; Micanite tape separators. H. K. Whitehorn. diags Elec R (Lond) 140:271-2 F 7 '47
British electric transformer co.'s three-phase 50 mva transformer. il Electrician 138:123 Ja 10 '47
Burden considerations in application of transformer type instruments. P. MacGahan. diags Power Pl Eng 50:80-2 N '46
Choice of cable and transformer size for portable spot welders. M. Zucker. Welding J 26:233-8; Discussion. A. C. Johnson. 238-9 Mr '47
Current and voltage transformers for protective-gear purposes; discussion. Electrician 137:1449 N 22 '46
Low-impedance transformers pay distribution dividends. Elec World 126:102-3 N 9 '46
Modern switchgear. R. N. Buttrey. il Electrician 138:929-32 Ap 11 '47
Progress in engineering knowledge during 1946. P. L. Alger and others. diag Gen Elec R 50:30-1 Mr '47
Quick testing of CPS transformer breakers. il diag Elec World 128:104 Jl 19 '47
Spare transformer switched hot. C. E. Plummer. il Elec West 99:68-9 Ag '47
Transformer for balancing load on 3-phase supply. L. Cummins. diag Elec World 128: 112 Jl 5 '47
Transformer load estimates. Elec World 127: 132-3 My 24; 118+ Je 7; 85+ Je 21 '47
Transformer welders served by rural lines. F. B. Scott. il Elec World 127:66-7 Je 21 '47
Transformers in Germany. Elec R (Lond) 139:1050 D 27 '46
Transformers in the United States. K. W. McBain. Inst E E J 94 pt 1:182-3 Ap '47
See also
Radio transformers

Autotransformers
Adjustable autotransformer and knee switches for small tools. D. Campbell. diags Am Mach 91:141-2 Mr 13 '47
Designing an auto-transformer. R. L. Parmenter. il diags Radio N 36:47+ D '46
Rectifiers for electroplating; variable autotransformer control. L. W. Reinken. il diags Metal Finishing 45:58-62 Ap '47
Standard transformers as 2:1 autotransformers. R. C. Schmitz. diag Elec World 128: 138+ S 13 '47

Connections
Bank improvised from available transformers. B. R. Askew. diag Elec World 127:146 My 24 '47
C.T. secondary networks; interconnection in three-phase circuits. G. W. Stubbings. diags Elec R (Lond) 141:370-3 S 5 '47
Primary transformer connections metal-clad. O. O. Rands. il Elec World 128:123 O 25 '47
Relaying delta-wye transformers. S. L. Scheffer. diags Elec World 128:51-2 Ag 30 '47
12,000/460-volt service by unusual connections. il diags Elec World 128:131-2 O 11 '47
Useful transformer connections for powering industrial machinery. H. K. Pritchard. il diags Product Eng 18:103-8 Mr '47

Cooling
Heat removal from electrical apparatus. T. W. Reynolds. diag Heat & Ven 44:78-82 Ap '47

Failures
Transformer failures and fuse blowings; 1935-1944 experience of 21 electric utilities in Pennsylvania; tabulations. Elec World 127: 61 Je 21 '47

Fires and fire protection
Power plant fire protection. P. W. Eberhardt. il Power Pl Eng 50:76-7 D '46

Inspection
Inspecting distribution transformers. Elec World 126:106 N 23 '46

Installation
Growing trend toward direct-bolting of transformers. diags Elec World 128:134+ O 25 '47
How to mount three 50-kva transformers on one pole. L. G. Fanning. il Elec World 128: 82+ S 27 '47
Improved transformer rack. G. Brunzell. il Elec World 128:118 O 11 '47
Outdoor primary metering with lightning protection. R. A. Markel. il Elec World 127: 106-7 Ap 12 '47
Platformless mount for lighting transformers. il Elec World 126:113 D 7 '46
Three-phase bank hung on two-pole rack. W. P. Harrison. diags Elec World 127:70 Je 21 '47
Transformer bank mounted on line poles. R. H. MacKinnon. il Elec World 127:52 Ja 4 '47

Losses
It pays to cut core loss of rural transformers. M. W. Rothpletz. Elec World 127:178+ Ja 18 '47
Metering with transformer-loss compensators; abstracts. G. B. Schleicher. bibliog il diags Elec Eng 66:538-42 Je '47; Elec World 128:95-7 Jl 19 '47

Manufacture
Flow production; specialized transformer and switchgear manufacture. il Elec R (Lond) 140:67-9 Ja 10 '47
Making power transformers. il Elec R (Lond) 139:911-16 D 6 '46

Oil
See Insulating oil

Protection
Grounding of instrument transformer secondary circuits. Elec Eng 66:335-7 Ap '47
Magnesium anode protection of transformer tanks. L. J. Gorman. diags Elec World 127: 74 Mr 29; 111-12 Ap 12; 58-9 Ap 26 '47
Melamine helps protect transformers; eight-cavity transfer mold. il Mod Plastics 24: 119 My '47
Relay protection of transformers. Elec Eng 66:964-8 O '47
Simplicity in transformer protection; gas-actuated relays. E. T. B. Gross. bibliog il diags Elec Eng 66:564-9 Je '47
Six transformers pinch hit for two. J. East. diag Elec World 127:128+ Ap 12 '47
Two 115-kv fuses can open 230 kv. il Elec World 128:65 S 27 '47

ELECTRIC transformers—*Continued*

Standards

Short-circuit requirements for transformers. A. N. Garin. Elec Eng 66:771-3 Ag '47

Transformer practice with reference to standardization. A. G. Ellis. diags Inst E E J 93 pt 2:285-302 bibliog(p302) Je '46; Discussion. 93 pt 2:302-9; 94 pt 2:252-68, 530-4 Je '46, Je, O '47

Tables, calculations, etc.

Chart gives transformer demands in residential areas. J. Wallis. Elec World 128:110 Jl 19 '47

Watt and var solution for unbalanced loads. E. C. Goodale. Elec World 128:86+ Ag 2 '47

Watt and var solution of voltage problems. E. C. Goodale. Elec World 128:114+ Jl 19 '47

Tap changing

Load-ratio control equipment for unit substations. R. E. Coates and E. M. Hunter. il diags Gen Elec R 49:8-12 N '46

Temperature

Graphical determination of heating attainment factor for transformers installed in vaults. J. E. Gahagan. Elec World 127:72-3 Mr 1 '47

How to maintain temperature indicators for generators and large transformers. W. F. Dunkle. diag Elec World 128:106 Jl 19; 80 Ag 2; 90 Ag 16; 66 Ag 30; 132 S 13; 78 S 27 '47

Testing

Brief absorption test index of dielectric condition. R. Blackway. il Elec World 127: 101-3 Ap 12 '47

Current transformer testing. G. W. Stubbings. diag Elec R (Lond) 139:1037-8 D 20 '46

Fry method of transformer testing. R. L. Grimm. Locomotive 46:146-7 Ja '47

Oklahoma gas & electric company method for load determination on distribution transformers. P. Shelley. Edison Elec Inst Bul 15:17-19 Ja '47

Tests of distribution transformers made with lamp. R. A. Caldwell. diags Elec World 127: 116-17 F 15 '47

Windings

About transformers; mechanical design of windings. G. O. Castell. il diags Electrician 139:533-7, 998-1001 Ag 22, O 3 '47

ELECTRIC transient phenomena

Transient response of filters. C. C. Eaglesfield. diag Wireless Eng 23:306-7 N '46

Transient response of filters. D. G. Tucker. bibliog il diags Wireless Eng 23:36-42, 84-90 F-Mr '46; Discussion. 24:27-8, 93-4, 126-7 Ja, Mr-Ap '47

Transient response of v.f. couplings; compensated networks for wide-band amplifiers. W. E. Thomson. bibliog diags Wireless Eng 24:20-7 Ja '47

ELECTRIC transmission

D.c. versus a.c. transmission; comments on paper by C. Ehrensperger. A. M. Taylor. Elec R (Lond) 140:491-2 Mr 28 '47

Long-distance a-c power transmission economics; with comparative costs. S. B. Crary and I. B. Johnson. bibliog diags Gen Elec R 50:32-40 Jl '47; Same cond. Elec Eng 66: 793-7 Ag '47

Progress in engineering knowledge during 1946; power transmission. P. L. Alger and others. Gen Elec R 50:39-40 Mr '47

Regional transmission and distribution of electricity. Inst E E J 94 pt 1:87-90 F '47

Super high voltage transmission research begins at Tidd 500-kv test project. il Edison Elec Inst Bul 15:371-4 O '47

Transmitting a half-million volts. il Bsns W p68+ O 4 '47

See also

Electric cables
Electric conductors
Electric distribution
Electric driving
Electric lines
Electric plants—Interconnection
Electric switchgear
Voltage regulation

Tables, calculations, etc.

Transmission losses; assessment of their annual value. J. L. Taylor. Elec R (Lond) 139:657-8 O 25 '46

ELECTRIC trucks

Electric vehicle production; Cleco electric industries, ltd. il Elec R (Lond) 139:995 D 13 '46

Transport nationalization; possible effects on the electric vehicle. Automobile Eng 37: 88-9 Mr '47

ELECTRIC trucks, Industrial

Amputation no handicap; man minus hand operates electric truck; plant of Carnation company. il Nat Safety N 55:46 My '47

Automatic shifting increases electric lift-truck flexibility. il Steel 119:72 D 23 '46

Automatic sky lift; hydraulic lift electric fork truck. il Automotive & Aviation Ind 95:47 D 1 '46; Ry Age 121:965 D 7 '46

Battery and the electric industrial truck; operation and maintenance. il Mech Handling 34:483-7 S '47

Brush battery electric truck. il Engineer 182: 475 N 22 '46

Charging industrial truck batteries by means of copper-oxide rectifiers. J. J. Buckley. il diags Gen Elec R 50:27-35 Ap '47

Electric industrial truck. il Mech Handling 34:384-5 Jl '47

Electric industrial truck for material handling. C. F. Kells. il Edison Elec Inst Bul 15:317-20 S '47

Electric industrial trucks. B. I. Ulinski. Mech Eng 69:508-9 Je '47

Electric truck for power station fuel recovery. il Mech Handling 34:379-80 Jl '47

Electric truck maintenance suggestions. A. E. Dorod. il Paper Ind 29:423-4 Je '47

Electric trucks in the textile industry. il Mech Handling 33:676-8 N '46

Elwell-Parker fork-type truck has 18-foot reach. il Ry Age 121:965 D 7 '46

Fork trucks for heavy handling sheet steel at American laundry machinery company. H. W. Knox. il Factory Management 104: 138-9 O '46

German battery electric vehicles. Mech Handling 33:763-6 D '46

Hammermill traffic control speeds its operations. il Paper Tr J 124:21+ Mr 20 '47

Harbilt electric truck. il Mech Handling 34: 97 F '47

Lower battery cost by better charging; Sunshine Biscuits. E. W. Kerwin. il diag Factory Management 104:104-5 O '46

Material handling survey of rubber goods industry. il India Rubber World 116:351-4 Je '47

Mechanization of freight station simplifies l.c.l. handling. il Ry Age 123:438-40 S 13 '47

New equipment. il Iron Age 158:99-100 N 14 '46

Platform trucks speed material flow in forge shop. il Iron Age 159:62 F 27 '47

Power truck fleet solves tough handling problem. il Factory Management 105:74-6 Ap '47

Power trucks simplify strip mill operations; Jones & Laughlin steel corp. Mech Handling 34:305 Je '47

Rotary lift mechanism increases versatility of industrial truck. J. A. Draxler. il diags Machine Design 18:101-4 N '46

Small-plant handling by power truck; Electrolux corporation. il Factory Management 105:123-4 My '47

Survey shows advantages of electric industrial trucks. Elec World 127:146 Mr 15 '47

Tin plate transportation; Carnegie-Illinois steel corporation's Irvin works. il Steel 121: 106+ S 15 '47

Trained dog simplifies short haul service. il Steel 120:105 F 17 '47

Transporting quenching tanks and metal parts. il Steel 119:98+ N 18 '46

Wingrove and Rogers electrically propelled jack trucks. il Mech Handling 33:714 N '46

Control

Dashpot operates controller; electrically powered industrial trucks. B. I. Ulinski. il Machine Design 19:114 Ap '47

ELECTRIC units
Announcement of changes in electrical and photometric units. bibliog U S Nat Bur Stand Circ C459:1-7; pa 5c Supt. of doc. '47; Excerpts. Ind Stand 18:113-15 My '47; Chem & Eng N 25:1090 Ap 14 '47; R Sci Instr 18:382-4 My '47; Product Eng 18:143-4 Je '47
Electrical and light units at the N.P.L. Engineer 184:61 Jl 18 '47; Same. Engineering 164:55 Jl 18 '47; Same. Electrician 139:207 Jl 18 '47
Official announcement from the National bureau of standards regarding changes in electrical and photometric units. E. U. Condon. Franklin Inst J 243:429 My '47
Watt and var solution for unbalanced loads. E. C. Goodale. Elec World 128:86+ Ag 2 '47
Watt and var solution of voltage problems. E. C. Goodale. Elec World 128:114+ Jl 19 '47

ELECTRIC utilities
Graphics, color, language, humanize annual reports. M. S. Rukeyser. il Elec World News ed 128:16-17 Jl 12 '47
Hazard of new inventions; effect of atomic energy on established power and fuel facilities. E. R. Abrams. Pub Util 38:651-7 N 21 '46

See also
Electric industries
Electric lines
Electric plants (central stations)
Electric service, Rural
Holding companies
also Standard gas and electric company

Accidents
EEI accident prevention group studies '46 record. Elec World 128:95 S 13 '47
Fatal accidents in 1945 in electric light and power industry; review and classification with statistics, 1941-1945. D. C. Stewart. Edison Elec Inst Bul 14:415-17 D '46
Five years of fatal accidents in the industry point the way to prevention. D. C. Stewart. Edison Elec Inst Bul 15:297-302+ Ag '47
They did it with pictures; Florida power and light company utilized photographs taken at accident scenes. H. L. Dutkin. il Safety Eng 93:18-19+ Mr '47

Accounting
Accountant's place in management. J. V. Toner. Edison Elec Inst Bul 15:149-51 My '47
American gas association, Edison electric institute conference, Buffalo, April 7-9. Gas Age 99:19-21+ My 1 '47; Edison Elec Inst Bul 15:145-8+ My '47
Cost versus price; a management problem. W. S. Leffler. Pub Util 40:217-25 Ag 14 '47
Dispersion factor in depreciation accounting. A. W. Hastings. Edison Elec Inst Bul 15: 289-92 Ag '47
Effect of plant write-offs on utility investors. O. Ely. Pub Util 39:85-8 Ja 16 '47; Correction. 39:244 F 13 '47
Issue over original cost. O. Ely. Pub Util 40:108-10 Jl 17 '47
John Doe gets his dough; preparation of payrolls and checks; Niagara Hudson power corp. J. A. Williams. Am Gas Assn Mo 29: 185-8 Ap '47
Trends in utility accounting and financing. P. Grady. Edison Elec Inst Bul 15:152-6 My '47
Watt and var basis for accounting. E. C. Goodale. diag Elec World 128:108+ Jl 5 '47

See also
Hydroelectric plants —Accounting

Advertising
Advertising and top management. C. J. Allen. Edison Elec Inst Bul 14:412-14+ D '46
American way of life; advertising campaign of Dayton power & light company. K. C. Long. Pub Util 39:69-72 Ja 16 '47
Electric industry fights back; 170 companies use advertising to oppose government ownership. A. C. Spurr. Adv & Sell 39:47-8 S '46; Same cond. Pub Util 39:48-50 Ja 2 '47
Electrical living. Sales Management 58:97-8 F 1 '47
More for your money; Philadelphia electric company newspaper advertising campaign. R. C. Cox. Pub Util 38:817-21 D 19 '46
Newspaper advertising to commercial customers; New Orleans public service. D. Markstein. Elec World 127:90 Mr 1 '47
Newspapers used for intensive selling job; New Orleans Public Service advertises lighting to retail salesmen. D. Markstein. Ptr Ink 219:96 Ap 25 '47
Personalizing the company pays off in results. il Elec World 127:90+ Mr 29 '47
Planned lighting program shows utilities way to heavier pay load. E. M. Kelley. il Sales Management 59:106+ Ag 15 '47
Power company plays up its part in the local scene; Hawaiian electric co. il Elec World 127:61 Mr 29 '47

Appliance selling
Case for rural merchandising. J. D. Howard. Elec World 126:122 N 23 '46

See also
Electric utilities—Dealer relations

Buildings
Functions fix design of new service building; Ohio public service co. il plan Elec World 126:72-3 D 21 '46

Costs
Construction cost trends and implications. W. F. Ryan. Edison Elec Inst Bul 15:229-34 Je '47; Same. Power Pl Eng 51:116-20 Ag '47; Excerpts. Elec World 127:98-9 Je 7 '47
Maintenance, 1946; with tabulated data, 1938-1945. Elec World 127:147 Ja 18 '47
Material cost trends for electric utilities. R. W. T. Purchas. Edison Elec Inst Bul 14: 379-81+ N '46
Public utility construction cost index, 1921-1946. Eng N 138:609 Ap 17 '47
Rising costs taxing genius of engineers and operators. Elec World News ed 128:11 O 4 '47

Customer relations
Commercial department angle of public relations. R. P. Wagner. Pub Util 40:569-73 O 23 '47
Commercial development of electricity supply as a consumer-service; abstracts and discussion. C. T. Melling. Electrician 138: 1017-19 Ap 18 '47; Elec R (Lond) 140:631-2 Ap 18 '47
Customers have ideas, too; Union electric company of Missouri customer research survey. J. C. Faris. Pub Util 39:671-7 My 22 '47
Grouped records aid customer contacts; Virginia electric & power co. R. G. Schneider. il Elec World 128:61 S 27 '47
How to lose friends, how to make them. E. T. Kaveny. Edison Elec Inst Bul 15:375-8+ O '47
Interviews aid customer relations; Cleveland electric illuminating co. C. G. King. Elec World 128:110-11 O 11 '47
Prime objective; good public relations and load growth; urban representatives' Monongahela power company. Edison Elec Inst Bul 14:350+ O '46
Procedure for interrupting service. Elec World 127:60+ Ja 4 '47
Rate reduction publicity program does effective job. M. H. Frank. il Edison Elec Inst Bul 15:277-8 Jl '47
Reflecting customer attitude accurately to top management. F. J. Porter, jr. Edison Elec Inst Bul 15:173-9 My '47
Service rules and information made available to customers. Elec World 127:73-4 Mr 29 '47
Write as you talk, customers like it. C. L. Sullivan. Edison Elec Inst Bul 15:165-8 My '47

Dealer relations
Tell dealers how to install water heaters; cooperative plan by Union electric co. of Missouri. R. Latimer. Elec World 127:144+ Mr 15 '47
Why are appliance sales reports? Washington water power company shows dealers new record plan. il Elec West 97:90-2 O '46

ELECTRIC utilities—*Continued*

Development work

Agricultural development clinic emphasizes promotion of farmers' welfare. Edison Elec Inst Bul 15:33-5+ F '47

As agriculture goes, so goes our destiny. R. Godley. Edison Elec Inst Bul 15:316 S '47

Chemurgy program for power; Idaho power company's adventure in community enterprise. R. E. Gale. Pub Util 39:766-9 Je 5 '47

First farm development clinic attracts big attendance at Fairmont, West Virginia. Pub Util 39:441-3 Mr 27 '47

How to foster community development; program of Monongahela power company. A. C. Spurr. Pub Util 39:550-4 Ap 24 '47

Our ten years' experience with territorial development; Monongahela power company. A. C. Spurr. Edison Elec Inst Bul 15:36-8 F '47

Rural prosperity pays; agricultural development program of Portland general electric co. F. G. Mackaness. Elec West 98:93 Je '47

Selling the West to industry; development work of British Columbia electric railway, Los Angeles department of water and power, Idaho power co. and Pacific gas and electric. J. E. Underhill and others. Elec West 97:70-6 O '46

Emergency problems

Mutual assistance plan of Connecticut electric utilities and New England telephone company. W. A. Upham. Edison Elec Inst Bul 14:425-6+ D '46; Same abr. map Elec World 126:62-4 D 21 '46

Southeast power pool. C. W. Mayott. map Elec Eng 66:166-70 F '47

Utilities' quick action restores electric service at Texas City. il Elec World 127:33-4 Ap 26 '47

Employees

Anti-strike plan generally approved; summary of opinions on plan of L. H. Hill. Elec World 127:41 Ja 4 '47

Arbitration board announces Duquesne Light case awards. Elec World 127:94 F 15 '47

Conciliation service has given raises in 5 disputes. Elec World News ed 127:5 Ap 19 '47

Courses fit GI's for utility jobs; South Carolina power co. il Elec World 128:114 O 11 '47

Duquesne union asks raise as cost of living increases. Elec World News ed 128:13 N 1 '47

Electric light and power wage structure. J. W. Bloch. Pub Util 39:143-51 Ja 30 '47

Employee information and education. G. S. Dailey. Edison Elec Inst Bul 15:303-6 Ag '47

Employee relations for office workers. M. Hale. Edison Elec Inst Bul 15:161-4 My '47

Employees' magazine promotes utility's growth plans in big way; Arkansas power & light company. Pub Util 39:113-15 Ja 16 '47

For a fuller understanding; Utah power and light co. acquaints employees with company operations, finances, and problems. A. S. Bennion. Pub Util 40:564-8 O 23 '47

For better human relations let's think intelligently. A. E. Grauer. Elec West 98:73-5 Ap '47

Has electronics eloped with engineers? attitude of college students toward career in electric utility industry. il Elec World 128:103-5 O 11 '47

Help wanted; young engineers needed. F. E. Sanford. Elec World 127:90-1 My 10 '47

IBEW will sign no-strike pacts with electric utilities. Elec World News ed 128:12 Ag 23 '47

If only we had faith. E. L. Lindseth. Edison Elec Inst Bul 15:201-7 Je '47; Excerpts. Elec World 127:86-7 Je 7 '47

Job evaluation still on trial; results of survey in electric utilities. Elec World 128:99-102 O 11 '47

Let's train the trainers. W. H. Senyard. Pub Util 39:152-6 Ja 30 '47

Looking to your future. L. E. Osborne. Edison Elec Inst Bul 15:198-200 Je '47; Excerpts. Elec World 127:91 Je 7 '47

NLRB follows Taft-Hartley act in Detroit Edison ruling; refuses to disestablish independent union. Elec World 128:65 Jl 5 '47

Newspaper editors' views on the Pittsburgh power strike. Pub Util 38:770-1 D 5 '46

On-the-job training for veterans of World war II. C. L. Derrick. Edison Elec Inst Bul 14:387-9 N '46

Pittsburgh power strike. L. D. Farrar. Pub Util 39:89-94 Ja 16 '47

Pittsburgh story; power strike. G. Doying and others. il Elec World 126:101-8 D 7 '46

Quick thinking and acting saves lives; EEI resuscitation awards prove. M. B. Woods Edison Elec Inst Bul 15:87-93 Mr '47

Security within industry. A. S. Bennion. bibliog Edison Elec Inst Bul 15:271-3 Jl '47; Excerpts. Elec World 127:101 Je 7 '47

Selection and training of personnel. M. S. Viteles. bibliog Edison Elec Inst Bul 15:74-80+ Mr '47

Shall we arbitrate? strikes in the electric light and power industry must be outlawed. J. C. McIntosh. Pub Util 39:80-4 Ja 16 '47

Sparking the employee magazine; Toledo Edison company. J. H. Barker. Pub Util 40:340-5 S 11 '47

Staffing and management in the electricity supply industry. G. O. McLean. Elec R (Lond) 141:53-5, 137-9 Jl 11, 25 '47

Supervisor and employee training is a selling job; Louisiana power & light co. W. H. Senyard. Elec World 128:72-3 Ag 16 '47

Telling employees of company affairs; how two utilities have done it. Pub Util 39:50-3 Ja 2 '47

Twelve Public service company of Colorado employees received Matthews valor award; prevented destruction of transmission line during blizzard. il Edison Elec Inst Bul 15:244-5 Je '47

UUU dissolves and locals favor affiliation with CIO. Elec World 128:87 O 25 '47

Utility employee training program of educational courses of Commonwealth Edison company. G. E. Trulock. Pub Util 40:205-10 Ag 14 '47

Utility employment and wages, 1946; with tabulated data, 1932-1946. Elec World 127:162-3 Ja 18 '47

Which rules, state or federal labor law? J. M. Gambatese and G. D. Reilly. Elec World 128:100-2 S 13 '47

Whose job is it to lead? B. L. Wells. Elec West 98:39-41 Ja '47

Younger men are needed for industrial leadership. G. C. Neff. Pub Util 39:729-31 Je 5 '47

See also
Electric plants (central stations)—Employees
Electric utilities—Salesmen
Linemen

Equipment and supplies

Power plant equipment in big demand. V. Bell. il Steel 120:61-3 Mr 31 '47

Shaving and incising machines mechanize pole yard operations; Southern California Edison co. F. B. Doolittle. il Elec World 127:112-13 Mr 15 '47

Utility trucks are traveling workshops. F. Sanford. il diags Elec World 128:75-86 Jl 5 '47

Extension policies

Should customer contributions be charged against the utility? M. H. Diels. Pub Util 40:354-64 S 11 '47

Finance

Capital structure of electric utilities; address before National association of railroad and utilities commissioners, Boston. R. B. McEntire. Comm & Fin Chr 166:317+ Jl 24 '47

Class A and class B privately owned electric utilities in the United States; source and disposition of electric operating revenues, 1942-1946; chart. Pub Util 39:505 Ap 10 '47

Electric and gas operating company bank loans. J. F. Childs. Pub Util 39:678-86 My 22 '47

Electric utilities' return on rate base not excessive. O. Ely. Pub Util 40:304-6 Ag 28 '47

ELECTRIC utilities—Finance—*Continued*
Fair return for a sheltered utility; Safe Harbor water power case. O. Ely. Pub Util 39:309-10 F 27 '47
Financial position of the electrical utilities, 1932 and 1946 compared. O. Ely. Pub Util 39:785-7 Je 5 '47
Financial statistics, public utilities, electric and gas operating companies, 1940-1945. C. A. Turner. 443p $15 The author, 208 South La Salle st, Chicago 4 '46
Financial yardstick ratios for gas and electric utilities, 1945. O. Ely. Pub Util 39:46 Ja 2 '47
Five billion dollar construction program of electric power companies. C. E. Oakes. Edison Elec Inst Bul 15:313 S '47
Income and expenses, budget, 1946; with tabulated data, 1932-1946. Elec World 127: 155-9 Ja 18 '47
Legislation for revenue bond financing; Los Angeles bonds for water and power. S. B. Robinson. Am Water Works Assn J 39: 1021-31 O '47
Our broadened responsibilities; need of continual large investment in power companies; present interest rates too low. T. I. Parkinson. Comm & Fin Chr 165:3110+ Je 12 '47
Plant investment, income, earnings and depreciation reserve for major privately-owned electric utilities, 1937-1945; graph. Pub Util 39:174 Ja 30 '47
Revenue, 1946; with tabulated data, 1933-1946. Elec World 127:152-3 Ja 18 '47
Trends in utility accounting and financing. P. Grady. Edison Elec Inst Bul 15:152-6 My '47
$270,000,000 all-time high for added facilities in the West. Elec West 98:68-87 F '47
Utilities keep less of each income dollar but debt cuts leave more for common stocks. J. F. Falvey. Barron's 27:33 Jl 21 '47
Utilities to get bulk of construction funds from consumers through depreciation charges. E. R. Abrams. Barron's 27:33 Ag 18 '47

See also
Electric utilities—Securities
Holding companies

Gas company competition

Electrical cooking in veterans' hospitals checked by formula. Elec World News ed 127:20 Ap 19 '47

Government ownership

Changed Congress may check public power drive. R. N. Larkin. Elec World 126:78-9 N 23 '46
Electricity act; resumé outlining some of the changes which have taken place in the original structure. Electrician 139:757-8 S 12 '47
Electricity bill. Economist 152:92-3 Ja 18 '47
Electricity bill examined; fixing of compensation. Economist 152:109-11 Ja 18 '47; Discussion. 152:142 Ja 25 '47
Electricity bill; extracts from debate in Parliament. Engineer 183:145-6 F 7 '47; Elec R (Lond) 140:253-6, 404-5, 443-4, 485-6, 528-9, 578-9, 669-70, 694, 763, 811-13, 855-6; 141:100-1, 175-7 F 7, Mr 14-Ap 11, 25-My 23, Jl 18, Ag 1 '47; Electrician 138:428-30+, 633, 942, 1251, 1328, 1389, 1460, 1770; 139:54 F 7, Mr 14, Ap 11, My 9-30, Je 27-Jl 4 '47
Electricity bill; new clauses and amendments. Elec R (Lond) 140:1059; 141:33-5 Je 27-Jl 4 '47
Electricity bill; with list of compensation prices. map Electrician 138:188-94 Ja 17 '47
Electricity nationalization; views on the bill. Elec R (Lond) 140:161-2 Ja 24 '47
Future of the electricity supply industry. Engineer 183:566-7 Je 27 '47
I.M.E.A. and the bill; resolutions passed at extraordinary meeting. Electrician 138:561-2 Mr 7 '47; Elec R (Lond) 140:358 Mr 7 '47
It is not in the cards; no such thing as fair government competition with private industry. F. McLaughlin. Pub Util 39:738-45 Je 5 '47
Nationalisation and efficiency; abstracts. H. Nimmo. Electrician 139:1139 O 17 '47; Elec R (Lond) 141:587 O 17 '47
Nationalization of electricity; effect on municipal undertakings. W. Smith. Elec R (Lond) 141:245-6 Ag 15 '47
Nebraska, the public power state. J. King. Pub Util 39:357-63, 419-26, 483-8 Mr 13-Ap 10 '47
Organizing committee for the electricity supply industry. Elec R (Lond) 140:843-4 My 23 '47
Pitfalls in the British system. W. H. Hayes. Edison Elec Inst Bul 15:221-4 Je '47; Excerpts. Elec World 127:84-5 Je 7 '47
Power is next: British Labor party plans to nationalize electricity. Bsns W p114+ D 14 '46
Power rift; two deals between federal agencies and private utilities. Bsns W p29 My 31 '47
Presidential address; electricity bill; abstracts. J. S. Pickles. Engineering 164:18 Jl 4 '47; Elec R (Lond) 140:1051-2 Je 27 '47; Electrician 138:1737-40 Je 27 '47
Public attitude today. C. Robinson. Edison Elec Inst Bul 15:265-8 Jl '47; Excerpts. Elec World 127:92 Je 7 '47
Public corporation; its guiding principles and how it works; abstract. A. Street. Electrician 139:695-6 S 5 '47
Two bills would cut U.S. rule of electricity; Thomas and Dirksen bills. Barron's 27:9 Ap 14 '47
Unanswered electricity questions; Mr Shinwell on the Electricity bill. Economist 152: 249-50 F 8 '47
Utilities rebound from new deal suppression. J. H. Falvey. Barron's 27:7 Mr 31 '47
Wanted, a national power program. N. L. Smith. Pub Util 39:732-7 Je 5 '47
What happened when France nationalized utilities? map Elec World 127:96-9 Mr 15 '47

See also
Electric utilities—Municipal ownership
Hydroelectric plants—Government ownership

Law

Court holds Queens utility not liable in accident suit involving failure of street lights. Elec World News ed 128:20 Ag 9 '47
Electricity supply law; abstracts. R. Birt. Elec R (Lond) 140:1055-6 Je 27 '47; Electrician 138:1749-52 Je 27 '47; Discussion. Elec R (Lond) 141:15-16 Jl 4 '47
Highest New York court rules utility can enjoin commission; Staten Island Edison corp. wins suit. Elec World News ed 127: 13 My 31 '47

See also
Electric utilities—Regulation

Management

Accountant's place in management. J. V. Toner. Edison Elec Inst Bul 15:149-51 My '47
Forgotten stockholder. M. H. Frank. Edison Elec Inst Bul 14:347-9 O '46
Marketing, the next big job. D. G. Mitchell. Edison Elec Inst Bul 15:257-60 Jl '47
Personnel policy should aim at greatest effective output. A. E. Grauer. Elec World 126:55 D 21 '46
Rising costs taxing genius of engineers and operators. Elec World News ed 128:11 O 4 '47
Utility sales policy. G. N. Hawley. Elec West 99:53-4 Jl '47

Meter departments

Who does what in the meter department. Elec World 127:56-7 Je 21 '47

Municipal ownership

Combination utility ups gas rates, lowers electric; Norwich (Conn.) gas and electrical department. T. Braaten. Elec World 127:64 Je 21 '47
Municipal and co-op systems in Tennessee valley organize. Elec World News ed 127:5 Mr 22 '47
Nationalization of electricity; effect on municipal undertakings. W. Smith. Elec R (Lond) 141:245-6 Ag 15 '47

ELECTRIC utilities—Municipal ownership—*Continued*
Public ownership support weak as utility asks charter; Chicago city council begins hearings on new franchise for Commonwealth Edison co. R. N. Larkin. Elec World 128:84-5 O 25 '47
When is a city not a city? Pub Util 40:379-80 S 11 '47

Public relations

Better understanding will do more to solve the industry's problems. J. B. French. Elec West 98:87-8 Je '47
City-wide school lighting promotion gets results in Birmingham, Ala. R. H. Knox. il Elec World 127:66-7 Mr 1 '47
Connecticut Yankee looks at public relations. C. J. Allen. Pub Util 40:135-43 Jl 31 '47
Let's tell America. R. S. Peare. Edison Elec Inst Bul 15:261-4 Jl '47; Excerpts. Elec World 127:94 Je 7 '47
Look at your broadened responsibilities. T. I. Parkinson. Edison Elec Inst Bul 15:213-16+ Je '47
More for your money; Philadelphia electric company newspaper advertising campaign. R. C. Cox. Pub Util 38:817-21 D 19 '46
Public attitude today. C. Robinson. Edison Elec Inst Bul 15:265-8 Jl '47; Excerpts. Elec World 127:92 Je 7 '47
Public relations along the right-of-way. E. S. Mathers. Edison Elec Inst Bul 15:41-3+ F '47
Public's view of the electric power industry. J. C. Bevis. Edison Elec Inst Bul 14:375-8 N '46; Same cond. Pub Util 39:313-18 F 27 '47
Serving the people; a new concept. S. L. Drumm. Edison Elec Inst Bul 15:14-16 Ja '47
Three-way dividend; Hartford Electric Light shares with consumers, employees, and stockholders. Bsns W p18 N 23 '46
What is the pay off on agricultural development. C. H. Leatham. Edison Elec Inst Bul 15:39-40 F '47
What to do about it. E. R. Dunning. Edison Elec Inst Bul 15:269-70 Jl '47; Excerpts. Elec World 127:93 Je 7 '47

See also
Cooking schools

Radio communication

Experience in the 70 megacycle band; Portland general electric co. W. A. Leidigh, jr. il Elec West 99:55-7 Jl '47
Radio equipment for a Canadian power system. Engineer 183:338 Ap 18 '47
Radio signal confusion; Northwestern electric co. W. L. Campbell. Elec West 98:70-1 My '47
Recent F.C.C. actions on mobile radio and the problems facing electric utilities. G. H. Underhill. Edison Elec Inst Bul 15:45-6 F '47
Selective dial calling of radio cars. R. L. Brinton. il Elec World 126:93 N 9 '46
Tests confirm efficacy of 72 mc. for mobile radio in mountainous area; Central Hudson gas & electric corp. G. H. Underhill. maps Elec World 127:48-51 F 1 '47
Utilities try mobile phone channel. H. P. Lawther. il map Elec World 128:64-5 Ag 2 '47
Utility radio gets FCC go-ahead. il Elec West 97:55 D '46
Utility radio organization expanding. Edison Elec Inst Bul 15:307 Ag '47

Rates

See Electric rates

Records

Compact manhole record; Western Massachusetts electric co. il Elec World 128:121 S 13 '47
Customer records essential for commercial load building. R. Warren. Elec World 127:64-5 Mr 29 '47
Grouped records aid customer contacts; Virginia electric & power co. R. G. Schneider. il Elec World 128:61 S 27 '47
Keeping meter records with business machines. H. W. Bruce. Elec West 97:58-9 D '46

Regulation

Failure of competition in public utility regulation. J. A. Whitlow. Pub Util 39:597-606 My 8 '47
Federal agencies act to keep electric utilities in operation. Elec World News ed 126:3 N 30 '46
Fundamental legislation for electricity supply to consumers. W. Fennell. Inst E E J 93 pt 1:300-9 Jl '46; Discussion. 93 pt 1:309-16, 539-42 Jl, N '46

Reports

Annual company report. G. Kerr. Pub Util 39:629-33 My 8 '47
Some tips on the phrasing of company reports. G. Kerr. Pub Util 38:740-5 D 5 '46

Safety measures

It's smart public relations to tell the kids, go fly a kite! Pacific Gas & Electric safety program. E. Gidlow. Sales Management 58:58+ My 1 '47
No fair weather record; no-accident record lasted more than 15 years; Conowingo power company. Nat Safety N 55:32+ Ap '47
Safety program cements employee relations. C. B. Boulet. Elec World 128:118-20 Jl 5 '47
Taking safety to remote system points. Elec World 127:54 Ja 4 '47
What gets results in safety? A. S. Bennion. Nat Safety N 54:20-1+ D '46

See also
Linemen's equipment

Salesmen

Closed minds and complicated rates hamper power selling. L. A. Blackburn. Elec World 127:98-9 My 10 '47
How to train your men for creative selling in a returning buyer's market. R. C. Borden Edison Elec Inst Bul 15:123-6 Ap '47
Keeping track of 18,000 customers; Duquesne light company. il Am Bsns 17:12-13+ Je '47
Sales management conference of the British electrical development association, May 7-9. Electrician 138:1243-4, 1314 My 9-16 '47

Securities

Effect of plant write-offs on utility investors. O. Ely. Pub Util 39:85-8 Ja 16 '47; Correction. 39:244 F 13 '47
Power and light securities; their desirability from a large institutional investor's standpoint. W. W. Bodine. Pub Util 39:746-50 Je 5 '47
Utilities need buyers for new common stocks. E. R. Abrams. Barron's 27:7-8 O 27 '47

Service

Customer prosperity is our business! R. G. Ely. Edison Elec Inst Bul 15:281-4 Ag '47
Friendly talks with homemakers build goodwill and sales for P G & E. M. Fenner. il Sales Management 59:37-9 S 1 '47
Frozen foods research develops new load; abstract. R. Coe. Elec World 127:134+ Ap 12 '47
Home service programs. S. S. Bradford. Edison Elec Inst Bul 15:23-6 Ja '47
How Public service co. of N.J. handles trouble calls. T. L. Hall. il Edison Elec Inst Bul 15:321-3 S '47
It's a woman's intuition, plus. M. Fenner. Elec West 98:81-3 Mr '47
Manning and functioning of the trouble department. Elec World 127:68-9 Mr 1 '47
Power sales advice in machine buying. Elec World 127:142+ F 15 '47
Promote residential load; free service entrances under certain limitations; Central Maine power co. diag Elec World 127:130+ Je 7 '47
Promoting service by information centers; Western Massachusetts electric company. Elec World 127:92 Je 21 '47
Service continuity standards aid economical distribution planning. W. J. Lyman. Edison Elec Inst Bul 15:325-9+ S '47
Utility departments cooperate in developing kitchen modernization; Boston Edison plans dietetics laboratory for Regis college. Elec World 126:90+ D 21 '46

See also
Electric service, Rural

ELECTRIC utilities—*Continued*

Statistics

Annual statistical issue. Elec World 127:135-56 Ja 18 '47

Electric light and power industry in 1946. G. C. Neff. Edison Elec Inst Bul 14:401-3 D '46

Taxation

Edison electric institute issues Dorau-Foster report on federal electrical energy tax. Pub Util 39:791-4 Je 5 '47

Impact of federal income tax a threat to private power industry; another report by H. B. Dorau and J. R. Foster. Pub Util 40: 309-12 Ag 28 '47

Valuation

Issue over original cost. O. Ely. Pub Util 40: 108-10 Jl 17 '47

War problems

British grid system in war time. J. Hacking and J. D. Peattie. il map diags Engineering 163:225-7, 249-51 Mr 21-28 '47; Abstracts and discussion. Electrician 138:507-9 F 14 '47; Elec R (Lond) 140:305-6 F 14 '47

German electrical utilities in wartime. J. G. Noest. bibliog il map Elec Eng 66:949-57 O '47

China

Shanghai power companies increase electricity rates. For Comm W 25:40 D 21 '46

France

What happened when France nationalized utilities? map Elec World 127:96-9 Mr 15 '47

Great Britain

British electricity authority; appointments. Elec R (Lond) 141:316-17 Ag 29 '47

British electricity authority; members, with chairmen-designate of area boards. Electrician 139:603 Ag 29 '47

British power and light corporation 18th ordinary general meeting. Economist 152: 516 Ap 5 '47

County of London electric supply company, limited, Northmet power company, annual meetings. Economist 152:435-6 Mr 22 '47

Edmundsons electricity corporation, limited; statement by the chairman at ordinary general meeting. T. Royden. Economist 153: 86 Jl 12 '47

Electricity act; resumé outlining some of the changes which have taken place in the original structure. Electrician 139:757-8 S 12 '47

Electricity bill. Economist 152:92-3 Ja 18 '47

Electricity bill. Engineer 183:73 Ja 17 '47

Electricity bill examined; fixing of compensation. Economist 152:109-11 Ja 18 '47; Discussion. 152:142 Ja 25 '47

Electricity bill; extracts from debate in Parliament. Engineer 183:145-6 F 7 '47; Elec R (Lond) 140:253-6, 404-5, 443-4, 485-6, 528-9, 678-9, 669-70, 694, 763, 811-13, 855-6; 141:100-1, 175-7 F 7, Mr 14-Ap 11, 25-My 23, Jl 18, Ag 1 '47; Electrician 138:428-30+, 633, 942, 1251, 1328, 1389, 1460, 1770; 139:54 F 7, Mr 14, Ap 11, My 9-30, Je 27-Jl 4 '47

Electricity bill; new clauses and amendments. Elec R (Lond) 140:1059; 141:33-5 Je 27-Jl 4 '47

Electricity bill; with list of compensation prices. map Electrician 138:188-94 Ja 17 '47; Abstract. Elec R (Lond) 140:99-102 Ja 17 '47

Electricity nationalization; views on the bill. Elec R (Lond) 140:161-2 Ja 24 '47

Electricity supply law; abstracts. R. Birt. Elec R (Lond) 140:1055-6 Je 27 '47; Electrician 138:1749-52 Je 27 '47; Discussion. Elec R (Lond) 141:15-16 Jl 4 '47

Fundamental legislation for electricity supply to consumers. W. Fennell. Inst E E J 93 pt 1:300-9 Jl '46; Abstract. Electrician 136: 418 F 15 '46; Discussion. Inst E E J 93 pt 1:309-16, 539-42 Jl, N '46; Electrician 136: 418-20 F 15 '46

Future of the electricity supply industry. Engineer 183:566-7 Je 27 '47

I.M.E.A. and the bill; resolutions passed at extraordinary meeting. Electrician 138:561-2 Mr 7 '47; Elec R (Lond) 140:358 Mr 7 '47

Lancashire electric light and power company, limited; Clyde Valley electrical power company; Midland counties electric supply company, limited; meetings. Economist 152: 562-3, 565 Ap 12 '47

Nationalisation and efficiency; abstracts. H. Nimmo. Electrician 139:1139 O 17 '47; Elec R (Lond) 141:587 O 17 '47

Nationalization of electricity; effect on municipal undertakings. W. Smith. Elec R (Lond) 141:245-6 Ag 15 '47

North-eastern electric supply company, limited, Midland electric corporation for power distribution, limited, ordinary general meetings. Economist 152:476-8 Mr 29 '47

Organizing committee for the electricity supply industry. Elec R (Lond) 140:843-4 My 23 '47

Pitfalls in the British system. W. H. Hayes. Edison Elec Inst Bul 15:221-4 Je '47; Excerpts. Elec World 127:84-5 Je 7 '47

Presidential address; electricity bill; abstracts. J. S. Pickles. Engineering 164:18 Jl 4 '47; Elec R (Lond) 140:1051-2 Je 27 '47; Electrician 138:1737-40 Je 27 '47

Public corporation; its guiding principles and how it works; abstract. A. Street. Electrician 139:695-6 S 5 '47

Scottish power company, limited, ordinary general meeting. Economist 152:652 Ap 26 '47

Unanswered electricity questions; Mr Shinwell on the Electricity bill. Economist 152: 249-50 F 8 '47

United Kingdom; bill proposes nationalization of electricity. For Comm W 26:28 F 15 '47

See also

Electricity supply—
Great Britain

Mexico

Expansion in electrification; amounts spent for improvements in 1941-46 compared with proposed expenditures in 1947; table. For Comm W 28:21 Ag 9 '47

Missouri

Co-op turtle that wanted to fly; Missouri utility co-operative caught between financing and bookkeeping problems. E. R. Abrams. Barron's 26:7 D 23 '46

Nebraska

Nebraska, the public power state. J. King. Pub Util 39:357-63, 419-26, 483-8 Mr 13-Ap 10 '47

Northwestern states

Conferences reconciling BPA and northwestern private utilities. Elec World News ed 127:3 Ja 25 '47

More public power for private utility distribution? J. H. Polhemus. Pub Util 39: 511-12 Ap 10 '47

Palestine

Palestine utilities report rise in electric consumption. For Comm W 26:35 F 22 '47

Puerto Rico

Electrical utilities in Puerto Rico. J. F. Rippy. bibliog J Bsns 19:221-3 O '46

Southern states

Electric utilities and southern progress. T. W. Martin. Edison Elec Inst Bul 15:285-7 Ag '47

Spain

Fight with Franco; international power interests won't bow. Bsns W p26 O 18 '47

United States

Five billion dollar construction program of electric power companies. C. E. Oakes. Edison Elec Inst Bul 15:313 S '47

Future of electric industry. L. E. Osborne. Comm & Fin Chr 165:3112+ Je 12 '47

Industry added 2,000,000 new customers in 1946; abstracts. G. C. Neff. Elec World 127: 28 Ja 4 '47; Pub Util 39:112-13 Ja 16 '47

Output and productivity in the electric and gas utilities, 1899-1942, by J. M. Gould; review. Pub Util 39:379-80 Mr 13 '47

Post war progress in electrifying America. Pub Util 39:789-91 Je 5 '47

ELECTRIC utilities—United States—*Continued*
President's report; address before Edison electric institute. G. C. Neff. Edison Elec Inst Bul 15:193-7 Je '47; Same. Comm & Fin Chr 165:3109+ Je 12 '47; Same cond. Elec World 127:82-3 Je 7 '47
Utilities rebound from new deal suppression. J. H. Falvey. Barron's 27:7 Mr 31 '47
Washington utility outlook for 1947. F. X. Welch. Pub Util 39:12-23 Ja 2 '47
See also
Electricity supply—United States

Western states
Electrical West annual review number. Elec West 98:65-107 F '47

Wisconsin
Wisconsin utility and co-op end hydro project quarrel. Elec World 128:89 O 25 '47

ELECTRIC utilities and the plumbing trade
Selling method for water heaters; Union electric company and St Louis contracting plumbers' assn. il diags Dom Eng 169:104-5+ Ja '47

ELECTRIC vehicles
See also
Electric tractors
Electric trucks
Electric trucks, Industrial
Trolley buses

ELECTRIC washing machines. See Washing machines

ELECTRIC water heaters
Electric heat safer in acetylene production. K. P. Allen. il Elec World 128:96+ Ag 16 '47
Engineering principles applied to the design of domestic water-heating installations of the solid-fuel/electric type. R. Grierson and F. Jackson. il diags Inst E E J 93 pt 2: 463-89 O '46; Abstract. Elec R (Lond) 138: 412 Mr 15 '46; Discussion. Inst E E J 93 pt 2:489-95 O '46; Elec R (Lond) 138:449-50 Mr 22 '46; Electrician 136:742-4 Mr 22 '46
Flasheat water heater. Consumers Res Bul 19:18 My '47
Heaters in hard water. il Elec R (Lond) 139: 741 N 8 '46; Electrican 137:1286 N 8 '46
How to remove scaled-up water heaters. il Elec World 127:70+ Ja 4 '47
Jet water heater. diags Elec R (Lond) 140: 679 Ap 25 '47
Tell dealers how to install water heaters; cooperative plan by Union electric co. of Missouri. R. Latimer. Elec World 127:144+ Mr 15 '47
Water heater diversity and daily load curves. H. G. Knaf. Elec World 126:68-72 N 23 '46
Water heating; summer load builder. A. W. Ames. il Elec World 128:144+ S 13 '47

Control
Value of water heater time control questioned. H. W. Berning. Elec World 128: 100-1 Jl 19 '47

Manufacture
Water heater production. il Elec R (Lond) 140:771-3 My 9 '47

Merchandizing
It is time to sell; sales guide. Elec West 98:107-10 My '47
Selling method for water heaters; Union electric company and St Louis contracting plumbers' assn. il diags Dom Eng 169:104-5+ Ja '47

Standards
Effective standardization of water heaters is needed. H. A. Brown. Elec World 127:58-60 Mr 1 '47

ELECTRIC waves
See also
Electric circuits
Electricity
Electronics
Lightning
Oscillations, Electric
Radio waves

ELECTRIC welding
Automatic resistance welders speed railroad car construction. A. M. Unger. il Iron Age 159:40-5 Mr 20 '47; Same cond. Ry Mech Eng 121:236-8 My '47
Building up locomotive wheel centers; cost data. M. J. Conway. Welding J 26:337 Ap '47
Case histories show versatility of resistance welding. J. W. Kehoe. il Materials & Methods 25:77-81 Mr '47
Certain aspects of seam welds in aluminum alloy sheets. G. H. Boss. il Metal Prog 51:599-602 Ap '47
Chain welding. J. F. Davies. Elec R (Lond) 140:809-10 My 16 '47
Chemical surface treatment of magnesium alloy sheet for spot welding. W. F. Hess and others. Welding J 26:sup170-90 Mr '47
Continuous seam welding using automatic fixture. il Steel 120:166 F 3 '47
Cylinder welding job. il Ry Mech Eng 120: 631-2 N '46
Design for flash welding. H. W. Brown. il diags Aero Digest 55:82+ S '47
Design for resistance welding; abstract. I. A. Crawford. Iron Age 158:61 N 28 '46
Electric welding of pipe. O. Blodgett. il diags Welding J 26:684-9 Ag '47
Electrical characteristics of resistance welding tools; abstract. E. M. Callender. diags Product Eng 18:136-7 O '47
Engineering symposium of future control of resistance welding equipment; abstract. C. E. Smith. Iron Age 160:58-9 O 30 '47
Fabricating sheet metal parts of jet engines. H. A. Knight. il Materials & Methods 24: 1461-5 D '46
Flash welding submarine pipelines in operation Pluto. Iron Age 159:59 Ja 23 '47
Flash welding; theory and practice. W. H. Cochran. il diags Iron Age 160:150-4 O 16 '47
Flash-welding tubular and solid parts for Lockheed planes. F. C. Pipher. il Mach 53: 160-3 Je '47
Fundamentals of spot welding steel plate. W. F. Hess and others. il diags Welding J 26:sup533-93 O '47
Improved products by mechanized welding and cutting; manufacture of Terra Cobra scraper. E. Griffeth. il diags Welding J 26: 670-4 Ag '47; Steel 121:80-4+ O 27 '47
Joining complicated assemblies in one operation; record changers. il Steel 120:112+ My 5 '47
Magnesium alloys; methods of joining. A. G. Gray. il diags Steel 120:114-15+ Mr 3; 114-15+ Mr 10 '47
New frontiers in welding. W. F. Hess. bibliog Welding J 26:114-20 F '47; Abstract. Iron Age 158:59 N 28 '46
1946 Resistance welder manufacturers' association prize contest. Welding J 25:1214+ D '46
Poor design may stymie shop savings. J. D. Gordon. diags Am Mach 91:140b-140c Ap 10 '47
Preweld cleaning. W. J. Campbell. Steel 120: 96+ Ap 7 '47
Problems in resistance welding stainless steel railway car structures. J. H. Van den Beemt. il Welding J 26:837-43 O '47
Progress of electric welding; review covering the years 1939 to 1945. il Electrician 139:105-9 Jl 11 '47
Projection welding of fasteners. R. A. Reich. il diags Welding J 25:1189-92 D '46
Projection welding of low carbon and stainless steel sheet. M. L. Ochieano. il diags Product Eng 18:124-6 Mr '47
Pulling harrow teeth with a spot welder. il Steel 120:82-3 Mr 31 '47
Recommended spotwelding procedures. F. S. Dever. il Iron Age 159:46-50 Ja 30 '47; Same abr. Materials & Methods 25:92-6 My '47
Redesign for projection welding speeds stamping assembly; roller skates. il Product Eng 18:95 Jl '47
Resistance welders mass-produce containers; Durabilt mfg. co.; illustrations with text. Am Mach 91:104-5 Ja 30 '47
Resistance-welding aids in the production of jet engines. F. G. Harkins. il diags Welding J 25:1175-8 D '46
Resistance welding design needed. J. D. Gordon. Steel 121:128 Jl 14 '47
Resistance welding for porcelain enameled ware. R. S. Florek. il diags Welding J 26: 137-40 F '47
Resistance welding improves appearance of sheet metal signs. il Steel 120:122 Je 23 '47

ELECTRIC welding—*Continued*
Resistance welding of spring steel to low-carbon steel. A. Willink. il Welding J 26: 30-1 Ja '47
Resistance welding of stainless steels. J. J. Riley. il diags Am Mach 90:112-15 N 7; 108-12 N 21; 134-8 D 5 '46
Safe-ending large diameter locomotive flues. il Steel 121:75 Jl 28 '47
Spot welding mass-produces body panels for Kaiser-Frazer car. il Am Mach 91:90-1 Ag 28 '47
Spot-welding of assemblies; Boeing aircraft co. F. Matthews. il Aero Digest 54:82 Ap '47
Spot welding of primary structures; Boeing aircraft co. il Steel 120:88+ My 19 '47
33% increase in production of oil dispensing tanks follows adoption of different joining method. il Steel 121:114 Jl 14 '47
Unconventional resistance welding reduces production time and costs. il Steel 121:119 Ag 25 '47
Uniform welding results obtained by equalizing current and pressure. M. Thomson. il diag Steel 120:101-2 Mr 17 '47
Welding equipment for locomotive wheel centers. il Gen Elec R 50:56 Ap '47
Welding repairs water turbine shaft. A. R. Callender. il Factory Management 105:88 Ap '47
Welding steel trailer door frames increases strength, saves weight. A. F. Denham. il diags Materials & Methods 26:93-6 Ag '47
Welding symposium. Electrician 139:775 S 12 '47

Control

Additional timing period of new motor-driven control increases gun welder speed. H. I. Stanback. il diags Welding J 25:1055-60 N '46
Air pressure speeds automatic welding. il diags Steel 120:97+ F 3 '47
Engineering symposium of future control of resistance welding machine. C. E. Smith. il diags Welding J 26:860-6 O '47

Electrodes

Minimum physical properties of R.W.M.A. alloys (Resistance welder manufacturers association); comparable alloys for electrodes; reference book sheet. Am Mach 91:163, 165 F 13 '47
Observations of electrode tip pickup and tip life in the spot welding of magnesium alloy sheet. W. F. Hess and others. il diag Welding J 26:sup433-42+ Ag '47

Power supply

Assembling turntables with battery powered welders. il Iron Age 160:42 O 23 '47
Battery operated machines speed multi-spot welders. il Automotive & Aviation Ind 96:40 Ja 15 '47
Battery powered aluminum flash welder. il Iron Age 158:51 D 26 '46
Better welding transformers; Micanite tape separators. H. K. Whitehorn. diags Elec R (Lond) 140:271-2 F 7 '47
Multiple bus for easy welding. G. Nicholson. plan diag Factory Management 104:128-9 N '46
Power supply for resistance welding. H. W. Tietze. bibliog diags Elec Eng 66:657-62 Jl '47
Precision energy-storage spot welder. R. Briggs and H. Klemperer. il diag Electronics 20:102-4 Je '47
Resistance welding accomplished by battery power, carbon-pile control. Sci Am 176:31 Ja '47
Resistance welding with storage-battery power. J. D. Gordon. il diag Welding J 25: 1049-54 N '46
Series capacitors for improving voltage regulation on circuits supplying power to resistance-welder loads. W. C. Bloomquist and R. C. Wilson. il diags Gen Elec R 50: 21-3 Je '47
Shunt circuit impedance in spot welding ⅛-, ¼- and ½-in. mild steel. R. H. Blair. diags Welding J 26:843-8 O '47
Spot welders with series capacitors; with cost data. F. L. Brandt. il Welding J 26: 499-503 Je '47
Three-phase balanced load resistance welding machines. J. L. Solomon. il diags Welding J 26:426-31 My '47; Same cond. Steel 121:94-6+ Jl 7 '47
Transportable a.c. welding sets. il Engineer 183:227 Mr 14 '47

See also
Electric welding, Arc—Power supply

Subaqueous welding

Spot welding under water. C. L. Coomer. il Welding J 26:217-18 Mr '47

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Electric welding, Arc—Subaqueous welding

Testing

Classification and recording of spot-weld defects revealed by radiography. R. C. McMaster and others. bibliog il Welding J 26: 121-8 F '47
Control of welding stresses by welding sequence. P. Ffield. bibliog il diags Welding J 25:1109-22 N '46
Development of a two-row high-strength spot-welded lap joint in 24S-T Alclad aluminum alloy. L. M. Crawford and J. E. Pease. il diags Welding J 25:1203-10 D '46
Fatigue tests on some spot-welded joints in aluminum alloy sheet materials. H. J. Grover and L. R. Jackson. bibliog il diags Welding J 26:sup215-32 Ap '47
Flash welding of concentrated areas up to 24 sq. in. in S.A.E. 1020, NE 9440 and NE 8620 steels. D. B. Johnston. il diags Welding J 26:sup65-81 F '47
General corrosion and stress corrosion of spot-welded magnesium alloy sheet. W. F. Hess and others. bibliog il diags Welding J 26:sup539-44 S '47
Magnetic tests of spot welds in stainless steel. il(p 180) Engineering 164:177-8 Ag 22 '47; Elec R (Lond) 141:325-6 Ag 29 '47; Electrician 139:266 Jl 25 '47
Optimum welding conditions and general characteristics of spot welds in magnesium alloy sheet. W. F. Hess and others. bibliog il Welding J 26:sup268-82 My '47
Preliminary investigation of the spot welding of scaly and rusty structural steel. W. D. Doty and W. J. Childs. il diag Welding J 26:sup358-62 Je '47
Progress report on the flash welding of high-strength aluminum alloys. R. Della-Vedowa and E. A. Reynolds. il Welding J 26:sup81-7 F '47
Radiography and the fatigue strength of spot welds in aluminum alloys. R. C. McMaster and H. J. Grover. bibliog il Welding J 26:223-32 Mr '47
Radiography of spot welds in various sheet gages and dissimilar gage combinations. R. C. McMaster and others. bibliog il Welding J 26:19-29 Ja '47
Some metallurgical aspects of carbon steel spot welding. J. Heuschkel. bibliog il diags Welding J 26:sup560-82 O '47
Summary of results of tests made by aluminum research laboratories of spot-welded joints and structural elements. E. C. Hartmann and G. W. Stickley. il diags Welding J 26:sup233-51 Ap '47

Unionmelt process

Depositing overlaid surfaces by the submerged melt welding process. L. C. Bradburn and others. il Welding J 26:297-300 Ap '47; Abstract. Mach 53:165-6 Ja '47
Redistribution of residual welding stresses by tensile loading along a Unionmelt weld joining two 3-ft. x 12-ft. x 1-in. plates. J. L. Meriam and others. il diags Welding J 25:sup697-9 O '46; Discussion. 26:sup 127-8, 191-2 Mr '47
Shop shots; automatic welding, manufacture of water-heater boilers; Day and night manufacturing co. il Am Mach 91:94-5 Ag 14 '47
Submerged melt welding in pressure vessel fabrication. N. G. Schreiner. il diags Welding J 26:400-7 My '47
Submerged melt welding of corrosion-resistant metals. R. J. Anderson and H. J. Roberts. il diags Welding J 26:338-42 Ap '47; Same cond. Materials & Methods 26:89-92 Jl '47

ELECTRIC welding—Unionmelt process—*Cont.*
Submerged melt welding of locomotive boilers. il Steel 120:94-5+ F 10 '47
Unionmelt automatic portable welding machine. il Mach 53:212 Je '47
Variation of longitudinal residual strain through the thickness of a 1-in. Unionmelt weld. J. L. Meriam and others. diags Welding J 25:sup844-7 D '46

ELECTRIC welding, Arc
All-welded hydraulic scraper. il Iron Age 159: 57 Ap 24 '47
All-welded prefabricated sandwich shops shipped completely assembled anywhere in the United States. R. H. Davies. il Welding J 26:788-9 S '47; Same. Sheet Metal Worker 38:62-3 N '47
All-welded structure in Canada leads in economy, strength and appearance. M. N. Vuchnich. il diags Welding J 26:782-3 S '47
Arc weld fabrication of ball mills. J. F. Cunningham, jr. il Iron Age 160:43 O 23 '47
Arc-welded fabrication is lowering cost, extending life of modern valves. H. H. Stahl. il diags Welding J 26:620-1 Jl '47
Arc-welded steel construction improves production of meat packing machinery. R. H. Davies. il Welding J 26:514 Je '47
Arc welding fixture speeds tank production. il Elec World 128:68 Ag 30 '47
Arc welding in furnace making. il Sheet Metal Worker 38:90 O '47
Arc welding of copper and copper-base alloys. F. E. Garriott. il diags Welding J 26:907-15 O '47
Arcwelding tool steel; abstract. A. R. Butler and F. E. Kessler. Iron Age 158:59-61 N 28 '46
Arc welding used in renovation of railroad equipment. A. L. Champigny. il Welding J 26:776 S '47
Automatic fusion welding; Renfrew works of Babcock & Wilcox. il Elec R (Lond) 141: 237-42 Ag 15 '47
Automatic metallic arc welding hot water tanks; Ferro stamping & manufacturing co. il diags Steel 120:94+ Je 9 '47
Cold cracking in the heat-affected zone. C. B. Voldrich. bibliog il Welding J 26:sup153-69 Mr '47
Composite alloy fabrication with the hidden arc. H. E. Cable. il Welding J 26:903-6 O '47
Contact arc welding. P. C. van der Willigen. il diags Iron Age 158:58-62 D 12 '46; Abstracts. Mech Eng 68:1077-8 D '46; Metal Prog 52:1026+ D '47
Controlling weld metal when making repairs. diags Power Pl Eng 51:92-3 Ag '47
Development of butt-welded joints in pressure vessels. E. J. Brown. il diags Welding J 26:867-71 O '47
Directional welding to minimize or eliminate distortion in weldments and control residual stresses. J. Holt. il diags Welding J 26:885-8 O '47
Efficiency of war-born operating methods is inspiration for today's welding production; Cleveland steel erecting co., fabrication of tank-tread units. A. F. Davis. il Welding J 25:1193-4 D '46
Electric arc-welding of copper-base alloys. H. Hose. il Mach 53:178-81 F '47
Electric welding equipment for the cement industry. A. Smith and W. J. Campbell. il Concrete 55:6-9+ Ja '47
Fabrication and welding of oil-fired water heaters. W. R. Persons. il Mach 53:138-9 Ag '47
How a cast iron block was welded with steel patches. il Roads & Sts 89:108 O '46
How to increase flexibility of automatic arc welding; positioner, manufactured by Mark F. Gouran. diag Steel 121:112 S 29 '47
Hydraulic pressure provides uniform welds; new welding gun. il diag Steel 121:104 S 15 '47
Improves production of generator housings with Lincolnweld. R. C. Stupp. il diags Factory Management 105:165 S '47
In welding stainless steel containers, distortion can be controlled. L. K. Stringham. il diags Sheet Metal Worker 38:51-2 Ag '47
Lightweight arc welding set. il Engineer 184:298 S 26 '47
Mammoth furnace, arc welded. il Sheet Metal Worker 38:52 F '47
More arc welded steel being used in machinery structures; abstract. J. F. Lincoln. Steel 121:78-9 S 29 '47
Needless regulations impede use of arc welding in industry. A. F. Davis. il Heat & Ven 44:85-6 My '47
New method for the welding of rail joints. F. Wörtmann. il diags Iron & Steel Inst J 156:261-70 Je '47
New stick feeder welding apparatus. J. M. Tyrner. diags Welding J 26:13-16 Ja '47
Nonmagnetic arc welding joints between mild steel plates. O. C. Frederick. il diags Steel 121:85+ O 13 '47
Package welds; stainless steel and aluminum shops. il Steel 120:116 Je 2 '47
Penetration and welding speed in contact arc welding. P. C. van der Willigen. diags Iron Age 159:70-2 My 29 '47; Abstract. Mech Eng 69:414-15 My '47
Pipe lines play big role in nation's economic reconversion; arc welding operations. R. H. Davies. il Pet Eng 18:182+ Mr '47
Portable electric stud-welding machine, Cycarc. il Engineering 163:234, 240 Mr 28 '47
Production time cut by arc welding thin tubing; illustrations with text; Consolidated Vultee aircraft corporation. il Am Mach 91:94-5 O 9 '47
Radial head positioner speeds welding operations. il Iron Age 159:84 Ap 10 '47
Repair welding of steel castings. O. T. Barnett. bibliog il diags Foundry 75:74-7 Ja '47
Rigid, unique watersphere design gained by use of electric arc-welding process. A. F. Davis. il Welding J 26:512-13 Je '47
Salvaging iron castings with machinable arc welds. D. W. DeArmand and S. Epstein. il Foundry 75:146+ My '47; Materials & Methods 25:68-72 My '47
Semiautomatic welding with standard manual arc-welding equipment. F. W. Myers, jr. il diags Welding J 26:sup626-40 O '47
Some novel developments in design and operation of a.c. arc welding plant; abstract. E. C. Davies. Engineering 164:366-7 O 17 '47
Specification changes in fire fighting equipment met easily by arc welding. R. H. Davies. il Steel 121:96+ Ag 25 '47
Theory of moving sources of heat and its application to metal treatments. D. Rosenthal. il A S M E Trans 68:849-61 bibliog (p864) N '46
Vital parts for coal loader unit are fabricated by automatic welding arc. C. W. Lytton. il diag Welding J 26:698-9 Ag '47
Weld repair of gray iron castings. C. E. Phillips. il diags Iron Age 160:49-51 O 23 '47
Weld repairing defective and damaged castings; Mogul arc bonder. il Steel 120:118 My 12 '47
Welding of boilers and tenders; report of Master boiler makers' assn. il Ry Mech Eng 121:569-72 O '47
Worn mill rolls rebuilt by welding 6½ tons on work face. il Iron Age 159:80 My 22 '47

Control

Accurate production control in direct-current arc welding. il Steel 121:108 Ag 25 '47

Electrodes

Arc atmospheres and underbead cracking. M. W. Mallett and P. J. Rieppel. bibliog il diags Welding J 25:sup748-59 N '46
Automatic electrode. diag Chem Eng 54:149 F '47
Coated electrode developed for automatic welding. il diag Iron Age 158:67 D 5 '46
Constituents of arcwelding electrode coatings. Iron Age 160:67 Jl 24 '47
Coordinated development of a.-c. welders and electrodes. C. P. Croco. il diag Welding J 26:680-3 Ag '47
Crack sensitivity of chromium-nickel stainless weld metal. R. D. Thomas, jr. il Metal Prog 50:474-9 S '46; Discussion (Chemical composition of austenitic welding electrodes). R. K. Lee. 51:445-7 Mr '47
Development and applications of lime-ferritic electrodes. D. L. Mathias and A. P. Bunk. il diags Welding J 26:209-17 Mr '47

ELECTRIC welding, Arc—Electrodes—*Cont.*
Effect of alloying elements on the tensile properties of 25—20 weld metal. H. C. Campbell and R. D. Thomas, jr. il Welding J 25:sup760-8 N '46; Discussion. 26:sup 119-20 F '47
Electrode for welding pressure vessels. Engineer 183:432 My 16 '47
How to select wear resisting alloys for welding; engineering data sheet. J. A. Cunningham. Machine Design 19:139-42 Ja '47
How welding electrodes are made. il Gen Elec R 49:56 N '46
Influence of the water-content of an electrode-coating on the hydrogen-content of weld metal. W. P. van den Blink. Welding J 26:sup369-70 Jl '47
Lincoln low-hydrogen electrode. Blast F & Steel Pl 35:134 Ja '47
Many companies announce new lines of welding electrodes. il Materials & Methods 25: 144 Ja; 173-4 Ap '47
Miniature electric furnace; shielded-arc electrode. il diag Steel 119:70-1+ N 25 '46
New stainless steel electrode specifications. R. D. Thomas. Welding J 26:792 S '47
Preliminary investigation of the constitution of mild-steel arc-weld deposits. H. A. Sloman and others. Iron & Steel Inst J 152: 127-55, pl 11-14 no 2 '45; Same. Welding J 25:sup39-52 Ja '46; Same cond. Engineering 160:197, 217-20, 238-9 S 7-21 '45
Selection of austenitic electrodes for welding dissimilar metals. A. L. Schaeffler. bibliog il Welding J 26:sup601-20 O '47
Welding hardenable steels; use of lime-ferritic low hydrogen electrodes. O. T. Barnett. Steel 121:84+ S 29 '47
Welding power piping with chromium-molybdenum electrodes. O. T. Barnett. il Steel 120:88-90+ My 26 '47
Why use E6012 electrodes? O. T. Barnett. diags Steel 119:73+ D 30 '46

Heliarc process

Shop using Heliarc welding with four other processes; Phillips, Doup & co. il diags Sheet Metal Worker 38:55-7 S '47

Hydrogen process

Atomic hydrogen welding of stainless sheet; combustion chambers for General Electric's aircraft jet engine. G. Richardson. il diags Iron Age 159:72-4 My 8 '47
Effects of flux in welding stainless steel by the atomic hydrogen process. G. Richardson. il Iron Age 159:42-6 My 1 '47
Fabricating sheet metal parts of jet engines. H. A. Knight. il Materials & Methods 24: 1463-5 D '46
Welding with atomic hydrogen; Ryan aeronautical co. W. P. Brotherton. il Elec West 97:78-80 O '46

Hygienic aspects

Health survey of shipyard welders; abstracts. W. C. Dreessen. Ind Med 16:465-6+ S '47; Safety Eng 94:48-9 S '47

Inert gas shielding

Argonarc process. il Engineer 163:235-6 Mr 21 '47
Cleaning aluminum before welding with inert-arc method. M. J. Conway. Materials & Methods 24:1230 N '46
How to select good operating current levels for use with tungsten electrodes in inert-arc welding. R. W. Tuthill. Welding J 26: 766 S '47; Same. Paper Ind 29:866 S '47
Inert arc welding. D. W. Puffer. il diags Steel 119:80-2+ N 18 '46
Inert arc welding makes stainless strip into belt. Steel 121:100 S 22 '47
Inert-arc welding stainless steel belt. M. J. Conway. Welding J 26:791-2 S '47
Inert-arc welding; uses helium or argon; application to aluminum, magnesium, and stainless steel. R. F. Wyer. il Iron Age 158: 57-8 O 31 '46; Same. Sheet Metal Worker 38:137-8 Ja '47; Abstract. Metal Prog 51: 826+ My '47
Inert-arc welding with direct current. R. F. Wyer. il Iron Age 160:68-70 Ag 21 '47
Inert-gas-shielded arc welding for difficult-to-weld materials. H. R. Clauser. il Materials & Methods 25:86-90 Ap '47
Inert gas shielded arc welding process. G. J. Gibson. diags Welding J 26:sup282-94 My '47
Portable inert gas metal arc welder of aluminum. il Iron Age 159:46 My 1 '47
Production applications for inert gas-shielded arc welding. H. T. Herbst. il diag Welding J 26:410-18 My '47; Same cond. Steel 121:72-4+ S 1 '47
Selecting current for inert arcwelding with tungsten rods. Iron Age 160:76 S 25 '47
Welding by the inert-arc process. R. W. Tuthill and W. J. Campbell. il Heat & Ven 44:83-6 S '47

Power supply

Combination gas-electric drive 300-amp. arc welder. il Welding J 25:1140 N '46
Direct-current arc-welding generators and systems. J. C. Macfarlane and others. bibliog diags Inst E E J 93 pt 2:603-16 D '46; Abstract. Elec R (Lond) 138:695 My 3 '46; Discussion. Inst E E J 93 pt 2:617-20 D '46; Elec R (Lond) 138:745-6 My 10 '46; Electrician 136:1248-50 My 10 '46
Electricity supply for arc-welding plant. R. Neumann. Engineering 162:446 N 8 '46
Transformer welders served by rural lines. F. B. Scott. il Elec World 127:66-7 Je 21 '47

Safety measures

Mascol products co.'s arc-welding electrode holder. il diag Engineering 163:201 Mr 14 '47
Results of what's wrong? contest; picture of welders showing 17 unsafe practices. Pet Processing 2:746 O '47
Safety electrode holder for arc welding. diag Engineering 162:438 N 8 '46; Engineer 182: 402 N 1 '46; Mech Eng 69:31 Ja '47

Standards

Arc welding is being handicapped. J. F. Lincoln. il Sci Am 177:101-5 S '47
Strength of arc-welded joints. J. F. Lincoln. il Mech Eng 69:325-6 Ap '47; Same cond. Civil Eng 17:268 My '47; Same cond. Arch Rec 101:112 Mr '47

Subaqueous welding

Under-water arc-welding; patent. diag Electrician 138:137 Ja 10 '47

Testing

Arc atmospheres and underbead cracking. M. W. Mallett and P. J. Rieppel. bibliog il diags Welding J 25:sup748-59 N '46
Control of weld hot cracking in nickel-chromium-iron alloys. T. E. Kihlgren and C. E. Lacy. il diags Welding J 25:sup769-75 N '46; Discussion. R. D. Thomas, jr. 26: sup190-1 Mr '47
Distribution of strength and ductility in welded steel plate as revealed by the static notch bar tensile test. W. F. Brown, jr. and others. bibliog il diags Welding J 26: sup545-54 O '47
Effect of alloying elements on the tensile properties of 25—20 weld metal. H. C. Campbell and R. D. Thomas, jr. il Welding J 25:sup760-8 N '46
Effect of welding on ductility and notch sensitivity of some ship steels. R. D. Stout and others. il diags Welding J 26:sup335-57 Je '47
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup372-432 Jl '47
Investigation of the influence of hydrogen on the ductility of arc welds in mild steel. A. E. Flanigan. bibliog (p210) il diags Welding J 26:sup193-214 Ap '47
Metallurgical properties of high yield strength seamless line pipe. A. B. Wilder and J. D. Tyson. il diags Welding J 26:872-80 O '47
Method for determining the applicable welding procedure for steels. B. Ronay. il diags Welding J 25:sup736-47 N '46
Notched-bead slow-bend tests of carbon-manganese steels. C. B. Voldrich and others. diags Welding J 26:sup489-503 S '47
Reinforcement of branch pieces. J. S. Blair. il diags Engineering 162:1-4, 217-21, 228, 508-11, 529-33, 540, 553-6, 577-81, 588, 605 Jl 5, S 6, N 29-D 27 '46

ELECTRIC welding, Arc—Testing—*Continued*
Some observations on the weldability of high-strength wrought aluminum alloys. W. R. Apblett, jr. il diag Welding J 25:sup802-8 N '46
Some tests of large welded structures. E. P. DeGarmo and others. il plans diags Welding J 26:sup257-67 My '47
Static and fatigue tests of arc-welded aluminum alloy 61S-T plate. E. C. Hartmann and others. bibliog il diags Welding J 26:sup129-38 Mr '47
Static-strength tests of fillet welds on aluminum alloy 61S-T plate. R. L. Moore. il diags Welding J 26:sup593-600 O '47
Weldability of ship steels; effects of travel speed, preheat temperature and arc power level. E. F. Nippes and W. F. Savage. il diags Welding J 25:sup776-87 N '46

ELECTRIC welding machines
Air-powered, water-cooled resistance welding press designed by Precision welder & machine co. il diags Machine Design 19:154-5 F '47
Choice of cable and transformer size for portable spot welders. M. Zucker. Welding J 26:233-8; Discussion. A. C. Johnson. 238-9 Mr '47
Converted portable welder. Sci Am 177:221-2 N '47
Coordinated development of a.-c. welders and electrodes. C. P. Croco. il diag Welding J 26:680-3 Ag '47
Drying current from welding generators. R. G. Swisher. il diags Power 90:860 D '46
Engineering and marine exhibition at Olympia. il diags Engineer 184:189-92, supp 1-12 Ag 29 '47
Engineering and marine exhibition at Olympia; display of electric-welding equipment. Engineering 164:267-70 S 19 '47
Engineering symposium of future control of resistance welding machine. C. E. Smith. il diags Welding J 26:860-6 O '47
Federal high-production mash seam welder. il Welding J 26:646 Jl '47; Am Mach 91: 190 Je 19 '47
Flash butt welder. il Sci Am 176:37-8 Ja '47
Flexible multi-transformer welder boosts steel drawer output. il Iron Age 159:79 Je 5 '47
Improved resistance welders announced. il Materials & Methods 25:145-6 Mr '47
Influence of magnetic materials on the welding characteristics of resistance welding machines. J. J. Riley and C. E. Smith. bibliog diags Elec Eng 65:Trans 852-60 D '46
Large spot welder speeds production; Pullman-standard car manufacturing company. il Ry Mech Eng 120:626-7 N '46
Multi-spot welding. il Sci Am 177:80-1 Ag '47
Preventive measures reduce welder upkeep; Ryan aeronautical co. C. A. Lehton and H. F. Worcester. il Am Mach 91:118-19 Je 5 '47
Production welder has high flexibility. il Iron Age 160:68 Jl 3 '47
Progressive higher speed automatic welder. il diags Welding J 26:82 Ja '47; Automotive & Aviation Ind 95:43+ D 15 '46; Iron Age 158:67 N 28 '46
Sciaky flash-butt welding machines. il Mach 53:198 F '47
Spot welder designed for production line use, by Precision welder & machine co. il Product Eng 18:100 Ap '47
Welding time cut in half on trailer body panels; Fruehauf trailer co. using dual 100 kva seam welder. il Automotive & Aviation Ind 96:44 Je 15 '47

Maintenance and repair
Planned maintenance of welding machines. C. A. Lehton and H. F. Worcester. il Elec West 97:80-2 O '46

Testing
Spotweld analyzer for maintenance work. D. F. Hays. il Iron Age 159:49-51 Je 12 '47

ELECTRIC welding machines, Domestic
Magic wand welder. Consumers Res Bul 18: 20-1 D '46

ELECTRIC winches. See Winches, Electric

ELECTRIC wire
Application of insulated aluminum wire and cable. C. W. Ange and E. E. McIlveen. il Elec World 128:104-13 S 13 '47
Charts for designing copper coils; reference book sheet. R. C. Hitchcock. Product Eng 18:163, 165 Je '47
Diameter, weight and resistance of standard annealed copper wire and bare stranded annealed copper cable, concentric lay; tables. Power Pl Eng 51:100 O '47
Properties of magnet wire; abstract. H. A. Smith and W. G. Skinner. Product Eng 18:145-7 Ap '47
Soldering litz ends. E. Toth. Electronics 20: 158+ Mr '47
Wiring goes lightweight. Bsns W p66+ N 9 '46

See also
Electric cables
Electric conductors
Electric lines

Manufacture
General Cable; big wiremaker is recharged with novel ideas. il Fortune 36:98-105+ O '47
List of asbestos covered wire and cable manufacturers. Electronics 20:237 Ja '47

Testing
Limits of accuracy set for wire and cable testing. G. Thompson. Elec World 127:48-9 Ap 26 '47
Process testing of film continuity on Formex fine wire. B. Mulvey. il diags Gen Elec R 49:46-8 N '46

ELECTRIC wiring
Codes of wiring practice. Electrician 139: 1065-6 O 10 '47
Cost of installation wiring. Electrician 137: 1295-6 N 8 '46
How to select and install pyrometer lead-wires. C. C. Roberts and C. A. Vogelsang. il diag Power 91:447-9+ Jl '47; Same. Steel 121:91+ Ag 18 '47; Same cond. Power Pl Eng 51:110-12+ S '47; Same cond. Iron Age 159:82-4 Mr 6 '47; Same. Glass Ind 28:354-5+ Jl '47
Marking of electric equipment. T. Powell. Elec Eng 66:349-51 Ap '47
Mass-production wiring. V. Zeluff. il Sci Am 177:116-18 S '47
Stamped wiring for economical production. il Product Eng 18:168 S '47
Supply engineer's view of some installation matters; abstract. R. H. Rawll. Electrician 139:1217-18 O 24 '47
Trend to three-wire service shown in survey. Elec World 127:118+ Ap 12 '47
Variable details in service rules have top importance. diags Elec World 127:101+ My 10 '47

See also
Electric cables
Electric codes
Electric conduits
Electric distribution
Electric fittings
Electric fuses
Electric lighting
Electric lines
Electric transmission
National electrical code

Diagrams
What the electrical engineering department needs from the drawing department. W. A. Lewis. diag J Eng Educ 37:653-9 Ap '47

Safety measures
Aluminum conductors for building wires. Nat Safety N 54:106 D '46
Plugs and sockets. Electrician 139:925-6 S 26 '47

ELECTRIC wiring, Interior
Aluminum conductors for interior wiring. F. Benz. il Elec West 98:47-9 Ja '47
Bodleian library; electrical installation. Electrician 137:1194 N 1 '46
Building wiring model 1947. S. Beamer. il Elec West 98:54-6 Mr '47
Domestic wiring developments. Electrician 138:845-6 Ap 4 '47
Domestic wiring problems; some reactions to standardising of plugs and sockets. Electrician 139:193-4 Jl 18 '47

ELECTRIC wiring, Interior—*Continued*
Electricity and building; conference. Electrician 137:1593 D 6 '46
Gilflex wiring system. il Electrician 138:1159 My 2 '47
House heating load characteristics as they affect wiring costs. J. B. Cochran. graphs Elec World 127:108-9+ Ap 12 '47
House wiring; attributes of non-metallic Gilflex flexible conduit. il Elec R (Lond) 140: 1073-5 Je 27 '47
House wiring; withdrawable installations without elbows and tees. il Elec R (Lond) 140:307-8 F 14 '47
Planned lighting; wiring for lighting. diags Elec World 128:120-1 O 25 '47
Rewiring on a limited budget; Veterans' administration offices, San Francisco. S. Beamer. il Elec West 99:74-5 Ag '47
Views on the wiring codes. Electrician 138: 439-40 F 7 '47
Wiring in buildings. Electrician 138:268 Ja 24 '47
See also
Electricity in the home

ELECTRIC workers
Chemical hazards in the electrical industry. C. B. Fagan. Chem Age (Lond) 56:809 Je 21 '47
Death by boycott. Bsns W p102-5 Ap 12 '47
Electric training for industry; war training programs conducted by the University of California in cooperation with the U.S. Office of education. C. F. Dalziel and others. J Eng Educ 37:520-30 Mr '47
Electrical union drafts 1947 demands, substantial wage increase sought. Elec World News ed 127:20 Ja 11 '47
How wages hike prices. Elec West 99:83 S '47
In-service farm electrification training. P. T. Montfort. Edison Elec Inst Bul 14:390-2 N '46
I.B.E.W. president answers NEMA charges of boycotts. Elec World News ed 127:5 F 8 '47
NEMA calls upon Congress to bar secondary boycotts. Elec World 127:127 Ja 18 '47
Pension plan; electrical contractors first in building to pension workers. Arch Forum 86:15-16 Ap '47
Portal-to-portal pay fight enters electrical manufacturing field. J. C. Meier. Elec World News ed 127:21 Ja 11 '47
Possible wage pattern set; 15c an hour increase for 30,000 G.M. employees. Bsns W p92-3 Ap 19 '47
Secondary boycott problem. Elec World News ed 127:16-17 Ap 5 '47
Technical education in England and Wales. C. F. Partridge. Inst E E J 94 pt 1:99-102 F '47
Westinghouse lighting plant may become boycott casualty. Elec World News ed 127: 5-6 Ap 5 '47
See also
Electric utilities—Employees
Linemen

ELECTRICAL association for women
Annual meeting, 22d, London, May 13-14. Electrician 138:1309 My 16 '47; Elec R (Lond) 140:851-2 My 23 '47
Future of the E.D.A. and E.A.W.; abstract. W. M. Citrine. Electrician 139:1224 O 24 '47

ELECTRICAL wholesalers association, National. See National electrical wholesalers association

ELECTRICAL world (periodical)
Hill succeeds S. B. Williams as editor of Electrical world. Elec World 127:31 Ja 4 '47
Tenney named editor; Flynn, publisher, as Hill resigns. Elec World 128:47 S 27 '47

ELECTRICIANS
See also
Linemen

ELECTRICITY
Properties of monoclinic crystals. W. P. Mason. diags Phys R 70:705-28 N 1 '46
Teaching electricity and magnetism. V. P. Hessler. Elec Eng 65:Trans 828-33 D '46
See also
Armatures
Corona (electricity)
Dielectrics
Edison effect
Electric currents
Electroacoustics
Electrodynamics
Electrons
Electrophysiology
Electrostatics
Insulation (electric)
Ionization, Electrolytic
Lightning
Photoelectric cells
Piezoelectricity
Potential, Electric
Radio communication
Telegraph
Telephone
Thermoelectricity

History
Electricity in the '47s; retrospect of past three centuries. G. J. S. King. Elec R (Lond) 140:71-3 Ja 10 '47; Same cond. Elec Eng 66:914-15 S '47

ELECTRICITY, Accidents from
Static hazard in industry. G. Morris. diags Engineering 164:49-51, 73-5 Jl 18-25 '47

ELECTRICITY, Atmospheric. See Atmospheric electricity

ELECTRICITY, Injuries from
Controlling electrical hazards. C. F. Dalziel. bibliog Elec Eng 66:786-92 Ag '47; Same cond. il Nat Safety N 56:93-5+ O '47
Dangerous electric currents. C. F. Dalziel. bibliog Elec Eng 64:Trans 579-85 Ag-S '46; Same cond. Power Pl Eng 50:78-81 D '46
EEI accident prevention group studies '46 record. Elec World 128:95 S 13 '47
E.E.I. sponsors research to find stimulant for electric shock victims. W. R. Smith. Edison Elec Inst Bul 14:429 D '46
Factory report; suggestions for ensuring safety; abstracts. H. E. Chasteney. Elec R (Lond) 140:5 Ja 3 '47; Electrician 138:53-4 Ja 3 '47
Fatal chain of circumstance. Safety Eng 93: 50 My '47
Quick thinking and acting saves lives; EEI resuscitation awards prove. M. B. Woods. Edison Elec Inst Bul 15:87-93 Mr '47

ELECTRICITY, Static
Car radio static reduced by powder blown into tube. Elec World News ed 127:29 Ap 5 '47; Chem Eng 54:164+ Ap '47
Conference explores methods of dissipating static electricity; summer meeting, AIEE. Elec Eng 66:828-9 Ag '47
Electrostatic dischargers for aircraft. W. C. Hall. bibliog il diags J Ap Phys 18:759-65 Ag '47
Electrostatic ills and cures of aircraft. R. Beach. bibliog il diags Elec Eng 66:325-34, 453-62 Ap-My '47; Discussion. 66:1044-6 O '47
Electrostatic sparks. diags Coal Age 52:116+ Ap '47
How to select safety flooring for chemical plants. C. L. Jones. bibliog il Chem Ind 60:414-17 Mr '47
Humidifiers an aid in eliminating explosions. R. J. Branham. Safety Eng 93:52 F '47
Ionotron static eliminator. il Rayon 28:508 S '47
Rebuilding 44-kv. line for static installation. J. A. Sayre. diag Elec World 127:80+ Mr 1 '47
Static for radio receiver tests. J. C. R. Licklider and E. B. Newman. il diags Electronics 20:98-101 Je '47
Static hazard in industry. G. Morris. diags Engineering 164:49-51, 73-5 Jl 18-25 '47
Tribo-electrification principle applied to sort metals. il Product Eng 18:93 My '47
See also
Electric charges
Electric discharges
Electrostatics

ELECTRICITY in air conditioning
Annual hours of operation of air conditioning systems; abstract. A. B. Newton. Heating-Piping 19:93 Je '47
Commercial aspects of the heat pump. E. N. Kemler. Edison Elec Inst Bul 15:20-2 Ja '47
Electrical and allied developments of 1946; air conditioning. G. Bartlett. il Gen Elec R 50:48-9 Ja '47

ELECTRICITY in air conditioning—*Continued*
Planning to air condition? electrical and water requirements. Heating-Piping 19:81-2 Ag '47
Selection of medium size motors; types available for use in the heating, ventilating and air conditioning fields. A. F. Lukens. il diags Heat & Ven 44:70-6 Ja '47

ELECTRICITY in mining
Borehole cable installed to cut power bills; Silver King coalition mines co. L. J. Battey. il diag Eng & Min J 148:91-2 Je '47
Infra-red ray on the maintenance programme; mine motors. C. E. Dunlop. Can Min J 68: 729-30 O '47
Kilowatts mine copper; Castle Dome open pit mine near Miami, Arizona. il Elec West 99:74 O '47
Passing glance at a ground system; Perron gold mines. C. E. Dunlop. Can Min J 68: 649-50 S '47
Problems in the application of peak load control; off peak pumping at Perron gold mine. C. E. Dunlop. diag Can Min J 68: 489-90 Jl '47

See also
Coal mines and mining—Electric equipment
Detonators, Electric
Electric locomotives, Mine
Coal mines and mining—Power
Mine hoisting, Electric

Safety measures
Intrinsic safety of electrical apparatus. G. Allsop and others. Engineering 162:462 N 15 '46
Safety in mines research board annual report, 1945. Electrician 138:643 Mr 14 '47

ELECTRICITY in refrigeration
Frozen cooked meals. il Elec R (Lond) 140: 893-4 My 30 '47
Frozen foods have highest kwh. content. W. C. Heston. il plan Elec West 99:76-80 O '47
Line pressure drop, its effect on cooling costs. H. E. Ferrill. Refrig Eng 52:425-7+ N '46
Refrigeration, present and future. D. H. Anderson. Edison Elec Inst Bul 15:83-5 Mr '47

See also
Electricity in air conditioning
Refrigerators, Electric

ELECTRICITY in the home
Applying the code to homes. J. M. Evans. diags Elec West 97:84-5 O '46
Architects and builders; co-operation with the electrical industry; conferences. Elec R (Lond) 139:919-20 D 6 '46
Connection of new homes still proceeding at record levels; statistical data. Edison Elec Inst Bul 15:306 Ag '47
Design and installation of electrical accessories for domestic purposes. F. C. Fuke. il diags Inst E E J 92 pt 2:90-9 Ap '45; Discussion. 92 pt 2:100-6; 94 pt 2:68-70 Ap '45, F '47
District heating and appliances. J. H. Fella. Electrician 138:698 Mr 21 '47
Domestic load; further check on after-diversity demands. H. A. P. Caddell and others. Elec R (Lond) 140:477-9 Mr 28 '47
Domestic wiring developments. Electrician 138:845-6 Ap 4 '47
Electricity and housing; discussion at Smoke abatement conference. Electrician 137:1195 N 1 '46
Electricity in the home; abstract. C. Haslett. Electrician 138:1150 My 2 '47
House heating load characteristics as they affect wiring costs. J. B. Cochran. graphs Elec World 127:108-9+ Ap 12 '47
Housing supplies; new estates at Bradford. il Elec R (Lond) 140:580 Ap 11 '47
London load building; service in the domestic field. il Elec R (Lond) 140:515-20 Ap 4 '47
Meeting domestic demand; methods adopted at Gravesend. il Elec R (Lond) 139:787-9 N 15 '46
Prefabricated bungalows; investigation of load characteristics. Elec R (Lond) 140: 543-4 Ap 4 '47
Promote residential load; free service entrances under certain limitations; Central Maine power co. diag Elec World 127:130+ Je 7 '47
Teach electrical living in Pennsylvania schools. Y. L. Ripley. il Elec World 128: 130+ Jl 19 '47

See also Electric apparatus and appliances, Domestic

Cost
All-electric house; twenty-two years' experience. S. P. Smith. Elec R (Lond) 139: 1027-8 D 20 '46
Consumers' expenditure; electricity in relation to other goods and services. S. B. Jackson. Elec R (Lond) 141:541 O 10 '47

ELECTRICITY in the petroleum industry
A.c. auxiliaries for Diesel-electric drilling rigs. J. N. Poore. diags Oil & Gas J 46: 81+ Jl 12 '47
Electric drive for water-flood recovery. W. G. Taylor. il Pet Eng 18:80+ Ag '47
Newer electric-power equipment for the oil industry; abstract. B. M. Brown. Oil & Gas J 45:76 D 7 '46
Petroleum electric power association, 18th annual meeting, Tulsa. Oil & Gas J 45:62 D 14 '46
Telephone influence factor and what to do about it. G. L. Oscarson. il diags Pet Eng 18:100+ Ag '47
Utilization of electrical energy in natural gasoline plants. H. S. Davis. il diags Pet Eng 18:124+ D '46

See also
Petroleum engineering—Power
Petroleum pipe lines—Pumping stations, Electric

ELECTRICITY in war
Electric power and national defense; lesson from Spanish revolution. J. W. Swaren. Power Pl Eng 51:67+ S '47
Generating plant for military equipment; abstract. K. H. Tuson. Engineering 163:545 Je 27 '47; Abstract and discussion. K. H. Tuson. Electrician 138:1089-90 Ap 25 '47

See also
Electric utilities—War problems

ELECTRICITY on ships. See Ships—Electric equipment

ELECTRICITY on the farm
Agricultural workers' part in farm electrification; Agricultural extension service. I. P. Trotter. Edison Elec Inst Bul 15:130-2+ Ap '47
Agricultural workers' part in farm electrification; home demonstration work. J. Campbell. Edison Elec Inst Bul 15:133 Ap '47
Ambitious electric campaign by NEMA to win small town-rural market. Pub Util 39:175-6 Ja 30 '47
As agriculture goes, so goes our destiny. R. Godley. Edison Elec Inst Bul 15:316 S '47
Corn drying requires 175 kwhr per 1,000 bu. il Elec World 128:138+ O 11 '47
Degree of farm electrification depends largely on farmer's prosperity. maps Edison Elec Inst Bul 14:358 O '46
Electric blowers cut hay drying costs. L. S. Dube. il Elec World 126:136+ N 9 '46
Electric egg cleaner cuts labor in two. il Elec World 127:134 Je 7 '47
Electrical and allied developments of 1946; industrial equipment, applications. G. Bartlett. il Gen Elec R 50:31-2 Ja '47
Electricity and agriculture; demonstrations at the Kent, Sussex and Herts shows. il Electrician 139:327-8 Ag 1 '47
Electricity and the farmer; composite equipment displays. il Electrician 138:1513-14 Je 6 '47
Electricity for the farmer; demonstrations at the Lincoln royal show. il Electrician 139: 49-50 Jl 4 '47
Electricity in farming; uses demonstrated at agricultural shows. il Elec R (Lond) 141: 57-8 Jl 11 '47
Farm conferees agree that market problems are many; National farm electrification conference, Indianapolis, Oct. 7-8. Elec World News ed 128:4 O 18 '47
Farm electrification conference creates permanent organization at Chicago meeting; abstracts of addresses. Pub Util 38:766-70 D 5 '46

ELECTRICITY on the farm—*Continued*
Farm electrification; the industry's next objective. F. R. Innes and J. D. Wilson. il map Elec World 127:111-30 My 24 '47
Farm market and how to use it. P. E. Miller. Edison Elec Inst Bul 15:127-9 Ap '47
Farm market for radio and appliances. C. R. Elder. Radio N 37:62+ Mr '47
Farm power conferees see big job ahead; National farm electrification conference, Indianapolis. Pub Util 40:643-5 N 6 '47
General Electric launches intensified farm program. C. E. Wilson. Elec World News ed 127:5 Mr 8 '47
Hay curing as a load builder; Central Vermont public service corp. Elec World 127: 65 Mr 29 '47
In-service training program for agricultural workers. G. C. Neff. Edison Elec Inst Bul 15:200 Je '47
Making chores easier on the farm. T. E. Hienton. Elec World 126:120+ N 23 '46
National farm electrification conference, Chicago, Nov. 7-8. Edison Elec Inst Bul 14: 383-6 N '46
National farm electrification conference voted a success. Elec World News ed 126:3-4 N 16 '46
National farm survey; its electrical implications. E. W. Golding. Electrician 137:1819-21 D 27 '46
Power for dairy barn ventilation. Elec World 127:72+ Ja 4 '47
Power for farms of the Nation. G. C. Neff. Pub Util 38:791-5 D 19 '46
Progress of farm electrification in the United States; map. Elec World News ed 127:16-17 F 22 '47
Race to capture the farm power market. T. N. Sandifer. Pub Util 39:221-7 F 13 '47
Reducing farming costs. il Elec R (Lond) 139: 1047-50 D 27 '46
Swiss farming. F. Wirth. Elec R (Lond) 141: 207-8 Ag 8 '47
Transformer welders served by rural lines. F. B. Scott. il Elec World 127:66-7 Je 21 '47

See also
Electric service, Rural
Electric tractors
Poultry scalders, Electric
Rural electrification administration

ELECTRICITY supply
Demand for electricity. J. A. Nordin. bibliog J Land & Pub Util Econ 23:337-41 Ag '47
Trends in electric power supply. H. S. Bennion. Power Pl Eng 51:72-7 Je '47

See also
Electric lines
Electric plants
Electric power
Electric utilities

Africa, British West
Power for West Africa; possibilities during the next decade. F. J. Erroll. Elec R (Lond) 140:609-11 Ap 18 '47

Arizona
Arizona utilities act to bring Boulder Dam power to state. Elec World 126:90 N 23 '46

Arkansas
Featuring Arkansas; power. il Manuf Rec 116:116-17 Ag '47

Atlanta
Five-mile Oilostatic cable installation in Atlanta. R. O. Loomis and P. B. Boyd. il diags Elec World 127:42-4 Ap 26; 84-6 My 10 '47

Australia
Australia will double capacity. Elec World 128:57 Ag 16 '47

Austria
Austria regulates use of electric power. For Comm W 28:28 Jl 5 '47

Baltimore
Multiplication of substations found most economical. M. A. Polster. maps Elec World 127:109-11 Mr 15 '47

Bombay
Bombay electrical proposals. Elec R (Lond) 139:776 N 15 '46

British Columbia
Activities of the B.C. power commission and the Campbell River power development. A. W. Lash. Pulp & Pa of Can 48:80-5 O '47
BPA surplus power will aid in Canadian shortage. Elec World 128:35 Ag 30 '47

California
Power sales to chemical companies are reduced; Pacific Gas & Electric forced to limit sales. Elec World 128:36 Ag 30 '47

Chicago
Public ownership support weak as utility asks charter; Chicago city council begins hearings on new franchise for Commonwealth Edison co. R. N. Larkin. Elec World 128:84-5 O 25 '47

China
Electric power in China. F. O. McMillan. il map Elec Eng 66:67-74 Ja '47
Power production in the Far East. Engineer 183:343 Ap 18 '47

Eastern states
Power curtailment in East caused by severe drought. Elec World News ed 128:4 N 1 '47

Europe
U.S. aid needed by Europe to restore power systems. Elec World 128:44 S 27 '47

France
Electric production hits all-time high in France. For Comm W 26:44 Ja 25 '47
French fuel and power under the Monnet plan. Electrician 138:1601-2 Je 13 '47
Power expansion planned in France. For Comm W 25:30 D 14 '46

Germany
German electrical utilities in wartime. J. G. Noest. bibliog il map Elec Eng 66:949-57 O '47
German electricity supply in war time. M. Neubrunn. Engineering 162:582-3, 606 D 20-27 '46

Gravesend, England
Meeting domestic demand; methods adopted at Gravesend. il Elec R (Lond) 139:787-9 N 15 '46

Great Britain
Britain adds 2,321,000 kw to grid system. Power 91:391 Je '47
British grid system in war time. J. Hacking and J. D. Peattie. il map diags Engineering 163:225-7, 249-51 Mr 21-28 '47; Abstracts and discussion. Electrician 138: 507-9 F 14 '47; Elec R (Lond) 140:305-6 F 14 '47
Case for 240v. E. R. Wilkinson. Electrician 137:1749 D 20 '46
Central electricity board winter operating conditions. Engineer 183:201 Mr 7 '47
Central electricity board's annual report, 1946. Engineer 183:354-5 Ap 25 '47; Electrician 138:1077-8 Ap 25 '47; Elec R (Lond) 140:661-2 Ap 25 '47
Commissioners' statistics; 1945-46 compared with 1938-39. Elec R (Lond) 139:918 D 6 '46
Commissioners' war report; six years' survey; abstracts. Electrician 138:363-4 Ja 31 '47; Elec R (Lond) 140:205-6 Ja 31 '47
Crisis and after; problem of cold-snap loads. Elec R (Lond) 140:335-7 Mr 7 '47
Development of public electricity distribution in Great Britain. W. H. Howard. Inst E E J 94 pt 1:138-40 Mr '47
Distribution in Lancashire. il map Elec R (Lond) 139:719-23 N 8 '46
Electrical plant shortages and fuel restrictions. Engineering 163:198 Mr 14 '47
Electricity and coal; interim report of Parliamentary and scientific committee. Electrician 139:51-2 Jl 4 '47
Electricity and the grid. E. R. Wilkinson. Engineer 182:597-8 D 27 '46
Electricity, coal and economics; abstract. R. A. S. Thwaites. Electrician 139:1067 O 10 '47
Electricity generation and fuel utilization. W. Warren. Inst E E J 94 pt 1:135-7 Mr '47

ELECTRICITY supply—Great Britain—*Cont.*
Electricity generation and wholesale distribution. J. Hacking. graph Electrician 138: 1081-3 Ap 25 '47; Abstract. Engineer 183: 362 Ap 25 '47
Electricity in northern Ireland. il Electrician 139:53 Jl 4 '47
Electricity supply during the war. Engineering 163:134 F 7 '47
Electricity supply statistics; commissioners' report covering five years' working. Electrician 137:1583-4 D 6 '46
English grid system. J. Wright. Pub Util 40:431-4 S 25 '47
Fuel and power; Ministry's statistical digest for 1945; abstracts. Elec R (Lond) 139:571-2 O 11 '46; Electrician 137:1063-4 O 18 '46
Fuel crisis; statement on rising electricity demand. E. Shinwell. Electrician 138:496-7 F 14 '47
Future of electricity supply. Elec R (Lond) 139:725-7 N 8 '46
Grid and its development. J. A. Lee. Inst E E J 94 pt 1:45-8 Ja '47; Same cond. Engineer 182:394 N 1 '46; Abstracts. Electrician 137:1133-4 O 25 '46; Elec R (Lond) 139:650 O 25 '46
Grid, coal and electricity. R. W. Biles. Inst E E J 94 pt 1:107-10 F '47; Abstract. Elec R (Lond) 139:570 O 11 '46
Industry and the House; power supply and demand. F. J. Erroll. Elec R (Lond) 141: 179-80 Ag 1 '47
International electricity supply; Great Britain compared with other countries. H. Nimmo. Engineering 162:449-50 N 8 '46; Abstracts. Elec R (Lond) 139:618 O 18 '46; Electrician 137:1061-2 O 18 '46
January cold spell; demand outstripping plant capacity; abstracts. Electrician 138:498-9 F 14 '47; Elec R (Lond) 140:302-3 F 14 '47
Maintenance of production during the power cuts; improvisations in machine drives. il Engineering 163:166 Mr 7 '47
Power and planning. Economist 152:634-6 Ap 26 '47
Power cuts close factories. Chem Age (Lond) 56:256-7 F 15 '47
Power is next; British Labor party plans to nationalize electricity. Bsns W p114+ D 14 '46
Power situation. H. Hobson. Elec R (Lond) 139:1065 D 27 '46
Progress of electricity supply. Engineering 162:590 D 20 '46
Seven years' development of an urban distribution system. J. F. Wright. Inst E E J 94 pt 1:147-9 Mr '47
Simon report rebutted; electricity the only all-purpose medium; abstracts. Elec R (Lond) 139:1051-2 D 27 '46; Electrician 173: 1829-30 D 27 '46
Spreading the load; recommendations of electricity sub-committee. Elec R (Lond) 140: 842 My 23 '47
Towards the all-electric idea; a review and a forecast. V. Z. de Ferranti. Inst E E J 94 pt 1:21-5 Ja '47; Same cond. Engineer 182: 317-19 O 11 '46; Same cond. Engineering 162:430-2 N 1 '46; Abstracts. Elec R (Lond) 139:565-6 O 11 '46; Electrician 137:985-7 O 11 '46; Discussion. Inst E E J 94 pt 1:25 Ja '47
Undertakings and the crisis. Electrician 138: 551-2+ Mr 7 '47
West Midlands joint electricity authority; luncheon held to celebrate twenty-first anniversary. Elec R (Lond) 139:709-10 N 1 '46
Winter power cuts; arrangements for minimizing disturbances. Elec R (Lond) 141:299-300 Ag 22 '47

India

Electrical notes from India. Electrician 138: 1013 Ap 18 '47

Ireland

Electricity in Northern Ireland. Electrician 138:1688 Je 20 '47
Progress in Eire; annual report of the Electricity supply board. Electrician 139:333 Ag 1 '47
Record of experience on the Irish electricity supply system; abstract and discussion. A. Burke and others. Electrician 138:1091-2 Ap 25 '47
Supply in Eire. Elec R (Lond) 141:298 Ag 22 '47

Italy

Electrical industry in Italy. Electrician 138: 217 Ja 17 '47
Italy's upped production of power fails to meet demands; with table giving figures for 1938-1946. For Comm W 27:28 Ap 19 '47
Power shortage aggravates Italy's dilemma. A. Giordano. Comm & Fin Chr 165:992+ F 20 '47

London

London load building. il Elec R (Lond) 140: 6-12, 147-52, 243-9, 515-20, 647-52 Ja 3, 24, F 7, Ap 4, 25 '47

Mexico

Many Mexican towns suffer shortage of electricity. For Comm W 26:30 Ja 4 '47
Mexico pushes power development to raise her standard of living. il maps Power 91: 528-31 Ag '47
Regulation curtails electric services in state of Jalisco. For Comm W 28:30 Jl 5 '47

Missouri

Power in the hub state of the Nation. il Manuf Rec 116:108-9 Ja '47

New England

New England output up despite industrial decline. Elec World News ed 127:14 Je 28 '47

New Zealand

New Zealand progress. il Elec R (Lond) 140: 169-70 Ja 24 '47

Northwestern states

More public power for private utility distribution? J. H. Polhemus. Pub Util 39: 511-12 Ap 10 '47
Power in the reaches of the Pacific Northwest. D. White. Pub Util 38:643-50 N 21 '46
Power on the Columbia. il Elec West 98:94-8 Je '47
Prospective Pacific Northwest power requirements; abstract. I. Bloch. Chem Eng 54: 250+ Je '47
Strange alliance; text of statement of policy submitted to Congress by Northwest public and private power executives; with table showing new federal generating capacity needed to 1953. Pub Util 39:369-70 Mr 13 '47

Norway

First step in Norway power export. For Comm W 26:35 F 22 '47

Philadelphia

Major electrical connections of latest distribution substations on Philadelphia electric system. E. B. Shew. diags Edison Elec Inst Bul 15:49-51 F '47

Pittsburgh

Pittsburgh story; Diesel generator stand-by units in power strike. il Diesel Power 24: 1438-41 D '46
Pittsburgh story; power strike. G. Doying and others. il Elec World 126:101-8 D 7 '46

Poland

Electricity supply in Poland. Elec R (Lond) 140:766 My 9 '47

Rhodesia

Southern Rhodesia; electrical achievements and possibilities. D. Spencer. Elec R (Lond) 140:269-70 F 7 '47

Salvador

Industry handicapped by power shortage. For Comm W 28:15-16 Ag 2 '47

Scotland

Hydro-electric developments in Scotland. J. Henderson. maps Engineering 164:333-5, 357-9 O 3-10 '47; Excerpt. Engineer 184: 272 S 19 '47
Scottish county scheme; Dumfriesshire rural development. il map Elec R (Lond) 140: 1003-8 Je 20 '47

ELECTRICITY supply—*Continued*

Seattle

Seattle Council approves higher house-heating rate. Elec World 128:52 Ag 2 '47

South Africa

Electricity in South Africa. Electrician 137: 1146 O 25 '46
South African plant needs. Elec R (Lond) 141:516 O 3 '47

Southeastern states

Southeast power pool. C. W. Mayott. map Elec Eng 66:166-70 F '47
Southeast will need 85% more energy by 1970, FPC reveals. Elec World News ed 127:6 My 3 '47

Southwestern states

Coals to Newcastle; SPA power grid carries hydro output to gas fields. map Elec World 127:102-4 F 15 '47
Fuel-power outlook, Pacific Southwest. N. B. Hinson. il Elec West 99:69-71 O '47

Sweden

Sweden's power plants hard pressed to meet big demand. For Comm W 27:29 My 10 '47

Switzerland

Electricity in Switzerland. Elec R (Lond) 139:687 N 1 '46

Sydney, New South Wales

Supply in Sydney. Elec R (Lond) 140:58 Ja 10 '47

Tacoma, Washington

Tacoma advised to build additional hydro capacity. Elec World News ed 128:19 Ag 9 '47

Texas

Texas power & light co. and SPA agree on Denison Dam energy. Elec World News ed 127:3-4 Ap 19 '47

Uganda

Electricity for Uganda. C. R. Westlake. map Elec R (Lond) 141:17-18 Jl 4 '47; Abstract. Electrician 139:57 Jl 4 '47

United States

Electric power and national defense; lesson from Spanish revolution. J. W. Swaren. Power Pl Eng 51:67+ S '47
Electric utilities rush new capacity to forestall power shortage. il Bsns W p22-4 O 18 '47
Electricity production in U.S. now at rate of 300 billion kwhr per year. Edison Elec Inst Bul 15:365-8+ O '47
Industry's plans for meeting energy demands revealed. H. S. Bennion. Elec World News ed 128:5 O 4 '47
Output, 1946; with tabulated data, 1932-1946. Elec World 127:138-9 Ja 18 '47
Power industry survey estimates five per cent margin of capacity above peak demands this winter. Edison Elec Inst Bul 15:364 O '47
U.S. power shortage looms. il Bsns W p 17 Ag 9 '47; Discussion. p49-50 S 6 '47
Voltage reduction provides load relief but is unpopular; fall meeting of systems operation committee of Pennsylvania electric association. Elec World News ed 128:5 N 1 '47

Western states

Dynamic future. Elec West 98:65-7 F '47
More kilowatt-hours per worker mean industrial supremacy. E. Fleischmann. Elec West 99:72-4 O '47
More power for the West. il Elec West 97: 67-9 O '46
Power supplies in shifting plants overrated. Barron's 27:6 My 26 '47
Reclamation's 6-year power program; tabular summary. map Elec World News ed 127:13, 16-17, 20, 22 Mr 22 '47
Six-year reclamation power plan would cost U.S. $801,070,480. Elec World News ed 127: 3-4 Mr 8 '47

Winnipeg

Winnipeg hydro-system. il Electrician 138: 1512 Je 6 '47

York, England

Mains extensions at York. map Electrician 139:341 Ag 1 '47

ELECTRO refractories and alloys corporation

Men and imagination make Electro a key supplier to our industry. il Am Cer Soc Bul 26:275-7 S 15 '47

ELECTROACOUSTIC transducers

General theory of passive linear electroacoustic transducers and the electroacoustic reciprocity theorem. L. L. Foldy and H. Primakoff. bibliog Acoustical Soc Am J 17:109-20 O '45; 19:50-8 Ja '47
Practical application of the reciprocity theorem in the calibration of underwater sound transducers. P. Ebaugh and R. E. Mueser. bibliog Acoustical Soc Am J 19:695-700 Jl '47
Self-reciprocity calibration of electroacoustic transducers. E. L. Carstensen. Acoustical Soc Am J 19:702 Jl '47
Simplified method for determining transducer directivity index. P. M. Kendig and R. E. Mueser. diags Acoustical Soc Am J 19:691-4 Jl '47
Two parabolic reflector underwater transducers. J. R. Reitz and R. E. Mueser. il diags Acoustical Soc Am J 19:35-43 Ja '47

ELECTROACOUSTICS

Asymmetrical vibrations of cones. P. G. Bordoni. bibliog il diags Acoustical Soc Am J 19:146-55 Ja '47
Coordinates and the reciprocity theorem in electromechanical systems. J. W. Miles. bibliog diags Acoustical Soc Am J 19:910-13 S '47
Design of speech communication systems for use in presence of noise. L. L. Beranek. bibliog diags Inst Radio Eng Proc 35:880-90 S '47
General theory of passive linear electroacoustic transducers and the electroacoustic reciprocity theorem. L. L. Foldy and H. Primakoff. bibliog Acoustical Soc Am J 17:109-20 O '45; 19:50-8 Ja '47
Les installations électroacoustiques réalisées à l'occasion des grandes conférences internationales tenues à Paris. M. Adam. il diags Génie Civil 124:210-11 Je 1 '47

Bibliography

Radio progress during 1946; electroacoustics. Inst Radio Eng Proc 35:421-3 Ap '47

ELECTROBIOLOGY. See Electrophysiology

ELECTROCARDIOGRAPH

Electrocardiograph in industrial medicine; report based on 2,000 electrocardiograms. E. M. Kline and J. H. Hess. Ind Med 16: 378+ Jl '47

ELECTROCARDIOPHONE

Conversion of heart potentials into auditory equivalents. E. T. Krebs, jr. diag Science 106:151-2 Ag 15 '47

ELECTROCHEMICAL analysis

Determination of bismuth, copper, and lead in aluminum alloys. G. Norwitz, S. Greenberg and F. Bachtiger. bibliog Anal Chem 19:173-5 Mr '47
Electrolytic gold solution assay. J. E. Nelson. Can Min J 68:15-16 Ja '47

ELECTROCHEMICAL industries

Diaphragm vs. amalgam cells for chlorine-caustic production. R. B. MacMullin. bibliog il Chem Ind 61:41-50 Jl '47

Scotland

Chemical resources and industries of Scotland; uses of hydro-electric power. A. G. E. Robiette. Engineer 184:272-3 S 19 '47

ELECTROCHEMICAL society

Meeting, 90th, Toronto, Oct. 16-19; abstracts of papers. Steel 119:88-9+ D 9 '46
Meeting at Toronto. Chem & Eng N 24:2894-5 N 10 '46
Meeting, 91st, Louisville, Ky. April 9-12. Chem & Eng N 25:1190-1 Ap 28 '47
Meeting, 91st, Louisville, Ky. April 9-12; abstracts of papers. Steel 121:102+ Jl 7 '47
Meeting, 92d, Boston, Oct. 15-18. Chem & Eng N 25:3218-19 N 3 '47

ELECTROCHEMISTRY

Adventures in electrochemistry. E. A. LeSueur. Chem & Ind p83-6 F 8 '47; Abstract. Chem Eng 54:250+ Ja '47

Electric activation of chemical reactions. W. J. Cotton. bibliog diags Electrochem Soc Trans 91 (preprints 34A-G):489-602 '47

Electric activation of chemical reactions; effect of some variables on electric discharges through gases. W. J. Cotton. Electrochem Soc Trans 91 (preprint 34-H):603-28 '47

Electrochemistry of permselective collodion membranes. K. Sollner and H. P. Gregor. bibliog J Phys Chem 50:470-6 N '46; [cont as] J Phys & Colloid Chem 51:299-311 Ja '47

Electrochemists' congress in Toronto. Can Chem & Process Ind 30:42+ N '46

Electro-organic chemical preparations. S. Swann, jr. bibliog tables Electrochem Soc Trans 88 (preprint 23):237-54 '45; Same. Ill U Eng Exp Sta Reprint Ser 36:103-20 '47 (pa 25c)

Influence of crystal face on the electrochemical properties of a single crystal of copper. H. Leidheiser, jr. and A. T. Gwathmey. bibliog il Electrochem Soc Trans 91 (preprint 6):97-108 '47

Internment-camp electrochemics. T. Haden. diags Chem & Ind p625-7 O 11 '47

Production of synthetic lubricating oils by the voltolization processes. G. G. Pritzker. bibliog and patent list Pet Processing 2: 291+ Ap '47

Proposed interpretation of the zeta-potential. L. B. Robinson. bibliog J Chem Phys 14:721-4 D '46

Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46

Some observations on decomposition voltages. J. O. Bockris and S. Ignatowicz. bibliog diag Electrochem Soc Trans 92 (preprint 9):115-22 '47

Water locator successfully used in Permian basin workover programs; electro-chemical method. L. S. McCaslin. il diag Oil & Gas J 46:77+ S 6 '47

See also

Electric precipitation
Electrodeposition of metals
Electrodes
Electrolysis
Electrolytes
Electrolytic cells
Electrometallurgy
Electroplating
Ionization, Electrolytic
Reduction, Electrolytic

ELECTRODEPOSITION of metals

Cosmetic gloves from electroformed molds; gloves for use over artificial hands. C. L. Milton, jr. and others. il Metal Finishing 45:61-2+ Ag '47

Electrodeposited silver on steel for glass-to-metal seals. N. S. Freedman. il Electrochem Soc Trans 91 (preprint 19):285-96 '47

Electroforming for precision. H. R. Clauser. il Sci Am 176:15-17 Ja '47

Electroplating non-conductors. T. A. Dickinson. diag Metal Finishing 45:95 Je '47

Practical copper reduction on non-conductors. H. Narcus. bibliog Metal Finishing 45:64-7+ S '47

Production processes; their influence on design; electroforming. R. W. Bolz. il Machine Design 18:129-34 D '46

Simple technique for the X-ray determination of fiber-axes in electro-deposited metals. M. R. J. Wyllie. diags R Sci Instr 18:425-9 Je '47

See also

Electrometallurgy
Electroplating

ELECTRODEPOSITION of rubber

Positex, natural-rubber latex has reversed charge. Textile World 97:150 Mr '47

ELECTRODEPOSITORS' technical society

Coming of age. Chem Age (Lond) 56:101 Ja 11 '47

Review of progress since its formation. Chem Age (Lond) 55:704 D 7 '46

ELECTRODES

Activity of orthophosphoric acid in aqueous solutions at 25° from e.m.f. measurements with the lead amalgam-lead phosphate electrode. C. M. Mason and W. M. Blum. bibliog il Am Chem Soc J 69:1246-50 Je '47

Amperometric titration of styrene with potassium bromate using the rotating platinum electrode. I. M. Kolthoff and F. A. Bovey. bibliog Anal Chem 19:498-500 Jl '47

Anodic current efficiency in the counterflow electrolysis of uranyl chloride solutions. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39:141-7 Ag '47

Discharges between electrode and dielectric at low voltages. Engineer 183:480 My 30 '47

Effect of the hydrogen ion concentration upon the salt error of the quinhydrone electrode. J. L. Gabbard. bibliog diag Am Chem Soc J 69:533-6 Mr '47

Electric activation of chemical reactions; production of nitrogen oxides. W. J. Cotton. Electrochem Soc Trans 91 (preprint 34D-E):537-75 '47

Electric activation of chemical reactions; production of nitrogen oxides; critical electrode frequencies. W. J. Cotton. Electrochem Soc Trans 91 (preprint 34C):519-35 '47

Electric activation of chemical reactions; production of nitrogen oxides; periodic activation and work functions of electrode materials. W. J. Cotton. Electrochem Soc Trans 91 (preprint 34G):593-602 '47

Electrolytic behavior in the presence of a tension impulsion. L. B. Villaseca and C. G. Herrera. bibliog J Chem Phys 15:152 Mr '47

Hydrogen gas electrode measurements. G. A. Perley. bibliog il Electrochem Soc Trans 92 (preprint 14):167-77 '47

Molal electrode potentials of the silver-silver chloride electrode in *i*-propyl alcohol-water mixtures from 0 to 40°. R. L. Moore and W. A. Felsing. bibliog Am Chem Soc J 69: 1076-9 My '47

New type of electroencephalographic electrode coordinator with semipermanent electrodes. M. A. Buffington and A. A. Weil. il Science 105:185-6 F 14 '47

Package helps place line with 10% of prospective jobbers; McKay welding electrodes. P. Hyde. Ptr Ink 218:62+ F 21 '47

Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47

Production of electric furnace electrodes; illustrations with text. L. C. Judson. Iron Age 160:62-4 Ag 14 '47

Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46

Spectrochemical analysis by the copper spark method. M. Fred and others. bibliog il Opt Soc Am J 37:279-88 Ap '47

Zirconium and thorium electrodes in discharge lamps. H. C. Rentschler and others. il Electrochem Soc Trans 91 (preprint 21): 311-17 '47

See also

Cathodes
Electric welding—Electrodes
Electric welding, Arc—Electrodes

ELECTRODES, Glass

pH of wines; examination of glass and quinhydrone electrode values. J. C. M. Fornachon. bibliog Ind & Eng Chem Anal ed 18: 790-3 D '46

Rapid electrometric determination of the alkalinity of sea water using a glass electrode. D. H. Anderson and R. J. Robinson. bibliog Ind & Eng Chem Anal ed 18:767-9 D '46

Voltage anomalies of the glass electrode and the chemical durability of the glass; abstract. D. Hubbard and G. F. Rynders. Glass Ind 28:312+ Je '47

ELECTRODIAGNOSIS
Electrometric studies in women with malignancy of cervix uteri. L. Langman and H. S. Burr. Science 105:209-10 F 21 '47
See also
Diagnosis, Radioscopic

ELECTRODYNAMICS
Analysis of electromagnetic forces. W. A. Tripp. Elec Eng 64:351-6 O '45; Discussion. A. Gronner. 65:300-2 Je '46; Reply to discussion. W. A. Tripp. 65:596-8 D '46
Hydrogen atom in a generalized classical electrodynamics. C. J. Eliezer. Phys R 71: 49-53 Ja 1 '47
Interaction of electrons and an electromagnetic field. C. J. Eliezer. bibliog Rs Mod Phys 19:147-84 Jl '47
Lorentz transformation of charge and current densities. B. Podolsky. Phys R 72: 624-6 O 1 '47
Measurement of sea-water velocities by electromagnetic induction. R. W. Guelke and C. A. Schoute-Vanneck. bibliog diags Inst E E J 94 pt 2:71-4 F '47
Self-energy and interaction energy in Podolsky's generalized electrodynamics. A. E. S. Green. bibliog Phys R 72:628-31 O 1 '47
See also
Electrostatics
Wave mechanics

ELECTROENCEPHALOGRAPH
Automatic low frequency analyzer. I. Barbour. bibliog il diags R Sci Instr 18:516-22 Jl '47
Electro-encephalograph amplifier. D. L. Johnston. bibliog(61 titles) il diags Wireless Eng 24:231-42, 271-7, 292-7 Ag-O '47
Electroencephalographic technique from an engineer's point of view. W. G. Egan. bibliog il diags Inst Radio Eng Proc 34:1000-4 D '46
Frequency analysis of electroencephalograms. F. A. Gibbs and A. M. Grass. bibliog Science 105:132-4 Ja 31 '47
Interphase analyzer of the electroencephalogram. H. Sonnemann and M. A. Kennard. diag Science 105:437-8 Ap 25 '47
Minimal electroencephalographic response to metrazol as a method for measuring the convulsive threshold for use in human beings. E. Ziskind and others. Science 104: 462 N 15 '46
New type of electroencephalographic electrode coordinator with semipermanent electrodes. M. A. Buffington and A. A. Weil. il Science 105:185-6 F 14 '47
Simplified encephalophone. M. Conrad and B. L. Pacella. diag Science 105:216 F 21 '47
Variations in the normal electroencephalogram during a five-year period. G. L. Engel and others. bibliog Science 105:600-1 Je 6 '47

ELECTROENCEPHALOGRAPHY. See Brain

ELECTROFORMING. See Electrodeposition of metals

ELECTROGRAPHIC analysis
Electrographic methods of analysis. E. A. Arnold. Electrochem Soc Trans 90 (preprint 37):469-73 '46; Abstract. Steel 119:88-9+ D 9 '46

ELECTROGRAPHY
Pore size in protective films by electrographic printing. W. E. Shaw and E. T. Moore. bibliog diags Anal Chem 19:777-9 O '47

ELECTROHYDRAULIC control
Cochrane-Bly automatic metal sawing machine. il diags Product Eng 18:124-6 S '47
Diesel-drive control; electro-hydraulic governing system. il diag Ry Mech Eng 121:41 Ja '47
Diesel-electric load, speed controlled by new systems. il diag Elec World News ed 126: 19 D 14 '46
Dura hydro-lectric system for operation of windows, front seat and top; Packard convertibles. il diags Automotive & Aviation Ind 96:24-6+ My 15 '47
Electrohydraulic control of Diesel-electric drives. C. B. Lewis and M. A. Edwards. il diags Mech Eng 68:953-5 N '46; Same. Diesel Power 25:72-4+ F '47
Electronic computer for printing control; speed of a multicolor web printing press tripled by application of electronic-hydraulic system. J. W. Ludwig. il diags Electronics 20:108-11 N '47
Hydraulic coupling applied to electric motor. il diag Product Eng 18:96 Mr '47
Hydraulic-electric system operates windows, seat and top; Buick convertibles. diags Product Eng 18:100-1 Je '47
Hydraulic mechanism as used in bodies. J. B. Parsons. Automotive & Aviation Ind 95:46 D 1 '46
Keighley improved hydraulically-operated grinding machines. il Engineer 182:422 N 8 '46
Modern rotary drilling; developments in electric power. J. Zaba. Oil & Gas J 46:117 Je 21 '47
Oilgear's doubleslide surface broaching machines. il diags Product Eng 18:98-100 S '47

ELECTROLYSIS
Anodic current efficiency in the counterflow electrolysis of uranyl chloride solutions. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39:141-7 Ag '47
Concentration of isotopes of chlorine by the countercurrent electromigration method. S. L. Madorsky and S. Straus. bibliog il diags J Res Nat Bur Stand 38:185-9 F '47
Concentration of isotopes of potassium by the countercurrent electromigration method. A. K. Brewer and others. bibliog charts diags J Res Nat Bur Stand 38:137-68 F '47
Concentration of potassium^{39} by countercurrent electromigration; some theoretical aspects of the operation. J. W. Westhaver. bibliog charts J Res Nat Bur Stand 38:169-83 F '47
Electrolytic generation of fluorine. W. C. Schumb, R. C. Young and K. J. Radimer. diags Ind & Eng Chem 39:244-8 Mr '47
Electrolytic integrating tube; explosions of oxygen and hydrogen produced by electrolysis provide method of duplicating time cycles or integrating flow of liquid or gas. J. Sivertsen. il diags Electronics 20:92-5 Je '47
Hydrochloric acid electrolysis. W. C. Gardiner. diags Chem Eng 54:100-1 Ja '47
Influence of crystal face on the electrochemical properties of a single crystal of copper. H. Leidheiser, jr. and A. T. Gwathmey. bibliog il Electrochem Soc Trans 91 (preprint 6):97-108 '47
Isotope separation by counter-current methods. diags Chem Age (Lond) 57:263-6 Ag 23 '47
Isotope separation by electromigration. Elec Eng 66:452 My '47
Laboratory preparation of alkali metal hydroxides by electrolysis. A. F. Winslow, H. A. Liebhafsky and H. M. Smith. diags J Phys & Colloid Chem 51:967-72 Jl '47
Oxidation and reduction of glasses by means of electrolysis. G. E. Rindone and others. bibliog diags Am Cer Soc J 30:314-19 O 1 '47
Problem of teaching electrolysis in the course in general chemistry. J. A. Timm. diags J Chem Educ 24:160-5 Ap '47
Unitized mercury cathode apparatus for electrolytic removal of metals. H. O. Johnson, J. R. Weaver and L. Lykken. bibliog il diags Anal Chem 19:481-3 Jl '47
See also
Electrochemical analysis
Electrodeposition of metals
Electrodes
Electrolytes
Electrolytic cells
Electrolytic corrosion
Electrometallurgy

ELECTROLYTES
Application of electrolytic polishing to ferrous metallography. H. J. Merchant. bibliog 3pls diags Iron & Steel Inst J 155:179-94 F '47
Application of radioactive isotopes to the problem of diffusion of electrolytes in aqueous solutions. L. B. Robinson and J. B. Drew. J Chem Phys 15:417-18 Je '47
Chromic acid electrolyte for a magnesium primary cell. H. A. Barbian and R. E. McNulty. il Electrochem Soc Trans 91 (preprint 7):109-26 '47

ELECTROLYTES—*Continued*
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47
Dielectric behavior of solutions of electrolytes in solvents of low dielectric constant. A. H. Sharbaugh, jr. and others. bibliog diags J Chem Phys 15:47-64 Ja '47
Diffusion coefficient of potassium chloride in dilute aqueous solution. H. S. Harned and R. L. Nuttall. bibliog diags Am Chem Soc J 69:736-40 Ap '47
Effect of electrolytes on the foaming capacity of alpha soybean protein dispersions. J. M. Perri, jr. and F. Hazel. bibliog J Phys & Colloid Chem 51:661-6 My '47
Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47
Electrochemistry of permselective collodion membranes; experimental studies on the concentration potential across various types of permselective collodion membranes with solutions of several electrolytes. K. Sollner and H. P. Gregor. bibliog J Phys & Colloid Chem 51:299-311 Ja '47
Micelle structure in aqueous solutions of colloidal electrolytes. R. J. Vetter. bibliog J Phys & Colloid Chem 51:262-77 Ja '47
Molal electrode potentials of the silver-silver chloride electrode in *i*-propyl alcohol-water mixtures from 0 to 40°. R. L. Moore and W. A. Felsing. bibliog Am Chem Soc J 69:1076-9 My '47
Moving boundary method for the measurement of non-electrolyte transport in mixed solvents. L. G. Longsworth. bibliog Am Chem Soc J 69:1288-91 Je '47
Phase study of commercial soap-alkaline electrolyte water-systems. R. C. Merrill. bibliog Ind & Eng Chem 39:158-66 F '47
Quantitative aspect of diffusion in electrolyte solutions. H. S. Harned. il diags Chem R 40:461-522 bibliog(108 ref, p519-22) Je '47
Sawing metal by electrolytic action. Iron Age 158:61 D 26 '46
Solubilization by solutions of long-chain colloidal electrolytes. R. S. Stearns and others. bibliog J Chem Phys 15:496-507 Jl '47
Summary of discussion on electrolytic solutions. Chem & Ind p308-9 My 31 '47
Use of membrane electrodes in the study of soap solutions. C. W. Carr, W. F. Johnson and I. M. Kolthoff. bibliog J Phys & Colloid Chem 51:636-44 My '47

See also
Moving boundary,
Theory of

Conductivity

Conductance of tetraethylammonium sulfamate in liquid hydrogen sulfide. E. E. Lineken. Am Chem Soc J 69:467-8 F '47
Conductances of lead chloride in ethylene glycol-water mixtures. J. W. Norman and A. B. Garrett. bibliog Am Chem Soc J 69:110-13 Ja '47
Conductivity of strong electrolytes. S. G. Chaudhury. bibliog J Phys Chem 50:477-85 N '46
Electrical behavior of hexyl- and dodecylammonium chlorides in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. bibliog Am Chem Soc J 68:2460-4 D '46
Electrical conductance of aqueous solutions; silver chlorate at 25°. J. H. Jones. bibliog Am Chem Soc J 69:2065-6 Ag '47
Electrical conductivities of aqueous solutions of mixtures containing alkylammonium chlorides. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:883-6 Ap '47
Electrical conductivities of long-chain quaternary ammonium chlorides containing hydroxyalkyl groups. A. W. Ralston and others. Am Chem Soc J 69:2095-7 S '47
Electrolytic conductivity of NaOH in H_2O and of NaOD in D_2O at 25°; vacuum distilling apparatus for deuterium oxide. E. Hetland. diags Am Chem Soc J 68:2532-5 D '46
Maximum in the equivalent conductivity of two paraffin-chain salts in water. G. L. Brown and others. Am Chem Soc J 69:1835-6 Jl '47
Properties of electrolytic solutions; conductance of choline and related picrates in ethylene chloride at 25°. D. J. Mead and others. Am Chem Soc J 69:528-30 Mr '47
Properties of electrolytic solutions; conductance of several quaternary onium salts in ethylene chloride at 25°. L. F. Gleysteen and C. A. Kraus. bibliog Am Chem Soc J 69:451-4 F '47
Properties of electrolytic solutions; conductance of some salts in nitrobenzene at 25°. E. G. Taylor and C. A. Kraus. Am Chem Soc J 69:1731-5 Jl '47
Properties of electrolytic solutions; conductance of some substituted ammonium salts in ethylene chloride. L. M. Tucker and C. A. Kraus. Am Chem Soc J 69:454-6 F '47
Properties of electrolytic solutions; the conductance of several quaternary ammonium salts in ethylene chloride at 25°. W. E. Thompson and C. A. Kraus. bibliog Am Chem Soc J 69:1016-20 My '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47

ELECTROLYTIC cells
Adventures in electrochemistry. E. A. LeSueur. Chem & Ind p83-6 F 8 '47
Application of electrolytic polishing to ferrous metallography. H. J. Merchant. bibliog 3pls diags Iron & Steel Inst J 155:179-94 F '47; Discussion. il 156:524-6 Ag '47
Carbon-anode fluoride cell. R. L. Murray, S. G. Osborne and M. S. Kircher. il diags Ind & Eng Chem 39:249-54 Mr '47
Development and use of 600-ampere fluorine cell. R. D. Fowler and others. il diags Ind & Eng Chem 39:266-71 Mr '47
Diaphragm vs. amalgam cells for chlorine-caustic production. R. B. MacMullin. bibliog il Chem Ind 61:41-50 Jl '47
E. A. LeSueur receives S.C.I. (Canada) medal; speech of acceptance. Can Chem & Process Ind 30:45-6 D '46
Effect of cell variables on the electrowinning of manganese. J. H. Jacobs. bibliog il Electrochem Soc Trans 90 (preprint 35):439-48 '46
Electrolytic cells for production of fluorine. R. C. Downing and others. bibliog il diags Ind & Eng Chem 39:259-62 Mr '47
Electrolytic fluorine production in Germany. H. R. Neumark. diags Electrochem Soc Trans 91 (preprint 3):37-54 '46
Electrolytic generation of fluorine. W. C. Schumb, R. C. Young and K. J. Radimer. diags Ind & Eng Chem 39:244-8 Mr '47
Electrolytic lithium; report on a German method. Chem Age (Lond) 56:19 Ja 4 '47
Electrolytic valve action of zirconium. W. R. Carmody. bibliog diag Electrochem Soc Trans 91 (preprint 9):147-56 '47
Hull cell. H. J. Sedusky and J. B. Mohler. diags Metal Finishing 45:59-63 Ja '47
Hydrochloric acid electrolysis. W. C. Gardiner. diags Chem Eng 54:100-1 Ja '47
Interference films on tungsten. I. H. Parsons. diags J Chem Educ 24:483 O '47
Laboratory preparation of alkali metal hydroxides by electrolysis. A. F. Winslow, H. A. Liebhafsky and H. M. Smith. diags J Phys & Colloid Chem 51:967-72 Jl '47
Mercury cell. Chem Eng 54:148 S '47
Preparation of fluorine. J. T. Pinkston, jr. bibliog il diag Ind & Eng Chem 39:255-8 Mr '47
Pumped, not rocked; Mathieson Alkali stationary mercury cell. Chem Ind 61:212 Ag '47
Reaction of sulfur dioxide, water and oxygen in an electrolytic cell. W. F. Seyer and others. bibliog diag Electrochem Soc Trans 91 (preprint 22)319-32 '47
Small scale production and handling of fluorine; laboratory or small pilot plant. J. F. Gall and H. C. Miller. il diags Ind & Eng Chem 39:262-6 Mr '47
Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19:675-7 S '47

ELECTROLYTIC cells—*Continued*
Two-compartment cell softens water electrolytically. L. Streicher. il diags Civil Eng 16:312-13 Jl '46; Same. Water & Sewage 85: 18-19+ Ja '47

ELECTROLYTIC corrosion
Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47
Selection of materials and design important for controlling galvanic or two-metal corrosion. M. G. Fontana. Ind & Eng Chem 39:sup85A-6A Jl '47
Stray current control system for prevention of electrolytic corrosion. il Am Gas J 166: 37 F '47
See also
Stray currents

ELECTROLYTIC oxidation. See Oxidation, Electrolytic

ELECTROLYTIC polarization. See Polarization, Electrolytic

ELECTROLYTIC polishing. See Polishing, Electrolytic

ELECTROLYTIC recording paper. See Paper, Recording

ELECTROLYTIC reduction. See Reduction, Electrolytic

ELECTROMAGNETIC field
Calculation of field strengths over a spherical earth. C. Domb and M. H. L. Pryce. diags Inst E E J 94 pt 3:325-36; Discussion. 337-9 S '47
End plate and side wall currents in circular cylinder cavity resonator. J. P. Kinzer and I. G. Wilson. il pl Bell System Tech J 26: 31-79 Ja '47
Field of a microwave dipole antenna in the vicinity of the horizon. C. L. Pekeris. bibliog J Ap Phys 18:667-80, 1025-7 Jl, N '47
Motion of a particle in an electromagnetic and gravitational field. H. C. Corben and M. Corben. Phys R 72:434 S 1 '47
Newton's and Einstein's relations between mass and energy. J. J. Smith. bibliog Elec Eng 66:561-4 Je '47
Preliminary analysis of microwave transmission data obtained on the San Diego coast under conditions of a surface duct. C. L. Pekeris and M. E. Davis. J Ap Phys 18: 838-42 S '47

ELECTROMAGNETIC shielding
Locates grounds in shielded room. il Electronics 20:134+ O '47
Shielding principle provides electronic micrometer. il Pet Eng 18:113 Ap '47; Same abr. Mech Eng 69:406-7 My '47; Abstract. Electronics 20:150+ Jl '47

ELECTROMAGNETIC theory
Diffraction pattern of a circular aperture at short distances. C. L. Andrews. bibliog diags Phys R 71:777-86 Je 1 '47
Electrostatic field of a point charge inside a cylinder, in connection with wave guide theory. C. J. Bouwkamp and N. G. de Bruijn. bibliog J Ap Phys 18:562-77 Je '47; Correction. 19:105 Ja '48
Equivalence of the Riesz method and the λ-limiting process for the classical electromagnetic field of a point source. S. T. Ma. bibliog Phys R 71:787-92 Je 1 '47
Kinematics of uniformly accelerated motions and classical electromagnetic theory. E. L. Hill. bibliog Phys R 72:143-9 Jl 15 '47
Notes on the Wheeler-Feynman theory. C. W. Berenda. bibliog Phys R 71:550 Ap 15 '47
Refraction of plane non-uniform electromagnetic waves between absorbing media. L. Pincherle. Phys R 72:232-5 Ag 1 '47
See also
Maxwell's equations

ELECTROMAGNETISM
Absolute rotation and a rotating magnet. C. Hsü. diags Wireless Eng 24:185-7 Je '47
Analysis of electromagnetic forces. W. A. Tripp. Elec Eng 64:351-6 O '45; Discussion. A. Gronner. 65:300-2 Je '46; Reply to discussion. W. A. Tripp. 65:596-8 D '46
Applications of magnetic amplifiers. W. E. Greene. bibliog il diags Electronics 20:124-8 S '47
Electromagnetic radiation. J. Greig. diags Wireless Eng 24:143-4 My '47
Engine indicator; details of the Standard-Sunbury electromagnetic design. S. Hill. diags Automobile Eng 37:19-23 Ja '47
Frequency dependence of the properties of sea echo. H. Goldstein. bibliog diags Phys R 70:938-46 D 1 '46

Mechanical analogies
Electric-magnetic analogy. G. W. O. Howe. Wireless Eng 24:131-3 My '47
Use of anologies. G. W. O. Howe. Wireless Eng 24:1-3 Ja '47; Discussion. G. H. Livens. 24:156 My '47

ELECTROMAGNETS
A-c magnets and solenoids. L. T. Rader. diags Elec Eng 66:487-92 My '47; Abstract. Product Eng 18:126-9 Je '47
Determination of the d.c. magnetization characteristics of laminated cores using overlapping joints. O. I. Butler. bibliog diags Inst E E J 94 pt 2:27-32 F '47
Eight full open hearth heats used in 1100-ton magnet for navy super cyclotron. il Steel 120:126 My 12 '47
Electro-magnets in the field of materials handling. il Mech Handling 34:373-4 Jl '47
Powerful electromagnet developed for research work. Mach 53:156 Jl '47
Super electromagnet. il Sci Am 176:128 Mr '47
See also
Lifting magnets
Solenoids

ELECTROMECHANICAL transducers
Coordinates and the reciprocity theorem in electromechanical systems. J. W. Miles. bibliog diags Acoustical Soc Am J 19:910-13 S '47
Violation of the reciprocity theorem in linear passive electromechanical systems. E. M. McMillan. diags Acoustical Soc Am J 18: 344-7 O '46; Discussion. 19:502-3, 922 My, S '47

ELECTROMETALLURGY
Aluminum-silicon alloys by electrothermal reduction of clay with coke. M. M. Striplin, jr, and W. M. Kelly. bibliog il diags Chem Eng Prog 43:569-78 O '47
Vacuum melting in Germany. G. T. Motock. il diags Iron Age 158:64-9 D 12 '46
See also
Cobalt metallurgy—Electrometallurgy
Electric furnaces, Metallurgical
Electrodeposition of metals
Electroplating
Iron metallurgy—Electrometallurgy
Lead metallurgy—Electrometallurgy
Manganese metallurgy—Electrometallurgy
Smelting, Electric
Steel metallurgy—Electrometallurgy
Tin metallurgy—Electrometallurgy
Zinc metallurgy—Electrometallurgy

ELECTROMETERS
Capacitative commutator. S. A. Scherbatskoy and others. bibliog il diags R Sci Instr 18: 415-21 Je '47
Design of dynamic condenser electrometers. H. Palevsky and others. bibliog il diags R Sci Instr 18:298-314 My '47
Electrometer input circuits. H. A. Thomas. diag Electronics 19:130-1 D '46
Electrometer triode. R Sci Instr 18:590-1 Ag '47
Improvements in the stability of the FP-54 electrometer tube. J. M. Lafferty and K. H. Kingdon. bibliog il diags J Ap Phys 17: 894-900 N '46
Subminiature electrometer tube. C. D. Gould. il diags Electronics 20:106-9 Mr '47
Using a 919 as electrometer tube. Electronics 20:178+ Jl '47

ELECTROMETRIC titration. See Volumetric analysis

ELECTROMOTIVE force. See Potential, Electric

ELECTRON accelerator
Accelerators under construction at Berkeley. M. L. Kastens. il diags Chem & Eng N 25:224-7 Ja 27 '47
Atom smasher tank stresses as measured by SR-4 strain gages. T. F. Hengstenberg. il diags Welding J 26:sup363-6 Je '47

ELECTRON accelerator—*Continued*
Atomic artillery; principles and mechanisms of electron and ion accelerators. J. Stokley. il diags Gen Elec R 50:9-19 Je '47
Betatron at Picatinny arsenal. il Metal Prog 51:256 F '47
Betatron energy raised to 160 million volts. diags Power Pl Eng 50:82-3 N '46
Betatron research in multimillion volt range. Franklin Inst J 244:149-51 Ag '47
Biased betatron in operation. W. F. Westendorp. diags Phys R 71:271-2 F 15 '47
Bringing the beam out of a betatron. R. Wideröe. Phys R 71:376 Mr 15 '47
Cavity accelerator for electrons. H. L. Schultz and others. Phys R 72:346-7 Ag 15 '47
Development of electron accelerators. il diag Electronics 20:170+ Ja '47
Effect of phase displacement between the inducing and guiding fields in a betatron. R. Wideröe. R Sci Instr 18:250-1 Ap '47
Electron linear accelerator demonstrated; Microwave laboratory at Stanford university. il Electronics 20:144 N '47
Electron mechanics of induction acceleration. J. A. Rajchman and W. H. Cherry. bibliog diags Franklin Inst J 243:261-85, 345-64 Ap-My '47
Electronics and the future. E. U. Condon. il Elec Eng 66:358-60 Ap '47
Electronized Chemicals. il diag Fortune 35: 104-9+ Mr '47
European electron induction accelerators. H. F. Kaiser. bibliog il diags J Ap Phys 18:1-18 Ja '47; Discussion. R. Wideröe. 18:783 Ag '47
Forces between moving charges. R. D. Sard. bibliog diags Elec Eng 66:61-5 Ja '47
GE atom-smasher, combining betatron and cyclotron. il Chem & Eng N 25:102 Ja 13 '47
Industry's first 20-million-volt betatron shown by army at Picatinny arsenal. il Elec World 126:136 N 23 '46
Methods of displacing the high energy beam in a betatron. D. W. Kerst and H. W. Koch. R Sci Instr 18:681 S '47
New betatron can X-ray 2 ft. of steel. il Bsns W p52 N 23 '46
Nuclear transformations in the new high energy ranges. G. T. Seaborg. Chem & Eng N 25:2819-22 S 29 '47
On-orbit injector for betatrons and synchrotrons. D. C. dePackh and A. V. Haeff. diag Phys R 72:247-8 Ag 1 '47
Particle accelerators; betatron, synchrotron, cyclotron, and Van de Graaff generator. il diags Product Eng 18:149-51 Ja '47
Picatinny uncloaks betatron. il Chem & Eng N 24:3182 D 10 '46
Plans completed at National bureau of standards for erection of two betatrons. Science 105:230 F 28 '47
Plans for two subterranean betatrons at National bureau of standards. Chem & Eng N 25:614 Mr 3 '47
Power supply for the 100,000,000-volt betatron. F. L. Kaestle. il diag Elec World 128: 42-4 Ag 30 '47
Powerful X-ray machine for industrial use; betatron. Comp Air Mag 52:44 F '47
Racetrack stability. D. M. Dennison and T. Berlin. Phys R 70:764-5 N 1 '46
Remote control betatron target positioner. H. F. Kaiser. il diag R Sci Instr 18:134-5 F '47
70-Mev synchrotron. F. R. Elder and others. bibliog il diags J Ap Phys 18:810-18 S '47
Stanford linear accelerator. il diag Chem & Eng N 25:3074-5 O 20 '47
Study of a certain type of resonant cavity and its application to a charged particle accelerator. E. S. Akeley. J Ap Phys 17: 1056-60 D '46
Synchronization of auxiliary apparatus with a betatron. G. C. Baldwin and others. diags R Sci Instr 18:121-4 F '47
Synchrotron; capable of producing a beam of 70,000,000-volt X-rays. il Mech Eng 69:155 F '47
Third atom-smasher being built in Berkeley. Chem Eng 53:210+ N '46
Thresholds for creation of particles. H. Feshbach and L. I. Schiff. Phys R 72:254 Ag 1 '47
20-million-volt betatron. il Mech Eng 69: 34-5 Ja '47
20,000,000-volt betatron X-rays heavy sections. il diags Am Mach 90:152-3 N 21 '46; Iron Age 158:60-1 N 21 '46; Steel 119:68-9 N 25 '46
Ultrashort application time of penetrating electrons; tool for sterilization and preservation of food in the raw state. A. Brasch and W. Huber. il Science 105:112-17 Ja 31 '47
X-ray negatives made through twenty inches of metal; betatron at Picatinny arsenal. il Mach 53:172 Ja '47

See also
Cyclotron
Synchrotron

ELECTRON beams. See Electrons—Beams

ELECTRON diffraction cameras. See Cameras, Electron diffraction

ELECTRON gun
Electron-gun compass. il diag Machine Design 19:106 Mr '47
Optics of three-electrode electron guns. S. G. Ellis. bibliog diags J Ap Phys 18:879-90 O '47

ELECTRON microscope
Attachments for aligning a console electron microscope. H. C. Froula. il J Ap Phys 18: 850 S '47
Chromosome structure under the electron microscope. J. T. Buchholz. bibliog il Science 105:607-10 Je 13 '47
Comparison of optical and electron microscopy of pigments. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:261-4, pl 1-2 S '46
Design and construction of an electron microscope. M. E. Haine. il diags Engineering 164:20-4 Jl 4 '47; Abstract and discussion. Electrician 138:789-90 Mr 28 '47
Determination of magnification in electron micrographs. H. C. Froula. il J Ap Phys 18:19-20 Ja '47
Effect of electron bombardment upon carbon black. J. H. L. Watson. bibliog il J Ap Phys 18:153-61 F '47
Electron micrographs as an aid in teaching gravimetric analysis. R. B. Fischer. il J Chem Educ 24:484-6+ O '47
Electron microscope examination of the microphysical properties of the polymer cuprene. J. H. L. Watson and K. Kaufmann. bibliog il diag J Ap Phys 17:996-1005 D '46
Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diag J Phys & Colloid Chem 51: 654-61 My '47
Electron microscope studies; bright-drying wax dispersions. D. Schoenholz and C. S. Kimball. il Soap & San Chem 23:131+ Ag '47
Electron microscopic structure of cellulose powder from wood pulp ground in very dry condition. P. H. Hermans. il Am Chem Soc J 68:2730-2 D '46
Electron microscopy. J. Hillier. bibliog(110 titles) il diags Am Cer Soc Bul 25:438-48 N 15 '46
Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. bibliog Soc Chem Ind J 65:305-8, pl 5-6 O '46
Films, resistant to organic solvents, for use in the electron microscope. S. G. Ellis. il J Ap Phys 18:846-7 S '47
Instrument for measuring particle diameters and constructing histograms from electron micrographs. E. E. Hanson and J. H. Daniel. il diags J Ap Phys 18:439-43 My '47
Light scattering studies of tobacco mosaic virus. G. Oster, P. M. Doty and B. H. Zimm. bibliog Am Chem Soc J 69:1193-7 My '47
Magnetic electron microscope objective; contour phenomena and the attainment of high resolving power. J. Hillier and E. G. Ramberg. il diags J Ap Phys 18:48-71 Ja '47
Measuring by electron microscopy. E. F. Fullam. bibliog il Gen Elec R 50:18-21 O '47
Morphology of lyogels. E. A. Hauser and D. S. le Beau. bibliog il J Phys & Colloid Chem 51:278-85 Ja '47

ELECTRON microscope—*Continued*
New method of electrolytic polishing of electron microscope samples. E. Der Mateosian. il diags Iron Age 159:51-3 Ja 16 '47
Objective aperture system for the electron microscope. C. E. Hall. il diag J Ap Phys 18:588-9 Je '47
Observations of crystal structure and particle shape in electron micrographs of several carbon blacks. J. H. L. Watson. il diags Electrochem Soc Trans 92 (preprint 4):49-61 '47
Optics of three-electrode electron guns. S. G. Ellis. bibliog diags J Ap Phys 18:879-90 O '47
Particle growth in the electron microscope. V. E. Cosslett. il J Ap Phys 18:844-5 S '47
Preparing pigments for the electron microscope. A. M. Cravath. J Ap Phys 17:1125-6 D '46
Present status and future possibilities of the electron microscope. J. Hillier. il RCA R 8:29-42 Mr '47
Proceedings of the Electron microscope society of America annual meeting at Mellon institute, Dec. 5-7; with abstracts of papers. J Ap Phys 18:269-73 Mr '47
Report of the Electron microscope society of America's Committee on resolution. bibliog il diags J Ap Phys 17:989-96 D '46
Single crystal electron diffraction by microcrystalline materials. N. Davidson and J. Hillier. bibliog il diags J Ap Phys 18:499-511 Je '47
Study of age-hardening by the aid of the electron microscope. A. H. Geisler and F. Keller. Engineer 183:194-5 Mr 7 '47
Study of lubricating greases by electron microscope. B. B. Farrington and D. H. Birdsall. il Oil & Gas J 45:268-70+ Mr 22 '47
Universal electron microscope as a high resolution diffraction camera. R. G. Picard and J. H. Reisner. il diags R Sci Instr 17:484-9 N '46

Bibliography

Electron microscopy. J. Hillier. Am Cer Soc Bul 25:445-8 N 15 '46
Selected references from A bibliography of electron microscopy; I-III. C. Marton and S. Sass, comps. Am Cer Soc J 29(Cer A): 205-6 N 1 '46

Replica technique

Preparation and uses of silica replicas in electron microscopy. C. H. Gerould. bibliog il J Ap Phys 18:333-43 Ap '47

ELECTRON microscope society of America
EMSA and ASXRED hold joint meeting. Chem & Eng N 24:3341 D 25 '46
Proceedings of annual meeting, Mellon institute, Dec. 5-7; with abstracts of papers. J Ap Phys 18:269-73 Mr '47

ELECTRON multiplier phototube. See Photoelectric cells—Multiplier tube

ELECTRON multipliers
Behavior of magnetic electron multipliers as a function of frequency. L. Malter. diag Inst Radio Eng Proc 35:1074-6 O '47
Measurement of the intensity ratios of spectral lines with electron multiplier phototubes. K. G. Kessler and R. A. Wolfe. bibliog diags Opt Soc Am J 37:133-44 Mr '47
Method for measuring the spectral energy distribution of low brightness light sources. F. J. Studer. il diag Opt Soc Am J 37:288-91 Ap '47
New light balancing circuit for the nonrecording densitometer. R. O. Carpenter. bibliog diags Opt Soc Am J 36:676-8 N '46

See also
Photoelectric cells—Multiplier tubes

ELECTRON optics
Electron beam deflection. R. G. E. Hutter. bibliog diags J Ap Phys 18:740-58, 797-810 Ag-S '47
Image formation in cathode-ray tubes and the relation of fluorescent spot size and final anode voltage. G. Liebmann. bibliog diags Inst Radio Eng Proc 33:381-9 Je '45; Correction. 33:485 Jl '45; Discussion. 34:580-6; 35:791 Ag '46, Ag '47
Magnetic-deflection circuits for cathode-ray tubes. O. H. Schade. diags RCA R 8:506-38 S '47
Reflective optical system for projection television. V. K. Zworykin. il diags Radio N 38: 54-6+ S '47
Spherical aberration of compound magnetic lenses. L. Marton and K. Bol. bibliog diags J Ap Phys 18:522-9 Je '47
Tracer micrography. L. Marton and P. H. Abelson. il Science 106:69-70 Jl 18 '47

See also
Electron microscope
Television

ELECTRON telescope
Infra-red electron telescope aided Navy's invisible operations. il Product Eng 17:147 Ag '46

ELECTRONIC cooking
Adapting the dining car to electronic cooking. E. D. Campbell. il plans Ry Age 122: 784-6 Ap 19 '47
Dogmaster, frankfurter cooker. il Consumers Res Bul 19:11-12 Je '47
Electronic cooking goes commercial. il Electronics 20:140+ Je '47
Electronic cooking no threat. P. I. Berno. Am Gas Assn Mo 29:124 Mr '47
Electronic food conditioning. A. E. Welch. il Ry Age 122:789-91 Ap 19 '47
Electronic oven for frozen foods; heating of precooked frozen food. il Electronics 20: 160+ Ag '47
Magnetron adapted to cooking purposes. il Elec Eng 65:591 D '46
New methods of food preparation. O. Webber. il Ry Age 122:786-8 Ap 19 '47
Restaurant patrons like dielectric cooking. il Elec World 127:158+ My 24 '47
Super high frequency heating for preparation of food. il Food Ind 18:1699-700 N '46
Uhf heating of frozen foods. P. W. Morse and H. E. Revercomb. il diags Electronics 20:85-9 O '47

ELECTRONIC numerical integrator and computer. See Calculating machines

ELECTRONIC vibrators. See Vibrators

ELECTRONICS
Associations and their officers; directory of technical and trade associations in the field of electronics. Electronics 20:148 (Buyers' guide) Mid-Je '47
Consulting engineers in the field of electronics; directory. Electronics 20:132-9 (Buyers' guide) Mid-Je '47
Developments in electronics; abstract. L. Mountbatten. Electrician 137:1274 N 8 '46
Electrical and allied developments of 1946; electronics. G. Bartlett. il Gen Elec R 50: 38-41 Ja '47
Electron in industry. T. E. Allibone. Electrician 139:995-6 O 3 '47
Electronic research sponsored by the Office of naval research. E. R. Piore. bibliog Inst Radio Eng Proc 35:1119-21 O '47
Electronics and the future. E. U. Condon. il Elec Eng 66:355-61 Ap '47
Electronics in industry. Economist 152:154-6 Ja 25 '47
Has electronics eloped with engineers? attitude of college students toward career in electric utility industry. il Elec World 128: 103-5 O 11 '47
Microwave electronics. J. C. Slater. diags Rs Mod Phys 18:441-512 O '46
National electronics conference papers digested. Elec Eng 65:569-74 D '46
Nucleonics and electronics. K. Henney. Electronics 20:80-1 Je '47
Portable pulse generator. E. W. Titterton and V. L. Fitch. diags R Sci Instr 18:639-43 S '47
Quarter century of electronics. I. E. Mouromtseff. bibliog (38 titles) il Elec Eng 66: 171-7 F '47
Roots of electronics. K. Henney. diags Electronics 20:100-1 (Buyers' guide) Mid-Je '47
Some aspects of electronic engineering. T. P. Allen. Inst E E J 94 pt 1:113-15 F '47
Status of engineering research in electronics. H. Diamond. J Eng Educ 38:57-72 S '47
Survey of new techniques. il Electronics 20: 208+ My '47

See also

Electron microscope	Photoelectric cells
Electrons	Radio engineering
Oscillographs, Cathode ray	Television
	Vacuum tubes

ELECTRONICS—*Continued*

Bibliography

Books about electronics; approximately 125 books relating to electronics and electronic applications issued during the past year. F. Rockett. Electronics 20:142-4 (Buyers' guide) Mid-Je '47

Indexes

Electronic engineering master index; a subject index to electronic engineeering periodicals, January, 1935 to June, 1945. F. A. Petraglia, ed. 209p $6 Macmillan co, New York '46

Study and teaching

College courses in electronics; list of colleges and universities offering courses in electronics as distinct from courses in electrical engineering. Electronics 20:145 (Buyers' guide) Mid-Je '47

Symbols

Graphical symbols for electronic diagrams. Electronics 20:122-3 (Buyers' guide) Mid-Je '47

Terminology

Wartime words and their meanings; definitions of nearly six hundred code names, abbreviations, slang, and technical terms added to language of electronics during war years. C. DeVore. Electronics 20:108-13 (Buyers' guide) Mid-Je '47

ELECTRONICS (periodical)

Sponsors Citizens radio project; program of research, underwritten by publishers of Electronics, to develop equipment and test potentialities. il Electronics 20:80-3 N '47

ELECTRONICS, Industrial. See Vacuum tubes —Industrial applications

ELECTRONICS laboratory. See United States —Navy—Electronics laboratory

ELECTRONIZED chemicals corporation

Electronized Chemicals. il diag Fortune 35:104-9+ Mr '47

ELECTRONS

Atoms, electrons and engineers. T. E. Allibone. il diags Inst E E J 94 pt 1:165-71 Ap '47

Cloud-chamber search for a low mass neutral particle. P. G. Kruger and L. W. Smith. Phys R 72:360-1 S 1 '47

Electron and nucleus lessons for those who can learn. K. T. Compton. Western Soc E J 52:56-61 Je '47

Electron bombardment cleans optical glass prior to coating. Mach 53:156-7 Jl '47

Electron configurations of rare-earth elements. W. F. Meggers. bibliog Science 105: 514-16 My 16 '47

Electron in industry. T. E. Allibone. Electrician 139:995-6 O 3 '47

Electron in research. G. Thomson. Electrician 139:993-4 O 3 '47

Electron jubilee; fiftieth anniversary of Sir J. J. Thomson's discovery. diag Electrician 139:921-3, 992 S 26-O 3 '47; Engineer 184: 315 O 3 '47

Electron-neutrino angular correlation in beta-decay. D. R. Hamilton. Phys R 71: 456-7 Ap 1 '47

Electronic collisional frequency in the upper atmosphere. E. F. George. bibliog Inst Radio Eng Proc 35:249-52 Mr '47

Electrons radiate light; synchrotron studies. il Electronics 20:136 S '47

Energy spectrum of cascade electrons. I. Tamm and S. Belenky. bibliog Phys R 70: 660-4 N 1 '46

Excitation of molecular vibrations by electrons. T. Wu. Phys R 71:111-18 Ja 15 '47

Forces between moving charges. R. D. Sard. bibliog diags Elec Eng 66:61-5 Ja '47; Discussion. 66:518-19, 741-3 My, Jl '47

Hydrogen atom in a generalized classical electrodynamics. C. J. Eliezer. Phys R 71:49-53 Ja 1 '47

Interaction of electrons and an electromagnetic field. C. J. Eliezer. bibliog Rs Mod Phys 19:147-84 Jl '47

Interaction of neutrons with electrons in lead. W. W. Havens, jr. and others. bibliog Phys R 72:634-6 O 1 '47

Molecular dissociation by electron bombardment; a study of $SiCl_4$. R. H. Vought. Phys R 71:93-101 Ja 15 '47

Motional mass of the electron; reconsideration of views supporting Lorentz and Einstein equations. C. A. Boddie. diags Elec Eng 66:45-60 Ja '47; Discussion. 66:319-21, 420-2, 624-6 Mr-Ap, Je '47

Mutual magnetic interactions of electrons. H. H. Marvin. Phys R 71:102-10 Ja 15 '47

Nucleonics; chronology, tabulated information. Electronics 20:130-1 (Buyers' guide) Mid-Je '47

Pais' f-field theory and the mirror nuclei. A. S. Wightman. Phys R 71:447-8 Ap 1 '47

Periodic table and electron configurations. T. S. Wheeler. Chem & Ind p639-42 O 18 '47

Physics of electronic semiconductors. G. L. Pearson. diags Elec Eng 66:638-42 Jl '47

Probability of K ionization of nickel by electrons as a function of their energy. L. T. Pockman and others. bibliog Phys R 71: 330-8 Mr 15 '47

Proposed detector for high energy electrons and mesons. I. A. Getting. diags Phys R 71:123-4 Ja 15 '47

Radiation from electrons in a synchrotron. F. R. Elder and others. Phys R 71:829-30 Je 1 '47

Rate of electron production in the ionosphere. S. L. Seaton. bibliog Phys R 72:712-14 O 15 '47

Statistical geometry and fundamental particles. N. Rosen. bibliog Phys R 72:298-303 Ag 15 '47

Study of pulse shapes in a parallel-plate ionization chamber. R. Sherr and R. Peterson. bibliog il R Sci Instr 18:567-75 Ag '47

Why do we believe in electrons? A. Standen. J Chem Educ 24:120 Mr '47

See also

Beta rays	Ions
Cathode rays	Mesotrons
Electric discharges	Neutrons
Electromagnetic theory	Positrons
	Vacuum tubes

Beams

Bringing the beam out of a betatron. R. Wideröe. Phys R 71:376 Mr 15 '47

Cavity resonators and electron beams. J. H. O. Harries. diags Wireless Eng 24:71-80, 109-18, 135-42 bibliog(p 142) Mr-My '47

Electron beam deflection. R. G. E. Hutter. bibliog il diags J Ap Phys 18:740-58, 797-810 Ag-S '47

Electron light; electron beam made visible in the new 70,000,000-volt synchrotron. Gen Elec R 50:51 Jl '47

Electron reflectors with a quadratic axial potential distribution. J. M. Lafferty. diags Inst Radio Eng Proc 35:778-83 Ag '47

Frequency modulation and control by electron beams. L. P. Smith and C. I. Shulman. diags Inst Radio Eng Proc 35:644-57 Jl '47

Millimeter-wave reflex oscillator. J. M. Lafferty. bibliog il diags J Ap Phys 17:1061-6 D '46

Television deflection circuits; transformer and yoke cores molded from powdered iron. A. W. Friend. il diags RCA R 8:98-138 Mr '47

Theory of small signal bunching in a parallel electron beam of rectangular cross section. E. Feenberg and D. Feldman. J Ap Phys 17:1025-37 D '46

Theory of the beam-type traveling-wave tube. J. R. Pierce. Inst Radio Eng Proc 35:111-23 F '47

Traveling-wave tube as amplifier at microwaves. R. Kompfner. diags Inst Radio Eng Proc 35:124-7 F '47

Traveling-wave tubes. J. R. Pierce and L. M. Field. il diags Inst Radio Eng Proc 35:108-11 F '47

See also

Electron gun

Diffraction

Direct determination of stacking disorder in layer structures. W. H. Zachariasen. Phys R 71:715-17 My 15 '47

Electron diffraction investigation of isomeric lewisites. J. Donohue, G. Humphrey and V. Schomaker. bibliog Am Chem Soc J 69: 1713-16 Jl '47

ELECTRONS—Diffraction—*Continued*
Electron diffraction study of oxide films formed on high temperature oxidation resistant alloys. J. W. Hickman and E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 32):467-83 '47
High temperature furnace for electron diffraction studies. E. A. Gulbransen. il diag R Sci Instr 18:546-50 Ag '47
Interpretation of electron diffraction patterns from hydrocarbon films. J. Karle and L. O. Brockway. il J Chem Phys 15: 213-25 My '47
Metal analysis by electron diffraction. Chem Ind 60:74+ Ja '47
Reinvestigation of hexamethylenetetramine by electron diffraction. V. Schomaker and P. A. Shaffer, jr. bibliog Am Chem Soc J 69:1555-7 Jl '47
Single crystal electron diffraction by microcrystalline materials. N. Davidson and J. Hillier. bibliog il diags J Ap Phys 18:499-511 Je '47
Structure of tellurium dibromide. M. T. Rogers and R. A. Spurr. bibliog Am Chem Soc J 69:2102-3 S '47
Use of punched cards in molecular structure determinations; electron diffraction calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:659-64 N '46

Reflection, scattering, etc.

Contribution of restricted rotation to electron scattering by gases. J. Karle. bibliog J Chem Phys 15:202-7 Ap '47
Electron waves in the magnetic dipole field of a neutron. C. L. Critchfield. Phys R 71: 258-67 F 15 '47
Further experiments on the elastic single scattering of electrons by nuclei. W. W. Buechner and others. Phys R 72:678-9 O 15 '47
Multiple scattering of electrons in the gas of a Wilson cloud chamber. L. W. Smith and P. G. Kruger. bibliog diag Phys R 72:357-9 S 1 '47

Velocity

Transit-time effect in klystron gaps. H. B. Phillips and L. A. Ware. diag Inst Radio Eng Proc 35:1076-9 O '47

See also
Electron accelerator

ELECTRO-OSMOSIS. See Osmosis

ELECTROPHORESIS
Effect of cysteine—hydrogen peroxide treatments on the electrophoretic and immunological assay behavior of human gamma globulin. H. F. Deutsch. bibliog Am Chem Soc J 68:2625-8 D '46
Effect of molecular association and charge distribution on the gelation of pectin. R. Speiser, M. J. Copley and G. C. Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47
Electrophoresis apparatus using parabolic mirrors. S. M. Swingle. bibliog diags R Sci Instr 18:128-32 F '47
Electrophoretic mobilities and fractionation of sodium pectinates. W. H. Ward and others. bibliog J Phys & Colloid Chem 51: 1137-43 S '47
Improved electrophoresis cell and cell holder. S. M. Swingle. bibliog diag Science 105:501-2 My 9 '47
Preparation and properties of serum and plasma proteins; quantitative interpretation of electrophoretic Schlieren diagrams of normal human plasma proteins. S. H. Armstrong, jr., M. J. E. Budka and K. C. Morrison. bibliog Am Chem Soc J 69: 416-29 F '47
Quantitative interpretation of the electrophoretic patterns of proteins. L. G. Longsworth. bibliog J Phys & Colloid Chem 51: 171-83 Ja '47
Ultracentrifugal and electrophoretic studies on fetuin. K. O. Pedersen. bibliog J Phys & Colloid Chem 51:164-71 Ja '47
Zein solutions as association-dissociation systems. B. L. Scallet. bibliog Am Chem Soc J 69:1602-8 Jl '47

ELECTROPHYSIOLOGY
Effect of a constant current on vision. S. V. Kravkov and L. P. Galochkina. bibliog Opt Soc Am J 37:181-6 Mr '47
Electrical resistance of whole blood. S. Graff and others. diag Science 106:68-9 Jl 18 '47
Production of electricity by nerve. T. C. Barnes and R. Beutner. bibliog Science 104:569-70 D 13 '46

Apparatus

Mechanical switch for use in some bioelectric measurements. R. C. Hoyt. diags R Sci Instr 18:61-3 Ja '47
Variable-frequency stimulator for electrophysiology. W. I. Weiss. il diag Electronics 20:182+ O '47
Versatile electronic stimulator for nerve and muscle. W. L. Nastuk and H. L. Borison. il diag R Sci Instr 18:669-72 S '47

See also
Electroencephalograph

ELECTROPLATING
Aluminum electroplating in America; City Hall in Philadelphia; reprinted from Scientific American of Oct. 22, 1892. il Metal Finishing 45:66-7+ My '47
American electroplaters society, 34th annual meeting, Detroit, June 23-27; abstracts of papers. Metal Finishing 45:48-54+ Ag '47; Iron Age 160:74-7+ Ag 21; 81-2 S 25 '47
Automatic conveyors for electroplating. A. Bregman. il Iron Age 159:68-74 Je 19; 58-64 Je 26 '47
Automatic electroplating line at Pontiac. A. H. Allen. il Steel 121:80-3+ Ag 25 '47
Barrel plated multiple coatings; toy railroad parts; Lionel corporation. M. Mazzone and F. McKnight. il Metal Finishing 45:81-5 Je '47
Bright chromium plating and temperature control. M. G. Herbach and C. W. Bowden, jr. diags Metal Prog 51:257-9 F '47
Brush plating for small jobs. G. Black. Materials & Methods 25:136 Je '47
Cadillac reorganizes electroplating dept. for greater efficiency. J. Geschelin. il Automotive Ind 97:28-9+ O 15 '47
Common industrial electroplates. P. W. Prouty. il Product Eng 18:139-42 Mr; 155-8 Ap '47
Determination of free sodium hydroxide and sodium carbonate in plating solutions. L. Silverman. Metal Finishing 45:72-3 Ap '47
Die casting and plating operations; AC spark plug div., General motors corp. J. Geschelin. il Automotive & Aviation Ind 95:30-1+ D 15 '46
Economical electroplating of small parts; Hamilton watch co. il Steel 119:114 N 18 '46
Electrodeposition of cobalt and nickel from coordination compounds; cobalt ammines and nickel ammines. M. D. Kramer and others. bibliog Electrochem Soc Trans 90 (preprint 27):339-45 '46
Electrodeposition practice; International conference, London. Elec R (Lond) 141:471-2 S 26 '47
Electrolytic treatment; electro-plating and allied processes at the Hillington factory of Rolls-Royce, ltd. il Elec R (Lond) 141: 199-202 Ag 8 '47
Electroplating by brush; engineering data sheet. Metal Finishing 45:84 S '47
Electroplating control laboratory. H. J. Sedusky and J. B. Mohler. il diags Metal Finishing 45:60-3 S; 68-71+ O '47
Electroplating is big business; new devices prominent at finishing exposition, Detroit. il Bsns W p36-8 Jl 5 '47
Electroplating process produces better finish; Periodic reverse-current method. il Product Eng 18:144 Je '47
Electroplating solution purification; abstracts. B. C. Case. Iron Age 160:74-5 Ag 21 '47; Steel 121:86+ Jl 28 '47
Engineering applications of electrodeposited coatings. M. B. Diggin. Metal Finishing 45:78-80 Je '47
Features of the slot plating range cell. J. B. Mohler. diags Steel 121:92+ N 3 '47
Fluid mechanics; forgotten factor in electroplating. J. B. Kushner. diags Metal Finishing 45:72-4 O '47
Fusing of electrodeposited tin coatings. J. Falk. il Metal Finishing 45:63-5+ Ap '47
High production job shop plating. L. J. Donroe. il Metal Finishing 45:71-4 S '47

ELECTROPLATING—*Continued*
Improved barrel plating technique. H. E. Head. il plans Metal Finishing 45:55-7 Mr '47
Investigation of the figure of small concave metal-replica mirrors. J. N. Shive. Opt Soc Am J 37:849-51 O '47
Metal distribution from a plating bath. J. B. Mohler and H. J. Sedusky. diags Iron Age 160:56-9+ Jl 17 '47
Metal finishing in 1946. A. Bregman. il Iron Age 159:160-5 Ja 2 '47
Military applications of electroplating in world war II. W. Blum. bibliog Electrochem Soc Trans 90 (preprint 32):403-10 '46; Same abr. Metal Finishing 45:66-8 Ja '47
Mirror bright copper plating. J. Anthony. il Iron Age 159:54-5 F 13 '47
New acids for electroplating. Chem Ind 60: 982 Je '47
New process for bright copper plating. H. Leever. il Materials & Methods 25:82-4 Ja '47
Periodic chart for electroplaters. G. Dubpernell. Iron Age 158:51 N 28 '46
Periodic reverse-current electroplating. G. W. Jernstedt. il diags Metal Finishing 45:68-72 F '47; Same abr. Steel 120:100-2+ Ap 28 '47; Same cond. Automobile Eng 37:227-9 Je '47; Abstracts. Iron Age 159:164 F 13 '47; Mech Eng 69:313 Ap '47
Pipe electroplated inside for corrosion resistance; Lectro-Clad; abstract. S. G. Bart. Materials & Methods 25:126-7 Mr '47
Plated zinc base die castings. E. J. Roehl. il Metal Finishing 45:63-7 O '47
Plating bath voltage. G. W. Croninger and J. B. Mohler. Iron Age 160:66-8 O 30 '47
Plating with platinum, palladium and rhodium. H. M. Haberman. bibliog Metal Finishing 45:56-8 Ja '47
Precision plating of bearing alloys. R. A. Schaefer. bibliog il Iron Age 159:60-3 Ap 10 '47
Protective power and porosity of electrodeposits; abstract. N. Thon. Iron Age 160: 82 S 25 '47
Reducing embrittlement in electroplating of steel springs. C. T. Eakin and H. W. Lownie, jr. bibliog il Iron Age 158:69-72 N 21 '46
Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47
Significance of polarization in electroplating. H. Bandes. bibliog diags Metal Finishing 44:516-21 D '46
Synchronized stamping and plating; Eaton mfg. co. D. Dewey. il Steel 120:94-6 F 3 '47
Technical developments of 1946. R. A. Mozer. bibliog and patent list(213 ref) il Metal Finishing 45:50-5, 95-9 Ja '47
Toxicity of chemicals in electroplating. P. M. Van Arsdell. bibliog((79 ref) il Metal Finishing 45:55-60+ Ag; 79-83 S; 75-81 O '47
Tungsten and nickel codeposition from an aqueous ammoniacal citrate bath; abstract. L. E. Vaaler and M. L. Hoyt. Materials & Methods 25:149-50 Ap '47
Wartime electroplating. G. B. Hogaboom. Metal Prog 50:1065-7 N '46

See also
Chromium plating
Electrodeposition of metals
Gold plating
Nickel plating
Zinc plating

History
All our yesterdays; survey of articles on plating at turn of century. il Metal Finishing 43:452-3; 44:106-7, 161-3, 334-6+, 522-4+; 45:77-81 N '45, Mr-Ap, Ag, D '46, Jl '47

Power
Rectifiers for electroplating. L. W. Reinken. il diags Metal Finishing 45:73-7 F; 58-62 Ap; 72-4+ My; 88-90 Je; 75-8 S '47

Specifications
ASTM specifications for electrodeposited coatings. Automotive & Aviation Ind 96: 36-7 Je 15 '47

Stripping
Quick guide to solutions for stripping metal overlays. J. B. Mohler. Iron Age 159:66-7 My 8 '47

Testing
Electro-tinplate; influence of coating thickness on porosity and resistance to corrosion. R. Kerr, R. M. Angles and K. W. Caulfield. Soc Chem Ind J 66:5-7 Ja '47
Electro-tinplate; influence of pickling conditions on porosity and corrosion resistance. K. W. Caulfield, R. Kerr and R. M. Angles. il Soc Chem Ind J 66:7-11 Ja '47
Electro-tinplate; influence of plating conditions on the quality of electro-tinplate deposited from the stannous sulphate bath. R. M. Angles, K. W. Caulfield and R. Kerr. bibliog Soc Chem Ind J 65:430-3 D '46
Evaluation of methods for determining the thickness of electrodeposited coatings; abstract. H. J. Read. Metal Finishing 45:52-3 Ag '47
Hull cell. H. J. Sedulsky and J. B. Mohler. diags Metal Finishing 45:59-63 Ja '47
Metallography for the electroplater. A. Blazy and J. B. Mohler. bibliog il diags Metal Finishing 45:54-7 Ap; 68-71 My '47
Non-destructive thickness measurements; engineering data sheet. Metal Finishing 45:87 O '47
Semi-quantitative method for measuring the ductility of chromium electrodeposits. M. R. J. Wyllie. bibliog il diags Electrochem Soc Trans 92 (preprint 5):63-80 '47

Bibliography
Recent publications on the testing of metallic finishes. M. B. Diggin and O. Kardos. Metal Prog 50:1072-4, 1078, 1080 N '46

ELECTROPULT. See Airplanes—Take-off

ELECTROSTATIC analyzer
Electrostatic analyzer for selection of homogenous ion beam. R. E. Warren and others. plan diags R Sci Instr 18:559-63 Ag '47

ELECTROSTATIC field. See Electric field

ELECTROSTATIC generators. See Electric generators, Electrostatic

ELECTROSTATIC paint spraying. See Paint spraying, Electrostatic

ELECTROSTATICS
Electrostatic field strengths in molecules and nuclear quadrupole moments. C. H. Townes. bibliog Phys R 71:909-10 Je 15 '47
Electrostatic flocking. il diag Electronics 20: 142+ Mr '47
Numerical solution of axisymmetrical problems, with applications to electrostatics and torsion. G. Shortley, P. Darby and E. H. Gamble. diags J Ap Phys 18:116-29 Ja '47
Self-energy and interaction energy in Podolsky's generalized electrodynamics. A. E. S. Green. bibliog Phys R 72:628-31 O 1 '47
Theory of the equivalent diode. G. B. Walker. bibliog Wireless Eng 24:5-7 Ja '47; Discussion. J. Eastabrook. 24:188-9 Je '47

See also
Condensers (electricity)
Electric charges
Electric discharges
Electricity, Static
Electrodynamics
Potential, Electric

ELECTROTHERAPEUTICS

Apparatus and instruments
Phenolic massager. il Mod Plastics 24:146-7 Jl '47

ELECTROTYPES in advertising
How to save money on art work and electrotypes; 14 hints on relations with artists; ordering electrotypes. H. Bauer. il Ptr Ink 218:40-1 Mr 14 '47

ELEMENTS, Chemical. See Chemical elements

ELEPHANTS
Variation in the molars of the living African elephant and a critical revision of the fossil proboscidea of southern Africa. H. B. S. Cooke. bibliog il diags Am J Sci 245:434-57, 492-517 Jl-Ag '47

ELEPHANTS, Fossil
Variation in the molars of the living African elephant and a critical revision of the fossil proboscidea of southern Africa. H. B. S. Cooke. bibliog il diags Am J Sci 245:434-57, 492-517 Jl-Ag '47

ELEVATORS
Care and maintenance of conveyors and elevators. J. Carruthers. diags Mech Handling 34:417-28 Ag '47

Lift and elevator ropes. R. Saxton. Mech Handling 34:489+ S '47

Planning for elevator installations. diags Eng N 137:875-9 D 26 '46

Servicing elevator ropes at Carlsbad Caverns. R. L. Parr. il Power Pl Eng 51:92-3 Je '47

See also
Hoisting machinery
Insurance, Elevator

Maintenance and repair

Bearings babbitted upside down. W. Willecke. diags Power 91:265-6 Ap '47

Ventilation

Ventilation of passenger elevator cabs. T. W. Reynolds. diags Heat & Ven 43:80-1 N '46

ELEVATORS, Electric
Elevator for men tops new Willow Grove portal. il plans Coal Age 52:78-82 Je '47

Control

Cast phenolic control housing. il Mod Plastics 24:190 Ap '47

Maintenance and repair

Efficient electric elevator maintenance pays dividends. T. Trail. il diags Power Pl Eng 51:68-73 Ap '47

ELGIN, Joliet and eastern railroad
Beven succeeds Bond on E.J. & E. Ry Age 121:964 D 7 '46

ELGIN national watch company
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:214 My 24 '47

Relies on good labor relations to help keep its earnings up. Barron's 27:29 Mr 17 '47

ELK HILLS oil reserve. See Oil reserves (United States navy)

ELKHART, Indiana

Sewerage

Elkhart planning adequate sewage works. E. C. Brady. Water & Sewage Works 94:196 My '47

ELLIPSE
Transition curve trigonometry; the ellipse. F. T. Murray. Engineering 162:409-11 N 1 '46

ELLWOOD CITY, Pennsylvania
Cities take inventory. Bsns D p21 Ja 4 '47

ELMS
Constitution of the mucilage from the bark of ulmus fulva (slippery elm mucilage); sugars formed in the hydrolysis of the methylated mucilage. R. E. Gill, E. L. Hirst and J. K. N. Jones. Chem Soc J p 1025-9 N '46

ELON. See Metol

EL SALVADOR. See Salvador

ELY and Walker dry goods company
Wholesaling on borrowed time. il Fortune 36:122-5+ N '47

EMBANKMENTS
Compaction; how states specify it today; Highway research board committee's summary, tabulated. Roads & Sts 90:55-9+ Ap '47

Graphical method locates point of breaking ground at crest of unstable slopes. R. G. Hennes. Civil Eng 17:333 Je '47

Methods of stabilizing embankments at Terminal island. Pub Works 77:37 N '46

See also
Angle of repose
Dams
Levees

EMBEZZLEMENT
Bank defalcation problem. L. W. Zuttermeister. Nat Underw 51:27 My 15 '47

Chicago crime commission issues booklet, Why honest people steal. East Underw 48: 32 Je 20 '47

Defalcation in relation to audit, internal control, and fidelity bonds. J. L. Carey. J Account 83:353-5 Ap '47

Embezzlement by agent with authority to cash checks; State v. Florian, Supreme court of Missouri. Banking Law J 64:581-6 Jl '47

Embezzlement of bank's money; State v. Adams, Supreme court of Missouri. Banking Law J 64:695-702 S '47

Pool salvage operations in Mergenthaler case. Nat Underw 51:28 Ap 3 '47

Six class C employes steal more than $750,000; Western Electric loss resembles West Virginia Pulp & Paper embezzlement. Nat Underw 51:17+ Ja 23 '47

Story of Wm. T. Knott co. defalcation. R. T. Wood. East Underw 48:37 Mr 28 '47

Western Electric bilked of $400,000; five employes held. Nat Underw 51:15 Ja 2 '47

EMBOSSING (typography)
Embossing requires patience. J. Kovec. Inland Ptr 119:69 Ap '47

EMBOSSING of plastics. See Plastic materials —Embossing

EMBRYOLOGY
Oxygen and air pressure effects upon the early development of the frog's egg. O. E. Nelson. Science 106:295-6 S 26 '47

See also
Botany—Embryology

EMERGENCY committee of atomic scientists
Recently organized. Science 104:506 N 29 '46

EMERSOL process. See Acids, Fatty

EMERSON radio and phonograph corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:275+ Je 7 '47

EMERY
Emery cloth under grippers. J. Kovec. Inland Ptr 119:49 Ap '47

Why blame it on the emery? J. Kovec. Inland Ptr 119:47 S '47

EMINENT domain
Illinois widens eminent domain rights. Eng N 139:93 Jl 17 '47

Kentucky city (Georgetown) gets court sanction for condemning property for parking. Eng N 137:642 N 14 '46

Right to extinguish highway access upheld by Minnesota courts. plan Eng N 138:91-3 Ja 9 '47

EMPIRE air lines, inc.
Empire sues Beech over feeder planes. Aviation N 7:4 Je 30 '47

EMPLOYEES
Blood brothers; Tube Turns' blood donors' club. il Nat Safety N 55:46+ F '47

Employees as group members; abstract. R. L. Sutherland. Chem Eng 54:262 Jl '47

Finish the job! W. Austin. Ptr Ink 218:80 Mr 21 '47

Fortune survey; American factory worker. Fortune 35:5-6+ My; 5-6+ Je '47

Fortune survey; self-portrait of the American people, 1947. Fortune 35:5-6+ Ja '47

Industry audits; case studies in industrial relations. G. E. Stedman. Personnel J 25: 259-66 F '47

Investigating job satisfaction. D. E. Lynch. Management R 36:325-8 Je '47

Management's reactions to employee opinion polls; abstract. R. N. McMurry. Management R 35:465-7 N '46

What industry expects of the chemistry graduate. C. K. Calvert. J Chem Educ 24: 450-2 S '47

What the factory worker really thinks about the cost of living, wages, and strikes; third annual survey. Factory Management 104:81-8 O; 81-8 N '46

EMPLOYEES—*Continued*
Workable plan for off-the-job safety. T. M. Webb. Safety Eng 93:15+ Ap '47

See also
Ability tests
Absenteeism (labor)
Advertising—Employees, Appeal to
Advertising and employees
Airplane factories—Employees
Apprentices
Arbitration, Industrial
Automobile factories—Employees
Automobile shops—Employees
Bank employees
Bonus system
Building trades—Labor conditions
Chemical workers
Collective bargaining
Colleges and universities—Employees
Cotton mills—Employees
Dental service, Industrial
Disabled—Rehabilitation
Electric utilities—Employees
Electric workers
Employees' benefit plans
Employees' representation in management
Employment management
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Gas companies—Employees
Government employees
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Hotels—Employees
Hygiene, Industrial
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Insurance companies—Employees
Job analysis
Labor and laboring classes
Medical service, Industrial
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Negroes—Employment
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Retail workers
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Saving
Servants
Sickness
Steel workers
Suggestion systems
Supervisory workers
Telephone companies—Employees
Textile workers
Veterans—Employment
Wage payment plans
Wages
Watchmen
Welfare work in industry
Woman—Employment

Clothing

See Clothing, Protective

Housing problems

Management and the housing headache; abstract. G. Seybold. Management R 35:439-41 N '46
Monsanto tackles employee housing. J. Mathews. il Am Bsns 16:14-15+ D '46

See also
Employees, Transfer of

Length of service

Absenteeism and separation in relation to length of employment. K. Brodman and L. P. Hellman. bibliog Ind Med 16:219-22 My '47
Current industrial seniority practices; a survey; abstract. Management R 36:84-6 F '47
Formulating a seniority policy; abstract. Managament R 36:21-2 Ja '47
Seniority provisions and promotions to managerial positions. M. M. Shipman. Oil Paint & Drug Rep 151:7+ F 10 '47
Why and how of an employee recognition program; length-of-service pins; Gardner-Richardson co. R. W. Richardson. Paper Ind 29:366-7 Je '47

Physical examinations

See Physical examinations

Promotion

Esso opens school to qualify employes for promotions. E. M. Kelley. il Sales Management 58:132-4 Mr 15 '47
Skill file. J. K. Gerdel. Personnel J 26:150-6 O '47

See also
Employees—Rating

Rating

Achievement report system helped develop capable employees; Bank of Virginia, Richmond. J. W. Taliaferro. il Bankers Mo 64: 161-3 Ap '47
Employee performance rating. A. J. Cardall. Personnel J 26:130-5 O '47
How to improve employee rating; abstract. A. J. Cardall. Management R 35:518-20 D '46
Merit rating. H. S. Wharen. Am Mach 90: 117-28 D 19 '46
Merit rating fundamentals. Factory Management 105:138, 140 Je '47
Our employee rating, training and executive development programs; Consolidated Edison company of New York. H. H. Judson. Am Gas J 166:31-5 Ja '47
Simple rating device. D. E. Lundberg. Personnel J 25:267-70 F '47
Some common errors in employee merit rating practices. W. R. Mahler. Personnel J 26:68-74 Je '47
Story of your salary; International resistance co. H. T. Stephens. Personnel J 25:330-4 Ap '47

See also
Ability tests

Bibliography

Employee rating. 4p pa 10c Princeton univ, Industrial relations section, Princeton, New Jersey '47

Selection

See Employment systems

Testing

See Ability tests

EMPLOYEES, Age of. See Age and employment

EMPLOYEES, Disabled. See Disabled—Rehabilitation; Handicapped; Veterans, Disabled—Employment

EMPLOYEES, Dismissal of
Conditions affecting an employer's right of discharge; discharge of salesman challenged by union. M. M. Shipman. Oil Paint & Drug Rep 150:7+ D 30 '46
Federal court denies veteran special immunity to discharge. M. M. Shipman. Oil Paint & Drug Rep 151:7+ Ja 6 '47
Right of discharge for employee incompetency; effect of union agreement. M. M. Shipman. Oil Paint & Drug Rep 150:5+ D 23 '46
When firing, remember that ad people are sensitive. J. Bonnell. Ptr Ink 218:74+ F 14 '47

EMPLOYEES, Reports to
Accounting and industrial peace. V. Z. Brink. J Account 83:385-93 My '47
Case study in transmitting company facts; AVCO manufacturing corp. E. O. Johnson. il Factory Management 105:100-4 O '47
Company booklet helps employes explain shortages. il Sales Management 57:53 D 15 '46
Consolidated Edison reports to employees and their families. Pub Util 40:182-3 Jl 31 '47
Education of employees about free enterprise. Pub Util 39:176-9 Ja 30 '47
Eleven principles for effective communication between employer and employees. H. E. Green. Ptr Ink 220:27-9 S 26 '47
Employee financial statements. S. J. Broad. Trusts & Estates 84:15-16 Ja '47
Explaining the facts to employees. K. Powlison. Harvard Bsns R 25 no2:145-57 [Ja] '47; Excerpt. Trusts & Estates 84:164 F '47
Explains new stock issue in quarterly letter. Factory Management 105:108 Je '47
Financial facts for employees. Trusts & Estates 83:439 N '46
How can we help workers grasp the truth about profits? K. Powlison. Sales Management 59:37-9 Ag 15; 141+ S 1 '47
How Corning glass works merchandises company facts; policy meetings. C. D. La Follette. il Adv & Sell 40:33-4+ O '47
How to get maximum benefit from your annual report; employees, opinion-molding groups even barber shops should get books. G. Kerr. Adv & Sell 40:56+ Ja '47
Informing employees. E. de la Ossa. Personnel J 26:104-8 S '47

EMPLOYEES, Reports to—*Continued*
Letter from the president to all employees; Pitney-Bowes, inc. W. H. Wheeler, jr. Personnel J 26:23-6 My '47
Profit publicity; interim reports and interpretation to employees. Trusts & Estates 83:567-71 D '46
Studebaker takes a novel step in promoting labor-management relations; financial report to employees. W. G. Patton. Iron Age 159:92+ Ap 10 '47
Telling employees of company affairs; how two utilities have done it. Pub Util 39:50-3 Ja 2 '47
Tells workers facts in company paper. Factory Management 105:96 Je '47
To the organization; by General foods corporation. Personnel J 26:103 S '47
Workers get wage-and-profit data by picture-story report. Factory Management 105: 128 My '47
See also
Advertising—Employees, Appeal to

EMPLOYEES, Selection of. See Employment systems

EMPLOYEES, Training of
Abitibi trains its engineers. B. Cowan. il Paper Ind 29:212-13 My '47
Add ten to the jackpot; Dr I. Q. shows conducted by the Georgia power company to increase operator's knowledge. il Bus Transportation 26:46-7 Ag '47
B&B's college of advertising knowledge; Benton & Bowles' on-the-job training. V. J. Dallaire. il Ptr Ink 218:32-3 F 21 '47
Ball brothers company training program. V. J. Cox. Glass Ind 28:347-8 Jl '47
Company institutes its own program for training oil burner service men; Ray oil burner sales, inc. F. C. Sturtevant. il Nat Pet N 39:32-3+ My 14 '47
Developing the young engineer. A. C. Monteith. Mech Eng 69:548-50 Jl '47
Easy to use on-the-job training program for your highway personnel. il diags Pub Works 78:17, 29-32, 62 Ja; 30-1+ F '47
Educational activities; abstracts of A.F.A. papers. Foundry 75:139+ Je '47
Employee information and education. G. S. Dailey. Edison Elec Inst Bul 15:303-6 Ag '47
Employee training and customer relations. E. E. Jacobson. Am Water Works Assn J 39: 464-6 My '47
Engineer training methods; Magnolia petroleum company. C. O. Buttrill. Pet Refiner 26:123 My '47
Esso opens school to qualify employes for promotions. E. M. Kelley. il Sales Management 58:132-4 Mr 15 '47
Esso training center designed to develop company leadership. Oil & Gas J 45:26 F 1 '47
Esso trains men for better jobs. il Sales Management 59:42-3 Jl 1 '47
Faculty for linemen training school. Elec World 128:138 O 25 '47
Foremen train workers with ready-made lectures; Seagram's plan. J. Manczyk. Factory Management 105:128-9 Jl '47
Fundamental training job of management. A. A. Hood. Sales Management 59:sup3+ Ag 15 '47
How one company developed a source of trained clerical workers; typing service department at Merck & company. il Am Bsns 17:10-11+ Je '47
Improving customer relations through employee training. L. A. Horton. Am Gas Assn Proc 1946:133-9; Same. Am Gas Assn Mo 28:541-4+ D '46; Discussion. Am Gas Assn Proc 1946:139-41
In-service technical training, a case in point; Humble lectures in science. W. H. Shearon, jr. Chem & Eng N 25:2432 Ag 25 '47
Industrial training of chemical engineers. L. B. Hitchcock. bibliog il Chem Eng Prog 43:509-14 O '47
Inspecting incoming material; inspector training course. E. Goddess. Steel 121:104+ Ag 18 '47
Job analysis plus job training mean top performance; American stores company job training of grocery-store-merchandise cashier-checkers. W. C. Ferguson. J Retailing 23:56-9 Ap '47
Lights! camera! moving pictures and slide films. J. H. Kostmayer. il Bus Transportation 26:56-7 Ag '47
Linemen, the trainee way; Puget Sound power & light co. il Elec West 99:61 Ag '47
Lubritorium training, its benefits. F. C. Sturtevant. Nat Pet N 39:25+ F 5 '47
Modernizing of on-the-job training programs undertaken by API group. H. D. Kolb. Pet Processing 2:748 O '47
New employees; training and supervision; program for an insurance agency. A. V. Cain. Rough Notes 89:19-20 D '46
On-the-job training for veterans of World war II. C. L. Derrick. Edison Elec Inst Bul 14:387-9 N '46
Our employee rating, training and executive development programs; Consolidated Edison company of New York. H. H. Judson. Am Gas J 166:31-5 Ja '47
Outline for on-the-job training program for water department personnel. il diags Pub Works 78:38-40+ Jl; 38+ S '47
Outline of a complete training program. H. P. Mold. Personnel J 26:75-9 Je '47
Practical training for mining graduates. K. W. Langford. Can Min J 68:252-3 Ap '47
Predicts a shortage of technical manpower into 1949 or 1950; Westinghouse graduate student course. H. N. Muller. Iron Age 160:208+ O 16 '47
Prerequisites of a training and educational program. O. Van Rye. Am Gas J 166:14-15+ F '47
Qualifications and training of personnel. L. W. Bass. Chem & Eng N 24:3333-4 D 25 '46
Recruiting and training men at a Belgian coal operation. J. C. White. il plan Coal Age 52:92-5 S '47
Selecting, training and rating personnel. S. C. Casteel. Am Water Works Assn J 39: 47-51 Ja '47
Selection and training of personnel. M. S. Viteles. bibliog Edison Elec Inst Bul 15: 74-80+ Mr '47
Selection and training of servicemen. T. J. Perry. Am Gas Assn Proc 1946:470-4
Selling merchandising to St Louis platform men. C. Robinson. il Mass Transportation 42:490-1 N '46
Sound films for on-the-job baggage training program. Bus Transportation 26:67 F '47
Super school of linemen; Southern California Edison co. il Elec World 127:52-4 Mr 1 '47
Supervisor and employee training is a selling job; Louisiana power & light co. W. H. Senyard. Elec World 128:72-3 Ag 16 '47
Time study training for stewards and committeemen; American Type Founders. H. M. Hinkel. il Factory Management 105:78-80 Ag '47
Top management does training. W. G. Torpey. Personnel J 25:208-10 D '46
Training credit personnel. C. M. Mathewson. Credit & Fin Management 49:17-19 S '47
Training-film production problems. R. H. Ray. Soc Motion Picture Eng J 49:203-8 S '47
Training in a plant that's not so big; Walter Kidde & company. P. W. Kayser. il Factory Management 105:82-3 Ap '47
Training methods; how to decide which ones to use to get results; United States rubber co. W. F. Wrightnour. Sales Management 59:112-14+ N 1 '47
Training of metallurgical engineers in the steel industry. F. C. Wright. Blast F & Steel Pl 34:373-5 Mr '46; Same. il Steel 119:82-3+ D 23 '46
Training of water works employees with special reference to the Metropolitan water board; abstract. L. C. Whiskin. Am Water Works Assn J 39:807-8 Ag '47
Training operatives. F. Hill. Textile Inst J 38: P96-104; Discussion. P104-6 Mr '47
Training program for small towns. J. Steinke. Sheet Metal Worker 37:62+ N '46
Training within industry in the United States. C. R. Dooley. Int Labour R 54:160-78 S-O '46
Union oil company's manufacturing department technical trainee program. W. K. Park. Pet Refiner 26:162 Ap '47
Use of visual aids in department-store training. J. J. Gress. J Retailing 23:91-8+ O '47

EMPLOYEES, Training of—*Continued*
Vestibule sessions set the stage for quicker on-the-job training; B. F. Goodrich company. M. R. Collins. il Factory Management 105:133-5 Ja '47
Visual aids drive home points in training programs; Minnesota mining & manufacturing co. E. S. Howard. il Factory Management 105:80-1 O '47
Visual aids in executive training for Standard Oil supervisors and technical personnel. il Factory Management 105:75-6 Mr '47

See also
Apprentices
Bank employees—Training
Corporation schools
Employees' manuals
Executives—Training
Foremen—Training
Insurance, Life—Agents—Training
Insurance agents—Training
Motor bus drivers—Training
Railroads—Employees—Training
Safety instructions and training
Salesmen—Training
Supervisory workers—Training

Bibliography
Industrial training abstracts. Published quarterly by Institute of personnel methods, Wayne univ, Detroit 1

EMPLOYEES, Transfer of
Management and the housing headache; abstract. G. Seybold. Management R 35:439-41 N '46

EMPLOYEES, Transportation of
Textiles move on wheels; American yarn processing co.'s motor division. C. M. Bowden. il Textile World 97:131+ F '47

EMPLOYEES and advertising. See Advertising and employees

EMPLOYEES as salesmen
Appliance sales leads, now unneeded, safeguard against electric competition. D. W. Frye. Gas Age 99:19-20+ Ja 9 '47
Management, labor cooperate at Wisconsin industrial plant; CIO union employes sell drop forgings. Ind Marketing 32:122 Jl '47
Union helps sell; U.A.W. members at Unit Drop Forge get new business, save their jobs. Bsns W p76+ Ag 23 '47

EMPLOYEES as stockholders
BBD&O wins tax suit on employees' stock; working capital placed in direct ratio to billing. H. L. Stephen. Ptr Ink 221:181 O 31 '47
Employe stock purchase plans; are they a benefit or a danger? Trusts & Estates 84:8-9 Ja '47
Good production and cooperation record benefits employees of Rome Cable. Elec World News ed 127:20 Ja 25 '47
Limitations of employee stock ownership; abstract. Management R 35:534-6 D '46
Management's stake in its own companies; effect on investments. W. S. Kane. Management R 36:457-8 S '47

EMPLOYEES' benefit plans
Carnation sets up scholarship fund for sons and daughters of company employes. Sales Management 57:78 D 15 '46
Employe plans used widely, Illinois chamber of commerce reports. Nat Underw (Life ed) 51:3 Ja 3 '47
Employer's dollar in pension plans. M. M. Goldstein. Nat Underw (Life ed) 51:17 S 12 '47; Same. East Underw 48:6 S 12 '47
Experience of 123 companies with employee benefit programs. (Report no. 555) pa $7.50 Dartnell corp. 4660 Ravenswood av, Chicago 40 '47
Security against loss of wages. F. O. Dietter. Personnel J 25:353-7 Ap '47
Survey of employee benefit programs. Management R 36:546-8 O '47
Trusts for welfare benefits; trust service vital in plans keyed to production. L. G. Hanmer. Trusts & Estates 84:403-8 Ap '47
What an accountant should know about setting up employee benefit plans. M. M. Goldstein. J Account 84:118-25 Ag '47

See also
Employees' trusts
Insurance—Employees' insurance
Pensions, Industrial
Sickness benefits
Trade unions—Benefit funds

Termination and severance
Employes' trust data for plan termination; queries of income tax unit. East Underw 48:13 Je 27 '47
IRB modifies ruling on severance payment from benefit plans. Nat Underw (Life ed) 51:7 Ag 1 '47

EMPLOYEES' booklets
Employe relations printed pieces; Ansco film corporation. Inland Ptr 119:52-3 My '47

EMPLOYEES' buildings
Elevator for men tops new Willow Grove portal. il plans Coal Age 52:78-82 Je '47

Heating and ventilation
Change house ventilation design for the Gulf coast. H. E. Bovay, jr. diag Pet Refiner 26:135-6 O '47

EMPLOYEES' bulletins
See also
Foremen's bulletins

EMPLOYEES' Christmas parties. See Christmas parties, Employees'

EMPLOYEES' clothing. See Clothing, Protective

EMPLOYEES' compensation commission. See United States—Employees' compensation commission

EMPLOYEES' conferences
Man-to-man conferences on the Espee; Southern Pacific's training program on human relations. il Ry Age 123:44-7 Jl 12 '47

EMPLOYEES' counselors
Negro personnel counselors. A. G. Freeman. Personnel J 25:215-17 D '46

EMPLOYEES' insurance. See Insurance—Employees' insurance; Insurance, Group—Employees' insurance; Insurance, Health—Employees' insurance; Insurance, Life—Employees' insurance

EMPLOYEES' lunches. See Lunches, Employees'

EMPLOYEES' lunchrooms and cafeterias. See Lunchrooms and cafeterias, Employees'

EMPLOYEES' magazines
Cartoon strips promote the suggestion system; AC spark plug's employee magazine. il Factory Management 105:87 My '47
Cites barriers to effective employee publications. R. Newcomb. Ptr Ink 218:108 Mr 7 '47
Employees' magazine promotes utility's growth plans in big way; Arkansas power & light company. E. Chesnutt. Pub Util 39:113-15 Ja 16 '47
Employees want answers; question box feature of Detroit Edison's employee magazine. J. H. Walker. Pub Util 40:78-83 Jl 17 '47
Giving employees economic facts in pictures; General Motors experience. il Factory Management 105:114-15 Jl '47
House magazine poll secures data for industrial relations manager of General aniline & film corp. Ptr Ink 221:60+ O 24 '47
Human interest builds house organ readership. R. A. McInnes. Ptr Ink 220:52+ Ag 15 '47
Industrial editors contest demonstrates improvements made in house magazines. Inland Ptr 119:79 Je '47
Industry's sounding board; review of L. E. Finley's survey. F. T. Barnes. Management R 36:414-16 Ag '47
Labor relations reviewed weekly in company paper; Goodyear tire and rubber co. Factory Management 105:101 My '47
Making the company publication pay dividends. K. C. Pratt. Am Gas Assn Proc 1946:107-10
New approach in employe publications. R. Newcomb. Ind Marketing 32:51+ Jl '47
Pittsburgh plate glass company streamlines its employe magazine. il Ind Marketing 32:94 Jl '47
Policy in the ranks; research study on policy manuals. Bsns W p78-80 My 17 '47
Public opinion is many private opinions; public relations policy of Flintkote company. L. R. Walter. Paper Ind 28:1314 D '46
Southern starts magazine. il Ry Age 122:453 Mr 1 '47

EMPLOYEES' magazines—*Continued*
Sparking the employee magazine; Toledo Edison company. J. H. Barker. Pub Util 40: 340-5 S 11 '47
Time to revise; employee publications that workers will read. Bsns W p80+ My 3 '47
Training the plant correspondent. Management R 36:264-5 My '47
Trends in employee informational programs; abstract. Management R 35:461 N '46
Using a publication to improve employe relations; Young radiator company follows seven goals. D. V. Coon. il Ind Marketing 32:45+ Ap '47
Who gets how much of sales dollars? Stewart-Warner's house organ. Sales Management 58:126 Ap 15 '47
See also
Salesmen's magazines
Printing
Caterpillar Tractor's employe publication, and annual report, unfold possibilities for printers. il Inland Ptr 119:63 Je '47
House-organ layout is a simple job. il Ptr Ink 220:58 Ag 29 '47

EMPLOYEES' manuals
Handbook for employees can supply a fund of utility facts; excerpts from Consolidated Edison's booklet. Pub Util 39:647-8 My 8 '47
Harris-Seybold booklet tells company story to employes. Sales Management 58:90 Mr 1 '47
How to put out an employee handbook. D. Markstein. Am Gas J 167:39-40 Ag '47
Personnel training made easy by an operations manual. C. N. Richards. Bankers Mo 64:18-20 Ja '47
Power of the printed word; safety rule books. J. V. Grimaldi. Safety Eng 94:16+ S '47
Telling employees of company affairs; how two utilities have done it. Pub Util 39: 50-3 Ja 2 '47
Ten ways to pep up employee handbooks; abstract. Management R 35:515-17 D '46
See also
Foremen's manuals

EMPLOYEES' ownership
Employees' shop; Market specialties co. employee-ownership plan. il Bsns W p22+ Jl 19 '47
Worker-owners; Parmenter & Bulloch mfg. co., Ottawa. Bsns W p 112-13 S 20 '47

EMPLOYEES' publications
Employee publications for interpreting the personnel program. R. D. Breth. Personnel J 26:54-61 Je '47
See also
Employees' magazines
Employees' manuals

EMPLOYEES' recreation. See Recreation

EMPLOYEES' representation in management
Les comités d'entreprise. A. Mestre. Génie Civil 124:134-6 Ap 1 '47
Employee-management participation plan; Community savings bank of Rochester. Burroughs Clearing House 31:4 Ja '47
Industrial relations in France; amendment of legislation on works committees. Int Labour R 54:93-6 Jl '46
Labor joins in at Oliver iron corp.; union and management cooperate on time studies. Bsns W p76 Ag 30 '47
Labor participation in industrial management in European countries. O. Weigert and others. Mo Labor R 63:692-705 N '46
Partnership plan pays off for everyone in the plant; Auto-Soler company. W. H. Wilkerson. il Factory Management 105:135-6 Jl '47
See also
Corporations—Directors, Junior
Shop stewards

EMPLOYEES' suggestions. See Suggestion systems

EMPLOYEES' trusts
Employee benefit plans; trust or insurance facilities may be used. J. A. Hamilton. Trusts & Estates 83:583-7 D '46
Pension and profit-sharing trusts; A.B.A. committee report. Trusts & Estates 85: 344-5 O '47
Pension and profit-sharing trusts; A.B.A. committee report; with specimen pension trust agreement. Trusts & Estates 83:485-6+ N '46
Profit-sharing plan with retirement features. P. F. Millett. Trusts & Estates 85:224-6 S '47
See also
Pension trusts

EMPLOYERS
Free speech in union-management relations. H. S. Hall. Comm & Fin Chr 166:435 Jl 31 '47
Freedom of speech and the NLRB; employers' right; abstract. P. M. Herzog. Management R 36:24-6 Ja '47
National labor relations board decision gives employers certain freedom of speech in union plants. Comm & Fin Chr 165:1979 Ap 10 '47
Right of free speech by employers. N. C. Rockwood. Chem Ind 60:430+ Mr '47; Same. Rock Prod 50:113 Ja '47

EMPLOYERS, Accredited. See Employment management—Standards

EMPLOYERS' associations
Collective bargaining with associations and groups of employers. R. M. Patterson. Mo Labor R 64:397-410 Mr '47
Turkey; change in legal status of labor unions and employers' associations. Mo Labor R 65:197-8 Ag '47
See also
Hawaii employers council
San Francisco employers' council

EMPLOYERS' liability
Law suits involving injuries to employes. L. T. Parker. Am Gas J 166:41-3 Mr '47
Scope of employment; employee driving employer's car; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:42-4 N 14 '46
See also
Insurance, Employers' liability
Workmen's compensation

EMPLOYERS' liability insurance. See Insurance, Employers' liability; Insurance, Workmen's compensation

EMPLOYMENT
American economy under full employment; a pattern for 1950; based on Bureau of labor statistics study. W. D. Evans and others. Dun's R 55:17-19+ Jl; 17-20+ S '47
Aspects of the economics of over-full employment. B. Ohlin. Comm & Fin Chr 165: 733+ F 6 '47
Contribution of full employment and production to world stability. L. H. Keyserling. Comm & Fin Chr 165:1122+ F 27 '47
Current labor market. Fed Res Bul 33:1199-206 O '47
Employment outlook good. H. B. Byer. Comm & Fin Chr 165:1253+ Mr 6 '47
First report of Council of economic advisers; text. Comm & Fin Chr 164:3351+ D 26 '46; Same. Fed Res Bul 33:13-25 Ja '47
Full employment patterns, 1950. J. Cornfield and others. bibliog Mo Labor R 64:163-90, 420-32 F-Mr '47
How practical personnel men think the labor law will work; featherbedding. H. M. Dirks. Factory Management 105:90-1 Ag '47
Interest rate, price level and Keynesian ideology; gospel of full employment has been oversold. G. E. Jackson. Comm & Fin Chr 166:105+ Jl 10 '47
Job prospects in plastics products industry. S. Swerdloff and C. R. Winegarden. Mo Labor R 65:293-301 S '47
Jobs in New England at peak peacetime level. Barron's 27:32 Ap 28 '47
Keynesian and Swedish theories. B. Ohlin. Comm & Fin Chr 165:995+ F 20 '47
Major problems in creating full employment; statement before Joint congressional committee on the economic report; abstracts. C. E. Wilson. Comm & Fin Chr 165:3339+ Je 26 '47; Pub Util 40:112-14 Jl 17 '47
More workers will be employed. Steel 120: sup12-19 Ja 6 '47

EMPLOYMENT—*Continued*
Preview of 1950; full employment survey, Bureau of labor statistics. Bsns W p18 F 15 '47
Public investment and full employment. 348p $2.25 International labor office, 734 Jackson place, NW, Washington 6, D.C. '46
Shorter hours bring permanent employment shifts. J. Hirsch. Barron's 27:7 S 8 '47; Abstract. Management R 36:512-13 O '47
Should full employment be guaranteed? E. B. George. il Dun's R 55:17-19+ O '47 (to be cont)
Swedish anti-depression program. B. Ohlin. Comm & Fin Chr 165:1125+ F 27 '47
Swedish theory of unused resources. B. Ohlin. Comm & Fin Chr 165:869+ F 13 '47

See also
Age and employment
Applications for positions
Child labor
Employment departments
Handicapped
Labor supply
Negroes—Employment
Unemployment
Veterans—Employment
Woman—Employment

Stability

Conditions of employment stabilization; promoting investment stability. B. Ohlin. Comm & Fin Chr 165:1381+ Mr 13 '47
Goal of steady employment; address before Economic club of Detroit. H. Ford, 2d. il Dun's R 55:19-20+ Mr '47
Industry's responsibility for employment. E. P. Schmidt. Comm & Fin Chr 165:3233+ Je 19 '47
Role of government in employment stabilization. B. Ohlin. Comm & Fin Chr 165:1515+ Mr 20 '47

Statistics

Adjusted manufacturing series of employment and pay rolls. Mo Labor R 64:926-30 My '47
Annual averages of employment and pay rolls, 1945 and 1946; tables. Mo Labor R 64:917-20 My '47
Comparative employment levels; construction projects, 1941-47. Mo Labor R 65:202-3 Ag '47
Detailed reports for industrial and business employment, October 1946. Mo Labor R 64:133-5 Ja '47 [cont monthly]
Economy in reconversion; labor force and employment in 1946; with figures for other years. Survey of Cur Bsns 27:13-15 F '47
Employees in nonagricultural establishments; revised data; monthly figures and monthly averages, Jan. 1939-Feb. 1946. Survey of Cur Bsns 27:22-3 My '47
Employees in nonagricultural establishments; revised series; monthly figures 1943-1945. Survey of Cur Bsns 27:32 F '47
Employment; a key to appraising changes in industrial markets. A. H. Dix. Sales Management 58:46+ Je 1 '47
Employment during the transition period, in prospect and retrospect. E. Schiff. R Econ Stat 28:231-6 N '46
Employment in southern manufactures. E. H. Barnes. Mo Labor R 64:305-17 F '47
Employment in the Northwest. E. H. Barnes. Mo Labor R 64:589-98 Ap '47
Employment trends, 1940-April 1947; graphs. Survey of Cur Bsns 27:1-5 Je '47
Estimated employment in nonagricultural establishments, by industry division, yearly 1939-1945, monthly Sept. 1942-Nov. 1946. Fed Res Bul 33:78 Ja '47 [cont monthly]
Factory employment and pay rolls, by industries (without seasonal adjustment) monthly, Oct-Nov. 1945 and July-Nov. 1946. Fed Res Bul 33:76-7 Ja '47 [cont monthly]
Income earners include abnormal number of teen agers and elderly men and women; with statistics by age for April, 1945, 1946 and 1947. Weekly Underw 157:1006 O 18 '47
Measures of employment. D. R. Roberts. Survey of Cur Bsns 27:18-22 O '47
Nonfarm placements made by public employment offices in 1946. Mo Labor R 64:1065-8 Je '47
Postwar adjustment of aircraft workers in southern California. L. R. Linsenmayer and P. E. Warwick. Mo Labor R 63:706-11 N '46
Postwar labor turn-over among women factory workers. C. F. Schloss and E. J. Polinsky. Mo Labor R 64:411-19 Mr '47
Production-worker employment and pay rolls in manufacturing industries; revisions; monthly figures and monthly averages. Jan. 1945-Feb. 1946. Survey of Cur Bsns 27:24 My '47
Production-worker employment and pay rolls in sawmills and logging camps; revised data, 1939-1946. Survey of Cur Bsns 27:23 O '47
Production-worker employment and payrolls in the boots and shoes industry; revised data, monthly, 1939-1946. Survey of Cur Bsns 27:24 S '47
Production-worker employment and pay rolls in the furniture industry; revised data, monthly figures and monthly averages, 1939-1946. Survey of Cur Bsns 27:23 Jl '47
Production-worker employment and pay rolls in the men's and women's clothing industries; monthly figures and monthly averages, 1939-1946; revised series. Survey of Cur Bsns 27:22 Je '47
Production-worker employment and pay rolls in the printing, book and job, industry; revised data, 1939-1946. Survey of Cur Bsns 27:23 O '47
Revised estimates of nonagricultural employment. Mo Labor R 64:921-5 My '47
Shift of employment among younger scientists. M. H. Trytten. Science 106:3-5 Jl 4 '47
Trends of employment and labor turn-over. Mo Labor R 64:126-46 Ja '47 [cont monthly]
Unemployment, employment and hours of work. Int Labour R 53:283-93, 455-65; 54:239-49 Mr-Ap, My-Je, S-O '46
USES records employment in 1946 highest in history. J. K. Johnson. Iron Age 159: 112-13 Ja 9 '47
Wages and employment in the public utility industries. E. Neuner, jr. bibliog J Land & Pub Util Econ 22:363-80 N '46
Wartime and postwar employment trends in California. M. I. Gershenson. Mo Labor R 64:577-88 Ap '47

See also
Occupations—Statistics

EMPLOYMENT act of 1946
Employment act and economic outlook. E. G. Nourse. Comm & Fin Chr 165:3231+ Je 19 '47
First report of Council of economic advisers; text. Comm & Fin Chr 164:3351+ D 26 '46; Same. Fed Res Bul 33:13-25 Ja '47
Full employment act and the economic future. E. G. Nourse. Comm & Fin Chr 164: 320-6+ D 19 '46
Maintaining prosperity; role of management and government; explains Employment act of 1946. L. H. Keyserling. Comm & Fin Chr 165:1782+ Ap 3 '47
President's economic report under Full employment act; abstract. Comm & Fin Chr 165:128 Ja 9 '47
Step forward in government responsibility. R. E. Flanders. Comm & Fin Chr 166:1747+ O 30 '47
Two discussions of the Employment act of 1946 and its early operation. A. H. Hansen; J. Viner. R Econ Stat 29:69-79 My '47
What can be expected of Employment act of 1946. J. H. Williams. Comm & Fin Chr 166: 110+ Jl 10 '47

EMPLOYMENT agencies
Employment service organisation. Int Labour R 55:372-95 My '47
Financial placement and clearance center opened in New York. Comm & Fin Chr 166: 634 Ag 14 '47
Nonfarm placements made by public employment offices in 1946. Mo Labor R 64: 1065-8 Je '47
Reception of clerical job-seekers; public employment offices, private agencies, and employment departments of companies. P. H. Kriedt and D. G. Paterson. Personnel J 25:236-41 Ja '47

EMPLOYMENT contracts. See Labor contracts

EMPLOYMENT departments
Personnel department; annual report. D. E. Dickason. Personnel J 25:323-8 Mr '47
Principles in manpower utilization. L. L. McQuitty. Personnel J 25:302-9 Mr '47

EMPLOYMENT departments—*Continued*
Reception of clerical job-seekers; public employment offices, private agencies, and employment departments of companies. P. H. Kriedt and D. G. Paterson. Personnel J 25:236-41 Ja '47
Role of the industrial physician. G. A. Wainwright. Ind Med 16:107-9 Mr '47
Social factors in industrial personnel management. D. F. Hutchinson. Personnel J 26:62-7 Je '47
Tools of advertising service the machinery of industrial and public relations; three-way organization at Falk corporation. L. Fox. il Ind Marketing 32:43-4+ Mr '47

Records

Faster way to keep personnel records; North American Aviation's one-writing plan. S. Bower, jr. il Am Bsns 17:18-19+ Ag '47
One girl keeps personnel records of 900 employees. R. D. McMillen. Factory Management 105:109-10 Je '47
Quick facts about your employees. H. L. Corley, jr. il Am Bsns 17:18-19+ F '47
Skill file. J. K. Gerdel. Personnel J 26:150-6 O '47

EMPLOYMENT management
Are you encouraged? B. Sless. Personnel J 25:299-301 Mr '47
Better relations through better information. W. H. Senyard. Am Gas Assn Proc 1946: 100-5; Discussion. F. W. Fisher. 105-6
Bridging men and management; abstract. J. H. Wright. Chem Eng 54:256+ Jl '47
Business in showcase; good employee relations pre-requisite to good public relations. Trusts & Estates 84:477-9 My '47
Caterpillar sponsors management dinners. Factory Management 105:108 Ag '47
Chairman gives foremen basic economic facts. A. C. Higgins. Factory Management 105: 129-30 S '47
Changing aspects of the personnel functions in management. G. B. Arthur, jr. Pub Util 40:377-8 S 11 '47
Checker-playing mine foremen. J. J. Rutledge. Explosives Eng 25:54-5 Mr '47
Complex art of getting along with people; or public relations, mister! S. C. Robinson. Mass Transportation 43:324-6 Ag '47; Same cond. Bus Transportation 26:58 Ag '47
Conducting the salary interview; abstract. L. E. Himler. Management R 36:83-4 F '47
Creating and expressing sound personnel policies. G. Hodge. Management R 36:529-30 O '47
Credit swiping nurses hidden losses. B. H. Hopkins. Chem Eng 54:110-11 Jl '47
Eleven principles for effective communication between employer and employees. H. E. Green. Ptr Ink 220:27-9 S 26 '47
Employe questionnaires guide Victor's internal relations. G. H. Turner. Ind Marketing 31:50+ D '46
Employee opinion survey aids Ford in policy making. Factory Management 105:132-3 Je '47
Employee relations for office workers. M. Hale. Edison Elec Inst Bul 15:161-4 My '47
Employee relations forum; American gas association. Am Gas Assn Mo 28:479-80 N '46
Employee relations in the white collar group. K. A. McIntyre. Am Gas Assn Proc 1946: 118-22
Employee services; Powell River company. J. F. Flett. il Pulp & Pa of Can 48:55-61 Je '47
Employees want answers; question box feature of Detroit Edison's employee magazine. J. H. Walker. Pub Util 40:78-83 Jl 17 '47
Engineers and industrial relations. C. A. Myers. bibliog Mech Eng 68:1059-60 D '46
Engineers criticize mining industry personnel policies. E. Just. Eng & Min J 148: 64-7 Ja '47
For better human relations let's think intelligently. A. E. Grauer. Elec West 98:73-5 Ap '47
For bosses only. E. N. May. Chem Ind 60: 40-3 Ja '47
Fundamental training job of management. A. A. Hood. Sales Management 59:sup3+ Ag 15 '47
La gestion ouvrière des usines de construction automobile Berliet, à Lyon, depuis la Libération. Génie Civil 124:78 F 15 '47
Getting and keeping foundry workers. F. O'Malley. Foundry 75:78+ Ja '47
Getting business facts to workers; abstract. Management R 35:486-9 N '46
Good production starts in the head men's hearts. E. W. Davidson, comp. Sales Management 58:102 Je 1 '47
Grievance procedure. E. G. Amos. Paper Ind 28:1650-1 F '47
Grievances cut 99 percent by commonsense methods; Gerber products co. R. B. Cribbs. il Food Ind 19:1210-11+ S '47
Handling work assignment changes. S. Barkin. Harvard Bsns R 25 no 4:473-82 [Jl] '47
He gets 100% labor efficiency; E. F. Pierson. E. W. Davidson, comp. Sales Management 57:107 D 1 '46
How Armstrong Cork keeps employees and community informed. T. G. Newton. il Trusts & Estates 84:384-7 Ap '47
How can employees best use their freedom of speech? lines of communication between management and employees. C. B. Boulet. Pub Util 40:15-22 Jl 3 '47
How it's used posters boost morale; Tinnerman products, inc. il Am Mach 91:109-10 Jl 17 '47
How to build teamwork in industry. J. V. Carmichael. Sales Management 59:57 Jl 1 '47
How to communicate with employees. K. MacRury. Personnel J 25:186-202 D '46
Human relations and you. R. E. Oliver. il Pulp & Pa of Can 48:45-9 Ag '47
Human relations in employment. A. L. Kress and others. Oil Paint & Drug Rep 150:4+ N 4 '46
Human relations in industry. R. F. Bennett. Paper Ind 28:1645-6 F '47
Human relations; key coal factor. Coal Age 52:56-60 Mr '47
Human relations program helps to push American brake shoe company ahead. Am Bsns 17:56 S '47
I know our workers and their problems; Simplex time recorder company, Gardner, Mass. C. G. Watkins. il Factory Management 104:94-5 D '46
Industrial relations and safety. C. J. Flippen. il Min Cong J 33:42-4+ Mr '47
Industrial relations in paper industry. E. G. Amos. Paper Ind 28:1342+ D '46
Institute a grievance procedure in your business. O. C. Cool. Cer Ind 48:52 My '47
It's management's job to fight economic quackery; Elgin national watch co. T. A. Potter. Factory Management 105:84-6 My '47
Labor-relations school set up by Botany mills. il Textile World 97:111 Je '47
Labor-relations viewpoint on personal protection for the worker. W. J. Niederaur. il Safety Eng 93:18-19+ Je '47
Line supervision best of employer-employee information channels. Iron Age 159:135-6 Je 26 '47
Loyalty, spirit, and co-operation fostered by these personnel functions. J. D. Kingery and W. A. Garrett. il Bankers Mo 64:61-3 F '47
Management leader's manual for operating executives, supervisors and foremen. J. O. Rice and M. J. Dooher, eds. 190p $3 American management assn, 330 W. 42d st, New York 18 '47
Management techniques in a small plant; Tri-Clover machine company's employee relations, production methods, and management controls. C. F. Stein. il Factory Management 104:136-9 N '46
Morale survey improves management-employee relations. E. J. Benge. Paper Ind 28:1141-3 N '46
More on personnel administration. C. C. Fracker. Personnel J 26:33-6 My '47
More on personnel administration. B. H. Prentice, jr. Personnel J 26:116-18 S '47
Most trouble with labor is unnecessary. E. S. Tillinghast. il Eng & Min J 148:82-3 S '47
Need for improved methods. D. F. Tver. Personnel J 25:287-90 F '47

EMPLOYMENT management—*Continued*
Needed: human engineering. E. J. Tangerman. il Am Mach 91:85-9 Je 5 '47
Pay envelope stuffers explain free enterprise. Sales Management 58:83 Ja 15 '47
Personnel policy should aim at greatest effective output. A. E. Grauer. Elec World 126:55 D 21 '46
Pitney-Bowes meets its neighbors; company sells itself to employees and community. Trusts & Estates 85:7-8 Jl '47
Policy choices in employer-employee relations. R. Parkinson. N E Water Works Assn J 61:88-96 Mr '47
Posters aim at greater productivity. il Factory Management 105:136-7 Ja '47
Post-war supervisor; detective in human relations. J. E. Eitington. Personnel J 26: 19-22 My '47
Practical grievance procedure avoids real trouble. O. C. Cool. Am Mach 91:104-7 Ap 10 '47
Prerequisites of a training and educational program. O. Van Rye. Am Gas J 166:14-15+ F '47
Prevention of fidelity and crime losses. C. A. Sullivan. Management R 36:227-9 Ap '47
Principles in manpower utilization. L. L. McQuitty. Personnel J 25:302-9 Mr '47
Production clinic; autocratic management. E. G. Thomssen. Soap & San Chem 23:81+ Mr '47
Program for labor peace. C. B. Boulet. Am Gas Assn Proc 1946:92-6; Same. Gas Age 98:50+ O 31 '46; Same. Am Gas J 165:26-9 N '46; Discussion. M. V. Cousins. Am Gas Assn Proc 1946:97-9
Psychologist looks at management problems. J. W. Wilson. Iron Age 159:47-9 Ap 17 '47
Recommendations for handling personnel problems. W. J. Barclay. Foundry 75:137 S '47
Research needed in personnel administration. A. W. Ayers. Personnel J 26:127-9 O '47
Responsibility for incentive administration; management data sheets. G. Z. Wollam. Factory Management 105:134+ O '47
Review of personnel progress. L. K. Johnson. Personnel J 25:242-9 Ja '47
Safety and industrial relations. J. L. Roy. il Safety Eng 92:22+ N '46
Salary interview. J Account 83:528-9 Je '47
Security within industry. A. S. Bennion. bibliog Edison Elec Inst Bul 15:271-3 Jl '47; Excerpts. Elec World 127:101 Je 7 '47
Selling mining to the miner. W. Williams. Eng & Min J 147:57-9 D '46
Service station manpower; survey reveals programs to raise personnel standards. H. Taylor. Nat Pet N 39:41 Jl 2 '47
Shop grievances; the human approach. F. C. Smith. Personnel J 26:95-102 S '47
Social factors in industrial personnel management. D. F. Hutchinson. Personnel J 26:62-7 Je '47
Solving the employee-turnover problem. O. C. Cool. Paper Ind 29:687-8 Ag '47
Some reflections on the responsibilities of supervisors in the field of labor relations. G. R. Schenck. Paper Tr J 122:143-6 Je 20 '46; Same cond. Paper Ind 29:267-70 My '47
Sound personnel policy; plan of Koppers co. B. Somervell. Comm & Fin Chr 165:2525+ My 8 '47
Staffing and management in the electricity supply industry. G. O. McLean. Elec R (Lond) 141:53-5, 137-9 Jl 11, 25 '47
Time study training for stewards and committeemen; American Type Founders. H. M. Hinkel. il Factory Management 105:78-80 Ag '47
Twice-a-year interviews help us stay acquainted with workers; Victor adding machine company. G. H. Turner. Factory Management 105:73 Ap '47
What the engineer should know about industrial relations. W. R. Spriegel. J Eng Educ 37:1-9; Discussion. 9-13 F '47
What to do about problem personnel. W. J. Reilly. il Am Bsns 17:8-9+ Je '47
When foreman deals with worker. L. M. Gilbreth and A. R. Cook. il Factory Management 105:115-22 Mr '47
When the veteran needs help: program of Standard register company. J. N. Griffith. Am Bsns 16:10-11+ D '46
Whose job is it to lead? B. L. Wells. Elec West 98:39-41 Ja '47
Whose job is labor relations? A. F. Scoblic. Am Mach 91:146 Je 19 '47
Wildcat strike means trouble ahead. R. W. Putney. Personnel J 26:3-5 My '47
World the manager lives in. R. E. Gillmor. Mech Eng 69:541-3+ Jl '47
You can't run a shop by remote control. E. J. Tangerman. Am Mach 90:101-3 N 21 '46

See also
Ability tests
Absenteeism (labor)
Advertising and employees
Apprentices
Bank employees
Bonus system
Building trades—Labor conditions
Chaplains, Industrial
Collective bargaining
Efficiency, Industrial
Employees—Rating
Employees, Dismissal of
Employees, Reports to
Employees, Training of
Employees' magazines
Employees' manuals
Employees' publications
Employees' representation in management
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Psychology, Industrial
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Research workers
Safety devices and measures
Sales management
Shop stewards
Suggestion systems
Supervisory workers
Time study
Veterans—Reemployment
Wage payment plans
Welfare work in industry
Woman—Employment

Bibliography

New literature on plant management, published by the American management association. W. von Pechmann. Ind & Eng Chem 39:sup 107A-8A S '47

Incentives

See also
Bonus system
Employees' benefit plans
Profit sharing
Wage payment plans

Standards

Labor peace, professional independence seen if employers are accredited. F. H. McDonald. Civil Eng 17:13+ Ja '47

Study and teaching

Training in employee relations; University of Illinois course. G. Carter. Personnel J 25:271-2 F '47

EMPLOYMENT of children. See Child labor

EMPLOYMENT of women. See Woman—Employment

EMPLOYMENT service (United States). See United States—Employment service

EMPLOYMENT systems
Aids to recruiting bank personnel. M. A. Ralston. il Burroughs Clearing House 31: 20-1+ My '47
Application blank in employee selection. M. A. Mitzel. Personnel J 26:6-8 My '47
Better vision for greater efficiency. E. F. Richardson. il Factory Management 105:109-16 S '47
Employer practice regarding engineering graduates. Elec Eng 66:386-9 Ap '47; Same. Mech Eng 69:306-8+ Ap '47; Same. Min & Met 28:197-9 Ap '47; Same. Chem Eng Prog 43:sup23-5 My '47
Engineers joint council issues preliminary report in survey of employer practices. Civil Eng 17:215 Ap '47
How efficient are your hiring methods? R. N. McMurry. Personnel J 26:45-53 Je '47

EMPLOYMENT systems—*Continued*
How the other fellow does it and gets his man; industries seek engineering graduates; interview with W. E. Crew. F. Tifft. Ry Age 122:1075+ My 24 '47
How to get good employees; how to give them a good start. J. D. Kingery and W. A. Garrett. Bankers Mo 63:599-601 D '46
Human engineering. R. L. Demmerle. Chem & Eng N 25:14-18+ Ja 6 '47
Industrial physician in the personnel program. D. F. Tver. Personnel J 26:30-2 My '47
Less labor turnover; because applicant previews job. R. Young. il Factory Management 105:93 Jl '47
Need for improved methods. D. F. Tver. Personnel J 25:287-90 F '47
Pattern for executive placement. B. Haldane. Harvard Bsns R 25 no 4A:652-63 [O] '47
Physically fitting man to job. G. E. Finout. Factory Management 104:113 D '46
Physically handicapped make good employees. M. Hutchison. il Food Ind 19:172-3+ F '47
Picking good bus mechanics. B. K. Van Allyn. Bus Transportation 26:77-9 Ja '47
Proper selection, training of drivers are profit factors in operation of trucks. Nat Pet N 39:34+ Je 11 '47
Right eyes for the job. H. S. Kuhn. il Ind Med 16:485-8 O '47
Selection and placement of technical personnel. R. A. Fear. Chem Eng Prog 43:sup 12-14 Ag '47
Selection and training of personnel. M. S. Viteles. bibliog Edison Elec Inst Bul 15: 74-80+ Mr '47
Selection for appointments and advice on careers; P.T.D. method of assessment of candidates according to their personal qualities. H. G. Welch. Textile Inst J 38: P57-61 F '47
Should he be hired? Los Angeles transit lines applies psychological tests to prospective employees. il Bus Transportation 26:60-2 O '47
Skill file. J. K. Gerdel. Personnel J 26:150-6 O '47
Staffing and management in the electricity supply industry. G. O. McLean. Elec R (Lond) 141:53-5 Jl 11 '47
Which driver for the job? A. E. Neyhart. bibliog il diags S A E J 54:21-7+ N '46
X-ray screens out chest cases in hiring and placing employees; Caterpillar tractor company. il Factory Management 105:140-2 Ja '47

See also
Ability tests
Civil service
Disabled—Rehabilitation
Employees—Rating
Employment management
Handicapped
Insurance, Life—Agents—Selection
Job analysis
Labor turnover
Layoff systems
Physical examinations
Salesmen—Selection

Advertising aids
Firebrick Freddie attracts workers for A. P. Green fire brick co.; increases staff 60 per cent. Brick & Clay Rec 110:70+ Ap '47
Skillful publicity aids labor procurement; Bigelow-Sanford newspaper advertising. H. S. Knowlton. il plan Textile World 97:135+ O '47

Guaranty of employment
Guaranteed employment plan of Seaboard railroad. J. L. Afros. Mo Labor R 65:167-71 Ag '47

Interviews
Interviewing methods used in the selection of salesmen. R. D. Henderson and D. W. Hoover. Personnel J 26:9-18 My '47
Suggestions for interviewing veteran engineering graduates. R. B. Eckles. Personnel J 26:92-4 S '47
Systematic interviewing of prospective workers ensures a good working staff. W. von Pechmann. Ind & Eng Chem 39:sup87A-8A Ap '47
Validity of the placement interview. R. W. Putney. Personnel J 26:144-5 O '47

EMULSIFIERS
Alginates; their use as emulsifiers and thickeners in soaps and cosmetics. N. J. Federici. Soap & San Chem 23:35+ My '47
Les émulseurs; étude bibliographique. F. Appell. bibliog diags Chimie & Ind 57:241-9, 341-6 Mr-Ap '47
Emulsifying acaricides; abstract. H. J. Fluno, H. A. Jones and F. M. Snyder. Soap & San Chem 23:153+ O '47
New emulsifiers for foods. N. F. Johnston and H. H. Favor. il Food Ind 19:1196-7 S '47

EMULSIONS
Composition, control and selection of coolants for working metals. E. L. H. Bastian. il Steel 120:82-3+ My 19; 94-5+ My 26 '47
Copolymerization; mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce and E. C. Chapin. bibliog Am Chem Soc J 69:581-3 Mr '47
Copolymerization; mechanism of emulsion copolymerization of styrene and itaconic acid. R. G. Fordyce and G. E. Ham. Am Chem Soc J 69:695-6 Mr '47
Copolymerization; the mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce. Am Chem Soc J 69: 1903-4 Ag '47
DDT emulsion concentrates. H. A. Jones and others. Soap & San Chem 22:155+ D '46
Demulsification of water gas tar emulsions. Chem Ind 61:248 Ag '47
Disposal of petroleum refinery waste; methods for handling emulsions. W. B. Hart. diags Pet Processing 2:691-2+ S '47
Emulsion paints. G. M. Sutheim. bibliog il Chem Ind 60:948-51+ Je '47
Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47
Emulsions bring safety to oil-fire fighting. D. Powell. il Safety Eng 93:16-17+ Mr '47
General theory of the mechanism of emulsion polymerization. W. D. Harkins. bibliog diags Am Chem Soc J 69:1428-44, pl 1-2 Je '47
Mechanism of emulsion polymerizations; effect of oxygen on the emulsion polymerization of styrene. I. M. Kolthoff and W. J. Dale. bibliog Am Chem Soc J 69:441-6 F '47
Mechanism of emulsion polymerizations; oxygen as a comonomer in the emulsion polymerization of styrene. F. A. Bovey and I. M. Kolthoff. bibliog diags Am Chem Soc J 69:2143-53 S '47
New emulsions developed for textile printing. il Textile World 97:143+ S '47
Oils, waxes and resins; increasing uses in the dyeing industry. J. R. F. Jackson. Chem Age (Lond) 56:435 Ap 12 '47
Stabilization of emulsions with vegetable gums; citrus emulsions. C. M. Ferri. il Food Ind 19:784-5 Je '47
Water settling and emulsion breaking system; Oleum refinery, Union oil company of California. il Pet Refiner 26:114-15 Ag '47

See also
Petroleum—Emulsions

ENAMEL and enameling
Abstracts of ACS convention papers. Cer Ind 48:68-73 Je '47
Approach to proper method of preparing steel sheets for vitreous enameling. D. J. Benoliel and W. J. Haring. bibliog Am Cer Soc Bul 26:213-14 Jl 15 '47
Ceramic batches; enamel batches; recipes. Cer Ind 48:130+ Ja '47
Ceramic type coatings for exhaust disposal systems; abstract. D. G. Bennett and others. Am Cer Soc J 30 (Cer A):171-2 S 1 '47
Changing fuels without temperature loss; dual oil-gas burner system at Smoot-Holman company plant. W. G. Holman and G. F. Thomas. il diag Cer Ind 48:70-2 Mr '47
Developing opacity in ceramics. H. D. Prior. Cer Ind 48:53+ F '47
Economical use of titanium dioxide in enamels. W. G. Armstrong and W. H. Madson. Ind & Eng Chem 39:944-7 Ag '47
Effect of composition on properties of titanium enamels. A. L. Friedberg and others. bibliog Am Cer Soc J 30:261-77 S 1 '47

ENAMEL and enameling—*Continued*
18 months bring revolution in porcelain enamel. Cer Ind 47:80+ D '46
Enameled screen gives best results in screening coke breeze and damp materials. F. J. Geyer. il Blast F & Steel Pl 34:1529-30 D '46
First porcelain enameled stove. il Cer Ind 49: 67+ Ag '47
General beading practice; wet vs dry application. P. A. Huppert. il Cer Ind 49:68+ Jl '47
High-temperature protection for mild steels; heat-resistant ceramic coatings. W. N. Harrison and others. il Steel 120:92-3+ F 10 '47
How Westinghouse cuts enamel losses; titanium enamels reduce shipping damage; better crating methods; special steels. R. F. Bisbee. Cer Ind 48:63-4 My '47
Hussmann modernizes enameling plant. il Cer Ind 47:62 N '46
Influence of chemical composition of enamel on a few of its properties. B. K. Niklewski. bibliog (60 ref) il Am Cer Soc J 29:316-31 N 1 '46
Larger furnaces to speed American Stove's enameling program. il Cer Ind 48:74-5 Mr '47
Lithium compounds in porcelain enamel compositions; abstract. P. A. Huppert. Am Cer Soc J 30(Cer A):195-6 O 1 '47
Modern enamel-plant layout and equipment. G. A. Hutt and P. S. Gruber. Am Cer Soc Bul 26:235-6 Ag 15 '47
Modern finishing methods; Landers Frary & Clark. L. A. Brown. il plans diags Am Mach 91:77-81 Ja 30 '47
New cooker factory; G. Corner & co., ltd. il Gas J (Lond) 248:833-4 N 13 '46
Obstacle in cleaning drawing compounds from enameling iron. W. H. Pfeiffer and V. A. Williamitis. Am Cer Soc J 30:90-4 Mr 1 '47
Porcelain coats on metal bases. E. Mackasek. il Sci Am 177:106-9 S '47
Porcelain enamel institute forum held at the University of Illinois. Cer Ind 47:56-60 N '46
Porcelain enamel modernizes. Bsns W p60+ N 30 '46
Porcelain enameled bearings. il Cer Ind 47:61 N '46
Porcelain enameling characteristics of some common ferrous metals; diffusibility of atomic hydrogen. W. A. Deringer. il diag Am Cer Soc J 29:332-40 N 1 '46
Porcelain enamels for machine parts. R. L. Fellows. il Machine Design 19:147-50 F '47
Properties of enamel slips; soluble salts in enamel slips. B. W. King, jr, and others. bibliog Am Cer Soc J 30:22-6 Ja 1 '47
Protective coatings for high temperature applications. W. N. Harrison. Steel 121: 126+ N 3 '47
Quality enameling in American kitchens; American central division, Aviation corp. il plan Cer Ind 48:44-50 F '47
Roller conveyors increase efficiency of small enameling plant. il plan Cer Ind 49:58+ Jl '47
Statistical methods applied to the inspection of porcelain enamel. L. S. Kauffman. Cer Ind 49:61-2 Ag '47
Steel for enameling. G. H. McIntyre. Steel 119:80 D 23 '46
Study of dry-process cast-iron ground-coat enamels. R. R. Danielson and J. H. Koenig. il diags Am Cer Soc J 30:306-11 O 1 '47
Thermal insulating and radiation suppressive coatings for aircraft power plant systems. Cer Ind 48:142 Ap '47
Thickness gage saves $600 monthly at Florence stove co. il Cer Ind 48:72 Mr '47
Titanium-bearing white enamels in shop practice. P. A. Huppert. Cer Ind 49:64-5 Ag; 98 N '47
Titanium for enamelling steel. Chem Age (Lond) 56:569 My 3 '47
Types and characteristics of modern porcelain enamels. H. A. Knight. il Materials & Methods 26:93-8 Jl '47
Viscosimeter assures proper thickness of spraying enamel. il Sci Am 177:171 O '47
Vitreous enamel, its preparation and application; Frigidaire products of Canada. D. S. O'Donnell. il Can Chem & Process Ind 31:527-9+ Je '47
War-developed ceramic coatings have peace uses. F. W. Connor. il Dom Comm 35:30-3 Mr '47

See also
Sheet metal, Enameled

Bibliography

Publications of G. H. Spencer-Strong. Am Cer Soc Bul 26:167-8 My 15 '47

Defects

Factors affecting orange peel. J. J. Steencken. Am Cer Soc J 30:64-8 F 1 '47

Patents

Enamel composition suitable for use in manufacture of wire-wound electrical resistors; patent. diag Glass Ind 28:469 S '47
Vitreous enamel opacifier; patents. Glass Ind 28:418, 576 Ag, N '47

Standards

Vitreous enamel standard. Chem Age (Lond) 56:721 My 31 '47

Testing

Testing resistance of enameled surfaces to scratching, gouging, and abrasion. F. A. Petersen. bibliog il Am Cer Soc J 30:94-104 Mr 1 '47
Tests for hot-water resistance of tank enamels. D. G. Moore and W. N. Harrison. il diags Am Cer Soc J 30:220-6 Jl 1 '47
Useful apparatus for measuring yield value of enamel slips; suspensiometer. G. Morren. diag Am Cer Soc Bul 26:180-1 Je 15 '47

ENAMEL spraying
Factors affecting orange peel. J. J. Steencken. Am Cer Soc J 30:64-8 F 1 '47
Metal sprayed with molten porcelain enamel; air pressure blowgun, finishes metal surfaces with molten glass, metals or plastics. il Cer Ind 49:65+ S '47

ENAMELED sheet metal. See Sheet metal, Enameled

ENAMELED ware
Enamelware production, China. For Comm W 28:26 Ag 30 '47

Manufacture

General beading practice; wet vs dry application. P. A. Huppert. il Cer Ind 49:68+ Jl '47
Resistance welding for porcelain enameled ware. R. S. Florek. il diags Welding J 26: 137-40 F '47
12 ways to handle enameled ware in the spray room. il Cer Ind 48:52+ Je '47
Wider fusion range aids enameling. Cer Ind 49:60 S '47

Testing

Mechanism of thermal-shock failure in enamelware; oven-test method. J. C. Richmond and W. N. Harrison. bibliog il diags Am Cer Soc J 30:227-36 Ag 1 '47
Thermal shock failure of enamelware utensils. Franklin Inst J 243:491-2 Je '47

ENAMELING furnaces. See Furnaces, Enameling

ENCEPHALOMYELITIS
Effect of chlorination on the virus of eastern equine encephalomyelitis in the presence of organic substances; abstract. J. E. Kempf and others. Am Water Works Assn J 39: 192 F '47
Recovery of western equine encephalomyelitis virus from wild bird mites (liponyssus sylviarum) in Kern county, California. W. C. Reeves and others. bibliog Science 105: 411-12 Ap 18 '47

ENCEPHALOPHONE. See Electroencephalograph

ENCYCLOPEDIAS

See also
Science—Dictionaries and encyclopedias

ENDELL, Kurd H. 1887-1946
Sketch. bibliog(87 titles) por Am Cer Soc Bul 26:171-3 My 15 '47

ENDICOTT Johnson corporation
Stocks selling below current net assets. Mag of Wall St 80:703 S 27 '47

ENEMY property
General Aniline & Film is largest seized alien property. il Fortune 36:68-73+ Ag '47
Norway's largest second-hand store to close; Directorate for enemy property. For Comm W 25:21 N 16 '46
Public sale of rayon shares out of alien property sought; loans to Algemeene kunstzijde unie of Arnhem. Barron's 27:34 N 3 '47
Reparations news; sales of German external assets. For Comm W 26:30 Mr 29; 27 Ap 19 '47
Sale of German external assets in neutral countries. F. L. Brooks. il For Comm W 27:6-7+ My 3 '47

ENERGY. See Force and energy

ENGINEERING
Engineering developments. E. E. Johnson. Mech Eng 69:590-1 Jl '47
Engineering in an atomic era. A. C. Klein. Mech Eng 68:1029-31 D '46; Same. Power Pl Eng 51:110-13 Ja '47
Engineering News events of 1946; chronological summary. Eng N 138:260-1 F 20 '47
Engineering sciences. (Description of professions series no. 2) 51p National roster of scientific and specialized personnel, Dept. of labor; pa 15c Supt. of doc. Washington 25 '47
Glass fibers as engineering materials. K. Rose. il Materials & Methods 25:82-5 Mr '47
Invention in engineering development. D. W. McLenegan. Mech Eng 69:661-2+ Ag '47; Same. Gen Elec R 50:9-12 S '47
New engineering materials. Iron Age 159:71-3 Mr 13 '47
Progress in modern engineering. W. Halcrow. Engineering 164:210-11, 236-7 Ag 29-S 5 '47
Scientific approach reveals fallacies in paradoxical engineering. S. F. Borg. diags Civil Eng 17:397-8 Jl '47
Tantalum as an engineering material. K. Rose. il Materials & Methods 26:94-8 O '47
Technical knowledge and engineering progress; abstract. R. W. Bailey. Engineer 184: 89 Jl 25 '47
Weight economy in engineering design. W. A. Semmion. il Materials & Methods 25: 59-62 My '47

See also
Aeronautic engineering
Air conditioning
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Aqueducts
Automobile engineering
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Industrial engineering
Irrigation
Lighting
Machinery
Marine engineering
Mechanical engineering
Mechanical handling
Military engineering
Mining engineering
Pavements
Petroleum engineering
Pipe laying
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Reservoirs
Roads
Sanitary engineering
Sewerage
Standards, Engineering
Steam engineering
Steam engines
Steel construction
Strains and stresses
Streets
Strength of materials
Structural engineering
Surveying
Technology
Telephone
Tunnels and tunneling
Ventilation
Water supply engineering

Bibliography
Additions to the library. Inst Mech Eng J p16-19 Ja '47 [cont monthly in Journal section]
Engineer's bookshelf. Published in monthly numbers of Power
Guide to the literature of mathematics and physics including related works on engineering science. N. G. Parke, 3d. 205p $5 McGraw-Hill book co, 330 W. 42d st, New York 18 '47
Reviews of books and notes on books received in the Engineering societies' library. Published in monthly numbers of Mechanical engineering

Examinations
College and professional registration examinations. H. T. Person. J Eng Educ 37: 714-19 My '47
New York state professional engineering examination, Feb. 7. Chem Eng Prog 43:sup 16+ Je '47

Handbooks
Vest-pocket handbook of engineering. L. A. Waterbury. 4th ed rev 386p $2.50 John Wiley & sons, 440 4th av, New York 16 '47

History
Engineer and the historian. L. M. Sears. Mech Eng 69:581-4 Jl '47

Bibliography
Manual of the William Freeman Myrick Goss library of the history of engineering and associated collections. W. M. Hepburn. 218p Purdue univ, Lafayette, Ind. '47

Social aspects
American stake in world engineering. F. B. Turck. Mech Eng 69:142-4 F '47; Excerpts. Refrig Eng 53:209-10+ Mr '47; Chem Eng Prog 43:sup21-3 Mr '47
Engineer and the historian. L. M. Sears. Mech Eng 69:581-4 Jl '47
Engineering progress or world stagnation. diags Power Pl Eng 50:103 O; 97-8 N '46
Trivia from oblivia. E. C. Elliott. J Eng Educ 37:260-7 N '46

Study and teaching
Some modifications in approach to teaching engineers. E. C. Shuman. J Eng Educ 37: 446-52 Ja '47

See also
Engineering colleges
Engineering education

Tables, calculations, etc.
Calculating machine furnishes shortcut method of computing coordinates of the point of intersection of two lines. H. G. Weissenstein. Civil Eng 17:545 S '47; Discussion. R. E. Burnett. 17:50 D '47
Engineering calculations; suggested new unit of length. D. G. Sandeman. Elec R (Lond) 140:613 Ap 18 '47

Alaska
Test study of foundation design for permafrost conditions. il diags Eng N 139:404-7 S 18 '47

Bolivia
Engineer looks at Bolivia. R. Hammond. maps diags Engineer 183:556-8 Je 27 '47

Chile
Engineer looks at Chile. R. Hammond. il diag Engineer 184:192-4, 226-7, 250-2, 266-8 Ag 29-S 19 '47

ENGINEERING—*Continued*

France

Ancient Rhone valley begins a new cycle. W. G. Bowman. il map Eng N 139:148-52 Jl 31 '47

History and hydro power in southern France. W. G. Bowman. il Eng N 139:82-5 Jl 17 '47

Germany

Occupation army engineering. W. G. Bowman. il Eng N 139:25-6 Jl 10 '47

Near East

Engineering progress or world stagnation. diags Power Pl Eng 50:97-8 N '46

Turkey

Turkey's need for engineers. Eng N 139:295 Ag 28 '47

United States

Electricity, oil, mining; world looks to U.S. for engineered solutions to technical problems. il Bsns W p98+ Jl 19 '47

ENGINEERING, Structural. See Structural engineering

ENGINEERING and marine exhibition

Exhibition, Olympia, London, Aug. 28-Sept. 13. Chem & Ind p546-9, 563-4 S 6-13 '47

ENGINEERING college research council

Activities. F. M. Dawson. J Eng Educ 37: 741-2 Je '47

ENGINEERING colleges

After veteran programs, what next? H. L. Spencer. J Eng Educ 37:796-802 Je '47

Cooperation between departments of physics and mechanics in engineering colleges. R. Z. Williams. J Eng Educ 37:720-6 My '47

L'école nationale des ponts et chaussées de France. Engineer 184:11 Jl 4 '47

Engineering colleges and the U.S. Office of education. H. H. Armsby. J Eng Educ 37: 601-9 Ap '47

Obligations of engineering school to junior engineers. O. W. Eshbach. Chem Eng Prog 43:383-5 Jl '47

See also

Engineering education
Engineering graduates
Mining schools and education
also names of colleges, e.g.
Massachusetts institute of technology

Curriculum

Accrediting agricultural engineering curricula; view points of agricultural engineering faculty members. G. B. Nutt. J Eng Educ 37:386-8 Ja '47

Approach to the 5-year curriculum. J. D. Ryder. Elec Eng 66:535-7 Je '47

Comparison of industrial engineering curricula. J. M. Apple. J Eng Educ 37:821-4 Je '47

Course requirements in humanistic-social studies. M. V. McEnany. J Eng Educ 37: 704-8 My '47

Five-year curriculum engrosses education session; summer meeting, AIEE. Elec Eng 66:816-18 Ag '47

Five year curriculum in industrial engineering. P. N. Lehoczky. J Eng Educ 37:246-51 N '46

Five-year mechanical engineering curriculum. R. C. Jordan. J Eng Educ 37:414-18 Ja '47

General engineering-science. W. L. DeBaufre. J Eng Educ 37:696-703 My '47

Humanities in an engineering school. R. A. Novak. il Tech R 49:221-2+ F '47

Mathematics beyond calculus for engineering students. F. H. Miller. J Eng Educ 37:330-5 D '46

Mathematics in civil engineering. H. E. Wessman. J Eng Educ 37:378-82 Ja '47

Modifications and trends in engineering curricula. W. G. Van Note. J Eng Educ 38: 77-85 S '47

Philosophy of humanistic-social studies in engineering education. E. S. Burdell. J Eng Educ 37:593-600 Ap '47

Pity the ignorant engineer; non-engineering curricula. D. J. Mack. J Eng Educ 37:837-9 Je '47

Progress reports of the Society's professional committee on engineering education for 1944 and 1945. Am Soc C E Proc 72:375-96 Mr '46; Discussion. 72:913-16, 1023-8; 73: 55-8 Je-S '46, Ja '47

Reorientation needed on engineering curricula. M. M. Samuels. Elec Eng 66:212-13 F '47

Senior thesis in the undergraduate curriculum. M. A. Hunter. J Eng Educ 37:483-6 Mr '47

Summary of information concerning humanistic-social courses in engineering colleges. L. A. Rose. J Eng Educ 37:336-9 D '46

Uniform curriculum in mechanical engineering; symposium. Mech Eng 69:491-3 Je '47

Will comprehensive courses meet the needs of engineers? A. L. Pugsley. J Eng Educ 37:840-2 Je '47

Directories

Directory of mineral engineering schools in the United States and Canada. Min & Met 28:223-4 My '47

Enrollment

Engineering students, enrollment, November 5, 1946; tabulation. J Eng Educ 37:463-76 Ja '47

Enrollment in mineral engineering schools of United States and Canada at all-time high; curricula are: mining, metallurgy, petroleum and natural gas, ceramics, geology, and fuels. W. B. Plank and F. W. Bloecher, jr. J Eng Educ 37:765-70 Je '47; Same. Min & Met 28:221-3 My '47

Reexamination of the Compton report in the light of enrollment in engineering curricula, fall of 1946. H. H. Armsby. J Eng Educ 37:675-88 My '47; Abstract. Mech Eng 69: 666-7 Ag '47

Report of committee on transfer of students from emergency institutions. J Eng Educ 38:31-8 S '47

Survey shows civil engineer students form 11 percent of total enrollment. Eng N 138: 418-19 Mr 13 '47

Graduate work

Aims and content of under graduate courses in machine design. J. H. Billings. J Eng Educ 37:563-8; Discussion. 568-71 Mr '47

Graduate engineering students, enrollment, November 5, 1946, by courses; tabulation. J Eng Educ 37:463-8 Ja '47

Quick courses in reading foreign language for science and engineering graduate students. W. N. Locke. J Eng Educ 37:732-5 My '47

Undergraduate preparation for graduate study through applied mathematics. J. L. Synge. J Eng Educ 37:531-5 Mr '47

Use of the graduate record examination in the selection of graduate engineering students. G. S. Speer. J Eng Educ 37:313-18 D '46

Laboratories

See Engineering laboratories

Professors and instructors

Engineering professor in a society in transition. A. H. Blaisdell. J Eng Educ 37:222-7 N '46

Pros and cons of teaching engineering. R. M. Brick. il Min & Met 28:275-8 Je '47

Report on present-day salaries of members of the instruction staffs of engineering schools in United States and Canada. J Eng Educ 38:39-56 S '47

Salary survey indicates engineering teachers are underpaid. A. P. Richmond. Civil Eng 17:552 S '47

Teachers are human beings. C. E. Gus. J Eng Educ 37:558-62 Mr '47

Research

Engineering schools and departments; research activities for the sessions of 1945-46. A. A. Potter and W. A. Knapp. Purdue Univ Eng Exp Sta, Research Ser 100:1-42 '47

Report of the president of the Engineering college research council. J Eng Educ 38: 27-30 S '47

Research in technical colleges. Engineering 163:478 Je 6 '47

ENGINEERING colleges—*Continued*

Student selection

Admission test procedure. R. R. Slaymaker. J Eng Educ 37:402-13 Ja '47
Use of the graduate record examination in the selection of graduate engineering students. G. S. Speer. J Eng Educ 37:313-18 D '46

ENGINEERING contracts
Can you specify what you want? how to write specifications. R. H. Emerick. il Power 91:467-9+ Jl '47
Contracts for engineering services do not require calling for bids. Pub Works 78:14 My '47
Future costs and their effects on engineering budgets. L. R. Howson. Am Soc C E Proc 72:337-46 Mr '46; Discussion. 73:43-54, 525-7 Ja, Ap '47

See also
Contractors
Roads—Contracts

ENGINEERING departments
How the industrial designer works with the engineer. W. D. Teague. il Product Eng 18:81-4 Mr '47
Management control through industrial engineering. E. F. Gibian. S A E J 55:75-7 F '47
Philco practices true engineering art in refrigerator manufacture. H. Chase. il Refrig Eng 54:239-42+ S '47
Refinery-engineering organization has manifold responsibilities at Shell's Wood River plant. J. F. Goldsberry. Oil & Gas J 45:213-14+ Mr 22 '47
So you want to be an airline engineer! G. T. Hayes. Air Transport 5:26-8 My '47
What the electrical engineering department needs from the drawing department. W. A. Lewis. diag J Eng Educ 37:653-9 Ap '47

Records

Engineering record system. R. I. Haywood. diags Machine Design 18:108-14 N '46
Microfilm as an engineering tool; experience of the Timken roller bearing co. E. S. Kopecki. il Iron Age 159:46-8 Ja 16 '47

ENGINEERING drawing
Case for axonometric drawing. P. F. Boehm. il diags Steel 120:80-1+ Mr 24 '47
Drawing three-dimensional assemblies. W. E. Walters. diags Machine Design 19:82-7 O '47
Exploded product technique has many uses in visual aids. il Sales Management 57:97 N 10 '46
New magic in old lines; pictorial, engineering drafting. A. Presutti. il diags J Eng Educ 37:487-97 Mr '47
New method of axometric projection. D. Maksymiuk. diags J Eng Educ 37:871-8 Je '47
Simplified three-dimensional drawing. W. E. Walters. diags Machine Design 19:94-9 Ja '47
What the electrical engineering department needs from the drawing department. W. A. Lewis. diag J Eng Educ 37:653-9 Ap '47

See also
Drafting room practice

ENGINEERING economics
Investments and the engineer. R. A. Kinckiner. diags Chem Eng Prog 43:183-7; Discussion. 187-8 Ap '47
Many economic factors fix market value of engineering specialties. D. M. Baker. il Civil Eng 17:126-9+ Mr '47
Obsolescence is your business. C. W. Balch. il Chem Ind 60:952-3 Je '47
Practical economics for engineers. C. E. Young. J Eng Educ 37:319-29 D '46
Teaching the break-even chart. C. E. Bullinger. J Eng Educ 37:228-33 N '46

ENGINEERING education
Biotechnology; new fundamental in the training of engineers. C. L. Taylor and L. M. K. Boelter. Science 105:217-19 F 28 '47; Same cond. Mech Eng 69:403 My '47
Designing for production; a problem in education. W. E. Johnson. Mech Eng 69:380-2 My '47
Education and industry. M. Gregg. Pulp & Pa of Can 48:68-71 Jl '47
Educators have opportunity to further scientific prestige of engineering profession. F. E. Terman. Civil Eng 17:407-8 Jl '47
Engineer hates grandfather's horse. W. G. Crouch and R. L. Zetler. J Eng Educ 38:73-6 S '47
Engineering and education. R. G. Caldwell. il Tech R 49:465-8 Je '47
Engineering education for an atomic age. H. O. Croft. J Eng Educ 38:12-15 S '47
Engineering education in the future. A. D. Bailey. J Eng Educ 37:572-8 Mr '47
Engineering education includes more than basic three R's. G. H. Harding. il Civil Eng 17:321-3 Je '47
Engineering professor in a society in transition. A. H. Blaisdell. J Eng Educ 37:222-7 N '46
Engineering training for professional and civil life. J. S. Crout. il Min & Met 28:490-4 O '47
Fine arts for engineers. H. L. Seaver. J Eng Educ 37:811-17 Je '47
Importance of ecology in the training of engineers. P. B. Sears. Science 106:1-3 Jl 4 '47
Liberal education for the engineering profession. H. S. Rogers. Inst Radio Eng Proc 35:951-2 S '47
Licking the language problem; modern pedagogy saves time; M.I.T. methods. W. N. Locke. il Tech R 49:405-7+ My '47
Philosophy of humanistic-social studies in engineering education. E. S. Burdell. J Eng Educ 37:593-600 Ap '47
Planning the professional aspect of the humanistic-social courses. B. R. Teare, jr. J Eng Educ 37:344-52 D '46
Practical economics for engineers. C. E. Young. J Eng Educ 37:319-29 D '46
Preventive medicine in engineering education. G. W. Reid. J Eng Educ 37:638-40 Ap '47; Same. Ind Med 16:51-2 F '47
Progress reports of the Society's professional committee on engineering education for 1944 and 1945. Am Soc C E Proc 72:375-96 Mr '46; Discussion. 72:913-16, 1023-8, 1173-4; 73:55-8 Je-O '46, Ja '47
Shortage of engineers; problem for education and industry. H. T. Heald. Elec Eng 66:340-1 Ap '47
Some thoughts on engineering education. D. M. Baker. Am Soc C E Proc 72:461-82 Ap '46; Discussion. 72:1041-56, 1133-60, 1415-20; 73:705-8, 885-98 S-O, D '46, My-Je '47
Teaching mathematics to engineers. L. E. Grinter. J Eng Educ 37:536-9 Mr '47
Technology and international relations. N. J. Padelford. J Eng Educ 37:751-8 Je '47
Types of films in engineering education. M. C. Giannini. J Eng Educ 37:441-5 Ja '47

See also
Engineering colleges
Mining schools and education
Technical education
also subdivision Study and teaching under engineering subjects, e.g. Mechanical engineering—Study and teaching
also American society for engineering education; Engineers' council for professional development; Westinghouse, George, award in engineering education

Cooperative plan

Close-coupled cooperative engineering education. A. Sobey. J Eng Educ 37:498-512 Mr '47
Effect of the war on co-operative education. L. F. Smith. J Eng Educ 37:340-3 D '46

France

L'école nationale des ponts et chaussées de France. Engineer 184:11 Jl 4 '47

Latin America

Engineering education in Latin America. S. S. Steinberg. map J Eng Educ 37:297-309 D '46

South America

Some aspects of engineering education in South America especially in Uruguay. S. Gerszonowicz. J Eng Educ 37:660-8 Ap '47

ENGINEERING ethics
Competitive engineering proposals. Eng N 138:997 Je 26 '47; Discussion. M. H. Klegerman. 139:275-6 Ag 21 '47

ENGINEERING foundation
Annual report. A. B. Kinzel and E. H. Colpitts. Mech Eng 69:88-90 Ja '47; Elec Eng 66:199 F '47
Engineering foundation elects officers for 1946. Elec Eng 65:595 D '46
Seeks additional funds. Iron Age 159:161 Mr 13 '47

Welding research council
Welding research council and its relation to the American welding society. Welding J 26:705-6+ Ag '47

ENGINEERING graduates
Developing the young engineer. A. C. Monteith. Mech Eng 69:548-50 Jl '47
Employer practice regarding engineering graduates. Elec Eng 66:386-9 Ap '47; Same. Mech Eng 69:306-8+ Ap '47; Same. Min & Met 28:197-9 Ap '47; Same. Chem Eng Prog 43:sup23-5 My '47
Employment histories of engineering graduates. E. D. Howe. J Eng Educ 37:513-19 Mr '47
Engineers joint council issues preliminary report in survey of employer practices. Civil Eng 17:215 Ap '47
How the other fellow does it and gets his man; industries seek engineering graduates; interview with W. E. Crew. F. Tifft. Ry Age 122:1075+ My 24 '47
Railways can get cream of the crop for future officers. Ry Age 122:699-702 Ap 5 '47
Reexamination of the Compton report in the light of enrollment in engineering curricula, fall of 1946. H. H. Armsby. J Eng Educ 37: 675-88 My '47; Abstract. Mech Eng 69:666-7 Ag '47
Suggestions for interviewing veteran engineering graduates. R. B. Eckles. Personnel J 26:92-4 S '47
Training of metallurgical engineers in the steel industry. F. C. Wright. Blast F & Steel Pl 34:373-5 Mr '46; Same. il Steel 119: 82-3+ D 23 '46

ENGINEERING institute of Canada
Annual meeting, 60th, Toronto, May 8-9. Roads & Bridges 85:63+ My '47; Eng N 138:853 My 22 '47

ENGINEERING instruments
See also
Aeronautic instruments
Electric instruments
Radio instruments
Servomechanisms

ENGINEERING laboratories
Army engineer research and development laboratories. Mech Eng 69:597-8 Jl '47
Central research laboratory at Winterthur. il Engineer 183:537-9 Je 20 '47
Engineering laboratories of the Bureau of reclamation. J. W. Shaver. Concrete 55:20-2 S '47
Engineering research laboratory management. M. Nelles. il Mech Eng 69:383-6+ My '47
Pametrada research station. il Engineering 162:559, 564 D 13 '46
Research laboratories of the Reclamation bureau. R. F. Blanks and others. il Eng N 139:380-3, 472-6, 524-8, 603-7, 655-8, 737-40 S 18, O 2, 16, 30, N 13, 27 '47
See also
Aeronautic laboratories
Automobile laboratories
Chemical engineering laboratories
Electric laboratories
Metallurgical laboratories
Naval boiler and turbine laboratory
Sanitary engineering—Laboratories

ENGINEERING libraries
See also
Aeronautic libraries
Engineering societies library, New York

ENGINEERING literature
Keeping magazine articles for future reference. il Heating-Piping 19:97-8 O; 105-6 N '47
See also
Technical writing

ENGINEERING materials. See Materials

ENGINEERING news record (periodical)
Index to Engineering news-record for the years 1928 to 1943 inclusive. C. R. Skillman, comp. 414p $8 McGraw-Hill pub. co, 330 W. 42d st, New York 18 '47

ENGINEERING physics. See Physics

ENGINEERING reports
Plea for plain English. R. A. Gantt. Pub Util 40:23-8 Jl 3 '47
See also
Petroleum engineering—Reports

ENGINEERING research
Biggest army research study started by Engineer corps. Eng N 139:351+ S 11 '47
Engineer and his place in research. A. R. Cullimore. J Eng Educ 37:803-8 Je '47
Flow of gases at sonic and supersonic speeds. G. A. Hankins and W. F. Cope. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 23):401-8, pl 1-4; Discussion. 409-16 '46
Incentives for research. R. E. Wilson. il Tech R 49:217-19+ F '47
Mechanical engineering research; organization set up by government. Engineer 183: 499-500 Je 6 '47; Iron Age 160:146+ Jl 3 '47; Mech Handling 34:386-7 Jl '47
Postwar design for A.S.M.E. research. R. A. O'Brien. Mech Eng 69:145-6 F '47
Progress in engineering knowledge during 1946. P. L. Alger and others. il diags Gen Elec R 50:12-50+ bibliog(p52-5) Mr '47
Research in the mechanical industries. J. F. Wilkes. Product Eng 18:131-2 Ag '47
Scientific research in Australia. Engineering 163:5-6, 42-3, 53-4, 89-90 Ja 3-24 '47
Shortage of engineers; problem for education and industry. H. T. Heald. Elec Eng 66:340-1 Ap '47
Status of engineering research in electronics. H. Diamond. J Eng Educ 38:57-72 S '47
See also
Aeronautic research
Automobile research
Electric research
Engineering colleges—Research
Engineering laboratories
Gas research
Highway research
Hydraulic research
Industrial research
Lighting research
Petroleum research
Railroad research
Refrigeration research
Scientific research

ENGINEERING, science and management war training. See Technical education—Engineering, science and management war training

ENGINEERING societies
Centenary celebration of Royal Netherland institution of engineers. il Engineer 184: 322-3, 335-6 O 3-10 '47; Engineering 164: 354-5 O 10 '47
Centenary celebrations of King's College engineering society. Engineer 183:218-19 Mr 14 '47
Conference of representatives of Commonwealth engineering institutions, London, Sept. 1946. Inst E E J 94 pt 1:81-2 F '47
Electrical engineer. E. S. Lee. Elec Eng 66: 521-4 Je '47
Engineer in North America. C. L. Champion. Engineer 182:561-2, 582-4 D 20-27 '46
Engineering organization in Canada. F. L. Lawton. Elec Eng 66:146-8 F '47
Engineering professions and the institutions. J. H. W. Turner. Engineering 163:447 My 30 '47; Discussion. 163:552-3 Je 27 '47
National professional organization of engineers; necessary to establish professional status. W. F. Ryan. Iron Age 159:119-20 Je 5 '47
Organization of the engineering profession. E. B. Robertson. Elec Eng 65:563-4 D '46
Organizations of engineers in the United States of America. C. E. Davies. bibliog Mech Eng 69:21-5 Ja '47
Plan for a comprehensive national engineering society. J. G. Henderson. Product Eng 18:152 Je '47
Professional activities subcommittee reports for 1946 on organization of engineering profession. Elec Eng 66:496-501 My '47
Professional advantages offered by technical societies. W. M. Sheehan. Product Eng 18:81-3 Mr '47

ENGINEERING societies—*Continued*
Results tabulated on engineering organization questionnaire. Elec Eng 66:397-8 Ap '47

See also names of societies, e.g.
American society of civil engineers
American society of heating and ventilating engineers
American society of mechanical engineers
Engineers' council for professional development
Illuminating engineering society
King's College engineering society
National society of professional engineers
Society of motion picture engineers

Directories

Associations and societies. Roads & Bridges 85:190 Je '47

ENGINEERING societies library, New York
Annual report. R. H. Phelps. Elec Eng 66: 200 F '47; Same cond. Mech Eng 69:87-8 Ja '47

ENGINEERING society of Detroit
Detroit engineers' public activities. S. M. Dean. Mech Eng 69:193-6 Mr '47

ENGINEERING standards. See Standards, Engineering

ENGINEERING students
Foundry practice for engineering students. H. F. Scobie. J Eng Educ 37:689-95 My '47
Report of committee on transfer of students from emergency institutions. J Eng Educ 38:31-8 S '47
Report on mathematics preparation for engineering colleges. F. H. Miller and S. G. Roth. J Eng Educ 37:628-37 Ap '47

See also
Engineering colleges—Enrollment
Engineering colleges—Student selection

Employment

See also
Engineering education—Cooperative plan

ENGINEERING symbols

See also
Control equipment—Symbols

ENGINEERS
Abitibi trains its engineers. B. Cowan. il Paper Ind 29:212-13 My '47
Aptitudes and engineering careers. J. Mills. Min & Met 28:317-20 Jl '47
Bidding for engineering services; editorial. Eng N 138:33 Ja 9 '47; Discussion. R. R. Price. 138:579-80 Ap 17 '47
Designing for production; a problem in education. W. E. Johnson. Mech Eng 69:380-2 My '47
Doctors or businessmen? E. Smith. Mech Eng 69:328; Reply. C. T. Chave. 328-9 Ap '47
Economic and professional status of engineers and scientists. A. E. MacRae. Can Chem & Process Ind 31:817-18+ S '47
Engineer in North America. C. L. Champion. Engineer 182:561-2, 582-4 D 20-27 '46
Engineer of the future. I. C. Crawford. Western Soc E J 52:13-15 Mr '47
Engineering profession affected by Labor management-relations act of 1947. Elec Eng 66:835-6 Ag '47
Engineering professions and the institutions. J. H. W. Turner. Engineering 163:447 My 30 '47; Discussion. 163:552-3 Je 27 '47
Engineering; science, industry, or labor? Elec Eng 66:65-6 Ja '47
Engineers and industrial relations. C. A. Myers. bibliog Mech Eng 68:1059-60 D '46
Engineers as corporation heads. E. B. Norris. Eng N 138:1028 Je 26 '47
Engineers ask Congress for labor law amendments; requests professional men be freed from enforced unionism. Civil Eng 17:202+ Ap '47
Engineers freed from enforced unionism with overhauling of Wagner act. E. L. Chandler. Civil Eng 17:406-7 Jl '47
Engineers' organizations for collective bargaining. S. S. Green. Am Water Works Assn J 39:855-62 S '47
Engineers present views on changes in Wagner act; testimony before Senate committee. Eng N 138:405 Mr 13 '47
Engineers' war detection plan receives national recognition; Look magazine features plan in article. Civil Eng 16:536-7 D '46
Federation of employee-engineers; collective bargaining rights established. Water & Sewage 84:32+ N '46
How to beat the 40-year deadline. H. A. Wagner. Power Pl Eng 51:67+ Ap '47
Human side of engineering. W. J. King. Chem & Eng N 25:152-3 Ja 20 '47
Labor peace, professional independence seen if employers are accredited. F. H. McDonald. Civil Eng 17:13+ Ja '47
Methods of achieving professional recognition. W. F. Ryan. J Eng Educ 37:453-60 Ja '47
National professional organization of engineers; necessary to establish professional status. W. F. Ryan. Iron Age 159:119-20 Je 5 '47
New proverbs for young engineers. P. W. Swain. Chem Eng 54:98-9 Ap '47
Opportunities for engineers in industry. M. M. Boring. J Eng Educ 37:759-61 Je '47
Shortage of engineers; problem for education and industry. H. T. Heald. Elec Eng 66: 340-1 Ap '47
Some thoughts on engineering education. D. M. Baker. Am Soc C E Proc 72:461-82 Ap '46; Discussion. 72:1041-56, 1133-60, 1415-20; 73:705-8, 885-98 S-O, D '46, My-Je '47
Strikes, boycotts, closed-shop issue harass West coast engineers. W. E. Jessup. Civil Eng 16:538-9+ D '46
Unionism and collective bargaining. D. R. Yarnall. Mech Eng 69:80-1 Ja '47; Excerpts. Factory Management 105:240+ F '47
Unionization of professional engineers and chemists. H. R. Northrup. 52p pa $1.50 Industrial relations counselors, New York '46
What a young engineer should know. E. T. Price. S A E J 55:28-30 O '47
What is professional recognition? N. W. Dougherty. Civil Eng 17:276-7 My '47
What management expects of an engineer. A. C. Rubel. il Min & Met 28:188-91 Ap '47; Same cond. Civil Eng 17:344-5 Je '47; Excerpts. Mech Eng 69:494-5 Je '47
What the engineer should know about industrial relations. W. R. Spriegel. J Eng Educ 37:1-9; Discussion. 9-13 F '47

See also
Aeronautic engineers
Automobile engineers
Chemical engineers
Civil engineers
Engineering colleges
Engineering education
Engineering graduates
Engineering societies
Lighting engineers
Mining engineers
Municipal engineers
Radio engineers
Sanitary engineers
Steam engineers
Technical writing
also Engineers' council for professional development

Biography

Bibliography

Book-length biographies of engineers, metallurgists and industrialists. T. J. Higgins, comp. Bulletin of Bibliography [F. W. Faxon co, Boston] 18:206-10, 235-9; 19:10-12, 32 Ja '46-Ja '47

Directories

American society for engineering education officers, council members and committees for 1946-47; with list of members. J Eng Educ 37:15-267 F '47
Consulting engineers in the field of electronics; directory. Electronics 20:132-9 (Buyers' guide) Mid-Je '47
Public works engineers' yearbook-directory, 1946. 252p $3 American public works assn, 1313 E. 60th st, Chicago '46
Western society of engineers year book. Western Soc E J 51:1-81 pt 2 S '46

Foreign service

Income tax requirements affect foreign service of American engineers. E. H. Lang. il Civil Eng 17:610-12+ O '47

Public relations

Challenge of affairs. J. R. Townsend. Power Pl Eng 51:67 Ja '47

ENGINEERS—Public relations—*Continued*
Detroit engineers' public activities. S. M. Dean. Mech Eng 69:193-6 Mr '47
Engineer in building for peace. E. M. Hastings. Civil Eng 17:444+ Ag '47
Engineering, instrument of peace. J. E. Housley. Elec Eng 66:798 Ag '47
Engineers are also citizens. R. M. Gates. il Mech Eng 69:485-8 Je '47; Excerpts. Refrig Eng 54:123-4+ Ag '47
Engineers in public and civil affairs. Power Pl Eng 51:100 Ag '47
Engineers in public life. C. Hinshaw. Civil Eng 16:201 My '46; Same. Power Pl Eng 50:73 D '46
The machine, the worker, and the engineer. R. K. Merton. Science 105:79-84 Ja 24 '47; Same cond. Chem & Eng N 25:362-5 F 10 '47
Planning the professional aspect of the humanistic-social courses. B. R. Teare, jr. J Eng Educ 37:344-52 D '46
Politics needs engineers. W. Goldsmith. Civil Eng 17:474-5+ Ag '47
Public responsibility of engineers. D. R. Yarnall. Mech Eng 69:5-6 Ja '47
Public responsibility of the engineer. C. Hinshaw. Mech Eng 69:13-15 Ja '47
Relation of the engineering profession to world affairs. C. B. Jolliffe. Inst Radio Eng Proc 35:810-12 Ag '47
Stewardship of professionalism given high priority. W. W. Horner. Am Soc C E Proc 72:1371-9 D '46
Where are we going? R. E. Doherty. J Eng Educ 37:771-6 Je '47

See also
Engineering—Social aspects

Registration

California broadens registration law. Eng N 139:91 Jl 17 '47
California engineers amend Registration act. Civil Eng 17:551 S '47
California professional engineers' act. Chem & Eng N 25:166 Ja 20 '47
Engineering examiners see registration rise. Eng N 137:633 N 14 '46
Engineering registration laws in Canada. Illum Eng 42:466-70 Ap '47
Kansas licensing law passed after years of effort by state's engineers. R. M. Lingo. Civil Eng 17:343 Je '47
Licensing of engineers. Min & Met 27:460-1 S '46; Discussion. 28:22-3, 168-9 Ja, Mr '47
Provisions of California engineering registration law summarized. Chem & Eng N 25:2636 S 15 '47
Why a professional engineer classification. H. K. Glidden. Roads & Sts 90:66-7 Ja '47; Discussion. G. M. Shepard. 90:103-4 Mr '47

Salaries

Earning capacity of the engineer; Engineers' joint council publishes The engineering profession in transition. map Min & Met 28: 516-17+ O '47
Engineering profession in transition; report on economic status survey. W. N. Carey. map Civil Eng 17:441-3 Ag '47; Same. Elec Eng 66:869-72 S '47; Same. Mech Eng 69: 732-4 S '47; Same cond. Refrig Eng 54: 237-8+ S '47; Same abr. Power Pl Eng 51: 71+ D '47

See also
Highway engineers—Salaries
Municipal engineers—Salaries

Social relations

Social and economic role of engineers and technicians. J. H. E. Fried. bibliog Int Labour R 55:512-37 Je '47

Canada

Engineering organization in Canada. F. L. Lawton. Elec Eng 66:146-8 F '47
Engineering registration laws in Canada. Illum Eng 42:466-70 Ap '47

France (colonies)

La carrière d'ingénieur dans les territoires coloniaux. Génie Civil 124:76 F 15 '47

Netherlands

Centenary celebration of Royal Netherland institution of engineers. il Engineer 184: 322-3, 335-6 O 3-10 '47; Engineering 164: 354-5 O 10 '47

Ontario

Association of professional engineers of the province of Ontario 25th anniversary. Can Chem & Process Ind 31:122+ F '47
Turkey's need for engineers. Eng N 139:295 Ag 28 '47

ENGINEERS as salesmen
Can we make engineers of salesmen, and vice versa? J. H. Collins. il Sales Management 58:101-2+ F 15 '47
Industrial finds profit pay-off in men of three-way-skills; Lebanon salesman is engineer and trouble-shooter. W. H. Worrilow. Sales Management 59:124+ O 1 '47

ENGINEERS' council for professional development
Annual meeting, 14th, New York, Oct. 18-19. Mech Eng 68:1095-6 D '46
Annual report. Elec Eng 66:102-5 Ja '47
Report to the Council. E. S. Lee. Mech Eng 68:1064-6 D '46

ENGINEERS public service company
Amends plan of dissolution. Comm & Fin Chr 164:3290 D 23 '46
Annual report. Comm & Fin Chr 165:1999 Ap 14 '47
Plan approved by SEC. Comm & Fin Chr 165:336 Ja 20 '47
Reorganization plan approved. Comm & Fin Chr 165:3051 Je 9 '47
SEC disapproves proposed dissolution plan as whole. Comm & Fin Chr 164:2957 D 9 '46
SEC viewpoint accepted even as it loses one case; bundle of rights theory. Barron's 27: 28 My 19 '47
Year's net facilitates Engineers' plan. Barron's 26:7 N 25 '46

ENGINEERS' society of western Pennsylvania
Annual water conference of the Civil section, 7th, Pittsburgh, Jan. 6-8. Chem & Eng N 25:229 Ja 27 '47

ENGINEHOUSES. See Roundhouses

ENGINES
Maximum inertia force and maximum speed of the crosshead in reciprocating engines. W. D. Kimball. Franklin Inst J 242:309-24 O '46

See also
Air engines
Air turbines
Airplane engines
Automobile engines
Diesel engines
Gas engines
Gas turbines
Internal combustion engines
Locomotives
Motor bus engines
Motor truck engines
Pistons
Pumping machinery
Steam engines
Steam turbines

ENGLAND
Fortune survey; how did U.S. troops react to Europe? Fortune 34:5-6 D '46

Antiquities

Anglo-Saxon cutlery. H. R. Schubert. bibliog il Iron & Steel Inst J 157:22-6 S '47

ENGLISH Channel pipe line
Flash welding submarine pipelines in operation Pluto. Iron Age 159:59 Ja 23 '47
Operation Pluto. A. C. Hartley. il map Inst Mech Eng J & Proc 154:Proc 433-8, pl 1-2 Mr '47
Recovery of the Pluto pipe line. il Engineer 183:326-8 Ap 18 '47

ENGLISH language
Apostle of plain talk; Rudolf Flesch. Bsns W p22+ Ap 12 '47
Misuse of language blamed for economic ills; research conducted by American economic foundation. Comm & Fin Chr 166:1143 S 18 '47

See also
Advertising copy—Language, style, etc.

Business English

Financial reports can be written so people can understand them. J. M. Lambie, jr. J Account 84:40-5 Jl '47

ENGLISH language—Business English—*Cont.*
Production clinic; art of expressing ideas in words. E. G. Thomssen. Soap & San Chem 23:79+ Je '47

Errors

Common errors in the use of English by accountants. H. C. Hasbrouck. J Account 83:135-8 F '47
Sour notes in our selling English; grammatical lapses from speech of salesmen in sales training classes. J. F. Bender. Sales Management 58:56+ Ja 1 '47

History

History of scientific English; the story of its evolution based on a study of biomedical terminology. E. Andrews. 342p $7.50 Richard R. Smith, 120 E. 39th st, New York 16 '47

Study and teaching

Engineer hates grandfather's horse. W. G. Crouch and R. L. Zetler. J Eng Educ 38: 73-6 S '47

ENGLISH literature

Study and teaching

English 113, an experiment in reading; Washington university. A. M. Buchan. J Eng Educ 37:780-5 Je '47

ENGOBES
Engobes, slips and underslips. C. W. Parmelee. bibliog Cer Ind 47:74+ Ag; 98+ S; 82+ O; 98 N; 94 D '46; 48:74-5 F; 100-1 Mr '47

ENGRAVING
54 ways to combat rising production costs. H. Bauer. il Ptr Ink 218:37-9 Mr 7 '47
Precise measurement of halftone dot depth now possible with engravers' microscope. il Inland Ptr 119:51 My '47

See also
Ben Day process
Photoengraving

ENGRAVING machines
Engraves cylinders from flat patterns; pantograph machine. il Machine Design 19:141 Mr '47
Halftone made direct from photograph by new method. il Inland Ptr 119:42-3 S '47

ENGRAVINGS
Those vignette cuts in large mixed form. J. Kovec. Inland Ptr 118:52 F '47

See also
Stocks—Certificates

ENIAC. See Calculating machines

ENOLIZATION. See Isomerization

ENSILAGE. See Silage

ENTEROCOCCI
Pollution of water and food detected by new, rapid test; isolation of enterococci. Food Ind 18:1862 D '46

ENTHALPY. See Thermodynamics

ENTRANCES
Factory entrances for modern brickbuilders; illustrations. Brick & Clay Rec 111:25 S '47
Functional details for entrance and hall; better detail plate. R. J. Alexander. plan diags Am Bld 69:92-3 Ja '47

ENTROPY
Activation energies and entropies of activation in the rearrangement of allyl groups in three carbon systems. E. G. Foster, A. C. Cope and F. Daniels. Am Chem Soc J 69:1893-6 Ag '47
Analysis of internal flow machinery. S. H. Christensen. J Ap Phys 18:587-8 Je '47
Comments on the Hildebrand rule. J. H. Hildebrand and T. S. Gilman. bibliog J Chem Phys 15:229-31 My '47
Electron deficient molecules; entropy of diborane. K. S. Pitzer. Am Chem Soc J 69: 184 Ja '47
Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47
Entropy of nitromethane; heat capacity of solid and liquid; vapor pressure, heats of fusion and vaporization. W. M. Jones and W. F. Giauque. bibliog Am Chem Soc J 69: 983-7 My '47
Entropy of solution of molecules of different size. J. H. Hildebrand. bibliog J Chem Phys 15:225-8 My '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Meaning of entropy and how to use the Mollier chart. J. Yavitch. diags Power Pl Eng 50:102-5 D '46
New temperature-total heat-entropy chart for gases with variable specific heats; for exploring performance of gas turbine plants. J. R. Finniecome. fold chart Inst Mech Eng J & Proc 155 (War emergency issue no 17):117-19 bibliog(p118); Discussion. 120-4 '46

ENVELOPE stuffers. See Advertising, Mail—Stuffers

ENVELOPES
Ad proof envelope helps inform Hercules salesmen on campaign. Ind Marketing 31: 72 N '46
Add a new flavor to a commonplace item for attention; Sheppard Envelope flavor seal. H. Shershow. Ptr Ink 221:42-3 O 3 '47
Output of envelope industry, Netherlands. For Comm W 27:25 My 24 '47
Winners! and some runners-up; Inland printer's envelope-corner-card contest. il Inland Ptr 118:58-60 D '46

See also
Advertising mediums—Envelopes

ENVIRONMENT

See also
Man—Influence of environment

ENZYMES
Combined influence of temperature and urethan on the respiration of rhizobium. H. Koffler, F. H. Johnson, P. W. Wilson. bibliog Am Chem Soc J 69:1113-17 My '47
Commercially dehydrated vegetables; oxidative enzymes and other factors. M. F. Mallette and others. bibliog Ind & Eng Chem 39:1345-8 O '47
Enzyme crystallisation. J. B. Sumner. Chem Age (Lond) 56:71 Ja 11 '47
Enzymes discussed at Appleton; symposium. Chem & Eng N 25:1043 Ap 14 '47
Enzymes in textile processing. P. J. Wood. il Am Dyestuff Rep 36:355-61 Je 30 '47
Genes and nucleoproteins in the synthesis of enzymes. S. Spiegelman and M. D. Kamen. bibliog Science 104:581-4 D 20 '46
Mode of action of chlorine. D. E. Green and P. K. Stumpf. Am Water Works Assn J 38:1301-5 N '46
Nature of the non-porphyrin bonding in derivatives of ferriheme. J. G. Erdman and A. H. Corwin. bibliog Am Chem Soc J 69: 750-5 Ap '47
Note on an enzymatic method of estimating chlorine. P. K. Stumpf and D. E. Green. Am Water Works Assn J 38:1306-8 N '46
Pectin and pectin-splitting enzymes. A. Hansen. bibliog J Chem Educ 24:223-31 My '47
Simple, rapid technique for the study of the action of hydrolytic enzymes on insoluble substrates. I. W. Sizer. bibliog diag Science 104:488-90 N 22 '46
Soft curd milk; abstract. S. Hilton. Chem & Ind p59-60 Ja 25 '47
Stable spectrophotometry of small density changes. B. Chance. il diags R Sci Instr 18:601-9 S '47
Use of enzymes in production of shrink-resistant wool fabrics; abstract. C. S. Jones. Am Dyestuff Rep 36:580 O 6 '47
Vacuum infiltration as a method for determining enzymic activity in vivo. G. Krotkov. bibliog Science 105:318-20 Mr 21 '47

See also
Amylases
Arginase
Cholinesterase
Coenzymes
Fermentation
Glucuronidase
Invertase
Lipase
Pepsin
Phosphatases
Proteases
Ribonucleinase
Urease

Manufacture

Commercial production of enzymes. J. A. Shellenberger. flow sheets il Chem Eng 54: 130-1 F '47

EOLIAN sand
Eolian dam near Tucumcari, New Mexico. E. Dobrovolny and R. C. Townsend. map Econ Geol 42:492-7 Ag '47

EPHEMERAL publications. See Libraries—Ephemeral and source materials

EPIDEMICS
See also
Infectious diseases

EPIDIASCOPE
Naval training-type epidiascope for universal projection of solid objects. J. Bolsey. il Soc Motion Picture Eng J 47:418-25 N '46

EPILEPSY
Certain 5-phenyl-5-(substituted phenyl)-hydantoins. J. W. Melton and H. R. Henze. bibliog Am Chem Soc J 69:2018-20 Ag '47
Mesantoin vs. dilantin. Chem & Eng N 25: 1888 Je 30 '47

EPOXY compounds
Analysis
Determination of oxirane oxygen. D. Swern and others. bibliog Anal Chem 19:414-15 Je '47

EPOXYSTEARIC acid
Analysis
Determination of oxirane oxygen. D. Swern and others. bibliog Anal Chem 19:414-15 Je '47

EQUAL rights for women. See Woman—Equal rights

EQUATION of state
Critical temperature. F. Brescia. bibliog diag J Chem Educ 24:123-8 Mr '47
Dieterici's equation modified. J. Joffe. bibliog Am Chem Soc J 69:1216-17 My '47
Equation of state for a system with a single type of transformation. J. L. Finck. Franklin Inst J 243:117-29 F '47
Equation of state for gases at extremely high pressure. S. R. Brinkley, jr. bibliog J Chem Phys 15:113-14 F '47
Equation of state for gases at extremely high pressure. P. Caldirola. bibliog J Chem Phys 14:738-41 D '46
Equation of state for gases at extremely high pressures and temperatures from the hydrodynamic theory of detonation. M. A. Cook. bibliog J Chem Phys 15:518-24 Jl '47
Generalized van der Waals equation of state for real gases. G. Su. bibliog Ind & Eng Chem 38:1322 D '46
Metastable states of equilibrium in thermodynamics. J. L. Finck. Franklin Inst J 243:1-12 Ja '47
New equation of state for gases. J. Joffe. bibliog Am Chem Soc J 69:540-2 Mr '47

EQUATIONS
First and second order equations for piezoelectric crystals expressed in tensor form. W. P. Mason. diags Bell System Tech J 26:80-138 Ja '47
Simple analytical equations for the velocity of an airplane in unaccelerated level, climbing, and diving flight. H. B. Freeman. J Aeronautical Sci 14:185-9 Mr '47
Simplified equations give sight distance on horizontal curves. D. Thompson. Civil Eng 17:204-5 Ap '47
See also
Differential equations
Secular equations

EQUATIONS, Chemical. See Chemical equations

EQUATIONS, Integral. See Integral equations

EQUATIONS, Quadratic
Bridge type electrical computers. W. K. Ergen. diags R Sci Instr 18:564-7 Ag '47

EQUATIONS, Quartic
Bridge type electrical computers. W. K. Ergen. diags R Sci Instr 18:564-7 Ag '47

EQUATIONS, Simultaneous
Concerning computer for solving linear simultaneous equations. C. C. Eaglesfield. J Ap Phys 17:1125 D '46
Nature and conditioning of least work equations in structures. J. Morris. Roy Aeronautical Soc J 51:329-33 Mr '47
Variation of coefficients of simultaneous linear equations. B. L. Weiner. Am Soc C E Proc 73:1219-44 O '47

EQUILENANE
cis and *trans dl*-Equilenane. A. L. Wilds, L. W. Beck and T. L. Johnson bibliog Am Chem Soc J 68:2161-3 N '46

EQUILENIN
Synthesis of 2-hydroxy-17-equilenone. W. E. Bachmann and W. J. Horton. bibliog Am Chem Soc J 69:58-61 Ja '47

EQUILIBRIUM, Chemical. See Chemical equilibrium

EQUILIBRIUM, Economic. See Supply and demand

EQUIPMENT industries
Capital goods selling needs new concepts; emphasis on productivity, better living standards, intelligent depreciation policies. J. L. Trecker. Ind Marketing 32:47+ Ja '47; Same. Power Pl Eng 51:67+ Mr '47
Capital goods spending is up. il Bsns W p25 O 18 '47
Estimated plant and equipment expenditures for 1947; quarterly survey by Securities and exchange commission and Department of commerce. Comm & Fin Chr 165:2651 My 15 '47
Expenditures for new plant and equipment in 1946. G. B. Wimsatt. Survey of Cur Bsns 26:14-17+ D '46
Industrial equipment gets priority as dollar crisis slows exports. M. Kelly. Ind Marketing 32:126+ S '47
Industry 1947 plant and equipment expenditures to exceed last year's; SEC prediction. Comm & Fin Chr 165:2211 Ap 24 '47; Survey of Cur Bsns 27:8+ My '47
Is the distributor your weak link? B. M. Reiss. Ind Marketing 31:38+ D '46
Plant and equipment expenditures in 1946. Survey of Cur Bsns 27:6-7 Ap '47
Plant and equipment survey; position at end of third quarter of 1947. Survey of Cur Bsns 27:11-12 Jl '47
Projected investment in plant and equipment. Survey of Cur Bsns 27:5-6 O '47
What can capital goods industries do for economic stability? G. Terborgh. Comm & Fin Chr 165:3350+ Je 26 '47
See also
Automobile accessories industry
Electric apparatus industry
Industrial market
Machine tool industry
Machinery industry
Office equipment industry
Plumbing supplies industry
Printing supplies industry
Railroad supplies industry

Advertising
Power plant performance reports step up sales for Northern equipment company. D. Allshouse. il Ind Marketing 32:46-7+ Ap '47
See also
Advertising mediums—Trade journals
Office equipment industry—Advertising
Tractor industry and trade—Advertising

Directories
Manufacturers and agents of sewerage and waterworks equipment; addresses; products index. Water & Sewage 85:144+ Ag '47
34th annual review number. il diags Am Mach 91:118-212 Ja 16 '47

Securities
See also
Electric apparatus industry—Securities

Canada
Equipment distributors; addresses of head and branch offices; list of principals they represent. Roads & Bridges 85:208+ Je '47

Southern states
Transportation equipment a southern opportunity. C. R. Walker. il Manuf Rec 116:36, 52 Jl '47

EQUIPMENT trust certificates. See Railroads—Equipment trust certificates

EQUITABLE office building corporation
New refinancing proposal. Comm & Fin Chr 166:1578 O 20 '47
Reorganization sets new pattern. A. B. Morse. Comm & Fin Chr 166:429 Jl 31 '47

EQUITY corporation
Subscription and exchange offered; plan of recapitalization. Comm & Fin Chr 165:206 Ja 13 '47

ERBIUM
Place of yttrium and the application of ferricyanide precipitation in the rare-earth group; the purification of erbium. J. K. Marsh. Chem Soc J p 118-22 Ja '47

ERGONOVINE
Analysis
Determination of ergonovine; method described using Evelyn photoelectric colorimeter. W. M. Bachinsky and M. G. Allmark. bibliog Can Chem & Process Ind 30: 83-5 D '46

ERGOSTEROL
Ergosterol from the mycelium of penicillium notatum (submerged culture). K. Savard and G. A. Grant. bibliog Science 104:459 N 15 '46

ERICKSON, David L. 1890-
Sketch. por(p550) Civil Eng 16:553-4 D '46

ERIE railroad
Equipment trust certificates. Comm & Fin Chr 165:2669 My 19 '47
Equipment trusts offered. Comm & Fin Chr 165:2135 Ap 21 '47

ERLEIGH, Norbert Stephen, 1903-
Portrait. Fortune 34:169 D '46

ERO manufacturing company
Stock offered. Comm & Fin Chr 166:1786 N 3 '47

EROSION
Check dams successful in Connecticut; controlling erosion caused by flow of water from culverts. il Roads & Sts 89:82 D '46
Ditch retards to prevent erosion. G. B. Finley. diags Pub Works 77:19-20+ D '46
Wave erosion along the southern California coast. F. P. Shepard and U. S. Grant, 4th. bibliog Geol Soc Bul 58:919-26, pl 1-5 O '47
See also
Soil conservation

EROSION of metals
Erosion in vent plugs, the effect of vent diameter. J. H. Wiegand. il diags Franklin Inst J 244:291-308 O '47 (to be cont)
Mechanical erosion of thermometer stems. A. H. Lamb. il diags Power Pl Eng 51:88-9 O '47
See also
Hydraulic machinery—Cavitation

ERRORS
See also
English language—Errors

ERUCIC acid
X-ray and thermal examination of the glycerides; glycerides of erucic, brassidic, oleic, and elaidic acids. M. G. R. Catter and T. Malkin. Chem Soc J p554-8, pl 1-2 Ap '47

ERYTHRONIUM americanum
α-Methylene butyrolactone from erythronium americanum. C. J. Cavallito and T. H. Haskell. bibliog Am Chem Soc J 68:2332-4 N '46

ESCALATORS
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87:117-20 Jl '47
Stair to sales; Motorstair. Bsns W p28+ Ap 12 '47

ESCAPEMENT mechanism
Escapement mechanism; mechanical time fuse for shells. F. G. Kelly and J. L. Zar. il diags Machine Design 19:110-14 F '47

ESCHEAT
Bank charges against accounts upon escheat to state; State v. First Wisconsin national bank of Milwaukee. Banking Law J 64: 594-6 Jl '47

ESSAYS
Bibliography
Essay and general literature index, 1946. D. H. West and L. P. Lee, eds. 424p H. W. Wilson co, New York '47

ESSENTIAL oil association of the United States
Annual meeting, New York, Jan. 10. Oil Paint & Drug Rep 151:7+ Ja 20 '47
Essential oil association adopts standards. Oil Paint & Drug Rep 150:7+ D 16 '46
Meeting of the scientific section, New York, Dec. 10. Oil Paint & Drug Rep 150:7+ D 16 '46

ESSENTIAL oils
Development of essential-oil industry, Argentina. For Comm W 26:28 Ja 4 '47
Occurrence of *isophyllocladene* in the essential oil of araucaria excelsa. L. H. Briggs and W. I. Taylor. Soc Chem Ind J 66:168 My '47
Our business is curing products of halitosis; Magnus, Mabee & Reynard, inc. T. B. Tribble. il Sales Management 58:106+ Ap 15 '47
See also
Citronella oil
Lemon grass
Perfumery
Statistics
Essential-oil exports, Reunion. For Comm W 29:24 O 18 '47
Essential oil imports in Jan.-Aug., 1945 and 1946 compared. Oil Paint & Drug Rep 151:68 Ja 6 '47
Essential oils, other aromatics. Published in weekly numbers of Oil, paint and drug reporter
Exports of essential oils, Ceylon. For Comm W 27:27 My 24 '47
Haiti's exports of essential oils in fiscal year 1945-46. For Comm W 25:39 D 21 '46

ESTATE planning
Death, taxes and your business. G. J. Laikin. Trusts & Estates 85:372-4 O '47
Difference between estate analysis and estate planning. H. T. Powers. East Underw 40:54+ pt 2 O 3 '47
Estate planning. E. M. Heffernan. Comm & Fin Chr 165:3029+ Je 5 '47
Estate planning. H. Silverson. J Account 83: 483 Je '47
Estate planning and the lawyer. S. F. Hancock. Trusts & Estates 85:287-92 O '47
Estate planning procedure; getting the data for analysis and design. F. W. Pierce. Trusts & Estates 84:291-4 Mr '47
Estate planning under Hallock case; effect of Treasury decision 5512. H. C. Smith. Trusts & Estates 84:337-43, 448-52 Mr-Ap '47
Functions of life insurance and annuities in estate planning. F. L. Morton. il Spectator (Life ed) 154:28-9+ D '46
Initiating an estate plan. E. J. Myers. Trusts & Estates 85:132-4 Ag '47
Interesting estate planning case. G. J. Laikin. Nat Underw (Life ed) 51:11+ F 7 '47
Memorandum re estate suggestions; case history in estate planning. H. H. Judson. Trusts & Estates 84:39-40 Ja '47
Penalties of piece-meal planning. H. S. Koster. Trusts & Estates 83:579-80 D '46
Powers of appointment, estate planning and taxation. S. J. Foosaner. Weekly Underw 155:1208+ N 16 '46; Same cond. Nat Underw (Life ed) 50:10 D 6 '46
Pre-administration of estates. S. L. Zeigen. East Underw 48:56 pt 2 O 3 '47
Selling through estate planning. W. O. Heath. Trusts & Estates 84:503-7 My '47
Tax deduction for estate planning fees; U.S. Tax court decision; Bagley vs Commissioner. East Underw 48:8 Ja 31 '47
Trends in estate analysis and planning. H. T. Powers. Trusts & Estates 84:391-3, 498-501, 593-5; 85:195-8, 377-8 Ap-Je, S-O '47
Trends in estate planning. H. S. Koster. Trusts & Estates 84:33-5, 181-2 Ja-F '47
Typical estate plan submitted at 1946 convention of Financial advertisers association. F. M. Flint. Trusts & Estates 84:298-301 Mr '47
Use of trusts in federal estate tax planning. G. E. Ray and O. W. Hammonds. J Account 83:283-90 Ap '47

ESTATE planning—*Continued*
Why I specialize in estate analysis. H. J. Kirkpatrick. Trusts & Estates 85:23-6 Jl '47
See also
Insurance, Life—
Estate protection

ESTATE tax. See Inheritance tax

ESTATES (law)
Legislation affecting trusts and estates; A.B.A. committee report. Trusts & Estates 85:335-42 O '47
Legislation affecting trusts and estates; A.B.A. committee report for 1946. Trusts & Estates 83:516-18 N '46
Pennsylvania's new estates and trusts legislation. E. C. S. Highley. bibliog Trusts & Estates 85:72-8 Jl '47
See also
Joint tenancy
Life tenants and remaindermen
Power of appointment
Reversions

ESTATES, Decedents'
Alternate payee of time deposit certificate not entitled to proceeds upon death of payee; Reese v. First national bank of Bellville. Banking Law J 64:8-14 Ja '47
Estate check list. Trusts & Estates 84:80 Ja '47
Estate planning under Hallock case; effect of Treasury decision 5512. H. C. Smith. Trusts & Estates 84:337-43, 448-52 Mr-Ap '47
Pennsylvania's new estates and trusts legislation. E. C. S. Highley. bibliog Trusts & Estates 85:72-8 Jl '47
Savings deposits in trust; right of surviving beneficiary limited to one-half of funds; Abruzzese v. Oestrich, Court of chancery of New Jersey. Banking Law J 64:52-60 Ja '47
Simplifying stock transfers; suggestions for reducing delay on estate securities. T. R. Taylor. Trusts & Estates 84:81-3 Ja '47
Streamlining the settlement of small estates. G. T. Stephenson. Trusts & Estates 83: 478-84 N '46
Tax problems incident to community and jointly owned property. W. L. Nossaman. Trusts & Estates 85:295-302 O '47
See also
Executors and administrators
Inheritance and succession
Insurance, Life—
Estate protection
Wills

ESTERIFICATION
Catalysis by acid-regenerated cation exchangers. S. Sussman. bibliog Ind & Eng Chem 38:1228-30 D '46
Catalytic coal; esterification catalysts by sulfonated coal, an ion-exchange resin. Chem Ind 61:381 S '47
Direct esterification of gallic acid with higher alcohols. W. C. Ault and others. Am Chem Soc J 69:2003-5 Ag '47
Electrophoretic mobilities and fractionation of sodium pectinates. W. H. Ward and others. bibliog J Phys & Colloid Chem 51:1137-43 S '47
Esterification rate of dibasic acid anhydrides with primary alcohols at room temperature. E. F. Siegel and M. K. Moran. bibliog Am Chem Soc J 69:1457-9 Je '47
Modified synthesis of ethyl trifluoroacetate. J. C. Reid. Am Chem Soc J 69:2069 Ag '47
New method of esterification. M. S. Newman and W. S. Fones. bibliog Am Chem Soc J 69:1046-7 My '47
Pilot plant production of diacetate 2,3-butylene glycol. H. W. Grubb. bibliog flow diag il diags Chem Eng Prog 43:437-48 Ag '47
Production of benzyl benzoate; laboratory and pilot plant studies. I. D. Tharp and others. bibliog Ind & Eng Chem 39:1300-2 O '47
Rearrangement in preparation of ester acid chlorides. J. Cason. Am Chem Soc J 69: 1548 Je '47
Recovery of lactic acid from dilute solutions. A. A. Dietz, E. F. Degering and H. H. Schopmeyer. bibliog Ind & Eng Chem 39: 82-5 Ja '47
Reversible esterification of carboxylic acids with isobutene and trimethylethylene; quantitative studies and synthetic applications. R. Altschul. bibliog Am Chem Soc J 68:2605-9 D '46

ESTERS
Acid-catalyzed alcoholysis of β-naphthyl esters. M. Harfenist and R. Baltzly. Am Chem Soc J 69:362-5 F '47
Action of Grignard reagents on esters of optically active carboxylic acids. A. Campbell and J. Kenyon. Chem Soc J p436-7 Ap '47
Acylations of esters with esters to form β-keto esters using sodium amide. J. C. Shivers, M. L. Dillon and C. R. Hauser. bibliog Am Chem Soc J 69:119-23 Ja '47
Alkaline condensation of fluorinated esters with esters and ketones. A. L. Henne and others. Am Chem Soc J 69:1819-20 Jl '47
p-Alkoxybenzenesulfonic acid esters. M. H. Carr and H. P. Brown. bibliog Am Chem Soc J 69:1170-2 My '47
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-811 S '46
Anticonvulsants; esters of γ-diethylamino-α-phenylbutyric acid. J. H. Billman, W. T. Smith, jr. and J. L. Rendall. Am Chem Soc J 69:2058-9 Ag '47
Antispasmodics; cyclohexyl and Δ^2-cyclohexenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1854-7 Ag '47
Antispasmodics; cyclopentyl and Δ^2-cyclopentenyl substituted diethylaminoethyl esters. R. B. Moffett, C. A. Hart and W. M. Hoehn. Am Chem Soc J 69:1849-54 Ag '47
C-18 alcohol esters of orthosilicic acid. L. B. Falkenburg, H. M. Teeter and J. C. Cowan. Am Chem Soc J 69:486-7 Mr '47
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2118-19 S '47
Cinnolines; esters of 4-hydroxy-cinnoline- and -quinoline-3-carboxylic acids. J. C. E. Simpson. Chem Soc J p 1035-6 N '46
Condensation of certain esters by means of diethylaminomagnesium bromide. C. R. Hauser and H. G. Walker, jr. bibliog Am Chem Soc J 69:295-7 F '47
Course of cyclisation in the formation of alicyclic rings; effect of alkyl groups on the cyclisation of esters of polycarboxylic acids. R. N. Chakravarti. Chem Soc J p 1028-9 Ag '47
Development of additives aid lubricating oil compositions. D. C. Atkins, jr. and others. bibliog Ind & Eng Chem 39:491-7 Ap '47
Dialkylaminoalkyl esters of 4,4'-stilbenedicarboxylic and 4,4'-dibenzyldicarboxylic acid. L. S. Fosdick and K. F. Urback. bibliog Am Chem Soc J 69:503-5 Mr '47
Esters of α-aminoisobutyric acid. R. A. Jacobson. bibliog il Am Chem Soc J 68:2628-30 D '46
Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47
Esters of lactyllactic acid. M. L. Fein and C. H. Fisher. bibliog Am Chem Soc J 68:2631-2 D '46
Ether esters, plasticizers for vinyl coating. F. J. Tuttle and E. B. Kester. diag Mod Plastics 24:163-6 D '46
Hydroxyalkylation with cyclic alkylene esters; synthesis of hydroxyethylapocupreine. W. W. Carlson and L. H. Cretcher. bibliog Am Chem Soc J 69:1952-6 Ag '47
Improved method of nitrating aromatic *o*-hydroxy-carboxylic acids and their esters. H. C. Barany and M. Pianka. Chem Soc J p965-6 O '46
Isomeric chlorinated long-chain esters. H. H. Guest. Am Chem Soc J 69:300-2 F '47
Isomeric esters produced by the dehydration of ethyl 3-hydroxy-2,3-dimethylbutanoate. R. C. Huston and G. L. Goerner. bibliog Am Chem Soc J 68:2504-6 D '46
Polymerization of allyl esters. H. S. Lilley. bibliog Chem & Ind p133 Mr 15 '47
Ricinoleate esters as low-temperature plasticizers for nitrile-type synthetics. T. C. Patton and M. K. Smith. India Rubber World 116:643-4 Ag '47
Sodium reduction of fatty acid esters. V. L. Hansley. bibliog(68 ref) diags Ind & Eng Chem 39:55-62 Ja '47

ESTERS—*Continued*
Synthesis of certain α-amino acid esters from malonic ester. J. C. Shivers and C. R. Hauser. bibliog Am Chem Soc J 69:1264-5 Je '47
Synthetic low temperature greases from aliphatic diesters. G. M. Hain and others. bibliog diags Ind & Eng Chem 39:500-6 Ap '47
Synthetic lubricant fluids from branched-chain diesters; physical and chemical properties of pure diesters. E. M. Bried and others. bibliog Ind & Eng Chem 39:484-91 Ap '47
Thermodynamics of crystallization in high polymers; dependence of melting points of polyesters on molecular weight and composition. R. D. Evans and others. J Chem Phys 15:685 S '47
See also
Cellulose esters

ESTHETICS
On the force of esthetic values; address at Princeton university bicentennial conference. S. Giedion. il Arch Rec 101:84-7 Je '47

ESTIMATES
Chem. & Met. reports on process equipment cost estimation. il diags Chem Eng 54:107-38+ My '47 [reprints 25c]
See also
Chemical engineering—Estimates
Heating—Estimates
Plumbing—Estimates
Sales estimates

ESTRADIOL
Synthesis of estradiol and 1-methyl-estradiol from cholesterol. A. L. Wilds and C. Djerassi. bibliog Am Chem Soc J 68:2125-33 N '46

ESTROGENIC activity
Estrogenic action and isomorphism. H. E. Ungnade and F. V. Morriss. bibliog Am Chem Soc J 69:1545-7 Je '47
Some αββ-triarylacrylonitriles, αββ-triarylacrylic acids, and their derivatives. Buu-Hoï and J. Lecocq. Chem Soc J p641-4 My '47
Synthesis of certain hydroxyacids with possible estrogenic activity. J. H. Hunter and J. Korman. bibliog Am Chem Soc J 69: 2124-6 S '47

ESTRONE
Effect of vitamin B complex on inactivation of estrone in vivo and in vitro. B. Zondek and M. Finkelstein. bibliog Science 105: 259-60 Mr 7 '47

ETCHING (metals)
Detection, causes and prevention of injury in ground surfaces. L. P. Tarasov. il Am Soc for Metals Trans 36:389-440 bibliog(p439-40); Discussion. 441-51 '46
Etching reagent for stainless steels. R. A. Huseby. il Metal Prog 51:87 Ja '47
Identification of delta constituent in aluminum bronzes. D. J. Mack and M. A. Shurman. il Metal Prog 51:976-7 Je '47
Macro-etching and photomacrography of ferritic and austenitic welded joints in low-alloy steel. O. O. Miller and E. G. Houston. il diags Welding J 26:sup620-5 O '47
Metallographic etchant to reveal temper brittleness in steel; abstract. J. B. Cohen and others. il Iron Age 158:57-8 N 28 '46
Salvaging over-sized parts by an acid etch. D. A. Baker. Mach 53:166 My '47
To avoid staining around cracks. V. Kappel. Metal Prog 51:85 Ja '47

ETHANE
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Fat-oil deethanization. A. M. Whistler. flow diags Oil & Gas J 45:105-6+ O 26 '46; Same. Pet Refiner 25:135-8 D '46
Fluorinated derivatives of ethane. E. T. McBee and others. bibliog Ind & Eng Chem 39:409-12 Mr '47
Production of ethylene from ethane, propane. H. C. Schutt. bibliog flow diag il Chem Eng Prog 43:103-15; Discussion. 115-16 Mr '47
Thermodynamic properties of ethane. C. H. Barkelew and others. Chem Eng Prog 43: 25-38 bibliog(p37) Ja '47; Discussion. bibliog 43:385-8 Jl '47

ETHANEDITHIOL
Some steroid mercaptols. H. Hauptmann. bibliog Am Chem J 69:562-6 Mr '47

ETHANOL. See Alcohol

ETHANOLAMIDES
Rearrangements between primary ethanolamides of carboxylic acids and the corresponding aminoethylesters. A. P. Phillips and R. Baltzly. bibliog Am Chem Soc J 69:200-4 F '47

ETHANOLAMINE
Absorption of carbon dioxide with ethanol amines; rate of absorption of carbon dioxide with mono-, di- and triethanol amine; abstract. A. L. Schneerson and A. G. Leibusch. Chem Eng 54:268+ S '47
High purity natural gas by the glycol-amine process. W. F. Chapin. flow diag bibliog il Pet Refiner 26:109-12 Je '47

ETHENE. See Ethylene

ETHER (anesthetic). See Ethyl ether

ETHERIFICATION
Etherification process. S. T. Bowden. bibliog J Chem Educ 24:432-3 S '47

ETHERS
Fluorinated ethers. E. T. McBee and R. O. Bolt. bibliog Ind & Eng Chem 39:412-15 Mr '47
Preparation of certain ethers of trifluoromethyl-substituted phenols. E. T. McBee and others. bibliog Am Chem Soc J 69:947-50 Ap '47
Tuberculostatic compounds; ethers of 2-hydroxy-5-aminopyridine. H. L. Friedman and others. Am Chem Soc J 69:1204-6 My '47
Vinyl alkyl ethers. C. E. Schildknecht, A. O. Zoss and C. McKinley. bibliog(63 ref) Ind & Eng Chem 39:180-6 F '47
See also
Vinyl ethers

ETHICS
See also
Accounting ethics
Advertising ethics
Engineering ethics
Legal ethics
Medical ethics
Professional ethics

ETHIOPIA
Ethiopian development. Economist 151:913 D 7 '46
See also
Petroleum industry and trade—Ethiopia

ETHOXY group
Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47

ETHYL acetate
Separation of small amounts of chromium from vanadium with ethyl acetate. M. D. Foster. In U S Geol S Bul 950:15-18 '46

ETHYL acrylate
Acrylate polymers in Germany. G. M. Kline and others. Mod Plastics 25:128-9+ S '47
Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47

ETHYL alcohol. See Alcohol

ETHYL azoxybenzoate
Surface tension of liquid crystals. W. M. Schwartz and H. W. Moseley. bibliog il diags J Phys & Colloid Chem 51:826-37 My '47

ETHYL benzene
Heat and the external work of vaporization of ethylbenzene from 0 to 140°. J. E. Haggenmacher. bibliog Am Chem Soc J 69:707-8 Mr '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Preparation of *o*- and *p*-nitroacetophenone from phenylmethylcarbinol and ethylbenzene. A. H. Ford-Moore and H. N. Rydon Chem Soc J p679-81 Ag '46

ETHYL benzene—*Continued*
Preparation of chlorofluoro derivatives of ethylbenzene. E. T. McBee and others. Ind & Eng Chem 39:384-6 Mr '47
Production of styrene in Germany. G. M. Kline and others. diags Mod Plastics 25: 151-3+ O '47
Pyrolytic dehydrogenation of ethylbenzene to styrene. G. A. Webb and B. B. Corson. bibliog flow diag diags Ind & Eng Chem 39:1153-6 S '47
Tetraethylbiphenyl from the ethylation of ethylbenzene. J. V. Karabinos and J. F. R. Kuck, jr. bibliog Am Chem Soc J 69: 1223-4 My '47
Vibrational frequencies of semirigid molecules; a general method and values for ethylbenzene. W. J. Taylor and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:1-17 Ja '47

ETHYL benzylaminopropionate
Preparation of ethyl β-benzylaminopropionate and benzyl-di-(β-carbethoxyethyl)-amine. G. Stork and S. M. McElvain. bibliog Am Chem Soc J 69:971-2 Ap '47

ETHYL carbamate. See Urethane

ETHYL cellulose
Effect of humidity on properties of plasticized ethylcellulose. W. P. Moeller and N. Taylor. bibliog Ind & Eng Chem 39: 1149-52 S '47
Ethyl cellulose compositions; factors affecting outdoor durability. B. Berry and W. Koch. il Mod Plastics 25:154-8+ O '47
Fabrication of Ethocel sheeting; abstract. F. C. Dulmage. Mod Plastics 24:95-6 Je '47
Low temperature impact strength of cellulosic plastics. W. E. Gloor. bibliog il Ind & Eng Chem 39:1125-9 S '47
Properties of cellulose as applied in plastic materials. W. E. Gloor. bibliog J Chem Educ 24:214-21 My '47

ETHYL chloride
Ethyl chloride bottling problem solved by refrigeration. Refrig Eng 52:524 D '46
One of three; hydrochlorination of ethylene for making ethyl chloride. Chem Ind 61: 381 S '47

ETHYL citrylideneacetate
Isomeric citrylideneacetic acids. E. E. Royals. bibliog Am Chem Soc J 69:841-4 Ap '47

ETHYL corporation
Lead to burn. il Chem Ind 61:39-40 Jl '47
Midgley plaque dedicated by Ethyl corporation. il Chem & Eng N 24:3159 D 10 '46

ETHYL cyclopentane
Hydrocarbons in the 102° to 108° C fraction of petroleum. A. R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38:621-6 Je '47
Vapor pressures and saturated liquid and vapor densities of cyclopentane, methylcyclopentane, ethylcyclopentane and methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69:1273-7 Je '47

ETHYL decenol
Reactions of carbinols in the presence of alkali; scission of αβ-ethylenic carbinols. G. H. Hargreaves and L. N. Owen. Chem Soc J p756-8 Je '47

ETHYL ether
Century of sleep; developments and early uses of anesthesia. T. L. Davis. Tech R 49:279-80+ Mr '47
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
Danger of explosion in handling ether. W. G. Bailey and A. Roy. Soc Chem Ind J 65:421-2 D '46
Products of the reaction of benzoyl peroxide with certain ethers. W. E. Cass. bibliog Am Chem Soc J 69:500-3 Mr '47

ETHYL ethoxalylacetate
Preparation of 4-quinolinols by the ethyl ethoxalylacetate method. B. Riegel and others. bibliog Am Chem Soc J 68:2685 D '46

ETHYL ethoxymethylenemalonate
Preparation of quinoline derivatives from aromatic amines and ethyl ethoxymethylenemalonate. K. Schofield and J. C. E. Simpson. Chem Soc J p 1033-5 N '46

ETHYL hexanediol
2-Ethylhexanediol-1,3, a high-boiling, nonvolatile glycol. Chem Ind 60:984+ Je '47

ETHYL hydrogen sulfate
Urea alkyl sulfates. C. L. Carter and P. A. Ongley. Am Chem Soc J 69:460-1 F '47

ETHYL hydroxydimethylbutyrate
Isomeric esters produced by the dehydration of ethyl 3-hydroxy-2,3-dimethylbutanoate. R. C. Huston and G. L. Goerner. bibliog Am Chem Soc J 68:2504-6 D '46

ETHYL iodide
Ammonolysis of ethyl iodide by liquid ammonia. G. W. Watt and J. B. Otto, jr. bibliog Am Chem Soc J 69:836-8 Ap '47

ETHYL ionylideneacetate
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S. L. Linden. Am Chem Soc J 69:2042-6 Ag '47

ETHYL isocyanate
Reaction of aminoesters with ethyl isocyanate; open chain models of desthiobiotin. E. M. Schultz. bibliog Am Chem Soc J 69:1056-7 My '47

ETHYL mercury phosphates
Ethylmercury phosphates; reaction between tetraethyl-lead, mercuric oxide and phosphoric acid. A. D. Ainley, L. A. Elson and W. A. Sexton. Chem Soc J p776-7 S '46

ETHYL methylbenzene. See Ethyl toluene

ETHYL methylpyridine
Nitrogen compounds in petroleum distillates; confirmation of presence of Bz-tetrahydroquinolines in California petroleum. P. L. Pickard and H. L. Lochte. bibliog Am Chem Soc J 69:14-16 Ja '47

ETHYL nitrate
Ionization of ethyl nitrate in sulfuric acid. L. P. Kuhn. bibliog Am Chem Soc J 69: 1974-6 Ag '47

ETHYL oxalacetate
Intermediates in the synthesis of orotic acid from oxalacetic ester and urea. H. K. Mitchell and J. F. Nyc. bibliog Am Chem Soc J 69:674-7 Mr '47

ETHYL pentachlorobenzene
Pentachlorophenyl derivatives; the β-chlorination of ethylpentachlorobenzene and the preparation of pentachlorostyrene. S. D. Ross, M. Markarian and M. Nazzewski. bibliog Am Chem Soc J 69:1914-17 Ag '47

ETHYL phenylacetoacetate
Synthesis of 3,4-dihydro-10-hydroxy-1,2-benzanthracene and derivatives. H. E. Zaugg. bibliog Am Chem Soc J 68:2492-4 D '46

ETHYL pyruvate
Decarbonylation of ethyl pyruvate. M. Calvin and R. M. Lemmon. Am Chem Soc J 69: 1232-3 My '47

ETHYL silicate
L'emploi du silicate d'éthyle comme charge, liant ou agglomérant. Génie Civil 124:278-9 Jl 15 '47

ETHYL sulfate
Rearrangement in the reaction between benzylmagnesium chloride and ethyl sulfate. J. G. Burtle and R. L. Shriner. Am Chem Soc J 69:2059-60 Ag '47

ETHYL toluene
Fluorinated derivatives of *p*-ethyltoluene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:397-9 Mr '47

ETHYL trichlorosilicane
Ethyl trichlorosilane and its fluorination products. H. S. Booth and P. H. Carnell. bibliog Am Chem Soc J 68:2650-2 D '46

ETHYL trifluoroacetate
Modified synthesis of ethyl trifluoroacetate. J. C. Reid. Am Chem Soc J 69:2069 Ag '47

ETHYLAMINE
Dissociation of the addition compounds of trimethylboron with the ethylamines; configuration of the ethylamines. H. C. Brown and M. D. Taylor. bibliog il diags Am Chem Soc J 69:1332-6 Je '47

ETHYLATION
Reactions of cellulose. J. Honeyman. Chem Soc J p 168-73 F '47

ETHYLATION—*Continued*
Tetraethylbiphenyl from the ethylation of ethylbenzene. J. V. Karabinos and J. F. R. Kuck, jr. bibliog Am Chem Soc J 69: 1223-4 My '47

ETHYLENE
Addition of dinitrogen tetroxide to olefins; ethylene. N. Levy, C. W. Scaife and A. E. W. Smith. Chem Soc J p1096-100 D '46
Analysis and properties of German synthetic polyethylene oils. C. M. Murphy and C. E. Saunders. bibliog Pet Refiner 26:111-16 My '47
Bananas ripen via explosion of ethylene. Safety Eng 92:68 N '46
Condensation of 1,1-diarylethylenes with maleic anhydride. F. Bergmann, J. Szmuszkowicz and G. Fawaz. bibliog Am Chem Soc J 69:1773-7 Jl '47
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46
Ethylene adsorption isotherms at -183°. R. L. Burwell, jr, P. A. Smudski and T. P. May. bibliog diag Am Chem Soc J 69:1525-9 Je '47
Ethylene imine ketones; reaction with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:258-60 F '47
Ethylene requires caution; fruit ripener is highly explosive. Nat Underw 50:6 N 28 '46
Experimental determination of the intensities of infra-red absorption bands; measurements on ethylene and nitrous oxide. A. M. Thorndike, A. J. Wells and E. B. Wilson, jr. bibliog J Chem Phys 15:157-65 Ap '47
Explosive decomposition of ethene. H. I. Waterman and others. bibliog Inst Pet J 33:254-5 Ap '47
Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene. R. S. Rasmussen and R. R. Brattain. bibliog J Chem Phys 15:120-30 Mr '47
Kinetics of halogen addition to unsaturated compounds; the halogeno-ethylenes. B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47
Laboratory explosions with ethylene and carbon tetrachloride; nature of the explosion; precautions in avoiding the explosion. R. O. Bolt; R. M. Joyce. Chem & Eng N 25:1866-7 Je 30 '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Normal coordinate analysis of the vibrational frequencies of ethylene, propylene, *cis*-2-butene, *trans*-2-butene, and isobutene. J. E. Kilpatrick and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:191-209 F '47
Polyethylenes. A. E. Maibauer and C. S. Myers. bibliog il diags Electrochem Soc Trans 90 (preprint 36):449-67 '46
Production of synthetic alcohol from ethylene. C. M. Beamer. flow diag il Chem Eng Prog 43:92-6 Mr '47
Vinyl resins as consumers of C_2H_2 and C_2H_4. H. H. Atlas and R. S. Aries. flow sheet Chem Eng 54:101-3+ Mr '47; Abstract. Pet Processing 2:333 My '47

Manufacture

Ethylene manufacturing process; Lummus company. flow diag il Pet Refiner (Process Handbook sec) 26:144-5 Ap '47
Ethylene production process; Stone & Webster engineering corporation. flow diag il Pet Refiner (Process Handbook sec) 26: 146-7 Ap '47
Ethylene purification by absorption process; Monsanto chemical co.'s plant at Texas City. L. Kniel and W. H. Slager. flow sheets il Chem Eng Prog 43:335-42 Jl '47; Same cond. Pet Processing 2:769-72+ O '47
Leaner days for ethylene? il Chem Ind 61: 205-7 Ag '47
Production of ethylene from ethane, propane. H. C. Schutt. bibliog flow diag il Chem Eng Prog 43:103-15; Discussion. 115-16 Mr '47

ETHYLENE carbonate
Hydroxyalkylation with cyclic alkylene esters; synthesis of hydroxyethylapocupreine. W. W. Carlson and L. H. Cretcher. bibliog Am Chem Soc J 69:1952-6 Ag '47

ETHYLENE chloride
Organic fungicides; preparation of some α-bromoacetamides. W. E. Weaver and W. M. Whaley. bibliog Am Chem Soc J 69:515-16 Mr '47
Organic fungicides; preparation of some α-bromopropionamides. W. E. Weaver and W. M. Whaley. Am Chem Soc J 69:1144-5 My '47
Performance of McMahon packing; tests in a 6-inch-diameter fractionating column with benzene-ethylene dichloride mixtures. W. L. Forsythe, jr. and others. bibliog diag Ind & Eng Chem 39:714-18 Je '47
Properties of electrolytic solutions; conductance of choline and related picrates in ethylene chloride at 25°. D. J. Mead and others. Am Chem Soc J 69:528-30 Mr '47
Properties of electrolytic solutions; conductance of several quaternary onium salts in ethylene chloride at 25°. L. F. Gleysteen and C. A. Kraus. bibliog Am Chem Soc J 69:451-4 F '47
Properties of electrolytic solutions; conductance of some substituted ammonium salts in ethylene chloride. L. M. Tucker and C. A. Kraus. Am Chem Soc J 69:454-6 F '47
Properties of electrolytic solutions; the conductance of several quaternary ammonium salts in ethylene chloride at 25°. W. E. Thompson and C. A. Kraus. bibliog Am Chem Soc J 69:1016-20 My '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47

ETHYLENE compounds
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Researches on acetylenic compounds; miscellaneous addition reactions of ethynyl ketones. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p945-8 O '46
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46
Studies in light absorption; auxochromic properties and the periodic system. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p948-52 O '46
Unsaturated lactones; researches on acetylenic compounds; new route to growth-inhibitory αβ-ethylenic γ- and δ-lactones. L. J. Haynes and E. R. H. Jones. Chem Soc J p954-7 O '46

ETHYLENEDIAMINE
Cupric pyrophosphate and ethylenediamine. T. P. McCutcheon and S. Raymond. Am Chem Soc J 69:276 F '47
Interaction of 6-chloro-2-methoxy-9-phenoxyacridine and ethylene diamine. R. L. McKee and R. W. Bost. Am Chem Soc J 69: 468 F '47
Respiratory stimulants; fully-substituted ureas derived from αω-alkylenediamines. W. R. Boon. Chem Soc J p307-18 Mr '47

ETHYLENEDIAMINE tartrate
New low-coefficient synthetic piezoelectric crystals for use in filters and oscillators. W. P. Mason. bibliog diags Inst Radio Eng Proc 35:1005-12 O '47

ETHYLENE dichloride. See Ethylene chloride
ETHYLENE glycol. See Glycol
ETHYLENE glycol monomethyl ether. See Methyl cellosolve
ETHYLENEIMINE. See Ethylenimine

ETHYLENE iodide
Photochemical investigations; photolysis of solutions of ethylene iodide. R. J. Grabenstetter and E. O. Wiig. bibliog Am Chem Soc J 69:1027-31 My '47

ETHYLENE oxide
Action of acidic reagents on ethylene oxide anhydro sugars; action of acid reagents on 4 : 6-benzylidene 2 : 3-anhydro α-methylalloside. F. H. Newth, W. G. Overend and L. F. Wiggins. Chem Soc J p 10-18 Ja '47
Determination of oxirane oxygen. D. Swern and others. bibliog Anal Chem 19:414-15 Je '47
Nonrespiratory variant of saccharomyces cerevisiae. R. Whelton and H. J. Phaff. Science 105:44-5 Ja 10 '47
Reactions of ethylene oxides; preparation of ethylene sulphides and trithiocarbonates. C. C. J. Culvenor, W. Davies and K. H. Pausacker. Chem Soc J p 1050-2 N '46

ETHYLENE sulfides
Reactions of ethylene oxides; preparation of ethylene sulphides and trithiocarbonates. C. C. J. Culvenor, W. Davies and K. H. Pausacker. Chem Soc J p 1050-2 N '46

ETHYLENE sulfite
Hydroxyalkylation with cyclic alkylene esters; synthesis of hydroxyethylapocupreine. W. W. Carlson and L. H. Cretcher. bibliog Am Chem Soc J 69:1952-6 Ag '47

ETHYLENIMINE
Modification of Wenker's method of preparing ethyleneimine. P. A. Leighton, W. A. Perkins and M. L. Renquist. Am Chem Soc J 69:1540 Je '47

ETHYNYL ketones
Researches on acetylenic compounds; heterocyclic compounds derived from ethynyl ketones. K. Bowden and E. R. H. Jones. Chem Soc J p953-4 O '46
Researches on acetylenic compounds; miscellaneous addition reactions of ethynyl ketones. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p945-8 O '46

ETHYNYLATION
Reppe's acetylene chemistry. M. H. Bigelow. Chem & Eng N 25:1038-42 Ap 14 '47

EUCALYPTOLE. See Cineol

EUCALYPTUS oil
β-Phellandrene tetrabromide. P. A. Berry and A. K. MacBeth. Chem Soc J p 1039-41 Ag '47

EUGENOL
Sulphonation of some derivatives of eugenol. G. R. Clemo and J. H. Turnbull. Chem Soc J p 124-7 Ja '47

EUROPE
Convalescent Europe; personal observations. H. S. Mudd. Min & Met 28:6-9 Ja '47
United States in Europe; need of sound money, free prices and open markets. Fortune 36:2-4 Jl '47

See also
Coal mines and mining—Europe
Fertilizer industry—Europe
Motor bus lines—Europe
Railroad supplies industry—Europe

Commerce

Europe fears U.S. slump. Bsns W p113-14 D 14 '46
Europe's dollar needs; comments on the Paris report. Economist 153:610-11 O 11 '47
Our European trade outlook. W. Ward. Comm & Fin Chr 166:1107+ S 18 '47
United States of Europe; proposed economic and customs union in Europe. R. Lann. Comm & Fin Chr 166:1202+ S 25 '47
United States transactions with Europe in the year 1946; balance-of-payments structure shows impressive changes. W. McCarroll. For Comm W 28:3-5+ Ag 16 '47
Western customs union? Economist 153:307-8 Ag 23 '47

Economic conditions

American interest in European reconstruction; address before American bankers association. W. W. Aldrich. Comm & Fin Chr 166:1422-3+ O 9 '47
Bird's eye view of Central Europe. W. R. Martin. Comm & Fin Chr 165:2330+ My 1 '47
Causes and remedies of European economic distress. L. Dolivet. Comm & Fin Chr 166: 1014-15 S 11 '47
Contrasts of U.S. and European economy. W. F. Zimmerli. Comm & Fin Chr 165:396+ Ja 23 '47
Economic picture of Europe. B. Asper. Comm & Fin Chr 165:389+ Ja 23 '47
Europe as it is! H. J. Taylor. Comm & Fin Chr 166:1106+ S 18 '47
Europe in climax. A. W. Zelomek. Comm & Fin Chr 166:217+ Jl 17 '47
European crisis. E. V. Bell. Comm & Fin Chr 166:1201+ S 25 '47
European economic cooperation; within or without the UN? purposes of Economic commission for Europe. F. Haussmann. Comm & Fin Chr 166:1203+ S 25 '47
European recovery. W. L. Thorp. Comm & Fin Chr 166:1747+ O 30 '47
European situation. W. W. Aldrich. Comm & Fin Chr 166:4+ Jl 3 '47
Europe's future in our hands. I. Lubin. Comm & Fin Chr 164:2882+ D 5 '46
Foreign aid and the export boom; Europe's economic needs. Nat City Bank p76-8 Jl '47
Interim report on status of European reconstruction. V. L. Horoth. il Mag of Wall St 79:543-5+ F 15 '47
Repressed inflation; economic cancer of Europe. W. Ropke. Comm & Fin Chr 166: 905+ S 4 '47
16-nation aid program; report of the Paris conference. Nat City Bank p 113-16 O '47
Stable money a prerequisite to European recovery. W. Chamberlain. Comm & Fin Chr 166:209+ Jl 17 '47
Summary of the general report of the Committee of European economic co-operation. Economist 153:524-6 S 27 '47
Tools are the answer to economic evolution. L. Wilkie. Factory Management 105:238+ O '47
War specter over Europe? F. E. Gannett. Credit & Fin Management 48:6-8+ N '46
What's wrong with Europe? F. H. Rosenstiel. Comm & Fin Chr 166:617+ Ag 14 '47
World crisis. A. W. Zelomek. Comm & Fin Chr 166:813+ Ag 28 '47

See also
Reconstruction (World war, 1939-1945)—Marshall plan

Economic policy

Western Europe; testing ground for private enterprise. V. L. Horoth. Mag of Wall St 80:259-61+ Je 7 '47

Industries and resources

Financing industrial development in Europe; address before International chamber of commerce, Montreux. M. A. Heilperin. Comm & Fin Chr 165:3115+ Je 12 '47
Industrial conditions in Europe. E. Oberg. il Mach 53:158-64 Ap '47
Interim report on status of European reconstruction. V. L. Horoth. il Mag of Wall St 79:543-5+ F 15 '47
More production, key to European recovery. C. E. Saltzman. Comm & Fin Chr 166: 1111+ S 18 '47
Production is key to European recovery. A. M. Pope. Comm & Fin Chr 166:1637 O 23 '47

Politics and government

Communism in eastern Europe. Economist 152:893-4, 942-3 Je 7-14 '47
Eastern Europe in 1947. map Economist 152: 799-801, 853-4 My 24-31 '47
Europe in 1938 and now; report of Research institute of America. Comm & Fin Chr 165: 3353+ Je 26 '47
Plans for Europe; economic federation. Economist 152:131-2 Ja 25 '47
Question of freedom; position of the Western Socialists. Economist 153:230-1 Ag 9 '47
Republican program for Europe. J. F. Dulles. Comm & Fin Chr 165:646+ Ja 30 '47
Socialists of eastern Europe. Economist 153: 284+ Ag 16 '47

EUROPE—*Continued*

Russian occupied region

In Russia's Europe. il map Fortune 35:78-83+ F '47

EUROPE, Central. See Central Europe

EUROPE, Western

European unity; dream and hard reality. Fortune 35:2-3 Mr '47

EUROPEAN and North American railway

Two-employee railroad pays $5 dividend. Bsns W p76 N 30 '46

EUROPIUM

Isotopes

Activities induced by pile neutron bombardment of samarium. M. G. Inghram and others. Phys R 71:643 My 1 '47

Artificial activities produced in europium and holmium by slow neutron bombardment. M. G. Inghram and R. J. Hayden. Phys R 71:130 Ja 15 '47

EVANS, Raymond F.

Heads Diamond Alkali. por Bsns W p63 My 17 '47

EVANSTON, Illinois

Water supply

Evanston to experiment with fluorine in water. W. H. Tucker and R. J. Faust. Eng N 138:515 Ap 3 '47

EVANSVILLE, Indiana

Evansville community airport program sets a pattern. il plans Aero Digest 53:48-52 D '46

EVAPORATED films. See Films, Metallic

EVAPORATION

Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15: 314-32 My '47

Commonsense about evaporation. L. V. Burton. il diags Food Ind 19:459-61 Ap '47

Evaporation. W. L. Badger and R. A. Lindsay. bibliog Ind & Eng Chem 39:22+ Ja '47

Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69: 771-7; Discussion. 777-8 O '47

See also

Atmometers

EVAPORATION, Heat of

Relation between the heat of evaporation and the surface tension of liquids. J. C. de Wijs. J Phys & Colloid Chem 51:747-50 My '47

EVAPORATORS

Automatic control of the quintuple effect sugar house evaporator. diag Chem Eng 54:221-2+ Je '47

Evaporation; new equipment. W. D. Kohlins. il Chem Ind 61:419-20 S '47

Improvements in evaporator engineering. R. E. Bergstrom and J. R. Lientz. diags Paper Tr J 124:42-6 Ja 2 '47

Let's take a look at new suction-line controls. F. M. MacDougall. diags Refrig Eng 53:191-4 Mr '47

Multiple effect evaporation in the sugar industry. D. M. Semple. il diags Inst Chem Eng Trans 21:11-17; Discussion. 17-18 '43

Plate evaporators for refrigeration. il Engineer 182:468 N 22 '46

Product that couldn't explode; explosion of ammonium nitrate evaporator. C. Field. il Chem Eng 54:146-7 My '47

Recovery of dried solubles from thin stillage. J. W. Spanyer, jr. il Chem Eng Prog 43:523-6 O '47

Second-hand heat; principle of vapor recompression will yield distilled water for chemical processing. Chem Ind 61:213 Ag '47

Starch prevents scaling in Navy's evaporators. C. J. Lamb. Chem Ind 60:411 Mr '47

See also

Drying apparatus

Design

Liquid carry over in a horizontal tube evaporator; entrainment splashing and foaming. H. E. O'Connell and E. S. Pettyjohn. bibliog flow diag Am Inst Chem Eng Trans 42:795-814 O-D '46

EVERGLADES

Muck makes millions in the Florida Everglades. H. Severson. il Banking 40:50-1+ Ag '47

EVERGREENS

See also

Christmas trees

EVERSHARP, Inc.

Here's the answer to Eversharp's $64 question; three network radio shows and lots of newspaper, magazine and point-of-sale promotion cost $6,500,000 per year. V. J. Dallaire. il Ptr Ink 217:46-7 D 20 '46

Policies that sent Eversharp ahead. E. Whitmore. il Am Bsns 17:8-9+ Ja '47

Rags to riches with Eversharp: a story of selling courage. T. Armstrong. Sales Management 58:48+ Ja 15 '47

EVIDENCE (law)

Metallurgical examinations, analyses aid FBI. J. E. Hoover. il Steel 120:52-3 Ja 20 '47: Same abr. Mech Eng 69:234-5 Mr '47

EVOLUTION

Natural selection and the mental capacities of mankind. T. Dobzhansky and M. F. A. Montagu. Science 105:587-90 Je 6 '47

EXAMINATIONS

See also

Grading and marking (students)

EXAMINATIONS, Physical. See Physical examinations

EXCAVATING machinery

Bigger digger, an electronic Hercules; walking dragline operated by International minerals and chemical corporation. J. A. Barr, jr. il Rock Prod 49:66-7+ N '46

Blade replacement. C. Richards. diags Roads & Sts 89:89 D '46; Same. Brick & Clay Rec 110:56+ F '47

Caterpillar hydraulic-controlled bulldozer. il Mech Handling 34:494 S '47

Coal handling with earth-moving equipment; synthetic-rubber of Polymer corporation. R. L. Hearn and R. F. Legget. il plan diag Mech Eng 69:559-63 Jl '47

Easing the way for the shaft sinker. R. G. MacFarland. il diag Comp Air Mag 52:149-51 Je '47

Extending precision methods to construction field; Warner and Swasey multi-purpose earth mover. W. B. Fiske. il Ind Marketing 32:40-2+ S '47

Gradall earth mover has unusual design features. il Machine Design 18:126 N '46

Hydraulic control of telescoping boom makes versatile earth mover. il diags Product Eng 18:90-4 Ag '47

Modern earthmoving equipment makes the dirt fly in North Dakota; Northern Pacific, Salem-Kurtz cutoff. il plan Ry Age 123: 142-5 Jl 26 '47

Money-saving ideas on excavator upkeep. Roads & Sts 90:100-1 Ag '47

New Tournapull. il Ry Age 123:235 Ag 9 '47

25-yd. dragline extends life of Trevorton stripping. R. R. Richart. il diags Coal Age 52:71-7 Ja '47

Use of scrapers and other light earth-moving equipment in bituminous coal strip mining. L. A. Turnbull and others. 15pls U S Bur Mines Rep of Invest 4033:1-37 '47

Welded brake straps for excavators. W. C. Black. il diags Welding J 26:494-6 Je '47

See also

Mining machinery
Rock drills
Shoveling machines
Trenching machinery

Advertising

LeTourneau tells how its ad campaign is tailored to reach export markets. J. G. Van De Loo. il Ind Marketing 32:132+ O '47

EXCAVATION

Caliche presents excavating difficulties. il Comp Air Mag 52:99 Ap '47

Constructing the Shipshaw power development. W. M. Goodwin. il plan diags Comp Air Mag 52:2-7 Ja '47

Deep building excavation in Cincinnati required a bold design of cross-bracing. A. D. Quinn. il diags Eng N 139:30-3 Jl 10 '47

Draining coarse gravel with wellpoints; dewatering excavation for power plant on the Allegheny river. il diag Eng N 137:638-9 N 14 '46

Earth and rock excavation for Stewartville dam. il map plan Roads & Bridges 85:70-6+ My '47

EXCAVATION—*Continued*
Heavy rock work on British Columbia power development; Bridge River hydro-electric development. il Roads & Bridges 85:46-9 Jl '47
Mine in Seventy-second street; sewerage excavation work in New York. C. H. Vivian. il plan diags Comp Air Mag 52:186-90 Ag '47
700,000 cu. yd. roadway excavation belted across busy arterial; relocating and widening California road. il Roads & Sts 90:77-8 Ag '47
See also
Blasting
Drilling and boring (earth and rocks)
Excavating machinery
Shaft sinking
Shoveling machines
Tunnels and tunneling

EXCAVATION, Subaqueous
Cleaning and grouting of limestone foundations, Tennessee Valley authority; Douglas dam. T. F. Taylor. il plan diags Am Soc C E Proc 72:1352-69 D '46
Cleaning and grouting of limestone foundations, Tennessee Valley authority; Fort Loudoun dam. A. L. Pauls. il diags Am Soc C E Proc 72:1332-51 D '46
Practical lessons in caisson sinking from the Baton Rouge bridge. E. S. Blaine. diags Eng N 138:213-15 F 6 '47
See also
Dredging
Petroleum—Well drilling, Subaqueous
Tunnels and tunneling, Subaqueous

EXCAVATIONS (archeology)
Exploration for big bones at lower Blue Licks Spring, Ky. W. R. Jillson. Science 104: 555-6 D 6 '46

EXCESS profits tax
Excess profits tax experts see problems easing. C. D. Hamel. Barron's 27:9 My 19 '47
Excess-profits tax relief; United States Tax court decision in trucking case. R. Ash. Bus Transportation 25:65 N '46
Inside story of the East Texas case. W. T. Durant. J Account 82:460-9 D '46
Normal earnings redefined for taxes. Oil Paint & Drug Rep 151:45 Ja 6 '47
Reviews progress of Excess profits tax council. P. G. Evans. Comm & Fin Chr 165: 493+ Ja 23 '47
Work of Excess profits council. C. D. Hamel. Am Gas Assn Mo 29:89-90+ F '47

China
Income tax and special excess-profits tax. For Comm W 28:14-15 Jl 5 '47

EXCHANGE
See also
Balance of payments
Commerce
Foreign exchange
Money

EXCHANGE, Foreign. See Foreign exchange

EXCHANGE buffet corporation
New corporation organized to acquire Longchamps. Comm & Fin Chr 166:565 Ag 11 '47

EXCHANGE charges, Bank. See Banks and banking—Collection charges

EXCHANGE rates. See Foreign exchange

EXCHANGES
Future of agricultural commodity exchanges. J. M. Mehl. Comm & Fin Chr 165:1386 Mr 13 '47
Outside delivery; multiple delivery points for exchanges. Bsns W p38+ Je 21 '47
Resume rubber trading on commodity exchange. Comm & Fin Chr 165:2128 Ap 17 '47
There goes Mr Jordan. Fortune 35:132 F '47
See also
Cotton exchanges
Hedging
New York coffee and sugar exchange
New York cotton exchange

EXCHANGES, Literary and scientific
International exchanges. R. B. Downs. Science 105:417-21 Ap 25 '47

EXCHANGES, Stock. See Stock exchange

EXCISE tax
Asks repeal of excise tax on copper imports. Steel 120:79+ F 3 '47
Cosmetics tax repeal urged by beauty and barber shop supply manufacturers and drug producers. Oil Paint & Drug Rep 151:5+ Je 16 '47
House passes excise freeze. Comm & Fin Chr 165:785 F 6 '47
How excise tax rates would come down. Bsns W p20 Ja 11 '47
Repeal of 15 percent tax big aid to oversea travel. For Comm W 27:17 My 10 '47
Toiletries tax revision opposed by Treasury. Oil Paint & Drug Rep 152:5+ O 13 '47
Truman signs bill extending excise tax. Comm & Fin Chr 165:1711 Mr 27 '47

EXCITATION equipment
Basic procedures in motor control; amplidyne control circuits. G. W. Heumann. il diags Gen Elec R 50:41-8 Jl '47
How does the Leblanc exciter operate to improve the power factor of an induction motor? Electrician 137:1676; 138:39, 354 D 13 '46, Ja 3, 31 '47

EXCLUSIVE sales contracts. See Restraint of trade

EXECUTIVE ability
Academic mind in business. J. D. Miller, jr. bibliog J Bsns 20:146-55 Jl '47
Mr Hancock and the bomb. il Fortune 35: 102-7 F '47

EXECUTIVE furniture guild
Office furniture dealers organize. Am Bsns 17:42 O '47

EXECUTIVES
Aid to executives; USES merges placement functions. Bsns W p70+ D 28 '46
Are you encouraged? B. Sless. Personnel J 25:299-301 Mr '47
Communication of specialist information to business executives. R. S. Hutton. Assn of Sp Lib & Inf Bur Proc 1946:57-63; Discussion. 63-5
Doctor looks at executive deaths. I. H. Page. Am Bsns 17:23+ Jl '47
Engineers as corporation heads. E. B. Norris. Eng N 138:1028 Je 26 '47
Executive planes lead the way. F. M. Reck. il map Aero Digest 54:38-41+ F '47
For top executives; vacations. H. G. Vincent. il Burroughs Clearing House 31:23+ N '46
Have you taken inventory of personnel? G. H. Colin. Personnel J 26:27-9 My '47
Pattern for executive placement. B. Haldane. Harvard Bsns R 25 no 4A:652-63 [O] '47
Top executive's real job; subordinates should lift the load off top management's shoulders. J. Garth. Am Bsns 17:20-1+ O '47
When it's time for retirement. W. J. Reilly. Am Bsns 17:10-11+ Mr '47
Younger men are needed for industrial leadership. G. C. Neff. Pub Util 39:729-31 Je 5 '47
See also
Business management
Credit managers
Efficiency, Industrial
Employment management
Factory management
Foremen
Organization in industry
Sales managers
Supervisory workers

Bibliography
Leadership and management. Cleveland Pub Lib Business Information Bur Bul v 18, no 1:1-4 Je '47

Salaries
Deferred compensation plans open new vistas. Nat Underw (Life ed) 51:2 Ag 1 '47
Executive incentives; abstract. H. A. Hopf. Chem Eng 54:254+ O '47
Executives need an incentive; taxes rise faster than take-home pay. Bsns W p 15-16 Jl 5 '47
Special aspects of deferred compensation problems. G. Simons. East Underw 48:18 Ap 11 '47
What price Yoricks? inadequacy of salaries of transit executives. E. A. Roberts. Mass Transportation 43:3 Ja '47; Same. Comm & Fin Chr 165:608 Ja 30 '47

Training
Here's how to make executives for tomorrow. H. A. Bullis. Sales Management 58:73 F 1 '47

EXECUTIVES—Training—*Continued*
How Standard Oil is developing management talent for tomorrow. E. M. Kelley. Sales Management 58:85+ F 15 '47
Jersey plan hunts key job candidates, then trains them for top management. G. R. McKee, jr. Nat Pet N 39:25+ O 15 '47
Training the executive, the forgotten man in industry; General foods corporation. A. S. Igleheart. Food Ind 19:32-3+ Ja '47
See also
Junior achievement movement

EXECUTORS and administrators
Estate check list. Trusts & Estates 84:80 Ja '47
See also
Wills

EXERCISE
See also
Physical education and training

EXHAUST steam
Condensing by compression; a locomotive experiment. H. Holcroft. il diag Engineer 182:202-3, 227-9, 248-9 S 6-20 '46; Discussion. O. Lyle. 183:89-91 Ja 24 '47; Reply. Engineer 183:244-5 Mr 21 '47

EXHAUST systems
Air recirculation from exhaust systems. J. M. Kane. il Heat & Ven 44:75-7 Ap '47
Cabinet exhaust designs. il diags Sheet Metal Worker 38:50-2 Mr '47
Ceramic type coatings for exhaust disposal systems; abstract. D. G. Bennett and others. Am Cer Soc J 30 (Cer A):171-2 S 1 '47
Demonstration unit shows principles of industrial exhaust ventilation; to prevent exposure of workers to toxic air contaminants. K. J. Caplan and R. S. McClintock. il Safety Eng 92:58-60 D '46
Design of exhaust systems (cont). F. H. Stebbins. diags Sheet Metal Worker 37: 40-1 N; 48-50+ D '46; 38:99-101 Ja; 47-9 F; 54-6 Ap; 46-8+ My; 62+ Je; 44-6 Jl; 53-5 Ag; 68-9 S; 55-7 O '47
Dust control by ventilation. J. M. Kane. il Safety Eng 92:62-3 N '46
Effective exhaust for tanks. B. F. Postman and W. P. Battista. il diags Heat & Ven 44:53-6 Ja; 83-7 F '47
Exhaust system and curtain of water halts spread of fire gases. il Safety Eng 93:20+ Je '47; Nat Safety N 56:44 S '47
Exhaust unit for fume suppression. diag Iron Age 159:63 My 29 '47
Fire hazards reduced; protective system prevents smoke and gases from spreading to upper building. il diag Heat & Ven 44:114 Je '47
Foundry ventilation. J. Black and L. T. Avery. il Heating-Piping 19:78-81 Ap '47
Fume removal and ventilation of industrial buildings. B. B. Reilly. il diags Eng N 139: 529-31 O 16 '47
If it costs too much it's poor engineering. W. C. L. Hemeon. Nat Safety N 55:28-9+ F '47
Nature of air flow at suction openings. A. D. Brandt and others. bibliog diags Heating-Piping 19:101-7; Discussion. 107-8 F '47
New layout and under-floor duct cut floor area in half; Tri-Clover machine company polishing machine layout. J. S. Kessler. il Factory Management 105:100-1 F '47
Portable ventilated tunnel aids in discharging kettle contents when toxic gas is produced. F. A. Mitchell. diags Chem Eng 54: 156 My '47
Probability theory applied to exhaust system design. J. D. Dalla Valle. Heat & Ven 44: 95-6 Jl '47
Semi-lateral tank ventilation hood controls contamination, cuts costs. W. P. Battista. diags Heating-Piping 19:85-9 Ja '47
Should air be recirculated from industrial exhaust systems? A. D. Brandt. il Heating-Piping 19:69-72 Ag '47; Discussion. L. T. Avery. 19:120 S '47
Special collectors in laundry; light cotton lint from drying tumblers satisfactorily handled, plan diags Sheet Metal Worker 37:82+ D '46
Unique exhaust system for a unique process; metal spraying of worn automobile crankshafts and parts. diags Sheet Metal Worker 38:53-4 Mr '47
Ventilating an engine room. P. R. Jordan. diags Sheet Metal Worker 38:42+ My '47
Ventilating screens, breakers, mullers. diags Foundry 75:76-7+ Mr '47
Ventilation dividends. A. D. Brandt. il Nat Safety N 56:90-2+ O '47
Ventilation; keeping contaminants out of the air. il Nat Safety N 55:17+ Mr '47
Wrong exhaust opening can cause ventilating troubles. S. Lewis. diags Heating-Piping 19:94-5 Ap '47
See also
Dust removal

EXHIBITION buildings
RCA exhibition hall. il plans diags Arch Forum 87:57-60 Ag '47
Tea centre; information center and exhibition hall for Empire tea bureau, London. il plan Arch Forum 87:104-7 Jl '47
Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:571-685 My '47; Discussion. 73:1444-7 N '47

EXHIBITIONS
Atlantic City plans international exhibit for Million Dollar pier. il Ind Marketing 32: 58 Mr '47
Beware of dog; he sells! Gillespie varnish co.'s real life trade-mark. il Sales Management 58:73 Ap 15 '47
Conventions and trade shows featured by associations. C. J. Judkins. Dom Comm 34:16-18 D '46
Exhibit brings product design before public; Society of industrial designers. il diags Product Eng 18:143-4 Mr '47
Fairs and exhibitions. For Comm W 26:25 Ja 11 '47 [cont irregularly]
Indianapolis industrial exposition. O. Rieger. Am Bsns 16:42 D '46
Industrial shows and exhibits. Published in monthly numbers of Industrial marketing
Philadelphia story; better Philadelphia exhibition to sell city planning. R. A. Protheroe. il Sales Management 59:118+ O 15 '47
Putting the audit on trade show audiences. W. H. Eisenman. Ptr Ink 221:65-6+ O 10 '47
See also
Aeronautics—Exhibitions
British industries fair
Chemical industries—Exhibitions
Electric lighting—Exhibitions
Leipzig fair
Motor boats—Exhibitions
National exposition of power and mechanical engineering
Packaging—Exhibitions
Radio apparatus industry—Exhibitions
Science—Exhibitions
Tea industry and trade—Exhibitions
Textile industry—Exhibitions
Toy industry and trade—Exhibitions

EXHIBITS
How to analyze trade shows. R. B. Hanna. Ind Marketing 32:39+ Ap '47
When you're the host; sales representative at a trade show. R. L. Fegley. il Ind Marketing 32:44-5+ O '47
See also
Banks and banking—Exhibits
Gas companies—Exhibits

EXHIBITS, Traveling
Atlas Sky Merchant pioneers aviation line at 800 airports. il Sales Management 57:43 D 1 '46
Britain's floating trade show tours South American ports. il Automotive Ind 97:47+ Ag 15 '47
From spoons to rowboats, Alcoa's road show sells aluminum to the public. il Sales Management 57:40-2 D 1 '46
Houses USA, 1607-1946; Life and Architectural forum create exhibitions of American architecture to tour North and South America. il Arch Forum 86:81-8 Ja; 97-104 Mr; 81-8 My '47

EXHIBITS, Traveling—*Continued*

Insurance aspects

Freedom train well protected physically and by insurance. Nat Underw 51:13 O 9 '47

EXITS

Building exits and fire safety. R. S. Moulton. il Ind Stand 18:37-40 F '47

Fire towers and fireproof exits help save lives in burning buildings. diags Brick & Clay Rec 110:35 My '47

EXPANSION (heat)

Checking the thermal expansion of glasses and metals by stress-optical tests. A. A. Padmos. diags Glass Ind 28:465-6+ S '47

Coefficients of thermal expansion of wood and wood products. R. C. Weatherwax and A. J. Stamm. bibliog il diags A S M E Trans 69:421-32 My '47

Engineering applications of controlled expansion alloys; Ni-Resist and others. F. G. Sefing. il Iron Age 159:46-50 Mr 20 '47

Expansion and contraction; general theory and basic control procedures. R. B. Aitchison. il diags Welding J 25:1195-202 D '46

Expansion theory of circulation in water-tube boilers. R. F. Davis. Engineering 163: 145-8 F 14 '47

Measuring the volumetric expansion of solid materials. W. W. Pendleton and H. M. Philofsky. diag Anal Chem 19:406-9 Je '47

Physical properties of steel control cable with nearly same expansion rate as aluminum alloy. C. W. Meyers. Automotive & Aviation Ind 95:44-5+ D 15 '46

Pressure and oil flow in oil-filled cables at load variations. H. L. Knudsen. bibliog diag J Ap Phys 18:545-62 Je '47

Pressure in bottles; breakage avoided by controlling filling height. H. J. Wing. diag Mod Packaging 20:146-7+ Ja '47

Thermal expansion of cables. H. C. Boynton and H. J. Godfrey. bibliog Aero Digest 53:92+ N '46

Thermal-expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Same abr. Mod Plastics 24:153-7+ D '46; Abstracts. Product Eng 18:159 Ja '47; Rubber Age 60:446 Ja '47

EXPANSION problems. See Business management—Expansion problems

EXPERIMENTAL plants. See Chemical plants—Experimental plants; Factories—Experimental plants; Petroleum refineries—Experimental plants

EXPLORATION geophysicists, Society of. See Society of exploration geophysicists

EXPLORERS, Radio aids to. See Radio aids to explorers

EXPLOSION insurance. See Insurance, Explosion

EXPLOSIONS

Apparatus for determining the reactivity of calcium carbide and acetylene-water vapor mixtures. G. W. Jones and others. 14 pls U S Bur Mines Rep of Invest 4067:1-15 '47

Bananas ripen via explosion of ethylene. Safety Eng 92:68 N '46

Blasts raise havoc in Texas City. C. K. Waters, jr. il Spectator (Property ed) 12: 12-15 Ap 24 '47

Cool nitrate is the key. il Chem Ind 61:377-8 S '47

Danger of explosion in handling ether. W. G. Bailey and A. Roy. Soc Chem Ind J 65: 421-2 D '46

Dead men do tell tales; corpses, studied as missiles, help determine cause of accidental explosions. C. Field. il diags Chem Eng 54:118-20 Mr '47

Death by the granulator; study of missiles resulting from accidental explosions. C. Field. il map Chem Eng 54:126-8 F '47

Diesel crankcase explosion. Ry Mech Eng 121:178-9 Ap '47

Draws Texas City conclusions in N.F.P.A. report. G. H. Tryon, 3d. Nat Underw 51:10 My 8 '47

18 oil men killed; 33 others missing and believed dead in Texas City blast. B. Booth. Nat Pet N 39:9-11 Ap 23 '47

Emergency action in Texas City. Am Gas Assn Mo 29:209 My '47

Explosion of a rotor in an analytical air-driven ultracentrifuge. E. B. Sanigar and J. H. Hambleton. il diags Franklin Inst J 244:234-40 S '47

Explosion wrecks 1400 hp turbine. il Locomotive 46:187-8 Ap '47

Explosions during fire-fighting; case for establishment of a research agency. D. J. Price. Safety Eng 94:20+ Ag '47

Explosions in chemical works; methods of minimising the results. Chem Age (Lond) 55:639-40 N 23 '46

Explosive decomposition of ethene. H. I. Waterman and others. bibliog Inst Pet J 33:254-5 Ap '47

Fire and explosion; inflammable concentrations and ignition temperatures; abstract. J. H. F. Smith. Chem Age (Lond) 55:571 N 9 '46

Fire underwriters report on Texas City disaster. il Nat Pet N 39:38-9 Je 11 '47

Fires and explosions at oil installations, due to air raids. E. P. Lancashire. 6 pls Inst Pet J 33:131-46; Discussion. 146-58 Mr '47

Have you a powder keg under your plant that is about to explode? causes and prevention of gas and dust explosions. W. G. Hudson. il diags Power 91:774-6 N '47

How Southern California gas company acted in a disaster emergency; explosion in an electroplating plant in Los Angeles. Am Gas J 166:33 Ap '47

Humidifiers an aid in eliminating explosions. R. J. Branham. Safety Eng 93:52 F '47

Hydro-pneumatic tank explosion kills two men. diag Locomotive 46:182-4 Ap '47

Investigation of explosions. C. Field. il diag Mech Eng 69:629-38 Ag '47; Same cond. Chem Eng 54:102-4 Ja '47

Laboratory explosions with ethylene and carbon tetrachloride; nature of the explosion; precautions in avoiding the explosion. R. O. Bolt; R. M. Joyce. Chem & Eng N 25:1866-7 Je 30 '47

Laundry mangle explosion injures three, causes $15,000 damage. Locomotive 46:216 Jl '47

Liability for blast will be difficult to determine; government seems to be in clear on Texas City ship explosion. Nat Underw 51:11 Ap 24 '47

London barge explosion. il Chem Age (Lond) 56:737 Je 7 '47

Los Angeles disaster, Feb. 20. Safety Eng 93:73 My '47

Los Angeles plating plant explosion; perchloric acid being used for electrolytic polishing of aluminum. F. A. Herr. il Metal Finishing 45:72-3+ Mr '47

Maintenance stops explosions. Safety Eng 93:26 Mr '47

Measuring pressures of industrial explosions. N. J. Thompson and E. W. Cousins. il diags Electronics 20:90-3 N '47

Mercury and ammonia; an explosion hazard. J. J. Sampey. Chem & Eng N 25:2138 Jl 28 '47; Same. Refrig Eng 54:349 O '47

Methane in metal mines; explosion in underground workings of Pacific (eastern) gold mine, Aug. 18, 1947. Can Min J 68: 739-41 O '47

Microbarometric pressures from large high explosive blasts. E. F. Cox. bibliog map diag Acoustical Soc Am J 19:832-46 S '47

Monsanto only Texas City plant materially damaged by ship blast. C. C. Pryor. il Pet Refiner 26:170+ My '47

Monsanto suffers most in Texas City tragedy. J. V. Hightower. il Chem Eng 54:144-5 My '47

No blame placed on oil, chemical industries in Texas City disaster; abstracts. G. Armistead, jr. Nat Pet N 39:24 Jl 23 '47; Pet Refiner 26:145 Jl '47; East Underw 48:24 Jl 18 '47

Observations relating to the Texas City disaster. G. W. Cox. Ind Med 16:352-3 Jl '47

One killed, 19 injured, as tank explosion wrecks school. il Locomotive 46:149-51 Ja '47

Perchloric acid, a bad actor; may cause shattering explosions. E. E. Thum. Metal Prog 52:231 Ag '47

EXPLOSIONS—*Continued*
Plastics blameless in Los Angeles blast. Mod Plastics 24:83 Jl '47
Prearranged disaster plan minimizes loss in Los Angeles blast. Nat Pet N 39:13 Je 25 '47
Preliminary reports of Texas City damage from April 16 disaster emphasize effects of flying fragments and ground shock from explosion; contamination of ammonium nitrate as underlying cause. il Chem & Eng N 25:1198+ Ap 28 '47
Product that couldn't explode; explosion of ammonium nitrate evaporator. C. Field. il Chem Eng 54:146-7 My '47
Propane and butane explosions cause heavy toll of life and property. Locomotive 46: 132+ Ja '47
Refrigeration failure said to have caused Los Angeles explosion. Heat & Ven 44:102 Mr '47
Report gives summary of petroleum tankage damage sustained during Texas City disaster. Nat Pet N 39:45 S 17 '47
Report on Texas City disaster cites fire and explosion precautions. Safety Eng 93:22+ Je '47
Representative air tank accidents. il Locomotive 46:208-11+ Jl '47
Reverberations; Texas City's explosion will accentuate tank car and other shortages. il Bsns W p22 Ap 26 '47
Studies on explosives and explosions, fiscal year 1945. W. J. Huff. bibliog 18pls U S Bur Mines Rep of Invest 4031:1-57 '46
Texas City, a survey. W. H. Shearon, jr. il Chem & Eng N 25:1334-5 My 12 '47
Texas City disaster. J. S. Felton. Ind Med 16:304 Je '47
Texas City disaster. D. F. Summers. il Manuf Rec 116:26-7+ My '47
Texas City disaster spurs nitrate research. Safety Eng 94:33 Jl '47
Texas disaster loss may be $50,000,000. J. C. Leissler, jr. Weekly Underw 156:1125+ Ap 26 '47; Same abr. East Underw 48:24+ Ap 25 '47; Same cond. Nat Underw 51:1+ Ap 24 '47
Theory of the propagation of shock waves. S. R. Brinkley, jr. and J. G. Kirkwood. bibliog Phys R 71:606-11 My 1 '47
$20,000,000 Monsanto plant blasted. L. D. Gruberg. il Chem Age (Lond) 56:498-501 Ap 26 '47
Utilities of Texas City withstood catastrophe well. Eng N 138:888 My 29 '47
What the newspapers are saying; accidents involving pressure vessels of various kinds. Locomotive 46:175-7+ Ap '47

See also
Boiler explosions
Coal mines and mining—Accidents and explosions
Dust explosions
Feed water heaters—Explosions
Flywheel explosions
Hot water tanks—Explosions
Inflammable liquids
Inflammable mixtures
Pressure vessels—Failures

EXPLOSIVES
Accidents with explosives; war reports. Chem Age (Lond) 56:163-5 Ja 25 '47
Aromatic-aliphatic nitro compounds; condensation of nitrobenzaldehydes with nitromethane. L. F. Fieser and W. H. Daudt. bibliog Am Chem Soc J 68:2248-9 N '46
Aromatic-aliphatic nitro compounds; condensation of nitrophenylnitromethanes with formaldehyde. L. F. Fieser and M. Gates. Am Chem Soc J 68:2249-52 N '46
Casing perforating with shaped explosive charges. R. H. McLemore. il diags Oil & Gas J 45:268-71 D 28 '46
Crystal structure of pentaerythritol tetranitrate. A. D. Booth and F. J. Llewellyn. diags Chem Soc J p837-46 Je '47
Effect of high mechanical stress on certain solid explosives. P. W. Bridgman. diags J Chem Phys 15:311-13 My '47
Equation of state for gases at extremely high pressure. P. Caldirola. bibliog J Chem Phys 14:738-41 D '46
Equation of state for gases at extremely high pressures and temperatures from the hydrodynamic theory of detonation. M. A. Cook. bibliog J Chem Phys 15:518-24 Jl '47
Explosives find many uses in oil production. M. M. Kinley and J. Kinley. diags Oil & Gas J 46:83+ Je 7 '47
High explosives; mechanical theory of detonation. S. Paterson. Engineering 163:98-100 Ja 31 '47
Solid and liquid propellants. W. H. Wheeler, H. Whittaker and H. M. Pike. il Chem Age (Lond) 56:367-74 Mr 29 '47
Studies on explosives and explosions, fiscal year 1945. W. J. Huff. bibliog 18pls U S Bur Mines Rep of Invest 4031:1-57 '46
Thermochemistry of propellent explosives. J. Taylor, C. R. L. Hall and H. Thomas. bibliog J Phys & Colloid Chem 51:580-92 Mr '47

See also
Blasting
Bombs
Fluorine perchlorate
Nitroglycerin
Tetrazoles
Torpedoes
Trinitrotoluene

Analysis
X-ray diffraction patterns for the identification of crystalline constituents of explosives. A. M. Soldate and R. M. Noyes. bibliog Anal Chem 19:442-4 Jl '47

History
Turning back the pages in explosives history; a series of prints from the Bettman archives. il Explosives Eng 25:15-18 Ja '47

Laws and regulations
Explosives act. W. B. Paton. Can Min J 68:420-3 Je '47

Manufacture

See also
Smokeless powder—Manufacture

Safety measures
Explosive hazards. H. B. Hicks. il Can Min J 68:333-5 My '47
Explosives accidents in bituminous-coal mines; coal-mine accident-prevention course. bibliog il plans diags U S Bur Mines Miners' Circ 58:1-82; pa 20c Supt. of doc. '47
Misdirected curiosity produces fatal results. H. H. Fawcett. J Chem Educ 24:457 S '47
Rules are announced by underwriters for handling of ammonium nitrate. Pet Refiner 26:154 Je '47; Same. Weekly Underw 156:1468 My 31 '47; Same. Safety Eng 93: 22+ Je '47; Same. Nat Safety N 56:90-2 Jl '47
Safe storage, handling, and use of commercial explosives in metal mines, nonmetallic mines, and quarries. D. Harrington and J. H. East, jr. bibliog 14pls U S Bur Mines Information Circ 7380:1-30 '46
Safety rules with explosives. Can Min J 68: 409 Je '47
Taking the danger out of high explosives. il Safety Eng 94:14+ S '47

See also
Explosives—Transportation

Storage
Data on heat loss from underground walls given in British air conditioning report; storage of explosives. Heating-Piping 19:96 Mr '47
Some results of inspections of explosives-storage facilities under the Federal explosives act. P. R. Moyer. U S Bur Mines Information Circ 7398:1-60 '47

Testing
Direct determination of burning rates of propellant powders. B. L. Crawford, jr. and others. il diag Anal Chem 19:630-3 S '47
Tests made by the U.S. Bureau of mines with gelatin explosives; abstract. H. P. Greenwald and I. Hartmann. diags Coal Age 52:120+ Ja '47

Transportation
Explosives handling rules revised. Oil Paint & Drug Rep 150:5 N 25 '46
Explosives transport rules. Oil Paint & Drug Rep 151:4 Mr 10; 3 My 12 '47

EXPLOSIVES—Transportation—*Continued*
I.C.C. regulations amended. T. P. Callahan. Chem Ind 59:1058+; 60:1000+ D '46, Je '47
Regulations for transportation of dangerous articles. R. W. Lahey. Chem & Eng N 24: 3406 D 25 '46

EXPORT advertising. See Advertising, Foreign

EXPORT associations
Sulphur export corp. gets FTC suggestions. Oil Paint & Drug Rep 151:7+ F 17 '47
See also
Mid-continent world trade council
United States scientific export association, inc.

EXPORT-import bank of Washington
Approves credit to Bolivian development corp. Comm & Fin Chr 165:1434 Mr 13 '47
Export-import bank activities. For Comm W 25:14-15+ N 9 '46
Export-import bank and repayment problem; address before Buffalo Chamber of commerce. W. M. Martin, jr. Comm & Fin Chr 164:3205+ D 19 '46
Export-import bank announces project credits to Australia. For Comm W 28:35 Ag 9 '47
Export-import bank approves more credit to Italian industries. Comm & Fin Chr 166:1751 O 30 '47; For Comm W 29:33 N 22 '47
Export-import bank authorizes additional credits to Finland. For Comm W 26:18 F 1 '47
Export-import bank grants Italy credit. Comm & Fin Chr 166:534 Ag 7 '47
Export-import bank looks ahead; statement before Senate Banking and currency committee on S. 993. W. M. Martin, jr. Comm & Fin Chr 165:2198+ Ap 24 '47
Export-import bank to finance KLM Constellation purchase. W. Kroger. Aviation N 7:9 Je 9 '47
Export-import bank's credit to Mexican government agency. For Comm W 29:15 O 18 '47
Extends loans to Hungary and Italy. Comm & Fin Chr 165:1936+ Ap 10 '47
$50,000,000 credit to Norway; new credit to Brazil. Comm & Fin Chr 165:1703, 1704 Mr 27 '47
Offers bill to give private lenders participation in Export-import bank loans. H. Buffett. Comm & Fin Chr 165:273 Ja 16 '47
Policy issues at Export-import bank. W. M. Martin, jr. Comm & Fin Chr 165:1384+ Mr 13 '47
Prop for trade; Export-import bank grants loan to United States scientific export assn. Bsns W p81-2 O 11 '47
Safeguarding Export-import bank; objective of HR 665. H. Buffett. Comm & Fin Chr 165:407 Ja 23 '47
U.S. world trade and the Export-import bank; address before National foreign trade convention. W. M. Martin, jr. map For Comm W 25:3-4+ D 7 '46; Same, with additions. Comm & Fin Chr 164:2463+ N 14 '46

EXPORT taxes. See Tariff (export duties)

EXPORT trade
Barter solves exchange confusion; Gillette razors and blades for Italian agricultural products. Ptr Ink 219:66 Je 13 '47
Buda executive advises concentrating export sales effort on Latin America; abstract. R. K. Mangan. il Ind Marketing 32:82+ Ag '47
Business and investment aspects of our foreign policy. J. Dana. Mag of Wall St 81:14-15+ O 11 '47
Canada; Uncle Sam's biggest customer. F. S. Chalmers. Ind Marketing 32:70+ Jl '47
Changing world; increasing demand for American equipment in foreign countries. J. J. DeMott. Ind Marketing 32:40+ Ap '47
Chemical exports on upswing. C. C. Concannon. Chem & Eng N 25:80-2 Ja 13 '47
Commerce dept. issues report on exports to Russia during 1946. Iron Age 160:130+ Jl 24 '47
Commerce department warns of decline in exports. Comm & Fin Chr 165:3377 Je 26 '47
Danger in our surplus productive capacity; importance of exports to our economy. V. L. Horoth. il Mag of Wall St 80:192-4+ My 24 '47
Do salesmen need world trade? M. J. Fox. Sales Management 58:135-9 Ja 15 '47
Economic relationship between foreign trade and the shipbuilding industry. R. E. Anderson. Marine Eng 51:90-1 N '46
Export boom. Nat City Bank p62-3 Je '47
Export boom collapse threatens business outlook. C. Davidson, jr. Comm & Fin Chr 166:212+ Jl 17 '47
Export buyer, the working tool of the export trade. Published monthly by Commodity research bureau, 82 Beaver st, New York 5
Export slump; how much will it hurt? R. L. Heilbroner. Am Bsns 17:12-13+ S '47
Export trade methods. J. C. Hancock. Elec R (Lond) 140:587-8 Ap 11 '47
Exports and business outlook; Hugh W. Long & co. hold a decline would not be unfavorable. Comm & Fin Chr 166:1004+ S 11 '47
Exports and our national economy. J. A. de Haas. Comm & Fin Chr 166:1001+ S 11 '47
Farmer and the export market. W. B. Garver. Comm & Fin Chr 166:1547+ O 16 '47
First quarter pipe exports up 411 per cent. Nat Pet N 39:17 My 28 '47
For export; U.S. know-how. il Bsns W p85-6+ Jl 5; 93-4+ Jl 12; 98+ Jl 19; 94+ Jl 26 '47
Foreign markets and our national economy. W. Ward. Comm & Fin Chr 164:2460+ N 14 '46; Same cond. Trusts & Estates 83:641-4 D '46
Foreign markets; golden opportunity to sell more packaged goods. il Mod Packaging 20:87-92+ F '47
Foreign trade. G. F. Sullivan. il Iron Age 159:82-7 Ja 2 '47
Foreign trade developments. Survey of Cur Bsns 27:3-4 O '47
Foreign trade myth. W. E. Knox. Comm & Fin Chr 164:2753+ N 28 '46
Foreign traders expect big 1947, early drop. R. M. Bleiberg. Barron's 27:28 Mr 17 '47
Future of foreign trade; a Printers' Ink market exploration. W. P. Burn. Ptr Ink 218:41 Mr 7 '47
General business conditions; effects of export shrinkage. Nat City Bank p97-9 S '47; Excerpt. Comm & Fin Chr 166:926 S 4 '47
How much of a load can the United States carry? we cannot eat our cake and export it too. J. Hirsch. Barron's 27:7 Je 2 '47
Industrial equipment gets priority as dollar crisis slows exports. M. Kelly. Ind Marketing 32:126+ S '47
Industrial machinery exports set a record. J. D. Wilson. Am Mach 90:151-2 D 19 '46
Industrial sales promotion for export markets. L. R. Beck. Ind Marketing 31:57-8+ D '46
Industries most vulnerable to export decline. J. Dana. il Mag of Wall St 81:80-1+ O 25 '47
Nine ways to improve industrial exports. W. F. Rockwell. Ptr Ink 219:36-7 Je 20 '47
One prop of U.S. economy weakens. Bsns W p86 Ag 9 '47
Organization requirements for successful export business. G. W. Wolf. Mech Eng 69: 26-8 Ja '47
Organization to improve world trade urged by Vergil Reed at export meeting. Ptr Ink 218:94 Mr 21 '47
Outlook for exports; our foreign economic program and our export position. Nat City Bank p39-42 Ap '47
Plan for exports to Japan; U.S. will set up corporation to resume nearly normal cotton trade. Bsns W p 116-17 S 13 '47
Sales promotion in Latin America. B. J. Taines and J. Beck. il Ptr Ink 217:50-2 D 6 '46
These are the export markets. R. L. Hoadley. il Aviation 45:82-3 N '46
U.S. exports by air reach record level. Aviation W 47:57 Jl 14 '47
U.S. exports; end of a boom. Bsns W p 15-16 Ag 16 '47
U.S. '47 chemical exports may hit $700 million peak. Barron's 27:8 Ag 18 '47
United States production and trade in selected commodities. D. S. Parris. il For Comm W 28:3-5+ Ag 2 '47
United States radio exports to exceed $60,000,000 in 1947. G. R. Donnelly. il For Comm W 28:6-8+ Jl 5 '47

EXPORT trade—*Continued*
Warns present export trade is abnormal; Guaranty trust company of New York. Comm & Fin Chr 165:3360 Je 26 '47
What New Orleans is doing to build itself as a port; advertising, planning international trade mart, sponsorship of trade conferences, development of foreign trade zone, and organization of trade council. il Sales Management 59:138+ S 15 '47
Who will be hit hardest as export boom fades. R. M. Bleiberg. Barron's 27:5 Ag 4 '47
World knows and wants U.S. toilet preparations; with tabulation showing U.S. exports of toilet preparations, 1945, by areas, countries, and commodities. T. W. Delahanty. il For Comm W 25:8-11+ D 14 '46
World trade; on it depends prosperity at home. J. A. Farley. il Ptr Ink 221:46-7+ O 31 '47

See also
Balance of payments
Commerce
Foreign exchange
Free trade and protection
Latin America—Commerce
Packing for shipment
Tariff
United States—Commerce
World commerce corporation

Advertising

See Advertising, Foreign

Bibliography

Bank literature on foreign trade. Burroughs Clearing House 31:8-10 F '47

Finance

Credit and foreign trade; some of the hazards that the exporter must expect. J. H. Schwoon. Credit & Fin Management 49:30-1+ Ag '47
Dollar crisis and foreign trade. F. Prager. Comm & Fin Chr 166:212+ Jl 17 '47
Export credits vital to making boom last. Barron's 27:1+ My 26 '47
Foreign aid and the export boom. Nat City Bank p76-8 Jl '47; Excerpts. Comm & Fin Chr 166:8+ Jl 3 '47
Foreign trade, loans and prosperity. M. Winkler. Comm & Fin Chr 166:810+ Ag 28 '47
Future of our exports. W. L. Thorp. Comm & Fin Chr 165:3228+ Je 19 '47
Plea for broader export credits. A. M. Strong. Comm & Fin Chr 165:2340+ My 1 '47

See also
Banks and banking—Foreign banking service
Export-import bank of Washington

Government aid

Anderson sees need of new export agency. Food Ind 19:1252-3 S '47

Marketing

Doing it the American way; U.S. technical knowledge goes abroad with U.S.-built machines and equipment. il Bsns W p89-90+ Je 28 '47
Duro metal products removes mystery from export problems. M. Kelly. Ind Marketing 32:54+ Mr '47
How Koret is cashing in on sales potentials in Hawaii. E. Gidlow. il Sales Management 59:80+ S 1 '47
International Harvester creates model organization for export. M. Kelly. Ind Marketing 32:66+ Je '47
Market and media data needed for foreign sales; pioneer experiment in Buenos Aires. E. R. Smith. Ptr Ink 219:46+ My 30 '47
Sell and produce abroad for profit; export of technology to build foreign plants for the production of products which cannot be exported. A. Rooseboom. il Chem Ind 60:605-6 Ap '47

Regulation

Export control act extended to Feb. 29. Oil Paint & Drug Rep 152:5 Jl 21 '47
Export control extension for vital supplies urged. T. C. Blaisdell. Oil Paint & Drug Rep 151:3+ My 19 '47
Export control extension urged by President. Comm & Fin Chr 165:1702 Mr 27 '47
Government's new Export policy committee. For Comm W 25:16 D 28 '46
OIT defines firm order in export rules. Oil Paint & Drug Rep 152:3 O 6 '47
Soap export controls. il Soap & San Chem 23: 35-6 Ag '47
Tighten steel export trade regulations. il Steel 121:41-2+ S 1 '47
U.S. export control and related announcements. Published in Foreign commerce weekly

Statistics

Foreign trade; per capita exports to 83 countries and areas and favorable trade balances; average for 1936-1940 with a comparison of lend-lease shipments for 1943; graph and tabulation. W. P. Burn. Ptr Ink 218:42-4 Mr 7 '47
Iron and steel exports in 1945 reported as 5,109,000 tons. Iron Age 159:114 Ja 23 '47
Postwar trends in U.S. trade to midyear 1946; with charts and tabulations. G. A. Witherow. il For Comm W 25:6-19 D 7 '46
U.S. trade up to mid-point in this year of crucial issues; with charts and tabulations. G. A. Witherow. For Comm W 29: 3-5+ O 18 '47
U.S. trade with the Soviet Union January-June 1946; with tabulations. For Comm W 25:6-8 D 21 '46
U.S. world trade in 1946 witnessed remarkable shifts. G. A. Witherow. For Comm W 27:4-8 My 17 '47

Taxation problems

Foreign trade taxwisely; when should corporations be organized in the United States and when should they be formed abroad to do business in foreign countries? J. K. Lasser and H. Silverson. Dun's R 54:17-18+ D '46; Abstract. Management R 36:107-10 F '47

EXPRESSION of liquids. See Filters and filtration (technical chemistry)

EXPRESSWAYS
Baton Rouge plan calls for four-lane expressway. il Civil Eng 17:538 S '47
Catskill thruway gets going. H. K. Glidden. il Roads & Sts 90:55-8 Ja '47
Coordinate control methods applied to design and construction of city expressways. G. M. Leatherwood. il maps plans Roads & Sts 90:78+ Ja '47
Express highway planning in metropolitan areas. J. Barnett. il maps Am Soc C E Proc 72:287-305 Mr '46; Discussion. 72:722-4, 1057-69, 1247-70; 73:533-40 My, S, N '46, Ap '47
Expressway US 40; Sacramento-Oakland; contractor's equipment and methods; illustrations with text. Roads & Sts 89:61-2 D '46
Fort Wayne plans North-South and East-West expressways. il Civil Eng 17:203 Ap '47
Fort Worth expressways; abstract. E. C. Woodward. Roads & Sts 89:79-80 O '46
Full-scale tests checked design of expressway gutter inlets. E. C. Woodward. il diags Roads & Sts 89:69-73 D '46; Discussion. C. F. Izzard. 90:90+ Ap '47
Highway improvement advocated by Toronto planning board. plans diag Roads & Bridges 85:36-9+ Ja '47
Houston urban expressways. H. J. McKeever and others. il map plan diags Roads & Sts 90:61-2+ Je; 69+ Jl '47
Immediate expressway construction for Montreal urged. A. A. Cousineau; P. R. Walters. il maps Roads & Bridges 85:90-2+ Ap '47
Kanawha boulevard extended at Charleston. il map Eng N 139:181-3 Ag 7 '47
Los Angeles metropolitan area demands adequate freeway and parkway system. L. Aldrich. il map Civil Eng 17:250-3+ My '47
Maine Turnpike, Nation's largest single postwar road job; design features and construction methods. H. J. McKeever. il diags Roads & Sts 90:59-61+ S '47
New Jersey starts dual-dual highway to end serious traffic congestion. C. M. Noble. il maps diags Eng N 138:120-4 Ja 23 '47
New York state builds its thruway. T. F. Farrell. il map diags Eng N 138:129-33 Ja 23 '47

EXPRESSWAYS—*Continued*
Relationship of free enterprise to modern traffic facilities; limited access highways and state control of roadside business. L. S. Wescoat. Am Pet Inst Proc 26(1):103-6 '46; Same cond. Oil & Gas J 45:239+ N 16 '46
Speed transition ramps on a bridged rotary; to provide the speed transition between expressways and local streets. R. O. Swain. il diags Pub Roads 24:307-11 Ap '47; Same. Roads & Bridges 85:95-6+ Je '47
Urban expressways and the parking problem. P. Donald. Roads & Sts 89:91-2 O '46

EX-SERVICE men. See Veterans

EXTENSOMETERS
Les extensomètres électriques à résistance. Génie Civil 124:217-18 Je 1 '47
Measurement of the bending modulus of monofils; Cambridge fibre extensometer. P. W. Carlene. il diag Textile Inst J 38:T38-42; Discussion. T48-9 F '47
Photographic recording extensometer. J. Sikorski and others. diags Textile Inst J 38:T20-36; Discussion. T37 F '47
Types of strain measuring devices and their range of utility. K. F. Smith. il diags Product Eng 18:107-10 Ja '47

EXTRACTION apparatus
Annular thimble for Soxhlet extractor. I. C. P. Smith and M. M. Neustadt. diag Anal Chem 19:618 Ag '47
Chemical plant in miniature; distillation and solvent extraction. il Chem Age (Lond) 56:739 Je 7 '47
Low-temperature continuous extractor. M. Moskowitz. diag Science 105:624-5 Je 13 '47

EXTRACTION processes
Chemicals from the Dead sea. Z. Halperin. flow diag il Chem Eng 54:94-6 Je '47
Cottonseed process developed; solvent extraction of oil. Oil Paint & Drug Rep 151: 7+ Mr 10 '47
Dehydration of water gas tars. Am Gas Assn Mo 29:389-90 S '47
Duo-sol solvent extraction; Max B. Miller & company. flow diag Oil & Gas J 45:171 Mr 22 '47
Duo-sol solvent extraction process; Max B. Miller & company. flow diag Pet Refiner (Process Handbook sec) 26:138-9 Ap '47
Estimation of properties of solvent-refined products. V. A. Kalichevsky. Pet Refiner 26:93-8 Ja '47
Extraction methods applied to the analysis of electroplating baths and the determination of zinc and other impurities in nickel solutions; abstract. E. J. Serfass and W. S. Levine. Metal Finishing 45:51 Ag '47
Extraction of aromatics; patent. P. J. Gaylor. flow diag Pet Processing 2:701-2 S '47
Extraction of vanadium from aqueous acid solutions by isopropyl ether. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 68:2443-7 D '46
Fatty oil processing improvement claimed; Solexol. Oil Paint & Drug Rep 150:37 N 25 '46
Furfural refining process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:154-5 Ap '47
Furfural solvent extraction; Texaco development corporation. flow diag Oil & Gas J 45:172 Mr 22 '47
Manufacture of sulfolanes and use as selective solvents. H. G. Staaterman and others. flow diags il Chem Eng Prog 43:148-51 Ap '47
Multistage separation processes. M. Benedict. bibliog diags Chem Eng Proc 43:41-60 F '47
Nitrobenzene extraction process; Atlantic refining company. flow diag il Pet Refiner (Process Handbook sec) 26:202-3 Ap '47
Phenol extraction process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:220-1 Ap '47
Phenol solvent extraction; M. W. Kellogg company. flow diag Oil & Gas J 45:173 Mr 22 '47
Pilot plant aids operation of furfural extraction unit. L. C. Brown. flow diag il Oil & Gas J 46:112-14 Je 14 '47
Recovery of lactic acid from dilute solutions. A. A. Dietz, E. F. Degering and H. H. Schopmeyer. bibliog Ind & Eng Chem 39: 82-5 Ja '47
Solvent extraction. J. C. Elgin. bibliog(44 ref) Ind & Eng Chem 39:23-5+ Ja '47
Solvent extraction of vegetable oils. S. E. Tray and C. W. Bilbe. flow sheet (p160-3) il Chem Eng 54:139-41+ My '47
Solvent extraction process applied to cottonseed. N. H. Moore. flow sheet il Food Ind 19:471-3 Ap '47
Solvent extraction processes for cottonseed oil. Chem & Eng N 25:1000 Ap 7 '47
Solvent separation of hydrocarbon mixtures by vapor-liquid extraction. M. R. Fenske, C. S. Carlson and D. Quiggle. bibliog diags Ind & Eng Chem 39:1322-8 O '47
Stage estimation in lubricating distillate extraction. V. G. Skogan and M. C. Rogers. bibliog il Oil & Gas J 46:70+ Ag 2 '47

EXTRACTORS, Fruit juice. See Fruit juice extractors

EXTRUSION
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47

EXTRUSION process
Casting aluminum billets for extruding. R. W. Graham. il Iron Age 158:52-4 D 26 '46
Extruded powder metal welding rods. F. C. Kelley and F. E. Fisher. il diags Iron Age 158:68-72 D 19 '46
Extrusion method of manufacturing tubes of stainless steel, special steel, nickel, monel, and inconel. H. Lorant. il diags Mech Eng 69:471-4 Je '47; Same cond. Mach 53:170-1 Jl '47; Discussion. Mech Eng 69:1052-3 D '47
Extrusion of magnesium; Dow chemical co. C. S. Harris. il diags Mach 53:143-52 Mr '47
Ford utilizes extrusion method for producing metal powder gears. E. E. Ensign. il diags Automotive Ind 97:30-1+ Ag 15 '47
Forming steel by cold extrusion; Heintz mfg. co. diags Steel 121:93+ O 20 '47
Light metal extrusion; industrial heating applications. il Elec R (Lond) 140:923-8 Je 6 '47
Magnesium extrusions offer fabrication economies. H. Chase. il Materials & Methods 25:96-9 Ap '47
Mechanical principles of the screw extrusion machine. Z. M. Rogowsky. bibliog diag Inst Mech Eng J & Proc 156:Proc 56-61 Je '47; Same abr. Engineering 162:358-60 O 11 '46; Discussion. Inst Mech Eng J & Proc 156: Proc 62-5 Je '47
New complete sheeting unit. il diags Mod Plastics 25:142-5 O '47
New steel forming technique; cold extrusion. il Bsns W p21-2+ Ag 9 '47
Producing automotive valves by extrusion; Chevrolet-Flint manufacturing division of the General motors corporation. C. H. Wick. il diag Mach 53:142-6 Ag '47
Production processes; their influence on design; impact extrusion. R. W. Bolz. il diags Machine Design 19:115-19 F '47
Techniques of extruding acrylic. J. Bailey. il diags Mod Plastics 24:131-9 D '46
Theory of moving sources of heat and its application to metal treatments. D. Rosenthal. A S M E Trans 68:861-2 N '46
Vinyl elastomers for extrusion and molding. G. W. Jargstorff. il India Rubber World 116:797-8 S '47

EYE
See also
Color sense
Mydriatics
Optics, Physiological
Sight
Winking

Accommodation and refraction
Change in refractive power of the human eye in dim and bright light. G. Wald and D. R. Griffin. bibliog diag Opt Soc Am J 37:321-36 My '47
Effects of ultraviolet radiation on visual thresholds. E. Wolf. Science 105:366 Ap 4 '47
Influence of accommodation on spherical aberration in the human eye, an attempt to interpret night myopia. A. Ivanoff. bibliog Opt Soc Am J 37:730-1 S '47
Kinetics of visual dark adaptation. T. L. Jahn. diag Opt Soc Am J 36:659-65 N '46

EYE—Accommodation and refraction—*Cont.*
Simple criterion for quality in lighting. P. Moon and D. E. Spencer. bibliog il diags Illum Eng 42:325-56; Discussion. 356-64 Mr '47
Visibility of lines and squares at high brightnesses. S. Hecht and others. bibliog diag Opt Soc Am J 37:500-7 Je '47

Diseases and defects

Watch out for the blind eye! R. S. Bonsib. il Safety Eng 93:16-17+ Ap '47
See also
Miners' nystagmus

Examination

Better vision boosts production. A. C. Holland. il Sci Am 176:245-8 Je '47
Color vision in industry. G. A. Strebel, jr. Ind Med 15:425-6 Jl '46; Abstract. Nat Safety N 54:54+ D '46
Device for testing visual acuity is real contribution to graphic arts. H. V. Brumby. il Inland Ptr 119:63 Ap '47
Help for optical cripples; program sponsored by American optical company. W. T. Cameron. il Nat Safety N 54:30-1+ D '46
Importance of visual aptitude testing. K. Kern. il Paper Ind 28:1740+ Mr '47
Modified stereoscope measures visual skills; Ortho-Rater. il diag Machine Design 19: 148-9 Mr '47
Production and calibration of Foucault test objects of various contrasts. H. S. Coleman and D. G. Clark. il diag Opt Soc Am J 37:272-4 Ap '47
Right eyes for the job. H. S. Kuhn. il Ind Med 16:485-8 O '47
Vision fact finding discloses relationship of visual capacity and job performance. C. P. Brownell. il Safety Eng 93:24+ Ap '47
Visual aptitude tests prove of value to industry. J. A. Howland. il Foundry 75:130+ Ag '47

Injuries

Common eye injuries. L. W. Jones. Ind Med 15:692+ D '46
Early treatment of ocular injuries. D. Vail. Ind Med 16:173-4 Ap '47
First aid for chemical eye injuries. P. M. Van Arsdell. bibliog(54 ref) Ind Med 16: 188+ Ap '47
Glass eye can't see. Safety Eng 94:74 O '47
Industrial eye surgery and treatment; mechanical approach. L. C. Potter. il Ind Med 16:350-2 Jl '47
Quinone vapors and their harmful effects. J. H. Sterner and others. flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73-84) Mr '47
Recent research on chemical injuries to the eye. R. S. McLaughlin. Ind Med 16:86+ F '47; Abstract. Nat Safety N 55:52 Je '47
Sounds familiar, doesn't it? eye lost through horseplay. F. J. Sluze. Safety Eng 92:52 D '46

Protection

American optical co. wins top safety honors. Safety Eng 93:53 My '47
Eye injuries hurt more! experience at New York navy yard. L. Bauer. il Safety Eng 92:18-20+ O '46
Eyes and face; goggles, shields and masks. il Nat Safety N 55:25-6+ Mr '47
Investing in eyesight. il Safety Eng 94:18+ S '47
Labor and management get together on eye protection in industry. Safety Eng 93:44 My '47
Look at eye safeguards. J. M. McGreevy and L. Banet. il Safety Eng 94:14-15+ Ag '47
Plastic eye protectors. C. A. Reichelderfer. il Nat Safety N 55:11 Mr '47
Professionalize your eye protection program. C. W. Dreyer. il Nat Safety N 55:22-3+ Ap '47
Saving eyes in industry. W. W. Allison. il diag Safety Eng 92:14-15+ D '46
See also
Goggles

EYE shields, Plastic
Molded eye shields. il Mod Plastics 24:214 Je '47

EYEBARS
Shortening eyebars by heating with oxyacetylene torch. Mech Eng 69:152 F '47
Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46; Excerpts. Civil Eng 17:205-6 Ap '47; Metal Prog 52:276+ Ag '47

EYRITE. See Magnesium silicate

F

FABRICANT, Solomon
Portrait. Factory Management 104:123 N '46

FABRICS, Airplane. See Airplane fabrics

FABRICS, Automobile. See Automobile fabrics

FABRICS, Textile. See Textile fabrics

FABRY-PEROT interferometer. See Interferometers

FACE

Protection

See Head—Protection

FACETTED pebbles. See Pebbles

FACSIMILE transmission. See Radio facsimile

FACT-finding boards. See Labor disputes

FACTOR of safety
Safety of structures. A. M. Freudenthal. bibliog Am Soc C E Proc 71:1157-91 O '45; Discussion. 72:111-14, 251-5, 559-60, 885-8; 73:208-18 Ja-F, Ap, Je '46, F '47

FACTORIES
Architect's opportunities in factory design. R. A. Wank. il Arch Rec 102:86-90 Ag '47
Brick and tile masonry faces its biggest chance in building history. A. S. Low. Brick & Clay Rec 109:26+ D '46
Construction methods and building materials; modern factory. H. Penn. il Western Soc E J 52:81-5 Je '47
Conversion of war plant into industrial center, Birmingham, Ala. J. Adams. il Dom Comm 35:26-30 Mr '47
Cost comparisons aid selection of building materials and installations; Westinghouse electric corp. G. Parkman. il Eng N 138: 592-4 Ap 17 '47
Current danger in penny-wise savings. E. W. Bowden. il Arch Rec 100:95 D '46
Design to produce functional building. W. F. Dolke. Western Soc E J 52:75-7 Je '47
Designing the small industrial plant. J. Cromelin. il diags Arch Rec 100:106-9 D '46
Factory builders prefer brick; illustrations. Brick & Clay Rec 111:23-7 Ag '47
Factory designed for residential area; clothing factory and store for Bond stores, inc. in Rochester. il diags Eng N 138:511-13 Ap 3 '47
Factory entrances for modern brickbuilders; illustrations. Brick & Clay Rec 111:25 S '47
Ferguson engineers develop new low cost steel frame factory. Iron Age 158:154+ N 21 '46
Fire protection considerations in the design of a modern factory. A. H. Jens. Western Soc E J 52:85-9 Je '47
General electric company; new plant at Tiffin, Ohio. il Factory Management 105:B49-53 pt 2 Ap '47
Industrial buildings; building types study; with time-saver standards. il plans diags Arch Rec 102:85-102, 115-16+ Ag '47
Industrial plant cost reaching peak. E. W. Bowden. Eng N 138:591 Ap 17 '47
Industrial plants; a Harvard research project; with construction analysis. W. F. Bogner. plans diags Arch Rec 102:103-14 Ag '47
Insurer builds for industry; New York Life invests in four new plants for leasing to Continental can co. Bsns W p70+ Ja 18 '47
Light construction details for a small factory; working drawings. Brick & Clay Rec 111:28-9 Ag '47
New plant built for low-cost production and upkeep; carpet yarn mill, Glasgow, Va. R. E. Oberholtzer. il Factory Management 105:116-20 Jl '47

FACTORIES—*Continued*
New plant design cuts costs; Sentinel radio corporation's new, one-story building. il Am Bsns 17:16-19 My '47
Newest of Johnson & Johnson factories; baby products plant, Cranford, N.J. il plans Arch Rec 102:91-5 Ag '47
Plant as a place to work. R. Wank. il Arch Rec 100:91-4 D '46
Plant to make precision-built products; Diesel equipment division of General motors corporation. il plans diags Eng N 137:801-5 D 12 '46
Plastics factory poses some building problems; laminated plastics plant, built for the General electric co. il Eng N 139:564 O 23 '47
Plastics plant will make mill bearings; General electric company's new laminated plastics plant. il Blast F & Steel Pl 35: 1279 O '47
Principles of noise reduction in offices and factories. M. A. Smith. il Eng N 137:643-5 N 14 '46
Putting a new building around the old; Quaker rubber corporation, Philadelphia. H. E. Fritz, jr. il Factory Management 104: 92-4 N '46
Sentinel radio corporation; new plant at Evanston, Ill. il Factory Management 105: B46-8 pt 2 Ap '47
Small modern factory; Ritepoint co., St Louis. il plans Am Bld 68:78+ N '46
Stove building at linoleum plant is itself part of production process. il Heat & Ven 44:83-4 Mr '47
Trends in industrial plant design. G. H. Miehls. il Arch Rec 100:96-101 D '46
Trends in plant design and construction. il Factory Management 105:B43-5 pt 2 Ap '47

See also
Airplane factories
Automobile factories
Branch factories
Canneries
Chemical plants
Clay products plants
Concrete products plants
Cotton mills
Drug factories
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Food factories
Foundries
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Munition factories
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Paper products plants
Petroleum refineries
Potteries
Rayon mills
Rock products plants
Rolling mills
Rubber factories
Shoe factories
Soap factories
Steel works
Textile mills
Tire factories
Varnish factories
Watch factories
Water supply for factories

Accounting

Accounting as an aid to increased industrial production. T. B. Dodds. J Account 84: 299-303 O '47
Accounting development work for a manufacturing company. T. W. Spicer. N A C A Bul 28:807-18 Mr 1 '47
Bookless bookkeeping system speeds accounts receivable at Hudson manufacturing company. J. Turner. il Am Bsns 17: 12-13+ Mr '47
Budgetary control of manufacturing and commercial expense. J. B. Heckert. N A C A Bul 28:869-80 Mr 15 '47
Calculating payout time for equipment investments. W. H. Buell. Chem Eng 54:97 O '47
Control of major maintenance expense. T. F. Bradshaw. N A C A Bul 28:747-56 F 15 '47
Controlling expenses and losses by cost accounting. T. R. Hosick. J Account 83:308-12 Ap '47
Costs in relation to production runs. R. E. Staunton. N A C A Bul 28:1117-27 My 15 '47
Depreciating assets replacement becoming most serious problem. Iron Age 160:237-40 O 16 '47
Detail expense reports that spotlight excess spending. J. Turner. il Am Bsns 17:12-13+ Ag '47
Graphic system to control costs; Cribben & Sexton company. J. Turner. il Am Bsns 17: 8-9+ Ap '47
Greater output per dollar; new approach to handling of depreciation reserves and fixed asset accounts; replacement and modernization program. L. D. McDonald. il Iron Age 160:71-3 Ag 21 '47
Methods of distribution cost analysis. H. I. Arenson. N A C A Bul 29:13-24 S 1 '47
Payroll, costs, and personnel figures from one system; Ferro machine & foundry company. J. Turner. il Am Bsns 16:16-17+ D '46
Picturing production costs; a formula approach; determining machine-hour rates without the use of a burden ledger. H. Kilborn. il diags Dun's R 55:16-19+ F '47
Production; economic lot sizes in manufacturing. P. T. Norton, jr. Manuf Rec 116: 46-7+ O; 41-2 N; 41-2+ D '47
Profit-volume relationship. C. H. Gleason. N A C A Bul 28:1330-51 Jl 1 '47
Role of the certified public accountant in industrial accounting. G. D. McCarthy. J Account 83:120-3 F '47
Teamwork; accounting and management; paper converting plant. K. H. Bergstrom. N A C A Bul 28:550-9 Ja 2 '47
Time standards; their systematic use in industrial management. H. G. Houghton. Automobile Eng 37:171-4 My '47
Top management gets the figures; Formfit's accounting system. J. Turner. il Am Bsns 16:8-9+ N '46
What cost accounting means to a production executive. W. K. Bailey. N A C A Bul 28: 851-8 Mr 15 '47
What foremen should know about costs. R. J. Spence. Am Mach 91:130 My 22 '47
What operating management needs from accountants. T. M. Chalmers. N A C A Bul 28:489-99 D 15 '46

See also
Depreciation
Factories—Records
Inventories—Accounting
Paper mills—Accounting
Payrolls—Accounting
Shoe factories—Accounting

Air conditioning

Air conditioned just to make sure; Campana plant. il Dom Eng 170:110-11+ Ag '47
Air distribution makes or breaks air conditioning. L. R. Phillips. il Power Pl Eng 51:73-5 My '47
Exacting air conditioning installation; problems included two testing rooms and four cafeterias. il plans diags Sheet Metal Worker 38:108+ Ja '47
Factory in a railway tunnel; wartime use of miles of London subway. S. C. Mount. il diag Heat & Ven 43:74-7 O '46; Abstract. Heating-Piping 18:94-5 N '46
Is air conditioning profitable in industry? N. N. Wolpert. Heat & Ven 43:65-6 D '46

See also
Air conditioning, Industrial
Factories—Heating and ventilation
Textile mills—Air conditioning

Branch factories

See Branch factories

Cleaning

See also
Cotton mills—Cleaning

Cleanliness

Clean-up for health. Safety Eng 94:47-8 Jl '47
Good housekeeping under difficulties. R. Bernheim. il Factory Management 104:134-5 N '46
Housekeeping plus housecleaning needed to maintain safe and efficient plant. il Nat Safety N 54:46+ D '46
How to rate your housekeeping. H. C. Blankmeyer and L. F. Kacel. il Factory Management 105:90-3 Mr '47
Non-financial awards promote good housekeeping; General instrument corporation. T. E. Keller. il Factory Management 105:133-4 Jl '47
Plant maintenance. il Nat Safety N 55:157+ Mr '47

See also
Foundries—Cleanliness

FACTORIES—Cleanliness—*Continued*

Electric equipment

Capacitors for power factor correction. R. E. Marbury. il diags Power Pl Eng 51: 108-13 Mr '47

Capacitors improve load characteristics. Elec World 127:62 Ja 4 '47

Chose high-tension service to solve power problem. J. Carnila. il diag Factory Management 104:116-17 O '46

Demand control through supervision. E. G. Schlup. il diags Elec World 127:56-7 F 1 '47

Economic advantages of higher industrial voltages. R. H. Kaufmann. diags Gen Elec R 49:35-8 N '46

Electric systems for industrial plants. R. R. Nissley and H. Speight. il diags Eng N 139:454-6 O 2 '47

Electrical and allied developments of 1946; industrial equipment, applications. G. Bartlett. il Gen Elec R 50:23-31 Ja '47

Electrical control of dangerous machinery and processes. W. F. Cooper. diags Inst E E J 94 pt 2:216-27 Je '47; Abstracts. Electrician 137:1364 N 15 '46; Elec R (Lond) 139:836 N 22 '46; Discussion. Inst E E J 94 pt 2:227-32 Je '47; Electrician 137:1443-4 N 22 '46; Elec R (Lond) 139:836-7 N 22 '46

Electrical spares; requirements in factories. F. G. Marshall. Elec R (Lond) 141:391-2 S 12 '47

Fuses protect 13.2-kv industrial service. H. W. Grate. il diag Elec World 128:80-1 Ag 16 '47

Inspection and maintenance guide for electrical equipment hazards. G. E. Walters. Safety Eng 94:12-13+ Jl '47

Lightning damages, how to prevent them. E Beck. diags Steel 121:88 S 22 '47

Motors, controls, switches, and relays. il Factory Management 104:166+ D '46

Neutral grounding limits industrial system faults. R. L. Witzke. diags Elec World 127: 87-9 My 10 '47

Organization of industrial electrical maintenance. J. C. B. Nicol. bibliog Inst E E J 92 pt 2:166-71 Je '45; Discussion. 92 pt 2: 171-6, 593-609; 94 pt 2:159-64 Je, D '45, Ap '47

Primary distribution reduces plant's power problems; Otis elevator co. W. G. Nutzel. diags Elec World 126:74-5 D 21 '46

Revamping electrical distribution systems. D. L. Beeman. il diags Factory Management 105:113-24 O '47

Revised electrical distribution for greater flexibility; Liquid carbonic corp., Chicago. R. B. Burton. il diag Factory Management 104:96-9 D '46

See also

Airplane factories—Electric equipment
Electric driving
Paper mills—Electric equipment

Equipment

Cost reduction through better utilization of tools and equipment; abstract. L. J. Bayer. Management R 36:89-91 F '47

Modernization; a solution to our cost-price problem? W. Gates. il Mag of Wall St 79: 242-3+ D 7 '46

New equipment; plant service (cont). il Iron Age 158:81-4 D 12 '46; 159:67-72 F 13 '47

Scale-model planning gets five big cost-saving results; Nineteen hundred corp. E. Gray. il Factory Management 105:108-9 O '47

Straight-line methods treble former output; Kalamazoo stove & furnace company. A. L. Blakeslee. il Factory Management 104: 90-1 N '46

34th annual review number; plant service equipment, parts and materials. il diags Am Mach 91:195-212 Ja 16 '47

See also

Conveying machinery
Equipment industries
Factories—Maintenance and repair
Lavatories
Machinery, Replacement of
Mechanical handling
Power plants

Expansion

Finding new products to fill expanded plants; Warner & Swasey co. il Product Eng 18: 85-8 Jl '47

General motors corporation; new plant for Truck & coach division at Pontiac, Mich. il Factory Management 105:B63-5 pt 2 Ap '47

Plant expansion tapering off; with list of recent industrial construction projects. Bsns W p21-2 N 9 '46

Quonset factory buildings expand plant capacity; York-Shipley, inc. il Eng N 138:428 Mr 20 '47

Recent expansion moves by process industries. Chem Eng 53:180+ D '46

Sell and produce abroad for profit; export of technology to build foreign plants for the production of products which cannot be exported. A. Rooseboom. il Chem Ind 60: 605-6 Ap '47

United States rubber company; new plant at Detroit. il Factory Management 105:B54-7 pt 2 Ap '47

See also

Branch factories

Experimental plants

Pilots to profits. E. L. Cady. il Sci Am 176: 69-70+ F '47

See also

Chemical plants—Experimental plants

Fire protection

See Factory fire brigades; Fire protection

Floors

Are we slipping; recording conditions contributing to slips and falls. F. C. Narber. il Safety Eng 93:14-15+ Ja '47

Floor care at low cost. H. C. Henderson. il Factory Management 105:139-41 Jl '47

Here's a floor for severe service; Lee rubber & tire corporation. F. Leopold. diags Factory Management 104:105 D '46

How to rate your housekeeping. H. C. Blankmeyer and L. F. Kacel. il Factory Management 105:90-3 Mr '47

Plant walkways. il Nat Safety N 55:85-6 Mr '47

Resurfacing areas; asphalt mastic materials for floor repair and construction. Mech Eng 69:851-2 O '47

Safe walkway surfaces. P. A. Sigler and A. T. McPherson. Nat Safety N 55:10+ Mr '47

See also

Chemical plants—Floors
Textile mills—Floors

Foreign branches

See Branch factories, Foreign

Grounds

Beauty in industry. E. Mottershead. il Iron Age 160:54-5 Jl 17 '47

Better grounds make better factories. E. L. Cady. il Sci Am 177:110-12 S '47

Industry can have beauty. il Comp Air Mag 52:200-1 Ag '47

Rheem's industrial garden. D. Meredith. il Manuf Rec 116:83+ Ja '47

See also

Factories—Yards

Heating and ventilation

Air hygiene is favored topic at industrial health meetings in Buffalo, April 26-May 4. Heat & Ven 44:112-13 Je '47

Air recirculation from exhaust systems. J. M. Kane. il Heat & Ven 44:75-7 Ap '47

All-electric unit heaters; Mountain City mill co. il Heat & Ven 44:96 Jl '47

Avoiding wet walls in high humidity industrial plants. G. R. Morgan. Heat & Ven 43:74-9 N '46

Conversion to fuel oil. F. J. Erroll. Chem Age (Lond) 55:671-3 N 30 '46

Dravo industrial heater. il Blast F & Steel Pl 35:380+ Mr '47

Fan my brow! methods of minimizing summer heat. il Nat Safety N 55:33+ Je '47

Forty miles of piping used in new plant's radiant heating system; A. O. Smith corp. il Steel 119:112-13+ S 23 '46; Abstract. Am Gas J 166:35-6 F '47

FACTORIES—Heating and ventilation—*Cont.*
Fume removal and ventilation of industrial buildings. B. B. Reilly. il diags Eng N 139: 529-31 O 16 '47
Getting heat down to the floor; Bemis bag co. O. W. Ott. il diag Heating-Piping 19:75 My '47
Heating and ventilating a modern factory. S. R. Lewis. Western Soc E J 52:93-5 Je '47
High temperature water for radiant heating system. diag Heating-Piping 19:73 Je '47
Night cooling industrial plants. il Steel 120: 80 Je 30 '47
Plant work zones heated by discharges of warm air above heads of workers. il Steel 121:100 S 22 '47
Recirculating cleaned air frequently found hazardous. Safety Eng 92:91+ O '46
Some aspects of the ventilation of factories, with particular reference to the annual report of the chief inspector of factories; discussion. il diags Inst Mech Eng J & Proc 154:Proc 344-50 D '46
Unit heaters, finned pipe radiation for standardized factory building. il Heating-Piping 19:77 Ap '47
Ventilation dividends. A. D. Brandt. il Nat Safety N 56:90-2+ O '47
Ventilation; keeping contaminants out of the air. il Nat Safety N 55:17+ Mr '47

See also
Exhaust systems
Foundries—Heating and ventilation

Layout

Consolidated layout quadruples handling capacity; Parker appliance company combines inspection packaging and shipping departments in one work area. C. J. Giblin. il Factory Management 105:96-9 F '47
Flow layout means more output at less than estimated cost; Crosley's Cobra engine. H. E. Brazier. flow plan il Factory Management 105:76-9 O '47
For planning plant layout; standards for templates and three-dimensional models being developed. R. W. Mallick and R. Rimbach. il diags Ind Stand 18:48-50 Mr '47
H. K. Porter, inc.; new plant at Somerville, Mass.; fabrication of hand cutting tools and a forge and heat-treating shop. il Factory Management 105:B66-9 pt 2 Ap '47
Layout for functional aspects. F. E. Oakhill. Western Soc E J 52:79-81 Je '47
Layout for productive operations. E. P. Berg. Western Soc E J 52:78-9 Je '47
Materials handling in multi-storey buildings. H. M. Harman. il Mech Handling 34:519-22 O '47
New layout returned first cost in three months. W. D. Weidner. il Factory Management 105:72-4 Ag '47
New layout wipes out a storage; Day-Brite lighting fixtures. R. V. Wilk. il Factory Management 105:105 O '47
New plant laid out faster and surer with model. J. H. Gillies. plans Factory Management 104:156-7 O '46
Photographs of scale model layout simplify plant changes; Victor adding machine co. R. F. Bartlett. il Factory Management 104: 142-4 N '46
Planning a plant layout. R. Spurgin, jr. diags Iron Age 158:73-5 D 19 '46
Plant layout for materials handling. H. M. Harman. diags Mech Handling 34:125-8 Mr '47
Plant layout; many hazards can be avoided. il Nat Safety N 55:15-16+ Mr '47
Plant layout with us is a cost-cutting tool; R. G. Le Tourneau, inc. O. W. Nelson. il Factory Management 105:57-9 Ap '47
Plant model insures success in layout changes. W. F. Pioch. il Factory Management 105:130-2 Jl '47
Porter forge and tool factory, Somerville, Mass. il diags Arch Forum 87:61-6 Ag '47
Relocation of plant equipment pays high dividends; Insley mfg. corp. il Steel 120:114+ Ap 14 '47
Revamped shipping layout cuts costs ten to thirty per cent; Lincoln electric co. C. M. Erickson. Factory Management 105:70-1 S '47
Scale model helps plan multi-story handling. il diag Factory Management 105:74-5 Je '47
Short flow lines reduce handling. H. M. Harman. il plans Mech Handling 34:306-10 Je '47
Standardized handling methods and layout integrate material movement; General Electric Erie works. F. E. Bliven. il Am Mach 91:78-82 Jl 31 '47
Storage in key areas cuts floor space 60 per cent; United specialities company, Chicago. N. Quigg. il Factory Management 105:125 Ag '47
Three-dimensional model shows the shape of things to come; planning factory layouts. H. G. Jarman. il Mech Handling 33:685-7 N '46
Visual layout previews production; Ford Highland Park plant. H. S. Wharen. il plans diags Am Mach 91:113-16 Ag 14 '47
Visual production planning; employing three dimensional models of machines, benches and other equipment; Maytag co. il Iron Age 159:57 My 15 '47
Why three-dimensional layout. il Factory Management 104:93 D '46

See also
Automobile factories—Layout
Machine shops—Layout

Lighting

Better lighting; better work. J. S. Walsh. il Food Ind 18:1548-50+, 1705-7+ O-N '46
Better vision boosts production. A. C. Holland. il Sci Am 176:245-8 Je '47
Canada adopts color and lighting code for industry. Safety Eng 93:38-9 Je '47
Factory lighting; annual report of the chief inspector of factories, 1945. H. E. Chasteney. Light & Lighting 40:28-30 F '47
Good plant lighting is profitable lighting. J. C. Forbes and J. L. Tugman. il diag Iron Age 160:68-73 O 9 '47
How to budget industrial lighting costs. J. C. Forbes and J. L. Tugman. il Steel 120:102-5+ Je 23; 68-70+ Je 30 '47
How to figure the cost of light. J. C. Forbes. table Factory Management 105:68-72 Ap '47
Industrial problems of natural lighting. P. J. Waldram. Light & Lighting 40:85-6 My '47
Light and colour in factories. W. Robinson. Electrician 138:1011 Ap 18 '47
Light for sight. il Nat Safety N 55:18+ Mr '47
Lighting engineer in industry. S. D. Lay. Light & Lighting 40:55-6 Mr '47
Lighting in industry. Safety Eng 92:42 D '46
Lighting is a production tool. E. E. Elliott. Western Soc E J 52:96-9 Je '47
Mercury-incandescent lighting for high bays. W. W. Wendelken. il diags Factory Management 105:128-31 Ag '47
Plant lighting. H. Reinhardt. il Factory Management 105:111-22 Je '47
Point method of rating industrial lighting. W. Allphin. il Illum Eng 41:719-36 N '46
Safe light for spray booth. il Elec West 99: 82 S '47
Les sources d'éclairage industriel. A. Gouffé. il diags Chimie & Ind 57:126-35 F '47

See also
Textile mills—Lighting

Location

Factors affecting relocation of industry; power needs. H. F. Rech. Edison Elec Inst Bul 15:274-6 Jl '47
Industry fans out. map Bsns W p31-2 N 23 '46
Need for basic data in selecting plant location. J. Jackson. Dom Comm 35:28-32 Je '47
Process equipment cost estimation; considerations in industrial plant site cost. O. E. Sieder. Chem Eng 54:117 My '47
Significant factors in plant location; abstract. W. R. Spriegel. Management R 36:6-9 Ja '47

See also
Steel works—Location

Lunchrooms

See Lunchrooms and cafeterias, Employees'

FACTORIES—*Continued*

Maintenance and repair

Budgetary control of plant maintenance costs. E. V. Hopton. N A C A Bul 28:426-37 D 1 '46

Control of major maintenance expense. T. F. Bradshaw. N A C A Bul 28:747-56 F 15 '47

Cost of maintenance in seventy-six industries; compiled from data contained in survey of Securities and exchange commission; tabulation. Factory Management 105:96a-96d Je '47

Elaborate maintenance surveys key to plant fitness; Western Electric's Kearny works. H. L. Husson. il Factory Management 105: 80-3 My; 79-82 Je '47

Fitting maintenance paperwork to size of job; Motorola. C. W. Gramlich. il Factory Management 105:82-5 O '47

Five safety committees stimulate better maintenance. J. Penberthy. il Factory Management 104:153-5 O '46

Floor care at low cost. H. C. Henderson. il Factory Management 105:139-41 Jl '47

Flow chart points way to low-cost maintenance; National screw & manufacturing co. R. D. Fell. Factory Management 105:84-6 Mr '47

Improving maintenance work; case study at Arvida works, Aluminum company of Canada; abstract. H. A. Estabrook. Management R 35:471-3 N '46

Instilling safety habits in maintenance workers. H. M. Bradley. il Factory Management 105:90-2 My '47

Keeping maintenance costs in line with forecasts; Hercules powder company. J. G. Christfield. il Factory Management 105:129-32 Ja '47

Maintenance budget matches manpower and work load; Thompson Products. P. H. Burkons. Factory Management 105:106-8 S '47

Maintenance is well done because well planned; Goodyear tire & rubber company. E. Clark. Factory Management 105:109 F '47

No red tape in this maintenance program; Wallace & Tiernan co. R. H. Heidrich. Factory Management 105:123-6 Mr; 84-6 Ap '47

Planned upkeep pays off as never before. Factory Management 105:B72+ pt 2 Ap '47

Planning gets maintenance work done on time; Ford instrument company. G. S. Stringer. il Factory Management 104:110-12 O '46

Preventive maintenance based on four records. J. R. Clemens. il Factory Management 105:82-5 Ag '47

Speeding upkeep with job scoreboard; Signode steel strapping company. J. M. McGregor. Factory Management 105:89 Ja '47

Three-form cost control; Illinois tool works, Chicago. E. F. Sharpe. Factory Management 104:98-9 O '46

Upkeep program for dust and fume collectors. A. V. Bolt. il Factory Management 105:76-7 Ag '47

Utilizing mechanized handling to speed maintenance; Bethlehem Steel. T. A. Lewis. il Factory Management 105:110-12 Ag '47

See also

Lubrication and lubricants—Records

Paper mills—Maintenance and repair

Moving

Plants on the move keep right on producing. il Bsns W p21 S 13 '47

Noise

See Noise

Painting

Can factory painting be effectively standardized? C. B. Ryder. diags Ind Stand 18: 216-19, 252-6 S-O '47

Colour affects costs. B. J. McGuire. Pulp & Pa of Can 48:70-1 Je '47

Colour in factories; abstract. H. D. Murray. Light & Lighting 40:49-50 Mr '47

Color makes the clock tick! transforming idle plant into efficient productive unit; William L. Gilbert clock corp. H. E. Cleveland. Safety Eng 93:15+ My '47

Factory lighting; annual report of the chief inspector of factories, 1945. H. E. Chasteney. Light & Lighting 40:28-30 F '47

Industrial use of colour should be scientifically calculated. Pulp & Pa of Can 48:97 S '47; Same. Paint Oil & Chem R 110:26 O 2 '47

Paint can cut your production costs. A. W. Gray. il Inland Ptr 119:48-50 Jl '47

Paint saves more than the surface. il Nat Safety N 55:20+ Mr '47

Painted the plant in colors, here's how; Gillette safety razor company. W. J. L. Roop. il Factory Management 105:91-3 Je '47

Protection

See also

Factory fire brigades

Records

Care and handling of gages in quality control; Adel precision products corporation. L. S. Schickle. il Factory Management 104: 153-6 D '46

Closer inventory control helps double production. J. Wahowski. il Factory Management 105:126-7 O '47

Fitting maintenance paperwork to size of job; Motorola. C. W. Gramlich. il Factory Management 105:82-5 O '47

Manual coordinates decentralized stocks; Westinghouse electric corp. G. R. Kepner. il Am Mach 91:110-12 O 23 '47

Matching inventory with sales; experience of Buda company. il Am Bsns 17:24+ S '47

No red tape in this maintenance program; Wallace & Tiernan co. R. H. Heidrich. Factory Management 105:123-6 Mr; 84-6 Ap '47

Planning paperwork. H. P. Dutton. il Factory Management 104:130-1 D '46

Preventive maintenance based on four records. J. R. Clemens. il Factory Management 105:82-5 Ag '47

Property records and depreciation accounting on punched cards. J. G. Sidak. il N A C A Bul 28:1352-8 Jl 1 '47

Quick figures mean more sales; experience of Stronghold screw products. J. Turner. il Am Bsns 17:12-13+ My '47

Simple repair cost record guides machine maintenance. J. R. McLain. Factory Management 105:110-12 O '47

Solve your handling problems with these three forms; Westinghouse Electric. R. W. Mallick. Factory Management 105:102-3 Je '47

Three-form cost control; Illinois tool works, Chicago. E. F. Sharpe. Factory Management 104:98-9 O '46

See also

Automobile factories—Records

Engineering departments—Records

Lubrication and lubricants—Records

Production control

Punched card system

Roofs

Factory roof replaced without exposing interior; Mt Vernon, Ohio, plant of the Pittsburgh plate glass co. il Eng N 138:18 Ja 2 '47

Industrial roof replaced without interrupting operations; Pittsburgh plate glass co. C. B. Robbins. il Cer Ind 48:83-4 Mr '47

Roof trusses with welded joints tested by jacking against each other; General electric co.'s electronic-device research and manufacturing center. il Eng N 138:878-9 My 29 '47

Space-saving shift moves large finishing ovens to plant roof; Cavalier corp. il Steel 120:107 My 19 '47

Sanitation

See Factory sanitation

Visitors

See Visitors

Water supply

See Water supply for factories

Yards

Outdoor housekeeping; planning and maintenance of plant yards. Nat Safety N 55: 52 Ap '47

FACTORIES, Outdoor
Insulating unhoused plants. D. von Ludwig. il diags Chem Eng 54:114-17 Mr '47

FACTORIES, Underground
Aircraft engine plant goes underground; Swedish factory; illustrations with text. il Aviation 46:56-7 Ja '47
Army investigates feasibility of building underground war plants. Steel 120:65 My 19 '47
Factory in a railway tunnel; wartime use of 5 miles of London subway. S. C. Mount. il diag Heat & Ven 43:74-7 O '46; Abstract. Heating-Piping 18:94-5 N '46
If war should drive plants underground. Nat Safety N 56:84-5 S '47
In a hole and liking it; Sweden's basic industries. il Bsns W p17 N 30 '46
Nipponese nightmare; aircraft industry in war; underground factories. S. P. Johnston. il Tech R 49:398-400+ My '47
Sweden finds underground factories practicable for peacetime work; abstracts. il Eng N 137:754 D 5 '46; Aviation N 6:18 D 30 '46
Underground facilities are better protection against bombing than heavy concrete construction. Civil Eng 17:420 Jl '47; Same cond. Elec Eng 66:537 Je '47
Underground factories? Eng N 138:347 F 27 '47
Underground factories; experience of the Germans. Mech Eng 69:600 Jl '47
Underground industrial plants have limited possibilities. R. H. Oppermann. Franklin Inst J 244:321 O '47
Underground industrialization. Elec Eng 66: 537 Je '47
Underground plants are feasible for textiles. J. A. McPherson, jr. il plan Textile World 97:114-15+ Mr '47
Would you like to be a mole? il Bsns W p17-18 F 15 '47

FACTORY communication
Customer specifications teletyped to assembly; Kaiser-Frazer corporation, Willow Run, Mich. H. J. Bustetter. il Factory Management 105:86-8 Je '47
First factory F-M radiophone; Haskell and Barker freight car plant. il Electronics 20:188+ Mr '47
Tailor-made cars by teletype; production scheduling at Dodge plant of equipment and combinations of body types, colors, accessories and other options. J. Geschelin. il Automotive Ind 97:32-3+ Jl 15 '47

See also
Radio telephone in factories

FACTORY costs
Cost of maintenance in seventy-six industries; compiled from data contained in survey of Securities and exchange commission; tabulation. Factory Management 105:96a-96d Je '47
Designing for economy of material, tooling, labor. K. W. Schmidt. il diags Product Eng 18:132-6 Ja '47
Flow chart points way to low-cost maintenance; National screw & manufacturing co. R. D. Fell. Factory Management 105:84-6 Mr '47
How to budget industrial lighting costs. J. C. Forbes and J. L. Tugman. il Steel 120: 102-5+ Je 23; 68-70+ Je 30 '47
Keeping maintenance costs in line with forecasts; Hercules powder company. J. G. Christfield. il Factory Management 105:129-32 Ja '47
Production costs are expected to increase further. Steel 120:sup22-5 Ja 6 '47

See also
Labor cost
Machine shops—Costs

FACTORY fire brigades
Emergency squad strengthens defense against fires; Simplex wire & cable company, Boston. G. A. Van Brunt. il Factory Management 105:94-5 F '47
Employee fire units; Alexander Smith company. il Safety Eng 93:16+ Je '47
Fire and accident hazards can and do affect profits. il Rayon 27:615-17 N '46
On-the-job training in fire loss prevention. J. A. McGuckin. il Safety Eng 93:16+ F '47
Organization; men and equipment. il Nat Safety N 55:137-8 Mr '47

FACTORY floors. See Factories—Floors

FACTORY inspection
Elaborate maintenance surveys key to plant fitness; Western Electric's Kearny works. H. L. Husson. il Factory Management 105: 80-3 My; 79-82 Je '47
Factory report; suggestions for ensuring safety; abstracts. H. E. Chasteney. Elec R (Lond) 140:5 Ja 3 '47; Electrician 138:53-4 Ja 3 '47

FACTORY insurance association
F.I.A. cancels RFC business; puts end to 10 per cent discount. Nat Underw 51:3+ Je 12 '47
FIA sets forth explicit purpose of new fire safety laboratory. East Underw 48:22 Ag 1 '47
Opens fire safety laboratory in Hartford; abstracts. C. W. Pierce. il East Underw 48: 14 Jl 4 '47; Nat Underw 51:3 Jl 3 '47; Weekly Underw 157:5+ Jl 5 '47
President's report for 1946; abstracts. C. W. Pierce. East Underw 48:1+ Mr 28 '47; Weekly Underw 156:869+ Mr 29 '47

FACTORY laws and legislation

See also
Labor laws and legislation

FACTORY lunchrooms. See Lunchrooms and cafeterias, Employees'

FACTORY management
Better vision for greater efficiency. E. F. Richardson. il Factory Management 105: 109-16 S '47
Cases in work simplification; Casco products corporation, Bridgeport. il diag Factory Management 105:97-9 Jl '47
Check list for controlling costs. Management R 36:420 Ag '47
Concentrated attack aims at 10 per cent lower cost; Lincoln electric company, Cleveland. C. E. Erickson. il Factory Management 105:71-4 Mr '47
Control in small businesses. P. F. Lawler. Harvard Bsns R 25 no 4:521-6 [Jl] '47
Cost reduction. T. D. Foy. N A C A Bul 28:1065-75 My 1 '47
Cost reduction through better utilization of tools and equipment. L. J. Bayer. Advanced Management 12:29-34 Mr '47; Abstract. Mech Eng 69:509 Je '47
Costs for management decisions. E. M. Hicks. N A C A Bul 28:1471-83 Ag 1 '47
Engineers will mold the future. C. J. Lamb. il Sci Am 177:197-200 N '47
How to use carbide cutters for milling; converting to carbide milling; educating management. H. A. Frommelt. il Iron Age 159: 62-5 My 15 '47
Ideas for methods improvement. Management R 36:474-6 S '47
Looking both ways. C. D. Gibb. Engineering 163:127 F 7 '47
Operating a systems department; Camden plant of RCA Victor division. T. A. McMullen. N A C A Bul 28:819-28 Mr 1 '47
Organization for cost reduction. M. A. Smith. N A C A Bul 28:1391-5 Jl 15 '47
Plant yield studies cut losses. G. F. Schlaudecker. il Chem Ind 60:408-10 Mr '47
Production clinic; clash of personalities. E. G. Thomssen. Soap & San Chem 23:81+ F '47
Production clinic; problem of long distance supervision. E. G. Thomssen. Soap & San Chem 23:87 Ap '47
Production engineering fundamentals; management data sheets. B. A. Moski, jr. Factory Management 105:136+ Ag '47
Production planning. H. P. Dutton. il Factory Management 104:121-32 D '46
Purpose and organization of a development department. R. D. Gartrell. il Product Eng 18:81-4 Ap '47
Responsibility for establishing, maintaining time standards; data sheet. G. Z. Wallam. Factory Management 105:134+ S '47
Semicircular chart shows who's who in the plant; Reynolds wire co. R. T. Finnell. Factory Management 105:92-3 O '47

FACTORY management—*Continued*
Standard systems; vital aid to management; staffing and functioning of a systems department; types of publications. T. A. McMullen and J. H. Quick. il Iron Age 158:48-50 D 26 '46
Streamlining industrial methods. G. A. Visser. Steel 120:89+ Ap 14 '47
Time standards; their systematic use in industrial management. H. G. Houghton. Automobile Eng 37:171-4 My '47
We need more cooperation among engineers and production men. D. V. Ludwig. Materials & Methods 25:63-7 Mr '47

See also
Assembling methods
Branch factories
Chemical plants—Management
Control boards
Control charts
Dental service, Industrial
Efficiency, Industrial
Employees
Employees' benefit plans
Employees' representation in management
Employment management
Employment systems
Engineering departments
Executives
Factories—Accounting
Factories—Cleanliness
Factories—Heating and ventilation
Factories—Maintenance and repair
Factories—Records
Factory costs
Factory transportation
Foremen
Foundry management
Hours of labor—Shift schedules
Hygiene, Industrial
Idleness, Industrial
Industrial engineering
Industrial management
Inspection
Inventories
Job analysis
Machine shop management
Machine works—Management
Material control
Material handling
Mechanical handling
Medical service, Industrial
Metal waste
Metal working plants—Management
Music in industry
Noise
Office management
Packaging
Packing for shipment
Planning
Production and sales, Coordination of
Production control
Purchasing
Purchasing departments
Quantities (in production)
Research departments
Routing systems
Safety devices and measures
Salvage (waste, etc.)
Shipment of goods
Standardization
Stores systems
Suggestion systems
Textile mills—Management
Time study
Tool rooms
Visitors
Wage payment plans
Watchmen
Welfare work in industry

Quality control

Application of statistical methods in industry. W. T. Rogers. Steel 120:82 Ja 20 '47
Care and handling of gages in quality control; Adel precision products corporation. L. S. Schickle. il Factory Management 104:153-6 D '46
Charts help diagnose quality progress. E. Goddess. Am Mach 91:96-100 Je 5 '47
Chemistry in quality control. R. B. Faurote. il Aero Digest 55:78+ Jl '47
Common-sense quality control. E. L. Fay. il Am Mach 91:76-8 S 25; 110-13 O 9 '47
Control of quality in steel manufacture. A. O. Schaefer. il Metal Prog 50:815-19+ N '46
Control of raw materials and processes assures quality aluminum forgings. L. J. Barker. il Materials & Methods 25:63-7 My '47
Engineering and quality control. P. L. Alger. Elec Eng 66:16-19 Ja '47
Fault detector in quality control. H. T. McLean. il diags Gen Elec R 50:52-5 Ap '47
How statistical quality control is being applied at Timken-Detroit plant. il Automotive Ind 97:29+ O 1 '47
How to analyze production rejects. E. Goddess. Am Mach 91:111-13 My 8 '47
How to increase tolerances and obtain closer fits. E. E. Bates. il diags Iron Age 160:58-61 Jl 3 '47
How to use statistical methods in quality control. R. J. Davis. Chem Eng 53:115-17 D '46
Installing a quality control program. N. L. Enrick. il Materials & Methods 25:90-3 Mr '47
Introduction to industrial statistics and quality control. P. Peach. 2d ed 235p $5 Edwards and Broughton co., Raleigh, 214 S. Salisbury st, N.C. '47; Review, by L. C. Young. Mech Eng 69:843-4 O '47
Mass production without sacrificing quality of products; Plasticrete corporation. B. Nordberg. il Rock Prod 50:174-7+ Ja '47
Method for evaluating and reporting product quality. J. B. Catlin and J. G. Strieby. Paper Tr J 124:57-60 Ap 10 '47
One in 10 an inspector; quality control system, Monroe auto equipment co. il Steel 119:70-2 D 30 '46
Organization of quality control as a management tool. T. D. Foy. Elec Eng 66:483-6 My '47; Same cond. Machine Design 18:127-30 N '46
Plant organization for quality control. D. E. Durst. Elec Eng 66:486-7 My '47
Practical application of statistical methods in a quality control program. W. T. Rogers. bibliog Am Soc for Metals Trans 36:361-82 '46; Same cond. Steel 118:119-20 F 11 '46; Same. Blast F & Steel Pl 34:233-5 F '46; Abstract. Chem & Met Eng 53:274+ Ap '46; Discussion. Am Soc for Metals Trans 36:382-8 '46
Practical aspect of modern quality control methods. C. W. Kennedy. Iron Age 159:66-9 Ap 10 '47
Quality control aids supervisors. D. T. Armstrong. bibliog il Am Mach 91:101-5 F 13; 96-100 F 27; 133-6 Mr 13; 104-7 Mr 27 '47
Quality control, an important factor in competitive production. J. R. Steen. Steel 121:89+ Jl 7 '47
Quality control at Cadillac based on latest methods. il Automotive Ind 97:27+ Ag 1 '47
Quality control for the pulp and paper industry. C. A. Bicking. bibliog Paper Tr J 124:63-7 Ap 24 '47
Quality control goes versatile; sampling technique now expanding in use. il Bsns W p46+ Je 21 '47
Quality control handbook. E. Goddess. Steel 120:70-3 Ja 20 '47
Quality control in production testing of single-phase watthour meters. T. M. Wallis. il Gen Elec R 50:38-41 Ap '47
Quality control service performed by Malleable founders' society. Foundry 75:100+ My '47
Sampling techniques applied to quality control. E. Goddess. bibliog Iron Age 158:70-5+ D 12 '46
Statistical and quality control methods in industrial chemistry; second Westman memorial lecture. A. E. R. Westman. bibliog diags Can Chem & Process Ind 31:716-25+ Ag '47
Statistical control cuts scrap cost 88 percent; Federal products corporation, Providence. C. W. Kennedy. il Factory Management 104:102-5 N '46
Statistical survey of some hardened steel forgings. R. F. Mather. il Metal Prog 51:79-85 Ja '47
Teaching of statistics for quality control. L. A. Knowler. J Eng Educ 37:709-13 My '47
Three-way control for low-cost operation; Lenox incorporated. J. M. Tassie. il Factory Management 104:110-12 D '46
Use of electric gauges in quality control. J. Manuele. il diag Elec Eng 66:441-4 My '47
Use of instruments for controlling quality. J. Manuele. il Mach 53:156-9 F '47

See also
Food factories—Quality control
Inspection

FACTORY sanitation

Aerosol technique provides plant-scale insect control. E. C. Barnes and others. bibliog il diags Chem Ind 60:238-40+ F '47
Custodial services in plant sanitation. J. S. Felton. bibliog Ind Med 16:331-5 Jl '47

FACTORY sanitation—*Continued*
DDT for insect control in industrial plants. H. I. Scudder. bibliog il Safety Eng 93:58-63 F '47
How to rate your housekeeping. H. C. Blankmeyer and L. F. Kacel. il Factory Management 105:90-3 Mr '47
Personal services; facilities that promote comfort and hygiene. il Nat Safety N 55: 158+ Mr '47
Sanitary dishwashing in the plant cafeteria. R. C. Strong. il Safety Eng 94:86-7 O '47
Sanitation in cheese factories. C. R. White. Soap & San Chem 23:147 F '47

See also
Dust collectors
Factories—Cleanliness
Food factories—Sanitation
Lavatories
Packing houses—Sanitation

FACTORY transportation
Containers are controlling factor in production increase; Euclid road machinery company, Cleveland. H. T. Monson. il diags Factory Management 105:89-92 Jl '47
Handling and transport of materials in a modern factory. W. L. Beeby. il Mech Handling 34:255-8+, 311-12 My-Je '47
Handling organized for mass production; Kaiser-Frazer corp. E. M. Argersinger. il Am Mach 91:98-100 O 23 '47
Small-plant handling by power truck; Electrolux corporation. il Factory Management 105:123-4 My '47
Standardized handling methods and layout integrate material movement; General Electric Erie works. F. E. Bliven. il Am Mach 91:78-82 Jl 31 '47
Unit-load handling protects products; Mack manufacturing corporation; illustrations with text. E. R. Klein. Am Mach 91:92-4 Ag 28 '47

See also
Conveying machinery
Electric trucks, Industrial
Material handling
Mechanical handling
Monorail conveyors
Motor trucks, Industrial
Pallets
Tractors, Industrial
Trucks

FACTORY visitors. See Visitors

FADE-OMETER
Atlas ometers in retrospect. C. W. Jameson. il Am Dyestuff Rep 35:sup74-7 D 2 '46

FADING. See Dyes, Fastness of

FADING, Radio. See Radio transmission—Fading

FAIR employment practice committee
Termination of work of federal FEPC. Mo Labor R 64:1068-9 Je '47

FAIRBANKS, Morse and company
Debentures offered. Comm & Fin Chr 165: 2412-13 My 5 '47
Fairbanks, Morse receives unusual response to historical book. F. J. Cummings. il Ind Marketing 32:41+ My '47
Old company, young ideas. Bsns W p59-64 My 17 '47

FAIRCHILD engine and airplane corporation
Fairchild reports largest peace profit in company history. Aviation W 47:20 O 20 '47; Barron's 27:33 O 6 '47

FAIRLESS, Benjamin F. 1890-
Portrait. Bsns W p 15 Jl 12 '47

FAIRS
Commerce department's broad program to further American participation and development in international trade fairs. For Comm W 28:33 S 13 '47
Fairs and exhibitions. For Comm W 26:25 Ja 11 '47 [cont irregularly]
Trade fairs; signs of world revival. Bsns W p66 Ja 4 '47

See also
Leipzig fair

FALLING bodies
Rate of descent of parachutes from various altitudes. K. E. Penrod and others. bibliog J Aeronautical Sci 14:303-10 My '47

FALLS
Are we slipping; recording conditions contributing to slips and falls. F. G. Narber. il Safety Eng 93:14-15+ Ja '47
Short falls. Nat Safety N 55:100-1 Je '47

FALSE aneurysm. See Hematoma

FAMILY
Changing conceptions of the family. S. M. Gruenberg. Ann Am Acad 251:128-36 My '47

See also
Farm families

Law

See Domestic relations

FAMILY budget. See Budget, Household

FAMILY finance corporation
Annual report. Comm & Fin Chr 166:1682 O 27 '47

FAMILY of products
Basic package design adaptable to a family of textiles, comprising sheets, pillow cases, hosiery, etc. Mod Packaging 20:99 Je '47
Housewife's library; carrier packs for cleaning fluids. il Mod Packaging 20:128-9 N '46
How product-line research reduces distribution costs by increasing over-all sales and advertising effectiveness. R. D. Crisp. Ptr Ink 218:40-2 Ja 24 '47
How to raise a family of promising new products; Interchemical corp., Setfast canvas paint, Mil-Du-Rid, Dippo, and I. C. degreaser. W. Hansot. il Sales Management 58:46+ Mr 1 '47
One big family for Durkee. il Mod Packaging 20:115 F '47
Product makes the trademark; Hassall's line of special nails, rivets and screws. il Mod Packaging 20:104-6 N '46
We traded a Cinderella item to the luxury class; $100 wallet as bellwether for entire line. A. A. Weiss. il Ptr Ink 218:75-6+ F 7 '47
What's cooking at College Inn; chicken, chili, fatter quotas. P. F. Tevis. il Sales Management 58:37-9 Mr 15 '47

See also
Leaders (merchandizing)
Package design—Family of products

FANS, Mechanical
Can this fan be improved? J. R. Darnell. diags Power Pl Eng 51:99 O '47
Fans for the chemical industry. Chem Age (Lond) 57:537-8 O 18 '47
Flexible shafts and couplings protect high-speed gears. R. L. Benford. il diag Power 91:477-8 Jl '47
How to care for engine and fan bearings and cylinders. J. G. Cronin. Heating-Piping 18:90 D '46
Minor adjustment changes end school room complaints. J. Cassie. diags Heat & Ven 44:87-8 My '47
Operating velocities for multiblade ventilating fans; table. Cer Ind 48:97 Ap '47

See also
Electric fans, Ventilating
Mechanical draft

FAR EAST
West of Honolulu; absence of real independent power. Economist 151:900-2 D 7 '46
Whose victory in Asia? map Economist 152: 230-1 F 8 '47

See also
China
Japan

Commerce

Asia's not-so-open door. B. G. Davis. il Banking 40:40-2+ S '47
Private trading with Far East; control and restriction pattern. il For Comm W 27: 3-5+ Ap 5 '47
Trade potentialities in Far East. J. C. Vincent. Comm & Fin Chr 164:2614+ N 21 '46
Will we adjust Pacific before European solution? V. L. Horoth. il Mag of Wall St 80: 87-9+ Ap 26 '47

FARES. See Airlines—Fares; Motor bus lines—Fares; Railroads—Fares

FARICY, William Thomas, 1893-
Elected president of A.A.R. por Ry Age 122:688-9 Ap 5 '47
Midwesterner to A.A.R. presidency. por Bsns W p16 Ap 5 '47

FARM accidents
18,500 accident victims on farms in 1946. Weekly Underw 156:1479 My 31 '47

FARM accounting
Farm accounting procedures applied to the fruit grower. W. R. Barney. J Account 84: 291-8 O '47

FARM buildings
Aluminum in rural construction. F. B. Hastings. il Sheet Metal Worker 38:48-9 Je '47
Buildings next as farmers improve plants. J. A. McWethy. Barron's 26:11+ D 9 '46
Sheet metal buildings on farms. W. Alwyn-Schmidt. il Sheet Metal Worker 38:64-6 S '47

See also
Farmhouses
Swine houses

FARM chemurgic council, National. See National farm chemurgic council

FARM credit. See Agricultural credit

FARM equipment workers
Too few for F.E.W. Bsns W p88 Jl 26 '47

FARM families
Farm family budgets; a moving picture. W. W. Cochrane. R Econ Stat 29:189-98 Ag '47
More family help on the farm, better credit rating at the bank. O. D. Ellsworth. il Bankers Mo 63:604+ D '46

FARM houses. See Farmhouses

FARM income
Canada; farm cash-income gains in 1946. For Comm W 26:17 Mr 15 '47
Farm cash income at all-time high, but vulnerable. I. W. Duggan. Comm & Fin Chr 166:1007+ S 11 '47
Farm family budgets; a moving picture. W. W. Cochrane. R Econ Stat 29:189-98 Ag '47
Farmer goes to town and brings home most of its amenities. il map Fortune 36:89-97+ O '47
Farms and gross income from farming, 1946; tabulation. Sales Management 58:50 My 10 '47
Gross farm dollars in 1946, Sales Management estimates. Sales Management 58:70 My 10 '47
High farm income bolsters business outlook. M. S. Rukeyser. Comm & Fin Chr 165: 3123 Je 12 '47

FARM journals

See also
Advertising mediums —Farm papers

FARM labor
American agriculture; Schultz' analysis and policy proposals. J. S. Davis. R Econ Stat 29:80-91; Reply. T. W. Schultz. 92-4 My '47
Conditions of agricultural workers in Uruguay. Int Labour R 55:576-7 Je '47
Farm employment levels in relation to supply and demand as per cent of normal. W. A. Hendricks. Am Stat Assn J 42:271-81 Je '47
Hired farm work force in 1945. M. Sworzyn. Mo Labor R 64:225-31 F '47
Labor problem down on the farm; mechanization is cutting need for hired hands. Bsns W p 100-1 S 13 '47
Nonscheds play important role in farm labor supply program; moving West Indian field workers to and from U.S. during 1946. Aviation N 7:18 F 17 '47
Perquisites furnished hired farm workers. Mo Labor R 65:193 Ag '47

FARM land values. See Land values

FARM loans. See Agricultural credit

FARM machinery. See Agricultural machinery

FARM management
Farm management parable; father-son arrangements. V. B. Hart. Banking 39:49 Ja '47
One bank's farm operating service. F. R. Warden. plans Banking 40:52 Ag '47
Why some farms pay better. V. B. Hart. Banking 39:48 Ap '47

FARM market
Address; viewpoints and suggestions from the farm-machinery industry. J. L. McCaffrey. Am Pet Inst Proc 26(1):97-100 '46
Address; what the farmer wants from the oil industry. L. Haystead. Am Pet Inst Proc 26(1):89-91 '46
Agricultural America tastes its greatest prosperity; 1945 census of agriculture; market exploration map. W. P. Burn. Ptr Ink 218: 37-40 Ja 3 '47
Back talk to Mr Hurd. G. C. Jordan. Sales Management 59:70-1+ Jl 1; 103+ Jl 15 '47
Farm market and how to use it. P. E. Miller. Edison Elec Inst Bul 15:127-9 Ap '47
Farm market for radio and appliances. C. R. Elder. Radio N 37:62+ Mr '47
Farm market survey. Bsns W p64 Je 21 '47
Farm survey by Capper-Harman-Slocum, inc.; on gasoline and motor oil. Nat Pet N 38:40-1 N 6 '46
Farmer goes to town and brings home most of its amenities. il map Fortune 36:89-97+ O '47
Farmers aren't hard to sell when approached properly; American Specialty vegetable washing machine. J. A. Ignat. il Ptr Ink 217:50-1 D 13 '46
Farms, the oil they need; work of API Agricultural development committee. G. Krieger. Nat Pet N 39:31-2+ Ap 23 '47
Features customers' produce in chicken and eggs campaign; Staley poultry feed. il Ptr Ink 220:35 Ag 22 '47
Frozen food report no. 2; key to rural markets is the locker plant. C. R. Havighorst and H. C. Diehl. Food Ind 19:159-60 F '47
How Ellinwood dealers grub for tractor sales ideas; farmer-suggested changes in the Bearcat. J. Collins. il Sales Management 57:84+ D 1 '46
How to adjust retail service to changed living conditions; G. Fox & co., Hartford, opens farm service branch store. J. A. Murphy. il Ptr Ink 220:42-3 S 26 '47
Huge equipment market is seen on small farms. Steel 121:67 Ag 4 '47
Industrial revolution on U.S. farms opens new markets for many products. H. Everett. il Ind Marketing 32:42-4+ My '47
Kansas-Nebraska offsets heating load with summer farm uses. G. E. Stedman. il map Gas Age 99:55-6+ Ap 17 '47
Lease-to-sale switch on farm tanks brings few complaints. E. Lamm. Nat Pet N 39: 7+ Je 18 '47
Major companies invite trouble for industry by giving small tanks to farm customers. Nat Pet N 38:19 O 30 '46; Discussion. 38: 18-19 N 6 '46
Mechanized farms open new industrial market for Independent tools. il Ind Marketing 32:48+ Ag '47
Model farm is training school for Ralston Purina salesmen. K. Jones. il Sales Management 59:40-1 Ag 15 '47
Most companies believe free storage tanks for farmers is a vicious practice. Nat Pet N 38:20 N 13 '46
NPN check shows 7 oil companies ordered more than 60,000 farm storage tanks in '46. Nat Pet N 38:18 N 27 '46
New American market; the farm West. il Bsns W p65-72 S 27 '47 [reprints 20c]
Sales action can offset competition offered by overhead tank suppliers. Nat Pet N 39:33+ Mr 19 '47
Selling the farmer oil. F. C. Sturtevant. Nat Pet N 39:34 Ag 27 '47
Some heating jobs that can be sold down on the farm. R. H. Emerick. il diags Dom Eng 169:102-5+ F '47
Statistical yardsticks for measuring the farm market. J. C. Capt. il Dom Comm 34:3-7 D '46
Wooing the farmer's dollar. Bsns W p70-1 Mr 8 '47

See also
Advertising—Farmers, Appeal to
Electricity on the farm
Farm buildings
Home demonstration work
Insurance, Life—Farmers as prospects
Plumbing trade—Farm market

FARM mortgages. See Mortgages, Farm

FARM ownership
City farmers and their clubs. L. Haystead. Fortune 35:162+ Ja '47

FARM produce
Farmer and the export market. W. B. Garver. Comm & Fin Chr 166:1547+ O 16 '47

FARM produce—*Continued*
L'utilisation industrielle des matières premières agricoles. H. T. Herrick. il Chimie & Ind 57:431-40 My '47; Abstract (Chemicals from farm and forest). Chem Age (Lond) 57:335 S 6 '47

See also
Crops
Dairy products
Grain
Live stock
Wheat

By-products

Agricultural residue pulps; comparison with typical wood pulps. S. I. Aronovsky and others. bibliog il Paper Tr J 124:49-55 Mr 27 '47; Abstract. Paper Ind 29:277-9 My '47

Marketing

Agriculture market research urged. Oil Paint & Drug Rep 152:5 Jl 28 '47
Hand processing for the carriage trade; Leavitt cheese. L. Haystead. Fortune 34: 239+ D '46
Unions' part in produce cost. H. S. Huber. Bsns W p 114 O 4 '47
U.E. joins farmers in food-cost attack; direct farmer-consumer marketing. il Bsns W p 108 S 13 '47

See also
Produce terminals
Vegetables—Prepackaging

Prices

Agriculture department reverses self, begins sale of frozen egg stocks; effects of CCC purchases on farm produce prices. Barron's 27:36 N 3 '47
Another Republican opportunity; a new farm policy. Fortune 35:3-4 Mr '47
Consumer gets his first break on a price-support commodity. Barron's 27:37-8 Mr 24 '47
Counting the crops in cash; farm income will probably hold up in 1947, may even increase. il Bsns W p 17 Ag 30 '47
End of hostilities heralds price troubles for farmer. Barron's 27:5 Ja 6 '47
Expect agricultural price drop! warns banks. H. S. Cherry. Comm & Fin Chr 165:2336+ My 1 '47
Farm price supports and the general price level. H. I. Liebling. Survey of Cur Bsns 27:17-22 Jl '47
Farm price supports may be made less expensive. Barron's 26:5+ N 25 '46
Farm prices top dispersion array; futures prices at discount. Survey of Cur Bsns 26:4-6 chart(p7) D '46
Farm problems for the next few years; parity concepts may have to be revised for new postwar needs. C. P. Anderson. Barron's 27:7-8 Mr 24 '47
Futures markets forecast further food price declines. Barron's 27:5+ Ja 27 '47
Indexes of prices received by farmers; revised series; monthly average, 1913-1935, monthly figures and monthly averages, 1936-1945 and monthly data for 1913-1935; tabulations. Survey of Cur Bsns 27:17-19 Ap '47
Perhaps consumers can fight against farm subsidies as well as labor union excesses. Barron's 27:10 S 8 '47
Proposes floor under food consumption and scheme of price supports. C. C. Farrington. Comm & Fin Chr 166:1650 O 23 '47
Support for farm prices poses an increasing problem; graph. Bsns W p18 D 14 '46
Weighing changing trends in commodity prices. J. D. C. Weldon. Mag of Wall St 79: 719-21+ Mr 29 '47

FARM telephone. See Telephone service, Rural

FARM tenancy
Burma; new tenancy act promulgated. For Comm W 25:19-20 N 16 '46

FARM underwriters association
Annual meeting, Chicago. Nat Underw 51:3 Ja 9 '47

FARM volunteer policies. See Insurance, Accident—Farm volunteer policies

FARM women
Survey shows use of beauty aids by Iowa farm women. Ptr Ink 221:70 O 24 '47

FARMERS
Banking and teen-age farmers; Brody Lee Koon of Brashear, Tex. H. Severson. Banking 39:50-1 Ja '47
Farmer goes to town and brings home most of its amenities. il map Fortune 36:89-97+ O '47
Farmers rich, and thrifty. Bsns W p 15-16 My 17 '47
Production policies for a permanent and profitable agriculture. N. Clark. J Land & Pub Util Econ 23:169-79 My '47

See also
Advertising—Farmers, Appeal to
Agricultural credit
Farm families
Farm income
Farm labor
Farm market
Farm tenancy
Land settlement

Insurance requirements

Survey shows Michigan farm buildings underinsured. Nat Underw 51:4 F 13 '47

See also
Insurance, Fire—Farm policies

FARMERS' clubs
City farmers and their clubs. L. Haystead. Fortune 35:162+ Ja '47

FARMERS' cooperative associations
Activities of farmers' cooperatives, 1944-45. G. Wanstall. Mo Labor R 65:459 O '47
Failures of farmers' cooperatives. R. W. Miller and A. L. Jensen. Harvard Bsns R 25 no2:213-26 [Ja] '47

See also
Electric service, Rural—Cooperative lines

FARMHOUSES
For a tiller of the soil, who would live like a king. il plans Am Bld 69:116-17 Je '47
Small farmhouse; Texas version. il plan Arch Rec 100:90-1 N '46
Tuskegee institute starts project to provide southern farmers with low-cost concrete masonry homes. il Concrete 55:30-1 My '47

FARMING. See Agriculture

FARMS
Banking on future farmers, Carlin brothers and National bank of Coatsville, Pa. redeem a worn out farm. R. G. Struble. Banking 40:53+ Ag '47
Farms grow fat; trend to fewer, bigger farms. Bsns W p21 Mr 29 '47
Petroleum and agriculture team up to speed new scientific development; Shell oil company's research laboratory and experimental farm. R. Sneddon. il Pet Eng 18: 71+ N '46
Petroleum research and better farming; Shell's experimental farm and laboratory. il Nat Pet N 39:20-1 Ja 1 '47
Research needs in land tenure and farm finance. G. H. Aull. J Land & Pub Util Econ 23:255-60 Ag '47
Small farms aid small towns. Bsns W p17-18 Ap 12 '47
Strip farming for profit; Pittsburg & Midway coal mining co. F. J. Foresman. il Coal Age 52:86-9 S '47
Unleveled spoil brings good return as farming project. J. H. Edwards. il Coal Age 52: 92-7 F '47

See also
Dairy farms
Electricity on the farm
Farm buildings and other headings beginning Farm
Farmers
Insurance, Life—Farm property
Land settlement

FARMS, Experimental
Proving ground pre-tests farm feeds for Consolidated; provides sales training and steady source of news. F. A. South. il Sales Management 59:48+ O 15 '47

FARQUHAR, A. B., company
Securities offered. Comm & Fin Chr 165:1588-9 Mr 24 '47

FASHION
California's challenge to Seventh avenue. J. H. Collins. il Sales Management 58:42-4 Ap 1 '47
Can style acceptance be measured in advance? G. J. Cullinan. J Retailing 23:81-4+ O '47

FASHION—*Continued*
Fashion show is more than a frill. A. Kimball. il Sales Management 59:44-6+ N 1 '47
Fashion shows are big business. il Bsns W p31-2+ Ap 19 '47
Forced style changes spur our prosperity. J. G. Lippincott. il Adv & Sell 40:42-3+ O '47
Future of Paris and world markets and their contributions to American fashion merchandising. D. Nemerov. J Retailing 22:95-6 D '46
Hollywood look. il Bsns W p31-2+ S 20 '47
Is a style show a good promotion investment? yes, when you can do a group selling job. G. N. Elliott. Sales Management 59:48 N 1 '47
Kodachrome fashion show jumps gun on market trips. il Sales Management 58:95-6 My 1 '47
Koret adds new twist to Hollywood fashion tie-ins. il Sales Management 58:76+ Ap 15 '47
Merchandising trends; knitwear manufacturer looks forward to revitalization of merchandise quality and design. N. E. Handler. J Retailing 22:105-8 D '46
Message from the Golden Gate; Paris showing of San Francisco houses. il Textile Col 69:27+ O '47
Protests mount as hemlines go lower and lower. M. Reiners. Ptr Ink 220:92 Ag 8 '47
Trans-World promotion wins splashy retail support for Dorothy Gray; new fabric color, new lipstick color, tie in with dress designs. B. Carpenter. il Sales Management 58:42-4 Mr 15 '47
Wine industry draws publicity dividend from wine color promotions. E. Gidlow. il Sales Management 58:75-6+ F 1 '47

See also
Advertising copy—Fashion appeal

FASTENINGS
Casting fastening hardware with dies and metal molds; J. Edward Ogden corp. H. Chase. il diag Steel 121:94-6+ Ag 18 '47
Dot snappers kit. il Consumers Res Bul 20: 21-2 O '47
Fasteners for aircraft. il diags Aviation 46: 35-50 My '47
Fastening devices; recent developments. il Iron Age 159:73-4 Mr 13 '47
Increased life of lead-lined tanks by revised method of fastening; patent. diags Pet Processing 2:543 Jl '47
Quick-removable fastener redesigned. il diags Product Eng 18:98-9 My '47
Special fasteners cut assembly time; Motorola gasoline car heater. il diags Product Eng 18:96-8 Jl '47

See also
Bolts and nuts — Rivets
Cotter pins — Screws

Advertising

Peeling campaign; zippers. G. Conover. il Ptr Ink 218:39 Mr 14 '47

Manufacture

Heat treating fasteners by the million; Tinnerman products inc. H. Chase. il Steel 120: 104-6+ My 5 '47
Projection welding of fasteners. R. A. Reich. il diags Welding J 25:1189-92 D '46

FAT
Absorption of fat from the intestine. A. C. Frazer. bibliog il Chem & Ind p379-82 Jl 5 '47
Differences in physiological activity in brown and white fat as revealed by histochemical reactions. D. W. Fawcett. bibliog Science 105:123 Ja 31 '47
Evidence that the hemolytic anemia caused by fat and choline is not due to lipotropic action. J. E. Davis. bibliog Science 105:43 Ja 10 '47
Fat absorption and metabolism; abstract. A. C. Frazer. Chem & Ind p438-9 D 7 '46

See also
Oils and fats

FATHOMETER
Telemetering fathometer to secure continuous depth indications beneath remote-controlled pilotless ship. E. F. Kiernan. il diags Electronics 20:96-8 O '47

FATIGUE
What makes them tired? Nat Safety N 55: 5-6 Mr '47

FATIGUE in metals
Damping capacity and the fatigue of metals. R. F. Hanstock and A. Murray. il diags Engineering 161:358-60, 381-3 Ap 12-19 '46; Abstract. Metal Prog 50:1108+ N '46; Discussion. Engineer 181:284-5 Mr 29 '46
Fatigue strength of steel parts. P. O. Johnson and C. Lipson. Product Eng 18:144-6 O '47
Fatigue-testing machine. B. J. Lazan. bibliog il diags Machine Design 19:123-7 My '47
Fatigue tests as criterion of the weldability of sheet; abstract. R. L'Hermite and others. Materials & Methods 25:128-9 Mr '47
Fatigue tests of rail webs. R. S. Jensen. il diag Ill U Eng Exp Sta Reprint Ser 35: 35-7 '46
Fatigue tests on some spot-welded joints in aluminum alloy sheet materials. H. J. Grover and L. R. Jackson. bibliog il diags Welding J 26:sup215-32 Ap '47
Impact and fatigue tests for metals. H. N. Lyle. Oil & Gas J 46:113 Ag 9 '47
Lead base babbitt alloys; fatigue and wear properties. H. P. George. il diag Product Eng 18:138-41 Je '47
Mechanism of corrosion fatigue of steel in acid solution. M. T. Simnad and U. R. Evans. bibliog diag Iron & Steel Inst J 156:531-9 Ag '47
Pneumatic fatigue testing; machine for testing turbosupercharger and gas turbine buckets. F. B. Quinlan. il diags Automotive & Aviation Ind 96:30-1+ Ja 15 '47
Radiography and the fatigue strength of spot welds in aluminum alloys. R. C. McMaster and H. J. Grover. bibliog il Welding J 26: 223-32 Mr '47
Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46
Some experiments on the effects of residual stresses on the fatigue of aluminum alloys; abstracts. G. Forrest. Engineering 161:280-1 Mr 22 '46; Engineer 181:285 Mr 29 '46; Metal Prog 50:1254+ D '46
Static and fatigue tests of arc-welded aluminum alloy 61S-T plate. E. C. Hartmann and others. bibliog il diags Welding J 26:sup129-38 Mr '47
Strengthening metal parts by shot peening. H. F. Moore. bibliog il diags Iron Age 158: 70-6 N 28; 81-6 D 5 '46
Stress concentration and fatigue failures. S. Timoshenko. il diags Engineer 183:398-9, 421-2 My 9-16 '47
Tuned air columns induce resonance for fatigue testing. il diags Product Eng 18: 98-9 F '47
X-ray diffraction study of the effect of residual compression on the fatigue of notched specimens. J. T. Norton and others. bibliog il diag Welding J 25:sup729-35 N '46

See also
Shot peening

FATS and oils. See Oils and fats

FATTY acids. See Acids, Fatty

FAUCETS, Plastic
All-plastic faucet. il Mod Plastics 24:200 My '47

FAULTS (geology)
Chojlla mine unusual in geological features. G. D. Bellows. il diags Eng & Min J 148: 68-70 S '47
Classification of faults. M. L. Hill. bibliog diag Am Assn Pet Geologists Bul 31:1669-73 S '47
Diastrophism during historic time in Gulf coastal plain. M. M. Sheets. bibliog Am Assn Pet Geologists Bul 31:201-26 F '47
Fault problems in fault planes. R. H. Beckwith. bibliog diags Geol Soc Bul 58:79-108 Ja '47
Faulting in east part of Grand Canyon of Arizona. C. E. Van Gundy. bibliog 2pls maps Am Assn Pet Geologists Bul 30:1899-1909 N '46
Freezeout Creek fault, Baca county, Colorado. map diag Am Assn Pet Geologists Bul 31:1863-8 O '47

FAULTS (geology)—*Continued*
Geologic section from the Sierra Nevada to Death Valley, California. R. H. Hopper. bibliog fold map Geol Soc Bul 58:393-432, pl 1-6 My '47
Normal fault structures and others. B. Willis. bibliog diags Am Assn Pet Geologists Bul 30:1875-87 N '46
Relations between kinds of well data and apparent faulting. H. H. Suter. diags Am Assn Pet Geologists Bul 30:1910-17 N '46
Thrust fault zones in Ventura basin, Los Angeles and Ventura counties, California. J. W. Sheller and M. N. Bien. map diags Am Assn Pet Geologists Bul 31:1505-9 Ag '47

FEATHERBEDDING. See Employment

FEATHERS
Disposal of poultry feathers. Can Chem & Process Ind 31:663 Jl '47

FEBRIFUGINE (term)
Alkaloid with high antimalarial activity from dichroa febrifuga. J. B. Koepfli, J. F. Mead and J. A. Brockman, jr. Am Chem Soc J 69:1837 Jl '47

FECES
Use of polyvinyl alcohol to preserve fecal smears for subsequent staining. M. Goldman. Science 106:42 Jl 11 '47

FEDDERS-QUIGAN corporation
Data on offering of common stock. Comm & Fin Chr 166:854 S 1 '47

FEDERAL aid to states. See State finance—Federal aid

FEDERAL and provincial relations (Canada). See Canada—Politics and government

FEDERAL bureau of investigation. See United States—Federal bureau of investigation

FEDERAL commissions. See United States—Executive departments; also names of commissions, e.g. Federal communications commission; Interstate commerce commission

FEDERAL communications commission
Accounting implications of the New York telephone company decision. G. O. May. J Account 82:456-9 D '46
Another milestone in regulation; New York telephone company case. G. O. May. J Land & Pub Util Econ 23:22-8 F '47
Rules governing stations in the utility radio service. Am Water Works Assn J 38:1398-407 D '46
White bill would set up FCC telephone division. Pub Util 39:845-6 Je 19 '47

FEDERAL corporations. See Government corporations

FEDERAL council of the churches of Christ in America
Charlie Taft's big chance as the first lay leader of U.S. Protestantism. map Fortune 36:84-7+ Ag '47

FEDERAL crop insurance corporation
Counsel not pigeonholed; how FCIC has acted on industry suggestions. J. B. Daniels. Nat Underw 50:16+ N 21 '46
Federal crop insurance Connecticut indemnities $29,250 for 1946. Nat Underw 51:33 Mr 6 '47
How Federal crop insurance works. G. F. Geissler. Rough Notes 90:30+ Ap '47
Put insurance into FCIC. C. P. Anderson. Nat Underw 51:3 Ja 16 '47
Sees better omens for FCIC. C. P. Anderson. Nat Underw 51:11 Mr 6 '47
Suggests FCIC act as reinsurer. G. Geissler. Nat Underw 51:21 Ap 3 '47

FEDERAL deposit insurance corporation
Bill asks FDIC repay funds obtained from Treasury. Comm & Fin Chr 165:2114 Ap 17 '47
Cancellation of stock of Federal deposit insurance corporation. Fed Res Bul 33:980 Ag '47
FDIC and the dual banking system. H. E. Cook. Comm & Fin Chr 166:1436-7 O 9 '47
FDIC assessment; A.B.A. proposals. Burroughs Clearing House 31:34 Je '47
FDIC insured deposits at all-time high. M. T. Harl. Comm & Fin Chr 165:2119 Ap 17 '47
Liability of FDIC for breach of warranty. Banking Law J 64:131-40 F '47
Role of FDIC. M. T. Harl. Comm & Fin Chr 165:1841+ Ap 3 '47

FEDERAL employees. See Government employees

FEDERAL government
Australia and the international labour conventions. K. H. Bailey. bibliog Int Labour R 54:285-308 N '46
See also
Canada—Politics and government
State governments—Federal relations

FEDERAL home loan banks. See Home loan banks

FEDERAL housing administration
FHA's building code does not cover 10" cavity or 6" masonry walls. Brick & Clay Rec 111:34 Ag '47
Loans insured (gross) and insured home mortgages (Title II) held in portfolio, by class of institution. Fed Res Bul 33:79 Ja '47 [cont monthly]

Insured mortgage plan
FHA mortgage system has never been tested; abstracts. M. Woll. East Underw 48:10 Mr 28 '47; Nat Underw (Life ed) 51:2 Ap 4 '47
Private rental housing; FHA's 608 financing scheme and its application to Gross-Morton's Glen Oaks Village. il plans Arch Forum 87:67-71 Ag '47
Refunds on FHA mortgage foreclosures. R. M. Foley. Comm & Fin Chr 165:3100 Je 9 '47
Rental housing needs architects' initiative. R. M. Foley. Arch Rec 101:80 F '47
Today; volume financing; home building made easier. il Am Bld 69:88-9+ O '47

FEDERAL land banks. See Land banks

FEDERAL light and traction company
Plan approved by SEC. Comm & Fin Chr 166:1149 S 22 '47

FEDERAL loans and grants
See also
State finance—Federal aid

FEDERAL mediation and conciliation service. See United States—Federal mediation and conciliation service

FEDERAL power commission
FPC authority to take hydro plants hit by congressmen. Elec World News ed 127:5-6 Je 14 '47
Is FPC regulating production-gathering of natural gas? J. J. Hassett. Pub Util 39:622-8 My 8 '47
Legislation curbing FPC gathers widespread industry support. H. D. Ralph. Oil & Gas J 45:37-8 Mr 8 '47
New law suits involving authority of commissions. L. T. Parker. Am Gas J 166:31-2 Ap '47
Peace feelers from FPC. Bsns W p24+ My 31 '47
Smith elected chairman of FPC when Olds quits. Elec World News ed 126:5 D 28 '46
Where is the FPC heading in gas regulation? S. H. Crosby. Pub Util 40:476-85 O 9 '47
Will the FPC drive natural gas out of the fuel market? S. H. Crosby. Pub Util 39:216-20 F 13 '47
See also
Gas, Natural—Government investigation

FEDERAL power projects. See Hydroelectric plants—Government ownership

FEDERAL reserve act
Purchase of government obligations by Federal reserve banks; amendment to Federal reserve act; text. Fed Res Bul 33:694 Je '47

FEDERAL reserve bank of New York
Annual report; abstract. Comm & Fin Chr 165:2065+ Ap 17 '47
Reports drop in banking profits related to capital funds; second Federal reserve district report for 1946; abstract. A. Sproul. Comm & Fin Chr 165:1259+ Mr 6 '47

FEDERAL reserve banks
Asks end of pegged short-term rate; opposes bill to restrict Federal reserve purchases of government securities to open market; H.R. 2233. M. S. Eccles. Comm & Fin Chr 165:1251+ Mr 6 '47
Economists' national committee on monetary policy urges Congress to repeal all authority of Treasury to sell securities directly to Federal reserve banks. Comm & Fin Chr 165:1522 Mr 20 '47
Excess earnings of Federal reserve banks. W. N. Peach. bibliog Banking Law J 64: 81-6 Ja '47
Explains termination of repurchase privilege on Treasury bills. A. G. Lanston. Comm & Fin Chr 166:124, 232 Jl 10, 17 '47
Federal Reserve terminates fixed rate on Treasury bills. Comm & Fin Chr 166:124 Jl 10 '47
Only in the open market; an inflation safeguard; attacks Wolcott bill. F. E. Lee. Comm & Fin Chr 165:1510+ Mr 20 '47
Permanent authority for Federal reserve to buy bonds from Treasury dangerous. W. E. Spahr. Comm & Fin Chr 165:1373+ Mr 13 '47
Purchase of government obligations by Federal reserve banks; amendment to Federal reserve act; text. Fed Res Bul 33:694 Je '47

Directors
Directors of Federal reserve banks and branches. Fed Res Bul 33:136-48 F '47

Earnings
Federal reserve board out of bounds again; transfer to Treasury of excess earnings of Federal reserve banks unauthorized. W. E. Spahr. Comm & Fin Chr 165:3226+; 166: 1105+ Je 19, S 18 '47
Transfer to Treasury of excess earnings of Federal reserve banks; text of announcement by Board of governors, April 24, 1947. Fed Res Bul 33:518-19 My '47
See also
Federal reserve banks—Statistics

Member banks
All member banks; assets and liabilities on Dec. 31, 1946, by class of bank. Fed Res Bul 33:464 Ap '47
All member banks; assets and liabilities on June 30, 1947, by class of bank. Fed Res Bul 33:1317 O '47
Business loans of member banks; results of nation-wide survey of loans as of Nov. 20, 1946; with specimen reporting form and instructions. A. R. Koch. Fed Res Bul 33: 253-63 Mr '47
Earnings and expenses of Federal reserve banks during 1946. Fed Res Bul 33:212-13 F '47
Eleven business benefits from Federal reserve membership. R. E. Horner and others. Bankers Mo 64:475-7 O '47
Member bank earnings, first half of 1946, with comparisons, 1941-1945. Fed Res Bul 32:1238-9, 1298 N '46
Member bank earnings; national and state member banks, first half of the year, 1946-1947. Fed Res Bul 33:1315 O '47
Member bank earnings, 1946 and comparisons for selected years, 1929-1945; with ratios. Fed Res Bul 33:528-30, 602-12 My '47
Member bank loans to small business. C. H. Schmidt. Fed Res Bul 33:963-77 Ag '47
Revision of weekly statistics for member banks in leading cities. Fed Res Bul 33: 692-3 Je '47
Sales of mortgages by state member banks. Fed Res Bul 33:695 Je '47
Security pledged on member bank loans to business; with tabulation on loans as of Nov. 20, 1946. T. Smith. Fed Res Bul 33: 664-80 Je '47
Structure of interest rates on business loans at member banks; with tabulations on loans as of Nov. 20, 1946. R. Youngdahl. Fed Res Bul 33:803-19 Jl '47
Suit regarding condition of membership; Peoples bank, Lakewood Village, Calif. v. Eccles, et al. Fed Res Bul 33:532-40 My '47
Ten services rendered free to Federal reserve member banks. S. R. Carpenter. Bankers Mo 64:170-1 Ap '47
Term lending to business by commercial banks in 1946; with tabulations on Federal reserve member bank loans. D. M. Holthausen. Fed Res Bul 33:498-517 My '47
Termination of licensing of member banks; text of Presidential proclamation. Fed Res Bul 33:531-2 My '47
We get many benefits from Federal reserve membership, correspondent bank services. J. G. Dickerson. Bankers Mo 64:269-70 Je '47

Par collection of checks
More banks join the Federal Reserve par list. Bankers Mo 64:393 Ag '47
Number of banking offices on Federal Reserve par list and not on par list, by Federal reserve districts and states, July 31, 1947. Fed Res Bul 33:1174 S '47

Statistics
Earnings and expenses of Federal reserve banks during 1946. Fed Res Bul 33:212-13 F '47
Member bank earnings, first half of 1946, with comparisons, 1941-1945. Fed Res Bul 32:1238-9, 1298 N '46
Member bank earnings, 1946 and comparisons for selected years, 1929-1945; with ratios. Fed Res Bul 33:528-30, 602-12 My '47
Revision of weekly statistics for member banks in leading cities. Fed Res Bul 33: 692-3 Je '47

FEDERAL reserve board
Eccles says take it easy. Bsns W p83-4+ Mr 15 '47
Federal Reserve asks more power; abstract of annual report. Comm & Fin Chr 166:125 Jl 10 '47
Federal reserve board out of bounds again; transfer to Treasury of excess earnings of Federal reserve banks unauthorized. W. E. Spahr. Comm & Fin Chr 165:3226+ Je 19 '47
Federal reserve policy and the national debt during the war years. E. C. Simmons. J Bsns 20:84-95 Ap '47
Thirty-sixth annual report of the Board of governors. C. O. Hardy. Harvard Bsns R 25 no2:207-12 [Ja] '47

Credit policy
Control of credit control; viewpoint of bankers and bank economists. E. S. Adams. Banking 39:34-5+ F; 44+ Mr '47
Federal reserve of N.Y. defends margin and consumer credit controls. Comm & Fin Chr 165:2065+ Ap 17 '47
Federal reserve policy and inflationary pressures. O. P. Wheeler. Comm & Fin Chr 166:1411+ O 9 '47
How can the Federal reserve regain control over bank credit? address before New York state bankers association. A. C. Lanston. Banking Law J 64:353-60 Ap '47
Inflation danger, heritage of war finance. W. Thomas. Comm & Fin Chr 165:592+ Ja 30 '47
Inflationary forces and the FRB. M. S. Eccles. Comm & Fin Chr 164:2201+ O 31 '46; Same. Fed Res Bul 32:1230-5 N '46
Money management and credit control. A. Sproul. Comm & Fin Chr 164:3012+ D 12 '46
Wants all U.S. credit guarantees and controls ended; statement by Chamber of commerce. Comm & Fin Chr 164:2761 N 28 '46

FEDERAL reserve system
Federal reserve system and the commercial banks. C. E. Earhart. Comm & Fin Chr 165: 2060+ Ap 17 '47
Restore Federal Reserve to its essential functions. A. G. Lanston. Comm & Fin Chr 165:2061+ Ap 17 '47

FEDERAL savings and loan associations

Securities
Insured shares for small trusts. W. M. Bastian. Trusts & Estates 83:640 D '46

FEDERAL savings and loan insurance corporation
Increase in resources in '46. Comm & Fin Chr 165:891 F 13 '47

FEDERAL specifications board

Technical committee on packaging

Government packaging. C. K. Royce. Mod Packaging 20:126-31 Jl '47

FEDERAL trade commission

Agencies dispute FTC jurisdiction; Ipana advertising copy case. Ptr Ink 219:97+ Je 20 '47

Corporation reports. W. H. England. Am Stat Assn J 42:22-4 Mr '47

FTC asks more authority on mergers. Oil Paint & Drug Rep 151:3+ Mr 17 '47

FTC formally adopts policy of cooperation. Oil Paint & Drug Rep 150:46 D 16 '46

FTC on new tack. Bsns W p55-6+ N 30 '46

FTC rules monopoly product cannot be fair-traded; Eastman decision. A. W. Gray. Sales Management 58:108+ Je 1 '47

FTC stalemated in its attempt to gain additional power. Iron Age 159:111-12 My 22 '47

FTC tackles the gyp-artist; calls industry-wide conferences that correct abuses, protect consumers and industry itself. B. Clark. Adv & Sell 40:112+ Mr '47

FTC trims sail to eliminate conflict with FDA. Bsns W p34+ D 28 '46

FTC's trade practices program reflects new industrial attitude. S. E. Cohen. Ind Marketing 32:41+ Ja '47

New approach to fair trade practices; address before Chamber of commerce of U.S. L. B. Mason. Comm & Fin Chr 165:2489 My 8 '47

Where does monopoly really lie; attacks FTC report. E. Bunting. Comm & Fin Chr 165: 2197+ Ap 24 '47

Why Appeals court reversed FTC's attack on price system; refused to declare basing point price system illegal. G. H. Montague. Ptr Ink 217:73-4+ D 6 '46

FEDERAL wholesale druggists association

Annual meeting, French Lick, Ind. Oil Paint & Drug Rep 152:7+ O 13 '47

Midyear meeting, New York, March 3-5. Oil Paint & Drug Rep 151:7+ Mr 10 '47

FEDERATED department stores, inc.

Annual report. Comm & Fin Chr 163:2544 N 18 '46

FEDERATION for railway progress

A.A.R.'s rival? Bsns W p21 Mr 1 '47

Battling railroad groups' opening shots turn out to be mostly duds. Barron's 27:31 Mr 17 '47

Officers. Comm & Fin Chr 165:1434 Mr 13 '47

Plan for progress in railroading. Am Bsns 17:20-1+ My '47

Young launches new organization; Federation for railway progress aims to implement national transportation policy. W. J. Taft. Ry Age 122:445-7 Mr 1 '47

FEDERATION of American scientists

Letter to President Truman about German military scientists imported by the army. Science 105:329 Mr 28 '47

FEDERATION of architects, engineers, chemists, and technical workers

Strike with a difference; engineers and technicians on picket line. il Bsns W p98+ S 20 '47

FEDERATION of insurance counsel

Annual meeting, Swampscott, Mass., Sept. 18-19. Weekly Underw 157:688 S 20 '47

FEDERATION of paint and varnish production clubs

Annual convention, 24th, Atlantic City. Chem & Eng N 24:3038-9 N 25 '46; Oil Paint & Drug Rep 150:79+ N 11 '46

Annual meeting, 25th, Cleveland, June 14. Oil Paint & Drug Rep 151:7 Je 23 '47

1946 annual meeting, Atlantic City, N.J., Nov. 4-5. Paint Oil & Chem R 109:3-5 N 14 '46

FEDERATION of sewage works associations

Annual meeting, 19th, Toronto, Oct. 6-9. Water & Sewage 84:41-8+ O '46; Water & Sewage Works 93:433-40, 461-6 N-D '46

Annual meeting, 20th, and joint conference with American water works association, San Francisco, July 21-25. Water & Sewage Works 94:315-26, 384-90 S-O '47; Water & Sewage 85:26-30+ S '47

Sewage federation shows healthy growth curve. Water & Sewage Works 94:134 Ap '47

FEED mechanism

Adjustable centers roll drive maintains constant surface feed. E. J. Hills. diag Am Mach 91:116 Ap 24 '47

Air operated feeder for small flows of powders and granulated solids. A. H. McKinney. diag Chem Eng 54:124 Ap '47

Automatic feeding and ejection of small cylindrical parts. M. W. Purser. il diag Mach 53:177 D '46

Compact table-feeding mechanism; making wax impressions from type. R. Sachtleber. diag Mach 53:172 D '46

Device for indexing, locating, and feeding lock-washer blanks. J. W. Gulliksen and J. W. Hillhouse. diags Mach 53:194-5 Ja '47

Dial feeds synchronized by air. J. F. Budnick. diags Am Mach 91:101-3 N 6 '47

Hopper feed speeds milling operation. il Iron Age 160:80 S 25 '47

Ingenious work-transfer mechanisms for progressive dies; designed by Ford engineers. C. O. Herb. il plan diags Mach 53: 139-47+ D '46

Injection feed in use on a rubber injection molding machine. il diag Machine Design 19:107-8 S '47

Landis vibration type loading device for centerless thread grinder. il Automotive Ind 97:48 Ag 15 '47

Magazine loading speeds second-operation work. W. L. Woodcock. diags Am Mach 91: 108-10 My 8 '47

Mechanism for interrupting a feeding device at adjustable predetermined positions; window-sash chain-forming machine. C. F. Smith. plan diags Mach 53:187-9 F '47

Mechanism for operating dial feed and radially positioned multiple punches. C. F. Smith. diags Mach 53:164-5 Ag '47

Mechanism for retarding an automatic feeding device; die used to form flanges on relay armature. V. Santacaterina. diags Mach 53:191-2 Ja '47

FEED water

Boiler-water fouling has many sources. H. M. Spring. diags Power 91:336-7 My '47

Chart to determine boiler-water concentration and blowdown; data sheet. Power 91:61 Ja '47

Corrosion and pitting in boiler systems. Oil & Gas J 45:87 Ja 18 '47

Corrosion of plant equipment by steam and water. R. C. Ulmer. il Power Pl Eng 50: 72-5+ O; 90-2 N '46; 51:108-9+ Ja '47

De-aeration of feed water. diag Chem Age (Lond) 56:702+ My 31 '47

Experience shows amines stop corrosion. R. S. Moncrief and M. E. Dreyfus. il Power 91:19-21 Ja '47

Feed distribution and hunting in marine water-tube boilers. H. Hillier. diags Inst Mech Eng J & Proc 156:Proc 139-55, pl 1-4 S '47; Same. Engineering 162:548-52, 573-5 D 6-13 '46; Same cond. Engineer 182:450-1, 477-9 N 15-22 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 155-75 S '47; Engineering 162:472-3, 498-9, 521, 592 N 15-29, D 20 '46

Formation of boiler scale. Oil & Gas J 45: 111 F 15 '47

How boiler-water impurities can measure steam quality; chart. F. M. Giordano. Power 91:427 Je '47

Identification of scale deposits. Oil & Gas J 45:173 F 22 '47

Steam turbine blade deposits. F. G. Straub. il diags Ill U Eng Exp Sta Bul 364:1-90 bibliog(p80-3) '46 (pa 70c)

Turbine blade deposits reduced. M. E. Fitze and F. H. Long. Elec World 126:138 D 7 '46

Waterwalls; a must with high boiler-water concentrations. M. H. Kuhner. diags Power 91:450-1 Jl '47

See also

Feed water purification

Testing

Colorimetric determination of iron, manganese, phosphate, and silicic acid; abstract. W. Teichert. Am Water Works Assn J 39:595 Je '47

FEED water—Testing—*Continued*
Colorimetric phosphate tests for boiler waters containing tannin. L. Goldman and R. N. Love. U S Bur Mines Rep of Invest 3983: 1-11, pl 1-2 '46; Same. Power Pl Eng 50: 76-9 N '46
Dissolved oxygen in feedwater indicated by electron ray. J. M. Decker. il Power Pl Eng 50:114-15 D '46
How to make hydrate alkalinity test; illustrated instructions. M. E. Reiner. Power 91:647 S '47
Photometer measures dissolved silica. N. I. Sax. il Power 91:762-3+ N '47
Water test chemistry helps you operate softener better. U. C. Fleming, jr. Power Pl Eng 50:104-5 N; 106 D '46
What units should you use in reporting boiler water tests? U. C. Fleming, jr. Power Pl Eng 51:93 Ja '47

FEED water heaters
Atomizing deaerators on new Alcoa ships. Marine Eng 52:79+ My '47
Feedwater heaters vary in arrangement. il Power 91:85-7 F '47
Hotwell takes kinks out of feed heater. A. N. Musgrave. diag Power 91:637 S '47

Explosions
Avoid explosive hazards in feedwater heaters. H. M. Spring. il diags Power 91:189-91 Mr '47

FEED water heating
Cleaning the heater restores feed temperature. O. M. Roberts. Power 91:781-2 N '47
Eliminating fuel waste. H. D. Elfreth and A. MacHarg. Heating-Piping 19:86+ O '47
Feed-heating cycle; influence on performance of turbo-alternators. G. Oldroyd. flow diag Elec R (Lond) 140:115-18 Ja 17 '47
Temperature of feedwater for desalter controlled with steam pressure regulator. il diag Pet Processing 2:100 F '47

FEED water pumps. See Pumps, Feed water

FEED water purification
Annual water conference, 7th, Pittsburgh, Pa. Jan. 6-8. Power Pl Eng 51:114 Mr '47
Boiler-water conditioning at Talco refinery. C. G. Rook, jr. il diag Pet Refiner 25:129-31 D '46
Boiler water conditioning to prevent turbine deposits. C. E. Imhoff. Paper Tr J 124:30+ Je 5 '47; Same cond. Paper Ind 29:732-4 Ag '47
Chemical feeds for new water conditioner electrically operated, centrally controlled. C. E. Joos. flow diag Pet Processing 2:156-7 F '47
Control program insures follow-up on prescribed plant water treatment. D. P. Thornton, jr. il Pet Processing 1:181-4 N '46
Corrosion in boiler feedwater treating systems. L. F. Collins. bibliog diag Power Pl Eng 51:74-6 O '47 (to be cont)
Deaeration of water. Oil & Gas J 45:91 Ja 11 '47
Demineralized water; abstract. L. B. Porter. Heating-Piping 19:91 Je '47
Electrical deaeration licks corrosion in this plant. V. Rodwell. diags Power 91:324-6 My '47
Feed-pump symposium. Mech Eng 68:1073-4 D '46
Five ways to remove dissolved silica from boiler feedwater. M. E. Gilwood. diags Power 91:540-3 Ag '47
Hot lime soda and internal treatment condition 100% feedwater makeup; power plant, Nicaro nickel co. V. H. Brogdon. flow sheet il Power 91:82-4 F '47
How chlorine kills ammonia in boiler feedwater. Power Pl Eng 51:126+ Je '47
Inhibition of hard scale in boilers, and the action of static charges upon colloids. K. J. B. Willey. bibliog il diag Soc Chem Ind J 65:433-6 D '46
Lime-soda softener control. W. L. Nelson. Oil & Gas J 46:117-18 S 13 '47
Modern methods of feedwater conditioning for high pressure boiler plants. S. D. Distelhorst. Paper Tr J 125:41-4 Jl 31 '47
New applications for boiler feedwater treatment equipment. D. J. Saunders. flow diag diag Paper Tr J 125:47-9 Jl 17 '47
Operating experience with La Mont boilers, with special reference to feed water problems. G. A. J. Begg and others. il diags Inst Mech Eng J & Proc 155 (War emergency issue on 22):346-57 '46; Same cond. Engineer 181:129-31 F 8 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 22):357-75, pl 5-6 '46
Practical progress in water treatment. P. Wedgwood. Gas J (Lond) 250:453+ My 28 '47; Discussion. 250:554-5 Je 11 '47
Raw-water softening experience in Canada's largest steam plant; Polymer corp. J. E. Lewis. il diags Power 91:150-3, 230-3 Mr-Ap '47
Should I add compound to individual boilers? diags Power 91:639-42 S '47
Silica removal from boiler feedwater. W. Leaf. Mech Eng 69:156 F '47
Survey of German feedwater practice. W. W. Cerna. il diags Power 91:600-4+ S '47
Water treating; embrittlement. Oil & Gas J 45:289 Ja 25 '47
Water treatment question box (cont). K. M. Herstein and others. diags Power 90:871; 91:55, 128, 202, 275, 350, 497, 570, 718, 793 D '46-My, Jl-Ag, O-N '47
Western Pennsylvania's seventh water conference. Chem & Eng N 25:229 Ja 27 '47

FEED water regulators
Automatic feed-water controller. J. A. Campbell. il diags Pet Eng 18:62+ Jl '47
Boiler-water level controls feed pumps. G. L. Radamaker. diag Power 91:559 Ag '47
Corrosion-erosion of boiler feed pumps and regulating valves. H. A. Wagner and others. il diags A S M E Trans 69:389-97; Discussion. 397-403 My '47

FEEDER airlines. See Airlines—Feeder airlines

FEEDING and feeding stuffs
Allied can't wait; will go ahead with building plans. Bsns W p23 O 4 '47
Aquatic yeast; paper mills' plan to make feed from sulphite pulp waste. Bsns W p28 N 9 '46
Baker's dozen lifts feed sales for Sunlight Mills; lagniappe contest. Sales Management 58:32-3 Mr 1 '47
Causes of annual fluctuations in the production of livestock and livestock products. J. H. Lorie. bibliog J Bsns 20 pt 2:1-105 Ap '47
Dealer meetings that click pay out for Universal mills. Sales Management 59:54+ Ag 15 '47
Distillery waste treatment works provides cattle feed and power byproducts. S. I. Zack. flow diag il Eng N 138:940-1 Je 12 '47
Lower feeding ratios; with graphs showing hog-corn, milk-feed and egg-feed ratios. Survey of Cur Bsns 27:8-9 O '47
Mechanical dehydration adds to southern crop value; dried sweet potatoes as livestock feed. B. Buck. il Manuf Rec 116:42+ Ap '47
Model farm is training school for Ralston Purina salesmen. K. Jones. il Sales Management 59:40-1 Ag 15 '47
Potassium and sodium metaphosphates as sources of phosphorus for animals. H. F. Fraser and others. bibliog Pub Health Rep 61:1810-16, pl 1 D 13 '46
Production of fodder yeast from wood sugars. E. E. Harris and others. il diags Paper Ind 29:879-81 S '47
Recovery of dried solubles from thin stillage. J. W. Spanyer, jr. il Chem Eng Prog 43: 523-6 O '47
Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47

See also
Alfalfa
Forage plants
Silage

Analysis
Hemoglobin in meat scraps and tankage. R. Reiser. bibliog Anal Chem 19:114-18 F '47

Testing
Proving ground pre-tests farm feeds for Consolidated; provides sales training and steady source of news. F. A. South. il Sales Management 59:48+ O 15 '47

FEES
See also
Architects—Fees
Lawyers—Fees
Trust fees

FELDSPAR
Alteration of feldspar and its products as studied in the laboratory. R. L. Folk. bibliog Am J Sci 245:388-94 Je '47
Badu feldspar deposit, Llano county, Tex. G. W. Huseman and W. D. McMillan. 5pls U S Bur Mines Rep of Invest 4102:1-11 '47
Flotation of feldspar by the Turbo-Encabulator method. D. E. Walsh. Am Cer Soc Bul 26:296 S 15 '47
Quantitative estimation of potash and soda feldspars in pegmatite rock by means of chemical coloration; review of selected literature. G. A. Munson and E. P. Barrett. bibliog U S Bur Mines Information Circ 7412:1-5 '47
Texas mica and feldspar co. Culberson and Hudspeth counties, Texas. S. P. Holt and J. A. Bowsher. 3 pls U S Bur Mines Rep of Invest 4009:1-7 '47

FELLNER, William
Liquidity preference and monetary policy; Fellner theory; statistical relationship between demand for cash balances and rate of interest. J. Tobin. R Econ Stat 29:124-31 My '47

FELLOWS, Percy A.
To aid Ethiopia. por Bsns W p89 Ag 30 '47

FELLOWSHIPS. See Scholarships and fellowships

FELT
Animal hairs; increasing felting properties; patent. Am Dyestuff Rep 36:248 My 5 '47
Properties of felt in the reduction of noise and vibration. F. G. Tyzzer and H. C. Hardy. bibliog il Acoustical Soc Am J 19: 872-8 S '47
Stiffening felt hats; Zein solutions; patent. Am Dyestuff Rep 36:366 Je 30 '47
Wool + heat + pressure = felt. E. L. Cady. il Sci Am 177:201-3 N '47

Industrial applications
Industrial felts; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 26: 123 Jl '47
Resistance of treated felt gasket materials to fungus attack. S. Berk. il Am Dyestuff Rep 36:541-3 S 22 '47

FELT and Tarrant manufacturing company
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:216 My 24 '47

FELTING of wool. See Wool—Felting

FELTS (paper making)
Mildewproofing of paper mill felts; use of Preventol GD. F. A. Soderberg. Paper Tr J 122:153-4 Je 20 '46; Same. Pulp & Pa of Can 47:88-9 D '46; Same abr. Paper Ind 29:582-4 Jl '47

FENCES, Steel
All-steel fence for property protection. il Sheet Metal Worker 38:64 Je '47

FENS (district), England
Army flood work in the south Level fens. il map Engineering 163:304-6, 312 Ap 18 '47

FENUGREEK
New sources for sapogenins. R. E. Marker and others. Am Chem Soc J 69:2242 S '47

FERGUSON, Harry, inc.
Ferguson expansion postponed indefinitely. Bsns W p 18 My 10 '47
Ferguson on own; obtains Cleveland war plant. il Bsns W p20 F 1 '47

FERMENTATION
Chemical and microbiological differentiation of enantiomorphs of galactose and xylose. J. W. Appling, E. K. Ratliff and L. E. Wise. bibliog Anal Chem 19:496-7 Jl '47
Fermentation industry during World war II. C. S. Boruff and J. M. Van Lanen. bibliog Ind & Eng Chem 39:934-7 Ag '47
Le gaz de fumier. I. Carré. il diags Chimie & Ind 57:448-52 My '47
Invertase of bottom fermentation yeast; abstract. H. P. Traub and M. C. Slattery. Science 106:11-12 Jl 4 '47
Microbiological synthesis of 2-thiophenecarbinol. F. W. Dunn and K. Dittmer. bibliog Am Chem Soc J 68:2561-2 D '46
Production of 2 : 3-butylene glycol by fermentation of molasses. G. G. Freeman and R. I. Morrison. bibliog Soc Chem Ind J 66:216-21 Jl '47
Production of citric acid in submerged culture. E. O. Karow and S. A. Waksman. bibliog Ind & Eng Chem 39:821-5 Jl '47
Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47
See also
Alcohol—Manufacture
Enzymes
Lactic acid—Manufacture

FERMI, Enrico, 1901-
Franklin institute honors Robinson and Fermi. por Chem & Eng N 25:1264 My 5 '47

FERNELIUS, Willis Conrad, 1905-
Sketch. por Chem & Eng N 25:3060-1 O 20 '47

FERNICO. See Iron alloys—Nickel cobalt alloys

FERNS
Fern prints in lava. H. S. Palmer. pl Am J Sci 245:320-1 My '47

FERRICYANIDES
Place of yttrium and the application of ferricyanide precipitation in the rare-earth group; the purification of erbium. J. K. Marsh. Chem Soc J p 118-22 Ja '47

FERRIHEME
Nature of the non-porphyrin bonding in derivatives of ferriheme. J. G. Erdman and A. H. Corwin. bibliog Am Chem Soc J 69: 750-5 Ap '47

FERRIS, Theodore E., and sons
Ferris firm reorganized. Marine Eng 52: 91-2 Ag '47

FERRITE. See Iron—Metallography; Iron oxides

FERRO enamel corporation
New plants to help Ferro Enamel as soon as steel shortage ends. Barron's 27:32 Mr 10 '47

FERROALLOYS
Determination of titanium nitride in ferroalloys. L. Silverman. bibliog Iron Age 159: 68+ F 6 '47
Ferroalloying materials; review of 1946. R. M. Briney. il Min & Met 28:90 F '47
Ferroalloys, 1946. Eng & Min J 148:86-9 F '47
See also
Ferromanganese
Ferrosilicon
Iron alloys
Spiegeleisen

Prices
Some ferro-alloy prices raised. Blast F & Steel Pl 35:1134-5 S '47

Statistics
World production of pig iron and ferroalloys; by countries, 1937-1946; tabulation. Steel 120:315 Ja 6 '47

FERROMANGANESE

Prices
Ferromanganese, 80%; monthly, 1929-1946; tabulation. Iron Age 159:246 Ja 2 '47

FERRON. See Iodohydroxyquinoline sulfonic acid

FERROPORPHYRIN. See Hematin

FERROSILICON

Analysis
Spectrographic analysis of ferro-silicon. J. H. Coulliette. bibliog Opt Soc Am J 37:609-13 Ag '47

Prices
50% ferrosilicon; monthly, 1929-1946; tabulation. Iron Age 159:244 Ja 2 '47

FERRY terminals
Transportation coordinated; Municipal ferry terminal, St George, Staten Island, N.Y. il plans Arch Rec 101:94-7 Ap '47

FERRYBOATS
Diesel-electric ferry, Chinook. il plan Marine Eng 52:66-71 O '47
Lake Maracaibo ferry boat. il Marine Eng 52: 87 My '47
See also
Train ferries

FERTILIZATION (biology)
Activation of eggs by oxidation-reduction indicators. M. M. Brooks. Science 106:320 O 3 '47

FERTILIZATION of plants
Terminology of pollination. J. R. King and R. M. Brooks. Science 105:379-80 Ap 11 '47

FERTILIZER control officials, Association of American. See Association of American fertilizer control officials

FERTILIZER factories

Equipment
From mine to rail; mechanical handling equipment manufacture of fertilizers at the Billingham division of Imperial chemical industries. il plans diag Mech Handling 34: 399-413 Ag '47
Mechanical aids to fertiliser manufacture; Ipswich factory of Messrs Fison ltd. il plan diags Mech Handling 33:612-19 O '46
Palletizing permits stockpiling for quick shipment; Thomas fertilizer. H. V. Lehn. il Factory Management 105:82-3 S '47

FERTILIZER industry
Fertilizer industry forecast; abstract. M. H. Lockwood. Chem Eng 53:294+ N '46
Fertilizer producers ask probe of nitrogen export situation. Oil Paint & Drug Rep 150: 3+ D 2 '46
Fertilizer trade battles plan for federal handout in National soil fertility bill. Barron's 27:36 Mr 24 '47
Huge demand for farm chemicals, bug killers. Barron's 27:39 Mr 17 '47
National grange against government fertilizer plans. Oil Paint & Drug Rep 150:3+ D 9 '46
Nitrogen supply critical for 1948. Oil Paint & Drug Rep 151:3+ Je 2 '47
Peace job for standby plants; Army producing nitrogen fertilizer in 17 ammunition plants. map Bsns W p22 Ja 11 '47
Record fertilizer tonnage available in 1946. Comm & Fin Chr 165:2909 My 29 '47
TVA fertilizer export program continuance seen. Oil Paint & Drug Rep 152:5 Jl 28 '47
War dept. advised to return ammonia nitrate tonnage. Oil Paint & Drug Rep 151:5+ F 10 '47
World fertiliser production. Chem Age (Lond) 57:61 Jl 12 '47
See also
Lime as fertilizer
National fertilizer association

Regulation
Fertilizer project fought by industry; Hickenlooper-Flanagan bill (S.1251). Oil Paint & Drug Rep 151:5+ Je 9 '47
Fertilizer project opposed by Secretary of agriculture; opinions aired at Senate hearing. C. Anderson and others. Oil Paint & Drug Rep 151:3+ Je 2 '47
Fertilizer project substitute offered by Secretary Anderson. Oil Paint & Drug Rep 151:3+ Je 23 '47
Flannagan fertilizer bill in House again. Oil Paint & Drug Rep 151:5+ Mr 17 '47
Nitrogenous materials world control continued. Oil Paint & Drug Rep 151:5 Mr 17 '47

Statistics
Agricultural chemicals. Published in weekly numbers of Oil, paint and drug reporter
Chemical consuming industries; Pacific progress references. Chem Eng 54:112-15 S '47
Fertilizer chemicals lag world demand. Chem Eng 54:116-17 F '47
Fertilizer supplies estimated for 1947. Oil Paint & Drug Rep 151:3+ F 3 '47
Fertilizer supplies in 1946-1947. F. S. Lodge. Chem & Eng N 24:3180-1 D 10 '46
Fertilizer supply estimate for 1946-47; comparisons with last year. Oil Paint & Drug Rep 151:48 Mr 17 '47
Fertilizers in 1946-1947. F. S. Lodge. Chem & Eng N 25:90-1 Ja 13 '47

Egypt
Agriculture's need for nitrogenous fertilizers. For Comm W 25:23 D 28 '46

Europe
Fertilizer industries in Japan and northern and eastern Europe. C. K. Horner. il For Comm W 28:6-7+ S 13 '47
Fertilizer industries today in war-racked western Europe. C. K. Horner. il For Comm W 27:3-5+ Je 14 '47; Abstract. Barron's 27:35 Je 30 '47

France
French chemical industry plans development in production of fertilizers and coal-tars. Chem Eng 54:198+ Mr '47

Germany
German fertilizer plants destruction denied by army. R. P. Patterson. Oil Paint & Drug Rep 151:3 My 5 '47

Great Britain
Fertilizer society formed in Britain. Oil Paint & Drug Rep 151:7 Mr 31 '47

Italy
Fertiliser shortage in Italy. Chem Age (Lond) 56:642 My 17 '47

Japan
Fertilizer industries in Japan and northern and eastern Europe. C. K. Horner. il For Comm W 28:6-7+ S 13 '47

United States
Nitrogen loan terms voided. Oil Paint & Drug Rep 150:5 N 18 '46
See also
American plant food council
American fertilizer control officials

FERTILIZERS
Engrais et démographie. E. Roux. Chimie & Ind 57:395-6 Ap '47
Facts and fads in garden soil management. W. B. Mack. Consumers Res Bul 19:15-16 Je; 20:15-16 Jl; 22-4 O '47
Fertilizer chemicals lag world demand. Chem Eng 54:116-17 F '47
Fertilizer shortage hits South. J. A. Daly. Manuf Rec 116:40+ Ap '47
Fertilizers and fish. bibliog il Chem Age (Lond) 57:531-3 O 18 '47
Fertilizers, manures and nutrition; abstract and discussion. D. P. Hopkins. Chem & Ind p44-5 Ja 18 '47
Lignin as a fertilizer material. R. S. Aries. bibliog Paper Tr J 123:47-51 N 21 '46
New fertilizer processes reported from Germany. R. P. MacMullin. il Food Ind 19: 964+ Jl '47
Research programs held essential to agricultural welfare. Chem & Eng N 25:1870 Je 30 '47
Soil studies using radioactive phosphorus. S. Barber and others. bibliog il Can Chem & Process Ind 31:757-8+ Ag '47
Spontaneous development of heat in mixed fertilizers. J. O. Hardesty and R. O. E. Davis. bibliog Ind & Eng Chem 38:1298-303 D '46
Uses of lignin in agriculture. S. Dunn and J. Seiberlich. Mech Eng 69:197-8+ Mr '47
World soil and fertilizer resources in relation to food needs. R. M. Salter. map Science 105:533-8 My 23 '47; Discussion. W. Vogt. 106:83-4 Jl 25 '47
See also
Ammonium sulfate
Lime as fertilizer
Phosphates
Refuse as fertilizer
Sewage sludge as fertilizer
Slag as fertilizer
Sodium nitrate

Analysis
Displacement method for sampling the solution phase of mixed fertilizers. L. F. Rader, jr. bibliog Anal Chem 19:229-35 Ap '47

Bibliography
Bibliography of soil science, fertilizers and general agronomy, 1940-1944. 567p 30s Imperial bur. of soil science, Harpenden, England '46

FERTILIZERS—*Continued*

Manufacture

Continuous-mixing process for manufacture of concentrated superphosphate. G. L. Bridger, R. A. Wilson and R. B. Burt. bibliog flow sheet il diag Ind & Eng Chem 39:1265-72 O '47

Flexible plans for fertilizer making; International minerals & chemical corporation, Hartsville, S.C. R. S. McBride. flow sheet(p132-5) il Chem Eng 54:92-4 Jl '47

Langbeinite, mining and processing. G. T. Harley and G. E. Atwood. flow diags il Ind & Eng Chem 39:43-7 Ja '47

Points for new fertilizer manufacturers to consider. C. K. Horner. il Dom Comm 35: 44-8 Ag '47

See also
Ammonium sulfate—Manufacture
Fertilizer factories
Phosphates—Manufacture

Testing

Study of fertilizer uptake using P^{32}. J. W. T. Spinks and S. A. Barber. Am Chem Soc J 68:2748 D '46

FETUIN

Ultracentrifugal and electrophoretic studies on fetuin. K. O. Pedersen. bibliog J Phys & Colloid Chem 51:164-71 Ja '47

FETZER, John Clark

Will become professor of insurance at Newark university. East Underw 48:18 Jl 18 '47

FETZER, Wade, 1879-

Honored on 50th anniversary. East Underw 48:1+ O 3 '47; Nat Underw 51:15+ O 2 '47; Nat Underw (Life ed) 51:3+ O 3 '47

Sketch. por Nat Underw 51:30 S 18 '47

FEVER

See also
Malaria
Q fever
Typhoid fever
Typhus fever
Yellow fever

FIAT. See Field information agency, technical

FIBER, Vulcanized. See Vulcanized fiber

FIBER board

See also
Masonite

FIBERGLAS. See Glass fibers

FIBERS

Chemical engineering materials of construction; review of literature from start of World war II; fibers. R. S. Casey and C. S. Grove, jr. bibliog(40 ref) Ind & Eng Chem 39:1213-15 O '47

Chemurgists' meeting stresses plant fibers. Chem & Eng N 25:1123-4 Ap 21 '47

Fibrous raw materials committee report, 1946. J. Traquair. bibliog Paper Tr J 124:55-8 Ap 17 '47

Float fibers; their effect on printing. T. L. Crossley. il Paper Ind 29:838-40 S '47

Italy's fiber industry. For Comm W 29:27 N 1 '47

Not enough cordage fibers. Bsns W p28+ Ag 9 '47; Discussion. E. R. Metcalf. p 111 O 11 '47

Rapid measurement of an index of fibre length. R. de Montigny and P. Zborowski. diag Pulp & Pa of Can (Convention no) 47: 99-112, 115, 294 [F] '46; Same. Paper Tr J 123:42-8 N 7; 29-34 N 28 '46; Same cond. Paper Ind 28:882+ S '46

Resin fibers; abstract. H. H. Atlas and R. S. Aries. Materials & Methods 25:127 Ja '47

Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47

What is safe way to burn fiber in hrt boiler? diags Power 91:198-9+ Mr '47

See also
Cotton fibers
Fibrous materials
Glass fibers
Jute
Ramie
Rayon fibers
Saw palmetto
Textile fibers

FIBERS, Plastic coated. See Plastic coated fibers

FIBRIN

Fibrin film and other products from human plasma. J. D. Ferry and P. R. Morrison. bibliog il Ind & Eng Chem 38:1217-21 D '46

Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:388-400 F '47

Preparation and properties of serum and plasma proteins; human fibrin in the form of an elastic film. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:400-9 F '47

Preparation and properties of serum and plasma proteins; modification of the physical and chemical properties of fibrin film by heat treatment. J. D. Ferry and others. bibliog Am Chem Soc J 69:409-16 F '47

FIBRINOGEN

Fibrin film and other products from human plasma. J. D. Ferry and P. R. Morrison. bibliog il Ind & Eng Chem 38:1217-21 D '46

Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:388-400 F '47

FIBRINOLYSIN

Multiple protein interactions as exhibited by the blood-clotting mechanism. W. H. Seegers. bibliog(47 ref) J Phys & Colloid Chem 51:198-206 Ja '47

Prothrombin and fibrinolysin. W. H. Seegers and E. C. Loomis. Science 104:461 N 15 '46

FIBRO dyeing. See Dyes and dyeing—Rayon

FIBROUS materials

Expression of liquids from fibrous materials. C. F. Gurnham and H. J. Masson. bibliog diags Ind & Eng Chem 38:1309-15 D '46

Flow-resistance characteristics of fibrous acoustical materials. R. H. Nichols, jr. bibliog diag Acoustical Soc Am J 19:866-71 S '47

FICTION

See also
Business—Fiction

FIDELITY insurance. See Insurance, Surety and fidelity

FIDUCIARY management, inc.

Stockholders' rights. Comm & Fin Chr 165: 207 Ja 13 '47

FIELD, Edward D. 1879-

Sketch. por Nat Underw (Life ed) 51:4 My 23 '47

FIELD, Marshall

Home for the Sun. Bsns W p20 Ag 16 '47

FIELD, Marshall, and company. See Marshall Field and company

FIELD glasses

Trojan binocular. il diags Consumers Res Bul 19:16-17 F '47

FIELD information agency, technical

Review of German science. R. L. Kenyon. il Chem & Eng N 25:962-3 Ap 7 '47

FIELD tube. See Heat exchangers

FIELDNER, Arno Carl, 1881-

Portrait. Fortune 35:95 Mr '47

FIJI islands

Economic conditions

Review of developments during 1946. For Comm W 27:16-17 My 3 '47

FILAMENTS

Carbide structures in carburized thoriated-tungsten filaments. C. W. Horsting. bibliog il diags J Ap Phys 18:95-102 Ja '47

Lamp filament to atomic pile. Chem & Eng N 25:236 Ja 27 '47

FILARIASIS

Filaricidal activity of substituted phenyl arsenoxides. G. F. Otto and T. H. Maren. bibliog Science 106:105-7 Ag 1 '47

New class of antifilarial compounds. A. D. Welch and others. Science 105:486-8 My 9 '47; Discussion. M. Silverman. 106:316 O 3 '47

Production of quantitative infections with the filariae of the cotton rat. J. A. Scott. Science 105:437 Ap 25 '47

FILENE, Edward A., good will fund

Filene's co-ops. Bsns W p65-6+ Ap 5 '47

FILES and filing (documents, etc.)
Commercial archivist aids the controller. J. B. Kaiser. J Account 83:304-7 Ap '47
Filing plans in an engineering office; how to preserve drawings, blueprints, and specifications. S. Lewis. il Heating-Piping 19:94-5 Mr '47
Fire brick company issues folders to file and preserve its literature. A. Bernstein. il Ind Marketing 32:100+ Jl '47
How to originate and maintain a photo file; system developed by large construction equipment manufacturer, La Plant-Choate. C. E. Parks. il Ptr Ink 218:36-8 Ja 17 '47
Keeping magazine articles for future reference. il Heating-Piping 19:97-8 O; 105-6 N '47
Record retention and disposal policies; a survey; abstract. Management R 36:79-80 F '47
Reprint filing; perennial problem. R. H. K. Foster. Science 104:470-1 N 15 '46
Simple system for reprint filing. L. R. Richardson. Science 104:181-2 Ag 23 '46; Discussion. L. Whitcomb. 104:577 D 13 '46
Timesaving plan for filing; terminal digit plan for serially numbered documents. Am Bsns 17:26+ Ap '47

Tickler files
About tickler files; abstract. G. W. Peak. Management R 36:78-9 F '47

FILES and rasps
Manufacture, selection and use of files; with list of file names and terminology. L. E. Browne. il diags Steel 120:102-5+ My 12; 90-2+ My 19; 96-8+ My 26 '47
Rotary power filing technique. il Mach 53: 165-7 Ap '47

FILLING
Airport fill on soft bottom controlled to avoid mud waves; San Francisco municipal airport. il plan Eng N 138:104-7 Ja 23 '47
Brantford's troubles with garbage and refuse disposal. G. H. Richards. Water & Sewage 85:71-2+ O '47
Corrugated plate pipe culvert carries 61 ft. of fill; U.S. 40, in Colorado. il Roads & Sts 90:92 Ja '47
Earthfill placing, Center Hill dam, R. W. McCall. il Eng N 138:572-3 Ap 17 '47
Reclamation's biggest earthfill dam; Anderson Ranch dam in Idaho. D. S. Walter. il diags Eng N 139:396-402 S 18 '47
Why the army favors sanitary fills for refuse disposal. R. R. Durham. il diag Pub Works 78:21-2 Je '47
Why you should avoid housing construction on refuse landfills. R. Eliassen. il Eng N 138:756-60 My 1 '47

FILLING machines
Dust-free packaging of powdered products. il diag Comp Air Mag 52:203 Ag '47
Filler for miniature bottles. il Mod Packaging 20:176 Mr '47
Solenoid syruper; bringing frozen fruit and berry packages to exact weight. il Mod Packaging 20:119 Ag '47
Vacuum filler for powders. il Mod Packaging 20:177 Mr '47
See also
Bag filling machines

Control
Positive weight control; electronic device flashes signals to govern adjustment of filling machine; Lipton tea co. il Mod Packaging 20:130-4 Mr '47

FILLING materials
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47
See also
Paper making—Fillers

FILLING stations. See Gasoline service stations

FILM council of America
Film Council may build huge audience for commercially sponsored motion pictures. H. E. Green. Ptr Ink 220:38 Ag 8 '47

FILMS
Alkoxyl content of urea formaldehyde resin films. B. M. Shaw. diags Soc Chem Ind J 66:147-9 My '47; Abstract. Paint Oil & Chem R 110:60+ O 16 '47
Black soap films of fatty acids in sulfuric acid. L. McCulloch. il Am Chem Soc J 68: 2735-6 D '46
Coating thickness measurement by interferometry. M. F. Bechtold. bibliog il diag Opt Soc Am J 37:873-8 O '47
Determining tack of self polishing wax films; Touch controller. M. Fuld. il diags Soap & San Chem 23:126-7 F '47
Diffusion of vapors in films. P. E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47
Film manufacture; outline of methods. W. H. Aiken. il diags Mod Packaging 20:147-52 D '46
Films, resistant to organic solvents, for use in the electron microscope. S. G. Ellis. il J Ap Phys 18:846-7 S '47
High temperature furnace for electron diffraction studies. E. A. Gulbransen. il diag R Sci Instr 18:546-50 Ag '47
Interpretation of electron diffraction patterns from hydrocarbon films. J. Karle and L. O. Brockway. il J Chem Phys 15:213-25 My '47
Measurements of the refractive index of films. F. W. Billmeyer, jr. J Ap Phys 18: 431-4 My '47
Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašiček. Opt Soc Am J 37:145-53 Mr '47
Preparation and properties of serum and plasma proteins; human fibrin in the form of an elastic film. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:400-9 F '47
Preparation and properties of serum and plasma proteins; modification of the physical and chemical properties of fibrin film by heat treatment. J. D. Ferry and others. bibliog Am Chem Soc J 69:409-16 F '47
Printing on vinyl film. C. M. Robbins. il Rubber Age 60:203-5 N '46
Process testing of film continuity on Formex fine wire. B. Mulvey. il diags Gen Elec R 49:46-8 N '46
Reflection of light from glass with double and multiple films. A. Vašiček. Opt Soc Am J 37:623-34 Ag '47
Reflectivity and transmissivity of multiple thin coatings. W. Weinstein. Opt Soc Am J 37:576-81 Jl '47
Technique for obtaining exceptionally durable low reflecting films of MgF_2 on glass. J. E. Tyler. R Sci Instr 18:367-8 My '47
Water-repellent films. R Sci Instr 18:372-3 My '47

FILMS, Metallic
Construction and characteristics of evaporated nickel bolometers. B. H. Billings and others. il diag R Sci Instr 18:429-35 Je '47
Electron diffraction study of oxide films formed on high temperature oxidation resistant alloys. J. W. Hickman and E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 32):467-83 '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H. Billings and M. Hyman, jr. Opt Soc Am J 37:119-21 F '47
Interference films on tungsten. I. H. Parsons. diags J Chem Educ 24:483 O '47
Investigation of the properties of evaporated metal bolometers. B. H. Billings, W. L. Hyde and E. E. Barr. diags Opt Soc Am J 37:123-32 Mr '47
Kinetics of oxide film formation on metals and alloys. E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29):431-61 '47
Making Fresnel off-axis parabolic mirrors by the evaporation technique. L. G. Schulz. diags Opt Soc Am J 37:349-54 My '47
Metallic film formation at low temperatures. A. Goetz and others. bibliog diags Chem R 39:481-95 D '46
Metallizing glass and ceramic materials. A. J. Monack. Glass Ind 28:21-5+ Ja '47
Neutral density filters of Chromel A. M. Banning. Opt Soc Am J 37:686-7 S '47

FILMS, Metallic—*Continued*
Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37: 826-32 O '47
Partially reflecting mirrors of high efficiency and durability. M. Banning. Opt Soc Am J 37:688-9 S '47
Passivity in chromium-iron alloys; adsorbed iron films on chromium; abstract. H. H. Uhlig. diags Iron Age 160:60-1 O 30 '47
Practical copper reduction on non-conductors. H. Narcus. bibliog Metal Finishing 45:64-7+ S '47
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47
Preparation by an evaporation technique of correcting elements for refracting optical systems. L. G. Schulz. il Opt Soc Am J 37: 509 Je '47
Reflection and transmission interference filters. L. N. Hadley and D. M. Dennison. diags Opt Soc Am J 37:451-65 Je '47
Structure of sliding surfaces. G. I. Finch. Inst Mech Eng J & Proc 153 (War emergency issue no 10):331-2 '45; Same. Engineering 159:215 Mr 16 '45; Same cond. Automobile Eng 35:141 Ap '45
Study of the films of aluminum obtained by anodic oxidation of different aluminum alloys; abstract. Chem Eng 53:270 D '46
Thin oxide films on aluminum. E. A. Gulbransen and W. S. Wysong. bibliog J Phys & Colloid Chem 51:1087-103 S '47
X-ray method for measuring the thickness of thin crystalline films. A. Eisenstein. bibliog diags J Ap Phys 17:874-8 N '46

FILMS, Moving picture. See Moving picture films

FILMS, Photographic. See Moving picture films; Photography—Films

FILTER paper

Standards

Development of standards for analytical filter papers. B. W. Scribner and W. K. Wilson. bibliog J Res Nat Bur Stand 39:21-7 Jl '47
Standards for analytical filter papers. Franklin Inst J 243:245-6 Mr '47; Same abr. Chem & Eng N 25:1072 Ap 14 '47
Standards for analytical filter papers. Franklin Inst J 243:423-4 My '47

Testing

Development of standards for analytical filter papers. B. W. Scribner and W. K. Wilson. bibliog J Res Nat Bur Stand 39:21-7 Jl '47
Study of certain factors affecting the filtration of smoke by fibrous materials. J. J. Perot, jr. bibliog diags Paper Tr J 124:54-62 Je 19 '47; Excerpts. Paper Ind 29:1350-2 D '47

FILTERS and filtration
Diatomite filtration. R. E. Thompson. il Water & Sewage 85:31+ S '47
Filtration; new equipment. S. A. Miller. il Chem Ind 61:412-13 S '47
Filtration of water. Oil & Gas J 45:79 Ja 4 '47
Fluoride removal; treatment plant of Climax molybdenum co. R. Wamsley and W. E. Jones. flow sheet il plan diags Water & Sewage Works 94:272-6 Ag '47
High-rate water filtration meeting practical tests at Chicago; South district filtration plant. il Eng N 139:44-8 Jl 10 '47
Improving water plant operation with activated silica. H. R. Hay. bibliog Water & Sewage Works 93:353-8, 389-92, 479-82 S-O, D '46
Miniature industrial waste treatment plant; truck washing waste. R. F. Weston. il plan Water & Sewage Works 94:111-14 Mr '47
Okinawa water treatment plants. E. W. Campbell. N E Water Works Assn J 61:50-8 Mr '47
Pumice for water treatment; used in filter beds of the plant, primarily to remove algae from water. Rock Prod 50:162 O '47
Study of the clarification of compressor station recycle cooling water. E. G. Hammerschmidt. il Pet Eng 18:147+ Mr '47
Water treatment in Massachusetts. J. A. McCarthy. Am Water Works Assn J 39: 79-83 Ja '47
Water treatment practice in Quebec. T. J. Lafrenière. Am Water Works Assn J 39: 797-801 Ag '47; Same. Water & Sewage 85: 83-4+ My '47
Yuma and the Colorado river. C. G. Ekstrom. il Am Water Works Assn J 39:245-52 Mr '47

See also
Filtration plants
Sewage disposal—Filtration

Cleaning

Cleaning filter sand with sulphur dioxide. C. F. Angle. il Water & Sewage Works 94: 92-4 Mr '47
Cleaning sand filters with chlorine at Hamilton, Ontario. D. H. Matheson. il Water & Sewage 85:85+ My '47
Experience with surface wash system at Milwaukee; abstract. H. C. Schmitt. Water & Sewage Works 94:21 Ja '47
Problems in disposal of sludge and wash water for Connecticut water filtration plants. F. O. A. Almquist. plans diags N E Water Works Assn J 60:344-58 D '46; Abstract. Water & Sewage Works 93:416 N '46; Discussion. N E Water Works Assn J 60:359-62 D '46
Repairing a surface wash system. H. C. Schmitt. il Am Water Works Assn J 39: 235-44 Mr '47

FILTERS and filtration (technical chemistry)
Constant rate filtration in leaf filters. J. F. Schnacky. diag Chem Eng 54:138 S '47
Continuous contact filtration; Filtrol corporation. flow diag il Pet Refiner (Process Handbook sec) 26:126-7 Ap '47
Decolorization of petroleum waxes by adsorbent percolation. W. A. Johnson. bibliog diags Pet Processing 2:673-4+ S '47
Diatomaceous filter aids for paper mill waters and effluents. G. G. Halvorsen. il Paper Tr J 125:37-41 O 30 '47
Drainage characteristics of groundwood pulp; constant pressure filtration. S. A. Collicutt. bibliog diag Pulp & Pa of Can 48:66-78 Ja '47
Expression of liquids from fibrous materials. C. F. Gurnham and H. J. Masson. bibliog diags Ind & Eng Chem 38:1309-15 D '46
Filter sheet tightener. il Chem Eng 54:150 O '47
Filtration. S. A. Miller. bibliog(139 ref) Ind & Eng Chem 39:5-7+ Ja '47
Filtration process; Percofil. L. Wickenden. Chem Ind 60:634+ Ap '47
Flow of gas through gum filters on domestic gas appliances. L. F. Vixler. il Gas Age 100:25-30 Ag 7 '47
Ford throws out filter bags; removing chips from grinding coolant; centralized filtration. R. LeGrand. il diags Am Mach 91: 126-7 N 6 '47
Gas flows through U.G.I. gum filters. E. H. Smoker. Am Gas Assn Mo 29:295-6 Je '47
How to improve low grade sweeteners; use of filter aids, alone, or in conjunction with activated carbon or ion exchange resins. W. J. Nelson. flow sheet il Food Ind 18: 1852-3 D '46
Mobile military filters for industry; abstracts. E. G. Kominek. Chem Eng 53:262+ D '46; Eng N 137:719 N 28 '46
Optimum dilution in viscous liquid filtration. E. J. Reeves. Ind & Eng Chem 39:203-6 F '47
Percolation filtration process; Attapulgus clay company. flow diag Pet Refiner (Process Handbook sec) 26:216-17 Ap '47
Resistance to filtration. S. M. Walas. bibliog plan Am Inst Chem Eng Trans 42:783-93 O-D '46
Rotation speed in continuous filter operation. E. J. Reeves. Pet Refiner 26:104-5 Je '47
Special filtration yields more peach juice. D. S. Bentley. flow sheet il Food Ind 19: 1359-62+ O '47
Testing commercial pads used for sterile filtration; efficiency of asbestos filter pads. S. S. Epstein. il Food Ind 19:1070-1+ Ag '47

FILTERS and filtration (technical chemistry) —*Continued*
White water clarification by means of the Marx filter. C. A. Benson and H. E. Brakewood. flow diag il diag Paper Tr J 124:72-4 Ap 24 '47; Same cond. Paper Ind 29:1357-8 D '47
See also
Filter paper

FILTRATION plants
Compressed air to prevent freezing in open-air filter plant units. Eng N 139:403 S 18 '47
Operation of small filtration plants. A. E. Clark. Water & Sewage Works 94:277-8, 345-6, 415-16 Ag-S, N '47 (to be cont)
Operation of water-filtration plants. M. Gaboury. il Water & Sewage 85:86+ My '47
Toronto's new filtration plant reduces chemical costs. N. J. Howard. il Water & Sewage 85:18+ F '47
Water filtration plants in Canada. il Water & Sewage 85:5+ Ag '47
Water treatment and filtration plant at Chicago. E. E. R. Tratman. il diags Engineer 183:88-9, 112-14, 138-40 Ja 24-F 7 '47
Waterworks showplace in South Africa; Capetown's Steenbras filtration works. flow plans il Eng N 139:312-14 S 4 '47
See also
Filters and filtration
Waterworks

Design
Chicago's South District filtration plant nears completion. W. W. DeBerard and others. plans diags Western Soc E J 51:120-35 S '46

Employees
Why have operators in water filtration plants? A. E. Clark. Water & Sewage Works 94:133-4 Ap '47

Equipment
Addition to St Hyacinthe water filtration plant. L. Crepeau. il Water & Sewage 85: 20-2+ Ap '47
Baffled basins improve sedimentation; Baltimore's Montebello filtration plant. E. S. Hopkins. il diags Eng N 138:514-15 Ap 3 '47
English practice in hydraulic controls for water-purification plant. D. Brownlie. il Water & Sewage 85:25+ Mr '47
Meter control of water softening process; use of pH indicating recorder at the St Paul filtration plant. R. A. Thuma. il Eng N 138:384-5 Mr 6 '47
New filtration plant at Midland, Pa. H. F. Holloway. il Am Water Works Assn J 39: 361-5; Discussion. M. A. Slone. 365-8 Ap '47
New use for hydraulic control; innovation at Southampton waterworks. il Chem Age (Lond) 56:527 Ap 26 '47
Value of maintenance in filtration plants. A. E. Clark. Water & Sewage Works 93:431-2 N '46

FINANCE
Consolidated balance-sheet for a democracy. C. R. Noyes. J Account 83:100-12 F '47
See also
Banks and banking
Bonds
Budget
Capital
Colleges and universities—Finance
Corporations—Finance
Credit
Debt
Debts, Public
Deflation (finance)
Electric utilities—Finance
Finance companies
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Foreign exchange
Gold as money
Grants-in-aid—Apportionment formulas
Holding companies
Housing finance
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Income tax
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Reserves
Roads—Finance
Scientific research—Finance
Securities
Sewerage—Finance
State finance
Stock exchange
Stocks
Taxation
Trusts, Industrial
War finance
Waterworks—Finance

Argentina
Argentina's shift to creditor status. E. A. Gomez del Rey. Comm & Fin Chr 165:3232+ Je 19 '47

Austria
Inflation in Austria. Economist 152:588 Ap 19 '47

Burma
Independent financial system. For Comm W 25:25 D 7 '46

California
California's local revenue problem. J. O. McClintic. Ann Am Acad 248:260-7 N '46

Canada
Canada feels impact of world insecurity; Canadian dollar problem. V. L. Horoth. il Mag of Wall St 80:149-51 My 10 '47
Canada's balance of international payments. F. A. Knox. Ann Am Acad 253:134-42 S '47
Canada's dollar shortage. N. A. Robertson. Comm & Fin Chr 165:2484 My 8 '47
Canadian balance of payments with the United States, 1946; table. Banking 39:76 Je '47
Dollar balancing; Dominion's reserve of U.S. currency is getting low. Bsns W p105 Mr 29 '47
Reasons for confidence in Canadian credit. C. Elliott. Comm & Fin Chr 165:1650+ Mr 27 '47
Tendencies in Canadian public finance. D. C. MacGregor. Ann Am Acad 253:105-14 S '47

Denmark
Loan of $40,000,000 to Denmark by International Bank. For Comm W 28:35 S 6 '47; Comm & Fin Chr 166:831 Ag 28 '47

Europe
Europe's poverty; facts vs. fiction; with data on foreign assets in the United States. M. Winkler. Comm & Fin Chr 166:1408 O 9 '47

France
Course of inflation; deficit; international financial position. Fed Res Bul 33:356-62 Ap '47
Save the franc campaign. Economist 153:653 O 18 '47
World bank grants first loan to France; Significance of French loan. Comm & Fin Chr 165:2613+ My 15 '47
World bank loan to France and future of foreign private lending. E. H. Weinwurm. Comm & Fin Chr 165:3234+ Je 19 '47
See also
Banks and banking —France

Germany
See also
Banks and banking—Germany

Great Britain
Attention, Mr Dalton! disposition of India's blocked sterling balances. H. M. Bratter. Comm & Fin Chr 165:2602+ My 15 '47
Britain may refuse to pay India and Egypt. J. Reid. Barron's 27:30 My 12 '47
Britain rations its dollars. Bsns W p85-6 Ag 30 '47
Britain to borrow more? P. Einzig. Comm & Fin Chr 165:1525 Mr 20 '47
Britain's convertibility worries. P. Einzig. Comm & Fin Chr 165:2477+, 3028; 166:821, 1013 My 8, Je 5, Ag 28, S 11 '47
Britain's counter claims in settling sterling balances. P. Einzig. Comm & Fin Chr 165: 1130+ F 27 '47
Britain's dollar problem. F. B. Makin. il Banking 40:37 Jl '47
Britain's use of U.S. loan. P. Einzig. Comm & Fin Chr 165:1250+ Mr 6 '47
British balance of payments crisis. Nat City Bank p99-103 S '47
British loan drafts greater than anticipated. Comm & Fin Chr 165:2348 My 1 '47
British set to meet free sterling deadline. J. Reid. Barron's 27:8 My 5 '47
British treasury reports on use of American loan. H. Dalton. Comm & Fin Chr 166:826 Ag 28 '47

FINANCE—Great Britain—*Continued*
Cheap money in retrospect. Economist 151: sup3 N 16 '46
Convertibility; who is to blame? P. Einzig. Comm & Fin Chr 166:721 Ag 21 '47
Cost of convertibility. Economist 153:247-8 Ag 9 '47
Cost of sterling convertibility. P. Einzig. Comm & Fin Chr 166:528 Ag 7 '47
Debt to India. Economist 152:204-6 F 1 '47
Does a sterling crisis impend? P. Einzig. Comm & Fin Chr 165:2329+ My 1 '47
Drafts on the dollars. Economist 152:811-12 My 24 '47
Drawings on the loan. Economist 153:166, 209 Jl 26-Ag 2 '47
Exchequer returns for half-year. For Comm W 29:20 O 25 '47
Free trade possible only if we buy it. Barron's 27:1+ Ag 25 '47
Future of the sterling area. V. L. Horoth. il Mag of Wall St 79:730-2+ Mr 29 '47
How did the money go? Floating debt analysed. Economist 153:416 S 6 '47
Loan from South Africa. Economist 153:613, 654 O 11-18 '47
Mr Dalton's crisis; premature return to convertibility. P. Einzig. Comm & Fin Chr 166:626 Ag 14 '47
Post-mortem on dollars. Economist 153:288-9 Ag 16 '47
Pound sterling again becomes inconvertible. Iron Age 160:100+ S 4 '47
Second loan to Britain unlikely. P. Einzig. Comm & Fin Chr 165:2644, 2862 My 15, 29 '47
Sees leakage of British capital. L. Robbins. Comm & Fin Chr 166:1755 O 30 '47
Seven years of deficit finance. Economist 151: sup2 N 16 '46
Stabilization of dollar-sterling rate key to Britain's recovery. E. H. Weinwurm. Comm & Fin Chr 165:1936+ Ap 10 '47
Sterling balance talks with India fail. P. Einzig. Comm & Fin Chr 165:1379+ Mr 13 '47
Sterling position not alarming; return to free convertibility. G. Cummings. Comm & Fin Chr 166:117 Jl 10 '47
Suspension of the bluff standard; Britain's decision to suspend convertibility of sterling. P. Einzig. Comm & Fin Chr 166:922 S 4 '47
Wall Street inclined to believe British will ask America for additional financial aid. Comm & Fin Chr 165:1524 Mr 20 '47
When the dollars run out. Economist 152:504-5 Ap 5 '47
Which version of UK's finances is correct? H. M. Bratter. Comm & Fin Chr 165:2732+ My 22 '47
Why cheap money? P. Einzig. Comm & Fin Chr 164:3213+ D 19 '46

See also
Bank of England
Banks and banking—Great Britain
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Securities—Great Britain

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Law authorizing floating of internal loan of $10,000,000. For Comm W 28:18 Ag 23 '47

Hungary

Credit for Hungary. Economist 152:905 Je 7 '47

India

Attention, Mr Dalton! disposition of India's blocked sterling balances. H. M. Bratter. Comm & Fin Chr 165:2602+ My 15 '47
India and the Empire dollar pool. For Comm W 26:15+ Ja 11 '47

Italy

Course of inflation; deficit; international financial position. Fed Res Bul 33:356-62 Ap '47

Luxemburg

Luxembourg obtains $12,000,000 loan from International Bank. For Comm W 28:32 S 13 '47

Mexico

United States agrees on $100 million advances to Mexico. Comm & Fin Chr 165: 2610 My 15 '47

Minnesota

Problems of state aids in Minnesota. (State governmental research bul. 18) 43p Minnesota inst. of governmental research, 702 Empire bank bldg, St Paul 1 '47

Netherlands

Dutch financial policy. Economist 152:22 Ja 4 '47
$195,000,000 world bank loan to Netherlands. Comm & Fin Chr 166:635 Ag 14 '47; Same cond. For Comm W 28:35 S 6 '47

New York (city)

Municipal expenses soar; New York's billion-dollar budget leads. Bsns W p80+ Ap 12 '47

Philippine Islands

Customs and internal revenue collections, Manila, July 1, 1946, to June 30, 1947; table. For Comm W 28:20 S 6 '47
Report and recommendations of the joint Philippine-American finance commission available. For Comm W 28:15 S 20 '47

Switzerland

Switzerland has financed itself. F. Bek-Andreae. Comm & Fin Chr 166:925 S 4 '47

United States

Cash income and outgo of Treasury, fiscal years, 1940-1947; graph. Survey of Cur Bsns 27:1 Jl '47
Criticism of government fiscal organization and procedure. S. Tsai. J Account 83:296-303 Ap '47
Debt, the budget and taxes. B. Ruml. Comm & Fin Chr 166:1430+ O 9 '47
Economists' national committee on monetary policy suggest detailed monetary reform to the President and Congress. Comm & Fin Chr 165:1253+ Mr 6 '47
Economy and balanced budget could stabilize government credit; C. F. Childs & company Bulletin. Comm & Fin Chr 164:2760+ N 28 '46
Economy in reconversion; financial developments in 1946; with figures for other years. Survey of Cur Bsns 27:29-31 F '47
Facts and figures on government finance, 1946-1947. 144p pa Tax foundation, 30 Rockefeller plaza, New York 20 '46
Federal finance; results for the fiscal year ended June 30, 1947. Survey of Cur Bsns 27:7-8 Jl '47
Federal finances and the money market. Nat City Bank p63-5 Je '47; Same. Comm & Fin Chr 165:2985+ Je 5 '47
Financial expert looks at U.S.; address before Economic club of Detroit. A. N. Young. Comm & Fin Chr 165:2201+ Ap 24 '47
Foreign credits of the United States government. J. Shirer. Survey of Cur Bsns 27: 19-23 Ja '47
Government foreign transactions during the fiscal year 1946. J. Shirer. Survey of Cur Bsns 26:18-20 D '46
Inflation, interest rate and public debt management; address before California bankers association, San Diego. B. M. Anderson. Comm & Fin Chr 165:2849+ My 29 '47
Needed; a new fiscal policy. I. M. Ives. Comm & Fin Chr 165:2777+ My 22 '47
Our current inflation and monetary problem. M. S. Szymczak. Comm & Fin Chr 166:1642+ O 23 '47
Our federal finances; text of introductory portion of report for year ended June 30, 1946. J. W. Snyder. Comm & Fin Chr 165: 648+ Ja 30 '47
Ruthless taxing and spending must be stopped. F. L. Crawford. Comm & Fin Chr 165:1565+ Mr 20 '47
Short-term rates unpegged. Bsns W p22+ Jl 12 '47
Snyder reports 1947 surplus at $754,000,000. Comm & Fin Chr 166:125 Jl 10 '47
Summary of Treasury receipts, expenditures and related items; with details of trust accounts and general fund balance, yearly 1944-1946, monthly, Dec. 1945-Dec. 1946. Fed Res Bul 33:69 Ja '47 [cont monthly]
Taxes, national budget and debt. F. L. Crawford; R. Magill. Comm & Fin Chr 165:1118+ F 27 '47

FINANCE—United States—*Continued*
U.S. finances and obligations. W. Gates. il Mag of Wall St 80:689-91+ S 27 '47

See also
Budget—United States
Debts, Public—United States
Government expenditures
Income tax—United States
Inflation (finance)
Money—United States
Reconstruction finance corporation
Taxation—United States
United States—Appropriations and expenditures

FINANCE, International
Befuddled foreign exchange situation. S. D. Post. Comm & Fin Chr 166:1308+ O 2 '47
Dollar crisis a production crisis; address before American chamber of commerce, London. L. W. Douglas. Comm & Fin Chr 166: 116+ Jl 10 '47
Dollar shortage; address before American chamber of commerce in London. W. E. Knox. Comm & Fin Chr 166:520+ Ag 7 '47
Dollars for Europe? Economist 152:833-5 My 31 '47
Economic riddle of the dollar shortage. J. D. Mooney. Comm & Fin Chr 166:2+, 517+ Jl 3, Ag 7 '47
Europe's dollar needs; comments on the Paris report. Economist 153:610-11 O 11 '47
Exchange depreciation and international monetary stability. J. J. Polak. bibliog R Econ Stat 29:173-82 Ag '47
Foreign credits of the United States government. J. Shirer. Survey of Cur Bsns 27:19-23 Ja '47
International transactions of the United States in the first postwar year. Fed Res Bul 32:1321-34 D '46
Lending operations of the International monetary fund. A. Bourneuf. R Econ Stat 28:237-47 N '46
Need for world currency reform; prerequisite to recovery. V. L. Horoth. Mag of Wall St 81:78-9+ O 25 '47
New postwar foreign lending; report of Bank for international settlements. Fed Res Bul 33:1240-7 O '47
New York reserve bank analyzed world gold distribution. Comm & Fin Chr 166:535+ Ag 7 '47
Pattern of postwar international indebtedness. M. A. Kriz. Comm & Fin Chr 165: 1929+ Ap 10 '47
Security exchanges in world finance. R. A. Foulke. il Dun's R 54:11-12+ N; 11-14+ D '46
So called dollar shortage. M. Stevens. Comm & Fin Chr 166:1002+ S 11 '47
Trends toward economic crisis in China, France, Britain, Canada. H. M. Tremaine. Mag of Wall St 79:663-4+ Mr 15 '47
U.S. financial assistance in world reconstruction. N. Weyl. For Comm W 26:3-6+ F 1 '47
What's happening in world stock markets. V. L. Horoth. il Mag of Wall St 79:603-4+ Mr 1 '47

See also
Balance of payments
Banks and banking, International
Foreign exchange
International bank for reconstruction and development
International monetary fund
Investments, Foreign
Loans, Foreign
Money—International aspects
also National advisory council on international monetary and financial problems; World commerce corporation

Treaties

See Financial treaties and agreements

FINANCE, Municipal. See Municipal finance

FINANCE, Personal

See also
Estate planning

FINANCE, State. See State finance

FINANCE companies
Banks expand stake in instalment credit; finance companies admit dominance has lessened. R. M. Bleiberg. Barron's 27:7 Je 9 '47
C.I.T. biggest retailer of installment credit is signing them up again. Fortune 36:86-91+ S '47
Construction-equipment financing. H. K. Glidden. Roads & Sts 89:100+ O '46
Consumer credit companies' loans rise with reappearance of war-scarce durable goods. Barron's 27:33 O 6 '47
Defends finance companies. L. M. Jeger. Comm & Fin Chr 165:3360 Je 26 '47
Trend; issues giving rise to the Ford, Chrysler, Universal Credit, CIT and Commercial Credit consent decrees. T. W. Rogers. Banking 39:44+ D '46; 34+ Ja '47

See also
Commercial credit company

Advertising

Ads give single personality to all local representatives; Personal finance co. wants all its managers to be friendly and cheerful. R. K. Steinman. il Ptr Ink 220:34-5 Ag 29 '47

Insurance requirements

For small loan companies; standard form 26. Rough Notes 90:51 Je '47
N.A.U.A. proclaims auto floor plan form and rates. Nat Underw 51:1+ Ja 23 '47; Same abr. East Underw 48:25 Ja 31 '47
Wholesale floor plan endorsement. Rough Notes 90:77 Mr '47

Securities

Finance companies as Regulation W ends; with earnings and dividend record of leading companies. G. S. Kent. Mag of Wall St 80:708-9+ S 27 '47

FINANCE corporation for industry, ltd.
Role of the FCI. Economist 153:296-7 Ag 16 '47

FINANCIAL advertisers association. See Financial public relations association

FINANCIAL advertising. See Bank advertising; Securities—Advertising; Trust companies—Advertising

FINANCIAL employees guild
CIO union at Irving trust co. E. Germain. Comm & Fin Chr 165:595+ Ja 30 '47
Street divided; financial workers union competes with C.I.O. guild. Bsns W p83-4+ D 14 '46

FINANCIAL libraries

See also
Bank libraries

FINANCIAL placement and clearance center
Financial placement center opened in New York. Comm & Fin Chr 166:634 Ag 14 '47

FINANCIAL public relations association (formerly Financial advertisers association)
Annual convention, 31st, San Francisco, Oct. 7-10. Burroughs Clearing House 31:3 N '46
Annual convention, 32d, New York. Ptr Ink 221:92 O 10 '47
Report on F.A.A. trust departmentals. Trusts & Estates 83:531-2 N '46

FINANCIAL ratios
Behind the scenes in twelve retail trades; with tabulations showing fourteen important ratios. il Dun's R 55:20-1 O '47
Financial yardstick ratios for gas and electric utilities, 1945. O. Ely. Pub Util 39:46 Ja 2 '47
Fourteen important ratios for 1945 for 24 wholesale trades and for wholesale groceries, by size (tangible net worth) classes; tabulations. R. A. Foulke. Dun's R 54:13, 54 N '46
Fourteen important ratios for 36 manufacturing industries, 1945; tabulation. Dun's R 54:12-13, 50 D '46
Reliable measure of liquidity; ratio of debt cycle to trading cycle advocated. I. Epton. Credit & Fin Management 49:11-13 S '47
Selected utility ratios; tabulation. J. S. Hartt. Pub Util 40:233 Ag 14 '47
What will happen to future retail expense ratios? R. H. Johnson. Dom Comm 35:34-8 F '47

FINANCIAL reports. See Corporations—Reports and yearbooks

FINANCIAL statements
Adequate disclosure. J Account 83:155-6 F '47
Capital stock and earned surplus in financial statements. C. G. Blough. J Account 83: 327-8 Ap '47
Current assets and current liabilities; working capital; Accounting research bulletin no. 30. J Account 84:282-5 O '47
Current practice in disclosure of information in financial statements. C. S. Rockey. J Account 84:202-6 S '47
Depreciation allowances are the liquid part of fixed assets. F. S. Blackall, jr. Bankers Mo 64:423-4 S '47
Emergency facilities; Accounting research bulletin no. 27. J Account 83:22-5 Ja '47
Exploding the profit myth; make accounting jargon understandable. F. G. Clark. Trusts & Estates 85:10-11 Jl '47
Financial statement requirements. J Account 84:169-71 Ag '47
Financial statements for corporate annual reports; Caterpillar tractor co. W. Blackie. J Account 83:191-207 Mr '47
Fund theory of accounting and its implications for financial reports. W. J. Vetter. J Bsns 200 pt 2:1-123 Jl '47
Know your investment; how to interpret financial reports. T. M. Luttrell. Pulp & Pa of Can 48:57-60 Mr '47
Labor's interest in accounting; excerpt from letter addressed to the research director of District 50. J Account 83:78-80 Ja '47
Oversimplifying financial statements. J Account 84:267-8 O '47
Reporting events occurring subsequent to close of fiscal period. C. G. Blough. J Account 83:229-34 Mr '47
Reports to stockholders, management, and labor. J. B. Inglis. J Account 83:16-21 Ja '47
Trends in accounting terminology and form revealed by 1946 corporate reports. A. Williams. J Account 84:310-17 O '47
What the public thinks about financial statements. J Account 83:487-9 Je '47

See also
Balance sheets
Consolidated statements
Financial ratios
Income statements

FINANCIAL statistics
Financial, industrial, and commercial statistics. Published in monthly numbers of Federal reserve bulletin
International financial statistics. Published in monthly numbers of Federal reserve bulletin
Study shows only two industry groups had larger war earnings; financial performance of 22 major industries in war years. Steel 121:69 O 20 '47

See also
Assets, Liquid
Banks and banking—Statistics

FINANCIAL treaties and agreements
Anglo-American agreement; articles seven to ten. Economist 153:228-30 Ag 9 '47
Anglo-American agreement; sterling in multilateral trade. J. B. Knapp and F. M. Tamagna. Fed Res Bul 33:1083-90 S '47
Anglo-Argentine monetary and trade agreement; text. Comm & Fin Chr 164:2476+ N 14 '46
Anglo-Belgian payments agreement; Belgium's Schachtian devices. P. Einzig. Comm & Fin Chr 166:1755 O 30 '47
Anglo-Egyptian financial agreement; sterling diplomacy. P. Einzig. Comm & Fin Chr 166:223 Jl 17 '47
Anglo-India interim financial agreement signed. Comm & Fin Chr 166:732 Ag 21 '47
Anglo-Spanish money pact. Economist 152:550 Ap 12 '47
Banks of England and Brazil agree on currency pacts. Comm & Fin Chr 165:2646 My 15 '47
Britain's reassurance to U.S. on loan agreement; exchange of correspondence between Chancellor Dalton and Secretary Snyder. Comm & Fin Chr 165:746+ F 6 '47
Czechoslovakia; payment agreement with the franc territories implemented; temporary payment arrangements concluded with Poland. For Comm W 27:14-15 My 24 '47
Great Britain's sterling agreements; post-July 15th sterling machinery. Economist 153:27-8 Jl 5 '47
Iraq's sterling; financial agreement with Britain. Economist 153:337 Ag 23 '47
Italy; financial agreements concluded with United Kingdom. For Comm W 28:17 Jl 5 '47
United States agrees on $100 million advances to Mexico. Comm & Fin Chr 165:2610 My 15 '47
Yugoslavia; exchange and payments agreements with Netherlands effective. For Comm W 26:35 Ja 25 '47

FINDING lost articles. See Lost articles

FINISHERS of textile fabrics, National association of. See National association of finishers of textile fabrics

FINISHING materials
Arco opens new laboratory for organic coating research. il Paint Oil & Chem R 110: 47-8 Ag 21 '47
Finishes for plastics. H. W. Dell. il Iron Age 158:46-7 D 26 '46
Improved finishes; abstract. D. P. Joyce. Chem Eng 54:242+ O '47
Organic coatings for corrosion protection. G. W. Seagren. Steel 121:124+ N 3 '47
Organic finishes for magnesium alloys. A. G. Gray. il Steel 120:73-4+ Je 30 '47
Postwar organic finishes. G. Klinkenstein. Metal Prog 50:1076 N '46
Protective finishing of electrical equipment. F. Widnall and R. Newbound. Engineering 163:330 Ap 25 '47

See also
Lacquer and lacquering
Paint
Polishing materials
Resinous products—Finishing materials
Textile finishing
Varnish and varnishing
Waxes

Testing
Adhesion tester for organic coatings. R. J. Phair. il Mech Eng 69:236 Mr '47
Adhesion testing of organic coatings; engineering file facts. G. Black. Materials & Methods 26:115 S '47

FINLAND
Finland's ordeal. Economist 152:200 F 1 '47; Same. Iron Age 159:115+ F 13 '47

See also
Copper mines and mining—Finland
Nickel mines and mining—Finland

Commerce
Export-import bank credits to Finns; interests to promote imports into U.S. Comm & Fin Chr 165:1167 F 27 '47
Finland reenters export market with various improved products. R. C. Leslie. il For Comm W 27:8+ My 3 '47

Industries and resources
Finland reenters export market with various improved products. R. C. Leslie. il For Comm W 27:8+ My 3 '47
Finnish prefabs. il Bsns W p114+ Ap 5 '47

FIR
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47
White fir crates; a test of wood for fruit and vegetable shipping containers. R. S. Kurtenacker. il Mod Packaging 20:152-5 My '47

See also
Balsam fir
Douglas fir

FIRE alarms
Demonstrate thermostat hotel fire detectors. Nat Underw 51:10 Mr 6 '47
Detecto-Master new fire and cold alarm system. il East Underw 47:28 N 22 '46
New super-sensitive device can give warning even before fire breaks out; Pyrostat. C. R. Schlegel. Spectator (Property ed) 12: 20 Ja 9 '47
New type alarm activated by invisible rays. Nat Underw 51:32 F 20 '47

FIRE alarms—*Continued*
Some causes of false alarms in aircraft fire-detector systems. R. E. Carbauh. Air Transport 5:34 Je '47
Stop that aviation fire; extinguishing agents and automatic detection equipment. il diags Air Transport 5:23-5 Ja '47
Thermic fire alarm. il Sci Am 176:83 F '47

FIRE apparatus
Development center for forest-fire-control equipment. I. C. Funk. il Mech Eng 69:544-7 Jl '47
Fire train poised for action; Port Arthur, Tex. works, Texas co. il Oil & Gas J 46: 96 Ag 23 '47
Foam towers carry firefoam to where it can do the most good. A. L. Foster. il Oil & Gas J 46:70 Jl 19 '47
Specification changes in fire fighting equipment met easily by arc welding. R. H. Davies. il Steel 121:96+ Ag 25 '47
Stevens mine Fogocar; fire fighting equipment. il Can Min J. 68:725-6 O '47

See also
Fire extinguishers
Fire protection

FIRE apparatus, Motor
Cardox airport fire truck. il Aero Digest 55: 87 O '47
Development of modern motorized fire-fighting equipment; abstract. A. G. Sheppard. S A E J 55:75 O '47

FIRE brick
Alkali absorption of fireclay checker brick. Glass Ind 28:127+ Mr '47
Considerations in size distribution of clay firebrick; flue checker chambers for open-hearth regenerative systems. J. A. Pierce. il Steel 120:110-12 Ja 13 '47
Heat losses in furnace linings. J. D. McCullough. bibliog Am Gas J 167:29-32 Jl; 36-8 Ag '47; Same. Blast F & Steel Pl 35:817-23 Jl '47; Same. Pet Refiner 26:112-17 Jl '47
Silica vs. basic brick; rammed doors highlight steel refractory panel. il Brick & Clay Rec 111:68+ Jl '47

See also
Silica brick

Manufacture

Advantages of making common brick by dry press method. C. L. Sewell. Brick & Clay Rec 109:72+ N '46
Controlled dry pressing cycle improves brick density at Illinois clay products co. M. E. Gates. il diags Brick & Clay Rec 110:64-5 Ja '47
Discussion of mix and forming pressure in dry press brick. A. W. Jackson. il Brick & Clay Rec 109:70+; Discussion. 74+ N '46
Shrinkage rates in firing fire-clay refractories. D. K. Stevens and R. E. Birch. Am Cer Soc J 30:109-13 Ap 1 '47

Testing

Elastic behavior and creep of refractory bricks under tensile and compressive loads. L. E. Mong. bibliog diags J Res Nat Bur Stand 38:229-40 F '47; Same. Am Cer Soc J 30:69-78 Mr 1 '47

FIRE brigades, Factory. See Factory fire brigades

FIRE clay
Effect of adding alunite to refractory clays J. O. Knížek and H. Fetter. bibliog il Am Cer Soc J 29:355-63 D 1 '46
Finding a sillimanite substitute for use in wet patching. F. H. Norton. Brick & Clay Rec 110:70+ My '47
How U.S. fire clay deposits occurred and their properties developed. J. O. Everhart. Brick & Clay Rec 111:57-8+ S; 60-1 O '47
Workability index of fireclay refractories. Franklin Inst J 244:311-12 O '47

See also
Fire brick

Testing

Quartz in fireclay refractories. J. S. Smith and P. F. F. Clephane. il Gas J (Lond) 249:91-4, 156+ Ja 8-15 '47; Discussion. 249: 213+ Ja 22 '47
Workability index of fireclay refractories. Blast F & Steel Pl 35:1004+ Ag '47

FIRE companies' adjustment bureau. See General adjustment bureau, inc.

FIRE damp
Powder-powered tools: the firedamp safety of devices for splicing cables and punching rails. A. R. T. Denues. 2pls U S Bur Mines Rep of Invest 4105:1-11 '47

FIRE departments, Industrial. See Factory fire brigades

FIRE escapes
Fire towers and fireproof exits help save lives in burning buildings. diags Brick & Clay Rec 110:35 My '47

FIRE extinction
Combating fires that have passed beyond incipient stage. H. W. Boggess. Oil & Gas J 45:97 Ap 12 '47
Emulsions bring safety to oil-fire fighting. D. Powell. il Safety Eng 93:16-17+ Mr '47
Experiments on the rate of foam application to petrol fires. N. O. Clark and others. Inst Pet J 33:192-6; Discussion. 196-201 Mr '47
Extinction of isobutane flames by carbon dioxide and nitrogen. G. W. Jones and G. S. Scott. 2pls U S Bur Mines Rep of Invest 4095:1-9 '47
Extinguishing systems. A. L. Brown. diags Factory Management 105:122 My '47
Fire control methods learned in war; use of foam. R. B. Tuttle. il Oil & Gas J 45: 84-5+ Ap 19 '47
Fire-fighting trials on magnesium-base alloys. il Engineering 162:481-3, 492 N 22 '46
Fire protection equipment. H. W. Boggess. Oil & Gas J 45:69 Ja 4 '47
Pipe line fire protection. R. Sneddon. il Pet Eng 18:96+ Ap '47
Prevention and extinguishing of insulating oil fires in power stations and substations. H. K. Sels. Edison Elec Inst Bul 15:379-81 O '47
Prior planning best defense against paint fires. D. Bernhardt, jr. Paint Oil & Chem R 110:10+ My 29 '47
Stop that aviation fire; extinguishing aloft; lightweight water extinguisher needed. il Air Transport 5:26-7 Ja '47
Switch-door window aids fire extinction. J. W. St Andre. Elec World 127:64+ Ja 4 '47
Water spray extinguishing. W. O. Lincoln. Spectator (Property ed) 12:16 Je 12 '47
Wetter water for fire fighters. P. W. Kearney. Nat Safety N 55:34-5+ F '47

See also
Coal mines and mining—Fires and fire protection
Fire extinguishers
Sprinkling systems

Study and teaching

Fire fighter's training; safety aspects. S. Ingham. il Nat Safety N 56:30-1+ Ag '47
Portable practice extinguisher devised as a training aid. diag Safety Eng 94:24 Ag '47

FIRE extinguishers
Aircraft fire extinguishing. D. H. Moore, jr. diag Aero Digest 55:44-5+ S '47
Airplane crash fire fighter is adaptable to running oil fires; patent. diag Pet Processing 2:272 Ap '47
Automatic fire extinguishers, carbon tetrachloride bulb type. Consumers Res Bul 20: 10 S '47
Blanketing type fire extinguishers. H. W. Boggess. Oil & Gas J 45:176 F 22 '47
Characteristics and uses of fire extinguishers. H. W. Boggess. Oil & Gas J 45:91 F 8 '47
Classification, description, anti-freeze, weights; tabulated data. Safety Eng 94:18-19 O '47
Color used to identify fire extinguisher types. Steel 121:110 S 22 '47
Cuba, a market for fire-fighting equipment; Fire-extinguisher production and import demand, Spain. For Comm W 27:23-4 Ap 5 '47
Develop new equipment for handling volatile butadiene gas. il Rubber Age 61:82 Ap '47
Extinguishers. A. L. Brown. il Factory Management 105:118-21 My '47
Fighting oil fires; Automatic tank extinguisher. il Ry Age 123:112 Jl 19 '47
Fighting the engine fire; new Walter Kidde extinguishing agents. il Aero Digest 54:50 Je '47

FIRE extinguishers—*Continued*
Fire extinguisher mounted in truck for use on gas fires encountered in repairing pipe line. O. C. Irvine. il Pet Eng 18:30 Ag '47
Fire protection in natural gasoline plants. C. L. Hightower. il Pet Refiner 26:129-31 Ap '47
First-aid extinguishers. il Nat Safety N 55: 139-40 Mr '47
Foot-operated vise saves time, prevents spills in fire extinguisher recharging. il Pet Processing 2:98 F '47
Guard your airport investment with specialized fire equipment. il Aviation 45:113-14+ N '46
Lamp bulbs make fire extinguishers. C. R. Cummings. il Power 91:192 Mr '47
Model foam-type fire extinguisher. S. Toporek. diag J Chem Educ 24:458 S '47
New fire extinguisher; Alfite Speedex. Rough Notes 90:63 Mr '47
Portable practice extinguisher devised as a training aid. diag Safety Eng 94:24 Ag '47
Ready for fire! extinguishers must be regularly inspected, efficient and properly placed. il Safety Eng 94:18-19+ Jl '47
Ready when they're needed; inspection of fire extinguishers in plant of Caterpillar tractor company. il Nat Safety N 56:26 Jl '47
Stop that aviation fire; extinguishing agents and automatic detection equipment. il diags Air Transport 5:23-5 Ja '47
Too many extinguishers for one fire. il Safety Eng 93:26 My '47
Wetting type fire extinguisher. H. W. Boggess. Oil & Gas J 45:93 Mr 15 '47
Which extinguisher to use. Safety Eng 93: 39 Mr '47

Rating

Fire extinguishers. il Consumers Res Bul 18: 18-20 O '46; 19:18-21 Ja; 22-6 My '47

FIRE extinguishers, Carbon dioxide
Carbon-dioxide fire-protection systems. P. W. Eberhardt. il diag Eng N 138:108-10 Ja 23 '47
Diesel fire protection. P. W. Eberhardt. il Diesel Power 24:1351+ N '46
Extinction of isobutane flames by carbon dioxide and nitrogen. G. W. Jones and G. S. Scott. 2pls U S Bur Mines Rep of Invest 4095:1-9 '47
Guarding a subway against fire; Independent subway system of New York City transit system. P. W. Eberhardt. il Nat Safety N 54:22-3 D '46
Lightplane anti-fire unit means extra safety; Kidde carbon dioxide system. il Aviation 46: 111 F '47
Piping, industry's best transportation system; pipe line for carbon dioxide use in fire extinguishers; Walter Kidde & co. T. E. Kennedy. il Heating-Piping 18:87-8 D '46
Power plant fire protection. P. W. Eberhardt. il Power Pl Eng 50:76-7 D '46

Rating

Fire extinguishers. il Consumers Res Bul 19: 18-19 Ja '47

FIRE inspection. See Insurance, Fire—Inspection

FIRE insurance. See Insurance, Fire

FIRE losses
Canadian fire waste has underwriters worried. Weekly Underw 156:1210 My 3 '47
Carelessness chief factor. L. A. Vincent. Weekly Underw 156:145+ Ja 11 '47; Same abr. East Underw 48:27 Ja 10 '47
Fire loss of billion seen in 3 years unless trend halted; National Board address; abstracts. F. A. Christensen. Nat Underw 51:1 My 29 '47; Weekly Underw 156:1449+ My 31 '47
Fire loss situation. P. Bugbee. Weekly Underw 157:885 O 11 '47
Heavy store fire loss charged to carelessness; study by N.F.P.A. Weekly Underw 155: 1350 D 7 '46; Same cond. East Underw 47:22 D 6 '46; Same cond. Spectator (Property ed) 12:16+ D 12 '46
Huge fire waste total continues to climb. Weekly Underw 157:872+ O 11 '47
Human factor in fire losses. A. E. Dodd. Management R 36:353-4 Je '47
1946 fire losses tie record high of 1926. East Underw 48:24 Ja 24 '47; Same cond. Nat Underw 51:1 Ja 23 '47
War department fire losses show substantial reduction for 1946. East Underw 48:23 Jl 11 '47

FIRE protection
Britain organizes to fight fire. K. Courlander. Safety Eng 93:60-1 My '47
Clean plant is safe. G. B. James. il Safety Eng 92:88-9 O '46
Codes under fire; model safety regulations. Bsns W p19-20 Ja 25 '47
Committee to carry on work of Truman conference selected. East Underw 48:1+ My 23 '47; Weekly Underw 156:1389+ My 24 '47
Coordinating committee of President's fire prevention conference. East Underw 48:21 F 7 '47
Decorative fiberglas fabric, sound absorptive, can reduce fire hazard. Spectator (Property ed) 12:29+ Ap 24 '47
Device for detecting smoke perfected by Hendricks engineering corp; saves department store damage. Nat Underw 51:15 O 9 '47
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87:117-20 Jl '47
Don't give fire a chance! Safety Eng 94:58 O '47
Eight ways to prevent fires in homes. C. Woodbury. Rough Notes 89:28 N '46
Executive and sub-committees to implement Presidents prevention plan named. East Underw 48:27 Je 20 '47; Nat Underw 51:2 Je 19 '47
Exhaust system and curtain of water halts spread of fire gases. il Safety Eng 93:20+ Je '47; Nat Safety N 56:44 S '47
Fire! an answer; Boston campaign for city safest from fire. il Bsns W p20 D 14 '46
Fire blanket. Sci Am 176:133 Mr '47
Fire control: its personnel, equipment and procedures. Safety Eng 94:18-19+ O '47
Fire-fighting equipment; kinds and applications. A. L. Brown. il plans diags Factory Management 105:111-22 My '47
Fire prevention messages seek to arouse the public. Nat Underw 51:1, 16 O 9 '47
Fire prevention then and now, R. E. Vernor. Nat Underw 50th anniv no:203-5 1947
Fire protection conference at Hartford. East Underw 48:22+ O 17 '47
Fire protection considerations in the design of a modern factory. A. H. Jens. Western Soc E J 52:85-9 Je '47
Fire-protection engineer's role. J. A. Johnson. il Mech Eng 69:278-80 Ap '47
Fire protection for volatile gases. il Safety Eng 93:.21+ Ap '47
Fire protection held civic duty. D. L. Lawrence. Weekly Underw 156:45-7 Ja 4 '47
Fire protection; keep toxic gases, flames from spreading up stairwells, elevator shafts. il Bsns W p46+ My 24 '47
Fire safety measures can avoid costly construction disasters. A. L. Brown. il Civil Eng 17:532-5 S '47
Fireproofing Britain. Nat Safety N 55:33+ Ap '47
Firesafe stairways; water-curtain and ventilator system act as fire check in sprinklered building. il Arch Rec 102:119+ S '47
Flammable liquids in drums; indoor and outdoor storage. il Safety Eng 93:22-3+ Ap '47
Gremlins of fire protection. Safety Eng 95: 52-3 N '46
How fire-safe is a fireproof building. J. J. Ahern. il diag Eng N 138:942-5 Je 12 '47
Keep your plant fire-free. E. E. Taylor. Safety Eng 93:40-1 My '47
Keeping Caterpillars from burning; Caterpillar tractor company's Peoria plant. E. B. Warberg. il Safety Eng 92:74-6 O '46
Letters to a new superintendent. P. S. Trowbridge. il Brick & Clay Rec 111:50+ S '47
Lukewarm men cause hot fires. T. A. Fleming. Safety Eng 94:42+ O '47
New laboratory dedicated to greater safety from fire; Factory insurance association training laboratory. il Ind Stand 18:223 S '47

FIRE protection—*Continued*
No country can afford fires; international approach to fire prevention seen; Review of London. Nat Underw 51:11+ Ag 7 '47
On-the-job training in fire loss prevention. J. A. McGuckin. il Safety Eng 93:16+ F '47
Organization; men and equipment. il Nat Safety N 55:137-8 Mr '47
Potential hazards in molten salt baths for heat treatment. Metal Prog 51:251-3 F '47
President's committee on fire prevention laws; portraits. Nat Underw 51:5 Ap 10 '47
President's fire prevention parley. Nat Underw 51:3+ My 8; 1 My 15 '47; Nat Underw (Life ed) 51:2 My 9 '47; Weekly Underw 156:1326 My 17 '47
La prévention des asphyxies dans l'incendie des locaux habités. Génie Civil 124:138-9 Ap 1 '47
Program of action for fire prevention adopted by President's Conference. Spectator (Property ed) 12:12-15+ Je 12 '47
Program planned to reduce fire losses in business. P. B. Fleming. il Dom Comm 35:15-18 Ap '47
Proposals to halt fire waste. P. Bugbee. Weekly Underw 156:1261+ My 10 '47
Red cross to intensify fire prevention work. East Underw 48:25 My 2 '47
Safe use and storage of volatile paints and thinners; automobile repainting. W. T. Uley. il Safety Eng 93:18-19+ F '47
Safeguarding storage areas. Mech Eng 69:674 Ag '47
Safeguards against fire; new research organization. Elec R (Lond) 139:1064 D 27 '46
Winter fires. il Safety Eng 93:20+ Ja '47

See also
Exits
Fire extinction
Fire extinguishers
Fire resisting materials
Fireproof construction
Inflammable mixtures
Insurance, Fire—Preventive work
Mine fires
Smoking—Fire hazards
Spark arresters
Sprinkling systems
Underwriters' laboratories
Vents (architecture)
Watchmen

also subdivision Fires and fire protection under special subjects, e.g.
Airplanes
Bowling alleys
Coal mines and mining
Cotton
Gas works
Hotels
Paint factories
Piers
Railroads
School buildings
Ships
Store buildings
Textile mills

also National fire protection association

Contests and awards

Anti-fire campaign winners announced by national groups. Nat Underw 50:2 D 26 '46; Same. East Underw 47:22 D 27 '46; Weekly Underw 155:1547 D 28 '46
Gold medal awards of National Board to newspapers and radio. Weekly Underw 157: 144+ Jl 19 '47; Same. East Underw 48:18 Jl 18 '47; Same cond. Nat Underw 51:2 Jl 24 '47
Mansfield, Ohio, is fire prevention winner. East Underw 48:20 Ap 18 '47

Laws and regulations

Atlanta regulations for safety. Weekly Underw 156:822 Mr 22 '47
California law bans inflammable textiles. Textile World 97:218 Ja '47
Chemical aspects of the petroleum acts. S. G. Burgess. bibliog Inst Pet J 33:363-88 Je '47
New flammability law of California prohibits manufacture and sale of garments and textiles not meeting tests. Weekly Underw 155:1477+ D 21 '46

Legislation, Proposed

Propose federal research to foster safety; bill covers fires and explosions in chemical, agricultural and other industries. Weekly Underw 157:253+ Ag 2 '47

Standards

Standardization in fire protection. C. W. Pierce. il Ind Stand 18:140-3 Je '47; Abstract. Weekly Underw 156:1678 Je 21 '47

Study and teaching

Fire protec scholarships set up by mutual interests. Nat Underw 50:5 D 26 '46

FIRE protection, Rural
Farm fire preventionists hold Chicago parley. Nat Underw 50:5 D 5 '46; Nat Underw 50: 3+ D 12 '46
How to reduce fire hazards along highways. E. S. Whitaker and H. N. Bosworth. il Pub Works 77:25-6 D '46
South Carolina drives against rural fires. Weekly Underw 156:721 Mr 8 '47

FIRE protection association, National. See National protection association

FIRE resisting materials
Fire blanket. Sci Am 176:133 Mr '47
Fire-retardant coating; Albi—R. Ry Age 123:16 Jl 5 '47
Insulation and fire safety; how insulation acts as a fire stop. W. Royce. il Spectator (Property ed) 12:10-12+ D 12 '46
Nylon rope for fire fighting. Safety Eng 93:22 F '47
Study of fire resistant house paints made with chlorinated paraffin. Paint Oil & Chem R 109:28+ N 14 '46

See also
Asbestos
Brattice cloth
Refractory materials

Testing

Fire-fighting trials on magnesium-base alloys. il Engineering 162:481-3, 492 N 22 '46

FIRE service (water supply)
Deductions from research on use of water; abstract. H. Adeler. Am Water Works Assn J 39:1049-50 O '47
Distribution system maintenance; discussion. Water & Sewage 85:116+ My '47
Hydraulics for the practical water works man. R. W. Angus. diags Water & Sewage Works 94:15-16 Ja '47
Methods of fixing public fire protection charges. F. R. Witherspoon. Am Water Works Assn J 39:623-9 Jl '47
Tentative standard specifications for cold water meters, fire service type. Am Water Works Assn J 39:173-83 F '47
Water supply. A. L. Brown. Factory Management 105:115-16 My '47
Wetter water for fire fighters. P. W. Kearney. Nat Safety N 55:34-5+ F '47

FIRE underwriters, National board of. See National board of fire underwriters

FIRE underwriters association of the Pacific
Annual meeting, San Francisco. Nat Underw 51:1+ Mr 13 '47

FIRE waste council, National. See National fire waste council

FIREARMS
Guatemala; consolidated regulations governing the carrying of firearms. For Comm W 29:15 O 4 '47

See also
Duck shooting
Rifles

FIREBRICK. See Fire brick

FIREDAMP. See Fire damp

FIRELESS locomotives. See Locomotives, Fireless

FIREMAN'S fund insurance company
Western office at 75-year mark. Nat Underw 51:4+ Jl 10 '47

FIREPLACES
Common mistakes in fireplace construction. diags Brick & Clay Rec 111:29 S '47
Fireplace draft control. diags Am Bld 68:118 N '46
Masonry details for modern brickbuilders; fireplace construction. L. Maffett. diags Brick & Clay Rec 110:36-7 My '47
Typical fireplace proportions for various damper sizes. diags Brick & Clay Rec 111: 31 Ag '47

FIREPLACES, Outdoor
Six successful outdoor fireplace plans. il diags Brick & Clay Rec 110:30-2 Je '47

FIREPROOF construction
Brick & clay record's press release on fire loss sent to 1200 papers, radio stations. Brick & Clay Rec 110:43 Mr '47

FIREPROOF construction—*Continued*
Builder makes sales by featuring fireproof home construction. il plan Brick & Clay Rec 111:30 Ag '47
Building exits and fire safety. R. S. Moulton. il Ind Stand 18:37-40 F '47
Clarifies hotel fireproof term. W. E. Mallalieu. Weekly Underw 155:1486 D 21 '46; Same. Nat Underw 50:1 D 26 '46
Comparative economy of fireproof floor systems; with analysis and time-saver standards. T. Barbato. plans diags Arch Rec 100: 118-19+ D '46
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87:117-20 Jl '47
Dormitory of fire-resistant construction, Cornell university. il Eng N 138:371-2 Mr 6 '47
Engineered steel frame and wall construction; fireproof house at small extra cost. il plan diag Am Bld 69:78-9 Jl '47
Exhaust system and curtain of water halts spread of fire gases. il Safety Eng 93:20+ Je '47
Fire cannot attack 400,000 all ceramic homes a year. diag Brick & Clay Rec 110:29 F '47
Fire grading of buildings. Engineering 163: 154 F 14 '47
Fire hazards reduced; protective system prevents smoke and gases from spreading to upper building. il diag Heat & Ven 44:114 Je '47
Firesafe structures urged by building committee at President's conference. il Brick & Clay Rec 110:35 Je '47
Hotel fire safety. il plans Arch Rec 101:105-9 F '47
How fire-safe is a fireproof building. J. J. Ahern. il diag Eng N 138:942-5 Je 12 '47
If we don't act we will have billion dollar yearly fire loss, says expert. Brick & Clay Rec 111:35 Jl '47
Insulation and fire safety. W. Royce. il Spectator (Property ed) 12:10-12+ D 12 '46
Oct. 5-11 marks Fire prevention week as tolls mount towards all-time high. il diags Brick & Clay Rec 111:33-4 S '47
Precast fireproofing on used steel reinforces columns for re-use; building for Cuneo press. il Eng N 139:464-5 O 2 '47
Put out fire before it starts! design and erect firesafe buildings. Brick & Clay Rec 110:38 Ap '47
Ruberoid hangar plans. M. V. Engelbach. plans diags Aero Digest 55:65-6+ Ag '47
There's practically nothing here to burn, generally is fallacious. D. F. Lewis. East Underw 48:23 Ag 1 '47

FIREPROOFING of textiles
Ban-flame. Textile Col 69:22+ F '47
Composition and function of flame-resistant treatments for textiles. R. W. Little. Am Dyestuff Rep 36:135-9 Mr 24 '47
Fire and rot resistant finish; vinyl polymers; patent. Am Dyestuff Rep 36:467 Ag 25 '47
Fire resistance in aircraft textiles. J. R. Redmond. Am Dyestuff Rep 36:103+ Mr 10 '47
Fire-resistant agents reduce flame danger in cottons. R. J. Taylor and M. Dishman. il Textile World 97:113+ Ap '47
Fireproofing of fabrics. J. E. Ramsbottom. Chem Age (Lond) 56:380-1 Mr 29 '47
Flame-resistant and flameproof finishes; Ellicote. R. W. Little. Textile Col 69:26-7 Jl '47
Flameproofing composition, treatment with terpenes G,2,03; patent. Am Dyestuff Rep 36:156 Mr 24 '47
Flameproofing; dicyandiamide formaldehyde-resins; patent. Am Dyestuff Rep 36:615 O 20 '47
Flameproofing fabrics; silica-enamel composition; patent. Am Dyestuff Rep 36:547 S 22 '47
Flameproofing; melamine, phosphoric acid treatment; patent. Am Dyestuff Rep 36: 438 Ag 11 '47
Flameproofing of cotton fillers in plastic laminates. S. Williams and others. Mod Plastics 24:151-3+ Mr '47
Flameproofing of textiles. M. W. Sandholzer. bibliog il diag U S Nat Bur Stand Circ C455: 1-20; pa 10c Supt. of doc. '46
Flameproofing with antimony compounds; British patent. Am Dyestuff Rep 36:280-1 My 19 '47
Protein condensates as flameproofing agents; patent. Am Dyestuff Rep 36:338 Je 16 '47
Public assemblage safety; fireproofing of decorations. J. V. Torrey. Safety Eng 93:30 F '47
Trends in the evolution of fire-resistant textiles; abstract. R. W. Little. Am Dyestuff Rep 36:596 O 20 '47
Zinc soaps, flameproofing agents; patent. Am Dyestuff Rep 36:153 Mr 24 '47

FIRES
Britain organizes to fight fire. K. Courlander. Safety Eng 93:60-1 My '47
Explosions during fire-fighting; case for establishment of a research agency. D. J. Price. Safety Eng 94:20+ Ag '47
Fires at all-time high. L. A. Vincent. Safety Eng 93:11+ F '47
Gas and appliances show excellent record in fire safety for years 1941-1945; statistics of fire loss by causes. Gas Age 98:48 D 12 '46
Hot tip; preparing for fire. il Safety Eng 92: 18-19 D '46
Oct. 5-11 marks Fire prevention week as tolls mount towards all-time high. il diags Brick & Clay Rec 111:33-4 S '47
Peat-bog fires; their origin and control. D. J. Parker and others. 4pls U S Bur Mines Information Circ 7411:1-12 '47
President Truman calls conference on fire control. Safety Eng 93:54 Je '47
Revision of Atlanta's building code likely as result of fatal hotel fire. Eng N 137:842 D 19 '46
Specific hazard, specific remedy. il Safety Eng 92:21 O '46
While the country burns. H. Armand. Safety Eng 94:22 S '47
Why fires burn; basic facts about combustion. E. J. Kehoe. il Nat Safety N 55:34-5+ My '47
Windowless plants hamper fire fighters. Nat Safety N 55:146 Mr '47

See also
Electric fires
Fire extinction
Fire protection
Inflammable liquids
Insurance, Fire
Mine fires
Oil fires
Spontaneous combustion
also subdivision Fires and fire protection under special subjects, e.g.
Airplanes
Airports
Circus
Coal mines and mining
Piers
Railroads
Ships

FIRESTONE, Harvey Samuel, jr. 1898-
Portrait. Fortune 35:117 Je '47
Sketch. por(cover) Bsns W p8 F 22 '47

FIRESTONE tire and rubber company
Annual report. Comm & Fin Chr 165:72 Ja 6 '47
Big four in rubber. R. Colston. Mag of Wall St 80:327 Je 21 '47
Debentures offered. Comm & Fin Chr 165: 682 F 3 '47

FIRING
Methods suggested for preventing formation of clinkers. Consumers Res Bul 19:10-11 Ap '47

FIRST aid in illness and injury
Coal mine first-aid facilities; data sheet. il Nat Safety N 56:104-6 O '47
First aid for chemical eye injuries. P. M. Van Arsdell. bibliog(54 ref) Ind Med 16: 188+ Ap '47
First aid in the wood. D. C. Eisele. il Nat Safety N 55:20-1+ Ja '47
First aid training; Texas company. C. A. Miller. il Nat Safety N 56:18-19+ Ag '47
First-aid treatment for caustic soda burns. Paper Ind 29:1023 O '47
How to work with caustic soda. Safety Eng 94:92-3 O '47
Shock treatment. Safety Eng 93:69 Ap '47
Toxic reactions and first aid procedures; chemicals used in plating; tabulation. Metal Finishing 45:78-9 O '47
Treatment of injuries. il plan Nat Safety N 55:181-2+ Mr '47
When a snake bites. N. Burch. il Nat Safety N 55:44+ My '47

FIRST aid in illness and injury—*Continued*
When men get hurt. Nat Safety N 55:54 Ap '47

See also
Mine rescue work

FIRST national stores, inc.
Annual report. Comm & Fin Chr 166:1682 O 27 '47

FIRTH carpet company
Selected stocks. Mag of Wall St 80:487-8 Ag 2 '47

FISCAL year
Fiscal year for partnerships. J Account 84: 139-40 Ag '47

FISCHER, Franz, 1877-
Portrait. Fortune 35:104 Ap '47

FISCHER, Karl Tobias, 1871-
New Fischer techniques for studying oils and waxes. M. H. Bigelow. diag Chem & Eng N 25:2366-7 Ag 18 '47

FISCHER reagent
Determination of water in caustic soda and other alkaline materials; a distillation- titrimetric method. H. R. Suter. bibliog diag Anal Chem 19:326-9 My '47

FISCHER-TROPSCH process
Basic petroleum chemistry for refinery employes; potential sources of liquid fuel. J. J. Stadtherr. diags Pet Refiner 26:115-17 Mr '47

Bureau of mines asks $30,000,000 more for synthetic liquid fuels research. W. F. Bland and W. C. Uhl. flow diag Pet Processing 2:85-7 F '47

Chemical engineering aspects of the Fischer-Tropsch process; abstract, and discussion. C. C. Hall and A. H. Taylor. Chem & Ind p77 F 1 '47

Coal-chemical transformation. Chem Age (Lond) 55:725-6 D 14 '46

Conversion of natural gas to liquid fuels. R. C. Alden. bibliog flow diag map diag Pet Eng 18:148+ Ja '47; Same cond. Oil & Gas J 45:79+ N 9 '46

Development of hydrogenation and Fischer-Tropsch processes in Germany. K. Gordon. Inst Pet J 33:469-82; Discussion. 483-90 Ag '47

Equipment for low cost oxygen production. M. J. Conway. il diag Pet Refiner 26:129-33 Je '47; Abstract. Pet Processing 2: 113-14 F '47

Esso's fluid catalyst modifies Fischer-Tropsch; natural gas becomes source of liquid fuels and many chemicals. J. A. Lee. il Chem Eng 54:104-7 O '47

Fischer-Tropsch complications; abstract. R. C. Alden. Chem Eng 54:258 F '47

Fischer-Tropsch held one of most valuable enemy processes. Chem & Eng N 25:839 Mr 24 '47

Fischer-Tropsch process as a source of synthetic products; abstract. C. C. Hall. Chem Age (Lond) 57:47 Jl 12 '47

Future prospects of the process. C. C. Hall. Chem Age (Lond) 56:115-24 Ja 18 '47; Same cond. Engineering 163:30, 54-5, 79 Ja 10-24 '47; Abstract. Gas J (Lond) 249:150 Ja 15 '47

Hydrocarbon synthesis in the presence of cobalt catalysts at medium pressures. C. C. Hall and S. L. Smith. flow diag Inst Pet J 33:439-59 Jl '47

Industrial catalysis. B. B. Corson. il diag J Chem Educ 24:150-5 Mr '47

Manufacture of synthetic gasoline nearing commercial application in U.S. G. Roberts, jr. and J. A. Phinney. flow chart Oil & Gas J 45:72-3+ Mr 15 '47; Abstract. Pet Processing 2:312 Ap '47

New CO-H_2 converter provides better temperature control. il Chem Ind 60:793 My '47

Oil and waxes from coal; abstracts. C. C. Hall. Engineering 162:448 N 8 '46; Chem & Ind p421 N 23 '46; Chem Age (Lond) 55: 569-70 N 9 '46

Operation and development of the Fischer-Tropsch and similar processes in Germany. C. C. Hall. diags Chem & Ind p67-74; Discussion. 74-5 F 1 '47

Petroleum substitutes; past and present research, development and economics. H. H. Power. Pet Eng 18:78+ F '47

Synthetic production of petroleum; hydrogenation and Fischer processes. K. Gordon. Chem Age (Lond) 57:221-2, 269-70 Ag 16-23 '47

Synthine process. J. C. Lane and B. H. Weil. bibliog and patent list (366 ref.) il map diags Pet Refiner 25:87-98 Ag; 97-108 S; 109-20 O; 153-64 N '46

Use of thermal conductivity cells for gas analysis in studying the Fischer-Tropsch synthesis of hydrocarbons. E. L. D'Ouville and K. E. Howe. diags Pet Refiner 26:98-103 Je '47

See also Gasoline, Natural—Manufacture—Hydrocol process

FISH, Canned. See Canned fish

FISH, Frozen
Developments in Canada's frozen-fish industry. For Comm W 25:24 N 23 '46

Fish bricks. il Mod Packaging 20:100-1+ Ag '47

Fishbricks for fastidious housewives. il Bsns W p64 Jl 12 '47

Freezing marine products in Texas. W. R. Woolrich, jr. il map Refrig Eng 54:222-5 S '47

Norway's floating deep-freeze factory soon ready. For Comm W 25:24 N 30 '46

FISH as food
Flume system aids brining and siruping operations; Gorton-Pew installation to clean, chill and brine fish fillets; can be adopted for washing vegetables and siruping fruits. M. P. Vucassovich. il diags Food Ind 19:34-6 Ja '47

Trimethylamine oxide in marine products. O. A. Ronold and F. Jakobsen. bibliog Soc Chem Ind J 66:160-6 My '47

See also
Fish, Frozen

FISH culture
Experiment in farming the sea; abstract. F. Gross. Chem & Ind p396 N 2 '46

Fertilisers and fish. bibliog il Chem Age (Lond) 57:531-3 O 18 '47

FISH filleting machines
Big machines for big (and little) fish. il Bsns W p40 Mr 22 '47

Continuous fish filleter wins F.I. achievement award. flow diag il Food Ind 19: 753-8 Je '47

FISH livers
Vitamin A and oil content of fish livers and viscera; fishes of the Oregon coast. R. O. Sinnhuber and D. K. Law. bibliog Ind & Eng Chem 39:1309-10 O '47

FISH oil
Fish oil production and exports, Newfoundland, 1946. For Comm W 27:24-5 My 24 '47

Fish oils; abstract. J. A. Lovern. Chem Age (Lond) 56:613 My 10 '47

Liver oils of elasmobranch fish of south Indian waters. U. S. Kini and K. Chidambaram. bibliog Soc Chem Ind J 66:233-8 Jl '47

Marine oils of Norway. il Chem Age (Lond) 56:679-83 My 24 '47

South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions of natural fats. M. L. Karnovsky, W. S. Rapson and H. Black. bibliog Soc Chem Ind J 65:425-8 D '46

South African fish products; recovery of vitamin A in the unsaponifiable matter of fish liver oils. M. M. Black and others. bibliog Soc Chem Ind J 65:249-51 S '46

South African fish products; variations in the oil and vitamin A contents of the liver of the Cape hake (merluccius capensis, Cast.). E. R. Roux and C. J. Molteno. bibliog Soc Chem Ind J 65:281-4 O '46

Tocopherols as antioxidants for vitamin A in fish liver oils. L. A. Buxton. bibliog Ind & Eng Chem 39:225-32 F '47

Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47

Vitamin A and oil content of fish livers and viscera; fishes of the Oregon coast. R. O. Sinnhuber and D. K. Law. bibliog Ind & Eng Chem 39:1309-10 O '47

See also
Sardine oil
Shark liver oil
Squalene

FISH oil—*Continued*

Analysis

Determination of vitamin A in fish liver oils with activated glycerol dichlorohydrin; comparison with spectrophotometric and antimony trichloride methods. A. E. Sobel and H. Werbin. bibliog Anal Chem 19:107-12 F '47

South African fish products; application of the Fitelson method of squalene determination to some marine oils. M. L. Karnovsky and W. S. Rapson. bibliog Soc Chem Ind J 6:124-5 Ap '47

South African fish products; the recovery of unsaponifiable matter from marine oils by the Society of public analysts' method. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 66:95-9 Mr '47

FISH poisons

Comparative toxicity of DDT and four analogues to goldfish, gambusia, and culex larvae. E. P. Odum and W. T. Sumerford. bibliog Science 104:480-2 N 22 '46

Comparative toxicity of DDT isomers and related compounds to mosquito larvae and fish. J. M. Ginsburg. Science 105:233-4 F 28 '47

Disposal of cyanide wastes. J. G. Dobson. bibliog il Metal Finishing 45:78-81 F; 68-71 Mr '47

Effects of DDT mosquito larviciding on wildlife; effects on surface organisms of the routine hand application of DDT larvicides for mosquito control. C. M. Tarzwell. fold table Pub Health Rep 62:525-54, pl 1-2 Ap 11 '47

FISH products

South African fish products; application of the Fitelson method of squalene determination to some marine oils. M. L. Karnovsky and W. S. Rapson. bibliog Soc Chem Ind J 6:124-5 Ap '47

South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions of natural fats. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 65:425-8 D '46

South African fish products; recovery of vitamin A in the unsaponifiable matter of fish liver oils. M. M. Black and others. bibliog Soc Chem Ind J 65:249-51 S '46

South African fish products; the recovery of unsaponifiable matter from marine oils by the Society of public analysts' method. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 66:95-9 Mr '47

South African fish products; variations in the oil and vitamin A contents of the liver of the Cape hake (merluccius capensis, Cast.). E. R. Roux and C. J. Molteno. bibliog Soc Chem Ind J 65:281-4 O '46

FISH protection

Charged screens prevent mass destruction of fish. il Civil Eng 17:535 S '47

FISH trade

Advertising

It's time for aggression rather than recession; Gorton-Pew fisheries co. F. M. Bundy. Ptr Ink 219:33+ Ap 18 '47

Insurance requirements

Boost canneries rates; fish canneries in British Columbia get nearly 50% raise due to extremely bad loss experience. East Underw 48:30 Je 13 '47

Canada

Canada's growing fish industry. J. Montagnes. il Food Ind 18:1718-20+ N '46

Iceland

Salting herring in Iceland. G. J. Sigurdsson. il map Food Ind 19:449-52 Ap '47

Newfoundland

Newfoundland's codfish and herring industries. For Comm W 27:22-3 My 3 '47

Norway

Norway's floating deep-freeze factory soon ready. For Comm W 25:24 N 30 '46

Norwegian fisheries. Economist 152:107 Ja 18 '47

FISHER, Allan George Barnard, 1895-

Economic theory and the age we live in; appraisal of Economic progress and social security. O. H. Taylor. R Econ Stat 29: 102-7 My '47

FISHER, Harry Linn, 1885-

Sketch. por Chem & Eng N 25:3058 O 20 '47

FISHER, Irving, 1867-1947

Sketch. por Comm & Fin Chr 165:2335 My 1 '47

Tribute. R. Frisch. Am Stat Assn J 42:2-4; Response. 4-5 Mr '47

FISHER award

Fisher award in analytical chemistry. Anal Chem 19:819 O '47

FISHERIES

Pyridylmercuric acetate as a prophylactic in fisheries management. W. M. Van Horn and M. Katz. Science 104:557 D 6 '46

Canada

Fisheries of Canada. I. S. McArthur. Ann Am Acad 253:59-65 S '47

FISHERMEN and allied workers of America, International. See International fishermen and allied workers of America

FISHES

Need for ichthyological surveys of the major rivers of western North America. R. R. Miller. Science 104:517-19 D 6 '46

Reproductive cycles of five species of Texas centrarchids. C. L. Schloemer. Science 106: 85-6 Jl 25 '47

See also

Herring

Sound production by fishes

Eggs

Egg number. M. D. Burkenroad. Science 106: 290 S 26 '47

Food

Fertilisers and fish. bibliog il Chem Age (Lond) 57:531-3 O 18 '47

South Africa

South African fish products. W. S. Rapson and others. bibliog Soc Chem Ind J 63:313-16, 340-2, 367-72; 64:5-11, 44-50, 61-5, 114-18, 139-43, 172-7, 326-31; 65:13-15, 138-40, 249-51, 281-4, 425-8; 66:95-9, 124-5 O '44-Je, D '45-Ja, My, S-O, D '46, Mr-Ap '47

FISHES, Fossil

How fossil fish remains have been used in Pacific Coast stratigraphy. L. R. David. bibliog il Pet Eng 18:104+ My '47

Lower Ordovician fish remains from Missouri. A. K. Miller and others. bibliog Am J Sci 245:31-4, pl 1 Ja '47

Significance of fish remains in recent deposits off coast of southern California. L. David. Am Assn Pet Geologists Bul 31:367-70 F '47

See also

Trematapsis

FISHING boats

Combination purse seiner and tuna boat; Neptune I. il Marine Eng 52:104+ F '47

Diesel trawler, Bonnie. H. J. Barbour. il Marine Eng 52:95-6 Ap '47

Oil-engine driven trawl winches. il Engineer 183:410 My 9 '47

Refrigerated factory ship processes and packages seafood. il diag Refrig Eng 54:127+ Ag '47

Special winch equipment on Philippines fishing survey vessels. il Marine Eng 52:104+ Je '47

Trawler Deep Sea for Alaskan service. il Marine Eng 52:102+ Ag '47

Trawlers for Portuguese interests. il Marine Eng 52:65-6 S '47

Tuna clipper, a marine refrigerator. A. R. MacPherson. il Refrig Eng 53:194 Mr '47

Welded steel fishing boat by Welin. il Marine Eng 52:106+ F '47

See also

Whaling vessels

FISHING tackle

Casting gurdy spools in the Northwest; illustrations with text. Foundry 75:125 N '47

Compressed air power provides close tolerances for reel production; Langley corp. il Steel 120:83 Je 30 '47

FISHING tackle—*Continued*
Plastics for fishing. il Mod Plastics 24:236 Ap '47

See also
Minnow pails

Advertising

Didn't believe in advertising, tried it, now he does; Western Lace nylon fishing lines. L. F. Thomann. il Ptr Ink 220:37 Ag 1 '47

FISK, Arthur A. 1872-1947
Sketch. por East Underw 48:12 My 23 '47

FISK, James Brown, 1910-
Portrait. Bsns W p41 Mr 15 '47

FITS (machinery)
Calculations improve shrink fits on large gears and wheels. N. N. Sawin. diags Am Mach 91:142-5 Je 19 '47

Expansion fits with liquid nitrogen; reference book sheet. diags Am Mach 91:151, 153 Je 5 '47

Expansion fitting with liquid nitrogen. C. H. Wick. il diags Mach 54:156-9 O '47

Experiment in the use of a standard limit system. J. Loxham. diags Inst Mech Eng J & Proc 156:Proc 103-12; Discussion. 112-25 S '47

How to increase tolerances and obtain closer fits. E. E. Bates. il diags Iron Age 160: 58-61 Jl 3 '47

Liquid nitrogen sub-zero cools parts for expansion fitting. E. J. Tangerman. il Am Mach 91:144-5 Je 5 '47

Making an expansion fit; bushing for Diesel engine. A. C. Jones. il Metal Prog 52:248-9 Ag '47

New standard on limits and fits. il Ind Stand 18:137-8 Je '47

Plant freezer for fitting huge eccentric shafts. il Steel 120:98-9+ F 10 '47

Pressed fit on crankshaft stops overhung-flywheel wobble. E. Sterrett. il diag Power 91:612-13 S '47

Standard limits and fits; reference book sheet. Am Mach 91:135 Jl 31 '47

FITZGERALD, Edmund, 1895-
New president of Northwestern Mutual. C. Axman. East Underw 48:3-4 My 2 '47

New president of Northwestern mutual life insurance co. por Bsns W p36 My 10 '47

FITZ-GIBBON, Bernice
Portrait. Bsns W p24 D 7 '46

FIVE-day week. See Hours of labor—Five-day week

FIXED assets. See Assets, Fixed

FIXTURES, Lighting. See Lighting fixtures

FLAME detectors
Geiger tube flame detector. P. B. Weisz. il Chem Ind 59:834 N '46

FLAMEPROOFING of textiles. See Fireproofing of textiles

FLAMES
Equilibrium atom and free radical concentrations in carbon monoxide flames and correlation with burning velocities. C. Tanford and R. N. Pease. bibliog J Chem Phys 15:431-3 Jl '47

Extent of gas flame impingement allowable for satisfactory combustion. Am Gas J 167: 55 O '47

High-temperature flame makes blast holes in hard rock. il Roads & Bridges 85:84-5 My '47

Instrument for measuring open hearth flame radiation. E. M. Yard. bibliog il diag Blast F & Steel Pl 35:46+ Ap '47

Method of coloring flames with salts. A. G. Collard. diag R Sci Instr 18:451 Je '47

Spectrographic control of the converter blow. S. T. Jazwinski. diags Iron Age 159:50-7 My 29 '47

Study of reaction intermediates by means of a mass spectrometer; the thermal decomposition of some lower hydrocarbons; low pressure flames. G. C. Eltenton. bibliog diag J Chem Phys 15:465-81 Jl '47

Symposium on combustion. Gas J (Lond) 250:500+ Je 4 '47

Theory of burning velocity; temperature and free radical concentrations near the flame front, relative importance of heat conduction and diffusion. C. Tanford. bibliog J Chem Phys 15:433-9 Jl '47

Third Arthur Duckham research fellowship report, 1945-46; energy transfer from flame gases to solids. J. K. Kilham. bibliog diags Gas J (Lond) 249:258+ Ja 29 '47; Discussion. 249:382-3 F 12 '47

See also
Oxyacetylene flame

FLANGES
Critical compressive stress for outstanding flanges. E. E. Lundquist and E. Z. Stowell. diags U S Nat Advisory Com for Aeronautics 1942:111-21 '46

Development of new D flange motor mounting announced by NEMA. Iron Age 159: 140+ Ap 17 '47

Effective flange width of stiffened plating in longitudinal bending. G. M. Boyd. diags Engineering 152:603-4 D 27 '46

Strength of thin steel compression flanges. G. Winter. bibliog il diags Am Soc C E Proc 72:199-226 F '46; Discussion. 72:909-12, 1188-90, 1381-6; 73:39-42, 360-6 Je, O, D '46-Ja, Mr '47

FLASH points
Minimum ignition temperatures and flash points of combustible liquids, gases and vapors; table. Am Gas Assn Proc 1946:521-4

FLASH welding. See Electric welding

FLASHBOARDS. See Dams—Flashboards

FLASHING
Better detail plate; importance of flashing in house construction. R. J. Alexander. diags Am Bld 69:132-3 Ag '47

Sheet metal workers' catechism (cont). W. Neubecker. diags Sheet Metal Worker 37: 58 F; 70 Mr; 47-8 Je; 52+ Ag; 54-5 O; 54+ D '46; 38:94 F; 62 Ap; 74+ Je; 70 S '47

Through-wall flashing installed to make masonry library rainproof. il diags Brick & Clay Rec 111:32 S '47

FLASHING lamps. See Electric lamps—Flashing

FLASHLIGHT photography. See Photography, Flashlight

FLATIRONS. See Electric irons; Steam irons

FLAVANONE
Flavanones and related compounds; reduction of some naturally-occurring flavones at the dropping mercury electrode. D. W. Engelkemeir and others. bibliog Am Chem Soc J 69:155-9 Ja '47

Analysis

Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47

FLAVIN
Syntheses of 9-substituted flavins as antimalarials. M. M. Neeman. Chem Soc J p811-13 S '46

FLAVONES
Flavanones and related compounds; reduction of some naturally-occurring flavones at the dropping mercury electrode. D. W. Engelkemeir and others. bibliog Am Chem Soc J 69:155-9 Ja '47

See also
Rutin

Analysis

Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47

FLAVOR
Applying control chart methods to taste testing. S. Marcuse. bibliog il Food Ind 19:316-18 Mr '47

Choice of flavour. R. W. Moncrieff. il Can Chem & Process Ind 31:300-3+ Ap '47

Flavor reversion in soybean oil. C. Golumbic and B. F. Daubert. bibliog il Food Ind 19: 1075-7+ Ag '47

Industrial aspects of browning reaction. H. M. Barnes and C. W. Kaufman. bibliog Ind & Eng Chem 39:1167-70 S '47

FLAVORING materials
Fresh fruit essences available for use as flavoring material. Food Ind 19:785 Je '47

Mixer campaign; A. J. Lehman co. aims at national distribution for its Tom Collins, jr. Bsns W p24+ My 10 '47

FLAX
Developments in the production of retted flax in Northern Ireland. D. A. Derrett-Smith. plan diags Textile Inst J 38:P247-55; Discussion. P255-6 Ag '47
Egypt; export controls established. For Comm W 27:15 My 10 '47
Egypt's flax acreage expected to return to prewar average. For Comm W 26:27 F 8 '47
Estimation of fibre quality. J. L. Spencer-Smith. bibliog Textile Inst J 38:P257-72 Ag '47
Flax crop most precious to nation's agricultural economy. Paint Oil & Chem R 109:10 O 17 '46
Flax preparation; electricity's part in a new industry. il Elec R (Lond) 140:333-6 Mr 14 '47
Recent developments in retting of flax and disposal of the waste waters. T. W. Brandon and C. B. Taylor. bibliog diag Soc Chem Ind J 65:390-6 D '46
Recent developments in the microbiology of retting; microbial flora in different systems of retting. L. A. Allen. bibliog Soc Chem Ind J 65:365-70 N '46
Recent developments in the microbiology of retting; part played by bacteria in retting the flax and in purifying the liquor. L. A. Allen. bibliog Soc Chem Ind J 65:373-6 D '46

FLAX straw
Flax and rags make fine papers at Beauharnois. D. W. Emmerson. il Pulp & Pa of Can 47:77-80 N '46

FLAXSEED
Bumper flaxseed, but. Bsns W p24 S 13 '47
World linseed prospects. Economist 152:954 Je 14 '47

FLAXSEED oil. See Linseed oil

FLEAS as carriers of infection
Epidemic control with DDT, ANTU and 1080. H. Elishewitz. Soap & San Chem 23:127-8 My '47
Plague; field surveys in western United States during ten years, 1936-1945. N. E. Wayson. Pub Health Rep 62:780-91 My 30 '47
Plague, the survival of the infection in fleas or hibernating ground squirrels. F. M. Prince and N. E. Wayson. Pub Health Rep 62:463-7; 1167-8 Mr 28, Ag 8 '47
Use of DDT to control murine typhus fever in San Antonio, Texas. D. E. Davis. fold maps Pub Health Rep 62:449-63 Mr 28 '47

FLESCH, Rudolf
Apostle of plain talk. por Bsns W p22+ Ap 12 '47

FLETCHER, Robert Virgil, 1869-
New president of A.A.R. por(cover) Bsns W p8 D 21 '46
President of Association of American railroads. por Ry Age 121:1052 D 21 '46

FLIES
Fly control campaigns. Soap & San Chem 23:167+ My '47
Fly larvicide tests. A. H. Madden and others. Soap & San Chem 23:141+ Mr '47
New technique for sampling the density of housefly populations. H. I. Scudder. Pub Health Rep 62:681-6, pl 1 My 9 '47

See also
Blowflies
Botflies
Fly sprays and repellents

FLIES as carriers of infection
Fly-abatement studies in urban poliomyelitis epidemics during 1945. J. L. Melnick and others. bibliog map Pub Health Rep 62: 910-22, pl 1-2 Je 20 '47

FLIGHT
New approach to flight; flapping wing experiments. W. B. Stout. il diags S A E J 55:50-2 F '47

FLOATING cranes. See Cranes, Floating

FLOATING dry docks. See Dry docks, Floating

FLOATING power plants. See Power plants, Floating

FLOATS, Seaplane. See Seaplanes—Floats

FLOCK
Wood cellulose in rubber compounding. P. M. Goodloe and others. Rubber Age 61:697-703 S '47

See also
Rayon flock

FLOCK covered fabrics
Behr-Manning reports progress with flock. R. E. Ellsworth. il Rayon 28:463-4 S '47
Electrostatic flocking. il diag Electronics 20: 142+ Mr '47

FLOOD control
Back to the battle of flood control. R. A. Wheeler. il Eng N 138:287-90 F 20 '47
Big flood-control projects to go ahead with new funds. Eng N 137:751 D 5 '46
Cincinnati's Mill Creek flood control project. H. B. McDermid. il map diags Power Pl Eng 50:82-5 D '46
Development of the Missouri basin. B. H. Greene. map Elec Eng 66:140-5 F '47
Flood control without power; Miami conservancy district, solved problem by construction of dams only. R. A. Schmidt. map Pub Util 40:333-9 S 11 '47
Flood-prevention projects at Pennsylvania anthracite mines; progress report for 1945. S. H. Ash and others. 28pls U S Bur Mines Rep of Invest 4109:1-64 bibliog(p62-4) '47
Flood problem; its philosophy and its facts. R. A. Ryves. Engineer 183:467 My 30 '47
International treaty authorizes flood control structures on lower Rio Grande. L. M. Lawson and R. F. MacGregor. il map Civil Eng 17:117-20 Mr '47
Kansas plan for Neosho River basin development. R. V. Smrha. map Am Water Works Assn J 39:673-9 Jl '47
Little Sioux basin serves as miniature Mississippi valley for control studies. M. Elliott. il Civil Eng 17:136-9 Mr '47
Major projects; brief reports on status of construction operations. il Eng N 138:318-20 F 20 '47
Miami conservancy district clears debt after 33 years of operation. Eng N 137:630 N 14 '46
Model study of Brown Canyon debris barrier. K. J. Bermel and R. L. Sanks. il map diag Am Soc C E Proc 72:613-28 My '46; Discussion. 72:1325-6, 1401-6 N-D '46
New flashboard improves flood control; Central Maine Power's Shawmut station dam. diags Elec World 128:108 O 11 '47
Ohio converts a flood project into resort area. Bsns W p74 Ag 16 '47
Oil field flood protection; pump equipped barge protects Oklahoma's second largest oil reserve. il Diesel Power 25:53+ Mr '47
Prospects of conservancy works in China. B. Shen. bibliog Franklin Inst J 242:399-420 N '46
Reclamation's biggest earthfill dam; Anderson Ranch dam in Idaho. D. S. Walter. il diags Eng N 139:396-402 S 18 '47
Thames flood control; abstract. R. V. W. Stock. Engineer 184:63 Jl 18 '47
Training the Yellow river. Engineer 182:424-5 N 8 '46
Varying reservoir levels and discharges forecast by new method. N. S. Haines. Eng N 138:1003-5 Je 26 '47
Water development plans in California. E. Hyatt. map Am Water Works Assn J 39: 430-42 My '47

See also
Central Valley project, California
Dams
Levees
Mississippi river—Flood control projects
Rivers—Bank protection
Rivers—Regulation

FLOOD insurance. See Insurance, Flood

FLOODS
Record floods occur on midwest rivers. il Eng N 138:561 Ap 17 '47
Spillway energy dissipated on the face of a dam; Loskop and Vaalbank dams in South Africa. D. F. Roberts. il diags Eng N 137: 783-5 D 12 '46

See also
Bridges—Damage from floods, etc.
Flood control
Mississippi river—Floods
Rain and rainfall
Run-off
Waterworks—Flood damage

FLOODS—*Continued*

China

Training the Yellow river. Engineer 182:424-5 N 8 '46

Cincinnati

Cincinnati's Mill Creek flood control project. H. B. McDermid. il map diags Power Pl Eng 50:82-5 D '46

Egypt

Nile flood of 1946. Engineering 162:424 N 1 '46; Discussion. F. Newhouse. 162:496 N 22 '46

England

Army flood work in the south Level fens. il map Engineering 163:304-6, 312 Ap 18 '47

Florida

Southern Florida hit by heavy floods. Eng N 139:568 O 23 '47

Great Britain

Flood problem; its philosophy and its facts. R. A. Ryves. Engineer 183:467 My 30 '47

Kansas

Kansas plan for Neosho River basin development. R. V. Smrha. map Am Water Works Assn J 39:673-9 Jl '47

Massachusetts

Geologic features of the Connecticut valley, Massachusetts as related to recent floods. R. H. Jahns. maps diags U S Geol S Water-supply Pa 996:1-158, pl 1-33 bibliog(p144-55); pa $1.75 Supt. of doc. '47

Middle western states

Ruin by the river; Missouri-Mississippi damage worst in history. Bsns W p22 Jl 19 '47

New York (state)

Major winter and nonwinter floods in selected basins in New York and Pennsylvania. W. B. Langbein and others. maps 95 tables U S Geol S Water-supply Pa 915:1-139, pl 1-2 '47

Ohio

See also
Miami valley, Ohio

Pennsylvania

Major winter and nonwinter floods in selected basins in New York and Pennsylvania. W. B. Langbein and others. maps 95 tables U S Geol S Water-supply Pa 915:1-139, pl 1-2 '47

Rutland, Vermont

Rutland water gas plant disabled by flood and served by propane-air plant. Am Gas J 167:55 Jl '47; Same cond. Gas Age 100:34+ Jl 24 '47; Excerpts. Am Gas Assn Mo 29: 342 Jl-Ag '47

St Louis

Fighting the floods at St Louis. J. R. Carr. il map diag Eng N 139:264-7 Ag 21 '47

United States

Floods hit northern sector of U.S. as rains force streams over banks. il Eng N 138: 921 Je 12 '47

Utah

Cloudburst floods in Utah, 1850-1938. R. R. Woolley. maps plans U S Geol S Water-supply Pa 994:1-128, pl 1-23; pa $1.50 Supt. of doc. '46

Vermont

Vermont flood investigated; damage protests received. Elec World News ed 128:6 Jl 12 '47

FLOOR cleaning

Floor soaps and cleaners. M. A. Lesser. bibliog Soap & San Chem 23:36-9+ Jl '47

Mechanized floor maintenance saves money at Macon Textiles. D. W. Barnes. il Textile World 97:151+ S '47

FLOOR cleaning machines

Floor machine built low to reach tight spots. il Sci Am 176:81 F '47

Tennant floor cleaning machine. il Ry Mech Eng 121:38 Ja '47

FLOOR coverings

Big five in floor coverings. R. Colston. il Mag of Wall St 81:31-3+ O 11 '47

'48 will be too late! Armstrong Cork warns wholesalers at 25th annual convention of its distributors. Sales Management 58:45-6+ Ja 1 '47

See also
Carpets
Rugs

FLOOR finishing

Finishing of bowling alleys and floors involves large fire risks. C. L. Jones. East Underw 48:18 Ag 8 '47

FLOOR lamps. See Electric lamps, Floor

FLOOR traders. See Stock exchange—Floor traders

FLOOR wax

Floor polish; abstract. J. M. Vallance. Soap & San Chem 23:135 Ag '47

Floor wax symposium; N.A.I.D.M. meeting. Soap & San Chem 23:159 Jl '47

FLOORING

Labor requirements; hardwood flooring production. R. V. Murray and E. J. Lowther. Mo Labor R 65:49-53 Jl '47

Laminated vinyl tile flooring. il Mod Plastics 24:123-5 Ap '47

Latex/hydraulic cement flooring mixtures. L. H. Griffiths. Chem & Ind p578-80 S 20 '47; Discussion. p 15 Ja 4 '47

New building standard provides for light weight flooring. S. H. Burgess. il Ind Stand 13:173-6 Jl '47; Excerpts. Civil Eng 17:36 D '47

New composition found effective for use in radiantly-heated floors; Silvacon made of powdered treebark. il Arch Forum 87:124 S '47

Wood-asphalt-concrete sandwich answers mill floor problem. P. L. Geiringer. diags Textile World 96:141+ N '46

Advertising

How small advertiser by-passed competition to become a leader; domination in trade media and planned follow-through won national distribution for Kentile. C. J. Swan. il Ptr Ink 218:35-7 Mr 14 '47

FLOORS

Comparative economy of fireproof floor systems; with analysis and time-saver standards. T. Barbato. plans diags Arch Rec 100: 118-19+ D '46

Floor paint vehicles. Paint Oil & Chem R 109:60-2 N 14 '46

How to select safety flooring for chemical plants. C. L. Jones. bibliog il Chem Ind 60: 414-17 Mr '47

Suspension beam with unique hinge provides wide unobstructed floor. il diag Eng N 138: 1013 Je 26 '47

Time lag in radiant heating; effect of mass of floor. W. E. Wilson. diags Heating-Piping 19:82-6 Ap '47

See also
Bridges—Floors
Factories—Floors

Anti-slip surfaces

National bureau of standards seeks safety codes for walkways and footwear; measures slipperiness of walkway surfaces. diags Safety Eng 93:17+ Je '47; Same. Franklin Inst J 243:326-9 Ap '47; Excerpts. Eng N 138:732 My 1 '47; Roads & Sts 90:51 Ap '47

Plant walkways. il Nat Safety N 55:85-6 Mr '47

Rough surface walkway materials. Safety Eng 94:44 Jl '47

Safe walkway surfaces. P. A. Sigler and A. T. McPherson. Nat Safety N 55:10+ Mr '47

FLOORS, Concrete

Asphalt in concrete makes soft mix that increases floor comfort. Eng N 138:389 Mr 6 '47

Effect of floor slab on building structure temperatures and heat flow. C. F. Kayan. bibliog diags Heating-Piping 19:103-11 Je '47; Discussion. 19:131-2 Ag '47

Flat slabs on cast-iron columns increase usable space; hog-cooler building for a meat-packing plant; Wilson & co. il diags Eng N 138:216-17 F 6 '47

FLOORS, Concrete—*Continued*
Here's a floor for severe service; Lee rubber & tire corporation. F. Leopold. diags Factory Management 104:105 D '46
Hot foot; cold floor discomfort remedied by electric heat. Elec West 98:56 Mr '47
Precast floor slabs for UN housing. L. F. Booth. il diags Eng N 138:455-7 Mr 20 '47
Precast floor slabs speed U.N. housing project. il diag Civil Eng 17:18-19 Ja '47
Precast floor system for apartments. il plan diag Arch Rec 101:110-11 Mr '47

Testing

Floor slab tests at University of Illinois. Heat & Ven 44:118 S '47

FLOORS, Concrete-wood
Wood-asphalt-concrete sandwich answers mill floor problem. P. L. Geiringer. diags Textile World 96:141+ N '46

FLOORS, Steel
Lehigh Valley installs nailable steel flooring. il diags Ry Mech Eng 121:475-6 S '47

FLORIDA
See also
Fruit trade—Florida
Physical geography—Florida
Plastic industries—Florida

Commerce

See also
Miami, Florida—Commerce

FLORIDA east coast railway
Florida East Coast cut-off speeds crops to market. il Manuf Rec 116:38 Ap '47
I.C.C. approves Coast Line control of Florida East Coast. Ry Age 122:1072+ My 24 '47
Merger authorized. Comm & Fin Chr 165: 2925 Je 2 '47

FLORIDA Everglades. See Everglades

FLORIDA power and light company
Charter amendments approved. Comm & Fin Chr 165:1315 Mr 10 '47
Preferred stock offered. Comm & Fin Chr 166: 1050 S 15 '47
$20,000,000 of securities offered. Comm & Fin Chr 166:466 Ag 4 '47

FLORIDA power corporation
Stock sold. Comm & Fin Chr 166:465-6 Ag 4 '47

FLORISTS
California captures far-away markets with flying flowers. il Sales Management 59:92+ S 15 '47
Case studies of small business; retail florist policies. Dom Comm 35:71-2 Ap '47

FLORISTS' shops
1947 floral shop in Victorian style; Kansas City. il plan Am Bld 69:122-3 S '47
Smart architectural design invites customers. il plans Am Bld 68:84-5 D '46

FLORY, Paul John, 1910-
Baekeland award to Paul J. Flory. por Chem & Eng N 25:287 F 3 '47
Receives Baekeland award. India Rubber World 116:368 Je '47
Receives the Leo Hendrik Baekeland award. pors Chem & Eng N 25:1502-3+ My 26 '47

FLOTATION agents
Chemical view of flotation processes. J. A. Barr, jr. flow sheet il diags Rock Prod 49: 92-4 O; 88-93+ D '46

FLOTATION machines
Mine & smelter supply co. improved flotation machine. diags Rock Prod 49:69 D '46

FLOTATION plants

Equipment

Concrete flotation cells replace wooden ones. diags Eng & Min J 148:122 F '47

FLOTATION process
Beneficiation of New England beryllium ores. F. D. Lamb. U S Bur Mines Rep of Invest 4040:1-9 '47
Beneficiation of western beryl ores. H. D. Snedden and H. L. Gibbs. bibliog U S Bur Mines Rep of Invest 4071:1-18 '47
Economy, simplicity now watchwords in milling. R. H. Ramsey. il diag Eng & Min J 148:99-104+ F '47
Flotation. F. D. DeVaney. bibliog Ind & Eng Chem 39:26-7 Ja '47
Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46
Making tin flotation work; Bolivan ores. A. M. Gaudin and others. bibliog flow sheet il diag Eng & Min J 147:54-9 O; 72-4 N; 68-72 D '46; 148:84-7 Ja; 70-2 Mr '47
Research program on flotation announced. Blast F & Steel Pl 35:121 Ja '47
Rock drill oil may help or hinder your flotation. E. C. Herkenhoff. il Eng & Min J 148: 88-90 Je '47
St Joe's Balmat mill; Edwards division of the St Joseph lead co. J. Casale. il diag Eng & Min J 147:56-62 N '46
Test to determine the lime abstraction of iron ores. E. S. Hertzog. 3pls U S Bur Mines Rep of Invest 3929:1-10 '46
See also
Flotation machines

FLOTATION process (coal)
For cleaner industrial coal; suspension of magnetite in water as heavy medium. Bsns W p42+ F 15 '47
Oil flotation cleans silt cheaply and efficiently; Susquehanna collieries co. flow sheet il diag Coal Age 52:82-5 Jl '47

FLOTATION process (non-metals)
Froth flotation. J. A. Barr, jr. flow sheets il diags Rock Prod 49:65-7+ Jl; 128-32 Ag; 71-5 S; 92-4 O; 88-93+ D '46; 50:89-91+ Mr; 92-4 My; 112-15 Ag '47

FLOUR
Wheat-flour consumption in the Philippines is mounting. H. Maness. il For Comm W 27:6-7+ Ap 5 '47
See also
Potato flour
Sweet potato flour

Analysis

Determination of thiamine and riboflavin in the presence of reduced iron. E. De Ritter and S. H. Rubin. bibliog Anal Chem 19: 243-8 Ap '47
Dextrins in flour and yeast raised bread. W. Cunliffe. Soc Chem Ind J 66:187-9 Je '47

Manufacture

Explosive dissociation for processing of cereals. il Food Ind 19:759+ Je '47
Flour milling; abstract. D. C. Hailey. Chem & Ind p439 D 7 '46
Making flour by air blast. il Bsns W p21 My 10 '47

Storage

Storage of bulk flour in concrete silos. J. Fruchtbaum. Am Concrete Inst J 19:79-80 S '47

Testing

Improved method for measurement of gel strength and data on starch gels. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39:29-37 Jl '47

FLOUR bags. See Cotton bags

FLOUR mills

Accounting

Valuing flour mill inventories. R. C. McKibbin. N A C A Bul 28:1076-85 My 1 '47; Correction. 28:1238 Je 1 '47

Electric equipment

All-electric flour mill. il Elec R (Lond) 140: 743-7 My 9 '47

FLOW. See Fluids; Rheology; Viscosity

FLOW meters
ABC's of measuring flow with head meters. W. C. Bennett. diags Power 91:37-8 Ja '47
Air flow meter. il Sci Am 177:82 Ag '47
All-glass laboratory flowmeters. R. J. Fabris and N. M. Peacock. bibliog diags Can Chem & Process Ind 31:153-4+ F '47
Bailey electronic area meter. il diag Blast F & Steel Pl 35:996 Ag '47
Conveyoflo meter, new development. il Chem Eng Prog 43:sup 18 Ag '47
Flow meter for measuring input to water-injection wells. E. T. Young and O. L. Patterson. diags Oil & Gas J 46:60-1+ N 1 '47
Flow metering and controlling. C. G. Richardson. il diags Water & Sewage 85:32-6+ Ap '47

FLOW meters—*Continued*
Flowmeter for testing crankcase ventilation. R. G. Brown. il diag Automotive & Aviation Ind 95:38-9+ N 15 '46
Flowmeter measures crankcase ventilation. il diag Machine Design 18:153-4 D '46
He built his own flow meter. E. Hubert. diags Power Pl Eng 51:89-90 Mr '47
Impedance bridge for flow-rate metering. F. J. Curran. il diags Electronics 20:106-8 Ap '47
Indicating flow meter for process liquids. A. Bergholm. diag Chem Eng 54:119 Je '47; Correction. 54:192 Ag '47
Instrumentation. R. H. Munch. il Ind & Eng Chem 39:sup87A-88A Ag '47
Negretti and Zambra flowmeter. il diag Engineer 183:526 Je 13 '47
New type gas flow meter developed. il Gas Age 100:16+ O 16 '47
Possibilities of the positive displacement meter as a flow control device; abstract. E. W. Jacobson. Product Eng 18:130-1 F '47
Pulsation and its effect on flowmeters. E. J. Lindahl. bibliog diags A S M E Trans 68:883-94 N '46
Ratio flow and metered control in chemical processing. D. M. Considine and S. D. Ross. il diags Chem Eng Prog 43:497-504; Discussion. 504 S '47
Rotameter and petroleum refinery flow rate measurement. K. Fischer. il diags Pet Refiner 26:106-12 Ja '47

See also
Gas meters
Orifice meters
Rotameters
Water meters

FLOW of fluids. See Fluids; Hydraulics; Hydrodynamics; Rheology; Turbulence

FLOW of gas. See Air flow; Gas flow

FLOW of metals. See Metals—Fluidity

FLOW of water. See Hydraulics; Water flow

FLOW regulators
And now automatic remote control; gas lines of Pacific gas and electric co. W. A. La Violette. il diag map Gas Age 99:34-7+ Ap 17 '47
Diaphragm control valves conform to preferred numbers. B. A. Irwin. il Product Eng 18:85-9 Ap '47
How to select a control valve. B. A. Irwin. il Power 91:627-30, 670-3 S-O '47
Hydraulic controls used for flow rate and liquid level in cooling tower sump. A. Krieg. diag Pet Processing 2:419 Je '47
Possibilities of the positive displacement meter as a flow control device; abstract. E. W. Jacobson. Product Eng 18:130-1 F '47
Principles of automatic control as applied to natural gas operations. L. W. Parten. il diags Pet Refiner 26:121-8 O '47
Proportional flow controller for liquids. W. R. Wilkinson and H. A. Beatty. diags Ind & Eng Chem Anal ed 18:725-6 N '46; Same. Pet Eng 18:90+ Ag '47

FLOW sheets
Allis-Chalmers develops a quicker way to make graphic flow sheets; use of rubber stamps. flow sheet Paper Tr J 124:32 Ap 17 '47; Same. Chem Eng 54:158 My '47

Bibliography

Index to Chemical engineering pictured flowsheets, 1939-1946. Chem Eng 53:158+ D '46

FLOWER shops. See Florists' shops

FLOWERS
Flowers for all; new concept of pre-packaged cut flowers. A. Laurie and W. Bryant. il Mod Packaging 20:110-13 Je '47

Transportation

California captures far-away markets with flying flowers. il Sales Management 59:92+ S 15 '47
Orchids to you; special packaging brings blooms from Venezuela. il Mod Packaging 20:107+ Jl '47

FLOWERS, Artificial
Flowers that retain their beauty. il Mod Plastics 24:130 F '47

FLUE dust
Cinder and fly-ash factors when burning small anthracite coal on traveling-grate stokers. C. S. Gladden. bibliog diag A S M E Trans 69:191-8 Ap '47; Excerpts. Power Pl Eng 50:124 D '46; Discussion. A S M E Trans 69:198-202 Ap '47
Cottrell precipitation installation at Ocean Falls. M. E. Patterson. il plan diag Pulp & Pa of Can 47:90-5 N '46
Dust collector at Peterborough power station. diags Engineer 182:442 N 15 '46
Efficiency of small cyclones (aerotec) as a function of loading, temperature and pressure drop; coal-burning gas turbine for locomotive use. J. D. Parent. il diags Am Inst Chem Eng Trans 42:989-99 O-D '46
Elimination of lime stack losses with the type N Roto-clone; Southland paper mills. C. C. Porter and others. il Paper Tr J 124: 33-6 F 6 '47
High efficiency in stack dust recovery; Universal atlas cement company. B. Nordberg. il Rock Prod 50:134-7 Ag '47
History and use of pulverized fuel at Detroit power stations; disposal and uses of fly ash and cinders. P. W. Thompson. il diags Power Pl Eng 51:108-10 O '47
What the power engineer should know about electrostatic precipitators. diags Power Pl Eng 51:80-2 S '47

FLUE gas
Convection transfer rates; chart. W. L. Nelson. Oil & Gas J 45:321 N 16 '46
How to find stack gas temperature with an ordinary thermometer. R. H. Norton. Power Pl Eng 51:101 Ag '47
Removal of salt cake fume from sulphate recovery furnace stack gases by scrubbing. T. T. Collins, jr. and others. il diags Paper Tr J 124:45-9 Je 5 '47
Scrubbing of sulphate recovery furnace stack gases. T. T. Collins, jr. bibliog il diag Paper Ind 29:680-6, 830-4, 984-6 Ag-O '47
Some practical applications of flue gas recirculation; installation at Neches butane products company. W. H. Rowand and E. Durham. diags Pet Refiner 26:99-102 Ja '47

See also
Flue dust

Analysis

Automatic estimation of sulphur trioxide in flue gas. E. W. F. Gillham. diags Soc Chem Ind J 65:405-9 D '46
Determination of oxides of sulphur in flue gas. E. W. F. Gillham. Soc Chem Ind J 65: 370-2 N '46
Scrubbing of sulphate recovery furnace stack gases. T. T. Collins, jr. bibliog il diag Paper Ind 29:680-6, 830-4 Ag-S '47

See also
Carbon dioxide recorders

FLUES
Modular clay flue lining sizes; table. Brick & Clay Rec 111:32 O '47
New method for building open-hearth flues; use of refractory concrete made with lumnite cement. W. F. Conlin. il Steel 120: 94+ Ja 20 '47

FLUIDITY
Fluidity testing of foundry alloys. K. L. Clark. bibliog(105 titles) il diags Foundry 74:92-6+ D '46
Improved equipment and methods for fluidity measurements of cellulose and cellulose acetate. D. S. Lyle and F. K. Ray. bibliog il diags Am Dyestuff Rep 36:123-7 Mr 10 '47

See also
Viscosity

FLUIDIZATION
Fluidization in chemical reactions; method for developing design data. J. C. Kalbach. flow diag Chem Eng 54:105-8 Ja; 136-8 F '47
Fluidization observations. J. D. Parent. Chem Ind 60:617 Ap '47
Fluidized powder techniques; abstract. E. R. Gilliland. Chem Eng 54:270+ Ap '47
Fluidizing processes; basic observations from laboratory equipment. J. D. Parent, N. Yagol and C. S. Steiner. diags Chem Eng Prog 43:429-36 Ag '47

FLUIDS
Basic equations for fluid motion and pressure drop in pipes. A. H. Korn. diags Product Eng 18:85-9 My '47
Flow of fluids through porous media. L. E. Brownell and D. L. Katz. bibliog Chem Eng Prog 43:537-44; Discussion. 544-8 O '47
Flow properties of pseudoplastic fluids. C. C. Winding, G. P. Baumann and W. L. Kranich. bibliog diags Chem Eng Prog 43: 527-36 O '47 (to be cont)
Fluid flow friction factors for pipes, valves and fittings. V. L. Streeter. diag Product Eng 18:89-91 Jl '47
Friction loss and heat balance in viscous flow between plates. O. E. Teichmann. diags Product Eng 18:146-50 Ag '47
Generalized form of the reaction-rate law for homogeneous reactions. S. R. Brinkley, jr. and S. Weller. bibliog Am Chem Soc J 69:1319-21 Je '47
Heat transmission from fine wires to water; low velocity data and correlation. E. L. Piret, W. James and M. Stacy. bibliog il diags Ind & Eng Chem 39:1098-103 S '47
Measurement of elasticity in fluids of low viscosity. J. R. Van Wazer and H. Goldberg. diags J Ap Phys 18:207-11 F '47
Newton and fluid mechanics. J. C. Hunsaker. J Aeronautical Sci 13:647-51 D '46
One-dimensional theory of steady compressible fluid flow in ducts with friction and heat addition. B. L. Hicks and others. bibliog J Ap Phys 18:891-902 O '47
Phenomenological theory of transport processes in fluids. B. Leaf. bibliog Phys R 70: 748-58 N 1 '46
Pressure drop through packed tubes. M. Leva. Chem Eng Prog 43:549-54 O '47 (to be cont)
Pulsation and its effect on flowmeters. E. J. Lindahl. bibliog diags A S M E Trans 68:883-94 N '46
Streamlines for the subsonic flow of a compressible fluid past a sphere. E. R. Van Driest. J Ap Phys 18:194-8 F '47
Sudden application of a constant shearing motion to anomalous fluids. E. K. Carver and J. R. Van Wazer. bibliog il diags J Phys & Colloid Chem 51:751-63 My '47
Symposium of papers on flow or fluids. H. E. Rose. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 5): 141-61; Discussion. 162-8 '45
Two-dimensional steady flow of a compressible viscous fluid far behind a solid symmetrical body. M. Z. Krzywoblocki. Franklin Inst J 243:471-86 Je '47

See also
Aerodynamics
Air flow
Drops
Equation of state
Flow meters
Fluidity
Gas flow
Gases
Hydraulics
Hydrodynamics
Liquids
Vapors
Viscosity
Water flow

FLUKES
Operative approach to the treatment of schistosomiasis mansoni infections. J. L. Brandt. Science 105:239-40 F 28 '47

FLUMES
Design of control flumes for grit chambers. W. E. Howland. Water & Sewage Works 94:R182-3 Jl '47

FLUORANTHENE
Aromatic cyclodehydrogenation; synthesis of fluoranthene. M. Orchin and L. Reggel. bibliog Am Chem Soc J 69:505-9 Mr '47

FLUORENE
Alkylamine derivatives of fluorene. F. E. Ray and I. R. MacGregor. bibliog Am Chem Soc J 69:587-9 Mr '47
Dehydrogenation of 9-aminofluorene and fluorenol by unsaturated compounds; Michael condensation. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 68:2739-40 D '46
Derivatives of fluorene. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 69:723 Mr '47
Photochemical bromination of fluorene. J. R. Sampey and E. E. Reid. Am Chem Soc J 69:234-5 F '47
Structures of some nitrated fluorene derivatives. C. W. Bennett, W. G. Jewsbury and J. P. Dupuis. bibliog Am Chem Soc J 68: 2489-90 D '46

See also
Teflon

FLUORENE carboxylic acids
Antispasmodics; diarylacetic acid esters of some pyridyl and piperidyl alkanols. R. R. Burtner and J. M. Brown. Am Chem Soc J 69:630-3 Mr '47

FLUORENOL
Dehydrogenation of 9-aminofluorene and fluorenol by unsaturated compounds; Michael condensation. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 68:2739-40 D '46

FLUORESCEIN
See also
Uranin

FLUORESCENCE
Black light. il Gen Elec R 49:55 N '46
Black light, fluorescence, and ceramics. F. C. Arrance. bibliog il diag Am Cer Soc J 30: 250-5 Ag 1 '47
Blue-fluorescing compound, terthienyl, isolated from marigolds. L. Zechmeister and J. W. Sease. bibliog Am Chem Soc J 69: 273-5 F '47
Brightness of apparent fluorescence as a function of the exciting intensities. F. Urbach and others. Opt Soc Am J 37:122 F '47
Colored glasses; a review of part V of a monograph by W. A. Weyl. N. J. Kreidl. Glass Ind 28:463-4+ S '47
Factors in fluorescence microscopy. D. H. Hamly and C. Sheard. bibliog diag Opt Soc Am J 37:316-20 My '47
Fluorescence; abstract and discussion. N. Campbell. Chem & Ind p147 Mr 22 '47
Fluorescence of red blood cells. D. H. Hamly and others. bibliog Science 106:169-70 Ag 22 '47
Fluorescence of silicate phosphors. K. H. Butler. bibliog diag Opt Soc Am J 37:566-71 Jl '47
Fluorescence test for uranium in aqueous solution. C. W. Sill and H. E. Peterson. bibliog il Anal Chem 19:646-51 S '47
Fundamentals of fluorescence. A. L. Powell. bibliog J Chem Educ 24:423-8 S '47
Light absorption and emission of ions in glasses and crystals as affected by assymetrical electric fields; abstract. W. A. Weyl. Glass Ind 28:181 Ap '47
Luminous materials, properties and typical applications. L. H. Dawson. il Product Eng 18:144-9 Jl '47
Resonance fluorescence of nuclei. L. I. Schiff. Phys R 70:761-2 N 1 '46
Solvent quenching of fluorescence. E. J. Bowen and E. Coates. Chem Soc J p 105-9 Ja '47
Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47
Use of a fluorescent adsorbent for the chromatography of colorless compounds. J. W. Sease. Am Chem Soc J 69:2242-4 S '47

See also
Fluorometric analysis
Luminescence

FLUORESCENT lighting. See Electric lamps, Fluorescent

FLUORIDE poisoning
Use of sodium fluoride in the manufacture of steel. K. E. Markuson. bibliog Ind Med 16:434-6 S '47

FLUORIDES
Alkyl- and aryl-substituted fluorides of sulphur, selenium, tellurium, and iodine. H. J. Emeléus and H. G. Heal. Chem Soc J p 1126-31 D '46
Electric moments of some aliphatic fluorides, cyanides and amines. M. T. Rogers. bibliog Am Chem Soc J 69:457-90 F '47
Metallic fluorides in fluorocarbon synthesis; manganese trifluoride, ceric fluoride, etc. as alternates for cobalt trifluoride. R. D. Fowler and others. il Ind & Eng Chem 39:343-5 Mr '47
Preparation and properties of sulfur hexafluoride. W. C. Schumb. bibliog Ind & Eng Chem 39:421-3 Mr '47

FLUORIDES—*Continued*
Some new aspects of germanate and fluoride phosphors. F. E. Williams. bibliog diag Opt Soc Am J 37:302-7 Ap '47
Vapor pressures of some organic fluorides. F. H. Field and J. H. Saylor. Am Chem Soc J 68:2649 D '46

See also
Cryolite

Analysis

Influence of phosphate on zirconium-alizarin method of fluoride determination. D. M. Taylor and R. E. Frazier. Am Water Works Assn J 39:52-6 Ja '47

FLUORINATION
Action of elementary fluorine upon organic compounds. L. A. Bigelow. bibliog diags Chem R 40:51-115 F '47; Correction [diagrams] 40:180+ Ap '47
Action of elementary fluorine upon organic compounds; vapor phase addition to certain deactivated or condensed aromatic rings. R. Y. Tompson, P. Tarrant and L. A. Bigelow. bibliog diag Am Chem Soc J 68:2187-92 N '46
Aromatic fluorocarbons. E. T. McBee, V. V. Lindgren and W. B. Ligett. bibliog Ind & Eng Chem 39:378-80 Mr '47
Direct bromination of fluorinated alkanes. E. T. McBee and others. bibliog Ind & Eng Chem 39:420-1 Mr '47
Ethyl trichlorosilane [and other alkyl trichlorosilanes] and its fluorination products. H. S. Booth and others. bibliog diag Am Chem Soc J 68:2650-65 D '46
Fluorinated acids. A. L. Henne and W. J. Zimmerschied. Am Chem Soc J 69:281-3 F '47
Fluorinated derivatives of diethylbenzene. E. T. McBee and others. Ind & Eng Chem 39:395-7 Mr '47
Fluorinated derivatives of ethane. E. T. McBee and others. bibliog Ind & Eng Chem 39:409-12 Mr '47
Fluorinated derivatives of *p*-ethyltoluene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:397-9 Mr '47
Fluorinated derivatives of *p*-isopropyltoluene and isopropylbenzene. E. T. McBee and O. R. Pierce. Ind & Eng Chem 39:399-401 Mr '47
Fluorinated derivatives of mesitylene. E. T. McBee and R. E. Leech. Ind & Eng Chem 39:393-4 Mr '47
Fluorinated derivatives of propane. E. T. McBee and others. bibliog Am Chem Soc J 69:944-7 Ap '47
Fluorinated ethers. E. T. McBee and R. O. Bolt. bibliog Ind & Eng Chem 39:412-15 Mr '47
Fluorinated heterocyclic compounds; methylpyridines. E. T. McBee, H. B. Hass and E. M. Hodnett. bibliog Ind & Eng Chem 39:389-91 Mr '47
Fluorinated heterocyclic compounds (perhaloalkyl) triazines. E. T. McBee, O. R. Pierce and R. O. Bolt. Ind & Eng Chem 39:391-2 Mr '47
Fluorination of perhalogen olefins. W. T. Miller, jr. and others. bibliog diags Ind & Eng Chem 39:401-4 Mr '47
Fluorination of petroleum oils in liquid phase with silver difluoride. W. S. Struve and others. diag Ind & Eng Chem 39:352-4 Mr '47
Fluorination of petroleum oils in vapor phase with cobalt trifluoride. C. F. Irwin and others. diag Ind & Eng Chem 39:350-2 Mr '47
Fluorination of polychloroterphenyls. F. B. Stilmar, W. S. Struve and W. V. Wirth. Ind & Eng Chem 39:348-50 Mr '47
Fluorine as a halogen; reaction with a highly deactivated aromatic nucleus. L. A. Bigelow, R. Y. Tompson and P. Tarrant. bibliog diags Ind & Eng Chem 39:360-4 Mr '47
Fluorocarbons by fluorination of hydrocarbons with cobalt trifluoride. R. G. Benner and others. bibliog diag Ind & Eng Chem 39:329-33 Mr '47
Low polymers of chlorotrifluoroethylene; preparation and utilization in chlorofluorocarbon lubricants. W. T. Miller, jr. and others. bibliog Ind & Eng Chem 39:333-7 Mr '47
Metallic fluorides in fluorocarbon synthesis; manganese trifluoride, ceric fluoride, etc. as alternates for cobalt trifluoride. R. D. Fowler and others. il Ind & Eng Chem 39:343-5 Mr '47
Perfluoro dibasic acids and derivatives. E. T. McBee, P. A. Wiseman and G. B. Bachman. Ind & Eng Chem 39:415-17 Mr '47
Pilot plant preparation of polychloropolyfluoroheptane. J. H. Babcock, W. S. Beanblossom and B. H. Wojcik. flow sheet diags Ind & Eng Chem 39:314-19 Mr '47
Pilot plant syntheses; perfluoro-*n*-heptane, perfluorodimethylcyclohexane, and high boiling fluorocarbon oils. W. B. Burford, 3d and others. flow sheet il diags Ind & Eng Chem 39:319-29 Mr '47
Preparation of bis(trifluoromethyl)benzenes. E. T. McBee and others. il diag Ind & Eng Chem 39:298-301 Mr '47
Preparation of chloro-bis(trifluoromethyl)benzenes. E. T. McBee and others. Ind & Eng Chem 39:387-8 Mr '47
Preparation of chlorofluoro derivatives of ethylbenzene. E. T. McBee and others. Ind & Eng Chem 39:384-6 Mr '47
Preparation of chlorofluorocarbons; fluorination of Prins-type condensation products. M. Couper and others. bibliog Ind & Eng Chem 39:346-8 Mr '47
Preparation of chlorofluoromethanes by vapor-phase fluorination. E. T. McBee and others. bibliog diag Ind & Eng Chem 39:404-9 Mr '47
Preparation of fluorine-containing polyhaloheptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47
Preparation of fluorine perchlorate from fluorine and perchloric acid. G. H. Rohrback and G. H. Cady. bibliog diag Am Chem Soc J 69:677-8 Mr '47
Preparation of fluorocarbons by catalytic fluorination on hydrocarbons. G. H. Cady and others. diag Ind & Eng Chem 39:290-2 Mr '47
Preparation of fused-ring fluorocarbons. E. T. McBee and L. D. Bechtol. bibliog il diags Ind & Eng Chem 39:380-4 Mr '47
Preparation of perfluoroheptane and chloroperfluoroheptanes. E. T. McBee and others. diag Ind & Eng Chem 39:310-13 Mr '47
Production of polyperfluorovinyl chloride. E. A. Belmore, W. M. Ewalt and B. H. Wojcik. flow sheets diag Ind & Eng Chem 39:338-42 Mr '47
Some new fluorinated phenolic aldehydes and acids. L. N. Ferguson, J. C. Reid and M. Calvin. bibliog Am Chem Soc J 68:2502-4 D '46
Synthesis of fluorocarbons. R. D. Fowler and others. bibliog diag Ind & Eng Chem 39:292-8 Mr '47
Synthesis of halobutanes. E. T. McBee and W. R. Hausch. bibliog Ind & Eng Chem 39:418-20 Mr '47

FLUORINE
Action of elementary fluorine upon organic compounds. L. A. Bigelow. bibliog(108 ref) diags Chem R 40:51-115 F '47
Aluminum plant to recover fluorine fumes. Chem Eng 53:178+ D '46
Chemical uses promising for fluorine. Chem & Eng N 25:430 F 17 '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Electronically controlled apparatus for distillation of fluorine as hydrofluosilicic acid. H. H. Willard, T. Y. Toribara and L. N. Holland. diags Anal Chem 19:343-4 My '47
Fluorine; an important material for postwar development. S. C. Ogburn, jr. bibliog il J Chem Educ 24:314-18 Jl '47
Fluorine as a halogen; reaction with a highly deactivated aromatic nucleus. L. A. Bigelow, R. Y. Tompson and P. Tarrant. bibliog diags Ind & Eng Chem 39:360-4 Mr '47
Fluorine chemistry achieves commercial stature; report of symposium. bibliog il Chem Ind 59:1006-11 D '46
Fluorine chemistry; symposium. E. T. McBee and others. bibliog il diags Ind & Eng Chem 39:286-434 Mr '47
Fluorine marketed for first time. Sci Am 175:264 D '46
Fugitive fluorine works for industry. H. C. E. Johnson. il Sci Am 176:60-2 F '47

FLUORINE—*Continued*
Prevention of corrosion by fluorine and by hydrofluoric acid requires quite special apparatus. M. G. Fontana. Ind & Eng Chem 39:sup91A-2A Mr '47
Resonances in the disintegration of fluorine by protons. W. E. Bennett and others. bibliog diags Phys R 70:882-90 D 1 '46
See also
Water supply—
Fluorine content

Analysis

Analysis and disposal of fluorine. S. G. Turnbull and others. il diags Ind & Eng Chem 39:286-8 Mr '47
Constant-temperature steam-distillation apparatus for isolation of fluorine. W. B. Huckabay, E. T. Welch and A. V. Metler. bibliog il diag Anal Chem 19:154-6 Mr '47
Decomposition and analysis of organic compounds containing fluorine and other halogens. J. F. Miller, H. Hunt and E. T. McBee. bibliog il Anal Chem 19:148-9 Mr '47
Determination of fluorine and chlorine in organic compounds. R. H. Kimball and L. E. Tufts. bibliog diags Anal Chem 19:150-3 Mr '47
Determination of traces of fluorine in organic compounds. W. B. Huckabay, R. H. Busey and A. V. Metler. bibliog il diags Anal Chem 19:59-63 Ja '47
Hollow cathode source applicable to spectrographic analysis for the halogens and gases. J. R. McNally, jr. and others. bibliog il Opt Soc Am J 37:93-8 F '47
New titrimetric method for the estimation of fluorine; abstract. R. F. Milton and others. Soc Dyers & Col J 63:248 Jl '47
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47
Spectrophotometric determination of fluorine in glass. M. C. Parrish and others. bibliog Anal Chem 19:156-7 Mr '47

Compression

Mechanical fluorine compression. S. G. Osborne and M. M. Brandegge. il diag Ind & Eng Chem 39:273-4 Mr '47
Purification and compression of fluorine. J. F. Froning and others. bibliog il diags Ind & Eng Chem 39:275-8 Mr '47

Manufacture

Carbon-anode fluorine cell. R. L. Murray, S. G. Osborne and M. S. Kircher. il diags Ind & Eng Chem 39:249-54 Mr '47
Development and use of 600-ampere fluorine cell. R. D. Fowler and others. il diags Ind & Eng Chem 39:266-71 Mr '47
Electrolytic cells for production of fluorine. R. C. Downing and others. bibliog il diags Ind & Eng Chem 39:259-62 Mr '47
Electrolytic fluorine production in Germany. H. R. Neumark. diags Electrochem Soc Trans 91 (preprint 3):37-54 '46
Electrolytic generation of fluorine. W. C. Schumb, R. C. Young and K. J. Radimer. diags Ind & Eng Chem 39:244-8 Mr '47
Fluorine at Falkenhagen. Ind & Eng Chem 39:sup5A+ Mr '47
Preparation of fluorine. J. T. Pinkston, jr. bibliog il diag Ind & Eng Chem 39:255-8 Mr '47

Physiological effect

Fluorine and foodstuffs. Food Ind 19:422+ Mr '47
Industrial handling of fluorine. R. Landau and R. Rosen. bibliog flow diag Ind & Eng Chem 39:281-6 Mr '47
Lactobacillus acidophilus counts in the saliva of children drinking artificially fluorinated and fluorine-free communal waters. S. B. Finn and D. B. Ast. bibliog Science 106: 292-3 S 26 '47
Urinary fluoride excretion among men employed in alkylation plants using the hydrogen fluoride process. E. J. Largent. J Ind Hygiene 29:53-5 Ja '47

Storage

Storage of fluorine in pressure cylinders. H. F. Priest and A. V. Grosse. il diags Ind & Eng Chem 39:279-80 Mr '47

FLUORINE, Liquid
Mechanical fluorine compression. S. G. Osborne and M. M. Brandegge. il diag Ind & Eng Chem 39:273-4 Mr '47

FLUORINE compounds
Alkaline condensation of fluorinated esters with esters and ketones. A. L. Henne and others. Am Chem Soc J 69:1819-20 Jl '47
Difluoroarsines. L. H. Long, H. J. Emeléus and H. V. A. Briscoe. Chem Soc J p 1123-6 D '46
Fluorine chemistry achieves commercial stature; report of symposium. bibliog il Chem Ind 59:1006-11 D '46
Fluorine chemistry; symposium. E. T. McBee and others. bibliog il diags Ind & Eng Chem 39:236-434 Mr '47
Fugitive fluorine works for industry. H. C. E. Johnson. il Sci Am 176:60-2 F '47
Monomers and polymers; fluorinated styrenes. G. B. Bachman and L. L. Lewis. bibliog Am Chem Soc J 69:2022-5 Ag '47
Preparation of certain ethers of trifluoromethyl-substituted phenols. E. T. McBee and others. bibliog Am Chem Soc J 69:947-50 Ap '47
Study of the properties of fluorine-substituted 5-aminoacridines and related compounds; monofluoro-5-aminoacridines. J. H. Wilkinson and I. L. Finar. Chem Soc J p759-62 Je '47
Thermal reaction of hexafluoroethane with quartz. L. White, jr. and O. K. Rice. bibliog Am Chem Soc J 69:267-70 F '47
See also
Fluorocarbons

Analysis

Determination of hydrogen in fluorine-containing halohydrocarbons. J. F. Miller and others. diag Anal Chem 19:146-7 Mr '47

Nomenclature

Fluorine nomenclature. Ind & Eng Chem 39: 241-2 Mr '47; Discussion. Chem & Eng N 25:1696 Je 9 '47

FLUORINE handling
Industrial handling of fluorine. R. Landau and R. Rosen. bibliog flow diag Ind & Eng Chem 39:281-6 Mr '47
Purification and compression of fluorine. J. F. Froning and others. bibliog il diags Ind & Eng Chem 39:275-8 Mr '47
Small scale production and handling of fluorine; laboratory or small pilot plant. J. F. Gall and H. C. Miller. il diags Ind & Eng Chem 39:262-6 Mr '47

FLUORINE perchlorate
Preparation of fluorine perchlorate from fluorine and perchloric acid. G. H. Rohrback and G. H. Cady. bibliog diag Am Chem Soc J 69:677-8 Mr '47

FLUORITE. See Fluorspar

FLUOROACETIC acid
Modified synthesis of ethyl trifluoroacetate. J. C. Reid. Am Chem Soc J 69:2069 Ag '47

FLUOROAMINOACRIDINE
Study of the properties of fluorine-substituted 5-aminoacridines and related compounds; monofluoro-5-aminoacridines. J. H. Wilkinson and I. L. Finar. Chem Soc J p759-62 Je '47

FLUOROCARBONS
Aromatic fluorocarbons. E. T. McBee, V. V. Lindgren and W. B. Ligett. bibliog Ind & Eng Chem 39:378-80 Mr '47
Fluorocarbons by fluorination of hydrocarbons with cobalt trifluoride. R. G. Benner and others. bibliog diag Ind & Eng Chem 39:329-33 Mr '47
Industrial scale development of fluorocarbon processes; symposium. G. H. Cady and others. il diags Ind & Eng Chem 39:289-358 Mr '47
Metallic fluorides in fluorocarbon synthesis; manganese trifluoride, ceric fluoride, etc. as alternates for cobalt trifluoride. R. D. Fowler and others. il Ind & Eng Chem 39:343-5 Mr '47
Physical and chemical properties of pure fluorocarbons. R. D. Fowler and others. Ind & Eng Chem 39:375-8 Mr '47
Preparation of fluorocarbons by catalytic fluorination on hydrocarbons. G. H. Cady and others. diag Ind & Eng Chem 39:290-2 Mr '47

FLUOROCARBONS—*Continued*
Properties of fluorocarbons. A. V. Grosse and G. H. Cady. bibliog Ind & Eng Chem 39: 367-74 Mr '47
Synthesis of fluorocarbons. R. D. Fowler and others. bibliog diag Ind & Eng Chem 39: 292-8 Mr '47

FLUOROETHANOL
Some properties of methyl fluoroacetate and fluoroethanol. C. C. Price and W. G. Jackson. bibliog Am Chem Soc J 69:1065-8 My '47

FLUOROETHYLENE
Contrast in the dimerization of polychloro- and polyfluoro-ethylene. A. L. Henne and R. P. Ruh. Am Chem Soc J 69:279-81 F '47

FLUOROHYDROXYDIPHENYLS
Synthesis of some fluorohydroxybiphenyls. A. Roe and H. L. Fleishman. bibliog Am Chem Soc J 69:509-10 Mr '47

FLUOROISOCYANATES
Fluoroisocyanates of silicon. G. S. Forbes and H. H. Anderson. bibliog Am Chem Soc J 69:1241-2 Je '47

FLUOROMETRIC analysis
Determination of gallium in silicate rocks. E. B. Sandell. bibliog Anal Chem 19:63-5 Ja '47
Fluorometric determination of microgram quantities of boron. C. E. White, A. Weissler and D. Busker. bibliog Anal Chem 19: 802-5 O '47
Fluorometric method for estimating small amounts of chlorophyll a. R. H. Goodwin. bibliog Anal Chem 19:789-94 O '47
Fluorophotometric determination of rutin and other flavones. A. J. Glazko and others. bibliog Science 105:48 Ja 10 '47
Semiquantitative determination of traces of uranium; a fluorophotometric method for field use. T. R. P. Gibb, jr. and H. T. Evans, jr. diags Science 105:72-3 Ja 17 '47

FLUOROPHENANTHRENE
Derivatives of phenanthrene, preparation of 9-amino-, 9-iodo- and 9-fluorophenanthrene. M. A. Goldberg, E. P. Ordas and G. Carsch. bibliog Am Chem Soc J 69:260-2 F '47

FLUOROPHOSPHONATES
Toxic fluorophosphonates and related compounds; abstract. B. C. Saunders. Chem & Ind p117 F 22-Mr 8 '47

FLUOROPHOSPHORIC acid
Studies of fluorophosphoric acids and their derivatives; preparation of anhydrous monofluorophosphoric acid. W. Lange and R. Livingston. bibliog Am Chem Soc J 69: 1073-6 My '47

FLUOROSALICYLALDEHYDE
Some new fluorinated phenolic aldehydes and acids. L. N. Ferguson, J. C. Reid and M. Calvin. bibliog Am Chem Soc J 68:2502-4 D '46

FLUOROSCOPY
Persistence of fluoroscopic screens. W. W. Van Allen. diag Pub Health Rep 61:1583-8, pl 1 N 1 '46
X-ray storage properties of the infra-red storage phosphor and application to radiography. O. E. Berg and H. F. Kaiser. bibliog il diags J Ap Phys 18:343-7 Ap '47

FLUOROSULFONIC acid
Electropolishing with fluosulfonic acid. C. B. F. Young and K. R. Hesse. il Metal Finishing 45:63-7+ F; 64-7 Mr '47

FLUORSPAR
Blue Bell fluorite deposits, Beaver county, Utah. E. Frey. 4pls U S Bur Mines Rep of Invest 4091:1-11 '47
Daisy fluorite mine, Rosiclare lead & fluorspar mining co. Hardin county, Ill. N. M. Muir. 11pls U S Bur Mines Rep of Invest 4075:1-16 '47
Decoloration of natural fluorite crystals. R. Herman and S. Silverman. Opt Soc Am J 37:871-2 O '47
Exploration for fluorite, Crittenden and Livingston counties, Kentucky. X. B. Starnes and R. C. Hickman. 16pls U S Bur Mines Rep of Invest 3943:1-44 '46
Exploration for fluorite, Krausse estate property, Crittenden county, Kentucky. X. B. Starnes. 3pls U S Bur Mines Rep of of Invest 3953:1-15 '46
Exploration of Bishop Cap fluorspar project, Dona Ana county, New Mexico. F. J. Sur. 6pls U S Bur Mines Rep of Invest 3946: 1-7 '46
Exploration of Fluorite Ridge fluorspar district, Luna county, N.Mex. P. L. Russell. 5pls U S Bur Mines Rep of Invest 3987:1-7 Ja '47
Exploration of the Crowell fluorspar mine, Nye county, Nevada. R. W. Geehan. U S Bur Mines Rep of Invest 3954:1-9, pl 1-10 '46
Exploration of the Stoddard fluorite mine, Cheshire county, N.H. J. D. Bardill. 4pls U S Bur Mines Rep of Invest 3937:1-6 '46
Fluorite and zinc on the Eva Tanguay property, Crittenden county, Ky, X. B. Starnes. 2 maps U S Bur Mines Rep of Invest 4055:1-16 '47
Fluorite and zinc on the J. J. Shelby and H. McGuire properties, Pope county, Ill. O. M. Bishop. map U S Bur Mines Rep of Invest 4048:1-9 '47
Fluorite in the Mineral Ridge-Clay Lick fault system, Livingston county, Ky. N. M. Muir. 3pls U S Bur Mines Rep of Invest 4049:1-29 '47
Fluorite on the Lee mine property, Hardin county, Illinois. O. M. Bishop. U S Bur Mines Rep of Invest 3996:1-10, pl 1 Ja '47
Gila fluorspar district, Grant county, N. Mex. P. L. Russell. 4pls U S Bur Mines Rep of Invest 4020:1-5 '47
Huckleberry spar mine, Catron county, N. Mex. F. J. Sur. 5pls U S Bur Mines Rep of Invest 4053:1-11 '47
Improvement of the citric-acid solubility of basic open-hearth slags containing fluorspar. T. F. Pearson. Iron & Steel Inst J 152:441-53; Discussion. 453-6 no 2 '45
J. D. Price fluorite deposit, Crittenden county, Ky. X. B. Starnes. pl U S Bur Mines Rep of Invest 4087:1-8 '47
Northgate fluorspar, Jackson county, Colo. J. D. Warne. 11 pls U S Bur Mines Rep of Invest 4106:1-23 '47
Sink-and-float separation improves fluorspar recovery. W. C. Lay. flow sheet il Eng & Min J 148:80-3 O '47
Le spath fluor, ses gisements français, leur exploitation et leurs possibilités. V. Charrin. Chimie & Ind 57:499-501 My '47
Temperature of crystallization of a fluorite crystal from Luna county, New Mexico. W. S. Twenhofel. bibliog diags Econ Geol 42:78-82 Ja '47
United States fluorspar co. property, Sierra county, New Mexico. M. J. Sheridan. 9pls U S Bur Mines Rep of Invest 4017:1-15 '47
Uses of fluorspar; abstract. R. L. Cornell. Chem Eng 54:266 F '47
Valery fluorspar deposit, Pershing county, Nev. V. E. Kral. 3pls U S Bur Mines Rep of Invest 4014:1-8 '47

FLUORYLCHLORAMINE
Preparation and decomposition of 9-fluorylchloramines. L. A. Pinck and G. E. Hilbert. Am Chem Soc J 69:470-1 F '47

FLUOSILICIC acid
Electronically controlled apparatus for distillation of fluorine as hydrofluosilicic acid. H. H. Willard, T. Y. Toribara and L. N. Holland. diags Anal Chem 19:343-4 My '47
Hydrofluoric acid-water and hydrofluoric acid-hydrofluosilicic acid-water. P. A. Munter, O. T. Aepli and R. A. Kossatz. bibliog il diags Ind & Eng Chem 39:427-31 Mr '47

FLUOSULFONIC acid. See Fluorosulfonic acid

FLUSHING, Long Island
$50,000,000 retail center. il maps plans Arch Forum 85:100-5 N '46

FLUX
Effects of flux in welding stainless steel by the atomic hydrogen process. G. Richardson. il Iron Age 159:42-6 My 1 '47
Flux-injection cutting stainless steels. G. E. Bellew. il diag Steel 120:86-8+ F 17; 80-2+ F 24 '47
Function of fluxes in the preparation of infrared sensitive phosphors of the alkaline earth sulfides and selenides. W. Primak, R. K. Osterheld and R. Ward. bibliog Am Chem Soc J 69:1283-7 Je '47

FLUX—*Continued*
Gas fluxing in production of secondary aluminum. G. W. Birdsall. il Steel 121:88-9+ Ag 4; 86-8+ Ag 11 '47
New flux makes easier the soldering of zinc-coated parts. il Materials & Methods 26: 78-9 Jl '47
Reclamation of aircraft aluminum; chlorine gas fluxing; Reynolds metals co. G. W. Birdsall. il diag Metal Prog 50:1235-8 D '46

FLUX, Magnetic. See Magnetic flux

FLY ash. See Flue dust

FLY sprays and repellents
Control of houseflies by DDT sprays. W. C. Baker and others. Pub Health Rep 62:597-612, pl 1-2 Ap 25 '47
DDT residues; their toxicity to houseflies on various surfaces and materials. H. A. U. Monro and others. il Soap & San Chem 23:123+ Ag '47
Development and use of a small spray chamber. W. M. Hoskins and A. H. Caldwell, jr. il diags Soap & San Chem 23:143-5+ Ap '47
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47
Testing insecticidal residues; micro method for biological testing of non-fumigant type insecticidal residues on the housefly. M. H. Doner and C. V. Anderson. Soap & San Chem 23:124-5+ O '47

Rating
Products containing DDT for controlling flies. Consumers Res Bul 20:24-5 S '47

Testing
Test method for commercial aerosol dispensers. L. D. Goodhue and others. il diag Soap & San Chem 23:119-21 S '47

FLYING boats
British test new jet fighter; SARO flying boat. il Aviation W 47:27 Ag 25 '47
Drydock for a giant flying boat. il Eng N 138:730-2 My 1 '47
First jet flying boat is built in Britain. il Aviation N 6:8 D 30 '46
Flying boat problems related to production, controls and pressurisation. C. P. T. Lipscomb. Roy Aeronautical Soc J 51:132-40; Discussion. 140-4, 174, 184, 193-4 F '47
Jet-propelled flying boat fighter; Saunders-Roe AI. il Engineer 184:124 Ag 8 '47; Engineering 164:132, 140 Ag 8 '47; Mech Eng 69:853-4 O '47
Navy developing 400-mph. jet-powered flying boat. R. Hotz. il Aviation N 7:7-8 My 19 '47
Radio control of model flying boats. V. Welge. il diags Inst Radio Eng Proc 35:526-30 My '47
Recent developments in flying boats. H. Knowler. diags Inst Mech Eng J & Proc 156:Proc 89-102, pl 1-8 S '47; Same cond. Engineering 163:432, 441-4, 463-4 My 23-30 '47; Same cond. Engineer 183:91-3, 117-18, 140-1 Ja 24-F 7 '47
Saunders-Roe jet-propelled fighter flying boat. Engineering 162:466 N 15 '46
Static stability analysis for flying boats and seaplanes. E. G. Stout. diags Aviation 45: 70-1 D '46; 46:58-60 Ja; 55-7 F; 59-61 Ap '47

Testing
Stevens towing tank tests model of flying boat hull. Marine Eng 52:62 F '47

FLYING bombs. See Bombs, Flying

FLYING clubs. See Aviation—Clubs

FLYING machines
See also
Airplanes
Flying boats
Gliders
Helicopters

FLYING wing airplanes. See Airplanes, Flying wing

FLYWHEEL explosions
When flywheels turn. il Locomotive 46:107-12 O '46

FLYWHEELS
Determining the weight of a spoked fly wheel; data sheet. diag Foundry 75:140 My '47
Fly-wheel propulsion; Electrogyro system. il diag Engineer 183:524, 547 Je 13-20 '47; Engineering 163:540-1 Je 27 '47
Pressed fit on crankshaft stops overhung-flywheel wobble. E. Sterrett. il diag Power 91:612-13 S '47

FOAM
Effect of electrolytes on the foaming capacity of alpha soybean protein dispersions. J. M. Perri, jr. and F. Hazel. bibliog J Phys & Colloid Chem 51:661-6 My '47
Experiments on the rate of foam application to petrol fires. N. O. Clark and others. Inst Pet J 33:192-6; Discussion. 196-201 Mr '47
Fire control methods learned in war; use of foam. R. B. Tuttle. il Oil & Gas J 45:84-5+ Ap 19 '47
National Foam new spray equipment. il Chem Eng Prog 43:sup20 Jl '47

FOAMGLAS. See Glass, Cellular

FOENUGREEK. See Fenugreek

FOG
Fido's commercial debut; British fog-dispersal project. Bsns W p52 Ag 16 '47
Man made lighting will increase airport safety during fogs. il Iron Age 159:137 My 22 '47

FOG signals
Lighthouse engineering. K. C. Sutton-Jones. il Engineer 184:95-6 Ag 1 '47

FOLDERS. See Advertising, Mail—Folders

FOLDING paper box association of America
Box makers' best; award winners for '47 on basis of art work, printing, ingenuity and originality. il Mod Packaging 20:114-15 Ap '47

FOLDS (geology)
Delineation of parallel folds and measurement of stratigraphic dimensions. J. B. Mertie, jr. bibliog diags Geol Soc Bul 58: 779-802 Ag '47
Geosynclinal nomenclature and the craton. M. Kay. bibliog map Am Assn Pet Geologists Bul 31:1289-93 Jl '47
Oölite deformation in the South Mountain fold, Maryland. E. Cloos. map diags Geol Soc Bul 58:843-917, pl 1-13 bibliog(p915-17) S '47

FOLIC acid
Chemistry of the pteridines. M. Gates. Chem R 41:63-95 bibliog(115 ref, p93-5) Ag '47
Inability of thymine to substitute for folic acid in the rat. H. G. Petering and R. A. Delor. bibliog Science 105:547-8 My 23 '47
Injection vs. administration of folic acid in the chick. D. V. Frost and E. P. Dann. Science 104:492-3 N 22 '46
Mode of action of 7-methyl folic acid. G. J. Martin and others. Science 106:168 Ag 22 '47
Pharmacological and toxicological studies of pteroylglutamic acid. Chem & Eng N 25: 672 Mr 10 '47
Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:314-17 Mr 15 '47
Synthetic L. casei factor (folic acid) in treating certain anemias in man. G. A. Goldsmith. bibliog Science 104:439 N 8 '46

FOLLAND aircraft, limited
Statement by the chairman at annual general meeting. A. P. Good. Economist 152:170 Ja 25 '47

FOLLANSBEE steel corporation
Larger Follansbee Steel dividends probable. Barron's 27:35 Ag 25 '47

FOLLICULINIDS
Folliculinids are complex ciliated protozoans. E. A. Andrews. Science 106:145-6 Ag 15 '47

FOLLMANN, Joseph F. jr
A. & H. Bureau manager is musical director and composer. por East Underw 47:113 D 13 '46

FOLLOW-up systems
How national advertisers use sales letters for follow-up; examples of answers to inquiries in response to advertisements. C. J. Swan. Ptr Ink 220:32-4 Jl 11 '47

FOLLOW-up systems—*Continued*
How small advertiser by-passed competition to become a leader; domination in trade media and planned follow-through won national distribution for Kentile. C. J. Swan. il Ptr Ink 218:35-7 Mr 14 '47
Inquiries; why still give 'em the wartime brush-off? H. A. Stephens. Sales Management 58:70 Ap 1 '47
It's the follow-through that counts. J. C. Toedtman. Adv & Sell 40:54 Ap '47
Neglect of inquiries is one war baby to eliminate; compares current practice with follow-up of national advertising in 1933, 1935 and 1940. C. J. Swan. il Ptr Ink 219:29-31+ Je 6 '47

FOOD
Application of statistical methods to food problems; abstracts and discussion. D. J. Finney and others. Chem & Ind p43 Ja 18 '47
New methods of food preparation. O. Webber. il Ry Age 122:786-8 Ap 19 '47
Progress in foods and nutrition, 1946. C. G. King. Chem & Eng N 25:88-9 Ja 13 '47
Specific heats of foods in cooking. W. O. Ordinanz. Food Ind 18:1869 D '46

See also
Bakers and bakeries
Bread
Butter
Canned food
Cookery
Cornstarch
Cost of living
Dairy products
Diet
Drying (fruits and vegetables)
Eggs
Farm produce
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Flour
Food, Frozen
Food preservation
Food supply
Fruit
Meat
Meat extracts
Milk
Nutrition
Potatoes
Poultry
Restaurants
Sugar
Sweetening agents
Vegetables
Vitamins
Yeasts

Analysis

Polarographic determination of tin in foods and biological materials. E. M. Godar and O. R. Alexander. bibliog diag Ind & Eng Chem Anal ed 18:681-4 N '46

See also
Milk—Analysis

Bacteriology

Microbiological aspects of frozen precooked foods. B. E. Proctor and A. W. Phillips, jr. map Refrig Eng 53:30-3; Discussion. 33+ Ja '47
Thermophiles in a cannery; sources and control means. B. B. Lipske and M. R. Hubbard. il diags Food Ind 19:1062-6+ Ag '47

Chemistry

Chemist's view of nutrition. L. A. Maynard. Science 105:399-403 Ap 18 '47
How the organic chemist can best serve the food field. R. E. Kremers. il Food Ind 19: 601-2+ My '47

Color

See also
Coloring matter in food

Insect infestation

Insects; package pests and storage conditions which favor growth. A. E. Michelbacher. il diags Mod Packaging 20:143-5+ Ja '47
Modern bakery sanitation. P. W. Hodler. il Food Ind 18:1865-7+ D '46

Manufacture

IFT homecoming at Boston; seventh annual conference. Food Ind 19:913-18+ Jl '47

See also
Canning and preserving
Drying (fruits and vegetables)
Food factories
Kraft foods company

Prices

Dun & Bradstreet wholesale food price index, 1944 to date. Published in monthly numbers of Dun's statistical review; summary in Dun's review
Exports not responsible for high food prices; radio address. W. A. Harriman. Comm & Fin Chr 166:1108 S 18 '47
Food industry profit margins. Nat City Bank p 112-13 O '47
Food price trends lower. P. S. Willis. Comm & Fin Chr 165:2607 My 15 '47
Food prices not out of line. C. C. Du Mond. Comm & Fin Chr 166:812+ Ag 28 '47
Food prices will stay high. Bsns W p 18 Ag 16 '47
General Foods' figures point to "corrective"; possibility of wide-open break in prices ruled out. Barron's 27:6 Ap 28 '47
Government's bid-them-up, talk-them-down campaign on commodity prices nears a crisis. Barron's 27:36 S 22 '47
Index numbers of cost of living and food prices in various countries, yearly 1929-1945, monthly Dec. 1945-Dec. 1946. Int Labour R 55:168-75 Ja-F '47 [cont quarterly]
Indexes of retail prices of foods in large cities; new series; combined index and breakdown by major commodity groups, monthly 1923-1945; tabulations. Survey of Cur Bsns 26:16 N '46
Lays high food prices to politics and government manipulation. P. S. Willis. Comm & Fin Chr 165:2061 Ap 17 '47
No sharp drop in food prices. J. A. Guthrie. Comm & Fin Chr 165:2337+ My 1 '47
Retail food prices, United States, Canada, United Kingdom, Germany, Netherlands, Switzerland, 1934-1945 and monthly Dec. 1945-Nov. 1946. Fed Res Bul 33:111 Ja '47 [cont monthly]
Retail prices of food, 1944 and 1945. U S Bur Labor Statistics Bul 899:1-36; pa 10c Supt. of doc. '47
Store samples for retail food prices. J. W. Lethco and J. S. Middaugh. Mo Labor R 64:90-100 Ja '47
World markets for food promise that prices will hold up longer than after World war I. Barron's 27:29 Mr 31 '47

Spoilage

How foods spoil. B. L. Oser. il Food Ind 18:1683-5+ N '46

Storage

Insects; package pests and storage conditions which favor growth. A. E. Michelbacher. il diags Mod Packaging 20:143-5+ Ja '47

See also
Food, Frozen—Storage

Testing

Pollution of water and food detected by new, rapid test; isolation of enterococci. Food Ind 18:1862 D '46
Testing food by taste. Food Ind 19:570+ Ap '47

Transportation

Marine transport of perishables. L. L. Westling. il Refrig Eng 52:525-9 D '46

See also
Refrigeration on cars, trucks, etc.

FOOD, Dried
Dim prospect for dried foods. Bsns W p54 My 24 '47
Fire underwriting; dehydration of fruits and vegetables. W. O. Lincoln. Spectator (Property ed) 13:12+ S 25; 12 O 23 '47

See also
Drying (food)
Eggs, Dried
Fruit, Dried
Meat, Dried
Milk, Dried
Vegetables, Dried

FOOD, Frozen
Automatic cellophane bagging of frozen foods; making filling and heat sealing duplex bags. il Mod Packaging 20:143-5 Mr '47
Bulgarian activity in quick-frozen foods. For Comm W 25:43 D 28 '46
Electronic oven for frozen foods; heating of precooked frozen food. il Electronics 20: 160+ Ag '47
Electronics in the food industry; used in dehydrating foods and for thawing frozen foods. T. L. Swenson. Electronics 20:206+ F '47

FOOD, Frozen—*Continued*
Evaluating food freezing methods. G. W. Meek and V. R. H. Green, jr. il diags Refrig Eng 53:391-5+ My '47; Same cond. with additional table and diags Food Ind 19:1212-17+ S '47
Faster frozen food packaging. F. W. Lanigan. Food Ind 19:52 Ja '47
Flash freezing of foods. L. C. Mazzola. il diags Food Ind 18:1841-5+ D '46
Food frozen by evaporation. Bsns W p64+ D 14 '46
Four-color fibre can. il Mod Packaging 20: 88-9 Ag '47
Freezer lockers. il Fortune 36:92-5+ S '47
Freezer lockers in Georgia. D. N. Harrel. il Refrig Eng 54:235-6 S '47
Freezer wraps; need for better locker papers. D. C. McCoy and others. il Mod Packaging 20:188-92 Mr '47
Frozen cooked foods. F. Fenton. Refrig Eng 53:107-11; Discussion. G. A. Fitzgerald. 111 F '47
Frozen cooked meals. il Elec R (Lond) 140: 893-4 My 30 '47
Frozen cooked meals; Maxson's consumer package. il Mod Packaging 20:130-1 N '46
Frozen food enters selling era. il Bsns W p28+ Ja 4 '47
Frozen food; packaging requirements; report on a new dip-coat package. W. Rabak. il Mod Packaging 20:112-15+ F '47
Frozen food packs shifting. Mod Packaging 20:198 Ap '47
Frozen food report no. 2; transportation, warehousing and marketing. C. R. Havighorst and H. C. Diehl. il fold map plan diags Food Ind 19:3-28, 149-62 Ja-F '47
Frozen food squeeze. Bsns W p68+ F 22 '47
Frozen foods business climbing out of pitfalls. S. G. Ebert. Barron's 27:6 Ap 7 '47
Frozen foods have highest kwh. content. W. C. Heston. il plan Elec West 99:76-80 O '47
Frozen foods research develops new load; abstract. R. Coe. Elec World 127:134+ Ap 12 '47
Future developments in food preservation. C. Birdseye. il Refrig Eng 54:219-21+ S '47
How to control the quality of frozen cooked foods; raw materials, processing, sanitation, distribution and marketing. G. A. Fitzgerald. il Food Ind 19:623-5+ My '47
It's in the news. E. J. Lynahan. Am Gas Assn Proc 1946:206-8
Locker plant operators have many troubles becoming food processing plants. N. Orr. il Food Ind 19:760-2 Je '47
Method for the determination of water vapor permeability at low temperatures; frozen food containers. S. W. Pierce and J. F. Helms. bibliog il diags Paper Tr J 124:64-6 Ap 17 '47; Same. Mod Packaging 20:161-4 Ap '47
Microbiological aspects of frozen precooked foods. B. E. Proctor and A. W. Phillips, jr. map Refrig Eng 53:30-3; Discussion. 33+ Ja '47
Precooked frozen foods on a production line basis; Maxson food systems. L. Spitz and T. Derby. il Food Ind 19:930-2+ Jl '47
Psychrometry of air blast food freezing systems. G. W. Meek. diags Refrig Eng 53: 309-10 Ap '47
Quick-frozen foods for diners. C. Kolb. Ry Age 122:791+ Ap 19 '47
REMA surveys low temperature market. Refrig Eng 54:43+ Jl '47
Refrigeration, present and future. D. H. Anderson. Edison Elec Inst Bul 15:83-5 Mr '47
Safeway still studies frozen food business. Food Ind 19:953-4 Jl '47
Thought for food; frozen food industry plans standards of quality and labeling. Bsns W p21 Mr 29 '47
Uhf heating of frozen foods. P. W. Morse and H. E. Revercomb. il diags Electronics 20:85-9 O '47
Wax coating frozen foods. il Food Ind 19: 453+ Ap '47
Waxed fibre can for frozen foods; introduced by Seabrook farms. il Mod Packaging 20: 96-102 N '46

See also
Fish, Frozen
Freezers
Freezing
Fruit, Frozen
Meat, Frozen
Milk, Frozen
Pastry, Frozen
Vegetables, Frozen

Cabinets
Drawn acrylic lid on deep freeze unit. il Mod Plastics 24:94-6 Mr '47
Refrigeration cabinet produced in air conditioning shop. il diag Sheet Metal Worker 38:45-7 Je '47

Exhibitions
First national frozen foods exposition and convention, San Francisco, March 19-21. Mod Packaging 20:206+ Ap '47

Marketing
Case studies of small business; frozen food distributing. Dom Comm 35:64-5 My '47
Case studies of small business; frozen-food stores. Dom Comm 35:60-1 Je '47
Frozen food business is the department store's opportunity. W. Burston. J Retailing 23:23-8 F '47
Frozen food distributional facilities of the United States; map and tables. Food Ind 19: 27-8 Ja '47
Frozen food marketing areas of the United States; map and tables. Food Ind 19:161-2 F '47
Frozen food packers study factors in tighter markets. Food Ind 19:645 My '47
Frozen food report no. 2. C. R. Havighorst and H. C. Diehl. il maps plan diag Food Ind 19:149-62 F '47
Frozen foods and the department store. G. H. Sullivan. il diags Mod Packaging 20:108-12+ D '46
Pre-cooked frozen meals in vending machines. il Ptr Ink 218:71 Ja 31 '47

Statistics
Frozen food distributional facilities of the United States; map and tables. Food Ind 19: 27-8 Ja '47
Frozen food marketing areas of the United States; map and tables. Food Ind 19:161-2 F '47
Frozen food report no. 2. C. R. Havighorst and H. C. Diehl. il maps plan diag Food Ind 19:149-62 F '47

Storage
Frozen food report no. 2; warehousing. C. R. Havighorst and H. C. Diehl. il plan Food Ind 19:18-26 Ja '47
Future trends in home refrigerators. W. E. Watson. il Refrig Eng 53:296-9 Ap '47
How storage affects frozen cakes and batters. L. S. Graul and B. Lowe. il Food Ind 19:330-2 Mr '47
New reverse-cycle application; bananas ripened by heat from frozen foods. il Elec West 99:75 O '47

See also
Cold storage lockers
Meat, Frozen—Storage

Transportation
Food trucks keep loads at below zero temperatures. il Food Ind 19:1372-3 O '47
Freezer trucks hold foods at zero; Pacific intermountain express. il map diags Food Ind 19:628-9 My '47
Frozen food report no. 2. C. R. Havighorst and H. C. Diehl. il diags Food Ind 19:7-17 Ja '47
Marine transport of perishables. L. L. Westling. il Refrig Eng 52:525-9 D '46
New reefer car solves frozen food shipment problem. M. Burton. il diags Food Ind 19: 906-8+ Jl '47
Two frozen food utility carriers for consumers. il Consumers Res Bul 19:19-21 My '47

FOOD administration
See also
United States—Food and drug administration

FOOD adulteration and inspection
See also
Coloring matter in food
Meat inspection

FOOD and agriculture organization of the United nations
FAO fences in bigger field than it can plow. C. Thompson. Barron's 27:9 Ag 25 '47
FAO information service bulletin. Published bi-monthly, 2000 Massachusetts av, NW Washington 6, D.C.
World food council to succeed IEFC. Oil Paint & Drug Rep 152:5 S 29 '47

Preparatory commission

FAO commission offers new world food plan. Food Ind 19:352-3 Mr '47
Food Commission's proposals. H. M. Bratter. Comm & Fin Chr 165:597+ Ja 30 '47
Food policy. Economist 152:269-71 F 15 '47

FOOD and container institute, Associates of. See Associates of food and container institute

FOOD and drug administration. See United States—Food and drug administration

FOOD coloring. See Coloring matter in food

FOOD containers
Four-color fibre can. il Mod Packaging 20: 88-9 Ag '47
Long-lived chips; Dan Dee kodachromed carton for potato chips; pliofilm overwrap. il Mod Packaging 20:98-100 F '47
Measurement and analysis of gases in vacuum-packed food containers. L. C. Cartwright. bibliog diags Ind & Eng Chem Anal ed 18:779-85 D '46
One big family for Durkee. il Mod Packaging 20:115 F '47
Waxed fibre can for frozen foods; introduced by Seabrook farms. il Mod Packaging 20: 96-102 N '46
See also
Food packages

Testing

Method for the determination of water vapor permeability at low temperatures; frozen food containers. S. W. Pierce and J. F. Helms. bibliog il diags Paper Tr J 124:64-6 Ap 17 '47; Same. Mod Packaging 20:161-4 Ap '47

FOOD crops. See Crops

FOOD cutters
Slicing machine. il diag Machine Design 18: 148-9 N '46

FOOD factories
Better lighting; better work. J. S. Walsh. il Food Ind 18:1548-50+, 1705-7+ O-N '46
Courts say it's the law; recent higher court decisions are of concern to food plant operators. L. T. Parker. Food Ind 19:1221-2+ S '47
Facts to consider in building that new plant. E. W. Bowden. il plan Food Ind 19:302-4 Mr '47
Johnson & Johnson baby food plant features automatic operation and modern functional design. il Chem & Eng N 25:34 Ja 6 '47
Planning plant revitalization. J. I. Thompson. il diags Food Ind 19:29-31+ Ja '47
See also
Bakers and bakeries
Canneries
Packing houses

Accounting

Cost accounting for food processors. W. E. Mayhew. N A C A Bul 28:647-68 F 1 '47

Costs

Material standards for the food industries. R. E. Worden. flow sheet Food Ind 19:163-5+ F '47

Equipment

Continuous frying under full automatic control; Baxter frozen French fried potatoes. flow diag il Food Ind 19:1342-6 O '47
Continuous measuring of soluble solids. N. C. Updegraff. diag Chem Eng 54:121 Jl '47
Flume system aids brining and siruping operations; Gorton-Pew installation to clean, chill and brine fish fillets; can be adopted for washing vegetables and siruping fruits. M. P. Vucassovich. il diags Food Ind 19:34-6 Ja '47
Food machinery; study in growth. il diags Fortune 35:114-19+ Ap '47
Handling in a food factory; J. Lyons & co. ltd. il Mech Handling 34:461-4 S '47
New chocolate kettle overcomes sanitary defects of conventional ones. J. Feiner. il diags Food Ind 19:1044-7 Ag '47
New freezing tunnel speeds frozen food output: Consumers packing co. of Lancaster, Pa. il Sheet Metal Worker 37:58+ N '46
See also
Food machinery

Management

How packaging problems are tackled in food plants. F. W. Toof. il Food Ind 18:1852-3 D '46
New food packaging problems and how to handle them; packaging committee. J. V. Ziemba. il Food Ind 19:309-11 Mr '47
New staff from old employees; Walker's Austex chili company. R. McDaniel. il Am Bsns 17:16-17+ O '47

Power

Feed-water treatment at Deerfield packing corp. T. Martin. flow sheet il Food Ind 18: 1692-4 N '46

Quality control

Controlling the quality of kraut during manufacture. C. S. Pederson. il Food Ind 19:778-80+ Je '47
How foods spoil. B. L. Oser. il Food Ind 18:1683-5+ N '46
How to control the quality of frozen cooked foods; raw materials, processing, sanitation, distribution and marketing. G. A. Fitzgerald. il Food Ind 19:623-5+ My '47
Precooked frozen foods on a production line basis; Maxson food systems. L. Spitz and T. Derby. il Food Ind 19:930-2+ Jl '47
What's ahead in milk processing. M. E. Parker and E. S. Stateler. il Food Ind 19:333-5+ Mr '47

Safety measures

Bottles and broken glass; hazards and precautions. Nat Safety N 55:40+ My '47

Sanitation

How to work out a sanitation program in a food plant; National biscuit co. J. L. Barron. il Food Ind 19:170-1 F '47
Insecticides in food plants; abstract. M. E. Parker. Soap & San Chem 23:167 Ag '47
Sanitation in the food industry. P. A. Brehm. Safety Eng 94:54+ S; 90-1+ O '47
Using air filters in food processing plants. A. Nutting. il diags Food Ind 19:37-9 Ja '47

FOOD handling
Food movement by tractors at Swiss hospital. F. H. Slade. il plan Mech Handling 34:207-13 Ap '47
Food sanitation in Canada; abstract. A. G. Macnab. Soap & San Chem 22:133+ D '46
Gastroenteritis aboard ship; common types encountered, and the prevention and control of outbreaks. W. A. Meyers. Pub Health Rep 61:1853-8 D 20 '46
Handling raw materials for food processing. H. Campbell. bibliog il Refrig Eng 52:428-32+ N '46
Restaurant sanitation program of the United States Public health service. A. W. Fuchs. bibliog Pub Health Rep 62:261-72 F 21 '47
Sanitation in food establishments. A. G. Macnab. Soap & San Chem 23:121-3+ Ja '47

FOOD industries award
Most progressive food company to receive technology award. Food Ind 18:1848 D '46

FOOD industry and trade
Camera highlights from a General Mills stockholders' meeting. Sales Management 57:46+ D 1 '46
Decline in food spending? S. Parker. Food Ind 19:1082+ Ag '47
Food chain extends meat-packing trend. Bsns W p56 D 14 '46

FOOD industry and trade—*Continued*
Food industry looks beyond normal demand; expansion plans of leading firms. J. V. Sherman. Barron's 27:32 Jl 21 '47
Great A & P. il maps Fortune 36:102-7+ N '47
How General Mills develops its new food specialties. A. D. Hyde. il Food Ind 19:1374-6+, 1509-12+ O-N '47
How to forecast mail-order sales; McDonnell's epicure club of America. W. A. McGarry. Ptr Ink 219:100+ Ap 18 '47
Market research reveals pitfalls when sales decline. A. C. Nielsen. il Food Ind 19:40-3+ Ja '47
Material standards for the food industries. R. E. Worden. flow sheet Food Ind 19:163-5+ F '47
More competition for consumers' dollar. C. Francis. Comm & Fin Chr 164:2471+ N 14 '46
Own your own trademark; the Lanham act provisions that concern food manufacturers. P. D. Boone. Food Ind 19:933-4+ Jl '47
Product-promotion luncheons go national; Luncheon is served, inc. M. E. Reiners. Ptr Ink 219:108 Ap 11 '47
Shortages are major influence in present grocery purchasing habits. A. R. Hahn. Sales Management 58:42-6 Ja 15 '47
War food aversions were not confined to GI's. W. A. Foster. Food Ind 19:1347+ O '47

See also
Bakers and bakeries
Bread
Candy trade
Canned food
Chain stores
Coffee trade
Dairy products
Food, Dried
Food, Frozen
Food containers
Food packages
Grain trade
Grocery trade
Market stores
Meat industry and trade
Milk trade
Packing houses
Produce terminals
Restaurants
Sugar industry and trade

also Beech-Nut packing company; College inn food products company; Stokely-Van Camp, inc.

Advertising

Egg carton promotion, ad medium to sell eggs and many other products. il Mod Packaging 20:108-9+ Ag '47
Food ads win top places in latest readership study. Ptr Ink 218:84 Mr 28 '47
General Foods' television committee; what it is; how it operates. H. M. Chapin. Sales Management 58:65 My 1 '47
How a regional advertiser went national successfully; Hunt Foods 90-item line spearheaded by tomato sauce campaign. L. F. Thomann. il Ptr Ink 220:29-30+ S 5 '47
How a successful mail-order business was started; Cheney's seasoning, salad mix and six food flavorings. L. F. Thomann. Ptr Ink 219:49 Ap 4 '47
How consumer educators built General Mills' new program. H. E. Green. Ptr Ink 220:28-9 Jl 4 '47
How General Foods uses premiums to push sales; national advertising combined with premiums at point of sale. P. Lillard. il Adv & Sell 40:48+ Jl '47
How Standard Brands advertises in Latin America. B. G. Taines and J. Beck. Ptr Ink 219:38-9 Ap 4 '47
How two national advertisers doubled promotion by tie-in; Cling Peach Board and Kraft Foods join forces. C. J. Swan. il Ptr Ink 220:38-9 Ag 8 '47
100 sales letters a week keep the customers coming; California vegetable concentrates, inc. J. B. Pardieck. il Sales Management 58:70-1 Mr 1 '47
Will food markets use more display material? national study shows which types of manufacturer-supplied store displays dealers want. E. Van Brunt. il Ptr Ink 220:34-6+ S 12 '47

See also
Canned food—Advertising
Delicatessen stores—Advertising

Bibliography

Digest of manufacturers' new publications. Published in monthly numbers of Food industries

Finance

Food industry profit margins. Nat City Bank p 112-13 O '47

Securities

Evaluating investment status of food and dairy companies; with statistics on leading processors. S. Devlin. Mag of Wall St 80: 495-7+ Ag 2 '47
1947 prospects for food companies; with statistics on leading processors. F. R. Walters. Mag of Wall St 79:496-9+ F 1 '47

Statistics

Chicago Times pantry poll no. 4; selected products of which stocking increased or decreased from August 1945 to August 1946. Ptr Ink 217:94+ D 6 '46
Food buying; city vs farm homes. charts Sales Management 58:67 Ap 15 '47
Food imports rise along with exports in first half of 1947. Comm & Fin Chr 166:1467 O 9 '47; Same abr. Food Ind 19:1390+ O '47
Food sales in 1946, Sales Management estimates. Sales Management 58:76, 100 My 10 '47
Food sales increase while profits drop. Food Ind 19:1242 S '47

See also
Food, Frozen—Statistics

Canada

Food planning. Bsns W p100-1 Ja 11 '47

Chile

New breakfast-food industry established in Chile. For Comm W 28:33 Ag 9 '47

Georgia

Gordon Foods; story of a southern business. J. Mebane. il Manuf Rec 116:30-1+ My '47

Great Britain

See also
Bakers and bakeries—Great Britain

Southern states

Food retains spotlight in southern manufacturing. C. R. Walker. Manuf Rec 116:29+ Mr '47

FOOD laboratories
How a food packaging laboratory functions. J. V. Ziemba. il Food Ind 19:1206-9 S '47

FOOD laws and legislation
Formulas and the law; two higher court decisions. W. T. Woodson. Food Ind 18:1701-4 N '46
Laws and verdicts. L. T. Parker. Food Ind 19:191-2+ F '47
Who is liable for trichinosis? study of court decisions. J. A. Tobey. bibliog il Food Ind 19:474-5+ Ap '47

See also
Oleomargarine
Shellfish

Belgium

Belgium; regulations for food-coloring matter. For Comm W 29:8-9 O 4 '47

FOOD libraries
Kraft foods company library. A. Beaty. Special Lib 38:114-16 Ap '47

FOOD machinery
Churngold margarine made by continuous process; adaptation of equipment, originally designed for continuous ice cream manufacture. J. E. Slaughter, jr. flow diag il Food Ind 19:1050-2 Ag '47
Hamburger patty molding machine. il diag Machine Design 19:137 Ja '47
It peels, blanches, cooks; fruits and vegetables processed in small batches. E. S. Stateler. il diag Food Ind 19:1053-5 Ag '47

See also
Food cutters

FOOD machinery corporation
Food machinery; study in growth. il diags Fortune 35:114-19+ Ap '47
Securities offered. Comm & Fin Chr 165:1865 Ap 7 '47

FOOD mixers, Electric. See Electric mixers

FOOD packages
Automatic store; will it change your package; Grand union co. Food-O-Mat. il Mod Packaging 20:134-6 D '46
Colorful birds; Birds Eye's redesigned packages use four-color reproductions. il Mod Packaging 21:102-3 O '47
Colorful hams; Millar launches red cellophane wrap. il Mod Packaging 20:112-14 Jl '47
Developments in food packaging. J. V. Ziemba. il Food Ind 19:773-5+ Je '47
Fish bricks. il Mod Packaging 20:100-1+ Ag '47
Flexible vacuum package. il Mod Packaging 20:100-1+ Je '47
Foreign markets; golden opportunity to sell more packaged goods. il Mod Packaging 20:87-92+ F '47
Frozen cooked meals; Maxson's consumer package. il Mod Packaging 20:130-1 N '46
Frozen food; packaging requirements; report on a new dip-coat package. W. Rabak. il Mod Packaging 20:112-15+ F '47
Frozen foods and the department store. G. H. Sullivan. il diags Mod Packaging 20:108-12+ D '46
General Foods' inside story. L. W. Elder, jr. il Mod Packaging 20:117-22 Mr '47
Hallmark for Ritter; stylized R as a trademark. il Mod Packaging 20:128-9 Je '47
How packaging problems are tackled in food plants. F. W. Toof. il Food Ind 18:1854-5 D '46
Ice cream trends. Mod Packaging 20:102-6 Jl '47
Improved machines save labor on the packaging line. F. H. Mayoh. il diags Food Ind 19:1354-7 O '47
Impulse buying re-surveyed. H. D. Chickering. il Mod Packaging 20:126-9+ Ja '47
Insects; package pests and storage conditions which favor growth. A. E. Michelbacher. il diags Mod Packaging 20:143-5+ Ja '47
Juvenile appeal; research backing new Homix labels. il Mod Packaging 20:148-9 Mr '47
New dispensing unit for packaged foods; Grand Union's Food-O-Mat. il Food Ind 18:1861-2 D '46
New food packaging problems and how to handle them; packaging committee. J. V. Ziemba. il Food Ind 19:309-11 Mr '47
New ways of using food wraps. J. V. Ziemba. il Food Ind 19:456-8 Ap '47
Noodles in windows. il Mod Packaging 20:97 Ag '47
Package space, your best ad medium and its for free. J. Nash. il Mod Packaging 20:112-15 N '46
Packaging characteristics of products. C. A. Southwick, jr. Mod Packaging 20:147-8+ Jl '47
Packaging the gobbler. C. Pollock. il Food Ind 19:179-81 F '47
Polyethylene packages in use. il Mod Packaging 20:118-22 Ja '47
Private-brand departure; Kroger co. adopts one label. il Bsns W p48+ N 9 '46
Progress in food packaging; Packaging institute meeting. Food Ind 19:50-2 Ja '47
Resin-treated papers provide wet strength to wrappers. J. V. Ziemba. il Food Ind 19:612-13 My '47
Ritter re-designs packages to achieve family identity. P. J. Ritter. il Sales Management 59:42-3 S 1 '47
Saran film for foods. il Mod Packaging 20:218 My '47
Study of frozen food wrapping materials. D. C. McCoy and others. il Refrig Eng 52:531-4+ D '46
Testing packaging materials for quick frozen oysters. S. R. Pottinger and others. il Food Ind 19:324-6+ Mr '47
Transition; effect of self service on package goods. il Mod Packaging 20:98-102 Ja '47
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47
Western style; Reid's ranch sells Arizona delicacies direct to consumers. il Mod Packaging 20:124-6 Je '47
Why a packaging laboratory? J. V. Ziemba. il Food Ind 19:924-7+ Jl '47

See also
Cereals, Prepared
Fruit—Prepackaging
Meat—Prepackaging
Vegetables—Prepackaging

Protection
What is the protective value of the double overwrap? W. Rabak and J. B. Stark. bibliog il Food Ind 18:1690-1+ N '46

Testing
Army winter-tests rations. il Food Ind 19:478+ Ap '47
How a food packaging laboratory functions. J. V. Ziemba. il Food Ind 19:1206-9 S '47
Measurement and analysis of gases in vacuum-packed food containers. L. C. Cartwright. bibliog diags Ind & Eng Chem Anal ed 18:779-85 D '46

FOOD poisoning
Facts about food poisoning. Nat Safety N 55:42 F '47
Staphylococcus food poisoning still a serious problem. G. M. Dack. Food Ind 18:1868-9+ D '46

FOOD preservation
Controlling rancidity in frozen sausage meat; preheating, use of Avenex, lecithin, adequate packaging. I. Atkinson and others. il Food Ind 19:1366-9 O '47
Electronized Chemicals. il diag Fortune 35:104-9+ Mr '47
Extending keeping quality of frozen pork sausage by smoking before freezing and by using sage, black pepper or low fat-content trimmings. I. Atkinson and others. il Food Ind 19:1198-201 S '47
Food machinery; study in growth. il diags Fortune 35:114-19+ Ap '47
Future developments in food preservation. C. Birdseye. il Refrig Eng 54:219-21+ S '47
Handling raw materials for food processing. H. Campbell. bibliog il Refrig Eng 52:428-32+ N '46
Keeping properties of confectionery as influenced by its water vapour pressure. D. W. Grover. bibliog Soc Chem Ind J 66:201-5 Jl '47
Processing food for sterilization. C. O. Ball. il diag Food Ind 19:44-6+, 174-8+, 338-40+ Ja-Mr '47
Ultrashort application time of penetrating electrons; tool for sterilization and preservation of food in the raw state. A. Brasch and W. Huber. il Science 105:112-17 Ja 31 '47

See also
Canned food
Canning and preserving
Cold storage
Drying (fruits and vegetables)
Food, Frozen
Fruit—Preservation
Vegetables—Preservation

FOOD research
Electronic sterilization of canned foods? problems of localized overheating, heat losses, etc. J. M. Jackson. bibliog il Food Ind 19:634-6+ My '47
Farm studies set; research in farm marketing and distribution. Bsns W p68+ O 11 '47
How General Mills develops its new food specialties; General Mills parallels market research and product development. A. D. Hyde. il Food Ind 19:1374-6+, 1509-12+ O-N '47
How the organic chemist can best serve the food field. R. E. Kremers. il Food Ind 19:601-2+ My '47
Industry-wide research organization of Associates of food and container institute announced. Chem & Eng N 25:2504 S 1 '47
New products through research; soluble coffee and special food for aged developed by Borden's New products research laboratory. F. L. Seymour-Jones. il Food Ind 19:299-301+ Mr '47
Registration of food research made goal of National food board. Food Ind 19:1241 S '47
Research projects gain despite economy drive. Food Ind 19:950 Jl '47

FOOD research—*Continued*
Undercooling retards freezing of canned foods; data sheets. Food Ind 18:513-17, 866-9, 1034-7, 1370-1, 1716-17; 19:188-90 Ap, Je-Jl, S, N '46, F '47

FOOD stamp plan
Marketing official sees need for food stamp plan to meet impending crisis in agriculture; interview with C. A. Halnan. E. Germaine. Comm & Fin Chr 164:2619+ N 21 '46

FOOD stores
Automatic store; will it change your package; Grand union co. Food-O-Mat. il Mod Packaging 20:134-6 D '46
Case studies in small business; health food store. Dom Comm 35:67-8 My '47
Merchandising helps stores attract better customers; Gerber provides service to help food stores serve young mothers. E. J. Dever, jr. il Ptr Ink 218:44-5 F 28 '47
Millions are lost from spoiled fruits and vegetables in self-service stores when refrigeration is not used. D. R. Stokes. Refrig Eng 54:355-8 O '47
New dispensing unit for packaged foods; Grand Union's Food-O-Mat. il Food Ind 18: 1861-2 D '46
Service for busy retailers; company in Los Angeles takes and prices food-store inventories. Bsns W p30+ My 31 '47

See also
Grocery stores
Market stores

Equipment

See also
Show cases, Refrigerated

FOOD supply
AIFA urges increased use of chemicals in food crisis. Oil Paint & Drug Rep 152:7 O 20 '47
Eat less, waste less. Bsns W p21-2 O 4 '47
Food situation. Nat City Bank p 109-12 O '47
Food supplies; with data on food exports and imports. Survey of Cur Bsns 27:7-9 O '47
Lean years. Economist 152:1013-14 Je 28 '47
National or international relief? Economist 151:779-80 N 16 '46
New food crisis will be worse than last year's; fighting in Far East cuts rice supply. Barron's 27:36 My 19 '47
President outlines food program in radio talk. H. S. Truman. Comm & Fin Chr 166: 1417 O 9 '47
Problems of eating; with data on food conditions in the United States and Britain. Economist 153:601-2 O 11 '47
World food bank; a dangerous scheme. J. Hirsch. Barron's 26:3+ D 9 '46
World soil and fertilizer resources in relation to food needs. R. M. Salter. map Science 105:533-8 My 23 '47; Discussion. W. Vogt. 106:33-4 Jl 25 '47
You can't eat steel. Fortune 36:3-4 O '47

See also Food and agriculture organization of the United nations

Asia

Food and population in Asia. Economist 153: 548-9 O 4 '47

Europe

Food and coal hold key to Old World's dilemma. E. Blair. Barron's 27:14 S 15 '47

France

France's struggle for bread. Economist 153: 644-5 O 18 '47

Germany

Some aspects of nutrition in post war Germany and Austria; abstract and discussion. M. Pyke. Chem & Ind p493-4 Ag 9 '47
Voters approve shipping more food to Germany; Gallup poll. Iron Age 159:109+ Ap 3 '47

Great Britain

Britain's larder. Economist 152:770-1 My 17 '47
Dollar food cuts. Economist 153:252 Ag 9 '47
Facts about food. Economist 152:111-13 Ja 18 '47
Food from the Empire. Economist 153:611-13 O 11 '47
Food horoscope, official. Economist 152:411 Mr 22 '47
Food policy and subsidies. Economist 152:524-5 Ap 12 '47

India

Does India face famine? Economist 153:568 O 4 '47

Philippine Islands

Wheat-flour consumption in the Philippines is mounting. H. Maness. il For Comm W 27:6-7+ Ap 5 '47

Russia

Famine in Russia. Economist 152:244 F 8 '47; Same. Iron Age 159:111+ F 20 '47
More Soviet food. Bsns W p89 Ag 2 '47
Russia plans to eat; new developments in food processing; increase in grain, fruit and vegetable production. il Food Ind 19: 1337-9 O '47

South Africa

South African food supplies. Economist 153: 659 O 18 '47

United States

Abundant farm production with surplus food allotments; statement before House Committee on agriculture. C. P. Anderson. Comm & Fin Chr 165:2337+ My 1 '47
America's changing food pattern. F. W. Nordsiek. il Tech R 49:401-4+ My '47
Food prospects for 1947. Survey of Cur Bsns 27:13-14 Jl '47
Foods, fats, and oils; prospects for 1947. E. P. Hawk. Dom Comm 35:30-7 Ja '47
Government still reluctant to share facts of life and food exports with people. Barron's 27:36 S 29 '47
Nation's Christmas dinner basket will be well-filled. A. J. Mullen. il Dom Comm 34: 11-15 D '46
Something we can get our teeth into! H. E. Babcock. Am Pet Inst Proc 26(1):48-50 '46

FOOD technologists, Institute of. See Institute of food technologists

FOOT
Feet can't take it; faulty footwear, fungus infections and injuries cause lost time and reduced efficiency. J. M. Valenza. il Nat Safety N 56:30-1+ S '47
Treatment of fractures of metatarsals and phalanges. L. R. Byrd, jr. il Ind Med 16: 339-44 Jl '47

See also
Chiropody

Protection

Foot protection. il Nat Safety N 55:44+ Mr '47

See also
Shoes, Safety

FOOTBALLS
New Voit rubber production set-up utilizes radiant drying apparatus; manufacture of footballs, basket balls, and other balls which require rubber bladders. R. D. Holman. il Rubber Age 60:696-8 Mr '47

FOOTINGS
Method determines degree of fixity in footings and resulting frame stresses. A. Floris. diags Civil Eng 17:141-2+ Mr '47

FOOTINGS, Concrete
Undercutting tool cones concrete tower footings. il Elec World 126:128+ N 9 '46
Wall footing action poses enigmas. H. S. Woodward. diags Eng N 138:955-6 Je 12 '47; Discussion. V. R. Bergman. 139:891 D 25 '47

FORAGE plants
Effect of combined straw on new seedings. C. J. Willard and R. D. Lewis. il Paper Tr J 124:59-62 Ap 17 '47

FORAMINIFERA, Fossil
Bulimina and related foraminiferal genera. J. A. Cushman and F. L. Parker. bibliog U S Geol S Professional Pa 210-D:55-137, pl 15-30; pa 55c Supt. of doc. '47

Bibliography

Status of micropaleontology in eastern Gulf region. H. V. Howe. bibliog Am Assn Pet Geologists Bul 31:713-30 Ap '47

FORBES bands. See Glaciers

FORCE, Centrifugal. See Centrifugal force

FORCE and energy
Newton's and Einstein's relations between mass and energy. J. J. Smith. bibliog Elec Eng 66:561-4 Je '47
Recent advance in the physical sciences. H. R. Crane. Ann Am Acad 249:1-8 Ja '47
See also
Heat, Mechanical equivalent of

FORCE constants. See Chemical bonds

FORD, Henry, 1863-1947
Henry Ford's death will leave his empire intact. por Bsns W p17 Ap 12 '47
The man; his achievements; chronology. il pors Automotive & Aviation Ind 96:44-6+ My 1 '47
Presentation of citation and first gold-medal award of the American petroleum institute to Henry Ford. Am Pet Inst Proc 26(1):69-70 '46
Sketch. por Comm & Fin Chr 165:1933+ Ap 10 '47; Steel 120:73-4 Ap 14 '47
Sketch. Economist 152:537-8 Ap 12 '47
Sketch. K. N. Harris. por Engineer 183:313-14 Ap 11 '47
Sketch. W. G. Patton. por Iron Age 159:74+ Ap 17 '47

FORD, Henry, 1917-
Edison award for industrial statesmanship. Comm & Fin Chr 165:2782 My 22 '47
Rebirth of Ford. por Fortune 35:82-9+ My '47

FORD, Tirey L. 1898-
Sketch. Air Transport 5:29 Mr '47

FORD motor company
Employee opinion survey aids Ford in policy making. Factory Management 105:132-3 Je '47
Ford becomes a matriarchy. Bsns W p92+ Ap 26 '47
Ford employees at Buffalo vote down proposed plan for pensions. Steel 121:63 S 15 '47
Ford goes West. Bsns W p19 F 15 '47
Ford lure. Bsns W p24+ D 21 '46
Ford pension benefits. J. S. Bugas. Steel 121:73-4 Ag 18 '47
Ford purchasing department reorganization. A. H. Allen. Steel 121:59-60 S 22 '47
Ford reorganizes salvage department. L. Westrate. il Automotive & Aviation Ind 96:30-1+ Ja 1 '47
Ford settlement; yardstick of $90 a share set by probate court. Bsns W p32+ S 27 '47
Ford shakeup forecasts pitched battle for auto sales supremacy. Sales Management 58:75-6+ Mr 1 '47
Ford slashes prices $15 to $50. W. G. Patton. Iron Age 159:76+ Ja 23 '47
Ford terms a national pattern? expedient of delay gets around union liability section of Taft-Hartley act. Bsns W p70+ Ag 9 '47
Ford to build research-engineering center. il Product Eng 18:155 F '47
Ford vs. F.A.A. Bsns W p96-8 Ap 19 '47
Hard to buy; Ford receives 450 bids in response to request for western suppliers. Bsns W p47+ Je 14 '47
Henry Ford's death will leave his empire intact. Bsns W p17 Ap 12 '47
Is Ford shooting for the bus jackpot? Mass Transportation 43:235+ Je '47
More Ford iron; new blast furnace at the Rouge. Bsns W p22 O 11 '47
New approach to foremen; program to make supervisors more effective part of management. Bsns W p80+ Je 21 '47
Pensions for hourly workers; Ford-U.A.W. contract. Bsns W p72+ Jl 5 '47
Rebirth of Ford. il Fortune 35:81-9+ My '47
Rebuff to pensions; why? Ford workers choose straight raise. il Bsns W p98+ S 27 '47
Revamped purchasing saves steel for Ford. Bsns W p38+ S 20 '47
Seven musts for public relations in advertising and selling. H. E. Green. il Ptr Ink 220:27-9 Jl 25 '47
Strike at Ford? Foreman's association plans walkout. Bsns W p82 My 17 '47
Test for foremen; strike at Ford may put the future of supervisors' unions in the balance. il Bsns W p75-6 My 31 '47
Tractor split; Ford Motor to stop making units for Ferguson. Bsns W p17 N 23 '46

FORD motor company, England
Statement by the chairman at 18th ordinary general meeting. P. L. D. Perry. Economist 152:740 My 10 '47

FORD motor company of Canada
Rand labor-relations formula at work. Factory Management 105:94-6 Mr '47

FORECASTS (economics)
American economy under full employment; a pattern for 1950; based on Bureau of labor statistics study. W. D. Evans and others. Dun's R 55:17-19+ Jl; 17-20+ S '47
Employment during the transition period, in prospect and retrospect. E. Schiff. R Econ Stat 28:231-6 N '46
Full employment patterns, 1950. J. Cornfield and others. bibliog Mo Labor R 64:163-90, 420-32 F-Mr '47
Preview of 1950; full employment survey, Bureau of labor statistics. Bsns W p18 F 15 '47

FOREIGN advertising. See Advertising, Foreign

FOREIGN banking. See Banks and banking—Foreign banking service

FOREIGN credit. See Credit, Foreign

FOREIGN exchange
Attention, Mr Dalton! disposition of India's blocked sterling balances. H. M. Bratter. Comm & Fin Chr 165:2602+ My 15 '47
Bank of Montreal holds Canada benefits from sterling convertibility. Comm & Fin Chr 166:439 Jl 31 '47
Befuddled foreign exchange situation. S. D. Post. Comm & Fin Chr 166:1308+ O 2 '47
Black market trend in gold and dollars. Comm & Fin Chr 165:1245+ Mr 6 '47
Britain's convertibility worries. P. Einzig. Comm & Fin Chr 165:2477+, 3028 My 8, Je 5 '47
Canada's exchange position. Economist 152:686+, 862+ My 3, 31 '47
Canadian dollar. Nat City Bank p55-6 My '47
Canadian dollar; Bank of Nova Scotia analyzes present position. Comm & Fin Chr 165:3240+ Je 19 '47
Convertibility ahead. Economist 152:724-5 My 10 '47
Convertibility: who is to blame? P. Einzig. Comm & Fin Chr 166:721 Ag 21 '47
Dollar's value abroad. F. Pick. Barron's 25:7 D 10; 5 D 24 '45; 26:25 Ja 7; 19 Ja 28; 14 F 4; 5 F 25; 8 Mr 4; 10 Mr 18; 5 Ap 1; 6 Jl 29; 9 O 21; 9 D 2 '46
Exchange crisis; China will have to cut imports. Bsns W p106+ Mr 22 '47
Exchange depreciation and international monetary stability. J. J. Polak. bibliog R Econ Stat 29:173-82 Ag '47
Foreign exchange control board of Canada explains unofficial market in Canadian dollars. Comm & Fin Chr 165:2212+ Ap 24 '47
Foreign exchange rates, 1937-1945 and monthly Dec. 1945-Nov. 1946. Fed Res Bul 33:109 Ja '47 [cont monthly]
Foreign exchange rates. Published in weekly Monday numbers of Commercial and financial chronicle
Free exchange and American economy. R. Leon. Comm & Fin Chr 165:861+ F 13 '47
Free market evaluates foreign currencies; you can buy dinars at a bargain from New York dealers. F. Pick. Barron's 27:33-4 Ap 21 '47
Free sterling selling at sharp discount. F. Pick. Barron's 27:12 F 17 '47
Free versus fixed exchanges; with special reference to Bretton Woods monetary fund. R. Leon. Comm & Fin Chr 164:3009+ D 12 '46
Fund's opening day; with list of initial par values of members' currencies. Economist 151:1054, 1061 D 28 '46
Future of the sterling area. V. L. Horoth. il Mag of Wall St 79:730-2+ Mr 29 '47
India abandons sterling-exchange standard. For Comm W 27:16 My 10 '47
International fund and currency parities. C. Gutt. Comm & Fin Chr 165:11+ Ja 2 '47

FOREIGN exchange—*Continued*
International monetary fund par values; schedule showing par value of the currency of each member country in terms of gold or in U.S. dollars. Comm & Fin Chr 164:3394 D 26 '46; Same. Fed Res Bul 33:12 Ja '47
International monetary fund statement concerning initial par values. Fed Res Bul 33:11 Ja '47
International monetary group acts to outlaw economic warfare; countries record currency par values. Oil Paint & Drug Rep 150:3+ D 23 '46
Latin American exchange rates. Published in Foreign commerce weekly
Long-term outlook for commodities grows gloomier as sterling bloc returns. Barron's 27:36 S 1 '47
Making good on GI exchange loss; withdrawal of old army scrip in Europe and Japan. Comm & Fin Chr 165:1383 Mr 13 '47
Mexico acts to save exchange; delays curbs on advertising. Ind Marketing 32:130 S '47
Monetary fund announces initial par values of member currencies; statement to the press. C. Gutt. Comm & Fin Chr 164:3208+ D 19 '46
No early change in dollar-pound parity. J. T. Madden. Comm & Fin Chr 164:2523+ N 14 '46
Procedure for bringing paper currency into Poland. For Comm W 27:19 My 10 '47
Selected European and other exchange rates. For Comm W 26:31 Mr 29 '47 [cont weekly]
Step toward one world; the IMF sets exchange rates. H. D. White. Dun's R 55: 14-16, 46-7+ S '47
Sterling convertibility problems; interpretation of net balance provision of loan agreement. Comm & Fin Chr 165:2644 My 15 '47
Sterling in multilateral trade. J. B. Knapp and F. M. Tamagna. Fed Res Bul 33:1083-90 S '47
Undervalued sterling; criticizes Fund's currency parities. P. Einzig. Comm & Fin Chr 165:6+ Ja 2 '47
Wants Treasury to use flexible exchange rates. R. W. Kean. Comm & Fin Chr 165: 3271 Je 19 '47

See also
Balance of payments
World commerce
corporation

Regulation

Canada; exchange controls tightened. For Comm W 27:15 Je 14 '47
Canada to stop U.S. currency hoarding. Comm & Fin Chr 165:3032 Je 5 '47
China; revised foreign-exchange controls announced. For Comm W 28:11-12 S 20 '47
China; revised regulations issued concerning applications for foreign exchange for non-import requirements. For Comm W 28:11 S 13 '47
Currency for emigrants. Economist 152:732+ My 10 '47
Differential peso; Argentine exchange rates. Economist 151:882 N 30 '46
Exchange control bill. Economist 151:797-8 N 16 '46
Exchange control in Britain. P. Einzig. Comm & Fin Chr 164:2749+ N 28 '46
Exchange control in India. Economist 152: 297 F 15 '47
Foreign funds control; Treasury department releases. Published in monthly numbers of Federal reserve bulletin
Latin American exchange- and import-control developments; changes in Argentina, Brazil, Colombia, and Mexico. C. F. Carson and J. J. Magurn. For Comm W 28: 3-5 Jl 12 '47
Monetary Fund reports on exchange curbs. Comm & Fin Chr 166:1221 S 25 '47
Official alterations in exchange rates 1939-47; tabulation by country. Fed Res Bul 33:1238 O '47
Relaxation of Newfoundland's foreign-exchange controls. For Comm W 26:22 Mr 1 '47
Rumania; exchange rate of leu set. For Comm W 29:19 O 11 '47
Unfreezing Chinese exchange. Economist 153: 339 Ag 23 '47

FOREIGN investments. See Investments, Foreign
FOREIGN loans. See Loans, Foreign
FOREIGN service. See United States—Foreign service
FOREIGN service educational foundation
Foreign affairs get new emphasis in business. L. J. Philp. East Underw 47:8+ D 13 '46
FOREIGN students in the United States
International educational exchange; laboratory experiment in human relations. L. Duggan. Chem & Eng N 25:1178-81 Ap 28 '47
FOREIGN trade. See Commerce; Commercial policy; Export trade; Imports; United States—Commercial policy
FOREIGN trade convention, National. See National foreign trade convention
FOREIGN trade council, National. See National foreign trade council
FOREIGN trade zones. See Free ports and zones
FOREMAN'S association of America
Bow to NLRB; Supreme court decision on foremen's union. Bsns W p106+ Ap 12 '47
Firings stick; strike at Ford. Bsns W p82+ Jl 26 '47
Ford vs. F.A.A. Bsns W p96-8 Ap 19 '47
F.A.A. gets set. Bsns W p97-8 Mr 15 '47
Foremen's unions collapse; end of 47-day strike at Ford. Bsns W p 17 Jl 12 '47
Strike at Ford? Foreman's association plans walkout. Bsns W p82 My 17 '47
FOREMEN
Are foremen really management? Factory Management 105:66-72 My '47
Chairman gives foremen basic economic facts. A. C. Higgins. Factory Management 105:129-30 S '47
Comments direct from the foremen. Paper Ind 28:1457 Ja '47
Current foremen's compensation practices. Management R 36:466-8 S '47
Defining foremen; Packard asks high court to clarify supervisory employee issue. Bsns W p102 N 16 '46
Desk posters set supervisors to thinking; Stewart-Warner corporation, Chicago. G. F. Thomas. il Factory Management 105:75 Ag '47
Foreman can't do everything. R. A. Seiple. Am Mach 91:133 N 6 '47
Foreman, the key man in safety training; Procter & Gamble company. il Factory Management 105:100-3 Ag '47
Foreman's job; maintaining safety program. C. F. Burris. Safety Eng 94:28+ S '47
Foreman's place in management. G. B. Arthur, jr. Personnel J 26:42-4 Je '47
Foremen and the safety program. E. J. Calnan. Pulp & Pa of Can 48:141 O '47
Foremen or mice. A. F. Scoblic. Am Mach 91:108 Mr 27 '47
Foremen train workers with ready-made lectures; Seagram's plan. J. Manczyk. Factory Management 105:128-9 Jl '47
Getting ideas from foremen for labor contract changes; SKF Industries. H. F. Gracey. Factory Management 105:94-5 O '47
Helping the foreman carry the ball. J. E. Trainer. Safety Eng 93:20+ Ap '47
How practical personnel men think the labor law will work; foreman's new status. R. K. Heineman. Factory Management 105:93 S '47
How to communicate with employees. K. MacRury. Personnel J 25:186-202 D '46
New approach to foremen; program to make supervisors more effective part of management. Bsns W p80+ Je 21 '47
Report to supervisors. Management R 36:197-8 Ap '47
Responsibility for establishing, maintaining time standards; data sheet. G. Z. Wollam. Factory Management 105:134 S '47
Seeing the foreman through to security. W. H. Kushnick. Am Mach 91:69-71 F 27 '47
Should the foreman help buy? R. J. Spence. Am Mach 91:109 Ap 24 '47
Spotlight on the supervisor; responsibilities in safety. J. L. Ridinger. il Safety Eng 92: 10-11+ N '46

FOREMEN—*Continued*
Status for foremen. Bsns W p67-8+ Ag 2 '47
What foremen should know about costs. R. J. Spence. Am Mach 91:130 My 22 '47
When foreman deals with worker. L. M. Gilbreth and A. R. Cook. il Factory Management 105:115-22 Mr '47

See also
Foremen's manuals
Mine foremen
Supervisory workers

Training

Factory college; Ford, Wayne university set up course to train men for administrative jobs. il Bsns W p94+ S 6 '47
Guiding foremen. Bsns W p98-100 O 25 '47
Setting up a foremanship training program. E. Mottershead. Cer Ind 47:54-5 N '46

Unionization

Foremen battle; Harry Bridges' longshoremen support walking bosses' demand for recognition. Bsns W p86-8 Ag 16 '47
Foremen belonging to unions will change practice of collective bargaining. Bsns W p86 Mr 29 '47
Foremen have right of NLRA bargaining; Packard motor car company case. Oil Paint & Drug Rep 151:5 Mr 17 '47
Foremen revamp; Lewis' mine supervisors' union takes on new form, name. Bsns W p76-8 Ag 9 '47
Foremen's unions; a new development in industrial relations. J. C. Cabe. (Bur. of economic and business research bul. 65) 74p bibliog(p69-74) Univ. of Illinois, Urbana '47
Labor docket; NLRB asks Supreme court to review foremen's status. Bsns W p80-2 D 7 '46
Right of employer to require foremen to resign from union. M. M. Shipman. Oil Paint & Drug Rep 151:5+ Ja 13 '47
Shall we fight or welcome foremen's unions? J. Wolff. Mech Eng 69:128-30+ F '47
Supreme court backs foremen's rights in Packard motor co. case. Comm & Fin Chr 165:1566 Mr 20 '47
Supreme court decision in Packard foremen unionization case. Steel 120:81 Mr 17 '47
Supreme court o.k.'s another foremen's union. Bsns W p98+ My 24 '47
Supreme court rule on foremen meets with mixed reactions. Iron Age 159:102 Mr 20 '47
Supreme court rules state board cannot rule on labor disputes covered by NLRA; New York Board's order for recognition by steel companies of foremen's unions. Comm & Fin Chr 165:2114 Ap 17 '47
Supreme court upholds right of foremen to form unions. Elec World 127:87-8 Mr 15 '47
Test for foremen; strike at Ford may put the future of supervisors' unions in the balance. il Bsns W p75-6 My 31 '47
When foremen organize, here's what they demand. Factory Management 105:62-4 Ap '47

FOREMEN'S bulletins
Bulletin gives Goodrich management team advance information on company policies. J. D. Kelly. il Ind Marketing 32:124 Jl '47

FOREMEN'S conferences
How Corning glass works merchandises company facts; policy meetings. C. D. La Follette. il Adv & Sell 40:33-4+ O '47

FOREMEN'S manuals
How to prepare and maintain a supervisors' policy manual; based on a survey of company practices. 71p pa $3 American management assn. 330 W. 42d st, New York 18 '47
Management handbook gives foremen all the answers; Alcoa's New Kensington works. J. L. Patterson. Factory Management 105: 125 O '47

FOREST conservation
Modern chemistry controls forest insect outbreak. D. S. Hoffman and R. H. Forbes. il Chem & Eng N 25:2499-500 S 1 '47

FOREST fire patrol
Forest protective organizations in the province of Quebec, 1946. il Pulp & Pa of Can 48:93-4+ Ap '47

FOREST fire patrol, Aerial
AAF will bomb western forest fires; tests of new technique with proximity fuse. B. Stubblefield. il Aviation N 7:12 Je 30 '47
'Copters in forest service. il Aero Digest 54: 74 Ap '47

FOREST fires
AAF will bomb western forest fires; tests of new technique with proximity fuse. B. Stubblefield. il Aviation N 7:12 Je 30 '47
Basic planning for fire protection. J. B. Mathews. Pulp & Pa of Can 48:85 Ap '47
Development center for forest-fire-control equipment. I. C. Funk. il Mech Eng 69:544-7 Jl '47
Forest fire research in Canada during 1946. Pulp & Pa of Can 48:104 Je '47
Forest protection during 1946 in New Brunswick. R. J. Gill. il Pulp & Pa of Can 48:86 Ap '47
Forest protection during 1946 in Ontario. Pulp & Pa of Can 48:92-3 Ap '47
Forest protection during 1946 in Quebec. il Pulp & Pa of Can 48:88+ Ap '47
Forest protective organizations in the province of Quebec, 1946. il Pulp & Pa of Can 48:93-4+ Ap '47
Origins of historic fires. Pulp & Pa of Can 48:127-8 Ag '47
Price Brothers forest protective association. Pulp & Pa of Can 48:108+ Je '47

FOREST management
Forests and sulphite mills. J. M. Gibson. Pulp & Pa of Can 48:81-4 S '47
NEPCO forest management program. R. C. Doser. il map Paper Ind 29:368-71 Je '47
Taxation principles for sustained yield forest management. J. D. Gilmour. Pulp & Pa of Can (Convention no) 48:282+ [F] '47

FOREST products
Cellulose industries of the West. J. E. Lodewick. il Chem & Eng N 25:2696-8 S 22 '47

See also
Gums and resins
Lumber
Naval stores
Turpentine
Wood
Wood pulp

FOREST products research society
Wood research society formed. Oil Paint & Drug Rep 151:7+ F 10 '47; Chem & Eng N 25:550 F 24 '47

FOREST reserves
Southland paper mills would buy national forest for pulp. Paper Tr J 124:7+ My 22 '47

FOREST roads
$17 million road program taps new forest areas. il Eng N 137:830-1 D 19 '46

FOREST soils
Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

FOREST succession
Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

FOREST taxation
Taxation principles for sustained yield forest management. J. D. Gilmour. Pulp & Pa of Can (Convention no) 48:282+ [F] '47

FORESTERS
Forest villages. E. Menard. Pulp & Pa of Can 47:109 D '46

FORESTRY research
Summer forestry research in the Maritimes. Pulp & Pa of Can 48:102 Je '47
Work of the Petawawa forest experiment station. il Pulp & Pa of Can 48:94+ Ag '47

FORESTRY schools and education
Forestry department of the University of British Columbia. J. E. Liersch. Pulp & Pa of Can 48:126+ My '47
Forestry department of the University of New Brunswick. J. M. Gibson. il Pulp & Pa of Can 48:117-18+ My '47
Forestry department of the University of Toronto. J. W. B. Sisam. il Pulp & Pa of Can 48:85-8+ Je '47

FORESTS, Municipal
Forest management for Newark. J. M. Heilman. Am Water Works Assn J 39:87-92 Ja '47

FORESTS and forestry
Contributions of the forest to the pulp and paper industry. N. C. Brown. Paper Ind 28:1344+ D '46
Forestry and the pulp and paper industry. E. W. Tinker. Pulp & Pa of Can 48:71-2 F '47
Watersheds and reforestation. G. W. Dean. Am Water Works Assn J 39:455-8 My '47
See also
Lumber trade
Lumbering

Finance
Lower interest trend enhances forest investment. D. Pingree. Barron's 27:4 My 26 '47

Safety measures
First law of nature in the Forest service. H. E. Hedges. il Nat Safety N 55:20-1+ Je '47

Alaska
Alaska beckons; U.S. offers vast timber reserve for pulpwood. il Bsns W p 18 S 6 '47

Arkansas
Featuring Arkansas. il Manuf Rec 116:104-7 Ag '47

British Columbia
Forest for Celanese in British Columbia. map Bsns W p109 Mr 22 '47
Insect destruction in British Columbia. H. A. Richmond. Pulp & Pa of Can 48:112+ Jl '47
Our plans for sustained yield forestry. J. E. Liersch. Pulp & Pa of Can 48:109-10 S '47

Canada
Canada's woods operators seek more secure lease tenures. Paper Tr J 124:9+ Ja 2 '47
Canadian forest and its future. J. C. W. Irwin. Ann Am Acad 253:52-8 S '47
Forests and sulphite mills. J. M. Gibson. Pulp & Pa of Can 48:81-4 S '47
New Dominion forest policy. H. Kennedy. Paper Tr J 125:22+ Ag 21 '47
New wood, new forest, new challenge. C. D. Orchard. Pulp & Pa of Can 48:91-4+ Jl '47
Problem of the dying birch in eastern Canada. R. E. Balch. Pulp & Pa of Can 47: 104-5 D '46
Taxation principles for sustained yield forest management. J. D. Gilmour. Pulp & Pa of Can (Convention no) 48:282+ [F] '47

France
L'exposition du bois, Paris, 14 septembre-octobre 1946. P. Razous. il Génie Civil 124: 30-4 Ja 15 '47

Great Britain
England rebuilds her wooden walls. R. Black. Pulp & Pa of Can 47:115 N '46

Great Lakes states
Lake states forests and the pulp and paper industry. E. L. Demmon. Pulp & Pa of Can 48:92+ Je '47

Indiana
Reforestation solves strip-spoil problem in Indiana. V. Sappenfield. il Coal Age 52: 112-14 Ap '47

Maine
Forestry problems in Maine. D. H. Stevens. Paper Tr J 124:41-3 Ja 30 '47

Massachusetts
Reforestation on the Quabbin Reservoir project. R. Snow. fold maps N E Water Works Assn J 61:34-47; Discussion. W. R. LaDue. 47-9 Mr '47

Mexico
Summary of Mexican paper industry. R. S. Aries and J. Serrano, jr. Paper Ind 29:69-71 Ap '47
Wood survey for new Mexican mill. L. A. Nix. il map Paper Ind 28:1131-6 N '46

Michigan
Michigan's forestry problem; abstract. E. W. Tinker. Paper Tr J 125:9+ Ag 14 '47

Missouri
Forests in the hub state of the Nation. il Manuf Rec 116:115-16 Ja '47

New Brunswick
Forest protection during 1946. R. J. Gill. il Pulp & Pa of Can 48:86 Ap '47

New England
Timber resources of New England and New York with special reference to pulpwood supplies. V. L. Harper. Paper Ind 28:1358-60 D '46

New York (state)
Timber resources of New England and New York with special reference to pulpwood supplies. V. L. Harper. Paper Ind 28:1358-60 D '46

Newfoundland
Newfoundland's forests. A. W. Bentley. Pulp & Pa of Can 48:108+ Jl '47

North Carolina
Trends in timber supply of the Carolinas. R. B. Craig and J. W. Cruishank. Paper Ind 29:65-8 Ap '47

Ontario
Forest protection during 1946. Pulp & Pa of Can 48:92-3 Ap '47
New charter for Ontario forestry; extracts from report of Ontario royal commission on forestry. Pulp & Pa of Can 48:111-12+ S; 106+ O '47
Ontario receives briefs on forest control policies. Paper Tr J 123:21 D 26 '46
Ontario's forestry commission; report on public hearings. S. H. Howard. Pulp & Pa of Can 48:91-4 Ja '47

Pacific coast
New developments in pulpwood procurement on the Pacific coast. A. J. F. Brandstrom. Paper Ind 28:1352+ D '46

Quebec
Forest protection during 1946 in Quebec. il Pulp & Pa of Can 48:88+ Ap '47
Forest protective organizations in the Province of Quebec, 1946. il Pulp & Pa of Can 48:93-4+ Ap '47

South Carolina
Trends in timber supply of the Carolinas. R. B. Craig and J. W. Cruishank. Paper Ind 29:65-8 Ap '47

Southeastern states
How Seaboard air line promotes its area's timber. R. N. Hoskins. il Ry Age 123:390-1 S 6 '47

Southern states
South supplies nearly half of Nation's lumber products; modern forestry practices are vital if new growth is to balance drain. C. R. Walker. Manuf Rec 116:42+ O '47

Sweden
Sweden's forest industry in peace and war. G. A. Hall. Pulp & Pa of Can 48:55-6 F '47

Switzerland
Forestry in Switzerland. R. Black. Pulp & Pa of Can 47:114 N '46

Tropics
Immense tropical hardwood forests await development. A. D. McKellar. il For Comm W 29:3-5+ O 4 '47

United States
Pulpwood supplies of the United States. H. R. Josephson. Paper Ind 29:584-6 Jl '47

Washington (state)
Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

FORGE shops

Equipment

Continuous hardening, quenching, washing, drawing of forgings. il diag Steel 120:84+ Mr 24 '47
Forging production readings; Flame-eye photoelectric unit. il diag Steel 120:112 Je 23 '47
Foundries and forge shops reduce heat treating costs. K. Rose. il Materials & Methods 25:100-2 Ap '47
Fundamentals of forging. A. Ashburn. diags Am Mach 91:109-24 Ap 10 '47
Insulation of air lines saves $33,000. il Comp Air Mag 52:97-8 Ap '47
Mechanised forge; Daniel Doncaster and sons. il Engineer 184:31-3 Jl 11 '47
Platform trucks speed material flow in forge shop. il Iron Age 159:62 F 27 '47
Propane storage and piping system frees plant from gas interruptions; standby installation for heat treating; Ingalls-Shepard div. of Wyman-Gordon co. il diag Heating-Piping 19:83-5 S '47

FORGERY
Control of payroll funds. G. W. Adlam. J Account 83:124-8 F '47
Law for the layman; spurious stock certificates. M. L. Hayward. Barron's 27:38 S 8 '47
Surety claims involving forgery. S. Maurice. Weekly Underw 156:841-3+, 899-901+ Mr 22-29 '47

See also
Bankers' blanket bond
Checks, Fraudulent

FORGERY insurance. See Insurance, Forgery

FORGING
Aluminum alloy forging materials and design. L. W. Davis. il diags Am Soc for Metals Trans 35:156-79; Discussion. 179-83 '45
Annual engineering review. il Materials & Methods 25:101 Ja '47
Control of raw materials and processes assures quality aluminum forgings. L. J. Barker. il Materials & Methods 25:63-7 My '47
Forging aluminum and magnesium on a giant hydraulic press. R. Moore and J. R. Douslin. il diags Mach 54:135-41 O '47
Fundamentals of forging. A. Ashburn. diags Am Mach 91:109-24 Ap 10; 117-32 My 8 '47
Precision drop forging of high temperature alloys. S. G. Demirjian. il Materials & Methods 26:68-71 S '47
Precision forgings. F. P. Peters. il Sci Am 176:105-7 Mr '47
Production processes, their influence on design; hot upsetting. R. W. Bolz. il Machine Design 18:131-7 N '46
Shaping and forming. W. Trinks. diags Blast F & Steel Pl 35:967-8 Ag '47
Technical progress in metalworking; forging and forming. Steel 120:222+ Ja 6 '47

See also
Hammers, Drop
Steel forgings

FORGING dies. See Dies, Forging

FORGING machinery
Forging anvil resurfaced by ingenious setup. il Iron Age 160:48 Jl 17 '47
Fundamentals of forging; machines, presses and rolls. A. Ashburn. diags Am Mach 91: 114-17 Ap 10 '47
Making a 232-ton steel casting for forging press; United engineering & foundry co. il Foundry 75:78-9 My '47
United Engineering casts 472,000 lb. press frame. il Iron Age 159:49 My 1 '47
Waterbury Farrel announces giant nut former. il Iron Age 158:80 D 19 '46

See also
Hammers, Drop

FORGINGS
Need for sound ingot in high temperature forging; abstract. L. B. Fonda. Iron Age 160:147-8 Ag 7 '47
Standard tolerances for forgings up to 100 lb.; data sheet. Metal Prog 50:1039 N '46
Tolerances for impression die forgings; chart; engineering file facts. Materials & Methods 25:125 Je '47; Same. Iron Age 159:57 Je 12 '47

FORMALDEHYDE
Aftertreatment of direct dyeings with formaldehyde. R. K. Fourness; C. M. Whittaker. Soc Dyers & Col J 63:178-9 Je '47
Aromatic-aliphatic nitro compounds; condensation of nitrophenylnitromethanes with formaldehyde. L. F. Fieser and M. Gates. Am Chem Soc J 68:2249-52 N '46
Continuous structural board from sawdust. il Mod Plastics 25:89-91 S '47
Contributions to the chemistry of pyridine; condensation of β-hydroxypyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 1104-5 D '46
Contributions to the chemistry of pyridine; 3- and 5-hydroxy-2-methylpyridine, and the condensation of 5-hydroxy-2-methylpyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 132-4 F '47
Extending resorcinol resin glue with corn gluten. G. E. Babcock and A. K. Smith. Mod Plastics 24:153+ Ap '47
Formaldehyde in plant collecting. F. R. Fosberg. Science 106:250-1 S 12 '47
Formaldehyde polymer; Trioxane. Chem Eng 54:168 F '47
Formaldehyde presents a changing economic picture. C. P. Neidig. il map Chem Ind 61: 214-17 Ag '47
Infra-red absorption in formaldehyde beyond 10μ. W. E. Singer. Phys R 71:531-3 Ap 15 '47
Kinetic study of the urea-formaldehyde reaction. L. E. Smythe. bibliog J Phys & Colloid Chem 51:369-78 Mr '47
New condensation products of formaldehyde with amides and amines. H. Scheuermann. Paper Ind 28:1495-6 Ja '47; Same. Mod Plastics 24:161-2+ F '47
Preparation of formaldehyde-inactivated poliomyelitis virus and its use as an immunizing agent in cotton rats. H. S. Loring and others. Science 106:104-5 Ag 1 '47
Reaction of β-naphthol, β-naphthylamine and formaldehyde. R. S. Corley and E. R. Blout. bibliog Am Chem Soc J 69:755-69 Ap '47
Reaction of 1-nitropropane with formaldehyde and ammonia. E. L. Hirst and others. Chem Soc J p924-8 Jl '47
Reaction of some furan derivatives with formaldehyde and amine hydrochlorides. R. F. Holdren. Am Chem Soc J 69:464-5 F '47
Reaction of thiophene with formaldehyde and salts of hydroxylamine. H. D. Hartough. bibliog Am Chem Soc J 69:1355-8 Je '47
Some preliminary investigations of the phenol-formaldehyde reaction. T. T. Jones. diags Soc Chem Ind J 65:264-75 S '46; Abstract. Chem & Ind p19-20 Ja 12 '46
Trioxane as a source of formaldehyde. J. F. Walker and A. F. Chadwick. bibliog Ind & Eng Chem 39:974-7 Ag '47
Urea-formaldehyde condensates stabilizing; patent. Am Dyestuff Rep 36:153 Mr 24 '47
Use of formaldehyde to inhibit corrosion; injected into oil wells. J. A. Clay, jr. il diag Pet Eng 18:111-12+ N '46

FORMALIN. See Formaldehyde

FORMAMIDE
Amphiprotic substances; system formamide-ammonia. H. H. Sisler, C. A. VanderWerf and S. Stephanou. bibliog Am Chem Soc J 68:2538-9 D '46

FORMAMIDINE disulfide
Oxidation-reduction potentials of thiol-dithio systems; thiourea-formamidine disulfide. P. W. Preisler and L. Berger. bibliog Am Chem Soc J 69:322-5 F '47
Reaction of ketones with formamidine disulfide. L. C. King and I. Ryden. bibliog Am Chem Soc J 69:1813-14 Jl '47

FORMANILIDE
Aniline formate and its changes on keeping. J. R. Pound. J Phys & Colloid Chem 51: 378-82 Mr '47
Reactions of alkyl*iso*formanilides; with phenols. E. B. Knott. Chem Soc J p976-8 Jl '47

FORMEX wire. See Electric wire

FORMIC acid
Acridine syntheses and reactions; synthesis of amino-acridines from formic acid and amines. A. Albert. Chem Soc J p244-50 F '47

FORMIC acid—*Continued*
Addition of formic acid to dicyclopentadiene. F. Bergmann and H. Japhe. Am Chem Soc J 69:1826-7 Jl '47
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-803 S '46
Infra-red spectra of monomeric formic acid and its deuterated forms. V. Williams. bibliog J Chem Phys 15:23-51 My '47
Relation of the viscosity of nylon solutions in formic acid to molecular weight as determined by end-group measurements. G. B. Taylor. bibliog Am Chem Soc J 69:635-8 Mr '47

Analysis

Colorimetric micromethod for determination of formic acid. W. M. Grant. bibliog Anal Chem 19:206-7 Mr '47

FORMICA
Heavy duty for high-pressure laminates. il diag Mod Plastics 24:97 Mr '47

FORMING tools
Blended radius form tool eliminates shoulders. W. L. Woodcock. diags Am Mach 91:147-8 F 13 '47

FORMOSA

Economic conditions

Formosa; lost opportunity? ruthlessly exploited by Chinese since war's end. Bsns W p101-2 Mr 29 '47
Situation in Taiwan. For Comm W 26:13-14 F 1; 27:14-15 My 3 '47
Taiwan in transition; critical problems faced. R. J. Blake. il For Comm W 25:5+ D 7 '46

FORMS and blanks, Business
Ad space is where you find it; don't leave it blank; Towncliffe. C. Wolff. Ptr Ink 219:52 Ap 11 '47
How to end office expense worries. F. M. Knox. il Am Bsns 17:24-5+ Jl; 16-17+ Ag; 28+ S '47

See also
Factories—Records
Order blanks

Advertising

Job simplification case histories key ad theme for Standard Register. G. L. Staudt. il Ind Marketing 31:59+ D '46

FORMYLAMINOMALONIC ester
Ethyl formylaminomalonate; an intermediate in the synthesis of amino acids. A. Galat. Am Chem Soc J 69:965 Ap '47

FORMYL esters
Diethyl acetals of α-formyl esters. N. C. Deno. Am Chem Soc J 69:2233-4 S '47

FORSYTHIA
Isolation of rutin from two varieties of forsythia. J. Naghski, W. L. Porter and J. F. Couch. bibliog Am Chem Soc J 69:572-3 Mr '47

FORT WAYNE, Indiana
Fort Wayne plans North-South and East-West expressways. il Civil Eng 17:203 Ap '47
T.A.B. studies outdoor advertising in Ft Wayne. V. H. Pelz. Adv & Sell 40:41+ S '47

FORT WORTH, Texas
See also
Airports—Fort Worth, Texas

FORTICEL. See Cellulose propionate

FORTISAN
Postwar progress report on Fortisan. W. Whitehead. il Rayon 28:71-2, 127-8 F-Mr '47

FORUM, Open
Businessmen and the community forum. F. K. Ballaine. Harvard Bsns R 25 no 3:372-84 [Ap] '47; Excerpts. Trusts & Estates 85: 191 S '47
Peoria conference; forum-dinners of clergy, labor, education, business and other civic leaders. il Trusts & Estates 83:565-6 D '46

FORWARDING companies
Would end forwarder pacts with truckers; I.C.C. examiners recommend that joint-rate arrangements be condemned. Ry Age 123:579-80 O 4 '47

FORWARDING companies (air freight)
CAB set to throw spotlight on freight forward field. C. L. Adams. Aviation N 6: 11 D 30 '46
Public speculation wave expected if freight forwarders get rights. Aviation N 7:20 Ap 28 '47
Railway Express makes freight plea. Aviation N 7:30 Mr 3 '47

See also
Air freight forwarders association

FOSSIL algae. See Algae, Fossil

FOSSIL fishes. See Fishes, Fossil

FOSSIL plants. See Paleobotany

FOSSILS. See Paleontology

FOSTER, William Chapman
New under-secretary of Commerce. por Sales Management 58:45 F 15 '47
Republican businessman gets Commerce post. por Bsns W p5 D 7 '46

FOSTERITE resins. See Resinous products—Finishing materials

FOULING organisms
How to control marine growths in circulating water systems. J. G. Dobson. il Power Pl Eng 50:70-5 Ag; chart 86 D '46
Methods of assessment of anti-fouling compositions. K. A. Pyefinch. bibliog Iron & Steel Inst J 152:229-43 no 2 '45
Ship fouling. Sci Am 176:26 Ja '47
Some acoustic properties of marine fouling. J. W. Fitzgerald and others. bibliog il diags Acoustical Soc Am J 19:332-7 Mr '47

See also
Paint, Anti-fouling

FOUNDATION soils
Alaska permafrost investigation; abstract. H. J. Manger. Civil Eng 17:449 Ag '47
Easy to use-on-the-job training program for your highway personnel. Pub Works 78:30-1+ F '47
Research laboratories of the Reclamation bureau; what the engineering geologist does. R. Rhoades and W. H. Irwin. il Eng N 139:524-8 O 16 '47
Solving the problem of nalyeds (surface ice formation) in permafrost regions. A. Tchekotillo. diags Eng N 137:724-7 N 28 '46
Studies determine proper construction procedures in permafrost areas. il Civil Eng 17:387-9 Jl '47
Test study of foundation design for permafrost conditions. il diags Eng N 139:404-7 S 18 '47
Why you should avoid housing construction on refuse landfills. R. Eliassen. il Eng N 138:756-60 My 1 '47

See also
Dams—Foundations
Roads—Subgrades
Soil mechanics

Testing

Apparatus for testing the shear strength of soils. il Engineering 162:477 N 15 '46
Development and use of strength tests for subgrade soils and flexible base materials; abstract. C. McDowell. Concrete 55:22-3 Ja '47
Modern electrical equipment to speed soils investigation; New York state to aid subsurface investigations with seismograph and resistivity apparatus. Roads & Sts 90:76 Ja '47
Soil-survey procedure for road work. A. H. D. Markwick and S. B. Webb. il diags Roads & Bridges 85:58-62+ Jl '47

FOUNDATIONS
All sound building starts at the bottom, with good foundations. il plan diags Brick & Clay Rec 110:33 Ap '47
ASCE annual meeting; abstracts of papers before soil mechanics and foundations division. diag Eng N 138:96-7 Ja 23 '47
Beams on elastic foundation; abstract. M. Hetenyi. Am Concrete Inst J 18:349-51 N '46
Deep building excavation in Cincinnati required a bold design of cross-bracing. A. D. Quinn. il diags Eng N 139:30-3 Jl 10 '47

FOUNDATIONS—*Continued*
Foundation walls for engine plant; Diesel engine factory, Caterpillar tractor co. il Concrete 55:22 My '47
Influence charts for computation of vertical displacements in elastic foundations. N. M. Newmark. fold charts Ill U Eng Exp Sta Bul 367:1-11 '47 (pa 40c)
Minimum supporting strength of clay pipe for various foundations. diags Brick & Clay Rec 110:32 F '47
Reducing foundation design work for substations. diag Elec World 127:74 Ap 26 '47
Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72: 759-80 Je '46; Discussion. 73:79-84, 915-22 Ja, Je '47
Truck mounted mortar mixer speeds-up foundation work. il diag Brick & Clay Rec 111:33 Ag '47

See also
Bridges—Foundations and piers
Caissons
Cofferdams
Concrete piling
Dams—Foundations
Footings, Concrete
Foundation soils
Piles and pile driving
Roads—Foundations

FOUNDATIONS, Charitable and educational
Foundations file for customers; a social aid to testators and their advisers. W. R. Spinney. Trusts & Estates 85:201-2 S '47
How to have your own foundation. Fortune 36:108-9+ Ag '47

See also
Commonwealth fund
Foreign service educational foundation

Directories

See also
Social work—Directories

Investments

Carnegie corp. investment saga; safety of principal cuts income. Bsns W p62-6 Mr 8 '47

FOUNDATIONS, Subaqueous

See also
Caissons

FOUNDRIES
American brake shoe co. opens modern foundry. il Steel 121:76 O 20 '47
Importance and future of the foundry industry. G. T. Christopher. Foundry 75:85+ Je '47
Malleable iron plant holds open house; Saginaw plant of General motors corp. il Foundry 75:88-9 Ja '47
Modernized foundry to make it a better place to work; United States rubber company's aluminum alloy lasts. il Factory Management 105:74-6 S '47
Pattern shop and our national economy. A. J. Tuscany. Foundry 75:79+ Ja '47
Public visits a foundry; Belle City malleable iron co. il Foundry 75:90-2+ F '47
Working in the foundry, 1947 style. il Bsns W p46 Ag 16 '47

See also
Foundry practice

Accounting

See Foundry accounting

Advertising

Publicity campaign boosts Erie area foundry industry. il Foundry 75:147+ Je '47

Cleanliness

Good housekeeping and plant maintenance. J. Thomson. Foundry 75:93+ F '47

Electric equipment

Steel plant and foundry application of mercury arc rectifiers. S. R. Durand. bibliog il Steel 121:102+ Jl 14 '47

Employees

Educational activities; abstracts of A.F.A. papers. Foundry 75:139+ Je '47
Elbow room in the foundry? job opportunities. C. J. Freund. Foundry 75:83+ My '47
Employment outlook in foundry occupations. il U S Bur Labor Statistics Bul 880:1-55; pa 15c Supt. of doc. '46
Foundry, a good place to work. L. W. Woodhouse. il Foundry 75:90-5+ Jl '47
Getting and keeping foundry workers. F. O'Malley. Foundry 75:78+ Ja '47
Recommendations for handling personnel problems. W. J. Barclay. Foundry 75:137 S '47
Wages of foundry workers, October 1946. D. L. Helm. Mo Labor R 65:180-3 Ag '47
Young man and the foundry industry. A. W. Gregg. Foundry 75:98+ Je '47

Equipment and supplies

Blowing cores on a mass production basis; Ferro machine & foundry co. M. F. Degley. il plan Foundry 75:72-4+ Ag '47
Brass foundry practice at Crane co. H. M. St John. il Metal Prog 52:636-9 O '47
Cadillac's modernized foundry facilities. J. Geschelin. il plan Automotive & Aviation Ind 96:24-7+ Je 15 '47
Cupola melts above rated capacity; Forest City foundries co. P. Dwyer. il Foundry 74:98-101+ D '46
Foundries and forge shops reduce heat treating costs. K. Rose. il Materials & Methods 25:100-2 Ap '47
Foundry expansion aids production and working conditions; Christensen & Olsen foundry co. W. G. Gude. il plan Foundry 75: 94-6+ Ag '47
How the Ford Rouge foundry handles hot metal for continuous pouring. W. G. Patton. il diags Iron Age 159:40-3 Ap 24 '47
How to prevent snagging wheel breakage. R. B. Fair. il diags Foundry 75:70-2+ S; 82-4+ O '47
Mechanical pouring unit handles 11 tons per hour; American brake shoe co. J. R. Shepard and W. J. Olson. il diag Iron Age 158:77-80 D 5 '46
Mechanization of a cast iron foundry; Gloucester. il plan Mech Handling 33:740-5 D '46
Mechanized core shop in a gas-cooker factory. il plan diag Mech Handling 34:3-6 Ja '47
Mechanized grey iron foundry; Suffolk iron foundry. il layout plan Mech Handling 33: 668-71 N '46
Mechanizing the job foundry. il Bsns W p48-9+ My 3 '47
Modern gray iron foundry; McNally Pittsburg foundries, inc. il Foundry 75:92-3+ Je '47
Modernizes malleable iron foundry; Oliver corp. E. F. Ross. il Foundry 75:72-7+ My '47
Modernizing malleable iron foundries. F. A. Pampel. il diag Foundry 74:86-9+ D '46
New automotive foundry engineered on assembly line pattern; Cadillac motor car division. il Foundry 75:80-5+ Jl '47
New coreroom is model of efficiency; Cleveland foundry co. P. Dwyer. il plan Foundry 75:66-71+ O '47
New equipment. il Iron Age 159:69-71 Mr 13 '47
New gray iron foundry combines efficiency and cleanliness; Wells mfg. co. W. G. Gude. il plan Foundry 75:76-81 N '47
New lifting device simplifies mold weight handling. W. K. Mitchell. il Foundry 75: 146+ Mr '47
1947 inventory of foundry equipment. Foundry 75:[81-104] insert S1-24 Mr '47
Plant modernization increases output 150 per cent; Lynchburg foundry company. H. K. McGavock. il Factory Management 105:66-7 Ap '47
Portable yard crane handles materials economically; Fremont foundry co. R. H. Herrmann. il Foundry 75:73+ S '47
Pours engine castings in dry sand molds; Chicago pneumatic tool co. P. Dwyer. il plan Foundry 75:90-3+ My; 88-91+ Je '47
Role of centrifugal casting in transforming pigs to pipe; National cast iron pipe co. G. E. Stedman. il Steel 121:90-2+ O 13 '47
Sand reclamation and distribution; conveying equipment in a modern steel foundry. il Mech Handling 33:601-6 O '46
Underground conveyor; Wellworthy piston rings ltd. il Mech Handling 34:143-5 Mr '47

FOUNDRIES—Equipment and supplies—*Cont.*
Ventilating screens, breakers, mullers. diags Foundry 75:76-7+ Mr '47
Wartime plant makes large steel castings for peacetime uses; United engineering & foundry co. P. Dwyer. il Foundry 75:90-2+ S '47
Wetherill vacuum casting process. W. A. Phair. il Iron Age 160:67-70 Ag 14 '47

See also
Core ovens
Cupola furnaces
Foundry ladles
Molding machines
Molds (for casting)
Sand, Foundry

Experimental foundries
Pilot foundry aids product development; Reynolds metals co. G. W. Birdsall. il Foundry 75:90-1+ Ja '47

Heating and ventilation
Foundry atmosphere. W. N. Witheridge. il plan Iron Age 160:62-7 Ag 21; 67-73 Ag 28 '47
Foundry ventilation. J. Black and L. T. Avery. il Heating-Piping 19:71-4 Mr; 78-81 Ap; 89-91 My '47
High pressure condensate drainage for foundry heating. J. P. Turner. il diag Heat & Ven 43:73 N '46

Layout
Modern foundry layout gives clean working conditions; Freeport works of Fairbanks, Morse and co. il Automotive Ind 97:41 S 15 '47

Management
See Foundry management

Safety measures
Accident prevention. K. A. Colahan. Foundry 75:133+ Ja '47
Magnesium; fire, explosion and dust hazards. H. W. Johnsen. il Safety Eng 92:12-13+ N '46
Mould and core paints and washes, and parting powders. W. J. Rees. Iron & Steel Inst J 152:57-60 no 2 '45; Same. Engineering 160:27-8 Jl 13 '45
Report of the Joint advisory committee on conditions in ironfoundries. Engineer 184: 109 Ag 1 '47

Statistics
Foundries in United States and Canada. Foundry 75:75+ Ag '47
Foundry statistics (cont). Foundry 74:228 D '46; 75:126 Ja; 134 F; 148 Mr; 144 Ap; 109 Je; 128 S; 125 O '47
1947 inventory of foundry equipment. Foundry 75:[81-104] insert S1-24 Mr '47
Nonferrous foundry industry; its structure, sales, costs and profits. J. B. Meier and V. H. McClung. Foundry 75:86-8+ Jl; 88-90+ Ag; 94-7+ S '47

Argentina
Foundry practice in Argentina. E. J. Ash. il Foundry 75:72-3+ Ja '47

Belgium
Belgian foundries. V. Delport. il Foundry 75:92-3+ N '47

China
Chinese make thin iron castings; food bowl. il Foundry 75:186 Jl '47

Detroit
Automotive foundries around Detroit; illustrations with text. Foundry 75:94-105 Ap '47

Erie, Pennsylvania
Erie foundry industry. E. M. Strick. il Foundry 75:126+ S '47

Germany
Foundry layouts and labor utilization in Germany called poor. Iron Age 160:142-3 Ag 7 '47

Great Britain
Present problems in the foundry industry. P. H. Wilson. Engineering 164:30-1 Jl 11 '47
Report of the Joint advisory committee on conditions in ironfoundries. Engineer 184: 109 Ag 1 '47

Switzerland
Diversified foundry; example of Swiss mechanical industry. For Comm W 25:27 N 30 '46

FOUNDRY accounting
Controlling costs by production centers. A. A. Clay. Foundry 75:85+ N '47
Cost group activities of Gray iron founders' society. A. E. Hageboeck. Foundry 75:118 Jl '47
Cost system for a captive grey iron foundry. J. D. Pawling. il N A C A Bul 29:291-9 N 1 '47
Establishing a normal operation in a gray iron jobbing foundry. A. E. Grover. Foundry 75:92-3+ Ag '47
Nonferrous cost system. Foundry 74:146+ D '46

FOUNDRY costs
Nonferrous foundry industry. J. B. Meier and V. H. McClung. Foundry 75:94-7+ S '47
Pricing castings for profit. J. B. Meier. Foundry 75:72-3+ F; 108-9 Mr '47

See also
Foundry accounting

FOUNDRY dust
Foundry atmosphere. W. N. Witheridge. il plan Iron Age 160:62-7 Ag 21; 67-73 Ag 28 '47
Mould and core paints and washes, and parting powders. W. J. Rees. Iron & Steel Inst J 152:57-60 no 2 '45; Same. Engineering 160:27-8 Jl 13 '45
Study of the hazards of exposure to metallic fumes and dust in brass foundries. W. W. Stalker. bibliog il J Ind Hygiene 29:96-112 Mr '47

FOUNDRY educational foundation
Foundation fund drive for engineer training begins. Foundry 75:110 Je '47

FOUNDRY equipment manufacturers association
Annual meeting, Hot Springs, Va. Sept. 18-20. Foundry 75:128+ N '47

FOUNDRY furnaces. See Furnaces, Foundry

FOUNDRY ladles
Desulphurisation and dephosphorisation of iron. Engineer 183:281-2 Ap 4 '47
Pouring molten metal from foundry ladles by means of power industrial trucks. il Mech Eng 69:848-9 O '47
Rammed refractories in electric furnaces. R. H. Zoller. diags Brick & Clay Rec 110:72+ Mr '47

FOUNDRY machinery
New production machine automatically coats cylinder block cores. il Automotive & Aviation Ind 96:39 Ap 15 '47
Pattern rigging for production molding; Ford motor co. F. C. Riecks. Foundry 74:111+ D '46
Pneulec sand mixer. il Mech Handling 33:773-4 D '46
Specially designed machinery cleans newly cast cylinder blocks; illustrations with text. Automotive & Aviation Ind 96:33 F 15 '47

See also
Charging machines
Die casting machines
Molding machines

FOUNDRY management
Applying good management in the pattern shop. G. M. Dexter. il plans Foundry 75:68-71+ F '47
Controlling costs by production centers. A. A. Clay. Foundry 75:85+ N '47
Experience can point way to better castings. C. L. Frear. il Foundry 75:92-3+ O '47
Foundry, a good place to work. L. W. Woodhouse. il Foundry 75:90-5+ Jl '47
Good housekeeping and plant maintenance. J. Thomson. Foundry 75:93+ F '47
Gray iron founders' society 18th annual meeting, Cincinnati, Oct. 22-23. Foundry 74: 90-1+ D '46
Modernizing malleable iron foundries. F. A. Pampel. il diag Foundry 74:86-9+ D '46
Present problems in the foundry industry. P. H. Wilson. Engineering 164:30-1 Jl 11 '47
Pricing castings for profit. J. B. Meier. Foundry 75:72-3+ F; 108-9+ Mr '47

FOUNDRY management—*Continued*
Quality control service performed by Malleable founders' society. Foundry 75:100+ My '47
Use of time study data; abstract. M. Annich. Foundry 75:136 Jl '47
Work simplification starts with training for top management; Lynchburg foundry company. H. E. McWane. Factory Management 105:81 Ag '47
See also
Foundries—Employees
Foundry accounting
Foundry practice

FOUNDRY practice
Advances in the foundry industry. C. K. Donoho. il diag Metal Prog 51:765-70 My '47; Abstract. Mech Eng 69:603 Jl '47
Annual engineering review. Materials & Methods 25:98-9 Ja '47
Birmingham foundrymen hold 15th annual conference. Foundry 75:156+ Ap '47
Bottom pouring steel mill rolls; illustrations with text. Iron Age 160:123 Ag 7 '47
British steel founders hold first technical convention. Foundry 74:159+ D '46
Casting is changing. E. L. Cady. il Sci Am 177:67-9 Ag '47
Casting steel mill rolls. il Steel 121:80-2+ S 22 '47
Chicago area foundrymen hold successful conference. W. G. Gude and R. H. Herrmann. Foundry 75:143+ Ja '47
Counter-gravity casting; new foundry technique, developed by Armour Foundation. Bsns W p47-8+ D 28 '46
Counter-gravity casting saves scrap and metal. Am Mach 91:81 S 25 '47
Development and present position of the continuous casting of non-ferrous metals. H. Kästner. il diags Engineer 183:562-3 Je 27 '47
Drawing and forming steel with zinc alloy dies; method of casting Kirksite. S. Menton. il Steel 120:80-1+ Je 9 '47; Same. Foundry 75:76-9+ Je '47
Fluidity testing of foundry alloys. K. L. Clark. bibliog(105 titles) il diags Foundry 74:92-6+ D '46
Forming dies; new zinc-base alloy, Kirksite A. il Automobile Eng 37:139-40 Ap '47
Foundry practice in Argentina. E. J. Ash. il Foundry 75:72-3+ Ja '47
How to make precision castings. J. Van Voast. diags Am Mach 91:125-40 Je 19 '47 [reprints 25c]
Institute of British foundrymen 44th annual meeting, Nottingham, June 17-20. Foundry 75:97+ Ag '47
Manufacture of precision castings. G. Vennerholm and E. Ensign. il diags S A E J 55:37-40+ Je '47
Manufacture of some thin-walled steel castings, with notes on the influence of pouring speed. diags Iron & Steel Inst J 152: 519-34 no 2 '45
New England conference, 7th, Cambridge, Mass. March 28-29. Foundry 75:150+ My '47
Pattern rigging for production molding; Ford motor co. F. C. Riecks. Foundry 74:111+ D '46
Philadelphia conference draws 500 eastern foundrymen. Foundry 74:134+ D '46
Plant modernization increases output 150 per cent; Lynchburg foundry company. H. K. McGavock. il Factory Management 105:66-7 Ap '47
Precision cast finned cylinders; using refractory molds. E. I. Valyi. il Materials & Methods 24:1450-1 D '46
Producing large steel castings; Bethlehem steel co. P. Dwyer. il Foundry 75:74-7+ F '47
Radiography has role in developing foundry practice. R. G. Waite. Foundry 75:134 S '47
Sand control. G. W. Anselman. Foundry 75: 97+ O '47
Technical progress in metalworking; casting. Steel 120:217-18+ Ja 6 '47; Same cond. il Foundry 75:94-5+ F '47
Thirty years in steel founding; Crane co. H. W. Maack. il Metal Prog 52:631-5 O '47
Vacuum melting and casting of beryllium. A. R. Kaufmann and E. Gordon. diags Metal Prog 52:387-90 S '47
Wetherill vacuum casting process. W. A. Phair. il Iron Age 160:67-70 Ag 14 '47
Wisconsin chapter of A.F.A. 10th regional conference, Feb. 13-14. Foundry 75:162+ Ap; 125+ My '47
X-ray inspection promotes casting quality control. E. H. Grimm. il Foundry 75:94-6+ O '47; Same. Steel 120:110-12+ My 12 '47; Same cond. Automotive & Aviation Ind 96:36-8+ My 15 '47
See also
Aluminum bronze
Aluminum founding
Brass founding
Bronze founding
Cast iron
Casting, Centrifugal
Castings—Cleaning
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Iron founding
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Molds (for casting)
Pattern making
Sand, Foundry
Steel castings
Steel ingots—Molds
also Association technique de fonderie de France

Study and teaching
Foundry educational foundation program starts at five universities. Foundry 75:102+ S '47
Foundry practice for engineering students. H. F. Scobie. J Eng Educ 37:689-95 My '47
Foundry training scheme. il Engineer 184:65 Jl 18 '47
Foundrymen to sponsor engineering training; newly incorporated foundry educational foundation. il Foundry 75:114-15+ Ap '47

FOUNDRY research
Elbow room in the foundry? job opportunities. C. J. Freund. Foundry 75:83+ My '47
Emissivity of molten iron and steel. D. Knowles and R. J. Sarjant. bibliog diags Iron & Steel Inst J 155:577-92 Ap '47
Gains in fundamental research benefit steel casting industry. C. W. Briggs. Steel 120: 218 Ja 6 '47
Heat transfer sessions; abstracts of A.F.A. papers. Foundry 75:128+ Jl '47

FOUNDRY sand. See Sand, Foundry

FOUNDRY sanitation
See also
Foundries—Cleanliness

FOUNDRY workers. See Foundries—Employees

FOUNTAIN pens
Ball point ink mystery. Am Bsns 17:48 Ja '47
Fountain pen imports and exports, Belgium. For Comm W 29:22 O 11 '47
Plastics give desk sets color, finish, feel. il Mod Plastics 25:98-9 O '47
Three fountain pens. Consumers Res Bul 19: 17-18 F '47

Manufacture
Ball-pen tubular parts rotary-sliced to length; Eversharp fountain pens and mechanical pencils. J. W. Dean, Jr. il diags Am Mach 91:108-10 F 13 '47
Manufacture of balls for bearings and pens. J. Porterfield. il Materials & Methods 25: 97-100 Je '47
Shop shots from Eversharp; illustrations with text. Am Mach 91:82-3 Ja 30 '47

Prices
Ball point bonanza. il Bsns W p22 F 22 '47

FOUR-family houses. See Architecture, Domestic—Four-family houses

FOURCAULT tank. See Glass tanks

FOURIER'S integrals. See Fourier's series

FOURIER'S series
Crystal pattern synthesis by an approximate summation of Fourier series. J. S. Lukesh. J Ap Phys 18:493-8 Je '47
Electronic computer for X-ray crystal structure analyses. R. Pepinsky. il diag J Ap Phys 18:601-4 Jl '47
Graphical methods for evaluating Fourier integrals. W. J. Cunningham. bibliog J Ap Phys 18:656-64 Jl '47
Machine for the application of sand in making Fourier projections of crystal structures. D. McLachlan, jr. and E. F. Champaygne. bibliog il diags J Ap Phys 17:1006-14 D '46

FOURIER'S series—*Continued*
Semi-polar form of Fourier series and its use in crystal structure analysis. J. S. Lukesh. J Ap Phys 18:321-6 Mr '47
Use of punched cards in molecular structure determinations; crystal structure calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:648-58 N '46

FOWLE, Frank Fuller, 1877-1946
Memoir. P. A. Westburg and others. por Western Soc E J 51:196-8 D '46

FOX, Herbert
Gallery; crazy like a Fox. R. Burns. Adv & Sell 39:70+ N '46

FRACTIONAL horsepower motors. See Electric motors—Fractional horsepower

FRACTIONATING columns. See Distillation apparatus

FRACTOGRAPHY. See Metallography

FRACTURE of metals. See Metals—Failure

FRACTURES (surgery)
Fractures of the lower end of the radius and ulna commonly classified as Colles' fractures. W. Johnson and others. il Ind Med 15:685-8 D '46
Treatment of fractures of metatarsals and phalanges. L. R. Byrd, jr. il Ind Med 16: 339-44 Jl '47

FRAMED structures
Continuous frame analysis by elastic support action. J. C. Rathbun and C. W. Cunningham. diags Am Soc C E Proc 73:413-49 Ap '47; Discussion. 73:1139-56 S '47
Method determines degree of fixity in footings and resulting frame stresses. A. Floris. diags Civil Eng 17:141-2+ Mr '47
Moment-stiffness relations in continuous frames with prismatic members. G. H. Dell. Am Soc C E Proc 72:587-611 My '46; Discussion. 72:1182-4; 73:528-30, 899-903 O '46, Ap, Je '47
Numerical transformation procedure in continuous beam analysis. S. U. Benscoter. bibliog diags Franklin Inst J 244:15-26 Jl '47
Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72: 759-80 Je '46; Discussion. 72:1321-4; 73:79-84, 383-4, 915-22 N '46, Ja, Mr, Je '47
Testing of structural connections. A. W. Hendry. il diags Engineering 164:261-3 S 12 '47

FRAMING (building)
Balloon frame; a tribute. C. S. Hill. il Eng N 138:64-5 Ja 9 '47
Economical steel framing details for small industrial buildings; with time-saver standards. diags Arch Rec 102:115-16+ Ag '47
Metal jigs developed for preassembly of house parts; HomOgraf system. A. P. Wittman. il Am Bld 69:112-13 Jl '47
Precast concrete structures. A. Amirikian. plan diags Am Concrete Inst J 18:365-79 D '46; Discussion. 18:380¹-380⁴ Je '47
Precast frame for two-story plant erected like structural steel. il diag Eng N 139:184-6 Ag 7 '47
Schindler frame. R. M. Schindler. il diags Arch Rec 101:143-6 My '47
Some problems in structural framing of precast concrete houses. A. Amirikian. il plans diags Am Concrete Inst J 18:797-810 Mr '47; Excerpt. Concrete 55:18-19 O '47
Steel-frame Calco plant has concrete exterior. il Eng N 138:786 My 8 '47
Steel frame house, Sausalito, Calif; 1200 steel frame houses for Baltimore housing development. il map plans diags Arch Forum 86:79-87 Ap '47
Steel-frame houses built on assembly line principles; project known as Harundale, near Baltimore. il plan Eng N 138:950-4 Je 12 '47

RANCE, Mervin B.
Portrait. Bsns W p67 Ja 25 '47

RANCE
Fortune survey; how did U.S. troops react to Europe? Fortune 34:5-6 D '46
Transfer of war surplus to France almost complete. C. L. Hyssony. Iron Age 159:118 F 6 '47

See also
Automobile industry and trade—France
Coal—France
Coal mines and mining—France
Labor laws and legislation—France
Petroleum—France
Petroleum industry and trade—France
Safety movement—France
Standards—France
Steel industry and trade—France

Colonies
Crisis in the French empire. map Economist 152:70-1 Ja 11 '47; Correction. 152:108 Ja 18 '47
Revision of statute of the Caisse centrale of Overseas France. For Comm W 26:18 F 1 '47

Commerce
Les relations commerciales franco-britanniques. J. Ducrocq. Chimie & Ind 58:82-4 Jl '47

Commercial policy
Additional licensing requirements for goods imported under regime of special temporary admission. For Comm W 25:25 N 16 '46
Aids offered to French exporters. For Comm W 27:13-14 My 31 '47
French import plan for second half of 1946, implementing recent regulation of imports from the United States. For Comm W 25: 23-4 N 9 '46; 26:19 Ja 4 '47
French import program for the first half of 1947. For Comm W 27:16-17 Ap 5 '47
French import program for the second half of 1947. For Comm W 29:13-14 O 11 '47
Groupements for importation, purchase, and distribution of products included in import program for 1947. For Comm W 27:23 Ap 12 '47
Instruction on dollar import ban issued by French exchange control office. For Comm W 29:17 O 25 '47
Mechanical and electrical equipment; new regulations governing the procedure for obtaining import licenses; groupements of importation named. For Comm W 26:27 Ja 25 '47
Regulations governing the fixing of prices of imports from Germany. For Comm W 26:12 Ja 11 '47
Tariffs and trade controls. For Comm W 28: 13 S 20 '47

Economic conditions
Economic problems of postwar France. R. Mayer. Comm & Fin Chr 166:228-9 Jl 17 '47
L'état économique de la France. A. Caquot. Génie Civil 124:107-10, 130-2 Mr 15-Ap 1 '47
First aid for France. Economist 153:446 S 13 '47
France and Italy; patterns of reconstruction. Fed Res Bul 33:353-66 Ap '47
French austerity. Bsns W p 105 S 6 '47
French economic crisis. Economist 153:156-7, 199-200 Jl 26-Ag 2 '47
French face showdown on franc, Marshall aid. E. Blair. Barron's 27:10 S 29 '47
Inflationary experiences in France; effects on business. J. de Largentaye. Comm & Fin Chr 164:2601+ N 21 '46
Paris letter. Bsns W p 114 S 13 '47
Survey of the problems of reconstruction facing the Fourth republic. J. W. Walch. J Bsns 20:67-83 Ap '47

Economic policy
Battle of the franc. Economist 152:114 Ja 18 '47
Economic and social policy in France. C. Bettelheim. Int Labour R 54:139-59 S-O '46
France making stand for capitalism; Blum experiment and Monnet plan seek road back to economic health. E. Kaskeline. Barron's 27:9 Mr 17 '47
France still on middle road. Bsns W p113-14 N 23 '46
France's experiments with nationalization. Pub Util 40:520-1 O 9 '47
Monnet plan; summary. Economist 151:954-7 D 14 '46

FRANCE—Economic policy—*Continued*
Nationalisation of banks and industries in France. Int Labour R 54:206-12 S-O '46
Plans and democracies; Monnet plan. Economist 151:937-8 D 14 '46; Same. Mech Eng 69:309-10 Ap '47
Social and economic policy. Int Labour R 54: 75-81 Jl '46
Uneasy balance in France. Economist 153: 137-8 Jl 26 '47; Same. Iron Age 160:106+ Ag 7 '47

Foreign relations

Sympathies of French public are sharply divided between U.S. and Russia; public opinion poll. Iron Age 158:115 N 28 '46

Germany

French policy in Germany. R. Sergent. Comm & Fin Chr 164:2884+ D 5 '46

Great Britain

France and the alliance. Economist 152:333 Mr 8 '47
Moscow via Dunkirk; signing of the Dunkirk treaty. Economist 152:315-16 Mr 8 '47

German occupation

L'essai de colonisation agricole par les Allemands dans l'est de la France pendant l'occupation. Génie Civil 123:316 N 15 '46

Industries and resources

Committee settles question of French imports for 1947. Iron Age 159:112 F 27 '47
France overhauls its economy. Bsns W p93-4 D 21 '46
French industrial recovery plan calls for return to 48-hour week; Monnet program. Steel 120:62 Ja 13 '47
French industry and reconstruction. A. A. Luebs. Mech Eng 69:300-1+ Ap '47
Monnet plan; summary. Economist 151:954-7 D 14 '46
Monnet plan for France. Engineer 182:564-5 D 20 '46
Monnet plan for modernization of French industry. J. R. Hight. Iron Age 158:98+ D 19 '46
Plans and democracies; Monnet plan. Economist 151:937-8 D 14 '46; Same. Mech Eng 69:309-10 Ap '47
Progress of French production since World war II; tabulation by commodity. For Comm W 25:21 N 30 '46
Rapid nationalization of French industry. E. Kaskeline. Comm & Fin Chr 166:421+ Jl 31 '47
U.S. courts French market; American business in France. il Bsns W p97-8 F 22 '47

Politics and government

Communism in France. Economist 151:834 N 23 '46
DeGaulle sweep offers U.S. gains and perils. E. Blair. Barron's 27:10 O 27 '47
French socialists. Economist 152:761-2 My 17 '47; Same. Iron Age 159:104+ Je 5 '47
Ghosts of Vichy. Economist 152:499-500 Ap 5 '47
M. Ramadier's cleft stick. Economist 153:326 Ag 23 '47
Road to Paris. Economist 152:522-3 Ap 12 '47

Statistics

La statistique dans les industries chimiques. H. Fournier. Chimie & Ind 57:494-6 My '47

FRANCHISE insurance. See Insurance, Franchise (term)

FRANCK-CONDON principle
Validity of the Franck-Condon principle in collisions of the second kind. R. E. Meyerott. Phys R 71:553 Ap 15 '47

FRANKFURTER, Felix, 1882-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

FRANKFURTER cooker. See Sausage cooker

FRANKFURTERS. See Sausage

FRANKLAND, Percy Faraday, 1858-1946
Sketch. por Chem Age (Lond) 55:577 N 9 '46

FRANKLIN, Benjamin, 1706-1790
Benjamin Franklin, the American philosophical society, and the Russian academy of science; abstract. E. Dvoichenko-Markoff. Science 106:121 Ag 8 '47

FRANKLIN institute
Franklin institute honors Robinson and Fermi. Chem & Eng N 25:1264 My 5 '47
Medal day proceedings. Franklin Inst J 244: 73-89 Jl '47
1947 medal day. Science 105:471 My 2 '47

Biochemical research foundation

Progress of the Biochemical research foundation (1946). E. McDonald. bibliog diag Franklin Inst J 242:435-48 D '46

Library

Reprint collection as an easily accessible source of reference material. A. H. Longenbach. Franklin Inst J 242:335-6 O '46

FRASCH, Herman, foundation
Projects of Frasch foundation. Chem & Eng N 25:287 F 3 '47

FRATERNAL congress of America, National. See National fraternal congress of America

FRATERNAL field managers association
Annual meeting, Detroit. Nat Underw (Life ed) 51:30+ O 3 '47
Spring conference, French Lick, Ind. Nat Underw (Life ed) 51:3+ My 16; 26-7 My 23 '47

FRATERNAL societies. See Benefit societies

FRAUD
Three interesting defalcations. J Account 83: 525-6 Je '47

See also
Checks, Fraudulent
Embezzlement
Insurance, Fire—Fraudulent promotion
Insurance, Life—Fraudulent statements
Mine salting

FRAUDULENT advertising. See Advertising, Fraudulent

FRAUDULENT statements. See Insurance, Industrial—Fraudulent statements; Insurance, Life—Fraudulent statements

FRAZIER-LEMKE act. See Mortgages, Farm

FREE energy
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Movement of substances through a two-phased solution system. T. C. Broyer. Science 105:67-9 Ja 17 '47

FREE enterprise. See Capitalism

FREE goods. See Sales policies—Free goods

FREE offers. See Advertising copy—Free offers

FREE ports and zones
Foreign trade zone dedicated at New Orleans is second in the United States. il Manuf Rec 115:50+ D '46
Important new decisions affect operations at foreign-trade zones. For Comm W 27:35 Je 21 '47
New step in process of restoring New York foreign-trade zone to original location. For Comm W 25:22 N 16 '46
Panama foreign-trade zone urged. T. E. Lyons. Comm & Fin Chr 165:136 Ja 9 '47
Panama ponders foreign-trade zone as trade-and-shipping aid. T. E. Lyons. il map For Comm W 26:10-11+ F 22 '47
Port plan opposed in Canada. Bsns W p100 Ja 25 '47
Significance and value of New Orleans foreign-trade zone. T. E. Lyons. For Comm W 25:19 D 14 '46
Small businessman aided by foreign trade zones. T. E. Lyons. il Dom Comm 35:10-15 Ap '47
What New Orleans is doing to build itself as a port; advertising, planning international trade mart, sponsorship of trade conferences, development of foreign trade zone, and organization of trade council. il Sales Management 59:138+ S 15 '47

See also
Hong Kong

FREE speech
Free speech in union-management relations. H. S. Hall. Comm & Fin Chr 166:435 Jl 31 '47

FREE speech—*Continued*
Freedom of speech and the NLRB; employers' right; abstract. P. M. Herzog. Management R 36:24-6 Ja '47
How practical personnel men think the labor law will work; right of free speech. J. P. Woodward. Factory Management 105:91-2 Ag '47
National labor relations board decision gives employers certain freedom of speech in union plants. Comm & Fin Chr 165:1979 Ap 10 '47
Right of free speech by employers. N. C. Rockwood. Chem Ind 60:430+ Mr '47; Same. Rock Prod 50:113 Ja '47

FREE trade and protection
Freer trade vs. control. Fortune 35:2-4 F '47
See also
Tariff

FREEDOM. See Liberty

FREEDOM of speech. See Free speech

FREEDOM of the press
Dangers to press freedom; review of Free and responsible press. Fortune 35:2-5 Ap '47
Free and responsible press; a general report on mass communication: newspapers, radio, motion pictures, magazines, and books by the Commission on freedom of the press. Fortune 35:supp 1-21 Ap '47; Discussion. 35:24+ Je '47
Hits government news agency plan. K. Cooper. Comm & Fin Chr 166:532 Ag 7 '47
No peace without freedom of press. H. McNeil. Comm & Fin Chr 166:443 Jl 31 '47
Position of the press in a free society. A. Barth. Ann Am Acad 250:82-8 Mr '47
Three-year study finds advertising influence on press freedom is negligible. Ptr Ink 218: 83+ Mr 28 '47
Whose freedom of the press is it? H. A. Wallace. Comm & Fin Chr 165:135+ Ja 9 '47

FREEDOM train
Freedom train on year-long tour; with schedule to March 1, 1948. il Ry Age 123:565-6 O 4 '47
Freedom train set for nationwide tour. il Ry Age 123:332-3 Ag 23 '47
Freedom train well protected physically and by insurance. Nat Underw 51:13 O 9 '47

FREENESS testing. See Paper making—Freeness testing

FREEZERS
Evaluating food freezing methods. G. W. Meek and U. R. W. Green, jr. il diags Refrig Eng 53:391-5+ My '47; Same cond. with additional table and diags Food Ind 19:1212-17+ S '47
Freezer storage effect on fresh meat quality. J. M. Ramsbottom. bibliog il Refrig Eng 53:19-23 Ja '47
Warm up on freezers; sales guide. il Elec West 98:95-8 Ap '47

FREEZERS, Domestic
Home food freezers. R. H. Bishop. il diags Refrig Eng 53:1-12 sec 2 Ja '47
Manuals arm Deepfreeze men for tooth-and-nail selling; Motor products corporation. F. F. Duggan. Sales Management 59:124+ S 15 '47
Prolonging warmup time in home freezers during power outage. E. C. McCracken and others. Refrig Eng 54:335-8+ O '47
Test sale conducted on home freezers. Refrig Eng 52:439 N '46
Will planned cold canvass pay out in selling Deepfreeze units? G. H. Smith. il Sales Management 58:37-9 Ja 15 '47

Advertising
How we changed over to hard-selling copy; Deepfreeze division, Motor products corp. R. V. Newbell. il Ptr Ink 217:34 D 27 '46

FREEZING
Air blast quick freezing. R. Gubser. Refrig Eng 53:23 Ja '47
Cold storage rooms converted to quick freezers. J. F. Stone. il diags Food Ind 19:462-3 Ap '47
Compressed air to prevent freezing in open-air filter plant units. Eng N 139:403 S 18 '47
Effect of freezing on the stability of colloidal dispersions; silica sols; preliminary report. F. Hazel. bibliog diag J Phys & Colloid Chem 51:415-25 Mr '47
Evaluating food freezing methods. G. W. Meek and V. R. H. Green, jr. il diags Refrig Eng 53:391-5+ My '47; Same cond. with additional table and diags Food Ind 19:1212-17+ S '47
Flash freezing of foods. L. C. Mazzola. il diags Food Ind 18:1841-5+ D '46
Food frozen by evaporation. Bsns W p64+ D 14 '46
Freeze-drying plasma; patent. Food Ind 19: 559-60 Ap '47
Freezing can handicap fire protection. Nat Safety N 55:37 Ja '47
Freezing marine products in Texas. W. R. Woolrich, jr. il map Refrig Eng 54:222-5 S '47
Freezing rates of fruits and vegetables at various air velocities. W. R. Phillips. bibliog Refrig Eng 53:401-3 My '47
How jellied cranberry sauce is preserved by freezing. M. M. Boggs and G. Johnson. il Food Ind 19:1067-9+ Ag '47
Locker plant operators have many troubles becoming food processing plants. N. Orr. il Food Ind 19:760-2 Je '47
New freezing tunnel speeds frozen food output; Consumers packing co. of Lancaster, Pa. il Sheet Metal Worker 37:58+ N '46
Preservation of plasmodium vivax by freezing. G. M. Saunders and V. Scott. bibliog Science 106:300-1 S 26 '47
Prevention of pilot regulator freezing. diag Am Gas Assn Mo 29:31 Ja '47
Psychrometry of air blast food freezing systems. G. W. Meek. diags Refrig Eng 53: 309-10 Ap '47
Quick freezing of cores; practical method of preserving the fluid content. J. D. Wisenbaker. Oil & Gas J 45:275-6+ Ja 25 '47; Same. Pet Eng 18:75+ Ja '47
Regulation of food freezing action. W. J. Finnegan and T. F. Carter. bibliog il Refrig Eng 54:132-4+ Ag '47
Stability of synthetic rubber dispersions; coagulation of neoprene latices by freezing. H. W. Walker. bibliog diag J Phys & Colloid Chem 51:451-60 Mr '47
Temperature of freezing affects tenderness of beef. R. L. Hiner and O. G. Hankins. il Food Ind 19:1078-81 Ag '47
Undercooling retards freezing of foods in cartons; freezing time of canned beans. il diags Food Ind 19:1226-8 S '47
See also
Coal—Freezing
Concrete—Freezing
Food, Frozen
Refrigeration and refrigerating machinery
Rubber—Freezing
Soils—Freezing
Water pipes—Freezing

FREEZING points
Changes in fats and oils during freezing and thawing. Food Ind 19:632-3 My '47
Coördination compounds of boron trichloride; systems with the propyl chlorides. D. R. Martin and A. S. Humphrey. bibliog J Phys & Colloid Chem 51:425-30 Mr '47
Cryoscopic evidence for micellar association in aqueous solutions of non-ionic detergents. E. Gonick and J. W. McBain. bibliog Am Chem Soc J 69:334-6 F '47
Determination of water in phenol. L. R. Pollack. bibliog Anal Chem 19:241-2 Ap '47
Freezing point of pure phthalic anhydride. D. E. Debeau. Am Chem Soc J 68:2725-6 D '46
Phaset relations in heat transfer salt systems. J. Alexander, jr. and S. G. Hindin. diags Ind & Eng Chem 39:1044-9 Ag '47
Purification, purity, and freezing points of 7 heptanes, 16 octanes, 6 pentenes, cyclopentene, and 7 C_9H_{12} alkylbenzenes of the API-standard and API-NBS series. A. J. Streiff and others. pl J Res Nat Bur Stand 37:331-78 bibliog(p337) D '46
Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47
Undercooling retards freezing of canned foods; data sheets. Food Ind 18:513-17, 866-9, 1034-7, 1370-1, 1716-17; 19:188-90 Ap, Je-Jl, S, N '46, F '47

FREIGHT, Perishable
Dry ice refrigeration for air-borne perishables. D. E. Cox and H. W. Rahn. bibliog il Refrig Eng 53:404-7 My '47
See also
Food—Transportation
Refrigerator cars

FREIGHT airplanes. See Airplanes, Freight

FREIGHT and freightage
See also
Airlines—Freight service
Airplanes, Freight
Bills of lading
Freight cars
Freight handling
Freight ships
Motor trucks in freight service
Packing for shipment
Railroads—Freight
Shipment of goods
Shipping
Transportation

Claims
Carrier liable for goods stolen at warehouse not selected by owner. East Underw 48:22 Ag 15 '47

FREIGHT car service
Bad car situation. W. C. Kendall. Ry Age 122:464-5 Mr 1 '47
Beating the boxcar shortage. il Factory Management 105:65 Ap '47
Boost in freight car output; abstract. W. C. Kendall. Ry Age 123:746+ N 1 '47
Bouquets and ripe tomatoes; representatives of traffic profession say what they think of railroad service. L. B. Fitzgerald and others. Ry Age 122:980-7 My 17 '47
Box, hopper and reefer supply inadequate. C. B. Peck. il Ry Age 122:25-7+ Ja 4 '47
Car service division makes annual report. Ry Age 122:372-3 F 15 '47
Car service hearing opens before I.C.C. Ry Age 122:624-6 Mr 22 '47
Car-service inquiry launched by I.C.C. Ry Age 122:154 Ja 11 '47
Car shortage caucus. Ry Age 122:1131+ My 31 '47
Car shortage plagues shippers. Bsns W p19-20 F 8 '47
Comments on car supply, Department of justice and working rules. F. G. Gurley. Ry Age 122:1167 Je 7 '47
Cooperation is the key to progress; leaders report on how things are going and how the future looks. W. T. Faricy and others. Ry Age 122:976-9 My 17 '47
Erroneous car story challenged. W. T. Faricy. Ry Age 122:803+ Ap 19 '47
Faricy assails Berge views on car supply. Ry Age 122:1176+ Je 7 '47
Felton, Johnson, I.C.C. heard in car inquiry. Ry Age 122:330+ F 8 '47
Few cars freed by faster freights; abstract. W. C. Kendall. Ry Age 123:370-1 Ag 30 '47
Fletcher and Kendall heard in car inquiry. Ry Age 122:421-4 F 22 '47
Freight car pinch due to ease. il Bsns W p 19-20 O 18 '47
Freight-car program gets slow start. il Ry Age 122:1024-8+ My 17 '47
Freight car shortage hearings. Ry Age 122:376-8 F 15 '47
Getting record wheat crop under cover. Ry Age 122:1265-6 Je 21 '47
Have railroad managers done a good job? il Ry Age 122:1004-11 My 17 '47
Hope in freight car pinch. il Bsns W p 15-16 Je 21 '47
Keep 'em moving. W. C. Kendall. Ry Age 122:237+ Ja 25 '47
Lemke bill rapped by Faricy, Kendall; measure would regulate car service. Ry Age 122:1322+ Je 28 '47
More record loadings. W. C. Kendall. Ry Age 123:163 Jl 26 '47
N.I.T.L. attacks freight car exports. Ry Age 121:925 N 30 '46
Need for freight cars is becoming more urgent. T. J. Murphy. il Dom Comm 35:43-8 Jl '47
Number of old-age freight-cars indicates roads still must do much replacement buying. Barron's 27:33 N 3 '47
Opposes I.C.C. order on car service rules. Ry Age 122:864-5 Ap 26 '47
Railroads could do more to save cars. E. Webber. Ry Age 123:48-50 Jl 12 '47
Railroads once more do the impossible; boxcar loading record. W. C. Kendall. Ry Age 121:929+ N 30 '46
Report lists favorable car factors. W. C. Kendall. Ry Age 122:663-4 Mr 29 '47
Scans readiness for foreign-relief; Krug report suggests retention of controls to maximize car utilization. Ry Age 123:708+ O 25 '47
Severest freight car shortage will hit nation in summer. D. I. Brown. il Iron Age 159: 108-10 Mr 13 '47
Shippers describe box car shortage. Ry Age 122:278-80 F 1 '47
Teamwork put roads over embargo hump. W. C. Kendall. Ry Age 121:1095-6 D 28 '46
Turning point near in box car shortage. W. C. Kendall. Ry Age 122:192-3 Ja 18 '47
Twelve months of tough railroading. il Ry Age 122:988-95 My 17 '47
Wait out car shortage; substitution of other forms of transportation. E. G. Plowman. Ry Age 122:459-60 Mr 1 '47
See also
Freight cars—Interchange
Refrigerator cars

Car load
How can l.c.l. service be improved? L. Leighton. Ry Age 122:1066-9, 1121-5+ My 24-31 '47
Mechanization of freight station simplifies l.c.l. handling. il Ry Age 123:438-40 S 13 '47
Roads out to keep big l.c.l. business. il Ry Age 122:1016-17 My 17 '47
Turn-around time vs. average load. H. Ashton. Ry Age 122:694-5 Ap 5 '47

FREIGHT cars
Better boxcars. Bsns W p32+ D 14 '46
Bulkheads for railroad freight cars. il Bsns W p34 Ag 30 '47
Causes of equipment failures; report of Car department officers' assn. Ry Mech Eng 121:562-3 O '47
Freight-car argument doesn't aid shippers. Barron's 27:9 O 13 '47
Freight car features urgently needing correction for improved service; abstract of committee report presented at annual meeting of Car department officers' association. Ry Age 123:663-4 O 18 '47
Freight-car program gets slow start. il Ry Age 122:1024-8+ My 17 '47
How much railroad plant is needed? S. M. Felton. Ry Age 122:1022-3 My 17 '47
Increasing the availability of equipment. M. Andresen. Ry Mech Eng 121:303-4 Je '47
L.M.S. wagon for roadstone transport. Engineer 182:452 N 15 '46
MacLean-Fogg threshold plate. il Ry Age 122: 802 Ap 19 '47
More fireworks due in collapse of freight car building program. G. F. Sullivan. Iron Age 160:111-13 O 2 '47
New fruit and vegetable vans for L.M.S. Engineer 183:543 Je 20 '47
Pennsylvania devises special-device merchandise car; load-securing devices virtually eliminate in-transit damage. il Ry Age 123: 654 O 18 '47
Progressive die produces safety runway for freight cars. J. A. King. il diags Am Mach 91:128-32 N 6 '47
Railroad freight car exports. Manuf Rec 115: 72 N '46
Rails fear too many freight cars; shortages are partly reluctance to buy. R. M. Bleiberg. Barron's 27:7 Mr 3 '47
Steel industry voluntarily agrees to aid freight car program. G. Hardy. Iron Age 159:102-3 F 13 '47
See also
Coal cars
Draft gears
Dump cars
Freight car service
Loading and unloading—Cars
Refrigerator cars
Stock cars
also Car department officers' association

Design
Freight-car designs need revision. P. P. Barthelemy. Ry Mech Eng 121:301-3 Je '47
Practical suggestions on freight car design. Ry Mech Eng 121:305 Je '47

FREIGHT cars—*Continued*

Floors

Lehigh Valley installs nailable steel flooring. il diags Ry Mech Eng 121:475-6 S '47

Interchange

A.A.R. car interchange and billing rules; report of Car department officers' assn. Ry Mech Eng 121:559-62 O '47

A.A.R. for rejection of punitive per diem. Ry Age 123:65+ Jl 12 '47

I.C.C. prescribes $2 per diem rate. Ry Age 123:247-8+ Ag 9 '47

Meaning of the interchange rule changes. R. W. Hollon. il diags Ry Mech Eng 121: 183-5+ Ap '47

Per diem bagatelle; increase would boost the number of freight cars on line. J. M. Johnson. Ry Age 122:1229+ Je 14 '47

Punitive per diem of $5 is proposed; Short lines heard on per diem charge. Ry Age 122:1275-7 Je 21 '47

Railroads oppose punitive per diem. Ry Age 122:1085+, 1138-9 My 24-31 '47

Two dollars per diem order appealed to courts. Ry Age 123:537+ S 27 '47

Loading rules

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Lubrication

Hot boxes in freight service. H. R. Longhurst. il Ry Mech Eng 121:19-21 Ja '47

Manufacture

A.C.F. assembly line for welded cars; illustrations with text. Ry Mech Eng 121:408-9 Ag '47; Ry Age 123:188-9 Ag 2 '47

Assembling box cars at Reading. il Ry Mech Eng 121:462-4+ S '47

Missouri Pacific spends $750,000 on new shop to build freight cars at DeSoto, Mo. il Manuf Rec 116:46 Ap '47

Welded freight car construction. R. L. Rex. il Welding J 25:1043-8 N '46; Same cond. Ry Mech Eng 121:132-6 Mr '47; Discussion. W. B. Brooks. 121:167-8 Ap '47

Numbering

Car numbers should have a meaning. W. M. Foster. Ry Age 123:405-6 S 6 '47

Prices

Freight car prices; tabulation. Ry Age 122: 78 Ja 4 '47

Repair

Improving the car situation. C. N. Kittle. Ry Mech Eng 121:299-301 Je '47

See also
Freight cars—Interchange

Statistics

97,730 freight cars ordered in 1946. F. C. Miles. il Ry Age 122:102-6 Ja 4 '47

FREIGHT cars, Aluminum

Illinois Central builds aluminum refrigerator. il diags Ry Age 121:875-9 N 23 '46; Same. Ry Mech Eng 120:645-8+ D '46

Lightweight convertible refrigerator cars. il diags Product Eng 18:90-2 Ap '47

FREIGHT cars, Steel

Lighter and more durable freight cars; combining high-strength steels and welded construction. A. T. Cox. il Ry Age 122:592-3 Mr 22 '47

Milwaukee's 40-ft. 6-in. 50-ton welded box cars. il Ry Age 122:703-4 Ap 5 '47; Same. Ry Mech Eng 121:173-5 Ap '47

New York Central 70-ton covered hopper cars. il plans diags Ry Mech Eng 121:233-5 My '47

Pullman-Standard delivers first box cars built to P-S-1 design. il Ry Age 123:733-6 N 1 '47

Santa Fe stainless steel refrigerator car is placed in test service. il Ry Age 122: 273-5 F 1 '47; Ry Mech Eng 121:53-5+ F '47

Steel for 7000 new freight cars monthly to be provided by mills. Steel 120:65+ F 10 '47

Steel mineral wagon construction at the L.M.S. works. il Engineer 184:339-41 O 10 '47; Engineering 164:367-8, 372 O 17 '47

FREIGHT claims. See Freight and freightage—Claims; Railroads—Claims; Shipping—Claims

FREIGHT forwarders. See Forwarding companies

FREIGHT handling

C.N.R. fights freight loss with new weapons. il Ry Age 123:109-10 Jl 19 '47

Materials handling developments on the Great western railway. il Mech Handling 34:414-16 Ag '47

Mechanization of freight station simplifies l.c.l. handling. il Ry Age 123:438-40 S 13 '47

Mechanized goods depot; Consolidated freightways, inc. H. G. Jarman. il Mech Handling 34:370-3 Jl '47

Perpetual motion; conveyor system handles 1½ million lb. at freight terminal; Consolidated freightways inc. il Steel 120:124 Ap 28 '47

Railroad container engineer and shippers; abstract. W. R. White. Ry Age 122:936 My 10 '47

Saving time at terminals. il Ry Age 122:1018-21 My 17 '47

Speeding deliveries and cutting claims; second annual Industrial packaging and materials handling forum and exposition, Chicago, April 20-May 1. il Ry Age 122:934-6 My 10 '47

See also
Airplanes, Freight
Cargo handling
Freight houses
Loading and unloading—Cars
Railroads—Freight
Railroads—Loading rules
Railroads—Terminals

FREIGHT houses

Big freighthouse comes back to life; structure on the Katy at St Louis remodeled and re-equipped. il plans Ry Age 121:914-18 N 30 '46

Loud-speakers expedite operations in Missouri Pacific freighthouse. il plan Ry Age 123:198-9 Ag 2 '47

FREIGHT rates

Process equipment cost estimation; equipment freight cost. Chem Eng 54:125 My '47

See also
Railroads—Rates
Shipping—Rates

FREIGHT ships

C1-M-AV1 design. il plans Marine Eng 52: 56-64 Je '47

Cargo ships; standard vessels built during the war. W. T. Butterwick and W. M. Morison. Elec R (Lond) 139:771 N 15 '46

Converted corvette Camco. J. A. McAleer. il Marine Eng 52:95-6 Mr '47

Converting the LST to a coastwise cargo carrier. R. N. Herbert. plans diags Marine Eng 52:70-5 F; 88-91 Mr '47

Design and power of the Great Lakes bulk cargo carrier. L. A. Baier. Marine Eng 52:79-81 Ag '47

Dual-draft freighter Angèle Higgins. C. M. Jones. il diag Marine Eng 52:67-8 Ap '47

European refrigerated ships. il Marine Eng 52:83-5 O '47

Foreign interests buying prewar American flag ships. Marine Eng 52:81-4 Mr '47

Improved arrangement of accommodation for modern cargo vessels; discussion of paper by J. E. Church. Engineering 163:271 Ap 4 '47

Lake freighter, E. J. Block, converted to Diesel-electric propulsion. B. C. Dennison, jr. il plans diag Marine Eng 51:100-9 N '46

Maxspeed cargo-winch drive on the freighter, Angèle Higgins. M. A. Whiting. il diags Marine Eng 52:69-72 Ap '47

Modern Great Lakes freighter. R. C. Stanbrook. Marine Eng 52:73-5 Ap '47

New design C3-S-DB3 cargo ship. il plan Marine Eng 52:56-7 F '47

New Diesel freighter on Puget Sound. H. J. Barbour. il Marine Eng 52:85-7 Mr '47

Self propelled Diesel and Diesel electric deck whirleys. il Diesel Power 25:50-2 Mr '47

Service performance of S.S. Sussex Trader. Engineering 164:320 O 3 '47

United fruit company adds nine Yaque class reefers to its fleet. il plans diag Marine Eng 52:54-64 S '47

FREIGHT ships—*Continued*
United Fruit refrigerated cargo ships. M. L. Sellers. il plans diags Marine Eng 52:54-67 Ag '47
Vessels sold under provisions of Merchant ship sales act of 1946. Marine Eng 52:58-62 F '47
See also
Merchant marine
Ore ships
Tank ships
Train ferries

FRENCH CANADIANS
French Canadians. B. K. Sandwell. Ann Am Acad 253:169-75 S '47

FRENCH INDO-CHINA. See Indo-China, French

FRENCH literature
Bibliography
Bibliographical sources for contemporary French literature. T. V. Benn. J Doc 3:69-80 S '47
European imprints for the war years received in the Library of Congress and other federal libraries; French imprints, 1940-1945. 284p G. E. Stechert, 31 E. 10th st, New York 3 '46

FRENCH tapestry. See Tapestry, French

FRENCH WEST AFRICA
Commercial policy
Import and export programs for 1947. For Comm W 27:17 Ap 19 '47

FREON. See Chlorofluoromethanes

FREON 12. See Dichlorodifluoromethane

FREQUENCY analyzers
Automatic low frequency analyzer. I. Barbour. bibliog il diags R Sci Instr 18:516-22 Jl '47
Frequency analysis of electroencephalograms. F. A. Gibbs and A. M. Grass. bibliog Science 105:132-4 Ja 31 '47
Wide-range double-heterodyne spectrum analyzers. L. Apker and others. il diags Inst Radio Eng Proc 35:1068-73 O '47

FREQUENCY changers
Electrical-angle measurement on motor and generator determines load limit. K. J. Granbois. il diags Power 91:154-6 Mr '47
Electronic frequency converters for induction melting furnaces. S. R. Durand. il Iron Age 160:64-7+ S 25 '47
Parallel operation of aircraft alternators using frequency changers. O. E. Bowlus and P. T. Nims. il diags Elec Eng 66:463-6 My '47
Simple 10-meter converter. C. W. Roeschke. il diag Radio N 37:56+ F '47
Superregenerative frequency converter. P. V. Trice and M. Barat, jr. il diag Radio N 37:39+ F '47

FREQUENCY control
Adjustable frequency control of high-speed induction motors. G. W. Heumann. diags Elec Eng 66:576-9 Je '47
Variable-speed constant-frequency alternater. J. W. Crooks, jr. diags Elec Eng 66:882-4 S '47

FREQUENCY distribution (statistics)
Frequency distribution represented as the sum of two Poisson distributions. W. Schilling. bibliog Am Stat Assn J 42:407-24 S '47
See also
Histograms

FREQUENCY dividers
Inductance-capacitance oscillator as a frequency divider. E. Norrman. il diags Inst Radio Eng Proc 34:799-803 O '46

FREQUENCY measurement
Calibrating laboratory standards against WWV. G. P. Wilson. Electronics 20:190+ F '47

FREQUENCY meters
Electronic frequency meter and speed regulator. E. Levin. il diags Elec Eng 65:Trans 779-86 D '46
Frequency meter for 50 to 600 mc. J. W. Whitehead. il diag Electronics 20:148+ Ap '47
Frequency meter for random or uniformly spaced pulses. H. L. Schultz. diags R Sci Instr 18:223-5 Ap '47
Microwave frequency standard. R. G. Talpey and H. Goldberg. diags Inst Radio Eng Proc 35:965-9 S '47
New frequency recorder; abstract. J. E. Allen and W. B. Hess. Power 91:175-7 Mr '47
Shf heterodyne frequency meter. C. D. Jeffries. il diags Electronics 20:134-7 Ap '47
Tachometric audio-frequency meter. E. Kasner. il diags Electronics 20:121-3 F '47

FREQUENCY modulation. See Radio frequency modulation

FREQUENCY modulation association
New radio association. Dom Comm 35:85 My '47

FREQUENCY modulation receivers. See Radio receiving apparatus—Frequency modulation receivers

FREQUENCY modulation transmitters. See Radio transmitters—Frequency modulation transmitters

FREQUENCY modulators
Modulation in communication. F. A. Cowan. il diags Elec Eng 66:919-24 S '47

FRESH water fauna
Effects of DDT mosquito larviciding on wildlife; effects on surface organisms of the routine hand application of DDT larvicides for mosquito control. C. M. Tarzwell. fold table Pub Health Rep 62:525-54, pl 1-2 Ap 11 '47

FREUND reaction
Preparation and identification of alkylcyclopropanes; 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane. J. D. Bartleson, R. E. Burk and H. P. Lankelma. bibliog Am Chem Soc J 68:2513-18 D '46

FREY, John W. 1889-
Named API director of marketing. por Nat Pet N 38:11 D 11 '46

FRICTION
Explaining how to do your own friction testing and figuring. W. F. Schaphorst. diag Paper Ind 29:252 My '47
External floating friction shoes; theoretical analysis and design. A. C. Rasmussen. diags Product Eng 18:119-21 O '47
Fluid flow friction factors for pipes, valves and fittings. V. L. Streeter. diag Product Eng 18:89-91 Jl '47
Friction coefficients in a large tunnel. G. H. Hickox and others. bibliog il plan diags Am Soc C E Proc 73:451-70 Ap '47; Discussion. 73:973-4, 1122-38, 1307-9, 1450-4 Je, S-N '47
Friction effects in river models. T. A. Epstein. Eng N 138:880 My 29 '47
Friction in pipes. A. B. Stickney. Refrig Eng 53:129-31 F '47
Friction loss and heat balance in viscous flow between plates. O. E. Teichmann. diags Product Eng 18:146-50 Ag '47
Frictional properties of oil-seal materials. P. G. Forrester. il diags Engineering 164:121-4 Ag 8 '47
Frictional properties of some lubricated bearing metals; abstract and discussion. P. G. Forrester. Engineer 184:346-8 O 10 '47
Frictional properties of wool and other textile fibres. E. H. Mercer and K. R. Makinson. bibliog diags Textile Inst J 38:T227-40 My '47
Hydraulic friction chart; data sheet. P. J. Potter. Power 91:355 My '47
Internal floating friction shoes; analysis and application. A. C. Rasmussen. diags Product Eng 18:106-10 Jl '47
Internal friction blocks and shoes; analyses and applications. A. C. Rasmussen. diags Product Eng 18:133-8 Mr '47; Discussion. 18:161-2 Jl '47
Short review of surface finish in relation to friction and lubrication. D. Clayton. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 10):332-4 '45; Same. Engineering 159:215-16 Mr 16 '45
Simple method for studying friction. A. Turner. Science 105:414-15 Ap 18 '47
Some measurements of the friction of wool and mohair. A. J. P. Martin and R. Mittelmann. bibliog diags Textile Inst J 37:T269-80 D '46

FRICTION, Internal
Experimental evidence of the viscous behavior of grain boundaries in metals. T. Kê. bibliog diags Phys R 71:533-46 Ap 15 '47
Internal friction of zinc single crystals. I. H. Swift and J. E. Richardson. bibliog J Ap Phys 18:417-25 Ap '47

FRICTIONAL unemployment. See Unemployment—United States

FRIEDEL-CRAFTS reaction
Anomalous orientation in a Friedel-Crafts ketone synthesis. D. Papa, E. Schwenk and A. Klingsberg. bibliog Am Chem Soc J 68:2133-4 N '46
Friedel-Crafts reaction in the carbazole series. S. G. P. Plant and J. F. Powell. Chem Soc J p937-9 Jl '47
Friedel-Crafts reactions with organic dihalides. K. Sisido and H. Nozaki. bibliog Am Chem Soc J 69:961-4 Ap '47
Low-temperature polymerisation of *iso*butene by Friedel-Crafts catalysts. P. H. Plesch, M. Polyani and H. A. Skinner. diag Chem Soc J p257-63; Discussion. 263-6 F '47
Polymerisation of *iso*butene by Friedel-Crafts catalysts. A. G. Evans and M. Polanyi. Chem Soc J p252-6; Discussion. 256-7 F '47
Polymerisation of olefinic substances by Friedel-Crafts catalysts. J. P. W. Houtman. bibliog Soc Chem Ind J 66:102-3 Mr '47
Some observations on Friedel-Crafts reactions involving unsaturated ketones; 9-keto - 4b,5,6,7,8,8a,9,10 - octahydrophenanthrene. C. D. Gutsche and W. S. Johnson. bibliog Am Chem Soc J 68:2239-45 N '46
Some phenothiazine derivatives; course of the Friedel-Crafts reaction. R. Baltzly, M. Harfenist and F. J. Webb. bibliog Am Chem Soc J 68:2673-8 D '46
Studies in the imidazolone series; synthesis of a lower and a higher homolog of desthiobiotin and of related substances. R. Duschinsky and L. A. Dolan. bibliog Am Chem Soc J 68:2350-5 N '46
Synthesis of aromatic phosphonic acids and their derivatives; the derivatives of benzene, toluene and chlorobenzenes. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 69:2020-1 Ag '47
Tetraethylbiphenyl from the ethylation of ethylbenzene. J. V. Karabinos and J. F. R. Kuck, jr. bibliog Am Chem Soc J 69: 1223-4 My '47

FRIENDS, Society of
Biographical notices of printers and publishers of Friends' books up to 1750; a supplement to Plomer's dictionary. R. S. Mortimer. J Doc 3:107-25 S '47

FRIGATES. See Warships

FRITZ, John, medal
John Fritz medalists; list. Elec Eng 66:264 Mr '47
L. W. Chubb, 1947 John Fritz medalist; presentation by M. W. Smith; response by L. W. Chubb. Elec Eng 66:261-4 Mr '47

FROGS
Oxygen and air pressure effects upon the early development of the frog's egg. O. E. Nelsen. Science 106:295-6 S 26 '47

FRONTIER power company
Stock offered. Comm & Fin Chr 165:683 F 3 '47

FROST
Average dates of first killing frost in fall in U.S.; map. Bsns W p 19 S 27 '47

FROZEN beef. See Beef, Frozen

FROZEN cake. See Cake, Frozen

FROZEN fish. See Fish, Frozen

FROZEN food. See Food, Frozen

FROZEN food cabinets. See Food, Frozen—Cabinets

FROZEN food council, National. See National frozen food council

FROZEN food foundation, inc.
Frozen foods and the department store. G. H. Sullivan. il diags Mod Packaging 20: 108-12+ D '46

FROZEN food lockers. See Cold storage lockers

FROZEN fruit. See Fruit, Frozen

FROZEN ground. See Soils—Freezing

FROZEN meat. See Meat, Frozen

FROZEN milk. See Milk, Frozen

FROZEN oysters. See Oysters, Frozen

FROZEN pastry. See Pastry, Frozen

FROZEN pork. See Pork, Frozen

FROZEN potatoes. See Potatoes, Frozen

FROZEN poultry. See Poultry, Frozen

FROZEN sausage. See Sausage, Frozen

FROZEN vegetables. See Vegetables, Frozen

FRUCTOSE
Isosucrose synthesis. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 68: 2171-2 N '46
Levulose from sucrose. il Chem Ind 59:834 N '46
See also
Difructose anhydride

FRUDDEN, Conrad Erwin, 1887-
Sketch. por S A E J 55:25 Ja '47

FRUIT
It peels, blanches, cooks; fruits and vegetables processed in small batches. E. S. Stateler. il diag Food Ind 19:1053-5 Ag '47
Nutritive value of fresh fruits and fruit juices. V. L. S. Charley. Chem & Ind p220-4 Ap 26 '47
Sweetening from fruit; patent. Food Ind 19: 411 Mr '47
See also
Citrus fruit
Cooling of fruits and vegetables
Dates (fruit)
Fruit trees
Grapes
Oranges

Prepackaging
Apples; jumble-packed in Pliofilm-window carton. il Mod Packaging 20:129 Mr '47
Bagged cranberries; Ocean Spray turns out 165 a minute. il Mod Packaging 21:107+ S '47
Bagged oranges. il Mod Packaging 21:108-11 O '47
Glenmar farms, grower and packager. il Mod Packaging 20:93-8 D '46
Packaged produce without refrigeration; Purdue experiment. F. C. Gaylord and K. I. Fawcett. il Mod Packaging 20:124-8+ D '46
Prepackaging of produce. N. Allen. il Food Ind 19:51 Ja '47
Produce marketers survey pre-packaging to stem competition from frozen foods. B. Tolk. Ptr Ink 218:70 Ja 3 '47
Produce wastage; government survey of waste and spoilage of non-packaged produce at retail level. D. R. Stokes. Mod Packaging 21:120-4+ O '47
Refrigeration of prepackaged fruits and vegetables. C. O. Bratley. il Refrig Eng 52: 516-20+ D '46
Whither pre-packaging? views of a government marketing economist. F. L. Thomsen. Mod Packaging 20:132-4 N '46

Preservation
Effect of time and temperature of storage on vitamin content of commercially canned fruits and fruit juices (stored 12 months). D. S. Moschette, W. F. Hinman and E. G. Halliday. bibliog Ind & Eng Chem 39:994-9 Ag '47
How a service adds value to branded fresh produce; Brogdexing. il Sales Management 57:102-3 N 20 '46
Millions are lost from spoiled fruits and vegetables in self-service stores when refrigeration is not used. D. R. Stokes. Refrig Eng 54:355-8 O '47

Storage
See also
Apples—Storage

Transportation
Flying perishables to market. J. L. Nicholson. il Food Ind 19:786-9 Je '47
New fruit and vegetable vans for L.M.S. Engineer 183:548 Je 20 '47

FRUIT, Dried
Chilean production and exports of dried fruits. For Comm W 27:25 Je 14 '47

FRUIT, Dried—*Continued*
Currant, raisin, and fig industries, Greece. For Comm W 25:32-3 N 16 '46
Dried-fruit production, Australia; Canada's dried-apple production. For Comm W 28:21-2 S 20 '47
Investigations on use of sulphite dips in drying of peeled pears and peaches; abstract. E. C. Orton. Food Ind 19:997 Jl '47

FRUIT, Frozen
Freezing rates of fruits and vegetables at various air velocities. W. R. Phillips. bibliog Refrig Eng 53:401-3 My '47
Frozen foods; Wisbech produce canners. il Elec R (Lond) 140:51-3 Ja 10 '47

FRUIT culture
Control of cracking of fruit by rain. W. L. Powers and W. B. Bollen. il Science 105: 334-5 Mr 28 '47
Spray mixture useful for thinning apples after bloom. A. L. Kenworthy. Science 105: 238 F 28 '47

Accounting
Farm accounting procedures applied to the fruit grower. W. R. Barney. J Account 84: 291-8 O '47

FRUIT handling
How to palletize produce without using pallets; new clamp-lift device handles boxes of fruits and vegetables. il Food Ind 19: 1202-3 S '47

FRUIT juice extractors

Rating
Study of juice extractors. il Consumers Res Bul 19:5-6 Je '47

FRUIT juices
Fruit juices in British Columbia. F. E. Atkinson. Can Chem & Process Ind 31:337 Ap '47
Nutritive value of fresh fruits and fruit juices. V. L. S. Charley. Chem & Ind p220-4 Ap 26 '47
See also
Grape juice
Orange juice
Peach juice
Pineapple juice

Analysis
Electrometric indicator to replace starch in iodine titrations of sulphurous acid in fruit juices. M. Ingram. bibliog Soc Chem Ind J 66:50-4 F '47

Preservation
Effect of time and temperature of storage on vitamin content of commercially canned fruits and fruit juices (stored 12 months). D. S. Moschette, W. F. Hinman and E. G. Halliday. bibliog Ind & Eng Chem 39:994-9 Ag '47

FRUIT juices, Dried
See also
Orange juice, Dried

FRUIT sirups. See Sirups

FRUIT spreads. See Jelly, jam, etc.

FRUIT trade
Farm column; packaged quality deal. L. Haystead. Fortune 34:236+ D '46
Million carlots of fruits and vegetables go to market. W. W. Hubbell. il Dom Comm 35: 65-70 S '47
Report on fruit-preserving industry. For Comm W 27:24-5 Je 21 '47
See also
Citrus fruit
Produce terminals
United fruit company

Advertising
How Henry Cobb used advertising to turn $10 into $2,000,000. J. A. Murphy. il Adv & Sell 40:35+ F '47
Produce marketers survey pre-packaging to stem competition from frozen foods. B. Tolk. Ptr Ink 218:70 Ja 3 '47

Australia
Australian canned-fruit industry. For Comm W 28:28 Jl 19 '47

Canada
Canada's fruit situation. For Comm W 29: 24-5 O 4 '47

Chile
Chilean production and exports of dried fruits. For Comm W 27:25 Je 14 '47

Cuba
Fresh vegetable and fruit production and exports, Cuba. For Comm W 29:23 O 25 '47

Florida
Economic and housing survey of the Orlando metropolitan region. H. Hoyt. map J Land & Pub Util Econ 23:219-27 My '47

Washington (state)
Fruit cooperation; Washington state soft-tree-fruit industry. Bsns W p68-9 Ap 19 '47

FRUIT trees
Correcting deficiencies in fruit trees by inserting nutrient tablets. C. R. Thompson. Chem & Ind p426-7 N 30 '46

FRUIT waste
Ion exchange plant recovers sugar from fruit waste; Hawaiian pilot plant demineralizes 3,000 gals. of juice from pineapple shells daily. flow diags il Food Ind 18:1846-8+ D '46

FRYE, Jack, 1904-
Frye in Aniline post at strategic time. por Bsns W p35-6 Ap 19 '47

FRYING machines
Continuous frying under full automatic control; Baxter frozen French fried potatoes. flow diag il Food Ind 19:1342-6 O '47

FUCHSONE
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

FUCOSE
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47

FUEL
Coal's competitors gaining. Bsns W p17 D 7 '46
Disco co. plans to build a $3 million smokeless fuel plant. Iron Age 159:158 Je 19 '47
Fuel and the future conference; abstracts. Elec R (Lond) 139:605-8 O 18 '46; Electrician 137:1067-9 O 18 '46
Fuel and the future conference; report by W. R. Gordon. Can Min J 68:177-9 Mr '47
Fuel industry in transition; with financial statistics on leading companies. H. S. Coffin. il Mag of Wall St 79:306-8+ D 21 '46
Fuel technology in 1946. G. E. Foxwell. Chem Age (Lond) 56:85-8 Ja 11 '47
Fuels for American industry. W. H. Voskuil. Glass Ind 28:459-62+ S '47
Fuels of the future. A. J. Blackwood and others. il diags Sci Am 177:18-20, 72-4, 122-4, 162-4 Jl-O '47
Fuels used in Sweden. G. Egloff. Pet Eng 18:86+ F '47
Housing and fuel expenditures of city families. D. I. South. Mo Labor R 64:868-77 My '47
Industrial fuels of B.C. P. Borchard. Pulp & Pa of Can 48:74-6 O '47
New developments in fuels, steam power; abstracts of ASME papers. diags Power 90: 932-3 Mid-D '46
Our fuel supply; a look ahead. S. B. Flagg. il Mech Eng 69:131-4 F '47
Report on the investigation by Fuels and lubricants teams at the I. G. Farbenindustrie A. G. Leuna works, Merseburg, Germany. R. Holroyd, ed. 48pls U S Bur Mines Information Circ 7370:1-135 '46
Synthetic fuels promise to bolster petroleum reserves. P. C. Keith. Chem Eng 53:101-3 D '46
Synthetic fuels, the new frontier? excerpts from Pittsburgh consolidation coal company booklet. Pub Util 40:518-19 O 9 '47

FUEL—*Continued*
Unit fuel requirements at various efficiencies. Heat & Ven 43:82-3 N '46

See also
Airplane engines—Fuel
Automotive fuel
Benzol (commercial benzene)
Blast furnace gas
Boilers—Firing
Coal
Coal, Pulverized
Coke
Coke breeze
Coke-oven gas
Combustion
Diesel engines—Fuel
Firing
Fuel economy
Furnaces
Gas as fuel
Gas turbines, Aircraft—Fuel
Gasoline
Heating
Internal combustion engines—Fuel
Kerosene
Lignite
Liquid fuel
Locomotives—Fuel
Oil fuel
Peat
Petroleum coke
Pitch as fuel
Power plants—Fuel
Steel works—Fuel
Waste fuel

Bibliography

Abstracts of current literature and book reviews. Iron & Steel Inst J 155:145-6, 297-318, 453-80; 156:307-9 Ja-Mr, Je '47
Survey of literature on the manufacture and properties of iron and steel, and kindred subjects. Iron & Steel Inst J 152:1A-203A no 2 '45

Smokeless fuel

Production of smokeless fuel from semi-bituminous coal in Utah. Chem & Eng N 25:1052 Ap 14 '47

Tables, calculations, etc.

Combustion calculations for hydrocarbon fuels. H. R. Linden and D. F. Othmer. bibliog charts Chem Eng 54:115-19 Ap; 148-53 My '47

FUEL abstracts (periodical)
Fuel abstracts, compiled by Fuel research station of the Department of scientific and industrial research. Chem Age (Lond) 56: 474 Ap 19 '47

FUEL economizers
Economizer re-design stops leaks, cuts maintenance, boosts efficiency. J. B. Cotter. il diags Power Pl Eng 51:76-7 My '47
Where should relief valves be installed on economizers? J. F. Slavinsky; T. E. Corder. diag Power Pl Eng 50:111 D '46

FUEL economy
Comparisons between gas and electricity on the basis of coal economy. P. Schiller. bibliog Inst E E J 94 pt 1:355-63; Discussion. 364-70 Ag '47; Elec R (Lond) 140:433-4 Mr 21 '47
Electricity generation and fuel utilization. W. Warren. Inst E E J 94 pt 1:135-7 Mr '47
Eliminating fuel waste. H. D. Elfreth and A. MacHarg. Heating-Piping 19:86+ O '47
From the plant constructor's angle; consideration of bulletins of Fuel efficiency committee of the coking industry. D. T. Barritt and T. C. Finlayson. Gas J (Lond) 248:939-40+ N 27 '46
Fuel economy conference; abstracts from papers read at the Hague. Electrician 139: 759-60, 847-8 S 12-19 '47; Elec R (Lond) 141:407-9 S 12 '47
Fuel economy conference, The Hague. Engineering 164:281, 328-9, 377-8, 427 S 19, O 3, 17, 31 '47
Fuel economy in a small factory; abstract. V. G. Jenner. Chem & Ind p150 Mr 22 '47
Fuel economy in coal carbonization. T. C. Finlayson. bibliog Gas J (Lond) 252:43-6 O 1 '47
Fuel economy with slurry dryer. H. Kronstad. diags Rock Prod 49:94+ N '46
Fuel efficiency; abstract. E. V. Evans. Chem Age (Lond) 55:673 N 30 '46
Fuel efficiency scheme; Powell Duffryn's new activities; abstract. R. Foot. Chem Age (Lond) 56:318 Mr 15 '47
Fuel forecast and what to do about it. K. Steiner. il Heating-Piping 19:78-80 O '47
Fuel saving hints for plant operators. Chem Age (Lond) 56:10 Ja 4 '47
Fuel utilization in iron and steel works. N. H. Turner and F. A. Gray. Blast F & Steel Pl 34:1408-12+ N '46
Guide for reducing fuel consumption in commercial plants. J. F. Barkley and others. il 2pls diags U S Bur Mines Bul 466:1-168; pa 50c Supt. of doc. '47
Home insulation with mineral products. O. Bowles. U S Bur Mines Information Circ 7388:1-11 '46
How to estimate dollar savings by use of insulation to cut heat losses. Pet Processing 1:192 N '46
Possibilities of coal economies in gas-works. Gas J (Lond) 249:515-16 Mr 12 '47
Production and use of power and heat in textile manufacturing. il Rayon 28:565-7 O '47
Simon report rebutted; electricity the only all-purpose medium; abstracts. Elec R (Lond) 139:1051-2 D 27 '46; Electrician 137: 1829-30 D 27 '46
Trend in British coal utilization today. W. R. Gordon. Can Min J 67:1114-18 D '46
20 ways to save fuel. il Dom Eng 170:148-9+ O '47

See also
Fuel economizers

FUEL oil. See Oil fuel; Oil fuel industry

FUEL pumps. See Pumps, Fuel

FUEL research
Experiments on gas flow in producer fuel beds. M. L. Hughes. bibliog il Iron & Steel Inst J 156:371-9 Jl '47
Recent developments in fuel technology; Chem. & Met. report. flow diag Chem Eng 54:127-32 Ap '47
Report on the investigation by Fuels and lubricants teams at the Wintershall A. G., Lützkendorf, near Mücheln, Germany. H. Hollings. 7pls U S Bur Mines Information Circ 7369:1-21 '46
Trends in solid-fuel research. H. J. Rose. bibliog Mech Eng 69:823-6 O '47
William Arthur Bone; fuel technologist and chemist. A. C. Egerton. Chem Soc J p 1165-75 D '46

See also
Coal research
Gas research

FUEL supply
All fuels will be short. il Bsns W p 15-16 S 13 '47
Recent developments in fuel technology; Chem. & Met. report. flow diag Chem Eng 54:127-32 Ap '47

France

Fuel and power in France. E. G. Voiret. Chem Age (Lond) 56:129, 291-2 Ja 18, Mr 8 '47

Great Britain

National fuel service, is there a plan? E. Smith. Gas J (Lond) 251:32-3 Jl 2 '47

FUEL tanks. See Airplanes—Fuel tanks

FUJIWARA reaction
Colorimetric determination of carbon tetrachloride using a modified Fujiwara reaction. G. W. Rogers and K. K. Kay. bibliog J Ind Hygiene 29:229-32 Jl '47

FULLER, Margaret
Portrait. Fortune 35:136 My '47

FULLING
Milling cloth, from cell-wool blended wool; patent. Am Dyestuff Rep 36:249 My 5 '47

FULLING mills
Continuous-fulling mill gives increased output. diags Textile World 96:153 D '46
Improved fulling mill for wool fabrics. il Comp Air Mag 52:251 O '47

FULMER research institute
Fulmer research laboratory; new facilities for individual investigations. il Chem Age (Lond) 57:51 Jl 12 '47

FUMARIC acid

Analysis

Polarographic analysis of mixtures of maleic and fumaric acids. B. Warshowsky, P. J. Elving and J. Mandel. bibliog Anal Chem 19:161-4 Mr '47

FUMARONITRILE
Unsaturated nitriles; adducts of dienes with fumaronitrile. D. T. Mowry. bibliog Am Chem Soc J 69:573-5 Mr '47

FUMES
Exhaust unit for fume suppression. diag Iron Age 159:63 My 29 '47
Fume removal and ventilation of industrial buildings. B. B. Reilly. il diags Eng N 139: 529-31 O 16 '47
Fume scrubber effective on linseed oil kettles; Pease-Anthony scrubber. J. C. Dittmer. bibliog il diags Chem Eng 54:110-13 Mr '47
Fumes from asphalt oxidation; method of disposal. W. L. Nelson. Oil & Gas J 46:99 O 25 '47
Keep air clean; dusts, mists, fumes and gases, or vapors; permissible safe quantities and methods of control. C. H. Mehaffey. Am Mach 91:111-13 F 13 '47
Portable welding fume exhauster. il Engineer 182:401 N 1 '46
Removal of salt cake fume from sulphate recovery furnace stack gases by scrubbing. T. T. Collins, jr. and others. il diags Paper Tr J 124:45-9 Je 5 '47
Smoke, dust, fumes, and their fellow travelers. P. Sadtler. Chem & Eng N 25: 2827-8 S 29 '47

See also
Metal fumes

FUMIGANTS
Determination of fumigants; determination of low concentrations of methyl bromide. J. Russell. bibliog diags Soc Chem Ind J 66:22-6 Ja '47
Permeability of proofed fabrics to fumigants. F. P. W. Winteringham and A. Harrison. diag Soc Chem Ind J 65:409-12 D '46

FUMIGATION
Comparison of methyl bromide and hydrogen cyanide for the fumigation of empty bags in barges. W. B. Brown and S. E. Lewis. bibliog Soc Chem Ind J 65:241-5 S '46
Public liability insurance; operating a fumigating business using hydrocyanic gas; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11+ My 8 '47

FUNCTIONS, Bessel's. See Bessel's functions

FUNCTIONS, Potential. See Potential, Theory of

FUNCTIONS, Symmetric. See Symmetric functions

FUNGI
Chemistry of fungal antibiotics in relation to soil microbiology. J. C. McGowan. bibliog Chem & Ind p205-7 Ap 19 '47
Effect of fungi on cosmetics; abstract. G. Carroll. Oil Paint & Drug Rep 150:7+ D 9 '46
Nature and importance of physiologic specialization in phytopathogenic fungi. E. C. Stakman. Science 105:627-32 Je 20 '47
Production of antibiotics by fungi; javanicin, an antibacterial pigment from fusarium javanicum. H. R. V. Arnstein and A. H. Cook. Chem Soc J p 1021-8 Ag '47

See also
Mildew
Molds (botany)

Culture mediums
Culture medium for the primary isolation of fungi. M. L. Littman. il Science 106:109-11 Ag 1 '47

Dictionaries
Dictionary of the fungi. G. C. Ainsworth and G. R. Bisby. 2d ed 431p $4.60 Imperial mycological institute, Ferry Lane, Kew, Surrey '45

FUNGI, Pathogenic
Studies of fungus antigens; quantitative studies of cross-reactions between histoplasmin and blastomycin in guinea pigs. A. Howell, jr. bibliog Pub Health Rep 62: 631-51 My 2 '47

See also
Ringworm

FUNGICIDAL paint. See Paint, Fungicidal

FUNGICIDES
Action of substituted salicylaldehydes on bacteria and fungi. L. C. Felton and J. H. Brewer. Science 105:409-10 Ap 18 '47
Agricultural fungicide; Good-Rite. Sci Am 176:261 Je '47
Effect of fungicides on natural and synthetic rubber. J. L. Stief, jr. and J. J. Boyle. Ind & Eng Chem 39:1136-8 S '47
Esters of 4-hydroxybenzoic acid and related compounds; methods for the study of their fungistatic properties. J. M. Vincent. bibliog Soc Chem Ind J 66:149-55 My '47
Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47
Fungicide tests told in army report. Oil Paint & Drug Rep 150:56 D 23 '46
Goodrich develops new agricultural chemical, Good-Rite; basic material is polyethylene polysulphide. Oil Paint & Drug Rep 150:54 D 2 '46; Chem Eng 53:143 D '46; Chem Ind 60:76+ Ja '47
Method for evaluating the fungicidal properties of treated paper and paperboard. B. F. Shema. Paper Tr J 123:137-8 D 5 '46
Mildew fighting. il map Chem Ind 60:622 Ap '47
Mildewproofing protective coatings. A. Minich and M. Goll. il Paint Oil & Chem R 109: 6-7+ N 28 '46
New sales appeals born as chemists lick mildew menace. E. M. Kelley. il Sales Management 58:84-8 F 1 '47
Organic fungicides; preparation of some α-bromoacetamides. W. E. Weaver and W. M. Whaley. bibliog Am Chem Soc J 69: 515-16 Mr '47
Organic fungicides; preparation of some α-bromopropionamides. W. E. Waver and W. M. Whaley. Am Chem Soc J 69:1144-5 My '47
Petroleum products in agriculture; the role of petroleum in plant protection. L. W. L. Cole. bibliog Inst Pet J 33:203-13; Discussion. 213-18 Ap '47
Resistance of treated felt gasket materials to fungus attack. S. Berk. il Am Dyestuff Rep 36:541-3 S 22 '47
Wartime fungicide studies. Chem Ind 59:841 N '46

FUR
How to select a fur coat. M. Bachrach. il Consumers Res Bul 20:11-15 S '47

FUR, Plasticized
Beaver-like coats from resin-treated lamb skins. il Mod Plastics 24:110-11 N '46

FUR insurance. See Insurance, Fur

FUR trade

Great Britain
Fur market difficulties. Economist 152:82 Ja 11 '47

Norway
Decreased production. For Comm W 29:24 O 25 '47

FURACIN. See Nitrofuraldehyde semicarbazone

FURALDEHYDE. See Furfural

FURAN
Conversion of sucrose into furan compounds; some amidino-furans. F. H. Newth and L. F. Wiggins. Chem Soc J p396-8 Mr '47
Diazo reactions in the thiophene and furan series. C. D. Hurd and H. M. Priestley. Am Chem Soc J 69:859-64 Ap '47
Diene reaction of some furans. W. Herz. Am Chem Soc J 68:2732 D '46
Furan and tetrahydrofuran derivatives; synthesis and biological activity of a number of oxybiotin homologs. K. Hofmann and others. bibliog Am Chem Soc J 69:191-5 F '47
Furan and tetrahydrofuran derivatives; the synthesis of the sulfonic acid analogs of oxybiotin and homooxybiotin. K. Hofmann, A. Bridgwater and A. E. Axelrod. Am Chem Soc J 69:1550-1 Je '47
Furan arsenicals. J. F. Morgan and others. Am Chem Soc J 69:932-3 Ap '47
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47
Reaction of alcohols with dibenzoylethylene. P. S. Bailey and R. E. Lutz. Am Chem Soc J 69:498-9 Mr '47

FURAN—*Continued*
Reaction of some furan derivatives with formaldehyde and amine hydrochlorides. R. F. Holdren. Am Chem Soc J 69:464-5 F '47
Synthesis of 2-arylfurans. A. W. Johnson. Chem Soc J p895-9 O '46

FURANACRYLIC acid
Esters of 2-furanacrylic acid. P. D. Bartlett and S. D. Ross. bibliog Am Chem Soc J 69:460 F '47

FURFURAL
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Cobs go to town. il Chem Ind 61:209-10 Ag '47
Color formation in furfural systems. R. G. Rice, Z. I. Fertesz and E. H. Stotz. bibliog Am Chem Soc J 69:1798-800 Jl '47
Extractive distillation-separation by C_4 hydrocarbons using furfural. J. Happel and others. il Am Inst Chem Eng Trans 42: 1001-7 O-D '46
Furfural chemicals. Chem Eng 54:194 My '47
Furfural extractive distillation for separation and purification of C_4 hydrocarbons. C. K. Buell and R. G. Boatright. bibliog il diags Ind & Eng Chem 39:695-705 Je '47
Furfural is basis of new nylon process; abstracts. O. W. Cass. Oil Paint & Drug Rep 151:5+ Mr 31 '47; Mod Plastics 24:222-5 Ap '47
Furfural refining process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:154-5 Ap '47
Furfural solvent extraction; Texaco development corporation. flow diag Oil & Gas J 45:172 Mr 22 '47
Hydrogenation of furfuraldehyde to furfuryl alcohol and sylvan (2-methylfuran). J. G. M. Bremner and R. K. F. Keeys. diags Chem Soc J p 1068-80 Ag '47
Nylon from corncobs; du Pont's electrochemicals department develops adiponitrile from furfural. S. D. Kirkpatrick. il Chem Eng 54:100-1 Ap '47
Nylons from furfural. Rayon 28:386 Jl '47
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47
Pilot plant aids operation of furfural extraction unit. L. C. Brown. flow diag il Oil & Gas J 46:112-14 Je 14 '47
Quality of lubricating oils improved by new furfural plant in Kansas refinery. L. C. Brown and C. F. Tears. flow diag il Oil & Gas J 46:58-9+ Jl 12 '47; Pet Processing 2:492+ Jl '47
Solvent refining and dewaxing of lubricating oil. W. E. Skelton. flow diags il Oil & Gas J 45:137+ F 22 '47
Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47

Analysis
Analysis of furfural-water solutions. J. Griswold, M. E. Klecka and R. V. O. West, jr. bibliog diag Ind & Eng Chem Anal ed 18: 696-8 N '46

FURFURYL alcohol
Hydrogenation of furfuraldehyde to furfuryl alcohol and sylvan (2-methylfuran). J. G. M. Bremner and R. K. F. Keeys. diags Chem Soc J p 1068-80 Ag '47

FURNACE black. See Carbon black

FURNACE industry and trade
How to make home owners happy with a furnace. Sales Management 58:60+ Mr 1 '47

FURNACES
Continuous furnace brazing; how to select and operate furnaces. C. L. West. il diags Am Mach 91:98-100 Jl 31 '47
Control of vertical heaters in gasoline plant operation. J. M. Sappington. il diag Pet Refiner 26:89-91 Ag '47
Furnaceless heating and small gas furnaces. J. F. Waight and J. Palser. il diags Gas J (Lond) 250:344-6, 405+ My 14-21 '47
Header supports for furnaces; patent. P. J. Gaylor. diag Pet Processing 2:268 Ap '47
Oven vs. furnace construction for temperatures up to 1200°F. H. Gehnrich. Am Gas Assn Proc 1946:253-4
Radiant tubes. W. M. Hepburn. Am Gas Assn Proc 1946:266-8

See also
Blast furnaces
Cement kilns
Coke ovens
Cupola furnaces
Electric furnaces
Firing
Glass furnaces
Glass tanks
Kilns
Lime kilns
Oil burners
Open hearth furnaces
Refractory materials
Refuse incinerators

Atmosphere control
Carbo-nitriding of S.A.E. steel parts. W. H. Holcroft. il diags Metal Prog 52:380-6 S '47
Developments in the applications of controlled atmospheres; abstract. I. Jenkins. Materials & Methods 26:120-1 S '47
Equalized pressure mixing in automatic atmosphere generator. il diags Product Eng 18:94-6 Je '47
Furnace atmospheres cleaned with lithium. C. E. Thomas. Steel 119:104 D 23 '46
Prepared atmospheres; abstract. E. G. de Coriolis. Materials & Methods 24:1260+ N '46
Prepared atmospheres; codification of all furnace atmospheres. C. C. Eeles and M. E. Shriner. Steel 119:110-13+ D 2 '46; Excerpt (table). Metal Prog 52:256B Ag '47

See also
Furnaces, Heat treating—Atmosphere control

Firing
Utilization of producer gas in industrial furnaces. D. B. Hendryx. A S M E Trans 68: 877-82 N '46

Lining
Heat losses in furnace linings. J. D. McCullough. bibliog Am Gas J 167:29-32 Jl; 36-8 Ag '47; Same. Blast F & Steel Pl 35:817-23 Jl '47; Same. Pet Refiner 26:112-17 Jl '47
Workability index of fireclay refractories. Blast F & Steel Pl 35:1004+ Ag '47

FURNACES, Annealing
Annealing plant for steel strip at Newport; abstract and discussion. B. Jones and I. Jenkins. Engineering 162:568 D 13 '46
Convection annealing; large diameter tin plate coils; Dominion foundries and steel, ltd. W. F. Toerge. il diag Steel 121:130+ Jl 21 '47
High speed annealing of stainless bars and tubes. E. S. Kopecki. il diag Iron Age 160: 143-9 O 16 '47
New annealing ovens provide various economics; Canton malleable iron co. L. Belden. il Foundry 74:126 D '46
Silicon carbide radiant tubes for annealing furnaces. M. H. Luttropp. il Iron Age 160: 58-61 Ag 14 '47

FURNACES, Boiler
Air cooling extends furnace-wall life. il diags Power 91:631-3 S '47
Furnace explosions. A. H. Agaton. il Safety Eng 92:54-5 O '46
Furnace temperature control for large steam-generating units. O. de Lorenzi. Blast F & Steel Pl 35:724-9 Je '47
Horizontal furnace burns low-grade coal. Sci Am 176:173-4 Ap '47
Mineral wool insulates boiler water wall. il Elec World 126:84 D 21 '46
Progress in power engineering; pressure exchanger, new lightweight gas turbine, and ash-eliminating furnace. il Bsns W p64-7 D 7 '46
Redesigning boiler fireboxes. R. H. Wilder and K. Steiner. diags Heating-Piping 19: 69-72 Ja '47
Water arch furnace for Scotch boilers. il diags Power Pl Eng 51:122+ Ag '47
Waterwalls; a must with high boiler-water concentrations. M. H. Kuhner. diags Power 91:450-1 Jl '47

See also
Slag (in boilers)

FURNACES, Brazing
Furnace brazing. H. D. Hendrick. il diags Automobile Eng 37:365-71 O '47

FURNACES, Carburizing
Carburizing treatments; National cash register co. il Steel 119:101 N 18 '46
Continuous gas carburizing of steel without a gas generator. W. H. Holcroft and E. C. Bayer. il diags Materials & Methods 26: 92-3 O '47
Suspended carburization; method for holding charges in gas carburizing furnaces up to 72 hours. S. L. Widrig and others. diag Materials & Methods 25:65-8 F '47

FURNACES, Cupola. See Cupola furnaces

FURNACES, Electric. See Electric furnaces

FURNACES, Enameling
Larger furnaces to speed American Stove's enameling program. il Cer Ind 48:74-5 Mr '47
Porcelain enamel shop uses vapofiers 15 years. A. Vodicka. il Cer Ind 49:57 S '47

FURNACES, Forging
Forging failure caused by carbon pick-up due to heating in oil fired furnaces. M. B. Graham. bibliog il Iron Age 160:65-7 Jl 24 '47
Mechanised forge; Daniel Doncaster and sons. il Engineer 184:31-3 Jl 11 '47
See also
Electric furnaces, Forging

FURNACES, Foundry
Holding furnace keeps metal hot; illustrations with text. Foundry 75:230 N '47
Mechanized melting methods for foundries. A. W. Gregg. il diags Iron Age 159:60-5 My 8 '47
New equipment. il Iron Age 159:69-71 Mr 13 '47
1947 inventory of foundry equipment; melting furnaces. Foundry 75:[88-90] insert S8-10 Mr '47
Special refractories for metal melting. W. H. Henson. il Brick & Clay Rec 111:74+ Jl '47
Standard brass foundry practices. W. W. Young. Am Gas Assn Proc 1946:246-8; Same. Gas Age 98:26-7 N 28 '46; Same. Am Gas J 165:21-2 D '46
See also
Electric furnaces, Foundry; Furnaces, Iron founding

FURNACES, Heat treating
Advancements in industrial heat treating equipment. L. A. Lindberg. il Metal Prog 52:586-90 O '47
Continuous hardening, quenching, washing, drawing of forgings. il diag Steel 120:84+ Mr 24 '47
Continuous heating and heat treatment of bar stock and tubing. F. O. Hess. il Am Gas Assn Proc 1946:262-6
Fixture for handling work in heat treat furnace. S. Lapinski. diag Materials & Methods 25:133 Mr '47
Foundries and forge shops reduce heat treating costs. K. Rose. il Materials & Methods 25:100-2 Ap '47
Heat treating fasteners by the million; Tinnerman products inc. H. Chase. il Steel 120: 104-6+ My 5 '47
High-vacuum heat-treating furnace. il Mach 53:188 Jl '47
Mechanized furnaces. H. D. Hendrick. il diag Mech Handling 34:357-67, 448-9 Jl-Ag '47
Modern heat-treating methods in an automobile plant; Buick motor division, General motors corporation. C. H. Wick. il diags Mach 53:141-9 Ja '47
New equipment. il Iron Age 158:73-6 N 21 '46; 159:67-9 Mr 27 '47
Planning a toolroom heat-treating department. R. C. Onan. il plans diag Iron Age 160:40-4 Jl 31; 70-7 Ag 7 '47
Shortcuts in spring manufacture; William and Harvey Rowland, inc. W. F. Whiteman. il Steel 119:72-4 N 25 '46
Vertical normalizing furnace for strip steel. Iron Age 158:80 D 12 '46
See also
Electric furnaces, Heat treating

Atmosphere control

Bright hardening stainless steel; National cash register co. il Steel 119:80+ N 25 '46
Controlled atmospheres of city gas for heat treating steel; abstract. I. Jenkins. Materials & Methods 25:127 Je '47
Development of furnaces with recirculating atmospheres. J. Ade. il Metal Prog 52:594-8 O '47
Gas chemistry, its role in metallurgy. O. E. Cullen. il Steel 121:86-8+ Jl 7 '47
High-hydrogen atmosphere intensifies quench cracking tendency. C. A. Liedholm. il diags Metal Prog 51:414-19 Mr '47
Influence of water vapor and methane on the heat treatment of steel in a $CO:H_2$ gas atmosphere. H. M. Heyn. il diag Metal Prog 52:232-7 Ag '47
New developments in heat processing equipment. F. G. Daveler. il Gas Age 99:21-2 Mr 20 '47
New heat treating atmosphere producer for neutralene gas. A. G. Hotchkiss and H. M. Webber. flow diag il diag Iron Age 158: 48-55 N 21 '46; Same cond. Gen Elec R 49:21-7 N '46
Prepared atmospheres suitable for heat treatment of different materials; tabulation. Steel 119:112 D 2 '46
Prepared furnace atmosphere; use of lithium. C. E. Thomas. Am Gas Assn Proc 1946: 258-62
Use of controlled atmospheres to restore carbon to surface decarburized steels; abstract. O. E. Cullen. Iron Age 159:133 Ap 3 '47

FURNACES, Heating
Continuous heating and heat treatment of bar stock and tubing. F. O. Hess. il Am Gas Assn Proc 1946:262-6
Gas heating speeds seamless tube production; Babcock & Wilcox tube co. E. S. Kopecki. il diag Iron Age 159:64-8 Je 5 '47
Relation of refractory economy to combustion in steel mill furnaces. E. N. Hower. Iron Age 158:64 N 21 '46
Soaking pit operations; abstract. H. V. Flagg. Steel 121:110+ O 13 '47
Tensile testing at elevated temperatures; equipment for testing turbosupercharger and gas turbine parts. A. W. Brunot. il diag Steel 121:90-1+ Ag 4 '47

Atmosphere control

Air-fuel ratio controls oil-fired soaking pits. L. E. Browne. il Steel 119:68+ D 23 '46

FURNACES, Iron founding
Modern melting methods for malleable foundries. W. R. Jaeschke. il Foundry 75:72-5+ Mr '47

FURNACES, Laboratory
Petit four tournant de laboratoire. G. Pannetier. diags Chimie & Ind 57:250-1 Mr '47
See also
Electric furnaces, Laboratory

FURNACES, Metallurgical
Investigation of bubble-hearth process for production of sponge iron. E. P. Barrett and others. 6pls U S Bur Mines Rep of Invest 4092:1-15 '47
Output increased, maintenance reduced in new high temperature furnace; silicon carbide heating tubes and hearth roller. J. D. Knox. il diag Steel 120:99+ F 3 '47
Pilot-plant investigations production of sponge iron with producer gas. D. R. Torgeson and others. bibliog U S Bur Mines Rep of Invest 3994:1-42, pl 1-11 '46
See also
Blast furnaces; Cupola furnaces; Open hearth furnaces

Lining

Heat losses in furnace linings. J. D. McCullough. bibliog Blast F & Steel Pl 35:817-23 Jl '47

FURNACES, Non-ferrous melting
Adaptation of concrete mixers for other work; used as rotary furnace. il Engineer 183:339 Ap 18 '47
Ellipsoid melting furnace; abstract. A. J. G. Smith. Materials & Methods 25:128 Ja '47
Lead-melting furnace for cable sheathing. G. Aldred. il Elec R (Lond) 140:899-900 My 30 '47

FURNACES, Non-ferrous melting—*Continued*
Lead melting furnace for manufacture of cable sheathing. il Engineer 184:255 S 12 '47
Vacuum melting and casting of beryllium. A. R. Kaufmann and E. Gordon. diags Metal Prog 52:387-90 S '47

FURNACES, Open hearth. See Open hearth furnaces

FURNACES, Steel making
Crowe water cooled burner for steel mill furnaces. il Blast F & Steel Pl 35:862-3 Jl '47
Expanded tool steel facilities; Bethlehem steel co. R. J. Knerr and H. C. Bigge. il Steel 120:110+ Je 16 '47; Same cond. Iron Age 159:69-73 Je 5 '47
Furnace converts turnings into heavy melting stock. J. C. Sullivan. il Steel 120:124+ Je 23 '47

See also
Cupola furnaces
Electric furnaces, Steel making
Furnaces, Heating
Open hearth furnaces

Firing
Developments in the use of blast-furnace gas at the Port Kembla steelworks. H. Escher. il plans diags Iron & Steel Inst J 156:1-27 My '47

Lining
Comments on the German refractories industry as investigated in 1945. S. M. Phelps. diags Brick & Clay Rec 110:66-8+ Ja '47
Modern refractory practice. T. Firkin. Blast F & Steel Pl 34:1444, 1447 N '46
Refractories in 1946. L. A. Smith. il Blast F & Steel Pl 35:97-9 Ja '47
Relation of refractory economy to combustion in steel mill furnaces. E. N. Hower. Blast F & Steel Pl 35:260 F '47

FURNACES, Warm air
Dravo industrial heater. il Blast F & Steel Pl 35:380+ Mr '47
Jet-Heet furnace. il diag Sheet Metal Worker 38:65-6+ Ap '47
Research data on jet type heating points up efficiency; Jet-Heet furnace. W. J. King. Nat Pet N 39:37-8 Ap 9 '47
Rug drying with warm air heaters. il diags Sheet Metal Worker 38:94+ S '47
Warm air furnace, lightweight and efficient, builds directly into chimney; Mortemp company. il diags Arch Forum 87:158 S '47

Manufacture
Arc welding in furnace making. il Sheet Metal Worker 38:90 O '47
Mammoth furnace, arc welded. il Sheet Metal Worker 38:52 F '47

Testing
Bonnet output nomograph. G. S. MacLeod. Heat & Ven 44:94-5 O '47

FURNITURE
Furniture colors; Basic home furnishings color program. Bsns W p56 Je 28 '47
Help for the furniture customer; decorator's approach. C. H. Henders. J Retailing 22: 109-12 D '46
Modern furniture; new woods, colors used in Brooklyn store display. il Bsns W p62+ Ag 23 '47
New contemporary furniture offers wide selection, is designed for volume sales; Nelson designs. il Arch Forum 86:124-6 My '47
Three new furniture lines; by Robsjohn-Gibbings, Szoeke and Risom. il Arch Forum 86:116+ Ja '47

See also
Office furniture

Manufacture
Molded furniture; phenolic resin-bonded birch or maple veneers are molded. il Mod Plastics 24:188-9 Ap '47

Standards
Standard module used in design of furniture. il diags Ind Stand 17:268-71 N '46
Standards, labels used to protect quality of Australian furniture. Ind Stand 18:200 Ag '47

FURNITURE, Built-in
Built-ins with modern lighting combine utility with beauty. il Am Bld 69:131 F '47

FURNITURE, Metallic

Manufacture
Automatic handling aids plating success; Daystrom corporation. M. E. Kilroy. flow chart il Am Mach 91:84-7 Mr 27 '47

FURNITURE, Steel
Welded steel furniture; Simmons company. D. Raffone. il Welding J 26:761-6 S '47

FURNITURE factories
Bottleneck charts get first jobs done first; Kittinger company, Buffalo. J. Batson. Factory Management 105:138-9 Ja '47
Mechanization means handling is five times faster; Grand Rapids chair company. B. M. Baker. il Factory Management 105:97-9 Ag '47
Simple board and four-part form control materials flow; Kittinger co., Buffalo. J. Batson. il Factory Management 105:100-1 Mr '47

Employees
Wages in the metal furniture industry, Jan. 1947. D. L. Helm. Mo Labor R 65:446-9 O '47

Equipment
Welded steel furniture; Simmons company. D. Raffone. il Welding J 26:761-6 S '47

FURNITURE industry and trade
Color films teach new skills to retail furniture salesmen. R. R. Rau. il Sales Management 59:103-4+ S 1 '47
Furniture caution; buyers at Chicago show are wary. il Bsns W p66-8 Ja 18 '47
Furniture industry; its geography, anatomy, physiognomy, product. G. Nelson. il Fortune 35:106-11+ Ja '47
New films that speed sales training; National retail furniture association releases 15 color sound-slidefilms. il Am Bsns 17:26+ Ag '47
1947 sales at record high. il Bsns W p28+ Jl 19 '47

See also
Furniture stores

Advertising
$5,070 advertising builds $500,000 business in 1 year; direct mail and business publications teamed to sell furniture; food service equipment industry. W. H. Davis. Ptr Ink 219:36 My 30 '47
Home furnishings to get more national ads, point-of-sale promotion. H. E. Green. Ptr Ink 218:92+ Ja 10 '47
How to prepare a dealer-manufacturer omnibus promotion; 27-page ad introducing new line of Drexel furniture. S. S. Preston, jr. il Ptr Ink 220:34-5 Ag 8 '47
Stressing brand name in selling furniture; Morgan furniture company. N. S. Irwin. il Adv & Sell 40:50 S '47
Tags; midget mediums that carry a hefty sales load; Marcel Schulhoff & co.'s six criteria. il Sales Management 59:45-6 Ag 15 '47

Finance
Furniture dealers will need credit. L. Plummer. Banking 40:37+ Ag '47; Same abr. Comm & Fin Chr 166:231 Jl 17 '47
Installment loans on furniture profitable and safe for banks. R. R. Rau. Bankers Mo 64: 217 My '47
New York furniture sales show increase in credit use. Barron's 27:4 S 8 '47

Great Britain
Formula for furniture; with summary of Working party report and selected statistics. Economist 151:798-800, 811 N 16 '46
Furniture and exports. Economist 153:539 S 27 '47

Netherlands
Netherlands furniture industry scoring brisk advances. For Comm W 26:38 Ja 25 '47

Southern states
South's furniture industry expects long boom period. J. A. Daly. il Manuf Rec 116:44-5+ F '47

FURNITURE polish
Formulation of furniture polishes. D. Schoenholz. il Chem Ind 61:228-9 Ag '47

FURNITURE springs. See Springs (furniture)

FURNITURE stores
Developing advantages in a retail furniture store. C. W. Piehler. il Dom Comm 34:26-9 D '46
Furniture store in Los Angeles is designed for motorist attention and minimum cost. il plans diags Arch Forum 86:88-9 Ap '47
Furniture store in Schenectady, N.Y. undergoes both face-lifting and surgery to meet merchandising needs. il diags Arch Forum 86:116-17 Ap '47
New furniture floor for McCreery's. il plan diags Arch Forum 87:114-16 Jl '47

FURRIERS' customers insurance. See Insurance, Furriers' customers

FUSARIUM javanicum
Production of antibiotics by fungi; javanicin, an antibacterial pigment from fusarium javanicum. H. R. V. Arnstein and A. H. Cook. Chem Soc J p 1021-8 Ag '47

FUSED quartz. See Silica, Fused

FUSED salts. See Salts, Fused

FUSED silica. See Silica, Fused

FUSELAGE. See Airplanes—Fuselage

FUSES
Escapement mechanism; mechanical time fuse for shells. F. G. Kelly and J. L. Zar. il diags Machine Design 19:110-14 F '47
Investigations on delay-action fuses; operated by creep, under stress of lead or lead alloy. J. McKeown. diags Engineering 164: 97-101 Ag 1 '47
Optical proximity fuze. F. A. Zupa. il Machine Design 19:108-11 Jl '47
Radio proximity fuse. H. M. Bonner. il diags Elec Eng 66:888-93 S '47
Radio proximity-fuze development. W. S. Hinman, jr. and C. Brunetti. il diags Inst Radio Eng Proc 34:976-86 D '46
Rocket radio for moon to earth broadcasts foreseen. J. A. Hutcheson. Franklin Inst J 242:278 O '46

FUSES, Electric. See Electric fuses

FUSION, Heat of
High-temperature heat contents of V_2O_3, V_2O_4 and V_2O_5. O. A. Cook. Am Chem Soc J 69:331-3 F '47
Vapour pressure of phthalic anhydride. D. A. Crooks and F. M. Feetham. Chem Soc J p899-901 O '46

FUSSLER, Herman H.
Sketch. Special Lib 38:139 My-Je '47

FUTURES
Chicago board of trade adopts flexible margins. Comm & Fin Chr 166:1320 O 2 '47
Grain exchanges increase margin requirements. Comm & Fin Chr 166:1415 O 9 '47
Margin request shifts onus of high grain price. Barron's 27:38 Mr 17 '47
Sugar future trading in New York. J. C. Gardner. Comm & Fin Chr 166:717+ Ag 21 '47
Trading in metal futures. J. B. Baer. Comm & Fin Chr 166:716+ Ag 21 '47

See also
Exchanges
Speculation

FUZES. See Fuses

G

GCA. See Airplanes—Landing

G. G. HENDERSON memorial laboratory. See Glasgow university

GADGETS
Go West with a gadget. Fortune 35:151 My '47

GADOLINIUM
Neutron cross-section studies with the rotating shutter mechanism. T. Brill and H. V. Lichtenberger. bibliog diags Phys R 72: 585-90 O 1 '47

Isotopes
Neutron absorbing isotopes in gadolinium and samarium. R. E. Lapp and others. Phys R 71:745-7 Je 1 '47

GAGES
Adjustable gage sorts round stock accurately. B. Mogal. diag Am Mach 91:114 Ja 30 '47
Adjustable-length gage has many uses. R. F. Isetts. diag Am Mach 91:145 My 8 '47
Army ordnance-university gage laboratories. il Product Eng 18:137 My '47
Bryant gage for checking face squareness of threaded parts. il Mach 53:205 Ap '47
Built-up snap gages are simple and economical. R. Kaden. diag Am Mach 91:111 Ja 30 '47
Care and handling of gages in quality control; Adel precision products corporation. L. S. Schickle. il Factory Management 104: 153-6 D '46
Cylinder contour gage. il Sci Am 177:125-6 S '47
Deformeter gauges. G. E. Beggs, jr. il R Sci Instr 18:259-60 Ap '47
Design, construction, and use of some inspection gauges. L. H. Leedham. diags Inst Mech Eng J & Proc 153 (War emergency issue no 4):133-40, pl 1-2 '45
Dial snap gage. il Sci Am 175:275 D '46
Gauge for interchangeable bus chassis manufacture. il diags Engineer 183:166 F 14 '47
Gage for measuring taper per inch. H. Moore. diag Mach 53:179 Mr '47
Gauge for meter change gears. D. C. Calderwood. il Water & Sewage Works 94:R111 Jl '47
Hardest man-made material; boron carbide applied to metalworking operations. il Am Mach 91:122-4 Je 19 '47
Hartford finish gauge; patent for glass jars. diag Glass Ind 28:185-6 Ap '47
Hole gage features self-centralizing and readability. il diag Sci Am 177:35 Jl '47
Hydraulic gaging units check frame alignment. il diags Product Eng 18:96-7 Ja '47
Manvers adjustable plug gauge. il Engineer 183:547-8 Je 20 '47
Microinch machine setups provided by working gage blocks. H. J. Chamberland. il Steel 121:79+ Jl 28 '47
New accuracy attained in gaging metal wear. il diags Aviation W 47:21-2 Ag 4 '47; Mech Eng 69:672-4 Ag '47; Product Eng 18:172 S '47; Mach 54:158 N '47
Offset jaw and limit snap gage-block gages. A. J. Wormwood. diags Am Mach 91:145 Jl 17 '47
Pendulum gage. H. W. Cutting. diag Am Mach 91:105 Ja 2 '47
Shop manual on gage usage helps inspector and operator. W. P. Wehlau and D. Thorburn. il Am Mach 91:79-81 Ja 2 '47
Study of pigment dispersion, report no. 1; measurement of fineness of grind. il Paint Oil & Chem R 109:76-81 N 14 '46
Telescoping gage measures large gate valve threads. J. Proctor. diag Am Mach 91:130 Jl 3 '47
34th annual review number; layout and inspection. il Am Mach 91:184-91 Ja 16 '47
Three-legged plug gage has wide adjustability. C. H. Smith. diags Am Mach 91:137 Ap 10 '47
Toggle clamp base makes vernier height gage. L. L. Gould. diag Am Mach 91:111-12 Mr 29 '47
Universal clamp extends surface gage applications. H. Tate. diags Am Mach 91:139 N 6 '47
Use of instruments for controlling quality. J. Manuele. il Mach 53:156-9 F '47
V-grooves coined at helix angle in thread gages. C. Ricker. il diags Am Mach 91:100 Ja 2 '47

See also
Measuring instruments
Micrometers
Pressure gages
Rain gages
Strain gages
Vacuum gages

Testing
Gage laboratory, standardization center for measuring aids. il Steel 120:130 Je 23 '47
Gauge-testing bench. il Ry Mech Eng 121:367-8 Jl '47

GAGES—Testing—*Continued*
Interferometers; Hilger instruments for comparative or absolute measurements in wave-lengths of light. il Automobile Eng 37:137-8 Ap '47

GAGES, Electric
Automatic inspection system; Limitron. C. W. Warren. il diags Machine Design 19:127-9 Jl '47
Carrier-type amplifier for electric gages. H. C. Roberts. il diags Electronics 20:92-5 My '47
Electro-mechanical gaging; Limitron. il diags Product Eng 18:102-3 Jl '47
Electronic impulses gage 3600 pieces per hour; Sorton-Matic. il Steel 121:85 S 1 '47
Gage placed on outside of pipe measures thickness. il Mach 53:172 Mr '47
Pratt & Whitney Electrolimit contour gage for automotive pistons. il Mach 53:212 Je '47
Small parts inspection by automatic gaging; Limitron. C. W. Warren. il Iron Age 159: 64-5 Je 19 '47
Use of electric gaging equipment in machine design. P. E. Nokes and E. G. Carr. il Mech Eng 69:117-19 F '47; Same cond. Machine Design 19:125-6 F '47
Use of electric gauges in quality control. J. Manuele. il diag Elec Eng 66:441-4 My '47

GAGES, Pneumatic
Air size-control; gages workpiece during operation. J. E. Kline. il diag Machine Design 19:88-91 O '47
Controlling quality at the machine; use of Precisionaire gages; Timken Detroit axle co. il Steel 120:110 Ja 20 '47
Editorial citation to Buick div., General motors corp. for achievement in precision air gaging of metal parts. il Materials & Methods 24:1174-5 N '46
Essentials of air gaging. W. F. Aller. il diags Am Mach 91:69-72 Ja 2; 101-3 Ja 30 '47
Multiple air gauge forms part of production line. il Comp Air Mag 51:306 N '46

GAGES, Vacuum. See Vacuum gages

GAGING
Safe gaging and sampling device for LPG in tank cars; patent. diags Pet Processing 1:188+ N '46

GAINESVILLE, Missouri
Gainesville sets example for towns along Skyway One. CAA J 8:111 O 15 '47

GAIR, Robert, company
Profit may hold near high rate of first half-year. Barron's 27:34 Ag 11 '47

GALACTOSE
Chemical and microbiological differentiation of enantiomorphs of galactose and xylose. J. W. Appling, E. K. Ratliff and L. E. Wise. bibliog Anal Chem 19:496-7 Jl '47

Analysis
Quantitative determination of galactose, mannose, arabinose, and rhamnose. E. L. Hirst, J. K. N. Jones and E. A. Woods. Chem Soc J p 1048-51 Ag '47

GALACTURONIC acid
Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Ketesz. bibliog Am Chem Soc J 68:2178-9 N '46
Some polygalacturonide *n*-alkylamides. J. F. Carson. Am Chem Soc J 68:2723-4 D '46
Sur la composition et le dosage des pectines industrielles. H. Le Corvaisier. bibliog Chimie & Ind 57:545-8 Je '47

GALAXY. See Milky way

GALL bladder
Post-cholecystectomy syndrome. C. C. Guy. bibliog Ind Med 16:181-3 Ap '47

GALLIC acid
Direct esterification of gallic acid with higher alcohols. W. C. Ault and others. Am Chem Soc J 69:2003-5 Ag '47

GALLIUM
Analysis
Determination of gallium in silicate rocks. E. B. Sandell. bibliog Anal Chem 19:63-5 Ja '47

Isotopes
Coincidence experiments on Ga^{72}. A. C. G. Mitchell and others. Phys R 71:324-5 Mr 1 '47
Coincidence study of Ga^{72}. C. E. Mandeville and M. Scherb. bibliog Phys R 72:520-1 S 15 '47

GALLOCATECHOL
Catechins of green tea. A. E. Bradfield, M. Penney and W. B. Wright. Chem Soc J p32-6 Ja '47

GALVANIZED steel. See Steel, Galvanized

GALVANIZING
Conditioning hot dip galvanizing baths. W. G. Imhoff. bibliog il Steel 121:108+ Ag 18 '47
Continuous galvanizing; National tube co. A. D. Stout, jr. il diag Iron Age 160:79-80 Ag 28 '47
Effect of lead in hot-dip galvanizing baths. W. G. Imhoff. il Iron Age 159:46-9 Ja 9 '47
Full automatic hot zinc galvanizing of tanks. R. F. Ledford. il diag Iron Age 160:56-60 Jl 31 '47

GALVANOMETERS
Electromechanical d-c amplifier. C. G. Roper and J. F. Engelberger. il diags Electronics 20:117-19 N '47
Improvements in polarographic instrumentation. G. E. Philbrook and H. M. Grubb. il diags Anal Chem 19:7-10 Ja '47
Quantitative treatment of a density distribution pattern on photographic paper as produced by the disturbance of a spotlight galvanometer. G. Beall. il Paper Tr J 124: 35-7 My 8 '47; Same cond. Paper Ind 28: 1801-2 Mr '47
Uhf. voltage measurements obtained by new instrument; General radio co., type 1802-A crystal galvanometer. il Elec World News ed 126:22 D 28 '46

GAMBLE-SKOGMO, inc.
Gamble-Skogmo's sales methods. E. Whitmore. il Am Bsns 17:22-4+ Ag '47
Small storekeepers who kept growing; Bert Gamble and Phil Skogmo. E. Whitmore. il Am Bsns 17:20-2+ Jl '47

GAMBLING
See also
Betting

GAMES
Adult games make 3-way use of plastics. il Mod Plastics 24:99-101 D '46
See also
Baseball

GAMMA rays
Alleged gamma-ray of N^{13}. L. M. Langer and others. bibliog Phys R 71:906 Je 15 '47; Correction. 72:355 Ag 15 '47
Angular correlation of gamma-rays. G. Goertzel. bibliog Phys R 70:897-909 D 1 '46
Angular distribution of gamma-rays in Na^{24}, Co^{60}, Y^{88}. W. M. Good. bibliog Phys R 70:978-9 D 1 '46
Beta- and gamma-ray energies of several radioactive isotopes. L. C. Miller and L. F. Curtiss. Phys R 70:983 D 1 '46
Decay scheme of Sb^{124}. W. E. Meyerhof and G. Scharff-Goldhaber. bibliog diags Phys R 72:273-5 Ag 15 '47
Design of a proportional counter for gamma-rays. B. B. Benson. diags R Sci Instr 17: 533-6 D '46
Diamond as a gamma-ray counter. L. F. Curtiss and B. W. Brown. diag Phys R 72: 643 O 1 '47
Diamonds used to detect atomic radiation. il Chem & Eng N 25:3100+ O 20 '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Disintegration of Li^{7} by deuterons. W. E. Bennett and others. bibliog Phys R 71:11-14 Ja 1 '47
Disintegration of scandium^{46}. I. Feister and L. F. Curtiss. bibliog diags J Res Nat Bur Stand 38:411-14 Ap '47
Disintegration scheme of Sc^{46}. C. Peacock and R. G. Wilkinson. Phys R 72:251-2 Ag 1 '47
Evaluation of the beta and gamma radiation due to extended linear sources of radium. R. D. Evans. bibliog J Ind Hygiene 28:243-56 N '46

GAMMA rays—*Continued*
Excitation-function of the γ-radiation generated by Po-α bombardment of Na. M. Kovács. bibliog diags Phys R 70:895-6 D 1 '46
Further experiments on the surplus gamma-radiation from granite. V. F. Hess. bibliog Phys R 72:609-14 O 1 '47
Gamma- and beta-ray energies of some radioactive isotopes as measured by a thin magnetic lens beta-ray spectrometer. W. Rall and R. G. Wilkinson. Phys R 71:321 Mr 1 '47
Gamma-radiation from tantalum, iridium, and gold. J. M. Cork. il diag Phys R 72: 581-5 O 1 '47
Gamma ray and supersonic equipment-in-spection methods used in Continental Oil's eight refineries; Penetron and Audigage. L. S. McCaslin. il diags Oil & Gas J 46: 100-3+ O 18 '47
Gamma ray detection of internal corrosion. L. R. Keller. il diags Pet Eng 18:211-14 S '47
Gamma-ray studies of potassium salts and associated geologic formations. H. C. Spicer. In U S Geol S Bul 950:143-61, pl 3-5 '46
Gamma-ray yield curve of aluminum bombarded with protons. K. J. Broström and others. bibliog diags Phys R 71:661-6 My 15 '47
Gamma-rays from Cu^{64}, annihilation of swift positrons, and experiments on orbital-electron capture. M. Deutsch. Phys R 72:729-30 O 15 '47
Gamma-rays from tungsten and molybdenum. W. M. Schwarz and M. L. Pool. bibliog Phys R 71:122-3 Ja 15 '47
Gamma-rays of K^{40}. E. Gleditsch and T. Gráf. bibliog Phys R 72:640-1 O 1 '47
Gamma-rays of Po^{210}. S. De Benedetti and E. H. Kerner. bibliog diag Phys R 71:122 Ja 15 '47
High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays. J. W. M. DuMond. bibliog il diags R Sci Instr 18:626-38 S '47
γ-Instability of mesons. R. J. Finkelstein. Phys R 72:415-22 S 1 '47
Interaction of γ-rays with matter and the spectroscopy of γ-radiation. G. D. Latyshev. bibliog diags Rs Mod Phys 19:132-45 Ap '47
Magnetic-lens electron spectrometer; radiations from 5.3 year cobalt^{60}. L. C. Miller and L. F. Curtiss. diags J Res Nat Bur Stand 38:359-64 Mr '47
New invisible eyes; gamma rays in liquid-level control; Gagetron. L. S. McCaslin, jr. il diags Oil & Gas J 46:100-1+ O 25 '47
Photo-neutron sources and the energy of the photo-neutrons. A. Wattenberg. bibliog diags Phys R 71:497-507 Ap 15 '47
γ-Radiation of Na^{24} and the energy-level scheme of Mg^{24}. M. L. Wiedenbeck. bibliog diags Phys R 72:429-30 S 1 '47
Radiations from As^{72}. A. C. G. Mitchell and others. Phys R 71:825 Je 1 '47
Resonances in the disintegration of fluorine by protons. W. E. Bennett and others. bibliog diags Phys R 70:882-90 D 1 '46
Search for the transmutation products of gamma-meson reactions induced by 100-Mev X-rays. N. A. Bonner and others. bibliog il diag Phys R 71:511-20 Ap 15 '47
Yield of photo-neutrons from U^{235} fission products in heavy water. S. Bernstein and others. diags Phys R 71:573-81 My 1 '47

GAMMA 666. See Hexachlorocyclohexane

GAMMEXANE. See Hexachlorocyclohexane

GAND, Belgium
La canal de contournement de la ville de Gand. map Génie Civil 124:357 S 15 '47

GANG process charts. See Control charts

GANSE, Franklin Wile, 1859-1947
Sketch. por East Underw 48:11 Mr 7 '47; Nat Underw (Life ed) 51:2 Mr 7 '47

GANTRIES. See Cranes, derricks, etc.

GAR WOOD industries, inc.
Annual report. Comm & Fin Chr 165:538 Ja 27 '47

GARAGE doors
Ultrasonic garage-door opener. B. A. Andrews. il diags Electronics 20:116-18 Mr '47

GARAGE keepers' legal liability insurance. See Insurance, Automobile—Garage owners' and dealers' liability policies

GARAGES
Department store, garage and warehouse, built as a unit, permit mechanized system of stock handling, controlled customer traffic; Foley store in Houston, Tex. il plans diags Arch Forum 86:106-9 Ap '47
Multi-story garage for public parking; Spiralway ramp principle. B. Yurchenco and E. Catalano. il diags Arch Rec 101:125-8 Ap '47
Push button garages for tomorrow's parkers? il Bsns W p101 F 1 '47
Shop layout and equipment for a large fleet; abstract. E. W. Templin.-plan S A E J 54:30 D '46
Swiss mechanised car parking system. C. F. Armstrong. il plan diags Engineer 183:554-6 Je 27 '47

Fires and fire protection
How to inspect garages. M. E. Bulske. Rough Notes 90:34+ Mr '47

Heating and ventilation
Garage heating job; hot water heat for office. plans Heating-Piping 19:97-8 Ja '47; Discussion. 19:98-100 Mr; 100 Ap '47

Safety measures
Safety ideas for garage mechanics. Roads & Sts 90:102 Ag '47

GARAGES, Private
See also
Garage doors

GARBAGE disposal. See Refuse disposal

GARBAGE incinerators. See Refuse incinerators

GARDEN apartments. See Apartment houses—Garden apartments

GARDENING
Facts and fads in garden soil management. W. B. Mack. Consumers Res Bul 19:15-16 Je; 20:15-16 Jl; 22-4 O '47

GARDENS
See also
Landscape gardening

GARDNER, John Addyman, 1867-1946
Sketch. G. W. Ellis. Chem Soc J p865-6 Je '47

GARDNER, Leroy Upson, 1888-1946
Sketch. P. Drinker. por(front) J Ind Hygiene 29:59 Mr '47

GARDNER, Lester Durand, 1876-1947 Guggenheim medalist. por Aeronautical Eng R 6:7 Jl '47

GARDNER, Oliver Max, 1882-1947
Ambassador to Great Britain. Comm & Fin Chr 164:3126 D 12 '46
Sketch. Comm & Fin Chr 165:1057 F 20 '47

GARLIC
Certain antibiotics; abstract. I. J. Postovskii and N. P. Bednyagin. Chem Eng 54: 266+ S '47
Garlic antibiotic now synthesized. Chem Ind 60:986 Je '47
Garlic imports, Cuba. For Comm W 28:25 Ag 30 '47

GARMENT factories
Bond clothing plant in Rochester, N.Y. il plans Arch Forum 86:118-19 Ap '47

Equipment
Centralized maintenance reduces mill's repair costs; E-Z mills, inc. E. D. White. il Textile World 97:145+ Je '47

GARMENT workers
Annual pay plan for Gernes, Kansas garment maker. Bsns W p99-101 Ap 19 '47
Aptitude tester for garment workers; photoelectric device. E. C. Halliday and others. il diags Electronics 20:90-2 S '47
Production-worker employment and pay rolls in the men's and women's clothing industries; monthly figures and monthly averages, 1939-1946; revised series. Survey of Cur Bsns 27:22 Je '47

GARMENT workers—*Continued*
Wages in women's blouse and waist industry, Jan. 1947. F. W. Mohr. Mo Labor R 65:314-16 S '47
See also International ladies' garment workers' union

GARNER, Robert Livingston, 1894-
World bank goes Wall Street. por Bsns W p17 Mr 8 '47

GARTERS
How advertising is helping a new business to success; Hortense Hewitt garters. C. J. Swan. il Ptr Ink 218:67-8 Ja 24 '47

GARY, Indiana

Sewerage

Gary completes cycle on the Grand Calumet; a review of five years of operating results and accomplishments. W. W. Mathews. bibliog il Water & Sewage Works 93:455-60 D '46

GAS
Controlled atmospheres of city gas for heat treating steel; abstract. I. Jenkins. Materials & Methods 25:127 Je '47
See also
Blast furnace gas
Butane
Coal distillation
Coke-oven gas
Flue gas
Gas, Natural
Gas, Producer
Gas, Water
Gas analysis
Gas appliances
Gas as fuel
Gas companies
Gas industry
Gas manufacture
Gas producers
Gases
Liquefied petroleum gas
Propane
Sewage sludge—Gas production

Analysis

See Gas, Natural—Analysis; Gas analysis

Bibliography

Index to chemical and related subjects. L. Hilt, comp. 114p American gas assn, 420 Lexington av, New York 17 '47

Gum formation

Control of gum-formers in carburetted water gas. E. J. Murphy. diag Am Gas J 166: 22-5 Je '47; Same. Gas Age 100:33-5+ Jl 10 '47
Flow of gas through gum filters on domestic gas appliances. L. F. Vixler. il Gas Age 100:25-30 Ag 7 '47
Gas flows through U.G.I. gum filters. E. H. Smoker. Am Gas Assn Mo 29:295-6 Je '47
Storage of coke-oven gas in sandstone strata; removal of vapor phase gum. J. R. Bircher. bibliog flow sheet il map diag Chem Eng Prog 43:453-8; Discussion. 458 S '47

Manufacture

See Gas, Water—Manufacture; Gas manufacture

Moisture content

Condensate removal by special drip truck; Citizens gas and coke utility. D. S. Martin. il diag Am Gas J 166:29-30 Ap '47

Rates

See Gas rates

Sulfur content

Corrosion of water heaters. N. Booth and others. bibliog il Gas J (Lond) 248:1047-50+, 1090-4 D 11-18 '46; Discussion. 249:96-8+ Ja 8 '47
Removal of organic sulphur compounds from gases. Gas J (Lond) 248:1102+, 1154+ D 18-25 '46
Tentative procedures for determining individual organic sulfur compounds in gas. H. Hakewill and E. M. Rueck. il diags Am Gas Assn Proc 1946:529-38

GAS, Natural
A.G.A. Natural gas department annual meeting, Atlantic City, Oct. 7. Am Gas Assn Mo 28:481-2 N '46
American gas association, Natural gas department spring meeting, Chicago, April 30-May 1. Oil & Gas J 46:53-4 My 10 '47
Ammonia from natural gas; Lion oil company. flow diags Pet Refiner (Process Handbook sec) 26:106-7 Ap '47
Les applications chimiques du gaz naturel aux États-Unis. P. Guillaumeron. il map Génie Civil 124:125-30 Ap 1 '47
Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il Pet Refiner 25:97-102 D '46; Same abr. Oil & Gas J 45:59-60+ D 21 '46
Chemicals from petroleum and natural gas. G. Egloff. Oil & Gas J 46:88-9+ Ag 30 '47
Conversion of natural gas to liquid fuels. R. C. Alden. bibliog flow diag map diag Pet Eng 18:148+ Ja '47; Same cond. Oil & Gas J 45:79+ N 9 '46
Le craquage des hydrocarbures naturels par le procédé de la Hercules powder co. P. Guillaumeron. il diag Génie Civil 123:341-2 D 15 '46
Esso's fluid catalyst modifies Fischer-Tropsch; natural gas becomes source of liquid fuels and many chemicals. J. A. Lee. il Chem Eng 54:104-7 O '47
Gas, raw material for chemicals; underground gasification. Mech Eng 69:670 Ag '47
Modern developments in acetylene chemistry; German electro-thermal cracking of hydrocarbons. G. G. S. Dutton. Chem Age (Lond) 56:11-13 Ja 4 '47
Natural gas for mixing, reforming and enriching manufactured gas. G. Symonds. map Gas Age 98:38-40+ N 14 '46
Petroleum industry problem; vented casinghead gas; pipe line purchases. L. T. Potter. Pet Eng 18:48+ Jl '47
Power turbines for natural gas expansion; abstract. S. Bencze. Oil & Gas J 45:53 Mr 8 '47
Principles of automatic control as applied to natural gas operations. L. W. Parten. il diags Pet Refiner 26:121-8 O '47
Review and appraisal of the natural gas industry; abstract. R. W. Miller. Pub Util 40:514-15 O 9 '47
Shift from coal to aid natural gas firms. Barron's 27:7 Ja 6 '47
Stanolind oil and gas company designing commercial-scale Synthol plant to synthesize oil from natural gas in southwestern Kansas. Chem & Eng N 25:240 Ja 27 '47
Synthetic fuels made from dry gas. il Pet Eng 18:64 N '46
Synthine process; use of coal and natural gas. B. H. Weil and J. C. Lane. bibliog il map Pet Refiner 25:153-64 N '46
Transportation of natural gas. D. A. Hulcy. Gas Age 98:44-5+ D 12 '46; Same. Pet Eng 18:120+ Ja '47
Utilization of natural gas for chemical products. H. M. Smith and W. C. Holliman. bibliog(218 titles) 12pls U S Bur Mines Information Circ 7347:1-24 '47; Same, without bibliog. Pet Refiner 26:75-84 Ap '47
Wider use of natural gas. R. P. Russell. Chem Age (Lond) 56:763 Je 14 '47
See also
Gas as fuel—Natural gas
Gasoline, Natural
Liquefied petroleum gas
Petroleum
also American gas association—Natural gas department

Analysis

Analysis of a natural gas by volumetric chemical methods and by mass spectrometer. M. Shepherd. bibliog Anal Chem 19: 635-40 S '47
Analysis of a standard sample of natural gas by laboratories cooperating with the American society for testing materials. M. Shepherd. flow diag J Res Nat Bur Stand 38:19-51 Ja '47
Apparatus for the analysis of reservoir fluids. P. G. Exline and H. J. EnDean. bibliog il diags Oil & Gas J 45:82-3+ Mr 15 '47
Cooperative analysis of a standard sample of natural gas with the mass spectrometer. M. Shepherd. J Res Nat Bur Stand 38:491-8 My '47
Mass spectrometer in gas analysis. Gas Age 100:35+ Ag 7 '47; Same. Pet Eng 18:248 S '47

GAS, Natural—*Continued*

Change over

All's natural in Toledo; utility's servicemen complete conversion of appliances. W. F. Smiley. Am Gas Assn Mo 29:114-15 Mr '47
Preparation of a distribution system for increased load with natural gas. K. W. Person. Gas Age 98:19-20+ D 26 '46
Program of change-over in suburban Washington; conversion to natural gas. M. O. Waugh. Am Gas J 165:36-7 D '46
Texas town awaiting new citizen; Lone star gas company stages full educational campaign prior to entry of natural gas service. B. Cunningham, jr. Am Gas Assn Mo 29:322 Jl-Ag '47
Washington natural gas changeover. il map Gas Age 99:21-31 F 6 '47

Compression

Advanced design features compressor stations on El Paso natural line. P. Reed. il map Oil & Gas J 46:78+ Ag 30 '47
Bateman field cycling operation more than doubled by new plant facilities. N. Williams. il map Oil & Gas J 45:72-5+ N 30 '46
Coles Levee cycling plant. C. C. Pryor. il Pet Refiner 26:121-6 Ja '47
Compressor stations on Texas-California line. F. H. Love. il Pet Eng 18:100+ S '47
Dual control system synchronizes compressor speed-intake gas pressure. J. M. Sappington. il diag Pet Refiner 26:88-90 Ap '47
Expanded plant at West Pampa plays dual role; extracts gasoline, provides repressuring service. A. L. Foster. flow chart il Oil & Gas J 45:72-4+ N 9 '46
Field compressor stations. C. S. Worley. il Pet Eng 18:188+ Mr '47
Gas-turbine-driven centrifugal compressors for natural gas pipe lines. E. T. P. Neubauer. il diags Pet Eng 19:166+ O '47; Same. Oil & Gas J 45:59-61+ My 3 '47
Holliday gasoline plant. H. W. Harts. flow diag il Oil & Gas J 45:78-9+ N 23 '46
Lone Star's small automatic compressor station; with cost data. G. Weber. il diag Oil & Gas J 46:58-60+ O 4 '47
Magnolia's new Vanderbilt gasoline plant. H. L. Baker. flow diag il Pet Eng 18:131-2+ Je '47
Natural gas stored in buried pipe at 2,240 lb. C. R. Claxton and others. il plan diag Oil & Gas J 45:60+ Mr 1 '47; Same. Am Gas J 166:13-15 Mr '47; Same. Gas Age 99:26-7+ Mr 6 '47; Same. Am Gas Assn Mo 29:171-3 Ap '47; Same. Pet Eng 18:115-16+ Ap '47; Same cond. Pub Util 39:692-6 My 22 '47
Operating experiences with angle-type compressors. O. H. Moore. il Oil & Gas J 45:67-8+ My 3 '47; Same, without il. Am Gas J 166:35-7+ My '47
Pressure maintenance at Richard King designed to handle approximately 3,000,000 cu. ft. of gas daily. N. Williams. il diags Oil & Gas J 45:76-7+ F 15 '47
Pressure-maintenance project sets pattern for future programs of its kind. E. H. Short, jr. flow diag il plan Oil & Gas J 46:79-80 Jl 5 '47
Reducing natural-gas wastage. E. F. Neild, jr. and D. T. Whiting. il Comp Air Mag 51:321-5 D '46
Small flexible gas system aids conservation. G. Weber. flow diag il diag Oil & Gas J 45:92+ F 15 '47
Study of the clarification of compressor station recycle cooling water. E. G. Hammerschmidt. il Pet Eng 18:147+ Mr '47
Two new plants further Humble's gas-conservation program. il Oil & Gas J 46:71-2+ S 13 '47; Same. Pet Eng 18:216+ S '47

Conditioning

Girbotol process; Girdler corporation. flow diag Pet Refiner (Process Handbook sec) 26:158-9 Ap '47
Glycol-amine gas-treating process; Fluor corporation. flow diag Pet Refiner (Process Handbook sec) 26:296-7 Ap '47
High purity natural gas by the glycol-amine process. W. F. Chapin. bibliog flow diag il Pet Refiner 26:109-12 Je '47
Natural gas purification at Barker Dome, New Mexico. V. Thompson and R. A. Graff. diag Am Gas J 167:34-5 Ag '47
Purification of natural gas at well head. R. A. Graff. il Oil & Gas J 46:69 Ag 2 '47
Purification of natural gas in northwestern New Mexico. V. Thompson and R. A. Graff. il diag Oil & Gas J 45:116+ Ap 19 '47
Source and purification of gas supply in secondary recovery. L. L. McWilliams. bibliog Am Pet Inst Proc 26(4):26-32 '46; Same cond. Oil & Gas J 45:306+ N 16 '46

See also
Gas, Natural—Dust problem

Conservation

East Texas gas-conservation problem is broadened. G. Weber. Oil & Gas J 45:24 F 1 '47
Gas conservation in west Texas. D. V. Carter. Oil & Gas J 45:74+ Ja 11 '47
Gas production and conservation in Louisiana. S. P. Bennett. map Oil & Gas J 46:91-2 Je 21 '47
Gas wastage condemned at AGA meeting. Chem & Eng N 25:1440 My 19 '47
Humble gas conservation program. il Pet Eng 18:66+ Ap '47
Humble gas-conservation projects involve $10,000,000 expenditure. Oil & Gas J 45:134 Mr 22 '47
Lone Star's Chapel Hill plant, an efficient conservation step. A. L. Foster. il Oil & Gas J 46:58-9+ N 1 '47
Railroad commission concludes Texas flare-gas hearings. G. Weber. Oil & Gas J 45:63 Ap 19 '47
Small flexible gas system aids conservation. G. Weber. flow diag il diag Oil & Gas J 45:92+ F 15 '47
State regulation in gas conservation; steps taken by Texas railroad commission to end wastage of flare gas. E. O. Thompson. Pub Util 40:465-70 O 9 '47
Texas Gulf coast has efficient system of gas conservation. W. J. Murray, jr. Oil & Gas J 46:201-2 My 31 '47
Texas will have 69 gas-conservation plants costing $127,000,000. E. O. Thompson. Oil & Gas J 46:44-5 My 10 '47
Two new plants further Humble's gas-conservation program. il Oil & Gas J 46:71-2+ S 13 '47; Same. Pet Eng 18:216+ S '47

See also
Gas, Natural—Proration

Dehydration

Adsorptive gas dehydration process; Houston oil field material company. flow diag Pet Refiner (Process Handbook sec) 26:102-3 Ap '47
Automatic dehydration of large volumes of gas at high pressure. D. L. Sedgwick. flow diag il Gas Age 99:38-9+ Ap 17 '47
Compact plant dehydrates gas and meters distillate. E. H. Short, jr. il Oil & Gas J 46:88-9 S 13 '47
Diethylene glycol process for dehydrating natural gas. flow diag Pet Refiner (Process Handbook sec) 26:132-3 Ap '47
Drying high sulfur gases. W. L. Nelson. Oil & Gas J 46:94+ O 4 '47
Gas absorption-dehydration plant processes 150,000,000 cubic feet daily. C. C. Pryor. flow diags il Pet Refiner 26:91-8 Ap '47
Gas dehydration at Pecan Island. E. H. Short, jr. il Oil & Gas J 45:82-3 Ap 12 '47
Gas-processing plant maintains stability at 150 per cent throughput. R. B. Tuttle. flow diag il Oil & Gas J 46:86-7+ Jl 5 '47
Refrigeration removes liquid hydrocarbons from gas in transit. J. T. Simon. flow diag il Pet Refiner 26:117-19 Ap '47

Distillate wells

Benton unit approaches the ideal pressure-maintenance project. G. Weber. il map Oil & Gas J 45:56-8+ Ja 11 '47
Carthage approaching full gas production. G. Weber. il map Oil & Gas J 45:137-8+ Mr 29 '47
Carthage gasoline and dehydration plant. F. H. Love. flow diag il Pet Eng 18:158+ D '46
Cooperative processing attacked in Cotton Valley suit. G. Weber. Oil & Gas J 46:
Economics of cycling. W. H. Woods. Oil & Gas J 46:89+ Ag 16; 99+ Ag 23 '47
76+ Je 28 '47

GAS, Natural—Distillate wells—*Continued*
Gas-condensate reservoir engineering. C. K. Eilerts. bibliog Oil & Gas J 45:63-8 F 1; 78+ F 8; 100+ F 15 '47
Gas-condensate reservoirs. O. F. Thornton. bibliog diags Pet Eng (Ref annual) 18: 124+ Jl 1 '47; Same cond. Oil & Gas J 45:189+ N 16 '46
Interpretation well test data in gas-condensate fields. J. O. Lewis. Pet Eng 18:180+ S '47
Mobile laboratory for gas-condensate studies. E. H. Koepf. bibliog il diag Oil & Gas J 45:108-11+ Ap 26 '47
Sampling two-phase streams from high pressure condensate wells. D. L. Katz and G. G. Brown. bibliog flow diags il diags Pet Eng 18:95-6+ Mr; 78+ Ap '47
South Texas giant; second largest oil and gas field; largest condensate reservoir. C. J. Deegan and N. Williams. il maps Oil & Gas J 45:60-4 N 9 '46
Valuation of gas-condensate reservoirs for cycling. W. H. Justice. Oil & Gas J 45:72-3 Ja 4 '47

See also
Gas, Natural—Recycling

Corrosion problem

Corrosion and preventive methods in Katy field. R. C. Buchan. bibliog il Pet Eng (Ref annual) 18:159-60+ Jl 1 '47
Corrosion in high-pressure gas-condensate wells. H. A. Carlson. bibliog Oil & Gas J 45:81-4 D 21 '46
Corrosion in high-pressure gas-condensate wells, Gulf Coast area. T. S. Zajac. bibliog il Oil & Gas J 46:102-5+ Je 21; 127+ Je 28 '47
Corrosion leaks in producing string successfully remedied in gas-condensate field. E. Short. il Oil & Gas J 46:197-8 O 11 '47
Corrosion studies in natural gas condensate wells; protective layers. D. A. Shock and N. Hackerman. bibliog il Ind & Eng Chem 39:1283-6 O '47
Gas-condensate reservoir engineering. C. K. Eilerts. bibliog Oil & Gas J 45:102 F 15 '47
pH of waters from gas-condensate wells saturated with carbon dioxide at various pressures. H. A. Carlson. bibliog Pet Eng 18:160+ N '46
Remedies studied for freakish corrosion occurring in some condensate fields. D. P. Thornton, jr. bibliog il Pet Processing 2: 273+ Ap '47
Review of N.G.A.A. research on gas-condensate-well corrosion. T. S. Bacon. bibliog il diag Oil & Gas J 46:257-8+ Jl 26 '47
Surface layers on steel in natural gas condensate wells. N. Hackerman and D. A. Shock. bibliog il diags Ind & Eng Chem 39:863-7 Jl '47
Tests at cycling project demonstrate possibilities of new corrosion inhibitor; Kontol 115. W. H. Justice and E. N. Jones. diag Oil & Gas J 45:86-7+ N 9 '46

Dust problem

Dust scrubber research yields valuable data. H. F. Dawe and J. E. Stepanek. flow sheet il diag Pet Eng 18:192+ Mr '47

Fuel use

See Gas as fuel—Natural gas

Geology

Evolution of geologic thought in prospecting for oil and natural gas. P. H. Price. bibliog (63 titles) Am Assn Pet Geologists Bul 31:673-97 Ap '47

Government investigation

FPC gas probe reports. Pub Util 39:497-8 Ap 10 '47

Hydrates

Carthage engineers fight hydrates. G. Weber. il diags Oil & Gas J 45:58-60+ Ap 5 '47

Laws and regulations

Amendments action premature, FPC chairman testifies. Oil & Gas J 46:41 My 10 '47
Coal men fight for FPC control of natural gas. Barron's 27:44-5 Ap 21 '47
Court sanctions FPC authority to regulate gasoline plants. Pet Processing 2:640 Ag '47
FPC rules producer selling to interstate line not subject to gas act. Oil & Gas J 46:116 My 31 '47
FPC withdraws from jurisdiction over independent gas operators. Oil & Gas J 46: 72 Ag 23 '47
Grandfather rights not a bar to a new gas company. Pub Util 39:520-1 Ap 10 '47
Interstate Natural Gas case decision boosts Rizley bill. Pub Util 40:102-3 Jl 17 '47
Is FPC regulating production-gathering of natural gas? J. J. Hassett. Pub Util 39: 622-8 My 8 '47
Legislation curbing FPC gathers widespread industry support. H. D. Ralph. Oil & Gas J 45:37-8 Mr 8 '47
Legislation to redefine Natural gas act. Gas Age 99:31+ My 1 '47
Natural gas production and marketing; abstract. M. Newcomb. Am Gas Assn Mo 29: 394 S '47
Opposition heard on Rizley bill. H. D. Ralph. Oil & Gas J 46:40-1 Je 7 '47
Recent developments in natural gas regulations. C. I. Francis. Am Gas Assn Proc 1946:83-6
Rizley bill; new regulatory standards? Pub Util 39:432-3 Mr 27 '47
Supreme court upholds Federal power commission jurisdiction over gas sales in Interstate natural gas co. case. Pub Util 40: 125 Jl 17 '47
Supreme court upholds FPC, rules it may regulate gas field prices. R. E. Bjorkback. Nat Pet N 39:17 Je 18 '47
That new FPC gas rule. Pub Util 40:366-7 S 11 '47
Well-head price fixing. G. W. Clark. Oil & Gas J 45:71+ My 3 '47; Same. Am Gas Assn Mo 29:331-3 Jl-Ag '47
Where is the FPC heading in gas regulation? S. H. Crosby. Pub Util 40:476-85 O 9 '47
Will the FPC drive natural gas out of the fuel market? S. H. Crosby. Pub Util 39:216-20 F 13 '47

Liquefaction

Natural gas stored in liquid form. L. F. Stutzman and G. H. Brown. Am Gas J 167:48 Ag '47

Measurement

Conversion graph for open flows of gas wells. W. F. Martin. Pet Eng 18:49-50 D '46
New approach to mechanical orifice meter chart computation. W. F. Martin. diag Pet Eng 18:106+ Ja '47
Reservoir volumes; barrels of free-gas space. J. C. Calhoun, jr. Oil & Gas J 46:125 O 25 '47
Telemetering at United's Carthage plant. W. M. Moore. il diag Oil & Gas J 46:189-91 S 20 '47
Volume correction chart for reducing gas to standard cubic feet at 14.73 psia. Oil & Gas J 46:115 My 24 '47
Workable critical velocity formula. R. O. Cox. Pet Eng 18:214 Mr '47

Merchandizing

Eastern natural gas regional sales conference, Pittsburgh, Feb. 13-14. Am Gas J 166: 48+ Mr '47; Am Gas Assn Mo 29:138-9+ Mr '47; Gas Age 99:35-7+ Mr 6 '47
Kansas-Nebraska offsets heating load with summer farm uses. G. E. Stedman. il map Gas Age 99:55-6+ Ap 17 '47
Selling natural gas in volume. J. H. Gumz. Am Gas Assn Proc 1946:79-83

Moisture content

Maximum per cent by volume of water vapor in gas; chart. Oil & Gas J 46:101 My 10 '47

Peak load

Efficient tranmission system operation during peak demand periods. L. T. Potter. Gas Age 99:18-19+ Mr 20 '47
Production of high B.t.u. gas. E. L. Hall. Am Gas Assn Mo 29:434-6+ O '47
Recent developments in the production of high Btu gas for mixing with natural gas. il Am Gas J 166:11-14 My '47

GAS, Natural—*Continued*

Pipe lines

Advanced design features compressor stations on El Paso natural line. P. Reed. il map Oil & Gas J 46:78+ Ag 30 '47

And now automatic remote control; gas lines of Pacific gas and electric co. W. A. La Violette. il diag map Gas Age 99:34-7+ Ap 17 '47

Automatic dehydration of large volumes of gas at high pressure. D. L. Sedgwick. flow diag il Gas Age 99:38-9+ Ap 17 '47

Biggest Inch employs advanced ideas laying large lines. R. Reed. il map Oil & Gas J 46:58-60 Je 7 '47

Building Biggest Inch gas line. il Am Gas Assn Mo 29:132-3 Mr '47

Building 1.16 miles of pipe line bridges; El Paso natural gas co. G. R. Lunt. il Pet Eng 18:90+ S '47

Butt-welded pipeline for natural gas. il Engineering 163:97-8, 108 Ja 31 '47

California section nears completion; Texas-California pipe line. R. Sneddon. il Pet Eng 18:76+ S '47

Centrifugal compressors for gas pipe lines. M. C. Shaw and E. T. Neubauer. il diags Oil & Gas J 45:65+ Mr 8 '47

Centrifugal compressors will handle 350 million feet per day at new Tennessee gas transmission co.'s station. diag Oil & Gas J 46:199 S 20 '47

Changes in pipe line construction methods. T. A. Hester. Pet Eng 18:174+ Ag '47

Coating and wrapping the 30-inch California gas line. P. Reed. il Oil & Gas J 46:239+ Jl 26 '47

Colorado interstate line nears completion. il Gas Age 100:35-6+ S 18 '47

Compressor stations on Texas-California line. F. H. Love. il Pet Eng 18:100+ S '47

Construction methods followed in laying El Paso Natural's Texas-California line. P. Reed. il map Oil & Gas J 46:60-1+ Jl 12 '47

Design of long distance natural-gas transmission lines. R. G. Strong and T. H. Beals. Oil & Gas J 45:88+ Ap 19 '47

Disposition of surplus property with regard to use of Big and Little Inch. E. O. Thompson. Gas Age 99:21-2 Ja 9 '47

Double-barreled program for cleaning and pressure testing gas pipe lines. D. K. Stephens. il Oil & Gas J 46:252+ S 20 '47

Expanding pipe beyond yield point to make it rounder and stronger; steel pipe for natural gas line from El Paso to Los Angeles. il Eng N 139:318-19 S 4 '47

FPC approves pipeline competition in Detroit. Bsns W p18 D 7 '46

Fire extinguisher mounted in truck for use on gas fires encountered in repairing pipe line. O. C. Irvine. il Pet Eng 18:130 Ag '47

First pipe line to West coast; El Paso natural gas company's west Texas-California line. F. H. Love. il map Pet Eng 18:61+ S '47

5369 miles of interstate natural-gas lines authorized by FPC in 1946-1947. H. D. Ralph. Oil & Gas J 46:224+ S 20 '47

Gas flow in pipe lines; comparative pipe-line capacities; charts. Oil & Gas J 46:115 My 17 '47

Gas for the East; Texas eastern co. to get full control of Big Inches. Bsns W p28+ O 18 '47

Gas supply for west Texas-California line F. H. Love. il Pet Eng 18:114+ S '47

Gas through Inch lines to open new markets. R. M. Bleiberg. Barron's 27:27-8 Mr 24 '47

Gas-turbine driven centrifugal compressors for natural gas pipe lines. E. T. P. Neubauer. il diags Pet Eng 19:166+ O '47; Same. Oil & Gas J 45:59-61+ My 3 '47

High pressure welded steel pipe for Southern California gas line. F. A. Herr. il Am Gas J 166:19-20+ Ap '47

How gas was put through Big Inch lines. F. H. Love. il map Pet Eng 18:53-5 Ja '47

How to plan gas compressor stations for long-range efficiency. B. Thiel. il Power Pl Eng 51:68-72+ Jl '47

Inch lines provide gas for Pittsburgh. il map Am Gas Assn Mo 29:85 F '47

Inspection of pipe-line welding by radiographic methods. W. W. Offner. il Oil & Gas J 46:180-1 S 20 '47

Internal cleaning of gas pipe lines. C. A. Serafino. diags Pet Eng 18:180 Mr '47

Jeeps aid in laying pipe line. N. T. Regan. il Gas Age 45:25-6+ N 14 '46

Lakin-Denver gas-transmission project scheduled for early completion. P. Parks. il map Oil & Gas J 46:209-10+ S 20 '47

Lone Star's small automatic compressor station; with cost data. G. Weber. il diag Oil & Gas J 46:58-60+ O 4 '47

More natural gas for western Pennsylvania. E. D. Clutter. il Gas Age 98:11-12+ D 26 '46

Natural gas for the Northeastern seaboard. L. F. Terry. Min & Met 28:326-8 Jl '47

New 800 psi. working pressure gas pipe lines connect five California fields. E. H. Fisher. il map Oil & Gas J 45:66-7 D 21 '46

New England and natural gas. P. R. Taylor. Gas Age 99:27-9+ Ap 3 '47

New pipe line to diversify El Paso natural gas company's income. Barron's 27:38 S 15 '47

New research project, pipe line flow. C. H. M. Burnham. Am Gas Assn Proc 1946:76-8

Oil-gas fight on Inch lines goes to Congress; WAA asks quick sale. Nat Pet N 39:14 Ja 8 '47

Operating experiences with angle-type compressors. O. H. Moore. il Oil & Gas J 45: 67-8+ My 3 '47; Same, without il. Am Gas J 166:35-7+ My '47

Panhandle Eastern continues to expand. C. H. M. Burnham. il map Pet Eng 18:123-4 Mr '47

Pipe line aerial patrol. G. F. Leamon. Gas Age 99:27+ My 29 '47; Same cond. Oil & Gas J 45:64 My 3 '47

Pipe-line construction making rapid advances toward assembly-line efficiency. il Oil & Gas J 46:242-3+ S 20 '47

Pipe line provides outlet for new gas discoveries; Suisun Bay line. E. H. Fisher. il map Pet Eng 18:167-8+ Mr '47

Progress report on Biggest Inch line. il Pet Eng 18:53-4 My '47

Pushing a pipeline across marsh-land. il Eng N 138:576-8 Ap 17 '47

Refrigeration removes liquid hydrocarbons from gas in transit. J. T. Simon. flow diag il Pet Refiner 26:117-19 Ap '47

Report on pipe-line flow; abstract. J. W. Ferguson. Oil & Gas J 45:63 My 3 '47

San Juan-Needles line part of new El Paso natural expansion. P. Reed. Oil & Gas J 46:40 S 6 '47

Some experiences with the protection of bare pipe lines using zinc; cathodic protection of gas line, with cost data. F. A. Brownie. Gas Age 98:19-21+ N 28 '46

South Texas pipe line extension. F. H. Love. il Pet Eng 18:35-8 Jl '47

Texas Eastern given permanent Big Inch certificate. Oil & Gas J 46:82 O 18 '47

Texas Eastern takes over Big Inch pipe-line system. Oil & Gas J 45:38 My 3 '47

Texas eastern transmission corp. plans Inch gas line expansion when FPC ok's. Barron's 27:37 S 15 '47

Texas eastern transmission corp. studies areas to be supplied; Big and Little Big Inch pipe lines. map Gas Age 99:40+ Ap 17 '47

Texas Eastern's expansion plans include new techniques; cost data. P. Reed. maps Oil & Gas J 45:40-1 Ap 5 '47

Texas gas for California. A. F. Bridge. Pet Eng 18:100+ N; 136+ D '46

30-inch pipeline fabricated by Consolidated steel corp. from manganese steel plates. il Steel 120:74-5+ Mr 24 '47

Those troublesome Inch pipe lines. J. J. Hassett. Pub Util 38:796-809 D 19 '46

28,000 miles of pipe line announced for 1947-49. P. Reed. Oil & Gas J 46:211+ Jl 26 '47

United completes Mississippi pipe line. O. C. Irvine. il map Pet Eng 18:113-14+ Je '47

United Gas saves materials by reconditioning. il Gas Age 99:32-3 Ap 3 '47

Utilization of oil-well gas in new Texas-California pipe line. W. K. Davis. map Oil & Gas J 45:275+ D 28 '46; Same. Pet Eng 18:140+ F '47

WAA announces sale of Big Inch to Texas Eastern Transmission. Oil & Gas J 45:101 F 22 '47

WAA revises pipeline-sale policy; Inches go to gas. map Bsns W p21 D 14 '46

GAS, Natural—Pipe lines—*Continued*
Wanted, six million tons of steel for pipelines to be built in next few years. D. I. Brown. il map Iron Age 160:113-17 O 9 '47
Weed chopper built for pipe line work. O. C. Irvine. il Pet Eng 18:202 Ja '47
What's behind pipeline disposal delay; Federal power commission's report on natural gas industry. il Chem Ind 59:854+ N '46
Who gets gas? Bsns W p22 F 22 '47

Gathering lines

Carthage engineers fight hydrates. G. Weber. il diags Oil & Gas J 45:58-60+ Ap 5 '47

Maps

Natural gas lines of the United States. Oil & Gas J 46:supp S 20 '47
Natural gas pipelines in the United States; map. Gas Age 99:supp Ap 17 '47

Production estimates

Application of gas behavior to reserve estimates. J. C. Calhoun, jr. Oil & Gas J 46:157 O 18 '47
Estimating gas reserves. W. L. Nelson. Oil & Gas J 45:76 Mr 8 '47
Example of reserve estimates by gas law. J. C. Calhoun, jr. Oil & Gas J 46:91 N 1 '47
Methods used in the estimation of natural-gas reserves. H. J. Gruy and J. Crichton. Oil & Gas J 46:88-9+ O 25 '47

Production methods

Consolidation of sands in oil and gas wells; use of liquid resin. G. G. Wrightsman and H. H. Spain. Oil & Gas J 46:73+ Jl 19 '47
Economics of dual wells in Waskom field. K. M. Fagin. il map Pet Eng 18:120+ Je '47
11,667 productive acres repressured in West Pampa cooperative project. K. B. Barnes. il map Oil & Gas J 45:66-7+ N 9 '46
Use of helium as a tracer in oil and gas fields. E. M. Frost, jr. il diags Pet Eng (Ref annual) 18:140+ Jl 1 '47

Production rate

Plotting back pressure open flow curves. W. F. Martin. flow chart Pet Eng 18:78+ Mr '47

Proration

Texas as proration operates under specific statute and rules. J. K. Baumel. Oil & Gas J 45:54 D 14 '46

Prospecting

Evolution of geologic thought in prospecting for oil and natural gas. P. H. Price. bibliog (63 titles) Am Assn Pet Geologists Bul 31:673-97 Ap '47

Rates

Downward trend seen in pipeline return decision; Mississippi River fuel corp. E. R. Abrams. Barron's 27:9 Ag 11 '47
Gas price-fixing? Bsns W p18 D 28 '46
Vanishing rate base is no idle dream. S. H. Crosby. Pub Util 39:506-10 Ap 10 '47
Well-head price fixing. G. W. Clark. Oil & Gas J 45:71+ My 3 '47; Same. Am Gas Assn Mo 29:331-3 Jl-Ag '47

Recycling

Application to cycling of gas injection below normal gas-water contact. H. L. Hensley. diags Oil & Gas J 45:84-5+ My 3 '47
Bateman field cycling operations more than doubled by new plant facilities. N. Williams. il map Oil & Gas J 45:72-5+ N 30 '46
Coles Levee cycling plant. C. C. Pryor. il Pet Refiner 26:121-6 Ja '47
Cycling operations at Lake St John. F. H. Love. flow diag il Pet Eng 19:244+ O '47
Cycling plant important to Rincon field. F. H. Love. il Pet Eng 18:51-2 Ap '47
Cycling plant includes innovations; Chapel Hill plant. F. H. Love. flow diag il Pet Eng 18:41-6 Je '47
Cycling plants headed for 4.5 million-gallon-daily capacity. A. L. Foster. il Oil & Gas J 46:64-5+ Jl 19 '47
Economics of cycling. W. H. Woods. Oil & Gas J 46:89+ Ag 16; 99+ Ag 23 '47
Evaluation of gas condensate reservoirs for cycling; abstract. W. H. Justice. Oil & Gas J 45:145+ Mr 22 '47
Instrumentation in gas-cycling plants. G. L. Gudenrath. diags Pet Refiner 26:85-7 Ap '47
Instrumentation of cycling plants. A. J. L. Hutchinson. flow sheet diags Pet Refiner 26:115-19 S '47
Lone Star's Chapel Hill plant, an efficient conservation step. A. L. Foster. il Oil & Gas J 46:58-9+ N 1 '47
Natural-gasoline and cycling industry operating at 91 per cent of capacity. R. B. Tuttle. map Oil & Gas J 45:140-1 Ap 26 '47
New cycling plant for Carthage. F. H. Love. il Pet Eng 18:178+ N '46
Six-year history of Rincon pressure maintenance. N. Williams. il plan Oil & Gas J 46:80-1+ My 24 '47
Survey of cycling plants; tabulation. Oil & Gas J 45:148 Ap 26 '47
Valuation of gas-condensate reservoirs for cycling. W. H. Justice. Oil & Gas J 45:72-3 Ja 4 '47

Sampling

Sampling two-phase streams for high pressure condensate wells. D. L. Katz and G. G. Brown. bibliog flow diags il diags Pet Eng 18:95-6+ Mr; 78+ Ap '47

Statistics

Estimate of natural gas reserves shows increase. Gas Age 99:24 Mr 20 '47
Oil and gas exports for '46. Nat Pet N 39:56 My 14 '47

Storage

Burying gas in Michigan. D. E. Herringshaw and D. McGowan. Pub Util 40:471-5 O 9 '47
Gas storage in pipes being tested to aid in low pressure areas. Iron Age 160:124-5 Ag 14 '47; Same abr. Heating-Piping 19:77 Ag '47; Same cond. Oil & Gas J 46:106-7 Ag 2 '47
Gas to be stored underground in pipes. Blast F & Steel Pl 35:717-18 Je '47
High-pressure storage eases natural gas peaks. E. R. Abrams. Barron's 27:29 Jl 28 '47
Mother Earth's storage tanks; use of old natural gas fields. E. G. Dahlgren and L. D. Farrar. Pub Util 40:346-53 S 11 '47
Natural gas storage. Chem Eng 54:117 Jl '47
Natural gas stored in buried pipe at 2,240 lb. C. R. Claxton and others. il plan diag Oil & Gas J 45:60+ Mr 1 '47; Same. Am Gas J 166:13-15 Mr '47; Same. Gas Age 99:26-7+ Mr 6 '47; Same. Am Gas Assn Mo 29:171-3 Ap '47; Same. Pet Eng 18:115-16+ Ap '47; Same cond. Pub Util 39:692-6 My 22 '47
Performance of two underground gas storages. W. R. Kubista. il diags Gas Age 99: 41-7 Ap 17 '47
Storage of volatile liquids. H. Harvey. il J Chem Educ 24:197-8 Ap '47
Underground natural gas storage. E. G. Dahlgren. Gas Age 99:18-19+ My 29 '47

Sulfur content

Processing high-hydrogen sulphide-content natural gas. C. C. Pryor. flow diag il Pet Refiner 26:103-6 Mr '47
Purification of natural gas at well head. R. A. Graff. il Oil & Gas J 46:69 Ag 2 '47
Sulfur from sour gas. G. Weber. flow chart il Oil & Gas J 45:58-9+ Mr 8 '47

Testing

Burnett apparatus used for gas-deviation determinations. E. N. Armstrong. il diags Oil & Gas J 45:82-4+ D 7 '46

See also
Gas, Natural—Sampling

Unit operation of pools

Benton unit approaches the ideal pressure-maintenance project. G. Weber. il map Oil & Gas J 45:56-8+ Ja 11 '47

Water problem

Application to cycling of gas injection below normal gas-water contact. H. L. Hensley. diags Oil & Gas J 45:84-5+ My 3 '47

GAS, Natural—Water problem—*Continued*
Corrosion in high-pressure gas-condensate wells. H. A. Carlson. bibliog Oil & Gas J 45:81-4 D 21 '46
pH of waters from gas-condensate wells saturated with carbon dioxide at various pressures. H. A. Carlson. bibliog Pet Eng 18:160+ N '46

Well casing

Corrosion leaks in producing string successfully remedied in gas-condensate field. E. Short. il Oil & Gas J 46:197-8 O 11 '47

Well control

Abnormal gas pressures controlled. N. Williams. il Oil & Gas J 45:60-3 N 30 '46
Oil and gas well fire and blowout control. W. Hawkins and C. B. Wallace. bibliog Pet Eng 19:194+ O '47

Well pressure

Calculations of bottom-hole pressures. F. C. Fowler. bibliog Pet Eng 18:88+ Mr '47
Performance of two underground gas storages. W. R. Kubista. il diags Gas Age 99: 41-7 Ap 17 '47

Well testing

Interpretation well test data in gas-condensate fields. J. O. Lewis. Pet Eng 18:180+ S '47

Australia

Geology of Roma district, Queensland, Australia. F. Reeves. bibliog maps diags Am Assn Pet Geologists Bul 31:1341-71, pl 1(fold map) Ag '47

California

Coles Levee cycling plant. C. C. Pryor. il Pet Refiner 26:121-6 Ja '47
General pressure-volume-temperature correlation for mixtures of California oils and gases. M. B. Standing. Oil & Gas J 46:95-7+ My 17 '47

California, Supply to

Texas gas for California. A. F. Bridge. Pet Eng 18:100+ N; 136+ D '46

Gulf Coast region

Corrosion in high-pressure gas-condensate wells, Gulf Coast area. T. S. Zajac. bibliog il Oil & Gas J 46:102-5+ Je 21; 127+ Je 28 '47
Gulf Coast Golconda. L. A. Luther. il Comp Air Mag 52:66-70 Mr '47
Utilization of natural gas in the chemical field; changing the sky line of the Gulf coast of Texas and lower Louisiana. R. S. Child. Pub Util 40:500-6 O 9 '47

Italy

Oil and natural gas in Italy. Engineering 162:402 O 25 '46
Operations in Italy; abstract. C. Wiedenmayer. Oil & Gas J 45:45 Ap 5 '47

Louisiana

Bateman field cycling operations more than doubled by new plant facilities. N. Williams. il map Oil & Gas J 45:72-5+ N 30 '46
Benton unit approaches the ideal pressure-maintenance project. G. Weber. il map Oil & Gas J 45:56-8+ Ja 11 '47
Cycling operations at Lake St John. F. H. Love. flow diag il Pet Eng 19:244+ O '47
Gas dehydration at Pecan Island. E. H. Short, jr. il Oil & Gas J 45:82-3 Ap 12 '47
Gas production and conservation in Louisiana. S. P. Bennett. map Oil & Gas J 46: 91-2 Je 21 '47

Memphis, Supply to

Gas dispatching forms; Memphis light, gas and water division. H. G. Howell. Gas Age 98:27-9+ N 14 '46

Nashville, Tennessee, Supply to

Nashville fights TVA, smoke and soot. G. E. Stedman. il Gas Age 100:74-5+ O 2 '47

New England, Supply to

New England and natural gas. P. R. Taylor. Gas Age 99:27-9+ Ap 3 '47

New Mexico

Purification of natural gas in northwestern New Mexico. V. Thompson and R. A. Graff. il diag Oil & Gas J 45:116+ Ap 19 '47

New York (state)

Possibilities for oil and gas in New York. E. T. Heck. maps diag Pet Eng 18:163-4+ Ag '47

Pennsylvania

Pittsburgh mills are drilling for gas on their own properties. il Iron Age 160:98 O 23 '47
Storage of coke-oven gas in sandstone strata; removal of vapor phase gum. J. R. Bircher. bibliog flow sheet il map diag Chem Eng Prog 43:453-8; Discussion. 458 S '47

Pittsburgh, Supply to

Inch lines provide gas for Pittsburgh. il map Am Gas Assn Mo 29:85 F '47

Russia

Oil and gas resources of southern border of European part of U.S.S.R. I. O. Brod. map Oil & Gas J 46:62-3 S 27 '47

Texas

Carthage approaching full gas production. G. Weber. il map Oil & Gas J 45:137-8+ Mr 29 '47
Cycling plant includes innovations; Chapel Hill plant. F. H. Love. flow diag il Pet Eng 18:41-6 Je '47
East Texas gas-conservation problem is broadened. G. Weber. Oil & Gas J 45:24 F 1 '47
Economics of dual wells in Waskom field. K. M. Fagin. il map Pet Eng 18:120+ Je '47
Gas conservation in west Texas. D. V. Carter. Oil & Gas J 45:74+ Ja 11 '47
Gas developments and trends in south Texas. C. R. Williams. Pet Eng 18:174+ Ja '47; Same cond. Oil & Gas J 45:68+ Ja 11 '47
History of reserves and production of natural gas and natural gas liquids in Texas. P. Olcott. Am Assn Pet Geologists Bul 30: 1123-30 Jl '46; Same. Pet Eng (Ref annual) 18:118+ Jl 1 '47; Excerpt. Oil & Gas J 45:72+ Jl 13 '46
Humble gas conservation program. il Pet Eng 18:66+ Ap '47
Railroad commission concludes Texas flare-gas hearings. G. Weber. Oil & Gas J 45:63 Ap 19 '47
Record gas withdrawals indicated for Texas this year. G. Weber. Oil & Gas J 46:57-8 Ag 9 '47
South Texas giant; second largest oil and gas field; largest condensate reservoir. C. J. Deegan and N. Williams. il maps Oil & Gas J 45:60-4 N 9 '46
State regulation in gas conservation; steps taken by Texas railroad commission to end wastage of flare gas. E. O. Thompson. Pub Util 40:465-70 O 9 '47
Tests at cycling project demonstrate possibilities of new corrosion inhibitor; Kontol 115. W. H. Justice and E. N. Jones. diag Oil & Gas J 45:86-7+ N 9 '46
Texas gas proration operates under specific statute and rules. J. K. Baumel. Oil & Gas J 45:54 D 14 '46
Texas Gulf coast has efficient system of gas conservation. W. J. Murray, jr. Oil & Gas J 46:201-2 My 31 '47
Texas will have 69 gas-conservation plants costing $127,000,000. E. O. Thompson. Oil & Gas J 46:44-5 My 10 '47

Toledo, Supply to

All's natural in Toledo; utility's servicemen complete conversion of appliances. W. F. Smiley. Am Gas Assn Mo 29:114-15 Mr '47

United States

Les applications chimiques du gaz naturel aux États-Unis. P. Guillaumeron. il map Génie Civil 124:125-30 Ap 1 '47
Availability and price of natural gas for mixing, reforming and enriching manufactured gas. G. Symonds. map Am Gas Assn Proc 1946:56-62; Same abr. Am Gas Assn Mo 28:519-22 D '46

GAS, Natural—United States—*Continued*
Estimated proved recoverable natural gas reserves in the United States as of Dec. 31, 1945; table. Am Gas Assn Proc 1946:75
Intrinsic value of natural gas, a national asset. F. H. Dotterweich. flow sheet Am Gas J 165:11-14+ D '46
Natural gas for the Northeastern seaboard. L. F. Terry. Min & Met 28:326-8 Jl '47
Natural gas meets unprecedented demand. R. W. Hendee. il Gas Age 99:33 Ap 17 '47
Natural gas moves ahead. R. W. Hendee. Gas Age 99:28 Ja 23 '47
Natural gas; steady expansion to continue in 1947. D. M. Duff. Oil & Gas J 45:169 Ja 25 '47
Proved natural gas reserves rise. Am Gas Assn Mo 29:174-7+ Ap '47
What is being done about the gas shortage? Sheet Metal Worker 38:58+ My '47

Washington, D.C., Supply to

Program of change-over in suburban Washington; conversion to natural gas. M. O. Waugh. Am Gas J 165:36-7 D '46
Washington natural gas changeover. il map Gas Age 99:21-31 F 6 '47

GAS, Oil
High Btu oil gas. W. E. Steinwedell. Am Gas J 167:31+ O '47
Oil gas in continuous vertical retorts. A. H. Burton. Gas J (Lond) 250:132 Ap 16 '47
Oil gasifier. Chem Eng 53:132 D '46
Production of high B.t.u. gas. E. L. Hall. Am Gas Assn Mo 29:434-6+ O '47
Report on gas production research. E. L. Hall. Gas Age 98:32-3 N 14 '46
Some economics on use of a high B.t.u. gas. H. M. Henry. Gas Age 100:15-16+ Jl 24; 36-40+ Ag 7; 18-22+ Ag 21 '47
Twin generator oil gas process for production of high B.t.u. gas. R. J. Chambers. il diag Am Gas J 167:42-5 Jl '47; Same. Gas Age 99:24-6+ Je 26 '47; Same. Am Gas Assn Mo 29:323-6 Jl-Ag '47

See also
Gas oil

GAS, Producer
Pilot-plant investigations production of sponge iron with producer gas. D. R. Torgeson and others. bibliog U S Bur Mines Rep of Invest 3994:1-42, pl 1-11 '46
Producer gas, a low-cost efficient fuel. J. J. Swift. il Cer Ind 49:57-9 Ag '47
Utilization of producer gas in industrial furnaces. D. B. Hendryx. A S M E Trans 68:877-82 N '46

See also
Gas producers

GAS, Sewage sludge. See Sewage sludge—Gas production

GAS, Water
Cold enrichment with LP-gas; Boston consolidated gas co. experience with mixture of coke-oven gas, carburetted water gas and propane. J. Penney and W. Churchill. Gas Age 98:30-1+ N 28 '46
Control of gum-formers in carburetted water gas. E. J. Murphy. diag Am Gas J 166: 22-5 Je '47; Same. Gas Age 100:33-5+ Jl 10 '47
Dehydration of water gas tars. Am Gas Assn Mo 29:389-90 S '47
Report on gas production research. E. L. Hall. Gas Age 98:31-3+ N 14 '46

See also
Gas oil

Manufacture

Cinétique de la formation du gaz à l'eau dans les fours d'usines à gaz. H. Cassan. Chimie & Ind 58:127-34 Ag '47
German use of low-grade fuel with rich oxygen. D. D. Howat. bibliog diags Chem Age (Lond) 55:661-9 N 30 '46
Increasing water gas set capacity; Malden and Melrose gas light co. E. F. Kennedy. diag Am Gas J 165:15-18 D '46; Same. Gas Age 98:23-5+ D 26 '46
Kinetics of the reactions of steam and carbon dioxide with carbon. W. K. Lewis. Chem & Eng N 25:2815-18 S 29 '47
Lockheed principle; manufacture of carburetted water gas. S. C. Herbert. Gas J (Lond) 248:775-6, 839+ N 6-13 '46; Discussion. 248:841 N 13 '46
Modern water gas plant. il Chem Age (Lond) 55:771-2 D 21 '46
New developments and present practices in water gas manufacture. G. R. Steere. Am Gas J 166:21-4 Ja '47; Same. Gas Age 99:29-30+ Ja 9 '47
New plant developments at Bay Shore. C. A. Gallagher. flow sheet il diags Am Gas J 167:11-15 Ag '47
Reforming of liquid petroleum gases in water gas machines. R. E. Schneiter. diag Gas Age 98:37-41+ D 12 '46
Secrets of a water gas plant; drawing and explanatory text. Am Gas Assn Mo 29:465 O '47
Use of compressed air tools in clinker removal from water gas generators. K. H. Wolf. Am Gas J 166:25+ Mr '47
Water gas generator air supply. H. A. Reynolds. diags Am Gas J 166:11-13 Ap '47

GAS abstracts (periodical)
I.G.T. extends coverage of Gas abstracts. Am Gas Assn Mo 29:179+ Ap '47

GAS analysis
Analysis of a standard sample of natural gas by laboratories cooperating with the American society for testing materials. M. Shepherd. flow diag J Res Nat Bur Stand 38:19-51 Ja '47
Automatic-recording ultraviolet photometer for laboratory and field use. I. M. Klotz and M. Dole. bibliog il diag Ind & Eng Chem Anal ed 18:741-5 D '46; Abstract. Electronics 20:140+ F '47
Catalytic gas alarm. diag Chem & Eng N 25: 2368 Ag 18 '47
Cooperative analysis of a standard sample of natural gas with the mass spectrometer. M. Shepherd. J Res Nat Bur Stand 38:491-8 My '47; Abstract. Blast F & Steel Pl 35: 971-2 Ag '47
Determination of fumigants; determination of low concentrations of methyl bromide. J. Russell. bibliog diags Soc Chem Ind J 66:22-6 Ja '47
Determination of HCN in crude and in purified coal gas; abstract. H. F. Taylor. Chem & Ind p308 My 31 '47
Determination of hydrogen sulfide in gases. E. Field and C. S. Oldach. diag Ind & Eng Chem Anal ed 18:665-7 N '46
Gas analyzers for industrial control and protection. J. M. Lewis. il Oil & Gas J 46: 256+ Jl 26 '47
Gas blending system. A. Langer. diag R Sci Instr 18:101-3 F '47
Gow-Mac thermal conductivity unit. il R Sci Instr 18:527-8 Jl '47
Hollow cathode source applicable to spectrographic analysis for the halogens and gases. J. R. McNally, jr. and others. bibliog il Opt Soc Am J 37:93-8 F '47
Identification of sulfur compounds in gas mixtures. C. S. Oldach and E. Field. bibliog diags Ind & Eng Chem Anal ed 18:669-72 N '46; Same. Pet Eng (Ref annual) 18:226+ Jl 1 '47
Improved oxygen absorption bulb for the Carpenter-Haldane gas analysis apparatus. I. Goodman and R. G. Gustavson. diag Science 105:264 Mr 7 '47
Laboratory low-temperature fractional distillation; optimum charging rates; samples analyzed by mass spectrometer. C. E. Starr, jr., J. S. Anderson and V. M. Davidson. bibliog Anal Chem 19:409-12 Je '47
Mass spectrometer and the control laboratory. D. Milsom. diags Pet Refiner 26:83-8 O '47
Mass spectrometer and what it does. C. J. Deegan. il Oil & Gas J 46:64-5+ S 6 '47
Mass spectrometer for isotope and gas analysis. A. O. Nier. bibliog il diags R Sci Instr 18:398-411 Je '47
Mass spectrometer in gas analysis. Gas Age 100:35+ Ag 7 '47; Same. Pet Eng 18:248 S '47; Same abr. Mech Eng 69:764-5 S '47
Mass spectroscopic analysis of the polyatomic gases in a fast counter. S. S. Friedland. Phys R 71:377-8 Mr 15 '47
Measurement and analysis of gases in vacuum-packed food containers. L. C. Cartwright. bibliog diags Ind & Eng Chem Anal ed 18:779-85 D '46
Microanalyzer for very small gas samples (0.4-1 mm.^{3}). W. E. Berg. diag Science 104: 575-6 D 13 '46

GAS analysis—*Continued*
Micromethod for determination of gaseous olefins. R. Pyke, A. Kahn and D. J. LeRoy. bibliog Anal Chem 19:65-6 Ja '47
Precision semimicromethod for gas analysis. L. K. Nash. bibliog diag Ind & Eng Chem Anal ed 18:505-8 Ag '46; Same. Pet Eng (Ref annual) 18:233-4+ Jl 1 '47
Selective infra-red gas analyzers. W. G. Fastie and A. H. Pfund. bibliog diags Opt Soc Am J 37:762-8 O '47
Tentative procedures for determining individual organic sulfur compounds in gas. H. Hakewill and E. M. Rueck. il diags Am Gas Assn Proc 1946:529-38
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47
Use of thermal conductivity cells for gas analysis in studying the Fischer-Tropsch synthesis of hydrocarbons. E. L. D'Ouville and K. E. Howe. diags Pet Refiner 26:98-103 Je '47

See also
Air—Analysis
Flue gas—Analysis
Gas, Natural—Analysis

GAS and electric associates
To dissolve. Comm & Fin Chr 165:683 F 3 '47

GAS and oil engines. See Diesel engines; Gas engines; Gas turbines; Internal combustion engines

GAS appliance industry
Gas appliance manufacturers association 12th annual meeting, Chicago, April 14-16. Gas Age 99:15-16+ My 1 '47
How many appliances in 1947? H. Massey. Gas Age 99:29-30 Mr 6 '47; Same. Am Gas J 166:28-30 Mr '47; Abstract. Am Gas Assn Mo 29:134 Mr '47
Manufacturers anticipate five billion dollar market. D. P. O'Keefe. Gas Age 99:26 Ja 23 '47; Same. Am Gas J 166:17+ Ja '47

Directories
Gas engineering and appliance directory. Gas Age 99:91-167 Je 12 '47

Exhibitions
A.G.A. holds spotlight at National metal exposition. il Gas Age 98:46-8+ D 12 '46
Gas manufacturers' exhibition. il Am Gas Assn Mo 28:474-8 N '46

Statistics
Gas appliance production gains rapidly. Gas Age 98:30+ N 14 '46
Report on gas appliances first six months of 1947. Gas Age 100:50+ S 4 '47

GAS appliances
Extent of gas flame impingement allowable for satisfactory combustion. Am Gas J 167: 55 O '47
Huge market for appliances in nation-wide rehabilitation of hotels. Am Gas J 167:38 S '47
P.C.G.A. utilization conference, Los Angeles, Feb. 26-27. Am Gas J 166:41 Ap '47
Selection of gas heating equipment. D. K. Smith. Sheet Metal Worker 38:60+ Jl '47
Specifications developed for connectors. il diags Am Gas Assn Mo 28:554 D '46
Things to come. E. D. Milener. Am Gas Assn Proc 1946:216-21
Thirty years' progress by evolution. H. Hartley. Gas J (Lond) 250:442-3 My 28 '47

See also
Gas burners
Gas cooking
Gas ovens
Gas stoves
Gas water heaters
Refrigerators, Gas

Ignition devices
See Gas burners—Ignition devices

Merchandizing
Appliance selling in 1947. Am Gas J 166:39 Ja '47
Commercial cooking load; selling the equipment. H. A. Jordan. Am Gas J 166:22-3 F '47
How Detroit emphasizes basic selling; training program for dealers. S. Wineman and H. F. Reves. il Gas Age 100:25-6+ S 4 '47
Modern alliance; food service equipment industry hopeful of improving conditions relating to sale of gas cooking equipment. I. S. Anoff. Am Gas Assn Proc 1946:222-5

See also
Gas companies—Appliance selling

Pilot lights
Prevention of pilot regulator freezing. diag Am Gas Assn Mo 29:31 Ja '47

Standards
Gas appliance standards add high-altitude requirements. Ind Stand 18:31 F '47
Now is the time to upgrade gas heating installations; Public service electric & gas co. certification plan. H. P. Morehouse. il Gas Age 100:17-18+ Jl 24 '47

Testing
See also American gas association—Appliance testing laboratory

Ventilation
Common sense practices and rules for proper venting of gas appliances. diags Am Gas J 167:11-14+ S '47

GAS appliances, Domestic
Flow of gas through gum filters on domestic gas appliances. L. F. Vixler. il Gas Age 100:25-30 Ag 7 '47
Gas industry and efficient fuel service in the home. G. C. Holliday. Gas J (Lond) 251: 300; Discussion. 300-1 Ag 6 '47

See also
Clothes dryers

Installation
Recent and impending development in gas installation practice. R. N. Le Fevre. bibliog Gas J (Lond) 248:936-8 N 27 '46; Discussion. 248:995-6+ D 4 '46

Merchandizing
Demonstration kit is dealer promotion aid. M. E. Huck. il Am Gas Assn Mo 29:126+ Mr '47
Denver plan; kitchen and home planning service. il Am Gas J 167:41 Ag '47
Dreams don't come true. H. V. Potter. Am Gas Assn Proc 1946:161-5
First new freedom gas kitchen in Detroit. M. W. Bowman. Am Gas J 167:45 O '47
Four requirements for 1947 appliance sales. J. M. Bess. Gas Age 98:21+ D 26 '46
Home service fits into 1947 sales promotion. W. M. Chamberlain. Am Gas J 166:14-16 Ap '47
How Arkansas-Louisiana promotes kitchens. Z. Johnson. il Gas Age 99:42+ F 6 '47
How Philadelphia gas works assisted distributor in first promotion. il Gas Age 98: 13+ D 26 '46
Kitchen planning; a case history. L. Dinneen. il Gas Age 100:33-4+ S 4 '47
New home planning bureau helps dealers and increases gas load. M. McLoughlin. il Gas Age 99:32-4+ F 6 '47
N.Y.-N.J. regional sales conference, Spring Lake, N.J. June 23-24. Am Gas Assn Mo 29:350-2 Jl-Ag '47
Oregon City canning school aided public and dealers. G. E. Stedman. il Gas Age 100:35-6+ S 4 '47
Planning a modern laundry. E. Nolan. Am Gas Assn Proc 1946:194-6
Portland Gas and Coke features the Home planners' den. G. E. Stedman. il Gas Age 98:15-17+ D 26 '46
Residential gas section set to meet domestic market challenge. W. M. Chamberlain. Gas Age 99:30-3+ Ja 23 '47; Same abr. Am Gas Assn Mo 29:91-3 F '47
Sales ahead. W. C. Gordon, jr. Am Gas Assn Proc 1946:185-90
Use the feminine slant, Mr Salesman. H. Kirtland. il Am Gas Assn Mo 29:164-6 Ap '47
Utilities merchandising horizons. R. E. Ginna. Gas Age 99:26-7+ F 20 '47

Repair
Who should pay increased costs for modern appliance service? M. L. Bird. Gas Age 99: 25-6+ Ap 3 '47

GAS as fuel

Brooklyn Union builds summer load in major sports arenas. H. A. Praeger. il Gas Age 100:11-13+ O 16 '47

Chimney liner corrosion resulting from gas-fired furnaces. G. B. Johnson. Gas Age 100: 29-32+ Jl 10 '47

Dual-fuel engines for sewage-treatment plants. A. M. Beehm. il Water & Sewage 84:22+ N '46

Experimental furnace for the investigation of open-hearth-furnace combustion problems. A. H. Leckie and others. bibliog il diags Iron & Steel Inst J 155:392-422 Mr '47; Discussion. 156:501-4; 157:201-6 Ag, O '47

Gas competition with oil heat. J. R. Sherwood. Nat Pet N 38:38+ N 27 '46

Gas fuel plays important role in safety glass production. il Glass Ind 28:236-7 My '47

Gas industry and efficient fuel service in the home. G. C. Holliday. Gas J (Lond) 251: 300; Discussion. 300-1 Ag 6 '47

Gas production and the chemical industry. J. S. van Aken. Chem Age (Lond) 57:423-4, 457-8+ S 27-O 4 '47

Our equity in industry. E. M. Tharp. Am Gas Assn Proc 1946:213-16; Same. Gas Age 98:13-15+ O 17 '46; Same. Am Gas J 165: 36-8 N '46; Same. Am Gas Assn Mo 28: 531-3+ D '46

Refinery gas fuels. L. A. Mekler and C. G. Van Fredersdorff. il diags Pet Refiner 26:81-94 F '47

Substitute fuels; wartime developments in Australia. J. Fielder. Automobile Eng 37: 115 Mr '47

Symposium on combustion. Gas J (Lond) 250: 500+ Je 4 '47

Town gas in industry and commerce. A. Higgs. Gas J (Lond) 251:301; Discussion. 301-3 Ag 6 '47

Town gas in the ceramic industry. J. E. Stanier. Gas J (Lond) 248:1109+ D 18 '46

See also

Blast furnace gas
Boilers—Gas firing
Butane
Coke-oven gas
Gas, Producer
Gas appliances
Gas appliances, Domestic
Gas burners
Gas cooking
Gas heaters
Gas heating
Gas heating, Industrial
Gas ovens
Gas producers
Gas stoves
Liquefied petroleum gas
Propane
Sewage sludge—Gas production

Natural gas

Common sense practices and rules for proper venting of gas appliances. diags Am Gas J 167:11-14+ S '47

Consumers power company serves nation's largest college housing project; Michigan state college. V. W. Sisung. il Gas Age 99: 22 My 1 '47; Same. Am Gas J 166:45 Ap '47

Kansas-Nebraska offsets heating load with summer farm uses. G. E. Stedman. il map Gas Age 99:55-6+ Ap 17 '47

Preparation of a distribution system for increased load with natural gas. K. W. Person. Gas Age 98:19-20+ D 26 '46

Ratio of heating values of 1 bbl. of oil and 1,000 cu. ft. of gas; chart. Oil & Gas J 46:107 Jl 5 '47

Vapofier accomplishes change-over from gas to oil in few minutes. il Brick & Clay Rec 111:51 Ag '47; Same. Cer Ind 49:59 Ag '47

Testing

Caloriscope, système Duchêne. diag Génie Civil 124:318-19 Ag 15 '47

GAS burners

Brûleur sans flamme pour le chauffage des chaudières au gaz de haut fourneau. diags Génie Civil 123:330 D 1 '46

Characteristics of basic gas combustion equipment. D. A. Campbell. diags Steel 121: 78-9+ S 22 '47

Extent of gas flame impingement allowable for satisfactory combustion. Am Gas J 167: 55 O '47

Furnaceless heating and small gas furnaces. J. F. Waight and J. Palser. diags Gas J (Lond) 250:344-6, 405+ My 14-21 '47

Glass in the laboratory; burners for the glassblower. I. C. P. Smith. il diags Chem Age (Lond) 57:165-8 Ag 2 '47

Immersion tubes, open pressure burner fired. S. E. Shepard. il Am Gas J 167:21-4 O '47

Large non-Bunsen type burners. il diags Gas J (Lond) 248:989-90 D 4 '46

Neat gas cooking burners. D. Tinbergen. il Gas J (Lond) 250:399-400 My 21 '47

New system speeds and improves rayon-fabric singeing. J. C. Moore. il diag Textile World 97:112-13+ Je '47

Refinery gas fuels. L. A. Mekler and C. G. Von Fredersdorff. il diags Pet Refiner 26: 81-94 F '47

Smokeless burning of refinery vent gases. A. K. Brumbaugh, jr. il diags Oil & Gas J 45:126+ F 22 '47; Same. Pet Processing 2: 168-70 Mr '47; Same. Pet Refiner 26:111-14 Mr '47; Same. Pet Eng 18:59-61+ Mr '47

Solution to conversion burner problem. W. H. Wise. Gas Age 99:24-5+ Mr 6 '47; Same. Am Gas Assn Mo 29:111-13+ Mr '47; Same. Am Gas J 166:37-9 Mr '47

Thermocouple actuates waste gas torch ignitor when pilot flame fails. A. Krieg. diag Pet Processing 2:258 Ap '47

Bibliography

Laboratories guide to burner design; Association's research bulletins. il Am Gas Assn Mo 29:10-11 Ja '47

Cleaning

Cleaning device maintains water-cooled burners at maximum efficiency. D. E. Richardson and F. C. Arrance. diags Chem Eng 54:128-9 O '47

Ignition devices

Automatic ignition for gas ranges; Range-Lyter. il diags Product Eng 18:104 Je '47

New electronic igniter makes gas heat systems completely automatic. il Am Gas Assn Mo 29:182 Ap '47

Noise

Minimizing noise of extinction; design equation developed at A.G.A. laboratories for application to large gas burners. E. J. Weber. il Am Gas Assn Mo 29:217-18+ My '47; Same. Am Gas J 166:19-21 Je '47

GAS burning equipment

See also

Gas heating, Industrial
Gas water heaters

GAS carburizing. See Case hardening—Gas carburizing

GAS companies

See also

Gas industry
also Standard gas and electric company

Accidents

Accidents in the gas industry; statistics. Am Gas Assn Mo 28:535-8 D '46

Accounting

Accounting for LP-gas. L. Balch. Gas Age 100:34+ Ag 7 '47

Accounting requirements on merger of gas companies. Pub Util 39:259 F 13 '47

American gas association, Edison electric institute conference, Buffalo, April 7-9. Gas Age 99:19-21+ My 1 '47; Edison Elec Inst Bul 15:145-8+ My '47

Billing without meters. W. A. Hill. Am Gas Assn Mo 29:449 O '47

Bi-monthly billing. A. W. Fyfe. Am Gas Assn Mo 29:33-7 Ja '47

Depreciation dispersion factor. A. W. Hastings. Am Gas Assn Mo 29:347-9 Jl-Ag '47

Lone Star changes over to district billing. W. R. Stephens. il Gas Age 100:69-70+ O 2 '47

Mechanized accountancy and statistical work as applied to the North Middlesex gas company. J. D. Thomas. Gas J (Lond) 250:336-8; Discussion. 338+ My 14 '47

National accounting conference sponsored by American gas association and Edison electric institute, Buffalo, April 7-9. Am Gas Assn Mo 29:229-32 My '47

Recent utility accounting developments. C. E. Packman. Am Gas Assn Proc 1946:147-9

Revisions in uniform system of accounts; report of A.G.A. general accounting subcommittee. Am Gas Assn Proc 1946:142-3

GAS companies—Accounting—*Continued*
Use of the multiplying punch. G. J. Beswick and H. G. Littlewort. il Am Gas Assn Mo 29:401-4 S '47

Advertising

See Gas industry—Advertising

Appliance selling

Appliance sales leads, now unneeded, safeguard against electric competition. D. W. Frye. Gas Age 99:19-20+ Ja 9 '47
Equitable gas company opens new sales headquarters. il Gas Age 98:42-3+ D 12 '46
Utilities merchandising horizons. R. E. Ginna. Gas Age 99:26-7+ F 20 '47

See also
Cooking schools

Buildings

Utility building design conference, Los Angeles, April 16-17. Am Gas J 167:38 Ag '47

Combination with electric utilities

Combination utility ups gas rates, lowers electric; Norwich (Conn.) gas and electrical department. T. Braaten. Elec World 127:64 Je 21 '47

Complaints

Old Man Winter writes the fuel bill; tables and charts used in handling high bill complaints. H. S. Pease. Gas Age 100:21-3+ Jl 10 '47

Consolidation

Accounting requirements on merger of gas companies. Pub Util 39:259 F 13 '47

Customer relations

Improving customer relations through employee training. L. A. Horton. Am Gas Assn Proc 1946:133-9; Same. Am Gas Assn Mo 28:541-4+ D '46; Discussion. Am Gas Assn Proc 1946:139-41
Portland Gas & Coke stresses service. G. E. Stedman. il Gas Age 99:23-5+ Ja 9 '47
Write the way you talk. C. L. Sullivan. Am Gas Assn Mo 29:285-7+ Je '47

Dealer relations

Alabama gas co. has new dealer plan. S. F. Wikstrom. il Gas Age 100:19-20 O 16 '47
Deal in the dealer. B. A. Seiple. Am Gas J 166:24-5 Ap '47; Same. Am Gas Assn Mo 29:451-2 O '47
Dealer service training to minimize service calls; Southern California gas company. F. A. Herr. Am Gas J 167:48-50 Jl '47
Demonstration kit is dealer promotion aid. M. E. Huck. il Am Gas Assn Mo 29:126+ Mr '47
Gas service helps appliance dealers with home service follow-up. J. Armour. il Gas Age 99:16-17 Mr 20 '47
Home service helps the dealer. M. Clark. Am Gas Assn Proc 1946:197-200
How Detroit emphasizes basic selling; training program for dealers. S. Wineman and H. F. Reves. il Gas Age 100:25-6+ S 4 '47
How Philadelphia gas works assisted distributor in first promotion. il Gas Age 98:13+ D 26 '46
It started in Topeka; experimental dealer co-operative plan. C. H. Avery. il Gas Age 100:24-5+ S 18 '47
Modern alliance; food service equipment industry hopeful of improving conditions relating to sale of gas cooking equipment. I. S. Anoff. Am Gas Assn Proc 1946:222-5
New home planning bureau helps dealers and increases gas load. M. McLoughlin. il Gas Age 99:32-4+ F 6 '47

Electric utility competition

Appliance sales leads, now unneeded, safeguard against electric competition. D. W. Frye. Gas Age 99:19-20+ Ja 9 '47
Facts about gas cooking; answer to General Electric-LaSalle course in electric appliance salesmanship. Gas Age 100:25-32 Ag 21 '47
You're going to be in hot water; need for adequate supply. W. J. Schmidt. Gas Age 99:25-30+ Mr 20 '47; Same cond. Am Gas Assn Mo 29:288-91 Je '47

Emergency problems

Emergency fm radio communication. J. P. Woodward and W. R. McMillan. Am Gas Assn Proc 1946:333-5
Experience with gas outage affecting 6000 meters. J. L. Wood. map Gas Age 99:17-18+ F 20 '47
How Southern California gas company acted in a disaster emergency; explosion in an electroplating plant in Los Angeles. Am Gas J 166:33 Ap '47
Maintaining gas service while lines must be shut down; temporary bottled gas service. F. A. Herr. Am Gas J 167:27-9 Ag '47

Employees

Absence makes job grow harder; A.G.A. report on absenteeism. Am Gas Assn Mo 29:65-7 F '47
Approach to driver education; abstract. W. F. Brown. Am Gas J 166:15-16 My '47
Better relations through better information. W. H. Senyard. Am Gas Assn Proc 1946:100-5; Discussion. F. W. Fisher. 105-6
But where do you find such gals? how Los Angeles gas company trains girls for its telephone service bureau. J. R. Collins. Pub Util 39:73-9 Ja 16 '47
Careers in the gas industry; opportunities for would-be chemists. il Chem Age (Lond) 56:228-31 F 8 '47
Driver testing; Michigan consolidated gas co. F. M. Rudman. Am Gas Assn Proc 1946:330-2
Employee relations forum; American gas association. Am Gas Assn Mo 28:479-80 N '46
Employee relations in the white collar group. K. A. McIntyre. Am Gas Assn Proc 1946:118-22
Employee suggestion program; Southern California gas co. F. A. Herr. Am Gas J 166:14-15 Je '47
Home service, the road to opportunity. M. B. Burnett. Am Gas Assn Proc 1946:202-3
How to put out an employee handbook. D. Markstein. Am Gas J 167:39-40 Ag '47
Improving customer relations. L. A. Horton. Am Gas Assn Mo 28:541-4+ D '46
Job classification and evaluation. J. A. Whelpley. Am Gas J 166:16-17 My '47
Labor management relations and the Taft-Hartley act. H. Carlson and O. D. Fitz. Gas Age 100:71-3+ O 2 '47
Making the company publication pay dividends. K. C. Pratt. Am Gas Assn Proc 1946:107-10
On the job training for white collar employees. A. P. Coombs. Am Gas Assn Proc 1946:114-17
Our employee rating, training and executive development programs; Consolidated Edison company of New York. H. H. Judson. Am Gas J 166:31-5 Ja '47
Prerequisites of a training and educational program. O. Van Rye. Am Gas J 166:14-15+ F '47
Program for labor peace. C. B. Boulet. Am Gas Assn Proc 1946:92-6; Same. Gas Age 98:50+ O 31 '46; Same. Am Gas J 165:26-9 N '46; Discussion. M. V. Cousins. Am Gas Assn Proc 1946:97-9
Selection and training of servicemen. T. J. Perry. Am Gas Assn Proc 1946:470-4
Training Britain's future gas engineers. W. R. Gordon. il Am Gas J 166:30-2 Je '47
Training of maintenance supervisors; motor-vehicle maintenance. C. G. Seashore. Am Gas Assn Proc 1946:337-40
United Gas inaugurates new personnel plan. Gas Age 100:34 O 16 '47

Equipment and supplies

Report of A.G.A. subcommittee on compressor tools. il diags Am Gas Assn Proc 1946:348-79
Standardization of truck bodies. S. F. Gale. plans Am Gas Assn Proc 1946:343-7; Same. Gas Age 97:17-19+ Ap 18 '46
Summary of discussions during A.G.A. motor vehicle luncheon conferences. L. Edsall. Am Gas Assn Proc 1946:328-30

See also
Gas works—Equipment

GAS companies—*Continued*

Exhibits

Gas company rolls up prospects instead of sales at home show; Milwaukee gas light company. W. Nichol. Am Gas J 167:47 Jl '47

Lone Star gas exhibit at Texas state fair shows modern gas appliance equipment. il Gas Age 98:41 N 14 '46; Am Gas Assn Mo 28:528 D '46

Utility floor display helps dealers. D. C. Youngs. il Gas Age 99:28 F 20 '47

Extension policies

Should customer contributions be charged against the utility? M. H. Diels. Pub Util 40:354-64 S 11 '47

Finance

Electric and gas operating company bank loans. J. F. Childs. Pub Util 39:678-86 My 22 '47

Financial outlook for the manufactured gas industry. W. W. Bodine. Am Gas Assn Proc 1946:68-70; Same. Gas Age 98:42+ O 31 '46; Same. Am Gas J 165:17-18+ N '46

Financial statistics, public utilities, electric and gas operating companies, 1940-1945. 443p $15 C. A. Turner, 208 South La Salle st, Chicago 4 '46

Financial yardstick ratios for gas and electric utilities, 1945. O. Ely. Pub Util 39:46 Ja 2 '47

Rising costs of manufactured gas. A. I. Phillips. Am Gas J 167:17-20+ O '47

Shift from coal to aid natural gas firms. Barron's 27:7 Ja 6 '47

Law

Attractive nuisance liability. M. Springer. bibliog Am Gas Assn Mo 29:127-8 Mr '47

Damage to stored gas equipment and merchandise; legal aspects. L. T. Parker. Am Gas J 165:48-50 N '46

Evolution of gas rates. L. T. Parker. Am Gas J 166:33-5 Je '47

Law suits involving injuries to employes. L. T. Parker. Am Gas J 166:41-3 Mr '47

Legality of gas taxation. L. T. Parker. Am Gas J 167:24-6 Ag '47

New law suits involving authority of commissions. L. T. Parker. Am Gas J 166:31-3 Ap '47

New patent law affecting gas industry. L. T. Parker. Am Gas J 167:31-3 S '47

Review of new negligence law suits. L. T. Parker. Am Gas J 167:51-3 O '47

Right to cut off gas supply. L. T. Parker. Am Gas J 166:25-7 F '47

See also
Gas, Natural—Laws and regulations

Management

Nashville fights TVA, smoke and soot. G. E. Stedman. il Gas Age 100:74-5+ O 2 '47

Zone meter reading; its relation to office routine. G. E. Curtis. Am Gas Assn Proc 1946:123-7; Discussion. 127-8

See also
Gas companies—Employees

Public relations

Public relations and selling. A. H. Motley. Am Gas Assn Proc 1946:14-17

Public relations value of safety; skit on home safety presented by Brooklyn (N.Y.) Union gas co. W. B. Hewson. Gas Age 99:31+ Ja 9 '47; Abstract. Pub Util 39:115-17 Ja 16 '47

Radio communication

Emergency fm radio communication. J. P. Woodward and W. R. McMillan. Am Gas Assn Proc 1946:333-5

Gas service crews dispatched by radio. il Am Gas Assn Mo 29:184 Ap '47

Progress in utility radio co-ordination. H. J. Smith. map Gas Age 100:14-15 O 16 '47

Radio network to operate within five-state area; Pittsburgh group of affiliated gas companies in the Columbia gas system. Gas Age 100:84+ O 2 '47

Rates

See Gas rates

Records

Preservation and destruction of records; report of A.G.A. general accounting subcommittee. B. S. Rodey, jr. Am Gas Assn Proc 1946:144-6

Safety measures

Accident prevention in the training of apprentices. R. N. Le Fevre. Gas J (Lond) 249:512+ Mr 12 '47

Accidental ignition of gas. A. W. Breeland. Am Gas J 166:29-30 F '47

Conservation is smart business. W. F. O'Connor. Am Gas Assn Mo 29:427-9+ O '47

Constant threat; gas in manholes. H. G. Howell. il Nat Safety N 55:30-1+ Ja '47; Same. Gas Age 100:27-9 S 4 '47

Instrumentation to ensure safety in the gas industry. J. F. Anthes. Gas Age 100:21-3+ S 18 '47

Safety in the gas industry. H. T. Jayne. Am Gas J 167:42-3 O '47

Salesmen

Annie doesn't live here any more; gas sales departments can influence and help arrest trend toward decentralization. B. T. Franck. Am Gas Assn Mo 29:210-11+ My '47

Certificate in gas salesmanship and consumer service; regulations for training and examination. Gas J (Lond) 251:507-9 S 3 '47

How Ohio Fuel rebuilt its sales force. G. E. Stedman. Gas Age 99:22-4+ F 20 '47

How sales and service personnel benefit from courses in gas cooking. R. Soule. il Gas Age 98:28-9+ N 28 '46

Know sales or no sale; a dramatic presentation in skit form, with narration of the A.G.A. course in residential gas salesmanship. R. E. Williams. Am Gas Assn Proc 1946:159-61

Training on the service side; work of Institution of gas engineers. J. H. Dyde. Gas J (Lond) 248:1043 D 11 '46

Use the feminine slant, Mr Salesman. H. Kirtland. il Am Gas Assn Mo 29:164-6 Ap '47

Why Mobile gas service corp. has four sales managers. G. E. Stedman. il Gas Age 100: 32-4 S 18 '47

Securities

Fuel industry in transition; with financial statistics on leading companies. H. S. Coffin. il Mag of Wall St 79:306-8+ D 21 '46

Service

All's natural in Toledo; utility's servicemen complete conversion of appliances. W. F. Smiley. Am Gas Assn Mo 29:114-15 Mr '47

Appliance servicing. J. P. Dresen. Am Gas Assn Proc 1946:474-5

Community cooking schools; Consolidated gas, electric light and power co. of Baltimore. M. E. Holloway. il Am Gas Assn Mo 29: 334+ Jl-Ag '47

Denver plan; kitchen and home planning service. il Am Gas J 167:41 Ag '47

Dramatizing home service; circus kitchen exemplifies progress attained by Cincinnati utility's home service department. il Am Gas Assn Mo 29:386-8 S '47

Filling industrial customer needs. F. T. Potter. Am Gas Assn Mo 29:453-4+ O '47

Gas service helps appliance dealers with home service follow-up. J. Armour. il Gas Age 99:16-17 Mr 20 '47

General economics of LP-gas. H. E. Thomas. Gas Age 100:32-4 Ag 7 '47

Good grooming lessons in schools. K. L. Barnes. Am Gas Assn Proc 1946:196-7

Home service fits into 1947 sales promotion. W. M. Chamberlain. Am Gas J 166:14-16 Ap '47

Home service helps the dealer. M. Clark. Am Gas Assn Proc 1946:197-200

Home service, the road to opportunity. M. B. Burnett. Am Gas Assn Proc 1946:202-3

Home service workshop helps sell gas. Gas Age 99:19-20+ F 20 '47; Am Gas J 166:34-5 Mr '47; Am Gas Assn Mo 29:140-2 Mr '47

Kitchen planning; a case history. L. Dinneen. il Gas Age 100:33-4+ S 4 '47

Maintaining gas service while lines must be shut down; temporary bottled gas service. F. A. Herr. Am Gas J 167:27-9 Ag '47

GAS companies—Service—*Continued*
New A.G.A. Home service award, sponsored annually by McCall's magazine. Am Gas Assn Mo 29:236 My '47
New home planning bureau helps dealers and increases gas load. M. McLoughlin. il Gas Age 99:32-4+ F 6 '47
Now is the time to upgrade gas heating installations; Public service electric & gas co. certification plan. H. P. Morehouse. il Gas Age 100:17-18+ Jl 24 '47
Oregon City canning school aided public and dealers. G. E. Stedman. il Gas Age 100:35-6+ S 4 '47
Policy considerations and rates; liquefied petroleum gas service. A. D. Matarese. Gas Age 100:31-2 Ag 7 '47
Portland Gas and Coke features the Home planners' den. G. E. Stedman. il Gas Age 98:15-17+ D 26 '46
Possibilities of beyond the mains L.P.G. service by city gas companies. I. J. Wynn. Am Gas J 166:25-6 Ja '47
Report of subcommittee on work on customers' premises. Am Gas Assn Proc 1946: 321-3
Servicing gas refrigerators. W. W. Marshall. il Am Gas Assn Mo 29:68-70 F '47
Southern counties gas co. adopts unmetered service to meet emergency; meter shortage. Am Gas J 166:40-1 My '47
Who should pay increased costs for modern appliance service? M. L. Bird. Gas Age 99: 25-6+ Ap 3 '47

Showrooms

Equitable gas company opens new sales headquarters. il Gas Age 98:42-3+ D 12 '46
Greenwich greets new era; utility's anniversary featured by opening headquarters and display room. il Am Gas Assn Mo 29:433+ O '47
Pittsburgh's new sales center. il Am Gas Assn Mo 28:529-30 D '46

Statistics

Mechanized accountancy and statistical work as applied to the North Middlesex gas company. J. D. Thomas. Gas J (Lond) 250:336-8; Discussion. 338+ My 14 '47

Taxation

Legality of gas taxation. L. T. Parker. Am Gas J 167:24-6 Ag '47

GAS compressors
Centrifugal compressor for propane tested. il Oil & Gas J 46:99 Ag 2 '47; Mech Eng 69: 767 S '47
Centrifugal compressors for gas pipe lines. M. C. Shaw and E. T. Neubauer. il diags Oil & Gas J 45:65+ Mr 8 '47
Centrifugal compressors will handle 350 million feet per day at new Tennessee gas transmission co.'s station. diag Oil & Gas J 46:199 S 20 '47
Compressor starting auxiliaries. il diag Engineer 183:525 Je 13 '47
Developments in centrifugal gas compressor field. H. M. Shedd. il Pet Eng 18:144+ D '46
Gas-turbine driven centrifugal compressors for natural gas pipe lines. E. T. P. Neubauer. il diags Pet Eng 19:166+ O '47; Same. Oil & Gas J 45:59-61+ My 3 '47
How to plan gas compressor stations for long-range efficiency. B. Thiel. il Power Pl Eng 51:68-72+ Jl '47
Lone Star's small automatic compressor station; with cost data. G. Weber. il diag Oil & Gas J 46:58-60+ O 4 '47
Mechanical fluorine compression. S. G. Osborne and M. M. Brandegge. il diag Ind & Eng Chem 39:273-4 Mr '47
Multistage centrifugal compressor applications. T. R. Foster. il Oil & Gas J 45:67+ F 8 '47; Same cond. diags Pet Eng (Ref annual) 18:286+ Jl 1 '47
Operating experiences with angle-type compressors. O. H. Moore. il Oil & Gas J 45: 67-8+ My 3 '47; Same, without il. Am Gas J 166:35-7+ My '47
Protection for gas-compressor motor insures against unexpected failures. G. Lindgren. il diags Power 91:258-60+ Ap '47
Purification and compression of fluorine. J. F. Froning and others. bibliog il diags Ind & Eng Chem 39:275-8 Mr '47
Storage of fluorine in pressure cylinders. H. F. Priest and A. V. Grosse. il diags Ind & Eng Chem 39:279-80 Mr '47
Survey of leading manufacturers of gas compressors in Germany. L. P. Jehle. diags Product Eng 18:136-7 Ag '47

Cooling

Study of the clarification of compressor station recycle cooling water. E. G. Hammerschmidt. il Pet Eng 18:147+ Mr '47

GAS conservation. See Gas, Natural—Conservation

GAS containers
Industrial handling of fluorine. R. Landau and R. Rosen. bibliog flow diag Ind & Eng Chem 39:281-6 Mr '47
Moving and handling oxygen cylinders. il diags Safety Eng 94:20+ O '47
Purification and compression of fluorine. J. F. Froning and others. bibliog il diags Ind & Eng Chem 39:275-8 Mr '47
Storage of fluorine in pressure cylinders. H. F. Priest and A. V. Grosse. il diags Ind & Eng Chem 39:279-80 Mr '47

Standards

Safety and interchangeability for compressed gas cylinders; standardization of valve outlets. M. E. Steczynski. il Ind Stand 18: 105-7 My '47
Simpler and safer; compressed gas cylinders. il Chem Ind 61:211 Ag '47

GAS cooking
Brooklyn Union builds summer load in major sports arenas. H. A. Praeger. il Gas Age 100:11-13+ O 16 '47
Commercial cooking load; planning the installation. L. J. Fretwell. Am Gas J 166: 21-2 F '47
Commercial cooking load; selling the equipment. H. A. Jordan. Am Gas J 166:22-3 F '47
Commercial gas cooking program. J. J. Bourke. Am Gas Assn Mo 29:238-40 My '47
Community cooking schools; Consolidated gas, electric light and power co. of Baltimore. M. E. Holloway. il Am Gas Assn Mo 29: 334+ Jl-Ag '47
Cooking equipment for school lunchrooms. P. W. Craig. Gas Age 99:38-40+ F 6 '47; Same. il Am Gas Assn Mo 29:117-20+ Mr '47
Facts about gas cooking; answer to General Electric-LaSalle course in electric appliance salesmanship. Gas Age 100:25-32 Ag 21 '47
Frankfurters cooked in the rolls; Wonder baking machines. il Am Gas Assn Mo 82: 561 D '46
Gas prominent at restaurant exposition. il Am Gas Assn Mo 29:212+ My '47
Gas serves the champion Yanks, too! Gas Age 100:13+ O 16 '47
Hollywood cooks with gas; Metro-Goldwyn-Mayer studio commissary. il Am Gas Assn Mo 29:180-1 Ap '47
Home service teaches mess sergeants art of embellishing chow. il Am Gas Assn Mo 29: 88 F '47
How sales and service personnel benefit from courses in gas cooking. R. Soule. il Gas Age 98:28-9+ N 28 '46
It's in the news. E. J. Lynahan. Am Gas Assn Proc 1946:206-8
Meeting commercial competition. C. C. Hanthorn. Am Gas Assn Mo 29:355-8 Jl-Ag '47
Modern alliance; food service equipment industry hopeful of improving conditions relating to sale of gas cooking equipment. I. S. Anoff. Am Gas Assn Proc 1946:222-5
Objectives in the food service field. L. Ourusoff. Am Gas Assn Proc 1946:235-8
Report of the activities of John J. Bourke, director of Commercial gas cooking promotion. Am Gas Assn Proc 1946:243-5
Too many cooks, don't spoil broth; Equitable gas co. program of training for dealer range salesmen. W. E. Davis. il Gas Age 100:41+ Ag 7 '47

See also
Gas stoves

GAS cutting
City gas and oxygen mixture effective in flame cutting steel. il Steel 120:77 Mr 24 '47

GAS detectors
Detection of carbon monoxide or town gas in air. L. T. Minchin. bibliog diags Gas J (Lond) 251:100+ Jl 9 '47
Detection of poisonous gases; abstract. J. Boeke. Electronics 20:182+ Ag '47
Instrumentation to ensure safety in the gas industry. J. F. Anthes. Gas Age 100:21-3+ S 18 '47

GAS distribution
Automatic loading of district governors. F. J. Woolfenden. Am Gas Assn Proc 1946:297-300; Same. Am Gas J 164:27-9 My '46; Same, with diags. Am Gas Assn Mo 28:286-9 Je '46
Changing over low pressure area to intermediate pressure. C. F. Miller. Gas Age 100:26 Jl 24 '47
Design fundamentals for utility use of LP-gases. F. T. Carpenter. Gas Age 99:20-31+ F 20 '47
Distribution conference, 23d, Cleveland, April 14-16. Gas Age 99:29-33 My 15 '47; Same. Am Gas Assn Mo 29:242-6 My '47
Distribution maintenance work in small street openings. E. F. Schuldt. Am Gas Assn Proc 1946:324-6; Same. Gas Age 98:46+ O 31 '46; Same. Am Gas Assn Mo 28:550 D '46
Economics of supplying gas to outlying areas. H. W. Battin. Gas Age 100:19-22 Jl 24 '47; Same cond. Am Gas J 167:19-22 Ag '47
Efficient transmission system operation during peak demand periods. L. T. Potter. Gas Age 99:18-19+ Mr 20 '47
Forecasting the maximum days gas sendout. T. King. Gas Age 99:21-3 Mr 6 '47
Functional mechanization for gas distribution departments; use of trenching machinery; with cost data. J. E. C. Currens. il Gas Age 100:59-66+ O 2 '47
Gas dispatching forms; Memphis light, gas and water division. H. G. Howell. Gas Age 98:27-9+ N 14 '46
Gas production and developments to relieve fuel needs of France. J. G. Coutant. il map Am Gas J 166:11-13+ F '47
Gas transportation system calculations. B. Miller. Gas Age 99:17-21 Ap 3; 57-60 Ap 17; 27-31 My 1 '47
Heating value selection of propane-air gas. E. A. Jamison and T. J. Lambeck. Gas Age 100:21-4 S 4 '47
How to forecast residential gas customers from population trends. F. B. Jones. Gas Age 99:51-4+ Ap 17 '47
LP gases, plant and distribution practice; Philadelphia electric co. E. G. Boyer. il diag Am Gas Assn Proc 1946:415-24; Same. Am Gas Assn Mo 28:315-20+ Jl-Ag '46; Same cond. Am Gas J 165:31-5 Jl '46
Load development and distribution in the Ascot area. J. W. Kaye. Gas J (Lond) 249:620+; 250:94+ Mr 26, Ap 9 '47; Discussion. 250:147 Ap 16 '47
Remote pressure control in Dallas. L. A. Bickel. il Gas Age 99:24+ My 1 '47; Same. Am Gas Assn Mo 29:431-2+ O '47
Sendout growth, threat and promise; Brooklyn union gas co. C. E. Paige. Am Gas Assn Mo 29:315-18+ Jl-Ag '47
Some economics on use of a high B.t.u. gas. H. M. Henry. Gas Age 100:15-16+ Jl 24; 36-40+ Ag 7; 18-22+ Ag 21 '47

See also
Gas, Natural—Pipe lines
Gas governors
Gas holders
Gas leakage
Gas mixing
Gas pipes

Change over

See Gas, Natural—Change over

Long distance lines

See also
Gas, Natural—Pipe lines

Maps

Unifying Con-Edison gas and electric maps. il Gas Age 100:17+ Ag 21 '47

GAS engine plants. See Power plants—Gas engine plants

GAS engineering
Presidential address before Institution of gas engineers. G. C. Pearson. Gas J (Lond) 250:661-3 Je 18 '47
Presidential address before Manchester district association of gas engineers. T. R. Cook. il Gas J (Lond) 250:330-2+ My 14 '47
Report on gas production research. E. L. Hall. Gas Age 98:31-3+ N 14 '46
Technical section; organized for technical progress. C. S. Goldsmith. Am Gas Assn Mo 29:97-9 F '47; Same. Gas Age 99:34-6+ Ja 23 '47

See also
Gas distribution
Gas heating
Gas manufacture
Gas pipes
Gas works

Examinations

Institution of gas engineers; results of 1947 examinations. Gas J (Lond) 251:629-30 S 17 '47

Study and teaching

Education, recruitment, and training of gas engineers. S. G. Ward. Gas J (Lond) 250: 681+ Je 18 '47; Discussion. 250:726-9; 251: 510+ Je 25, S 3 '47
Institution education scheme; report of the Board of examiners, 1947. Gas J (Lond) 251:666-7 S 24 '47
Training Britain's future gas engineers. W. R. Gordon. il Am Gas J 166:30-2 Je '47

GAS engineers
Education, recruitment, and training of gas engineers. S. G. Ward. Gas J (Lond) 250: 681+ Je 18 '47; Discussion. 250:726-8; 251: 510+ Je 25, S 3 '47
Gas engineers' national guild; report on the first year's working. Gas J (Lond) 250: 443-4 My 28 '47

GAS engines
Gas engine maintenance and operation; with cost data. L. S. Kraus. il Water & Sewage Works 94:81-8 Mr '47
How gas engine was improved. J. R. Kennedy. Power Pl Eng 51:94 Ap '47
Propane gas engines for caboose power supply for radio communication. il Ry Mech Eng 120:675 D '46
Selection of multi-cyclinder gas engines. F. E. Hummel. il diag Pet Eng 18:120+ Ap '47

See also
Gas turbines
Internal combustion engines
Power plants—Gas engine plants

GAS fitting
Installation of gas service piping. E. L. Henderson. map Am Gas J 166:19-21+ My '47; Same cond. Am Gas Assn Mo 29:455-7 O '47
Recent and impending development in gas installation practice. R. N. Le Fevre. bibliog Gas J (Lond) 248:936-8 N 27 '46; Discussion. 248:995-6+ D 4 '46

GAS flow
Abrupt energy transformation in flowing gases. N. P. Bailey. il diags A S M E Trans 69:749-57; Discussion. 758-63 O '47
Absorption from a fluid stream flowing through a stationary granular bed. O. A. Hougen and W. R. Marshall, jr. bibliog Chem Eng Prog 43:197-208 Ap '47
Adjustable gas leak. A. O. C. Nier and others. diag R Sci Instr 18:191 Mr '47
Analysis of internal flow machinery. S. H. Christensen. J Ap Phys 18:587-8 Je '47
Experiments on gas flow in producer fuel beds. M. L. Hughes. bibliog il Iron & Steel Inst J 156:371-9 Jl '47
Extended applications of the hot-wire anemometer. S. Corrsin. bibliog R Sci Instr 18:469-71 Jl '47
Flow of gas through gum filters on domestic gas appliances. L. F. Vixler. il Gas Age 100:25-30 Ag 7 '47
Flow of gases at sonic and supersonic speeds. G. A. Hankins and W. F. Cope. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 23):401-8, pl 1-4; Discussion. 409-16 '46
Fluidization in chemical reactions; method for developing design data. J. C. Kalbach. flow diag Chem Eng 54:105-8 Ja; 136-8 F '47
Fluidizing processes; basic observations from laboratory equipment. J. D. Parent, N. Yagol and C. S. Steiner. diags Chem Eng Prog 43:429-36 Ag '47

GAS flow—*Continued*
Gas flows through U.G.I. gum filters. E. H. Smoker. Am Gas Assn Mo 29:295-6 Je '47
Gas transportation system calculations. B. Miller. Gas Age 99:17-21 Ap 3; 57-60 Ap 17; 27-31 My 1; 36-8+ My 15; 28-32 My 29; 29-32+ Je 26; 100:36-40 Jl 10; 29-34 Jl 24; 42-6 Ag 7; 23-4+ Ag 21; 37-40 S 4; 27-31 S 18; 76-81 O 2; 25-8 O 16 '47
Interchange of heat between a gas stream and solid granules. J. R. Arthur and J. W. Linnett. diag Chem Soc J p416-24 Mr '47
Isothermal flow of gases through beds of granular materials. H. E. Rose. diag Inst Mech Eng J & Proc 153 (War emergency issue no 5):148-53; Discussion. 162-8 '45
Kinetics of homogeneous gaseous reactions in flow systems. G. M. Harris. bibliog J Phys & Colloid Chem 51:505-12 Mr '47
New research project, pipe line flow. C. H. M. Burnham. Am Gas Assn Proc 1946: 76-8
Pipe-line flow formulas. B. Miller. Oil & Gas J 46:174-5+ S 20; 102-4+ S 27; 69-71+ O 4 '47
Pressure drop through packed tubes. M. Leva. Chem Eng Prog 43:549-54 O '47 (to be cont)
Rate of adsorption of phosgene and chloropicrin on charcoal. M. Dole. bibliog J Chem Phys 15:447-54 Jl '47
Report on pipe-line flow; abstract. J. W. Ferguson. Oil & Gas J 45:63 My 3 '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46
Steady flow of a gas through a tube with heat exchange or chemical reaction. P. Chambre and C. Lin. bibliog diags J Aeronautical Sci 13:537-42 O '46; Discussion. G. P. Wood. 14:24+ Ja '47
Temperature gradients in turbulent gas streams. W. H. Corcoran, B. Rondebuch and B. H. Sage. bibliog diags Chem Eng Prog 43:135-42 Mr '47
Workable critical velocity formula. R. O. Cox. Pet Eng 18:214 Mr '47

See also
Fluids
Gas meters

GAS governors
Automatic loading of district governors. F. J. Woolfenden. Am Gas Assn Proc 1946:297-300; Same. Am Gas J 164:27-9 My '46; Same, with diags. Am Gas Assn Mo 28:286-9 Je '46

Manufacture

Special machine performs multiple operations in five different directions; production of cast-iron gas-regulator bodies. il Mach 53: 190 F '47

GAS heaters
Heating Research has new gas room heater. il Gas Age 98:48 N 28 '46
New Stewart-Warner South Wind home heater. Consumers Res Bul 20:16 Jl '47

See also
Gas water heaters

Merchandizing

Pacific coast as a market for gas space heaters. J. E. Wyatt, jr. map Am Gas J 167:35-6 O '47

Testing

Research in home comfort; laboratories conducting projects. il Am Gas Assn Mo 29: 443-4 O '47

GAS heating
Chimney liner corrosion resulting from gas-fired furnaces. G. B. Johnson. Gas Age 100:29-32+ Jl 10 '47
Common sense practices and rules for proper venting of gas appliances. diags Am Gas J 167:11-14+ S '47
Comparisons between gas and electricity on the basis of coal economy. P. Schiller. bibliog Inst E E J 94 pt 1:355-63; Discussion. 364-70 Ag '47
Comparisons between gas and electricity on the basis of coal economy; abstract and discussion. P. Schiller. Electrician 138:709 Mr 21 '47
Daytona Village, a multiple garden apartment project in Dayton, Ohio, uses individualized gas heating. il plans Am Bld 69:112-13 F '47
Detroit's gas heating code. Sheet Metal Worker 38:66+ Mr; 74+ Ap '47
Function of convection and radiation in heating by gas. L. W. Andrew and A. L. Roberts. Gas J (Lond) 252:208+ O 22 '47
Gas competition with oil heat. J. R. Sherwood. Nat Pet N 38:38+ N 27 '46
Gas heating demand spirals. Bsns W p21-2+ D 14 '46
Gas house-heating; what to do about it. L. A. Brand. Am Gas J 167:14-15 Jl '47
Home heating by gas; yesterday, today and tomorrow. R. Little. Gas Age 100:41-2+ S 18 '47
LP; fourth string to the automatic heat bow. il Dom Eng 170:157-8 O '47
Moisture control and its effect on home heating service. V. Pearson. Gas Age 98:49-51+ D 12 '46
Now is the time to upgrade gas heating installations; Public service electric & gas co. certification plan. H. P. Morehouse. il Gas Age 100:17-18+ Jl 24 '47
Old Man Winter writes the fuel bill; tables and charts used in handling high bill complaints. H. S. Pease. Gas Age 100:21-3+ Jl 10 '47
Problems of the house heating load. I. K. Peck. Am Gas Assn Mo 29:265-9+ Je '47
Selection of gas heating equipment. D. K. Smith. Sheet Metal Worker 38:60+ Jl '47
Solution to conversion burner problem. W. H. Wise. Gas Age 99:24-5+ Mr 6 '47; Same. Am Gas J 166:37-9 Mr '47; Same. Am Gas Assn Mo 29:111-13+ Mr '47
Survey of companies allowing installation of residential heating appliances, May 1, 1947. Gas Age 99:23 Je 26 '47
What about gas house heating? Gas Age 98: 35-6 N 14 '46
What to do about house heating. R. E. Ginna. Gas Age 100:21-2+ O 16 '47; Same. Am Gas Assn Mo 29:543-4+ D '47
Who should pay increased costs for modern appliance service? M. L. Bird. Gas Age 99:25-6+ Ap 3 '47

GAS heating, Industrial
Burn-off rust-proofing with infra-red rays; Burdett infra-red gas-fired burners. il Metal Finishing 45:103-4 Je '47
Characteristics of basic gas combustion equipment. D. A. Campbell. diags Steel 121:78-9+ S 22 '47
Continuous heating and heat treatment of bar stock and tubing. F. O. Hess. il Am Gas Assn Proc 1946:262-6
Control of vertical heaters in gasoline plant operation. J. M. Sappington. il diag Pet Refiner 26:89-91 Ag '47
Drying ovens with low temperature radiant panels for drying ceramic dishware; abstract. R. B. Grossman. Am Cer Soc J 30(Cer A):202 O 1 '47
Field heat treating of refinery piping. W. H. Fortney. diags Pet Refiner 25:122-4 D '46
Function of convection and radiation in heating by gas. L. W. Andrew and A. L. Roberts. Gas J (Lond) 252:207-8 O 22 '47
Furnaceless heating and small gas furnaces. J. F. Waight and J. Palser. il diags Gas J (Lond) 250:344-6, 405+ My 14-21 '47
Gas-fired infrared dryer used with automatic jigger; Sterling china co. O. O. Todd. il Cer Ind 48:70+ F '47
Gas heat speeds production of electron tubes. il Glass Ind 28:75-7 F '47
Gas heating speeds seamless tube production; Babcock & Wilcox tube co. E. S. Kopecki. il diag Iron Age 159:64-8 Je 5 '47
Gas makes possible special printing process; Relief printing corporation. il Am Gas J 166:16 Ap '47
Gas or electricity for infra-red drying; with cost data. G. R. Van Kampen. il Paper Tr J 125:34+ O 9 '47
High speed annealing of stainless bars and tubes. E. S. Kopecki. il diag Iron Age 160: 143-9 O 16 '47
High speed food can manufacture. il Gas J (Lond) 252:90 O 8 '47
How to sell gas in textile processing. E. V. K. Schutt. Am Gas J 166:43-5 My '47

GAS heating, Industrial—*Continued*
Immersion tubes, open pressure burner fired. S. E. Shepard. il Am Gas J 167:21-4 O '47
Infra red heating by gas exhibition. Gas J (Lond) 250:717 Je 25 '47
Infra-red heating by gas exhibition. il Engineer 183:571 Je 27 '47
Keeping rail lines open; gas-fired switch heaters for removing snow and ice. il diags Am Gas Assn Mo 29:445+ O '47
Laboratories studying gas glow tubes. il Am Gas Assn Mo 29:413 S '47; Same. Am Gas J 167:37 S '47
Latest developments in the use of gas for firing glass melting tanks. F. G. Schwalbe. Glass Ind 28:420+ Ag '47
New developments in heat processing equipment. F. G. Daveler. il Gas Age 99:21-4+ Mr 20 '47
New system speeds and improves rayon-fabric singeing. J. C. Moore. il diag Textile World 97:112-13+ Je '47
Now is the time to think about snow; gas-fired switch heaters. F. L. Kay. il diags Gas Age 100:23-4 O 16 '47
Oven vs. furnace construction for temperatures up to 1200° F. H. Gehnrich. Am Gas Assn Proc 1946:253-4
Precision casting; abstract. P. L. Butler. Iron Age 159:133-4 Ap 3 '47
Propane storage and piping system frees plant from gas interruptions; standby installation for heat treating; Ingalls-Shepard div. of Wyman-Gordon co. il diag Heating-Piping 19:83-5 S '47
Radiant tubes. W. M. Hepburn. Am Gas Assn Proc 1946:266-8
Standard brass foundry practices. W. W. Young. Am Gas Assn Proc 1946:246-8; Same. Gas Age 98:26-7 N 28 '46; Same. Am Gas J 165:21-2 D '46

GAS holders
Dry seal gas holders, all welded. R. Kraus. il diags Welding J 26:675-9 Ag '47
High-pressure gasholder. M. Noone and A. G. Grant. bibliog diags Gas J (Lond) 251: 364-6, 411-12+ Ag 13-20 '47; Discussion. 251: 464-6+ Ag 27 '47
Largest welded holder in Great Britain; new plant inaugurated at St Helens. Gas J (Lond) 248:829 N 13 '46
New high pressure storage inaugurated at Leeds. Gas J (Lond) 250:329 My 14 '47
Reconstructed waterless holder at Bognor Regis. il Gas J (Lond) 252:148-9 O 15 '47
Vertical sheet construction featured in new St Petersburg gas holder. G. C. Pfaff. il Gas Age 98:25 N 28 '46

Purging
Purging eliminates explosion hazards in tanks. W. E. Rossnagel. diag Power 91:707-8 O '47
Purging of gas plant and holders. L. Silver. il Gas J (Lond) 249:317-18+, 374+ F 5-12 '47; Discussion. 249:572+ Mr 19 '47
Repairs to a large gasholder. J. P. Scott. il Gas J (Lond) 251:624+ S 17 '47

Repair
Repairs to a large gasholder. J. P. Scott. il diags Gas J (Lond) 251:622-4+ S 17 '47

GAS igniters. See Gas burners—Ignition devices

GAS in air conditioning
All-gas air conditioning now reality. Am Gas Assn Mo 29:319+ Jl-Ag '47
Field of gas in air conditioning. W. R. Hainsworth. Am Gas J 165:26-9 D '46
Individual gas fired air conditioners are featured in new St Louis shopping center. J. Kearns. il Am Gas J 166:43 Ap '47

GAS in refrigeration
See also
Refrigerators, Gas

GAS industry
See also
Gas appliance industry
Gas companies
Gas distribution
Gas manufacture
Gas works

Advertising
Coast-to-coast gas advertising campaign off to fast start. Am Gas Assn Mo 29:438-42 O '47
Displays are important aids in promotion. D. W. Frye. il Gas Age 98:22-3+ N 28 '46
Hot water, and how. J. H. White, jr. Adv & Sell 40:54 Je '47
Laclede billboards adopt one theme. R. Latimer. il Gas Age 98:37 N 14 '46
Multiple Mr Gus Gas; collection of gas advertizing characters. H. Obermeyer. il Gas Age 99:48-9 Ap 17 '47
New gas sound-color motion picture; Winning seals of approval. il Am Gas Assn Mo 29:280-1 Je '47
New national advertising plans. D. P. Hartson. il Am Gas Assn Mo 29:13-16+ Ja '47; Same cond, with list of media, Oct. 1, 1946-Sept. 30, 1947. Gas Age 99:40-1+ Ja 23 '47
Preparation of food for illustration. A. Given. Am Gas Assn Proc 1946:200-1
Promotion for the gas industry. D. A. Hulcy. Gas Age 99:37+ Ja 23 '47
Selling helps, for what we have to sell. R. A. Malony. Gas Age 99:32-4 F 20 '47
34 neighborhood papers used by B'klyn Union Gas. H. A. Praeger. Adv & Sell 40:46+ S '47

Directories
Gas journal calendar and directory, 1947. 541p 21s Walter King, 11 Bolt court, Fleet st, London, E.C. 4 '47

Exhibitions
British industries fair; exhibits of interest to the gas industry. Gas J (Lond) 250:346+ My 14 '47
G.A.M.A. exhibit. il Am Gas J 165:43-5 N '46
Gas at metal show. Am Gas Assn Mo 29: 43-4 Ja '47
Gas prominent at restaurant exposition. il Am Gas Assn Mo 29:212+ My '47

Finance
18-year record of the gas industry. Pub Util 40:516 O 9 '47

History
One hundred years of service; gas in Charleston, South Carolina. Pub Util 39:446-8 Mr 27 '47

Merchandizing
A.G.A. sales conference on industrial and commercial gas, Boston, March 17-19. Gas Age 99:25-6+ My 1 '47
Commercial gas cooking program. J. J. Bourke. Am Gas Assn Mo 29:238-40 My '47
Drama highlights sales program; A.G.A. annual meeting. Am Gas Assn Mo 28:496-7 N '46
Full-speed, sales ahead! W. C. Gordon, jr. Am Gas Assn Mo 29:233-6 My '47
Gas house-heating; what to do about it. L. A. Brand. Am Gas J 167:14-15 Jl '47
Gas industry plans for building domestic load at New York-New Jersey regional gas sales conference. Pub Util 40:524-6 O 9 '47
How to sell gas in textile processing. E. V. K. Schutt. Am Gas J 166:43-5 My '47
Industrial and commercial gas in 1947. K. Emmerling. Gas Age 99:29+ Ja 23 '47
Industrial gas sales tools. S. T. Olinger. il Am Gas Assn Mo 29:407-9 S '47
Industry-wide cooperation. F. H. Adams. Gas Age 99:35-6+ Ap 3 '47
LP-gas distribution beyond the mains. H. E. Thomas. Am Gas J 167:25-7 Jl '47
Meeting commercial competition. C. C. Hanthorn. Am Gas Assn Mo 29:355-8 Jl-Ag '47
Mid-west regional sales conference attracts enthusiastic attendance, Chicago, March 17-18. Gas Age 99:34+ Ap 3 '47; Same. Am Gas Assn Mo 29:189-90 Ap '47
New horizons open before the manufactured gas industry. H. W. Reed. Gas Age 99:27+ Ja 23 '47
N.Y.-N.J. regional gas sales conference, Spring Lake, N.J. June 23-24. Am Gas J 167:29-30 Ag '47
Objectives in the food service field. L. Ourusoff. Am Gas Assn Proc 1946:235-8
Opportunities facing gas industry call for aggressive action. G. E. Stedman. Gas Age 99:22-6+ My 29; 48+ Je 12; 19-21+ Je 26; 100:24-6+ Jl 10; 23-5+ Jl 24 '47

GAS industry—Merchandizing—*Continued*
Organizing for accomplishment. W. M. Jacobs. Am Gas Assn Proc 1946:225-8
Our equity in industry. E. M. Tharp. Am Gas Assn Proc 1946:213-16; Same. Gas Age 98: 13-15+ O 17 '46; Same. Am Gas J 165:36-8 N '46; Same. Am Gas Assn Mo 28:531-3+ D '46
Paradoxical position of gas. F. H. Adams. Am Gas Assn Mo 29:161-3 Ap '47; Excerpts. Am Gas J 166:37-9 Ap '47
Public relations and selling. A. H. Motley. Am Gas Assn Proc 1946:14-17
Put it to work; Public service electric & gas co. distributes reference manuals to architects, builders, finance institutions and others. H. P. Morehouse. il Am Gas Assn Mo 29:328-30 Jl-Ag '47
Report of the activities of John J. Bourke, director of Commercial gas cooking promotion. Am Gas Assn Proc 1946:243-5
Selling gas for firing large boilers; comparative fuel costs and efficiencies. L. S. Reagan. Am Gas Assn Proc 1946:248-52
Strengthening bonds of service. R. H. Hargrove. Am Gas Assn Mo 29:207-8+ My '47
Synthetic customer analysis; estimating monthly gas sales. A. B. Roberts. Gas Age 99:27-8+ Ja 9 '47
What to do about house heating. R. E. Ginna. Gas Age 100:21-2+ O 16 '47; Same. Am Gas Assn Mo 29:543-4+ D '47
Wisconsin public service charts its sales for five years ahead; interview with A. G. Bur. G. E. Stedman. il Gas Age 98:15-18+ N 28 '46

See also
Gas appliances—Merchandizing
Gas appliances, Domestic—Merchandizing
Gas companies—Appliance selling
Gas companies—Salesmen
Gas heating
Gas in air conditioning

Statistics
Gas industry in 1946. R. H. Hargrove. il Am Gas Assn Mo 29:2-8+ Ja '47; Same. Am Gas J 166:13-17 Ja '47; Same. Gas Age 99:21-5+ Ja 23 '47; Same cond. Pet Eng 18: 66+ Ja '47
Indexes of utility gas sales, 1945-46; charts. Pub Util 39:312 F 27 '47

Australia
Australian attitude towards nationalization. Gas J (Lond) 249:257 Ja 29 '47

Belgium
Post-war reconstruction and expansion in Belgium. Gas J (Lond) 250:553 Je 11 '47

Canada
Canadians are using more natural, manufactured, gas. For Comm W 26:45 Ja 25 '47
Meeting peak loads in the Canadian gas industry. R. L. Bevan. Am Gas Assn Proc 1946:285-7

Charleston, South Carolina
One hundred years of service. Pub Util 39: 446-8 Mr 27 '47

France
Impressions of the French gas industry. J. W. Pallister. Gas J (Lond) 251:409 Ag 20 '47

Germany
Gas meters in the British zone of Germany and in Berlin. M. W. Jones. Gas J (Lond) 252:212+ O 22 '47
Restoration and control of the gas industry in the British zone of Germany, 1945-1947. H. D. Greenwood. Gas J (Lond) 251:194-6, 253-4, 305-6+, 357-8+ Jl 23-Ag 13 '47; Discussion. 251:459-60+ Ag 27 '47

Great Britain
Before and after nationalization. Gas J (Lond) 249:619; 250:34-5 Mr 26-Ap 2 '47
British gas council in action; extracts from the second annual report. Gas J (Lond) 251:199-200+ Jl 23 '47
British gas council unification completed. Gas J (Lond) 251:94-6 Jl 9 '47
Costs, prices, and labour conditions, 1939-1947. J. R. Cleator. Gas J (Lond) 251:91-2 Jl 9 '47
Coventry sets new record. Gas J (Lond) 251: 150 Jl 16 '47
Croydon gas company's centenary celebration. Gas J (Lond) 251:96+ Jl 9 '47
Eastern association of gas engineers and managers, fall meeting, Nov. 11. Gas J (Lond) 248:873-5 N 20 '46
Gas light and coke company and other gas company meetings. Gas J (Lond) 249:455-6+, 521-2+, 581-3; 250:40+; 251:107-9, 366+ Mr 5-19, Ap 2, Jl 9, Ag 13 '47
How shall we emerge from the melting pot? F. N. Howes. Gas J (Lond) 248:875-6 N 20 '46
Junior associations' activities. Gas J (Lond) 248:827, 1087 N 23, D 18 '46
Kidderminster gas company, 1818-1947. P. Dougall. Gas J (Lond) 250:135-6 Ap 16 '47
Nationalization and the future of the industry. F. Dawson. Gas J (Lond) 248:877-9 N 20 '46
1946; annual review. Gas J (Lond) 248:1139-51 D 25 '46
North British association of gas managers; 86th annual meeting, St Andrews, Sept. 11. Gas J (Lond) 251:671-2+ S 24 '47
North of England gas managers' association; presidential address. J. G. Aitken. Gas J (Lond) 252:93-4 O 8 '47
Organization and regional boundaries of a nationalized gas industry. map Gas J (Lond) 251:242-4+ Jl 30 '47
Policy, money, and men. C. C. Walmsley. Gas J (Lond) 248:830-2 N 13 '46
Presidential address before North British association of gas managers. J. M. Dow. Gas J (Lond) 250:242+, 284+ Ap 30-My 7 '47
Presidential address before Waverley association of gas managers. J. Dickson. Gas J (Lond) 251:144-6+, 192-3 Jl 16-23 '47
Problems before the coke oven industry. G. A. Phillipson. Gas J (Lond) 248:768-70 N 6 '46
Reorganization of the gas industry; holding companies suggest an alternative to nationalization. Gas J (Lond) 249:368+ F 12 '47
Society of British gas industries 42d annual report. Gas J (Lond) 250:383-4 My 21 '47
South-Eastern gas corporation, limited; 15th ordinary general meeting. Economist 153: 37 Jl 5 '47
Thirty years' progress by evolution. H. Hartley. Gas J (Lond) 250:442-3 My 28 '47
Wales and Monmouthshire association of gas engineers and managers; presidential address. E. M. Edwards. Gas J (Lond) 250: 445-6+ My 28 '47

Pacific coast
Pacific coast as a market for gas space heaters. J. E. Wyatt, jr. map Am Gas J 167: 35-6 O '47

Southern states
Southern gas association 36th annual meeting, Biloxi, Miss. April 16-18. Gas Age 99: 19-24+ My 15 '47

United States
A.G.A. Manufactured gas department, annual meeting, Atlantic City, Oct. 7. Am Gas Assn Mo 28:483-4 N '46
Economic production for gas loads ahead. E. G. Boyer. Am Gas Assn Proc 1946:270-84
Gas industry endorses new enlarged three-year P.A.R. plan (promotion, advertising and research). Am Gas Assn Mo 29:316-17 Jl-Ag '47
Gas industry in 1946. R. H. Hargrove. il Am Gas Assn Mo 29:2-8+ Ja '47; Same. Am Gas J 166:13-17 Ja '47; Same. Gas Age 99:21-5+ Ja 23 '47; Same cond. Pet Eng 18:66+ Ja '47; Abstract. Pub Util 39:118-19 Ja 16 '47
Government and business. J. A. Krug. Am Gas Assn Proc 1946:8-10; Same. Am Gas Assn Mo 28:488-90 N '46; Same cond. Am Gas J 165:31-2 N '46
Impressions of the gas industry in America. E. Crowther. Gas J (Lond) 248:1039-42 D 11 '46
Industry with a program. H. C. Wolf. Am Gas Assn Proc 1946:29-32; Same. Am Gas Assn Mo 28:515-18 D '46

GAS industry—United States—*Continued*
Manufactured gas utilities expand. S. G. Ebert. Barron's 27:24 Je 23 '47
Opportunities facing gas industry call for aggressive action. G. E. Stedman. Gas Age 99:22-6+ My 29; 48+ Je 12; 19-21+ Je 26; 100:24-6+ Jl 10; 23-5+ Jl 24 '47
Output and productivity in the electric and gas utilities, 1899-1942, by J. M. Gould; review. Pub Util 39:379-80 Mr 13 '47
You too may win an Oscar; program provides for annual awards for leadership in the gas industry. Am Gas Assn Mo 29:270 Je '47

See also
American gas association

GAS industry and the plumbing trade
Gas water heater sales promoted by plumbers in Portland, Oregon. il Am Gas J 166: 36 F '47
Portland dealers hit 937 percent sales increase on water heaters. Dom Eng 170: 116-17 Ag '47

GAS laboratories

See also American gas association—Appliance testing laboratory

GAS leakage
Constant threat; gas in manholes. H. G. Howell. il Nat Safety N 55:30-1+ Ja '47; Same. Gas Age 100:27-9 S 4 '47
High-vacuum leak testing. J Chem Educ 23: 566 N '46
Proposed method of reducing leakage on change-overs. L. J. Willien. Gas Age 99: 31+ Ap 3 '47
Vegetation surveys; method of locating gas leaks. R. W. Stafford. Gas Age 98:52-3+ D 12 '46

GAS lifts
Design, installation, and operation of gas lift equipment. L. F. Davis. diags Pet Eng 18: 60+ D '46
Small flexible gas system aids conservation. G. Weber. flow diag il diag Oil & Gas J 45:92+ F 15 '47

GAS lighting
Association of public lighting engineers; gas lighting demonstration. il Gas J (Lond) 251: 668-70 S 24 '47

GAS manufacture
Applications of science to industry. J. G. King. bibliog Chem & Ind p462-6 D 28 '46
Carbonization and gasification; abstracts of papers at meeting of International congress of pure and applied chemistry. Am Gas J 167:15-18 S '47
Carbonization in horizontal retorts. L. M. Wilson. Gas J (Lond) 251:560-2+ S 10 '47
Chicago experiences in meeting peak loads. J. J. Novy. Am Gas Assn Proc 1946:287-90; Same. Am Gas Assn Mo 29:47-9 Ja '47
Coke and gas industry; waste disposal problems. H. A. Gollmar. bibliog flow diags il Ind & Eng Chem 39:596-601 My '47
Control of chemical reactions on a large scale; fluid catalyst process of oil refining; catalytic and gas-solid reactions. J. G. King. Chem Age (Lond) 56:795-7 Je 21 '47
Economic production for gas loads ahead. E. G. Boyer. Am Gas Assn Proc 1946:270-84
L'emploi de l'oxygène pour gazéifier les combustibles. J. Baral. diags Génie Civil 124: 333-5 S 1 '47
Four new ways to manufacture high B.t.u. gas from coal. diags Chem Eng 54:104-6 Ag '47
Fuel economy in coal carbonization. T. C. Finlayson. bibliog Gas J (Lond) 252:43-6 O 1 '47
Future development of gas manufacture. S. G. Irwin. Gas J (Lond) 249:105+ Ja 8 '47
Future of gas enrichment oils. A. J. McIntosh and E. B. Delgass. Am Gas Assn Proc 1946: 45-53; Same. Gas Age 98:16-20+ O 17 '46; Same. Am Gas Assn Mo 29:21-4+ Ja '47
Future supply of coal for gas-making. W. R. Cameron. Am Gas Assn Proc 1946:42-4
Gas manufacturing equipment. Can Chem & Process Ind 31:327+ Ap '47
Gas manufacturing trends in North America. G. F. Knight. Am Gas J 167:37-40 Jl '47
Gas production and the chemical industry. J. S. van Aken. Chem Age (Lond) 57:423-4, 457-8+ S 27-O 4 '47
Gas-works routine and coal conservation. D. B. Laws. Gas J (Lond) 249:149-50 Ja 15 '47
Gasification of lignite and subbituminous coal; progress report for 1945-46. V. F. Parry and others. 22pls U S Bur Mines Rep of Invest 4128:1-69 '47
Kinetics of the reactions of steam and carbon dioxide with carbon. W. K. Lewis. Chem & Eng N 25:2815-18 S 29 '47
Low ash coal in carbonization. Gas J (Lond) 250:36+, 91+ Ap 2-9 '47
Mechanism of carbonization in continuous vertical retorts. F. R. Weston. il diags Gas J (Lond) 250:556+, 730+ Je 11, 25 '47; Discussion. 250:736-7 Je 25 '47
Modern coal gasification methods. D. T. A. Townend. Chem Age (Lond) 57:357-60, 399-400 S 13-20 '47; Gas J (Lond) 251:611-14+ S 17 '47
Modern developments in coal carbonization. C. A. Poulson. diags Gas J (Lond) 249: 29-32 Ja 1 '47
Natural gas for mixing, reforming and enriching manufactured gas. G. Symonds. map Gas Age 98:38-40+ N 14 '46
New factors influence gas manufacture. R. S. McBride. Gas Age 99:35-6 F 6 '47
Oxygen gasification of anthracite. C. C. Wright and L. L. Newman. diag Chem Eng 54:114-15 Je '47
Oxygen production and utilization in gas making processes. L. L. Newman. flow diags il diags Am Gas Assn Proc 1946:444-67
Partial devolatilization of coal by the fluidization process. A. D. Singh. flow diag Am Gas Assn Proc 1946:400-9
Possibilities of coal economies in gas-works. Gas J (Lond) 249:515-16 Mr 12 '47
Post war period at Middlesbrough. S. Jones. Gas J (Lond) 250:187-8+ Ap 23 '47; Discussion. 250:246 Ap 30 '47
Production and chemical conference, New York, June 2-9. Am Gas J 167:18-20+ Jl '47; Am Gas Assn Mo 29:360-4 Jl-Ag '47
Production of high B.t.u. gas. E. L. Hall. Am Gas Assn Mo 29:434-6+ O '47
Production of synthesis gas; symposium. A. R. Powell and others. diags Pet Processing 2:731-3 O '47
Recent developments in the production of high Btu gas for mixing with natural gas. il Am Gas J 166:11-14 My '47
Report of A.G.A. subcommittee on high B.t.u. gas. Am Gas Assn Proc 1946:410-14
Report of A.G.A. subcommittee on new developments. Am Gas Assn Proc 1946:487-92
Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47
Survey of carbonizing properties of American coals; Bureau of mines coal carbonization laboratory, 1945-1946. J. D. Davis and D. A. Reynolds. Am Gas Assn Proc 1946:426-41
Yields and properties of gases from BM-AGA carbonization tests at 900° C. D. E. Wolfson and D. A. Reynolds. U S Bur Mines Tech Pa 693:1-12; pa 5c Supt. of doc. '46

See also
Gas, Oil
Gas, Water—Manufacture
Gas producers
Gas retorts
Gas works

By-products
Gas industry vis à vis the coke oven industry. Gas J (Lond) 250:35-6, 87-8 Ap 2-9 '47
Gasworks effluents; methods of utilisation and disposal. Chem Age (Lond) 56:166-8 Ja 25 '47
Liquor effluents and ammonia committee, Institution of gas engineers; 8th report. Gas J (Lond) 249:101-2+ Ja 8 '47

See also
Benzol (commercial benzene)

Coal mine gasification
Conducts experiment to produce coal gas by bombing a coal mine. Iron Age 159:120 F 6 '47
Experiment in underground gasification of coal, Gorgas, Ala. J. J. Dowd and others. 29pls U S Bur Mines Rep of Invest 4164: 1-62 '47
First U.S. test made in underground gasification of coal. Am Gas J 166:31 F '47

GAS manufacture—Coal mine gasification —*Continued*
Gas from burning coal mine providing a new type heat source; abstract. R. C. Allen. Iron Age 159:140+ Ap 3 '47
Gas from coal in the ground; Russian experiments. il Comp Air Mag 52:95-6 Ap '47
Gas, raw material for chemicals; underground gasification. Mech Eng 69:670 Ag '47; Excerpt. Heating-Piping 19:107 S '47
Gasification of coal underground. L. C. McCabe. il plan diags Min Cong J 33:42-5 Ag '47
Gasifying coal underground. J. V. Hightower. il plan Chem Eng 54:107-9 Ap '47; Same. Elec World 127:45-7 Ap 26 '47; Same cond. Coal Age 52:74-5 My '47
How coal is burned in the mine to produce power and synthesis gas. C. R. Earle. il plan diag Power Pl Eng 51:74-7 S '47
Mine gasification at Gorgas proves successful beyond expectations. Heat & Ven 44:120+ S '47
Underground coal gasification. G. E. Stedman. il Gas Age 99:13-15+ Mr 20 '47
Underground gasification. Mech Eng 69:408-9 My '47
Underground gasification of coal at Gorgas. M. H. Fies. il plans Pub Util 40:486-99 O 9 '47
Underground gasification of coal reported. M. H. Fies. Chem & Eng N 25:1331 My 12 '47
U.S. tests underground gasification. H. B. Hinton. Am Gas Assn Mo 29:12 Ja '47
Unmined coal will be burned in ground to manufacture gas in Alabama experiment. Heat & Ven 43:116 D '46

Complete gasification process

Gasification of coal in hydrogen under pressure. Gas J (Lond) 248:984-6 D 4 '46
La gazéification intégrale des combustibles par le procédé Koppers. J. Barral. diags Chimie & Ind 57:441-3 My '47
Huge project will convert coal to gas; collaboration between Pittsburgh consolidation coal co. and Standard oil development co. Am Gas Assn Mo 29:167+ Ap '47
New plant will turn coal into gasoline and gas fuel. P. A. Johnston. Barron's 27:6 Mr 31 '47
Pittsburgh consolidation coal co. and Standard oil development co. announce program for making gasoline and gas fuel from bituminous coal. Chem & Eng N 25:976 Ap 7 '47; Abstract. Iron Age 159:104 Mr 27 '47
Pittsburgh consolidation coal co. announces program to make oil and gas from coal. J. Pursglove, jr. Coal Age 52:130+ Ap '47
Pittsburgh to have gasification plant; editorial analysis. il Chem Eng Prog 43:sup 11+ My '47
Plant projected to convert coal into motor fuel and gas; Standard oil development co. and Pittsburgh consolidation coal co. plans. Oil & Gas J 45:46 Ap 5 '47
Processing coal into liquid products may be practicable in a few years; joint program of Standard oil co. (N.J.) and Pittsburgh consolidation coal co. W. F. Bland. Pet Processing 2:325-7 My '47; Abstract. Nat Pet N 39:23-4 Ap 2 '47
Recent developments in gasification. D. T. A. Townend. diags Gas J (Lond) 251:611-14+ S 17 '47

Lurgi process

Gasification of coal; abstract. D. T. A. Townend. Chem Age (Lond) 57:79 Jl 19 '47
German use of low-grade fuel with rich oxygen. D. D. Howat. bibliog diags Chem Age (Lond) 55:661-9, 729-34 N 30, D 14 '46
High pressure gasification of coal in Germany. H. M. Weir. bibliog flow diags il Ind & Eng Chem 39:48-54 Ja '47
Lurgi high pressure gasification. H. Hollings and others. flow diag Gas J (Lond) 248: 889-90+ N 20 '46
Oxygen production and utilization in gas making processes. L. L. Newman. Am Gas Assn Proc 1946:455-8

Winkler process

German use of low-grade fuel with rich oxygen. D. D. Howat. bibliog diags Chem Age (Lond) 55:661-9, 729-34 N 30, D 14 '46
Oxygen production and utilization in gas making processes. L. L. Newman. flow diag diag Am Gas Assn Proc 1946:448-52

GAS masks
Determination of acetylene tetrachloride in air; protection afforded by gas mask canisters against acetylene tetrachloride. J. Goldenson and J. W. Thomas. bibliog il diag J Ind Hygiene 29:14-22 Ja '47
Handling corrosive and toxic materials. F. C. Amstutz. Safety Eng 93:42-3+ Je '47
Reaction of small enclosures on the human voice; specifications required for satisfactory intelligibility. C. T. Morrow. il diags Acoustical Soc Am J 19:645-52 Jl '47
Study of certain factors affecting the filtration of smoke by fibrous materials. J. J. Perot, jr. bibliog diags Paper Tr J 124:54-62 Je 19 '47; Excerpts. Paper Ind 29:1350-2 D '47

GAS measurement
Some laboratory applications of the low friction properties of the dry hypodermic syringe. H. F. Brubach. diags R Sci Instr 18:363-6 My '47

See also
Gas, Natural—Measurement
Gas meters

GAS meters
Aspects of gas measurement. W. L. S. Spinks and A. E. Mason. diag Gas J (Lond) 250: 665-9+; Discussion. 673-4+ Je 18 '47
European meter shop practices. L. A. Dixon, jr. Am Gas Assn Mo 29:410 S '47
Gas meter valves and facings. Gas J (Lond) 251:423 Ag 20 '47
Gas meters in the British zone of Germany and in Berlin. M. W. Jones. Gas J (Lond) 252:212+ O 22 '47
History and recent development of the wet gas meter. B. R. Parkinson. diags Gas J (Lond) 252:101+, 155-6+ O 8-15 '47
Impedance of meter valves. H. Johnston. il plan diags Gas J (Lond) 248:685-6+, 727-8+, 779-80+ O 23-N 6 '46; Discussion. 248: 883-4 N 20 '46
New approach to mechanical orifice meter chart computation. W. F. Martin. diag Pet Eng 18:106+ Ja '47
New type gas flow meter developed. il Gas Age 100:16+ O 16 '47
Report of A.G.A. subcommittee on meters and metering. Am Gas Assn Proc 1946:300-2
Temperature correction factors for gas displacement meters. Oil & Gas J 56:115 My 24 '47

Repair

Desoldering gas meters with induction heating. il Gas Age 99:33+ My 15 '47
Induction heating steps up desoldering operations. il Steel 121:96 S 22 '47
Obtaining the most for the meter repair dollar. H. M. Blain, jr. Am Gas J 165:39-41 D '46

Specifications

Institution of gas engineers specification for gas meters for domestic consumers (1947 revision). diags Gas J (Lond) 251:681 S 24 '47

Testing

Indications of an orifice meter. H. S. Bean. bibliog diags Am Gas Assn Mo 29:337-41+ Jl-Ag '47

GAS mixing
Charleston plant uses propane-air for peak shaving. C. J. Smith. il Gas Age 99:18 Je 26 '47
Chicago experiences in meeting peak loads. J. J. Novy. Am Gas Assn Proc 1946:287-90; Same. Am Gas Assn Mo 29:47-9 Ja '47
Cold enrichment with LP-gas; Boston consolidated gas co. experience with mixture of coke-oven gas, carburetted water gas and propane. J. Penney and W. Churchill. Gas Age 98:30-1+ N 28 '46
Consolidated Edison increases standby facilities. il Gas Age 100:32 S 4 '47
Meeting peak loads in the Canadian gas industry. R. L. Bevan. Am Gas Assn Proc 1946:285-7
Mixed gas research. J. Huck. il Am Gas Assn Mo 29:271-2 Je '47
Natural gas for mixing, reforming and enriching manufactured gas. G. Symonds. map Gas Age 98:38-40+ N 14 '46

GAS mixing—*Continued*
Open forum; gas loads. Am Gas Assn Proc 1946:291-3
Recent developments in the production of high Btu gas for mixing with natural gas. il Am Gas J 166:11-14 My '47
Report of A.G.A. technical advisory committee on mixed gas research. J. F. Anthes. Am Gas Assn Proc 1946:540-2

GAS oil
Air foam system protects gas oil tank. J. A. McGuckin. il Gas Age 100:37-9 S 18 '47
Battle for middle distillates a major refining problem. A. L. Foster. il Oil & Gas J 46: 163-4 S 20 '47
Delayed coking unit processes residuum into gas oil charge for TCC unit. R. Maass and R. E. Lauterbach. flow diag il diags Pet Processing 2:11-16 Ja '47; Same. Pet Refiner 26:84-92 Ja '47; Same. Pet Eng 18:110+ F '47; Same cond. Oil & Gas J 45:44-7+ Ja 4 '47
Evaluation of enriching oils. S. P. Cauley. Am Gas Assn Proc 1946:479-86
Future of gas enrichment oils. A. J. McIntosh and E. B. Delgass. Am Gas Assn Proc 1946:45-53; Same. Gas Age 98:16-20+ O 17 '46; Same. Am Gas Assn Mo 29:21-4+ Ja '47
Gas-oil polyforming. W. C. Offutt and others. flow sheet Oil & Gas J 46:80+ S 27 '47; Same. Pet Processing 2:753-4+ O '47
Naphtha and gasoil polyforming process; Lummus company. flow diags Pet Refiner (Process Handbook sec) 26:198-9 Ap '47
Naphthenic acids; boiling points and distribution in gas oil distillates. K. F. Coles. Inst Pet J 33:325-9 My '47

Analysis
Estimation of hydrogen content of gasoils. C. Allen. bibliog Pet Refiner 26:116-18 F '47

Testing
Gas-making qualities of oils; with tables and graphs. W. F. Kugel. Am Gas Assn Mo 29:297-303 Je '47

GAS ovens
Bake oven permits the use of silicones; St Paul shops of the Great northern railway. il Ry Mech Eng 121:200 Ap '47
Baking Diesel-electric components in gas-fired convection heated oven. il Steel 119: 85 N 25 '46
Briggs adopts special lacquer-drying ovens. J. Geschelin. il Automotive Ind 97:32-3+ Ag 1 '47
Dodge bodies baked by gas ovens. R. Le Grand. il diags Am Gas Assn Mo 29:213-16+ My '47
Oven baking bus bodies. il Steel 120:128 Je 23 '47
Oven vs. furnace construction for temperatures up to 1200°F. H. Gehnrich. Am Gas Assn Proc 1946:253-4
Recirculation as applied to heating and cooling on industrial ovens. R. J. Ruff. Am Gas Assn Proc 1946:254-8

GAS ovens, Baking
Correction of baking complaints; A.G.A. laboratories' testing program. J. Huck. il Am Gas Assn Mo 29:219-21 My '47
Gas conversions in the bakehouse; with cost data. J. H. Fulton. il Gas J (Lond) 251:619-21 S 17 '47

GAS pipe lines
Le transport par pipe-lines du gaz obtenu par gazéification des lignites. E. G. Voiret. map Génie Civil 124:158-9 Ap 15 '47

GAS pipes
Brooklyn Union Gas installs 60-in. cast iron main; illustrations. Gas Age 99:32-3 Ja 9 '47
Installation of gas service piping. E. L. Henderson. map Am Gas J 166:19-21+ My '47; Same cond. Am Gas Assn Mo 29:455-7 O '47
New Cities Service line for Independence, Mo. C. D. Greason. il Gas Age 99:21 F 20 '47
Westchester lighting co. constructs 24-in. transmission line. il Gas Age 100:29 O 16 '47

See also
Gas, Natural—Pipe lines
Gas distribution
Gas fitting

Cleaning
Condensate removal by special drip truck; Citizens gas and coke utility. D. S. Martin. il diag Am Gas J 166:29-30 Ap '47

Failure
Experience with gas outage affecting 6000 meters. J. L. Wood. map Gas Age 99:17-18+ F 20 '47
Stress-corrosion cracking of welded mild-steel gas mains. Engineering 164:186 Ag 22 '47; Same. Gas J (Lond) 251:355 Ag 13 '47

Leakage
See Gas leakage

Protection
Cathodic protection of underground systems. J. Frink. Am Gas J 167:27-9 S '47
Effect of anions on the performance of sacrificial anodes; study of cathodic protection. K. M. Wight and R. F. Hadley. bibliog diag Am Gas Assn Proc 1946:304-20
Protecting pipe in open systems; protection against action of sulfate-reducing bacteria. M. D. Appleman. bibliog Am Gas Assn Mo 29:194-6 Ap '47
Report of A.G.A. subcommittee on pipe coatings and corrosion. Am Gas Assn Proc 1946:302-4

Repair
Accidental ignition of gas. A. W. Breeland. Am Gas J 166:28-30 F '47
Distribution maintenance work in small street openings. E. F. Schuldt. Am Gas Assn Proc 1946:324-6; Same. Gas Age 98: 46+ O 31 '46; Same. Am Gas Assn Mo 28: 550 D '46

Tables, calculations, etc.
Gas transportation system calculations. B. Miller. Gas Age 99:17-21 Ap 3; 57-60 Ap 17; 27-31 My 1; 36-8+ My 15; 28-32 My 29; 29-32+ Je 26; 100:36-40 Jl 10; 29-34 Jl 24; 42-6 Ag 7; 23-4+ Ag 21; 37-40 S 4; 27-31 S 18; 76-81 O 2; 25-8 O 16 '47

GAS pipes, Plastic
Plastic piping for gas services. F. A. Herr. il Am Gas J 166:16-18+ Mr '47
San Diego company uses plastic tubing. il Gas Age 98:14 D 26 '46

GAS pipes, Steel
Gas transportation system calculations; standard specifications for steel pipe. B. Miller. Gas Age 100:25-8 O 16 '47

GAS producers
Experiments on gas flow in producer fuel beds. M. L. Hughes. bibliog il Iron & Steel Inst J 156:371-9 Jl '47
Instrumentation and control for automatic gas producers. V. J. Azbe. Rock Prod 50:69 Mr '47
Modern developments in coal carbonization. C. A. Poulson. diags Gas J (Lond) 249:29-32 Ja 1 '47
Oxygen gasification of anthracite. C. C. Wright and L. L. Newman. diag Chem Eng 54:114-15 Je '47
Producer gas, a low-cost efficient fuel. J. J. Swift. il Brick & Clay Rec 111:48-50 Ag '47; Same. Cer Ind 49:57-9 Ag '47
Slagging gas producer for melting foundry iron. H. LaPlanche. diag Metal Prog 51: 447-50 Mr '47

See also
Gas, Producer
Gas manufacture—Lurgi process

Testing
Distribution of fuel in gas producers. M. L. Hughes. il diags Iron & Steel Inst J 156: 55-74 My '47

GAS purification
Benzole recovery plant at Liverpool gas company's Garston works. flow diag il Gas J (Lond) 249:561-2+ Mr 19 '47
Control of gum-formers in carburetted water gas. E. J. Murphy. diag Am Gas J 166:22-3 Je '47: Same. Gas Age 100:33-4 Jl 10 '47
Gas purifier; Deoxo Puri-dryer. il Chem Ind 61:282 Ag '47
Girbotol process for the removal of acidic gases from hydrocarbon gases and liquids. flow diag Oil & Gas J 45:161 Mr 22 '47

GAS purification—*Continued*
Girbotol process; Girdler corporation. flow diag Pet Refiner (Process Handbook sec) 26:158-9 Ap '47
Hydrogen sulphide removal by ammoniacal iron ammonium ferrocyanide liquors. H. C. Craggs and M. H. M. Arnold. diag Chem & Ind p571-3, 590-3 S 20-27 '47
Organic sulfur removal process; with cost data. F. H. Darlington. Am Gas Assn Mo 29:147 Mr '47
Removal of organic sulphur compounds from gases. Gas J (Lond) 248:1102+, 1154+ D 18-25 '46
Removal of salt cake fume from sulphate recovery furnace stack gases by scrubbing. T. T. Collins, jr. and others. il diags Paper Tr J 124:45-9 Je 5 '47
Scrubbing of sulphate recovery furnace stack gases. T. T. Collins, jr. bibliog il diag Paper Ind 29:680-6, 830-4, 984-6 Ag-O '47
Storage of coke-oven gas in sandstone strata; removal of vapor phase gum. J. R. Bircher. bibliog flow sheet il map diag Chem Eng Prog 43:453-8; Discussion. 458 S '47

GAS ranges. See Gas stoves

GAS rates
Combination utility ups gas rates, lowers electric; Norwich (Conn.) gas and electrical department. T. Braaten. Elec World 127:64 Je 21 '47
Commission must show basis for allocation of gas company costs; Mississippi River fuel corp. v. Federal power commission et al. Pub Util 40:59-60 Jl 3 '47
Evolution of gas rates. L. T. Parker. Am Gas J 166:33-5 Je '47
Highlights of gas rate situation; review of regulatory and economic history. C. F. De Mey. Am Gas Assn Mo 29:274-8 Je '47
Policy considerations and rates; liquefied petroleum gas service. A. D. Matarese. Gas Age 100:31-2 Ag 7 '47
Rate investigation terminated on acceptance of new schedules; city of Columbus v. United fuel gas co. Pub Util 39:391 Mr 13 '47
Rates of Ohio company tested by return on value; Cleveland electric illuminating co. vs. city of Cleveland. Pub Util 39:455-6 Mr 27 '47
Rising costs of manufactured gas. A. I. Phillips. Am Gas J 167:17-20+ O '47
Temporary gas rate increase disapproved; Milwaukee gas light company. Pub Util 39:127 Ja 16 '47
Wartime prices that fell; gas and electricity. I. Putnam. Pub Util 40:151-62 Jl 31 '47

See also
Gas, Natural—Rates

GAS refrigerators. See Refrigerators, Gas

GAS research
Advances in gas research. Chem Age (Lond) 56:577 My 3 '47
Applications of science to industry. J. G. King. bibliog Chem & Ind p462-6 D 28 '46
Clearer focus on research. H. J. Hense. il Am Gas Assn Mo 29:168-9+ Ap '47
Constructive criticism on research; discussion. Gas J (Lond) 248:1097-8+ D 18 '46
Co-operative effort at Watson House. A. E. Sylvester. Gas J (Lond) 248:766-7 N 6 '46
Gas research board; a review of eighteen months' work. Gas J (Lond) 250:389-90+ My 21 '47
Gasification of coal in hydrogen under pressure. Gas J (Lond) 248:984-6 D 4 '46
General research program, past, present and future. E. P. Noppel. Gas Age 99:38-9+ Ja 23 '47
Government and business. J. A. Krug. Am Gas J 165:31-2 N '46
Institution of gas engineers, 12th autumn research meeting, London. Gas J (Lond) 248: 977-84 D 4 '46
Looking ahead in gas research. E. S. Pettyjohn. Gas Age 99:42-4+ Ja 23 '47
Minimizing noise of extinction; design equation developed at A.G.A. laboratories for application to large gas burners. E. J. Weber. il Am Gas Assn Mo 29:217-18+ My '47; Same. Am Gas J 166:19-21 Je '47
Mixed gas research. J. Huck. il Am Gas Assn Mo 29:271-2 Je '47
Report of A.G.A. subcommittee on new developments. Am Gas Assn Proc 1946:487-92
Report of A.G.A. technical advisory committee on mixed gas research. J. F. Anthes. Am Gas Assn Proc 1946:540-2
Report on gas production research. E. L. Hall. Gas Age 98:31-3+ N 14 '46
Research in home comfort; laboratories conducting projects. il Am Gas Assn Mo 29: 443-4 O '47
Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47
Symposium on combustion. Gas J (Lond) 250:500+ Je 4 '47
Third Arthur Duckham research fellowship report, 1945-46; energy transfer from flame gases to solids. J. K. Kilham. bibliog diags Gas J (Lond) 249:258+ Ja 29 '47; Discussion. 249:382-3 F 12 '47
Value of research in the gas industry. E. H. Falmouth. Gas J (Lond) 250:241-2 Ap 30 '47

GAS retorts
Carbonization in horizontal retorts. L. M. Wilson. Gas J (Lond) 251:560-2+ S 10 '47
Experiences with a new type of coke extractor on vertical retorts. W. W. Chisholm. il Gas J (Lond) 250:141-2+ Ap 16 '47; Discussion. 250:196 Ap 23 '47
Inauguration of new Woodall-Duckham vertical retorts at Harwich. Gas J (Lond) 248: 991-2 D 4 '46
Measurement of temperatures in gas retorts. E. Heaton and A. T. Green. diags Gas J (Lond) 149:151-2+, 207-10 Ja 15-22 '47
Mechanism of carbonization in continuous vertical retorts. F. R. Weston. il diags Gas J (Lond) 250:556+, 730+ Je 11, 25 '47; Discussion. 250:736-7 Je 25 '47
Oil gas in continuous vertical retorts. A. H. Burton. Gas J (Lond) 250:132 Ap 16 '47

GAS sampling

See also
Gas, Natural—Sampling

GAS scrubbers. See Gas purification

GAS storage
Underground gas storage; abstract. J. R. Bircher. Chem & Eng N 25:1506 My 26 '47

See also
Coke oven gas—Storage
Gas, Natural—Storage
Gas holders

GAS stoves
Automatic ignition for gas ranges; Range-Lyter. il diags Product Eng 18:104 Je '47
Fourth cooking zone; steam oven. C. Fowler. Am Gas Assn Proc 1946:171-4
Fourth cooking zone; steam oven. C. C. Young. Am Gas Assn Proc 1946:170-1
From an automatic point of view. E. C. Sorby. Am Gas Assn Proc 1946:165-8; Same. Am Gas Assn Mo 29:38-40 Ja '47
How Kansas City developed fourth zone cooking; gas stove with steam oven. G. E. Stedman. il Gas Age 99:25-7 My 15 '47
Introducing a new gas cooker. il Gas J (Lond) 252:97-8 O 8 '47
Neat gas cooking burners. D. Tinbergen. il Gas J (Lond) 250:399-400 My 21 '47
New requirements for automatic gas ranges. Am Gas Assn Mo 29:170 Ap '47
Range situation today. P. I. Berno. Am Gas Assn Mo 29:63-4+ F '47

Advertising

Gas range ads hits cooperative jackpot; American gas association is getting five-to-one return on its national advertising investment. R. Alderman. il Adv & Sell 40:39+ O '47; Same. Am Gas Assn Mo 29: 536-8 D '47
Telling Mrs America that gas has got it! il Am Gas Assn Mo 29:380-4 S '47

Manufacture

Conveyor line at Kalamazoo stove & furnace co.; illustrations with text. Cer Ind 48:94 Ap '47
Larger furnaces to speed American Stove's enameling program. il Cer Ind 48:74-5 Mr '47

GAS stoves—Manufacture—*Continued*
Mechanized core shop in a gas-cooker factory. il plan diag Mech Handling 34:3-6 Ja '47
Mechanized sand plant; foundry at Richmond gas stove co. il plans Mech Handling 34: 58-65 F '47
New cooker factory; G. Corner & co., ltd. il Gas J (Lond) 248:833-4 N 13 '46
Surface and overhead conveyors; Kalamazoo stove & furnace co. il Steel 120:92-3 Ap 7 '47

Merchandizing

A.G.A. survey estimates 1947-1949 gas range sales at nearly seven million. Am Gas Assn Mo 29:395 S '47
Automatic performance; campaign designed to tell housewives about features of CP range. J. W. Lea. Am Gas J 167:37+ O '47; Excerpts. Am Gas Assn Mo 29:405-6 S '47
Gas companies estimate 1947-49 gas range sales. Gas Age 100:54 S 4 '47
Need for 25,000,000 gas ranges seen in next five years. D. P. O'Keefe. Am Gas J 167:46 Jl '47
Point of view of the manufacturers. M. Leach. il Am Gas J 167:47-9 O '47
Schools in eight Texas towns go exclusively C.P. il Gas Age 100:43-4 S 18 '47
Too many cooks, don't spoil broth; Equitable gas co. program of training for dealer range salesmen. W. E. Davis. il Gas Age 100:41+ Ag 7 '47

Standards

Building better CP gas ranges. P. I. Berno. il Am Gas Assn Mo 29:121-4+ Mr '47

Testing

Correction of baking complaints; A.G.A. laboratories' testing program. J. Huck. il Am Gas Assn Mo 29:219-21 My '47

GAS supply

Birmingham, England

City of Birmingham. il map Gas J (Lond) 250:supp 1-8 My 28 '47

Brazil

Fuel-gas rationing in Sao Paulo, Brazil, eased. For Comm W 28:28-9 Ag 2 '47

Brooklyn

Sendout growth, threat and promise; Brooklyn union gas co. C. E. Paige. Am Gas Assn Mo 29:315-18+ Jl-Ag '47

California

Integration of California gas systems proposed by state commission. F. A. Herr. Am Gas J 166:37-9 Ja '47

Cambridge, Massachusetts

Some economics on use of a high B.t.u. gas. H. M. Henry. Gas Age 100:15-16+ Jl 24; 36-40+ Ag 7; 18-22+ Ag 21 '47

Dallas, Texas

Remote pressure control in Dallas. L. A. Bickel. il Gas Age 99:24+ My 1 '47; Same. Am Gas Assn Mo 29:431-2+ O '47

France

Gas production and developments to relieve fuel needs of France. J. G. Coutant. il map Am Gas J 166:11-13+ F '47
Le transport par pipe-lines du gaz obtenu par gazéification des lignites. E. G. Voiret. map Génie Civil 124:158-9 Ap 15 '47

Great Britain

Compulsory gas cuts for industry. Gas J (Lond) 248:1037 D 11 '46
Gas and the fuel situation. J. R. W. Alexander. Gas J (Lond) 249:145 Ja 15 '47
Glimpses beyond the gloom. E. V. Evans. Gas J (Lond) 250:387-8 My 21 '47
Load development and distribution in the Ascot area. J. W. Kaye. Gas J (Lond) 249: 620+; 250:94+ Mr 26, Ap 9 '47; Discussion. 250:147 Ap 16 '47
National fuel service, is there a plan? E. Smith. Gas J (Lond) 251:32-3 Jl 2 '47

Texas City, Texas

Emergency action in Texas City. Am Gas Assn Mo 29:209 My '47

United States

Depletion of gas resources discussed by A.G.A. Chem & Eng N 25:3220 N 3 '47
What is being done about the gas shortage? Sheet Metal Worker 38:58+ My '47

GAS supply, Rural

Le gaz de fumier. I. Carré. il diags Chimie & Ind 57:448-52 My '47

GAS tanks

See also
Gas holders

GAS testing

See also
Gas, Natural—Testing

GAS turbine locomotives. See Locomotives, Gas turbine

GAS turbine power plants. See Power plants—Gas turbine plants

GAS turbines

ASME semi-annual meeting; abstracts of power plant papers. diags Power 91:546-7 Ag '47
Automotive gas turbine; abstract. G. L. Lentz. Mech Eng 69:233-4 Mr '47
British high temperature steels for gas turbines. C. C. Hall. il Steel 120:101+ Je 23 '47
Brittle lacquer technique used to test forged impeller design. H. Dobkin. il diag Steel 121:70-1+ S 1 '47
Centrifugal impellers; their design for applications such as superchargers and gas turbines. H. Woodhouse. diags Machine Design 19:121-6 Ag '47
Characteristics of three high temperature alloys for gas turbines, etc. developed by Allegheny Ludlum steel corp. J. B. Henry, jr. diags Iron Age 159:58-64 Je 12 '47
Coal-fired gas turbine predicted for 1948; abstract. J. Yellott. Chem & Eng N 25:3220 N 3 '47
Comprex, pressure exchanger for gas turbines. P. R. Sidler. diags Power Pl Eng 51:128+ Jl '47
Editorial citation to Elliott company for achievement in use of high temperature alloys. il Materials & Methods 24:1176-7 N '46
Effect of centrifugal force in axial-flow turbines. B. Pochobradsky. diags Engineering 163:205-7 Mr 21 '47; Discussion. A. D. S. Carter. 163:388 My 9 '47; Reply. 164:160 Ag 15 '47
Efficiency of small cyclones (aerotec) as a function of loading, temperature and pressure drop; coal-burning gas turbine for locomotive use. J. D. Parent. il diags Am Inst Chem Eng Trans 42:989-99 O-D '46
Emergency uses for gas turbines; snow clearing, boiler firing. il Engineering 163:285 Ap 11 '47
Escher Wyss-AK closed-cycle turbine, its actual development and future prospects. C. Keller. il diags A S M E Trans 68:791-812 bibliog(p811-12) N '46; Abstract. Power 90: 37-40 Ja '46; Discussion. A S M E Trans 68:812-22 N '46
Flying gas turbines help develop earth-bound units. il Power 91:330+ My '47
Gas turbine applications in iron and steel works. A. T. Bowden and others. il plans diags Iron & Steel Inst J 156:98-118 My '47; Discussion. 157:115-30 S '47
Gas turbine development in 1946. il diags Engineer 183:12-14, supp 8, 53-4, 77-9, 96-7, 119-20 Ja 3-31 '47
Gas-turbine driven centrifugal compressors for natural gas pipe lines. E. T. P. Neubauer. il diags Pet Eng 19:166+ O '47; Same. Oil & Gas J 45:59-61+ My 3 '47
Gas turbine in industry. J. R. Carlson. S A E J 54:76 N '46
Gas turbine power plant. J. I. Yellott. bibliog il diags Power Pl Eng 51:113-14+ Jl; 113-14+ S; 124+ N '47; [cont as] Power Generation 52:94-7 F '48
Gas-turbine progress; abstracts of ASME papers. il Power 90:936-7 Mid-D '46; Power Pl Eng 51:122 F '47

GAS turbines—*Continued*
Gas turbine research; developments at national experimental establishment. Electrician 139:914 S 26 '47
Gas turbines becoming lighter, more efficient. il diag Product Eng 18:159-60 Ap '47
General Electric constructing two experimental gas turbines. A. Howard. Blast F & Steel Pl 35:34 Ap '47; Same. Marine Eng 52:94 Ap '47; Same abr. Iron Age 159:153 Ap 3 '47
Haynes alloys for high-temperature service. W. O. Sweeny. il diags A S M E Trans 69:569-81 Ag '47
High creep strength austenitic gas turbine forgings. D. A. Oliver and G. T. Harris. Engineer 183:468-9, 502-3 My 30-Je 6 '47
High-creep strength austenitic steel for gas turbines. D. A. Oliver and G. T. Harris. Engineering 163:533-6 Je 20 '47
High-temperature alloys. Mech Eng 69:37-8 Ja '47
High-temperature metals; special section. L. N. Rowley and B. G. A. Skrotzki. il diags Power 91:681-96 O '47
Higher temperature gas turbine. A. Papini. diags Diesel Power 25:50-3 Ap '47
Low operating cost indicated for coal turbine. E. R. Abrams. Barron's 27:31 Ag 25 '47
Metallurgical considerations of gas turbines N. L. Mochel. bibliog il diags A S M E Trans 69:561-8 Ag '47
Metals and ceramics able to withstand higher stresses and temperatures being developed; abstracts. C. E. Williams. Steel 121:48-9 S 8 '47; Iron Age 160:240+ S 11 '47
National gas turbine establishment. il Engineer 184:290-1 S 26 '47
New 4800-hp 1400-F gas turbine marked by simplicity of design. A. Howard. il diags Power 91:522-4 Ag '47; Abstracts. Elec World 128:87 Jl 5 '47; Blast F & Steel Pl 35:849-50 Jl '47
New fuel nozzle's finer atomization aids gas-turbine development. il Power 91:457 Jl '47; Heat & Ven 44:80 Jl '47; Automotive Ind 97:37 Jl 15 '47
New gas turbine studied for use in locomotive; Turbodyne. il Automotive & Aviation Ind 96:45 Ap 1 '47
New industry; gas turbines. diag Bsns W p56-8+ Ap 12 '47
Nickel-chromium alloys for gas-turbine service. C. A. Crawford. A S M E Trans 69: 609-12 Ag '47
Observations on conducting and evaluating creep tests; heat-resistant alloys used in the construction of gas turbines. W. Siegfried. bibliog il diags Iron & Steel Inst J 156:189-207 Je '47; Discussion. 157:382-4 N '47
Oil engine and gas turbine developments at Winterthur. il Engineer 183:517 Je 13 '47
Power turbines for natural gas expansion; abstract. S. Bencze. Oil & Gas J 45:53 Mr 8 '47
Precipitation-hardened alloys for gas-turbine service. H. Scott and R. B. Gordon. il A S M E Trans 69:583-99 Ag '47
Progress in development of gas turbines; chemical engineering report. il diags Chem Eng 53:123-30 D '46
Progress in power engineering; pressure exchanger, new lightweight gas turbine, and ash-eliminating furnace. il Bsns W p64-7 D 7 '46
Progress reports; abstracts. Am Cer Soc J 30 (Cer A):172-3 S 1 '47
Proposed multiphase high output Diesel; with gear coupled exhaust gas power turbine and steam waste heat turbine. R. M. Tucker. Diesel Power 25:52-4 Ja '47
Recent developments in gas turbines. A. Meyer. il diags Mech Eng 69:273-7 Ap '47
Recent engineering developments in Switzerland on gas turbines and steam generators. H. J. Rose. bibliog U S Bur Mines Information Circ 7403:1-38 '47
Recent gas turbine developments at Brown Boveri. P. R. Sidler. il diags Power Pl Eng 51:122+ Mr '47
Requirements of steel for gas turbines. H. R. Zschokke and K. H. Niehus. il diag Iron & Steel Inst J 156:271-83 Je '47; Abstracts and discussion. Engineer 184:97-8 Ag 1 '47; Engineering 164:136-7 Ag 8 '47
Scaling behavior of high-strength heat-resisting steels in air and combustion gases in the gas turbine. W. Stauffer and H. Kleiber. il diags Iron and Steel Inst J 156: 181-8 Je '47; Abstracts and discussion. Engineer 184:98-9 Ag 1 '47; Engineering 164: 136-7 Ag 8 '47
Sub-atmospheric gas-turbine cycle. L. Kastner. Engineering 164:400 O 24 '47
Swiss develop new gas turbine units. A. Meyer. il diag Elec World 127:38-40 Ja 4 '47
Symposium on materials for gas turbines. 199p pa $3 Am. soc. for testing materials, 1916 Race st, Philadelphia '46
Tensile testing at elevated temperatures; equipment for testing turbosupercharger and gas turbine parts. A. W. Brunot. il diag Steel 121:90-1+ Ag 4 '47
2000-horsepower gas turbine generator set. T. J. Putz. il diags Blast F & Steel Pl 34: 1548-50+ D '46; Same. Pet Eng 18:180b+ D '46; Same cond. Power 91:34-6 Ja '47; Excerpts. Iron Age 158:137+ D 12 '46; Oil & Gas J 45:27 Ja 4 '47; Elec World 126:109-11 D 7 '46
What is new in engineering? E. E. Johnson. Blast F & Steel Pl 35:1114+ S '47

See also
Hydroelectric plants —Gas turbine auxiliaries
Locomotives, Gas turbine
also American society of mechanical engineers—Gas turbine power division

Blades

Jones & Lamson optical comparator inspects turbine blades. il diags Am Mach 91:133 S 25 '47
Turbine blades. il Sci Am 176:172 Ap '47

Cooling

Research in water-cooled gas turbines. R. W. McLane. il Product Eng 18:127-8 My '47

Design

Design and operation of some experimental high-temperature gas-turbine units. A. D. Hughes. il diags A S M E Trans 69:549-58; Discussion. 558-9 Ag '47
Development of the internal combustion turbine; symposium. H. Constant and others. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):409-512, pl 1-32 '45
Gas turbine designs; progress in three fields of application. diags Electrician 138:281-2 Ja 24 '47
Where gas turbines will fit in future power fields; development and application of units built in Switzerland. H. Pfenninger and S. A. Tucker. il diags Power 90:728-31; 91:24-7 N '46, Ja '47

Efficiency

Contribution to the solution of the gas turbine problem. A. J. R. Lysholm. diags Engineer 183:240-1, 263-4 Mr 21-28 '47
Fuel and the future. F. R. Dimbleby. Engineer 182:546 D 13 '46; Discussion. G. F. Lake. 182:594 D 27 '46; Reply. 183:149 F 7 '47
Gas turbine power plant. J. I. Yellott. il plan diags Power Pl Eng 51:74-9 F; 104-7+ Ap; 106-10 My '47
Modern gas turbine in the industrial power plant. J. R. Haskin, jr. bibliog Mech Eng 69:475-8 Je '47
New temperature-total heat-entropy chart for gases with variable specific heats; for exploring performance of gas turbine plants. J. R. Finniecome. fold chart Inst Mech Eng J & Proc 155 (War emergency issue no 17):117-19 bibliog(p118); Discussion. 120-4 '46
Part-load characteristics of marine gas-turbine plants. W. M. Rohsenow and J. P. Hunsaker. bibliog diags A S M E Trans 69:433-9 My '47
Place of the gas turbine in future electricity generation; abstract. B. V. Poulston. Inst E E J 93 pt 1:577 D '46
Power dividends seen available for turboprops; impulse-wave compressor; Comprex. S. A. Tucker. diags Aviation 46:44-5 Je '47
Regulation theory for thermal power plants employing a closed gas cycle. F. Salzmann. diag A S M E Trans 69:329-35 My '47

GAS turbines—Efficiency—*Continued*
10,000-kw gas turbine. C. Seippel. diags Mech Eng 69:856-8 O '47
Value of wet compression in gas-turbine cycles. R. V. Kleinschmidt. Mech Eng 69: 115-16 F '47; Discussion. 69:684-5 Ag '47

Fuel

Coal-burning gas turbine power plant. diag Product Eng 18:152-4 Ag '47
Fuel vaporizer. il Sci Am 177:75-6 Ag '47
Fuels for jet and propeller gas turbine engines. A. J. Nerad. diag Pet Processing 2:552-3 Jl '47
Fuels of the future; for gas turbines and jet propulsion. P. H. Holt. diags Sci Am 177: 72-4 Ag '47
Gas turbine power plant. J. I. Yellott. il diags Power Pl Eng 51:106-10 My; 118+ S '47
Powdered-coal locomotive. Sci Am 176:127-8 Mr '47
Vaporization of fuels for gas turbines. B. P. Mullins. bibliog(82 ref) fold charts pl diags Inst Pet J 32:703-37; 33:44-70 D '46-Ja '47

History

Parsons, the man and his work. C. D. Gibb. Inst Mech Eng J & Proc 156:Proc 216-18, pl 2-4 S '47; Same cond. Engineer 183: 559-60 Je 27 '47

Manufacture

Forging aluminum and magnesium on a giant hydraulic press; aluminum gas turbine impeller. R. Moore and J. R. Douslin. il diags Mach 54:136-40 O '47
Precision drop forging of high temperature alloys. S. G. Demirjian. il Materials & Methods 26:68-71 S '47

Patents

Exploratory excursion into gas-turbine patents. E. M. Fernald. diags Mech Eng 68: 727-32 Ag '46; Discussion. 69:326-7 Ap '47

Temperature

Color change reveals temperatures in gas turbines. Sci Am 175:268 D '46
New gas turbine pyrometer ups accuracy and response. il diags Aviation W 47:20 S 1 '47
New pyrometer for gas turbines and jet engines. diags Product Eng 18:140 My '47

Testing

Gas-turbine test results show actual performance better than guaranteed. H. Pfenninger. il Power 91:228-9 Ap '47
Pneumatic fatigue testing; machine for testing turbosupercharger and gas turbine buckets. F. B. Quinlan. il diags Automotive & Aviation Ind 96:30-1+ Ja 15 '47

GAS turbines, Aircraft
Aeronautics in 1946. il Engineer 183:42-4, supp 1 Ja 10 '47
Air conditioning turbine-propelled aircraft. H. J. Wood. il diags Aviation 46:49-52 F; 56-8 Ap '47; Abstract. S A E J 55:58-62 F '47
Aircraft gas turbine for propeller drive. A. Howard and C. J. Walker. il Mech Eng 69:827-35 O '47
Aircraft propulsion. F. M. Green and J. E. Wallington. diags Inst Mech Eng J & Proc 156:Proc 176-85 S '47; Same cond. Engineer 182:516-17 D 6 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 185-94 S '47; Engineer 182:521-2 D 6 '46; Engineering 162:570-1, 593-4 D 13-20 '46
All-crystalline porcelains for use in jet-propulsion and gas-turbine engines. il Mech Eng 69:234 Mr '47
Atmosphere and its predicted effects on turbine type aircraft engines; abstract. A. Dolinsky and F. W. Disch. S A E J 55:60 Ap '47
Automatic control considerations for aircraft gas turbine-propeller powerplants. C. W. Chillson and others. S A E J 55:68-70 F '47; Abstract. Automotive & Aviation Ind 96:40+ Ja 1 '47
Big piston type aircraft engines are doomed by gas turbines; abstract. J. T. Rettaliata. Iron Age 160:253-4 S 11 '47
Boeing develops baby turbojet. il Aviation W 47:31 Jl 28 '47
British aircraft outlook; abstract. F. R. Banks. Mech Eng 69:671-2 Ag '47
British jet family gets new member; Napier Naiad unveiled at Radlett show; other equipment displayed. il Aviation W 47:49 O 13 '47
British powerplant progress. J. W. Morrison. il diag Aero Digest 53:78-9+ D '46
British prop-jet progress. W. Nichols. il diag Aero Digest 54:63-5+ F '47
Characteristics of turbojet engines at high flight speeds. C. A. Meyer. diags A S M E Trans 69:237-43; Discussion. 243-4 Ap '47
Cobalt-base and nickel-base alloys for ultra-high temperature. F. S. Badger, jr. and F. C. Kroft, jr. il Metal Prog 52:394-400+ S '47
Compounding aircraft engines. W. O. Meckley and L. J. Fischer. diag Aviation 45:50-2 N '46
Current British gas turbines. il diags S A E J 55:32-3 S '47
Current problems in developing major components for aviation gas turbines. A. H. Redding. il diags Aeronautical Eng R 5:30-5+ D '46
De Havilland Ghost. il Aero Digest 54:81 Ap '47
De Havilland Ghost; drawing. Automotive & Aviation Ind 96:33 Ap 1 '47
De Havilland Ghost jet aero-engine. il diag Engineer 183:191-2 Mr 7 '47
De Havilland Ghost jet-propulsion engine. il Engineering 163:520-1 Je 20 '47; Same. Mech Eng 69:765-6 S '47
Development of the internal combustion turbine; symposium. H. Constant and others. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):409-512, pl 1-32 '45; Summary. Engineering 162:208-9 Ag 30 '46
Engineers study turbojet flexibility. Aviation W 47:18 S 1 '47
Extra kick for jet engines; thrust augmentation offers power gain. R. McLarren. diags Aviation W 47:25-6 O 20 '47
Ferritic disks used for gas turbines; abstract. D. A. Oliver and G. T. Harris. Materials & Methods 25:126 Mr '47
Flow of gases at sonic and supersonic speeds. G. A. Hankins and W. F. Cope. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 23):401-8, pl 1-4; Discussion. 409-16 '46
Flying display of British aircraft. il Engineering 164:307-8 S 26 '47
French and British turbojets show new features. il diags Aviation 46:42-3 Ap '47
Fuel-air ratio required for constant pressure combustion of hydrocarbon fuels. N. A. Hall. S A E J 54:32-6 D '46
Future of gas turbines in aircraft. A. E. Raymond. il Tech R 49:527-8+ Jl '47
Future of the gas turbine in air transportation; abstracts. F. W. Kolk. Automotive & Aviation Ind 96:56 Ja 1 '47; S A E J 55: 80-1 F '47
Guide to aircraft power-plant selection. A. L. Lowell. Aeronautical Eng R 6:22-5 Ap '47
High-temperature high-strength porcelains. Iron Age 159:57 Mr 13 '47; Same abr. Product Eng 18:157 Jl '47; Same abr. Mech Eng 69:234 Mr '47; Excerpts. Chem & Eng N 25:452 F 17 '47; Materials & Methods 25:139 Mr '47
I.A.S. National aircraft propulsion meeting, Cleveland. Aeronautical Eng R 6:22-5+ My '47
Jet-engine instruments. C. A. Edman. Mech Eng 69:505-6 Je '47
Jet propulsion and gas turbines in aviation. H. J. Clyman. Iron Age 158:146+ N 21 '46
Lincoln II bomber with propeller turbine engines. il diag Engineer 183:515-17 Je 13 '47
Mean specific heats for the working media of gas turbine powerplants; abstract. N. A. Hall. S A E J 55:59-60 Ap '47
Metallurgical aspects of gas turbine wheels and nozzles; abstract. E. M. Phillips. Iron Age 160:198 O 16 '47
Morphology and nomenclature of jet engines. F. Zwicky. diags Aeronautical Eng R 6:20-3 Je '47; Same. Aviation 46:49-50+ Je '47
NACA research on effect of combustor-inlet conditions on combustion in a turbojet engine; abstract. J. H. Childs and others. Automotive & Aviation Ind 96:39-40 Ja 1 '47

GAS turbines, Aircraft—*Continued*
New British turbo-prop engine announced. Automotive Ind 97:56 O 1 '47
New porcelains hope for turbojets; Bureau of standards' project. Aviation N 7:10 Mr 17 '47
Northrop Turbodyne has rail possibilities. S. Bangs. Aviation N 7:18 Mr 3 '47
One-third more thrust; turbojet afterburner developed by Ryan aeronautical co. il Aviation N 7:13 Je 9 '47
Outlook in aircraft propulsion. F. R. Banks. S A E J 55:31-2+ S '47; Abstract. Aviation W 47:17 Jl 7 '47
Paris postwar international air show. W. F. Bradley. il diag Automotive & Aviation Ind 96:18-21+ Ja 1 '47
Power dividends seen available for turboprops; impulse-wave compressor; Comprex. S. A. Tucker. diags Aviation 46:44-5 Je '47
Power installations. F. M. Owner. il diags Roy Aeronautical Soc J 51:71-105 bibliog(p104-5); Discussion. 105-8, 179-90 F '47
Power units for future aircraft. F. R. Banks. il diags Roy Aeronautical Soc J 51:35-53 Ja '47
Pratt & Whitney, Wright build compound engines; combine reciprocating, jet features. Aviation N 7:25 Je 9 '47
Progress in engineering knowledge during 1946; gas turbines. P. L. Alger and others. il Gen Elec R 50:26-7 Mr '47
Reliability of Rolls-Royce gas turbines. Engineering 162:394 O 25 '46
Research on special refractories for use in aircraft power systems; abstract. L. R. McCreight. Brick & Clay Rec 110:62+ My '47
Rolls-Royce Trent gas turbine propeller engine. il Engineer 184:88 Jl 25 '47; Engineering 164:201 Ag 29 '47
Ryan FR-1 Fireball, composite-powered aircraft. B. T. Salmon. il Aero Digest 54:66-8+ Mr '47
Secrets of jet engine sought by scientists in bomb-proof dugout, Westinghouse research laboratories. Iron Age 159:132+ My 15 '47
Solar develops new gas turbine. Aviation W 47:44 Ag 11 '47
Vampire flown with Nene engine. il Aviation N 7:16 Je 23 '47
Westinghouse uses new jet metal test. il Aviation N 7:18 Mr 31 '47
Wright gas-turbine laboratory. il Aero Digest 55:65 Jl '47
Wright's jet efforts equal piston studies. Aviation N 7:16 Je 23 '47

See also
Jet propulsion of aircraft

Bearings

Bearings for jet engines. il Aero Digest 53: 102 D '46

Blades

Aspects of German work on high temperature materials; abstract. Product Eng 17: 137 D '46
How to tailor gas turbine elements to the job; illustrations with text, from a paper by N. C. Price. S A E J 54:52-3 D '46
Increasing the range of axial-flow compressors by use of adjustable stator blades. J. T. Sinnette, jr. bibliog il diags J Aeronautical Sci 14:269-82 My '47
Stressing of gas turbine blading. J. Hodge. diags Engineer 182:559-60 D 20 '46
Use of ceramics in gas turbine design. S. W. G. Foster. Roy Aeronautical Soc J 50: 893-5 N '46

Design

Design analysis of the General Electric TG-180 turbojet. N. Burgess. flow diag il diags Aviation W 47:36+ Jl 7; 29-30+ Jl 14 '47
Design changes in J-33 turbojet. J. Foster, jr. il Aviation W 47:21-2 Ag 18 '47
Design details of Bristol Theseus turboprop; first aircraft application utilizing heat exchanger. il diag Aviation 45:53-5 N '46
Design development of the gas turbine. C. J. Lane. il diags S A E J 55:24-9 My '47
Design trends in turbojet and turboprop aircraft engines. E. V. Farrar. il diags S A E J 55:53-6 Jl '47
Development of an axial flow gas turbine for jet propulsion. D. M. Smith. il diags Engineer 183:81-2, 105-7 Ja 17-24 '47; Discussion. 183:102-3 Ja 24 '47
Development of the Goblin engine. E. S. Moult. il diags Roy Aeronautical Soc J 51:655-78; Discussion. 678-85 Ag '47
Future trends in aircraft engine design. A. T. Gregory and A. L. Pomeroy. S A E J 55:62-6 Ag '47
Gyroscopic loads on jet shafts create new design problems; NACA studies. R. McLarren. Aviation W 47:27 O 13 '47
Method for simplifying the calculations of the natural frequencies for a system consisting of n rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47
Thermodynamic factors in turbine-aircraft design. J. Whitney. il Aviation 46:46-8 Je '47

Efficiency

Gas turbine engine performance. H. Serbin. diags Aero Digest 53:78-80+ N '46
Gas turbine propulsion systems. A. H. Redding. il diags Aero Digest 54:75-7+ My '47
Graphical solution for the performance of continuous-flow jet engines; abstract. R. E. Bolz. S A E J 55:60 Ap '47
Internal aerodynamics opens new speed fields; proper handling of supersonic airflows inside power plants capable of reducing fuel consumption. bibliog il Aviation W 47:25-6 Jl 14 '47
Study of efficiency and thrust of conventional turbojet propulsor; abstract. B. Szczeniowski. Aeronautical Eng R 6:30 Ag '47
Survey of the calculated efficiencies of jet power plants. J. H. Keenan and J. Kaye. diags J Aeronautical Sci 14:437-50 Ag '47; Discussion. L. S. Dzung. 14:681-2 D '47
Systematic analysis of thermal turbojet propulsion. H. Reissner. bibliog diag J Aeronautical Sci 14:197-210 Ap '47

Fuel

Composite engine fuel costs. J. F. Fairlie. il Aero Digest 55:44-5 Jl '47
Fuel systems for jet aircraft. W. H. Curtis and W. J. Lansing. diags S A E J 55:50-3 Je '47
Fuels and lubricants for aero gas turbines. C. G. Williams. diags Inst Pet J 33:267-97; Discussion. 306-24 My '47
Fuels for jet and propeller gas turbine engines; abstracts. A. J. Nerad. Oil & Gas J 46:116+ Je 14 '47; Pet Processing 2:552-3 Jl '47

Inspection

Inspecting and measuring jet-propulsion blades; Pant-O-Jector method. il diags Mach 53:185-8 Ja '47
Inspecting turbosupercharger blades by optical projection comparator; Pant-O-Jector. E. C. Polidor. il diags Iron Age 159: 40-4 Ja 16 '47
Inspection procedures for turbojets. I. Stone. il diags Aviation 45:51-4 D '46

Installation

Flexible mountings for turbines. V. Ellis and W. A. Keech. il diags Aero Digest 55:58-9+ Jl '47
Installation enginering of aircraft turbojet engines. R. E. Small. il diags S A E J 55: 57-60 Jl '47; Abstract. Automotive & Aviation Ind 96:30-1 My 1 '47
Installation of jet turbines. M. C. Benedict and A. W. Gabriel. il diags Aero Digest 54: 136-9 Ja '47
Mounting jet engines. J. C. Buechel. il diags Aviation W 47:24+ Ag 4 '47
What are the essential requirements of a gas turbine installation? G. W. Newton. il S A E J 55:25+ Je '47

Lubrication

Fuels and lubricants for aero gas turbines. C. G. Williams. diags Inst Pet J 33:297-306; Discussion. 306-24 My '47

GAS turbines, Aircraft—*Continued*

Manufacture

Aircraft engines of tomorrow in production today; Allison division of the General motors corporation. C. H. Wick. il Mach 53: 138-45 Je; 136-9 Jl '47

Allison turbo-jet production indicates impressive potential. A. McSurely. Aviation W 47:19-20 Jl 21 '47

Atomic hydrogen welding of stainless sheet; combustion chambers for General Electric's aircraft jet engine. G. Richardson. il diags Iron Age 159:72-4 My 8 '47

Fabricating sheet metal parts of jet engines. H. A. Knight. il Materials & Methods 24: 1461-5 D '46

Gas turbine developments; production of aero-engine combustion system components. il Engineer 182:392-4 N 1 '46

Need for sound ingot in high temperature forging; abstract. L. B. Fonda. Iron Age 160:147-8 Ag 7 '47

Precision forging of high temperature alloys. C. H. Smith, jr. il diags Iron Age 158:42-6 N 28 '46

Recent developments in materials for gas turbines. T. A. Taylor. Inst Mech Eng J & Proc 153 (War emergency issue no 12): 505-12, pl 25-32 '45

Resistance-welding aids in the production of jet engines. F. G. Harkins. il diags Welding J 25:1175-8 D '46

Tone stylus provides precise duplicating; tension on stylus converted to sound, allows milling of thin contour sections to close limits. H. L. Seekins. il diags Am Mach 91:109-11 Je 19 '47

Turbine wheel and shaft joined in three minutes welding cycle. il Automotive & Aviation Ind 96:46 F 15 '47

U.S. whittling British lead in jet plane production. W. Kroger. il Aviation N 7:24-5 Ap 7 '47

Welding in the development of jet propulsion engines; abstract. H. E. Lardge. Engineering 164:366 O 17 '47

Welding of stainless steel for jet propulsion. E. J. DeWitt and F. J. Lammers. il diags Welding J 26:320-3 Ap '47

Specifications

Aircraft gas turbine engines; tabulation. Automotive & Aviation Ind 96:133 Mr 15 '47

Aircraft gas turbines; specification of G-E TG-100 and TG-180. il Mech Eng 69:592-3 Jl '47

Aviation's turbojet specifications; tabulation. Aviation 46:supp Mr '47

Starting

Aircraft turbojet and gas-turbine engine starter systems. A. G. Bardwell, jr. Mech Eng 69:577-80 Jl '47; Excerpts. Machine Design 19:174 F '47

Testing

Determination of turbojet engine thrust from tailpipe measurements. R. W. Pyle. J Aeronautical Sci 14:561-4 O '47

Effect of combustor-inlet conditions on combustion in a turbo-jet engine; abstract. J. H. Childs and others. S A E J 55:61 Ap '47

Flight testing gas turbines. W. O. Meckley. il diags Aviation W 47:28-9 Ag 11; 26+ Ag 18 '47

Freak supersonic sickness threatens jet engine testers; caused by impact of ultra-high sound waves. W. Kroger. Aviation W 47:21-2 Jl 14 '47

Gas turbine aero-engine reliability. Engineer 183:132 Ja 31 '47

New laboratory tests gas turbines for army. Power 91:660b S '47

Rolls research reveals reliability improvement for aero jet engines. Iron Age 159: 116 F 6 '47

Service type test of Theseus propeller-turbine aero-engine. Engineering 163:283, 288 Ap 11 '47

Steam puts the ram in ramjet. il Power 91: 476 Jl '47

Technique of testing gas turbine engines. D. N. Walker. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12):472-83, pl 15-22 '45

These test procedures keyed jet engine advance. E. E. Stoeckly. plan diags Aviation 46:46-8 F '47

See also

Gas turbines, Aircraft—Blades

Gas turbines, Aircraft—Inspection

Vibration

Army-navy research will probe supersonic sickness; efforts to determine effects on human beings of high-frequency vibrations emitted by jet engines. il Aviation W 47:17 Ag 18 '47

Freak supersonic sickness threatens jet engine testers; caused by impact of ultra-high sound waves. W. Kroger. Aviation W 47:21-2 Jl 14 '47

Some vibration problems in gas turbine engines. R. G. Voysey. diags Inst Mech Eng J & Proc 153 (War emergency issue no 12): 483-95, pl 23-4 '45

GAS turbines, Marine

British gas-turbine installation on British torpedo boat. il Marine Eng 52:85-6 O '47

Coal-burning gas turbine; locomotive plant applicable to marine service. W. B. Tuker; J. I. Yellott; G. W. Shipley. diag Marine Eng 51:103-5 D '46

Design and operation of some experimental high-temperature gas-turbine units. A. D. Hughes. il diags A S M E Trans 69:549-58; Discussion. 558-9 Ag '47

First gas turbine goes to sea. Power 91:745 N '47

Gas turbine boat gets first tryout by British navy. Iron Age 160:140-1 O 9 '47

Gas turbine development in 1946. diags Engineer 183:77-8 Ja 17 '47

Gas turbine propelled M.G.B. 2009. il diags Engineer 184:218-20, 248-9, 260-2 S 5-19 '47

Gas-turbine propelling machinery for British gunboat. il diag Engineering 164:271-4, 276 S 19 '47

Gas turbines for naval purposes. Engineer 183:126 Ja 31 '47

Insulating for United States navy experimental gas turbine plant. H. A. Altorfer. il Marine Eng 52:90-2 O '47

Marine gas turbine. A. Meyer. diags Engineer 183:146-7 F 7 '47

Materials for power gas turbines. C. T. Evans, jr. bibliog il diags A S M E Trans 69:601-8 Ag '47

Naval gas turbine; Metropolitan-Vickers development. il Elec R (Lond) 141:352 S 5 '47; Electrician 139:761 S 12 '47

Necessity for continued development work on regenerators before gas turbines can be adapted to marine use. Iron Age 159:147-9 Ap 17 '47

Part-load characteristics of marine gas-turbine plants. W. M. Rohsenow and J. P. Hunsaker. bibliog diags A S M E Trans 69:433-9 My '47

Testing

Pametrada research station. il Engineering 162:559, 564 D 13 '46

GAS water heaters

Forty miles of piping used in new plant's radiant heating system; A. O. Smith corp. il Steel 119:112-13+ S 23 '46; Abstract. Am Gas J 166:35-6 F '47

Large volume water heating; how to select and install correct types of systems for specific purposes. M. B. Mackay. Am Gas J 164:37-41+ Ja; 21-6 F; 38-9+ Mr; 42-3+ My; 40-2 Je; 165:39-41+ Jl; 31-3 Ag; 27-9 S; 31-3 D '46; 166:29-30+ Ja; 32-4+ F; 167: 22-4 S; 43-6 N '47 (to be cont)

New storage water heater, by Main water heaters, ltd. il Gas J (Lond) 250:293 My 7 '47

Sizing gas water heaters to meet automatic washer requirements. L. F. Vixler. Am Gas J 167:11-14 Jl '47

Town gas and domestic hot water. il diags Gas J (Lond) 248:835 N 13 '46

Water heating council; Pacific coast gas association and other councils discuss policies. Am Gas J 166:25-7 My '47

You're going to be in hot water; need for adequate supply. W. J. Schmidt. Gas Age 99:25-30+ Mr 20 '47; Same cond. Am Gas Assn Mo 29:288-91 Je '47

GAS water heaters—*Continued*

Advertising

Gas water heater sales promoted by plumbers in Portland, Oregon. il Am Gas J 166: 36 F '47

Hot water, and how. J. H. White, jr. Adv & Sell 40:54 Je '47

Portland Gas & Coke offers hot water soundslide film to industry. il Gas Age 100:35+ Ag 21 '47; Same cond. Am Gas Assn Mo 29:388 S '47

Control

Bimetallic thermal element study. H. J. Hense and A. A. Kampman. Am Gas Assn Mo 29:335-6 Jl-Ag '47

Corrosion

Corrosion of water heaters. N. Booth and others. bibliog il Gas J (Lond) 248:1047-50+, 1090-4 D 11-18 '46; Discussion. 249:96-8+ Ja 8 '47

Installation

Enclosed fixing of gas water heaters. il Gas J (Lond) 248:899 N 20 '46

Merchandizing

Cold cash for hotwater. E. W. Cone. Am Gas Assn Proc 1946:174-83; Same cond. Am Gas Assn Mo 29:72-5 F '47

Good grooming lessons in schools. K. L. Barnes. Am Gas Assn Proc 1946:196-7

Importance of water heater promotion. W. J. Schmidt. Am Gas Assn Proc 1946:191-4; Same. Gas Age 98:26-7+ O 17 '46; Same. il Am Gas Assn Mo 29:17-20 Ja '47

Now, sell hot water to this big commercial market. il diags Dom Eng 169:120-1+ F '47

Portland dealers hit 937 percent sales increase on water heaters. Dom Eng 170:116-17 Ag '47

GAS welding

Magnesium alloys; methods of joining. A. G. Gray. il Steel 120:90-1+ Mr 10 '47

GAS works

Are all your windows really necessary? il Gas J (Lond) 250:729 Je 25 '47

Conversion

Experience with a gas plant conversion; Claremont gas light company. V. Stark. il Am Gas J 166:11-13 Je '47

Heating value selection of propane-air gas. E. A. Jamison and T. J. Lambeck. Gas Age 100:21-4 S 4 '47

Proposed method of reducing leakage on change-overs. L. J. Willien. Gas Age 99: 31+ Ap 3 '47

Costs

Public utility construction cost index, 1921-1946. Eng N 138:609 Ap 17 '47

Some economics on use of a high B.t.u. gas. H. M. Henry. Gas Age 100:36-40+ Ag 7 '47

Damage from air raids

Post-war reconstruction and expansion in Belgium. Gas J (Lond) 250:553 Je 11 '47

Electric equipment

Electricity in the gas industry. G. M. Rimmer. Gas J (Lond) 250:723-5; 251:39-40+ Je 25-Jl 2 '47; Abstract. il Electrician 138: 1521-2 Je 6 '47; Discussion. Gas J (Lond) 251:43-4+; 252:47-8+ Jl 2, O 1 '47

Stranger within the gates; use of electricity in gas manufacturing plants. H. C. Widlake. Inst E E J 94 pt 1:132-4 Mr '47; Abstract. Elec R (Lond) 139:616 O 18 '46

Equipment

Benzole recovery plant at Liverpool gas company's Garston works. flow diag il Gas J (Lond) 249:561-2+ Mr 19 '47

Engineering and marine exhibition; exhibits of interest to the gas industry. Gas J (Lond) 251:567-8+ S 10 '47

Experiences with a new type of coke extractor on vertical retorts. W. W. Chisholm. il Gas J (Lond) 250:141-2+ Ap 16 '47; Discussion. 250:196 Ap 23 '47

Functional mechanization for gas distribution departments; use of trenching machinery; with cost data. J. E. C. Currens. il Gas Age 100:59-66+ O 2 '47

Gas development in west Yorkshire. Gas J (Lond) 251:410 Ag 20 '47

Gas engineering and appliance directory. Gas Age 99:91-167 Je 12 '47

Gas industry vis à vis the coke oven industry. Gas J (Lond) 249:311, 364+, 452, 571-2, 626-7; 250:35-6, 87-8, 237-8 F 5-12, Mr 5, 19-Ap 9, 30 '47

Gas manufacturing equipment. Can Chem & Process Ind 31:327+ Ap '47

Inauguration of new Woodall-Duckham vertical retorts at Harwich. Gas J (Lond) 248: 991-2 D 4 '46

Increasing water gas set capacity; Malden and Melrose gas light co. E. F. Kennedy. diag Am Gas J 165:15-18 D '46; Same. Gas Age 98:23-5+ D 26 '46

Kidderminster gas company, 1818-1947. P. Dougall. Gas J (Lond) 250:135-6 Ap 16 '47

Largest welded holder in Great Britain; new plant inaugurated at St Helens. Gas J (Lond) 248:829 N 13 '46

L-P gas installations. E. A. Flaschar. il diags Am Gas J 167:27-30 O '47

Lockheed principle; manufacture of carburetted water gas. S. C. Herbert. Gas J (Lond) 248:775-6, 839+ N 6-13 '46; Discussion. 248:841 N 13 '46

New carbonizing plant at Lydney. il Gas J (Lond) 252:205 O 22 '47

New plant developments at Bay Shore. C. A. Gallagher. flow sheet il diags Am Gas J 167: 11-15 Ag '47

Oxide handling plant at a gas works. il Mech Handling 34:129-30 Mr '47

Post war period at Middlesbrough. S. Jones. Gas J (Lond) 250:187-8+ Ap 23 '47; Discussion. 250:246 Ap 30 '47

Presidential address before North British association of gas managers. J. M. Dow. Gas J (Lond) 250:242+ Ap 30 '47

Rehabilitation of coke ovens at Brooklyn Union. il Am Gas J 166:40 F '47

Report of A.G.A. builders' section. il diag Am Gas Assn Proc 1946:337-93

Steam jet blowers and fans on steam boilers at gas-works. R. L. Greaves. il Gas J (Lond) 250:288+ My 7 '47

Twin generator oil gas process for production of high B.t.u. gas. R. J. Chambers. il diag Am Gas J 167:42-5 Jl '47; Same. Gas Age 99:24-6+ Je 26 '47; Same. Am Gas Assn Mo 29:323-6 Jl-Ag '47

Use of compressed air tools in clinker removal from water gas generators. K. H. Wolf. Am Gas J 166:25+ Mr '47

Water gas generator air supply. H. A. Reynolds. diags Am Gas J 166:11-13 Ap '47

See also

Gas holders

Gas retorts

Fires and fire protection

Air foam system protects gas oil tank. J. A. McGuckin. il Gas Age 100:37-9 S 18 '47

Conservation is smart business. W. F. O'Connor. Am Gas Assn Mo 29:427-9+ O '47

Illuminating gas plants. W. O. Lincoln. Spectator (Property ed) 12:12+ Je 26 '47

Flood problems

Rutland water gas plant disabled by flood and served by propane-air plant. Am Gas J 167:55 Jl '47; Same cond. Gas Age 100: 34+ Jl 24 '47; Excerpts. Am Gas Assn Mo 29:342 Jl-Ag '47

Fuel

Possibilities of coal economies in gas-works. Gas J (Lond) 249:515-16 Mr 12 '47

Laboratories

Modern calorimeter room; Liverpool gas company's Garston works. il Gas J (Lond) 251: 356 Ag 13 '47; Abstract. Chem Age (Lond) 57:57 Jl 12 '47

Load

Brooklyn Union builds summer load in major sports arenas. H. A. Praeger. il Gas Age 100:11-13+ O 16 '47

Economic production for gas loads ahead. E. G. Boyer. Am Gas Assn Proc 1946:270-84

GAS works—Load—*Continued*
Forecasting the maximum days gas sendout. T. King. Gas Age 99:21-3 Mr 6 '47
Load development and distribution in the Ascot area. J. W. Kaye. Gas J (Lond) 249:620+; 250:94+ Mr 26, Ap 9 '47; Discussion. 250:147 Ap 16 '47
Preparation of the distribution system for increased load with natural gas. K. W. Person. Gas Age 98:19-20+ D 26 '46
Problems of the house heating load. I. K. Peck. Am Gas Assn Mo 29:265-9+ Je '47
Sendout growth, threat and promise; Brooklyn union gas co. C. E. Paige. Am Gas Assn Mo 29:315-18+ Jl-Ag '47
Some economics on use of a high B.t.u. gas; 1947-48 probable daily demands; plant capacities. H. M. Henry. Gas Age 100:18-22+ Ag 21 '47
See also
Gas works—Peak load

Management

Economics of supplying gas to outlying areas. H. W. Battin. Gas Age 100:19-22 Jl 24 '47; Same cond. Am Gas J 167:19-22 Ag '47
Gas-works routine and coal conservation. D. B. Laws. Gas J (Lond) 249:149-50 Ja 15 '47
Load development and distribution in the Ascot area. J. W. Kaye. Gas J (Lond) 249:620+; 250:94+ Mr 26, Ap 9 '47
Wales and Monmouthshire association of gas engineers and managers; presidential address. E. M. Edwards. Gas J (Lond) 250: 445-6+ My 28 '47

Peak load

Charleston plant uses propane-air for peak shaving. C. J. Smith. il Gas Age 99:18 Je 26 '47
Chicago experiences in meeting peak loads. J. J. Novy. Am Gas Assn Proc 1946:287-90; Same. Am Gas Assn Mo 29:47-9 Ja '47
Consolidated Edison increases standby facilities. il Gas Age 100:32 S 4 '47
Expansion of peak-load propane-air gas plant; Brooklyn union gas company. il plan Am Gas J 167:31-3 Ag '47
Meeting peak loads in the Canadian gas industry. R. L. Bevan. Am Gas Assn Proc 1946:285-7
Methods of handling peak loads. E. L. Hall. Gas Age 100:27-8+ Jl 10 '47
Open forum; gas loads. Am Gas Assn Proc 1946:291-3
Problem of the peak load. Gas J (Lond) 249: 252 Ja 29 '47
Reforming of liquid petroleum gases in water gas machines. R. E. Schneiter. diag Gas Age 98:37-41+ D 12 '46
Report of A.G.A. subcommittee on high B.t.u. gas. Am Gas Assn Proc 1946:410-14

Power

Electricity in the gas industry. G. M. Rimmer. Gas J (Lond) 250:723-5; 251:39-40+ Je 25-Jl 2 '47; Discussion. 251:43-4+ Jl 2 '47

Records

Gas dispatching forms; Memphis light, gas and water division. H. G. Howell. Gas Age 98:27-9+ N 14 '46

Safety measures

Report of subcommittee on chemical aspects of safety and accident prevention. Am Gas Assn Proc 1946:510-26

Waste

Coke and gas industry; waste disposal problems. H. A. Gollmar. bibliog flow diags il Ind & Eng Chem 39:596-601 My '47
Gasworks effluents; methods of utilisation and disposal. Chem Age (Lond) 56:166-8 Ja 25 '47
Liquor effluents and ammonia committee, Institution of gas engineers; 8th report. Gas J (Lond) 249:101-2+ Ja 8 '47
Removal of phenols from gas works ammoniacal liquor; abstract. D. G. Murdoch. Chem & Ind p398 N 2 '46

GASES
Abrupt energy transformation in flowing gases. N. P. Bailey. il diags A S M E Trans 69:749-57; Discussion. 758-63 O '47
Chemisorption of gases. S. Weller. J Chem Phys 15:336 My '47
Cloud-chamber studies of electronic and nuclear stopping of fission fragments in different gases. J. K. Bøggild and others. bibliog il Phys R 71:281-7 Mr 1 '47
Combustible limits of gases; chart. Oil & Gas J 46:119 Je 21 '47
Compressibilities of gas mixtures. J. Joffe. bibliog Ind & Eng Chem 39:837-8 Jl '47
Contribution of restricted rotation to electron scattering by gases. J. Karle. bibliog J Chem Phys 15:202-7 Ap '47
Determination of the molecular law of force from self-diffusion coefficients. I. Amdur. bibliog Phys R 72:642-3 O 1 '47
Electrical discharge through gases. L. B. Loeb. bibliog(90 ref) Inst E E J 94 pt 1: 349-54 Ag '47; Same. Science 106:229-36 S 12 '47; Abstract. Electrician 138:1162-4 My 2 '47
Gas chemistry, its role in metallurgy. O. E. Cullen. il Steel 121:86-8+ Jl 7 '47
Gas enthalpies (at low pressures) chart; data sheet. W. M. Rohsenow and D. A. Mooney. Power 91:135, 209 F-Mr '47
Gas-inflammability limits in air; data sheet. J. Constance. Power 91:651 S '47
Generalized van der Waals equation of state for real gases. G. Su. bibliog Ind & Eng Chem 38:1322 D '46
Heat-capacity lag measurements in various gases. P. W. Huber and A. Kantrowitz. J Chem Phys 15:275-84 My '47
Heat transfer in a 3-1 hydrogen-nitrogen mixture at high pressure. A. P. Colburn, T. B. Drew and H. Worthington. bibliog diag Ind & Eng Chem 39:958-64 Ag '47
Heat transfer to gases through packed tubes; general correlation for smooth spherical particles. M. Leva. diag Ind & Eng Chem 39:857-62 Jl '47
High frequency absorption in air and other gases. L. J. Sivian. bibliog Acoustical Soc Am J 19:914-16 S '47
Kinetics of absorption of gases from an air stream by granular reagents. C. J. Danby and others. Chem Soc J p918-34 O '46
Kinetics of homogeneous gaseous reactions in flow systems. G. M. Harris. bibliog J Phys & Colloid Chem 51:505-12 Mr '47
Kinetics of nitrous gas absorption in aqueous nitric acid. K. G. Denbigh and A. J. Prince. diag Chem Soc J p790-801 Je '47
Low temperature transport properties of gases; helium. I. Amdur. bibliog J Chem Phys 15:482-7 Jl '47
New equation of state for gases. J. Joffe. bibliog Am Chem Soc J 69:540-2 Mr '47
New temperature-total heat-entropy chart for gases with variable specific heats; for exploring performance of gas turbine plants. J. R. Finniecome. fold chart Inst Mech Eng J & Proc 155 (War emergency issue no 17):117-19 bibliog(p118); Discussion. 120-4 '46
Pressure broadening in the infra-red and optical collision diameters. N. D. Coggeshall and E. L. Saier. bibliog J Chem Phys 15: 65-71 Ja '47
Pseudo-critical temperature of gases. J. C. Calhoun, jr. Oil & Gas J 46:103-4 O 4 '47
Radial density variation of gases and vapors in a centrifugal field. J. W. Beams. Phys R 72:433-4 S 1 '47
Ratio of specific heats of gases. R. Spitzer. J Chem Educ 24:251-2 My '47
Recherches sur la catalyse d'oxydation. J. Ternisien and H. F. Mélot. il diag Chimie & Ind 57:11-21 Ja '47
Redistribution and desorption of adsorbed gases. R. F. Barrow and others. Chem Soc J p401-16 Mr '47; Abstract. Chem & Ind p391 O 26 '46
Report of A.G.A. subcommittee on chemical aspects of safety and accident prevention. Am Gas Assn Proc 1946:510-26
Standard calculations for gases. J. C. Calhoun, jr. Oil & Gas J 46:113 S 27 '47
Thermal conductivity of gases at high pressures. E. W. Comings and M. F. Nathan. bibliog Ind & Eng Chem 39:964-70 Ag '47

GASES—*Continued*
Use of punched cards in molecular structure determinations; electron diffraction calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:659-64 N '46

See also
Absorption
Acetylene
Adsorption
Aerodynamics
Air
Ammonia
Blast furnace gas
Carbon dioxide
Chlorine
Coke-oven gas
Dew points
Electric discharges
Equation of state
Fire damp
Flue gas
Furnaces—Atmosphere control
Gas
Gas, Natural
Gas analysis
Gas flow
Glass—Gas content
Helium
Hydrogen
Inflammable mixtures
Ionization, Gaseous
Nitrogen
Oxygen
Plants, Effect of gases on
Vapor pressure
Vaporization
Vapors

Apparatus

Apparatus for measuring Joule-Thomson effects in gases by direct expansion through a valve. H. L. Johnston. bibliog diags Am Chem Soc J 68:2362-6 N '46
Baker Deoxo Puridryer. il Comp Air Mag 52:207 Ag '47
Burnett apparatus used for gas-deviation determinations. E. N. Armstrong. il diags Oil & Gas J 45:82-4+ D 7 '46
Gas absorption and humidification in cyclone spray towers. H. F. Johnstone and H. E. Silcox. bibliog il diags Ind & Eng Chem 39:808-17 Jl '47
Gas analyzers for industrial control and protection. J. M. Lewis. il Oil & Gas J 46: 256+ Jl 26 '47
Gas blending system. A. Langer. diag R Sci Instr 18:101-3 F '47
Gasometer increases medical instrument safety; Insufflator designed by Charles Davies associates. il diags Product Eng 18:100-1 O '47
Pebble heat exchanger performs uniform high temperature gas heating. il diags Product Eng 18:99 Ap '47
Precision semimicromethod for gas analysis. L. K. Nash. bibliog diag Ind & Eng Chem Anal ed 18:505-8 Ag '46; Same. Pet Eng (Ref annual) 18:233-4+ Jl 1 '47
Pressure gasometer aids in industrial health studies. il Comp Air Mag 52:255 O '47
Tests of instruments for the determination, indication, or recording of the specific gravities of gases. F. A. Smith and others. il U S Nat Bur Stand Misc Pub M177:1-143 '47 ($1)
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47
Use of the expansion of gases in a centrifugal field as cooling process. R. Hilsch. diags R Sci Instr 18:108-13 F '47

Liquefaction

Air separation, principles and technology; Chem. & Met. report. bibliog flow sheet (p136-9) diags Chem Eng 54:126-34 Mr '47
Describes work on liquefied gases; abstract. L. I. Dana. Chem & Eng N 25:1575-6 Je 2 '47
Helium cryostat. S. C. Collins. il diags R Sci Instr 18:157-67 Mr '47
Joule-Thomson effects in hydrogen at liquid air and at room temperatures. H. L. Johnston, I. I. Bezman and C. B. Hood. bibliog Am Chem Soc J 68:2367-73 N '46
Low pressure liquefaction of air. J. H. Rushton. bibliog flow sheet il diags Refrig Eng 53:24-9+ Ja '47
New cryogenic methods of using liquid hydrogen. W. DeSorbo and others. il diags Chem R 39:403-17 D '46
Ohio state university's low temperature laboratory. H. L. Johnston. il diags Refrig Eng 52:421-4 N '46
Small scale hydrogen liquefier. H. A. Fairbank. il diags R Sci Instr 17:473-7 N '46

See also
Fluorine, Liquid
Liquid air

GASES, Asphyxiating and poisonous
Characteristics and hazards of gases. Locomotive 46:152-5 Ja '47; Same. Safety Eng 94:99-100 O '47
Detection of poisonous gases; abstract. J. Boeke. Electronics 20:182+ Ag '47
Keep air clean. C. H. Mehaffey. Am Mach 91:111-13 F 13 '47
Noxious vapors in aircraft cabins. H. Speert. Nat Safety N 55:105-6 Ja '47
Portable ventilated tunnel aids in discharging kettle contents when toxic gas is produced. F. A. Mitchell. diags Chem Eng 54:156 My '47
Ten ways to make tanks safe for workmen. W. E. Rossnagel. il diags Power 91:322-3+ My '47

See also
Carbon disulfide
Carbon monoxide poisoning
Chemical warfare
Chloropicrin
Hydrogen sulfide
Ketene
Mustard gas
Nitrogen oxides
Phosgene
Respiratory apparatus

GASES, Compressed
Combustion-compressor locomotive; method of using combustion gases as medium of energy transmission. diags Mech Eng 69: 588-90 Jl '47
Storage of coke-oven gas in sandstone strata; removal of vapor phase gum. J. R. Bircher. bibliog flow sheet il map diag Chem Eng Prog 43:453-8; Discussion. 458 S '47
Temperature rise of gas during compression; chart. Oil & Gas J 46:119 Je 21 '47

See also
Gas, Natural—Compression

Safety measures

Safety and interchangeability for compressed gas cylinders; standardization of valve outlets. M. E. Steczynski. il Ind Stand 18: 105-7 My '47
Simpler and safer; compressed gas cylinders. il Chem Ind 61:211 Ag '47
Storing compressed gas cylinders. il Safety Eng 92:16+ N '46

GASES, Kinetic theory of
Historic researches; molecular physics. diags Engineer 183:302-4, 324-6 Ap 11-18 '47
Statistical mechanical theory of transport processes; transport in gases. J. G. Kirkwood. J Chem Phys 15:72-6 Ja '47; Correction. 15:155 Mr '47
Superaerodynamics, mechanics of rarefied gases. H. Tsien. bibliog J Aeronautical Sci 13:653-64 D '46
Teaching the kinetic theory of gases. C. S. Hoyt. diags J Chem Educ 24:186-9 Ap '47

GASES, Liquefied

See also
Carbon dioxide, Liquid
Fluorine, Liquid
Helium, Liquid
Hydrogen, Liquid

GASES, Rare
Mass-spectrometer study of the rare gases. V. H. Dibeler and others. bibliog J Res Nat Bur Stand 38:617-20 Je '47
New uses in industry found for rare gases. J. V. Sherman. Barron's 27:4 Je 30 '47

See also
Argon
Helium
Krypton
Neon

GASKETS
Chemical and heat resistance of gasket materials; tabulation. H. H. Dunkle and E. C. Fetter. diags Chem Eng 53:102-9 N '46
Factors that affect choosing a gasket. Product Eng 18:134 F '47
Gasket-cutting time reduced about 80 per cent with special tool used on drill press. diags Pet Processing 2:418-19 Je '47
How to install gasket between flanges already in place. W. F. Schaphorst. diag Paper Ind 29:865 S '47
Proposed method of reducing leakage on change-overs. L. J. Willien. Gas Age 99: 31+ Ap 3 '47
Silicone rubber for industrial products. il Mech Eng 68:1079-80 D '46
Silicone rubber used for high temperature gaskets. Elec World 128:68+ Ag 30 '47

GASKETS—*Continued*
Uniform gaskets can be cut quickly and accurately from vinylite plastic tubing. A. B. Kourt. il diags Pet Processing 2:350 My '47
Uses of silicone rubber in high-temperature field. il Steel 119:80 D 30 '46

GASOLINE
Converted topping unit makes close-cut naphthas and solvents from gasoline. flow diag il Pet Processing 2:191-2 Mr '47
Dielectric studies; dipole moment of acetonitrile in solvents of unknown molecular weights. N. C. C. Li and T. Chu. bibliog Am Chem Soc J 69:558-9 Mr '47
Enjay co. introduces additive for gasoline; acts as gum solvent and upper lubricant. V. B. Guthrie. Nat Pet N 39:16 F 19 '47
Evaluation of crude oils for production of straight-run aviation gasolines. B. G. Adams. diags Pet Refiner 26:126-8 F '47
Factors affecting quality and supply of internal-combustion-engine fuels. W. M. Holaday and others. Pet Refiner 26:79-85 My '47; Same cond. Oil & Gas J 45:112+ Ap 26 '47
Inflammability of gasoline vapor-air mixtures at low pressures. G. W. Jones and I. Spolan. 2pls U S Bur Mines Rep of Invest 3966:1-5 '46
Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159:67-70 Mr 6 '47
Method of figuring octane numbers of gasolines. Oil & Gas J 45:55 F 1 '47
National motor-gasoline survey, summer 1946. O. C. Blade. U S Bur Mines Rep of Invest 4063:1-37 '46
National motor-gasoline survey, winter 1946-47. O. C. Blade. 3pls U S Bur Mines Rep of Invest 4146:1-38 '47
Ventilation involved in the use of gasoline-powered equipment in enclosed spaces (not in mines or tunnels). L. B. Berger. 4pls U S Bur Mines Information Circ 7404:1-8 '47
What next in automotive fuels? D. P. Barnard. Pet Processing 2:245-8 Ap '47

See also
Airplane engines—Fuel
Automobile engines—Fuel
Automotive fuel
Gasoline service stations
Internal combustion engines—Fuel
Motor truck engines—Fuel
Petroleum refining

Alcohol mixtures
Changing industrial alcohol picture; cost of production of alcohol from molasses, grain, petroleum, wood. R. S. Aries. map Chem & Eng N 25:1792-6 Je 23 '47

Analysis
Determination of antioxidants in gasoline. L. R. Williams and B. R. Strickland. Anal Chem 19:633-4 S '47
Determination of olefinic unsaturation; nitrogen tetroxide method as applied to petroleum hydrocarbons in the gasoline boiling range. G. R. Bond, jr. diags Ind & Eng Chem Anal ed 18:692-6 N '46
Determination of olefins, aromatics, paraffins, and naphthenes in gasoline. S. S. Kurtz, jr. and others. bibliog Anal Chem 19:175-82 Mr '47
Determination of tetraethyllead in aviation gasoline; rapid iodometric method. L. Newman, J. F. Phillip and A. R. Jensen. Anal Chem 19:451-3 Jl '47
Infrared analyses of alkylates and correlation of alkylate composition with motor tests. G. M. Webb and W. S. Gallaway. bibliog il Pet Processing 2:356-7+, 442-4+ My-Je '47
Microdetermination of tetraethyllead in gasoline. B. E. Gordon and R. A. Burdett. bibliog diags Anal Chem 19:137-40 F '47
Picric acid method for determination of aromatic content of aviation gasoline. C. M. Gambrill and J. B. Martin. Ind & Eng Chem Anal ed 18:689-92 N '46
Quantitative determination of paraffins and naphthenes in gasolines by the lamp method. S. G. Hindin and A. V. Grosse. bibliog Anal Chem 19:42-7 Ja '47
Spectrographic analysis of lubricating-oil additives, additive lubricants, and gasolines. L. E. Calkins and M. M. White. Am Pet Inst Proc 26(3):88-90 '46

Anti-knock and anti-knock mixtures
Anti-knock agents in fuel oils. Chem Age (Lond) 56:343 Je 28 '47
Approach to selection of compression ratio to fit fuel anti-knock quality; abstracts. E. J. Gay and H. T. Mueller. Pet Processing 2:91 F '47; S A E J 55:38-9 Ap '47
Bouncing-pin indicator is 25 years old. T. A. Boyd. bibliog il diags S A E J 54:55-7+ N '46
Catalytic cracking still held way to meet higher octane numbers. W. Miller. Nat Pet N 39:40 F 26 '47
Chemical structure affects knocking. P. J. Gaylor. Pet Eng 18:72, 74, 76 Mr '47
Diisopropyl from isobutane-ethylene alkylation in presence of BF_3-H_2O-HF catalyst systems. W. N. Axe and W. A. Schulze. flow diag Ind & Eng Chem 39:1273-9 O '47
Do higher octane gasolines favor the V engine? P. M. Heldt. diags Automotive & Aviation Ind 96:30-2+ Je 15 '47
Electronic detonation meter for motor-fuel antiknock rating. D. R. deBoisblanc and H. M. Trimble. bibliog il diags Oil & Gas J 45:57-9 N 9 '46
Higher compression engine may multiply supply woes. Nat Pet N 39:11-12 O 29 '47
Knock-free power. P. J. Gaylor. bibliog diags Pet Eng 18:43-8 D '46
Maximum use of gasoline quality imperative; abstract. W. H. Holaday. Oil & Gas J 46:83 O 18 '47
Motor-fuel trends in relation to antiknock requirements. T. H. Risk and J. F. Jordan. Pet Refiner 26:99-108 Ap '47; Same cond. Oil & Gas J 45:78-9+ Ap 5 '47
Octane versus conservation. E. O. Thompson. bibliog Pet Refiner 26:86-90 My '47
Power vs. octane number. W. L. Nelson. bibliog Oil & Gas J 45:317 N 16 '46
Processes for octane improvement. D. Read. diags Pet Eng 18:106+ D '46
Refiner still follows his will-o'the-wisp. F. E. Fisher and J. W. Vaiden. Pet Eng 18:131-2 My '47
Thermal reforming unit improves naphtha octane rating. flow diag il Pet Refiner 25:141-2 D '46

Blending
Experimental fuel blending. H. C. Walters. il Pet Processing 2:685-6+ S '47
Proportioning valves speed blending of gasoline, eliminates mixing tanks at pipe line terminal. diags Pet Processing 2:128+ F '47

Dehydration
Use of dehydration in combating internal corrosion in products pipe-line systems. H. K. Phipps. flow diag il Am Pet Inst Proc 26(5):37-40 '46; Same cond. Oil & Gas J 45:67+ N 23 '46

Ethyl mixtures
Comparative study of the lead content of street dirts in New York city in 1924 and 1934. S. Kaye and P. Reznikoff. J Ind Hygiene 29:178-9 My '47

Evaporation losses
Économies de matières dans les installations de stockage des produits pétroliers. G. Daric. diags Chimie & Ind 57:228-40 Mr '47
Property changes during storage of gasoline. W. L. Nelson. Oil & Gas J 46:86 Ag 2; 84-5 N 1 '47

Gum formation
Allowable gum in gasoline. W. L. Nelson. bibliog Oil & Gas J 45:85 Ja 11 '47
Gray clay treating process; Texaco development corporation. flow diag il Pet Refiner (Process Handbook sec) 26:162-3 Ap '47
Gray clay treating process to reduce gum-forming tendencies of gasoline; Texaco development corp. flow diag Oil & Gas J 45:170 Mr 22 '47

Manufacture
Alkylation and polymerization; effect on refinery earnings of the two processes. il Pet Eng 18:116+ N '46
Application of steam-jet ejectors in the Houdry fixed-bed catalytic cracking process. P. Freneau and others. flow diag diags A S M E Trans 69:69-79 Ja '47

GASOLINE—Manufacture—*Continued*
Butane isomerization; U.O.P. process. J. A. Chenicek and others. flow diag Chem Eng Prog 43:210-18 My '47
Cadman lecture outlines fluid catalyst principle. R. P. Russell. Chem & Eng N 25: 1737 Je 16 '47
Catalytic alkylation process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:114-15 Ap '47
Catalytic cracking process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:116-17 Ap '47
Catalytic polymerization process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:120-1 Ap '47
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Cities Service tannin solutizer unit; its design, operation, results. R. B. Tuttle. flow diag il Oil & Gas J 46:84-5+ S 13 '47
Commercial T.C.C. operations on partially vaporized charge stock. H. D. Noll and others. flow diag il diags Oil & Gas J 45: 116+ O 19 '46; Same. Pet Refiner 25:165-71 N '46; Abstract. Pet Processing 1:211+ N '46
Control of chemical reactions on a large scale; fluid catalyst process of oil refining; catalytic and gas-solid reactions. J. G. King. Chem Age (Lond) 56:795-7 Je 21 '47
Converted U.O.P. isomerization unit now makes polymer gasoline. L. C. Brown. flow chart il Oil & Gas J 46:91-4 My 17 '47
Correlation of operating variables in the polyform process. J. H. Hirsch and others. Am Pet Inst Proc 26(3):247-53 '46; Same. Oil & Gas J 45:225+ N 16 '46; Same. Pet Refiner 25:136-40 N '46; Same. Pet Processing 2: 61-2+ Ja '47
Cracking sulfur stocks with natural catalyst. R. C. Davidson. bibliog diags Pet Refiner 26:79-88 S '47
Cut costs on new 3000 b/d fluid cracker by using unified reactor-generator. W. F. Bland. flow diag il Pet Processing 2:670-2 S '47
Cycloversion, catalytic cracking; Phillips petroleum co. flow diag Oil & Gas J 45:151 Mr 22 '47
De Laval acid treating process; De Laval separator company. flow diag Pet Refiner (Process Handbook sec) 26:128-9 Ap '47
Delayed coking process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:130-1 Ap '47
Delayed coking unit processes residuum into gas oil charge for TCC unit. R. Maass and R. E. Lauterbach. flow diag il diags Pet Processing 2:11-16 Ja '47; Same. Pet Refiner 26:84-92 Ja '47; Same. Pet Eng 18: 110+ F '47; Same cond. Oil & Gas J 45: 44-7+ Ja 4 '47
Design and operation of a small-scale thermofor catalytic cracking unit. G. Kelso and others. flow diag il Pet Refiner 26:98-103 Ag '47
Developments in the petroleum industry. E. R. Smoley and T. T. Whipple. il diag Mech Eng 69:293-9 Ap '47
Donnelly cracking process. flow diag Pet Refiner (Process Handbook sec) 26:134-5 Ap '47
Dual-flo distillation process; Born engineering company. flow diag il Pet Refiner (Process Handbook sec) 26:136-7 Ap '47
Effect of temperature in thermofor catalytic cracking. H. D. Noll and others. Oil & Gas J 46:64-6 My 10 '47
Fluid catalytic cracking. flow diag Oil & Gas J 45:152 Mr 22 '47
Fluid catalytic cracking process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:150-1 Ap '47
Fluid catalytic cracking process; Standard oil development company. flow diag Pet Refiner (Process Handbook sec) 26:152-3 Ap '47
Fluid cracker charges heavy distillate in postwar motor gasoline operation. il Pet Processing 2:46+ Ja '47
Gas-oil polyforming. W. C. Offutt and others. flow sheet. Oil & Gas J 46:80+ S 27 '47; Same. Pet Processing 2:753-4+ O '47
Houdry catalytic cracking. flow diag Oil & Gas J 45:153 Mr 22 '47
Houdry fixed-bed catalytic cracking process. flow diag Pet Refiner (Process Handbook sec) 26:168-9 Ap '47
Houdry process for treating motor gasoline. flow diag Pet Refiner (Process Handbook sec) 26:170-1 Ap '47
Howard treating process; Petroleum research corporation. flow diag Pet Refiner (Process Handbook sec) 26:172-3 Ap '47
Hydroform and catalytic polymerization. flow diag Oil & Gas J 45:156 Mr 22 '47
Hydroforming process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:176-7 Ap '47
Hydrogenation of catalytically cracked naphthas for production of aviation gasolines. A. Voorhies, jr., W. M. Smith and C. E. Hemminger. bibliog Ind & Eng Chem 39: 1104-7 S '47
Hydrogenation process; Standard oil development company. flow sheet Pet Refiner (Process Handbook sec) 26:178-9 Ap '47
Idle isomerization unit converted to produce polymer gasoline. W. R. Newman. flow diags il Pet Refiner 25:91-3 O '46; Same. Pet Processing 1:257+ D '46; Same. Pet Eng 18:156+ F '47
Indiana isoforming process; Standard oil company (Indiana). flow diag Pet Refiner (Process Handbook sec) 26:184-5 Ap '47
Indiana isomate process; Standard oil company (Indiana). flow diags Pet Refiner (Process Handbook sec) 26:186-7 Ap '47
Industrial catalysis. B. B. Corson. il diag J Chem Educ 24:150-5 Mr '47
Isomerization of light hydrocarbons. S. F. Perry. flow plans Am Inst Chem Eng Trans 42:639-46 Ag '46; Same. Pet Eng (Ref annual) 18:185-8 Jl 1 '47
Light-ends fractionation and stabilization; E. B. Badger & sons company. il diag Pet Refiner (Process Handbook sec) 26:190-1 Ap '47
Major process improvement marks 1947 refining developments. A. L. Foster. il Oil & Gas J 45:192-3+ Mr 22 '47
Mercapsol process removes mercaptans from gasoline. flow diag Oil & Gas J 45:164 Mr 22 '47
Modern fluid catalytic cracking. E. Van Dornick. flow diag Pet Eng 18:149-50+ Ap '47
More gasoline, less coke, from new cat cracker design. flow diag il Pet Refiner 26: 129-30 F '47; Same. Oil & Gas J 45:82-3 Mr 1 '47
Multistage centrifugal compressor applications. T. R. Foster. il Oil & Gas J 45:67+ F 8 '47; Same cond. diags Pet Eng (Ref annual) 18:286+ Jl 1 '47
Naphtha and gasoil polyforming process; Lummus company. flow diags Pet Refiner (Process Handbook sec) 26:198-9 Ap '47
Naphtha polyform. flow diag Oil & Gas J 45:157 Mr 23 '47
Naphtha polyforming. W. C. Offutt and others. flow sheet il diag Am Pet Inst Proc 26(3):222-36 '46; Same. Pet Refiner 25:120-8 N '46; Same. Pet Processing 1:267-8+ D '46; Same cond. Oil & Gas J 45:180-2+ N 16 '46
Naphtha polyforming with outside gas. W. C. Offutt and others. flow sheet il diag Am Pet Inst Proc 26(3):237-46 '46; Same. Pet Refiner 25:129-35 N '46; Same. Pet Processing 1:278-9+ D '46
Naphthas from fluid catalyst cracking. C. E. Starr, jr., J. A. Tilton and W. G. Hockberger. bibliog Ind & Eng Chem 39:195-202 F '47
Osterstrom clay treating process; Texaco development corporation. il diag Pet Refiner (Process Handbook sec) 26:204-5 Ap '47
Perco catalytic reforming process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:208-9 Ap '47
Perco copper sweetening process; Phillips petroleum company. flow diags Pet Refiner (Process Handbook sec) 26:210-11 Ap '47
Perco cycloversion for the small refiner. W. W. Daniels and M. W. Conn. bibliog flow diag Pet Processing 2:391-2+ My '47
Perco cycloversion process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:212-13 Ap '47

GASOLINE—Manufacture—*Continued*
Perco HF alkylation process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:214-15 Ap '47
Phillips petroleum co. and Universal oil products co. HF alkylation process. flow diag Oil & Gas J 45:159 Mr 22 '47
Phosphoric acid polymerization. flow diag Oil & Gas J 45:166 Mr 22 '47
Polyform process utilizes excess gases in upgrading naphthas and gasolines. W. F. Bland. il Pet Processing 1:243-4 D '46
Process for octane improvement. D. Read. diags Pet Eng 18:106+ D '46
Production of high octane spirit with aluminium chloride catalyst. Chem Age (Lond) 56:260 F 15 '47
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26(3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46
Reduced structural height design feature of 25,000 bbl. fluid cat-cracker; Whiting refinery of Standard oil co. (Indiana). W. C. Uhl. il Pet Processing 1:163-4 N '46
Refiner's look at gasoline quality. A. P. Frame. Pet Refiner 26:106-11 O '47; Same cond. Pet Processing 2:549-52 Jl '47; Discussion. Pet Refiner 26:111-13 O '47
Refinery planning. D. Read. bibliog Pet Refiner 26:73-7 Ag '47
Shell catalytic hydrogenation. flow diags Pet Refiner (Process Handbook sec) 26:246-7 Ap '47
Shell solutizer process. flow diag Pet Refiner (Process Handbook sec) 26:252-3 Ap '47
Stopgap processes versus catalytic cracking; with cost data. D. Read. diags Pet Refiner 26:99-110 My '47; Same cond. Oil & Gas J 45:76-80+ My 3 '47
Sulfuric acid alkylation; M. W. Kellogg co. flow diag Oil & Gas J 45:160 Mr 22 '47
Superfractionation process; E. B. Badger & sons company. flow diag il Pet Refiner (Process Handbook sec) 26:258-9 Ap '47
Suspensoid catalytic cracking. R. L. Purvin. flow diags il Pet Processing 2:328-31 My '47
Suspensoid catalytic cracking at Imperial Oil's Sarnia refinery. C. H. Caesar. Oil & Gas J 46:69+ S 6 '47; Same. flow diag Pet Refiner 26:91-3 O '47; Same cond. Pet Processing 2:929-30 D '47
Suspensoid catalytic cracking; Imperial oil co. flow diag Oil & Gas J 45:154 Mr 22 '47
Tannin solutizer process; Shell development co. flow diag Oil & Gas J 45:163 Mr 22 '47
Tannin-solutizer process; Shell development company. flow diag Pet Refiner (Process Handbook sec) 26:260-1 Ap '47
Thermal cracker expanded into T.C.C. unit at Leonard refineries, inc. A. L. Foster. flow chart il diags Oil & Gas J 46:78-82 Ag 16 '47
Thermal reforming process; Foster Wheeler corporation. flow diag il Pet Refiner (Process Handbook sec) 26:264-5 Ap '47
Thermofor catalytic cracking; Houdry process corp. flow diag Oil & Gas J 45:155 Mr 22 '47
Thermofor catalytic cracking process; Houdry process corporation. flow diag Pet Refiner (Process Handbook sec) 26:266-7 Ap '47
Three papers on polyform process given at API Refining division session. V. B. Guthrie. Nat Pet N 38:57-8 N 13 '46
Unisol mercaptan extraction process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:280-1 Ap '47
Unisol process extracts mercaptans from hydrocarbons. flow diag Oil & Gas J 45:165 Mr 22 '47
UOP thermal cracking process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:290-1 Ap '47
UOP thermal reforming process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:292-3 Ap '47
Use of bead catalyst in commercial Houdry units. C. V. Hornberg and others. il Oil & Gas J 46:214-16+ Jl 26 '47
Yields in catalytic cracking. W. L. Nelson. bibliog Oil & Gas J 46:67-8 Ag 30 '47

See also
Gasoline, Natural—Manufacture
Petroleum distillation
Petroleum refining

Coal processes
See Liquid fuel

Hygienic aspects
Urinary fluoride excretion among men employed in alkylation plants using the hydrogen fluoride process. E. J. Largent. J Ind Hygiene 29:53-5 Ja '47

Prices
Consumer still pays sub-normal prices for oil despite increases; complete text of IPAA report. Nat Pet N 39:17-18 Ap 2 '47
Court says actual transport cost must be used in determining prices. Nat Pet N 39: 15 Ja 22 '47
Esso holds its price line. Bsns W p 16 S 6 '47
Many markets begin to narrow gap between no. 2 and gas prices. Nat Pet N 39:19 O 29 '47

Rating
Oxygen boost method of rating the engine performance of aviation fuels. W. B. Heaton and others. diag Inst Pet J 33: 256-65 Ap '47
Performance-rating of fuels. T. B. Rendel. Aero Digest 53:105+ D '46
Reference fuels for knock rating in spark ignition engines. Inst Pet J 33:578-9 S '47

Sulfur content
Catalytic desulfurization of cracked and straightrun gasolines. R. C. Amero and W. H. Wood. bibliog diag Oil & Gas J 46:82-5+ My 24 '47
Evaluation of sulfur compounds in gasolines. F. C. Moriarty. Pet Refiner 25:106-8 O '46; Same. Pet Eng 18:167+ F '47; Abstracts. Chem & Eng N 24:2603 O 10 '46; flow diag Pet Processing 1:208+ N '46
Gray catalytic desulfurization process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:160-1 Ap '47
Linde copper sweetening process. C. T. Schieman, jr. flow chart il Pet Eng 18:184+ My '47; Same cond. Pet Refiner 26:134-6 Je '47
Mercapsol and Unisol processes. flow diags Oil & Gas J 45:164-5 Mr 22 '47
Perco catalytic desulfurization process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:206-7 Ap '47
Perco copper sweetening; Phillips petroleum co. flow diag Oil & Gas J 45:162 Mr 22 '47
Perco desulfurization; Phillips petroleum co. flow diag Oil & Gas J 45:167 Mr 22 '47
Removal of mercaptans from gasoline; Old Dutch refining company. il Pet Refiner 26: 113-14 Ja '47
Technology, operation, and results from Linde copper sweetening process. G. L. Mann. flow chart il Oil & Gas J 45:195-6+ Mr 22 '47
Unisol mercaptan extraction process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:280-1 Ap '47

Taxation
Case against city gasoline taxes. Nat Pet N 39:35 Jl 9 '47
Editorial columns in newspapers join in battling gasoline tax increases. Nat Pet N 39:34 Mr 26 '47
Five states enact gasoline tax increases this year; legislative action by states. Nat Pet N 39:34+ Ag 6 '47
Four states pass gasoline tax boosts; 27 legislatures hear 67 levy bills. Nat Pet N 39:37 My 21 '47
Gas tax flood. il Bsns W p36+ D 21 '46
Gasoline tax cut; Ottawa's plan to centralize income taxes. Bsns W p80 D 28 '46
Gasoline taxes, antidiversion bills head proposals in state legislatures. D. E. Button. Nat Pet N 39:35+ F 5 '47

GASOLINE—Taxation—*Continued*
Tracing of inland petroleum barge movements to be studied in move to reduce tax evasion. Nat Pet N 39:17 Ag 27 '47

Testing

Aircraft fuels and lubricants research at Thornton-le-Moors. il Engineering 163:355-7, 360 My 2 '47
Bouncing-pin indicator is 25 years old. T. A. Boyd. bibliog il diags S A E J 54:55-7+ N '46
Correlation of accelerated and laboratory storage measurements of gasoline stability with field stability; abstract. E. L. Walters. Pet Processing 2:554 Jl '47
Electronic detonation indicator. D. R. deBoisblanc and others. diags Oil & Gas J 45:50-3+ Ja 18 '47
Electronic detonation meter for motor-fuel anti-knock rating. D. R. deBoisblanc and H. M. Trimble. bibliog il diags Oil & Gas J 45:57-9 N 9 '46
Field testing of motor oil and gasoline; abstract. A. C. Pilger, jr. Pet Processing 2:593 Ag '47
Knockometer; new instrument for fuel rating. P. J. Costa and J. W. Wheeler. il diags S A E J 55:27-9+ Ap '47; Abstract. Automotive & Aviation Ind 96:64 Ja 1 '47
Lower volatility of postwar gasolines lengthens engine warm-up period; abstract. J. G. Moxey, jr. Pet Processing 2:92+ F '47
Status report on the CFR-AAF volatility flight-test studies. H. M. Trimble. Am Pet Inst Proc 26(3):99-126 '46
Temperature control for octane tests; vacuum-tube relay circuit. P. J. Malraison. il diags Electronics 20:99-101 N '47

Transportation

See also
Gasoline pipe lines
Tank trucks

Volatility

Quality trends in motor fuels, central United States, 1929-1946. H. M. Trimble and others. Oil & Gas J 46:61-2+ O 4 '47
Status report on the CFR-AAF volatility flight-test studies. H. M. Trimble. Am Pet Inst Proc 26(3):99-126 '46
Testing volatility of today's fuels. R. J. Clark and R. M. Adams. il Air Transport 5:47-9 Ap '47

GASOLINE, Natural
Multi-column distillation of natural gasoline. F. J. Lockhart. bibliog diags Pet Eng 18:111+ Ag '47; Same. Pet Refiner 26:104-8 Ag '47
Natural gasoline looks ahead. G. G. Oberfell and R. C. Allen. Pet Refiner 26:91-8 My '47; Same abr. Pet Processing 2:453-4+ Je '47
Physical constants of low-boiling hydrocarbons and miscellaneous compounds. W. S. Hanna and R. Matteson. bibliog(91 ref) Oil & Gas J 45:61-4+ Ja 11 '47
Place of natural gasoline and the NGAA in the petroleum industry. J. H. Dunn. Pet Refiner 26:158+ My '47; Same abr. Oil & Gas J 45:121+ Ap 26 '47

Analysis

Relation of Reid to true vapor pressure. W. L. Nelson. Oil & Gas J 46:84 My 10 '47.

Manufacture

Air-cooled heat exchangers; their advantages, disadvantages and application. D. P. Thornton, jr. il Pet Processing 2:775+ O '47
Application of automatic controls to gasoline plant and refinery processing. E. H. Reynolds and others. diags Pet Refiner 26:132-6 Ap '47; Same abr. Oil & Gas J 45:66-7+ Ap 5 '47
Basic petroleum chemistry for refinery employes; potential sources of liquid fuel. J. J. Stadtherr. diags Pet Refiner 26:115-17 Mr '47
Carthage gasoline and dehydration plant. F. H. Love. flow diag il Pet Eng 18:158+ D '46
Closed vent system increases plant operating safety factor. R. G. Murray, jr. flow diag il Pet Refiner 26:94-8 O '47
Control of vertical heaters in gasoline plant operation. J. M. Sappington. il diag Pet Refiner 26:89-91 Ag '47
Cycling operations at Lake St John. F. H. Love. flow diag il Pet Eng 19:244+ O '47
Cycling plant important to Rincon field. F. H. Love. il Pet Eng 18:51-2 Ap '47
Cycling plant includes innovations; Chapel Hill plant. F. H. Love. flow diag il Pet Eng 18:41-6 Je '47
Cycling plants headed for 4.5 million-gallon-daily capacity. A. L. Foster. il Oil & Gas J 46:64-5+ Jl 19 '47
Dual control system synchronizes compressor speed-intake gas pressure. J. M. Sappington. il diag Pet Refiner 26:88-90 Ap '47
Esso's fluid catalyst modifies Fischer-Tropsch; natural gas becomes source of liquid fuels and many chemicals. J. A. Lee. il Chem Eng 54:104-7 O '47
Evaluation of absorber operating efficiency. E. G. Ragatz and J. A. Richardson. Oil & Gas J 45:89+ N 23 '46; Same. Pet Refiner 25:148-52 N '46; Same. Pet Eng 18:53-6+ D '46; 110+ Ja '47
Expanded plant at West Pampa plays dual role; extracts gasoline, provides repressuring service. A. L. Foster. flow chart il Oil & Gas J 45:72-4+ N 9 '46
Fat-oil deethanization. A. M. Whistler. flow diags Oil & Gas J 45:105-6+ O 26 '46; Same. Pet Refiner 25:135-8 D '46
Fire protection in natural gasoline plants. C. L. Hightower. il Pet Refiner 26:129-31 Ap '47
Gas absorption-dehydration plant processes 150,000,000 cubic feet daily. C. C. Pryor. flow diags il Pet Refiner 26:91-8 Ap '47
Gas-processing plant maintains stability at 150 per cent throughput. R. B. Tuttle. flow diag il Oil & Gas J 46:86-7+ Jl 5 '47
Holliday gasoline plant. H. W. Harts. flow diag il Oil & Gas J 45:78-9+ N 23 '46
Humble gas conservation program. il Pet Eng 18:66+ Ap '47
Increasing propane recovery in existing gasoline plants. D. P. Thornton, jr. il Pet Processing 2:583-4+ Ag '47
Liquefied petroleum gas manufacture and bottling operations. R. E. Chambers. flow sheets diag Pet Processing 2:664-8 S '47
Lone Star's Chapel Hill plant, an efficient conservation step. A. L. Foster. il Oil & Gas J 46:58-9+ N 1 '47
Magnolia's new Vanderbilt gasoline plant. H. L. Baker. flow diag il Pet Eng 18:131-2+ Je '47
Natural-gasoline and cycle plants in the United States, January 1, 1946. F. S. Lott and E. M. Seeley. U S Bur Mines Information Circ 7399:1-18 '47
Natural-gasoline and cycling industry operating at 91 per cent of capacity. R. B. Tuttle. map Oil & Gas J 45:140-1 Ap 26 '47
Natural gasoline refrigeration process; Signal oil and gas company. flow diag Pet Refiner (Process Handbook sec) 26:200-1 Ap '47
Pressure maintenance and gasoline absorption plant, Santa Barbara field, Venezuela. H. M. Russell and E. Moncrief. flow diags il Oil & Gas J 45:164-8 D 28 '46
Processing high-hydrogen sulphide-content natural gas. C. C. Pryor. flow diag il Pet Refiner 26:103-6 Mr '47
Remove troublesome sulfides and water from unstabilized natural gasolines. il Pet Processing 2:97 F '47
Shamrock completes reconversion program. B. R. Carney. il diag Oil & Gas J 46:56-60+ Ag 30 '47
Six-year history of Rincon pressure maintenance. N. Williams. il plan Oil & Gas J 46:80-1+ My 24 '47
Small flexible gas system aids conservation. G. Weber. flow diag il diag Oil & Gas J 45:92+ F 15 '47
Small gasoline plant utilizes waste gas for economic operation. C. A. Schwartz. flow diag il Pet Refiner 26:125-8 Ap '47
Survey of natural-gasoline plants; tabulation. Oil & Gas J 45:143-4+ Ap 26 '47
Telemetering at United's Carthage plant. W. M. Moore. il diag Oil & Gas J 46:189-91 S 20 '47
Tulsa type absorption process; Tulsa boiler and machinery company. flow diag il Pet Refiner (Process Handbook sec) 26:276-7 Ap '47

GASOLINE, Natural—Manufacture—*Continued*
Two new plants further Humble's gas-conservation program. il Oil & Gas J 46:71-2+ S 13 '47; Same. Pet Eng 18:216+ S '47
Utilization of electrical energy in natural gasoline plants. H. S. Davis. il diags Pet Eng 18:124+ D '46
Warren gasoline plant designed for operation without steam. C. C. Pryor. flow diag il Pet Refiner 26:109-12 F '47
Water scarce; natural gasoline plant uses air for 80% of required cooling. D. P. Thornton, jr. flow diag il Pet Processing 2:52+ Ja '47

Hydrocol process

Conversion of natural gas to liquid fuels. R. C. Alden. bibliog flow diag map diag Pet Eng 18:148+ Ja '47; Same cond. Oil & Gas J 45:79+ N 9 '46
Hydrocol process shows many improvements not found in the Fischer-Tropsch synthesis. P. C. Keith. Pet Processing 2:390 My '47; Abstract. Chem & Eng N 25:1044 Ap 14 '47
Hydrocol process; Texaco development corp. flow diag Oil & Gas J 45:180 Mr 22 '47
Hydrocol process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:174-5 Ap '47
Synthetic-hydrocarbon processes; abstract. P. C. Keith. Oil & Gas J 45:37-8 Ap 5 '47

Synthol process

Manufacture of synthetic gasoline nearing commercial application in U.S. G. Roberts, jr. and J. A. Phinney. flow chart Oil & Gas J 45:72-3+ Mr 15 '47; Abstract. Pet Processing 2:312 Ap '47
Power plant services for synthetic gasoline manufacture. G. Roberts, jr. and J. A. Phinney. diags Power Pl Eng 51:108-1. Ag '47
Stanolind oil and gas company designing commercial-scale plant to synthesize oil from natural gas in southwestern Kansas. Chem & Eng N 25:240 Ja 27 '47
Stanolind oil & gas co. to sell to U.S. industrial chemicals entire production of water-soluble oxygenated chemicals. Chem & Eng N 25:2436 Ag 25 '47

GASOLINE, Substitutes for
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47

See also
Automotive fuel
Liquid fuel

GASOLINE industry
Farm survey by Capper-Harman-Slocum, inc.; on gasoline and motor oil. Nat Pet N 38:40-1 N 6 '46
What jobbers are thinking. H. Taylor. Nat Pet N 39:34+ Ap 16 '47

Advertising

How Esso selected a subject for television commercials. J. R. Allen. il Ptr Ink 220:46 S 19 '47

Credit problems

Gas on the cuff. Fortune 36:124+ S '47

Statistics

Bureau of mines sees 2,205,000 b/d record motor fuel demand in 1947. Nat Pet N 38:42 D 18 '46
Gasoline use on highways sets new record in 1946; tabulation. Nat Pet N 39:30 Je 11 '47
Monthly percentage of total 1946 gasoline demand; tabulated by states. Nat Pet N 39:34 Jl 9 '47

Arkansas

Marketing competition seen growing in Arkansas; 15 new jobbers in field. E. Lamm. Nat Pet N 39:34 F 19 '47

Minnesota

Opinion on jobber status varies among marketers. Nat Pet N 39:36+ Ag 13 '47

New Jersey

Test plan for giving credit, financial aid, to gasoline retailers in New Jersey. Nat Pet N 38:19 N 13 '46

United States

Allocater blues; companies find allocating supply isn't easy. Nat Pet N 39:24 O 1 '47

GASOLINE pipe lines
Recent developments in pipe-line technology. H. H. Anderson. Am Pet Inst Proc 26(5): 20-5 '46; Same. Pet Eng (Ref annual) 18: 252+ Jl 1 '47; Same cond. Oil & Gas J 45: 241+ N 16 '46
Ultra-modern fabrication for Biggest Inch. R. Sneddon. il map Pet Eng 18:134+ Mr '47

GASOLINE pumps
Coin-operated pumps may solve many problems for station operators but scope is limited. H. Ridder. Nat Pet N 39:37 F 19 '47
Self serve gas pumps may receive blow from fire protection group; text of proposal on farm storage of flammable liquids. Nat Pet N 39:28 My 21 '47
Tank truck pumps; survey figures show high percentage of companies plan purchases. H. Ridder. Nat Pet N 39:29-30 Je 25 '47

Manufacture

More output, less space with infrared oven; Martin & Schwartz inc. J. F. Gschwind. il Elec World 127:56-7 Ap 26 '47

GASOLINE research
Process development and production of isohexane and isoheptane as aviation fuel components. S. F. Birch and others. diags Inst Pet J 32:167-99 Ap '46; Abstract. Pet Processing 2:136+ F '47; Discussion. Inst Pet J 32:200-5 Ap '46
Progress in petroleum research. R. P. Russell. 8pls Inst Pet J 33:391-401 Jl '47; Same. Engineer 183:490-2, 508 Je 6-13 '47; Same cond. Engineering 163:507-8 Je 13 '47
Project progress report on component parts of gasoline; abstract. C. E. Boord. Pet Processing 2:554+ Jl '47

GASOLINE service stations
Attracting the holiday trade; Christmas decorations help sell available items, boost oil, gasoline sales. F. C. Sturtevant. il Nat Pet N 38:27-8 N 20 '46
Filling stations are staging a comeback. W. N. Small. Dom Comm 34:47-50 N '46
Jobber looks ahead; Hambleton terminal corp. F. C. Sturtevant. il Nat Pet N 38:29+ N 6 '46
Nine-city survey gives data on credit card use, TBA, oil heat and brand preference. H. Taylor. Nat Pet N 39:30-1 O 29 '47
Winter tourist; urge to travel in cold weather spells profit to jobbers. F. C. Sturtevant. Nat Pet N 38:30 D 25 '46

Automobile accessories

Are service stations asleep on TBA? F. C. Sturtevant. Nat Pet N 39:26 O 1 '47
Building a TBA business; Service oil co. F. C. Sturtevant. il Nat Pet N 39:36+ Mr 5 '47
Gain in sale of tires, tubes at service stations forecast. E. Lamm. Nat Pet N 39: 45-6 Ap 30 '47
New service stations feature economy of operation and expanded facilities. H. Ridder. il Nat Pet N 39:24-5+ Mr 26 '47
1947, oil marketing's biggest year for TBA. F. C. Sturtevant. Nat Pet N 39:30-1 Ja 22 '47
Tires a profit builder for marketers, stations if proper approach is used. F. C. Sturtevant. Nat Pet N 39:27+ S 10 '47

Cleanliness

As the public sees us; case history of a trip; service and housekeeping at 61 stations in four states. F. A. Bean. Nat Pet N 39:22-3+ S 3 '47
Check shows housekeeping still below par in one area. H. Taylor. Nat Pet N 39:25+ Ap 9 '47
Contest for station cleanliness. il Nat Pet N 39:30 Jl 23 '47
Efficient housekeeping program pays off in additional sales. F. C. Sturtevant. Nat Pet N 39:26-8 Ap 2 '47
Housekeeping bill, 19c; dealer utilizes slack time to keep station clean year around. il Nat Pet N 39:26-7+ My 14 '47

GASOLINE service stations—Cleanliness—*Continued*
Ounce of prevention, how it can insure profits; need for cleaner stations. F. C. Sturtevant. il Nat Pet N 39:32-3 Mr 19 '47
$250,000 investment backs station housekeeping drive. D. Sweeney. il Nat Pet N 39:23+ Ag 27 '47
Use of NPN inspection form brings productive results. Nat Pet N 39:33-4 Mr 26 '47

Construction and design
Improved display facilities, radiant heat incorporated in Sinclair postwar station. H. Ridder. il plans Nat Pet N 39:22-3+ Ap 23 '47
New service stations feature economy of operation and expanded facilities. H. Ridder. il Nat Pet N 39:24-5+ Mr 26 '47

Employees
Dealers use new labor law clause to attack union, major companies. Nat Pet N 39:31 Ag 27 '47
Indiana jobbers assn. joins fight against coercion by labor unions; provisions in union contract. Nat Pet N 38:34+ D 18 '46
Post cards replace operating manual. Ptr Ink 220:56 S 5 '47
Service station manpower; survey reveals programs to raise personnel standards. H. Taylor. Nat Pet N 39:41 Jl 2 '47
Union coercion by service station boycott is held illegal by court. Nat Pet N 39:13 Mr 12 '47

Equipment
Chain store opens 12-pump station featuring innovations in its lubritorium; Sears-Roebuck's Cleveland station. H. Taylor. il Nat Pet N 39:26-8+ Ja 15 '47
33% increase in production of oil dispensing tanks follows adoption of different joining method. il Steel 121:114 Jl 14 '47

Finance
Service station possibilities; a basis for financing owners. J. S. Cordell. Bankers Mo 63:544-5 N '46

Heating and ventilation
Packaged heating for service stations. plan Sheet Metal Worker 38:75 S '47

Leasing
Jobber keeps good will despite extensive replacement of wartime station lessees; Staebler-Kempf oil co. Nat Pet N 38:36+ D 11 '46

Lubricating service
Car dealers and manufacturers moving in on service stations' lubrication dollar. F. C. Sturtevant. Nat Pet N 39:28+ F 12 '47
Car lubrication and advertising. F. A. Bean. Nat Pet N 39:24-6 Ja 22 '47
Lubritorium training, its benefits. F. C. Sturtevant. Nat Pet N 39:25+ F 5 '47
Nine ways to improve lube service, insure future profit. F. C. Sturtevant. Nat Pet N 39:34 Mr 12 '47
Showmanship, efficiency, salesmanship can make lube service builder of profits. F. C. Sturtevant. Nat Pet N 39:23-4 Ja 29 '47
Spring change-over; advertising campaign. F. C. Sturtevant. Nat Pet N 39:23-4 F 26 '47
Union Oil on coast, Shell east of Rockies, introduce all-purpose grease at stations. il Nat Pet N 39:26+ Mr 5 '47

Management
Oil jobber adds tire distributorship, garners profits once taken by supplier; Western oil company. H. Taylor. il Nat Pet N 38:30-1+ N 20 '46
Pure Oil's folksy sales manual tells principles of successful service station operation. L. Colby. Sales Management 58:45-6+ Je 15 '47
Specialists push housekeeping, service; Texaco trains 55 to improve appearance and operation of stations. G. R. McKee, jr. Nat Pet N 39:26 Je 25 '47

Motor truck service
See Motor truck service stations

Regulation
Relationship of free enterprise to modern traffic facilities; limited access highways and state control of roadside business. L. S. Wescoat. Am Pet Inst Proc 26(1):103-6 '46; Same cond. Oil & Gas J 45:239+ N 16 '46

Rest rooms
Our revolting restroom manners. F. Newton. Nat Pet N 39:34 Jl 23 '47
Restrooms at stations unfit for 60 million users; American automobile assn. protest; comments by oil companies. Nat Pet N 39:9-12 Jl 16 '47; Discussion. A. L. Feinman. 39:18 Ag 6 '47
State laws in many cases may force service station restroom clean-ups. Nat Pet N 39:38 Ap 16 '47
Two cents a day incentive fund sparks manager's clean restroom campaign. il Nat Pet N 39:24 O 8 '47
Use NPN housekeeping forms to set standards for clean restroom drive; Lehigh Valley oil co. H. Taylor. il Nat Pet N 39:32+ Ag 13 '47

Service
As the public sees us; case history of a trip; service and housekeeping at 61 stations in four states. F. A. Bean. Nat Pet N 39: 22-3+ S 3 '47
Free services make slaves of station men; with editorial comment. H. Boegaholtz. Nat Pet N 39:30+ O 15 '47
Mr Taylor buys a car, but nobody in a service station appears interested. H. Taylor. Nat Pet N 39:38 Jl 16 '47
Skelly battles untidy washrooms with approved service plan. H. S. Byrne. il Sales Management 59:110+ S 15 '47

Service charges
Lube, wash service prices steady in most of U.S. despite rising costs. Nat Pet N 38:45 N 27 '46

Side line selling
Oil jobber adds appliance department; Staebler-Kempf oil co. F. C. Sturtevant. il Nat Pet N 38:26-7 D 18 '46

GASOLINE storage
Correlation of accelerated and laboratory storage measurements of gasoline stability with field stability; abstract. E. L. Walters. Oil & Gas J 46:119-20 Je 14 '47
Property changes during storage of gasoline. W. L. Nelson. Oil & Gas J 46:86 Ag 2; 84-5 N 1 '47
See also
Gasoline tanks

GASOLINE tanks
Arc welding fixture speeds tank production. il Elec World 128:68 Ag 30 '47
Design of low-pressure vapor-conservation tanks. F. L. Plummer. il diags Oil & Gas J 46:85-6+ Ag 16 '47
Sales action can offset competition offered by overhead tank suppliers. Nat Pet N 39: 33+ Mr 19 '47
Selecting storage tanks for pipe line service. D. A. Leach. il diags Pet Eng 18:49-51 Je '47
Storage of volatile liquids. H. Harvey. il J Chem Educ 24:197-8 Ap '47

Manufacture
Work flow speeds job-shop welding; American welding & manufacturing co. il plan Am Mach 91:147-9 Je 19 '47

GASOMETER. See Gases—Apparatus

GASTEROPODA
Hemocyanins of the gastropods. S. Brohult. bibliog il J Phys & Colloid Chem 51:206-17 Ja '47

GASTEROPODA, Fossil
New gastropods and trilobites critical in the correlation of lower Ordovician rocks. J. Bridge and P. E. Cloud, jr. bibliog map Am J Sci 245:545-59, pl 1-2 S '47
Studies of some Comanche pelecypods and gastropods. T. W. Stanton. 2 fold charts(in pocket) map U S Geol S Professional Pa 211:1-256, pl 1-67 bibliog(p114-16) '47

GASTRIC juice
Inhibitory effect of sodium dodecyl sulfate upon the gastric secretory response to histamine. H. Shay and others. bibliog Science 105:128-9 Ja 31 '47

GASTROENTERITIS. See Digestive organs—Diseases

GASTRO-INTESTINAL diseases. See Digestive organs—Diseases

GASTROPODS. See Gasteropoda

GATES, Hydraulic
Cincinnati's Mill Creek flood control project. H. B. McDermid. il map diags Power Pl Eng 50:82-5 D '46
Estimating data for reservoir gates. F. L. Boissonnault. diags Am Soc C E Proc 73: 1027-46 S '47
Safeguarding hydro plants against the ice menace. P. E. Gisiger. il diag Civil Eng 17:24-7 Ja '47
See also
Locks (hydraulic engineering)
Valves, Hydraulic

GAUMONT-BRITISH picture corporation
Statement by the chairman at annual general meeting. J. A. Rank. Economist 151: 928 D 7 '46

GAUSSIAN networks
Statistical properties of networks of flexible chains. H. M. James. J Chem Phys 15:651-68 S '47
Theory of the increase in rigidity of rubber during cure. H. M. James and E. Guth. bibliog J Chem Phys 15:669-83 S '47

GEAR cutting
Carbides hob non-metallic gears. L. W. Reuland. il Am Mach 91:96-8 Jl 3 '47
Cemented hard carbide and gear making; abstract. P. M. McKenna. Iron Age 159:104 Je 12 '47
Gear shaving. il diags Automobile Eng 36:443-50, 481-6 O-N '46
Generating 44-inch pinions. il Steel 120:120 Ap 14 '47
Hobbed gear tooth layout simplified. C. A. Young. diags Am Mach 90:133-5 S 12; 130-1 S 26; 133 D 19 '46
Special cutters. J. DeEulis. il Steel 121:88-91+ S 15 '47
Theory and practice of gear generating. il diags Steel 119:54-5+ D 23 '46

GEAR cutting machines
Brown & Sharpe automatic pinion-turning machine. il Mach 54:191-2 O '47
Cranky shapes yield; gear shapers can be set up to handle many odd-shaped pieces. diags Am Mach 91:106-8 O 23 '47
Fellows no. 10 rotary gear shaper. il Am Mach 91:161 N 6 '47
Fellows planetary gear shaper. il Mach 54:158 S '47; Product Eng 18:108-9 S '47
Gear cutting; precision machine-tool drives. il Elec R (Lond) 140:603-7 Ap 18 '47
Gear making, with the help of modern machine tools. G. Hubbard. il Steel 121:80-2+ Ag 11 '47
Giant Dominion gear generator cuts rolling mill pinions. il Iron Age 159:71 Mr 6 '47
Lees-Bradner ultra-speed gear-hobbers. il Mach 54:177 S '47
Machine tool show in print; gear cutting and finishing. il diags Am Mach 91:264-72 S 11 '47
Michigan rack type gear finisher. il Automotive Ind 97:50+ Ag 15 '47
Michigan Shear Speed gear shaper. il Product Eng 18:90-1 S '47
Modern methods of cutting truck transmission gears. il Mach 53:160-2 Ag '47
New applications of roto-shaving. il Automotive & Aviation Ind 96:28-9+ Ap 15 '47
New type cutter boosts gear output; used by Ford motor co. W. G. Patton. il Iron Age 160:63 S 25 '47
Precise speeds from gear-tooth splitter. J. H. Gepfert. il diags Machine Design 19:110-11 Ap '47
Red Ring diagonal gear-shaving machine. il Mach 53:202 Ja '47
Red Ring high-production turmatic gear-shaving machine. il Mach 53:192 Mr '47; Am Mach 91:148 Mr 27 '47; Automotive & Aviation Ind 96:43 Mr 1 '47

GEAR testing machines
Active portion of involute on external spur and helical gears. S. Cornell. il diags Mach 53:150-4 Ja '47
Helical gear design; testing sample gears on a special machine. E. M. Currie. il diag Machine Design 19:100-4 Ja '47
Involute checking machine for large helical gears. D. W. Dudley. il Mach 54:142-5 O '47
Laboratory testing machine for helical gear tooth action. H. Walker. il diags Engineer 183:486-8 Je 6 '47
Operating test for the evaluation of the surface durability of gears. T. H. Wickenden and others. il diags Diesel Power 24:1334-7+ N '46; Same cond. Machine Design 18: 142-6 Jl '46; Same cond. Automotive & Aviation Ind 95:36-40 Ag 1 '46; Abstract. Iron Age 157:60-1 Je 13 '46; Discussion. Diesel Power 24:1458-60 D '46

GEAR-tooth couplings. See Couplings

GEARING
Brown and sons double-reduction gear with barring mechanism. il diags Engineering 163:32-3 Ja 10 '47
Flexible shafts and couplings protect high-speed gears. R. L. Benford. il diag Power 91:477-8 Jl '47
High-pressure gear pumps. T. E. Beacham. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 24):417-29 '46; Same. Engineering 161:284-5, 310-12, 334-5 Mr 22-Ap 5 '46; Same cond. Engineer 181:182-4 F 22 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 24): 429-52 '46; Engineering 161:185-6, 208-9 F 22-Mr 1 '46; Engineer 181:180-2 F 22 '46
How to rebuild teeth in gear wheels; illustrated instructions. Power 91:717 O '47
Infinitely variable speed gear. il diag Engineer 183:167 F 14 '47
Non-reversible rack and pinion motion. L. Kasper. diags Mach 53:175-6 Mr '47
Rugged gear man Grant; excerpts from his Gear book for 1893. il Am Mach 91:96-7 Ag 28 '47
Speed gear regulated through variable throw crank. il diag Product Eng 18:105 Ag '47
Speed reducer with wabble-gear mechanism. A. W. Jansson. diags Mach 53:178-80 Jl '47
Zero-backlash arrangements for gear trains and drives. K. E. Lofgren. diags Product Eng 18:150-2 Jl '47
See also
Chain gear
Draft gears
Power transmission
also subdivision Gearing under special subjects, e.g.
Airplane engines—Gearing
Automobiles—Gearing

Design
Closed gear train. H. E. Merritt. diags Engineer 184:284-5 S 26 '47
Designing face gears. B. Bloomfield. il diags Machine Design 19:129-34 Ap '47
Helical gear design; testing sample gears on a special machine. E. M. Currie. il diag Machine Design 19:100-4 Ja '47
Hobbed gear tooth layout simplified. C. A. Young. diags Am Mach 90:133-5 S 12; 130-1 S 26; 133 D 19 '46
Lubrication considerations in gear design diags Mach 53:145-53 My '47
Tooth deflection and scuffing in design of highly loaded gears. F. R. McFarland. il diags Product Eng 18:141-5 F '47

Manufacture
Aluminum timing gears for automotive use; aluminum bonded to steel by the Al-Fin process. il Bus Transportation 26:227-9 My '47; Excerpts. Iron Age 160:74 Jl 3 '47
Bevel gears. il Automobile Eng 37:71-6 F '47
Carbide-ball burnishing cuts bore-finishing cost 90%. J. Busch. il diag Am Mach 90: 129 D 19 '46
Distortion reduced in gears for paper production. Pulp & Pa of Can 48:122 Mr '47
Electronically controlled flame hardening machine. il Automotive Ind 97:48 S 15 '47
Ford utilizes extrusion method for producing metal powder gears. E. E. Ensign. il diags Automotive Ind 97:30-1+ Ag 15 '47

GEARING—Manufacture—*Continued*
High-duty gears; special reduction gearing manufactured by David Brown and sons. il Automobile Eng 37:273-4 Jl '47
How to machine large circular sectors. R. J. Poetzel. diags Am Mach 91:106 F 27 '47
Mechanical handling flexibility assures smooth flow of gear blanks; Westinghouse electric corp.'s Gearing division. il Steel 121:91 S 1 '47
Mechanical handling of gear blanks speeds production. O. P. Adams. il Materials & Methods 25:132 My '47
Modified isothermal treatments minimize distortion. O. E. Brown. il Iron Age 159:54-6 Ap 17 '47
Novel tools cut cost of gear sector; drive-gear boxes of domestic washing machines. K. F. Brooks. il diags Am Mach 91:93-5 Ap 10 '47
Precision machining and heat-treating of aircraft-engine gears; Wright aeronautical corp. V. H. Laughner. il diags Mach 53: 168-73 Je '47
Reducing cost in manufacturing transmission gears; abstract. H. J. Inch, jr. Iron Age 159:104 Je 12 '47
Reducing distortion in case-hardened nickel-chromium gears. C. A. E. Wilkins. Metal Prog 51:441 Mr '47
Ring gears formed from steel bar stock. K. Rose. il Materials & Methods 26:74-7 Ag '47
Shop practice; handling and machining of drum gears; Hyster company. G. E. Stedman. il diags Steel 120:78-9+ Mr 31 '47
Transfer machines and other specialized equipment at Detroit gear plant. J. Geschelin. il Automotive Ind 97:32-4+ O 1 '47
See also
Gear cutting
Gear cutting machines

Measurement

Active portion of involute on external spur and helical gears. S. Cornell. il diags Mach 53:150-4 Ja '47
Checking external gear sizes by measurement over wires; data sheets. Mach 53:219 D '46; 237 Ja '47
Checking internal gear sizes by measurement between wires; data sheets. Mach 53:245 Ap; 233 My '47
Small thread and gear measuring pin technique. L. R. Fitzsimmons. diags Am Mach 91:136 Ap 10 '47

Standards

A.G.M.A. standard materials; cast iron gear blanks; reference book sheet. Product Eng 17:155+ D '46; Same. Am Mach 91:127 Ja 2 '47
Keyways for holes in gears; revised standard; reference book sheet. diags Am Mach 91: 219 Ja 16 '47
Master gear standard; reference book sheet. Am Mach 90:141, 143 N 21 '46

Tables, calculations, etc.

Analysis of involute sliding. B. Bloomfield. Am Mach 91:96-7 Ja 2 '47
Calculations improve shrink fits on large gears and wheels. N. N. Sawin. diags Am Mach 91:142-5 Je 19 '47
Equations for the normal profile of helical gears. A. F. Zamis. il diags Am Mach 91: 82-4 S 25 '47; Correction. 91:103 N 6 '47
How to apply the formula for involute sliding. B. Bloomfield. diag Am Mach 91:121-2 Ag 14 '47
Vector analysis of epicyclic gear trains; reference book sheet. L. Avondoglio. diags Product Eng 18:171+ Ag '47

Testing

Brown polariscope. il diag Automobile Eng 37:231-2 Je '47
Evaluating surface roughness of gear teeth. L. D. Martin. Iron Age 158:144+ N 21 '46
Operating test for the evaluation of the surface durability of gears. T. H. Wickenden and others. il diags Diesel Power 24:1334-7+ N '46; Same cond. Machine Design 18:142-6 Jl '46; Same cond. Automotive & Aviation Ind 95:36-40 Ag 1 '46; Abstract. Product Eng 17:138-9 D '46; Discussion. Diesel Power 24:1458-60 D '46
See also
Gear testing machines

GEARING, Bevel
Bevel gears. G. W. Nash. il Automobile Eng 37:71-6 F '47
GEARING, Helical. See Gearing, Spiral
GEARING, Herringbone
Large herringbone gear fabricated by welding. il Iron Age 160:83 Ag 7 '47
GEARING, Hypoid
Latest hypoid lubricants. C. F. Prutton. il Steel 120:84-5+ Mr 31 '47
GEARING, Planetary
Analysis of epicyclic gear systems for torque converters. A. Y. Dodge. diags Automotive Ind 97:38-40+ Ag 1; 34-7 Ag 15 '47
Cyclic variations in speed, obtainable from cycloidal cranks. E. H. Schmidt. diags Machine Design 19:108-11+ Mr '47
New GM hydraulic reverse gear. il diag Automotive & Aviation Ind 96:36+ My 1 '47; Same. Marine Eng 52:100+ My '47
Nomograph simplifies planetary gear calculations; engineering data sheet. A. Cowie. diag Machine Design 19:155-6 S '47
Planetary transmissions. L. A. Graham. diags Machine Design 18:115-19 N '46
Two-speed rear axles; Eaton double reduction designs embodying epicyclic gears. diags Automobile Eng 37:335-6 S '47
Variable drive provides infinite speed changes at constant torque. il Mach 53:164 Mr '47
Vector analysis of epicyclic gear trains; reference book sheet. L. Avondoglio. diags Product Eng 18:171+ Ag '47
GEARING, Spiral
Active portion of involute on external spur and helical gears. S. Cornell. il diags Mach 53:150-4 Ja '47
Equations for the normal profile of helical gears. A. F. Zamis. il diags Am Mach 91: 82-4 S 25 '47; Correction. 91:103 N 6 '47
Equivalent spur and helical gears; engineering data sheet. C. A. Johnson. Machine Design 19:155 Jl '47
Helical-gear indexing mechanism. C. F. Smith. diags Mach 53:189-91 Ap '47

Testing

Helical gear design; testing sample gears on a special machine. E. M. Currie. il diag Machine Design 19:100-4 Ja '47
Involute checking machine for large helical gears. D. W. Dudley. il Mach 54:142-5 O '47
Laboratory testing machine for helical gear tooth action. H. Walker. il diags Engineer 183:486-8 Je 6 '47
GEARING, Spur
Active portion of involute on external spur and helical gears. S. Cornell. il diags Mach 53:150-4 Ja '47
Cyclic variations in speed, obtainable from cycloidal cranks. E. H. Schmidt. diags Machine Design 19:108-11+ Mr '47
Equivalent spur and helical gears; engineering data sheet. C. A. Johnson. Machine Design 19:155 Jl '47
GEARING, Worm
How to calculate worm gearing proportions. C. Goussios. il diags Machine Design 19: 129-32 Ja '47
Lathe makes hour-glass worms. C. Chen. diag Am Mach 91:120 O 9 '47
Rating of worm gears. W. Hirst. Mech Handling 34:200-3 Ap '47

Manufacture

Worm wheel milling without centers. C. W. Metters. diags Am Mach 91:141 F 13 '47
GEESE, Charles F.
Consultant on lithography, Time, incorporated, laboratories. por Inland Ptr 119:61 My '47

GEIGER-MÜLLER counters
Absorption isotherm for determination of barium in quantities as low as 10^{-10} gram atom. M. H. Kurbatov and J. D. Kurbatov. Am Chem Soc J 69:438-41 F '47
All-metal fast Geiger counters for cosmic-ray research. V. H. Regener. diags R Sci Instr 18:267-70 My '47
Beta-ray thickness gage for sheet steel; G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O. J. M. Smith. il diags Electronics 20:106-12 O '47
Carbon dioxide filled Geiger-Müller counters. S. C. Brown and W. W. Miller. bibliog R Sci Instr 18:496-500 Jl '47
Construction of Geiger-Müller tubes of high sensitivity to β-radiations. G. A. Elliott and R. H. Lee. R Sci Instr 18:450-1 Je '47
Design of metal G-M counters. M. H. Shamos and I. Hudes. diag R Sci Instr 18: 586-7 Ag '47
Discharge mechanism of self-quenching Geiger-Mueller counters. S. H. Liebson. bibliog diags Phys R 72:602-8 O 1 '47
Electronics for cosmic-ray experiments. B. Howland and others. diags R Sci Instr 18: 551-6 Ag '47
Geiger counter; how it works. il Power Pl Eng 51:101 O '47
Geiger-Mueller counter detection of light radiation from the paths of high energy particles. P. B. Weisz and B. L. Anderson. diags Phys R 72:431-2 S 1 '47
Geiger-Müller counter tubes. il R Sci Instr 18:458 Je '47
Geiger-Müller counters applied to mining. A. W. Knoerr. il diags Eng & Min J 148:92-5+ Jl '47
Geiger-Müller tubes. Chem & Eng N 25:388 F 10 '47
Geiger tube flame detector. P. B. Weisz. il Chem Ind 59:834 N '46
Improved Geiger-counter arrangement for determination of radium content. F. J. Davis. il diags J Res Nat Bur Stand 38: 513-18 My '47
Improvement on the copper evaporation, Geiger-Müller counter. P. J. G. de Vos and others. diag R Sci Instr 17:516 N '46
Measurement of depth of cold work on X-ray spectrometer. M. Field. il R Sci Instr 18: 451-3 Je '47
Measurement of high intensities with the Geiger-Müller counter. C. O. Muehlhause and H. Friedman. il diags R Sci Instr 17: 506-10 N '46
Metallurgical applications of the X-ray diffraction spectrometer. J. L. Abbott. bibliog il Iron Age 159:50-3 F 13; 57-61 F 20; 56-9 F 27 '47
Method of measuring half-lives. A. C. Graves and R. L. Walker. bibliog Phys R 71:1-3 Ja 1 '47
Miniature Geiger counter. Chem & Eng N 25:190 Ja 20 '47
Modern Geiger-Müller counters. A. Graves. il diags Electronics 20:80-3 Ja '47
Pulse time circuit for cosmic-ray research. H. K. Ticho. il diags R Sci Instr 18:271-8 My '47
Quantitative analysis of mixed powders with the Geiger-counter X-ray spectrometer. Z. W. Wilchinsky. diag J Ap Phys 18:929 O '47
Radiation detector for use in field or laboratory. il Sci Am 177:178 O '47
Ray-tracer of atomic fission. S. Burger. il diag Sci Am 176:53-6+ F '47
Scale of *N* counting circuits. B. Howland. bibliog diags Electronics 20:138+ Jl '47
Time lags in Geiger-Mueller counter discharges. C. G. Montgomery and D. D. Montgomery. bibliog diags R Sci Instr 18: 411-14 Je '47
Uranium and thorium prospecting with the Geiger counter. J. De Ment. il diags Min Cong J 33:30-2+ Ag '47
Velocity of propagation of the discharge in Geiger-Müller counters. E. Wantuch. Phys R 71:646 My 1 '47

Testing
National bureau of standards radioactivity section to test Geiger-Müller counters. Chem & Eng N 25:700 Mr 10 '47; Same. Franklin Inst J 244:225-6 S '47

GEIST, Walter, 1894-
Allis-Chalmers president. por(cover) Bsns W p8 Ja 4 '47

GELATIN
Gelatin production in 1946. Oil Paint & Drug Rep 151:59 Mr 31 '47
Microiodometric method for the determination of glue or gelatin in paper. G. E. Naponen and others. bibliog Paper Tr J 125:45-7 Jl 31 '47
See also
Collagen

GELATIN powder
Biologically absorbable surgical glove powder. J. T. Correll and E. C. Wise. Science 105:529-30 My 16 '47

GELATION
Effect of molecular association and charge distribution on the gelatin of pectin. R. Speiser, M. J. Copley and G. C Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47
Gélatinisation des nitrocelluloses. T. Petitpas. bibliog il diags Chimie & Ind 58:17-23 Jl '47; Abstract (Gelling of nitrocellulose). Chem Age (Lond) 57:625-6 N 8 '47
Molecular size distribution in three dimensional polymers; post-gelation relationships. P. J. Flory. bibliog Am Chem Soc J 69:30-5 Ja '47

GEMS
X-ray irradiation of gems causes color change. il Electronics 20:138 Ag '47
See also
Diamonds

GENERAL accounting office. See United States —General accounting office

GENERAL adjustment bureau, inc. (formerly Fire companies' adjustment bureau)
Adjustment bureau assumes new name. Spectator (Property ed) 12:27 Je 12 '47

GENERAL American transportation corporation
Selected stocks with long dividend records. Mag of Wall St 79:203 N 23 '46
Thumbnail stock appraisal. Mag of Wall St 79:419 Ja 18 '47

GENERAL aniline and film corporation
Frye in Aniline post at strategic time. Bsns W p35-6 Ap 19 '47
General Aniline & Film is largest seized alien property. il Fortune 36:68-73+ Ag '47
Photographic companies in new era. S. Devlin. Mag of Wall St 79:742+ Mr 29 '47

GENERAL business service corporation
Paperwork farmed out. Bsns W p43 Ag 9 '47

GENERAL cable corporation
General Cable; big wiremaker is recharged with novel ideas. il Fortune 36:98-105+ O '47

GENERAL cigar company
Promising stocks. Mag of Wall St 79:666-7 Mr 15 '47

GENERAL controls company
Stocks offered. Comm & Fin Chr 165:3393 Je 30 '47

GENERAL dyestuff corporation
Matthew J. Hickey, jr. resigns as president of General dyestuff corp. Comm & Fin Chr 166:1742 O 30 '47

GENERAL electric company
Apparatus department management decentralized. Elec World News ed 128:6 O 4 '47
Atom's industrial sponsors. il Bsns W p22+ Mr 29 '47
General electric company's part in Manhattan district electromagnetic process. T. R. Rhea. il Gen Elec R 50:11-12 Ap '47
General Electric spends $1,000,000 for employee education. Blast F & Steel Pl 35: 580-1 My '47
GE units formed during revision. Aviation W 47:34 O 27 '47
G-E's lamp department performs architectural surgery at Nela Park, bringing lighting center up-to-date. il plans diags Arch Forum 86:101-5 Ja '47
Mr Wilson at work; General Electric's president. il Fortune 35:120-3+ My '47
Silicones; new class of synthetics. il Fortune 35:104-11+ My '47

GENERAL electric company, International. See International general electric company

GENERAL Electric lighting institute. See Nela Park, Cleveland

GENERAL engineering and manufacturing company
Stocks offered. Comm & Fin Chr 165:73 Ja 6 '47

GENERAL foods corporation
Annual report. Comm & Fin Chr 165:1589-90 Mr 24 '47
General Foods' inside story. L. W. Elder, jr. il Mod Packaging 20:117-22 Mr '47
Net at six-year high. Barron's 27:1+ Ja 13 '47
Preferred stock offered. Comm & Fin Chr 166:53 Jl 7 '47

GENERAL instrument corporation
New radio, television fields opening for General Instrument. Barron's 27:35 S 1 '47

GENERAL machinery corporation
Lima-General Machinery merger may lift earnings. Barron's 27:35 S 1 '47

GENERAL mills, inc.
Annual report. Comm & Fin Chr 166:466-7 Ag 4 '47
Camera highlights from a General Mills stockholders' meeting. Sales Management 57:46+ D 1 '46
How General Mills develops its new food specialties. A. D. Hyde. il Food Ind 19:1374-6+, 1509-12+ O-N '47
Unit process building for chemical engineering research. W. B. Wade and L. Champlin, jr. il Chem & Eng N 25:2629-30 S 15 '47

Research library
Development and use of a classified catalog for periodical literature in selected subject fields. M. J. Voigt. Special Lib 37:285-90 N '46

GENERAL motors corporation
Annual report. Comm & Fin Chr 165:1727-8 Mr 31 '47
Financial wizardry of William C. Durant recalled. Steel 120:59-60 Mr 24 '47
Ford lure. Bsns W p24+ D 21 '46
GM folks; other house organs. il Inland Ptr 120:52-3 O '47
Keeping independent banners flying; plan used to finance and counsel independent automobile dealers. F. C. Sturtevant. Nat Pet N 39:28-9 S 17 '47
New plant for Truck & coach division at Pontiac, Mich. il Factory Management 105: B63-5 pt 2 Ap '47
Preferred shares offered. Comm & Fin Chr 164:2830 D 2 '46
Ubiquitous Buick. il Fortune 36:86-93+ N '47
Year-end summary of passenger car and truck production. Comm & Fin Chr 165:208 Ja 13 '47

GENERAL panel corporation
Industrialized house. il plans diags Arch Forum 86:115-20 F '47

GENERAL Phoenix corporation
Debentures offered. Comm & Fin Chr 165:683 F 3 '47

GENERAL portland cement company
Stock offered. Comm & Fin Chr 166:759 Ag 25 '47

GENERAL public service corporation
Annual report. Comm & Fin Chr 165:1070 F 24 '47

GENERAL public utilities corporation
Public utility securities. Comm & Fin Chr 166:624 Ag 14 '47

GENERAL refractories company
Long spell of good business ahead. Barron's 27:39-40 S 15 '47

GENERAL steel castings corporation
Arrears must await debt retirement. Barron's 27:13-14 Mr 17 '47

GENERAL strikes. See Strikes

GENERAL telephone corporation
Preferred stock offered. Comm & Fin Chr 166:1050 S 15 '47

GENERAL waterworks corporation
Preferred stock offered. Comm & Fin Chr 165: 73 Ja 6 '47

GENES
Genes and nucleoproteins in the synthesis of enzymes. S. Spiegelman and M. D. Kamen. bibliog Science 104:581-4 D 20 '46
Linkage between the genes for sickle cells and the M-N blood types. L. H. Snyder and others. Science 106:347-8 O 10 '47

GENETICS
Natural selection and the mental capacities of mankind. T. Dobzhansky and M. F. A. Montagu. Science 105:587-90 Je 6 '47
Work of Soviet biologists; theoretical genetics. N. P. Dubinin. Science 105:109-12 Ja 31 '47

GENEVA, Switzerland
Bridges
Le pont-rail en béton de La Jonction, à Genève. il diags Génie Civil 123:312-14 N 15 '46

GEOCHEMISTRY
Abundance of thallium in the earth's crust. L. H. Ahrens. Science 106:268 S 19 '47
Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47
Contributions to geochemistry, 1942-45. R. C. Wells and others. diags U S Geol S Bul 950:1-161, pl 1-5; pa 40c Supt. of doc. '46
Geochemistry of columbium. K. Rankama. bibliog Science 106:13-15 Jl 4 '47
Metalliferous geochemical zones of Australia. E. S. Hills. maps Econ Geol 42:478-91 Ag '47
Relative abundance of some light nuclear species as determined from the composition of stony meteorites. H. Brown and C. Patterson. bibliog Phys R 72:456-7 S 15 '47
Simple chemical tests to aid prospectors; testing water, soil and vegetation for zinc. P. Leach. il Eng & Min J 148:78-9 O '47
What is geochemistry. K. Rankama. Am J Sci 245:458-61 Jl '47
See also
Rocks, Igneous

GEODESY
Research in geodesy and geophysics coordinated; National research council of Canada. Can Chem & Process Ind 31:247 Mr '47
See also
Triangulation

GEOLOGICAL association of Canada
Constitution, bylaws, rules and regulations, adopted by the Fellows, March 11, 1947. Can Min J 68:324-9 My '47

GEOLOGICAL drawing
Graphical construction of perspective diagrams. G. D. Hobson. bibliog diags Am Assn Pet Geologists Bul 31:1886-93 O '47

GEOLOGICAL maps
Aerial photographs in structural mapping of sedimentary formations. L. E. Nugent, jr. bibliog diags Am Assn Pet Geologists Bul 31:478-94 Mr '47
Exaggeration of vertical scale of geologic sections. H. H. Suter. bibliog diags Am Assn Pet Geologists Bul 31:318-39 F '47
Geological survey completes new structure map for Rangely field. N. W. Bass. map Oil & Gas J 44:86-7+ N 30 '46
Use of the broadcast band in geologic mapping. L. Kerwin. bibliog il map diags J Ap Phys 18:407-13 Ap '47
See also
Mine maps

GEOLOGICAL research
American assn. of petroleum geologists puts official sanction on research committee projects. C. J. Deegan. Oil & Gas J 45:123 Ap 5 '47
Final reports on a reconnaissance survey of research needs in petroleum geology. bibliog Am Assn Pet Geologists Bul 30:2042-63; 31:161-81, 375-93 D '46-F '47
Fundamental research in sedimentology. S. W. Lowman. Am Assn Pet Geologists Bul 31:501-12 Mr '47
Oölite deformation in the South Mountain fold, Maryland. E. Cloos. map diags Geol Soc Bul 58:843-917, pl 1-13 bibliog(p915-17) S '47
Report of the general committee on research of the Society of economic geologists. Econ Geol 42:505-9 Ag '47

GEOLOGICAL society of America
Abstracts of papers presented at the December meeting in Chicago, Dec. 26-28, 1946 and at meeting in Berkeley, April, 1946. Geol Soc Bul 57:1173-262 pt 2 D '46

GEOLOGICAL society of America—*Continued*
Interim proceedings of the Geological society of America, 1947. 2pts 82p; 29p Geological society of America, 419 W. 117th st, New York '47
Proceedings volume for 1946. Geol Soc Proc 1946:1-284, pl 1-13 Jl '47

GEOLOGICAL surveys
See also
Canada—Geological survey
United States—Geological survey

GEOLOGISTS
Geologist as an executive. Oil & Gas J 45:149 Ap 19 '47
See also
Geology—Study and teaching

GEOLOGISTS, Petroleum
What the geologists need. Oil & Gas J 46: 149 Ag 23 '47

GEOLOGY
Abstracts of papers presented at the December meeting of Geological society of America, Chicago, Dec. 26-28, 1946 and at meeting in Berkeley, April, 1946. Geol Soc Bul 57:1173-259 pt 2 D '46
Application of geology to tunneling problems. E. E. Wahlstrom. diags Am Soc C E Proc 73:1245-56 O '47
Geology in civil engineering. R. Rhoades. Engineering 163:329, 377-8 Ap 25, My 9 '47
Geomorphology of depositional surfaces. W. A. Price. maps Am Assn Pet Geologists Bul 31:1784-800 O '47
Research laboratories of the Reclamation bureau; what the engineering geologist does. R. Rhoades and W. H. Irwin. il Eng N 139:524-8 O 16 '47
Society of economic geologists 27th annual meeting, New York, March 19-21; abstracts of papers. Econ Geol 42:409-29 Je '47
See also
Continental shelf
Continents
Correlation (geology)
Diastrophism
Faults (geology)
Folds (geology)
Geophysics
Glacial geology
Metamorphism
Metasomatism
Mines and mineral resources
Ore deposits
Paleontology
Pebbles
Petroleum—Geology
Rocks
Rocks, Igneous
Salt domes
Sand
Sedimentation and deposition
Volcanoes
Water, Underground

Bibliography
Bibliography of North American geology, 1944 and 1945. E. M. Thom. U S Geol S Bul 952:1-496; pa $1 Supt. of doc. '47
Cooperative work by U.S. Geological survey and state of Colorado. H. M. Crain. fold map[in pocket] Colorado School of Mines [Golden] Quarterly 42 no 4:1-31 '47 (pa 50c)

Study and teaching
Interim proceedings of the Geological society of America, 1947. pt 1 82p Geological society of America, 419 W. 117th st, New York '47
Survey of college students majoring in geology. A. I. Levorsen. Am Assn Pet Geologists Bul 31:1294 Jl '47

Terminology
Geosynclinal nomenclature and the craton. M. Kay. bibliog map Am Assn Pet Geologists Bul 31:1289-93 Jl '47
Geosynclines; a fundamental concept in geology. M. F. Glaessner and C. Teichert. Am J Sci 245:465-82, 571-91 bibliog(p589-91) Ag-S '47
Onlap and strike-overlap. F. A. Melton. diags Am Assn Pet Geologists Bul 31:1868-78 O '47
Terminology for insoluble residues. H. A. Ireland and others. bibliog fold chart Am Assn Pet Geologists Bul 31:1479-90 Ag '47

Alabama
Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Alaska
Mineral investigations of the geological survey in Alaska in 1943 and 1944. J. C. Reed. U S Geol S Bul 947-A:1-6; pa 5c Supt. of doc. '46

Arizona
Ajo mining district. J. Gilluly. maps (in pocket) U S Geol S Professional Pa 209:1-112, pl 1-27 '46
Faulting in east part of Grand Canyon of Arizona. C. E. Van Gundy. bibliog 2 pls maps Am Assn Pet Geologists Bul 30:1899-1909 N '46
Hydrothermal alteration in the Castle Dome copper deposit, Arizona. N. P. Peterson and others. maps diag Econ Geol 41:820-40 D '46

Australia
Geology of Roma district, Queensland, Australia. F. Reeves. bibliog maps diags Am Assn Pet Geologists Bul 31:1341-71, pl 1(fold map) Ag '47
Stratigraphy of western Australia. C. Teichert. bibliog 4pls maps diags Am Assn Pet Geologists Bul 31:1-70 Ja '47

Bolivia
Geology of the Colquiri tin mine, Bolivia. D. F. Campbell. il maps diags Econ Geol 42:1-21 Ja '47

British Columbia
Control of ore by primary igneous structures, Porcher Island. A. Smith. bibliog map Geol Soc Bul 58:245-61, pl 1-2 Mr '47
Geology of the Red Rose tungsten mine, Hazelton, British Columbia. J. S. Stevenson. bibliog il map diags Econ Geol 42: 433-64 Ag '47
Mississippian rocks of Meramec age along Alcan highway, northern British Columbia. L. R. Laudon and B. J. Chronic, jr. bibliog map diags Am Assn Pet Geologists Bul 31:1608-18 S '47
Tuyas, flat-topped volcanoes in northern British Columbia. W. H. Mathews. bibliog diags Am J Sci 245:560-70, pl 1 S '47

California
Geologic section from the Sierra Nevada to Death Valley. R. H. Hopper. bibliog fold map Geol Soc Bul 58:393-432, pl 1-6 My '47
Geology of Reef Ridge, Coalinga district, California. R. Stewart. bibliog maps U S Geol S Professional Pa 205-C:81-115, pl 9-17 '46
Monterey formation of California and the origin of its siliceous rocks. M. N. Bramlette. bibliog U S Geol S Professional Pa 212:1-57, pl 1-19; pa 60c Supt. of doc. '46
Radioactivity of the rocks of the batholith of southern California. E. S. Larsen and N. B. Keevil. map Geol Soc Bul 58:483-93 Je '47
Structure plan of the southern Sierra Nevada, California. E. B. Mayo. bibliog Geol Soc Bul 58:495-504, pl 1 Je '47
Thrust fault zones in Ventura basin, Los Angeles and Ventura counties, California. J. W. Sheller and M. N. Bien. map diags Am Assn Pet Geologists Bul 31:1505-9 Ag '47

Colorado
Cenozoic physiographic history of the Front range. E. E. Wahlstrom. bibliog map plan diags Geol Soc Bul 58:551-72 Jl '47
Freezeout Creek fault, Baca county, Colorado. map diag Am Assn Pet Geologists Bul 31: 1863-8 O '47
Upper Montana group, Golden area, Jefferson county, Colorado. J. D. Moody. bibliog maps diags Am Assn Pet Geologists Bul 31:1454-71 Ag '47

Bibliography
Cooperative work by U.S. Geological survey and state of Colorado. H. M. Crain. fold map[in pocket] Colorado School of Mines [Golden] Quarterly 42 no 4:1-31 '47 (pa 50c)

Cuba
Stratigraphic paleontology of Camagüey district. J. F. De Albear. map Am Assn Pet Geologists Bul 31:71-91 Ja '47

GEOLOGY—*Continued*

Florida

Geology and occurrence of oil in Florida. E. D. Pressler. map diags Am Assn Pet Geologists Bul 31:1851-62 O '47

Great Britain

British resources of steel moulding sands. W. Davies and W. J. Rees. maps diags Iron & Steel Inst J 148:11-111, pl 1-9 no 2 '43; 152:71-116, pl 7-10 no 2 '45

Greece

Progress of the geological exploration of Greece. C. Renz. map Am J Sci 245:175-80 Mr '47

Gulf Coast region

Diastrophism during historic time in Gulf coastal plain. M. M. Sheets. bibliog Am Assn Pet Geologists Bul 31:201-26 F '47

Marine sedimentary cycles of tertiary in Mississippi embayment and central Gulf Coast area. M. Bornhauser. bibliog maps Am Assn Pet Geologists Bul 31:698-712 Ap '47

Bibliography

Status of micropaleontology in eastern Gulf region. H. V. Howe. bibliog(211 titles) Am Assn Pet Geologists Bul 31:713-30 Ap '47

Hawaiian Islands

Honolulu series, Oahu, Hawaii. H. Winchell. bibliog il maps Geol Soc Bul 58:1-48, fold map(pl 1) pl 2 Ja '47

Koolau basalt series, Oahu, Hawaii. C. K. Wentworth and H. Winchell. bibliog maps Geol Soc Bul 58:49-77, pl 1-4 Ja '47

Origin and development of craters. T. A. Jaggar. (Memoir 21) 508p, pl 1-87 bibliog(p419-25) Geological soc. of America, 419 W. 117th st, New York 27 '47

Idaho

Epithermal mineralization at the Last Chance and Hornsilver mines, Lava Creek district, Butte county. A. L. Anderson. bibliog maps Geol Soc Bul 58:451-82, pl 1-4 My '47

Geology of the lead-silver deposits of the Clark Fork district, Bonner county, Idaho. A. L. Anderson. bibliog maps U S Geol S Bul 944-B:37-117, pl 5-13 '47

Illinois

Tri-state geological field conference for Iowa, Illinois, and Wisconsin. Science 104:541 D 6 '46

India

Structural principles controlling the occurrence of ore in the Kolar gold field. W. J. Bichan. bibliog(48 titles) il maps diags Econ Geol 42:93-136 Mr '47

Indiana

Meteorite impact suggested by orientation of shatter-cones at Kentland, Indiana, disturbance. R. S. Dietz. bibliog Science 105: 42-3 Ja 10 '47

Kansas

Middle Ordovician limestones in central Kansas. H. Taylor. bibliog il maps diags Am Assn Pet Geologists Bul 31:1242-82 Jl '47

Relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas; Research committee, Tulsa geological society. bibliog maps diags Am Assn Pet Geologists Bul 31:92-148 Ja '47

Solution features on cretaceous sandstone in central Kansas. J. C. Frye and A. Swineford. bibliog diag Am J Sci 245:366-79, pl 1-4 Je '47

Upper Ordovician shales in central Kansas. H. Taylor. bibliog 2pls map diag Am Assn Pet Geologists Bul 31:1594-607 S '47

Maryland

Oölite deformation in the South Mountain fold, Maryland. E. Cloos. map diags Geol Soc Bul 58:843-917, pl 1-13 bibliog(p915-17) S '47

Massachusetts

Geologic features of the Connecticut valley, Massachusetts as related to recent floods. R. H. Jahns. maps diags U S Geol S Water-supply Pa 996:1-158, pl 1-33 bibliog(p144-55); pa $1.75 Supt. of doc. '47

Mexico

Diagenetic origin of chert lenses in limestone at Soyatal, State of Queretaro, Mexico. D. E. White. diags Am J Sci 245:49-55 Ja '47

Geology of the Cuarenta mercury district, state of Durango, Mexico. D. Gallagher and R. P. Siliceo. map diag U S Geol S Bul 946-F:155-68, pl 51; pa 30c Supt. of doc. '46

See also

Parícutin

Michigan

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47

Lithology and thickness of the traverse group in Michigan basin. G. V. Cohee. map Oil & Gas J 46:90-2 Jl 5 '47

Relation of geology to ground water in Michigan. N. Billings. map Am Water Works Assn J 38:1373-9 D '46

Stratigraphy and structure of Traverse group in Afton-Onaway area. W. A. Kelly and G. W. Smith. bibliog maps diags Am Assn Pet Geologists Bul 31:447-69 Mr '47

Minnesota

Minnesota's wide range of minerals. H. E. Swanson and N. C. Rockwood. flow sheet il maps Rock Prod 49:70-7 N '46

Mississippi

Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Cenozoic deposits of Central Gulf coastal plain. G. E. Murray. bibliog maps diags Am Assn Pet Geologists Bul 31:1825-50 O '47

Mississippi valley

Development of structures in basin areas of northeastern United States; Illinois, Indiana, Ohio, northern Kentucky basins. J. R. Lockett. bibliog il map diags Am Assn Pet Geologists Bul 31:429-46 Mr '47

Montana

Chromite deposits near Red Lodge, Carbon county, Montana. H. L. James. maps plan diags U S Geol S Bul 945-F:151-89, pl 52-64; pa $1.75 Supt. of doc. '46

Devonian system in central and northwestern Montana. L. L. Sloss and W. M. Laird. bibliog il map diags Am Assn Pet Geologists Bul 31:1404-30 Ag '47

Nebraska

Geology and ground-water resources of Box Butte county, Nebraska. R. C. Cady and O. J. Scherer. maps diags U S Geol S Water-supply Pa 969:1-102, pl 1-9; pa 70c Supt. of doc. '46

Geology and ground-water resources of Scotts Bluff county, Nebraska. L. K. Wenzel and others. maps diags U S Geol S Water-supply Pa 943:1-150, pl 1-12; pa 25c Supt. of doc. '46

Netherlands Indies

Coral reefs of the East Indies. J. H. F. Umbgrove. maps diags Geol Soc Bul 58:729-77, pl 1-7 bibliog(p773-7) Ag '47

New Hampshire

Chemical analyses and calculated modes of the Oliverian magma series, Mt Washington quadrangle. M. P. Billings and J. C. Rabbitt. bibliog Geol Soc Bul 58:573-96 Jl '47

New Mexico

Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46; Discussion. P. B. King. bibliog 31:774-7 Ap '47

Eolian dam near Tucumcari, New Mexico. E. Dobrovolny and R. C. Townsend. map Econ Geol 42:492-7 Ag '47

Geology of the Los Pinos mountains, New Mexico. J. T. Stark and E. C. Dapples. bibliog map Geol Soc Bul 57:1121-72, pl 1-7 D '46

Occurrence of Comanche rocks in Black River valley, New Mexico. W. B. Lang. map diags Am Assn Pet Geologists Bul 31:1472-8 Ag '47

GEOLOGY—New Mexico—*Continued*
Triassic deposits of Pecos valley, southeastern New Mexico. W. B. Lang. Am Assn Pet Geologists Bul 31:1673-4 S '47

New York (state)

Boulders of interglacial conglomerate in central New York. V. E. Schmidt. bibliog pl map Am J Sci 245:127-33 F '47
Possibilities for oil and gas in New York. E. T. Heck. maps diag Pet Eng 18:163-4+ Ag '47

Newfoundland

Silurian of eastern Newfoundland with some data relating to physiography and Wisconsin glaciation of Newfoundland. W. H. Twenhofel. bibliog 3pls fold map Am J Sci 245:65-122 F '47

North America

Bibliography

Bibliography of North American geology, 1944 and 1945. E. M. Thom. U S Geol S Bul 952:1-496; pa $1 Supt. of doc. '47

North Carolina

Atlantic coastal plain floor and continental slope of North Carolina. W. F. Prouty. map diag Am Assn Pet Geologists Bul 30:1917-20 N '46

Ohio

Black Hand sandstone and conglomerate in Ohio. K. Ver Steeg. bibliog maps Geol Soc Bul 58:703-27, pl 1 Ag '47

Okinawa

Geology and water resources of southern Okinawa. D. J. Cederstrom. bibliog il maps Am Assn Pet Geologists Bul 31:1752-83 O '47

Oklahoma

Relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas; Research committee, Tulsa geological society. bibliog maps diags Am Assn Pet Geologists Bul 31:92-148 Ja '47
Southwest Antioch; new Oklahoma pool; development report. R. M. Swesnik. il map diag Oil & Gas J 45:82-3+ Ap 19 '47

Pacific coast

How fossil fish remains have been used in Pacific Coast stratigraphy. L. R. David. bibliog il Pet Eng 18:104+ My '47

Pennsylvania

Glacial age peat deposit near Pittsburgh. J. M. Schopf and A. T. Cross. bibliog 2pls map diag Am J Sci 245:421-33 Jl '47
Origin of a scapolite metagabbro in Bucks county, Pennsylvania. J. Weiss. bibliog diag Geol Soc Bul 58:821-32 S '47

Quebec

Bachelor Lake area. W. W. Longley. maps Can Min J 68:22-4 Ja '47
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships. C. Faessler and M. S. Badollet. bibliog Can Min J 68:157-67 Mr '47

South America

Paleogeography of South America. L. G. Weeks. maps Am Assn Pet Geologists Bul 31:1194-241 bibliog(p 1230-41) Jl '47
Structural evolution of the South American Andes. V. Oppenheim. bibliog fold map Am J Sci 245:158-74 Mr '47

South Dakota

Marine Jurassic of Black Hills area, South Dakota and Wyoming. R. W. Imlay. bibliog diag Am Assn Pet Geologists Bul 31:227-73 F '47

Southeastern states

Stratigraphy of outcropping cretaceous beds of southeastern states. W. H. Monroe. bibliog map diag Am Assn Pet Geologists Bul 31:1817-24 O '47

Tennessee

Clarksburg kaolin area of Carroll county. G. I. Whitlatch and B. Gildersleeve. bibliog map Econ Geol 41:841-50 D '46

Texas

Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2 pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46; Discussion. P. B. King. bibliog 31:774-7 Ap '47
Devonian rocks of central Texas. V. E. Barnes and others. bibliog maps diag Geol Soc Bul 58:125-40, pl 1 F '47
Geological group develops columnar section of pre-Permian formations along Central Basin platform. J. M. Barton. Oil & Gas J 45:106-7 D 14 '46
Modal analyses of well cores from basement complex in west Texas. L. T. Patton. Am Assn Pet Geologists Bul 31:308-17 F '47
Sedimentation in Permian Castile sea. R. H. King. bibliog Am Assn Pet Geologists Bul 31:470-7 Mr '47
Stratigraphy of the upper Cambrian, Llano uplift, Texas. J. Bridge and others. bibliog Geol Soc Bul 58:109-23, pl 1-8 Ja '47

Turkey

Paleozoic-mesozoic section of southeastern Turkey. C. E. Tasman. map Am Assn Pet Geologists Bul 31:1500-2 Ag '47

Uganda

Phosphate deposits of the Eastern Province, Uganda. K. A. Davies. bibliog map Econ Geol 42:137-46 Mr '47

Utah

Geology and ground-water resources of Cedar City and Parowan valleys, Iron county, Utah. H. E. Thomas and G. H. Taylor. diags U S Geol S Water-supply Pa 993:1-210, pl 1-27 '47
Geology of the Green River desert-cataract canyon region, Emery, Wayne, and Garfield counties, Utah. A. A. Baker. map diags U S Geol S Bul 951:1-122, pl 1-20; pa $2 Supt. of doc. '46
Zion national monument, Utah. H. E. Gregory and N. C. Williams. bibliog il map fold map(pl 1) Geol Soc Bul 58:211-44, pl 1-9 Mr '47

Venezuela

Elements of diastrophic history of northeastern Venezuela. C. G. de Juana. bibliog map Geol Soc Bul 58:689-701 Ag '47

Vermont

Ordovician chazyan classification. M. Kay and W. M. Cady. Science 105:601 Je 6 '47

Washington (state)

Cambrian rocks of northeastern Stevens county. C. D. Campbell. bibliog map Geol Soc Bul 58:597-612, pl 1 Jl '47

Wyoming

Marine Jurassic of Black Hills area, South Dakota and Wyoming. R. W. Imlay. bibliog diag Am Assn Pet Geologists Bul 31:227-73 F '47
Oregon basin field, Park county, Wyoming. P. T. Walton. bibliog fold pl maps diags Am Assn Pet Geologists Bul 31:1431-53 Ag '47
Paleozoic and mesozoic stratigraphy of northern Gros Ventre mountains and Mount Leidy highlands, Teton county, Wyoming. H. L. Foster. bibliog il maps diag Am Assn Pet Geologists Bul 31:1537-93 S '47
Paleozoic formations near Cody, Park county. T. F. Stipp. diag Am Assn Pet Geologists Bul 31:274-81 F '47

Yukon

Ordovician and Silurian rocks in Yukon territory, northwestern Canada. C. E. Decker and others. bibliog il map Am Assn Pet Geologists Bul 31:149-56 Ja '47

GEOLOGY, Stratigraphic
Analysis of stratigraphy. M. Kay. Am Assn Pet Geologists Bul 31:162-8 Ja '47
Delineation of parallel folds and measurement of stratigraphic dimensions. J. B. Mertie, jr. bibliog diags Geol Soc Bul 58:779-802 Ag '47
Elements of diastrophic history of northeastern Venezuela. C. G. de Juana. bibliog map Geol Soc Bul 58:689-701 Ag '47

GEOLOGY, Stratigraphic—*Continued*

Geologic section from the Sierra Nevada to Death Valley, California. R. H. Hopper. bibliog fold map Geol Soc Bul 58:393-432, pl 1-6 My '47

Geological group develops columnar section of pre-Permian formations along Central Basin platform. J. M. Barton. Oil & Gas J 45:106-7 D 14 '46

How fossil fish remains have been used in Pacific Coast stratigraphy. L. R. David. bibliog il Pet Eng 18:104+ My '47

How old is the Colorado river? C. R. Longwell. bibliog maps diags Am J Sci 244:817-35, pl 1-6 D '46

Jacob staff and measurements of stratigraphic sequences. J. A. Broggi. diags Am Assn Pet Geologists Bul 30:716-25 My '46; Correction. 30:1934 N '46

Oregon basin field, Park county, Wyoming. P. T. Walton. bibliog fold pl maps diags Am Assn Pet Geologists Bul 31:1431-53 Ag '47

Paleogeography of South America. L. G. Weeks. maps Am Assn Pet Geologists Bul 31:1194-241 bibliog(p 1230-41) Jl '47

Stratigraphy of western Australia. C. Teichert. bibliog 4pls maps diags Am Assn Pet Geologists Bul 31:1-70 Ja '47

Nomenclature

Stratigraphic commission; organization and objectives of the Stratigraphic commission; Nature and classes of stratigraphic units. R. C. Moore. bibliog diags Am Assn Pet Geologists Bul 31:513-28 Mr '47

Cambrian

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47

Cambrian rocks of northeastern Stevens county, Washington. C. D. Campbell. bibliog map Geol Soc Bul 58:597-612, pl 1 Jl '47

Stratigraphy of the upper Cambrian, Llano uplift, Texas. J. Bridge and others. bibliog Geol Soc Bul 58:109-23, pl 1-8 Ja '47

Cenozoic

Cenozoic deposits of Central Gulf coastal plain. G. E. Murray. bibliog maps diags Am Assn Pet Geologists Bul 31:1825-50 O '47

Cenozoic physiographic history of the Front range, Colorado. E. E. Wahlstrom. bibliog map plan diags Geol Soc Bul 58:551-72 Jl '47

Cretaceous

Solution features on cretaceous sandstone in central Kansas. J. C. Frye and A. Swineford. bibliog diag Am J Sci 245:366-79, pl 1-4 Je '47

Stratigraphy of outcropping cretaceous beds of southeastern states. W. H. Monroe. bibliog map diag Am Assn Pet Geologists Bul 31:1817-24 O '47

Upper Montana group, Golden area, Jefferson county, Colorado. J. D. Moody. bibliog maps diags Am Assn Pet Geologists Bul 31: 1454-71 Ag '47

Devonian

Devonian rocks in central Texas. V. E. Barnes and others. bibliog maps diag Geol Soc Bul 58:125-40, pl 1 F '47

Devonian system in central and northwestern Montana. L. L. Sloss and W. M. Laird. bibliog il map diags Am Assn Pet Geologists Bul 31:1404-30 Ag '47

Stratigraphy and structure of Traverse group in Afton-Onaway area, Michigan. W. A. Kelly and G. W. Smith. bibliog maps diags Am Assn Pet Geologists Bul 31:447-69 Mr '47

Jurassic

Marine Jurassic of Black Hills area, South Dakota and Wyoming. R. W. Imlay. bibliog diag Am Assn Pet Geologists Bul 31:227-73 F '47

Revised correlation of Jurassic formations of parts of Utah, Arizona, New Mexico, and Colorado. A. A. Baker and others. map Am Assn Pet Geologists Bul 31:1664-8 S '47

Mesozoic

Paleozoic and mesozoic stratigraphy of northern Gros Ventre mountains and Mount Leidy highlands, Teton county, Wyoming. H. L. Foster. bibliog il maps diag Am Assn Pet Geologists Bul 31:1537-93 S '47

Paleozoic-mesozoic section of southeastern Turkey. C. E. Tasman. map Am Assn Pet Geologists Bul 31:1500-2 Ag '47

Mississippian

Mississippian rocks of Meramec age along Alcan highway, northern British Columbia. L. R. Laudon and B. J. Chronic, jr. bibliog map diags Am Assn Pet Geologists Bul 31:1608-18 S '47

Ordovician

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47

Middle Ordovician limestones in central Kansas. H. Taylor. bibliog il maps diags Am Assn Pet Geologists Bul 31:1242-82 Jl '47

New gastropods and trilobites critical in the correlation of lower Ordovician rocks. J. Bridge and P. E. Cloud, jr. bibliog map Am J Sci 245:545-59, pl 1-2 S '47

Ordovician and Silurian rocks in Yukon territory, northwestern Canada. C. E. Decker and others. bibliog il map Am Assn Pet Geologists Bul 31:149-56 Ja '47

Ordovician chazyan classification in Vermont. M. Kay and W. M. Cady. Science 105:601 Je 6 '47

Upper Ordovician shales in central Kansas. H. Taylor. bibliog 2pls map diag Am Assn Pet Geologists Bul 31:1594-607 S '47

Paleozoic

Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Geology of the Los Pinos mountains, New Mexico. J. T. Stark and E. C. Dapples. bibliog map Geol Soc Bul 57:1121-72, pl 1-7 D '46

Paleozoic and mesozoic stratigraphy of northern Gros Ventre mountains and Mount Leidy highlands, Teton county, Wyoming. H. L. Foster. bibliog il maps diag Am Assn Pet Geologists Bul 31:1537-93 S '47

Paleozoic formations near Cody, Park county, Wyoming. T. F. Stipp. diag Am Assn Pet Geologists Bul 31:274-81 F '47

Paleozoic-mesozoic section of southeastern Turkey. C. E. Tasman. map Am Assn Pet Geologists Bul 31:1500-2 Ag '47

Paleozoic seaways in western Arizona. E. D. McKee. bibliog map Am Assn Pet Geologists Bul 31:282-92 F '47

See also
Geology, Stratigraphic—Mississippian

Permian

Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2 pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46; Discussion. P. B. King. bibliog 31:774-7 Ap '47

Sedimentation in Permian Castile sea. R. H. King. bibliog Am Assn Pet Geologists Bul 31:470-7 Mr '47

Pre-Cambrian

Geology of the Los Pinos mountains, New Mexico. J. T. Stark and E. C. Dapples. bibliog map Geol Soc Bul 57:1121-72, pl 1-7 D '46

Silurian

Ordovician and Silurian rocks in Yukon territory, northwestern Canada. C. E. Decker and others. bibliog il map Am Assn Pet Geologists Bul 31:149-56 Ja '47

Silurian of eastern Newfoundland with some data relating to physiography and Wisconsin glaciation of Newfoundland. W. H. Twenhofel. bibliog 3pls fold map Am J Sci 245:65-122 F '47

GEOLOGY, Stratigraphic—*Continued*

Tertiary

Marine sedimentary cycles of tertiary in Mississippi embayment and central Gulf Coast area. M. Bornhauser. bibliog maps Am Assn Pet Geologists Bul 31:698-712 Ap '47

Triassic

Triassic deposits of Pecos valley, southeastern New Mexico. W. B. Lang. Am Assn Pet Geologists Bul 31:1673-4 S '47

GEOMETRICAL drawing
Dfawing of accurate curves; with time-saver standards. S. M. Palm. Arch Rec 102:122-3+ Jl '47

GEOMETRY
Math tips; useful facts from geometry. P. Swain. Power 91:130, 204, 277, 349 F-My '47

GEOMETRY, Projective
Generation of the conic sections with machine tools; theorems from projective geometry can be duplicated by kinematic linkages. R. T. Hinkle. diags Product Eng 18:162-5 Ag '47

GEON (term)
Trade names are tricky; B. F. Goodrich chemical co. products. J. R. Hoover. Chem Ind 61:621 O '47

See also
Vinyl chloride

GEOPHYSICS
Committee on geophysical sciences of the army and navy joint research and development board. Science 105:230 F 28 '47

Further experiments on the surplus gamma-radiation from granite. V. F. Hess. bibliog Phys R 72:609-14 O 1 '47

Gamma-rays of K^{40}. E. Gleditsch and T. Gráf. bibliog Phys R 72:640-1 O 1 '47

Preliminary measurements relative to the onset of thermal convection currents in unconsolidated sands. H. L. Morrison. J Ap Phys 18:849-50 S '47

Research in geodesy and geophysics coordinated; National research council of Canada. Can Chem & Process Ind 31:247 Mr '47

Significance of the radioactivity of potassium in geophysics. E. Gleditsch and T. Gráf. bibliog Phys R 72:641 O 1 '47

See also
Atmospheric electricity
Continents
Earthquakes
Magnetism, Terrestrial
Meteorology
Petroleum—Prospecting—Geophysical methods
Prospecting—Geophysical methods
Rocks, Igneous
Sedimentation and deposition

Bibliography

Geophysical abstracts 124, January-March 1946. V. L. Skitsky, comp. U S Bur Mines Information Circ 7384:1-60 '46

Geophysical abstracts 125, April-June 1946. V. L. Skitsky, comp. U S Bur Mines Information Circ 7386:1-62 '46

Geophysical abstracts 126, July-September 1946. V. L. Skitsky, comp. U S Bur Mines Information Circ 7400:1-63 '47

Geophysical abstracts 127, Oct.-Dec. 1946; with an index to abstracts 124-127. V. L. Skitsky, comp. U S Bur Mines Information Circ 7414:1-86 '47

Geophysical abstracts 128, January-March 1947. V. L. Skitsky, comp. U S Geol S Bul 957-A:1-56; pa 15c Supt. of doc. '47

Geophysical abstracts 129, April-June 1947. V. L. Skitsky, comp. U S Geol S Bul 957-B:57-116; pa 15c Supt. of doc. '47

GEOPOLITICS

See also
Demography

GEORGE junior republic association
Directors elected. Comm & Fin Chr 165:2114 Ap 17 '47

GEORGIA

See also
Mines and mineral resources—Georgia

Politics and government

Georgia's battle of governors; Gallup poll. Iron Age 159:105 F 27 '47

GEORGIA Florida and Alabama railroad
Files amended reorganization plan. Comm & Fin Chr 166:855 S 1 '47

GEOSYNCLINE (term)
Geosynclinal nomenclature and the craton. M. Kay. bibliog map Am Assn Pet Geologists Bul 31:1289-93 Jl '47

Geosynclines; a fundamental concept in geology. M. F. Glaessner and C. Teichert. Am J Sci 245:465-82, 571-91 bibliog(p589-91) Ag-S '47

See also
Folds (geology)

GERITY-MICHIGAN die casting company
Annual report. Comm & Fin Chr 166:1051 S 15 '47

GERMAN language
Guide to scientific German. L. DeVries. 54p pa $1 Rinehart & co, 232 Madison av, New York 16 '47

New readings in medical German. O. C. Burkhard and L. G. Downs. 199p, cxiiip $2.90 Henry Holt and co, 257 Fourth av, New York 10 '47

GERMAN literature

Bibliography

European imprints for the war years received in the Library of Congress and other federal libraries; German imprints, 1940-1945. 315p G. E. Stechert, 31 E. 10th st, New York 3 '46

GERMAN scientists. See Scientists, German

GERMAN silver. See Nickel silver

GERMANIUM
Applying the 1N34 as discriminator for fm; germanium crystal. N. L. Chalfin. il diags Radio N 37:55+ Mr '47

Properties of welded contact germanium rectifiers. H. Q. North. il diags J Ap Phys 17: 912-23 N '46

Silicon and germanium rectifiers; tabulations. Electronics 20:146-7 (Buyer's guide) Mid-Je '47

Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47

Transition from classical to quantum statistics in germanium semiconductors at low temperature. V. A. Johnson and K. Lark-Horovitz. bibliog Phys R 71:374-5 Mr 15 '47

Analysis

Method for the spectrochemical determination of germanium, tin, and lead in ore samples. G. W. Marks and H. T. Hall. bibliog U S Bur Mines Rep of Invest 3965: 1-38, pl 1-24 '46

GERMANIUM chloride
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H. Sisler and J. C. Cory. Am Chem Soc J 69:1515-19 Je '47

Secondary structure in the *K* absorption limit of germanium tetrachloride. C. H. Shaw. bibliog Phys R 70:643-5 N 1 '46

Theory of the fine structure of X-ray absorption limits in polyatomic molecules. E. M. Corson. bibliog Phys R 70:645-52 N 1 '46

X-ray absorption structure of $GeCl_4$ and $AsCl_3$. S. T. Stephenson. bibliog Phys R 71:84-7 Ja 15 '47

GERMANIUM compounds
Infrared absorption spectra of tetramethyl compounds. C. W. Young, J. S. Koehler and D. S. McKinney. bibliog Am Chem Soc J 69:1410-15 Je '47

Organic compounds of germanium; direct synthesis from elementary germanium. E. G. Rochow. Am Chem Soc J 69:1729-31 Jl '47

Some new aspects of germanate and fluoride phosphors. F. E. Williams. bibliog diag Opt Soc Am J 37:302-7 Ap '47

GERMANIUM tetrachloride. See Germanium chloride

GERMANY
European unity; dream and hard reality. Fortune 35:2-3 Mr '47

Fortune survey; how did U.S. troops react to Europe? Fortune 34:5-6 D '46

GERMANY—*Continued*
Observations of war damage to concrete and to cement industry properties in Germany. M. A. Swayze. il Am Concrete Inst J 18: 617-27 F '47
Smaller powers and Germany; views on the German treaty. Economist 152:228-9 F 8 '47
What peace treaty with Germany? E. N. Van Kleffens. Comm & Fin Chr 165:610 Ja 30 '47
Widespread feeling revealed in survey that Germany will never banish warlike ideas. Iron Age 159:105+ F 20 '47

See also
Aeronautics, Military—Germany
Banks and banking—Germany
Chemical industries—Germany
Coal mines and mining—Germany
Electricity supply—Germany
Iron ores—Germany
Metal working industries—Germany
Paper industry and trade—Germany
Printing trade—Germany
Textile industry—Germany
Trade unions—Germany

Allied military government

Allied policy on wages in occupied Germany. M. A. Kelly. Int Labour R 55:351-71 My '47
Allies differ on levels of German metalworking output. J. Christie. il Am Mach 91:117-20 Ap 24 '47
Away from Potsdam. Economist 153:389-90 S 6 '47
Battle for western Germany. Economist 153: 179-81 Ag 2 '47
Battle of Minden; Anglo-American policies in the fused zones. map Economist 152:609-11 Ap 26 '47
British, U.S. set up in German zones four joint administrations. Iron Age 159:147-50 Ap 3 '47
British zone as partner. Economist 152:588-9 Ap 19 '47
Brown plan; report on Germany. Bsns W p25 O 25 '47
Byrnes' legacy to Marshall; Germany; pawn in intra-allied struggle. A. W. May. Comm & Fin Chr 165:125+ Ja 9 '47
Chaos to allied German controls and reparations. M. J. Bonn. Comm & Fin Chr 166: 713+ Ag 21 '47
Colmer committee recommends self-sustaining Germany. Comm & Fin Chr 165:7+ Ja 2 '47
Condition of advertising in four zones of Germany. G. Baier. map Adv & Sell 40:48+ O '47
Daily life in occupied Germany. S. Nelson. Dun's R 55:24-5+ Ap '47
Economic progress in Germany. W. H. Draper, jr. Comm & Fin Chr 165:283+ Ja 16 '47
Gen. Clay needs U.S. business management's help. R. Smith. Bsns W p 17 S 6 '47
German trade; U.S. and Britain announce import-export plan. Bsns W p97 Ja 11 '47
German unity in question. Economist 152: 91-2 Ja 18 '47
German votes and grievances. Economist 152: 629 Ap 26 '47
Hasten European reconstruction and trade; problem of Germany. A. W. Dulles. Comm & Fin Chr 164:2465+ N 14 '46
Hoover's plan fits Truman doctrine. Barron's 27:1+ Mr 31 '47
How's business? what we do about Germany. Barron's 27:1 Ja 20 '47
Is there a German policy? Fortune 35:126-7+ Ja '47
New German government; British and American fusion. Economist 152:876-8 Je 7 '47
Occupation army engineering. W. G. Bowman. il Eng N 139:25-6 Jl 10 '47
Procedure in merging US-UK zones in Germany; interview with W. H. Draper, jr. Comm & Fin Chr 164:3121+ D 12 '46
Revived Germany essential to Marshall plan. L. H. Brown. Comm & Fin Chr 166:714+ Ag 21 '47
U.S., Britain to merge German zones. Comm & Fin Chr 164:3132 D 12 '46
U.S. pushes interzone trade. Bsns W p105 N 9 '46
What to do about Germany. L. H. Brown. Comm & Fin Chr 166:1413+ O 9 '47

Intelligence library

Intelligence library in Germany. K. Garside. J Doc 3:99-106 S '47

American zone

Is U.S. military government deserting economic democracy? H. M. Bratter. Comm & Fin Chr 164:2616+ N 21 '46
Our job in Germany today; summary of radio address of May 23, 1947. M. S. Szymczak. Comm & Fin Chr 165:2862 My 29 '47
Our stake in German economic recovery; address before Economic club of Detroit. M. S. Szymczak. Fed Res Bul 33:681-8 Je '47
Reports progress from Germany. M. S. Szymczak. Comm & Fin Chr 165:1128 F 27 '47
Transfer of management of property in the U.S. zone permitted. For Comm W 28:17-18 Jl 26 '47
United States labor policy in Germany. Mo Labor R 65:459-60 O '47

British zone

Restoration and control of the gas industry in the British zone of Germany, 1945-1947. H. D. Greenwood. Gas J (Lond) 251:194-6, 253-4, 305-6+, 357-8+ Jl 23-Ag 13 '47; Discussion. 251:459-60+ Ag 27 '47
Scientific publications in the British zone of Germany. B. K. Blount. Assn of Sp Lib & Inf Bur Proc 1946:99-100; Discussion. 100-2
Wages and prices in the British zone. Economist 151:715-16 N 2 '46

French zone

French in Germany. map Economist 153:22-3, 68-70 Jl 5-12 '47
French policy in Germany. R. Sergent. Comm & Fin Chr 164:2884+ D 5 '46

Army

How German chocolate ration was made for wehrmacht. W. T. Clarke. il diags Food Ind 18:1695-8 N '46

Commerce

Current trade procedures and possibilities; data for combined American and British zones, French zone and Russian zone. For Comm W 29:14-15 N 1 '47
Czech trade with Germany arranged. Comm & Fin Chr 165:1134 F 27 '47
Foreign exchange made available to German exporter through new export incentive plan for combined U.S.-U.K. zone; German firms in combined zone now permitted to import materials for export production. For Comm W 28:14-15 S 20 '47
Foreign trade of the combined zone during first half of 1947. For Comm W 29:13-14 N 1 '47
German-American trade getting under way. F. Haussmann and N. Muhlen. Comm & Fin Chr 164:2881+ D 5 '46
German exports start to roll. Bsns W p 105-6+ My 17 '47
Our interest in German foreign trade; radio address. M. S. Szymczak. Comm & Fin Chr 165:3242-3 Je 19 '47
Resumption of limited business correspondence with Germany and Japan. For Comm W 26:14 Ja 18 '47
Rules for trading with Germany. Comm & Fin Chr 165:1135 F 27 '47
Trade with Germany and Japan; procedures currently governing business communications. For Comm W 26:19 Mr 22 '47
Way eased for more U.S. buyers in Germany. Bsns W p 109 S 27 '47

See also
Leipzig fair

Economic conditions

Economic situation in U.S. zone in Germany. M. S. Szymczak. Comm & Fin Chr 165:2487 My 8 '47
German economy in state of pernicious anaemia. W. Ropke. Comm & Fin Chr 165: 1117+ F 27 '47
German nemesis. Economist 151:857-9 N 30 '46
German situation. M. S. Szymczak. Comm & Fin Chr 165:2731+ My 22 '47

GERMANY—Economic conditions—*Continued*
Germany; its prewar economic importance and plans for reconstruction. Index 27 no 3: 47-60 [S] '47
Germany; poor-house or power-house. J. P. Warburg. Comm & Fin Chr 164:3015+ D 12 '46
Germany revisited. J. S. Knowlson. Comm & Fin Chr 166:809+ Ag 28 '47
Germany's economic crisis. J. van Galen. Comm & Fin Chr 165:1+ Ja 2 '47
How factory workers live around the world. il Factory Management 105:74-5, 78 Jl '47
News by countries. For Comm W 28:18 S 27; 29:14 O 11; 13-15 N 1 '47
OMGUS trade chief interviewed on Germany. M. S. Szymczak. Comm & Fin Chr 165:2614 My 15 '47
Our stake in German economic recovery; address before Economic club of Detroit. M. S. Szymczak. Fed Res Bul 33:681-8 Je '47
Der papierkrieg; the war of paper work; with notes by W. Eucken. J. Davenport. Fortune 36:82-3+ Jl '47
Reports on Germany. H. Hoover. Comm & Fin Chr 165:1293+ Mr 6 '47
Waging world peace. Economist 152:712-13 My 10 '47; Same. Iron Age 159:121+ My 22 '47

Economic relations

Netherlands

Dutch claims on Germany. map Economist 152:100 Ja 18 '47

Industries and resources

Barter incentive; German industry swaps finished products to give employees consumer goods bonuses. Bsns W p65 Ja 4 '47
D-day for dismantling. Economist 153:631 O 18 '47
German industrial plants available for allocation on reparation account (cont). For Comm W 25:51 D 21 '46; 26:33 Ja 11; 40 F 1; 29 F 15; 31-2 Mr 15; 27:34 My 3; 32 My 17; 33 My 31; 33 Je 21; 28:29 Ag 9; 36 Ag 30; 34 S 13; 28 S 27; 29:36 O 4; 36 O 11; 33 O 25 '47
German official reports socialization of vital industries in Hesse. H. Koch. For Comm W 29:14 O 11 '47
Germany; its prewar economic importance and plans for reconstruction. Index 27 no 3:47-60 [S] '47
Industrial conditions in Europe. E. Oberg. il Mach 53:158-62 Ap '47
Level of German industry; revised plan for the British and American zones. Engineer 184:221 S 5 '47; Excerpts. For Comm W 28:18 S 27 '47
New level of German industry pushes top steel production up. Iron Age 160:202+ O 16 '47
Reich industry; a challenge. Bsns W p 101-2+ S 6 '47
Ruhr. il. maps Fortune 34:128-39+ D '46
U.S. aids ex-enemy economies; arrival of German and Japanese goods for the holiday market. il Bsns W p15-16 N 23 '46
War and the German drug industry. C. F. Enloe, jr. il Chem & Eng N 24:3046-8 N 25 '46

Politics and government

Federation of German states. N. M. Butler. Comm & Fin Chr 165:602-3+ Ja 30 '47
German constitution. Economist 152:441-2 Mr 29 '47
Politics of western Germany. Economist 153: 606+ O 11 '47

Reparations

Chaos to allied German controls and reparations. M. J. Bonn. Comm & Fin Chr 166: 713+ Ag 21 '47
Dawes loan trustees protest; Paris reparations conference made no provisions for servicing 1924 German issue. Comm & Fin Chr 165:1042 F 20 '47
First reparations plant offered U.S. industry; German aluminum foil plant. Chem & Eng N 25:2506 S 1 '47
German industrial plants available for allocation on reparation account (cont). For Comm W 25:51 D 21 '46; 26:33 Ja 11; 40 F 1; 29 F 15; 31-2 Mr 15; 27:34 My 3; 32 My 17; 33 My 31; 33 Je 21; 28:29 Ag 9; 36 Ag 30; 34 S 13; 28 S 27; 29:36 O 4; 36 O 11; 33 O 25 '47
German machine tools; spoils of war. J. C. Christie. il Am Mach 91:148a-148d Mr 13 '47
German plants approved for industrial reparations. Chem Eng 53:186+ N '46
German share-out. Economist 152:286 F 15 '47
Reparations and the Russian people. Economist 152:542-3 Ap 12 '47; Same. Iron Age 159:107, 134, 136 Ap 24 '47
Reparations; antidote for war. E. W. Pauley. Comm & Fin Chr 165:997+ F 20 '47
Reparations from Germany. Economist 151: 833, 873-4 N 23-30 '46
Reparations news; sales of German external assets. For Comm W 26:30 Mr 29; 27 Ap 19 '47
Sale of German external assets in neutral countries. F. L. Brooks. il For Comm W 27:6-7+ My 3 '47
Scale of reparations announced; Britain's small allocation of chemical plants. Chem Age (Lond) 57:559-60 O 25 '47

GERMINATION
Effects of 2,4-D on seed germination and respiration. Y. L. Hseueh and C. H. Lou. bibliog Science 105:283-5 Mr 14 '47

GERONTOLOGY. See Old age

GERRARD industries, limited
Statement by the chairman. K. Harrison. Economist 153:301 Ag 16 '47

GIANNINI, Amadeo Peter, 1870-
A.P. wins a pair; SEC drops all charges against Transamerica corp. Bsns W p97-8 Ap 26 '47
World's biggest bank; Bank of America. il por Fortune 36:68-75 Jl '47

GIBSON, Ralph Edward
Sketch. por Am Cer Soc Bul 26:86 Mr 15 '47

GIBSON ISLAND research conferences. See Chemical research conferences

GIFFORD, Walter Sherman, 1885-
President of American telephone & telegraph co. por(cover) Bsns W p8 My 10 '47

GIFT certificates
Is your product hard to merchandise for Christmas? gift certificate for Breier sports jackets. C. S. Leeds. il Ptr Ink 221:44-5 O 24 '47

GIFT packages. See Package goods—Gift packages

GIFT tax
Proposed integration of estate and gift taxes by Treasury. East Underw 48:1+ O 17 '47
Repeal the Federal estate tax. R. C. Osgood. Trusts & Estates 84:246-52 F '47
Should estate and gift taxes be combined? analysis of Treasury study. M. M. Lore. Trusts & Estates 85:375-6 O '47
State and federal taxation; A.B.A. committee report. Trusts & Estates 85:317-28 O '47
State and federal taxation, 1945-46; A. B. A. committee report. Trusts & Estates 83:503-7 N '46

GIFTS (law)
Contemplation of death; an old bogey in a new light. L. M. Bregy. East Underw 48: 136+ pt 2 O 3 '47
Delivery of savings bank book with intent to make gift. Banking Law J 64:736-8 S '47
Evidence insufficient to establish gift inter vivos. Banking Law J 63:854-8 N '46
Gift inter vivos established of money held in joint account. Banking Law J 63:869-73 N '46
How to assign income from invention royalties with minimum tax to donor. S. A. Gutkin and D. Beck. J Account 84:304-9 O '47
No effective gift although bank account held jointly; Ogle v. Barker, Supreme court of Indiana. Banking Law J 64:240-8 Mr '47
Testamentary nature of life insurance; transfer in contemplation of death; digest of recent tax decisions. F. L. Morton. Spectator (Life ed) 154:22-3+ Ap '47
Transfers of life insurance; some comments on section 811 (C) of federal estate tax law. E. M. Thoré. East Underw 48:20+ pt 2 O 3 '47

See also
Gift tax

GILBERT, Albert Carlton, 1884-
Toy tycoon. H. Coons. por Adv & Sell 39:49+ N '46

GILDS
Turgot and the closed shop; an historical precedent; monopoly of French guilds in trades and professions. H. Gluck. Comm & Fin Chr 165:1923+ Ap 10 '47

See also
Glass sellers company

GILLETTE safety razor company
Earnings ease as replacement demand ends. Barron's 27:33 Jl 14 '47
Selected stocks. Mag of Wall St 80:487 Ag 2 '47

GIMBEL brothers, inc.
Companies forging ahead. Mag of Wall St 80:381 Jl 5 '47

GINSBERG, Henry
Portrait. Fortune 35:91 Je '47

GIRBOTOL process. See Gas purification

GIRDERS. See Beams and girders

GIRDLER, Joseph H.
Girdler advanced. por Bsns W p58 Mr 1 '47

GLACIAL geology
Boulders of interglacial conglomerate in central New York. V. E. Schmidt. bibliog pl map Am J Sci 245:127-33 F '47
Glacial age peat deposit near Pittsburgh. J. M. Schopf and A. T. Cross. bibliog 2pls map diag Am J Sci 245:421-33 Jl '47
Glacial climates in the southern hemisphere. R. F. Flint. Am J Sci 244:861-2 D '46

See also
Glacial lakes

Terminology
Kames. C. D. Holmes. bibliog Am J Sci 245: 240-9 Ap '47

GLACIAL lakes
Life history of Lake Agassiz; alternative interpretation. C. C. Nikiforoff. bibliog maps Am J Sci 245:205-39 Ap '47

GLACIERS
Forbes' and Alaskan dirt bands on glaciers and their origins. J. E. Fisher. diags Am J Sci 245:137-45, pl 1-8 Mr '47

GLARE
Further data on glare ratings. W. Harrison and P. Meaker. Illum Eng 42:153-68; Discussion. 169-79 F '47
Glare factors and their significance. W. Harrison and P. Meaker. diags Gen Elec R 50:31-7 Ag '47

GLASERITE
System potassium sulfate-sodium sulfate-magnesium sulfate-water at 35°. N. S. Bayliss and others. bibliog diag Am Chem Soc J 69:2033-6 Ag '47

GLASGOW

Industries
Glasgow; Empire's second city. H. M. Bratter. Comm & Fin Chr 165:130+ Ja 9 '47

GLASGOW university
Bicentenary at Glasgow; two centuries of chemistry in the University. A. Kent. il Chem Age (Lond) 56:636-7 My 17 '47
G. G. Henderson memorial laboratory. il Chem & Ind p476-7 Ag 2 '47
Two hundred years of chemistry at the University of Glasgow. J. C. Speakman. Chem & Ind p219-20 Ap 26 '47

GLASS
Alumina-silica relationship in glass. H. W. Safford and A. Silverman. bibliog Am Cer Soc J 30:203-11 Jl 1 '47
American chemical society, Glass division program, Atlantic City, April 22-23; with abstracts of papers. Glass Ind 28:178-9+ Ap '47
Application of low frequency spectra to glass technology. P. Girard and P. Abadie. Glass Ind 27:609+ D '46
Calculation of refractive index of a glass as a direct function of its composition. K. Sun. bibliog Am Cer Soc J 30:282-7 S 1 '47
Chemical engineering materials of construction; review of literature from start of World war II; glass. J. R. Blizard. bibliog il diag Ind & Eng Chem 39:1215-18 O '47
Effect of boric oxide on properties of soda-dolomite lime-silica glass; abstract. J. C. Coleman. Cer Ind 48:83-4 Je '47
Effect of magnesia and alumina on rate of crystal growth in some soda-lime-silica glasses. H. R. Swift. bibliog il Am Cer Soc J 30:170-4 Je 1 '47
Energy additivity in oxygen-containing crystals and glasses. M. L. Huggins and K. Sun. bibliog J Phys Chem 50:319-28 Jl '46; [cont as] J Phys & Colloid Chem 51: 438-43 Mr '47
Fundamental condition of glass formation. K. Sun. bibliog Am Cer Soc J 30:277-81 S 1 '47
Glasses for the laboratory. I. C. P. Smith. diags Chem Age (Lond) 56:386-8, 712-16; 57: 19-22 Mr 29, My 31, Jl 5 '47
Infrared absorption spectra of some experimental glasses containing rare earth and other oxides. R. Stair and C. A. Faick. bibliog diags J Res Nat Bur Stand 38:95-101 Ja '47; Abstract. Glass Ind 28:470+ S '47
Light absorption and emission of ions in glasses and crystals as affected by assymetrical electric fields; abstract. W. A. Weyl. Glass Ind 28:181 Ap '47
New optical thickness gauge for flat glass; abstract. L. A. Shussett. Glass Ind 28:532 O '47
New resistant glass withstands hydrofluoric acid. Chem Age (Lond) 57:539 O 18 '47
Nonsilica glass systems. F. L. Jones. J Chem Educ 23:608-9 D '46
Phosphoric glass developed by Russian scientists. Chem Eng 54:206 Mr '47
Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašíček. Opt Soc Am J 37:145-53 Mr '47
Properties of soda- strontium oxide- alumina-silica glasses; abstract. C. L. Babcock. Cer Ind 48:80+ Je '47
Scale glass as a substitute for mica. J. M. Stevels. Glass Ind 27:607-8+ D '46
Some experiments on crystal growth and solution in glasses. H. R. Swift. bibliog il diags Am Cer Soc J 30:165-9 Je 1 '47
Viscosity of some glasses in the annealing range. Glass Ind 27:615 D '46

See also
Airplanes—Materials—Glass
Ampoules
Enamel and enameling
Glass manufacture
Glassware
Insurance, Plate glass
Photography on glass
Silica, Fused
also American ceramic society—Glass division

Analysis
Determination of boric oxide in glass. M. Hollander and W. Rieman, 3d. bibliog Ind & Eng Chem Anal ed 18:788-9 D '46
Influence of glass composition on reducibility of Ag^{+}, Bi^{3+}, Sb^{3+}, and Pb^{2+}. A. W. Bastress. Am Cer Soc J 30:52-3 F 1 '47
Micro-analysis of gases in glass. W. B. Price and L. Woods. bibliog diags Glass Ind 28:516-17+ O '47
Spectrophotometric determination of fluorine in glass. M. C. Parrish and others. bibliog Anal Chem 19:156-7 Mr '47

Bibliography
Books on glass; a checklist of 183 selected titles. 27p Steuben glass, 718 Fifth av, New York '46
Development of hard glasses. A. E. Pavlish and I. Mockrin. Am Cer Soc J 30:54-63 F 1 '47

Cleaning
See Glass cleaning

Coating
Coating thickness measurement by interferometry. M. F. Bechtold. bibliog il diag Opt Soc Am J 37:873-8 O '47
German reflection reducing coatings for glass. H. A. Tanner and L. B. Lockhart, jr. diags Opt Soc Am J 36:701-6 D '46

GLASS—Coating—*Continued*
Metallizing glass and ceramic materials. A. J. Monack. Glass Ind 28:21-5+ Ja '47
Partially reflecting mirrors of high efficiency and durability. M. Banning. Opt Soc Am J 37:688-9 S '47
Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašiček. Opt Soc Am J 37:145-53 Mr '47
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47
Technique for obtaining exceptionally durable low reflecting films of MgF_2 on glass. T. E. Tyler. R Sci Instr 18:367-8 My '47
Theoretical development of exact solution of reflectance of multiple layer optical coatings. D. L. Caballero. bibliog Opt Soc Am J 37:176-80 Mr '47
Three-layered reflection-reducing coatings. L. B. Lockhart, jr. and P. King. Opt Soc Am J 37:689-94 S '47

Coloring

Method of making colored mirrors; patent assigned to Libby-Owens-Ford. diag Glass Ind 28:32+ Ja '47
Vitrifiable colors for spraying. Cer Ind 47:59 D '46

See also
Glass, Colored

Defects

Staining of glass containers in contact with iron. E. C. Marboe and W. A. Weyl. Am Cer Soc J 30:320-2 O 1 '47

Definition

F.T.C. reversed on definition of glass. Glass Ind 28:188 Ap '47

Durability

Effect of chemical composition on the durability of bottle glass; abstract. H. E. Simpson. Glass Ind 28:298 Je '47
Lead-nickel glass of controlled chemical durability for storage battery use. F. J. Williams and J. A. Orsino. Am Cer Soc J 29:313-16 N 1 '46; Abstract. Glass Ind 28: 85+ F '47
Voltage anomalies of the glass electrode and the chemical durability of the glass; abstract. D. Hubbard and G. F. Rynders. Glass Ind 28:312+ Je '47

Electric properties

Dielectric properties of glasses at ultra-high frequencies and their relation to composition. L. Navias and R. L. Green. bibliog diag Am Cer Soc J 29:267-76 O 1 '46; Abstract. Cer Ind 46:68+ Je '46; Glass Ind 27:615+ D '46
Glass or vitreous composition having very low electrical loss; patent. Glass Ind 28: 82 F '47
Toughened glass insulators. il Elec R (Lond) 141:461-6 S 26 '47

Expansion and contraction

Checking the thermal expansion of glasses and metals by stress-optical tests. A. A. Padmos. diags Glass Ind 28:465-6+ S '47

Fracture

Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47; Discussion. S. Thompson. 18:781-2; Reply. 782-3 Ag '47
Theory of the mechanism of the fracture of glass; abstracts. N. W. Taylor. Glass Ind 28:296+ Je '47; Cer Ind 48:79 Je '47

Gas content

Micro-analysis of gases in glass. W. B. Price and L. Woods. bibliog diags Glass Ind 28: 516-17+ O '47

Hardness

Development of hard glasses. A. E. Pavlish and I. Mockrin. bibliog(32 foot notes and 99 titles) Am Cer Soc J 30:54-63 F 1 '47; Abstract. Glass Ind 28:250 My '47

Heat transmission

Studies in the distribution of temperature through molten glasses in a tank. R. Halle and W. E. S. Turner. Glass Ind 26:521+; 27:136; 28:523+ N '45, Mr '46, O '47
Total emissivity of various materials at 100-500°C. B. T. Barnes and others. diags Opt Soc Am J 37:804-7 O '47
Vertical temperature gradient through colored glasses. Cer Ind 49:78 Ag '47

Infrared rays transmission

Corning infrared transmitting glass; patent. Glass Ind 28:184-5 Ap '47
Infrared absorption spectra of some experimental glasses containing rare earth and other oxides. R. Stair and C. A. Faick. bibliog diags J Res Nat Bur Stand 38:95-101 Ja '47
Transmission of binary glasses in near infrared; abstract. J. M. Florence and others. Glass Ind 28:295-6 Je '47

Iron content

Staining of glass containers in contact with iron. E. C. Marboe and W. A. Weyl. Am Cer Soc J 30:320-2 O 1 '47; Abstract. Glass Ind 28:294-5 Je '47

Joining to metal

Checking the thermal expansion of glasses and metals by stress-optical tests. A. A. Padmos. diags Glass Ind 28:465-6+ S '47
Electrodeposited silver on steel for glass-to-metal seals. N. S. Freedman. il Electrochem Soc Trans 91 (preprint 19):285-96 '47
Glass-to-metal joints; abstract. J. H. Partridge. Materials & Methods 25:150-1 Ap '47
Metallized glass for low cost joining of glass to metal. H. G. Vogt. il Materials & Methods 25:81-3 Je '47
Method of forming glass film on metal; patent. diag Glass Ind 28:468 S '47
Silver plating facilitates bonding glass to steel. il Steel 121:92+ Ag 25 '47

Lead content

Mechanism of the reduction of lead in glass. A. J. Monack. bibliog Glass Ind 28:125-6+ Mr '47

Light transmission

German reflection reducing coatings for glass. H. A. Tanner and L. B. Lockhart, jr. diags Opt Soc Am J 36:701-6 D '46
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47
Talbot's bands. F. B. Pidduck. diags Opt Soc Am J 37:55-8 Ja '47
Theoretical development of exact solution of reflectance of multiple layer optical coatings. D. L. Caballero. bibliog Opt Soc Am J 37:176-80 Mr '47
Three-layered reflection-reducing coatings. L. B. Lockhart, jr. and P. King. Opt Soc Am J 37:689-94 S '47
Unstable glass has high light transmission speed; beryllium-fluoride glass. Sci Am 176:31 Ja '47

Opacification

Developing opacity in ceramics. H. D. Prior. Cer Ind 48:53+ F '47

Polishing

Corning fire polishing machine; patent. diag Glass Ind 28:417 Ag '47
Mechanical treatment of hardened glass; abstract. N. O. Abelchuk. Glass Ind 28:245-6 My '47

Stones

Glass-plant guide to identification of stones in glass. M. A. Knight. bibliog Glass Ind 28:69-74+ F '47
Occurrence of cassiterite as a stone in glass. B. L. Steierman. Am Cer Soc J 29:367 D 1 '46

Strength

Development of hard glasses. A. E. Pavlish and I. Mockrin. bibliog(32 foot notes and 99 titles) Am Cer Soc J 30:54-63 F 1 '47
Effect of abrasion on glass surface strength; abstracts. D. W. Mueller and C. D. Mylchreest. Cer Ind 49:76 O '47; Glass Ind 28: 515 O '47

GLASS—Strength—*Continued*
Effect of temperature on the strength and fatigue of glass rods. B. Vonnegut and J. L. Glathart. bibliog diag J Ap Phys 17: 1082-5 D '46

Surface

Low reflection treatment of glass surfaces. Cer Ind 48:120 Ap '47
Some practical aspects of the surface chemistry of glass. W. A. Weyl. bibliog(88 ref) diags Glass Ind 28:231-5+, 300-2+, 349-53+, 408-12+ My-Ag '47
Surface studies of glass; contact angles. L. A. Spitze and D. O. Richards. bibliog il J Ap Phys 18:904-11 O '47

Temperature effect

Effect of temperature on the strength and fatigue of glass rods. B. Vonnegut and J. L. Glathart. bibliog diag J Ap Phys 17: 1082-5 D '46
New interpretation of certain discontinuities in property-temperature curves for glasses; abstracts. W. R. Ham and others. Glass Ind 28:298+ Je '47; Cer Ind 48:76 Je '47

Terminology

Glass division standard definitions. Am Cer Soc Bul 26:239 Ag 15 '47
Proposed standard definitions. Glass Ind 28: 86 F '47

Testing

A.S.T.M. standards on glass and glass products; prepared by A.S.T.M. committee C-14. 86p pa $1.25 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
Attenuation and scattering of high frequency sound waves in metals and glasses. W. P. Mason and H. J. McSkimin. bibliog diags Acoustical Soc Am J 19:464-73 My '47
Checking the thermal expansion of glasses and metals by stress-optical tests. A. A. Padmos. diags Glass Ind 28:465-6+ S '47
Hartford-Empire seedscope. il Glass Ind 27: 622 D '46

Ultraviolet rays transmission

Ultraviolet-transmitting glasses for mercury-vapor lamps. M. E. Nordberg. Am Cer Soc J 30:174-9 Je 1 '47

GLASS, Cellular
Glass house for Duplan insulates for nylon throwing; Foamglas in side walls and roof protects against condensation. il Textile World 97:114-15 My '47
Paper mill insulating problems; use of Foamglas. V. Sanders. il Paper Ind 29:531-3 Jl '47

GLASS, Colored
Airbrushed glass paintings. E. S. Perrine. il Cer Ind 47:68 N '46
Chemicals used for glass colouration. L. M. Angus-Butterworth. Chem Age (Lond) 57: 421-2 S 27 '47
Chemistry and manufacture of Carrara structural glass. R. A. Miller. il J Chem Educ 24:158-9 Ap '47
Colored glasses; a review of a monograph by W. A. Weyl. N. J. Kreidl. Glass Ind 25:262-3, 405-6; 26:235-8, 375+; 27:450-1+; 28:463-4+ Je, S '44; My, Ag '45, S '46, S '47
Colored glasses; colors produced by metals; abstract. W. A. Weyl. Am Cer Soc J 30 (Cer A):4-5 Ja 1 '47
Control of color on amber container ware during production. W. H. Manring. Am Cer Soc J 30:27-31 Ja 1 '47
Functions of minor constituents in commercial selenium ruby batch. R. R. Shively, jr. and W. A. Weyl. bibliog Am Cer Soc J 30:311-14 O 1 '47; Abstracts. Glass Ind 28:298 Je '47; Cer Ind 48:75 Je '47
New Corning glass; treating copper containing glass to produce color; patent. Glass Ind 28:360 Jl '47
Oxidation and reduction of glasses by means of electrolysis. G. E. Rindone and others. bibliog diags Am Cer Soc J 30:314-19 O 1 '47
Photosensitive glass developed by Corning. Chem & Eng N 25:1822 Je 23 '47; Same abr. Chem Ind 61:80+ Jl '47
Selenium-ruby and other glasses colored by selenium. A. E. Pavlish and C. R. Austin. Am Cer Soc J 30:1-11 Ja 1 '47; Abstract Glass Ind 28:187+ Ap '47
Selenium ruby glass; patent. Glass Ind 28:247 My '47

See also
Lovibond glasses

GLASS, Effect of alkalies on
Attack of glasses by alkaline solutions; abstracts. R. D. Smith and P. E. Corbin. Glass Ind 28:314 Je '47; Cer Ind 48:85 Je '47

GLASS, Heat absorbing
Heat-resisting and heat-absorbing glass. Engineering 163:235 Mr 28 '47; Engineer 183:249 Mr 21 '47

GLASS, Heat resisting
Chemical engineering materials of construction; review of literature from start of World war II; glass. J. R. Blizard. bibliog il diag Ind & Eng Chem 39:1215-18 O '47
Heat-resisting and heat-absorbing glass. Engineering 163:235 Mr 28 '47; Engineer 183: 249 Mr 21 '47

GLASS, Laminated
Transparent conductor coats glass to carry electrical current; Nesa. Sci Am 175:275 D '46
What about silicone-glass laminates? Mod Plastics 24:184+ My '47

GLASS, Molten
Measurement of mean specific heat of plate glass at high temperatures. S. Anderson. diags Am Cer Soc J 29:368-70 D 1 '46
Metal sprayed with molten porcelain enamel; air pressure blowgun, finishes metal surfaces with molten glass, metals or plastics. il Cer Ind 49:65+ S '47
Studies in the distribution of temperature through molten glasses in a tank. R. Halle and W. E. S. Turner. Glass Ind 26:521+; 27:136; 28:523+ N '45, Mr '46, O '47

GLASS, Optical
Calculation of refractive index of a glass as a direct function of its composition. K. Sun. bibliog Am Cer Soc J 30:282-7 S 1 '47
Cleaning optical glass by electronic bombardment. C. H. Alexander. il Mech Eng 69:321 Ap '47; Same cond. Comp Air Mag 52:181 Jl '47
Contribution to refractive index and Abbe value of oxide components in glass. K. Sun. bibliog Am Cer Soc J 30:287-9 S 1 '47
Electron bombardment cleans optical glass prior to coating. Mach 53:156-7 Jl '47; Sci Am 177:29 Jl '47
Intensity of the light reflected from or transmitted through a pile of plates. L. B. Tuckerman. bibliog Opt Soc Am J 37:818-25 O '47
Reflection of light from glass with double and multiple films. A. Vašiček. Opt Soc Am J 37:623-34 Ag '47
Surface tensions of some optical glasses. L. Shartsis and A. W. Smock. bibliog diags J Res Nat Bur Stand 38:241-50 F '47; Same. Am Cer Soc J 30:130-6 Ap 1 '47
Two wars put U.S. at the top in optical glass. il Cer Ind 48:96-7 Ap; 49:76 S '47

Manufacture

Changes caused in the refractivity and density of glass by annealing. A. Q. Tool and others. bibliog J Res Nat Bur Stand 38: 519-26 My '47
Fused quartz production of optical quality; developed by W. C. Heraeus. Cer Ind 47: 66 N '46
Optical glass developed and produced at National bureau of standards. C. H. Hahner. il Dom Comm 35:58-63 F '47
Optical glass production. C. H. Hahner. il Chem Eng 54:122-3 Ap '47
Optical system for television sets; projection-type receivers. il Glass Ind 28:129+ Mr '47
Study of time and temperature effects on glass in the annealing range; abstract. P. W. Collyer. Glass Ind 28:314 Je '47

Patents

American optical glass composition invented by Edgar D. Tillyer. Glass Ind 28:417 Ag '47

GLASS, Optical—Patents—*Continued*
Beryllium boro-phosphate glass, invention of Kuan-Han Sun and Maurice L. Higgins; patent. Glass Ind 28:135 Mr '47
Eastman Kodak glass; patent. Glass Ind 28: 468 S '47
Method of annealing optical glass; patent. diag(p248) Glass Ind 28:249 My '47
Method of making optical glass; patent assigned to du Pont. diag Glass Ind 27:624+ D '46

GLASS, Ornamental
Imaginative use of glass in the giant Queen Elizabeth. il Glass Ind 28:45 Ja '47

GLASS, Photosensitive
Photos on glass; Corning glass works. Bsns W p46-7 S 27 '47
Photosensitive glass; abstract. S. D. Stookey. Glass Ind 28:532 O '47
Photosensitive glass developed by Corning. Am Cer Soc Bul 26:231 Ag 15 '47; Chem & Eng N 25:1822 Je 23 '47; Chem Ind 61: 80 Jl '47; R Sci Instr 18:588-9 Ag '47

GLASS, Powdered
Rapid insulator production with glass-bonded mica. A. J. Monack. bibliog flow chart il Cer Ind 48:59-60+ F; 76+ Mr; 98+ Ap; 76-7+ My; 49:74+ Jl '47

GLASS, Safety
Curved safety glass. Engineer 184:371 O 17 '47

Manufacture
Curved glass in automotive glazing. J. W. Kamerer. Automotive & Aviation Ind 95: 41-2 D 1 '46
Gas fuel plays important role in safety glass production. il Glass Ind 28:236-7 My '47

GLASS, Structural
Chemistry and manufacture of Carrara structural glass. R. A. Miller. il J Chem Educ 24:158-9 Ap '47
See also
Glass, Laminated
Glass blocks

GLASS bending
Curved glass in automotive glazing. J. W. Kamerer. Automotive & Aviation Ind 95:41-2 D 1 '46

GLASS blocks
Glass block details and facts you should know about them. diags Brick & Clay Rec 110:37 Mr '47
Glass block details for brick veneer walls. diags Brick & Clay Rec 110:33 F '47
Glass block dimension table. Brick & Clay Rec 110:34 Mr '47
How to select and install glass block. K. H. Cunningham. il diag Eng N 138:1006-7 Je 26 '47

GLASS blowing and working
Glass-blowing art in petroleum research. W. E. Barr. il Pet Refiner 26:103-6 F '47
Glass in the laboratory; burners for the glassblower. I. C. P. Smith. il diags Chem Age (Lond) 57:165-8 Ag 2 '47
Glass in the laboratory; tools and accessories used in lamp working. I. C. P. Smith. il diags Chem Age (Lond) 57:571-3 O 25 '47

GLASS cleaning
Cleaning optical glass by electronic bombardment. C. H. Alexander. il Mech Eng 69: 321 Ap '47
Electronic bombardment cleans optical surfaces in preparation for coat. il Sci Am 177:29 Jl '47
Recent trends in glass cleaner formulations and markets. D. A. Neidig. il Chem Ind 60:53-5 Ja '47

GLASS construction
Builder speeds-up laying glass block with specially designed metal jigs. il Brick & Clay Rec 111:26-7 O '47
See also
Glass blocks

GLASS container industry
Glass manufacture trust suit settled. Oil Paint & Drug Rep 151:5 Je 2 '47
Glass monopoly case reaches settlement. Food Ind 19:955-6 Jl '47
Glass salesmen train in plant; Thatcher glass manufacturing co. Cer Ind 48:102 Ap '47

GLASS container manufacturers institute
Annual meeting, Asheville, North Carolina. Glass Ind 28:289-90 Je '47
Semi-annual meeting in Miami. Glass Ind 28: 17-20+ Ja '47

GLASS containers
Container breakage reduced by infrared; lamps preheat jars before being filled with hot molasses. J. R. Heilman. il Food Ind 19:193 F '47
Staining of glass containers in contact with iron. E. C. Marboe and W. A. Weyl. Am Cer Soc J 30:320-2 O 1 '47; Abstracts. Glass Ind 28:294-5 Je '47; Cer Ind 48:75 Je '47
See also
Bottles
Glass jars

Manufacture
Ball Brothers new El Monte plant to start operations. il Cer Ind 49:79+ S '47
Brockway glass co. chooses the Southwest for plant no. 3; Muskogee, Okla. il Cer Ind 48: 56-8 F '47
Bulk handling in the glass container plant. il diags Cer Ind 49:76-7 Ag; 84 S '47
Control of color on amber container ware during production. W. H. Manring. Am Cer Soc J 30:27-31 Ja 1 '47
Modern equipment in the new Antioch plant of Glass containers, inc. il Glass Ind 28: 407 Ag '47
Ware faults in glass containers. diags Cer Ind 46:68+ My; 47:64+ Jl; 59 Ag; 78+ S; 60 O; 70+ N; 56-7 D '46; Discussion. 48: 80+ Mr '47

Standards
Glass jar standardization revoked over industry's head. Food Ind 18:1731 N '46

GLASS cutting
Glass in the laboratory; cutting glass tubing. I. C. P. Smith. il diags Chem Age (Lond) 57:298-300, 431-3 Ag 30, S 27 '47

GLASS electrodes. See Electrodes, Glass

GLASS fabrics
Better tools from molded laminates; glass fabric impregnated with unsaturated polyester resins and addition-type polymers. L. Wittman. il Mod Plastics 24:132-7 Je '47
Decorative fiberglas fabric, sound absorptive, can reduce fire hazard. Spectator (Property ed) 12:29+ Ap 24 '47
Glass fibre yarns and fabrics. A. M. Robertson. Textile Inst J 37:P529-30 N '46
See also Plastic materials, Laminated—Glass reinforcement

GLASS factories
Ball Brothers' new El Monte plant to start operations; food packers' ware and fruit jars. il Cer Ind 49:79+ S '47
Brockway enters new territory with Muskogee plant. il plans Glass Ind 27:601-5+ D '46
Brockway glass co. chooses the Southwest for plant no. 3; Muskogee, Okla. il Cer Ind 48: 56-8 F '47
Latchford-Marble erecting tower-type batch mixing and storage plant. Cer Ind 49:76+ Jl '47
See also
Glass manufacture

Electric equipment
Electric glass melting furnaces; abstract. P. C. Barnes. Electrician 139:1146 O 17 '47
Heat and sound insulation; modern materials handling in glass fibre production. il Elec R (Lond) 140:963-7 Je 13 '47

Equipment
New, compact batching system; Milner unit. il Cer Ind 49:72+ S '47
See also
Glass furnaces

GLASS fibers
All-plastic boat; molded of fiberglas and a low pressure thermosetting resin. il Mod Plastics 25:166 S '47
Cold-storage pail uses fiberglas-plastics insulating liner. il Sci Am 177:34 Jl '47
Compression packaging; fibrous glass for building insulation. il Mod Packaging 20: 118-21 F '47
Fiberglas. il Fortune 35:86-91+ Ja '47

GLASS fibers—*Continued*
Four-part polyester impregnated glass mat bucket; molding of durable, lightweight, rustproof minnow bucket. il Mod Plastics 24:112-14 Ag '47
Glass fibre yarns and fabrics. A. M. Robertson. Textile Inst J 37:P529-30 N '46
Glass fibers as engineering materials. K. Rose. il Materials & Methods 25:82-5 Mr '47
Glass fibres, yarns and cloths; abstract. A. M. Robertson. Textile Inst J 38:P43 Ja '47
Glass insulation; electrical applications to the processes of manufacture. il Elec R (Lond) 139:679-82 N 1 '46
New uses recently developed for glass fiber materials. H. Helfer. il Cer Ind 49:70+ Ag '47
1947 revision, Textile World's synthetic-fiber table. C. W. Bendigo, comp. Textile World 97:121-8 S '47
1947 table of commercial synthetic yarns and fibers. Textile World 97:117-20 S '47
Surface studies of glass; contact angles. L. A. Spitze and D. O. Richards. bibliog il J Ap Phys 18:904-11 O '47
Thermal-expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Same abr. Mod Plastics 24:153-7+ D '46
Thermal properties of walls; various applications of fiberglas insulation. diags Brick & Clay Rec 110:35 Mr '47
U.S. charges monopoly in fiber glass field. Eng N 139:430 S 25 '47

See also
Plastic materials—Glass reinforcement
Plastic materials, Laminated—Glass reinforcement

Manufacture

Fiber glass production; pictured flow sheet. Chem Eng 54:130-3 Je '47
Heat and sound insulation; modern materials handling in glass fibre production. il Elec R (Lond) 140:963-7 Je 13 '47

Patents

Owens-Corning fiberglas corporation offers twelve patents for license. Glass Ind 28:248 My '47
Owens-Corning fiberglas crimping machine. diags Glass Ind 28:304-5 Je '47

Physiological effect

Fiberglas plastics; industrial medical aspects and experiences. J. R. Erwin. bibliog Ind Med 16:439-41 S '47

GLASS flow
Primary flow of glass in the Fourcault tank; abstract. diags Glass Ind 28:246+ My '47

GLASS furnaces
Acceleration of the withdrawal of glass in Fourcault furnaces. D. L. Gilk. Glass Ind 28:467+ S '47
Electric glass melting furnaces; abstract. P. C. Barnes. Electrician 139:1146 O 17 '47
Fight against wastage of heat in glass furnaces; translated from the Bulletin de l'Institut du verre, Paris, for September, 1946 by F. W. Preston. I. Peyches. diags Glass Ind 28:173-7+, 238-42+ Ap-My '47
Glass making at high temperatures. J. H. Partridge and O. Adams. il plan diags Can Chem & Process Ind 31:24-5+ Ja '47
Laboratory experimental electric glass furnaces. W. A. Hedden and others. il diag Am Cer Soc J 30:48-51 F 1 '47
Photoelectric glass level control. G. Rudinger. diag Glass Ind 28:405-6+ Ag '47
Teco Firoll lehrs. il Cer Ind 48:85 F '47

See also
Glass tanks

Control

Combustion and reversing controls govern Erskine glass furnace. diag Cer Ind 48:51 Je '47

Patents

Cornelius electric melting furnace. diag Glass Ind 28:247 My '47
Patent assigned to Corning glass works by C. F. DeVoe. diag Glass Ind 28:82 F '47
Water cooled furnace roof or crown, invented by William E. Moore. diag Glass Ind 28:134 Mr '47

GLASS jars
Hartford finish gauge; patent. diag Glass Ind 28:185-6 Ap '47

GLASS lining
Acetic acid vs. materials of chemical plant construction; glass lined steel. O. I. Chormann. Chem Eng 53:260+ N '46
Pfaudler equipment for many industries. R. G. Skerrett. il Comp Air Mag 51:292-7 N '46
Sulphur dioxide versus construction materials; glass-lined steel. O. I. Chormann. Chem Eng 54:224 S '47
Wet and dry chlorine vs. materials of chemical plant construction; glass-lined steel. O. I. Chormann. Chem Eng 54:226 F '47

GLASS machinery
Machinery in glass production; abstract. J. Row. Am Cer Soc J 30 (Cer A):6-7 Ja 1 '47

Control

Improving glass feeder operation through electronic pneumatic control. J. R. Green and E. A. Murphy. il Glass Ind 28:81+ F '47

Patents

American window glass company sheet tempering machine. diags Glass Ind 28:31-2 Ja '47
Corning perforating and tabulating machine. diag Glass Ind 27:613-14 D '46
Danner tube drawing machine; patent. diags Glass Ind 28:361-2 Jl '47
Inventions and inventors. Published in monthly numbers of Glass industry
Jeannette glass company method of pressing; reflector button press. diags Glass Ind 28: 303-4 Je '47
Owens burn-off machine. diag Glass Ind 28: 186+ Ap '47
Spray device for the shears of a glass feeder. diag Glass Ind 28:31 Ja '47
Tube forming machine; patent. diag Glass Ind 28:417-18 Ag '47

GLASS making materials
Cheap methods of reducing silica dust in unloading. il diag Cer Ind 48:75 My '47
Experiments concerning the replacement of boric oxide and lead oxide in some technical glasses. H. Kalsing and others. Glass Ind 27:606+ D '46
German war efforts in replacing glass raw materials. O. Knapp. bibliog Glass Ind 28: 413-14 Ag '47

See also
Sand

GLASS manufacture
Acceleration of the withdrawal of glass in Fourcault furnaces. D. L. Gilk. Glass Ind 28:467+ S '47
Changes caused in the refractivity and density of glass by annealing. A. Q. Tool and others. bibliog J Res Nat Bur Stand 38:519-26 My '47
Experiments concerning the replacement of boric oxide and lead oxide in some technical glasses. H. Kalsing and others. Glass Ind 27:606+ D '46
Fight against wastage of heat in glass furnaces; translated from the Bulletin de l'Institut du verre, Paris, for September, 1946 by F. W. Preston. I. Peyches. diags Glass Ind 28:173-7+, 238-42+ Ap-My '47
German glass manufacture as applied to illumination, with particular reference to aviation lighting; abstract. H. N. Green and others. Am Cer Soc J 30 (Cer A): 175 S 1 '47
Glass batches; recipes. Cer Ind 48:134+ Ja '47
Glass density determinations by a sink-float method. R. D. Duff. bibliog diag Am Cer Soc J 30:12-21 Ja 1 '47; Abstract. Glass Ind 28:137+ Mr '47
Glass making at high temperatures. J. H. Partridge and O. Adams. il plan diags Can Chem & Process Ind 31:24-5+ Ja '47
Glass-metal seals, glass density discussed at ACS Glass division meeting. Cer Ind 47: 64-6 N '46

GLASS manufacture—*Continued*
Improving glass feeder operation through electronic pneumatic control. J. R. Green and E. A. Murphy. il Glass Ind 28:81+ F '47
Miscellaneous glass industry of Central Europe. Cer Ind 48:126+ Ap '47
New, compact batching system; Milner unit. il Cer Ind 49:72+ S '47
Particle size of anthracite used for reduction of sodium sulfate. E. Z. Zhitomirskaya. Glass Ind 28:130 Mr '47
Photoelectric glass level control. G. Rudinger. diag Glass Ind 28:405-6+ Ag '47
Pilkington brothers limited; diagram showing relationship between various glass groups. Cer Ind 47:54-5 D '46
Recent translations of Russian papers of interest to the glass industry. diags Glass Ind 28:245-6+ My '47

See also
Glass, Optical—Manufacture
Glass, Safety—Manufacture
Glass factories
Glass furnaces
Glass machinery
Glass tanks
Glassware—Manufacture

Patents

Corning alabaster glass; W. H. Armistead patent. Glass Ind 28:247-8 My '47
Corning infrared transmitting glass. Glass Ind 28:184-5 Ap '47
Glass especially useful in making parts for radio broadcasting and receiving apparatus. diags Glass Ind 27:612-13 D '46
Glass useful as insulating laminae in electrical condensers and for sealing iron conductors into electronic tubes. Glass Ind 28:134-5 Mr '47
Inventions and inventors. Published in monthly numbers of Glass industry
Patent on a selenium-containing glass, silicon addition; was assigned to Battelle memorial institute by A. E. Pavlish and C. R. Austin. Glass Ind 28:82 F '47

GLASS melting
Cornelius electric melting furnace; patent. diag Glass Ind 28:247 My '47
Laboratory experimental electric glass furnaces. W. A. Hedden and others. il diag Am Cer Soc J 30:48-51 F 1 '47
Latest developments in the use of gas for firing glass melting tanks. F. G. Schwalbe. Glass Ind 28:420+ Ag '47
Recent developments in glass-tank melting furnaces. W. E. S. Turner. Glass Ind 28: 363-4 Jl '47

See also
Glass, Molten
Glass flow

GLASS patents. See Glass, Optical—Patents; Glass fibers—Patents; Glass manufacture—Patents

GLASS pipes. See Pipes, Glass

GLASS reinforcement of plastics. See Plastic materials—Glass reinforcement; Plastic materials, Laminated—Glass reinforcement

GLASS research
Changes caused in the refractivity and density of glass by annealing. A. Q. Tool and others. bibliog J Res Nat Bur Stand 38:519-26 My '47
Experiments concerning the replacement of boric oxide and lead oxide in some technical glasses. H. Kalsing and others. Glass Ind 27:606+ D '46
Influence of glass composition on reducibility of Ag^{+}, Bi^{3+}, Sb^{3+}, and Pb^{2+}. A. W. Bastress. Am Cer Soc J 30:52-3 F 1 '47
Mechanism of the reduction of lead in glass. A. J. Monack. bibliog Glass Ind 28:125-6+ Mr '47
New interpretation of certain discontinuities in property-temperature curves for glasses; abstracts. W. R. Ham and others. Glass Ind 28:298+ Je '47; Cer Ind 48:76 Je '47
New tools of heat-flow research in the glass industry; abstract. V. Paschkis. Cer Ind 48:79-80 Je '47
Polarographic study of sodium polyphosphates. J. A. Campbell. bibliog Am Chem Soc J 69:109-10 Ja '47
Research digest. Published in monthly numbers of Glass industry
Research horizons for glass. A. Silverman and others. Am Cer Soc Bul 26:164 My 15 '47
Some experiments on crystal growth and solution in glasses. H. R. Swift. bibliog il diags Am Cer Soc J 30:165-9 Je 1 '47
Some practical aspects of the surface chemistry of glass. W. A. Weyl. bibliog (88 ref) diags Glass Ind 28:231-5+, 300-2+, 349-53+, 408-12+ My-Ag '47
Studies in the distribution of temperature through molten glasses in a tank. R. Halle and W. E. S. Turner. Glass Ind 26:521+; 27:136; 28:523+ N '45, Mr '46, O '47
Trend of research and development in the glass field. O. G. Burch. Cer Ind 48:73+ Je '47

GLASS sand. See Sand

GLASS sculpture
Making figurines of spun glass. M. G. Hawkins. il Cer Ind 47:58-9 D '46

GLASS sellers company
Worshipful company of glass sellers of the city of London. L. M. Angus-Butterworth. Glass Ind 28:243-4+ My '47

GLASS stones. See Glass—Stones

GLASS tanks
Alkali absorption of fireclay checker brick. Glass Ind 28:127+ Mr '47
Convection currents in glass tanks; abstract. I. Peychès. Am Cer Soc J 30(Cer A):196-7 O 1 '47
Instrumentation of regenerative glass tank. diag Cer Ind 48:71 My '47
Insulation of glassmaking equipment. W. R. Kerr. bibliog il diag Am Cer Soc Bul 26: 261-8 S 15 '47
Latest developments in the use of gas for firing glass melting tanks. F. G. Schwalbe. Glass Ind 28:420+ Ag '47
Primary flow of glass in the Fourcault tank; abstract. diags Glass Ind 28:246+ My '47
Rate of creep at elevated temperatures of four sillimanite tank blocks. Glass Ind 28: 85 F '47
Recent developments in glass-tank melting furnaces. W. E. S. Turner. Glass Ind 28: 363-4 Jl '47
Small glass tanks in Russia. D. B. Ginzburg. diags Glass Ind 28:130-1 Mr '47

GLASS trade

History

Worshipful company of glass sellers of the city of London. L. M. Angus-Butterworth. Glass Ind 28:243-4+ My '47
Worshipful company of glaziers of the city of London. L. M. Angus-Butterworth. Glass Ind 28:132-3+ Mr '47

Law

New law suits affecting manufacturers of glass products. L. T. Parker. Cer Ind 48: 69-71 My '47

Securities

New horizons for glass companies, with statistics on the leading companies. C. F. Morgan. il Mag of Wall St 80:212-13+ My 24 '47

Czechoslovakia

Glass, ceramic and jewelry production. For Comm W 27:23-4 My 10 '47
Glassware industry disputes ill-timed action on reciprocal trade agreements; committee for reciprocity information for American glassware association. Glass Ind 28:78-80+ F '47

Finland

Operations in leading glass concern, Riihimaki. For Comm W 27:24 Je 28 '47

Germany

German glass industry. Chem Age (Lond) 56:780 Je 14 '47
German war efforts in replacing glass raw materials. O. Knapp. bibliog Glass Ind 28: 413-14 Ag '47
German window glass production. Glass Ind 28:474 S '47

Great Britain

British plan big glass plant expansions. Glass Ind 28:30 Ja '47

GLASS trade—Great Britain—*Continued*
Status of British glass industry. Glass Ind 28:183 Ap '47
See also United glass bottle manufacturers limited

Italy

Italy's glass industry sets pace in recovery. Glass Ind 28:356+ Jl '47

Netherlands

Dutch glass industry encounters difficulties. For Comm W 27:27-8 My 17 '47

Russia

Recent translations of Russian papers of interest to the glass industry. diags Glass Ind 28:245-6+ My '47

Western states

Chemical consuming industries; Pacific progress references. Chem Eng 54:114-15 S '47

GLASS tubing
Glass in the laboratory; cutting glass tubing. I. C. P. Smith. il diags Chem Age (Lond) 57:298-300, 431-3 Ag 30, S 27 '47

Manufacture

Glass in the laboratory; the manufacture of glass tubing. I. C. P. Smith. il diags Chem Age (Lond) 56:712-16 My 31 '47
Tube cutting machine adapted for manufacturing tubes for fluorescent lighting; patent. diag Glass Ind 27:614+ D '46
Tube forming machine; patent. diag Glass Ind 28:417-18 Ag '47

GLASS walls. See Walls, Glass

GLASSWARE
Glassware industry disputes ill-timed action on reciprocal trade agreements; committee for reciprocity information for American glassware association. Glass Ind 28:78-80+ F '47
Hand-made glassware industry plans for competitive market. E. R. Killam. il Dom Comm 35:40-4 My '47
Prepackaging sells glassware. il Bsns W p70+ Je 7 '47
Two vets develop new glass instruments. H. Helfer. il Cer Ind 48:88 Mr '47
See also
Glass tubing

Decoration

Airbrushed glass paintings. E. S. Perrine. il Cer Ind 47:68 N '46
Decoration at Laurens. P. Nelson. il Glass Ind 28:511-12+ O '47
Patent for drying decorations applied to glassware. diag Glass Ind 27:612-13 D '46
Photosensitive glass developed by Corning. Chem & Eng N 25:1822 Je 23 '47; Same abr. Chem Ind 61:80+ Jl '47
Vitrifiable colors for spraying. Cer Ind 47: 59 D '46

Manufacture

Method of making footed stem ware; patent. diags Glass Ind 28:184 Ap '47
Owens method of gathering; patent. diags (p488) Glass Ind 28:489 S '47
Toughened glass insulators. il Elec R (Lond) 141:461-6 S 26 '47
Volume of ceramic fired glassware reaches half million a year. il Cer Ind 49:80-1 Jl '47
See also
Glass containers—Manufacture
Glass tubing—Manufacture

GLASSWARE, Laboratory
Glass in the laboratory. I. C. P. Smith. il diags Chem Age (Lond) 56:386-8; 712-16; 57:19-22, 165-8, 298-300, 431-3, 571-3, 702-3 Mr 29, My 31, Jl 5, Ag 2, 30, S 27, O 25, N 29 '47
Trends in laboratory glassware. il diags Chem Age (Lond) 56:510-13 Ap 26 '47

GLATFELTER, P. H., company
Preferred stock offered; bonds and common stock placed privately. Comm & Fin Chr 165:3051-2 Je 9 '47

GLAUBER, Johann Rudolph, 1604?-1668
Old dyers, old books and old methods; remarks on the history of dyeing and finishing. S. M. Edelstein. por Am Dyestuff Rep 36:524 S 22 '47

GLAUCONITE
Rapid oxidation of glauconite in glauconitic sand. W. H. Monroe. il Am Assn Pet Geologists Bul 31:1509-11 Ag '47

GLAZES
Achieving varied color effects through simple control of slips and glazes. M. M. French. Cer Ind 48:156+ Ja '47
Bristol glazes for all temperatures. C. W. Parmelee. Cer Ind 48:84+ My '47
Chinese ash glaze. M. Ling. diag Am Cer Soc Bul 26:7-8 Ja 15 '47
Developing opacity in ceramics. H. D. Prior. Cer Ind 48:53+ F '47
Low lead, bright opaque glazes for cones 08 to 06. R. R. Danielson. bibliog Am Cer Soc J 30:245-9 Ag 1 '47; Same cond. Cer Ind 48:92+ Je '47
Pottery glazes; recipes. Cer Ind 48:146+ Ja '47
Project in copper blue glazes. Cer Ind 48:88+ My '47
Some new crystalline glazes; abstract. H. G. Schurecht. Cer Ind 48:60+ Je '47
Vitreous glaze; patent was assigned to Monsanto chemical company by Lewis D. Gittings. Glass Ind 28:419 Ag '47
See also
Slips (ceramics)

GLAZIERS company, London
Worshipful company of glaziers of the city of London. L. M. Angus-Butterworth. Glass Ind 28:132-3+ Mr '47

GLENMAR farms
Glenmar farms, grower and packager. il Mod Packaging 20:93-8 D '46

GLENNAN, Thomas Keith
Case school names businessman as head. por Bsns W p36-7 Je 28 '47

GLIDDEN company
Attacking high sales costs. Bsns W p58-60 My 3 '47

GLIDERS
Design for power soaring. E. H. Rowley. il diags S A E J 55:48-9 Ag '47; Abstract. Automotive & Aviation Ind 96:90+ Je 1 '47
General Electric gyro glider. il Aero Digest 53:96+ D '46; Sci Am 176:31 Ja '47
Model of flying lifeboat tested at Stevens tank; glider with removable wings and tail may be means of saving victims of airline crashes at sea and survivors of marine accidents. Marine Eng 52:75 Je '47
New details reported on sailplane ballast. Aviation W 47:47 Jl 21 '47
1947 annual glider directory; illustrations, miniature plans and brief descriptions. Aero Digest 54:81+ Ja '47
Schweizer develops new soaring plane; sailplane, Model 121. Aviation N 6:14 N 11 '46

GLIOTOXIN
Effects of an antibiotic from aspergillus fumigatus Fresenius on tumor cells in vitro, and its possible identity with gliotoxin. J. G. Kidd. bibliog Science 105:511-13 My 16 '47

GLOBE aircraft corporation
Globe to continue operations, expand sales, under trustees. Aviation N 7:17 Ja 13 '47

GLOBULINS
Effect of cysteine—hydrogen peroxide treatments on the electrophoretic and immunological assay behavior of human gamma globulin. H. F. Deutsch. bibliog Am Chem Soc J 68:2625-8 D '46
Effect of gamma globulin on circulating human complement. G. W. Waring, jr. and L. Weinstein. Science 105:479 My 2 '47
Electrophoretic inhomogeneity of crystalline beta-lactoglobulin. Choh Hao Li. bibliog Am Chem Soc J 68:2746-7 D '46
Physical-chemical characteristics of certain of the proteins of normal human plasma. J. L. Oncley, G. Scatchard and A. Brown. J Phys & Colloid Chem 51:184-98 Ja '47
See also
Fetuin

GLOVES

Advertising

Week is born midst much publicity and advertising; American knit glove week. E. M. Housman. il Ptr Ink 219:44 My 30 '47

GLOVES, Rubber
Rubber glove usage defined by utility. Elec World 127:112 Ap 12 '47

GLOVES, Safety
Keeping track of rubber protective equipment. Elec World 128:70+ Ag 30 '47
Nurse's idea saves fingers; F. Silbaugh invents mesh glove for packinghouse workers. B. Christiansen. il Nat Safety N 54:32+ N '46; Same. Safety Eng 92:40-2 N '46

GLUCITOL. See Sorbitol

GLUCONIC acid
Dimethylene-D-gluconic acid. C. L. Mehltretter and others. Am Chem Soc J 69:2130-1 S '47
Structure of 2,4;3,5-dimethylene-D-gluconic acid. M. Zief and A. Scattergood. bibliog Am Chem Soc J 69:2132 S '47

GLUCOPYRANOSIDOGLUCOSE
Crystalline derivatives of 6-α-D-glucopyranosido-β-D-glucose from starch. E. M. Montgomery, F. B. Weakley and G. E. Hilbert. Am Chem Soc J 69:2249-50 S '47
Crystalline octaacetate of 6-α-D-glucopyranosido-β-D-glucose. L. W. Georges, I. L. Miller and M. L. Wolfrom. Am Chem Soc J 69:473 F '47

GLUCOSAMINE
Derivatives of N-methyl-L-glucosaminic acid; N-methyl-L-mannosaminic acid. M. L. Wolfrom and A. Thompson. bibliog Am Chem Soc J 69:1847-9 Ag '47

GLUCOSAZONE
Action of periodic acid on glucose phenylosazone. E. Chargaff and B. Magasanik. bibliog Am Chem Soc J 69:1459-61 Je '47

GLUCOSE
Condensation of nitromethane with D- and L-arabinose: preparation of L-glucose and L-mannose. J. C. Sowden and H. O. L. Fischer. Am Chem Soc J 69:1963-5 Ag '47
Crystalline 2,3,4,6-tetrapropionyl-β-D-glucose. W. A. Bonner, C. D. Hurd and S. M. Cantor. bibliog Am Chem Soc J 69:1816-19 Jl '47
Lesions of the pancreatic islets produced in cats by administration of glucose. F. C. Dohan and F. D. W. Lukens. Science 105: 183 F 14 '47
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Recent reports on the results of glucose tolerance tests in vitamin-deficient animals. V. R. Potter. Science 106:290 S 26 '47
Reduction of *p*-nitrobenzoic acid to hydrazo- and azo-benzene-4 : 4'-dicarboxylic acids by means of glucose. M. L. Tomlinson. Chem Soc J p756 Ag '46
Relative stabilities of D-glucose-amine derivatives. A. Mohammad and H. S. Olcott. Am Chem Soc J 69:969 Ap '47
Role of glucose in promoting growth of lactobacilli in saliva. D. Weisberger. Science 105:290 Mr 14 '47
Starches and starch fractions. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:68-73, 117-21 Mr-Ap '47
Sugar interconversion under reducing conditions; D,L-glucitol. M. L. Wolfrom and others. bibliog Am Chem Soc J 68:2342-3 N '46

GLUCOSIDES
Experiments on the synthesis of purine nucleosides. G. W. Kenner, A. R. Todd and others. Chem Soc J p852-65 O '46
Preparation and chromatographic separation of *p*-phenylazophenyl polyacetylglycosides. C. D. Hurd and R. P. Zelinski. bibliog Am Chem Soc J 69:243-6 F '47
Synthesis of glucosides of digitoxigenin, digoxigenin and periplogenin. R. C. Elderfield, F. C. Uhle and J. Fried. Am Chem Soc J 69:2235-6 S '47

See also
Naringin

GLUCOSYL bromide
Dibenzylidene-xylitol and its reaction with tetraacetyl-D-glucosyl bromide; dibenzylidene-L-fucitol. M. L. Wolfrom, W. J. Burke and E. A. Metcalf. bibliog Am Chem Soc J 69:1667-8 Jl '47

GLUCURONIC acid
Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Kertesz. bibliog Am Chem Soc J 68:2178-9 N '46
Investigation of the properties of cellulose oxidized by nitrogen dioxide; evolution of carbon dioxide from uronic acids and polyuronides. E. W. Taylor and others. bibliog Am Chem Soc J 69:342-7 F '47

GLUCURONIDASE
Comparison of the β-glucuronidase activity of normal, tumor, and lymph node tissues of surgical patients. W. H. Fishman and A. J. Anlyan. Science 106:66-7 Jl 18 '47
β-Glucuronidase activity of the blood and tissues of obstetrical and surgical patients. W. H. Fishman. bibliog Science 105:646-7 Je 20 '47
Simplified method of preparing active extracts of β-glucuronidase. W. H. Fishman and P. Talalay. bibliog Science 105:131-2 Ja 31 '47

GLUE
Chemistry of collagen. J. R. Kanagy. bibliog il U S Nat Bur Stand Circ C458:1-26; pa 10c Supt. of doc. '47
Dielectric heat used for continuous edge gluing. il Elec World 128:127 Jl 19 '47
Extending phenolic resin plywood glues with proteinaceous materials; corn gluten, soybean meal, linseed meal. G. E. Babcock and A. K. Smith. Ind & Eng Chem 39:85-8 Ja '47
Extending resorcinol resin glue with corn gluten. G. E. Babcock and A. K. Smith. Mod Plastics 24:153+ Ap '47
Glues for use in construction; abstract. P. Baumgarten and M. Michoudet. Materials & Methods 25:128 F '47
High-frequency woodwelding speeds construction, helps reduce costs; illustrations with text. Arch Forum 87:128 O '47
Microiodometric method for the determination of glue or gelatin in paper. G. E. Naponen and others. bibliog Paper Tr J 125:45-7 Jl 31 '47
Non-arcing glue, Cascophen RF-228. il Sci Am 176:226 My '47
Protein adhesive. A. Frieden. il Chem Ind 59:835-7 N '46
Temperature distribution in white oak laminated timbers heated in a high-frequency electric field. Dunlap and Bell. Elec World 127:132+ F 15 '47
Vegetable glue, from cassava and wheat flour; patent. Am Dyestuff Rep 36:546 S 22 '47

See also
Adhesives

GLUING machines
Edge glued by machine; thousand feet of lumber edge-glued in an hour, making use of urea resins. il Mod Plastics 25:138-9 O '47

GLUTAMIC acid
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47

GLUTATHIONE
Structural resemblance between penicillin and glutathione. E. Fischer. Science 106: 146 Ag 15 '47

GLUTEN
Effect of dry heat on proteins. D. K. Mecham and H. S. Olcott. bibliog Ind & Eng Chem 39:1023-7 Ag '47
Extending phenolic resin plywood glues with proteinaceous materials; corn gluten, soybean meal, linseed meal. G. E. Babcock and A. K. Smith. Ind & Eng Chem 39:85-8 Ja '47
Extending resorcinol resin glue with corn gluten. G. E. Babcock and A. K. Smith. Mod Plastics 24:153+ Ap '47

GLYCERIDES
Component acids and glycerides of Australian lumbang oil. F. D. Gunstone and T. P. Hilditch. bibliog Soc Chem Ind J 66:205-8 Jl '47
Configuration of naturally occurring mixed glycerides; the configuration of the major component glycerides of piqui-a fruit-coat fat. M. L. Meara. Chem Soc J p773-5 Je '47

GLYCERIDES—*Continued*
Glyceride structure of natural fats. K. F. Mattil and F. A. Norris. bibliog Science 105:257-9 Mr 7 '47
Mixed unsaturated glycerides of liquid fats; low-temperature crystallisation of rape oil. T. P. Hilditch, P. A. Laurent and M. L. Meara. Soc Chem Ind J 66:19-22 Ja '47
Polymorphism of triolein. R. H. Ferguson and E. S. Lutton. bibliog pl Am Chem Soc J 69:1445-8 Je '47
X-ray and thermal examination of the glycerides; glycerides of erucic, brassidic, oleic, and elaidic acids. M. G. R. Carter and T. Malkin. Chem Soc J p554-8, pl 1-2 Ap '47
X-ray diffraction analyses of synthetic unsaturated monacid diglycerides. B. F. Daubert and E. S. Lutton. bibliog Am Chem Soc J 69:1449-51 Je '47
X-ray investigation of glycerides; diffraction analyses of synthetic diacid diglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 68:2603-5 D '46
X-ray investigation of glycerides; diffraction analyses of synthetic triacid triglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 69:1451-3 Je '47

GLYCERIN
Glycerine and glycols gain ground. H. C. E. Johnson. il Sci Am 176:259-61 Je '47
Glycerine; history, chemical and physical properties and importance to industry. N. N. Dalton. il Soap & San Chem 23:41-2+ Ag '47; Abstract. Paint Oil & Chem R 110: 28 Jl 24 '47
Glycerin venture; Shell's decision to make synthetic product. Bsns W p21 D 21 '46
Glycerine's expanding role in paper production. G. Leffingwell and M. A. Lesser. bibliog and patent list Paper Ind 28:1598-9 F '47
Measurements of ultrasonic absorption and velocity in liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47
Modern roles for glycerine in textile processes. G. Leffingwell and O.-S. Linkletter. bibliog Rayon 28:50-2 Ja '47
Shell plans production of synthetic glycerine. Pet Processing 2:9-10 Ja '47
Shell to begin large scale production of synthetic glycerin in 1948. Manuf Rec 116:57 F '47
Stability of penicillin in glycerin and in glycols. R. J. Ferlauto and H. A. Clymer. bibliog Science 105:130-1 Ja 31 '47
Use of glycerine on air filters. J. B. Segur. Heat & Ven 44:86 S '47

Manufacture

Continuous hydrolysis of fats. H. D. Allen and others. flow diag diags Chem Eng Prog 43:459-66 S '47

GLYCERIN dichlorohydrin
Determination of vitamin A in fish liver oils with activated glycerol dichlorohydrin; comparison with spectrophotometric and antimony trichloride methods. A. E. Sobel and H. Werbin. bibliog Anal Chem 19:107-12 F '47

GLYCERYL ethers
South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions and natural fats. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 65:425-8 D '46

GLYCERYL phthalimide
Imide-modified alkyd resins. H. J. Wright and R. N. DuPuis. bibliog Ind & Eng Chem 38:1303-8 D '46

GLYCINE
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47
Viscosities of aqueous solutions of amino-acids, with some conductivity values. A. E. Bell and W. M. Madgin. Chem Soc J p74-6 Ja '47

GLYCOCYAMINE
Role of the liver in guanidoacetic acid metabolism in man. H. D. Hoberman and others. bibliog Science 104:619-20 D 27 '46

GLYCOGEN
Glycogen content of phymatotrichum sclerotia. D. R. Ergle. bibliog Am Chem Soc J 69:2061-2 Ag '47

GLYCOL
Conductances of lead chloride in ethylene glycol-water mixtures. J. W. Norman and A. B. Garrett. bibliog Am Chem Soc J 69: 110-13 Ja '47
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 66:48-50 F '47

See also
Methyl cellosolve

GLYCOLS
Glycerine and glycols gain ground. H. C. E. Johnson. il Sci Am 176:259-61 Je '47
Hydrogenation of lignin over Raney nickel. J. F. Saeman and E. E. Harris. bibliog Am Chem Soc J 68:2507-9 D '46
Pilot plant production of diacetate 2, 3-butylene glycol. H. W. Grubb. bibliog flow diag il diags Chem Eng Prog 43:437-48 Ag '47
Portable glycol vaporizers for air disinfection. F. C. W. Olson and others. bibliog diags Science 105:23-4 Ja 3 '47
Speed-dry inks. Chem Ind 60:943-4 Je '47
Stability of penicillin in glycerin and in glycols. R. J. Ferlauto and H. A. Clymer. bibliog Science 105:130-1 Ja 31 '47

See also
Ethyl hexanediol

Physiological effect

Acute toxicity and general systemic actions of diethylene glycol monoethyl ether (carbitol). P. J. Hanzlik and others. bibliog J Ind Hygiene 29:190-5 My '47
Comparative chronic toxicity of diethylene glycol monoethyl ether (carbitol) and some related glycols; results of continued drinking and feeding. P. J. Hanzlik and others. bibliog J Ind Hygiene 29:233-41 Jl '47
Epidermal application of diethylene glycol monoethyl ether (carbitol) and some other glycols; absorption, toxicity and visceral damage. P. J. Hanzlik and others. il J Ind Hygiene 29:325-41 S '47

GLYCOSIDES. See Glucosides

GLYOXAL
Commercial glyoxal clears new research paths. J. A. Field. bibliog il Chem Ind 60: 960-3 Je '47
Glyoxal semiacetate. E. Baer and H. O. L. Fischer. Am Chem Soc J 69:1463-5 Je '47

GLYOXALINE. See Imidazole

GOGGLES
Are you in favor of the universal goggle rule? panel discussion. Nat Safety N 56:26-7+ S '47
Eye injuries hurt more! experience at New York navy yard. L. Bauer. il Safety Eng 92:18-20+ O '46
Eyes and face; goggles, shields and masks. il Nat Safety N 55:25-6+ Mr '47
Guard with goggles. H. W. Boggess. Oil & Gas J 46:89-90 S 6 '47
How industry protects the worker's eyes; results of survey of 730 plants. J. M. Roche and H. S. Kuhn. Nat Safety N 56:33-9 Jl '47
Their goggles were on the job; saved eyes of two employees of Blatz brewing company. il Nat Safety N 55:60+ My '47

GOLD
Absorption cross section of gold for neutrons of energies from 0.01 to 0.3. ev. B. D. McDaniel and others. bibliog Phys R 72:729 O 15 '47
Black market in yellow metal; U.S. Treasury cracks down. Bsns W p 19-20 Ag 9 '47
Free market for gold. Can Min J 68:587-8 Ag '47
Future of gold. D. H. McLaughlin. il Min Cong J 32:36-40+ N '46
Future of gold in the world economy. P. M. Anderson. Can Min J 68:258-61 Ap '47; Same abr. Comm & Fin Chr 165:1509+ Mr 20 '47
Gold, 1946. Eng & Min J 148:74-6 F '47
Neutron cross-section studies with the rotating shutter mechanism. T. Brill and H. V. Lichtenberger. bibliog diags Phys R 72:585-90 O 1 '47

GOLD—*Continued*
Production and movement of gold; report of Bank for international settlements. Fed Res Bul 33:1238-40 O '47
Propaganda for a free market in gold. H. M. Tremaine. il Mag of Wall St 80:633-5+ S 13 '47
Refiner's representatives object to proposed gold export curb. Comm & Fin Chr 166: 637 Ag 14 '47
Representative Smith questions gold buying policy; Secretary Snyder replies. Comm & Fin Chr 165:1796 Ap 3 '47
Les sables aurifères des Gardons dans les Cévennes. map Génie Civil 124:217 Je 1 '47
Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens, jr. and others. Phys R 71:165-73 F 1 '47
Stopping power of various substances for fission fragments. E. Segrè and C. Wiegand. diag Phys R 70:808-11 D 1 '46
Treasury issues stricter regulation on gold traffic. Comm & Fin Chr 166:1754 O 30 '47
Treasury proposes more brakes on gold exports. Comm & Fin Chr 166:534 Ag 7 '47

See also
Gold as money
Gold metallurgy
Gold mines and mining
Gold ores

Analysis

Assaying gold solutions; method used at Hollinger gold mines. M. B. Scott. Can Min J 68:405-7 Je '47
Determination of gold with ascorbic acid. E. C. Stathis and H. C. Gatos. Ind & Eng Chem Anal ed 18:801 D '46
Electrolytic gold solution assay. J. E. Nelson. Can Min J 68:15-16 Ja '47

Isotopes

Gamma-radiation from tantalum, iridium, and gold. J. M. Cork. il diag Phys R 72:581-5 O 1 '47
Radioactive isotope of gold, $_{79}Au^{198}$ and low energy range of its spectrum. S. Jnananda. bibliog Phys R 70:812-14 D 1 '46

Prices

All that glitters. Fortune 36:3-4 Ag '47
Gold selling plan of American smelting & refining co. portends no free market. Comm & Fin Chr 166:339 Jl 24 '47
Is the price of gold too low? P. Einzig. Comm & Fin Chr 164:2882+ D 5 '46
Keeping gold price officially low retards recovery; U.S. could raise quotation to free-market value and help world trade. J. E. Kelly. Barron's 27:7 Jl 21 '47; Discussion. 27:7 Ag 4 '47
Must gold price be raised? V. L. Horoth. il Mag of Wall St 79:654-6+ Mr 15 '47
Transactions in gold at premium prices; statement by International monetary fund. Fed Res Bul 33:851 Jl '47; Same. Comm & Fin Chr 165:3360 Je 26 '47; Same. Economist 152:1037-8 Je 28 '47

Statistics

Production and movements of gold; Bank for international settlements analysis. Comm & Fin Chr 166:225+ Jl 17 '47
U.S. gold, silver, and lead production low in 1946. Min & Met 28:112 F '47
U.S. imports of gold from USSR since 1940; table. Comm & Fin Chr 165:1549 Mr 20 '47

GOLD alloys
Cold working and heat treatment of a 10-carat gold alloy. V. H. Patterson and B. N. Iannone. il diag Am Soc for Metals Trans 37:278-97; Discussion. 297-302 '46

GOLD as money
Agitation for further devaluation of our dollar. W. E. Spahr. Comm & Fin Chr 166: 617+ Ag 14 '47
Bevin could be right! not giving away our gold, but purchases of selected currencies might lubricate trade. T. McCarthy. Barron's 27:8-9 S 8 '47
Black market in yellow metal; U.S. Treasury cracks down. Bsns W p 19-20 Ag 9 '47
British attack on Fort Knox. A. W. May. Comm & Fin Chr 166:1005+ S 11 '47
Danger of our buried gold. T. I. Parkinson. Comm & Fin Chr 166:1733+ O 30 '47
Economists' national committee on monetary policy suggest detailed monetary reform to the President and Congress. Comm & Fin Chr 165:1253+ Mr 6 '47
Future of gold in the world economy. P. M. Anderson. Can Min J 68:258-61 Ap '47; Same abr. Comm & Fin Chr 165:1509+ Mr 20 '47
Gold and inflation; gold purchase policy. T. I. Parkinson. Comm & Fin Chr 166:908+ S 4 '47
Gold dealings ban. Economist 153:210 Ag 2 '47
Gold; price of gold; world tied to American dollars. W. Gates. Mag of Wall St 80:431-3+ Jl 19 '47
Gold question reemerges. Nat City Bank p 117-19 O '47
Gold standard in a free gold market. J. D. Mooney. Comm & Fin Chr 164:2457+ N 14 '46
Keeping gold price officially low retards recovery; U.S. could raise quotation to free-market value and help world trade. J. E. Kelly. Barron's 27:7 Jl 21 '47; Discussion. 27:7 Ag 4 '47
Make the dollar as good as gold. L. H. Haney. Comm & Fin Chr 165:861+ F 13 '47
Must gold price be raised? V. L. Horoth. il Mag of Wall St 79:654-6+ Mr 15 '47
New York reserve bank analyzes world gold distribution. Comm & Fin Chr 166:535+ Ag 7 '47
Production and movement of gold; report of Bank for international settlements. Fed Res Bul 33:1238-40 O '47
Propaganda for a free market in gold. H. M. Tremaine. il Mag of Wall St 80:633-5+ S 13 '47
Proposes return to gold standard. E. J. W. Proffitt. Comm & Fin Chr 165:1387+ Mr 13 '47
Re-appraising the gold standard; its relevance to the foundations of Anglo-American collaboration; further exchange of correspondence. P. Courtney and W. Craven-Ellis. Comm & Fin Chr 164:2937+; 165: 868+ D 5 '46, F 13 '47
Secretary Bevin's proposal for redistribution of Fort Knox gold. W. E. Spahr. Comm & Fin Chr 166:1001+ S 11 '47
Should free gold markets be outlawed? A. M. Sakolski. Comm & Fin Chr 166:519+ Ag 7 '47
Status of gold clause with Fund and Bank. Comm & Fin Chr 165:2483 My 8 '47
There'll be gold standards again. A. M. Sakolski. Comm & Fin Chr 165:1936+ Ap 10 '47
What price for gold? L. H. Haney. Comm & Fin Chr 165:990+ F 20 '47

Statistics

Production and movements of gold; Bank for international settlements analysis. Comm & Fin Chr 166:225+ Jl 17 '47

Europe

Europe's remarkable gold movements. J. van Galen. Comm & Fin Chr 165:1924+ Ap 10 '47

Great Britain

Convertible currency and a free gold market. J. D. Mooney. Comm & Fin Chr 166:1533+ O 16 '47

Mexico

Bank of Mexico ends gold sales. Comm & Fin Chr 166:19 Jl 3 '47

Switzerland

Switzerland and gold. Economist 153:457 S 13 '47

GOLD COAST, Africa

Commerce

Gold Coast imports of selected items, first 9 months 1946 and 1945; tabulation. For Comm W 26:22 Mr 29 '47

GOLD compounds
ω-Aurothio fatty acids and their salts. E. E. Moore and R. T. Rapala. Am Chem Soc J 69:266 F '47

GOLD dust
Design of exhaust systems; elimination of such dusts as gold, silver and platinum. F. H. Stebbins. il plan diags Sheet Metal Worker 37:48-50+ D '46

GOLD leaf
Goldbeater's ancient art lags behind demand for leaf. il Bsns W p22 D 28 '46

GOLD metallurgy
Carbon-cyanide mill tests at the Getchell mine, Nevada. R. A. Hardy. Min Cong J 32:81 O '46
Dissolution of gold in cyanide solution. P. F. Thompson. bibliog il Electrochem Soc Trans 91 (preprint 26):375-403 '47
Electrolytic gold solution assay. J. E. Nelson. Can Min J 68:15-16 Ja '47
Hasaga gold mines, limited. D. C. McLaren. Can Min J 68:173-4 Mr '47
McKenzie Red Lake gold mines. D. C. McLaren. Can Min J 68:240-1 Ap '47
Milling at Magnet Consolidated mines. A. C. Anderson. flow sheet il Can Min J 68: 393-8 Je '47
Milling on a shoestring on the African Gold Coast. W. H. Dennis. il Eng & Min J 148: 76-7 My '47
Milling practice at Perron gold mines; with cost data. B. Demarsh. flow sheet il Can Min J 68:5-9 Ja '47
Notes on the operation of a rod mill at Kirkland Lake Gold. J. Dixon. Can Min J 67: 1030 N '46

GOLD miners

Gold Coast, Africa

Report on silicosis and tuberculosis among mine workers in the Gold Coast; abstract. A. J. Murray and J. A. Crocket. J Ind Hygiene 29:sup 46-7 My '47

Ontario

Why the shortage of miners? too little instruction. K. O'Donnell. Can Min J 68:13-14 Ja '47

South Africa

Native mine workers in South Africa. il map Comp Air Mag 52:33-8 F '47

GOLD mines and mining
Gold, 1946. Eng & Min J 148:74-6 F '47
Plane-of-vein maps used to settle stope contracts. G. C. Waterman. diags Eng & Min J 148:72-5 S '47

Finance

Agitation for further devaluation of our dollar; mining interests. W. E. Spahr. Comm & Fin Chr 166:617+ Ag 14 '47
Tax relief plan little help for Canadian gold miners. Barron's 27:30 Mr 24 '47

Placer mining

Shaped charge helpful in placer drilling tests. J. A. Roos. il diag Eng & Min J 148:73 Ja '47

Securities

Gold; with statistics on leading shares. W. Gates. Mag of Wall St 80:431-3+ Jl 19 '47
Outlook for gold mining stocks. L. H. Bradshaw. Comm & Fin Chr 165:2980+ Je 5 '47

Arizona

History of famous western mines; legend of the Lost Dutchman. Can Min J 68:580-1 Ag '47
History of famous western mines; lost Tombstone treasure. J. McCaleb. Can Min J 68:407 Je '47

Australia

Australia's golden West. J. Johnson. il Can Min J 68:582-3 Ag '47

British Columbia

Methane in metal mines; explosion in underground workings of Pacific (eastern) gold mine, Aug. 18, 1947. Can Min J 68:739-41 O '47

California

Mojave gold; Burton brothers Tropico mine. M. Wharton. il Explosives Eng 25:39-41+ Mr '47
Narrow vein problem solved by scraper-slot stoping. R. Farmin. il diags Eng & Min J 148:74-6 Ja '47
Original sixteen to one gold-quartz vein, Alleghany. H. R. Cooke, jr. bibliog il maps diags Econ Geol 42:211-50 My '47

Canada

Tax relief plan little help for Canadian gold miners. Barron's 27:30 Mr 24 '47

Colorado

Fabulous Camp Bird mine. J. McCaleb. Can Min J 68:642-3 S '47

France

Contribution à l'étude de l'or en France. V. Charrin. Chimie & Ind 57:187-9 F '47
L'exploitation des mines d'or en France. G. Vié. map Génie Civil 124:328-33 S 1 '47
L'or dans le bassin du Rhône; la mine de Bissieux, Loire. Génie Civil 124:77 F 15 '47

Gold Coast, Africa

Ariston gold mines (1929), limited; 17th ordinary general meeting. Economist 153:342 Ag 23 '47
Ashanti goldfields corporation, limited; Bibiani (1927) limited; ordinary general meetings. Economist 152:826 My 24 '47
Milling on a shoestring on the African Gold Coast. W. H. Dennis. il Eng & Min J 148: 76-7 My '47

India

Structural principles controlling the occurrence of ore in the Kolar gold field. W. J. Bichan. bibliog(48 titles) il map diags Econ Geol 42:93-136 Mr '47

Montana

Shaped charge helpful in placer drilling tests. J. A. Roos. il diag Eng & Min J 148:73 Ja '47

Mysore

Deep mining problems in the Kolar gold field. J. Spalding. il Eng & Min J 148:70-5 Ag '47

Nevada

Tribulations of a small-mine operator; Standard cyaniding company. H. L. Hazen. Min & Met 28:279-81 Je '47

New Mexico

History of famous mines; Sublette's secret. J. McCaleb. Can Min J 68:503 Jl '47

Ontario

Hasaga gold mines, limited. D. C. McLaren. il Can Min J 68:168-74 Mr '47
McKenzie Red Lake gold mines. D. C. McLaren. il Can Min J 68:236-41 Ap '47
Milling at Magnet Consolidated mines. A. C. Anderson. flow sheet il Can Min J 68: 393-8 Je '47
Recent developments in Keith township. N. Hogg. Can Min J 68:24-5 Ja '47
Reminiscences of the early days of Porcupine and Red Lake. H. Hanson. il Can Min J 68:572-4 Ag '47
Rush Lake gold mines; preliminary report. N. Hogg. map Can Min J 67:1109-12 D '46
Safety practice at Wright Hargreaves. M. Hastie. Can Min J 67:1046-8 N '46

Philippine Islands

Gold king sets out again; Benguet consolidated mining co. Bsns W p32+ O 4 '47
Recovering gold the hard way; methods of Igorots of Mountain Province. N. N. Lim. Eng & Min J 148:85 Ag '47

Quebec

Milling practice at Perron gold mines; with cost data. B. Demarsh. flow sheet il Can Min J 68:5-9 Ja '47
Passing glance at a ground system; Perron gold mines. C. E. Dunlop. Can Min J 68: 649-50 S '47

Siberia

Stalin's Eldorado. B. Nikolaevsky. bibliog il map Fortune 36:98-101+ Ag '47

South Africa

Discovery of Orange State goldfield. Can Min J 67:1129 D '46
OFS goldfield. map Economist 152:808-10, 858-60 My 24-31 '47
Seven golden houses; they dominate African mining. il Fortune 34:162-9+ D '46

See also
Gold miners—South Africa
Gold mines and mining—Transvaal

GOLD mines and mining—*Continued*

South Dakota

Two-way shaft communications; Homestake mining company. C. N. Kravig and R. Tario. il Min Cong J 33:20-4 Ja '47

Transvaal

Blyvooruitzicht gold mining company, limited; statement by the chairman at annual general meeting. W. M. Frames. Economist 151:848 N 23 '46

General mining and finance corporation, limited; statement by the chairman at ordinary general meeting. G. Albu. Economist 153:43 Jl 5 '47

Kaffir dilemma. Economist 152:27-9 Ja 4 '47

Kaffir gold; illustrations with text. Eng & Min J 148:54-9 My '47

New Modderfontein gold mining company, Nourse Mines, annual general meetings. Economist 151:887 N 30 '46

Rand mines, limited; Crown mines, limited; City Deep, limited; annual meetings. Economist 152:823-5 My 24 '47

Sinking a mine shaft in South Africa. il diags Comp Air Mag 52:8-12 Ja '47

United States

Future of gold. D. H. McLaughlin. il Min Cong J 32:36-40+ N '46

Gold mining in the doldrums. N. O'Donnell. il Min Cong J 33:79-82+ F '47

Yukon territory

British Columbia and Yukon in 1946. F. H. Stephens. il Can Min J 68:83-4 F '47

Klondike discovery; gold rush fifty years ago. H. G. Henderson. il Can Min J 67: 1027-9 N '46

GOLD ores

Original sixteen to one gold-quartz vein, Alleghany, California. H. R. Cooke, jr. bibliog il maps diags Econ Geol 42:211-50 My '47

Structural principles controlling the occurrence of ore in the Kolar gold field. W. J. Bichan. bibliog(48 titles) il maps diags Econ Geol 42:93-136 Mr '47

Ubiquity of gold values and their relation to zones of tensional dilation. W. J. Bichan. Econ Geol 42:396-403 Je '47

GOLD plating

Plating with gold. H. M. Haberman. bibliog diags Metal Finishing 44:525-8 D '46

GOLD standard. See Gold as money

GOLDBEATING. See Gold leaf

GOLDEN, Clinton Strong, 1886-

Labor adviser. por Bsns W p80 Jl 26 '47

GOLDEN Gate international exposition. See San Francisco—Golden Gate international exposition

GOLDSCHEIDER, Walter F.

Goldscheiders' American venture in eighth year of prosperity. por Cer Ind 49:98+ S '47

GOLF balls

Rating

Golf balls. il Consumers Res Bul 20:9 Jl '47

GOLF clubs

Manufacture

Broaching matches golf irons within 1/16 oz. il diags Am Mach 91:90-1 Ja 30 '47

Molded golf club heads. il Mod Plastics 24: 101 Jl '47

GOMBERG, Moses, 1866-1947

Sketch. por Chem & Eng N 25:548 F 24 '47

GOOD will in business

New applications for market research; management research on market position. W. Alderson. Sales Management 58:87 Mr 15 '47

GOODELL, John M. 1867-1927

Goodell prize in waterworks field is awarded to its 20th recipient. Eng N 139:55 Jl 10 '47

GOODLASS wall and lead industries, limited

Statement by the chairman. C. Cookson. Economist 153:38 Jl 5 '47

GOODLOE, John Duncan, 3d, 1908-

Takes RFC chair. por Bsns W p56 Ap 19 '47

GOODRICH, B. F., company

Annual report. Comm & Fin Chr 165:1590 Mr 24 '47

Big four in rubber. R. Colston. Mag of Wall St 80:326 Je 21 '47

Trouble in synthetic rubber. pors Fortune 35:115-19+ Je '47

GOODSON, Joseph Arthur, 1910-1946

Sketch. D. A. Green. por Am Assn Pet Geologists Bul 30:1322-4 Jl '47

GOODWIN, Richard V. 1895-

Sketch. J. S. Daniel. por East Underw 47: 85+ D 13 '46

GOODYEAR tire and rubber company

Annual report. Comm & Fin Chr 165:1190 Mr 3 '47

Big four in rubber. R. Colston. Mag of Wall St 80:326 Je 21 '47

DeYoung, Climer advanced; other company changes. India Rubber World 115:832-4 Mr '47

GORDON foods, inc.

Gordon Foods; story of a southern business. J. Mebane. il Manuf Rec 116:30-1+ My '47

Stock offered. Comm & Fin Chr 165:1190 Mr 3 '47

GORMAN, Manuel M.

Special assistant to Attorney General handles insurance matters. por East Underw 47:76 D 13 '46

GOSSETT, William T.

New members of Ford cabinet. por Bsns W p38 F 15 '47

GOSSYCAERULIN. See Gossypol

GOSSYFULVIN

Pigments of cottonseed; gossyfulvin, a native cottonseed pigment related to gossypol. C. H. Boatner and others. bibliog il Am Chem Soc J 69:1268-73 Je '47

GOSSYPOL

Pigments of cottonseed; gossycaerulin, a blue quinonoid gossypol derivative occurring in cooked cottonseed. C. H. Boatner and others. bibliog Am Chem Soc J 69:668-72 Mr '47

GOUDY, Frederic William, 1865-1947

Designer of type faces. por Inland Ptr 119: 42-3 Je '47

Sketch. por Ptr Ink 219:110 My 16 '47

GOULD, Harris Perley, 1871-1946

Sketch. G. M. Darrow. Science 105:490 My 9 '47

GOVERNMENT accounting

Navy accounting; a lesson in adaptation. L. A. Schmidt. Harvard Bsns R 25 no2:243-54 [Ja] '47

See also

Government corporations—Accounting
Municipal accounting
United States—General accounting office

GOVERNMENT advertising

WAA signs 30 agencies for regional campaigns. Ptr Ink 217:104 N 22 '46

See also

Recruiting campaigns
State advertising

GOVERNMENT aid to business

Guides for new world traders. E. F. Becker and C. Cloyes. bibliog il map U S Dept of Commerce, Economic Ser 59:1-26; pa 10c Supt. of doc. '46

Monthly trade reports; a Census business barometer. H. Kailin. Dom Comm 35:8-16 Ja '47

U.S. foreign service and American business. C. M. Ravndal and E. M. Braderman. il For Comm W 28:3-5+ Ag 23 '47

See also

Information service, Government
Loans, Bank—Guaranty
Reconstruction finance corporation
Subsidies
United States—Commerce, Department of
United States—International trade, Office of

GOVERNMENT aid to science. See Science and state

GOVERNMENT bank deposits. See Bank deposits, Government

GOVERNMENT bonds. See Bonds, Government

GOVERNMENT checks. See Checks, Government

GOVERNMENT contracts. See Contracts, Government

GOVERNMENT corporations

Financial status of federal corporations. K. L. Pray. Harvard Bsns R 25 no2:158-68 [Ja] '47

Government corporations and credit agencies, principal assets and liabilities, Sept. 30, 1946. Fed Res Bul 33:70 Ja '47 [cont monthly]

Public corporation; its guiding principles and how it works; abstract. A. Street. Electrician 139:695-6 S 5 '47

See also

Commodity credit corporation
Federal deposit insurance corporation
Home owners' loan corporation
Reconstruction finance corporation

Accounting

TVA's first audit by GAO points way to businesslike evaluation. J Account 83:507-10 Je '47

GOVERNMENT employees

Blow aimed at C.I.O. hits A.F.L.; striking barge workers are suspended. Bsns W p90 D 14 '46

Cities fear union pressure; states and counties also. Bsns W p77-8+ F 22 '47

Collective bargaining in the public service. S. D. Spero. Ann Am Acad 248:146-53 N '46

Federal government and the shortage of scientific personnel. C. V. Kidd. Science 105: 84-8 Ja 24 '47

Government employees to have loyalty test. Comm & Fin Chr 165:1845 Ap 3 '47

House passes bill to bond House sergeant-at-arms employes. Nat Underw 51:29-30 Ap 10 '47

Production clinic; meeting government men. E. G. Thomssen. Soap & San Chem 23:71+ Ag '47

Staff regulations for nationalised industries and public services in France. Int Labour R 55:115-22 Ja-F '47

Study ordered on U.S. employees' loyalty. Comm & Fin Chr 164:2941 D 5 '46

Suggested plan for a preventive medical program in a Federal employees' health service. Pub Health Rep 61:1642-54 N 15 '46

Time studies possible now on federal jobs. Barron's 27:6 Je 9 '47

Uncle Sam's payroll; table of federal personnel inside and outside continental United States employed by executive agencies during November 1946, and comparison with October. Credit & Fin Management 49:32 F '47

See also

Civil service
Municipal employees
State employees

Law

Defends his legislative program; upholds measure prohibiting strikes by public employees; Condon-Wadlin bill. T. E. Dewey. Comm & Fin Chr 165:2249+ Ap 24 '47

Significance of legislation forbidding strikes by public employees. W. R. LaDue. Am Water Works Assn J 39:844-54 S '47; Same. Water & Sewage Works 94:353-8 O '47

Striking employees of government-owned corp. to be discharged. Comm & Fin Chr 164:2815 N 28 '46

Supreme court upholds Hatch act. Comm & Fin Chr 165:1169 F 27 '47

GOVERNMENT expenditures

Debt, taxes and expenditures; abstract. N. M. Mason. Comm & Fin Chr 165:1129+ F 27 '47

Experts check spots for cuts in federal spending. J. Reid. Barron's 27:9 Je 9 '47

Federal budget document; Appendix 6, Budget receipts and expenditures, fiscal years 1939 thru 1948. J Account 83:356-62 Ap '47

Government foreign transactions during the fiscal year 1946. J. Shirer. Survey of Cur Bsns 26:18-20 D '46

Governmental expenditures grow apace. maps Pub Util 40:312-13 Ag 28 '47

Hits high cost of government. K. St. George. Comm & Fin Chr 166:128 Jl 10 '47

Limitations of government spending. C. Revercomb. Comm & Fin Chr 165:650+ Ja 30 '47

Menace of rising federal expenditures; address before U.S. Chamber of commerce. F. R. Fairchild. Comm & Fin Chr 165:2330+ My 1 '47

Rep. Stefan, a specialist on cutting out expense. Bsns W p20 My 10 '47

Safeguarding Nation's financial solvency; need of arousing public interest in taxation and government expenditures. J. W. Hanes. Comm & Fin Chr 166:1534+ O 16 '47

U.S. commitments abroad. H. F. Byrd. Comm & Fin Chr 165:2114 Ap 17 '47

Wants Baruch survey of America's assets before undertaking President's proposed foreign assistance program. H. F. Byrd. Comm & Fin Chr 165:1923+ Ap 10 '47

Will the GOP Congress fulfill war commitments to our people? H. Buffett. Comm & Fin Chr 164:3016+ D 12 '46

See also

Budget—United States
Finance
Municipal finance
Public works—Federal loans and grants
State finance
Taxation
United States—Appropriations and expenditures
War finance

GOVERNMENT housing. See Housing projects, Government

GOVERNMENT investigations

Hearings go town meeting: House and Senate committees investigating problems of all types of business. Bsns W p 17-18 S 20 '47

See also

Gas, Natural—Government investigations

GOVERNMENT laboratories

Government laboratories of the Office of rubber reserve. il Chem & Eng N 24:3024-6 N 25 '46

See also

Brookhaven national laboratory
Naval research laboratory

GOVERNMENT liability

La responsabilité de l'État à la suite d'accidents causés par la défaillance d'ouvrages publics. A. Mestre. Génie Civil 124:116-17 Mr 15 '47

See also

Municipal liability

GOVERNMENT libraries

Library of the world's oldest Parliament; House of commons. J. V. Kitto. Special Lib 38:17-19 Ja '47

See also

Library of Congress
United States—Army medical library
United States—Technical services, Office of—Library

GOVERNMENT loans and grants

Government corporations and credit agencies, principal assets and liabilities; classification of loans by purpose and agency, Sept. 30, 1946. Fed Res Bul 33:70 Ja '47 [cont monthly]

Wants all U.S. credit guarantees and controls ended; statement by Chamber of commerce. Comm & Fin Chr 164:2761 N 28 '46

See also

Public works—Federal loans and grants
Reconstruction finance corporation
Rural electrification administration

GOVERNMENT loans to industry

Future of government in the farm mortgage field. J. D. Black. J Land & Pub Util Econ 23:1-11 F '47

GOVERNMENT ownership

Britain's nationalization growing pains. R. Hobbs. Pub Util 39:228-34 F 13 '47

Britain's problem of transport nationalization. H. T. Banyard. Pub Util 40:93-100 Jl 17 '47

Coal nationalisation in Britain. W. R. Gordon. Can Min J 68:245-9 Ap '47

GOVERNMENT ownership—*Continued*
Fortune survey; how do veterans feel toward business and industry? making airplanes for army and navy, a privately owned or government plant? Fortune 34:6+ D '46
France's experiments with nationalization. Pub Util 40:520-1 O 9 '47
How Britons react to effort to socialize all transport. W. V. Morland. Mass Transportation 43:181+ My '47
Mixed economy in transportation. C. S. Duncan. Ry Age 123:99-103 Jl 19 '47
Nationalization; its effect on public utilities; policy of the Conjoint conference. Gas J (Lond) 249:253-4 Ja 29 '47
Nationalization law for Austrian basic industry. For Comm W 27:12-13 Ap 26 '47
Nationalization threat slows foreign investment in Italy. A. Giordano. Comm & Fin Chr 165:5+ Ja 2 '47
Nationalised mines and the coal supply situation. R. A. S. Redmayne. il Engineer 183: 35-6, 62-4 Ja 10-17 '47
Norwegian government goes into steel business. J. R. Hight. Iron Age 158:86+ D 26 '46
Organization and regional boundaries of a nationalized gas industry. map Gas J (Lond) 251:242-4+ Jl 30 '47
Politics of railway compensation; Rail stocks and the law. Economist 151:864, 879-80 N 30 '46
Public opposes government ownership of industry; Gallup poll. Iron Age 159:111 F 6 '47
Rapid nationalization of French industry. E. Kaskeline. Comm & Fin Chr 166:421+ Jl 31 '47
Transport bill; Transport bill dissected. Economist 151:897-9, 914-15 D 7 '46

See also
Electric utilities—Government ownership
General aniline and film corporation
Government corporations
Hydroelectric plants—Government ownership

GOVERNMENT packaging. See Packaging, Government

GOVERNMENT paper. See Paper, Government

GOVERNMENT patents. See Patents—Government ownership

GOVERNMENT plants. See Industrial demobilization—Government plants

GOVERNMENT publications
U.S. government publications in relation to industry. I. M. Meyer. Special Lib 38:35-8 F '47
Where you can get government market data; with chart. W. P. Burn. Ptr Ink 218:43-6 F 7 '47

Bibliography

Census publications subject guide, Jan.-June 30, 1946. 176p U.S. Bur. of the census, Dept. of commerce, Washington 25, D.C. '46
Format of U.S. monthly catalog changed. Special Lib 38:269-70 O '47
100 selected books. 46p Supt. of doc. Washington, D.C. '47
Selected United States government publications. (no. 11) 4p Supt. of doc. Washington, D.C. '47 [published semi-monthly]
Services available to retailers from the United States Department of commerce. B. H. Gordon. J Retailing 23:14-15 F '47
Subject guide to United States government publications. H. S. Hirshberg and C. H. Melinat. 228p $5 American library assn, 520 North Michigan av, Chicago '47

See also
United States—Mines, Bureau of—Bibliography

GOVERNMENT publicity
British council, 1947. Economist 151:862-3 N 30 '46

GOVERNMENT purchasing. See Purchasing, Government

GOVERNMENT radio stations. See Radio stations, Government

GOVERNMENT regulation of industry
Bureaucracy trend toward collectivism. J. C. O'Mahoney. Comm & Fin Chr 165:873+ F 13 '47
Government and business. A. W. Barkley. Comm & Fin Chr 166:620+ Ag 14 '47
Government in economic and industrial relations. E. Clague. Comm & Fin Chr 166: 918+ S 4 '47
Industry's planners better than government's. R. M. Bleiberg. Barron's 26:3+ N 18 '46
Public controls. A. Walsh. Comm & Fin Chr 164:2885+ D 5 '46
Regulator looks at regulation. R. B. McEntire. Comm & Fin Chr 166:1319+ O 2 '47
Rise and fall of the public utility concept. H. R. Smith. J Land & Pub Util Econ 23:117-31 My '47
Small business and government regulation. B. W. Roper. U S Dept of Com, Economic (Small Business) Ser 58:1-16; pa 10c Supt. of doc. '46

See also
Commercial policy
Commodity control
Electric utilities—Regulation
Export trade—Regulation
Federal trade commission
Food laws and legislation
Government ownership
Industry and state
Insurance companies—Regulation
Interstate commerce commission
Labor laws and legislation
Moving picture industry—Regulation
National war labor board
Prices—Regulation
Railroads and state
Rent—Laws and regulations
Trade marks
Trusts, Industrial—Law
Wages—Regulation

GOVERNMENT research
Address at general engineering meeting. V. Bush. Science 105:89-91 Ja 24 '47
Britain spurs broad industrial research; D.S.I.R.; set-up and purposes. R. C. Leslie. il For Comm W 26:3-4+ Ja 11 '47
Bulk of $625 million spent during 1947 for government research. Iron Age 160:219-20 O 16 '47
Canada's industrial research experiences great expansion. R. C. Leslie. il For Comm W 28:7-8+ S 6 '47
Federal government and the shortage of scientific personnel. C. V. Kidd. Science 105:84-8 Ja 24 '47
Government and business. J. A. Krug. Am Gas J 165:31-2 N '46
Industrial research advances in Australia and New Zealand. R. C. Leslie. il For Comm W 28:5-7+ Ag 9 '47
Industrial research in India presages broad advances. R. C. Leslie. il For Comm W 27:4-6+ Je 7 '47
Industrial research in South Africa and in British colonies. R. C. Leslie. il For Comm W 29:6-7+ O 11 '47
Mechanical engineering research; organization set up by government. Engineer 183: 499-500 Je 6 '47; Iron Age 160:146+ Jl 3 '47; Mech Handling 34:386-7 Jl '47
Operational analysis in relation to administration of government-sponsored research J. R. Loofbourow. bibliog diags Science 106:113-17 Ag 8 '47
President's budget message recommends more than one billion dollars for federal research and development. Chem & Eng N 25:213 Ja 27 '47
President's scientific research board recommends changes in administration of federal research program; Administration for research and Manpower for research. Chem & Eng N 25:3055+ O 20 '47
Quartermaster corps research and development. A. Leggin. il Chem & Eng N 24: 3044-5+ N 25 '46
Quartermaster research program offers attractive careers to scientists. J. S. Jacobs. bibliog il Rayon 27:533-6, 591-5 O-N '46
Recommendations for national science program. J. R. Steelman. Steel 121:52 S 8 '47
Research techniques strengthening asked by Scientific research board. Oil Paint & Drug Rep 152:7 O 13 '47
Science, government, and industry. E. V. Appleton. Chem & Eng N 25:2422-6 Ag 25 '47; Same cond. il Tech R 49:211-16+ F '47
Science, industry, and government; England's utilization of research on a national scale. E. V. Appleton. il Tech R 49:211-16+ F '47

GOVERNMENT research—*Continued*
Scientific research expenditures increase urged by Truman board. Oil Paint & Drug Rep 152:7+ S 1 '47
U.S. need; more research. il Bsns W p 15-16 Je 7 '47
See also
Brookhaven national laboratory
Great Britain—Scientific and industrial research, Department of
Naval research
United States—Army—Medical corps
United States—Navy department—Naval research, Office of
United States—War department—Research and development division

GOVERNMENT statistics
Accuracy of government statistics. G. H. Moore. Harvard Bsns R 25 no 3:306-17 [Ap] '47
Measures of employment. D. R. Roberts. Survey of Cur Bsns 27:18-22 O '47
Monthly trade reports; a Census business barometer. H. Kailin. Dom Comm 35:8-16 Ja '47
Neglected business index; Department of commerce quarterly report on current and prospective capital expenditures. J. E. Loshar. Comm & Fin Chr 165:50 Ja 2 '47
Social and economic adjustments in a democratic world. I. Lubin. Am Stat Assn J 42:11-19 Mr '47
U.S. foreign-trade statistics; some immediate questions posed. J. E. Ely. For Comm W 26:5-6+ Mr 15; 7+ Mr 22 '47
United States government program for statistics. Am Stat Assn J 42:20-45 Mr '47
See also
Great Britain—Statistics

GOVERNMENTAL purchasing, National institute of. See National institute of governmental purchasing

GOVERNMENTAL research association
Directory of organizations and individuals professionally engaged in governmental research 1946-1947. 44p pa $1.50 Governmental research assn, 30 Rockefeller Plaza, New York 20 '46
Proceedings of the thirty-second annual conference, Magnolia, Mass., Sept. 10-13, 1946. 91p pa $2 Governmental research assn, 30 Rockefeller Plaza, New York 20 '46

GOVERNORS (machinery)
Centrifugal governor speed control for small motors. W. M. Yogerst. il diag Product Eng 18:138-9 Ag '47
Centrifugal governors with flyweights of distributed mass. B. W. Millington. diags Engineering 163:232 Mr 28 '47
Diesel engine governors. il diags Diesel Power 24:1320-2+, 1448+; 25:58-62+ N '46-Ja '47
Editorial citation to Myron J. Bestervelt and William Blanchard, Continental motors corp. for achievement in induction heating and spinning; governor sub-assembly. il Materials & Methods 24:1190 N '46
Electrohydraulic control of Diesel-electric drives. C. B. Lewis and M. A. Edwards. il diags Mech Eng 68:953-5 N '46; Same. Diesel Power 25:72-4+ F '47
Magnetic governor release for standby operation. B. H. Mudgett. il diag Elec World 127:100-1 My 10 '47
Massey's new governor for Diesel engines. il diag Diesel Power 25:55-6 Jl '47
New frequency recorder; abstract. J. E. Allen and W. B. Hess. Power 91:175-7 Mr '47
New Kegresse transmission; gear shifting actuated by hydraulic and centrifugal governor control. diags Automotive & Aviation Ind 96:40-1+ My 15 '47
Solving a difficult machining problem; producing governor bodies. R. Mawson. diags Materials & Methods 24:1505 D '46
Train-control governor for Diesels; for use with automatic train control equipment. il Ry Mech Eng 120:633-4 N '46
Turbine-shaft centrifugal oil pump works with oil-driven booster pump. R. Sheppard and J. W. Barnett. il diags Power 91:78-81 F '47
Variable-speed hydraulic governor. J. Z. Bujak. il diags Inst Mech Eng J & Proc 153 (War emergency issue no 7):193-203; Discussion. 204-5 '45

Manufacture
Production control spots shortages; Woodward governor co. W. A. Ring. il Am Mach 91:117-20 Mr 13 '47

Testing
Analyzer charts performance of hydraulic governors. B. F. Gostin. il Elec World 127:64-5 Mr 1 '47
Stand built to test governors under service conditions. il Comp Air Mag 52:155 Je '47

GOVERNORS, Gas. See Gas governors

GRABAU, Amadeus William, 1870-1946
Memorial. H. W. Shimer. por(pl 6) Geol Soc Proc 1946:155-66 bibliog(p161-6) Jl '47

GRADE crossing accidents
1946 crossing accidents. Ry Age 123:29-30 Jl 5 '47

GRADE crossing elimination
Liability insurance as related to California highway contracts. K. A. Keyes. Pub Works 77:28 N '46

GRADERS, Road. See Road making machinery

GRADING (earthwork)
See also
Roads—Grading

GRADING and marking (students)
Application of sequential sampling to testing students. D. J. Cowden. Am Stat Assn J 41:547-56 D '46
Physics laboratory in an engineering school; one solution to problem of assigning grades to the student in the Sophomore physics laboratory. C. J. Pratt. J Eng Educ 37: 828-30 Je '47

GRADUATE school of banking. See Rutgers university—Graduate school of banking

GRADUATE work. See Colleges and universities—Graduate work; Engineering colleges—Graduate work

GRADUATES. See College graduates; Engineering graduates

GRADY, Henry Francis, 1882-
Ambassador to India. por Bsns W p114+ Ap 12 '47

GRADY, Robert Franklin, 1860-1946
Sketch. por Am Cer Soc Bul 25:465-7 D 15 '46

GRAFFITO decoration
L'emploi des sgraffites pour la décoration des maisons de la cité-jardin du Wylergut, près de Berne, Suisse. il Génie Civil 124:77 F 15 '47

GRAFTING (surgery)
See also
Bone grafting

GRAHAM, Benjamin, 1894-
When to mount a corporation. por Fortune 36:120+ S '47

GRAHAM-HOEME plow company
Plant blooms while the sun shines. il Bsns W p34 Ag 16 '47

GRAHAM-NEWMAN corporation
When to mount a corporation. Fortune 36: 120+ S '47

GRAHAM-PAIGE motors corporation
Forms Frazer farm equipment corp. as subsidiary. Comm & Fin Chr 165:1070 F 24 '47
Graham pulls rototiller out of Willow Run. Bsns W p35 Mr 1 '47
Kaiser-Frazer seeks cash; proposed merger with Graham-Paige. Bsns W p17 D 21 '46
Sale of auto assets approved; to retain farm equipment business. Comm & Fin Chr 165: 810 F 10 '47

GRAIN
Commodities are moving into shaky ground if grain-savings proposals work out. Barron's 27:28 O 20 '47
European bread grain crop would increase if price ratios were changed. Barron's 27:36 O 27 '47
Explosive dissociation for processing of cereals. il Food Ind 19:759+ Je '47; Same cond. Comp Air Mag 52:128 My '47
Grain crisis ahead. Barron's 27:42 S 15 '47
You can't eat steel. Fortune 36:3-4 O '47
See also
Barley
Corn
Flour
Rice
Rye
Wheat

GRAIN—*Continued*

Transportation

New York fights for grain. Barron's 27:5 F 24 '47

See also
Railroads—Rates—Grain

GRAIN bins
Ventilation in grain and seed bins. Safety Eng 94:95 O '47

GRAIN elevator insurance. See Insurance, Grain elevator

GRAIN elevators
Improved concreting techniques facilitate grain elevator construction. il plan diag Eng N 139:320-4 S 4 '47

GRAIN handling
Floating pneumatic grain-handling plant. il diags Engineering 163:210-14, 216 Mr 21 '47
Grain drying; processing and handling equipment. il plan Mech Handling 34:291-8 Je '47
Pattern for diagonal grain chute. O. W. Kothe. diags Sheet Metal Worker 37:42+ N '46
Pneumatic grain conveying on the farm. A. E. Canham. Mech Handling 34:480-2 S '47

GRAIN trade
Chicago board of trade adopts flexible margins. Comm & Fin Chr 166:1320 O 2 '47
Grain exchanges increase margin requirements. Comm & Fin Chr 166:1415 O 9 '47
Grain prospects worsening. Economist 153: 496-7 S 20 '47
Grain speculator needed; exchanges provide liquid market for hedging operations. Bsns W p26+ O 4 '47
Margin request shifts onus of high grain price. Barron's 27:38 Mr 17 '47
Markets' action shows conclusively that government makes high prices. Barron's 27:36-7 O 6 '47

GRAININESS (photography)
Photographic granularity and graininess. L. A. Jones and G. C. Higgins. bibliog il diags Opt Soc Am J 35:435-57; 36:203-27; 37:217-63 Jl '45, Ap '46, Ap '47

GRAM, Lewis Merritt, 1876-
Sketch. por(p550) Civil Eng 16:552 D '46

GRAMINE
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2118-19 S '47

GRAMMAR

See also
English language—Errors

GRAND canyon of the Colorado river
Faulting in east part of Grand canyon of Arizona. C. E. Van Gundy. bibliog 2pls maps Am Assn Pet Geologists Bul 30:1899-1909 N '46

GRAND COULEE dam. See Columbia river—Grand Coulee dam

GRAND RAPIDS, Michigan

Industries

Grand Rapids bets on quality. il Bsns W p34+ Jl 19 '47

GRAND union company
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:342+ Je 21 '47

GRANGE

Advertising

Oregon Grange merchandises its activities. W. A. Ayres. Ptr Ink 217:143-4 N 15 '46

GRANITE
Barre's boom presents a local problem. il Bsns W p54 O 11 '47
Diamond drilling and diamond bit investigation; drilling tests in uniform granite. L. Obert and others. bibliog 7 pls U S Bur Mines Rep of Invest 4041:1-18 '47
Further experiments on the surplus gamma-radiation from granite. V. F. Hess. bibliog Phys R 72:609-14 O 1 '47
Significance of the radioactivity of potassium in geophysics. E. Gleditsch and T. Gráf. bibliog Phys R 72:641 O 1 '47
Some pipe deposits of eastern Australia. R. Blanchard. maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47
Well-drill blasting in a granite quarry. O. M. Davis. il Explosives Eng 25:110-11 Jl '47

GRANITE cutting
Design of exhaust systems; dust collecting equipment for granite cutting. F. H. Stebbins. diags Sheet Metal Worker 38:99-101 Ja '47

GRANT, George B.
Rugged gear man Grant; excerpts from his Gear book for 1893. por Am Mach 91:96-7 Ag 28 '47

GRANT, W. T., company
How W. T. Grant uses sales promotion. J. R. Rowen. il Adv & Sell 40:46+ O '47
Variety chain store; a view of what's ahead in retail merchandising. J. Reiss. il Ptr Ink 220:27-9+ S 12 '47

GRANTS-in-aid
Upjohn research grants. Chem & Eng N 25: 2923 O 6 '47

Apportionment formulas

Grant-in-aid apportionment formulas. F. G. Cornell. Am Stat Assn J 42:92-104 Mr '47

GRANULAR materials
Adsorption from a fluid stream flowing through a stationary granular bed. O. A. Hougen and W. R. Marshall, jr. bibliog Chem Eng Proc 43:197-208 Ap '47
Design and use of adsorptive drying units. R. C. Amero, J. W. Moore and R. G. Capell. bibliog(126 ref) diags Chem Eng Prog 43:349-65; Discussion. 365-70 Jl '47
Interchange of heat between a gas stream and solid granules. J. R. Arthur and J. W. Linnett. diag Chem Soc J p416-24 Mr '47
Resistance to filtration. S. M. Walas. bibliog plan Am Inst Chem Eng Trans 42:783-93 O-D '46
Symposium of papers on flow of fluids. H. E. Rose. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 5):141-61; Discussion. 162-8 '45

GRANULARITY
Photographic granularity and graininess. L. A. Jones and G. C. Higgins. bibliog il diags Opt Soc Am J 35:435-57; 36:203-27; 37:217-63 Jl '45, Ap '46, Ap '47

GRANULATORS
Death by the granulator; study of missiles resulting from accidental explosions. C. Field. il map Chem Eng 54:126-8 F '47

GRAPE juice
Package keeps pace; Welch modernization. flow chart il Mod Packaging 20:108-11 My '47

GRAPEFRUIT
Juicells, new form of canned grapefruit. flow diag Food Ind 19:47-9 Ja '47

Analysis

Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47

GRAPES
Improved machines for processing grapes; patent. Food Ind 18:1964+ D '46
Ozark grapes graduate into big business; Welch grape juice co. il Manuf Rec 116:79+ Ja '47
Tartrates from winery pomace. E. K. Metzner. flow sheet il Chem Eng Prog 43:160-2 Ap '47

GRAPHIC arts
Developments in the graphic arts, 1945. R. H. Simmons. bibliog Paper Tr J 123:27-34 D 12 '46
Forging tomorrow's markets. E. Deubner. Inland Ptr 119:45 Ap '47
Graphic arts group takes aptitude tests. il Inland Ptr 118:39 Mr '47

See also
Engraving
Printing

GRAPHIC arts education association, National. See National graphic arts education association

GRAPHIC methods
Adaptable three-dimensional graph model. J. W. Brown. il Science 105:439 Ap 25 '47

GRAPHIC methods—*Continued*
Conversion graph for open flows of gas wells. W. F. Martin. Pet Eng 18:49-50 D '46
Designing two-soil mixtures. G. W. Shults. Roads & Sts 90:58+ Je '47
Determination of moisture content of coal by means of pulverizer heat balance. T. J. Finnegan and H. L. Smith. A S M E Trans 69:635-40; Discussion. 640-2 Ag '47
Determination of the thermal correction for a single-shielded thermocouple. W. M. Rohsenow and J. P. Hunsaker. bibliog diags A S M E Trans 69:699-703; Discussion. 703-4 Ag '47
Disposal of petroleum refinery waste; disposal needs based on graph method for finding run-off to rainfall ratio. W. B. Hart. bibliog diag Pet Processing 2:131+ F '47
Falk's graphical solutions to 100,000 practical problems. K. H. Falk, ed. 402p $6 Columbia graphs, Columbia, Conn. '46
Graph for determining lug shear-out distance; reference book sheet. W. A. McGowan. diags Product Eng 18:157+ My '47
Graphic heat loss computation for sludge digesters. J. G. Montgomery. Water & Sewage Works 94:287-91 Ag '47
Graphic method of selecting roller chain drives for multiple speed transmissions. W. Brown. Pet Eng 18:156+ N '46
Graphical analysis of cathode-biased degenerative amplifiers. W. A. Huber. bibliog diags Inst Radio Eng Proc 35:265-9 Mr '47
Graphical determination of heat transfer film coefficient for steam. B. F. Raber and F. W. Hutchinson. Heat & Ven 43:94-6 D '46
Graphical determination of heating attainment factor for transformers installed in vaults. J. E. Gahagan. Elec World 127:72-3 Mr 1 '47
Graphical method for distillation calculations. W. D. Harbert. Pet Processing 2: 610+ Ag '47
Graphical method locates point of breaking ground at rest of unstable slopes. R. G. Hennes. Civil Eng 17:333 Je '47
Graphical method of determining size of round blanks. G. A. Larri. Mach 53:147-8 Ap '47
Graphical methods for evaluating Fourier integrals. W. J. Cunningham. bibliog J Ap Phys 18:656-64 Jl '47
Graphical solution to problem of connecting two lines by a third line which makes specified angles with each. P. O. Potts and H. J. Johnson. diags Machine Design 19:114-16 My '47
Graphical solutions for cathode followers. H. L. Krauss. bibliog diags Electronics 20:116-21 Ja '47
Hydrocarbon absorption and fractionation process design methods; Sherwood graphical method for absorption and stripping calculations. W. C. Edmister. Pet Eng 19: 200+ O '47
Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47
Motor h.p. at partial loads. A. N. D. Kerr. Electrician 139:403 Ag 8 '47
Numerical-graphical methods of characteristics for plane potential shock-free flow problems. L. L. Cronvich. bibliog J Aeronautical Sci 14:237-42 Ap '47
Oklahoma gas & electric company method for load determination on distribution transformers. P. Shelley. Edison Elec Inst. Bul 15:17-19 Ja '47
Pure bending in the plastic range. H. A. Williams. diags J Aeronautical Sci 14:457-69 Ag '47
Rapid graphical method of estimating tower diameter and tray spacing of bubble-plate fractionators. W. L. Bolles. diags Pet Refiner 25:103-10 D '46
Raw mix blending calculated graphically. J. E. Berrocal. Rock Prod 49:87+ N '46
Short-circuit characteristics and load performance of inductor-type alternators. A. Mandl. il diags Inst E E J 94 pt 2:102-17 Ap '47
Stabilizing direct-voltage supplies; graphical method of assessing performance of gas-discharge tube stabilizer circuit. J. W. Hughes. bibliog diags Wireless Eng 24: 224-30 Ag '47
Stanton diagram modification gives direct solution for pipe flows. H. J. Miles. Eng N 137:732-3 N 28 '46
Streamline graphics. J. P. Vidosic. diags Georgia School of Technology State Eng Exp Sta [Atlanta] Bul 11:1-20 '47 (pa 75c)
Teaching the break-even chart. C. E. Bullinger. J Eng Educ 37:228-33 N '46
Tetrafunctional graph for appraising plasticizer performance in vulcanized rubbers. T. C. Patton and M. K. Smith. India Rubber World 115:666-9 F '47
Three component mixing computed graphically. M. T. Howerton. Chem Eng 54:139-40 F '47
Tidal illumination diagrams. H. R. Seiwell. Science 106:76-7 Jl 25 '47
Time factor and production planning; mine development schemes and erection jobs. A. Nelson. Can Min J 68:316-20 My '47
Tolerance charts forecast accuracy. J. K. Matter. diags Am Mach 91:114-18 O 23 '47
Transmission line design simplified by graphical aids; engineering reference sheet. H. V. Wingfield. Elec World 128:119 O 11; 132 O 25; 120 N 8 '47
Use of charts in the analysis of sewage operation. W. V. Barry. Water & Sewage Works 94:R249-51 Jl '47
Varying reservoir levels and discharges forecast by new method. N. S. Haines. Eng N 138:1003-5 Je 26 '47
Velocity sizing of water lines. G. R. Adams. chart Pet Refiner 26:136-7 Mr '47

See also
Charts (calculating)
Curve plotting
Histograms
Nomography

GRAPHIC statics
Analysis of rigid knee-braced bents used in petroleum and chemical plants. W. H. Blank. il diags Pet Refiner 25:111-18 D '46
Beam deflections by simple graphical analysis. W. Schroeder. plan diags Machine Design 19:85-90 Ja '47
Simple model tests predict aerodynamic characteristics of bridges. D. B. Steinman. il Civil Eng 17:20-3, 77-9 Ja-F '47
Theory of inelastic bending with reference to limit design. A. Hrennikoff. Am Soc C E Proc 73:255-89 Mr '47; Discussion. 73:944-6, 1293-301 Je, O '47

GRAPHITE
Absolute sensitivity of a graphite ionization chamber. M. Lax. Phys R 72:61-7 Jl 1 '47
Band theory of graphite. P. R. Wallace. diags Phys R 71:622-34 My 1 '47; Correction. 72:258 Ag 1 '47
Carbon and graphite; properties, characteristics, fabrication, etc. diags Machine Design 19:157-60 Jl '47
Chemical engineering materials of construction; review of literature from start of World war II; carbon and graphite. C. E. Ford. bibliog (34 ref) il Ind & Eng Chem 39:1202-4 O '47
Colloidal graphite in the metal industry; abstract. Materials & Methods 26:118 Ag '47
Elementary theory of the chain-reacting pile. E. Fermi. Science 105:27-32 Ja 10 '47
Experimental contribution to the problem of diamond synthesis. P. W. Bridgman. bibliog diags J Chem Phys 15:92-8 F '47
Graphite formation in cast irons and in nickel-carbon and cobalt-carbon alloys. H. Morrogh and W. J. Williams. bibliog(115 ref) diags Iron & Steel Inst J 155:321-71, pl 1-14 Mr '47; Discussion. il 156:491-6; 157:193-7 Ag, O '47
Graphite heat exchangers; ten year engineering review. C. E. Ford. il Chem Eng 54:92-6 Ja; 132-5 F '47
Graphite molds for casting vertical steel ingots. S. W. House and T. Killman. il Iron Age 159:59-63 Ja 16 '47
Karbate tube heat exchanger. il Blast F & Steel Pl 35:82 Ap '47
Production of low energy neutrons by filtering through graphite. H. L. Anderson and others. diag Phys R 70:815-17 D 1 '46
Refractory coatings for permanent molds. H. E. Bourassa. il Iron Age 159:58-9 F 6 '47

GRAPHITE—*Continued*
Sulphur dioxide versus construction materials; carbon and graphite. L. C. Werking. Chem Eng 54:222+ S '47
See also
Cast iron—Graphitization
GRAPHITIZATION of piping. See Piping (power plants)—Graphitization
GRAPTOLITES
Graptolites of North America. R. Ruedemann. (Memoir 19) 652p, pl 1-92 bibliog (p499-527) Geological soc. of America, 419 W. 117th st, New York '47
Ordovician and Silurian rocks in Yukon territory, northwestern Canada. C. E. Decker and others. bibliog il map Am Assn Pet Geologists Bul 31:149-56 Ja '47
GRASSES
Grass sowing under film of bitumen emulsion; abstracts. H. W. Jarvis. Pub Works 78:31 Ag '47; Eng N 139:523 O 16 '47
Sensitivity of grasses and some crop plants to isopropyl-n-phenyl carbamate. J. W. Mitchell and P. C. Marth. il Science 106: 15-17 Jl 4 '47
See also
Rhodes grass
GRAVEL
Calcium chloride as a compaction aid in gravel base construction. J. A. Knight. Roads & Bridges 85:90-3+ O '47
Draining coarse gravel with wellpoints; dewatering excavation for power plant on the Allegheny river. il diag Eng N 137:638-9 N 14 '46
Experimental observations on grouting sands and gravels; preventing salt water intrusion in wells. A. Machis. il diags Am Soc C E Proc 72:1203-27 N '46; Discussion. 73:251-2, 387-8, 936-40 F-Mr, Je '47
Minnesota's wide range of minerals; sands and gravels. H. E. Swanson and N. C. Rockwood. Rock Prod 49:75-7 N '46
Practices of western states in using sand and gravel in bituminous mixtures; abstract. E. C. Knowlton. Rock Prod 50:148-9 Ap '47
Reducing pea gravel to sand with rod mills. W. B. Lenhart. il Rock Prod 50:103-5 O '47
Studies of stone vs. gravel in traffic-bound roads; abstract. A. T. Goldbeck. Rock Prod 50:69 Mr '47
Use of industrial products for granular bases in highway construction; abstract. H. D. Jumper. Rock Prod 50:148 Ap '47
Water formed deposits of sand and gravel, North Carolina. H. E. Swanson and N. C. Rockwood. il Rock Prod 50:128-30 Ja '47
See also
Concrete—Aggregate
GRAVEL handling
Gravel-spreading cost reduced by use of tractor-scrapers; highway in British Columbia. il Roads & Bridges 85:76-7+ O '47
GRAVEL plants. See Sand and gravel plants
GRAVEL roads. See Roads, Gravel
GRAVIMETERS
Exploration and the gravity meter. L. L. Logue and F. K. Fisk. diags Oil & Gas J 45:122-5 F 22 '47
Helicopter aids oil search. C. J. Deegan. il Oil & Gas J 46:61-3 Je 7 '47
GRAVIMETRIC analysis
Alloy steel analysis; quantitative determination of heavy metal oxinates. W. G. Cass. Chem Age (Lond) 55:709-12 D 7 '46
Chemistry of sodium phosphates. O. T. Quimby. bibliog Chem R 40:141-79 F '47
Determination and nature of leaf sterols. M. E. Wall and E. G. Kelley. bibliog Anal Chem 19:677-83 S '47
Determination of calcium in magnesite and fused magnesia. W. M. Hazel and W. K. Eglof. bibliog Ind & Eng Chem Anal ed 18:759-60 D '46
Determination of carbon monoxide; microgravimetric method. J. M. Salsbury, J. W. Cole and J. H. Yoe. bibliog diag Anal Chem 19:66-8 Ja '47
Determination of dipentaerythritol in mixtures of pentaerythritol and dipentaerythritol. J. A. Wyler. Ind & Eng Chem Anal ed 18:777-8 D '46
Determination of nickel in cobalt steels and alloys. H. Kirtchik. bibliog Anal Chem 19: 95-6 F '47
Determination of solids in resin solutions. J. H. Vail. Anal Chem 19:412-13 Je '47
Determination of thorium and its separation from uranium by ferron. D. E. Ryan, W. J. McDonnell and F. E. Beamish. bibliog Anal Chem 19:416-17 Je '47
Determination of total volatiles in smokeless powder. W. E. Shaefer and others. diags Anal Chem 19:378-81 Je '47
Electron micrographs as an aid in teaching gravimetric analysis. R. B. Fischer. il J Chem Educ 24:484-6+ O '47
Gravimetric analysis of sand. L. J. Ehly. diag Eng N 138:458 Mr 20 '47
Gravimetric determination of styrene as styrene nitrosite. G. R. Bond, jr. Anal Chem 19:390-2 Je '47
Gravimetric determination of tungsten with brucine. F. S. Grimaldi and N. Davidson. bibliog In U S Geol S Bul 950:135-8 '46
Quick moisture determination; calcium carbide, heated with finely grated cheese, gives off acetylene. E. R. Shemin and J. W. Wagner. Food Ind 19:1230+ S '47
Rapid gravimetric determination of silicon in aluminum alloys. P. Lisan and H. L. Katz. bibliog Anal Chem 19:252-3 Ap '47
Solid polyethylene glycols (carbowax compounds); quantitative determination in biological materials. C. B. Shaffer and F. H. Critchfield. bibliog Anal Chem 19:32-4 Ja '47
Solubility of magnesium ammonium phosphate hexahydrate. R. F. Uncles and G. B. L. Smith. bibliog Ind & Eng Chem Anal ed 18:699-702 N '46
Study of the hexabromide number. J. P. Kass, W. R. Roy and G. O. Burr. bibliog Anal Chem 19:21-4 Ja '47
Zirconium determination in presence of interfering elements. C. A. Kumins. Anal Chem 19:376-7 Je '47
GRAVING docks. See Dry docks
GRAVITATION
Class of exact solutions of Einstein's field equations. S. D. Majumdar. Phys R 72:390-8 S 1 '47
Motion of a particle in an electromagnetic and gravitational field. H. C. Corben and M. Corben. Phys R 72:434 S 1 '47
Physical significance of Birkhoff's gravitational equations. H. E. Ives. bibliog Phys R 72:229-32 Ag 1 '47
GRAVITOMETERS
Tests of instruments for the determination, indication, or recording of the specific gravities of gases. F. A. Smith and others. il U S Nat Bur Stand Misc Pub M177:1-143 '47 ($1)
GRAVITY, Center of. See Center of mass
GRAVITY, Specific. See Specific gravity
GRAVITY meters. See Gravimeters
GRAY, J. Copeland
New NLRB team. por Bsns W p86+ Jl 26 '47
GRAY iron. See Cast iron
GRAY iron founders' society
Annual meeting, 18th, Cincinnati, Oct. 22-23. Foundry 74:90-1+ D '46
Annual meeting, 19th, Milwaukee, Oct. 2-3. Foundry 75:90-1+ N '47
GREASE
Laboratory machine for the continuous production of grease; development and design. G. M. Hain and E. E. Stone. flow diag il Ind & Eng Chem 39:506-7 Ap '47
Small grease kettle. E. A. Bergmann. il diags Ind & Eng Chem 39:498-500 Ap '47
See also
Lubricating greases
GREASE kettles
Small grease kettle. E. A. Bergmann. il diags Ind & Eng Chem 39:498-500 Ap '47
GREASE traps
Grease interceptor tests. E. G. Liddle and L. G. Shields. diags Dom Eng 170:106-7+ Ag; 117-19, 127+ S; 111-13+ O; 107+ N '47
Sizing of grease interceptors, proper flow control; abstract. J. Schmid. Dom Eng 170: 109+ S '47

GREASEPROOF paper. See Paper, Greaseproof
GREASES, Lubricating. See Lubricating greases
GREAT Atlantic and Pacific tea company
A & P decision. R. L. Klein. J Retailing 23: 16-22 F '47
A.&P. still no. 1. Bsns W p67 Jl 12 '47
Great A & P. il maps Fortune 36:102-7+ N '47
Links in a chain. Bsns W p60 F 22 '47
GREAT BRITAIN
See also
Agricultural machinery industry—Great Britain
Agriculture—Great Britain
Airlines—Great Britain
Airplanes, Military—Great Britain
Coal trade—Great Britain
Coke industry—Great Britain
Cotton trade—Great Britain
Electric apparatus industry—Great Britain
Electricity supply—Great Britain
Finance—Great Britain
Furniture industry and trade—Great Britain
Industry and state—Great Britain
Labor and laboring classes—Great Britain
Machinery industry—Great Britain
Patent laws and legislation—Great Britain
Public utilities—Great Britain
Sewerage—Great Britain
Standards—Great Britain
Steel industry and trade—Great Britain
Textile industry—Great Britain
Tin mines and mining—Great Britain
Tobacco industry and trade—Great Britain
Trade unions—Great Britain
Wages—Great Britain
Wool trade—Great Britain

Admiralty
Admiralty research and development. Engineer 183:403 My 9 '47

Air force
Development of air transport during the war. R. Cochrane. il maps Roy Aeronautical Soc J 51:384-406; Discussion. 406-16 Ap '47
Flying start; Royal air force's educational and vocational training scheme. R. Cooke. Personnel J 25:282-4 F '47

Armed services
Services' manpower. Economist 152:320 Mr 8 '47

Army
Equipment and supplies
Inspection. A. W. Sproull. Engineering 163: 90-1, 100-1 Ja 24-31 '47

Cabinet
Cabinet and government. Economist 153:587-8 O 11 '47
Reconstruction of the Cabinet. Economist 153: 551 O 4 '47

Colonies
British colonial development; economic actualities and aims. C. L. Wood and B. Blankenheimer. il For Comm W 27:3-6+ My 24 '47
Bulk purchasing system of the United Kingdom. For Comm W 26:11 F 8 '47
Colonial economies changing. Bsns W p105-6+ Ja 18 '47
Development and design of colonial telecommunication systems and plant. C. Lawton and V. H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47
Development or welfare? Economist 152:364-5 Mr 15 '47
England today. H. McNeil. Comm & Fin Chr 165:1246+ Mr 6 '47
General planning and organization of colonial telecommunication systems. C. Lawton and V. H. Winson. Inst E E J 94 pt 3: 245-51; Discussion. 251-9 Jl '47
Industrial research in South Africa and in British colonies. R. C. Leslie. il For Comm W 29:6-7+ O 11 '47
Juggernauts in the colonies? Economist 151: 989-90 D 21 '46
Nationalism in the colonies. Economist 153: 140-1 Jl 26 '47
See also
Hong Kong
Jamaica
West Indies, British

Commerce
Anglo-Brazilian commercial understanding; exchange of notes of Sept. 21. Comm & Fin Chr 165:16+ Ja 2 '47
Balance of payments. Economist 153:310-11, 350-1, 390-2, 511-12, 549-50 Ag 23-S 6, 27-O 4 '47
Britain's balance of payments. Economist 151: 1009-10 D 21 '46
Britain's currency problems grow. H. M. Bratter. Comm & Fin Chr 165:996+ F 20 '47
Britain's current problems in foreign-trade reconstruction. D. F. Heatherington. il diag For Comm W 26:3-6+ Mr 8; 7-9+ Mr 15; 3-6+ Mr 22; 5-7+ Mr 29 '47
Britain's economic position analyzed as of mid-year 1947; balance-of-payments difficulties. F. L. Hall. il For Comm W 28:6-8+ Ag 2 '47
Britain's export trade. L. C. Gamage. Electrician 138:1771 Je 27 '47
Britain's trade pattern. Economist 153:370-1 Ag 30 '47
British crisis; balance of payments, position. Fed Res Bul 33:1071-82 S '47
British exports above prewar in many lines. R. M. Bleiberg. Barron's 27:4 S 29 '47
Britons zone U.S.; Hambros, British merchant bank export program. Bsns W p110+ N 16 '46
Ever-widening gap; visible trade deficit 1947. Economist 153:538 S 27 '47
Export expansion; abstract. S. Cripps. Elec R (Lond) 141:437-8 S 19 '47
Export prices. Economist 152:34 Ja 4 '47
Future trading conditions in the world's markets. P. Lister. Mech Handling 33:699-702 N '46
Great Britain's export drive is one-sided. P. Einzig. Comm & Fin Chr 165:589+ Ja 30 '47
Growing trade deficit. Economist 153:169 Jl 26 '47
Hard and soft currencies; failure to take account of currencies in which exports are paid. P. Einzig. Comm & Fin Chr 164:3017+ D 12 '46
Impact on United States of British socialization. V. L. Horoth. maps Mag of Wall St 79:359-61+ Ja 4 '47
Les relations commerciales franco-britanniques. J. Ducrocq. Chimie & Ind 58:82-4 Jl '47
Scope for import cuts; problem of Britain's balance of overseas-payments. Economist 152:856-8 My 31 '47
Sellers' export market ending. Economist 152:1036 Je 28 '47
Spending the dollars. Economist 152:208 F 1 '47
Survey of imports; Deteriorating terms of trade. Economist 153:252-3 Ag 9 '47
Tobacco, food and dollars; recommendations to reduce tobacco imports and increase food imports. P. Einzig. Comm & Fin Chr 165:1935+ Ap 10 '47
Trade against hard currencies; with table showing figures for 1938 and 1946. Economist 151:920 D 7 '46
Trade deficit. Economist 152:157-8 Ja 25 '47
UK's exchange status. H. A. Marquand. Comm & Fin Chr 165:1045+ F 20 '47

Commercial policy
After July 15th; sterling arrangements. Economist 153:117-18 Jl 19 '47
Aftermath of the American-British loan. L. Robbins. Comm & Fin Chr 165:875+ F 13 '47
Anglo-Danish trade talks. Economist 153:395 S 6 '47
Barclays bank sees permanent need for sterling area. Comm & Fin Chr 166:923 S 4 '47
Blocked sterling balances. P. Einzig. Comm & Fin Chr 165:867+ F 13 '47
Britain and bilateralism. P. Einzig. Comm & Fin Chr 166:1113 S 18 '47
Britain favors multilateralism. P. Einzig. Comm & Fin Chr 165:124+ Ja 9 '47
Britain intensifies export drive. P. Einzig. Comm & Fin Chr 164:2461+ N 14 '46

GREAT BRITAIN—Commercial policy—*Cont.*
Britain's current problems in foreign-trade reconstruction. D. F. Heatherington. il diag For Comm W 26:3-6+ Mr 8; 7-9+ Mr 15; 3-6+ Mr 22; 5-7+ Mr 29 '47
Britain's import controls and Anglo-American trade. H. E. Hall. il For Comm W 25:3-5+ N 9 '46
Britain's trade policy dilemma. P. Einzig. Comm & Fin Chr 165:1787 Ap 3 '47
British token import plan developments. For Comm W 26:42 Ja 18; 27:30 Ap 5; 35 My 24 '47
British token import plan=profits for alert traders; with list of commodities subject to plan. J. C. Borton. For Comm W 25:8-9+ D 28 '46; Same abr. Comm & Fin Chr 164:3207+ D 19 '46
British violation of Anglo-American loan pact. H. M. Bratter. Comm & Fin Chr 165: 395+ Ja 23 '47
Bulk purchasing system of the United Kingdom. For Comm W 26:11 F 8 '47
Convertibility ahead. Economist 152:724-5 My 10 '47
Cuts without policy. Economist 153:1-2 Jl 5 '47
Engineering industry and the export plan; abstract. J. Wilmot. Engineer 184:314 O 3 '47
Essentials of British export policy. S. Cripps. Comm & Fin Chr 164:3209+ D 19 '46
Exchange control bill. Economist 151:797-8 N 16 '46
Exchange control in Britain. P. Einzig. Comm & Fin Chr 164:2749+ N 28 '46
Export arithmetic; Sir Stafford Cripps' programme. Economist 153:489-91 S 20 '47
Export conference; objectives; functions of government and industry. L. Gamage; N. V. Kipping. Engineer 182:488, 511 N 29-D 6 '46
Export needs and possibilities. Economist 152:386-7 Mr 15 '47
Export policy preview. Economist 153:412-13 S 6 '47
Future of the sterling area. V. L. Horoth. il Mag of Wall St 79:730-2+ Mr 29 '47
Government's plans for exports. Chem Age (Lond) 57:383-4 S 20 '47
High war cost and British foreign trade policy. H. A. Marquand. Comm & Fin Chr 164:2601+ N 21 '46
Home and overseas trade; debate in House of commons. Engineer 182:415 N 8 '46
How big is the gap? import program. Economist 153:73-4 Jl 12 '47
Is the export target possible? Economist 153: 252 Ag 9 '47
Outlook for the sterling area. P. Bareau. Comm & Fin Chr 166:330+ Jl 24 '47
Retreat from convertibility. Economist 153: 450-2 S 13 '47
Sterling after July 15th. Economist 152:1032-3 Je 28 '47
Sterling agreements; post-July 15th sterling machinery. Economist 153:27-8 Jl 5 '47
Sterling and July 15. Nat City Bank p82-3 Jl '47
Sterling convertibility in July anticipated. H. M. Bratter. Comm & Fin Chr 165:1653+ Mr 27 '47
Sterling in multilateral trade. J. B. Knapp and F. M. Tamagna. Fed Res Bul 33:1083-90 S '47
Sterling's future role. Economist 153:331-3 Ag 23 '47
Token import arrangements extended to Italy by United Kingdom. For Comm W 27:18 Ap 19 '47
Trade outlook varied in sterling area. D. F. Heatherington. Comm & Fin Chr 165:994+ F 20 '47
Why sterling convertibility could not succeed. E. H. Weinwurm. bibliog Comm & Fin Chr 166:1002+ S 11 '47
Will sterling be made convertible? P. Einzig. Comm & Fin Chr 165:271+ Ja 16 '47

Cultural relations

See also
British council

Defenses

Defence in two worlds. Economist 152:227-8 F 8 '47

Economic conditions

American mining engineer visits the British Isles. E. McAuliffe. Min & Met 28:437-9 S '47
Battle of Britain; autumn 1947. N. Kipping. il Dun's R 55:14-16+ O '47
Bear market develops in London. B. Ravits. Barron's 27:29-30 S 1 '47
Bottlenecks in Great Britain. H. Ward. il Dun's R 54:15-16+ N '46
Britain faces her difficulties. Lord Inverchapel. Comm & Fin Chr 165:1123+ F 27 '47
Britain needs a new way out. Bsns W p 101-2+ My 10 '47
Britain's crisis. Fortune 35:230+ Ap '47
Britain's crisis. P. Einzig. Comm & Fin Chr 165:989+ F 20 '47
Britain's economic dilemma; its origin and nature. P. Ripley. Comm & Fin Chr 165: 1781+ Ap 3 '47
Britain's economic position analyzed as of mid-year 1947. F. L. Hall. il For Comm W 28:6-8+ Ag 2 '47
Britain's economic situation. S. Cripps. Comm & Fin Chr 166:527+ Ag 7 '47
Britain's economic troubles. P. Einzig. Comm & Fin Chr 165:397+ Ja 23 '47
Britain's serious economic position; radio address. C. Attlee. Comm & Fin Chr 166: 625+ Ag 14 '47
British balance of payments crisis. Nat City Bank p99-103 S '47
Coal, consequences. Economist 152:289-90 F 15 '47
Crisis called exaggerated term for Britain's present plight. J. R. Hight. Iron Age 159: 104-6 Mr 20 '47
Deflation in Britain? P. Einzig. Comm & Fin Chr 165:1660+ Mr 27 '47
Double meaning in coal crisis. Bsns W p109-10+ F 15 '47
Economic debate. Economist 152:361-2 Mr 15 '47
Economic survey of the United Kingdom for 1947. Int Labour R 55:538-49 Je '47
Economic survey of the United Kingdom; text of British white paper. Fed Res Bul 33:367-91 Ap '47; Excerpts. Comm & Fin Chr 165:1165+ F 27 '47
Great Britain's economic problem. A. L. Hood. Harvard Bsns R 25 no 4A:625-36 [O] '47
How's business; Britain's industrial stoppage. Barron's 27:1 F 17 '47
Is Britain finished? Economist 152:697-8 My 10 '47
Labor government's failures. W. Churchill. Comm & Fin Chr 165:1787+ Ap 3 '47
London; bottlenecks in postwar England. Spectator (Property ed) 12:27-9 Ja 23 '47
Short commons for consumers. Economist 152:899-900 Je 7 '47
Sir Stafford Cripps presents national bill for February crisis. Iron Age 159:125-6 My 15 '47
Situation in Great Britain. J. D. Simpson. East Underw 48:21 Ap 18 '47
Socialist John Bull takes stock. H. M. Bratter. Comm & Fin Chr 165:864+ F 13 '47

Economic history

Then and now; two postwar periods compared. Economist 152:749-50 My 17 '47

Economic policy

Britain moving toward fascism. G. J. Harris. Comm & Fin Chr 165:2741+ My 22 '47
Britain plans for future outside Marshall plan. E. Blair. Barron's 27:10 O 6 '47
Britain's brain trust. Bsns W p 113-14 Ap 12 '47
Britain's economic planning carried to unjustifiable extreme. P. Ripley. Comm & Fin Chr 166:317+ Jl 24 '47
Britain's nationalization growing pains. R. Hobbs. Pub Util 39:228-34 F 13 '47
Britain's recovery program. Inverchapel. Comm & Fin Chr 166:1629+ O 23 '47
British crisis; Attlee's recovery program. Fed Res Bul 33:1071-82 S '47
Crisis according to plan; advocates of government planning promise security; in Britain they have thus far delivered endless confusion. J. Jewkes. Fortune 36:84-5+ S '47

GREAT BRITAIN—Economic policy—*Continued*
Economic policy for 1947. Gas J (Lond) 249: 313-14 F 5 '47
Elbow room for essentials. Economist 153:385-6 S 6 '47
Fight against world crisis. V. L. Horoth. il Mag of Wall St 80:580-2+ Ag 30 '47
Government and industry; Industrial organisation bill. Economist 152:206-7 F 1 '47
Issue in Britain. Fortune 36:4 O '47
Lash of adversity. C. Attlee. Iron Age 160: 102+ Ag 21 '47
Lash of adversity; comments on Attlee's speech. Economist 153:225-6 Ag 9 '47
Mr Micawber's crisis. Economist 152:265-7 F 15 '47; Excerpts. Iron Age 159:113+ Mr 13 '47
Moral crisis in Downing Street. Iron Age 160:98+ Ag 28 '47; Same. Economist 153: 265-6 Ag 16 '47
Planners and politicians; Plowden appointed Chief planner. Economist 152:443-4 Mr 29 '47
Planners' last chance. Economist 153:177-9 Ag 2 '47
Planning in Britain. H. Morrison. Personnel J 25:228-35 Ja '47
Preaching at symptoms. Economist 151:738-9 N 9 '46
Reveals proposals to avert crisis. C. Attlee. Comm & Fin Chr 166:525 Ag 7 '47
Tighter belts in Britain's crisis. Bsns W p85-6 Ag 9 '47

Economic relations

Egypt

Sterling diplomacy; generous terms of Anglo-Egyptian financial agreement. P. Einzig. Comm & Fin Chr 166:223 Jl 17 '47

India

Debt to India. Economist 152:204-6 F 1 '47

Russia

British credit to Russia? P. Einzig. Comm & Fin Chr 165:3121 Je 12 '47

United States

Hope for Mr Clayton and his country; Mr Balogh's scheme. Fortune 35:4 Mr '47
Impact on United States of British socialization. V. L. Horoth. maps Mag of Wall St 79:359-61+ Ja 4 '47
Re-appraising the gold standard; its relevance to the foundations of Anglo-American collaboration; further exchange of correspondence. P. Cortney and W. Craven-Ellis. Comm & Fin Chr 164:2937+; 165: 868+ D 5 '46, F 13 '47

Foreign relations

Britain, a victim of western illusions. Barron's 27:1+ Ag 11 '47
Can Britain afford to play the part of one of the two great world powers? P. Einzig. Comm & Fin Chr 165:2070+ Ap 17 '47
Socialist foreign policy? Economist 151:817-18 N 23 '46

France

France and the alliance. Economist 152:333 Mr 8 '47
Moscow via Dunkirk; signing of the Dunkirk treaty. Economist 152:315-16 Mr 8 '47

Ireland

Britain and Eire. Economist 152:965-6 Je 21 '47

Italy

Italy next. Economist 152:614-15 Ap 26 '47

Near East

Britain and the Middle East. Economist 153: 6-7 Jl 5 '47

Russia

Stalin gambit. Economist 152:177-8 F 1 '47

United States

Gardner ambassador to Great Britain. Comm & Fin Chr 164:3126 D 12 '46

Industries and resources

British information services reports Britain's output hits new high despite crisis. Comm & Fin Chr 166:728 Ag 21 '47
British management faces new tests. H. Ward. il Dun's R 55:15-17+ Ag '47
Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46
Development area policy. Economist 152:810-11 My 24 '47
Fuel crisis post-mortem. Economist 152:727 My 10 '47
Government and industry; Industrial organisation bill. Economist 152:206-7 F 1 '47
Industry and the crisis; F.B.I.'s proposals. Chem Age (Lond) 56:403 Ap 5 '47
Industry's new tasks; the Paris report. Economist 153:571-2 O 4 '47
Looking both ways. C. D. Gibb. Engineering 163:103, 127 Ja 31-F 7 '47

National physical laboratory, Teddington

National physical laboratory; exhibition. Engineering 163:554 Je 27 '47
Work of the N.P.L. Elec R (Lond) 140: 1077-8 Je 27 '47

Navy

Devonport dockyard, 1917-22. E. C. Smith. il plans diag Engineering 162:505-7, 533-4, 601-2 N 29-D 6, 27 '46
Historical review of Portsmouth dockyard. L. V. Morgan. il maps Engineer 184:300-2, 324-6 S 26-O 3 '47; Same cond. Engineering 164:414-16 O 31 '47
Notable naval engineering centenary. E. C. Smith. Engineering 163:233-4 Mr 28 '47

Parliament

Lords test match. Economist 152:1011-12 Je 28 '47
Privilege and pressure; case of Mr Brown. Economist 153:95 Jl 19 '47
Too much and too soon; democratic discussion incompatible with present pace of legislation. Economist 152:316-17 Mr 8 '47

House of commons library

Library of the world's oldest Parliament; House of commons. J. V. Kitto. Special Lib 38:17-19 Ja '47

Politics and government

Efficiency of the state. Economist 153:268-9 Ag 16 '47
Opposition party gaining popularity in Britain; opinion poll. Iron Age 159:109 My 29 '47
Postwar discontentment found in U.S. and Britain; public opinion polls. Iron Age 158: 135 N 14 '46
Responsibility dividing British Socialists. W. H. Millgate. Barron's 26:12-13 D 16 '46
Statute of liberty? Preservation of the rights of the subject bill. Economist 152:658-60 My 3 '47
Twilight of ministers. Economist 152:134-5 Ja 25 '47

See also
Labor party (Great Britain)

Scientific and industrial research, Department of

Department of scientific and industrial research, its organization and duties. O. F. Brown. J Doc 2:195-209 Mr '47

Statistics

Cost of living; passing of the 33-year old index number. Economist 152:447 Mr 29 '47
New yardstick for cost of living. Economist 152:971 Je 21 '47
Provisions of statistics of trade bill. For Comm W 26:35 Ja 25 '47

GREAT LAKES

See also
Shipping—Great Lakes

GREAT LAKES states
New American market; Great Lakes. Bsns W p41-8 My 31 '47

See also
Air lines—Great Lakes states

GREAT LAKES utilities company
Amended plan effective; common stock of Allied gas co. being distributed. Comm & Fin Chr 165:2001-2 Ap 14 '47

GREAT men
Ten most admired people named by U.S. public; Gallup poll. Iron Age 159:103+ Mr 20 '47

GREAT northern railway
Big gains in Great Northern's traffic likely to hold. M. Halpern. Barron's 27:31 Jl 21 '47
Redemption of bonds. Comm & Fin Chr 165: 2546 My 12 '47

GREBE, John Josef, 1900-
Sixth John Wesley Hyatt award. por Mod Plastics 24:109 My '47

GREECE

Commercial policy

State organization for managing surplus allied material established in Greece. For Comm W 26:19-20 Mr 1 '47

Economic conditions

Gamble in the Near East; Greece is no A-1 credit risk. map Bsns W p48+ Ap 19 '47
Letter from Athens. J. Davenport. Fortune 35:86-7 Je '47
News by countries. For Comm W 25:18 D 28 '46; 26:14-15 Mr 29; 27:16 My 10; 28:13 Jl 12; 29:14-15 O 11 '47

Foreign relations

Explains Greek situation before Senate Foreign relations committee. D. G. Acheson. Comm & Fin Chr 165:1653+ Mr 27 '47
Solve Balkan problem or pack up; supports report of UN Balkan commission. A. Cadogan. Comm & Fin Chr 166:113+ Jl 10 '47
U.S. backs Marshall's call for UN action on Greece; Gallup poll. Iron Age 160:121 O 2 '47
U.S. declares military force may be necessary in Greece; statement before Security council. W. R. Austin. Comm & Fin Chr 166: 16+ Jl 3 '47
Vandenberg's plan to consult United nations on aid to Greece in line with public sentiment; Gallup poll. Iron Age 159:103+ Ap 24 '47

United States

Accuses U.S. of crudest interference in Greece. A. Gromyko. Comm & Fin Chr 166:730 Ag 21 '47
Greco-Turkish aid bill signed. Comm & Fin Chr 165:2909 My 29 '47
Grounds for rejection of aid to Greece; statement before Senate Foreign relations committee. W. H. Melish. Comm & Fin Chr 165:1933+ Ap 10 '47
Opposes political aid to Greece. F. H. LaGuardia. Comm & Fin Chr 165:1658 Mr 27 '47
Truman asks aid for both Greece and Turkey; text of address before Congress. Comm & Fin Chr 165:1373+ Mr 13 '47
U.S. may take individual action in Greece; address before Security council. H. V. Johnson. Comm & Fin Chr 166:618+ Ag 14 '47
Wants careful study made before aiding Greece. H. H. Heimann. Comm & Fin Chr 165:2076 Ap 17 '47

Politics and government

Knife edge in Greece. Economist 153:3-4 Jl 5 '47

GREELEY, Samuel Arnold, 1882-
Sketch. por(p550) Civil Eng 16:552 D '46

GREEN, Robert Zemon
Machine as salesman; the Rowe corp. automatic cigarette dispensing. por Fortune 35: 116-21 Mr '47

GREEN, William, 1875-
Portrait. Bsns W p90 O 11 '47

GREEN
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47

GREENFIELD, Massachusetts

Sewerage

Greenfield, Mass. sewage works. F. L. Flood; E. L. Bond. il plans Water & Sewage Works 94:197-202 Je '47

GREENFIELD tap and die corporation
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:229-30 My 24 '47

GREENHOUSES

Electric equipment

Soil sterilization; advantages of electrical treatment. T. S. Parkinson. il diag Elec R (Lond) 140:977-8 Je 13 '47

Equipment

Greenhouse trays made of concrete. il diags Concrete 55:32+ Je '47

Heating and ventilation

Greenhouse heating data. Heat & Ven 44: 76a-76b Mr '47
Man-made temperatures help plant growth. F. W. Went. il Refrig Eng 53:495-7 Je '47

GREENLEE automatic transfer machine
Buick cylinder blocks now machined on first unitized transfer line. J. Geschelin. il plan Automotive & Aviation Ind 96:20-7+ F 1 '47
Precision boring of cylinder blocks on an automatic transfer machine. il Mach 53:171-3 My '47
Transfer machines, robots of production. J. H. Mansfield. il S A E J 55:42-4 F '47

GREENOCKITE. See Cadmium sulfide

GREENWICH royal observatory
Annual report. Engineering 164:304-5 S 26 '47

GREETING card industry
Manufacture and sale of greeting cards, New Zealand. For Comm W 27:22 Je 7 '47
Sorry! we're out of stock on that item; Gartner & Bender, greeting card manufacturers, stock control plan. R. J. Bender. il Sales Management 59:60+ Jl 15 '47

GREETING cards
Freud pays off; Gartner & Bender greeting cards. Fortune 35:132+ F '47

GRENADA
War gave Nutmeg Isle bigger spice-trade role. C. H. Whitaker. il For Comm W 25: 8-9+ N 23 '46

GREYHOUND corporation
Greyhound enters its busiest season. G. L. Merton. il Mag of Wall St 80:272-3+ Je 7 '47
Greyhound goes after foreign tourists. Bsns W p26 N 30 '46

GRIEVANCES. See Employment management; Labor disputes

GRIFFIN, Bennett H., 1896-
Griffin new National Airport head. por CAA J 8:74 Jl 15 '47

GRIFFIN, William H.
Sketch. por Inland Ptr 120:83-4 O '47

GRIFFIS, Stanton, 1887-
Banker turns envoy. por Bsns W p28 Ap 5 '47
Portrait. Fortune 35:94 Je '47

GRIGG, James, 1890-
United Kingdom executive director of the World bank. por Comm & Fin Chr 164: 3216 D 19 '46

GRIGNARD reagents
Action of Grignard reagents on esters of optically active carboxylic acids. A. Campbell and J. Kenyon. Chem Soc J p436-7 Ap '47
Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69:633-4 Mr '47
Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:668-90 Mr '47
Analgesics; the Grignard reaction with Schiff bases. R. B. Moffett and W. M. Hoehn. Am Chem Soc J 69:1792-4 Jl '47
Attempted asymmetric synthesis in a metathetical Grignard reaction. W. A. Bonner. Am Chem Soc J 69:183-4 Ja '47

GRIGNARD reagents—*Continued*
Chemistry of the pyrrocolines; the action of Grignard reagents and of iodine on 3-acetyl-2-phenylpyrrocoline. E. T. Borrows and D. O. Holland. Chem Soc J p670-2 My '47
Claisen condensation by a primary Grignard reagent. S. B. Soloway and F. B. LaForge. bibliog Am Chem Soc J 69:2244-5 S '47
Claisen condensation by *t*-butylmagnesium chloride. H. D. Zook, W. J. McAleer and L. Horwin. bibliog Am Chem Soc J 68: 2404 N '46
Configuration of heterocyclic compounds; preparation of phenoxstibines and resolution of 10-*p*-carboxyphenyl-2-methylphenoxstibine. I. G. M. Campbell. Chem Soc J p4-10 Ja '47
α,β-Diamino ketones; addition and cleavage with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:1857-60 Ag '47
Ethylene imine ketones; reaction with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:258-60 F '47
Experiments with Grignard solutions; action of Grignard solutions on thermochromic spiropyrans. A. Schönberg, A. Mustafa and W. Asker. Chem Soc J p847-8 Je '47
Grignard reagents to be made commercially. Chem Ind 60:74 Ja '47
Reaction of α,α,β-trichlorobutyraldehyde with a number of Grignard reagents. V. W. Floutz. Am Chem Soc J 68:2490-1 D '46
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Structure of the organomagnesium complex in carbonyl bridge indenones. C. F. H. Allen and J. A. VanAllan. bibliog Am Chem Soc J 68:2387-90 N '46
Studies on resin acids; carbinols. H. H. Zeiss. Am Chem Soc J 69:302-3 F '47
Use of organocadmium reagents for the preparation of ketones. J. Cason. bibliog(48 ref) Chem R 40:15-32 F '47
Yields of Grignard reagents in 4-methyl-1,3-dioxane. R. B. Carlin and L. O. Smith, jr. bibliog Am Chem Soc J 69:2007-8 Ag '47

GRINDERS, Wood. See Wood grinders

GRINDING
Bores ground to half a millionth. E. J. Tangerman. il diags Am Mach 91:93-5 My 22 '47
Chart indicates grinding time on cast iron. D. G. Anderson. Foundry 75:136 Ja '47
Detection, causes and prevention of injury in ground surfaces. L. P. Tarasov. il Am Soc for Metals Trans 36:389-440 bibliog(p439-40); Discussion. 441-51 '46
Devised; better method for sharpening carbide face mills. G. W. Sharp. il diags Am Mach 91:108-10 Mr 13 '47
Editorial citation to Landis tool co. for achievement in centerless grinding of threads. il Materials & Methods 24:1180-1 N '46
Faceplate mounted unit grinds inside castings. U. Wheatley. diag Am Mach 91:146 Mr 13 '47
Fine finishes and flatness obtained by surface grinding. il Mach 54:152-3 O '47
Fixture for grinding the under side and top of machine tool ways parallel. I. F. Yeoman. diags Mach 53:176 D '46
Grinding the beating surfaces of the standard laboratory beater. L. V. Forman and D. D. Niemeyer. Paper Tr J 124:47-8 Ja 2 '47; Same cond. Paper Ind 28:722 Ag '46
Grinding's importance increases as knowledge of techniques broadens. Sci Am 177: 27-8 Jl '47
Hints on grinding and polishing. il diags Sheet Metal Worker 38:135-6+ Ja '47
How to grind carbide die parts. R. Le Grand. il diags Am Mach 91:85-96 S 25 '47
Polishing and grinding goes modern. L. S. Sternal. il diag Metal Finishing 45:51-4 Mr '47
Precision method of generating circular cylindrical surfaces of large radius of curvature for use in the curved-crystal spectrometer. J. W. M. DuMond and others. il diags R Sci Instr 18:617-26 S '47
Reconditioning hot mill rolls. R. S. Trimble. il Iron Age 160:71-3 S 18; 77-80 S 25 '47
Results of an investigation of the removal of metals by the process of grinding. R. E. McKee and others. il diags A S M E Trans 69:125-9 F '47
Thread rolling, theory and practice; dies. J. W. Batchelder. il Iron Age 158:59 D 26 '46
Torpedo propeller-blade surfacing. G. L. Brown. il diags Engineering 163:73-6 Ja 24 '47
Wet belt machining. W. T. Schleicher. Materials & Methods 24:1532 D '46

See also
Grinding machines
Lubrication and lubricants (cutting and grinding)

Cost
How to establish grinding costs. A. S. Wyborski. il Steel 120:72-3+ Mr 24 '47

GRINDING (ores, etc.). See Crushing

GRINDING machines
Accurate holes with 0.6 micro-inch finish ground in one set-up. C. H. Wick. il diag Mach 53:162-6 My '47
Arter cylindrical and rotary surface grinders. il Mach 54:195 S '47
Automatic centreless form grinding. il Engineer 183:362 Ap 25 '47
Besly double vertical spindle grinder. il diags Machine Design 19:149-50 Mr '47
Besly wet grinder. il diags Product Eng 18: 156-7 S '47
Bridgeport Model 103 vertical surface grinder. il diags Product Eng 18:130-1 S '47
Brown & Sharpe surface grinder. il Am Mach 91:146 Mr 27 '47
Bryant automatic precision small-bore grinding machine. il Mach 53:186-7 My '47; Am Mach 91:173-4 My 8 '47
Bryant grinder. il Automotive & Aviation Ind 96:41-2+ Ja 15 '47; Am Mach 91:137 Ja 30 '47
Bryant internal grinder employs axial ball bearings on slides. il diag Machine Design 19:151-2 Jl '47; Product Eng 18:144-5 S '47
Centerless grinder arranged for continuous and simultaneous work-feeding and wheel dressing. E. Berger. diags Mach 53:182-3 Jl '47
Chatwood automatic hob and helical spline grinding machine. il Automobile Eng 37: 105-6 Mr '47
Chatwood automatic hob and helical spline grinding machine. il Engineer 183:83 Ja 17 '47
Churchill automatic internal grinding machine. il Engineer 183:432-3 My 16 '47
Churchill automatic sizing internal grinding machines. il Automobile Eng 37:169-70 My '47
Cincinnati Filmatic 4in plain hydraulic grinder. il Automobile Eng 37:16-17 Ja '47
Cincinnati Filmatic hydraulic grinding machine. il Ry Mech Eng 121:209-10 Ap '47
Cincinnati 4-in. hydraulic grinding machine. il Engineering 163:283-4 Ap 11 '47
Cincinnati hydraulic universal grinder. il Ry Mech Eng 121:495-6 S '47
Cincinnati milling machines and grinders. il Mach 54:210-11 S '47
Cincinnati profile grinding machine. il Automotive Ind 97:48 O 1 '47; Am Mach 91:161 O 9 '47; Mach 54:197 O '47
Colonial broach sharpening machine. il Automotive & Aviation Ind 96:41 Ja 1 '47
La construction des machines à rectifier aux ateliers Churchill, à Manchester. J. Dumas. il diags Génie Civil 124:285-7 Ag 1 '47
DoAll hand-operated grinder. il Mach 53: 197 F '47
DoAll Handraulic surface grinder. il Mach 54:265 S '47
Ex-Cell-O production grinders and precision boring machines. il Mach 54:180-1 S '47
Fixtures make disk grinders versatile; illustrations with text. F. C. Schaub. Am Mach 91:73-7 Jl 31 '47
Fixtures make rotary surface grinders automatic. F. C. Schaub. il diags Am Mach 91:69-73 S 25 '47
Grinding; American genius has advanced the grinding machine from obscurity to prominence. C. Hubbard. il Steel 121:80-2+ Jl 14 '47

GRINDING machines—*Continued*
Heald surface grinders, Bore-Matics, and internal grinders. il Mach 54:192-4 O '47
Improved centerless grinder work supports shorten setups. N. E. Winlund. il Am Mach 90:136 N 21 '46
Jones and Shipman centring machine and electronically-controlled grinder. il Engineering 164:152 Ag 15 '47
Jones and Shipman cone centre grinder. il Automobile Eng 37:387-8 O '47
Jones and Shipman rotary surface-grinding machine. il Engineering 163:427 My 23 '47
Jones grinding machine for table-knife shoulders. il Engineering 162:561 D 13 '46
Keighley improved hydraulically-operated grinding machines. il Engineer 182:422 N 8 '46
Landis hydraulic grinding machines. il Mach 54:162-3 S '47
Landis tool valve grinder. il Product Eng 18:154-5 S '47
Lempco crankshaft grinder. il Automobile Eng 37:191-2 My '47
Machine tool show in print; grinding, honing, lapping. il diag Am Mach 91:248-63 S 11 '47
Mattison surface grinder. il Ry Mech Eng 121:491 S '47
Modern optical profile grinding machine. il Engineer 182:400 N 1 '46; Automobile Eng 36:596-7 D '46
Norton company's new grinders. il Mach 54: 202-3 S '47
Oliver templet tool-bit grinders. il Mach 54: 201 S '47
Profile-grinding machine with optical control. il diags Engineering 163:80-2, 84 Ja 24 '47
Projection form-grinding machine. il Machine Design 18:106 D '46
Rivett tool-room grinding machine and lathes. il Mach 54:220-1 S '47
Rogers face and knife grinder with finger-tip control. il Mach 53:205 Ja '47
Scrivener form grinding machine. il Automobile Eng 37:190 My '47
Sheffield projection form grinder. il Product Eng 18:129 S '47
Speetol tap grinding attachment. il Automobile Eng 36:596 D '46
Tap support increases flute grinder accuracy. il diags Product Eng 18:98-9 Je '47
Thompson grinding machines. il Mach 54: 196-7 S '47
Truvox cylindrical grinding machine for small parts. Engineering 162:597 D 20 '46
Universal oscillating precision grinder. il diags Product Eng 18:106-7 S '47
Wet grinding sheet and strip; machine developed by Hamilton pump co. T. E. Lloyd. il Iron Age 160:65-6 Ag 14 '47

See also
Grinding wheels

Control

Electronics and precision grinding machines; development of Churchill machine tool company. il Engineer 182:300-1 O 4 '46; Automobile Eng 37:53-4 F '47

Lubrication

Lubrication of grinding machinery. A. F. Brewer. il diags Steel 121:74-6+ O 27 '47

GRINDING wheels
Grinding large radii with small wheels. G. Wenke. diags Am Mach 91:102 F 27 '47
Grinding wheels developed for wide application by the Carborundum co. il Mach 53: 156-7 Ag '47
Grinding wheels; selection of proper wheel important from standpoint of work-quality and safety. Pulp & Pa of Can 48:87 Jl '47
How to grind carbide die parts; wheel selection. R. Le Grand. il diags Am Mach 91:94-6 S 25 '47
How to prevent snagging wheel breakage. R. B. Fair. il diags Foundry 75:70-2+ S; 82-4+ O '47
New abrasive reduces grinding costs; 32 Alundum. J. Anthony. il Iron Age 158:56-9 N 21 '46
New aluminum-oxide abrasive improves grinding efficiency; 32 Alundum. G. T. Rideout. il Mach 53:158-64 Ja '47
New industrial grinding wheel; Carborundum company's ceramic bonded wheel. il Mod Plastics 24:216-17 My '47

Advertising

What to do when customers don't know your story; Norton company direct mail folders. R. A. Reed. il Sales Management 58:102+ Mr 15 '47

Safety measures

Daily grind; conditions which contribute to safe or unsafe grinding wheel work. F. K. Van Horn. il Safety Eng 93:12-13+ Ja '47
Safe use of portable grinders; reference book sheet. diags Am Mach 91:157, 159 O 9 '47

Truing

Comparison of crush dressing and diamond dressing as applied to thread grinding. E. V. Flanders. Mech Eng 69:123-7 F '47
Diamond- or crush-dressed wheels for contour grinding? F. Victory. il Mach 53:172-7 Ap '47
Form wheel dressing. Automobile Eng 37: 187-9 My '47
Old saws make crush-form masters. O. F. Nelson. Am Mach 91:111-12 Ap 24 '47

GRISWOLD, Dwight Palmer, 1893-
Head of the U.S. mission supervising Greek aid. por(cover) Bsns W p8 Je 14 '47

GRIT chambers. See Sewage disposal—Grit chambers

GROCERY manufacturers of America
Annual meeting, 38th, New York city, Nov. 18-20. Sales Management 57:119 D 1 '46

GROCERY stores
All-service selling builds load in grocery. il Elec World 126:140 D 7 '46
How blitz crews seek 98,000 outlets for Sherwin-Williams non-paint chemical specialties. E. W. Windsor. il Sales Management 58:42-3 My 1 '47

See also
Food stores
Market stores

GROCERY trade
Chains stage a comeback. Bsns W p55-6+ Ja 25 '47
Fair-trade fight in Missouri; grocers campaign for minimum-resale-price law. Bsns W p72-4 Ap 26 '47
Fifth wheel cuts loading time; trailer-tractor connections made from within driver's cab; Fisher Bros. deliveries of groceries from Cleveland warehouse to retail stores. il Food Ind 18:1714-15 N '46
GMA market basket quiz gets opinions, advice on labels. Ptr Ink 218:96-7 Ja 3 '47
How Lever helps retailers become better merchants; booklets on grocer problems. J. Brownell. il Ptr Ink 218:37-8 F 7 '47
Independent grocers switching to national brands, NARG survey indicates. W. H. Davis. Ptr Ink 220:87 Ag 22 '47
It's sell, sell, sell in groceries. W. F. Wolf. J Retailing 23:33-4+ Ap '47
National brands now get full recognition in Kroger chain. J. B. Hall. il Sales Management 59:42-4 Ag 1 '47
Need for wholesaler-retailer cooperation in pricing. F. M. Bernfield. Dom Comm 35: 3-7 Jl '47
Semi-trailers speed up grocery deliveries; Tulsa wholesaler uses two trailers for each tractor. il map Food Ind 19:790-1 Je '47
Small grocers fight back; New York group revives idea of wholesale warehouses owned cooperatively. Bsns W p70+ Ap 12 '47
Ten selling musts in modern food merchandising; prepackaging, preparing, precooking, precleaning, preselling by the manufacturer to stimulate self-service and impulse purchasing. F. L. McKibbin, jr. il Ptr Ink 220:31-3+ Ag 8 '47
Use double bottoms on big unit deliveries; three vehicle train spreads heavy load on five axles. il Food Ind 19:194 F '47
Warehouse trains pick stock for retail grocery stores; National tea company. il plan Food Ind 19:53-5 Ja '47

GROCERY trade—*Continued*
What will be the fate of war-born grocery items? J. A. H. Rehm. il Adv & Sell 40: 36-7 Je '47

See also
Canned food
Chain stores
Coffee trade
Food industry and trade
Great Atlantic and Pacific tea company
Kroger company
Market stores
Voluntary chain systems

also Independent grocers' alliance of America

Accounting

Cost accounting retail grocery stores. J. R. Bromell. Dom Comm 35:23-8 F '47
Stock control plan to insure profits; E. R. Godfrey and sons, Milwaukee wholesale grocer. J. Turner. il Am Bsns 17:12-13+ Ja '47

Advertising

Kroger promotes for profit; grocery chain advertising national brands. il Bsns W p62+ O 11 '47
Stars for sales; Kroger promotion of national brands. il Sales Management 59:56+ O 15 '47

See also
Delicatessen stores—Advertising

Finance

Grocery chain's big income promises extra dividend; Stop & shop, inc. Barron's 27:34 S 1 '47

GROLIER society, inc.
Selling education. Bsns W p65-7 Jl 19 '47

GRONDAHL, Lars Olai, 1880-
Grondahl and Wight get Henderson medals; Franklin Institute's honors for contributions to art of railway signaling. por Ry Age 122:708+ Ap 5 '47

GROOVING
Follower mechanism for contour milling of grooves. C. E. Lambert. diags Mach 53: 163 Ag '47
Internally grooving castings with a special tool. R. Mawson. diags Steel 121:80 S 1 '47
Lathe attachment for cutting oil-grooves. H. E. Murphey. diag Mach 53:175 D '46

GROUND controlled approach. See Airplanes—Landing

GROUND effect. See Aerodynamics

GROUND position indicator
GPI; an automatic navigational computer. W. J. Tull and N. W. MacLean. diags Franklin Inst J 242:373-98 N '46

GROUND squirrels
Plague, the survival of the infection in fleas or hibernating ground squirrels. F. M. Prince and N. E. Wayson. Pub Health Rep 62:463-7, 1167-8 Mr 28, Ag 8 '47

GROUNDNUTS. See Peanuts

GROUNDS and faults. See Electric distribution—Grounds and faults

GROUP banking. See Banks and banking—Group banking

GROUP bonus. See Wage payment plans—Group bonus

GROUP insurance. See Insurance, Group

GROUP medicine. See Medical service—Group and prepayment plans

GROUTING
Cement grouting practice; symposium. Concrete 55:16+ Ap '47
Cleaning and grouting of limestone foundations, Tennessee Valley authority. A. L. Pauls; T. F. Taylor. il map plan diags Am Soc C E Proc 72:1330-69 D '46; Discussion. 73:391-6, 923-35 Mr, Je '47
Contraction joint grouting of large dams. A. W. Simonds. plans diags Am Concrete Inst J 18:637-52 F '47; Discussion. il 19:652[1]-652[10] pt 2 D '47
Experimental observations on grouting sands and gravels. A. Machis. il diags Am Soc C E Proc 72:1203-27 N '46; Discussion. 73: 251-2, 387-8, 936-40 F-Mr, Je '47
Faulted rock passed by grouting on Copenhagen sewer tunnel. K. Pilgaard. il plan diags Eng N 138:40-2 Ja 9 '47
Joining large concrete pipe with air gun. W. B. Lenhart. il Rock Prod 50:121+ Jl '47
Leakage correction at the Great Falls reservoir. G. E. Tomlinson. il map diags Engineering 163:181-3, 192 Mr 14 '47
Machine grouts joints in trunk sewer. C. S. Seabrook. il Eng N 138:50-2 Ja 9 '47
Progress report of the joint investigation of methods of roadbed stabilization. R. B. Peck. il diags Ill U Eng Exp Sta Reprint Ser 34:1-32 '46
Reconstruction of 67-year-old bridge piers and abutments, Canadian national railways, Black Creek bridge. J. F. Salmon. il plan diags Roads & Bridges 84:57-61+ N '46
Theory and practice of foundation grouting. V. L. Minear. diags Am Concrete Inst J 18: 917-31 Ap '47; Abstract. Eng N 138:505-6 Ap 3 '47; Discussion. Am Concrete Inst J 19:932[1]-932[16] pt 2 D '47
Three-million-dollar Tacoma sewer project employs machine-made joints. C. S. Seabrook. il Civil Eng 17:314-16 Je '47

GROWTH inhibiting substances
Competitive inhibition of the metabolism of α-amino acids by their halogenated analogs. H. K. Mitchell and C. Niemann. Am Chem Soc J 69:1232 My '47
Growth inhibitor and a growth promoter in sugar cane. C. J. Engard and A. H. Nakata. bibliog Science 105:577-80 My 30 '47
Relative growth rates of bean and oat plants containing known amounts of a labeled plant-growth regulator (2-iodo[131]-3-nitrobenzoic acid. J. W. Mitchell and others. Science 106:395-7 O 24 '47
Some effects of o-isopropyl n-phenyl carbamate upon cereals. W. B. Ennis, jr. Science 105:95-6 Ja 24 '47
Some effects of ultraviolet light on 2,4-D and related compounds. M. G. Payne and J. L. Fults. bibliog il Science 106:37-9 Jl 11 '47
Suppression of axillary growth in decapitated tobacco plants by chemicals. R. A. Steinberg. Science 105:435-6 Ap 25 '47
Translocation of a radioactive plant-growth regulator in bean and barley plants. J. W. Wood and others. bibliog diag Science 105: 237-9 Mr 28 '47
Tryptophan as a competitive growth inhibiting analog of phenylalanine. E. Beerstecher, jr. and W. Shive. bibliog Am Chem Soc J 69:461-2 F '47
Unsaturated lactones; researches on acetylenic compounds; new route to growth-inhibitory αβ-ethylenic γ- and δ-lactones. L. J. Haynes and E. R. H. Jones. Chem Soc J p954-7 O '46

GROWTH promoting substances
Acetone-desiccated adult tissues as a source of cell growth-promoting extracts. E. Margoliash. Science 105:369-70 Ap 4 '47
Effects of 2,4-D on seed germination and respiration. Y. L. Hsueh and C. H. Lou. bibliog Science 105:283-5 Mr 14 '47
Growth inhibitor and a growth promoter in sugar cane. C. J. Engard and A. H. Nakata. bibliog Science 105:577-80 My 30 '47
Growth-regulating substances; their chemistry and development. T. Swarbrick. Chem Age (Lond) 55:559-61 N 9 '46
New compounds as plant growth regulators. M. S. Newman, W. Fones and M. Renoll. bibliog Am Chem Soc J 69:718-23 Mr '47
Physicochemical characterization of pituitary growth hormone. Choh Hao Li. bibliog J Phys & Colloid Chem 51:218-28 Ja '47
Reaction of certain plant growth regulators with ion exchangers. R. J. Weaver. Science 106:268-70 S 19 '47

See also
Auxins
Biotin

GRUMMAN aircraft engineering corporation
Grumman earnings record best in air industry. Barron's 27:35 Ag 25 '47

GUADELOUPE
See also
Tariff—Guadeloupe

GUANIDINE
Antiplasmodial action and chemical constitution; guanidines and diguanides. H. King and I. M. Tonkin. Chem Soc J p 1063-9 N '46
Dyeing cellulose with acid dyestuffs; guanidine salts; patent. Am Dyestuff Rep 36:367 Je 30 '47
Some alkoxy- and alkylenedioxydi-amines and alkoxy- and alkylenedioxydi-guanidines. A. T. Fuller and H. King. Chem Soc J p963-9 Jl '47

GUANIDINE nitrate. See Nitroguanidine

GUANIDOACETIC acid. See Glycocyamine

GUARANTEE mutual life company
Adopts CSO 2.5 per cent reserves and values Life Ins Courant 51:553-4 D '46

GUARANTY. See Suretyship and guaranty

GUARANTY of earnings. See Wage payment plans—Guaranty of earnings

GUARANTY of employment. See Employment systems—Guaranty of employment

GUARANTY of products
Colorful hams; Millar launches red cellophane wrap with campaign aimed at self-service merchandising. il Mod Packaging 20:112-14 Jl '47
See also
Products, Certification of

GUARANTY trust company of New York
Cleveland chairman and Kleitz president; capital increase proposed. Comm & Fin Chr 165:651 Ja 30 '47
50th anniversary of London office. Comm & Fin Chr 165:1306 Mr 6 '47

GUARD rails
Life-saving guard rail; abstract. H. F. Barney. Nat Safety N 56:37 Ag '47

GUARDIAN and ward
See also
Insurance, Surety and fidelity—Guardian bonds

GUATEMALA
See also
Banking law—Guatemala

Economic conditions

News by countries. For Comm W 25:15-16 N 23; 19-20 D 28 '46; 26:19-20 F 1; 18 Mr 8; 28:13-14 Jl 12 '47

GUAVAS
Guava-flavored pectin powder is rich in ascorbic acid. Y. Kanehiro and G. D. Sherman. flow sheet il Food Ind 18:1688-9+ N '46

GUAYAQUIL, Ecuador
Inadequate port facilities delay ships. For Comm W 27:35 Je 7 '47

GUAYULE
Evaluation of guayule rubber; development of testing formulae. W. F. L. Place and F. E. Clark. bibliog India Rubber World 115: 370-3 D '46

Analysis

Efficient apparatus for leaching samples with water. R. L. Holmes and H. W. Robbins. diag Anal Chem 19:808-9 O '47
Rubber determination in young guayule; studies on the Spence-Caldwell method. R. L. Holmes and H. W. Robbins. bibliog Anal Chem 19:313-17 My '47

GUEST houses
One room guest house. il plan Am Bld 69:103 S '47

GUEST houses, Industrial
Mill guest house; friendly addition to an industrial plant; Eastern corporation, South Brewer, Me. il plans Arch Forum 86:94-6 Mr '47

GUIDED missiles. See Bombs, Flying

GUILDS. See Gilds

GUINEA pigs
Blood picture of normal laboratory animals; review of the literature 1936-1946. M. V. Gardner. bibliog Franklin Inst J 243:498-502 Je '47

GUINNESS, Arthur Rundell
New I.C. of C. chief. por Bsns W p93 Je 28 '47

GULF coast
Cenozoic deposits of Central Gulf Coastal plain. G. E. Murray. bibliog maps diags Am Assn Pet Geologists Bul 31:1825-50 O '47
Equilibrium of form and forces in tidal basins of coast of Texas and Louisiana. W. A. Price. bibliog maps Am Assn Pet Geologists Bul 31:1619-63 S '47
Geomorphology of depositional surfaces. W. A. Price. maps Am Assn Pet Geologists Bul 31:1784-800 O '47
See also
Geology—Gulf Coast region

GULF, Mobile and Ohio railroad
Another rail merger? Gulf, Mobile & Ohio and just-reorganized Frisco talk over possibilities. map Bsns W p62+ Ag 30 '47
Equipment trusts offered. Comm & Fin Chr 164:3143 D 16 '46
Gulf, Mobile & Ohio absorbs Alton. M. Halpern. Barron's 27:23 Je 23 '47

GULF of Maine. See Maine, Gulf of

GULF oil corporation
Stock offered. Comm & Fin Chr 164:3143 D 16 '46

GULO-talo-HEPTITOL. See Sedoheptitol

GUM arabic
Stabilization of emulsions with vegetable gums; citrus emulsions. C. M. Ferri. il Food Ind 19:784-5 Je '47

GUM products, inc.
Stocks offered. Comm & Fin Chr 166:1254 S 29 '47

GUMS and resins
Chemistry of some plant gums and mucilages. E. L. Hirst and J. K. N. Jones. bibliog Soc Dyers & Col J 63:249-54 Ag '47; Abstract. Chem & Ind p14 Ja 4 '47
Constituents of natural phenolic resins; structure of *diiso*eugenol. N. J. Cartwright and R. D. Haworth. Chem Soc J p948-52 Jl '47
Constitution of egg-plum gum. E. L. Hirst and J. K. N. Jones. Chem Soc J p 1064-8 Ag '47
Organized commercial chemical development; market and product development; illustrated by Hercules powder co.'s vinsol, anethole and resin 731. J. H. Long. Chem & Eng N 24:3325-9 D 25 '46
Pine gum processing labor and fuel costs. H. P. Poole and E. L. Patton. Chem Eng 54:102-3 Ag '47
Stabilization of emulsions with vegetable gums; citrus emulsions. C. M. Ferri. il Food Ind 19:784-5 Je '47
Stimulation of oleoresin flow in pines by a fungus. G. H. Hepting. Science 105:209 F 21 '47
See also
Cherry gum
Mesquite gum
Naval stores
Resinous products
Turpentine

Statistics

Botanical drugs, spices, gums. Published in weekly numbers of Oil, paint and drug reporter

GUN metal
Centrifugal casting of copper-alloy wheels in sand moulds. O. R. J. Lee and L. Northcott. il Engineering 163:556-9 Je 27 '47
Effect of chills on rate of solidification of gun metal. W. J. Richmond. il Foundry 75:72-3+ O '47

GUN sights
Compensation of flexure in range finders and sighting instruments. G. W. Moffitt. diags Opt Soc Am J 37:582-5 Jl '47

GUNITE
Frost protection for concrete at elevation 9,050; Gem Lake dam. il diag Eng N 139: 610-12 O 30 '47
Gun resurfaces spall-eroded dam. il Elec World 128:71 Ag 16 '47
Hydraulic structure maintenance using pneumatically placed mortar. W. L. Chadwick. il diags Am Concrete Inst J 18:533-47 Ja '47

GUNITE—*Continued*
Low-cost thickener; clay plants of Edgar brothers co. C. D. Frobes. il diag Eng & Min J 148:81-2 S '47
Reconstruction of the Halifax high service reservoir. R. M. Doull and J. D. Kline. il diag Am Water Works Assn J 39:503-14 Je '47; Same. Water & Sewage 85:32-7 S '47; Same cond. Eng N 139:187-91 Ag 7 '47
Shaft problems; how some difficulties have been overcome. K. O'Donnell. il plan diags Can Min J 67:1023-6 N '46

GUNPOWDER

Manufacture

See also
Smokeless powder—Manufacture

GUNPOWDER, Smokeless. See Smokeless powder

GUNS
See also
Rifles

GUNS (ordnance)
Erosion in vent plugs, the effect of vent diameter. J. H. Wiegand. il diags Franklin Inst J 244:291-308, 363-84 O-N '47

See also
Guns, Aircraft
Naval guns

GUNS, Aircraft
Review of recent progress in aircraft gun design as it affects installation in aircraft. G. F. Wallace. diags Roy Aeronautical Soc J 50:986-97 D '46

GUNS, Industrial
New refractory gun speeds furnace repairs. Iron Age 159:79 My 8 '47
Submersible bolt-driving and punching gun; for making temporary ship repairs during salvage operations. diag Engineering 162: 597 D 20 '46

GUNS, Target
Molding phenolic parts of target gun. il Mod Plastics 24:131-4 Ag '47

GUTENBERG Bible
King Charles of France and the strange new book condemned as "The work of the devil." A. Warren. il Inland Ptr 119:62 My '47

GUTHRIE, Leroy R.
Power personality. por Power 91:109 F '47

GUTT, Camille
Business abroad; Fund and Camille Gutt. Fortune 35:214 Ja '47

GUTTERS
Curbs built of asphaltic concrete to cut highway maintenance costs; U.S. route 1 in Maryland; with cost data. il Eng N 138: 810-11 My 15 '47
Egg roller cuts cost of asphalt paved ditch. R. L. Winton. il Roads & Sts 90:69+ S '47
Full-scale tests checked design of expressway gutter inlets. E. C. Woodward. il diags Roads & Sts 89:69-73 D '46; Discussion. C. F. Izzard. 90:90+ Ap '47

GUTZEIT test. See Arsenic—Analysis

GUY anchors. See Anchors, Guy

GUY motors, limited
Statement by the chairman at annual general meeting. S. S. Guy. Economist 152: 564 Ap 12 '47

GWYNNE bill. See Wages—Law

GYMNASIUMS
Body building; physical fitness is a young business with three million paying customers. il Fortune 35:94-101+ F '47

GYPSUM
Caledonia gypsum deposit. D. C. McLaren. flow sheet il Can Min J 67:1101-8 D '46
Effect of gypsum content and other factors on shrinkage of concrete prisms. G. Pickett. Am Concrete Inst J 19:149-75 O '47
Gypsum industry expanding in the West. Rock Prod 50:82 Jl '47
Quarrying gypsum in Nova Scotia. J. W. McFarland. il Explosives Eng 25:20-1+ Ja '47
Solubility of $Ca(OH)_2$ and $CaSO_4.2H_2O$ in dilute alkali solutions; application to portland cement pastes. W. C. Hansen and E. E. Pressler. bibliog Ind & Eng Chem 39:1280-2 O '47

See also
National gypsum company

GYPSUM products
Cold-pour plastic material; Palestic formed by adding gypsum plasters to resin forming chemicals. J. F. T. Berliner. il Mod Plastics 24:103-4 Mr '47
Plasters and gypsum cements for the ceramic industry; alpha-gypsum. J. S. Offutt and C. M. Lambe. bibliog il Am Cer Soc Bul 26:29-36 F 15 '47

See also
National gypsum company

Exhibitions

USG tells sales story with fire, sound. il Ind Marketing 32:41 Mr '47

Manufacture

Labor requirements for gypsum wall plaster and board. A. L. Stucke. Mo Labor R 65: 453-6 O '47
Newest plaster board plant on West coast; Standard gypsum co. il Rock Prod 50:74-7 S '47
Southwest's newest plaster mill; Union plaster co, Phoenix, making gypsum plaster and agricultural product. il Rock Prod 50: 106-7 Je '47

GYRO-GLIDER. See Gliders

GYROMAGNETISM. See Magnetism

GYROSCOPE
Control of naval gunfire. Engineering 163: 409-10 My 16 '47
D.c. rate gyro; Fairchild camera and instrument corporation. il R Sci Instr 18:376 My '47
Improved azimuth indicating system for aircraft. E. E. Lynch and R. A. Pfuntner. bibliog il diags Elec Eng 65:Trans 806-12 D '46
Magnetic airborne detector employing magnetically controlled gyroscopic stabilization. V. Vacquier and others. il diags R Sci Instr 18:483-7 Jl '47
Precision balancing at mass-production speed; electronic balancer of automatic pilot rotor. S. Bousky. il diags Electronics 20:98-104 S '47
Rate-detecting gyro for measuring changes in velocity. V. J. Canziani. il diags Machine Design 19:142-4 Ag '47
Reid and Sigrist electronic balancing machine. il diags Engineering 163:56-7 Ja 17 '47

H

H.T.S. See Salts, Fused

HACKWORTH, Timothy, 1786-1850
Memorial to Timothy Hackworth. Engineering 164:165 Ag 15 '47
Timothy Hackworth. Engineer 184:133 Ag 8 '47

HAEGER potteries, inc.
Celebrates a 75th anniversary. il Cer Ind 48:106-9 Ap '47

HAFNIUM
Action of neutrons on hafnium. A. H. W. Aten, jr. Science 105:386 Ap 11 '47
Spectrophotometric study of the hafnium alizarin lake. H. A. Liebhafsky and E. H. Winslow. bibliog Am Chem Soc J 69:1130-4 My '47

HAFSTAD, Lawrence Randolph, 1904-
Hafstad to direct Johns Hopkins institute, Baltimore. por Chem & Eng N 25:1209 Ap 28 '47

HAHN, Otto
Nobel chemistry award for uranium fission. por Chem & Eng N 25:769 Mr 17 '47

HAIL insurance. See Insurance, Hail

HAIR
Cross-sections of undistorted human hair. S. M. Garn. bibliog diags Science 105:238 F 28 '47
Hair keratin solutions for finishes, etc.; patent. Am Dyestuff Rep 36:337 Je 16 '47
Pilometric measurements and the rheological properties of hair. A. L. Copley. bibliog diags Science 105:340-2 Mr 28 '47
Some biological and chemical properties of animal hair. J. L. Stoves. bibliog(77 ref) diag Soc Dyers & Col J 63:65-77, pl 1-4 Mr '47

Analysis
Determination of cystine and cysteine in altered human hair fibers. D. Sanford and F. L. Humoller. bibliog Anal Chem 19:404-6 Je '47
Free fatty acids of human hair fat. A. W. Weitkamp, A. M. Smiljanic and S. Rothman. bibliog Am Chem Soc J 69:1936-9 Ag '47

HAIR, Removal of
Odorless depilatory patent upheld. Oil Paint & Drug Rep 151:5 F 10 '47; Same. Chem & Eng N 25:508+ F 24 '47

HAIR ornaments, Plastic
High fashion takes to plastics. il Mod Plastics 24:212-13 My '47

HAIR preparations
Ammonium thioglycolate hair waving solutions; abstract. J. H. Draize and others. Oil Paint & Drug Rep 151:67 My 19 '47
Beauty shop packages. il Mod Packaging 20: 116-18 Ag '47
Physiologic properties of thioglycolic acid and thioglycolates. C. P. McCord. Ind Med 15:669-76 D '46
Sales of hair preparations achieve $50 million level. M. D. Hall. Dom Comm 35:60-4 Jl '47
Why four out of ten men say nix to hair tonic. J. Nathan. Sales Management 58: 100-1 F 1 '47

HAIRBRUSHES. See Brushes

HAIRDRESSING
See also
Permanent wave equipment

HAITI
See also
Finance—Haiti
Mines and mineral resources—Haiti
Paleontology—Haiti

Economic conditions
News by countries. For Comm W 25:26-7 N 16; 30 D 21 '46; 26:13-14 Ja 18; 22-3 F 22; 27:19 Ap 26; 18-19 My 17; 19-20 Je 21; 28: 17 Jl 19; 15-16 S 20 '47
Review of developments in 1946. For Comm W 26:18-19 Mr 8 '47

HALE, George Ellery, 1868-1938
Some reminiscences of the Yerkes observatory, 1898-1904. W. S. Adams. Science 106: 1967 S 5 '47

HALFTONE process. See Photoengraving

HALIDES
See also
Bromides
Chlorides
Fluorides
Grignard reagents
Iodides
Lead halides

HALIFAX, England

Sewerage
Experiments on precipitation of trade-waste sewage; use of chlorinated copperas. C. Lumb and others. Water & Sewage 85: 28-9+ Jl '47

HALIFAX, Nova Scotia

Water supply
Dutch Village Road station. il Water & Sewage 85:23+ Ap '47
Reconstruction of the Halifax high service reservoir. R. M. Doull and J. D. Kline. il diag Am Water Works Assn J 39:503-14 Je '47; Same. Water & Sewage 85:32-7 S '47; Same cond. Eng N 139:187-91 Ag 7 '47

HALL, Joseph B. 1889-
President of the Kroger co. por(cover) Bsns W p8 N 9 '46

HALL, R. Dawson
Retires after 35 years on Coal age. por Coal Age 52:106+ Ja '47

HALL, Robert, 1867-
Britain's brain trust. Bsns W p 113-24 Ap 12 '47

HALL lithographing company
Preferred stock offered. Comm & Fin Chr 166:949 S 8 '47

HALLIGAN, William J.
Portrait. Sales Management 58:41 Mr 15 '47

HALOES, Pleochroic. See Pleochroic haloes

HALOGEN compounds
Evidence for the homolytic bond fission of positive halogen compounds. A. Robertson and W. A. Waters. Chem Soc J p492-7 Ap '47; Abstract and discussion. Chem & Ind p446 D 14 '46
Halogen-metal interconversion reaction and its application to the synthesis of nicotinic acid labeled with isotopic carbon. A. Murray, 3d and others. Science 106:277 S 19 '47
Halogen-metal interconversions with halides containing functional groups. H. Gilman and C. E. Arntzen. Am Chem Soc J 69:1537-8 Je '47
Halogenated sulfonanilides. A. Mooradian and G. W. Leubner. Am Chem Soc J 69: 2067-8 Ag '47
Preparation of fluorine-containing polyhaloheptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47
Reaction of thiuram disulfide with halomethyl ketones. J. J. Ritter and H. Sokol. Am Chem Soc J 69:2069-70 Ag '47
Replacement of halogen by the nitro group in halogenated acetothiophenamides. H. M. Priestley and C. D. Hurd. Am Chem Soc J 69:1173-5 My '47
Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; bromination, halogeno-derivatives, and the preparation of the new 7-nitro-2-naphthol. H. H. Hodgson and E. R. Ward. Chem Soc J p327-31 Mr '47
Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47
Tetrahedral interactions and diamagnetic susceptibilities. J. R. Lacher. Am Chem Soc J 69:2067 Ag '47
Vulcanization of GR-S with halogen compounds. B. M. Sturgis, A. A. Baum and J. H. Trepagnier. bibliog Ind & Eng Chem 39:64-8 Ja '47
See also
Bromine compounds
Chlorine compounds
Fluorine compounds
Grignard reagents
Sandemeyer reaction

Analysis
Decomposition and analysis of organic compounds containing fluorine and other halogens. J. F. Miller, H. Hunt and E. T. McBee. bibliog il Anal Chem 19:148-9 Mr '47
Determination of hydrogen in fluorine-containing halohydrocarbons. J. F. Miller and others. diag Anal Chem 19:146-7 Mr '47
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47
See also
Fluorine—Analysis

HALOGENATION
Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives. I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47
Kinetics of halogen addition to unsaturated compounds; the halogeno-ethylenes. B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47
Preparation of 3-halo-4-dialkylaminoalkylaminoquinoline derivatives. A. R. Surrey and R. A. Cutler. bibliog Am Chem Soc J 68:2570-4 D '46

HALOGENATION—*Continued*
Sulfur bond in vulcanizates; implications of halogen reactions. S. R. Olsen, C. M. Hull and W. G. France. bibliog Ind & Eng Chem 38:1273-82 D '46
See also
Bromination — Fluorination
Chlorination — Iodination

HALOGENS
Displacement in the halogen series. A. Furst. J Chem Educ 24:445 S '47
Positive character of halogens. J. Kleinberg. bibliog J Chem Educ 23:559-62 N '46
Reactions of the halogens with the silver salts of carboxylic acids. J. Kleinberg. Chem R 40:381-90 Je '47
Self-quenching halogen counters. R. D. Present. bibliog Phys R 72:243-4 Ag 1 '47
Structure-optical studies; X-ray diffraction by addition compounds of halogens with hydrophilic organic polymers. C. D. West. J Chem Phys 15:689 S '47
See also
Bromine — Fluorine
Chlorine — Iodine

Analysis

Hollow cathode source applicable to spectrographic analysis for the halogens and gases. J. R. McNally, jr. and others. bibliog il Opt Soc Am J 37:93-8 F '47
Microdetermination of halogens and sulfur using the Grote combustion apparatus. O. C. Sundberg and G. L. Royer. bibliog il diags Ind & Eng Chem Anal ed 18:719-23 N '46

HAMBRO trading company of America, inc.
Britons zone U.S. Bsns W p110+ N 16 '46

HAMILTON, Alice, 1869-
Alice Hamilton. S. Ellis. Ind Med 15:664+ N '46

HAMILTON, Ontario
Master plan for Hamilton, Ontario covers 30-year development of city. plan Roads & Bridges 85:66 My '47

Water supply

Cleaning sand filters with chlorine. D. H. Matheson. il Water & Sewage 85:85+ My '47
750,000-gal. radial-cone water-tank for the city of Hamilton. W. L. McFaul. il Water & Sewage 85:20+ Mr '47

HAMILTON manufacturing corporation
Debentures offered. Comm & Fin Chr 166:855 S 1 '47

HAMILTON watch company
Hamilton watch. il Fortune 35:100-5+ Ja '47

HAMMERS
Machinist hammers. il Paper Ind 28:1791 Mr '47
Safe handling of hammers. il Paper Ind 29:711 Ag '47

HAMMERS, Drop
Ceco-Drop gravity drop hammer features pneumatic ram lift. il Iron Age 159:47 F 20 '47; Am Mach 91:169 Mr 13 '47; Mach 53: 183 Mr '47; Ry Mech Eng 121:205-6 Ap '47
Ceco-Drop; gravity hammer. il Bsns W p56 F 15 '47
Fundamentals of forging; hammers. A. Ashburn. diags Am Mach 81:111-13 Ap 10 '47

HAMMERS, Pneumatic. See Pneumatic hammers

HAMMERS, Steam. See Steam hammers

HAMMOND, Louisiana
What's the big idea? 20 per cent price cut. Bsns W p22 My 10 '47

HAMOR, William Allen, 1887-
Portrait. Chem & Eng N 25:3049 N 25 '46

HAMSTERS
Cinephotomicroscopy of normal blood circulation in the cheek pouch of the hamster. G. P. Fulton and others. Science 105:361-2 Ap 4 '47

HANCOCK, John M. 1883-
Mr Hancock and the bomb. pors Fortune 35: 102-7 F '47

HANCORNIA speciosa. See Mangabeira

HAND
Protection
See also
Gloves, Safety

HAND lotions. See Lotions

HANDBAGS
Handbag assembly requires a strong adhesive. il Mod Plastics 24:104-6 N '46

HANDICAPPED
Amputation no handicap; man minus hand operates electric truck; plant of Carnation company. il Nat Safety N 55:46 My '47
Directory of agencies and organizations concerned with rehabilitation and services to the handicapped. H. A. Rusk and E. J. Taylor, comps. 133p pa 10c New York Times co, 229 W. 43d st, New York 18 '47
Employers' aid to handicapped gets attention; survey shows work performance equal to that of non-handicapped. Steel 121:56 S 22 '47
Employment of physically handicapped workers in the chemical industry is good business. W. von Pechmann. Ind & Eng Chem 39:sup93A-94A Je '47
Importance of detection of heart disease through available screening facilities in preparation for employment. B. E. Kuechle. Ind Med 16:488-9 O '47
It's good business to hire the handicapped. G. B. Erskine. il Dom Comm 35:21-5 Mr '47
Jobs analyzed for work hazards; Camden plant, RCA Victor division. G. H. Metz. Factory Management 105:126-7 Ag '47
Physically handicapped make good employees. M. Hutchison. il Food Ind 19:172-3+ F '47
Physically impaired worker in industry. M. D. Kossoris and H. S. Hammond. Mo Labor R 63:918-23 D '46
Story of Carroll; how a poliomyelitis patient became a CPA. C. Forward. Credit & Fin Management 49:24+ Ap '47
Successful employment of the handicapped. M. Supa. il Safety Eng 93:70-3 My '47
Who are the physically handicapped? B. Hanman. Ind Med 16:298-300 Je '47
See also
Blind — Disabled—Rehabilitation
Deaf

HANDICRAFT
Handicraft production in four Caribbean countries. For Comm W 28:25-6 Jl 26 '47
Handicrafts are both hobbies and big business. il Dom Comm 34:64-7 D '46

HANDLING, Mechanical. See Mechanical handling

HANDLING of materials. See Material handling; Mechanical handling

HANDS, Artificial. See Artificial limbs

HANDY, Jamison, 1887-
Fly on the wheel. por Fortune 35:138+ Ja '47

HANES, Ralph
Personalities in industrial advertising. por Ind Marketing 32:62 Mr '47

HANGARS
AAF's climatic hangar. C. W. Kniffin. il diag Refrig Eng 54:128-31+ Ag '47
Bristol Brabazon aircraft and hangar. il Engineering 164:369-70 O 17 '47
Climatic hangar for all-weather testing; Air proving ground command, Eglin field, Florida. il Product Eng 18:147-9 O '47
Climatic hangar provides all-weather, year-around testing facilities for army air forces planes and equipment. Heat & Ven 44:112+ O '47
Compact parking for personal planes; rotating-flood parking hangar. diags Arch Rec 101:124 Ap '47
Construction of wide-span concrete hangars. A. Tedesko. il diag Western Soc E J 51: 155-61 D '46
Engineers design giant concrete hangar for Rapid City bomber base. Concrete 55:22+ Je '47
Florida's new air laboratory at Eglin field. Manuf Rec 116:53 F '47
Hangar fires of 1946. il Aero Digest 54:40-1+ Ap '47
Hangars analyzed. F. N. Severud. il plans diags Arch Rec 101:114-23 Ap '47

HANGARS—*Continued*
Low-cost repairs restore concrete hangar to design strength. A. Tedesko. il diags Civil Eng 17:9-12 Ja '47
Navy begins work on special hangar to test aircraft electronic devices. Eng N 138:80 Ja 16 '47
Plane maintenance plant analyzed; discussion by C. M. Kneisel, M. Abramovitz and F. N. Severud. il Arch Rec 101:111-13 Ap '47
Planning of airline hangars. W. R. Engstrom. il Aero Digest 55:44-5+ Ag '47
Ruberoid hangar plans. M. V. Engelbach. plans diags Aero Digest 55:65-6+ Ag '47
Scaffold makes faster moves on third and fourth blimp docks. il Eng N 139:470-1 O 2 '47
Small crews use simple scaffolding for repair of big hangars. E. S. Pashley. il Eng N 139:262-3 Ag 21 '47
Traveling scaffold 145 ft. high used in repairing timber airship hangars. il diags Eng N 138:204-7 F 6 '47
Utility in lightplane hangars. K. E. Van Scoy. il Aero Digest 53:63+ N '46

Heating and ventilation

Construction notes on embedding radiant heating pipe in concrete. il diag Concrete 54:6-9 D '46
Radiant heat for hangars; Packard's Willow Run. il Aero Digest 53:64+ D '46
Radiant heating system; hangars of Packard and General Electric. il Welding J 26:68+ Ja '47; Same cond. diags Dom Eng 169:144-5+ Ap '47

HANGARS, Portable
Steel-arch hangar tested to destruction. H. E. Wessman. il diags Eng N 139:539-43 O 16 '47

HANLON, Walter
After 20 years in magazine advertising, Hanlon converts a specialized publication; Dental health. por Ptr Ink 218:91 Mr 14 '47

HANNA, M. A., company
Hanna is as Hanna does. il Fortune 35:90-5+ My '47

HANNA, Marcus Alonzo, 1837-1904
Hanna is as Hanna does. Fortune 35:90-5+ My '47

HANTZSCH'S diazonides. See Diazocyanides

HARBOR plywood corporation
Annual report. Comm & Fin Chr 165:3167 Je 16 '47

HARBORD, James Guthrie, 1866-1947
Tribute. por RCA R 8:391 S '47

HARBORS
Le bombardement de Rotterdam, ses effets sur les constructions en béton armé; la reconstruction du port et du théâtre municipal. A. Bijls. il plans diags Génie Civil 124:325-8 S 1 '47
Emergency repairs to continental ports. il map Engineering 164:337-8, 348, 385-7 O 10, 24 '47 (to be cont)
Malibu quarterdeck club; an elaborate setting for private bathing and boating on California's gold coast. il plans Arch Forum 85: 82-7 D '46
Tehuantepec route rehabilitation undertaken by Mexico. C. S. Hill. il maps plans Eng N 137:734-7 N 28 '46

See also
Dry docks
Ports
also subdivisions Harbor under names of cities, e.g. Manila—Harbor

Protection

Radio controlled buoys; lights controlled for harbor blackouts. A. F. Hopkins, jr. and F. A. B. Smith. il diag Electronics 20:84-6 Ja '47
Welded steel tubular bridges; used for sea forts off British coast. il plan diag Engineering 162:391, 396 O 25 '46

HARD facing
Hard-faced dies make drums. J. A. Gallaher. il diags Am Mach 91:101-3 Mr 27 '47
Hard facing brick machinery parts cuts costs of repairs and shutdowns. il Brick & Clay Rec 110:54 F '47
Hard-facing materials; types and characteristics, processing, directory, etc. H. R. Clauser. il Materials & Methods 25:103-18 Je '47
Hard facing welding. R. Reiner. Rock Prod 50:137+ Mr '47
Hard-surfacing rolling mill skid pipes. S. J. Borchers. diags Materials & Methods 24:1503 D '46
Metal spraying; reclamation of worn or faulty parts. J. Porter. il diags Automobile Eng 37:343-6 S '47
Spray-welding; hard-facing process uses a powder-flame spray gun. il Steel 119:74+ D 23 '46

HARD facing alloys. See Alloys, Hard facing

HARD of hearing. See Deaf

HARD woods
Bleaching of semichemical pulps. F. A. Simmonds and R. M. Kingsbury. bibliog Paper Tr J 124:53-60 Ja 23 '47
Hardwoods for newsprint. G. E. Shipman. bibliog Pulp & Pa of Can 47:93-7 D '46
Immense tropical hardwood forests await development; with figures on United States imports of hardwood, 1937-1946. A. D. McKellar. il For Comm W 29:3-5+ O 4 '47
Kraft pulping of southern hardwoods. L. V. Forman and D. Niemeyer. Paper Ind 29: 586-8 Jl '47
Use of hardwoods in the pulp and paper industry; report on the Northeastern wood utilization conference. Pulp & Pa of Can 47:88-90 N '46

HARDEN, Orville, 1894-
Portrait. Fortune 35:143 My '47

HARDENING
Model which shows hardening and annealing mechanisms. E. C. Davis. il Metal Prog 51:248-9 F '47
Physical properties and temper-hardening characteristics of copper-nickel-manganese alloys; abstracts. M. Cook and W. O. Alexander. Engineer 182:296-7 O 4 '46; Engineering 162:330 O 4 '46; Metal Prog 51:810+ My '47
Precipitation-hardened alloys for gas-turbine service. H. Scott and R. B. Gordon. il A S M E Trans 69:583-99 Ag '47
Precipitation hardening. L. Sanderson. Chem Age (Lond) 56:202-4, 412-14, 741-3; 57:13-15, 151-2 F 1, Ap 5, Je 7, Jl 5, Ag 2 '47
Stress-relief-hardening of beryllium copper. R. W. Carson. il Mech Eng 69:651-4 Ag '47
Surface hardening of aluminum and its alloys; abstracts. K. G. Robinson and B. W. Mott. Product Eng 18:133-4 Jl '47; Materials & Methods 26:130 Jl '47

See also
Case hardening
Metals—Aging
Steel, Hardening of

HARDER, Del S.
Portrait. Bsns W p80 N 9 '46

HARDING, Carroll Rede, 1888-
Portrait. Bsns W cover Jl 12 '47

HARDNESS
Hardness of magnesium alloys; chart; engineering file facts. K. Rose, comp. Materials & Methods 25:121 Mr '47

See also
Glass—Hardness

Testing

Brinell hardness does not measure machinability. G. Schlesinger. bibliog diags Am Mach 91:125-36 Jl 17 '47
Comparison of microhardness indentation tests; Tukon and Eberbach testers. D. R. Tate. il Am Soc for Metals Trans 35:374-83; Discussion. 383-9 '45
Easy way to measure hardness; microhardness tester. il Bsns W p48+ Ap 5 '47
End-quench hardenability versus hardness of quenched rounds. G. K. Manning. il Metal Prog 50:647-52 O '46
Factors influencing microhardness testing; abstract. E. B. Bergsman. Am Cer Soc J 30 (Cer A):15 Ja 1 '47
Hardenability test for low carbon and shallow hardening steels. O. W. McMullan. il Am Soc for Metals Trans 35:584-602; Discussion. 602-8 '45

HARDNESS—Testing—*Continued*
Hardness testing at elevated temperatures; abstract. K. G. Robinson. Materials & Methods 26:134-5 O '47
Hot hardness testing. O. Zmeskal. il Metal Prog 51:86 Ja '47
Improvised hardness test. T. F. Burch. Metal Prog 50:661 O '46
Microhardness of small parts; Tukon hardness tester; abstract. G. E. Shubrooks. Materials & Methods 24:1272 N '46
Microhardness of steel; device designed at Research laboratory of United States steel corporation. Blast F & Steel Pl 35:484-5 Ap '47; il Automotive & Aviation Ind 96:37+ My 1 '47; il Mech Eng 69:408 My '47; il Sci Am 176:265-6 Je '47
Micro-hardness testing; a study of the W.63 high duty piston alloy. A. J. Stokes and S. B. Dew. il Automobile Eng 37:181-6 My '47
Microhardness testing; abstract. E. B. Bergsman. Materials & Methods 25:128 Ja '47
New microhardness tester; Microsclerometer L.C. Iron Age 160:69 S 18 '47
P-V test; new hardenability measure. E. S. Kopecki. il Iron Age 158:66-9 N 14 '46
Rockwell hardness corrections for rounds. G. E. Poole and J. Hunt. Metal Prog 51:775, 776B (data sheet) My '47
Role of surface condition in the measurement of hardness; abstract. P. Bastien and A. Popoff. Materials & Methods 25:132 Je '47
Several tests are available for testing hardness of metals. H. M. Lyle. Oil & Gas J 46:97 Ag 2 '47
Sources of error in diamond pyramid hardness measurements on hardened steel. W. N. Hindley. Iron & Steel Inst J 152:248-54, pl 23-23a no 2 '45; Same abr. Engineering 161:286-7 Mr 22 '46; Abstract. Metal Prog 49:610+ Mr '46; Discussion. Iron & Steel Inst J 152:254-8 no 2 '45
Testing hardness up to 700° F. A. L. Pranses. Metal Prog 52:249-50 Ag '47

HARDWARE
Drills packaged to speak for themselves. il Mod Packaging 20:107 N '46
Product makes the trademark; Hassall's line of special nails, rivets and screws. il Mod Packaging 20:104-6 N '46
See also
Bolts and nuts
Building fittings
Door knobs
Hinges
Tools

HARDWARE industry and trade
Meade Johnson revitalizes hardware manufacturer's marketing methods. Ptr Ink 218: 99-100 Mr 7 '47
Yale & Towne's new key; distributing thru local lumber dealers. Bsns W p62+ Ja 18 '47

Advertising
Brand name contest for hardware retailers. Ptr Ink 221:80 O 17 '47
Jobber pushes national brands in ad campaign for retailers; Hall hardware co. consumer campaign on behalf of retailer and manufacturer. il Ptr Ink 219:40 My 2 '47

HARDWARE stores
Case studies in small business; hardware window display. Dom Comm 35:61-2 Je '47

HARDWOOD. See Hard woods

HARDY, Charles Oscar, 1884-
Two economists for congressional staff posts. por Bsns W p 18 Ap 12 '47

HARGRAVE, Thomas Jean, 1891-
Eastman Kodak's president. por(cover) Bsns W p8 N 23 '46
Oversees munitions. por Bsns W p80 Je 28 '47

HARMAN, William H., corporation
Stock offered. Comm & Fin Chr 165:338 Ja 20 '47

HARMONIC analysis
See also
Spherical harmonics

HARMONICA
Mouth organ engineering; how it reduces fan and duct noises; harmonica used to measure sound frequencies. J. Cassie. il diags Power Pl Eng 51:84-7 Ag '47

Manufacture
Value of controls in molding; harmonica manufacture. C. W. Bowden, jr. and H. F. Hoyler. il Mod Plastics 24:194-6 My '47

HARMONICS (electric waves)
Harmonic-amplifier design. R. H. Brown. bibliog diags Inst Radio Eng Proc 35:771-7 Ag '47
Measuring speed with WWV; harmonics of station's signal obtained for calibrating oscillator used in measurement of shaft speed. J. C. Coe. il diags Electronics 20:90-3 Ag '47
See also
Multivibrators

HARRIMAN memorial medals for safety
Harriman medals go to Union Pacific, Western Maryland and Colorado & Wyoming. Ry Age 123:530-1 S 27 '47

HARRODS limited
Statement by the chairman at annual general meeting. R. Burbidge. Economist 152: 566 Ap 12 '47

HARROWS
Manufacture
Pulling harrow teeth with a spot welder. il Steel 120:82-3 Mr 31 '47

HARTFORD, Connecticut
Hartford, city insurance built; abstract. T. E. Murphy. East Underw 48:18 Ag 1 '47

Streets
Hartford publicity builds public support of snow removal job. Roads & Sts 89:106 N '46

HARTFORD electric light company
Three-way dividend; Hartford Electric Light shares with consumers, employees, and stockholders. Bsns W p18 N 23 '46

HARVARD university
Eleven separate agencies at Harvard university in the botanical field. Science 104:509 N 29 '46
Harvard university's science city. Science 104:485-6 N 22 '46; Same cond. Mech Eng 69:149 F '47

Graduate school of design
Industrial plants; a Harvard research project; with construction analysis. W. F. Bogner. plans diags Arch Rec 102:103-14 Ag '47

Libraries
Guides to the Harvard libraries; no. 1: Economics and business. A. H. Cole. 64p pa 50c Harvard univ. library, Cambridge 38, Mass. '47

HARVESTING machinery
Big pickings. il Bsns W p46 N 9 '46
Equipment for separately measuring power in the cylinder shaft, threshing machinery and sickle bar components of combine harvesters; abstract. A. C. Ruge and others. il S A E J 55:66 Mr '47
Some power requirements studies with Ohio power-take-off dynamometer. G. W. McCuen. il S A E J 55:44-6+ Ja '47
See also
Potato harvesting machinery

HARWELL, Gordon L.
Portrait. Bsns W p70 Mr 15 '47

HASTELLOY. See Nickel alloys

HASTINGS, Edgar Morton, 1882-
Stresses objectives at inaugural. por Civil Eng 17:91-2 F '47

HAT research foundation
Members of the men's hat industry pull together to profit separately. T. Armstrong. il Sales Management 57:44-6 N 20 '46

HATCH law. See Government employees—Law

HATCHERIES, Poultry. See Poultry hatcheries

HATHAWAY, Gail A. 1895-
Sketch. por Civil Eng 16:550-1 D '46

HATHAWAY bakeries, inc.
Offering of stock. Comm & Fin Chr 165:1191 Mr 3 '47

HATS
Place your bets; can Rolnick win mousy males to giddier headgear? I. Pierce. il Sales Management 58:80+ Je 1 '47

HATS—*Continued*

Advertising

Balanced sales effort peps up this merchandising program; broadcasts and revised sales plan bring bigger sales to Lee hats. Ptr Ink 219:45 Je 20 '47
Members of the men's hat industry pull together to profit separately. T. Armstrong. il Sales Management 57:44-6 N 20 '46

Manufacture

Stiffening felt hats; Zein solutions; patent. Am Dyestuff Rep 36:366 Je 30 '47

Rating

Men's hats. il Consumers Res Bul 18:17-19 N '46

HATS, Children's

Advertising

Point-of-sale promotion features young movie stars; Cinderella hat co. il Ptr Ink 220:38 Ag 22 '47

HATS, Safety
Head protection. il Nat Safety N 55:29 Mr '47

Standards

Head and foot protection standards. H. G. Lamb. Safety Eng 94:50-1 O '47

HATS, Straw. See Straw hats

HAULAGE
Low trailer runway cuts bottler's handling time; Minnehaha water co., Cleveland. il plan Food Ind 19:1224-5 S '47
Novel trolley hauling device. il Mech Handling 33:623-4 O '46

See also
Conveying machinery
Electric trucks, Industrial
Loading and unloading
Locomotives
Mine haulage
Motor trucks
Tractors
Trucks

HAUSSERMANN, John William, 1867-
Gold king sets out again. por Bsns W p32+ O 4 '47

HAVEG
Acetic acid and chlorine vs. materials of chemical plant construction; Haveg. E. P. Mampe; D. R. Gayle. Chem Eng 54:241, 244+ My '47
Sulphur dioxide versus construction materials. E. P. Mampe. Chem Eng 54:209 S '47

HAWAII employers council
Hawaii replies in three tongues; industries take firm stand in ruffled labor situation. il Bsns W p 104+ S 13 '47

HAWAII university
Research in the University of Hawaii Pacific expeditions. T. Nickerson. Science 104:542-3 D 6 '46

HAWAIIAN electric company
Bonds offered. Comm & Fin Chr 165:3394 Je 30 '47

HAWAIIAN ISLANDS
Hawaiian statehood urged. J. A. Krug. Comm & Fin Chr 165:1567 Mr 20 '47

See also
Clothing trade—Hawaiian Islands
Labor and laboring classes—Hawaiian Islands

Industries and resources

Hawaiian hopes for real benefits when statehood makes trading practices easier. Bsns W p22 Je 14 '47

HAY, William Perry, 1871-1947
Sketch. J. G. Needham. Science 105:490 My 9 '47

HAY
Spontaneous combustion of hay. J. B. Firth and R. E. Stuckey. bibliog il diags Soc Chem Ind J 64:13-15; 65:275-7 Ja '45, S '46

HAY drying
Electric blowers cut hay drying costs. L. S. Dube. il Elec World 126:136+ N 9 '46
Hay curing as a load builder; Central Vermont public service corp. Elec World 127: 65 Mr 29 '47
It ain't hay; Walla Walla alfalfa dehydration plant. il Elec West 99:85 O '47
Mow-cured bales produced with power-driven fan. Heat & Ven 44:114+ Jl '47
Some heating jobs that can be sold down on the farm. R. H. Emerick. il diags Dom Eng 169:102-5+ F '47

HAYDEN memorial library. See Massachusetts institute of technology—Hayden memorial library

HAYWOOD, Allan
Portrait. Bsns W p98 N 16 '46

HAZEL-ATLAS glass company
Thumbnail stock appraisal. Mag of Wall St 79:261 D 7 '46

HEAD

Protection

Eyes and face; goggles, shields and masks. il Nat Safety N 55:25-6+ Mr '47

See also
Hats, Safety

Wounds and injuries

Diagnosis and management of acute head injuries. M. J. Owens. Ind Med 16:169-71 Ap '47

HEADFRAMES
Bureau inspects old shafts with portable headframe; Leadville area in Colorado. N. Ebbley, jr. il Eng & Min J 148:93-4 Je '47

HEADING machines
Cold-heading makes pull rods faster. R. Le Grand. il diags Am Mach 91:86-7 Ja 30 '47

HEADLIGHTS, Automobile. See Automobiles—Lighting

HEADLINES
Consider the headline. A. R. Hahn. Sales Management 58:74 Je 1 '47

See also
Advertising copy—Headlines

HEADPHONES
Headphone measurements and their interpretation. D. W. Martin and L. J. Anderson. bibliog diag Acoustical Soc Am J 19: 63-70 Ja '47

HEALTH, Industrial. See Hygiene, Industrial

HEALTH, Public. See Public health

HEALTH and accident underwriters conference
Annnal meeting, 46th, Omaha, May 26-29. East Underw 48:30-43+ My 30 '47; Nat Underw 51:15 May 29 '47; Nat Underw (H.&A. conference no) 51:3-15 My 30 '47; Weekly Underw 156:1482-4 My 31 '47
Conference to make check on business practices. Nat Underw (Life ed) 51:3 Je 6 '47
Evolution of the Conference. H. R. Gordon. Nat Underw 50th anniv no:154+ 1947
Long-range public relations program shaping up. East Underw 48:36+ Mr 7 '47
New committees. East Underw 48:32 S 5 '47
Public relations committee report. Weekly Underw 156:1568-9 Je 7 '47

HEALTH centers
Center for mothers and infants; Tacubaya, D.F., Mexico. il plan Arch Rec 102:79-84 Ag '47

HEALTH departments. See Public health departments

HEALTH education

See also
Public health—Study and teaching

HEALTH examinations. See Physical examinations

HEALTH insurance. See Insurance, Health

HEARING
Acoustic constant of enclosed spaces correlatable with their apparent liveness. J. P. Maxfield and W. J. Albersheim. bibliog Acoustical Soc Am J 19:71-9 Ja '47
Airplane quieting; specification of acceptable noise levels; ability of passengers to converse during flight. L. L. Beranek. bibliog A S M E Trans 69:97-100 F '47
Auditory afterimage? W. A. Rosenblith and others. Science 106:333-5 O 10 '47
Auditory thresholds of short tones as a function of repetition rates. W. R. Garner. il diag Acoustical Soc Am J 19:600-8 Jl '47
Binaural versus monaural hearing. J. W. Keys. Acoustical Soc Am J 19:629-31 Jl '47

HEARING—*Continued*
Diffraction of a progressive sound wave by the human head. F. M. Wiener. bibliog Acoustical Soc Am J 19:143-6 Ja '47
Effect of frequency spectrum on temporal integration of energy in the ear. W. R. Garner. bibliog diag Acoustical Soc Am J 19: 808-15 S '47
Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. diag Acoustical Soc Am J 19:120-5 Ja '47
Factors governing the intelligibility of speech sound. N. R. French and J. C. Steinberg. bibliog Acoustical Soc Am J 19:90-119 Ja '47
Growth of auditory sensation. W. A. Munson. diags Acoustical Soc Am J 19:584-91 Jl '47
Hearing in water vs. hearing in air. L. J. Sivian. Acoustical Soc Am J 19:461-3 My '47
Masking effect of periodically pulsed tones as a function of time and frequency. R. L. Miller. bibliog diags Acoustical Soc Am J 19:798-807 S '47
Observation of cochlear structures during the process of hearing. H. G. Kobrak. diags Acoustical Soc Am J 19:328-31 Mr '47
Phase effects in monaural perception. R. C. Mathes and R. L. Miller. bibliog il diags Acoustical Soc Am J 19:780-97 S '47
Sensitivity to changes in the intensity of white noise and its relation to masking and loudness. G. A. Miller. diag Acoustical Soc Am J 19:609-19 Jl '47
Short duration auditory fatigue as a method of classifying hearing impairment. M. B. Gardner. bibliog il Acoustical Soc Am J 19:178-90 Ja '47
Studies on pitch discrimination in masking; effect of signal/noise differential. J. D. Harris. Acoustical Soc Am J 19:816-19 S '47
Theory as to the function of the scala tympani in hearing. L. A. de Rosa. bibliog diags Acoustical Soc Am J 19:623-8 Jl '47
Theory of communication; analysis of hearing. D. Gabor. il diags Inst E E J 93 pt 3:442-57 N '46

See also
Deafness
Ear
Hearing aids, Mechanical
Noise
Sound

Testing

Construction and calibration of an improved bone-conduction receiver for audiometry. R. W. Carlisle and others. il diags Acoustical Soc Am J 19:632-8 Jl '47
Pulse-tone technique for clinical audiometric threshold measurements. M. B. Gardner. il diags Acoustical Soc Am J 19:592-9 Jl '47

HEARING aids, Mechanical
Broadened criteria of hearing aid performance. A. B. Mundel and R. W. Carlisle. bibliog diags Acoustical Soc Am J 19:639-44 Jl '47
Construction and calibration of an improved bone-conduction receiver for audiometry. R. W. Carlisle and others. il diags Acoustical Soc Am J 19:632-8 Jl '47
New radio receiver for the deafened; multipurpose Emerson, model 1002. il Consumers Res Bul 19:26 Ja '47
Price factor slows growth of hearing aid industry. P. A. Johnston. Barron's 27:9 F 17 '47

Advertising

Intense competition in hearing-aid sales promises to lift '47 ad outlay to $2,500,000. W. H. Davis. Ptr Ink 219:102+ Ap 11 '47

HEART
Inhibition of the enzymatic hydrolysis of ATP by certain cardiac drugs. T. E. Kimura and K. P. DuBois. Science 106:370-1 O 17 '47

See also
Ballistocardiograph
Blood—Circulation

Diseases

Attacking the no. 1 killer; campaign for greater public support to fight cardiac ailments. il Bsns W p21-2 Jl 12 '47
Chemist develops drugs in home laboratory; Sogenate. Chem & Eng N 25:1042 Ap 14 '47
Coronary heart disease in industry. N. S. Davis. Ind Med 16:300-1 Je '47
Curable heart disease; mistakes in general practice. T. K. Williams. Ind Med 16:151 Mr '47
Education theme of National heart week. East Underw 48:16 F 7 '47
Evaluation of borderline cardiovascular abnormalities. J. T. Larkin. bibliog il Ind Med 16:9-14 Ja '47
Importance of detection of heart disease through available screening facilities in preparation for employment. B. E. Kuechle. Ind Med 16:488-9 O '47
Surgical treatment of congenital pulmonic stenosis; abstract. A. Blalock. Science 105: 633 Je 20 '47
Traumatic heart conditions. N. C. Gilbert. bibliog il Ind Med 16:223-5 My '47

Examination

Electrocardiograph in industrial medicine; report based on 2,000 electrocardiograms. E. M. Kline and J. H. Hess. Ind Med 16: 378+ Jl '47

HEARTWATER
Relationship of the agent of heart-water fever, rickettsia ruminantium. G. Rake and others. bibliog Science 102:424-5 O 26 '45; Discussion. D. Moshkovski. 106:62 Jl 18 '47

HEAT
Friction loss and heat balance in viscous flow between plates. O. E. Teichmann. diags Product Eng 18:146-50 Ag '47
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47
Spontaneous development of heat in mixed fertilizers. J. O. Hardesty and R. O. E. Davis. bibliog Ind & Eng Chem 38:1298-303 D '46

See also
Boiling points
Calorimeters and calorimetry
Combustion
Electric heating
Evaporation
Expansion (heat)
Flames
Heating
Hot weather
Insulation (heat)
Melting points
Pyrometers and pyrometry
Specific heat
Steam
Temperature
Thermochemistry
Thermodynamics
Thermoelectricity
Thermometers and thermometry
Waste heat

HEAT, Mechanical equivalent of
Historic researches. Engineer 183:278-9 Ap 4 '47

HEAT absorbing glass. See Glass, Heat absorbing

HEAT capacity. See Specific heat

HEAT conduction
Correction for heat conduction through longitudinal baffle of heat exchanger. A. M. Whistler. A S M E Trans 69:683-5 Ag '47
Experimental studies on panel heating tube spacing. B. F. Raber and F. W. Hutchinson. il Heating-Piping 19:111-14 Ag '47
Power losses from heated objects in still air. B. T. Barnes and others. Opt Soc Am J 37:808-9 O '47
Theory of burning velocity; temperature and free radical concentrations near the flame front, relative importance of heat conduction and diffusion. C. Tanford. bibliog J Chem Phys 15:433-9 Jl '47
Transient temperatures around heating pipes maintained at constant temperature. A. Gemant. bibliog J Ap Phys 17:1076-81 D '46

HEAT conductivity
Conductivities and conductances of building materials and insulations; data sheets. P. D. Close. Heating-Piping 19:101-2 Ja; 99-100 F; 101-2 Mr; 101-2 Ap; 101-2 My '47
Connection between the fountain effect, second sound, and thermal conductivity in liquid helium II. L. Meyer and W. Band. bibliog Phys R 71:828 Je 1 '47
Connection between the fountain effect, second sound, and thermal conductivity in liquid helium II. L. Tisza. bibliog Phys R 72:353-4 Ag 15 '47
Gaw-Mac thermal conductivity unit. il R Sci Instr 18:527-8 Jl '47

HEAT conductivity—*Continued*
Heat absorption of molding sand. H. W. Dietert and others. Foundry 75:84-5+ S '47
Heat flow value for a well in California. A. E. Benfield. bibliog map Am J Sci 245:1-18 Ja '47
How fast does a wire or rod conduct heat? R. C. Lipley; W. Heidecker. diags Power Pl Eng 50:109-10 D '46
Low mean temperature thermal conductivity studies. F. B. Rowley and others. il Refrig Eng 53:35-9 Ja '47
Low temperature transport properties of gases; helium. I. Amdur. bibliog J Chem Phys 15:482-7 Jl '47
Thermal conductivity. W. L. Nelson. Oil & Gas J 45:87 D 21 '46
Thermal conductivity of aluminum; solid and liquid states. C. C. Bidwell and C. L. Hogan. bibliog J Ap Phys 18:776-9 Ag '47
Thermal conductivity of gases at high pressures. E. W. Comings and M. F. Nathan. bibliog Ind & Eng Chem 39:964-70 Ag '47
Thermal properties of building materials. H. B. Nottage. bibliog Heating-Piping 19:127-30 S '47
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47
Use of thermal conductivity cells for gas analysis in studying the Fischer-Tropsch synthesis of hydrocarbons. E. L. D'Ouville and K. E. Howe. diags Pet Refiner 26:98-103 Je '47

See also
Heat transmission
Textile fabrics—Heat transmission

HEAT convection
Convection annealing; large diameter tin plate coils; Dominion foundries and steel, ltd. W. F. Toerge. il diag Steel 121:130+ Jl 21 '47
Convection currents in gray cast iron. J. H. Schaum. il Foundry 75:66-9+ S '47
Convection transfer rates; chart. W. L. Nelson. Oil & Gas J 45:321 N 16 '46
Drying industrial finishes on metals; convection heating method. H. R. Clauser. il diag Materials & Methods 24:1452-6 D '46
Function of convection and radiation in heating by gas. L. W. Andrew and A. L. Roberts. Gas J (Lond) 252:207-8+ O 22 '47
Heat transfer by forced convection along a smooth flat surface; laminar and transitional boundary layer flow. G. V. Parmelee and R. G. Huebscher. bibliog il diags Heating-Piping 19:115-18 Ag '47
Power losses from heated objects in still air. B. T. Barnes and others. Opt Soc Am J 37:808-9 O '47
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47

HEAT cramps
Hot weather hygiene. Nat Safety N 55:186+ Mr '47

HEAT detectors. See Detectors

HEAT engines

See also
Caloric engines
Diesel engines
Gas engines
Gas turbines
Steam engines
Thermodynamics

HEAT exchangers
Air-cooled heat exchangers; their advantages, disadvantages and application. D. P. Thornton, jr. il Pet Processing 2:775+ O '47
Air cycle heat pump. T. F. Thomas. Engineer 184:205-6 Ag 29 '47
Air purification in the reversing exchanger. W. E. Lobo and G. T. Skaperdas. bibliog diag Chem Eng Prog 43:69-74 F '47
Bellows-type heat exchanger for compactness and efficiency. E. H. Ziebold. il diags Product Eng 18:121-4 Je '47
Correction for heat conduction through longitudinal baffle of heat exchanger. A. M. Whistler. A S M E Trans 69:683-5 Ag '47
Design details of Bristol Theseus turboprop; first aircraft application utilizing heat exchanger. il diag Aviation 45:53-5 N '46
Design of ribbon-packed exchangers for low temperature air separation plants. P. R. Trumpler and F. F. Dodge. il diags Chem Eng Prog 43:75-84 F '47
Diesel cooling equipment. flow diag il plan diags Diesel Power 25:34-41 O '47
Effect of leakage around cross-baffles in a heat exchanger. A. M. Whistler. diags Pet Refiner 26:114-18 O '47; Abstract. Pet Processing 2:881 N '47
Graphite heat exchangers; ten year engineering review. C. E. Ford. il Chem Eng 54: 92-6 Ja; 132-5 F '47
Heat exchange equipment for refrigeration. C. Boling. diags Refrig Eng 52:513-15+ D '46; Discussion. 52:578+; 53:18+ D '46-Ja '47
Heat exchange; new equipment. P. S. Otten. il Chem Ind 61:413-14 S '47
Heat exchanger in fluid unit improves light oil processing; patent. diag Pet Processing 2:112 F '47
Karbate tube heat exchanger. il Blast F & Steel Pl 35:82 Ap '47
Large-scale production of oxygen; problem of heat exchange. D. D. Howat. bibliog diags Chem Age (Lond) 56:801-5+ Je 21 '47
Leakless heat exchanger. Chem Eng 54:147 O '47
Low pressure liquefaction of air. J. H. Rushton. bibliog flow sheet il diags Refrig Eng 53:24-9+ Ja '47
Maintenance of tubular heat exchangers. J. H. Housman. il Oil & Gas J 46:96-8 Je 21 '47; Same. Pet Processing 2:534+ Jl '47; Same abr. Pet Refiner 26:89-92 Jl '47
Mean temperature difference in the Field or bayonet tube. N. L. Hurd. bibliog il diags Ind & Eng Chem 38:1266-71 D '46
New design for heat exchangers relieves strain on tube sheet. S. Kopp and G. B. Farkas. bibliog il diags Pet Processing 2: 449-50 Je '47
New heat exchanger design reduces tube sheet failures; patent. diag Pet Processing 2:30 Ja '47
Non-fouling refinery charge stocks. L. F. Schimansky. il Pet Refiner 25:119-21 D '46
Novel detector quickly locates leaks in heat-exchanger tubes. il Oil & Gas J 46:102-3 S 6 '47
Pebble heat exchanger performs uniform high temperature gas heating. il diags Product Eng 18:99 Ap '47
Plant-process heat used to generate steam. R. B. Tuttle. il diag Oil & Gas J 45:73-4 Mr 8 '47
Predicting commercial heat transfer coefficients. E. P. Breidenbach and H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42: 761-76 O-D '46; Same. Pet Eng (Ref annual) 18:191-2+ Jl 1 '47
Reducing condensate temperature in process heating. T. W. Reynolds. diags Heat & Ven 43:90-3 D '46
Reversing exchangers purify air for oxygen manufacture. S. C. Collins. il Chem Eng 53:106-7 D '46
Save 28 man-hours dismantling time by improved method for cleaning exchangers. il Pet Processing 2:179 Mr '47
Shell-side coefficients of heat transfer in a baffled heat exchanger. H. S. Gardner and I. Siller. bibliog diags A S M E Trans 69: 687-92; Discussion. 692-4 Ag '47
Special cooling arrangement for pump engine at Charlottetown. W. S. Lea. diag Water & Sewage 85:15+ Ja '47
Spiral heat exchanger; heat-transfer characteristics. K. W. Coons and others. bibliog flow plans il diags Chem Eng Prog 43: 405-14 Ag '47

See also
Condensers (steam)

Cleaning
How to operate and maintain water tube cleaners for boilers, heat exchangers, condensers and evaporators. il diag Power Pl Eng 51:78-9+ S '47

HEAT exhaustion
Hot weather safety measures. Safety Eng 93:37 Je '47
Tolerance of man toward hot atmospheres. E. F. Adolph. bibliog(73 titles) (Public health rep supp 192) 38p U. S. Public health service, Washington; pa 10c Supt. of doc. '46

HEAT insulation. See Insulation (heat)

HEAT measurement

See also
Calorimeters and calorimetry
Pyrometers and pyrometry
Thermocouples
Thermometers and thermometry

HEAT of combustion. See Combustion, Heat of

HEAT of denaturation. See Denaturation, Heat of

HEAT of formation. See Thermochemistry

HEAT of fusion. See Fusion, Heat of

HEAT of neutralization. See Neutralization, Heat of

HEAT of polymerization. See Polymerization, Heat of

HEAT of solution. See Solution, Heat of

HEAT of transition. See Transition, Heat of

HEAT of vaporization. See Vaporization, Heat of

HEAT pump

Air cycle heat pump. T. F. Thomas. diags Engineer 184:180-1, 205-6 Ag 22-29 '47

Coefficient of performance of the heat pump. W. Parkerson. diags Heat & Ven 44:63-7 My '47

Commercial aspects of the heat pump. E. N. Kemler. Edison Elec Inst Bul 15:20-2 Ja '47

Diesel joins the heat pump; power and air conditioning equipment for Wilton community center. il diag Diesel Power 25:54-9 Ag '47

Electric heat pump. C. Tatham, jr. Pub Util 39:770-7 Je 5 '47

Fireless heat for the home. H. Manchester. il diags Sci Am 176:197-200 My '47

Five heat pumps installed by Chattanooga utility in tests of reverse cycle heating and cooling. Heat & Ven 43:118 D '46

Heat pump as a load builder. A. C. Crandall. il Edison Elec Inst Bul 15:114-18+ Ap '47

Heat pump developments; abstract. Engineering 162:557 D 13 '46; Electrician 137:1595 D 6 '46

Heat pump for comfort heating and cooling. E. R. Ambrose. diags Min Cong J 33:37-40 My '47

Heat pump heat sources; earth as a source of heat. E. N. Kemler. bibliog map diags Edison Elec Inst Bul 14:339-46 O '46; Same abr. Heating-Piping 18:84-6 D '46; 19:80-2 Ja '47

Heat pump is proving its practicality in year-round air conditioning. il plan diags Arch Forum 85:161-4 N '46

Heat pump; new coal outlet? il diags Coal Age 52:74-8 S '47

Heat pump paradox. C. W. Kellogg. diag Pub Util 39:531-5 Ap 24 '47

Heat pump; past, present, future. E. N. Kemler and others. bibliog il diags Refrig Eng 53:301-4+ Ap '47

Heat pump plant protects works of art stored in subterranean workings. A. C. Pallot. diags Heating-Piping 18:95-6 N '46

Heat pump prepares to compete for homes market. E. R. Abrams. Barron's 27:9 Je 30 '47

Heat pump requires 1½c rate to compete on cost. R. A. Budenholzer. Heating-Piping 19:76 Ap '47

Heat pump saves coal in British power plant. J. A. Sumner. Power 91:87 F '47

Heat pump; the choice and cost of various systems. S. P. Goethe. diags Refrig Eng 54:24-8+ Jl '47

Heat pump; use of large capacity units in industry. P. R. Sidler. il diags Refrig Eng 53:396-400 My '47; Discussion. O. N. Potier. 54:142 Ag '47

Heat pump used for heating offices and shops of Brown Boveri & company; abstract. P. Real. diags Mech Eng 69:778-9 S '47

Heat transfer from ground to water in buried coils. W. F. King and M. S. Martus. plan Heat & Ven 44:71-4 Jl '47

Hot water from surrounding air by means of a heat pump. il Dom Eng 170:102+ Ag '47

House heating by the heat pump method. S. W. Andrews. Edison Elec Inst Bul 14:419-23 D '46

House heating with earth heat pump. A. C. Crandall. il diag Elec World 126:94-5 N 9 '46

Losses in the cycle of a heat pump using a ground coil. R. A. Budenholzer. diag Dom Eng 170:103-5+ Ag; 110-13+ S '47; Excerpts. Heating-Piping 19:92-3 Je '47

Marvair heat pump; takes heat from the earth in winter; in summer, puts heat in the earth. il diags Sheet Metal Worker 38: 60+ My '47

Methods of earth heat recovery for the heat pump. E. N. Kemler. map diags Heat & Ven 44:69-72 S '47

New reverse-cycle application; bananas ripened by heat from frozen foods. il Elec West 99:75 O '47

Norwich heat pump; with cost data. J. A. Sumner. il diags Engineering 164:116-20 Ag 1 '47; Abstract. Elec R (Lond) 140:554 Ap 4 '47

Progress report on the heat pump. E. R. Ambrose, E. N. Kemler and others. il plan diags Heat & Ven 43:67-82 D '46; Discussion. 44:136-8 F '47

Report on heat pumps. bibliog diags Elec West 98:61-5 My '47

Reverse cycle refrigeration for heating in the South. S. P. Goethe. map diags Florida Eng and Industrial Exp Sta [Gainesville] Bul 14:1-48 bibliog(p48) '47

Reversing the refrigerating cycle. A. J. Mellish. diags Sheet Metal Worker 38:70+ Mr '47

Review of some heat-pump installations; with cost data. E. B. Penrod. bibliog(42 titles) flow diags il diags Mech Eng 69: 639-47 Ag '47

Thermodynamics of the heat pump. J. Kestin. diags Engineering 163:552 Je 27 '47

Where does the heat pump go from here? abstract. W. L. Holladay. Elec World 128:96 Ag 2 '47

Cost of operation

Heat pump; losses in the cycle of a heat pump using ground coil. R. A. Budenholzer. Dom Eng 170:112-13+ S '47

HEAT radiation

Function of convection and radiation in heating by gas. L. W. Andrew and A. L. Roberts. Gas J (Lond) 252:207-8+ O 22 '47

How infra-red radiation is used for space heating; review of two British reports. C. Tasker. diag Heating-Piping 19:104-6 O '47

Influence of gaseous radiation in panel heating. F. W. Hutchinson. Heating-Piping 18: 103-7 N '46

Instrument for measuring open hearth flame radiation. E. M. Yard. bibliog il diag Blast F & Steel Pl 35:46+ Ap '47

Total emissivity of various materials at 100-500°C. B. T. Barnes and others. diags Opt Soc Am J 37:804-7 O '47

See also
Heat transmission
Heating—Panel system

HEAT resisting alloys. See Alloys, Heat resisting

HEAT resisting glass. See Glass, Heat resisting

HEAT resisting materials

All-crystalline porcelains for use in jet-propulsion and gas-turbine engines. il Mech Eng 69:234 Mr '47

Aspects of German work on high temperature materials; abstract. Product Eng 17: 137 D '46

Ceramic coatings for high-temperature protection of steel. W. N. Harrison and others. il J Res Nat Bur Stand 38:293-307 Mr '47; Abstract. Steel 120:92-3+ F 10 '47

Chemical and heat resistance of gasket materials; tabulation. H. H. Dunkle and E. C. Fetter. diags Chem Eng 53:102-9 N '46

Construction materials in Mannheim HCl plant; non-metallics meet demand for good heat transfer plus resistance to acids; Ethyl corp., Baton Rouge plant. W. F. Armstrong. il diag Chem Eng 54:96-8 Ag '47

High heat resistant polystyrene. R. I. Dunlap, jr. and S. E. Glick. il Mod Plastics 24:127-9 Ag '47

HEAT resisting materials—*Continued*
High-temperature high-strength porcelains. Iron Age 159:57 Mr 13 '47; Same abr. Product Eng 18:157 Jl '47; Same abr. Mech Eng 69:234 Mr '47; Excerpts. Chem & Eng N 25:452 F 17 '47; Materials & Methods 25: 139 Mr '47; Abstract. Aviation W 47:20 S 1 '47
Progress reports; abstracts. Am Cer Soc J 30 (Cer A):172-3 S 1 '47
Protective coatings for high temperature applications. W. N. Harrison. Steel 121:126+ N 3 '47
Suppression of radiations at high temperatures by means of ceramic coatings. D. G. Bennett. bibliog il diag Am Cer Soc J 30: 297-305 O 1 '47
Uses of silicone rubber in high-temperature field. il Steel 119:80 D 30 '46
War-developed ceramic coatings have peace uses. F. W. Connor. il Dom Comm 35:30-3 Mr '47
What about silicone-glass laminates? Mod Plastics 24:184+ My '47

See also
Alloys, Heat resisting
Glass, Heat resisting
Insulation (heat)
Refractory materials
Silicones
Steel, Heat resisting
Teflon

HEAT resisting paint. See Paint, Heat resisting

HEAT resisting steel. See Steel, Heat resisting

HEAT storage
Mechanism of heat transfer panel cooling; heat storage. C. S. Leopold. bibliog diags Refrig Eng 54:33-41; Discussion. 41+ Jl '47
Solar house heating, problem of heat storage; new method using the heat of fusion of chemical compounds. M. Telkes. bibliog diags Heat & Ven 44:68-75 My '47

See also
Heat pump

HEAT stroke
Hot weather safety measures. Safety Eng 93:37 Je '47

HEAT transmission
Avoiding wet walls in high humidity industrial plants. G. R. Morgan. Heat & Ven 43:74-9 N '46
Circulating HTS as a pilot plant heat transfer medium. W. B. Johnson and W. M. Nagle. diags Ind & Eng Chem 39:971-4 Ag '47
Data on heat loss from underground walls given in British air conditioning report; storage of explosives. Heating-Piping 19:96 Mr '47
Electrically heated glove for determining local values of heat-transfer coefficients; used in designing anti-icing systems for airfoils. J. K. Goss. diags A S M E Trans 69:705-7; Discussion. il 707-8 Ag '47
Fight against wastage of heat in glass furnaces; translated from the Bulletin de l'Institut du verre, Paris, for September, 1946, by F. W. Preston. I. Peyches. diags Glass Ind 28:173-7+, 238-42+ Ap-My '47
Heat and moisture transfer in all-metal houses. F. G. Hechler and others. il Heat & Ven 44:69-74 Ap '47
Heat flow through composite cylinders. S. S. Penner and S. Sherman. J Chem Phys 15: 569-74 Ag '47
Heat losses in furnace linings. J. D. McCullough. bibliog Am Gas J 167:29-32 Jl; 36-8 Ag '47; Same. Blast F & Steel Pl 35:817-23 Jl '47; Same. Pet Refiner 26:112-17 Jl '47
Heat pump heat sources; earth as a source of heat. E. N. Kemler. bibliog map diags Edison Elec Inst Bul 14:339-46 O '46; Same abr. Heating-Piping 18:84-6 D '46; 19:80-4 Ja '47
Heat transfer. G. T. Skaperdas. bibliog(67 ref) Ind & Eng Chem 39:28-9+ Ja '47
Heat transfer from a vertical plate to an air stream. L. Slegel and G. A. Hawkins. bibliog diags Purdue Univ Eng Exp Sta, Research Ser 79:1-23 '46 (pa 25c)
Heat transfer from ground to water in buried coils. W. F. King and M. S. Martus. plan Heat & Ven 44:71-4 Jl '47
Heat transfer in a 3-1 hydrogen-nitrogen mixture at high pressure. A. P. Colburn, T. B. Drew and H. Worthington. bibliog diag Ind & Eng Chem 39:958-64 Ag '47
Heat transfer sessions; abstracts of A.F.A papers. Foundry 75:128+ Jl '47
Heat transmission from fine wires to water; low velocity data and correlation. E. L. Piret, W. James and M. Stacy. bibliog il diags Ind & Eng Chem 39:1098-103 S '47
How to calculate heat transmission coefficients and vapor condensation temperatures of concrete masonry walls. diags Concrete 55:28-9 Ja '47
Interchange of heat between a gas stream and solid granules. J. R. Arthur and J. W. Linnett. diag Chem Soc J p416-24 Mr '47
Isothermal and nonisothermal air-jet investigations. V. Cleeves and L. M. K. Boelter. bibliog diags Chem Eng Prog 43:123-32; Discussion. 132-4 Mr '47
Mass and heat transfer in agitator systems. D. E. Mack and V. W. Uhl. Chem Eng 54: 115-16 O '47
Measurements of recovery factors and coefficients of heat transfer in a tube for subsonic flow of air. W. H. McAdams, L. A. Nicolai and J. H. Keenan. bibliog diags Am Inst Chem Eng Trans 42:907-25 O-D '46
Phase relations in heat transfer salt systems. J. Alexander, jr. and S. G. Hindin. diags Ind & Eng Chem 39:1044-9 Ag '47
Some experiments on quenching media. F. W. Jones and W. I. Pumphrey. bibliog diags Iron & Steel Inst J 156:37-54 My '47; Discussion. 156:524 Ag '47
Steam-making fundamentals. diags Power 90: 806-13 D '46
Temperature gradients in turbulent gas streams. W. H. Corcoran, B. Roudebush and B. H. Sage. bibliog diags Chem Eng Prog 43:135-42 Mr '47
Third Arthur Duckham research fellowship report, 1945-46; energy transfer from flame gases to solids. J. K. Kilham. bibliog diags Gas J (Lond) 249:258+ Ja 29 '47; Discussion. 249:382-3 F 12 '47

See also
Glass—Heat transmission
Glass, Heat absorbing
Heat conductivity
Heat convection
Heat exchangers
Heat radiation
Insulation (heat)
Textile fabrics—Heat transmission

Electric analogies
Effect of floor slab on building structure temperatures and heat flow. C. F. Kayan. bibliog diags Heating-Piping 19:103-11 Je '47
Heating and cooling of bolometer elements. J. N. Shive. bibliog diags J Ap Phys 18: 398-405 Ap '47
New tools of heat-flow research in the glass industry; abstract. V. Paschkis. Cer Ind 48:79-80 Je '47
Quenching of steel balls and rings; temperature-time-space relationships investigated on Heat and mass flow analyzer at Columbia university. V. Paschkis. bibliog diag Am Soc for Metals Trans 37:216-44 '46
Temperatures and heat flow for a concrete slab with imbedded pipes. C. F. Kayan. bibliog diags Refrig Eng 54:143-51; Discussion. 151 Ag '47

Tables, calculations, etc.
Boiling coefficients for finned tubes. W. E. Zieman and D. L. Katz. bibliog flow diag il Pet Refiner 26:78-82 Ag '47
Calculating heat transmission through Plexiglas. chart Heat & Ven 44:97-8 Ap '47
Condensation of Freon-12 with finned tubes. D. L. Katz and others. flow diags il diags Refrig Eng 53:211-17, 315-19+ Mr-Ap '47
Equipment heat losses (B.t.u. per hour per square foot) tabulation. W. L. Nelson. Oil & Gas J 45:71 F 1 '47
Generation and utilization of steam in the heavy industries. G. E. Hider. diag Inst Mech Eng J & Proc 155 (War emergency issue no 22):376-84; Discussion. 385-6 '46
Graphic heat loss computation for sludge digesters. J. G. Montgomery. Water & Sewage Works 94:287-91 Ag '47
Graphical determination of heat transfer film coefficient for steam. B. F. Raber and F. W. Hutchinson. Heat & Ven 43:94-6 D '46

HEAT transmission—Tables, calculations, etc. —*Continued*
Heat transfer between a fluid and a porous solid generating heat. S. R. Brinkley, jr. bibliog J Ap Phys 18:582-5 Je '47
Heat transfer coefficients for condensing hydrocarbon vapors. D. A. Donohue. bibliog Ind & Eng Chem 39:62-4 Ja '47; Same. Pet Eng (Ref annual) 18:222+ Jl 1 '47; Same. Pet Refiner 26:116-17 Ag '47
Heat transfer to gases through packed tubes; general correlation for smooth spherical particles. M. Leva. diag Ind & Eng Chem 39:857-62 Jl '47
How to figure heat loss. K. H. Pfeiffer. map plan diags Brick & Clay Rec 110:24-5 F '47
Kiln shell heat loss re-evaluated. W. R. Bendy and H. Straight. Rock Prod 50:88-90 My '47; Discussion. G. F. Hubing. 50:102-3 S '47
Losses through heated walls. W. L. Nelson. Oil & Gas J 45:77 Ja 4 '47
Mean temperature difference in the Field or bayonet tube. N. L. Hurd. bibliog il diags Ind & Eng Chem 38:1266-71 D '46
Mechanism of heat transfer panel cooling; heat storage. C. S. Leopold. bibliog diags Refrig Eng 54:33-41; Discussion. 41+ Jl '47
Nomographs for heat transmission by conduction in the unsteady state. D. S. Davis. Chem Ind 60:466+ Mr '47
Predicting commercial heat transfer coefficients. E. P. Breidenbach and H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42: 761-76 O-D '46; Same. Pet Eng (Ref annual) 18:191-2+ Jl 1 '47
Shell-side coefficients of heat transfer in a baffled heat exchanger. H. S. Gardner and I. Siller. bibliog diags A S M E Trans 69: 687-92; Discussion. 692-4 Ag '47
Solution of transient heat conduction problems by finite differences. G. A. Hawkins and J. T. Agnew. bibliog Purdue Univ Eng Exp Sta, Research Ser 98:1-38 '46 (pa 25c)
Spiral heat exchanger; heat-transfer characteristics. K. W. Coons and others. bibliog flow plans il diags Chem Eng Prog 43:405-14 Ag '47
Tables for computing heat losses from digesters. H. B. Candee. diags Water & Sewage Works 94:292-3 Ag '47
Temperature charts for induction and constant-temperature heating. M. P. Heisler. bibliog A S M E Trans 69:227-36 Ap '47
Theory of moving sources of heat and its application to metal treatments. D. Rosenthal. il A S M E Trans 68:849-66 bibliog(p864) N '46
Thermal properties of building materials. H. B. Nottage. bibliog Heating-Piping 19:127-30 S '47
Transient temperatures around heating pipes maintained at constant temperature. A. Gemant. bibliog J Ap Phys 17:1076-81 D '46

HEAT treating furnaces. See Furnaces, Heat treating

HEAT treatment
Austempered cast iron serves as cylinder liners. C. W. Ohly. il Materials & Methods 25:89-91 My '47
Beryllium copper formed parts; advantages of fixture heat-treatment. il diags Product Eng 18:118-21 F '47
Changes in endurance limit of alloyed gray irons caused by heat treatment; tables; engineering file facts. R. S. Burpo, jr., comp. Materials & Methods 25:119, 121 Ja '47
Cold working and heat treatment of a 10-carat gold alloy. V. H. Patterson and B. N. Iannone. il diag Am Soc for Metals Trans 37:278-97; Discussion. 297-302 '46
Control of internal stresses in heat-treated aluminium-alloy parts. L. E. Benson. Engineering 162:463 N 15 '46; Discussion. Engineer 182:281-2 S 27 '46; Engineering 162: 306 S 27 '46
Effect of dry heat on proteins. D. K. Mecham and H. S. Olcott. bibliog Ind & Eng Chem 39:1023-7 Ag '47
Heat treating and machining magnesium alloys. A. G. Gray. il Steel 120:102-4+ F 3 '47
Heat treating schedules. J. E. Burkhardt. Metal Prog 51:442 Mr '47
Heat treatment of some chromium-nickel alloys. H. A. Campbell. bibliog il Iron Age 159:74-9 Je 5 '47
High-frequency induction heating; with cost data. E. May. il Engineer 183:178-80 F 14 '47
Ignition of magnesium alloys during heat-treatment. C. B. Willmore and W. S. Peterson. il Materials & Methods 26:85-8 Jl '47
Iron-manganese alloys; properties of cold-worked and heat treated alloys containing 1 to 7 per cent manganese. R. S. Dean and others. bibliog il Am Soc for Metals Trans 36:116-36 '46
Metallurgical applications of X-ray diffraction spectrometer; effects of heat treatment on diffraction patterns of SAE 3312 steel and 24S aluminum. J. L. Abbott. il Iron Age 159:57-61 F 20 '47
New developments in high strength aluminum alloy products. E. H. Dix, jr. bibliog Am Soc for Metals Trans 35:130-48; Discussion. 149-55 '45
New equipment. il Iron Age 159:67-70 Mr 27 '47
Nickel and high nickel alloys; heat treating. N. E. Woldman. il Materials & Methods 24: 1483 D '46
Potential hazards from molten salt baths; recommended precautions; reference book sheet. Am Mach 91:133 Ja 30 '47
Potential hazards in molten salt baths for heat treatment. Metal Prog 51:251-3 F '47
Propane storage and piping system frees plant from gas interruptions; standby installation for heat treating; Ingalls-Shepard div. of Wyman-Gordon co. il diag Heating-Piping 19:83-5 S '47
Salt baths for metals; used for case hardening, through-hardening, quenching and descaling ferrous metals; annealing nonferrous metals; soldering and brazing, and heating metals for forming. E. L. Cady. il Materials & Methods 25:99-114 Mr '47
Technical progress in metalworking; heat treating. Steel 120:280-2+ Ja 6 '47
34th annual review number. il Am Mach 91:180-3 Ja 16 '47

See also
Aluminum alloys, Heat treatment of
Case hardening
Electric furnaces, Heat treating
Furnaces, Heat treating
Steel, Heat treatment of
Tempering

Terminology
Glossary of terms employed in heat treating operations; data sheets. Foundry 75:123-4 S; 203-4 O '47

HEATERS
Combustion chamber surrounded by water in home heating unit. il Product Eng 18: 102 Ap '47
Direct fired units meet changed heating needs; War assets administration sales center and warehouse in Cleveland. A. A. Kosarin. il Heating-Piping 19:92-3 Ag '47
Direct-fired heater. il Sci Am 177:87 Ag '47
L'emploi de billes réfractaires pour transférer la chaleur à haute température. diags Génie Civil 123:348 D 15 '46
Give your fan a chance. J. Cassie. il Heat & Ven 44:72-4 F '47
Heater permits winter building and gives workmen comfort. il Brick & Clay Rec 109: 30 N '46
How high may unit heaters be mounted? New York shipbuilding corporation plant. il diag Dom Eng 168:145 D '46
Mechanical manpower loads 600 heaters in 10 minutes. il Steel 120:108 F 10 '47
Selecting, locating unit heater. diags Dom Eng 169:146-7+ Je '47
Smokeless heaters. il Sci Am 176:273-4 Je '47
Unit heaters. il Dom Eng 168:136-7 N; 144 D '46
Unit heaters have advantages in many heating applications. P. J. Menden. il Heating-Piping 19:87-8 Mr '47
Unit heaters ideal for home basement. M. J. Druse. il Heat & Ven 44:89-90 My '47
Unit heaters meet architectural requirements of modern store. il Heating-Piping 19:85 My '47

HEATERS—*Continued*
What's in a name? boiler ratings, and how to specify boilers and unit heaters. S. Lewis. Heating-Piping 18:102 N '46

See also
Electric heaters
Electric heaters, Laboratory
Gas heaters
Gas water heaters
Hot water heaters
Steam heaters

HEATING
Advances in house heating. C. Strock. il map diags Arch Rec 101:135-42 My '47
Causes of drafts, and how they are eliminated. L. R. Phillips. il Sheet Metal Worker 38:104+ S '47
Comparisons between gas and electricity on the basis of coal economy. P. Schiller. bibliog Inst E E J 94 pt 1:355-63; Discussion. 364-70 Ag '47
Condensation problems serious with indoor swimming pools. S. Lewis. il Heating-Piping 19:99-100 My '47
Domestic heating methods; smoke abatement conference. Electrician 139:1071-2 O 10 '47
Effect of panelling on intermittent heating. Heating-Piping 18:96-7 N '46
Electric and other types of house heating systems. L. Slegel. il Oregon State College Eng Exp Sta [Corvallis] Circ Ser no 9:1-51 bibliog(p50-1) '46 (pa 25c)
Experience is my classroom. T. W. Reynolds. Heat & Ven 44:80-2 Mr '47 [cont monthly]
Fireless heat for the home. H. Manchester. il diags Sci Am 176:197-200 My '47
Heat pump; discussion. Electrician 137:1595 D 6 '46
Heat pump is proving its practicality in year-round air conditioning. il plan diags Arch Forum 85:161-4 N '46
Heat pump; new coal outlet? il diags Coal Age 52:74-8 S '47
Heat pump; the choice and cost of various systems. S. P. Goethe. diags Refrig Eng 54:24-8+ Jl '47
Heat pump; use of large capacity units in industry. P. R. Sidler. il diags Refrig Eng 53:396-400 My '47; Discussion. O. N. Potier. 54:142 Ag '47
Heat pump used for heating offices and shops of Brown Boveri & company; abstract. P. Real. diags Mech Eng 69:778-9 S '47
Heating in the U.S.A.; report of joint party from British Ministry of fuel and power and Department of scientific and industrial research. Heating-Piping 19:79-80 F '47
How infra-red radiation is used for space heating; review of two British reports. C. Tasker. diag Heating-Piping 19:104-6 O '47
Lazy zoning causes heating, cooling troubles. S. Lewis. Heating-Piping 19:86-7 Jl '47
Losses in the cycle of a heat pump using a ground coil. R. A. Budenholzer. diag Dom Eng 170:103-5+ Ag; 110-13+ S '47
Meteorological history and the space-heating machine. R. Grierson. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 11):381-408, pl 1-4 '45
Meteorological instruments and heating design. W. E. K. Middleton. diag Heating-Piping 19:115-18 My '47
Methods of earth heat recovery for the heat pump. E. N. Kemler. map diags Heat & Ven 44:69-72 S '47
Norwich heat pump; with cost data. J. A. Sumner. il diags Engineering 164:116-20 Ag 1 '47
Powdered coal offers automatic home heat. diag Coal Age 52:104 Ja '47
Proceedings of a housing and heating conference, November 14-16, 1945. Pennsylvania State College Mineral Industries Exp Sta Bul 42:1-166 '46
Progress report on the heat pump. E. R. Ambrose, E. N. Kemler and others. il plan diags Heat & Ven 43:67-82 D '46; Discussion. 44:136-7 F '47
Reverse cycle refrigeration for heating in the South. S. P. Goethe. map diags Florida Eng and Industrial Exp Sta [Gainesville] Bul 14:1-48 bibliog(p48) '47
Reversing the refrigerating cycle. A. J. Mellish. diags Sheet Metal Worker 38:70+ Mr '47
Review of some heat-pump installations; with cost data. E. B. Penrod. bibliog(42 titles) flow diags il diags Mech Eng 69:639-47 Ag '47
20 ways to save fuel. il Dom Eng 170:148-9+ O '47
Use of climatological data in heating and cooling design. H. E. Landsberg. Heating-Piping 19:121-5 S '47
What kind of heating for housing program? Heating-Piping 18:91 N '46; Same cond. Heat & Ven 43:105 O '46
Will radiant heating displace convection heating? A. G. Dixon. il Heat & Ven 43:59-64 D '46; Discussion. 44:130+ F '47; Discussion (Radiant heating plus convection heating). T. N. Adlam. 43:99-101; Reply. 101-2 Ap '47

See also
Air conditioning
Boilers, Heating
Building—Heating aspects
Electric heating
Fuel
Furnaces, Warm air
Gas heating
Heaters
Heating from central stations
Hot water heating
Insulation (heat)
Oil burners
Oil fuel
Solar heating
Steam heating
Ventilation
Walks, Concrete—Heating

also subdivision Heating and ventilation under special subjects, e.g.
Airplanes
Apartment houses
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School buildings

Control

Automatic control of radiant panel heating; review. Heat & Ven 44:88-90 F '47

District heating

See Heating from central stations

Estimates

Estimates and how to make them. W. W. Hughes. Dom Eng 170:120+ Jl; 121-3 Ag; 125-6 S; 122-4 O '47 (to be cont)

Laws and regulations

Detroit's gas heating code. Sheet Metal Worker 38:66+ Mr; 74+ Ap '47
Law for the heating contractor. L. T. Parker. Heat & Ven 44:81-3 Ja '47

Panel system

Analysis of panel heating; comparison with warm air heating. J. W. Norris. Sheet Metal Worker 38:85-6+ O '47
Automatic control of radiant panel heating; review. Heat & Ven 44:88-90 F '47
Ceiling panels heated with air; abstracts. H. F. Randolph. Heating-Piping 19:94-5 Je '47; Heat & Ven 44:102 S '47
Distinctively designed small office building for fuel company receives architectural award; with floor plan, wall section detail and radiant heating plan. il Am Bld 69: 128-9 Je '47
Influence of gaseous radiation in panel heating. F. W. Hutchinson. Heating-Piping 18: 103-7 N '46
Let's ventilate these heating questions. S. Lewis. Heating-Piping 19:102-3 O '47
Panel and radiant heating forum. Heating-Piping 19:106-12 Ap '47
Panel discussion on panel heating. Dom Eng 169:142+ F '47
Panel heating; open system vs. closed system. C. O. Mackey. Heat & Ven 44:90-6 S '47
Radiant heat for a new airplane; Douglas DC-6. il Heat & Ven 44:77 Ag '47
Radiant heat for Tribune prize home. il Am Bld 69:158 Je '47
Radiant heating; discussion before Heating, piping and air conditioning contractors national association. il Heating-Piping 19:95-7 Ag '47
Radiant panel heating with warm air. il plan diag Arch Rec 101:137-40 Je '47
Response and lag in the control of panel heating systems; abstract. F. W. Hutchinson. Heat & Ven 44:103 F '47
Solar + radiant panel + warm air = comfort; residence of H. M. Sloan, Glenview, Ill. il plan diag Arch Rec 101:92-5 Je '47
Time lag in radiant heating; effect of mass of floor. W. E. Wilson. diags Heating-Piping 19:82-6 Ap '47

HEATING—Panel system—*Continued*
Warm air radiant heating system installed in ceiling provides uniform horizontal temperature gradient; International heater co. il plans Arch Forum 86:126+ F '47

See also
Electric heating—Panel system
Hot water heating—Panel system

Specifications

Simplified procedure for specification writing. G. W. Campbell. il Heating-Piping 18:86-9 Ap '46; Supplement. 19:98-102 Je; 97-9 Jl; 99-101 Ag; 117-19 S; 99-101 O; 111-13 N; 116-18 D '47

Tables, calculations, etc.

Canadian degree days (65F base) for recent heating seasons; table; reference data. Heat & Ven 43:82a-82b D '46
Degree day system; how one company's plan operates; Sohio's procedure for controlling automatic fuel oil deliveries. il Nat Pet N 39:26-7+ Ag 20 '47
Determination of outside design temperatures; method of using Weather bureau temperature records. W. L. Holladay. bibliog Heating-Piping 19:117-22 Jl '47; Discussion. 19:131 Ag '47
Normal (average) monthly and seasonal degree days (65F base) for 209 cities; tabulation. Heat & Ven 44:64-7 Ja '47
Normal degree-days for 42 Canadian cities; table; reference data. Heat & Ven 44:90a O '47
Operative temperature for still air conditions; chart; reference data. Heat & Ven 44:76a-76b Ja '47
Unit fuel requirements at various efficiencies. Heat & Ven 43:82-3 N '46

HEATING, Electric. See Electric heating

HEATING, Industrial
Burns oil or utility gas; Vapofier. il Comp Air Mag 52:46 F '47
Changing fuels without temperature loss; dual oil-gas burner system at Smoot-Holman company plant. W. G. Holman and G. F. Thomas. il diag Cer Ind 48:70-2 Mr '47
Developments made in heating equipment to meet new requirements. il Materials & Methods 24:1290-2 N '46
Drying industrial finishes on metals. H. R. Clauser. il diag Materials & Methods 24: 910-14, 1452-6 O, D '46
Heat for drying; its application in the chemical and allied industries. Chem Age (Lond) 55:593-9 N 16 '46
Heat operations in the plastics industry. H. G. Rappolt. il Mod Plastics 24:135-9 N '46
Heat pump; use of large capacity units in industry. P. R. Sidler. il diags Refrig Eng 53:396-400 My '47
Indirect methods of heating. diags Chem Age (Lond) 57:387-91 S 20 '47
Radiant heat units for workshops. il Engineer 184:278 S 19 '47
Rug drying with warm air heaters. il diags Sheet Metal Worker 38:94+ S '47
Salt baths for metals; used for case hardening, through-hardening, quenching and descaling ferrous metals; annealing nonferrous metals; soldering and brazing, and heating metals for forming. E. L. Cady. il Materials & Methods 25:99-114 Mr '47
Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46; Excerpt. Metal Prog 52:276+ Ag '47
Stove building at linoleum plant is itself part of production process. il Heat & Ven 44:83-4 Mr '47
Temperature charts for induction and constant-temperature heating. M. P. Heisler. bibliog A S M E Trans 69:227-36 Ap '47
Use of high temperature fluid in rubber manufacturing processes; Hydrotherm system. P. L. Geiringer. il diags Rubber Age 60:447-9 Ja '47

See also
Drying
Drying apparatus
Electric heating, Industrial
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Furnaces, Heating
Gas heating, Industrial
Heat treatment
Hot water heating, Industrial
Infrared rays—Industrial heating
Metallurgy
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Ovens
Oxyacetylene flame
Paint—Drying
Paper drying
Salamanders (heaters)
Steel, Heat treatment of
Welding

HEATING, Warm air
Air cycle heat pump. T. F. Thomas. diags Engineer 184:180-1 Ag 22 '47
Air Flo heating system uses cavity wall and hollow tile in floor. diag Brick & Clay Rec 110:36 Mr '47
Akron dealers sell indoor comfort; Akron furnace dealers association. il Sheet Metal Worker 37:60+ D '46
Analysis of panel heating; comparison with warm air heating. J. W. Norris. Sheet Metal Worker 38:85-6+ O '47
Basic conditions for comfort performance of warm-air winter air conditioning systems. R. Ulrich. il Sheet Metal Worker 38:69-70+ Ag; 76+ S '47
Builder Sloan erects first all-sealed house in America; Glenview, Ill. home combines solar heat, mechanical heat and air conditioning. il plans Am Bld 69:96-105 Ap '47
Ceiling panels heated with air; abstracts. H. F. Randolph. Heating-Piping 19:94-5 Je '47; Heat & Ven 44:102 S '47
Concentrating on warm air necessitated new shop; Turner-Harrison co. il plan Sheet Metal Worker 38:69-70+ Ap '47
Curing forced warm air heating troubles. J. W. Norris. Sheet Metal Worker 37:44+ N '46
Direct fired units meet changed heating needs; War assets administration sales center and warehouse in Cleveland. A. A. Kosarin. il Heating-Piping 19:92-3 Ag '47
Electric filters and modulated heating in 20-room house. il plans diags Sheet Metal Worker 38:63-4+ O '47
Electric home heating plant; Vap-O-Lec furnace. il diags Product Eng 18:96-7 My '47
Experiment in combinations; convected, radiated and solar heat combined in sealed-in air conditioned home. il diag Sheet Metal Worker 38:78+ Ag '47
Forced warm air heating. J. L. Shank. il plans Am Bld 69:68-73 Jl '47
400 apartments, 400 winter air conditioners; residential development in Ridgewood, N.J. il plan diag Sheet Metal Worker 38:84+ Jl '47
Getting heat down to the floor; Bemis bag co. O. W. Ott. il diag Heating-Piping 19:75 My '47
Gravity warm air heating. J. L. Shank. il plans diags Am Bld 69:85-9 Je '47
Installing a Panelaire system. il Sheet Metal Worker 38:107+ Ja '47
Its 2,000th installation; Long Island oil & gas heat corp. il diag Sheet Metal Worker 38:74+ F '47
Mass production methods in heating work; Triangle sheet metal works. il Sheet Metal Worker 38:56+ Mr '47
New warm air research residence at University of Illinois. il plans Am Bld 69:108-9+ Jl '47
No registers, no radiators in new type heating; Panelaire system. il Am Bld 68:152+ D '46
Object lesson in merchandising year around air conditioning; Climate control products co. il Sheet Metal Worker 38:60+ Mr '47
Packaged heating for service stations. plan Sheet Metal Worker 38:75 S '47
Panel heating; open system vs. closed system. C. O. Mackey. Heat & Ven 44:90-6 S '47
Plant work zones heated by discharges of warm air above heads of workers. il Steel 121:100 S 22 '47
Proposed design procedure for large mechanical warm air heating systems. S. Konzo and others. diags Heating-Piping 19:108-14 My '47
Small house heating system employs doors and rooms as valves and ducts for efficient circulation of warm air. il plan Arch Forum 86:120+ Mr '47

HEATING, Warm air—*Continued*
Split system heats and conditions product development, testing lab; Benjamin electric mfg. co. E. R. Gritschke and J. W. Scharres. il Heating-Piping 18:67-9 N '46
Steam-electric furnace applied to house heating; Vap-O-Lek furnace. il Elec World 127: 156+ My 24 '47
Warm air for industrial heating. il Sheet Metal Worker 38:92 O '47
See also
Furnaces, Warm air

Tables, calculations, etc.
Bonnet output nomograph. G. S. MacLeod. Heat & Ven 44:94-5 O '47

HEATING boilers. See Boilers, Heating

HEATING contracts
Avoid patent law suits. L. T. Parker. Heat & Ven 44:100-2 S '47
Law of contracts simplified; review of court decisions involving heating and air conditioning engineers. L. T. Parker. Heat & Ven 44:84-94 Ap '47
Legal status of independent contractors. L. T. Parker. Heat & Ven 44:99-100 Je '47

HEATING equipment
Chattel mortgage and real estate law; sale of heating equipment. L. T. Parker. Heat & Ven 44:97-9 Jl '47
Heating plant check-ups. E. W. Fair. Food Ind 19:631 My '47
Notes on today's heating equipment problems. diags Consumers Res Bul 18:19-21 N '46
Post-war status of domestic heating equipment. il Consumers Res Bul 19:22-5 Mr '47
Selection of medium size motors; types available for use in the heating, ventilating and air conditioning fields. A. F. Lukens. il diags Heat & Ven 44:70-6 Ja '47
See also
Boilers
Furnaces
Heat pump
Heating pipes

HEATING from central stations
District heating; abstracts of papers. Engineer 182:391 N 1 '46; Engineering 162:614 D 27 '46
District heating; an interim memorandum. Gas J (Lond) 248:1088-9 D 18 '46
District heating and appliances. J. H. Fella. Electrician 138:698 Mr 21 '47
District heating as a public service. A. Stubbs. Gas J (Lond) 249:43-4 Ja 1 '47
District heating at Pimlico. S. B. Donkin. diag Electrician 137:1053-4 O 18 '46
District heating; continental practice. A. E. Margolis. Gas J (Lond) 249:40-1+ Ja 1 '47
District heating in Detroit. G. D. Winans. il map diags Heat & Ven 43:64-70 N '46
District heating in relation to town and country planning. W. G. Holford. Gas J (Lond) 249:35-6 Ja 1 '47
District heating; London and the Dundee example. L. F. Stemp. Elec R (Lond) 141: 579-80 O 17 '47
District heating; the Wythenshawe scheme; with cost data. R. Nicholas. Gas J (Lond) 249:94-6 Ja 8 '47
Domestic heating methods; smoke abatement conference. Electrician 139:1071-2 O 10 '47
Electricity generation and fuel utilization. W. Warren. Inst E E J 94 pt 1:136-7 Mr '47
Expand central heat at Pittsburgh U. il plan Eng N 138:248 F 13 '47
High pressure hot water serves hospital project. F. H. Slade. il plan diag Heating-Piping 19:87-90 O '47
Mile-long high-pressure steam line aids system economy and flexibility; Rochester gas & electric corp. J. J. Schenck. il Power 91:674-7 O '47
National district heating association 38th annual meeting, Atlantic City. Heating-Piping 19:102-4 Ag; 108-10 S '47
National district heating association 38th annual meeting, Atlantic City. Power 91:622 S '47
Proposed district heating scheme at Urmston. E. L. Leeming. Gas J (Lond) 249:46-7 Ja 1 '47
Serving a large Detroit hotel with purchased steam. C. B. Sprenger. diag Heat & Ven 43:71-2 N '46
Space heating; how economic planning might ease the burden. Elec R (Lond) 140:509-10 Mr 28 '47
Steam line from municipal power plant supplies heat to three Piqua industries. Heat & Ven 43:100 N '46

HEATING furnaces. See Furnaces, Heating

HEATING industry
Accent on merchandising; Home and industrial heating co. il plan diag Sheet Metal Worker 38:52-4+ Je '47
Akron dealers sell indoor comfort; Akron furnace dealers association. il Sheet Metal Worker 37:60+ D '46
Automatic heating sales and prospects. il Dom Eng 169:109 Ja '47
Building a future with residential jobs; Debelak brothers. il plans diags Dom Eng 169:100-5+ Ap '47
Builds balance for 3 markets; industrial, residential, commercial; Inland heating company. il plans diag Dom Eng 169:110-17+ F '47
Dealer keeps step with changes; Sayville furnace & stove co. il Sheet Metal Worker 38:92+ Ap '47
Dress up your letterhead. il Dom Eng 169: 106-7 Ja; 105 Mr; 110-11, 122 Ap; 108-9 Je; 170:110-11, 122-3 Jl '47
Four-star plan for bigger sales; Western-Beverly plumbing and heating company. il Dom Eng 170:114-15+ Jl '47
From now on we sell the whole thing; Bell plumbing and heating of Denver now going to sell new appliance lines. il Dom Eng 170: 120-1+ S '47
It's a profession, not a racket; Proie and Coogan heating co. il Sheet Metal Worker 38:84+ Ag '47
Legal decisions of interest to contractor-dealers. Dom Eng 169:128+ F; 126+ Ap; 170:109+ O; 108+ N '47
1947 prospects; views of representatives of the industry. Sheet Metal Worker 38:84-9 Ja; 45-6+ F '47
One town tells the world, today's best buy is plumbing and heating; merchandizing by plumbing and heating contractor-dealers of San Diego. il Dom Eng 170:100-3 S '47
Opportunities in the commercial market. il Dom Eng 169:98-9+ Mr '47
Price program in action. il Dom Eng 169:96-103+ Je; 170:98-109+ Jl; 96-102+ Ag '47
Sell low per-day costs of plumbing and heating. il Dom Eng 170:97-9 O '47
Today's best buy is plumbing and heating; equipment prices compared with those of other products, wages, etc. il Dom Eng 169: 97-111+ My '47
Two-way design for modern service; Erickson Plumbing and Lind Heating, Chicago. il plan Dom Eng 168:104-6+ N '46

Advertising
How to set-up your advertising program. Dom Eng 169:96-7+ Ja '47

Directories
Directory section; names and addresses of manufacturers of equipment and products used in warm-air heating, air conditioning, ventilation and sheet metal work. Sheet Metal Worker 38:166-82 Ja '47
1947 directory of heating, piping and air conditioning equipment for industrial, commercial, institutional and public buildings; classified by products, trade names, and manufacturers addresses. Heating-Piping 19:241-342 Ja '47

Exhibitions
Exhibitors scheduled for seventh International heating and ventilating exposition. Heating-Piping 18:101-10 D '46; Sheet Metal Worker 37:69-76 D '46; plan Heat & Ven 44:57-60 Ja '47
International heating and ventilation exposition, Cleveland. il Sheet Metal Worker 38: 88+ F '47; Dom Eng 169:124-5+ Mr '47

Remodeling
Selling the conversion market. Dom Eng 169: 106+ Ap '47

Kansas City
Inquiring reporter visits Kansas City. il Dom Eng 170:122-4 S '47

HEATING industry—*Continued*

Oklahoma City

Inquiring reporter visits Oklahoma City. il Dom Eng 170:126-8+ Jl '47

Portland, Oregon

Reporter visits Portland. il Dom Eng 170:116-19 O '47

HEATING pads, Electric

G-E builds campaign around new re-usable package; improved heating pads. il Ptr Ink 220:47 S 19 '47

Heating pads packaged as beauty aids. il Mod Packaging 20:124-5 F '47

Turn the heat on heating pads; sales guide. il Elec West 99:105-6 O '47

Rating

Electric heating pads. il Consumers Res Bul 18:5-8 D '46

HEATING pipes

Duct insulation reduces fuel costs. Steel 121: 98 S 22 '47

Tables, calculations, etc.

Transient temperatures around heating pipes maintained at constant temperature. A. Gemant. bibliog J Ap Phys 17:1076-81 D '46

HEATING, piping and air conditioning contractors national association

Air conditioning contractors become member-body of ASA. Ind Stand 18:123 My '47

Annual meeting, 58th, Cincinnati. Heating-Piping 19:88-91 Jl; 95-8 Ag '47

Annual meeting, 58th, Cincinnati, June 11-14. Dom Eng 170:148-9 Jl '47

HEATING research

Air temperature gradients in a panel heated room. J. M. Ayres and B. W. Levy. il Heating-Piping 19:113-17 O '47

Challenge of the ASHVE research program. C. Tasker. il Heating-Piping 19:119-24 Ag '47

Heat pump heat sources; earth as a source of heat. E. N. Kemler. bibliog map diags Edison Elec Inst Bul 14:339-46 O '46; Same abr. Heating-Piping 18:84-6 D '46; 19:80-4 Ja '47

Heat transfer by forced convection along a smooth flat surface; laminar and transitional boundary layer flow. G. V. Parmelee and R. G. Huebscher. bibliog il diags Heating-Piping 19:115-18 Ag '47

Heating of houses; experiments at the D.S.I.R. Building research station. il Electrician 139:924 S 26 '47; Science 106:489 N 21 '47

Influence of gaseous radiation in panel heating. F. W. Hutchinson. Heating-Piping 18: 103-7 N '46

New warm air research residence at University of Illinois. il plans Am Bld 69:108-9+ Jl '47

1946 report of Committee on research. il Heating-Piping 19:115-22 Mr '47

Panel heat with copper tubing; experiment in practice. D. L. Mills and L. J. Latart. il Heat & Ven 44:65-9 O; 95-8 N '47 (to be cont)

Research on domestic heating; abstract. F. M. Lea. Engineering 164:295 S 26 '47

Solar heat test structure at M.I.T. F. N. Hollingsworth. il Heat & Ven 44:76-7 My '47

Solar heating on the beam; Colorado experiments cut fuel bill 20%. il diag Bsns W p21-2 Mr 15 '47

Solar house; second research progress report. F. W. Hutchinson. il Heat & Ven 44:55-9 Mr '47

Temperature distribution in an experimental low-cost house. R. S. Dill and P. R. Achenbach. il plan Heat & Ven 44:67-71 F; 85-6 Mr '47

Temperature distribution tests made for household heating. il Dom Comm 35:6-8 Ag '47

HEBLEY, Henry Frederick, 1893-

Sketch. por Min & Met 27:578 D '46

HECHT, Ben, 1894-

Portrait. Fortune 36:146 S '47

HEDDLES. See Looms

HEDGE clippers

Rating

Power hedge clippers. il Consumers Res Bul 18:9-11 N '46

HEDGING

Convertible preferreds as investment hedges in today's market. S. Devlin. Mag of Wall St 81:22-4+ O 11 '47

Government controls undermine common stocks as inflation hedge. H. F. Vultee. Comm & Fin Chr 165:2849+ My 29 '47

Grain speculator needed; exchanges provide liquid market for hedging operations. Bsns W p26+ O 4 '47

Platinum increasing in popularity as hedge against inflation. I. J. Louis. Comm & Fin Chr 166:1248 S 25 '47

Security prices and inflation; with charts showing hedging possibilities. I. Wright and M. Henn. Comm & Fin Chr 166:8-9+ sec 2 Ag 28 '47

HEENAN and Froude, limited

Statement by the chairman at ordinary annual general meeting. A. P. Good. Economist 151:1022 D 21 '46

HEINTZ manufacturing company

New steel forming technique; cold extrusion. il Bsns W p21-2+ Ag 9 '47

HEINZ, Henry John, 1908-

Sketch. por(cover) Bsns W p6 O 11 '47

HEITLER'S theory

Heitler theory of radiation damping. J. M. Blatt. bibliog Phys R 72:466-77 S 15 '47

HELENE CURTIS industries, inc.

Making mud packs into millions; the story of Helene Curtis. W. Gidwitz. il Sales Management 58:93+ Ap 15 '47

HELICAL gearing. See Gearing, Spiral

HELICOPTERS

Advancing helicopter technology; third annual helicopter forum. A. Klemin. il diag Aero Digest 54:86-7+ My '47

Aviation's 1947 yearbook; American and foreign helicopters; brief descriptions and illustrations. Aviation 46:116+ Mr '47

Bell Aircraft delivers $1,309,514 in 'copters. Aviation N 7:8 Mr 24 '47

Bending of rotor blade in the plane of rotation. Shao Wen Yuan. J Aeronautical Sci 14:285-93 My '47

Bending of rotor blades. A. H. Flax. bibliog J Aeronautical Sci 14:42-50 Ja '47; Discussion. D. O. Dommasch. 14:251-2 Ap '47

Brantly helicopter. il diags Aero Digest 55: 62-3+ S '47

British will make Landgraf helicopter. Aviation W 47:32 S 22 '47

CAA predicts 20 helicopter schools operating by summer. A. McSurely. Aviation N 7: 22 Mr 3 '47

CAB certificates helicopter route; Los Angeles airways. Aviation N 7:28 Je 9 '47

CAB examiner favors first helicopter airmail for Los Angeles. map Aviation N 7:28-9 Mr 10 '47

L'évolution de la technique aéronautique depuis la seconde guerre mondiale d'après le XVII[e] Salon de l'aéronautique de Paris. R. J. de Marolles. Génie Civil 124:207-10 Je 1 '47

Evolution of the pulsating jet engine and its future prospects; abstract. L. B. Edelman. diag S A E J 55:43 Ja '47

Examiner favors helicopter try-out for Los Angeles air mail service. CAA J 8:41 Ap 15 '47

Great Lakes area granted helicopter, feeder services. C. Adams. Aviation W 47:49 S 15 '47

Gyrodyne helicopter. il Aero Digest 54:76+ F '47

Hamilton low cost helicopter nearing completion. Aviation N 6:19 D 30 '46

HAT planning fleet of 40 helicopters as school expands. A. McSurely. il Aviation N 7:19-20 Ap 14 '47

Helicopter comes of age. il Bsns W p21-2 Ja 25 '47

Helicopter cuts travel time. E. J. Nesbitt. il S A E J 55:61 Mr '47

Helicopter engine cooling. A. Currie. diags Aero Digest 54:66-7+ Je '47

HELICOPTERS—*Continued*
Helicopter engineering. A. Klemin. il map diag Aero Digest 51:55+ D 1 '45; 52:49+ Ja; 55+ F; 73+ Mr; 73+ Ap; 75+ My; 73+ Je; 53:103+ Jl; 69+ Ag; 77+ S; 79+ O; 85+ N; 91+ D '46; 54:75+ F; 69+ Mr; 73+ Ap; 85+ My; 65+ Je; 55:37+ Jl; 56+ Ag; 61+ S; 63+ O '47
Helicopter enters air mail field with first route in Los Angeles. map CAA J 8:77 Jl 15 '47
Helicopter in air transport. J. P. Chawla. Aero Digest 55:58-9+ Ag '47
Helicopter instrumentation. C. F. Savage and R. G. Jewell. Mech Eng 69:495-6 Je '47
Helicopter patrol for transmission line. il Elec West 99:91 S '47
Helicopter powerplant installations; abstracts. R. A. Wolf and C. P. Spiesz. il diags S A E J 55:50-2+ Jl '47; Automotive Ind 97:40+ Ag 15 '47
Helicopter prospecting anticipated; abstract. H. T. Lundberg. il Min Cong J 33:123 F '47
Helicopter taxi in Boston. Bsns W p19 Ap 19 '47
Helicopters active in diverse fields. C. Adams. Aviation N 7:17 Ap 28 '47
Helicopters, today and beyond. I. I. Sikorsky. Aero Digest 54:85+ Ja '47
Investigation of the airflow underneath helicopter rotors. R. S. Ross. il diags J Aeronautical Sci 13:665-77 D '46
Is there a helicopter in your future? C. C. Campbell. il Sales Management 58:141+ Mr 15 '47
Jet propulsion applied to helicopter rotors. R. H. Miller. J Aeronautical Sci 13:639-45 D '46
Jet rotors point to 'copter payload gain. il Aviation W 47:28-9+ S 22 '47
Largest AAF helicopter flies; Kellett XR-10. A. McSurely. il Aviation W 47:11-12 Jl 14 '47
Los Angeles ready for helicopter mail. Aviation W 47:43 S 22 '47
Low-density rotor blades; densified, laminated hardwood spars and spruce plywood aft covers. G. P. Martin. il Aero Digest 53:91+ N '46
McDonnells' large helicopter. il Aero Digest 53:87+ N '46
Maid of all trades. L. D. Bell. Aero Digest 53:26-7 D '46
Marketing Bell's model 47. D. G. Forman. il Aero Digest 55:43+ S '47
Motion of an unarticulated helicopter blade. J. Winson. bibliog J Aeronautical Sci 14: 520-6 S '47
Navy, coast guard pressing for 'copter night operations. Aviation W 47:16 Jl 28 '47
New AAF-Bell helicopter flying; XR-12 military version of Model 42. il Aviation W 47:15 Ag 25 '47
New 'copter uses tested in California. Aviation W 47:14 S 15 '47
New deLackner helicopter. il Automotive & Aviation Ind 96:33 Ap 1 '47
New Helicopter council maps future of rotary wing aircraft. A. McSurely. Aviation N 6:7-8 D 30 '46
New helicopter services planned by the Metropolitan aviation corp. Aviation N 7:23 Ap 28 '47
Noise big problem to 'copter shuttle; Skyway corp.'s service from downtown Boston to airport. Aviation N 7:18 Je 30 '47
Operating helicopters commercially; Helicopter air transport (HAT) of Central airport, Camden, N.J. G. Herrick. il Air Transport 5:42-4 F '47
Paper chases news with Bell 'copter; Oregon journal, Portland. il Aviation N 7:32 My 19 '47
Pentecost building new Hoppicopters. Aviation W 47:36 O 20 '47
Post office expands 'copter mail test program at New York. map Aviation N 6:29 D 23 '46
Practical engineering of rotary wing aircraft. P. H. Stanley; J. E. McDonald; H. S. Campbell. bibliog il diags Aviation 45:55-65 Jl; 76-82 Ag; 67-70 S; 74-7 O; 62-3 N; 90-1 D '46; 46:62-3+ Ja; 58-9 F; 62-3+ Ap; 54-7 Je '47; [cont as] Aviation W 47:20+ Ag 25; 29-30 O 6 '47
Problems of helicopter powerplants; abstracts. R. Insley. il S A E J 55:46-8 S '47; Automotive Ind 97:41+ Ag 15 '47
Rotary wing kite; German submarine towed aircraft. il Aero Digest 53:86 N '46
Rotary wing world. il Aero Digest 53:96+ D '46; 54:79+ F; 70+ Mr; 74+ Ap; 55:38-9 Jl; 65+ O '47
Rotor blade production. J. T. Parsons. il diag Aero Digest 54:73+ Mr '47
SG Mark VI helicopter. il Aero Digest 53: 94+ D '46
See 100-hr. a month helicopter utilization; Armstrong-Flint helicopter co. il map Aviation W 47:40 Ag 25 '47
Sikorsky unveils new helicopter. il Aviation N 6:12 N 25 '46
Stress analysis of rotor blades. G. Horvay. bibliog diags J Aeronautical Sci 14:315-33 Je '47; Correction. 14:544 S '47
Telescope rotor blades are tested. il Aviation N 7:8 My 5 '47
Third Hoppicopter may fly at Cleveland. il Aviation W 47:39 Ag 18 '47
This bank finances helicopter sales; Buffalo industrial bank. C. P. Cooke. Bankers Mo 64:141 Mr '47
2,500-foot vertical antenna supported by electrically driven captive helicopter; German transmitter. Electronics 20:188+ My '47
Urge engine tailored to helicopter needs; SAE committee report. S A E J 55:64 Ap '47
Versatile helicopters hoist and patrol lines. Aviation W 47:40 Ag 18 '47

Accidents

New tests to avert helicopter accidents. il S A E J 54:31-2 N '46

Agricultural use

Bell helicopters dust locusts in Argentina. Aviation W 47:35 S 22 '47

Control

Helicopter control systems. G. D. Ray. il diags Machine Design 19:101-6 Je '47
Movable cabin controls helicopter. il Aviation W 47:22+ N 3 '47

Cost of operation

Factors in helicopter economics. R. F. Sturgis. Aviation 46:95-6 My '47

Design

Hiller simplifies design to cut 'copter production costs; illustrations with text. Aviation W 47:29-30 Jl 7 '47
New doors to helicopter design unlocked; work of SAE Helicopter committee. S A E J 55:82-4 Ja '47

Directories

1947 annual directory of rotary wing aircraft; illustrations and brief descriptions. Aero Digest 54:87+ Ja '47

Exhibitions

First national helicopter show attracts big crowd. R. C. Mack. il Automotive & Aviation Ind 96:56 Ap 15 '47

Forestry use

AAF will bomb western forest fires; tests of new technique with proximity fuse. B. Stubblefield. il Aviation N 7:12 Je 30 '47
Helicopters in woods operations. K. Hay-Roe. il Pulp & Pa of Can 48:80+ Mr '47

Laws and regulations

Helicopter council begins drive against restrictive regulations. A. McSurely. Aviation N 7:7-8 F 24 '47
Helicopter regulation program presented by AIA group. Aviation N 7:11 Mr 31 '47
New flight rules to aid helicopters. Aviation W 47:14 S 1 '47

Maintenance and repair

'Copter maintenance is meticulous, but not much different. D. G. Forman. il Air Transport 5:36-7 O '47

Manufacture

Limited production facilities seen as brake on helicopters; American helicopter society forum, Philadelphia. il Aviation N 7:11+ Ap 7 '47

HELICOPTERS—*Continued*

Mining use

Ore prospectors using helicopters. il Aviation N 7:20 F 3 '47

Petroleum prospecting

Helicopter aids oil search. C. J. Deegan. il Oil & Gas J 46:61-3 Je 7 '47

Safety measures

Helicopters; factors that would affect helicopter insurance rate; abstract. J. F. Lederer. Mech Eng 69:675-6 Ag '47

Specifications

U.S. rotary wing aircraft; tabulation. Automotive & Aviation Ind 96:142 Mr 15 '47

Stability

Stability and control characteristics of a simplified helicopter; abstract. C. M. Seibel. Automotive & Aviation Ind 96:92 Je 1 '47

Stability and control characteristics of a simplified helicopter; abstract. C. M. Seibel. il S A E J 55:65 Jl '47

Stability of rotor blade flapping motion when the hinges are tilted; generalization of the rectangular ripple method of solution. G. Horvay and S. W. Yuan. diags J Aeronautical Sci 14:583-93 O '47

Testing

Full-scale helicopter rotor test tower. il Aero Digest 55:38-9 Jl '47

Helicopter testing towers stress blades. Aviation W 47:21 Jl 7 '47

Langley Field tower. Aero Digest 55:65 O '47

Vibration

Vibrations of a helicopter on the ground. G. Horvay. bibliog J Aeronautical Sci 13: 605-19 N '46

HELIUM

Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46

Calculation of the coordinate matrix elements for helium. W. Romberg. bibliog Phys R 71:706-11 My 15 '47

Counter for use in scattering and distintegration experiments. P. G. Koontz and T. A. Hall. diag R Sci Instr 18:643-6 S '47

Eee equals em see squared; significance of the Einstein equation in production of atomic power; production of helium from hydrogen. A. W. Kramer. diags Power Pl Eng 51:80-5 F '47

Helium as tracer gas. Chem & Eng N 24: 2960 N 10 '46

Helium industrial research fund sought. Oil Paint & Drug Rep 151:3+ F 24 '47

Helium molecular energy states as detected by collisions of the second kind in helium. R. Meyerott. bibliog Phys R 70:671-9 N 1 '46

Helium 1947 sales expected to hit peak. Oil Paint & Drug Rep 151:60 Ja 6 '47

Low temperature transport properties of gases; helium. I. Amdur. bibliog J Chem Phys 15:482-7 Jl '47

Maximum inversion temperatures of helium, hydrogen, and neon. J. Joffe. Phys R 70: 766-7 N 1 '46

Mean free paths of cesium atoms in helium, nitrogen, and cesium vapor. I. Estermann and others. diags Phys R 71:250-7 F 15 '47

Minimum sparking potentials of barium, magnesium, and aluminum in helium. H. Jacobs and A. P. LaRocque. bibliog diags Electrochem Soc Trans 91 (preprint 20): 297-310 '47

Production of helium in meteorites by cosmic radiation. C. A. Bauer. Phys R 72:354-5 Ag 15 '47

Scattering of fast neutrons by helium. T. A. Hall and P. G. Koontz. bibliog diag Phys R 72:196-202 Ag 1 '47

Studs tested with helium under pressure. il Comp Air Mag 51:307 N '46

Thermal diffusion constant of helium and the separation of He^3 by thermal diffusion. B. B. McInteer and others. bibliog Phys R 72:510-11 S 15 '47

U.S. buys control of added helium reserves. Chem & Eng N 25:2374 Ag 18 '47

U.S. obtains New Mexico helium rights. Can Min J 68:586 Ag '47; Pet Eng 18:180 Ag '47

Use of helium as a tracer in oil and gas fields. E. M. Frost, jr. il diags Pet Eng (Ref annual) 18:149+ Jl 1 '47

Isotopes

Abundance of He^3 in atmospheric and well helium. L. T. Aldrich and A. O. Nier. Phys R 70:983-4 D 1 '46

Concentration of He^3 in the liquid and vapor phases of He^4. H. A. Fairbank and others. diag Phys R 71:911-13 Je 15 '47

H^3 and the mass of the neutrino. E. J. Konopinski. Phys R 72:518-19 S 15 '47

Magnetic exchange moment for H^3 and He^3. F. Villars. bibliog Phys R 72:256-7 Ag 1 '47

New method of separation of the isotopes He^3 and He^4. J. G. Daunt and others. bibliog diag Phys R 72:502-3 S 15 '47

Thermal diffusion constant of helium and the separation of He^3 by thermal diffusion. B. B. McInteer and others. bibliog Phys R 72:510-11 S 15 '47

HELIUM, Liquid

Connection between the fountain effect, second sound, and thermal conductivity in liquid helium II. L. Meyer and W. Band. bibliog Phys R 71:828 Je 1 '47

Connection between the fountain effect, second sound, and thermal conductivity in liquid helium II. L. Tisza. bibliog Phys R 72:353-4 Ag 15 '47

Conversion of ordinary sound into second sound. W. M. Fairbank and others. bibliog diag Phys R 72:645-6 O 1 '47

Describes work on liquefied gases; abstract. L. I. Dana. Chem & Eng N 25:1575-6 Je 2 '47

Helium cryostat. S. C. Collins. il diags R Sci Instr 18:157-67 Mr '47

Liquid helium; low temperature, new kind of sound explored at Yale university. C. T. Lane. Mech Eng 69:40 Ja '47

New method of separation of the isotopes He^3 and He^4. J. G. Daunt and others. bibliog diag Phys R 72:502-3 S 15 '47

Pyrex Dewars for liquid helium. C. T. Lane and H. A. Fairbank. R Sci Instr 18:522 Jl '47

Second sound in liquid helium II. C. T. Lane and others. diag Phys R 71:600-5 My 1 '47; Correction. 72:1129 D 1 '47

Theory of second sound in helium II; abstract. L. Tisza. Phys R 71:477-8 Ap 17 '47

Thermophone as a source of sound in liquid helium and liquid hydrogen. H. A. Fairbank and others. bibliog diag Acoustical Soc Am J 19:475-7 My '47

HELIUM nucleus. See Plutonium

HELIX pomatia hemocyanin. See Hemocyanins

HELMINTHOSPORIUM

Differential phytotoxicity of metabolic by-products of helminthosporium victoriae. F. Meehan and H. C. Murphy. il Science 106: 270-1 S 19 '47

HELMONT, Jan Baptist van, 1577-1644

Jan Baptist van Helmont. H. S. van Klooster. por(front) J Chem Educ 24:319 Jl '47

HEMATIN

Synthetic ferroporphyrin complex that is passive to oxygen. A. H. Corwin and J. G. Erdman. bibliog diag Am Chem Soc J 68: 2473-8 D '46

HEMATOMA

False aneurysm. S. T. Glasser and J. Bloom. il Ind Med 16:115-17 Mr '47

Persistent hematoma. E. De Jongh and H. W. Gehring. Ind Med 16:125 Mr '47

HEMICELLULOSE

Hemicelluloses, their importance to the pulp and paper industry. L. E. Wise. bibliog Paper Ind 29:825-3+ S '47

Masonite offers by-products of widespread application; water soluble hemicellulose and hydrolyzed lignocellulose. Paper Tr J 125:16 Jl 10 '47

Molecular properties of hemicellulose fractions. M. A. Millett and A. J. Stamm. bibliog J Phys & Colloid Chem 51:134-48 Ja '47

Recent advances in the chemistry of wood. F. H. Yorston. bibliog Pulp & Pa of Can (Convention no) 48:296+ [F] '47

HEMICELLULOSE—*Continued*
Wood by-products from Masonite. Chem Eng 54:174+ S '47

Analysis

Quantitative isolation of hemicelluloses and the summative analysis of wood. L. E. Wise and E. K. Ratliff. bibliog Anal Chem 19:459-62 Jl '47

HEMINS
See also
Ferriheme

HEMISPHERE trading company
Stock offered. Comm & Fin Chr 165:1728-9 Mr 31 '47

HEMISPHERIC insurance conference
Meeting, Rio de Janeiro. Nat Underw 51:6 S 4 '47; Weekly Underw 157:521+ S 6 '47

HEMLOCK
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47

HEMOCYANINS
Hemocyanins of the gastropods. S. Brohult. bibliog il J Phys & Colloid Chem 51:206-17 Ja '47

HEMOGLOBIN
Activity of the red pigment from leguminous root nodules; comparison with hemoglobin. H. N. Little and R. H. Burris. bibliog Am Chem Soc J 69:838-41 Ap '47
Clinical experience with hemoglobin-saline solutions; abstract. W. R. Amberson. Science 106:117 Ag 8 '47
See also
Oxyhemoglobin

Analysis

Hemoglobin in meat scraps and tankage. R. Reiser. bibliog Anal Chem 19:114-18 F '47

HEMOLYSIS
Quantitative study of the complement-hemolysin relation. J. F. Kent. bibliog Science 105:316-17 Mr 21 '47

HEMORRHAGE
Controlling irradiation hemorrhage. Chem & Eng N 25:1210 Ap 28 '47
Hyperheparinemia; cause of the hemorrhagic syndrome associated with total body exposure to ionizing radiation. J. G. Allen and L. O. Jacobson. Science 105:388-9 Ap 11 '47

HEMP
See also
Manila hemp
Sisal hemp

HEMP waste
Plant saves fuel by burning waste hemp; Plymouth cordage co. C. B. Hudson. il diags Power 91:555-7 Ag '47

HENS. See Poultry

HEPARIN
Hyperheparinemia; cause of the hemorrhagic syndrome associated with total body exposure to ionizing radiation. J. G. Allen and L. O. Jacobson. Science 105:388-9 Ap 11 '47
Operative approach to the treatment of schistosomiasis mansoni infections. J. L. Brandt. Science 105:239-40 F 28 '47

HEPATITIS, Infectious. See Jaundice

HEPTANE
Cracking of paraffin hydrocarbons in the presence of aluminum chloride. V. I. Komarewsky and S. C. Ulick. Am Chem Soc J 69:492-5 Mr '47
Fluorocarbons by fluorination of hydrocarbons with cobalt trifluoride. R. G. Benner and others. bibliog diag Ind & Eng Chem 39:329-33 Mr '47
Improved flow calorimeter; experimental vapor heat capacities and heats of vaporization of *n*-heptane and 2,2,3-trimethylbutane. G. Waddington, S. S. Todd and H. M. Huffman. bibliog diag Am Chem Soc J 69:22-30 Ja '47
Pilot plant preparation of polychloropolyfluoroheptane. J. H. Babcock, W. S. Beanblossom and B. H. Wojcik. flow sheet diags Ind & Eng Chem 39:314-19 Mr '47
Preparation of fluorine-containing polyhaloheptenes. E. T. McBee and others. diag Ind & Eng Chem 39:305-9 Mr '47
Preparation of perfluoroheptane and chloroperfluoroheptanes. E. T. McBee and others. diag Ind & Eng Chem 39:310-13 Mr '47

Analysis

Infrared analysis of mixtures of isooctane and normal heptane. A. E. Herald and H. A. Price. Oil & Gas J 46:94-6 Jl 5 '47

HEPTOSES
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47
Identification of Emil Fischer's phenyl-volemosazone as D-mannoheptose phenylosazone. W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:1370-1 Je '47

HEPTYL chloride
Aluminum chloride-catalyzed addition of *t*-butyl chloride to propylene. V. A. Miller. bibliog Am Chem Soc J 69:1764-8 Jl '47

HEPTYLENE. See Trimethylpentene

HERBARIUMS
Use of trisodium phosphate with herbarium material and microfossils in peat. W. S. Benninghoff. Science 106:325-6 O 3 '47

HERBICIDES. See Weeds—Control

HERBS
Herbs of distinction. il Mod Packaging 20: 200 Ap '47
Hobbyist's herb garden and how it grew. il Sales Management 58:119-21 Je 1 '47

HERCULES powder company
Annual report. Comm & Fin Chr 165:1191 Mr 3 '47

HERCULES steel products corporation
Preferred stock offered. Comm & Fin Chr 166:1254 S 29 '47
Stock offered. Comm & Fin Chr 165:1455-6 Mr 17 '47

HEREDITY
See also
Genes

HERMAPHRODITISM
Small specimen of octopus vulgaris. G. E. Pickford. Science 105:522 My 16 '47

HEROES
Printer heroes. H. F. Unger. Inland Ptr 119: 49 My '47

HERRICK, Waddell and company
SEC reverses NASD ruling in Herrick, Waddell case. Comm & Fin Chr 165:1785+ Ap 3 '47

HERRING
Herring industry, British Columbia. For Comm W 27:22 Ap 5 '47
Salting herring in Iceland. G. J. Sigurdsson. il map Food Ind 19:449-52 Ap '47

HERRINGBONE gearing. See Gearing, Herringbone

HERRMANN, Henry F.
Sketch. por Am Dyestuff Rep 36:11 Ja 13 '47

HERSEY, Rexford Brammer
Hersey variability. J. D. Weinland. Personnel J 25:211-14 D '46

HERSHEY, Milton Snavely, 1857-
Stock split helps orphanage. Bsns W p22+ S 13 '47

HERSHEY chocolate corporation
Another inventory joyride? Barron's 27:29-30 Mr 17 '47

HERSHEY industrial school
Stock split helps orphanage. Bsns W p22+ S 13 '47

HERSOV, Abraham Sundel
Portrait. Fortune 34:166 D '46

HERTER, Christian Archibald
Sketch. por(cover) Bsns W p8 Ag 23 '47

HERTY, Charles Holmes, 1867-1938
Georgia dedicates Herty memorial. il Chem & Eng N 25:1435 My 19 '47

HERTY laboratory
Savannah would make Herty lab. a college. P. Nugent. Paper Tr J 124:18 Ja 23 '47

HERTY medal
Reid receives Herty medal. Chem & Eng N 25:1433 My 19 '47

HERZL, Theodor, 1860-1904
Key ideas of Theodor Herzl, father of political Zionism. por Fortune 36:119 S '47

HERZOG, Paul M. 1906-
Portrait. Bsns W p22 Je 28 '47

HESSITE. See Silver telluride

HETEROCYCLIC compounds
Absorption spectra of heterocyclic compounds; quinolinols and isoquinolinols. G. W. Ewing and E. A. Steck. bibliog Am Chem Soc J 68:2181-7 N '46
Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R. A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47
Chemistry of the pyrrocolines; 2-methyl- and 2-phenyl-pyrrocoline. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1069-75 N '46
Configuration of heterocyclic compounds; preparation of phenoxstibines and resolution of 10-*p*-carboxyphenyl-2-methylphenoxstibine. I. G. M. Campbell. Chem Soc J p4-10 Ja '47
Fluorinated heterocyclic compounds; methylpyridines. E. T. McBee, H. B. Hass and E. M. Hodnett. bibliog Ind & Eng Chem 39:389-91 Mr '47
Fluorinated heterocyclic compounds (perhaloalkyl)triazines. E. T. McBee, O. R. Pierce and R. O. Bolt. Ind & Eng Chem 39:391-2 Mr '47
Heterocyclic basic compounds; 4,8-diaminoquinoline and derivatives. R. W. Gouley, G. W. Moersch and H. S. Mosher. bibliog Am Chem Soc J 69:303-6 F '47
Light absorption and resonance energies of some heterocyclic molecules. A. Maccoll. Chem Soc J p670-2 Ag '46
New syntheses of heterocyclic compounds; 9-amino-6; 8-dimethyl-7; 10-diazaphenanthrenes. V. A. Petrow. Chem Soc J p884-8 O '46
Researches on acetylenic compounds; heterocyclic compounds derived from ethynyl ketones. K. Bowden and E. R. H. Jones. Chem Soc J p953-4 O '46

See also
Cinnoline
Cyclic compounds

HEXABROMIDE number
Study of the hexabromide number. J. P. Kass, W. R. Roy and G. O. Burr. bibliog Anal Chem 19:21-4 Ja '47

HEXABROMOETHANE
Bromine-sensitized photochemical formation of hexabromoethane from carbon tetrabromide. L. B. Seely, jr. and J. E. Willard. Am Chem Soc J 69:2061 Ag '47

HEXACHLOROBENZENE
Perfluoro dibasic acids and derivatives. E. T. McBee, P. A. Wiseman and G. B. Bachman. Ind & Eng Chem 39:415-17 Mr '47

HEXACHLOROCYCLOHEXANE
Alkaline degradation of benzene hexachloride. F. A. Gunther and R. C. Blinn. bibliog Am Chem Soc J 69:1215-16 My '47
Benzene hexachloride. A. Weed. Soap & San Chem 23:115-16+ Ja '47
Benzene hexachloride, promising British insecticide takes hold here. il Chem Ind 60: 418-20 Mr '47
Epsilon isomer of 1,2,3,4,5,6-hexachlorocyclohexane. K. C. Kauer, R. B. DuVall and F. N. Alquist. bibliog diags Ind & Eng Chem 39:1335-8 O '47
Gamma 666; abstract. J. Savit and others. Soap & San Chem 22:161 D '46
Infrared spectroscopic analysis of five isomers of 1,2,3,4,5,6-hexachlorocyclohexane. L. W. Daasch. bibliog Anal Chem 19:779-85 O '47
Kinetics of the alkaline dehydrochlorination of the benzene hexachloride isomers; mechanism of second-order elimination reactions. S. J. Cristol. bibliog Am Chem Soc J 69:338-42 F '47
Newer synthetic insecticides. E. F. Knipling. Soap & San Chem 23:127+ Jl '47

Analysis
Determination of hexachlorocyclohexane in impregnated cloth. J. Goldenson and S. Sass. Anal Chem 19:320-2 My '47

HEXACHLOROCYCLOPENTADIENE
Diels-Alder syntheses with hexachlorocyclopentadiene. E. A. Prill. Am Chem Soc J 69:62-3 Ja '47
Perfluoro dibasic acids and derivatives. E. T. McBee, P. A. Wiseman and G. B. Bachman. Ind & Eng Chem 39:415-17 Mr '47
Preparation of hexachlorocyclopentadiene and certain derivatives. J. A. Krynitsky and R. W. Bost. bibliog Am Chem Soc J 69: 1918-20 Ag '47

HEXACHLOROETHANE
New mothproofing larvicide; mixture of hexachlorethane with paradichlorobenzene, or with naphthalene. N. M. Molnar. Soap & San Chem 23:143+ Jl '47

HEXADECAFLUOROHEPTANE
Pilot plant syntheses; perfluoro-*n*-heptane, perfluorodimethylcyclohexane, and high boiling fluorocarbon oils. W. B. Burford, 3d and others. flow sheet il diags Ind & Eng Chem 39:319-29 Mr '47
Preparation of perfluoroheptane and chloroperfluoroheptanes. E. T. McBee and others. diag Ind & Eng Chem 39:310-13 Mr '47

HEXADIENOIC acid. See Sorbic acid

HEXAETHYL tetraphosphate
Hexaethyl phosphate promising as insecticide. Oil Paint & Drug Rep 150:54 D 2 '46
Hexaethyl tetraphosphate for insecticide use. Chem & Eng N 25:1070 Ap 14 '47

HEXAFLUOROETHANE
Raman spectrum of hexafluoroethane. D. H. Rank and E. L. Pace. il diags J Chem Phys 15:39-40 Ja '47
Thermal reaction of hexafluoroethane with quartz. L. White, jr. and O. K. Rice. bibliog Am Chem Soc J 69:267-70 F '47

HEXAHYDROPHTHALIC acid
Improved synthesis of *cis*-Δ^4-tetrahydrophthalic anhydride and *cis*-hexahydrophthalic acid. E. F. Jenkins and E. J. Costello. Am Chem Soc J 68:2733 D '46

HEXAHYDROXYBENZENE
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene-tetrahydroxyquinone-rhodizonic acid. P. W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69:326-9 F '47

HEXAMETHYLENEDIAMINE
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diags Chem Ind 60:612-13 Ap '47

HEXAMETHYLENE diisocyanate
Use of polymers to make wool unshrinkable; di*iso*cyanates. T. Barr and others. Soc Dyers & Col J 62:338-45 N '46
Water-white colored liquid that turns straw colored on standing. Chem Ind 60:802+ My '47

HEXAMETHYLENETETRAMINE
Anisotropic oscillations in the hexamethylenetetramine crystal. P. A. Shaffer, jr. Am Chem Soc J 69:1557-61 Jl '47
Formaldehyde presents a changing economic picture. C. P. Neidig. il map Chem Ind 61: 214-17 Ag '47
Reinvestigation of hexamethylenetetramine by electron diffraction. V. Schomaker and P. A. Shaffer, jr. bibliog Am Chem Soc J 69:1555-7 Jl '47
Starch size, containing hexamethylene tetramine; U.S. patent. Am Dyestuff Rep 36:418 Jl 28 '47

HEXANE
Boiling coefficients for finned tubes. W. E. Zieman and D. L. Katz. bibliog flow diag il Pet Refiner 26:78-82 Ag '47
Cracking of paraffin hydrocarbons in the presence of aluminum chloride. V. I. Komarewsky and S. C. Ulick. Am Chem Soc J 69:492-5 Mr '47
Design and operation of a light hydrocarbon distillation drier. G. C. Gester, jr. bibliog il diag Chem Eng Prog 43:117-21; Discussion. 121-2 Mr '47

HEXANE—*Continued*
Physical and chemical properties of hydrocarbon solutions of aluminum bromide; the solubility of aluminum bromide in *n*-hexane. E. R. Boedeker and A. G. Oblad. bibliog Am Chem Soc J 69:2036-9 Ag '47

HEXANOLAMINE oleate
Blending of water with organic solvents by detergents. S. R. Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47

HEXANONE
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47

HEXOKINASE
Hexokinase activity and diabetes mellitus. R. H. Broh-Kahn and I. A. Mirsky. Science 106:148-9 Ag 15 '47

HEXOSEPHOSPHATES
Hexosediphosphoric acid in living yeast. H. Suomalainen and E. Arhimo. bibliog Science 105:17-18 Ja 3 '47

HEXYL ammonium chloride
Electrical behavior of hexyl- and dodecylammonium chlorides in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. bibliog Am Chem Soc J 68:2460-4 D '46

HEXYLENE glycol. See Methyl pentanediol

HEYDEN chemical corporation
Acquisition of Nyal co. Comm & Fin Chr 165:685 F 3 '47
Potash and pills. Chem Ind 60:770 My '47

HEYNEMAN, Paul
Portrait. Sales Management 58:39 Je 15 '47

HICKEY, Matthew J. 1896-
Resigns as president of General dyestuff corp. por Comm & Fin Chr 166:1742 O 30 '47

HIDES and skins
Adsorption of water vapor by untanned hide and various leathers at 100° F. J. R. Kanagy. bibliog il diag J Res Nat Bur Stand 38:119-28 Ja '47
Barter deals reduce Argentine hide supply, promise better prices for U.S. Barron's 27: 36 Jl 28 '47
Exotic hides and skins form South-of-border resource; from Mexico to Cape Horn, potentialities are large. M. E. Wambsganss. For Comm W 27:8+ My 24 '47
Exports of hides fail to lift home prices. Barron's 27:29 Ap 7 '47
Hides and skins in the other American republics. M. E. Wambsganss. il For Comm W 25:10-11+ D 28 '46; 26:6-7+ Ja 4 '47
India; hide and skin regulations. For Comm W 26:20-1 F 1; 20 Mr 15 '47
United Kingdom imports of hides and skins, August 1946 and 1947; table. For Comm W 29:22 N 1 '47
See also
Collagen
Leather
Tanning

HIGGINS, Andrew Jackson, 1886-
Higgins gets RFC loan. Bsns W p66 Mr 1 '47

HIGH buildings
Welded steel piles support 26-story skyscraper; Boston home of John Hancock life insurance co. il Civil Eng 17:113-16 Mr '47
See also
Office buildings

Heating and ventilation
Vertical air distribution in tall buildings. W. Sturm. il Heating-Piping 19:69-72 Je; 93-6 S '47

HIGH chairs

Rating
High chairs. il Consumers Res Bul 18:5-9 N '46

HIGH frequency electric furnaces. See Electric furnaces, High frequency

HIGH frequency heating. See Electric heating, Industrial—High frequency heating

HIGH pressure. See Pressure

HIGH school buildings. See School buildings

HIGH school graduates
Boy goes to work. H. L. Stein. Personnel J 25:250-6 Ja '47

HIGH school students
High school students get airplane flights in aviation courses. CAA J 8:87 Ag 15 '47
34,000 students report on spending habits. D. Layman. Adv & Sell 40:52+ Ja '47

HIGH schools

Curriculum
Secondary education for a new world. J. W. Studebaker. Ann Am Acad 249:135-42 Ja '47

HIGH speed steel. See Tool steel

HIGH vacuum processes, inc.
Stocks offered. Comm & Fin Chr 165:1591 Mr 24 '47

HIGH voltages
Calibration of uniform-field spark-gaps for high-voltage measurement at power frequencies. F. M. Bruce. bibliog il diags Inst E E J 94 pt 2:138-49 Ap '47; Abstract. Electrician 137:1517 N 29 '46; Discussion. Inst E E J 94 pt 2:149-54 Ap '47; Electrician 137:1517-18 N 29 '46
Design of an ellipsoid voltmeter for the precision measurement of high alternating voltages. F. M. Bruce. diags Inst E E J 94 pt 2:129-37 Ap '47; Abstract. Electrician 137:1517 N 29 '46; Discussion. Inst E E J 94 pt 2:149-54 Ap '47; Electrician 137:1517-18 N 29 '46
Development of the gas-cushion cable system for the highest voltages. T. R. P. Harrison. bibliog il Inst E E J 94 pt 2:233-42 Je '47; Same cond. Engineer 182:526-7 D 6 '46; Abstract. Electrician 137:1375-6 N 15 '46; Discussion. Inst E E J 94 pt 2:242-6, 700-5 Je, D '47
Economic advantages of higher industrial voltages. R. H. Kaufmann. diags Gen Elec R 49:35-8 N '46
Field tests on 132-kV cable installation. il diag Engineer 184:231 S 5 '47; Engineering 164:259 S 12 '47
500-kv line undergoing tests this week at Brilliant, Ohio. il Elec World News ed 128:4 O 4 '47
High-voltage cable testing at Birmingham power station. il diag Elec R (Lond) 141: 363-4 S 5 '47; Electrician 139:684-5 S 5 '47
H.V. impulse testing plant; W. T. Henley's telegraph works co. il Engineer 183:478-80 My 30 '47; Engineering 163:506-7 Je 13 '47; Elec R (Lond) 140:883-5 My 30 '47; Electrician 138:1448-51 My 30 '47
High-voltage indication; instrument for use on 33-kV circuits. T. A. Ledward. diags Elec R (Lond) 141:351-2 S 5 '47
Highest line voltage on earth; transmission line high-voltage test project at Brilliant, Ohio. P. Sporn. Pub Util 40:588-91 O 23 '47
Insulation of high voltages in vacuum. J. G. Trump and R. J. van de Graaff. bibliog diag J Ap Phys 18:327-32 Mr '47
Modern supertension cables. C. C. Barnes. bibliog il Electrician 139:189-91, 329-32, 397-9 Jl 18, Ag 1-8 '47
Performance of high-voltage oil circuit-breakers incorporating resistance switching. H. E. Cox and T. W. Wilcox. diags Inst E E J 94 pt 2:351-61 Ag '47; Abstract. Engineering 162:620-1 D 27 '46; Discussion. Inst E E J 94 pt 2:367-71, 655-62 Ag, D '47
Power distribution systems for pulp and paper mills; high-voltage power distribution. G. M. McHenry and J. L. McKeever. diags Elec Eng 66:985-90 O '47
Super high voltage transmission research begins at Tidd 500-kv test project. il Edison Elec Inst Bul 15:371-4 O '47; Abstract. Elec World 128:84-6 O 11 '47
Transmitting a half-million volts. il Bsns W p68+ O 4 '47
2½-million volt surge generator. il Engineer 183:273 Mr 28 '47; Electrician 138:783 Mr 28 '47
Voltage characteristics of polythene cable. R. Davis and others. bibliog Inst E E J 94 pt 3:154-65; Discussion. il 165-70 My '47
See also
Overvoltage (electric lines)

HIGHWAY accidents. See Automobile accidents

HIGHWAY accounting
Cost accounting plan for county roads. Roads & Sts 90:97-9 Ag '47
Dangers of highway bankruptcy. R. H. Baldock. Eng N 138:212 F 6 '47

HIGHWAY administration
Broad aspects of highway planning affect Nation's economic, cultural and social life. C. M. Noble. il Civil Eng 17:593-7+ O '47
Dangers of highway bankruptcy. R. H. Baldock. Eng N 138:212 F 6 '47
Financing and administration of Ontario's highways. T. J. Mahony. Roads & Bridges 85:142+ Mr '47
Financing and administration of provincial highways. T. J. Mahony. Roads & Bridges 85:112+ S '47
Future price structure and conditions in the highway industry. C. H. Sells. Roads & Bridges 85:128+ S '47
Long-range highway planning. R. E. MacCleery. il Roads & Bridges 85:94-6+ O '47
Mathematical rating for priority of road construction established by New Mexico state highway department. H. S. Wiley. il Pub Works 77:21-4 N '46
We get about what we pay for. B. H. Petty. Roads & Sts 89:84+ D '46

HIGHWAY contracts. See Roads—Contracts

HIGHWAY departments
Directory of provincial highway officials; organization charts, provincial highways departments, Canada. Roads & Bridges 85:108+ Je '47
Is it a fair bid? Arkansas highway department system of unit cost analysis. A. E. Johnson. Roads & Sts 90:51-4+ Je '47
Responsibilities of a highway maintenance organization. C. L. Motl. il Roads & Bridges 85:50-2+ Jl '47

See also
Radio telephone—Highway department use

Equipment
Pavement striping methods. il diag Roads & Sts 90:78+ Ap '47
Preventive maintenance extends life of Missouri highway equipment. il Eng N 137:717-19 N 28 '46
Shop-built tools speed road test work; Virginia department of highways. il diag Eng N 139:128-9 Jl 24 '47

Public relations
Highway engineers must gear up public relations. H. H. Hale. Roads & Sts 90:85+ S '47

HIGHWAY engineering
ASCE convention, Duluth; abstracts of Highway division papers. Civil Eng 17:448-50 Ag '47
Application of aerial strip photography to highway and airport engineering. J. E. Hittle. il Roads & Bridges 85:86-90+ My '47
Building a road through rock, sand and muskeg; Red Lake highway in northwestern Ontario. il Roads & Bridges 85:69+ F '47
Colorado highway follows gold-rush rail route. L. A. Luther. il map Comp Air Mag 52:191-5 Ag '47
Contractors at work; D. R. Smalley & sons; U.S. 40, Indiana-Ohio. il Roads & Sts 90:87-90 Ag '47
Developments in soil mechanics. E. F. Bennett. Roads & Sts 90:54-5 Ap '47
Economic justification of highway improvements confronts Arizona. E. V. Miller. il Civil Eng 17:523-7+ S '47
Helping a small city burst its seams; Klamath Falls, Oregon, suburban arterial highway reconstructed to aid growth of fringe developed community. R. Webber. il plan Roads & Sts 90:65-7 Mr '47
Highway builder looks at highway engineering. D. W. Winkleman. Roads & Sts 90:64+ Ap '47
Houston urban expressways. H. J. McKeever and others. il map plan diags Roads & Sts 90:61-2+ Je; 69+ Jl '47
How modern highway design reduces accidents. H. C. Coons. il Pub Works 78:21-3+ S '47
Importance of secondary roads. E. H. Gohier. Roads & Bridges 85:120+ S '47
Kanawha boulevard extended at Charleston. il map Eng N 139:181-3 Ag 7 '47
Kentucky attains record road program despite unfavorable conditions. il Eng N 137:659-61 N 14 '46
Maine Turnpike, Nation's largest single post-war road job; design features and construction methods. H. J. McKeever. il diags Roads & Sts 90:59-61+ S '47
Moving 178,000 cu. yd. of earth monthly for the Shirley highway. il Eng N 137:780-2 D 12 '46
Privately financed superhighway in Maine incorporates latest design features. R. N. Bergendoff. il diag Civil Eng 17:454-8+ Ag '47
Proceedings of the Kansas highway engineering conference, Feb. 28 and March 1, 1946. il Kansas State College Eng Exp Sta [Manhattan] Bul 51:1-140 '46
Red Lake highway gives access to rich mining area. il Roads & Bridges 84:49-53+ D '46
Road costs must be justified by savings to drivers. J. E. Williams. il Civil Eng 16:540-1 D '46
Roadbuilding in northern Ontario. W. B. Hutcheson. Roads & Bridges 85:130+ Ap '47
Roads to riches in Venezuela; new roads being built by oil companies. E. J. Cleary. il map diag Eng N 138:432-6 Mr 20 '47
700,000 cu.yd. roadway excavation belted across busy arterial; relocating and widening California road. il Roads & Sts 90:77-8 Ag '47
Significant trends in Missouri state highway construction. il Eng N 137:648-53 N 14 '46
Soil-survey procedure for road work. A. H. D. Markwick and S. B. Webb. il diags Roads & Bridges 85:58-62+ Jl '47
Special highway section. il maps diags Eng N 138:117-50 Ja 23 '47
Superhighway to by-pass Pittsburgh. J. R. Dietz. maps diag Eng N 139:450-2 O 2 '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway. H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47
Vertical sand drains speed consolidation of soft water-bearing subsoil; Terminal Island access freeway. il diags Eng N 138:386-9 Mr 6 '47
Work progresses on one of New England's most important highways; Maine turnpike between Portland and Kittery. il map diag Concrete 54:10+ D '46
Work resumed on Blue Ridge parkway. il map Eng N 137:880-2 D 26 '46
Work speeded on Penn-Lincoln parkway. E. L. Schmidt. il map Eng N 139:608-9 O 30 '47

See also
Bridge design
Bridges
Expressways
Highway research
Pavements
Roads
Snow removal
Streets
Traffic engineering

Bibliography
Highway and airport digest. Published in monthly numbers of Public works

Study and teaching
Easy to use on-the-job training program for your highway personnel. il diags Pub Works 78:17, 29-32, 62 Ja; 30-1+ F '47
Profiting by wartime training in roadbuilding. C. M. Upham. Roads & Bridges 84:118 N '46

Tables, calculations, etc.
General principles of highway transition curve design. J. J. Leeming. Am Soc C E Proc 73:1257-69 O '47
Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47

HIGHWAY engineers
Highway engineers must gear up public relations. H. H. Hale. Roads & Sts 90:85+ S '47

Salaries
American assn. of state highway officials committee on salaries makes interim report on 1946 salaries for highway engineers. Civil Eng 17:216 Ap '47
Urge equalizing of state road salaries. Eng N 138:177 Ja 30 '47

HIGHWAY law
Legal decisions regarding streets and highways. J. Simpson. Pub Works 78:29 Mr; 36 Je '47
New Jersey limits lines crossing super-highways. Elec World News ed 128:12 Jl 12 '47
Nine states enact toll road legislation. Eng N 139:459 O 2 '47
1946 highway legislation in review. Roads & Sts 90:89-90 Ja '47
Relationship of free enterprise to modern traffic facilities; limited access highways and state control of roadside business. L. S. Wescoat. Am Pet Inst Proc 26(1):103-6 '46; Same cond. Oil & Gas J 45:239+ N 16 '46
Right to extinguish highway access upheld by Minnesota courts. plan Eng N 138:61-3 Ja 9 '47

See also
Automobile laws and regulations
Highway administration
Motor bus lines—Laws and regulations
Motor trucks—Laws and regulations

HIGHWAY officials

Directories

Directory of provincial highway officials; organization charts, provincial highways departments, Canada. Roads & Bridges 85: 108+ Je '47
Municipal road officials in incorporated cities and towns, Canada. Roads & Bridges 85: 168+ Je '47
Township road officials, Canada. Roads & Bridges 85:154+ Je '47

HIGHWAY postal service. See Postal service, Highway

HIGHWAY research
Concrete highway research yields better guidance for contractors; laboratory of the Public roads administration. il Concrete 55: 8-9+ My '47
High drainage research expanded. Eng N 139: 40 Jl 10 '47
Highway research board, 26th annual meeting, Washington, D.C. Dec. 5-8. Eng N 137: 769+, 836-9 D 12-19 '46; Concrete 55:22-6 Ja '47; Roads & Sts 90:68-70+ Ja '47
Highway research develops better methods of road construction; activities of the U.S. Public roads administration. il Roads & Bridges 85:88-9+ Ap '47
Place of research in the construction and maintenance of highways. J. Walter. il Roads & Bridges 85:106+ Mr '47
Roadbuilding in Waterloo county as affected by soil studies. D. J. Emrey. il Roads & Bridges 85:83+ Je '47
Ten years of highway research. K. B. Woods. il Purdue Univ Eng Exp Sta, Research Ser 99:1-72 bibliog(p37-48) '46 (pa 50c)
Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47
Work of Public Roads research laboratory. il Eng N 138:998-1002 Je 26 '47

HIGHWAY transportation
Broad aspects of highway planning affect Nation's economic, cultural and social life. C. M. Noble. il Civil Eng 17:593-7+ O '47
Highway transportation congress, Washington, D.C. Sept. 26-27. Roads & Sts 89:100+ N '46
Motor-transport facilities of Italy. For Comm W 28:34 Jl 19 '47

See also
Motor bus lines
Motor trucks and roads
Motor trucks in freight service
Railroads—Motor vehicle auxiliaries
Road traffic
Roads
Street traffic

HIGHWAYS. See Roads

HILDEBRAND rule
Comments on the Hildebrand rule. J. H. Hildebrand and T. S. Gilman. bibliog J Chem Phys 15:229-31 My '47

HILL, Arthur Middleton, 1892-
For a peacetime WPB. Bsns W p8 S 13 '47
Pentagon businessman. por(cover) Bsns W p6 S 13 '47

HILL, George Washington, 1884-1946
Did much to give advertising a bad name. M. O'Dea. Ptr Ink 217:39 N 29 '46

HILL, Lee H. 1889-
Hill succeeds S. B. Williams as editor of Electrical world. por Elec World 127:31 Ja 4 '47

HILL, Richard W. 1878-1947
Sketch. Comm & Fin Chr 165:496 Ja 23 '47; por Banking 39:56 F '47; por Am Inst Banking Bul 29:12-13 Ap '47

HILLBERRY, Norman
Portrait. Bsns W p34 Mr 22 '47

HILLSIDE architecture
Built into a hillside; country house in Forestville, Va. il plans Arch Forum 86:94-7 Je '47
Hillside house, Central Valley, N.Y. solves difficult problem of solar orientation. il plans diags Arch Forum 86:126-8 Ap '47
Hillside house, formerly a country store, built to a split level plan. il plans diags Arch Forum 87:111-13 O '47
Hillside house near Los Angeles. il plans Arch Forum 86:100-1 F '47
Hilltop house has living room roof built like an airplane; Ross, Calif. il plans Arch Forum 86:78-9 Mr '47
House in California illustrates San Franciscans' proclivity for building on unscalable heights. il plans diag Arch Forum 85:94-5 D '46
House in Connecticut is designed to fit a sloping site. il plans Arch Forum 85:98-9 N '46
Many-windowed hillside house; solid, sturdy design typical of the Middlewest. il plans Arch Forum 87:72-4 Ag '47
Modern house designed to take advantage of sunny climate; Denver. il plan Am Bld 68:88-90 N '46
Quonset house on a California hillside in suburbs of Oakland. il plan diag Arch Forum 86:112-13 Ap '47
Split-level design takes full advantage of view and sloping site; house in Oregon. il plans diag Arch Forum 87:78-9 Ag '47
Two-story hilltop house for architect Moore in Seattle, Wash. il plans Arch Forum 86: 92-3 F '47
Unusual effects obtained in modern house on mountain slope overlooking Los Angeles. il plan Am Bld 69:118-19 S '47
With a lawn for a roof. plans diags Arch Rec 100:78-9 D '46

HILSCH'S tube
Blows hot and cold. Fortune 34:180+ D '46; Sci Am 177:29-30 Jl '47
Tube both heats and cools air. il Comp Air Mag 52:131 My '47; Same. Iron Age 159: 145-6 My 8 '47; Same. Power 91:480 Jl '47; Same. Power Pl Eng 51:87 Ag '47; Discussion. P. A. Baumeister. Comp Air Mag 52:206 Ag '47

HILTON, Conrad Nicholson
Hoteldom's Hilton goes global. por Bsns W p22+ S 6 '47

HINGES
Production increased three times by use of overhead conveyor; London pressed hinge co. il Mech Handling 34:436-7 Ag '47

HINSHAW, Ezra
Portrait. Fortune 35:169 Mr '47

HINSHELWOOD, Cyril Norman, 1897-
Portrait. Chem & Ind p396 Jl 12 '47

HIPERCO. See Iron alloys—Cobalt alloys; Magnetic materials

HIPPED plate construction. See Concrete construction—Design

HIROSHIMA, Japan

Water supply

Atomic bombing effects on Japanese water supply systems. il Pub Works 78:25-7 Ag '47

HISPANIC AMERICA. See Latin America

HISTAMINE
Aryloxyacetamidines and 2-(aryloxymethyl)-imidazolines. C. Djerassi and C. R. Scholz. bibliog Am Chem Soc J 69:1688-92 Jl '47
Effect of rutin on anaphylactic and histamine shock. R. J. Raiman and others. Science 106:368 O 17 '47
Halogenated thiophene derivatives as antihistamine agents. R. C. Clapp and others. Am Chem Soc J 69:1549 Je '47

HISTAMINE—*Continued*
Inhibitory effect of sodium dodecyl sulfate upon the gastric secretory response to histamine. H. Shay and others. bibliog Science 105:128-9 Ja 31 '47
N,N-dimethyl-N'-(α-pyridyl) - N'-(α-theinyl)-ethylenediamine, an antihistaminic agent. A. W. Weston. bibliog Am Chem Soc J 69: 980-1 Ap '47
Progress in allergy therapy. S. M. Feinberg. Chem & Eng N 25:2134-6 Jl 28 '47
Progress in antihistaminics noted at pharmaceutical meeting. Chem & Eng N 25: 2718 S 22 '47
Thiophene-containing antihistaminic agents. L. P. Kyrides, F. C. Meyer and F. B. Zienty. bibliog Am Chem Soc J 69:2239-40 S '47

HISTIDINE
Preparation and properties of the iodohistidines. K. J. Brunings. bibliog Am Chem Soc J 69:205-8 F '47

HISTOGRAMS
Instrument for measuring particle diameters and constructing histograms from electron micrographs. E. E. Hanson and J. H. Daniel. il diags J Ap Phys 18:439-43 My '47

HISTOPLASMIN
Calcifications in the spleen; occurrence in histoplasmin and tuberculin reactors. R. H. High. bibliog Pub Health Rep 61:1782-6, pl 1 D 6 '46
Histoplasmin sensitivity among siblings. S. H. Ferebee and M. L. Furcolow. Pub Health Rep 62:834-47 Je 6 '47
Studies of fungus antigens; quantitative studies of cross-reactions between histoplasmin and blastomycin in guinea pigs. A. Howell, jr. bibliog Pub Health Rep 62:631-51 My 2 '47

HITCHCOCK, Lauren Blakely, 1900-
Portrait. Chem Eng Prog 43:509 O '47

HOBBIES
Hobby in old checks; W. T. A. Durand collection, Rochester, N.Y. R. R. McGuire. il Banking 40:16-17 S '47
Norman C. Keyes and his son collect and make miniature figures and ship models. East Underw 48:34 Ja 17 '47

HOBBING machines
See also
Gear cutting machines

HOBBS act. See Labor laws and legislation—United States

HOBOKEN, New Jersey
Sale of Hoboken waterfront recalls early transportation developments. Marine Eng 51:114+ D '46

Harbor
First-class pier proposed. il Marine Eng 52: 93-4 O '47
N.Y. port body seeks Hoboken lease. il Eng N 139:423 S 25 '47

HOBS
Barber-Colman's automatic no. 6-5 hob sharpening machine. il diags Product Eng 18:136-8 S '47
Carbides hob non-metallic gears. L. W. Reuland. il Am Mach 91:96-8 Jl 3 '47

HOCHSCHILD, Mauricio, 1881-
Mauricio Hochschild. por Fortune 36:84-7+ Jl '47

HOD carriers', building and common laborers' union of America
Peglerized union looks to its public relations. Bsns W p102 N 23 '46

HOE, R., and company
Earnings big on new capital. Barron's 27:1+ F 10 '47
Plans recapitalization. Comm & Fin Chr 165: 210 Ja 13 '47
Recapitalization approved. Comm & Fin Chr 165:685 F 3 '47

HOFFMAN, James Irvin, 1893-
Hillebrand award. por(cover) Chem & Eng N 25:667 Mr 10 '47
Receives Hillebrand prize of Washington chemical society. por Chem & Eng N 25:906 Mr 31 '47

HOFFMAN, Leslie H.
Sketch. por Sales Management 58:128 Ap 15 '47

HOFMANN reaction
Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R. A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47

HOG houses. See Swine houses

HOGATE, Kenneth Craven, 1897-1947
Sketch. Comm & Fin Chr 165:1048 F 20 '47; por Ptr Ink 218:97 F 21 '47
Tribute. Barron's 27:3 F 17 '47

HOGS. See Swine

HOISTING
Know-how makes tough hoisting job easy. H. B. McDermid. diag Power 91:46 Ja '47
Mass methods made feasible by special lifting aids. E. A. Erickson. il diag Factory Management 104:94-7 O '46
Raising sunken bridge spans with chain hoists. il Roads & Sts 90:79 My '47
See also
Lifting magnets
Mine hoisting

Safety measures
Hoisting chain. il Nat Safety N 55:110+ Mr '47
Hoists and trucks add power to manpower. Nat Safety N 55:107-8 Mr '47
Regular inspection keeps hoists and ladders safe. C. Y. Wilgus. il Factory Management 105:121-2 F '47
Suggested standard code of signals. il Mech Handling 33:770-1 D '46
See also
Mine hoisting—Safety measures

HOISTING machinery
Battery elevating and transporting cart. G. Habian. il Air Transport 5:76 My '47
Cargo hoists on aircraft. il Mech Handling 33:702-4 N '46
Fire hazard gone; replacement of steam boiler on hoisting machine with Diesel engine. il Diesel Power 25:71+ F '47
Handling concrete blocks in yard by air hoist. il Comp Air Mag 52:202 Ag '47
Mobile hoist. il Mech Handling 33:679-81 N '46
Mobile hoist changes insulators. W. H. Blankmeyer. il Elec World 127:65 Je 21 '47
Modern rotary drilling; miscellaneous hoisting equipment. J. Zaba. Oil & Gas J 46:95 Ag 2 '47
New lifting device simplifies mold weight handling. W. K. Mitchell. il Foundry 75: 146+ Mr '47
New range of friction hoists. il Mech Handling 34:383-4 Jl '47
Novel lift devised to ease battery change. il Aviation 46:88 My '47
150 h.p. transportable hoist. il diags Engineer 183:363-5 Ap 25 '47
Portable power-driven hoist. il Mech Handling 34:253-4 My '47
Ratchet lever hoists straighten tilted bridge. il Civil Eng 17:179 Ap '47
Small air hoist. il Engineer 182:524 D 6 '46
Transportable hoists. il Mech handling 34: 218-19+ Ap '47
Vaughan lift engineering co.'s small friction hoist. il Engineer 183:456 My 23 '47
See also
Conveying machinery
Cranes, derricks, etc.
Mine hoisting

Standards
Proposed API specification on rating of rotary-drilling hoisting equipment. diag Am Pet Inst Proc 25(4):264-7 '45

HOISTING machinery, Electric
Electric hoist operation and maintenance. il diags Mech Handling 33:757-62; 34:103 D '46, F '47
Electro-magnets in the field of materials handling. il Mech Handling 34:373-4 Jl '47
150-h.p. transportable hoist for oil-refinery plant. il diags Engineering 163:428-9 My 23 '47

HOISTING machinery, Electric—*Continued*
Rotary lift mechanism increases versatility of industrial truck. J. A. Draxler. il diags Machine Design 18:101-4 N '46
Thrustor lowering control system for a.c. crane hoists; abstract. E. L. Schwarz-Kast. Product Eng 18:134-6 Jl '47
See also
Mine hoisting, Electric
Winches, Electric

HOLDEN, Roy Jay, 1870-1945
Memorial. J. K. Roberts. bibliog por(pl 7) Geol Soc Proc 1946:167-72 Jl '47

HOLDING companies
See also
Banks and banking—Holding companies
also names of companies, e.g.
Engineers public service company

Laws and regulations
Integration programs speeded up. Comm & Fin Chr 166:324 Jl 24 '47
Objections to dissolution orders under Holding company act rejected by Supreme court; American power & light company and Electric power & light corporation. Pub Util 38:857-8 D 19 '46
Progress of holding company integration. Pub Util 40:372-4, 444 S 11-25 '47; Abstract. Comm & Fin Chr 166:112 Jl 10 '47
Public utility holding companies; the death sentence and the future. W. H. Anderson. bibliog J Land & Pub Util Econ 23:244-54 Ag '47
Summary of holding company integration progress. Pub Util 39:703-6 My 22 '47
Supreme court sustains utility holding companies' death sentence; upholds SEC action against American power and light co. of Maine, and Electric power and light corp. Comm & Fin Chr 164:2794 N 28 '46; Elec World News ed 126:7 N 30 '46
Utilities divorced from parent companies; with details on individual companies. J. M. Gordon. il Mag of Wall St 81:34-5+ O 11 '47

Securities
Common stock investments for diversification and stability; indirect investment through parent company shares. R. Colston. Mag of Wall St 81:85-6+ O 25 '47
Electric-gas holding company stocks. Pub Util 38:669 N 21 '46
Mandatory v. voluntary plans to retire securities. O. Ely. Pub Util 40:110-11 Jl 17 '47
Preferred stockholders' claims to redemption premiums. Comm & Fin Chr 165:2732 My 22 '47

HOLDING devices
Carbon soldering fixtures. F. C. Dupre. il diags Am Mach 91:101-3 My 8 '47
Continuous seam welding using automatic fixture. il Steel 120:166 F 3 '47
Fixtures make welders flexible; illustrations with text. E. Reilly. il Am Mach 90:104-7 D 19 '46; 91:74-5 Ja 2; 84-5 Ja 30 '47
Floating punch holder aligns itself in high-speed riveting. H. Weitz. diags Am Mach 90:135 N 21 '46
Induction hardening of steel; various production fixtures. D. L. Martin and R. A. Gehr. bibliog il Steel 120:78-80+ Ja 27 '47
Jigs and fixtures for automatic fusion welding. E. D. Morris and L. J. Berkeley. il diag Welding J 26:332-7 Ap '47
Tooling requirements for induction heating. O. Weitmann. il Mach 53:167-70 My '47
Universal boring-bar holder designed especially to obtain rigidity. A. M. Thomas. il Mach 53:193-4 F '47
Work supports for machine cutting. J. A. Arnault. il diags Welding J 26:696-7 Ag '47
See also
Arbors and mandrels
Manipulators, Welding

HOLIDAYS
Contract provisions for holidays and week-end work. Management R 36:258-60 My '47
Holiday and vacation clauses. N. C. Rockwood. Inland Ptr 119:49-50 Je '47; Same. Rock Prod 50:99+ Je '47; Same. Chem Ind 61:112+ Jl '47
Holidays with pay in Canada. Int Labour R 54:381-3 N '46
Holidays with pay in Sweden. Int Labour R 55:455-7 My '47
See also
Bank holidays
Vacations

HOLLAND, Sir Thomas Henry, 1868-1947
Sketch. T. Dewhurst. por Inst Pet J 33:460-5 Jl '47

HOLLAND. See Netherlands

HOLLANDER, A., and son, inc.
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:331 Je 21 '47

HOLLEY, Alexander Lyman, 1832-1882
Who was Holley? his part in development of Bessemer steel industry. pors Mech Eng 69:564-6 Jl '47

HOLLOW tile
Air flo heating system uses cavity wall and hollow tile in floor. diag Brick & Clay Rec 110:36 Mr '47

HOLMAN, Eugene, 1895-
Portrait. Fortune 35:142 My '47

HOLMES safety association
Men and companies win heroism and safety awards of Joseph A. Holmes safety association. Coal Age 52:150+ Jl '47

HOLMIUM
Artificial activities produced in europium and holmium by slow neutron bombardment. M. G. Inghram and R. J. Hayden. Phys R 71: 130 Ja 15 '47

HOLOCELLULOSE
Molecular properties of hemicellulose fractions. M. A. Millett and A. J. Stamm. bibliog J Phys & Colloid Chem 51:134-48 Ja '47
Preparation of holocellulose from nonwoody plant material. E. Bennett. bibliog Anal Chem 19:215 Mr '47

HOME builders, National association of. See National association of home builders

HOME demonstration work
Agricultural workers' part in farm electrification. J. Campbell. Edison Elec Inst Bul 15: 133 Ap '47

HOME economics

Study and teaching
Teach electrical living in Pennsylvania schools. Y. L. Ripley. il Elec World 128: 130+ Jl 19 '47
Teaching electrical methods; Manchester's residential college for members of the forces. R. L. Hodgson. il Elec R (Lond) 139:803-4 N 15 '46

HOME furnishing stores. See Household products

HOME loan banks
Federal home loan bank paying maturing notes. H. Lee. Comm & Fin Chr 165:1169 F 27 '47
Home loan system prospects. Banking 39: 124 D '46

HOME office life underwriters association
Annual meeting, New York, May 26-28. East Underw 48:3, 14 My 30 '47; Nat Underw (Life ed) 51:1+ My 30 '47
Meeting, Cincinnati. East Underw 47:3+ N 22 '46; Nat Underw (Life ed) 50:1+ N 22 '46

HOME office underwriters, Institute of. See Institute of home office underwriters

HOME owners loan corporation
Billion dollar smile; HOLC loses no money for taxpayers. Arch Forum 87:14-15 Jl '47
HOLC to be liquidated without government loss. Comm & Fin Chr 165:2780 My 22 '47

HOME ownership
Bank program for home planners; Northwestern national bank of Minneapolis. il Banking 40:58+ S '47
Home ownership is good business; abstract. M. L. Colean. Banking 40:98 Ag '47
Home purchasing income groups show upward shift since 1940; FHA study. Barron's 27:12 Ag 18 '47

HOME ownership—*Continued*
Housing and fuel expenditures of city families. D. I. South. Mo Labor R 64:868-77 My '47
How to buy a house; abstract. L. D. Meredith. East Underw 48:14 My 2 '47
To buy now or not to buy; booklet of Home builders council offers advice to veterans. O. J. Hartwig. Am Bld 69:123 Ap '47
Who are the postwar builders? status of builders in their communities. Am Bld 69: 126 Ag '47
Would-be home owners are holding off; Northwestern life insurance co. study reports building and wage costs almost double prewar level. Comm & Fin Chr 165:2480 My 8 '47

Finance

A.B.A. mortgage merchandising service; home planning literature made available to banks. Banking 39:48 D '46
Dealer credit; National homes acceptance corp. to finance both dealers and customers. Arch Forum 87:11-12 Ag '47
Opportunity for the housing industry. G. T. O. Hollyday. Comm & Fin Chr 165:185+ Ja 9 '47
Seven new homes in Muncy, Pa. il Banking 39:60 Ja '47

HOME workshops. See Workshops, Home

HOMES, Institutional
Liability of charitable corporation to resident of home contracting typhoid fever. J. L. Roesch. Spectator (Property ed) 13:10-11+ Ag 7 '47

HOMES for the aged. See Old age homes

HOMESTAKE mining company
More miners key to boost in Homestake Mining profit. Barron's 27:29 Mr 17 '47

HOMESTEADS
Homesteads for veterans in Yakima valley. Mo Labor R 64:609 Ap '47

HOMOCHOLIC acid
Preparation of C-27 steroids from bile acids; coprostanetetrol-3(α),7(α),12(α),25. W. H. Pearlman. bibliog Am Chem Soc J 69:1475-6 Je '47

HOMOCYSTINE
Improved synthesis of the selenium analogs of methionine and homocystine. H. J. Klosterman and E. P. Painter. Am Chem Soc J 69:2009-10 Ag '47
Synthesis of selenium analogs of *dl*-methionine and *dl*-homocystine. E. P. Painter. bibliog Am Chem Soc J 69:232-4 F '47

HOMOGENIZATION
See also
Homogenizers

HOMOGENIZERS
Les émulseurs. F. Appell. bibliog diags Chimie & Ind 57:341-6 Ap '47

HOMOOXYBIOTIN
Furan and tetrahydrofuran derivatives; the synthesis of the sulfonic acid analogs of oxybiotin and homooxybiotin. K. Hofmann, A. Bridgwater and A. E. Axelrod. Am Chem Soc J 69:1550-1 Je '47

HONDURAS

Economic conditions

News by countries. For Comm W 26:20 F 1; 27:15 Je 7 '47

HONEY
Honey treatment; patent. Food Ind 19:1308 S '47
Nutritive value of preserves and honey. V. L. S. Charles. bibliog Chem & Ind p271-2 My 17 '47
Production of honey, Canada. For Comm W 28:24 S 27 '47

HONG KONG, China
Finances of Hong Kong. Economist 151:754-5 N 9 '46
Hong Kong; Britain's commercial crown jewel; a report and a portfolio of pictures. Fortune 36:116-25 O '47

Commerce

Hongkong and Japanese trade. Economist 151:1004 D 21 '46

Commercial policy

Exchange and trade controls applied to imports from the United States, Canada, and the Philippines. For Comm W 28:16-17 Jl 5 '47
Import duties; present rates on wines, liquor, tobacco products, hydrocarbon oils, proprietary medicines and toilet preparations. For Comm W 26:23-4 F 22 '47

Economic conditions

News by countries. For Comm W 26:13-15 Ja 11; 27:18-19 My 3 '47
Scarce currencies and scarce houses in Hongkong. Economist 153:287 Ag 16 '47

HONGKONG and Shanghai banking corporation
Statement by the chairman at ordinary general meeting. A. Morse. Economist 152:604 Ap 19 '47

HONING
Air size-control; gages workpiece during operation. J. E. Kline. il diag Machine Design 19:88-91 O '47
Delapena adjustable honing mandrels. il Automobile Eng 37:262 Jl '47
Powered toolbit honer produces sharper tools. H. Weitz. diags Am Mach 90:141 D 5 '46
Reducing processing costs by functional hone abrading. K. W. Connor and L. S. Martz. il Iron Age 159:54-8 Ja 16 '47

HONING machines
Automotive cyclinder bore size automatically controlled by Micromatic hone corp.'s honing tool and head. il diag Steel 120:96+ My 19 '47; Am Mach 91:162 My 22 '47; Iron Age 159:66 My 15 '47; Automotive & Aviation Ind 96:56 Je 1 '47; Bsns W p86 My 17 '47; Mach 53:190-1 Jl '47
Barnesdril no. 224 vertical hydraulic honing machine; magnetic separator removes swarf. il Product Eng 18:158-9 S '47
Delapena grinding and honing equipment. il Automobile Eng 37:107-8 Mr '47
Electronic automatic-sizing control on Micromatic microhoning machines. diags Am Mach 91:164 O 9 '47
Fulmer honing machines. il Ry Mech Eng 121: 208 Ap '47
Honing and lapping by modern machine tools. G. Hubbard. il Steel 121:86-8+ Ag 18 '47
Micromatic hone. il diags Fortune 35:84-9+ F '47
Micromatic hone; electronically controlled sizing mechanism. il diags Product Eng 18:116-17 S '47
Micromatic precision honing equipment. il Mach 54:154-6 S '47

HONOLULU

Hotels, restaurants, etc.

Royal Hawaiian hotel enlarged, refurbished. il plans diags Arch Forum 87:81-7 O '47

Sanitary affairs

New refuse incinerators for Honolulu. il Water & Sewage Works 94:121 Ap '47

HOOK, Charles R. 1880-
Metals medal winner. por Bsns W p58 O 11 '47

HOOKER electrochemical company
Growth requires financing. Barron's 27:34 Jl 21 '47
Stock subscribed. Comm & Fin Chr 166:1255 S 29 '47

HOOKS
Stresses in hooks, and their determination by relaxation methods. L. Fox and R. V. Southwell. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 13): 1-6; Discussion. il 6-19 '46

HOOPER-HOLMES bureau, inc.
Half century of commercial reporting. J. J. King. Nat Underw 50th anniv no:126 1947

HOOVER medal
Dr Vannevar Bush wins Hoover medal. Civil Eng 16:555 D '46
1946 Hoover medal; presentation, by E. L. Moreland; response by V. Bush. Elec Eng 66:258-60 Mr '47

HOPKINS, Sir Frederick Gowland, 1861-1947
Sketch. por Chem Age (Lond) 56:689 My 24 '47

HOPKINS transportation library. See Stanford university—Hopkins transportation library

HOPKINSON, Edward, 1885-
Investment bankers association president. por(cover) Bsns W p8 D 7 '46

HOPPERS
Clay levels in hoppers shown instantly and controlled by electrical instrument. A. Krieg. diag Pet Processing 2:580 Ag '47
Conveyor hoppers supply assembly hardware; production of washing machines and ironers. K. F. Brooks. il Am Mach 91:140 F 13 '47
Standardized hoppers. P. W. Rhame. diags Factory Management 104:113-15 O '46
Valley angle chart for bins and hoppers. W. E. Casler. Power Pl Eng 51:100 Jl '47

HOPS
Canada's hops and malt situation. For Comm W 28:20 S 20 '47
Czechoslovak hops industry. For Comm W 25:22 N 23 '46
Hops production, consumption, and trade, Belgium. For Comm W 25:30 N 16 '46

HORMONES
Application of the method of molecular rotation differences to steroids; steroidal hormones and bile acids. D. H. R. Barton. bibliog(101 ref) Chem Soc J p 1116-23 D '46
Changes in urinary steroid excretion and correlated metabolic effects during prolonged administration of adrenocorticotropic hormone in man. G. W. Thorn and others. Science 105:528 My 16 '47
cis and *trans dl*-Equilenane. A. L. Wilds, L. W. Beck and T. L. Johnson. bibliog Am Chem Soc J 68:2161-3 N '46
Identification and chromatography of androgens as their 2,4-dinitrophenylhydrazones. C. D. Johnston. Science 106:91 Jl 25 '47
Physicochemical characterization of pituitary growth hormone. Choh Hao Li. bibliog J Phys & Colloid Chem 51:218-28 Ja '47
Radioactive testosterone. R. B. Turner. Science 106:248 S 12 '47
Steroidal sapogenins. R. E. Marker and others. bibliog Am Chem Soc J 69:2167-230 S '47
Synthesis of condensed ring compounds; total synthesis of a 10a-methyldodecahydrochrysene-1,4-dione (a 10-methyl-D-homosteradiene-15,17a-dione). A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69: 1165-70 My '47
Synthetic analogs of the adrenal cortical hormones. G. P. Hager and H. A. Shonle. bibliog Am Chem Soc J 68:2167-8 N '46
Tumors in intrasplenic ovarian transplants in castrated mice. Min Hsin Li and W. U. Gardner. bibliog Science 105:13-15 Ja 3 '47
Use of hormones in animal husbandry; abstract and discussion. F. P. Malpress. Chem & Ind p128-9 Mr 15 '47
See also
Estrogenic activity
Estrone

HORMONES, Plant
Plant hormones with special reference to the selective weedkillers; abstract. E. Holmes. Chem & Ind p323-4 Je 7 '47
Results of determinations of the growth hormones of several species of plants. D. T. MacDougal. Science 106:316 O 3 '47

HORROCKSES, Crewdson and company
Annual general meeting, Lancashire. Economist 151:974 D 14 '46

HORSE breeding
Yearlings; horse racing's boom has lifted breeding of thoroughbreds to a speculative business. J. McDonald. il Fortune 35:106-13+ Ap '47

HORSE cars. See Street cars

HORSE insurance. See Insurance, Horse

HORSE meat
Production and consumption of horse meat continues up. E. G. Henning. Dom Comm 35:53-5 Jl '47

HORSE racing
Gamblers' gamblers. Fortune 36:122+ S '47
Yearlings; horse racing's boom has lifted breeding of thoroughbreds to a speculative business. J. McDonald. il Fortune 35:106-13+ Ap '47

HORSEPLAY. See Practical jokes

HORSEPOWER
Theoretical horsepower; table. Water & Sewage Works 94:R108 Jl '47

HORSES
Detection of drugs in horse saliva; comparison of sensitivities of a chemical and a biological method. C. E. Morgan and A. Gellhorn. bibliog Anal Chem 19:806-8 O '47
Horseman's encyclopedia. M. C. Self. 519p $5 A. S. Barnes and co, 67 W. 44th st, New York 18 '46
Yearlings; horse racing's boom has lifted breeding of thoroughbreds to a speculative business. J. McDonald. il Fortune 35:106-13+ Ap '47

Transportation
Flying horses; airplane transport of race and show horses. G. Herrick. il Air Transport 5:58-9 O '47

HORTICULTURE
See also
Plants—Soilless culture

HOSE
Automatic nozzle for garden hose. il diag Product Eng 17:97 D '46
Tube cleaning hose. Power Pl Eng 51:93-4 S '47

Advertising
Direct mail reestablishes neglected industrial contacts; American brass co. flexible metal hose and tubing. C. E. Woodward. Ptr Ink 219:46-7 Ap 11 '47

Testing
Comparison of the carrying capacities of rough and smooth bore oil suction and discharge hose under simulative service conditions; fueling of ships. T. A. Werkenthin and others. bibliog il Rubber Age 61:685-96 S '47

HOSE couplings
How to attach correctly and add to service life. il Roads & Sts 90:105-7 My '47

HOSIERY
Postwar trends in hosiery. N. Gowdy. il Rayon 28:200-2 Ap '47
See also
Dyes and dyeing—Hosiery

Manufacture
Factors in the production of nylon hose. A. R. Munden. Textile Inst J 38:P156-60 Ap '47
Hosiery manufacturer finds many advantages in air conditioning; abstract. R. E. Tilles. Heating-Piping 19:110 Ag '47
Knitting flow chart. Textile World 97:89-96 Ap '47
Nylon leads in tests of hosiery reinforcement. H. Wignall. Textile World 96:137 D '46
Return to silk means knitting changes. K. A. Hahn. il Textile World 97:131 Ja '47
Soft water for silk hosiery mill with zeolite water conditioning. R. L. Nessler. il diag Rayon 28:284-6 My '47
Suggestions for knitting ladies' nylon hosiery. Rayon 28:487-8, 552-3 S-O '47
See also
Hosiery machines

Rating
Test of twelve brands of men's socks. il diag Consumers Res Bul 19:9-11 Ja '47

HOSIERY boxes
Stocking packages for a buyers' market, il Mod Packaging 20:113 D '46

HOSIERY dyeing. See Dyes and dyeing—Hosiery

HOSIERY machines
American textile machine corp. seamless-hosiery machine has wide pattern range. il Textile World 97:153 F '47
Full-fashioned machines travel by special delivery; illustrations with text. C. M. Bowden. Textile World 97:114-17 Jl '47
New 400-needle electronic ladies' nylon hosiery machine. il Rayon 28:203 Ap '47
Prewar and postwar hosiery machines. G. A. Urlaub. Rayon 28:204-5 Ap '47

HOSIERY machines—*Continued*

Control

Electronic control of mechanisms for automatic circular knitter. H. W. Anderson. il diags Machine Design 19:101-4 Ap '47

Tension control in knitting seamless hose. J. Procter. il diags Textile Inst J 38:P406-10 Ag '47

HOSIERY mills

New Dublin hosiery mill features sealed construction. W. A. Newell. il plan Textile World 97:112-14 O '47

Textile industry expansion program estimated at $500,000,000 in five years. J. A. Daly. il Manuf Rec 115:45+ D '46

Air conditioning

Modern hosiery mill controls its air; Vanette hosiery mills. H. B. Le Feaux. il Textile World 97:129-31 S '47

Electric equipment

Photo-cell counting control; measurement of fabric passing over rollers in calendar machine. il Engineer 184:110 Ag 1 '47

Employees

Wage structure of the hosiery industry, January 1946. H. W. Callaway. Mo Labor R 63:954-61 D '46

Equipment

Handling system need not be expensive. E. D. White. il Textile World 97:120-1 O '47

Knitting mill devises brine-handling system. il diag Textile World 97:156 O '47

HOSIERY trade

Candid comments on the hosiery industry at home and in America. R. Taylor. Textile Inst J 38:P191-5; Discussion. 195-201 Je '47

Cheaper nylons? il Bsns W p74-5 Ap 12 '47

Getting in step; Jamison co. finds selective distribution, national brands, multiple-unit selling, boost its sales. Bsns W p58-60 Je 28 '47

1947 outlook for nylon. W. A. Beh. Textile Col 69:30+ Mr '47

Private brands go national; Chester H. Roth co. Bsns W p59-61 Ja 18 '47

Real Silk shift; door-to door merchant, company opens local shops. il Bsns W p54+ D 7 '46

Spurned worm; showdown between silk and nylon stockings. Bsns W p21 F 22 '47

Tests among foot-weary workers open markets for Cushion Foot Sox; free trial plans. G. P. Hall. Sales Management 58:70+ Ja 1 '47

Great Britain

Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46

HOSPITAL libraries

General library administration in a Veterans administration tuberculosis hospital. D. R. Shapleigh. Special Lib 38:181-7 Jl-Ag '47

Library service in a Veterans administration general hospital. S. M. Connell. Special Lib 38:176-8 Jl-Ag '47

Library service in a Veterans administration neuropsychiatric hospital. K. Mushake. Special Lib 38:179-81 Jl-Ag '47

HOSPITAL libraries, Medical. See Medical libraries

HOSPITALIZATION (group plan). See Medical service—Group and prepayment plans

HOSPITALIZATION insurance. See Insurance, Hospitalization

HOSPITALS

Hospital forecast; government-sponsored boom ahead. il plans Arch Forum 85:8-9 N '46

Hospitals; building types study; with time-saver standards. il plans diags Arch Rec 101:104-36, 141-2, 147+ Je '47

See also

Music in hospitals
New York (city)—Hospitals
Tuberculosis—Hospitals and sanatoriums

Air conditioning

Hospital air conditioning. W. S. Bodinus. bibliog Refrig Eng 53:1-4 sec2 Mr '47

Designs and plans

Bartolomé Churruca hospital, Buenos Aires. il plan Arch Forum 86:107 F '47

100-bed hospital on 150-bed chassis; Beth Israel hospital, Passaic, N.J. I. Rosenfield. il plans Arch Rec 101:134-6 Je '47

Royal Melbourne hospital. il Arch Forum 85: 109-13 D '46

Electric equipment

Electrical equipment of a modern hospital; abstract. J. J. Tomlinson. Electrician 138: 638 Mr 14 '47

Employees

Tuberculosis in general hospitals from insurance company's viewpoint. B. E. Kuechle. East Underw 48:30 Jl 25 '47

Equipment

Commercial jobs pay off, says Cleveland contractor in telling of one installation; plumbing in Community hospital, Berea, Ohio. il Dom Eng 169:116-17+ Mr '47

Plastics improve medical accessories. il Mod Plastics 24:99-101 N '46

Federal aid

Federal-aid hospital plan moves toward action stage. Eng N 138:253 F 20 '47

Food service

Food movement by tractors at Swiss hospital. F. H. Slade. il plan Mech Handling 34:207-13 Ap '47

Hospital as a market for paper products; paper dishes. R. Clevenger. il Pulp & Pa of Can 48:62-4 Je '47

Heating and ventilation

High pressure hot water serves hospital project. F. H. Slade. il plan diag Heating-Piping 19:87-90 O '47

Hospital ventilation. G. H. Priestley. il Elec R (Lond) 140:163-4 Ja 24 '47

Panel radiant heating in hospitals. G. D. Lain. Am Concrete Inst J 18:1145-7 Je '47

Law

Hospital survey and construction act. V. M. Hoge. Pub Health Rep 62:49-54 Ja 10 '47

Legislation on hospital surveys, construction, and licensing enacted by state legislatures in 1945 and 1946 (as of November 15, 1946). Pub Health Rep 62:54-66 Ja 10 '47

Operating rooms

Hospital operating room details; with time-saver standards. plans diags Arch Rec 101: 147+ Je '47

Power

Hospital economics; Diesel power for Lenox Hill hospital. il diags Diesel Power 25:46-9 Ap '47

Psychiatric wards

Mental facilities for the general hospital; plan suggestions of the U.S. Public health service. plans Arch Rec 101:130-3 Je '47

X ray rooms

X-ray facilities for the general hospital. F. J. Hodges. Arch Rec 101:141-2 Je '47

Australia

Royal Melbourne hospital. il plans Arch Forum 85:109-13 D '46

Canada

Annual report of hospitals in Canada for the year, 1945. 111p pa 25c Canada. Dominion bur. of statistics, Ottawa '47

France

Hospital for St Lo; illustrations with text. Arch Forum 86:16 Ap '47

Great Britain

Hospital regions. map Economist 151:866 N 30 '46

Morocco

Hospital equipment to be purchased, Tangier; modern hospital, clinic and dispensary being erected. For Comm W 28:25 S 20 '47

HOSPITALS, Animal. See Hospitals, Veterinary

HOSPITALS, College
Wayne university medical center, Detroit. il plans Arch Rec 101:124-9 Je '47

HOSPITALS, Industrial
Forging company's plant hospital provides modern medical service; Heppenstall co. il Steel 120:71 Ap 14 '47
Hospital layout saves time for patients and doctor; Cadillac motor car division, General motors corporation. flow chart il plan Factory Management 105:123-5 Je '47
Modernizing the medical facility in industry. J. S. Felton. bibliog(46 titles) plans diags Ind Med 16:291-8 Je '47
Powell River hospital; its organization, equipment and service. P. Glanzer. il Paper Ind 29:538-41 Jl '47
See also
Dispensaries, Industrial

HOSPITALS, Military
Design criteria for veterans' hospitals. il Eng N 137:662-3 N 14 '46
Electrical cooking in veterans' hospitals checked by formula. Elec World News ed 127:20 Ap 19 '47
Fort Hamilton veterans' hospital, Brooklyn, New York. il plans Arch Rec 101:114-23 Je '47
Private firms predominate in V. A. hospital program. il Arch Rec 102:100-5 O '47
Wilkes-Barre VA hospital planned on new criteria. il Eng N 137:687 N 21 '46

HOSPITALS, Psychiatric
Library service in a Veterans administration neuropsychiatric hospital. K. Mushake. Special Lib 38:179-91 Jl-Ag '47
Planning the mental hospital; Northville state hospital, Michigan. O. A. Luckenbach. plans diags Arch Rec 101:106-13 Je '47
See also
Hospitals—Psychiatric wards

HOSPITALS, State
Planning the mental hospital; Northville state hospital, Michigan. O. A. Luckenbach. plans diags Arch Rec 101:106-13 Je '47
Report on a typhoid fever epidemic at Manteno state hospital in 1939; abstract. Am Water Works Assn J 38:1315-16 N '46

HOSPITALS, University. See Hospitals, College

HOSPITALS, Veterinary
For an animal hospital, year-round climate control; Ardmore animal hospital. il diag Sheet Metal Worker 38:55-6+ Jl '47

HOT air engines. See Caloric engines

HOT water heaters
Hot water heating with unit heaters. H. E. Smith. Heat & Ven 44:87-8 S '47
Unit heater and fan solve a launderette comfort problem. il diag Heating-Piping 19:71 Jl '47
Unit heaters have advantages in many heating applications. P. J. Menden. il Heating-Piping 19:87-8 Mr '47
Unit heaters in a hot water system. diags Dom Eng 170:128+ S '47

HOT water heating
Air entrainment by forced hot water flow in pipes. R. M. Stern and R. M. Towne. Heat & Ven 44:93-4 Ag '47
Convector plus radiant; Georgia Tech's new eight-story student apartment building. il Dom Eng 170:110+ O '47
Garage heating job; hot water heat for office. plans Heating-Piping 19:97-8 Ja '47; Discussion. 19:98-100 Mr; 100 Ap '47
Heating installation problem. diags Dom Eng 169:134 My '47
Heating system installation. diags Dom Eng 170:140+ Jl '47
High pressure hot water heating. F. R. L. White. Heating-Piping 19:78-9 F '47
High pressure hot water serves hospital project. F. H. Slade. il plan diag Heating-Piping 19:87-90 O '47
How install piping and pumps on water jobs? Heating-Piping 18:89-90 D '46
How to heat garage apartments. S. R. Lewis. Heating-Piping 19:89 Je '47
One pipe hot water heating. J. L. Shank. il plans diag Am Bld 69:92-7 S '47
Use of baseboard radiation for steam and hot water home heating. C. F. Hill. Nat Pet N 39:39+ My 14 '47
See also
Hot water heaters
Walks, Concrete—Heating

Panel system
Air temperature gradients in a panel heated room. J. M. Ayres and B. W. Levy. il Heating-Piping 19:113-17 O '47
And now, the panel-heated apartment. il plan diag Arch Rec 102:117-18 S '47
Building a future with residential jobs; Debelak brothers. il plans diags Dom Eng 169:100-5+ Ap '47
Construction notes on embedding radiant heating pipe in concrete. il diag Concrete 54:6-9 D '46
Designing a radiant-panel heating system. R. G. Vanderweil. plans diags Dom Eng 168:109-16 N; 117-22 D '46
Experimental studies on panel heating tube spacing. B. F. Raber and F. W. Hutchinson. il Heating-Piping 19:111-14 Ag '47
Forty miles of piping used in new plant's radiant heating system; A. O. Smith corp. il Steel 119:112-13+ S 23 '46; Abstract. Am Gas J 166:35-6 F '47
High temperature water for radiant heating system. diag Heating-Piping 19:73 Je '47
Improved welding techniques increase use of radiant heating. il Civil Eng 17:396 Jl '47
Length of pipe for radiant heating coils; reference data. Heat & Ven 44:96a-96b S '47
New engineering design expected to reduce industrial radiant heating costs. diag Heat & Ven 44:104+ My '47
No Kentucky blue grass grows under this dealer's feet; E. Jungbert installs radiant heat for housing project. il Dom Eng 169: 98-9+ Ap '47
Panel heat with copper tubing; experiment in practice. D. L. Mills and L. J. Latart. il Heat & Ven 44:65-9 O; 95-8 N '47 (to be cont)
Panel radiant heating in hospitals. G. D. Lain. Am Concrete Inst J 18:1145-7 Je '47
Practical pointers on radiant heating design. R. G. Vanderweil. il diags Heating-Piping 19:69-71 Jl; 97-9 S '47; Discussion. 19:107-9 N '47
Radiant heat for hangars; Packard's Willow Run. il Aero Digest 53:64+ D '46
Radiant heated chickens; panel heating in chicken house; with cost data. il Dom Eng 168:164-5 D '46; Same. Heating-Piping 18:91-2 D '46
Radiant heating. C. H. Vivian. il diags Comp Air Mag 52:90-4 Ap '47
Radiant heating and its application to a passenger station. P. S. Park. il plan Ry Age 123:392-4 S 6 '47
Radiant heating by reinforced concrete; question examined whether embedment of warm water pipes in structural concrete would endanger integrity of concrete. J. R. Nichols. Am Concrete Inst J 17:513-16 Ap '46; Discussion. diags 18:516[1]-516[11] pt 2 D '46
Radiant heating field as seen by contractor-dealer. C. G. Inscho. il Dom Eng 169:134-5 Ja '47
Radiant heating for schools simplified by use of copper tubes. il Eng N 138:1020 Je 26 '47
Radiant heating job as described by a manufacturer. il Dom Eng 168:140-2 Ja '47
Radiant heating; student-apartment building on campus of Georgia school of technology. Mech Eng 69:851 O '47
Radiant heating system; hangars of Packard and General Electric. il Welding J 26:68+ Ja '47; Same cond. diags Dom Eng 169: 144-5+ Ap '47
Radiant heating; systems now in use throughout the country. il Mech Eng 69: 668 Ag '47
Radiant heating with hot water floor and ceiling panels. J. L. Shank. il plans diags Am Bld 69:128-33 O '47
Radiant panel heating system solves textile plant problems; Verney mills. G. L. Wiggs. il diag Heating-Piping 19:75-8 Mr '47

HOT water heating—Panel system—*Continued*
Remodels bank heating system without interrupting service. il Heating-Piping 19: 81 F '47
Response and lag in the control of panel heating systems. F. W. Hutchinson. il diags Heating-Piping 19:111-17 F '47
Showroom is radiant heated; Inland heating company. il plan diag Dom Eng 169:116-17 F '47
Split system heats and conditions product development, testing lab; Benjamin electric mfg. co. E. R. Gritschke and J. W. Scharres. il Heating-Piping 18:67-9 N '46
Survey reveals rapid increase in radiant heating installations. Iron Age 159:144-5 Je 26 '47
12 boilers fire floor coil job; Medical arts building, Dayton, Ohio. il Dom Eng 170: 156-7+ S '47
Unique system serves heating distributors; Bryant-Berg co. il Heating-Piping 19:78-9 Jl '47
Wickes, inc. builds a house with packaged utilities, solar fenestration, prefab radiant heat. il plans diags Arch Forum 86:98-100 Ja '47
Will radiant heating displace convection heating? A. G. Dixon. il Heat & Ven 43: 59-64 D '46; Discussion. 44:130+ F '47; Discussion (Radiant heating plus convection heating). T. N. Adlam. 43:99-101; Reply. 101-2 Ap '47
Zoned panel heating, fully automatic ventilation; Laurel Creek school, Calif. il Arch Rec 101:95-6 Ja '47

Tables, calculations, etc.

Greenhouse heating data. Heat & Ven 44: 76a-76b Mr '47
Hot water pipe sizing, copper tubing; chart; reference data. Heat & Ven 44:94a-94b Je '47
Hot water pipe sizing, iron or steel pipe; chart. Heat & Ven 44:80a-80b My '47

HOT water heating, Industrial
High temperature water is efficient heat carrier. V. R. Freeman. il Textile World 97:129+ Ja '47
Hot water heating of dye liquor. T. R. Smith. diag Am Dyestuff Rep 35:512 N 4 '46
Pipe coils embedded in concrete mat heat tank. H. J. Lang. il Heating-Piping 19:94 Ag '47
Supertherm heating system for paper mill process. S. Senko. il diag Paper Tr J 123: 175-8 O 10 '46; Same cond. Paper Ind 29: 588-90 Jl '47

HOT water supply
Combustion chamber surrounded by water in home heating unit. il Product Eng 18: 102 Ap '47
Engineering principles applied to the design of domestic water-heating installations of the solid-fuel/electric type. R. Grierson and F. Jackson. il diags Inst E E J 93 pt 2:463-89 O '46; Abstract. Elec R (Lond) 138:412 Mr 15 '46; Discussion. Inst E E J 93 pt 2:489-95 O '46; Elec R (Lond) 138: 449-50 Mr 22 '46; Electrician 136:742-4 Mr 22 '46
High pressure hot water serves hospital project. F. H. Slade. il plan diag Heating-Piping 19:87-90 O '47
Hot water distribution system for Reykjavik, Iceland; underground hot water; abstract. H. B. White. Am Water Works Assn J 39:395-6 Ap '47
Hot water from surrounding air by means of a heat pump. il Dom Eng 170:102+ Ag '47
House heating by the heat pump method. S. W. Andrews. Edison Elec Inst Bul 14: 423 D '46
Installation know-how is aid to commercial water heating equipment sales. il diags Dom Eng 169:110-11+ Mr '47
Large volume water heating; how to select and install correct types of systems for specific purposes. M. B. Mackay. Am Gas J 164:37-41+ Ja; 21-6 F; 38-9+ Mr; 20-1, 52 Ap; 39-43+ My; 40-2 Je; 165:39-41+ Jl; 31-3 Ag; 27-9 S; 31-3 D '46; 166:29-30+ Ja; 32-4+ F; 167:22-4 S; 43-6 N '47 (to be cont)
Method of installing an automatic electric hot water range boiler and a hot water range boiler of 40 gals. diag Dom Eng 168: 126 N; 123-4 D '46; 169:116 Ja; 123 F '47
Now, sell hot water to this big commercial market. il diags Dom Eng 169:120-1+ F '47
Performance of an indirect storage type of hot-water heater. A. P. Kratz and W. S. Harris. diags Ill U Eng Exp Sta Bul 366:1-39 '47 (pa 50c)
Questions and answers on commercial water heating. Dom Eng 169:109 Ap '47
Sizing gas water heaters to meet automatic washer requirements. L. F. Vixler. Am Gas J 167:11-14 Jl '47
Utilizing the flash of condensate returns for the heating of water. T. W. Reynolds. diags Heat & Ven 44:75-6 Jl '47
Water heating council; Pacific coast gas association and other councils discuss policies. Am Gas J 166:25-7 My '47
You're going to be in hot water; need for adequate supply. W. J. Schmidt. Gas Age 99:25-30+ Mr 20 '47; Same cond. Am Gas Assn Mo 29:288-91 Je '47

See also
Boilers, Range
Electric water heaters
Gas water heaters

HOT water tanks
Hot water tank hookup. diags Dom Eng 169: 122-3+ Mr '47
Tests for hot-water resistance of tank enamels. D. G. Moore and W. N. Harrison. il diags Am Cer Soc J 30:220-6 Jl 1 '47

Explosions

Bomb in your basement; hot water system can build up tremendous pressure. E. R. Granniss. il Nat Safety N 56:32-3+ Ag '47
Hot water tank wrecks restaurant. il Locomotive 46:113+ O '46
One killed, 19 injured, as tank explosion wrecks school. il Locomotive 46:149-51 Ja '47

Manufacture

Automatic metallic arc welding hot water tanks; Ferro stamping & manufacturing co. il diags Steel 120:94+ Je 9 '47

HOT weather
Fair and warmer; drinking water and salt requirements for hot weather work. Nat Safety N 55:26+ My '47
Heat sickness and that tired feeling. W. W. Allison. Safety Eng 94:56 Ag '47
Hot weather safety measures. Safety Eng 93:37 Je '47

HOTBEDS, Electric
Electric soil warming; abstract. W. Cover. Elec R (Lond) 140:263 F 7 '47
Soil heating; results of a horticultural questionnaire. Elec R (Lond) 140:223 Ja 31 '47

HOTELS
Below-cost hotels produce rising net for Sheraton. Barron's 27:35 Ag 25 '47
Hotel boom; can it last? Bsns W p48-50+ Jl 5 '47
Hotel business. Comm & Fin Chr 165:1924+ Ap 10 '47
Hotel design; few striking projects. G. Nelson. il Fortune 36:106-9+ S '47
Hoteldom's Hilton goes global. Bsns W p22+ S 6 '47
Steel erection for the Terrace Plaza hotel. il diag Eng N 139:336-9 S 4 '47
Ten-story Terrace Plaza hotel set atop stores seven stories high. il plans diags Eng N 139:196-9 Ag 7 '47
Terrace Plaza; penthouse hotel for Cincinnati is built on two big stores. il plans diags Arch Forum 85:100-8 D '46
That hotel boom. il Fortune 36:102-5+ S '47
What's wrong with our hotels? H. Little. Am Bsns 17:46-8 Ja '47

See also
Bars and bar rooms
New York (city)—
Hotels
Restaurants

HOTELS—*Continued*

Air conditioning

Air conditioning a vital part of architectural design; requirements of Cincinnati's Terrace Plaza Hotel building. H. C. Hoffmann. il plan diags Heating-Piping 19:71-7 O '47
Hotel air conditioning. Dom Eng 168:138-40+ N; 142 D '46; 169:138+ Ja; 152-3 My; 170: 158 S '47
Survey indicates much hotel air conditioning. Heating-Piping 19:116 S '47

Designs and plans

Hotel Bel-Air near Los Angeles. il plans Arch Forum 86:77-81 Je '47
Royal Hawaiian hotel enlarged, refurbished. il plans diags Arch Forum 87:81-7 O '47

Electric equipment

Electric cooking cuts hotel operating costs. Elec World 128:147+ O 25 '47

Employees

Association highlights; American hotel association and National restaurant association sponsor training programs in universities and vocational schools. T. K. Pasma. il Dom Comm 35:80-5 Jl '47
Employment outlook in hotel occupations. il U S Bur Labor Statistics Bul 905:1-12; pa 10c Supt. of doc. '47
Hotel-union group deal under fire in Pennsylvania; contract between Pittsburgh hotels and Local 237. Nat Underw 51:30 Mr 13 '47; Nat Underw (Life ed) 51:24 Mr 14 '47; East Underw 48:16 Mr 14 '47
Hotel union may take Malone into court; decision is extended. Nat Underw 51:22 Mr 27 '47; Same. Nat Underw (Life ed) 51:18 Mr 28 '47
Hotel wages in large cities, June 1947. Mo Labor R 65:450 O '47
Malone bars Pittsburgh hotel-union proposal; holds agreement illegal. East Underw 48: 35+ Mr 28 '47; Same cond. Nat Underw 51:29 Mr 20 '47; Same cond. Nat Underw (Life ed) 51:18-19 Mr 21 '47
Pittsburgh hotels revise their group setup. Nat Underw 51:35 Ap 3 '47; Same. Nat Underw (Life ed) 51:13 Ap 4 '47

Equipment

How to design Imhoff tanks and trickling filters for schools, camps and hotels. diags Pub Works 78:33-4 S '47
Huge market for appliances in nation-wide rehabilitation of hotels. Am Gas J 167:38 S '47

Finance

Comparative operating statements prove hotel to be better real estate investment than office building. Arch Forum 85:102 D '46
Full occupancy is required for profitable future hotel operations. F. L. Andrews. Comm & Fin Chr 164:2758+ N 28 '46
Hilton Hotels has sales trimmed for any storm. Barron's 27:35 Jl 21 '47
Hotel business. C. D. Coffman. Comm & Fin Chr 165:2605 My 15 '47
1946 hotel earnings. Comm & Fin Chr 166:721 Ag 21 '47

Fires and fire protection

Arkansas men have done something about preventing hotel fires. H. A. Ritgerod. il Nat Underw 50:3+ D 26 '46
Atlanta hotel fire. Safety Eng 93:38 Ja '47
Atlanta tragedy stuns nation, demand end to epidemic. Nat Underw 50:1+ D 12 '46
Chicago revises hotel fire code provisions. Eng N 138:92 Ja 16 '47
Clarifies hotel fireproof term. W. E. Mallalieu. Weekly Underw 155:1486 D 21 '46; Same. Nat Underw 50:1 D 26 '46
Damage suits follow Winecoff hotel fire. East Underw 47:28 D 20 '46
Demonstrate thermostat hotel fire detectors. Nat Underw 51:10 Mr 6 '47
Enclosure of vertical openings Winecoff lesson; abstracts. A. C. Hutson. il Nat Underw 50:1+ D 19 '46; East Underw 47: 28 D 20 '46
Experts blame all parties, including public, for hotel fire disasters. J. K. McElroy. Eng N 138:171 Ja 30 '47
Fire preventionists seek hotel safety; abstracts. P. Bugbee and others. Weekly Underw 156:197+ Ja 18 '47; East Underw 48:1+ Ja 17 '47; Nat Underw 51:3 Ja 16 '47
Hotel alarm warns guests of fires; uses room radios. Nat Underw 50:6 N 21 '46
Hotel fire safety. il plans Arch Rec 101:105-9 F '47
Hotels don't deserve bad reputation; smoker blamed for blazes. J. J. McCarthy. Nat Underw 51:11 Ap 3 '47
La Salle hotel loss investigation demands fire prevention measures. Spectator (Property ed) 12:20+ N 14 '46
National Board, S.E.U.A. issue Winecoff report. Nat Underw 51:8 Ja 9 '47
NFPA drives for hotel safety. R. S. Moulton. Weekly Underw 156:36-7 Ja 4 '47
Officials take drastic action as Winecoff disaster rouses nation. Spectator (Property ed) 12:16-17 D 26 '46; East Underw 47:66 D 13 '46
Preventing the spread of fire; question of proper venting. M. Webster. diags Arch Rec 101:110 F '47
Support for fire chiefs is requested; Chamber of commerce asks that causes of hotel fires be eliminated. Weekly Underw 155: 1477 D 21 '46

Heating and ventilation

Serving a large Detroit hotel with purchased steam. C. B. Sprenger. diag Heat & Ven 43:71-2 N '46

Insurance requirements

All insurers are scrutinizing hotel public liability risks. Nat Underw 50:17+ D 19 '46
Asks occupancy revenue rating plan for hotels. H. B. Doten. Nat Underw 50:18 D 19 '46
Counsel on insurance and hotel lease contract. F. W. Eckert. Nat Underw 51:14D S 4 '47
Innkeepers' liability policy. Rough Notes 90: 70 Ap '47
Insurers concerned with attitude on safety of hotels. E. J. Uhler. Nat Underw 51:32 S 18 '47
Rider listing hotel merchandise costs may solve U. & O. snarl. Nat Underw 51:1 Mr 27 '47

Laws and regulations

Limit of liability by innkeeper on guest's property held invalid. East Underw 47:28 N 29 '46
State does not have power to maintain control over hotel transient room rentals. D. M. Stephens. Comm & Fin Chr 165:280 Ja 16 '47

Rates

Higher rates only offset added costs, say hotels. P. A. Johnston. Barron's 27:38 Mr 10 '47
OPA decontrol accompanied by increase in transient hotel rates. Comm & Fin Chr 165: 994+ F 20 '47
OPA should abolish ceilings on hotel apartment rooms. L. Toth. Comm & Fin Chr 165: 1123+ F 27 '47

Remodeling

McAlpin remodels; new headquarters for Crawford stores; new bar and restaurant. il plans Arch Rec 102:90-5, 109-11 Jl '47
Royal Hawaiian hotel enlarged, refurbished. il plans diags Arch Forum 87:81-7 O '47

Safety measures

Safety quiz for hotels; employee participation contest, Sheraton hotels. Safety Eng 92:54 N '46

HOUDAILLE-HERSHEY corporation

Thumbnail stock appraisal. Mag of Wall St 79:605 Mr 1 '47

HOUDRY process

Application of steam-jet ejectors in the Houdry fixed-bed catalytic cracking process. P. Freneau and others. flow diag diags A S M E Trans 69:69-79 Ja '47
Houdry catalytic cracking. flow diag Oil & Gas J 45:153 Mr 22 '47
Houdry dehydrogenation. flow diag Oil & Gas J 45:177 Mr 22 '47

HOUDRY process—*Continued*
Houdry dehydrogenation process. flow diag Pet Refiner (Process Handbook sec) 26:166-7 Ap '47
Houdry fixed-bed catalytic cracking process. flow diag Pet Refiner (Process Handbook sec) 26:168-9 Ap '47
Houdry process for treating motor gasoline. flow diag Pet Refiner (Process Handbook sec) 26:170-1 Ap '47
Use of bead catalyst in commercial Houdry units. C. V. Hornberg and others. il Oil & Gas J 46:214-16+ Jl 26 '47

HOURS of business. See Banks and banking—Hours of business

HOURS of labor
Employment opportunities in aviation occupations; duties, qualifications, earnings, and working conditions. il U S Bur Labor Statistics Bul 837 pt 2:31-8; pa 20c Supt. of doc. '46; Same. Mo Labor R 63:186-94 Ag '46
Hours of work and output. M. D. Kossoris. Mo Labor R 65:5-14 Jl '47
Hours of work in the Dominican Republic. Int Labour R 54:377-9 N '46
Longer work week needed. B. Baruch. Comm & Fin Chr 165:2064+ Ap 17 '47
Problem of the 40-hour week. S. E. Williams. Pulp & Pa of Can 48:93-6 My '47
Shorter hours bring permanent employment shifts. J. Hirsch. Barron's 27:7 S 8 '47; Abstract. Management R 36:512-13 O '47
Survey gives clues to best working hours for women. Textile World 97:127 Mr '47
Trends of earnings and hours. Published in Monthly labor review

See also
Overtime
Staggered hours

Five-day week

Coal and industry; experiment of the five-day week. Economist 152:723-4, 772 My 10-17 '47
Expensive victory; Safeway wins right to sell meat in San Francisco on Monday. Bsns W p75 My 17 '47
Five-day week. Economist 152:36 Ja 4 '47
Five-day week; effect on bus travel. Bus Transportation 26:83-4 Mr '47
Five-day week in New York state. H. V. Odle. il Burroughs Clearing House 31: 18-21+ Jl '47
Geography and the five-day week. Banking 39:35 D '46
Is Saturday closing a boomerang? E. E. Agger. Banking 39:39+ Ap '47
New York brokers almost equally divided on question of Saturday closings of N.Y.S.E. Comm & Fin Chr 165:1120+ F 27 '47
Six banking days for customers but only five for employees; and no more help is needed; Central national bank in Chicago. L. A. Bowman. Bankers Mo 64:440+ S '47
Status of the five-day week. Banking 39:38+ Ap; 110+ My '47
That five-day problem. Bsns W p60+ My 10 '47
Western brokers oppose Saturday closing but favor longer trading hours; interview with Emil Schram. E. Germain. Comm & Fin Chr 165:1004 F 20 '47

Shift schedules

Double shift working. Economist 153:78 Jl 12 '47
Experience under a six-hour shift clause. Management R 36:194-6 Ap '47
More workers will be employed. Steel 120: sup12+ Ja 6 '47
Premium pay provisions in selected union agreements; shift differentials. Mo Labor R 65:423-4 O '47
Shift differentials in manufacturing, 1945-46. K. Hafen. Mo Labor R 65:183-5 Ag '47
Staggering by order. Economist 153:166 Jl 26 '47
Work schedules. Power Pl Eng 51:100-2 Ja '47

Statistics

Actual hours of work in France. Int Labour R 54:225-6 S-O '46
Hourly and weekly earnings and hours worked per week; by years, 1899-1946, by months, 1942-1946; tables and chart. Automotive & Aviation Ind 96:76-8 Mr 15 '47
Unemployment, employment and hours of work. Int Labour R 53:283-93, 455-65; 54: 239-49; 55:587-98 Mr-Ap, My-Je, S-O '46, Je '47
Union wages and hours in the building trades, July 1, 1946. D. H. Gerrish and others. Mo Labor R 64:53-66 Ja '47
Union wages and hours in the printing, trucking, local transit, and baking industries, 1946. J. P. Corkery and H. M. Abowitz. Mo Labor R 64:444-53 Mr '47
Wages and normal hours of work of adult males in certain occupations in various countries in October 1945. Int Labour R 54:257-73 S-O '46

HOUSE decoration
Help for the furniture customer; decorator's approach. C. H. Henders. J Retailing 22: 109-12 D '46

HOUSE flies. See Flies; Fly sprays and repellents

HOUSE lighting
Advances in house lighting; with time-saver standards. E. W. Commery. il diags Arch Rec 101:148+ My '47
Comfort in the home. G. P. Crowden and T. C. Angus. Light & Lighting 40:8 Ja '47
Fluorescent lighting in the domestic field. J. W. Strange and H. H. Ballin. Electrician 137:1209-11 N 1 '46; Abstract. Elec R (Lond) 139:710 N 1 '46
Illumination in offices and homes. A. A. Kruithof and H. Zijl. Light & Lighting 40:13-14 Ja '47
Modern light sources and techniques utilized in restyled Sylvania Center. il Elec World 126:160 D 7 '46
Preliminary study of radio interference as caused by fluorescent lamps in the home. L. F. Shorey and S. M. Gray. diag Illum Eng 42:365-76 Mr '47
Residence lighting forums of the Illuminating engineering society. M. E. Dodds. Illum Eng 41:897-902 D '46
Studies of illumination and brightness in residential interiors. E. W. Commery. il diags Illum Eng 42:87-107 Ja '47; Abstract. Elec West 98:78+; Discussion. 80+ Ja '47

Bibliography

Current articles on lighting. Published in monthly numbers of Illuminating engineering

HOUSE models. See Architectural models

HOUSE moving. See Moving of structures

HOUSE numbers
Acrylic numbers. il Mod Plastics 23:214 My '47

HOUSE of commons library. See Great Britain—Parliament—House of commons library

HOUSE organs
Chevrolet edits news letter for dealers; published bi-weekly. Sales Management 58: 50 Ja 1 '47
GM folks; other house organs. il Inland Ptr 120:52-3 O '47
House organs, organic and inorganic. Aesop Glim. Ptr Ink 220:70 Jl 4 '47
How we train our house organ reporters; Phillips petroleum co. F. L. Rice and B. H. Wamsley. il Ptr Ink 218:46-8 F 14 '47
Human interest touch in industrial company publications; Forgings. S. J. Borchers. il Ind Marketing 32:45+ F '47
What the house organ can do for the sales manager. I. Jewell. il Ptr Ink 220:30-1 S 12 '47

See also
Employees' magazines
Salesmen's magazines

HOUSE painting
Post-war exterior house paints. S. Werthan. Paint Oil & Chem R 110:18+ Ap 3 '47

HOUSEHOLD appliances. See Domestic appliances

HOUSEHOLD budget. See Budget, Household

HOUSEHOLD finance corporation
Annual report. Comm & Fin Chr 165:2278 Ap 28 '47

HOUSEHOLD products
Demand for new household goods; how much of it comes from families formed since 1940. K. Phelps. Ptr Ink 218:50-1 Mr 14 '47

HOUSEHOLD products—*Continued*
Keith's home store, Kansas City; where simplicity is the key for variety. il plan Arch Rec 102:112-17 O '47

See also
Ironing machines

HOUSEHOLD products industries
Carson's revolutionizes the selling of major household appliances. il Cer Ind 49:71 S '47

See also
Electric apparatus and appliances, Domestic
Furniture industry and trade
Washing machines

Advertising

For a buyers' market: a tested formula for profitable sales promotions; Good House Stores laboratory, Philadelphia. H. B. Brown. Sales Management 58:46+ F 15 '47
Ten stages in selling the thrifty homemaker. M. E. Ellis. Adv & Sell 40:60+ Ag '47

Exhibitions

Building center is visualizer for buyers. il Sales Management 58:43 My 20 '47

HOUSES
Basic design developed by house building industry to cut construction costs through standardization. plan Heat & Ven 44:108 O '47
Better materials and equipment give greater value. il Am Bld 69:90-5 O '47
Builder makes sales by featuring fireproof home construction. il plan Brick & Clay Rec 111:30 Ag '47
Develop new hollow tile wall in English houses. il diag Brick & Clay Rec 109:29 N '46
Expect to lower building costs on house engineered on modular basis. il plan Brick & Clay Rec 111:30 S '47
Houses built of earth. M. Kauten. bibliog il Comp Air Mag 52:117-20 My '47
It's easy to build a ceramic home. il plan diags Brick & Clay Rec 109:31 N '46
Modular coordination in engineered house! il plans Ind Stand 18:208-11 S '47
Plan for attack on home costs; building material makers push industry-engineered homes. plan Bsns W p54-6 S 13 '47
Why not sell all-ceramic houses to those homeless veterans? il diags Brick & Clay Rec 109:23-4 D '46

See also
Apartment houses
Architecture, Domestic
Brick houses
Bungalows
Concrete houses
Country houses
Farmhouses
Guest houses
Home ownership
House lighting
Housing
Plastic houses
Ranch houses
Steel houses
Suburban homes

Mechanical equipment

Building products on review; photographs with text. plans Am Bld 69:100-13+ F '47
Contractor combines appliance business with home building; Victor Carlson's sons, inc, Minneapolis. il plans Am Bld 69:112-13+ My '47
Heart of the home in one package; Mobilcore contains kitchen, bath and utility room. il plan Am Bld 68:94-5 D '46
Packaged mortgages for packaged homes; with chart showing FHA list of items of mechanical equipment eligible for inclusion in mortgage, by state and district FHA offices. Am Bld 69:60-3+ Ja '47
Plumbing prefab; mechanical core for homes. plans Dom Eng 168:103 N '46
Unique distributor setup, integrated promotion, aid Ingersoll Steel's success; IM case study. H. Burnett. il Ind Marketing 32: 34-6+ F '47
Wickes, inc. builds a house with packaged utilities, solar fenestration, prefab radiant heat. il plans diags Arch Forum 86:98-100 Ja '47
Work center; one-story, basementless house, poses problem of integrated kitchen and laundry layouts. il plans Arch Forum 87: 95-100 Ag '47

HOUSES, Concrete. See Concrete houses

HOUSES, Model
Downtown sample sells homes for Seattle real estate man. il plan Am Bld 69:123 Ag '47
Lumber dealer builds demonstration home in Sheboygan, Wis. il plans Am Bld 69: 104-5 Ag '47
New York builder stages permanent home show; full-scale indoor model of N. K. Winston associates' expansion home. il plan Am Bld 69:110-11 My '47
Seven model houses show today's values; exhibit staged by Tulsa home builders association. il plan Am Bld 69:130-1 Ag '47

HOUSES, Prefabricated
All-aluminum prefab is sectional, has integral kitchen-bath-utility unit; Airoh house made in Gloucester, England. il Arch Forum 86:126 Mr '47
Aluminum house; Butler manufacturing co., Kansas City, Mo. il plans Am Bld 68:92-4 N '46
Assembly-line methods produce 1,200 low-cost homes in Maryland. il Civil Eng 17: 473 Ag '47
Australian prefab resembles American counterpart in design, fabrication and erection techniques. il plan Arch Forum 86:122+ Mr '47
Begin building all-steel, porcelain finish prefabs. il Eng N 137:849 D 26 '46
Berlin exhibits plastic prefabs designed for export. il Arch Forum 86:15 Ja '47
Brazil, now making prefabricated houses, hopes to find export markets. For Comm W 28:23 Ag 2 '47
British firm uses line production methods in precasting house panels; Tarran prefabricated concrete house. il diags Concrete 55: 3-9+ Ag '47
British prefab used precast brick panels to surface steel frame; Cussins house. il plans diag Arch Forum 87:126 S '47
Builders borrow techniques from other industries. il Bsns W p52 My 3 '47
Building houses using large precast sections; Normac, inc. W. B. Lenhart. il diag Rock Prod 50:206-7 Ag '47
Construction of prefabricated and conventional war housing projects; comparison of labor requirements and other characteristics. A. C. Findlay. Mo Labor R 63:721-32 N '46
Dampney precast concrete slabs. H. B. Fletcher. il Concrete 55:32-3 My '47
Dealer credit; National homes acceptance corp. to finance both dealers and customers. Arch Forum 87:11-12 Ag '47
Factory-produced houses in the news. il Arch Rec 101:103-4 Ja '47
Finnish prefabs. il Bsns W p114+ Ap 5 '47
Give new contracts for prefab houses. Eng N 138:981 Je 19 '47
Government hairpulling; prefab issue sets Wyatt against RFC and WAA. il plan Arch Forum 85:7 D '46
Handling of pre-fabs; mechanical equipment aid to mass production of prefabricated aluminium houses. J. A. Oates. il plan diags Mech Handling 33:631-43+ O '46
How Homeola sells packaged homes via lumber yards to GI home builders. il Sales Management 57:83+ N 20 '46
Hustling Homeola; Willis distribution plan scores. Arch Forum 85:11 N '46
Industrialized house; prefabricated units by Harman corporation, Production line structures, Butler manufacturing company and Wickes, inc., General panel corporation; Kaiser community homes and Lustron corporation. il plans diags Arch Forum 86:89-100 Ja; 115-20 F; 105-13, 152+ Mr; 105-10 Je '47
Industry capitalism forgot; housebuilding business. il Fortune 36:61-7+ Ag '47
Manufacture of parts for prefabricated houses, Brazil. For Comm W 28:22-3 S 27 '47
Model prefabs offered to builders today. il plan Am Bld 69:82-3 Ja '47
Monocrete prefabricated slabs. H. B. Fletcher. il Concrete 55:30-1 Jl '47
Navy builds precast concrete houses for dependents of enlisted personnel stationed at Guam. il Concrete 55:18 O '47
New expandable HomeOla. il plan Am Bld 69:116-17 My '47

HOUSES, Prefabricated—*Continued*
Newcomers; General Panel is first to benefit from everything government has to give. Arch Forum 86:15 Ja '47
100 houses a week; Kaiser community homes. il plan Am Bld 68:95-7 N '46
Pomeroy organization finds American Houses units an ideal solution; project in Syracuse, N.Y. il plan Am Bld 68:106-8 D '46
Prefab makers buckle down. il Bsns W p 18-19 Ag 23 '47
Prefab makers sign government deals. Bsns W p18 F 8 '47
Prefab with a difference; General panel corporation's house. il Bsns W p31-2+ O 18 '47
Prefabricated bungalows; investigation of load characteristics. Elec R (Lond) 140:543-4 Ap 4 '47
Prefabricated steel house; Steelcraft manufacturing co., Cincinnati. il plan Am Bld 68:103 N '46
Prefabrication gains stature during past year. il Am Bld 68:105 D '46
Prefabs for thousands in California; Hamill & Jones, and Prefabricated home builders, Los Angeles. il plans Am Bld 69:116-18 Mr '47
Preview of three manufactured low cost small houses. il plans Am Bld 69:128-9 F '47
Progress in design and construction; Ford factory-built homes; General Panel's minimum house; General Houses. il plan Am Bld 68:110-11+ D '46
Prospects for prefabrication. il Eng N 138: 301-4 F 20 '47
Radicals push ahead; new RFC loans, public stock issues, redesign plans mark progress. il Arch Forum 86:13-14 F '47
Rental program holds principal hope for prefab makers. J. C. Taylor, jr. Barron's 27:9 S 29 '47
Scandinavian bid; Finns and Swedes are trying to break into house-hungry U.S. market. il Arch Forum 86:14 My '47
Some problems in structural framing of precast concrete houses. A. Amirikian. il plans diags Am Concrete Inst J 18:797-810 Mr '47; Discussion. 19:812[1]-812[3] pt 2 D '47
Steel and concrete in British prefabs; the Cussins and the Airey houses. il plans diags Arch Rec 101:129 Ap '47
Steel-frame houses built on assembly line principles; project known as Harundale, near Baltimore. il plan Eng N 138:950-4 Je 12 '47
Tech Home; the steel and concrete house. il plan diags Am Bld 69:118-19 Ag '47
There is no secret to the Cemesto system of construction; builder Joseph Leopold's answer to permanent low cost housing in Clayton, Mo. il plan diag Am Bld 69:134-5 Ap '47
1200 plywood houses demonstrate to Chicago the advantages of site fabrication. il plans diags Arch Forum 86:120-3 Ap '47
1200 steel-framed houses for Baltimore veterans; Harundale development. il map plan diags Arch Forum 86:82-7 Ap '47
Use of steel forms for concrete house production. W. J. Brooking. il Iron Age 159:57-62 F 13 '47

See also
Steel houses
also Prefabricated home manufacturers' institute

HOUSES, Remodeled
Connecticut hay barn remodeled into country house pleasantly free of affectation or cliché. R. Kehm. il plans Arch Forum 87: 80-2 Jl '47
House in Alexandria, Virginia; remodeling converts a conventional design. il plans diag Arch Forum 85:96-9 D '46
Old houses make desirable apartments in Montclair, N.J. il plans Am Bld 69:118-20 Je '47

HOUSES, Steel. See Steel houses

HOUSEWIVES
Economic contribution of homemakers. M. G. Reid. Ann Am Acad 251:61-9 My '47

HOUSING
Housing and the sanitary engineer. M. A. Pond. il Eng N 138:516-18 Ap 3 '47
Industry capitalism forgot; housebuilding business. il Fortune 36:61-7+ Ag '47
Proceedings of a housing and heating conference, November 14-16, 1945. Pennsylvania State College Mineral Industries Exp Sta Bul 42:1-166 '46
Rent control and the housing shortage; commentary on "Roofs or ceilings?" by Friedman and Stigler. L. N. Bloomberg. J Land & Pub Util Econ 23:214-18 My '47

See also
Architecture, Domestic
Building
City planning
Company towns
Employees—Housing problems
Federal housing administration
Housing laws
Housing projects
Negroes—Housing
Rent

Costs
Building cost fixation. E. Goble. il plans Arch Rec 101:85-9 Mr '47
Construction cost of 1946 homes; with table. Eng N 138:812-13 My 15 '47
Home sweet home, at a price. il Bsns W p17-18 F 22 '47
Houses are not being priced out of the market, National association of home builders contends. Comm & Fin Chr 166:1009+ S 11 '47
Housing construction at Fort Worth army airfield, Texas; unit prices. Eng N 139: 143 Jl 24 '47
Index of small house costs; cost index for standard house in 47 cities, 1939, 1943-1946. Eng N 138:647, 649 Ap 17 '47

Negroes
See Negroes—Housing

Statistics
Construction activity, March-May 1947; housing program. Mo Labor R 64:1108-10 Je '47
Estimated number of new dwelling units in nonfarm areas; revised series, yearly figures, 1910-1938 and monthly figures, 1939-1944. Survey of Cur Bsns 26:15 N '46

Altadena, California
Something better; housing project in Altadena Heights proved to be the answer. il plans Am Bld 69:126-9 Ap '47

Atlanta
Apartment group planned for long term dividends, Peachtree Hills. il plans Arch Rec 101:92 Mr '47

Baltimore
1200 steel-framed houses for Baltimore veterans; Harundale development. il map plan diags Arch Forum 86:82-7 Ap '47

Birmingham, Alabama
Two family houses for mass market; Dean & Wainwright, Birmingham, Ala. il plans Am Bld 69:90-1 S '47

Boston
Boston's two-year argument; federal low-rent housing project for veterans. il Arch Forum 86:14-15 Ap '47

Brazil
Half million new Cariocas produce housing crisis in Rio; Sao Paulo also suffers shortage. For Comm W 26:40 Ja 25 '47

Brooklyn, New York
Pentagonal apartment building; Farragut houses. il plans Arch Forum 86:64-6 Ja '47

Buffalo, New York
Housing mess; how the building boys blew in Mr Wyatt's housing program. il Fortune 35:82-5+ Ja '47

California
Greatest house-building show on earth; Kaiser community homes. il plans Arch Forum 86:105-13, 152+ Mr '47
Housing problems of minority groups in Los Angeles county. C. B. Spaulding. Ann Am Acad 248:220-5 N '46

Caracas, Venezuela
El Silencio housing project. il plans Arch Forum 85:113-15 N '46

HOUSING—*Continued*

Chevy Chase, Maryland

Rental housing in the Nation's capital. il plans Am Bld 69:78-81 Mr '47

Chicago

1200 plywood houses demonstrate to Chicago the advantages of site fabrication. il plans diags Arch Forum 86:120-3 Ap '47

Chicago area

Apartment house for veterans in Chicago area; Homestead apartments in LaGrange Park. il plans Am Bld 68:92-3 D '46

Klutznick plans $70,000,000 housing project adjacent to Chicago for 25,000 middle-income persons. il map Am Bld 68:91 D '46; Arch Forum 85:14+ D '46; Arch Rec 100: 14+ D '46

Colombia

Colombia; forced investments in housing decreed. For Comm W 28:15 Jl 5 '47

Dallas

Dallas, Texas, builders satisfy small house demand. il plans Am Bld 69:112-15 Je '47

Private enterprise builds a city; Wynnewood addition. il plans Am Bld 69:85-7+ Ja '47

Dayton, Ohio

Daytona Village, a multiple garden apartment project. il plans Am Bld 69:112-13 F '47

Europe

Abrams survey; noted houser canvasses Europe. Arch Forum 85:26+ N '46

France

L'état économique de la France; les matériaux de construction. A. Caquot. Génie Civil 124:130-2 Ap 1 '47

Housing problem in France. A. Sauvy. Int Labour R 55:227-46 Mr-Ap '47

Great Britain

Great Britain; housing program for 1947. Mo Labor R 65:196-7 Ag '47

Housing and industry. Economist 152:768-9 My 17 '47; Correction. 152:817 My 24 '47

Housing on the block. Economist 153:273 Ag 16 '47

Housing programme. Economist 152:180-2 F 1 '47

Housing target abandoned. Economist 152: 753 My 17 '47

More houses; with figures for Oct. 1946. Economist 151:904-5, 931 D 7 '46

Unfinished houses. Economist 153:59 Jl 12 '47

Greece

Opening of experimental housing project at Piraeus, Greece. For Comm W 29:19 O 18 '47

Holyoke, Massachusetts

Holyoke builds precision-built homes for vets; Memorial Village. il plans diags Am Bld 69:98-101 Ag '47

Houston, Texas

Home builders keep pace with phenomenal growth of Houston. il plans Am Bld 69:98-103 My '47

Kansas City, Kansas

J.C. Nichols, dean of city planners, master community builder; Kansas City developer's Prairie Village. il maps plans Am Bld 69:94-9 Mr '47

Landover, Maryland

Engineered design helps builders achieve results; Radiant Valley veterans' housing development in Landover. il plan Am Bld 69:90-3 Je '47

Los Angeles

Los Angeles builders show the truth to local press. il Am Bld 69:114-15 Ag '47

Massachusetts

Land serviced with utilities available for housing. Eng N 138:578 Ap 17 '47

New Canaan, Connecticut

Modified ranch houses appeal to Connecticut veterans. il plans Am Bld 69:88-9 S '47

New York (city)

Apartment house with balcony units; Park Avenue apartments; terrace apartment. il plans Arch Rec 101:104-6 Mr '47

New construction technique reduces cost of large-scale housing in New York. J. P. Riley. il Civil Eng 17:254-8+ My '47

N.Y. city subsidizes rents for low-income families. Eng N 139:303 S 4 '47

Stuyvesant Town; Metropolitan's newest housing giant. il plans Arch Forum 86:74-5 Ap '47

Newton Center, Massachusetts

Oak Hill Village, a model suburban community. il plans Am Bld 69:108-11 S '47

Oklahoma City

Private builders provide better Negro housing. il plans Am Bld 69:142-3 F '47

Typical Oklahoma City house for war veterans. il plans Am Bld 68:100-1 D '46

Orlando, Florida

Apartment group planned for long term dividends, Highland Lakes. il plans Arch Rec 101:93 Mr '47

Economic and housing survey of the metropolitan region. H. Hoyt. map J Land & Pub Util Econ 23:219-27 My '47

Princeton, New Jersey

Princeton garden apartments help solve university town's veteran housing problem via life insurance company investment. il plan Arch Forum 86:114 Ap '47

Roslyn, Long Island

Norgate, a subdivision of quality homes. G. A. Mezger. il plans Am Bld 69:140-1 Ap '47

San Francisco

High standards, low rents, Parkmerced, San Francisco. il plans Arch Rec 101:90-1 Mr '47

Toledo, Ohio

Seventeen veterans meet their housing problem in suburb of Toledo. il plans Am Bld 69:108-9+ Mr '47

Toronto

Two important civic improvements approved by Toronto ratepayers; housing redevelopment and construction of civic square. plans Roads & Bridges 85:44-5+ Ja '47

United States

Building spotlight for 1947 focuses on rental housing. il plans Am Bld 69:76-7 Mr '47

Congress group opens probe on housing shortage causes. Eng N 139:369+ S 18 '47

Houses or politics? T. S. Holden. Arch Rec 100:92-5 N '46

Housing for the middle income group. F. H. Allen. East Underw 48:3 F 7 '47

Housing mess; how the building boys blew in Mr Wyatt's housing program. il Fortune 35:80-5+ Ja '47

Housing probe. Bsns W p50-1 O 25 '47

Housing problem; its cause and cure. H. J. King. Comm & Fin Chr 165:121+ Ja 9 '47

Housing shift; end of Wyatt regime. Bsns W p17-18 D 14 '46

Housing shortage slips into chronic stage; hope for freedom for builders fades. Barron's 27:10 Je 9 '47

Let's have ourselves a housing industry. Fortune 36:2-4 S '47

Long line of housing bosses; portraits. Arch Forum 86:10 Ja '47

NAHB answers a veteran's letter. F. W. Cortright. il Am Bld 69:110 Jl '47

National association of real estate boards' sees brighter housing outlook. Comm & Fin Chr 166:1741 O 30 '47

Outline six-point federal housing plan to relieve shortage, aid contractors. Eng N 138: 3+ Ja 2 '47

Present housing picture. F. D. Richards. Comm & Fin Chr 165:2605+ My 15 '47

President announces housing program changes. Comm & Fin Chr 164:3265+ D 19 '46

HOUSING—United States—*Continued*
Rental housing; symposium. E. Goble and others. il Arch Rec 101:76-85 F '47
Republican housing policy; key congressmen favor public housing. Arch Forum 86:10 F '47
Round table; Congressmen fire questions, give no time for stalling on answers. Arch Forum 87:9-10 O '47
Scores Sen. Taft's socialistic tangent on public housing. H. U. Nelson. Comm & Fin Chr 166:1650 O 23 '47
Shift construction controls to housing expediter office. Eng N 138:541 Ap 10 '47
Trends in housing during the war and postwar periods. M. F. Jessup. Mo Labor R 64:11-23 Ja '47
Veteran dwelling units authorized; January 15 through September 27, 1946; tabulation. Sheet Metal Worker 37:47 D '46
Washington news letter; summary of provisions of Taft-Ellender-Wagner bill (S. 866). Spectator (Life ed) 154:25+ My '47
Within the building industry a plan is evolved for low-cost housing; industry-engineered homes. A. A. Hood. il plan Banking 39:52-3 Mr '47
Wyatt resigns, Kroth succeeds him as housing head. Comm & Fin Chr 164:3135 D 12 '46
See also
Housing projects, Government

Venezuela
Venezuela pushes work on housing projects. il plan Eng N 138:238 F 13 '47

Washington, D.C.
Rock Creek luxury houses. il plans Am Bld 69:120-1 Ap '47
Spaciousness with outlook on Rock Creek park; apartment house. il plans Arch Rec 101:100-1 Mr '47

Worcester, Massachusetts
Veterans' rental housing plan, Worcester, Mass. community plan. il Banking 40:56-7 S '47

Zlin, Czechoslovakia
They planned it that way. J. Pokorny and E. Hird. il plans Arch Rec 102:68-75 Ag '47

HOUSING, Cooperative
Nonprofit housing projects in the United States. il diags U S Bur Labor Statistics Bul 896:1-91; pa 25c Supt. of doc. '47
See also
Apartment houses—Cooperative ownership

HOUSING finance
Colombia; forced investments in housing decreed. For Comm W 28:15 Jl 5 '47
Rental housing; symposium. E. Goble and others. il Arch Rec 101:76-85 F '47
See also
Building—Finance
Federal housing administration
Home ownership—Finance

HOUSING laws

France
La défense des administrés contre la réquisition abusive de logement. A. Mestre. Génie Civil 124:235-6 Je 15 '47

United States
Housing and the 80th Congress. N. Brown. Arch Rec 102:80+ S '47
Taft introduces new housing bill. Comm & Fin Chr 165:1388 Mr 13 '47

HOUSING projects
Bank's village for veterans; Farmers and mechanics savings bank of Minneapolis housing project, Penn Model village. P. Edmonds. il Banking 39:49 D '46
Basic plans aid to economical construction; Greystone development in Rockville Center, L.I. il plans Am Bld 69:111-13 Ap '47
Building to satisfy the critical public; Newell & Daniel, Lake Success, Long Island project. il plan Am Bld 69:104-7 O '47
Building value into low cost houses; Gerholz-Healy, inc, Flint, Mich. il plans Am Bld 69:106-11 F; 110-11+ Mr '47
Complete house for $6,990, designed by Levitt and sons of Manhasset, L.I. il plans diag Arch Forum 86:70-2 My '47
Construction of prefabricated and conventional war housing projects; comparison of labor requirements and other characteristics. A. C. Findlay. Mo Labor R 63:721-32 N '46
Contractor, architect, realtor and banker join hands on 50-unit housing plan at Painesville, Ohio. il Eng N 139:118-19 Jl 24 '47
Contractor combines appliance business with home building; Victor Carlson's sons, inc, Minneapolis. il plans Am Bld 69:112-13+ My '47
Country homes for veterans; Valley Stream, L.I. il plan Am Bld 69:106-7 My '47
Dallas, Texas, builders satisfy small house demand. il plans Am Bld 69:112-15 Je '47
Dayton, Ohio, builder gives big value in small, compact homes. il plans Am Bld 69:110-11 Je '47
Developer Burns of Denver will erect 1,400 homes for veterans. il plans Am Bld 68:82-3+ D '46
Efficiency gives vets good low-cost houses; South Bend, Ind. il plans Am Bld 68:78-81 D '46
Engineered design helps builders achieve results; Radiant Valley veterans' housing development in Landover, Md. il plan Am Bld 69:90-3 Je '47
544 rental units under way; Nettleton & Baldwin of Seattle. il plans Am Bld 69:88-91 Ag '47
490 homes for Pomona's de luxe subdivision. il plans Am Bld 69:118-19+ Ap '47
Greatest house-building show on earth; Kaiser community homes. il plans Arch Forum 86:105-13, 152+ Mr '47
Group planning and building pay out; View Ridge project at Everett, Wash. il plans diags Am Bld 69:114-17+ Ap '47
Heating the Metropolitan Life apartment projects. L. Smith and W. Bessler. il plan diags Heating-Piping 19:77-82 S '47
Home builders keep pace with phenomenal growth of Houston. il plans Am Bld 69:98-103 My '47
Home builder's own power equipment does the heavy work; Albert Balch of Seattle, Wash. il Am Bld 69:108-11 Ag '47
House construction by factory methods; Greenway Addition, Houston, Texas. il plans Am Bld 69:102-5 Jl '47
How New Orleans builders save time and reduce costs with precutting. il plans Am Bld 69:122-5 Je '47
J. C. Nichols, dean of city planners, master community builder; Kansas City developer's Prairie Village. il map plans Am Bld 69:94-9 Mr '47
Levitt and sons complete veteran's project at Roslyn, L.I. in spite of Wyatt program. il plans Am Bld 68:72-7+ D '46
Levitts, Long Island builders, deliver $6,990 house completely equipped. il plans Am Bld 69:96-7 Je '47
Meeting the market; Long Island builder's development, Merrick-Wood. il plans Am Bld 69:116-17 Ag '47
New construction technique reduces cost of large-scale housing in New York. J. P. Riley. il Civil Eng 17:254-8+ My '47
No incentive to build under government controls; experience of Wisconsin builder. E. A. Precour. il plan Am Bld 68:102-3+ D '46
Nonprofit housing projects in the United States. il diags U S Bur Labor Statistics Bul 896:1-91; pa 25c Supt. of doc. '47
Norgate, a subdivision of quality homes; Roslyn, L.I. G. A. Mezger. il plans Am Bld 69:140-1 Ap '47
Oak Meadows; a development featuring 1200 Lockweld houses; Oak Lawn, Ill. il plans Am Bld 69:82-7 My '47
Pomeroy organization finds American Houses units an ideal solution; project in Syracuse, N.Y. il plan Am Bld 68:106-8 D '46
Power equipment plays big part in building Byrne community; Harundale development. il Am Bld 69:114-15+ My '47
Precutting speeds construction for New York builder; Larkin Manor, Croton-on-Hudson, N.Y. il plans Am Bld 68:91 N '46
Private enterprise builds a city; Wynnewood addition, Dallas. il plans Am Bld 69:85-7+ Ja '47

HOUSING projects—*Continued*
Private rental housing; FHA's 608 financing scheme and its application to Gross-Morton's Glen Oaks Village. il plans Arch Forum 87:67-71 Ag '47
Quality houses in two distinctive builder projects; Gorge View Park and Homecliff in Lewiston, N.Y. il plans Am Bld 69:100-3 F '47
Rock Creek luxury houses; a suburb of Washington, D.C. il plans Am Bld 69:120-1 Ap '47
Saving to aid selling; precutting and assembly in on-site workshop; Goudreau builders, Cleveland. il plans Am Bld 69: 84-7 S '47
Six thousand dollar house in high cost area; Painesville, Ohio. il plans Am Bld 69:120-1 F '47
Something better; housing project in Altadena Heights proved to be the answer. il plans Am Bld 69:126-9 Ap '47
Steel-frame houses built on assembly line principles; project known as Harundale, near Baltimore. il plan Eng N 138:950-4 Je 12 '47
Stuyvesant Town; Metropolitan's newest housing giant. il plans Arch Forum 86:74-5 Ap '47
Texas subdivision has 4780 different houses; Oak Forest, Houston. il plans Arch Forum 87:86-7 Jl '47
This business of home building; Bradford homes, Evansville, Ind. G. Bradford. il plans Am Bld 69:92-7 Jl '47
Tomorrow's homes today; project in San Bernardino, Calif. il plan Am Bld 69:126-7 O '47
1200 steel-framed houses for Baltimore veterans; Harundale development. il map plan diags Arch Forum 86:82-7 Ap '47
Two family houses for mass market; Dean & Wainwright, Birmingham, Ala. il plans Am Bld 69:90-1 S '47
Variety is provided in Long Island development; Fairview homes, Hempstead. il plans Am Bld 69:96-7 My '47
Washington builders developing suburban community of quality homes; Glen Mar Park. il plans Am Bld 69:93-5+ My '47
We sold 13 over Sunday; Seattle builders offer small house of concrete, radiant heated, deluxe equipment; Permatherm homes. il plans diags Am Bld 69:114-17 S '47
What kind of group design? possibilities and preventions. A. C. Holden. il plans Arch Rec 101:94-8 Mr '47
Why you should avoid housing construction on refuse landfills. R. Eliassen. il Eng N 138:756-60 My 1 '47
Wooded Hills values assured; project in Rock Island, Ill. il plans Am Bld 69:114-17 O '47
See also
Suburban development
United nations—Housing project

HOUSING projects, College
Consumers power company serves nation's largest college housing project; Michigan state college. V. W. Sisung. il Gas Age 99: 22 My 1 '47; Same. Am Gas J 166:45 Ap '47
Convector plus radiant; Georgia Tech's new eight-story student apartment building. il Dom Eng 170:110+ O '47
Steelcraft homes provide living quarters for Northwestern university students. il Am Bld 68:108-9 D '46
Student-faculty units, Georgia school of technology, Atlanta. il plan Arch Rec 101:103 Mr '47
Trailer communities on a university campus. S. Riemer and M. Riley. J Land & Pub Util Econ 23:81-3 F '47

HOUSING projects, Company
Model camp construction in the oilfields; Humble oil and refining co. il plan Eng N 138: 111-13 Ja 23 '47
Pacific Mills opens its community hotel. Paper Tr J 125:24 Ag 21 '47
See also
Company towns
Mining towns

HOUSING projects, Government
Army engineers design new four-family apartments readily convertible into duplex houses. il plans Am Bld 69:103-5 Je '47
Biggest buy; world's largest apartment development goes to Texas realty tycoon; Fairlington near Washington, D.C. il Arch Forum 86:16 F '47
No. 1 landlord; will government sell permanent war houses at bargain prices? Arch Forum 86:14 My '47
Venezuela pushes work on housing projects. il plan Eng N 138:238 F 13 '47

HOUSING projects, Municipal
Cavity walls and slab bands cut costs for multi-story public housing project; Elliott project, New York city; with cost data. il diags Eng N 138:584-7 Ap 17 '47
Close scheduling speeds housing project; Brownsville houses in Brooklyn, N.Y.; with cost data. il Eng N 139:272-4 Ag 21 '47
Holyoke builds precision-built homes for vets; Memorial Village. il plans diags Am Bld 69:98-101 Ag '47
Pentagonal apartment building; Farragut houses, Brooklyn, N.Y. il plans Arch Forum 86:63-6 Ja '47
Two important civic improvements approved by Toronto ratepayers; housing redevelopment and construction of civic square. plans Roads & Bridges 85:44-5+ Ja '47

HOUSING research
Industrial research and co-ordination produce engineered modular house. il plans Am Bld 69:138-9 O '47
Industry engineered house. G. Lorimer. il plans diag Arch Rec 102:74-9 S '47
Orientation of housing research; commentary on program of the Conference on research in housing. J. P. Dean. J Land & Pub Util Econ 23:76-80 F '47
University of Illinois plans campus center for integrated home research. il plan Arch Forum 85:11 N '46

HOUSING surveys
Economic and housing survey of the Orlando, Florida, metropolitan region. H. Hoyt. map J Land & Pub Util Econ 23:219-27 My '47
Use of housing statistics aids many types of business. R. C. Hamer. Dom Comm 35: 33-6 Je '47

HOUSTON, John M. 1890-
Portrait. Bsns W p22 Je 28 '47

HOUSTON, Samuel Henry, 1905-1947
Sketch. E. P. Tatum. por Am Assn Pet Geologists Bul 31:1906-8 O '47

HOUSTON, Texas
Third ranking U.S. deep sea port, launches $9,000,000 improvement program. il Manuf Rec 116:48+ O '47

Industries
Houston's boom hums on. il Bsns W p22+ Ag 2 '47
Houston's growing pains don't hurt. R. McDaniel. il Am Bsns 16:26+ D '46
Texas adds to iron output; Sheffield furnaces produce at 15,500-ton rate. il Manuf Rec 116:35+ S '47

Streets
Houston urban expressways. H. J. McKeever and others. il map plan diags Roads & Sts 90:61-2+ Je; 69+ Jl '47

HOUSTON natural gas corporation
Annual report. Comm & Fin Chr 165:74 Ja 6 '47

HOWARD, Frank Atherton, 1890-
Portrait. Fortune 35:95 Mr '47

HOWARD industries, inc.
Annual report. Comm & Fin Chr 165:1192 Mr 3 '47

HOWE, David W. 1892-
Yankee heads American newspaper publishers assn. por Bsns W p28 My 3 '47

HOYT, Palmer, 1897-
Hoyt's formula; tradition plus. Bsns W p17-19 Mr 15 '47
Top man on the Denver post. por(cover) Bsns W p8 Mr 15 '47

HUBBLE, Edwin Powell, 1889-
Portrait. Fortune 35:124 Ja '47

HUDSON, C. Brooks
Power personality. por Power 91:181 Mr '47

HUDSON and Manhattan railroad
Annual report. Comm & Fin Chr 165:1866 Ap 7 '47
Court declines to set aside election. Comm & Fin Chr 166:666-7 Ag 18 '47

HUERKAMP, Edward C.
Receives McGraw award. por Illum Eng 41: 699-700 N '46

HUFSTADER, William
Portrait. Fortune 36:93 N '47

HUGGINS, Maurice Loyal, 1897-
Relation between the force constant and the interatomic distance of a diatomic linkage; a modified Huggins relation. C. K. Wu and S. C. Chao. Phys R 71:118-21 Ja 15 '47

HUGHES, Howard Robard, 1905-
Elliott Roosevelt assails Materiel command for failures. Aviation W 47:12-13 Ag 11 '47
Hughes charges PAA-TWA rivalry stirred Senate probe. Aviation W 47:11-12 Ag 4 '47
Hughes levels new charges in Pan American-TWA feud. Aviation W 47:11 Ag 11 '47
Hughes' views. Bsns W p31-2 F 22 '47
Senate probe of Hughes ends abruptly with Meyer missing. por Aviation W 47:11-12 Ag 18 '47

HULL, Harvard Leslie, 1906-
Portrait. Bsns W p34 Mr 22 '47

HULL-DOBBS company, Memphis
Hull-Dobbs; first in Fords. Fortune 34:178 D '46

HUMANITIES
Course requirements in humanistic-social studies. M. V. McEnany. J Eng Educ 37: 704-8 My '47
Humanities in a scientific world. H. Keniston. Ann Am Acad 249:160-8 Ja '47
Humanities in an engineering school. R. A. Novak. il Tech R 49:221-2+ F '47
Philosophy of humanistic-social studies in engineering education. E. S. Burdell. J Eng Educ 37:592-600 Ap '47
Planning the professional aspect of the humanistic-social courses. B. R. Teare, jr. J Eng Educ 37:344-52 D '46
Science and the humanities at Yale university. Mech Eng 69:845-6 O '47
Summary of information concerning humanistic-social courses in engineering colleges. L. A. Rose. J Eng Educ 37:336-9 D '46

HUMIC acids
Solvent extraction of humic acids from nitric acid; treated bituminous coal. T. S. Polansky and C. R. Kinney. bibliog Ind & Eng Chem 39:925-9 Jl '47

HUMIDIFICATION
Absorption and humidification. H. C. Carlson. bibliog Ind & Eng Chem 39:14-15 Ja '47
Gas absorption and humidification in cyclone spray towers. H. F. Johnstone and H. E. Silcox. bibliog il diags Ind & Eng Chem 39:808-17 Jl '47

HUMIDIFIERS
Humidifiers an aid in eliminating explosions. R. J. Branham. Safety Eng 93:52 F '47

HUMIDITY
Basic elements of air conditioning; psychrometric chart. S. C. Moncher. Sheet Metal Worker 38:116+ Ja; 70+ F '47
Don't neglect humidity control. Heating-Piping 19:96-7 Je '47
Effect of humidity on properties of plasticized ethylcellulose. W. P. Moeller and N. Taylor. bibliog Ind & Eng Chem 39:1149-52 S '47
Effects of moisture content on the diffusion of odors in the air. R. L. Kuehner. bibliog diags Heating-Piping 18:115-20 D '46
Factors affecting the development of mould on cotton fabrics and related materials. W. I. Illman and M. W. Weatherburn. bibliog il Am Dyestuff Rep 36:343-4+ Je 30 '47
Humidity and tolerance to low barometric pressure. N. E. Phillips and others. Science 106:67 Jl 18 '47
Humidity key factor in fungus growth; with humidity map of U.S. Chem & Eng N 25: 1950 Jl 7 '47
Humidity measurement by a new system; Dewcel. W. F. Hickes. il diag Refrig Eng 54:351-4+ O '47
Method for improving the effective temperature index. C. P. Yaglou. bibliog Heating-Piping 19:131-3; Discussion. 134-40 S '47
Modern humidification installed in Lonsdale mills. il Textile World 96:118-19 N '46
Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47
Psychrometric charts for high altitude calculations. H. E. Karig. Refrig Eng 52:433-7+ N '46
Rh of air in equilibrium with refrigerated brine. A. B. Stickney. Refrig Eng 54:232-4 S '47
Simplified constant humidity room. J. d'A. Clark. il plans diag Paper Ind 28:1305-7 D '46

See also
Dampness in buildings
Dehumidifiers
Hygrometers

HUMPHREY, Delphine V.
McCann-Erickson's librarian lends a hand in training more agency librarians. por Ptr Ink 219:107-8 Ap 25 '47

HUMPHREY, George Magoffin, 1890-
Hanna is as Hanna does. por Fortune 35:90-5+ My '47
Portrait. Bsns W p 15 Jl 12 '47
Sketch. por Explosives Eng 25:4-5 Ja '47

HUMUS
Uses of lignin in agriculture. S. Dunn and J. Seiberlich. Mech Eng 69:197-8+ Mr '47

HUNGARY
See also
Advertising—Hungary
Labor and laboring classes—Hungary

Commercial policy
Foreign-trade control system. For Comm W 28:17-18 Jl 19 '47

Economic conditions
News by countries. For Comm W 28:15-16 Ag 9 '47

Industries and resources
Government to control Hungarian heavy industry. Iron Age 159:112 Ja 23 '47

Politics and government
Red coup in Hungary forcing us into stronger stand. Barron's 27:1+ Je 9 '47
Turning point in Hungary. Economist 152: 1029-30 Je 28 '47

HUNGERFORD, Clark, 1899-
Frisco's new officers named. por Ry Age 121: 1087-8 D 28 '46
Portrait. Bsns W p56 D 28 '46

HUNGERFORD process. See Plastic materials—Manufacture

HUNT, Frederick Vinton, 1905-
Awarded Presidential medal for merit. por Acoustical Soc Am J 19:702-3 Jl '47

HUNTER, Croil, 1893-
Expansion director. por(cover) Bsns W p8 Jl 19 '47

HUNTING
See also
Duck shooting

HURRICANES
Hurricane destroys main line trestles. Ry Age 123:538 S 27 '47
Hurricane sweeps Gulf Coast area; much of estimated $100,000,000 loss placed in crop destruction. Manuf Rec 116:39+ O '47

HUSBAND and wife
Change of insured's name; legal ownership of marital property; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 30-1 D 26 '46
Husband and wife as joint tenants of money saved by wife from husband's earnings. Banking Law J 64:649-52 Ag '47
Reappraisal of the revocable trust; cautions to avoid invalidity in face of spouse's and creditor's rights. E. C. King. Trusts & Estates 83:649-53 D '46
Rights of spouse and creditor in inter vivos trusts. R. P. Goldman. bibliog Trusts & Estates 85:305-11 O '47

See also
Community property

HYALURONIDASE
Failure of sodium salicylate to inhibit hyaluronidase in vitro. R. M. Pike. Science 105: 391 Ap 11 '47

HYAMINE 1622
Germicidal deodorant eliminates strong odors, is non-poisonous. Sci Am 177:227-8 N '47
Quaternary ammonium disinfectant. Chem Ind 61:644+ O '47
Quaternary ammonium germicidal treatment for jute-packed water mains. A. L. Sotier and H. W. Ward. bibliog il Am Water Works Assn J 39:1038-45 O '47

HYATT, John Wesley, award
Sixth John Wesley Hyatt award to John J. Grebe. Mod Plastics 24:109 My '47

HYCAR (term)
Trade names are tricky; B. F. Goodrich chemical co. products. J. R. Hoover. Chem Ind 61:621 O '47

HYDANTOINS
Absorption spectra of organic compounds containing nitrogen; derivatives of hydantoin. R. E. Stuckey. Chem Soc J p331-4 Mr '47
Certain 5-phenyl-5-(substituted phenyl)-hydantoins. J. W. Melton and H. R. Henze. bibliog Am Chem Soc J 69:2018-20 Ag '47
Intermediates in the synthesis of orotic acid from oxalacetic ester and urea. H. K. Mitchell and J. F. Nyc. bibliog Am Chem Soc J 69:674-7 Mr '47
Phenyl-pyridylhydantoins. P. C. Teague. bibliog Am Chem Soc J 69:714 Mr '47
Pyrrole formation during attempted hydantoin synthesis. H. R. Henze and J. H. Shown, jr. bibliog Am Chem Soc J 69:1662-6 Jl '47
Thiohydantoins; conversion of 5 : 5-disubstituted 2 : 4-dithiohydantoins into the corresponding monothiohydantoins. H. C. Carrington. Chem Soc J p684-6 My '47
Thiohydantoins; preparation of 5 : 5-disubstituted 2 : 4-dithiohydantoins from the corresponding ketones. H. C. Carrington. Chem Soc J p681-3 My '47
5-R-Thiomethyl- and 5-R-sulfonylmethyl-5-phenylhydantoins. L. M. Long. bibliog Am Chem Soc J 68:2159-61 N '46
See also
Mesantoin

HYDE, James Franklin
Portrait. Fortune 35:107 My '47

HYDERABAD (native state)
Big plans for Hyderabad. map Bsns W p 109-10 Ap 19 '47

HYDRA (zoology)
Methods for increasing the value of hydra as material in teaching and research. H. W. Chalkley and H. D. Park. Science 105: 553 My 23 '47
Use of the hydra for pharmacological study. S. Norton and E. J. de Beer. Science 106: 328 O 3 '47

HYDRANTS
Coach-yard hydrant. il Ry Age 123:56 Jl 12 '47
Distribution system maintenance; discussion. Water & Sewage 85:116+ My '47
Hydrant maintenance. E. T. Cranch. il Water & Sewage Works 94:R87-8 Jl '47
Zurn coach hydrant. diag Ry Age 123:736 N 1 '47

Standards

Value of hydrant, valve and meter standardization. G. J. Van Dorp. Am Water Works Assn J 39:470-2 My '47

HYDRATES
Refrigerant hydrates. H. E. Chinworth and D. L. Katz. bibliog diag Refrig Eng 54: 359-63 O '47
See also
Gas, Natural—Hydrates

HYDRATION
System CaO-SiO_2-H_2O and the hydration of the calcium silicates. H. H. Steinour. Chem R 40:391-460 bibliog(191 ref, p455-60) Je '47
See also
Cement—Hydration

HYDRATION, Heat of
Calorimetric measurements of heats of hydration of starches. W. G. Schrenk, A. C. Andrews and H. H. King. bibliog diag Ind & Eng Chem 39:113-16 Ja '47

HYDRATROPIC acid
Preparation of iodinated mono- and diphenyl-acetic and -propionic acids. J. W. Barnett, F. A. Robinson and B. M. Wilson. Chem Soc J p202-4 F '47

HYDRAULIC accumulators
Applying hydraulic accumulators. E. M. Greer. il diags Machine Design 19:145-50 Ap; 107-13 My '47
Principles in the design of modern hydraulic machinery. J. H. Maude. il diags Pulp & Pa of Can (Convention no) 48:217-18 [F] '47

HYDRAULIC brakes. See Brakes, Hydraulic

HYDRAULIC control
Diesel engine governors. il diags Diesel Power 24:1448+ D '46; 25:58-62+ Ja '47
English practice in hydraulic controls for water-purification plant. D. Brownlie. il Water & Sewage 85:25+ Mr '47
Hydraulic control for heavy engine lathe. il diags Product Eng 18:94-5 My '47
Hydraulic control of rotary motions creates new interest. L. R. Twyman. Steel 120:275 Ja 6 '47
Hydraulic control of telescoping boom makes versatile earth mover. il diags Product Eng 18:90-4 Ag '47
Hydraulic controls for buses. A. P. Trebesch. il diag Bus Transportation 26:43-5 Ag '47
Hydraulic controls for commercial vehicles; abstract. G. W. Pontius. S A E J 55:80-1 Ap '47
Hydraulic pressure provides uniform welds; new welding gun. il diag Steel 121:104 S 15 '47
King-Seeley hydraulic engine governor. il diag Automotive & Aviation Ind 95:64+ N 15 '46
Lockheed hydraulic remote-control gear; controlling draft fans of boilers. il diags Engineering 162:608-9 D 27 '46; Abstract. Mech Eng 69:242-3 Mr '47
Manifolding provides a compact hydraulic control panel; Model 51 automatic abrasive cutoff machine. il diags Product Eng 18:92-3 O '47
Massey's new governor for Diesel engines. il diag Diesel Power 25:55-6 Jl '47
New hydraulic applications for tomorrow's automotive designs. M. A. Hayden. il S A E J 55:42-3+ S '47
New use for hydraulic control; innovation at Southampton waterworks. il Chem Age (Lond) 56:527 Ap 26 '47
Pasteurizer employs hydraulically actuated cover. il diag Machine Design 19:136 Ja '47
Variable-speed hydraulic governor. J. Z. Bujak. il diags Inst Mech Eng J & Proc 153 (War emergency issue no 7):193-203; Discussion. 204-5 '45
Work table hydraulically positioned; Man-Au-Trol spacer. il diag Product Eng 18:94 Mr '47
See also
Electrohydraulic control

HYDRAULIC conveying
Low-pressure ash-sluicing systems; with particular reference to power station practice; with cost data. T. H. Carr. plans diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):294-302, pl 1-2; Discussion. il 303-10 '45

HYDRAULIC engineering
Development and hydraulic design, Saint Anthony Falls stilling basin. F. W. Blaisdell. il diags Am Soc C E Proc 73:123-59 bibliog(p 157-9) F '47; Discussion. 73:1093-118 S '47
Engineer services of the U.S. waterways experiment station with special reference to the Mississippi Basin model. C. T. Newton. il map Boston Soc C E J 34:1-17 Ja '47
New project for stabilizing and deepening lower Mississippi river. C. Senour. maps Am Soc C E Proc 72:145-58 F '46; Discussion. 73:221-3 F '47
Palestine's Jordan River Valley plan emulates TVA development. E. E. Shalowitz. il maps Civil Eng 17:528-31+ S '47

HYDRAULIC engineering—*Continued*
Prospects of conservancy works in China. B. Shen. bibliog Franklin Inst J 242:399-420 N '46
Puzzle in Panama; engineering study to determine adequacy of canal in both war and peace. W. G. Bowman. il maps diags Eng N 138:740-52 My 1 '47
Relief wells for dams and levees. T. A. Middlebrooks and W. H. Jervis. diags Am Soc C E Proc 72:781-98 Je '46; Discussion. 72:1165-72, 1407-10; 73:59-78, 231-5, 735-55, 907-14 O, D '46-F, My-Je '47
Sea level plan for Panama canal. J. G. Claybourn. maps diags Am Soc C E Proc 73: 175-96 F '47

See also
Aqueducts
Artesian wells
Bridges—Foundations and piers
Caissons
Cofferdams
Dams
Drainage
Flood control
Gates, Hydraulic
Harbors
Hydraulic machinery
Hydraulic models
Hydraulic transmission
Hydraulics
Hydrodynamics
Hydroelectric plants
Irrigation
Levees
Locks (hydraulic engineering)
Mattresses (hydraulic engineering)
Piers
Pumping
Pumping machinery
Pumping stations
Pumps
Ranney water collectors
Reservoirs
Rivers—Regulation
Siphons
Spillways
Stream measurement
Water flow
Water supply engineering
Waterworks
Wells

Estimates

Estimating data for reservoir gates. F. L. Boissonnault. diags Am Soc C E Proc 73: 1027-46 S '47

Tables, calculations, etc.

Investigation of drainage rates affecting stability of earth dams. F. H. Kellogg. diags Am Soc C E Proc 73:1065-88 S '47
Varying reservoir levels and discharges forecast by new method. N. S. Haines. Eng N 138:1003-5 Je 26 '47

HYDRAULIC gates. See Gates, Hydraulic

HYDRAULIC jacks
Development of ultra high-pressure hydraulic systems. S. M. Parker. diags Engineer 183: 169 F 14 '47
Lift that track, tote them ties; track extractor for Honolulu rapid transit co. il Bus Transportation 26:67 Ap '47
Newton & Bennett hydraulic jack unit. il diags Mech Handling 34:140-3 Mr '47
Raising railway bridge over Tennessee river. il diags Engineering 162:457-9, 468 N 15 '46

HYDRAULIC laboratories
Hydraulic model studies of unusual projects; hydraulic laboratory in Grenoble, France. Eng N 139:317 S 4 '47

HYDRAULIC machinery
Automatic hydraulic knurling fixture. C. T. Packer. il diag Mach 53:178-9 Mr '47
Chart of symptoms, causes, and remedies of trouble in oil hydraulic systems. L. Dodge. Product Eng 18:165+ F '47
Fluid punch. il diags Machine Design 18:106-7 D '46
Hydraulic O-ring packing for sealing cylinders and pistons. R. E. Allen. diags Product Eng 18:163-6 Jl '47
Hydro-Power booster increases hydraulic pressure. il Iron Age 159:55 Mr 20 '47
Liquid springing. A. E. Bingham. il diags Engineering 164:289-91 S 26 '47
Optimum hydraulic pressure for minimum cylinder diameter. P. J. Lindner. il diags Product Eng 18:119-20 Je '47; Discussion. V. Tatarinov. 18:152-3 N '47
O-ring seals; application in hydraulic mechanisms. D. R. Pearl. diags Machine Design 19:97-102 My '47
Specifying hydraulic fluids. E. A. Reehl. il Product Eng 18:122-5 O '47
User looks at hydraulics. H. T. Johnson. il Steel 119:91+ D 16 '46

See also
Airplanes—Hydraulic equipment
Hydraulic presses
Hydraulic transmission
Pumps
Turbines
Valves, Hydraulic

Cavitation

Effects of pressure cycling on physical properties of materials. T. C. Poulter. il diags Product Eng 18:81-3 Ag '47
Pump cavitation; abstract. B. R. Walsh. Pet Processing 1:172 N '46

Design

Compressibility of liquids as it affects design of high-pressure pumps and hydraulic equipment. R. L. Schmoyer. il diags Machine Design 19:134-7 Ag '47
Designing hydraulic circuits. R. Tyler. il Machine Design 19:143-5 Je '47

Manufacture

Air and hydraulic cylinder parts constructed of solid steel blocks. il Steel 121:129+ O 6 '47

Testing

Strain gage and oscilloscope combined in hydraulic analyzer. il diag Product Eng 18:96-7 Ap '47

HYDRAULIC models
Correction of tailwater erosion at Prairie du Sac dam. C. N. Ward and H. J. Hunt. il Am Soc C E Proc 72:1077-89 O '46; Discussion. 73:709-17 My '47
Development and hydraulic design, Saint Anthony Falls stilling basin. F. W. Blaisdell. il diags Am Soc C E Proc 73:123-59 bibliog(p 157-9) F '47; Discussion. 73:1093-118 S '47
Engineer services of the U.S. waterways experiment station with special reference to the Mississippi Basin model. C. T. Newton. il map Boston Soc C E J 34:1-17 Ja '47
Friction effects in river models. T. A. Epstein. Eng N 138:880 My 29 '47
Hydraulic model studies of unusual projects; hydraulic laboratory in Grenoble, France. Eng N 139:317 S 4 '47
Model study develops stepped transition for Mt Morris Dam stilling basin. G. F. Sowers. il Civil Eng 17:130-1 Mr '47
Model study of Brown Canyon debris barrier. K. J. Bermel and R. L. Sanks. il map diag Am Soc C E Proc 72:613-28 My '46; Discussion. 72:1325-6, 1401-6 N-D '46
Quantitative analysis of single- and multiple-capacity plants. P. G. Kaufmann. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 8):237-46; Discussion. 247-8 '45
Tidal model of the firth of Tay; abstracts. J. Allen. map Engineering 164:238 S 5 '47; Engineer 184:242-3 S 12 '47

HYDRAULIC oils. See Hydraulic transmission

HYDRAULIC presses
Air-hydraulic system utilized in press. diag Machine Design 19:92 Ja '47
Bliss percussion type press. il Mach 53:200-1 Ap '47
First inclinable hydraulic press offered to stamping trade by HPM. Am Mach 91:142 Ag 28 '47
Fluid punch draws sheet metal in one operation; Hydrodynamic process. il diags Steel 120:90-1+ Ap 14 '47
Forging aluminum and magnesium on a giant hydraulic press. R. Moore and J. R. Douslin. il diags Mach 54:135-41 O '47
High-capacity hydraulic presses. E. A. Randich. il diags Machine Design 18:137-42 D '46
Large-capacity high-pressure pumping plant for driving hydraulic forging presses. F. H. Roberts. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 24):453-62; Discussion. 463-4 '46
Leeds heavy fabricated hydraulic press. il Engineer 182:438-9 N 15 '46
Pneumatic control speeds hydraulic press response. P. T. Delmer. il diag Machine Design 19:107-8 O '47

HYDRAULIC presses—*Continued*
Principles in the design of modern hydraulic machinery. J. H. Maude. il diags Pulp & Pa of Can (Convention no) 48:216-23 [F] '47
Wroble super hi-speed hydraulic presses. il Mach 53:196-7 Ap '47

HYDRAULIC rams
Hydraulic ram as applied to water systems. diags Pulp & Pa of Can 48:72-3+ F '47

HYDRAULIC research
Cavitation in hydraulic structures; a symposium. J. K. Vennard and others. bibliog il diags Am Soc C E Proc 71:1000-68 S '45; Correction. 71:1571 D '45; Discussion. bibliog 72:419-22, 563-8, 705-16, 867-80; 73:197-207 Mr-Je '46, F '47
Entrainment of air in open-channel flow; abstract. L. G. Straub and W. W. De Lapp. Civil Eng 17:450-1 Ag '47
Experiments on effective uplift area in gravity dams. S. Leliavsky. bibliog il diags Am Soc C E Proc 71:1474-517 D '45; Discussion. 72:889-900; 73:349-59 Je '46, Mr '47
Fluid polariscope aids in hydraulic studies. J. H. Dawson. il Civil Eng 17:268-9 My '47; Discussion. F. B. Farquharson. 17:401-2 Jl '47

HYDRAULIC transmission
Analysis of epicyclic gear systems for torque converters. A. Y. Dodge. diags Automotive Ind 97:38-40+ Ag 1; 34-7 Ag 15 '47
Anatomy of the torque converter. M. C. Horine. il diags Bus Transportation 26:78-83 Je '47
Baush transfer machine. il diags Product Eng 18:94-5 S '47
Beacham hydraulic pump. diag Automobile Eng 37:336 S '47
Clutches for automatic transmissions; abstract. H. Nutt and R. L. Smirl. diags Automotive & Aviation Ind 96:40-1+ Je 15 '47
Crawler tractor performance with hydraulic torque converter drive; abstract. A. H. Diemel. S A E J 55:96-7 Ap '47
Design features of the Martin 202 hydraulic system. T. C. Hill and E. G. Riley. diags S A E J 55:61-4 Jl '47
Designing hydraulic circuits. R. Tyler. il Machine Design 19:143-5 Je '47
Designing hydraulic servos by combining basic cataloged elements. H. Ziebolz. il diags Machine Design 19:123-6 Jl '47
Development of ultra high-pressure hydraulic systems. S. M. Parker. diags Engineer 183: 167-70 F 14 '47; Abstract. Product Eng 18: 133-4 O '47
Fluid couplings for passenger cars; abstract. A. E. Kimberly. diag Automotive & Aviation Ind 96:41-2+ Je 15 '47
Fluid drive; hydra-matic transmission. W. L. Carnegie. Am Gas Assn Proc 1946:335-7
Fluid drives for the pulp and paper industry. R. D. O'Neil. il diags Pulp & Pa of Can 48: 70-4 Ap '47
Hydra-matic automatic transmission control systems; abstract. O. K. Kelley and M. S. Rosenberger. diag Automotive & Aviation Ind 96:39-40+ Je 15 '47
Hydra-matic fluid standardization needed before GM considers release to service station. H. R. Wolf. Nat Pet N 39:30 Mr 12 '47
Hydraulic booster reduces cycle time; coil straightening press. G. M. Geiger. il diag Machine Design 19:113-14 Ap '47
Hydraulic drives in the oil fields. N. A. D'Arcy, jr. Pet Eng 18:90+ F '47
Hydraulic gaging units check frame alignment. il diags Product Eng 18:96-7 Ja '47
Hydraulic power lift unit and linkage for use on farm tractors. diag Mech Handling 34:440-2 Ag '47
Hydraulic transmission. il Automobile Eng 37:175-7 My '47
Hydraulic variable-speed transmissions as servomotors. G. C. Newton, jr. bibliog il diags Franklin Inst J 243:439-69 Je '47
Hydraulics know-how taught to apprentices; Caterpillar tractor co. P. G. Griebel. il Am Mach 90:132-3 N 21 '46
Hydraulics modernizes an old planer. L. C. Beatty. il Am Mach 91:140-1 My 8 '47
Kegresse gear box; automatic design based on hydraulic actuation. diags Automobile Eng 37:11-15 Ja '47
Link-Belt hydraulic coupling. il Machine Design 18:108 D '46
Lockheed principle; manufacture of carburetted water gas. S. C. Herbert. Gas J (Lond) 248:775-6, 839+ N 6-13 '46; Discussion. 248:841 N 13 '46
Machine hydraulics. A. H. Dall. il diags Machine Design 18:43-8 Ap; 111-14 Je; 125-8 Ag; 87-90 O; 119-23 D '46; 19:138-40 Mr '47
Making transmissions automatic; abstracts. O. K. Kelley and others. S A E J 55:49-50 S '47
Modern rotary drilling; hydraulic transmission. J. Zaba. diag Oil & Gas J 46:271 My 31; 99 Je 7 '47
New GM hydraulic reverse gear. il diag Automotive & Aviation Ind 96:36+ My 1 '47; Same. Marine Eng 52:100+ My '47
New Kegresse transmission; gear shifting actuated by hydraulic and centrifugal governor control. diags Automotive & Aviation Ind 96:40-1+ My 15 '47
Oil purifying systems for molding plants. J. B. Biggers. il diags Mod Plastics 24:186+ Je '47
Piping for fluid-power systems; reference book sheet. Am Mach 91:179 Je 19 '47
Principles in the design of modern hydraulic machinery. J. H. Maude. il diags Pulp & Pa of Can (Convention no) 48:216-23 [F] '47
Radial piston pump for variable speed transmission; airport cargo trailers. il diag Product Eng 18:94-5 O '47
Service and maintenance of the new La Plant-Choate hydraulic power control system. il Roads & Sts 90:104-5 Ap '47
Silicone oils; their applications. D. F. Wilcock. il diag Gen Elec R 49:29-31 D '46
Some applications of hydraulics to high-speed rotary drives for aircraft accessories. W. W. Thayer. il diags S A E J 55:38-42+ Ag '47
Swashplate hydraulic pump. il diags Engineer 184:54-5 Jl 18 '47
Tractor power lift; hydraulic unit for the David Brown Cropmaster. diags Automobile Eng 37:377-8 O '47
Variable-speed drives. diags Factory Management 105:120-2 Ag '47
What does automaticity cost? Am Mach 91: 187-8 S 11 '47
What to look for in hydraulic oils. A. J. Zino, jr. il Am Mach 91:93-6 N 6; 112-16 N 20 '47 (to be cont)

See also
Airplanes—Hydraulic equipment
Hydraulic control

HYDRAULIC turbines. See Turbines

HYDRAULIC valves. See Valves, Hydraulic

HYDRAULICS
Équipement rationnel d'un puits de captage à haut rendement dans les nappes alluvionnaires. A. Vibert. diag Génie Civil 124:250-2 Jl 1 '47
Fluid mechanics; forgotten factor in electroplating. J. B. Kushner. diags Metal Finishing 45:72-4 O '47
Hydraulic horsepower; chart. Oil & Gas J 46:107 Jl 5 '47
Physics of water removal. W. B. Campbell. Pulp & Pa of Can (Convention no) 48:103-9+ [F] '47

See also
Cavitation
Floods
Flow meters
Fluids
Hydraulic engineering
Hydrodynamics
Hydrostatics
Kutter's formula
Liquids
Nozzles
Silt
Siphons
Stream measurement
Water flow
Wells
also National conference on industrial hydraulics

Tables, calculations, etc.

Bubble tray hydraulics. J. A. Davies. bibliog diags Ind & Eng Chem 39:774-8 Je '47
Calcul des chambres d'équilibre deversantes par les méthodes aux différences finies et semi-graphique; vérifications expérimentales. L. Escande. Génie Civil 124:229-31, 389-93 Je 15, O 15 '47

HYDRAULICS—Tables, calculations, etc.—*Continued*
Hydraulics for the practical water works man. R. W. Angus. il diags Water & Sewage Works 93:261-6, 295-8, 335-8, 426-9, 491-3; 94:14-17, 69-72, 122-5, 215-18, 245-8, 337-40 Jl-S, N '46-F, Ap, Je-Jl, S '47 (to be cont)
Water pressure; table. Water & Sewage Works 94:R108 Jl '47

HYDRAZINE dichloride
Crystal structure of hydrazinium dichloride, $N_2H_6Cl_2$. J. Donohue and W. N. Lipscomb. bibliog J Chem Phys 15:115-19 Mr '47

HYDRAZINE sulfate
Electric activation of chemical reactions; effect of some variables on electric discharges through gases. W. J. Cotton. Electrochem Soc Trans 91 (preprint 34-H):603-28 '47

HYDRAZOANISOLE
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46

HYDRAZOBENZENE
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46

HYDRAZONES
Identification and chromatography of androgens as their 2,4-dinitrophenylhydrazones. C. D. Johnston. Science 106:91 Jl 25 '47
Reactions of semicarbazones. R. A. Turner. bibliog Am Chem Soc J 69:875-7 Ap '47

HYDRAZOTOLUENE
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46

HYDRIDES
General mechanism for the formation of volatile hydrides by hydrolysis reactions. D. T. Hurd. bibliog Am Chem Soc J 69: 1647-51 Jl '47
Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of group 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47
Metals plus hydrogen. H. C. E. Johnson. il Sci Am 176:116-18 Mr '47
See also
Calcium hydride

HYDRINDENE. See Indan

HYDRIODIC acid
Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46
Solubility of iodine in concentrated hydriodic acid solutions. C. F. Powell and I. E. Campbell. diag Am Chem Soc J 69: 1227-8 My '47

HYDROAROMATIC compounds
Synthesis of hydroaromatic compounds containing angular groups; 9,4a(2)-iminoethanohydrophenanthrene series. M. S. Newman and B. J. Magerlein. bibliog Am Chem Soc J 69:942-4 Ap '47

HYDROBROMIC acid
Action of acidic reagents on ethylene oxide anhydro sugars; action of acid reagents on 4 : 6-benzylidene 2 : 3-anhydro α-methylalloside. F. H. Newth, W. G. Overend and L. F. Wiggins. Chem Soc J p 10-18 Ja '47
Addition of hydrogen bromide to propylene. F. R. Mayo and M. G. Savoy. bibliog Am Chem Soc J 69:1348-51 Je '47
Kinetics and mechanism of the reaction of hydrogen bromide with ethanol. E. Grunwald and S Winstein. bibliog Am Chem Soc J 69:2051-3 Ag '47
Preparation of hydrobromic acid by the reduction of bromine with sulphur. R. Bloch and others. bibliog diags Soc Chem Ind J 66:115-17 Ap '47
Removal of hydrogen bromide from certain β-phenylalkyl bromides by means of potassium amide in liquid ammonia. C. R. Hauser and others. bibliog Am Chem Soc J 69:589-93 Mr '47
Routine method for determining selenium in horticultural materials. J. S. McNulty. bibliog diags Anal Chem 19:809-10 O '47

HYDROCARBONS
Absorption and purification of hydrogen chloride from chlorination of hydrocarbons. C. F. Oldershaw and others. flow sheet il diag Chem Eng Prog 43:371-7; Discussion. 378 Jl '47
Action of safety fuel hydrocarbons on Perbunan compounds. R. M. Howlett and E. N. Cunningham. bibliog Rubber Age 60: 562-4 F '47
Air oxidation of high molecular weight petroleum hydrocarbons. H. W. Zabel. il diag Chem Ind 59:821-3 N '46
API research project 43C; studies of the effect of radioactivity on the transformation of marine organic materials into petroleum hydrocarbons. W. J. Mead. Am Pet Inst Proc 25(4):102-4 '45
Application of a new notation to petroleum hydrocarbons. G. M. Dyson. bibliog Inst Pet J 33:356-62 Je '47
Applications of thermodynamics to hydrocarbon processing. W. C. Edmister. bibliog Pet Refiner 26:77-82 Jl; 83-8 Ag; 105-11 S; 99-105 O; 110-17 N '47 (to be cont)
Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il diags Pet Refiner 25:97-102 D '46; Same abr. Oil & Gas J 45:59-60+ D 21 '46
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Calculation of relative volatility from boiling points. F. W. Melpolder and C. E. Headington. bibliog Ind & Eng Chem 39: 763-6 Je '47
Calculation of weight per cent ring and number of rings per molecule for aromatics. M. R. Lipkin and C. C. Martin. bibliog Anal Chem 19:183-9 Mr '47
Carbon and hydrogen in rubber hydrocarbon. H. J. Wing. Science 105:363-4 Ap 4 '47
Catalytic cracking of pure hydrocarbons; cracking of structural isomers. G. M. Good, H. H. Voge and B. S. Greensfelder. bibliog Ind & Eng Chem 39:1032-6 Ag '47
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Catarole process; high temperature cracking produces a mixture of aromatic and olefinic hydrocarbons. Chem Ind 60:226-7 F '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 136-8 N '46
Chemical structure affects knocking. P. J. Gaylor. diags Pet Eng 18:72, 74, 76 Mr '47
Chemicals from petroleum. J. E. Bludworth. flow sheet il Oil & Gas J 45:76-7+ Ap 12 '47; Same. Pet Refiner 26:120-4 Ap '47
Coal-chemical transformation. Chem Age (Lond) 55:725-6 D 14 '46
Combustion calculations for hydrocarbon fuels. H. R. Linden and D. F. Othmer. bibliog charts Chem Eng 54:115-19 Ap; 148-53 My '47
Compressibility of liquid hydrocarbons. E. W. Jacobson and others. bibliog Oil & Gas J 44:109-10 Mr 23 '45; Same. Am Pet Inst Proc 25(4):39-41 '45
Control of light hydrocarbon fractionators subject to variations in feed composition and quantity. E. D. Mattix. flow diag diags Pet Refiner 26:130-4 S '47
Deamination of 2 : 6-dichloro-4-nitroaniline. D. Ridge. Chem Soc J p734-6 Je '47
Design and operation of a light hydrocarbon distillation drier. G. C. Gester, jr. bibliog il diag Chem Eng Prog 43:117-21; Discussion. 121-2 Mr '47
Distribution in hydrocarbon-solvent systems. T. G. Hunter and T. Brown. Ind & Eng Chem 39:1343-5 O '47
Effect of temperature on the mass spectra of hydrocarbons. R. E. Fox and J. A. Hipple. diag J Chem Phys 15:208 Ap '47

HYDROCARBONS—*Continued*

Effects of high-energy radiation on organic compounds. M. Burton. bibliog J Phys & Colloid Chem 51:786-97 My '47

Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47

Fluorocarbons by fluorination of hydrocarbons with cobalt trifluoride. R. G. Benner and others. bibliog diag Ind & Eng Chem 39:329-33 Mr '47

Future research in hydrocarbons; abstracts. M. E. Spaght. Chem & Eng N 25:1122 Ap 21 '47; Chem & Ind p241-2 My 3 '47

Girbotol process for the removal of acidic gases from hydrocarbon gases and liquids. flow diag Oil & Gas J 45:161 Mr 22 '47

Graphical method for predicting azeotropism and effect of pressure on azeotropic constants. L. H. Horsley. Anal Chem 19:603-9 Ag '47

Heat transfer coefficients for condensing hydrocarbon vapors. D. A. Donohue. bibliog Ind & Eng Chem 39:62-4 Ja '47; Same. Pet Eng (Ref annual) 18:222+ Jl 1 '47; Same. Pet Refiner 26:116-17 Ag '47

Heats of combustion and isomerization of six nonanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 38:419-22 Ap '47

High molecular weight hydrocarbons; five new hydrocarbons derived from sebacic acid. M. D. Soffer and others. bibliog Am Chem Soc J 69:1684-8 Jl '47

Higher hydrocarbons; six phenyleicosanes and six cyclohexyleicosanes. F. C. Whitmore and others. Am Chem Soc J 69:235-7 F '47

Hydrocarbon synthesis in the presence of cobalt catalysts at medium pressures. C. C. Hall and S. L. Smith. flow diag Inst Pet J 33:439-59 Jl '47

Institute of petroleum hydrocarbon research group. bibliog Inst Pet J 33:580-2 S '47

Interpretation of electron diffraction patterns from hydrocarbon films. J. Karle and L. O. Brockway. il J Chem Phys 15:213-25 My '47

Light hydrocarbons to fore in new A.P.I. method of estimating reserves. C. J. Deegan. Oil & Gas J 45:136-7 Mr 22 '47

Mechanism of catalytic cracking. R. C. Hansford. bibliog diag Ind & Eng Chem 39: 849-52 Jl '47

New CO-H_2 converter provides better temperature control. il Chem Ind 60:793 My '47

Nomograph for normal boiling points of hydrocarbons. G. E. Mapstone. Pet Refiner 26:120-1 Mr '47

Nomographs for distillation of low-boiling hydrocarbons. F. M. Nelsen, F. R. Brooks and V. Zahn. Anal Chem 19:814-15 O '47

Operation and development of the Fischer-Tropsch and related processes in Germany; abstract. C. C. Hall. Chem & Ind p421 N 23 '46

Peak contour and half-life of metastable ions appearing in mass spectra. J. A. Hipple. diag Phys R 71:594-9 My 1 '47

Phase behavior of sodium stearate in anhydrous organic solvents. G. H. Smith and J. W. McBain. bibliog il J Phys & Colloid Chem 51:1189-204 S '47

Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W. N. Lacey. bibliog diag Ind & Eng Chem 39:77-82 Ja '47

Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H. H. Reamer and others. Ind & Eng Chem 39:206-9 F '47

Physical and chemical properties of hydrocarbon solutions of aluminum bromide; the solubility of aluminum bromide in *n*-hexane E. R. Boedeker and A. G. Oblad. bibliog Am Chem Soc J 69:2036-9 Ag '47

Physical constants of low-boiling hydrocarbons and miscellaneous compounds. W. S. Hanna and R. Matteson. bibliog(91 ref) Oil & Gas J 45:61-4+ Ja 11 '47

Physical research methods increase knowledge of catalysts, hydrocarbons. G. M. Webb. il Oil & Gas J 45:203-4+ Mr 22 '47

Predicting commercial heat transfer coefficients; condensation of hydrocarbons and chlorinated hydrocarbons. E. P. Breidenbach and H. E. O'Connell. bibliog Am Inst Chem Eng Trans 42:761-76 O-D '46; Same. Pet Eng (Ref annual) 18:191-2+ Jl '47

Preparation and physical properties of several aliphatic hydrocarbons and intermediates. F. L. Howard and others. bibliog J Res Nat Bur Stand 38:365-95 Mr '47

Preparation of fluorocarbons by catalytic fluorination on hydrocarbons. G. H. Cady and others. diag Ind & Eng Chem 39:290-2 Mr '47

Pressure-volume-temperature relations of 2,2,3,3-tetramethylbutane. W. A. Felsing, A. M. Cuellar and W. M. Newton. bibliog Am Chem Soc J 69:1972-4 Ag '47

Production of synthesis gas by reacting light hydrocarbons with steam and carbon dioxide. R. E. Reitmeier and others. Pet Processing 2:732-3 O '47

Properties of hydrocarbons; American petroleum institute's research project 44. Chem & Eng N 25:904-6 Mr 31 '47

Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47

Purification, purity, and freezing points of 7 heptanes, 16 octanes, 6 pentenes, cyclopentene, and 7 C_9H_{12} alkylbenzenes of the API-standard and API-NBS series. A. J. Streiff and others. pl J Res Nat Bur Stand 37:331-78 bibliog(p337) D '46

Rate of corrosion of lead by hydrocarbon solutions of organic acids. D. Turnbull and D. R. Frey. bibliog diags J Phys & Colloid Chem 51:681-704 My '47

Report of sub-committee on reservoir fluids, related constituents and conditions. bibliog Am Assn Pet Geologists Bul 31:375-93 F '47

Review of the chemical structure of fuels and their detonation in engines. A. G. Mazurkiewicz and V. G. Oberholzer. bibliog Inst Pet J 32:685-702 D '46

Solubilization by solutions of long-chain colloidal electrolytes. R. S. Stearns and others. bibliog J Chem Phys 15:496-507 Jl '47

Steam distillation of hydrocarbons and chlorohydrocarbons; nomograph. M. Nord. bibliog Chem Ind 59:884+ N '46

Study of reaction intermediates by means of a mass spectrometer; the thermal decomposition of some lower hydrocarbons. G. C. Eltenton. bibliog J Chem Phys 15:465-74 Jl '47

Synthesis and properties of hydrocarbons of high molecular weight; research project of the American petroleum institute. R. W. Schiessler and others. bibliog il Am Pet Inst Proc 26(3):254-302 '46; Abstract. Oil & Gas J 46:119 Je 14 '47

Synthetic-hydrocarbon processes; abstract. P. C. Keith. Oil & Gas J 45:37-8 Ap 5 '47

Synthine process. J. C. Lane and B. H. Weil. bibliog and patent list (366 references) il map diags Pet Refiner 25:87-98 Ag; 97-108 S; 109-20 O; 153-64 N '46

Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47

Theoretical interpretation of vibration frequencies of paraffinic hydrocarbons. G. B. B. M. Sutherland and D. M. Simpson. J Chem Phys 15:153-4 Mr '47

Thermal data on organic compounds; modern combustion data for fourteen hydrocarbons and five polyhydroxy alcohols. G. S. Parks and others. bibliog Am Chem Soc J 68:2524-7 D '46

Turbo-expanders. J. S. Swearingen. il diags Chem Eng Proc 43:85-90 F '47

Use of thermal conductivity cells for gas analysis in studying the Fischer-Tropsch synthesis of hydrocarbons. E. L. D'Ouville and K. E. Howe. diags Pet Refiner 26:98-103 Je '47

Utilization of natural gas for chemical products. H. M. Smith and W. C. Holliman. bibliog (218 titles) 12 pls U S Bur Mines Information Circ 7347:1-24 '47; Same, without bibliog. Pet Refiner 26:75-84 Ap '47

HYDROCARBONS—*Continued*

Vapor-phase nitration of saturated hydrocarbons. H. B. Hass and H. Shechter. bibliog Ind & Eng Chem 39:817-21 Jl '47

Vapor pressures of twelve four-carbon-atom hydrocarbons. K. Hachmuth, G. H. Hanson and M. L. Smith. bibliog Am Inst Chem Eng Trans 42:975-82 O-D '46

Viscometry of soap-in-hydrocarbon systems. G. F. Wood and others. bibliog 2pls diags Inst Pet J 33:71-94; Discussion. 94-102 F '47

See also

Acetylene
Benzene
Butadiene
Butane
Coal tar products
Ethane
Fischer-Tropsch process
Heptane
Hexane
Isoprene
Methane
Naphthalene
Octane
Olefins
Paraffins
Petroleum
Propane
Styrene
Terpenes
Toluene

Analysis

Analysis by the mass spectrometer of a liquefied hydrocarbon mixture containing C_3-C_5 paraffins and olefins. V. H. Dibeler and F. L. Mohler. diags J Res Nat Bur Stand 39:149-54 Ag '47

Analysis of alkylates and hydrocodimers. A. R. Glasgow, jr. and others. bibliog Pet Refiner 25:98-119 N '46; Same. J Res Nat Bur Stand 38:537-81 My '47; Same. Am Pet Inst Proc 26(3):127-69 '46; Excerpt. Oil & Gas J 45:236 N 16 '46

Apparatus for the analysis of reservoir fluids. P. G. Exline and H. J. EnDean. bibliog il diags Oil & Gas J 45:82-3+ Mr 15 '47

Application of infrared spectroscopy to the analysis of liquid hydrocarbons. J. J. Heigl, M. F. Bell and J. U. White. bibliog Anal Chem 19:293-8 My '47

Determination of aromatics and naphthenes in complex hydrocarbon mixtures containing olefins. R. M. Love and others. bibliog Anal Chem 19:37-42 Ja '47

Determination of extinction corrections in infrared analysis of gaseous hydrocarbon mixtures. J. H. Lee. bibliog Ind & Eng Chem Anal ed 18:659-61 N '46

Determination of olefinic unsaturation; nitrogen tetroxide method as applied to petroleum hydrocarbons in the gasoline boiling range. G. R. Bond, jr. diags Ind & Eng Chem Anal ed 18:692-6 N '46

Determination of olefins, aromatics, paraffins, and naphthenes in gasoline. S. S. Kurtz, jr. and others. bibliog Anal Chem 19:175-82 Mr '47

Fractional analysis of hydrocarbon mixtures on a gallon scale. R. F. Marschner and W. P. Cropper. diags Am Pet Inst Proc 26(3): 41-7 '46

Hydrocarbons in petroleum. F. D. Rossini. Chem & Eng N 25:230-3 Ja 27 '47; Same. Pet Eng 18:58+ Ja '47; Same. Pet Refiner 26:103-5 Ja '47

Hydrocarbons in the 102° to 108° C fraction of petroleum. A. R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38: 621-6 Je '47

Infrared analyses of alkylates and correlation of alkylate composition with motor tests. G. M. Webb and W. S. Gallaway. bibliog il Pet Processing 2:356-7+, 442-4+ My-Je '47

Infrared spectrometric quantitative analysis of multicomponent liquid hydrocarbon mixtures. J. W. Kent and J. Y. Beach. bibliog Anal Chem 19:290-3 My '47

Mass spectrometer and the control laboratory. D. Milsom. diags Pet Refiner 26:83-8 O '47

Mass spectrometer and what it does. C. J. Deegan. il Oil & Gas J 46:64-5+ S 6 '47

New method of analysis by mass spectrometry. S. E. J. Johnsen. bibliog Anal Chem 19:305-6 My '47

Picric acid method for determination of aromatic content of aviation gasoline. C. M. Gambrill and J. B. Martin. Ind & Eng Chem Anal ed 18:689-92 N '46

Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26(3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46

Quantitative analysis of hydrocarbon mixtures by means of Raman spectra. E. J. Rosenbaum, C. C. Martin and J. L. Lauer. bibliog Ind & Eng Chem Anal ed 18:731-3 D '46

Raman spectra of hydrocarbons. M. R. Fenske and others. bibliog diags Anal Chem 19:700-65 graphs(p723-65) O '47

Semimicroanalysis of light hydrocarbon mixtures by multiisothermal distillation. L. S. Echols, jr. and E. Gelus. bibliog diags Anal Chem 19:668-75 S '47

Short-cut methods of infrared analysis. W. D. Seyfried and S. H. Hastings. bibliog Anal Chem 19:298-304 My '47

Spectroscopic analysis; application of the hydrogen discharge lamp to the analysis of mixtures of C_8 aromatic hydrocarbons. R. R. Gordon and others. 2pls Inst Pet J 33: 103-12 F '47

Separation processes

Assembly and testing of 52-foot laboratory adsorption column; separation of hydrocarbons by adsorption. B. J. Mair, A. L. Gaboriault and F. D. Rossini. bibliog plans diags Ind & Eng Chem 39:1072-81 S '47

Distex hydrocarbon separation process. Chem Age (Lond) 56:338 Je 28 '47

Distribution in hydrocarbon-solvent systems. T. G. Hunter and T. Brown. Ind & Eng Chem 39:1343-5 O '47

Evaluation of azeotropic entrainers. L. Berg and J. M. Harrison. bibliog Chem Eng Prog 43:487-96 S '47

Extractive distillation-separation by C_4 hydrocarbons using furfural. J. Happel and others. il Am Inst Chem Eng Trans 42:1001-7 O-D '46

Furfural extractive distillation for separation and purification of C_4 hydrocarbons. C. K. Buell and R. G. Boatright. bibliog il diags Ind & Eng Chem 39:695-705 Je '47

Hydrocarbon absorption and fractionation process design methods. W. C. Edmister. bibliog flow diag diags Pet Eng 18:156+ My; 57+ Je; 39-44+ Jl; 49-54+ Ag; 130+ S; 19:200+ O '47

Hypersorption process for separation of light gases. C. Berg. il diags Pet Processing 2: 300-1+ Ap '47

Hypersorption process; Union oil company of California. flow diag Pet Refiner (Process Handbook sec) 26:182-3 Ap '47

Priority in separation of hydrocarbon fractions; Distex process; abstract. G. Natta. Chem & Eng N 25:1759 Je 16 '47

Separation of oil gases. M. Ruhemann. bibliog diags Chem & Ind p347-50 Je 21 '47

Solvent separation of hydrocarbon mixtures by vapor-liquid extraction. M. R. Fenske, C. S. Carlson and D. Quiggle. bibliog diags Ind & Eng Chem 39:1322-8 O '47

Standards

Development and maintenance of pure hydrocarbon standards. R. C. Alden and J. W. Tooke. bibliog il Oil & Gas J 45:42-4+ F 1 '47

Testing

Tendency to smoke of organic substances on burning. A. E. Clarke and others. pl diags Inst Pet J 32:627-42, 643-55 O-N '46

HYDROCARBONS, Aromatic

Antoine vapor-pressure equation for mononuclear aromatic hydrocarbons. N. Corbin; M. Alexander and G. Egloff. J Phys & Colloid Chem 51:528-40 Mr '47

Aromatics from petroleum. H. Steiner. bibliog Inst Pet J 33:410-35; Discussion. 435-8 Jl '47

British catarole plant. G. Abrahamson. Chem & Eng N 25:263 Ja 27 '47

Calculation of weight per cent ring and number of rings per molecule for aromatics. M. R. Lipkin and C. C. Martin. bibliog Anal Chem 19:183-9 Mr '47

Chemical constitution and aromatic groups in petroleum lubricants. C. Zerbe and K. Falkens. bibliog Pet Refiner 26:131-6 F; 122-4 Mr '47

HYDROCARBONS, Aromatic—*Continued*
Chemical refining of aromatic hydrocarbons from petroleum; toluene treating. P. L. Brandt, R. J. Lee and F. T. Wadsworth. bibliog il diag Ind & Eng Chem 39:1010-18 Ag '47
Distillation properties of aromatic hydrocarbons. J. Griswold and J. A. May. bibliog il Pet Refiner 26:85-8 Mr '47
Extraction of aromatics; patent. P. J. Gaylor. flow diag Pet Processing 2:701-2 S '47
Molal refractions of mononuclear aromatic hydrocarbons. N. Corbin, M. Alexander and G. Egloff. bibliog Ind & Eng Chem 39:1147-9 S '47
Numbers of isomeric alkylbenzenes. A. W. Francis. Am Chem Soc J 69:1536-7 Je '47
Photoelectric measurement of fluorescence spectra. R. A. Burdett and L. C. Jones, jr. bibliog il diag Opt Soc Am J 37:554-7 Jl '47
Polycyclic aromatic hydrocarbons; 2′-methoxy- and 2′-methoxy-9 : 10-dimethyl-1 : 2-benzanthracene. G. M. Badger. Chem Soc J p940-3 Jl '47
Some catalysed gas-phase reactions of aromatic hydrocarbons; interaction of benzene with methyl ether. P. H. Given and D. L. Hammick. Chem Soc J p928-35 Jl '47
Spectroscopic analysis; application of the hydrogen discharge lamp to the analysis of mixtures of C_8 aromatic hydrocarbons. R. R. Gordon and others. 2pls Inst Pet J 33: 103-12 F '47
Studies in the terpene series; destructive hydrogenation of bicyclic dihydroterpenic hydrocarbons V. N. Ipatieff, H. Pines and M. Savoy. bibliog Am Chem Soc J 69:1948-52 Ag '47
See also
Benzene
Naphthalene

HYDROCHLORIC acid
Acid neutralization. H. L. Jacobs. diags Chem Eng Prog 43:247-53; Discussion. 253-4 My '47
Action of acidic reagents on ethylene oxide anhydro sugars; action of acid reagents on 4 : 6-benzylidene 2 : 3-anhydro α-methylalloside. F. H. Newth, W. G. Overend and L. F. Wiggins. Chem Soc J p 10-18 Ja '47
Action of hydrogen chloride on isoprene. W. J. Jones and H. W. T. Chorley. Chem Soc J p832-3 S '46
Addition of hydrogen chloride to isobutylene. F. R. Mayo and J. J. Katz. bibliog diags Am Chem Soc J 69:1339-48 Je '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 138-9 N '46
Composition of mud acid and its function in sand horizons. E. N. Jones. Oil & Gas J 45:107 Ap 5 '47
Corrosion by chlorine and by hydrogen chloride at high temperatures. M. H. Brown, W. B. DeLong and J. R. Auld. diags Ind & Eng Chem 39:839-44 Jl '47
Development of a hydrochloric acid process for the production of alumina from clay. J. I. Hoffman and others. flow sheets diags J Res Nat Bur Stand 37:409-28 D '46; Summary. Iron Age 159:68 Mr 13 '47
Extraction of aluminium from clay; hydrochloric-acid process and alkaline process. il diags Engineering 164:265-6, 292-3 S 19-26 '47
Heavy chemicals; abstract. J. P. Baxter. Chem & Ind p397 N 2 '46
Hydrochloric acid electrolysis. W. C. Gardiner. diags Chem Eng 54:100-1 Ja '47
Interaction of hydrogen peroxide and hypochlorous acid in acidic solutions containing chloride ion. R. E. Connick. bibliog Am Chem Soc J 69:1509-14 Je '47
Investigation of acid attack on boilers and the effect of repeated acid cleaning on the metal. H. C. Farmer. il A S M E Trans 69:405-11; Discussion. 411-12 My '47
Kinetics of dissolution of cadmium in hydrochloric acid. J. F. Zimmerman and H. J. McDonald. bibliog diags J Phys & Colloid Chem 51:857-68 My '47
Mechanism of corrosion fatigue of steel in acid solution M. T. Simnad and U. R. Evans. bibliog diag Iron & Steel Inst J 156: 531-9 Ag '47
Recording vacuum grating spectrometer for the infra-red. E. E. Bell and others. bibliog il diags R Sci Instr 18:48-56 Ja '47
Some studies in the system $AlCl_3$-$FeCl_3$-KCl-NaCl-HCl-H_2O at 25, 30 and 35°. G. L. Miles. Am Chem Soc J 69:1716-19 Jl '47
Starches and starch fractions; the determination of starch by hydrolysis with hydrochloric acid. L. H. Lampitt, C. H. F. Fuller and N. Goldenberg. bibliog Soc Chem Ind J 66:117-21 Ap '47
Studies of the solid state by means of nuclear magnetism. N. L. Alpert. Phys R 72:637-8 O 1 '47

Analysis
Evaluating pickling acid inhibitors; colorimetric test method. E. L. Colichman and others. bibliog Iron Age 159:55-7 Ap 24 '47

Manufacture
Absorption and purification of hydrogen chloride from chlorination of hydrocarbons. C. F. Oldershaw and others. flow sheet il diag Chem Eng Prog 43:371-7; Discussion. 378 Jl '47
Construction materials in Mannheim HCl plant; non-metallics meet demand for good heat transfer plus resistance to acids; Ethyl corp., Baton Rouge plant. W. F. Armstrong. il diag Chem Eng 54:96-8 Ag '47

HYDROCHLORIDES
Derivatives of N-methyl-L-glucosaminic acid; N-methyl-L-mannosaminic acid. M. L. Wolfrom and A. Thompson. bibliog Am Chem Soc J 69:1847-9 Ag '47

HYDROCODIMERS
Analyses of alkylates and hydrocodimers. A. R. Glasgow, jr. and others. charts diags J Res Nat Bur Stand 38:537-81 My '47; Same. Am Pet Inst Proc 26(3):127-69 '46; Same. Pet Refiner 25:93-119 N '46; Excerpt. Oil & Gas J 45:236 N 16 '46
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26(3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46

HYDROCOL process. See Gasoline, Natural—Manufacture—Hydrocol process

HYDROCYANIC acid
Comparison of methyl bromide and hydrogen cyanide for the fumigation of empty bags in barges. W. B. Brown and S. E. Lewis. bibliog Soc Chem Ind J 65:241-5 S '46
Cyanide salvage. Chem Ind 60:947 Je '47
Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diag J Phys & Colloid Chem 51:654-61 My '47
Hydrogen cyanide from carbon monoxide and ammonia. H. Burrell. Chem & Eng N 25: 1939 Jl 7 '47
Permeability of proofed fabrics to fumigants. F. P. W. Winteringham and A. Harrison. diag Soc Chem Ind J 65:409-12 D '46
Public liability insurance; operating a fumigating business using hydrocyanic gas; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11+ My 8 '47
L'utilisation des amandes amères dans l'alimentation pendant la période 1940-1945. R. Talon. bibliog diags Chimie & Ind 57: 331-5 Ap '47

Analysis
Detection and estimation of microquantities of cyanide. A. O. Gettler and L. Goldbaum. diags Anal Chem 19:270-1 Ap '47
Determination of HCN in crude and in purified coal gas; abstract. H. F. Taylor. Chem & Ind p308 My 31 '47

HYDRODYNAMICS
Expansion theory of circulation in water-tube boilers. R. F. Davis. Engineering 163: 145-8 F 14 '47
Friction coefficients in a large tunnel. G. H. Hickox and others. bibliog il plan diags Am Soc C E Proc 73:451-70 Ap '47; Discussion. 73:1122-38, 1307-9, 1450-4 S-N '47
Hydrodynamic lubrication of finite sliders. C. P. Boegli. bibliog J Ap Phys 18:482-8 My '47

HYDRODYNAMICS—*Continued*
Hydrodynamic research; Experimental towing tank laboratory of Stevens institute of technology. Mech Eng 69:157 F '47
Laminar boundary-layer oscillations and transition on a flat plate. G. B. Schubauer and H. K. Skramstad. bibliog il diags J Res Nat Bur Stand 38:251-92 F '47
Normal reflection of shock waves. R. Finkelstein. diags Phys R 71:42-8 Ja 1 '47
Phenomenological theory of transport processes in fluids. B. Leaf. bibliog Phys R 70: 748-58 N 1 '46
Preliminary measurements relative to the onset of thermal convection currents in unconsolidated sands. H. L. Morrison. J Ap Phys 18:849-50 S '47
Resistance coefficient; Reynolds number relationship for fluid flow through a bed of granular materials. H. E. Rose. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 5):154-61; Discussion. 162-8 '45
Two-dimensional steady flow of a compressible viscous fluid far behind a solid symmetrical body. M. Z. Krzywoblocki. Franklin Inst J 243:471-86 Je '47
Use of residue theory for treating the subsonic flow of a compressible fluid. C. Kaplan. U S Nat Advisory Com for Aeronautics 1942:39-47 '46

See also
Aerodynamics
Drops
Hydraulics
Ship resistance
Viscosity
Water flow

HYDROELECTRIC plants
Canadian hydro practice reviewed at AIEE's summer meeting, Montreal. diag Power 91: 553-4 Ag '47
Progress in hydroelectric development. L. F. Harza. Western Soc E J 51:148-50 S '46

See also
Columbia river—Grand Coulee dam
Tennessee Valley project

Accounting
Adjust income to river flow; Western Massachusetts electric co. Elec World 128:81-2 Jl 19 '47

Auxiliary plants
Protection of powerhouse auxiliaries. diags Elec Eng 65:Trans 746-51 N '46; Same abr. Power Pl Eng 51:118+ Mr '47

Combination with steam plants
Added steam capacity cuts coal use by increasing hydroelectric generation; Nova Scotia light & power co. flow diag il diags Power 91:2-6+ Ja '47

Construction
Constructing the Shipshaw power development. W. M. Goodwin. il plan diags Comp Air Mag 52:2-7 Ja '47
Heavy rock work on British Columbia power development; Bridge River hydro-electric development. il Roads & Bridges 85:46-9 Jl '47
Large-scale construction operations on Mississagi development. F. Grosvenor. il plans Roads & Bridges 85:78-9+ Ag '47
1,400-ft. calyx holes for Peruvian hydro job. il plan Eng N 139:200-1 Ag 7 '47

Cost
Big Thompson project, Colorado; unit prices. Eng N 138:844-5 My 15 '47
SPA hydro program, summary and fallacies; steam and hydro costs compared. map Elec World 125:60-3 Mr 30 '46; Discussion (Analysis of SPA report criticized). 127:51+ Ja 4 '47
Steam v. hydro power. J. P. Callahan. Pub Util 39:28-33 Ja 2 '47

Equipment
AIEE hydroelectric session. il diags Power 91:174-80 Mr '47
Analyzer charts performance of hydraulic governors. B. F. Gostin. il Elec World 127:64-5 Mr 1 '47
Design of mechanical auxiliaries for TVA hydroelectric plants. H. J. Petersen. il diags A S M E Trans 68:663-72 O '46; Same cond. Power Pl Eng 50:134 S; 128 O; 113 D '46; 51:107 Ja; 124 F; 116 Mr '47; Discussion. A S M E Trans 68:672-3 O '46
Electrical-angle measurement on motor and generator determines load limit. K. J. Granbois. il diags Power 91:154-6 Mr '47
Grand Coulee; 3,000,000-hp hydroelectric power project; with cost data. il map diags Power 91:738-42 N '47
New instrument adjusts capacitor potential devices; Grand Coulee power plant. F. R. Schleif. il diags Elec World 128:74-5 Ag 16 '47
Uses of compressed air in TVA hydroelectric plants. H. J. Petersen. il diag Comp Air Mag 52:13-15 Ja '47
Winnipeg hydro-system. il Electrician 138: 1512 Je 6 '47

See also
Turbines

Fires and fire protection
Fire protection practices in TVA hydroelectric plants. H. J. Petersen. il Power Pl Eng 51:107 Ja '47

Gas turbine auxiliaries
Gas turbines to back up Swiss hydro in winter; abstract. P. R. Sidler. Power Pl Eng 51:140 Je '47

Government ownership
Coals to Newcastle; SPA power grid carries hydro output to gas fields. map Elec World 127:102-4 F 15 '47
Federal payments replacing taxes suggested by Wright; hearing on Dondero bill. Elec World News ed 127:4-5 Je 28 '47
FPC authority to take hydro plants hit by congressmen. Elec World News ed 127:5-6 Je 14 '47
Hydroelectric projects constructed and operated by government agencies; tabulation. Power 91:384 Je '47
Interior department's plants had 15 billion kw.-hr. output. Elec World News ed 127: 11 Ja 25 '47
Is public power taking over? T. N. Sandifer. Pub Util 38:810-16 D 19 '46
Power in the reaches of the Pacific Northwest. D. White. Pub Util 38:643-50 N 21 '46
Reclamation's 6-year power program; tabular summary. map Elec World News ed 127:13, 16-17, 20, 22 Mr 22 '47
Six-year reclamation power plan would cost U.S. $801,070,480. Elec World News ed 127: 3-4 Mr 8 '47
Story of Clark Hill; a summary of hydroelectric development and planning on project on the Savannah river. C. A. Collier. Pub Util 40:285-91 Ag 28 '47
Wanted, a national power program. N. L. Smith. Pub Util 39:732-7 Je 5 '47

See also
Bonneville power administration

Ice protection
Safeguarding hydro plants against the ice menace. P. E. Gisiger. il diag Civil Eng 17:24-7 Ja '47

Irrigation water use
Modern power and irrigation structures promote development of North Africa. A. V. Karpov. il map Civil Eng 17:317-20+ Je '47

Maintenance and repair
Restoration work prolongs life of concrete structures; hydroelectric plants of the Minnesota light & power co. A. C. Giesecke. il Civil Eng 17:588-92+ O '47

Storage type
Alpine hydro development employs pumped storage; Ill River project. T. C. McDermott. il map diag Elec World 128:70-2 Ag 2 '47

Africa, North
Modern power and irrigation structures promote development of North Africa. A. V. Karpov. il map Civil Eng 17:317-20+ Je '47

Alaska
FPC survey finds 228 hydro sites in southeastern Alaska. Elec World News ed 127:4 My 3 '47

Algeria
Hamiz hydro-electric plant, Algeria. il Engineer 182:449 N 15 '46

HYDROELECTRIC plants—*Continued*

Arkansas

FPC denies license to utility to operate Bull Shoals plant. Elec World News ed 127:11 Je 28 '47

Austria

Alpine hydro development employs pumped storage; Ill River project. T. C. McDermott. il map diag Elec World 128:70-2 Ag 2 '47

L'aménagement hydroélectrique de la Gerlos, dans le Tyrol autrichien. E. de la Sayette and M. Bouvard. il diags Génie Civil 124: 265-7 Jl 15 '47

L'aménagement hydroélectrique de l'Ill autrichienne, dans le Vorarlberg. M. Bouvard and E. de la Sayette. il plan diags Génie Civil 124:185-9 My 15 '47

British Columbia

Activities of the B.C. power commission and the Campbell River power development. A. W. Lash. Pulp & Pa of Can 48:80-5 O '47

Heavy rock work on British Columbia power development; Bridge River hydro-electric development. il Roads & Bridges 85:46-9 Jl '47

California

112,500-kw. of new hydro at Owen Gorge. il map diags Elec West 99:88-9 S '47

See also
Central Valley project, California

Canada

Hydro-electric progress in Canada. Engineering 163:272 Ap 4 '47

Hydroelectric projects built or on order in 1946; tabulation. F. A. Annett, comp. Power 91:382-3 Je '47

U.S. and Canada hit new high in hydro; over 4,000,000 hp on order. Power 91:379+ Je '47

Water power in Canada. Elec R (Lond) 140: 529 Ap 4 '47

Colombia

Hydroelectric development near Medellin, Colombia. For Comm W 25:42 D 7 '46

Irrigation and hydro power get lift by Colombia Congress. For Comm W 26:29 Mr 29 '47

Colorado

Construction features of Colorado-Big Thompson project. R. M. Sensintaffar. il map Elec World 127:54-5 Je 21 '47

Costa Rica

New power plant for Costa Rica on the Barranca river. For Comm W 25:42 D 7 '46

France

L'aménagement hydroélectrique de la chute de Cordéac, sur le Drac (Isère). il map diags Génie Civil 124:225-8 Je 15 '47

First hydroelectric plant on Rhone river completed. For Comm W 26:44 Ja 25 '47

Hydro-electric power installations in France. Engineer 183:129-30 Ja 31 '47

L'installation hydroélectrique de la Bissorte (Savoie). il map Génie Civil 124:353-5 S 15 '47

Progress on Rhone hydro-power project· Genessiat hydroelectric project. il map Bsns W p98 Je 21 '47

La reconstruction du barrage mobile de Kembs (Haut-Rhin). il diags Génie Civil 124:295-7 Ag 1 '47

Georgia

FPC dismisses application of utility for Clark Hill site. Elec World 127:125 Ja 18 '47

Georgia power seeks license to build hydro project at army engineers' site. il Elec World 126:65 Ag 31; 109 N 9 '46

Story of Clark Hill; a summary of hydro-electric development and planning on project on the Savannah river. C. A. Collier. Pub Util 40:285-91 Ag 28 '47

Utility petitions rehearing by FPC of Clark Hill plea. Elec World News ed 127:12 F 22 '47

Germany

Hydro in wartime Germany. A. Hoefle. il A S M E Trans 69:541-5; Discussion. 545-7 Jl '47

Underwater power plants; German plants that combine dam and powerhouse into one structure. Mech Eng 69:681 Ag '47

India

India stakes her economic future on hydro-electric developments. J. K. Van Denburg, jr. il Power 91:310-11 My '47

Massachusetts

Adjust income to river flow; Western Massachusetts electric co. Elec World 128: 81-2 Jl 19 '47

Minnesota

Restoration work prolongs life of concrete structures; hydroelectric plants of the Minnesota light & power co. A. C. Giesecke. il Civil Eng 17:588-92+ O '47

Missouri valley

Development of the Missouri basin. B. H. Greene. map Elec Eng 66:140-5 F '47

Northwestern states

Power of twenty million horses flows down the Columbia river. il map Power 91:666-9 O '47

Ontario

Large-scale construction operations on Mississagi development. F. Grosvenor. il plans Roads & Bridges 85:78-9+ Ag '47

Ontario Hydro builds huge new unit. il Eng N 139:572 O 30 '47

Progress in Ontario. Elec R (Lond) 139:884 N 29 '46

Palestine

Palestine's Jordan River Valley plan emulates TVA development. E. E. Shalowitz. il maps Civil Eng 17:528-31+ S '47

Peru

1,400-ft. calyx holes for Peruvian hydro job. il plan Eng N 139:200-1 Ag 7 '47

Philippine Islands

Hydroelectric program for Manila. Elec World 127:61 F 1 '47

Quebec

Constructing the Shipshaw power development. W. M. Goodwin. il plan diags Comp Air Mag 52:2-7 Ja '47

Hydroelectric development in Quebec. F. L. Lawton. il map diag Elec Eng 66:873-9 S '47

Low-cost power on the Saguenay. W. M. Goodwin. il maps plan Comp Air Mag 51: 326-9 D '46

Russia

USSR cuts lake's evaporation to increase hydro-power generation. il Power 91:110 F '47

Scotland

Annual report of the North of Scotland hydro-electric board. Engineer 184:41-2 Jl 11 '47; Electrician 139:104 Jl 11 '47

Glen Shira hydro-electric scheme. Engineer 184:149 Ag 15 '47

Hydro-electric developments in Scotland. J. Henderson. maps Engineering 164:333-5, 357-9 O 3-10 '47

North of Scotland Glen Lussa scheme. map Engineer 183:401 My 9 '47

North of Scotland Glen Shira hydro-electric scheme. il map Engineer 183:204 Mr 7 '47

North of Scotland, Storr Lochs hydro-electric scheme. map Engineer 183:546 Je 20 '47

South Carolina

Santee Cooper generating plant completes five years of service; performance record and cost data. F. A. Dale. il Civil Eng 17:476-7 Ag '47

Sweden

Water power; cornerstone of Sweden's industrial development. H. G. Tonndorf. il Power 91:168-70 Mr '47

HYDROELECTRIC plants—*Continued*

Switzerland

Electric steam boilers use excess hydro power in Switzerland. il diag Power 90:856+ D '46

Projet d'extension des installations hydro-électriques du Hasli supérieur, Suisse. map Génie Civil 124:39 Ja 15 '47

Rupperswil-Auenstein dam. il diags Engineer 183:174-6 F 14 '47

Texas

Texas power & light co. and SPA agree on Denison Dam energy. Elec World News ed 127:3-4 Ap 19 '47

United States

Hydroelectric projects built or on order in 1946; tabulation. F. A. Annett, comp. Power 91:380-2 Je '47

Major projects; brief reports on status of construction operations. il Eng N 138:311-13 F 20 '47

U.S. and Canada hit new high in hydro; over 4,000,000 hp on order. Power 91:379+ Je '47

Vermont

Wilder hydro re-development on Connecticut river. C. R. Bliss. il map diag Power Pl Eng 51:78-9 Ap '47

Wisconsin

Correction of tailwater erosion at Prairie du Sac dam. C. N. Ward and H. J. Hunt. il Am Soc C E Proc 72:1077-89 O '46; Discussion. 73:709-17 My '47

Wisconsin has river basin project developed by business interests. Pub Util 38:771-3 D 5 '46

HYDROELECTRIC power

Interior department reveals major objectives in report. Elec World News ed 127:3 F 8 '47

International electricity supply; Great Britain compared with other countries. H. Nimmo. Engineering 162:449-50 N 8 '46

Proposed projects develop power and irrigation potentials of Colorado River system. H. F. McPhail. il map Civil Eng 17:459-63+ Ag '47

Rainfall and water power; abstract. E. S. Ritter. Electrician 139:1148 O 17 '47

See also

Bonneville power administration

Hydroelectric plants

HYDROFLUORIC acid

Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 139-41 N '46

Critical ionization potentials of uranium hexafluoride and hydrogen fluoride. J. R. White and A. E. Cameron. Phys R 71:907 Je 15 '47

Enthalpy concentration chart for hydrogen fluoride-water solutions. E. G. Vogt. Chem Eng Prog 43:39-40 Ja '47

Hydrofluoric acid-water and hydrofluoric acid-hydrofluosilicic acid-water. P. A. Munter, O. T. Aepli and R. A. Kossatz. bibliog il diags Ind & Eng Chem 39:427-31 Mr '47

HF alkylation. flow diag Oil & Gas J 45:159 Mr 22 '47

Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of groups 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47

Molecular association in hydrogen fluoride vapor. H. A. Benesi and C. P. Smyth. bibliog J Chem Phys 15:337 My '47

New resistant glass withstands hydrofluoric acid. Chem Age (Lond) 57:539 O 18 '47

Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47

Prevention of corrosion by fluorine and by hydrofluoric acid requires quite special apparatus. M. G. Fontana. Ind & Eng Chem 39:sup91A-2A Mr '47

Thermodynamics of aqueous hydrofluoric acid solutions. H. H. Broene and T. De Vries. bibliog Am Chem Soc J 69:1644-6 Jl '47

Vapor pressure of hydrofluoric acid solutions. J. C. Brosheer, F. A. Lenfesty and K. L. Elmore. bibliog il Ind & Eng Chem 39:423-7 Mr '47

Analysis

Analysis of anhydrous hydrogen fluoride. C. D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47

Physiological effect

Hydrofluoric acid burn. A. N. Flack and P. D. Scofield. il Ind Med 16:17-18 Ja '47

Urinary fluoride excretion among men employed in alkylation plants using the hydrogen fluoride process. E. J. Largent. J Ind Hygiene 29:53-5 Ja '47

HYDROFLUOSILICIC acid. See Fluosilicic acid

HYDROFORMING process. See Gasoline—Manufacture

HYDROGEN

Adsorption of hydrogen and nitrogen on chromium oxide gel. P. H. Emmett and M. Cines. bibliog Am Chem Soc J 68:2535-6 D '46

Adsorption of hydrogen on tungsten powders. G. Halsey and H. S. Taylor. J Chem Phys 15:624-30 S '47

Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46

Carbon-hydrogen ratios of distillate fuel oils. S. P. Cauley and E. B. Delgass. Oil & Gas J 46:83-4 Jl 19 '47

Collision cross sections of carbon and hydrogen for fast neutrons. W. Sleator, jr. bibliog diag Phys R 72:207-19 Ag 1 '47

Differences in mass spectra of H_2 and D_2. N. Bauer and J. Y. Beach. bibliog J Chem Phys 15:150-1 Mr '47

Fine structure of Hα. L. Giulotto. Phys R 71:562 Ap 15 '47

Fine structure of the hydrogen atom by a microwave method. W. E. Lamb, jr. and R. C. Retherford. bibliog Phys R 72:241-3 Ag 1 '47

Heat transfer in a 3-1 hydrogen-nitrogen mixture at high pressure. A. P. Colburn, T. B. Drew and H. Worthington. bibliog diag Ind & Eng Chem 39:953-64 Ag '47

Heterogeneity of catalyst surfaces for chemisorption; zinc oxide. H. S. Taylor and S. C. Liang. bibliog Am Chem Soc J 69:1306-12 Je '47

Hydrogen atom in a generalized classical electrodynamics. C. J. Eliezer. Phys R 71: 49-53 Ja 1 '47

Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of groups 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47

Hydrogen discharge tube. G. B. Arnold and L. Donn. bibliog il diags Anal Chem 19: 666-7 S '47

Hydrogen-fluorine torch. H. F. Priest and A. V. Grosse. bibliog il diag Ind & Eng Chem 39:431-3 Mr '47

Hydrogen recoil proportional counter for neutron detection. J. H. Coon and R. A. Nobles. diags R Sci Instr 18:44-7 Ja '47

Hyperfine structure of atomic hydrogen and deuterium. J. E. Nafe and others. bibliog Phys R 71:914-15 Je 15 '47

Hyperfine structure of the ground state of H and D atoms. O. Halpern. Phys R 72:245-6 Ag 1 '47

Influence of glass composition on reducibility of Ag^{+}, Bi^{3+}, Sb^{3+}, and Pb^{2+}. A. W. Bastress. Am Cer Soc J 30:52-3 F 1 '47

Infrared spectroscopic investigations of hydrogen bonding in hindered and unhindered phenols. N. D. Coggeshall. bibliog Am Chem Soc J 69:1620-4 Jl '47

Mass spectra of hydrogen and deuterium. D. P. Stevenson. bibliog J Chem Phys 15:409-11 Je '47

Maximum inversion temperatures of helium, hydrogen, and neon. J. Joffe. Phys R 70: 766-7 N 1 '46

Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46

HYDROGEN—*Continued*
Metals plus hydrogen. H. C. E. Johnson. il Sci Am 176:116-18 Mr '47
Microbial transformation of molecular hydrogen in marine sediments, with particular reference to petroleum. C. E. ZoBell. Am Assn Pet Geologists Bul 31:1709-51 bibliog(200 titles, p1745-51) O '47
Nature of the hydrogen bond in KHF_2. K. S. Pitzer and E. F. Westrum. bibilog J Chem Phys 15:526 Jl '47
Neutron-hydrogen mass difference and the neutron mass. W. E. Stephens. bibliog Rs Mod Phys 19:19-24 Ja '47
Neutron-proton and neutron-carbon scattering cross sections for fast neutrons. C. L. Bailey and others. bibliog diag Phys R 70: 583 N 1 '46
Neutron scattering in ortho- and parahydrogen. M. Hamermesh and J. Schwinger. bibliog Phys R 71:678-80 My 15 '47
Nuclear magnetic resonance absorption in hydrogen gas. E. M. Purcell and others. Phys R 70:986-7 D 1 '46
Sorption of hydrogen on alumina. A. S. Russell and J. J. Stokes, jr. bibliog Am Chem Soc J 69:1816-19 Je '47
Theory of burning velocity; temperature and free radical concentrations near the flame front, relative importance of heat conduction and diffusion. C. Tanford. bibliog J Chem Phys 15:433-9 Jl '47
Total cross sections of carbon and hydrogen for neutrons of energies from 35 to 490 kev. D. H. Frisch. diags Phys R 70:589-92 N 1 '46
Upper limit for the cross section for scattering of neutrinos by hydrogen. E. O. Wollan. Phys R 72:445-6 S 15 '47
Velocity of sound in hydrogen when rotational degrees of freedom fail to be excited. J. E. Rhodes, jr. bibliog Phys R 70:932-8 D 1 '46

See also
Metals—Hydrogen content

Analysis

Automatic microdetermination of carbon and hydrogen. R. O. Clark and G. H. Stillson. il diag Anal Chem 19:423-6 Je '47
Determination of carbon and hydrogen by combustion; unitized dual apparatus and improved procedure. D. D. Tunnicliff and others. bibliog il diags Ind & Eng Chem Anal ed 18:710-18 N '46
Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47
Determination of hydrogen in fluorine-containing halohydrocarbons. J. F. Miller and others. diag Anal Chem 19:146-7 Mr '47
Estimation of hydrogen content of gasoils. C. Allen. bibliog Pet Refiner 26:116-18 F '47
Semimicrodetermination of carbon and hydrogen. E. C. Horning and M. G. Horning. bibliog il Anal Chem 19:688-90 S '47
Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47

Atomic hydrogen

Detection of free radicals in hydrogen atom reactions. G. M. Harris and A. W. Tickner. J Chem Phys 15:686-7 S '47
Porcelain enameling characteristics of some common ferrous metals; diffusibility of atomic hydrogen. W. A. Deringer. il diag Am Cer Soc J 29:332-40 N 1 '46

See also
Electric welding, Arc—Hydrogen process

Industrial applications

Nine years' operating experience with hydrogen-cooled generators. D. S. Snell and L. P. Grobel. graphs Power Pl Eng 51:68-72 My; 78-82+ Je '47

See also
Electric welding, Arc—Hydrogen process

Isotopes

Cathodic protium-tritium separation factor. M. L. Eidinoff. Am Chem Soc J 69:977 Ap '47
Vibrational frequencies of the isotopic water molecules; equilibria with the isotopic hydrogens. W. F. Libby. bibliog J Chem Phys 11:101-9 Mr '43; Correction. 15:339 My '47

See also
Deuterium
Tritium

Manufacture

Hygirtol process; Girdler corporation. flow diag Pet Refiner (Process Handbook sec) 26:180-1 Ap '47
Hypersorption process; Union oil company of California. flow diag Pet Refiner (Process Handbook ser) 26:182-3 Ap '47

HYDROGEN, Liquid
Joule-Thomson effects in hydrogen at liquid air at room temperatures. H. L. Johnston, I. I. Bezman and C. B. Hood. bibliog Am Chem Soc J 68:2367-73 N '46
New cryogenic methods of using liquid hydrogen. W. DeSorbo and others. il diags Chem R 39:403-17 D '46
Small scale hydrogen liquefier. H. A. Fairbank. il diags R Sci Instr 17:473-7 N '46
Thermophone as a source of sound in liquid helium and liquid hydrogen. H. A. Fairbank and others. bibliog diag Acoustical Soc Am J 19:475-7 My '47

HYDROGEN bromide. See Hydrobromic acid
HYDROGEN chloride. See Hydrochloric acid
HYDROGEN compounds

See also
Hydrides

HYDROGEN cyanide. See Hydrocyanic acid
HYDROGEN fluoride. See Hydrofluoric acid
HYDROGEN ion concentration
Apparatus for rapid electrometric titration of acid; determination of pH and measurement of turbidity in microbiological assays. L. B. Rockland and M. S. Dunn. bibliog diags Anal Chem 19:812-13 O '47
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47
Chart gives pH curves of some common acids, bases, and salts. Textile World 96: 111 N '46
Combination of wool protein with heavy metal salts as a function of pH. K. S. LaFleur. bibliog il Am Dyestuff Rep 35:383-6+; 36: 616-18 Ag 12 '46, O 20 '47
Control of pH in nickel plating solutions. H. Bandes. Electrochem Soc Trans 90 (preprint 34):423-37 '46
Control of pH of neoprene latex. H. K. Livingston and R. H. Walsh. bibliog Ind & Eng Chem 38:1262-5 D '46
Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. Kline and others. bibliog J Res Nat Bur Stand 37: 281-310 N '46; Same. Mod Plastics 24:123-8+ Jl '47
Effect of electrolytes on the foaming capacity of alpha soybean protein dispersions. J. M. Perri, jr. and F. Hazel. bibliog J Phys & Colloid Chem 51:661-6 My '47
Effect of pH on the reactivity of resorcinol resins. P. H. Rhodes. bibliog Mod Plastics 24:145-6+ Ag '47
Effect of the hydrogen ion concentration upon the salt error of the quinhydrone electrode. J. L. Gabbard. bibliog diag Am Chem Soc J 69:533-6 Mr '47
Gravity and pH sampler for closed vessels. F. L. Culler, jr. diag Chem Eng 54:140 F '47
Hydrogen gas electrode measurements. G. A. Perley. bibliog il Electrochem Soc Trans 92(preprint 14):167-77 '47
pH of nonaqueous colloidal carbon sludges. M. Brooke. Ind & Eng Chem 39:846 Jl '47
pH of waters from gas-condensate wells saturated with carbon dioxide at various pressures. H. A. Carlson. bibliog Pet Eng 18:160+ N '46

HYDROGEN ion concentration—*Continued*
pH of wines; examination of glass and quinhydrone electrode values. J. C. M. Fornachon. bibliog Ind & Eng Chem Anal ed 18:790-3 D '46
Kinetic study of the urea-formaldehyde reaction. L. E. Smythe. bibliog J Phys & Colloid Chem 51:369-78 Mr '47
Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69: 1296-301 Je '47
Measurement and control of pH. N. E. Swanson. Oil & Gas J 46:117 Ag 16; 137 Ag 23; 107 Ag 30; 109-10 S 6 '47
Meter control of water softening process; use of pH indicating recorder at the St Paul filtration plant. R. A. Thuma. il Eng N 138:384-5 Mr 6 '47
New pH indicators for determination of total alkalinity in water; disodium 4,4′-bis(*p*-dimethylaminophenylazo)-2,2′-stilbenedisulfonate and disodium 4,4′-bis(*o*-tolyltriazeno)-2,2′-stilbenedisulfonate. M. Taras. bibliog Anal Chem 19:339-41 My '47
Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47
Polarographic investigation of oxalate, citrate and tartrate complexes of ferric and ferrous iron. J. J. Lingane. bibliog Am Chem Soc J 68:2448-53 D '46
Portable pH meter. il Chem Eng 54:158+ S '47
Rapid electrometric determination of the alkalinity of sea water using a glass electrode. D. H. Anderson and R. J. Robinson. bibliog Ind & Eng Chem Anal ed 18: 767-9 D '46
Recent developments in apparatus for *p*H measurement and electro-titrations; abstract. A. D. E. Lauchlan. Chem Age (Lond) 55:641 N 23 '46
Saturated potassium hydrogen tartrate solution as a pH standard. J. J. Lingane. bibliog Anal Chem 19:810-11 O '47
Spectral changes in some dye ions and their relation to the protein error in indicators. I. M. Klotz and F. M. Walker. bibliog J Phys & Colloid Chem 51:666-80 My '47
Spectrophotometric and potentiometric evaluation of apparent acid dissociation exponents of various 4-aminoquinolines. J. L. Irvin and E. M. Irvin. bibliog Am Chem Soc J 69:1091-9 My '47
Standards bureau recommends pH scale. Oil Paint & Drug Rep 152:50 O 27 '47
Studies on carbon black; electrometric titration. D. S. Villars. bibliog Am Chem Soc J 69:214-17 F '47

HYDROGEN ion gun
Ion beams in high voltage tubes using differential pumping. E. S. Lamar and W. W. Buechner. bibliog diag J Ap Phys 18:22-7 Ja '47

HYDROGEN peroxide
Antiseptic action of glycerite of hydrogen peroxide on *mycobacterium tuberculosis* (var. *hominis*). E. A. Brown and L. W. Slanetz. bibliog Science 105:312-13 Mr 21 '47
Determination of residual silica on cotton in peroxide bleaching. B. DuBose and V. B. Holland. Am Dyestuff Rep 36:227-8 My 5 '47
Effect of cysteine—hydrogen peroxide treatments on the electrophoretic and immunological assay behavior of human gamma globulin. H. F. Deutsch. bibliog Am Chem Soc J 68:2625-8 D '46
Hydrogen peroxide for propulsive power; production and use by the Germans during World war II. L. McKee. diag Mech Eng 68:1045-8 D '46; Abstracts. Engineering 163: 307-8 Ap 18 '47; Chem Age (Lond) 57:395-7+ S 20 '47; Discussion. Mech Eng 69:682-4 Ag '47
Hydrogen peroxide; structural materials, manufacture and uses. J. S. Reichert and R. H. Pete. il Chem Eng 54:213-14+ Ap '47
Interaction of hydrogen peroxide and hypochlorous acid in acidic solutions containing chloride ion. R. E. Connick. bibliog Am Chem Soc J 69:1509-14 Je '47
Mechanism of decomposition of hydrogen peroxide solutions with manganese dioxide. D. B. Broughton, R. L. Wentworth and M. E. Laing. Am Chem Soc J 69:741-7 Ap '47
Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46
Reactions of the hydroxyl radical. W. H. Rodebush and others. bibliog Am Chem Soc J 69:538-40 Mr '47
Studies on the peroxide method for determining vanadium in minerals and ores. M. D. Foster. In U S Geol S Bul 950:7-13 '46

HYDROGEN sulfide
Absorption by hydrogen sulfide in the 3.5μ-4.5μ region. E. A. Wilson, jr. and P. C. Cross. J Chem Phys 15:687 S '47
Asymmetric rotor; analysis of the 3.7-μ band of H_2S by puncher-card techniques. R. M. Hainer and G. W. King. bibliog J Chem Phys 15:89-91 F '47
Augmentation de la résistance des ciments à l'hydrogène sulfuré par l'addition de ciment ferrique et de pouzzolane. Génie Civil 123: 300 N 1 '46
Determination of sulfate as barium sulfate; in the presence of metals of the acid hydrogen sulfide group. W. H. Millett and W. M. McNabb. bibliog Franklin Inst J 243:205-17 Mr '47
Determination of the equilibrium constant of the reaction between molten iron and hydrogen sulphide. J. White and H. Skelly. bibliog diags Iron & Steel Inst J 155:201-12 F '47; Discussion. 156:528-30 Ag '47
Equilibrium between gaseous carbon dioxide and hydrogen sulphide and solutions of alkali carbonates, bicarbonates and hydrosulphides. I. G. C. Dryden. bibliog Soc Chem Ind J 66:59-64 F '47
Expected microwave absorption coefficients of water and related molecules. G. W. King and others. bibliog Phys R 71:433-43 Ap 1 '47
Hydrogen sulphide removal by ammoniacal iron ammonium ferrocyanide liquors. H. C. Craggs and M. H. M. Arnold. diag Chem & Ind p571-3, 590-3 S 20-27 '47
Processing high-hydrogen sulphide-content natural gas. C. C. Pryor. flow diag il Pet Refiner 26:103-6 Mr '47
Purification of natural gas at well head. R. A. Graff. il Oil & Gas J 46:69 Ag 2 '47
Reaction of hydrogen sulfide with acrylonitrile, acrylic ester and crotonaldehyde. L. L. Gershbein and C. D. Hurd. bibliog Am Chem Soc J 69:241-2 F '47
Removal of organic sulphur compounds from gases. Gas J (Lond) 248:1102+, 1154+ D 18-25 '46
Shell phosphate process. flow diags Pet Refiner (Process Handbook sec) 26:250-1 Ap '47

Analysis
Analysis of anhydrous hydrogen fluoride. C. D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47
Conversion of organic sulfur to hydrogen sulfide for analysis. E. Field and C. S. Oldach. bibliog Ind & Eng Chem Anal ed 18:668-9 N '46
Determination of hydrogen sulfide in gases. E. Field and C. S. Oldach. diag Ind & Eng Chem Anal ed 18:665-7 N '46

HYDROGENATION
Base effect in catalytic hydrogenation; simple synthesis of 6-methoxy-α-tetralone. G. Stork. bibliog Am Chem Soc J 69:576-9 Mr '47
2-Butyne-1 : 4-diol; reactions involving the triple bonds. A. W. Johnson. Chem Soc J p 1014-17 N '46
Catalytic hydrogenation boosts sorbitol output. H. C. E. Johnson. il Chem Ind 61:618-20 O '47
Chemical nature of coal hydrogenation products; initial resolution by chromatography on alumina. M. B. Neuworth. bibliog diag Am Chem Soc J 69:1653-7 Jl '47
Decenes formed from *t*-amyl alcohol and from 2-methyl-2-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47

HYDROGENATION—*Continued*
Determination of the kinetics mechanism of a catalytic reaction. J. L. Tschernitz and others. bibliog flow chart pl diag Am Inst Chem Eng Trans 42:883-903; Discussion. 903-5 O-D '46
Development of hydrogenation and Fischer-Tropsch processes in Germany. K. Gordon. Inst Pet J 33:469-82; Discussion. 483-90 Ag '47
Experiments on the production of toluene from coal tar products and other sources. C. M. Cawley and others. bibliog flow diags plan Inst Pet J 32:660-83 N '46
Gasification of coal in hydrogen under pressure. Gas J (Lond) 248:984-6 D 4 '46
High pressure hydrogenations with Adams catalyst. R. H. Baker and R. D. Schuetz. bibliog Am Chem Soc J 69:1250-2 Je '47
Hydrogenation of catalytically cracked naphthas for production of aviation gasolines. A. Voorhies, jr., W. M. Smith and C. E. Hemminger. bibliog Ind & Eng Chem 39:1104-7 S '47
Hydrogenation of furfuraldehyde to furfuryl alcohol and sylvan (2-methylfuran). J. G. M. Bremner and R. K. F. Keeys. diags Chem Soc J p 1068-80 Ag '47
Hydrogenation of lignin over Raney nickel. J. F. Saeman and E. E. Harris. bibliog Am Chem Soc J 68:2507-9 D '46
Hydrogenation of spiropentane. V. A. Slabey. Am Chem Soc J 69:475 F '47
Hydrogenation of vitamin Bc (pteroylglutamic acid) and related pterines. B. L. O'Dell and others. Am Chem Soc J 69:250-3 F '47
Hydrogenation process; Standard oil development company. flow sheet Pet Refiner (Process Handbook sec) 26:178-9 Ap '47
Investigations on the stereoisomerism of unsaturated compounds; the catalytic hydrogenation of butadiene. W. G. Young and others. bibliog diags Am Chem Soc J 69: 2046-50 Ag '47
Preparation of acetopropyl alcohol and 1,4-pentanediol from methylfuran. L. E. Schniepp, H. H. Geller and R. W. Von Korff. bibliog Am Chem Soc J 69:672-4 Mr '47
Preparation of some primary and secondary β-cyclohexylalkylamines. B. L. Zenitz, E. B. Macks and M. L. Moore. bibliog Am Chem Soc J 69:1117-21 My '47
Preparation of β-tetralone by the catalytic reduction of β-naphthol. G. Stork and E. L. Foreman. bibliog Am Chem Soc J 68: 2172-4 N '46
Production of synthetic lubricating oils by hydrogenation reactions. G. G. Pritzker. bibliog Pet Processing 2:205-6+ Mr '47
Progress in hydrogenation of coal and tar. K. Gordon. diags Chem Age (Lond) 55:761-70, 795-804 D 21-28 '46
Studies in the terpene series; destructive hydrogenation of bicyclic dihydroterpenic hydrocarbons. V. N. Ipatieff, H. Pines and M. Savoy. bibliog Am Chem Soc J 69:1948-52 Ag '47
Synthetic production of petroleum; hydrogenation and Fischer processes. K. Gordon. Chem Age (Lond) 57:221-2, 269-70 Ag 16-23 '47
Work progresses on synthetic fuel unit; addition to Missouri ordnance works, Louisiana, Mo. L. H. Houck. il Manuf Rec 116:40+ S '47
See also
Dehydrogenation
Fischer-Tropsch process

HYDROGENOLYSIS
Hydrogenolysis of aliphatic alcohols. V. I. Komarewsky, C. F. Price and J. R. Coley. Am Chem Soc J 69:238-9 F '47

HYDROGRAPHIC surveying
Orinoco-Casiquiare-Negro waterway. map Engineering 163:421-3 My 23 '47
Topography of the Gulf of Maine; field season of 1940. H. W. Murray. bibliog maps Geol Soc Bul 58:153-96, pl 1-12 F '47
See also
Sounding

Study and teaching
Hydrographic surveying in the civil engineering curriculum. M. O. Schmidt. J Eng Educ 37:727-9 My '47

HYDROLOGY. See Water

HYDROLYSIS
Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47
Cold alkaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Constitution of mesquite gum; partial hydrolysis of mesquite gum. E. V. White. Am Chem Soc J 69:622-3 Mr '47
Constitution of the mucilage from the bark of ulmus fulva (slippery elm mucilage); sugars formed in the hydrolysis of the methylated mucilage. R. E. Gill, E. L. Hirst and J. K. N. Jones. Chem Soc J p 1025-9 N '46
Continuous hydrolysis of fats. H. D. Allen and others. flow diag diags Chem Eng Proc 43:459-66 S '47
Continuous process for hydrolysis of fats. Chem Age (Lond) 56:322 Mr 15 '47
General mechanism for the formation of volatile hydrides by hydrolysis reactions. D. T. Hurd. bibliog Am Chem Soc J 69:1647-51 Jl '47
High-boiling hydrolytic derivatives of lignin. A. Bailey. Am Chem Soc J 69:575-6 Mr '47
Hydrolysis and chlorinolysis of cyanogen chloride. C. C. Price and others. Am Chem Soc J 69:1640-4 Jl '47
Hydrolysis of dehydrated sodium phosphates. R. N. Bell. bibliog Ind & Eng Chem 39: 136-40 F '47
Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott. bibliog Am Chem Soc J 68:2291-4 N '46
Mechanism for the hydrolysis of cyanamide in acid solution. M. L. Kilpatrick. bibliog Am Chem Soc J 69:40-6 Ja '47
Starches and starch fractions; the determination of starch by hydrolysis with hydrochloric acid. L. H. Lampitt, C. H. F. Fuller and N. Goldenberg. bibliog Soc Chem Ind J 66:117-21 Ap '47
Study of the hydrolysis of several physostigmine analogs. S. W. Chaikin. bibliog Am Chem Soc J 69:1266-8 Je '47

HYDROMECHANICS
See also
Hydrodynamics
Hydrostatics

HYDROMETERS
Study of the wetting of textile materials; the use of a hydrometer method. I. J. Gruntfest and others. diag Am Dyestuff Rep 36:225-6+ My 5 '47
See also
Gravitometers

HYDROPEROXIDES. See Peroxides

HYDROPHOBIA. See Rabies

HYDROPHONE
Acoustic locating system; for finding torpedoes lost during test runs. E. A. Walker and P. M. Kendig. il diags Electronics 20: 124-7 F '47
German use of sonic listening. L. E. Holt. diags Acoustical Soc Am J 19:678-81 Jl '47
Measurement conditions influencing the front-to-back discrimination of an underwater hydrophone. L. N. Miller. Acoustical Soc Am J 19:59-62 Ja '47
Practical application of the reciprocity theorem in the calibration of underwater sound transducers. P. Ebaugh and R. E. Mueser. bibliog Acoustical Soc Am 19:695-700 Jl '47
Transient analysis of linear systems, using underwater explosion waves. M. F. M. Osborne and J. L. Carter. il J Ap Phys 17: 871-3 N '46

HYDROPONICS. See Plants—Soilless culture

HYDROQUINONE
Hydroquinone derivatives made available by Tennessee Eastman corp. Chem & Eng N 25:2924 O 6 '47; Same. Chem Ind 61:642 O '47
Oxidation processes; quinone catalysis in the autoxidation of hydroquinones. J. E. Lu-Valle and A. Weissberger. bibliog Am Chem Soc J 69:1576-82 Jl '47

HYDROQUINONE—*Continued*
Oxidation processes; the mechanism of autoxidation reactions in the presence of foreign catalysts and inhibitors. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1821-6 Jl '47

Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47

Analysis

Application of methyl ethyl ketone to the analysis of developers for Elon and hydroquinone. V. C. Shaner and M. R. Sparks. bibliog Soc Motion Picture Eng J 47:409-17 N '46

Improved method for the determination of hydroquinone and metol in photographic developers. H. L. Baumbach. bibliog Soc Motion Picture Eng J 47:403-8 N '46

Manufacture

Quinone vapors and their harmful effects; corneal and conjunctival injury. J. H. Sterner and others. flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73, 84) Mr '47

HYDROQUINONE dust
Quinone vapors and their harmful effects; corneal and conjunctival injury. J. H. Sterner and others. flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73, 84) Mr '47

HYDROSTATICS
Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47; Abstract. Engineer 184:506-7 N 28 '47; Discussion. S. Thompson. J Ap Phys 18:781-2; Reply. 782-3 Ag '47

Experiments on effective uplift area in gravity dams. S. Leliavsky. bibliog il diags Am Soc C E Proc 71:1474-1517 D '45; Discussion. 72:889-900; 73:349-59 Je '46, Mr '47

Hydrostatic lubrication. D. D. Fuller. bibliog il diags Machine Design 19:110-16 Je; 117-22 Jl; 115-20 Ag; 127-31+ S '47

Landslide investigation and correction; seepage forces in an earth dam. D. P. Barnes. diags Am Soc C E Proc 72:1387-90 D '46

Optimum spacing of rows of oil wells in sands under hydrostatic pressure. I. A. Charnyi. Pet Eng 18:135-7 Jl '47

Static stability analysis for flying boats and seaplanes. E. G. Stout. diags Aviation 45: 70-1 D '46; 46:58-60 Ja; 55-7 F; 59-61 Ap '47

HYDROXY acids
Synthesis of certain hydroxyacids with possible estrogenic activity. J. H. Hunter and J. Korman. bibliog Am Chem Soc J 69:2124-6 S '47

HYDROXYALKYLATION. See Alkylation

HYDROXYAMINES
Basic dissociation constants of some aliphatic hydroxyamines. S. Glasstone and A. F. Schram. Am Chem Soc J 69:1213-14 My '47

HYDROXYAMINOPYRIDINE
Tuberculostatic compounds; ethers of 2-hydroxy-5-aminopyridine. H. L. Friedman and others. Am Chem Soc J 69:1204-6 My '47

HYDROXYANDROSTERONE
Structure of adreno-cortical metabolites; $\Delta^{9,11}$-androstene-3 : 17-dione. C. W. Shoppee. Chem Soc J p 1134-7 D '46

HYDROXYANTHRAQUINONE
Spectrophotometric study of the hafnium-alizarin lake. H. A. Liebhafsky and E. H. Winslow. bibliog Am Chem Soc J 69:1130-4 My '47

HYDROXYBENZALDEHYDE
Mannich reaction with *p*-hydroxybenzaldehyde and N-(*p*-hydroxybenzyl)-acetamide. N. H. Cromwell. Am Chem Soc J 68:2634-6 D '46

HYDROXYBENZOIC acid
Esters of 4-hydroxybenzoic acid and related compounds; methods for the study of their fungistatic properties. J. M. Vincent. bibliog Soc Chem Ind J 66:149-55 My '47

Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47

HYDROXYBENZOPHENONE
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

HYDROXYBENZYLACETAMIDE
Mannich reaction with *p*-hydroxybenzaldehyde and N-(*p*-hydroxybenzyl)-acetamide. N. H. Cromwell. Am Chem Soc J 68:2634-6 D '46

HYDROXYCINNOLINE
Cinnolines; 8-nitro-4-hydroxycinnoline. J. C. E. Simpson. Chem Soc J p237-8 F '47

Cinnolines; preparation of 4-chloro-2-aminoacetophenone and related 4-hydroxycinnolines. C. M. Atkinson and J. C. E. Simpson. Chem Soc J p232-7 F '47

Cinnolines; the preparation of some 6 : 7- and 7 : 8-disubstituted-4-hydroxycinnolines. J. R. Keneford and J. C. E. Simpson. Chem Soc J p227-32 F '47

HYDROXYCINNOLINECARBOXYLIC acid
Cinnolines; esters of 4-hydroxy-cinnoline- and -quinoline-3-carboxylic acids. J. C. E. Simpson. Chem Soc J p 1035-6 N '46

HYDROXYCODEINE
Possible route to the location of the nitrogen atom in morphine. H. L. Holmes and C. C. Lee. bibliog Am Chem Soc J 69:1996-7 Ag '47

HYDROXY compounds
Action of diazomethane on hydroxy-compounds and of diazomethane derivatives on phenanthraquinone. A. Schönberg and A. Mustafa. Chem Soc J p746-8 Ag '46

Electrical conductivities of long-chain quaternary ammonium chlorides containing hydroxyalkyl groups. A. W. Ralston and others. Am Chem Soc J 69:2095-7 S '47

Experiments on the interaction of hydroxy-compounds and phosphorus and thionyl halides in the absence and in the presence of tertiary bases. W. Gerrard.. Chem Soc J p741-4 Ag '46

Experiments with diazomethane and its derivatives; action of diazomethane on hydroxyanils. A. Schönberg, A. Mustafa and M. K. Hilmy. Chem Soc J p 1045-8 Ag '47

Properties of the silicon-hydroxyl bond in trialkylsilanols. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore. bibliog Am Chem Soc J 68:2282-4 N '46

HYDROXYDIHYDROQUININDENE
Tetrahydroacridones and related compounds as antimalarials. J. M. L. Stephen, I. M. Tonkin and J. Walker. Chem Soc J p 1034-9 Ag '47

HYDROXYDIMETHYLPYRAZINE
Pyrazine derivatives; 2-hydroxy-3 : 6-dimethylpyrazine. R. A. Baxter, G. T. Newbold and F. S. Spring. Chem Soc J p370-2 Mr '47

HYDROXYEQUILENONE
Synthesis of 2-hydroxy-17-equilenone. W. E. Bachmann and W. J. Horton. bibliog Am Chem Soc J 69:58-61 Ja '47

HYDROXYETHOXYAMINOQUINOLINE
Studies in the quinoline series; some 6-β-hydroxyethoxy-4-aminoquinolines. V. G. Ramsey and L. H. Cretcher. bibliog Am Chem Soc J 69:1659-62 Jl '47

HYDROXYETHYLAPOCUPREINE
Hydroxyalkylation with cyclic alkylene esters; synthesis of hydroxyethylapocupreine. W. W. Carlson and L. H. Cretcher. bibliog Am Chem Soc J 69:1952-6 Ag '47

HYDROXYMETHYLFURFURAL
Effect of heat on aqueous solutions of sucrose and other carbohydrates. R. Montgomery and L. F. Wiggins. bibliog Soc Chem Ind J 66:31-2 Ja '47

HYDROXYMETHYL phthalimide
Reaction of N-hydroxymethyl phthalimide with nitriles. S. R. Buc. bibliog Am Chem Soc J 69:254-6 F '47

HYDROXYMETHYLPYRIDINE
Contributions to the chemistry of pyridine; 3- and 5-hydroxy-2-methylpyridine, and the condensation of 5-hydroxy-2-methylpyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 132-4 F '47

HYDROXYMETHYLPYRIMIDINE
Analogs of pyridoxine. G. E. McCasland and others. bibliog Am Chem Soc J 68:2390-5 N '46

HYDROXYMETHYLENEIONONE
Synthesis of compounds related to vitamin A from hydroxymethylene β-ionone. E. M. Shantz. Am Chem Soc J 68:2553-7 D '46

HYDROXYPALMITIC acid
γ-Palmitolactone and γ-hydroxypalmitic acid. D. F. Houston. bibliog Am Chem Soc J 69:517 Mr '47

HYDROXYPENTENOIC acid
Synthesis of some 5-substituted-5-hydroxy-2-pentenoic acids. J. English, jr. and J. D. Gregory. bibliog Am Chem Soc J 69:2123-4 S '47

HYDROXYPHENYLACETIC acid. See Hydroxytoluic acid

HYDROXYPICOLINE
Substituted 2-picolines derived from 6-amino-2-picoline. E. D. Parker and W. Shive. bibliog Am Chem Soc J 69:63-7 Ja '47

HYDROXYPYRAZINE
Pyrazine derivatives. R. A. Baxter, G. T. Newbold and F. S. Spring. Chem Soc J p370-8 Mr '47

HYDROXYPYRAZINOIC acid
Pyrazine chemistry; derivatives of 3-hydroxypyrazinoic acid. F. G. McDonald and R. C. Ellingson. bibliog Am Chem Soc J 69:1034-7 My '47

HYDROXYPYRIDINE
Contributions to the chemistry of pyridine; condensation of β-hydroxypridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 1104-5 D '46

HYDROXYQUINOLINE
Determination of gallium in silicate rocks. E. B. Sandell. bibliog Anal Chem 19:63-5 Ja '47

Synthesis of 4-hydroxyquinolines; 4-chloro-7-cyanoquinoline and 4-chloro-5-cyanoquinoline. C. C. Price and others. Am Chem Soc J 69:374-6 F '47

Synthesis of 4-hydroxyquinolines; quinoline derivatives with sulfur-containing substituents. C. C. Price, N. J. Leonard and G. W. Stacy. Am Chem Soc J 69:855-8 Ap '47

Synthesis of 4-hydroxyquinolines; some halogen containing 4-aminoquinoline derivatives. H. R. Snyder and others. Am Chem Soc J 69:371-4 F '47

Tetrahydroacridones and related compounds as antimalarials. J. M. L. Stephen, I. M. Tonkin and J. Walker. Chem Soc J p 1034-9 Ag '47

Ultraviolet absorption spectrum and the acid ionization constant of 8-hydroxyquinoline. K. G. Stone and L. Friedman. bibliog Am Chem Soc J 69:209-11 F '47

HYDROXYQUINOLINE carboxylic acid
Cinnolines; esters of 4-hydroxy-cinnoline- and -quinoline-3-carboxylic acids. J. C. E. Simpson. Chem Soc J p 1035-6 N '46

HYDROXYTOLUIC acid
Ortho-hydroxyphenylacetic acid from an amorphous penicillin. H. Fischbach and others. bibliog Science 106:373-4 O 17 '47

Preparation of hydroxyphenylalkanoic acids by the Willgerodt reaction. A. C. Ott, L. A. Mattano and G. H. Coleman. bibliog Am Chem Soc J 68:2633-4 D '46

HYDROXYL group
2-Butyne-1 : 4-diol; reactions of the hydroxyl groups. A. W. Johnson. Chem Soc J p 1009-14 N '46

Configuration of the C_3 hydroxyl group in hyodesoxycholic acid. R. B. Moffett and W. M. Hoehn. bibliog Am Chem Soc J 69:1995-6 Ag '47

Infrared absorption studies; stereochemistry of the hydroxyl group in vinyl alcohols. A. M. Buswell, W. H. Rodebush and R. M. Whitney. Am Chem Soc J 69:770-2 Ap '47

Reactions of the hydroxyl radical. W. H. Rodebush and others. bibliog Am Chem Soc J 69:538-40 Mr '47

HYDROXYL ion
Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19:675-7 S '47

HYDROXYLAMINE
Reaction of thiophene with formaldehyde and salts of hydroxylamine. H. D. Hartough. bibliog Am Chem Soc J 69:1355-8 Je '47

HYDROXYLATION
Performic acid hydroxylation of α,β-unsaturated acids and esters. J. English, jr. and J. D. Gregory. bibliog Am Chem Soc J 69:2120-2 S '47

HYGIENE
See also
Air pollution
Diet
Disinfection and disinfectants
Fatigue
Food
Mental hygiene
Nutrition
Physical examinations
Public health
Sanitation
Sickness
Temperature—Physiological effect
Ventilation
Water pollution
Water purification
Water supply

Bibliography
Health books for public libraries, 1945-1946. E. R. Hawkins, comp. Booklist [ALA] 44: 56-7, 119-20 O 1, N 15 '47

HYGIENE, Industrial
Air hygiene is favored topic at industrial health meetings in Buffalo, April 26-May 4. Heat & Ven 44:112-13 Je '47

Are these your problems, too? industrial hygiene division of U.S. Public health service education and information program. Safety Eng 93:52 Ja '47

Clean-up for health. Safety Eng 94:47-8 Jl '47

Control of lead exposure in storage battery manufacture. G. S. Winn and C. Shroyer. J Ind Hygiene 29:351-6 S '47

Control of radioactivity hazards. W. H. Sullivan. Chem & Eng N 25:1862-5 Je 30 '47

Dust control by ventilation. J. M. Kane. il Safety Eng 92:62-3 N '46

Dust control in industry; abstract. T. F. Hatch. Rock Prod 50:81 Mr '47

Effect of administering a vitamin supplement, in capsules, to groups of workers in the steel industry. A. C. Ivy and others. Ind Med 16:163-7 Ap '47

Evaluation of some factors in the development of occupational deafness. W. R. MacLaren and A. L. Chaney. bibliog diags Ind Med 16:109-15 Mr '47; Abstract. Nat Safety N 55:52+ Je '47

Foundry atmosphere. W. N. Witheridge. il plan Iron Age 160:62-7 Ag 21; 67-73 Ag 28 '47

Health in industry; abstracts of proceedings of combined meetings, Buffalo, New York, April 26-May 4. Ind Med 16:408+ Ag '47

Health in industry; abstracts of proceedings of the 11th annual meetings of the Industrial hygiene foundation. Ind Med 16:72+ F '47

Health in industry; importance of diet. Comp Air Mag 52:130 My '47

Health in industry; proposed industrial medical center, New York city. il Bsns W p97-8+ O 11 '47

Healthy, comfortable workers produce more. A. G. Hewitt. il Safety Eng 92:84+ O '46

How the medical department helps a safety program. J. A. Hubata. il Safety Eng 94: 54-5+ Ag '47

How to use chlorinated solvents. Safety Eng 93:60+ Mr '47

Hygiene problems in the textile industry. J. W. Hammond. il Safety Eng 93:66-9 My '47

Industrial health congress. C. O. Sappington. Ind Med 16:18-27 Ja '47

Industrial hygiene; abstracts of proceedings of Industrial hygiene section, 74th annual meeting of American public health association, Cleveland. Ind Med 16:448-9+ S '47

Industrial hygiene for all workers; evaluation of present facilities. J. G. Townsend. Ind Med 16:281-4 Je '47

HYGIENE, Industrial—*Continued*
Industrial hygiene survey of an onion dehydrating plant. B. Feiner and others. bibliog J Ind Hygiene 28:278-9 N '46
Industrial hygienists meet at Buffalo. Chem & Eng N 25:1432 My 19 '47
Industrial sanitation. G. W. Reid. Ind Med 16:183-4 Ap '47
Instrument control of environment; American can co. L. V. Taylor. Safety Eng 94:50 Jl '47
Keep air clean. C. H. Mehaffey. Am Mach 91:111-13 F 13 '47
Lowering personnel turnover. J. S. Felton. Ind Med 15:682-4 D '46
Mass chest survey at Douglas Aircraft plant. E. C. Armes. il Ind Med 16:225-7 My '47
Medical protection in solvent operations. L. Gordon. Rubber Age 60:451-2 Ja '47
Mercury; hazards and precautions. Nat Safety N 55:39-40+ Ja '47
Minimum requirements for an industrial health program. P. A. Brehm. il Nat Safety N 54:34-5+ D '46; Same cond. Safety Eng 94:58-61+ Ag; 52-3 S '47
Minor illness, short medical absenteeism, lateness and separation in a mail order firm. L. P. Hellman and others. Ind Med 16:14-17 Ja '47
Modern concept of industrial hygiene. Ind Med 16:30+ Ja '47
New challenges for the industrial hygienist. E. E. Dart. bibliog il Nat Safety N 55:24-5+ F '47
Occupational dermatitis and preventive methods. L. Schwartz and P. C. Campbell, jr. bibliog il Safety Eng 93:58-61+ Je; 94:52-4 Jl '47
Practical experiences with dangers and illnesses from plastics. C. S. McKinley. Ind Med 16:432-4 S '47
Preventive medicine in engineering education. G. W. Reid. J Eng Educ 37:638-40 Ap '47
Progress report on ventilation for cotton textile processes. L. Silverman and F. J. Viles, jr. il diags Heat & Ven 44:83-90 O '47
Role of codes in industrial hygiene administration. T. C. Waters. Ind Med 16:436-8 S '47
Role of the laboratory in an industrial hygiene program. A. L. Koven. bibliog Ind Med 15:628-32 N '46
Sanitation in the food industry. P. A. Brehm. Safety Eng 94:54+ S; 90-1+ O '47
Should air be recirculated from industrial exhaust systems? A. D. Brandt. il Heating-Piping 19:69-72 Ag '47; Discussion. L. T. Avery. 19:120 S '47
Sickness absenteeism among industrial workers, first quarter of 1946. W. M. Gafafer. Pub Health Rep 61:1664-6 N 15 '46
Sickness absenteeism among industrial workers, second and third quarters of 1946. W. M. Gafafer. Pub Health Rep 62:272-6 F 21 '47
Sickness absenteeism among industrial workers, fourth quarter of 1946. W. M. Gafafer. Pub Health Rep 62:1095-7 Jl 25 '47
Sickness absenteeism among male and female industrial workers during 1945, with a note on the respiratory epidemic of 1945-46. W. M. Gafafer. bibliog Pub Health Rep 61: 1620-30 N 8 '46
Supervising a plant hygiene program; International business machines corp. C. B. Burris. il Safety Eng 92:58-61 N '46
Wet-sandblasting operations; safety measures. Safety Eng 93:70 Mr '47
Why industrial hygiene in a rubber company? W. E. McCormick. il Rubber Age 61:322+ Je '47
Workers diet cited as industrial illness preventive. Safety Eng 93:64 My '47

See also
Coal miners—Diseases and hygiene
Dental service, Industrial
Diseases, Industrial
Dust removal
Eye—Examination
Factories—Cleanliness
Factory sanitation
Fatigue
Lavatories
Lead poisoning
Lunchrooms and cafeterias, Employees'
Lungs—Dust diseases
Medical service, Industrial
Mental hygiene, Industrial
Miners—Diseases and hygiene
Noise
Nurses and nursing, Industrial
Physical examinations
Poisons, Industrial
Quinone—Physiological effect
Railroads—Clinic trains
Safety devices and measures
Solvents—Physiological effect
Temperature—Physiological effect
Welding—Hygienic aspects

Bibliography
Abstract of the literature of industrial hygiene and toxicology. Published in monthly numbers of Journal of industrial hygiene and toxicology
Industrial safety and health. 69p pa 35c National safety council, 20 North Wacker drive, Chicago 6 '47

Research
Health research in British industry. R. S. F. Schilling. Ind Med 16:444-5 S '47
Next steps in industrial hygiene research; abstract. P. A. Neal. Ind Med 16:456 S '47
Outline analysis of research problems in industrial physiology; abstract. E. Simonson. J Ind Hygiene 29:sup 88-9 S '47

HYGIENIC laboratories
Role of the laboratory in an industrial hygiene program. A. L. Koven. bibliog Ind Med 15:628-32 N '46

HYGROMETERS
Application of the electric hygrometer to the determination of water-vapor permeability at low temperature. J. A. Van den Akker. bibliog diags Paper Tr J 124:51-6 Je '47; Same cond. Mod Packaging 20:148-51+ My '47; Same cond. Paper Ind 29:108+ Ap '47
Constructional details and advantages of a new electric hygrometer are reported. R. H. Munch. il Ind & Eng Chem 39:sup 83A-4A Ja '47
Hygrometer for high pressure gases. W. W. Buechner and L. R. McIntosh. diag R Sci Instr 18:586 Ag '47

HYGROSCOPICITY
Hygroscopicity of penicillin salts. C. Carr and J. A. Riddick. Ind & Eng Chem 39:1021-3 Ag '47

HY-LINE poultry farms
Poultry division of the Pioneer hybrid seed corn co. Fortune 35:158+ Mr '47

HYODESOXYCHOLIC acid
Configuration of the C_6 hydroxyl group in hyodesoxycholic acid. R. B. Moffett and W. M. Hoehn. bibliog Am Chem Soc J 69: 1995-6 Ag '47
3(β) : 6(β)-Dihydroxycholanic acid, an epimeride of hyodeoxycholic acid. J. S. Moffatt. Chem Soc J p812-15 Je '47

HYPERINSULINISM. See Insulin

HYPERSORPTION. See Adsorption

HYPERTHYROIDISM. See Thyroid gland

HYPERVOLEMIA. See Blood

HYPNOTICS
Thiohydantoins; conversion of 5 : 5-disubstituted 2 : 4-dithiohydantoins into the corresponding monothiohydantoins. H. C. Carrington. Chem Soc J p684-6 My '47
Thiohydantoins; preparation of 5 : 5-disubstituted 2 : 4-dithiohydantoins from the corresponding ketones. H. C. Carrington. Chem Soc J p681-3 My '47

HYPOCHLORITES
Effect of vat dyes on the rate of oxidation of cotton by hypochlorite solutions. D. A. Clibbens and A. H. Little. Textile Inst J 37:T219-26 O '46

See also
Sodium hypochlorite

HYPOCHLOROUS acid
Interaction of hydrogen peroxide and hypochlorous acid in acidic solutions containing chloride ion. R. E. Connick. bibliog Am Chem Soc J 69:1509-14 Je '47

Analysis
Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47

HYPODERMIC syringes
Some laboratory applications of the low friction properties of the dry hypodermic syringe. H. F. Brubach. diags R Sci Instr 18: 363-6 My '47

HYPOHALITES
Analysis
Analysis of hypochlorite-hypobromite solutions. L. Farkas and M. Lewin. bibliog Anal Chem 19:662-4 S '47

HYPOID gearing. See Gearing, Hypoid

HYPOXIA. See Anoxemia

HYSTERESIS
Medium-frequency magnetization of sheet steel. R. Pohl. Inst E E J 94 pt 2:118-23 Ap '47
Tooth-ripple losses in unwound pole-shoes. W. J. Gibbs. bibliog Inst E E J 94 pt 2:2-12 F '47

HYSTERESIS (mechanics)
Measurement of the dynamic stretch-modulus and hysteresis of tire cords. W. J. Lyons and I. B. Prettyman. bibliog diag J Ap Phys 18:586-7 Je '47

HYSTERESIS in adsorption. See Adsorption

I

ICE
Improved ice calorimeter, the determination of its calibration factor and the density of ice at 0°C. D. C. Ginnings and R. J. Corruccini. bibliog diag J Res Nat Bur Stand 38:583-91 Je '47
Man-made snow; production of ice crystals in a cloud of supercooled water droplets. V. J. Schaefer. il Mech Eng 69:32-3 Ja '47; Same abr. Science 104:457-9 N 15 '46
New ways of producing man made snow. Franklin Inst J 244:165-6 Ag '47; Same. Chem & Eng N 25:552 F 24 '47
Nucleation of ice formation by silver iodide. B. Vonnegut. J Ap Phys 18:593-5 Jl '47
See also
Airplanes—Ice protection
Glacial geology
Ice breaking vessels
Ice on rivers, lakes, etc.
Roads—Ice control
Streets—Ice control
Walks, Concrete—Heating
Manufacture
How do you keep sediment out of ice? diags Power 90:864-5 D '46
See also
Ice plants

ICE breaking vessels
Development of ice-breaking vessels for the U.S. Coast guard. H. F. Johnson. il plans diags Marine Eng 51:88-97; Discussion. 84-5 D '46

ICE cream
Ice cream packaging system. il Food Ind 19: 1223 S '47
Ice cream trends. il Mod Packaging 20:102-6 Jl '47
Present trends in the evaluation of hygiene quality in ice-cream; abstract. H. F. Clayson. Chem & Ind p538 Ag 30 '47
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47

ICE cream cabinets
Styrene cabinet lid. il Mod Plastics 24:164 Jl '47

ICE cream industry
Consumption of ice cream reaches three billion quarts. A. J. Mullen. il Dom Comm 35: 38-43 Ag '47

ICE crusher-slinger
Mass-production icing on Union Pacific; double deck platform permits 248 cars to be serviced simultaneously; new type ice slingers. il Ry Age 122:1250-1 Je 21 '47

ICE crushers
Rating
Ice crushers. il Consumers Res Bul 19:9-10 Je '47

ICE on rivers, lakes, etc.
Dynamite opens ice-jammed rivers. il Explosives Eng 25:55 Mr '47
Thrust exerted by expanding ice sheet. E. Rose. bibliog Am Soc C E Proc 72:571-85 My '46; Discussion. 72:1391-400; 73:975-80 D '46, Je '47
Tubular steel pile piers withstand rigid test; two piers of Garrison dam construction bridge subjected to unusual ice load. E. E. Howard. il map diags Civil Eng 17:580-3+ O '47
See also
Hydroelectric plants—Ice protection
Ice breaking vessels

ICE plants
See also
Cold storage warehouses
Power
Texas Diesel ice plant. il Diesel Power 25: 71+ F '47
Safety measures
Safety on ice. M. H. Seelig. il Safety Eng 93:12-13+ F '47

ICE protection. See Dams—Ice protection; Hydroelectric plants—Ice protection

ICE rinks. See Skating rinks

ICELAND
See also
Fish trade—Iceland

ICONOSCOPE
Iconoscope. M. S. Kiver. il Radio N 38:90+ N '47

IDAHO
See also
Mines and mineral resources—Idaho
Industries and resources
Selling the West to industry; development work of Idaho power co. O. C. Mayer. Elec West 97:73-4 O '46

IDAHO power company
Stocks offered. Comm & Fin Chr 166:1788 N 3 '47

IDEAS in business
Can you breed profitable business-building ideas? D. Belding. Sales Management 59: 48+ Jl 1 '47
Customers furnish ideas to sell 400 items; help Burgess battery co. discover uses for variety of merchandise. C. L. Anson. il Adv & Sell 40:64 O '47
How to get an idea. R. J. McAndrews. Sales Management 58:48+ Ap 15 '47
Pitfalls to avoid when you sell ideas. A. W. Gray. Sales Management 58:118+ Mr 15 '47
Sales ideas? Fram gets them right out of the field. H. E. Robinson. Sales Management 57:113-14+ D 1 '46
See also
Suggestion systems

IDLENESS, Industrial
Measuring idle time. D. M. Sutter. il Steel 120:77+ Ja 27 '47
Simple way to figure machine downtime. D. Jones. il Factory Management 104:118-21 O '46

IDLEWILD airport. See Airports—New York (city)

IGEPON T
Quantitative analysis of Igepon T. D. A. Shiraeff. Am Dyestuff Rep 36:313-14 Je 16 '47

IGNEOUS rocks. See Rocks, Igneous

IGNITION
Electrostatic ignitibility of various solvent vapour-air mixtures. A. R. Boyle and F. J. Llewellyn. bibliog diag Soc Chem Ind J 66: 99-102 Mr '47

IGNITION—*Continued*
Minimum ignition temperatures and flash points of combustible liquids, gases and vapors; table. Am Gas Assn Proc 1946: 521-4

See also
Airplane engines—Ignition
Diesel engines—Ignition
Electric ignition
Gas burners—Ignition devices
Inflammable mixtures

IGNITRON
Characteristics of resistance ignitors. D. E. Marshall and W. W. Rigrod. bibliog il diags Electronics 20:122-6 My '47

Ignitron converters for induction heating. R. J. Ballard and J. L. Boyer. diag Elec World 127:114-15 Mr 15 '47

Pulse-type tester for higher-power tubes used for loran apparatus. E. C. Easton and E. L. Chaffee. diags Electronics 20:97-9 F '47

ILLINIUM (element 61). See Chemical elements

ILLINOIS
See also
Geology—Illinois
Lead mines and mining—Illinois
Roads—Illinois
Water supply—Illinois
Zinc mines and mining—Illinois

ILLINOIS bankers life assurance company
Examine new idea: mutualization abandoned. Nat Underw (Life ed) 51:24 Ap 18 '47

Mutualization probable; soon to decide on new Illinois Bankers parentage. Nat Underw (Life ed) 51:12 Mr 14; 2 Mr 28 '47

Poll policyholders on settlement. Nat Underw (Life ed) 51:3 Ja 24 '47

ILLINOIS central railroad
Equipment issue. Comm & Fin Chr 166:567 Ag 11 '47

Illinois Central seeking free cash for dividends. Barron's 27:34 Ag 25 '47

Railroad securities. Comm & Fin Chr 166:726 Ag 21 '47

ILLINOIS daily newspaper markets, inc.
Second annual consumer analysis. Sales Management 59:142+ N 1 '47

ILLINOIS institute of technology
Architecture speaking for itself; library and administration building. il plans diags Arch Rec 100:85-90 D '46

ILLINOIS national casualty company
New Illinois National decision; Palmer again vindicated. Nat Underw 51:17 My 29 '47

Reiter continues to seek exaction from Palmer. Nat Underw 51:19 F 20 '47

What will accounting be? await next chapter in T. H. Reiter Illinois case. Nat Underw 51:15+ Ja 30 '47

ILLINOIS terminal railroad
Equipment trust sold. Comm & Fin Chr 165: 3284 Je 23 '47

ILLINOIS university
Plans campus center for integrated home research. il plan Arch Forum 85:11 N '46

University of Illinois students learn to fly at first concrete college airport. il plans diags Concrete 54:3-5+ D '46

Research and educational hospitals

Medical research in atmospheric environment; physical environment addition to research and educational hospitals at Chicago professional college campus. Science 104: 467 N 15 '46

ILLITE
Reaction of different clay minerals with some organic cations. R. E. Grim and others. bibliog Am Cer Soc J 30:137-42 My 1 '47

ILLUMINATING engineering (periodical)
Guide to authors; preparation of papers for publication in Illuminating engineering. Illum Eng 41:648-53 S '46

ILLUMINATING engineering society
Aims for 1946-47. G. K. Hardacre. Illum Eng 41:709-18 N '46

Annual meeting, 38th, Quebec, Sept. 18-20. Illum Eng 41:687-92 N '46

Correlating portable lamp design with the Society's performance recommendations. R. G. Slauer and L. L. Sutro. il diags Illum Eng 42:377-90; Discussion. 390-3 Mr '47

General secretary's report 1945-1946. Illum Eng 42:15-53 Ja '47

President's report. A. F. Wakefield. Illum Eng 41:597-603 S '46

Report of the I.E.S. Committee on progress. il diags Illum Eng 42:54-86 Ja '47

ILLUMINATING engineering society, London
Annual dinner. Light & Lighting 40:103-7 Je '47

ILMENITE
Bush-Hutchins ilmenite, Roanoke county, Va. R. C. Hickman. 4pls U S Bur Mines Rep of Invest 4112:1-5 '47

IMAGE orthicon. See Television cameras

IMHOFF tanks
How to design Imhoff tanks and trickling filters for schools, camps and hotels. diags Pub Works 78:33-4 S '47

IMIDAZOLE
Amidines; preparation of 2-substituted 4 : 5-dihydroglyoxalines and ring homologues from cyanides and alkylenediamines. P. Oxley and W. F. Short. Chem Soc J p497-505 Ap '47

Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R. A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47

New synthesis of oxazoles and iminazoles including its application to the preparation of oxazole. J. W. Cornforth and R. H. Cornforth. Chem Soc J p96-102 Ja '47

Preparation and properties of the iodohistidines. K. J. Brunings. bibliog Am Chem Soc J 69:205-8 F '47

IMIDAZOLINE
Aryloxyacetamidines and 2-(aryloxymethyl)-imidazolines. C. Djerassi and C. R. Scholz. bibliog Am Chem Soc J 69:1688-92 Jl '47

IMIDAZOLONE
Studies in the imidazolone series; synthesis of a lower and a higher homolog of desthiobiotin and of related substances. R. Duschinsky and L. A. Dolan. bibliog Am Chem Soc J 68:2350-5 N '46

IMIDES
Amidines; preparation of substituted amidines from ammonium or substituted ammonium salts and *N*-acylbenzenesulphonalkylamides or acylbenzenesulphonanilides. P. Oxley and W. F. Short. Chem Soc J p382-9 Mr '47

IMINES
Ethylene imine ketones; reaction with Grignard reagents. N. H. Cromwell. bibliog Am Chem Soc J 69:258-60 F '47

Preparation of N-substituted diamines. E. L. Wittbecker, R. C. Houtz and W. W. Watkins. Am Chem Soc J 69:579-81 Mr '47

IMINODIPROPIONIC acid
Reaction of certain secondary amines with phthalic anhydride; new synthesis of β-alanine. S. Chodroff, R. Kapp and C. O. Beckmann. bibliog Am Chem Soc J 69:256-8 F '47

IMMIGRATION and emigration
Displaced persons and refugees; recent statements in British House of commons. Int Labour R 55:434-6 My '47

First meeting of the I.L.O. Permanent migration committee. Int Labour R 55:98-108 Ja-F '47

Immigration eased. Bsns W p113 F 15 '47

Right to move. H. Maurer. il maps Fortune 36:136-43+ O '47

Australia

Australian immigration policy. Int Labour R 55:451-2 My '47

Brazil

Immigration to the New world. Economist 152:896 Je 7 '47

IMMIGRATION and emigration—Brazil—*Cont.*
Possibilities for the resettlement of displaced persons in Brazil. For Comm W 27:20 Ap 12 '47

Canada

Immigration into Canada. Int Labour R 55: 449-51 My '47
Immigration to the New world. Economist 152:894+ Je 7 '47
Need for an immigration policy. H. F. Angus. bibliog Ann Am Acad 253:16-21 S '47

France

France and her foreigners. Economist 152: 421-2 Mr 22 '47
Franco-Italian migration agreements. Int Labour R 55:395-402 My '47

Great Britain

Immigration policy in the British commonwealth. Int Labour R 55:135-9 Ja-F '47

Italy

Franco-Italian migration agreements. Int Labour R 55:395-402 My '47

Mexico

Conditions for admission of immigrants during 1947. For Comm W 26:20-1 Mr 8 '47

South America

Immigration policies of countries of South America. Int Labour R 55:436-44 My '47

United States

Air immigration can build international load factors; pitfalls in entry of GI wives and fiancées. G. Forbes. il Air Transport 5:30-8 Jl '47

IMMIGRATION law

Canada

Canadian immigration policy. Int Labour R 54:223-4 S-O '46

United States

Air immigration can build international load factors; pitfalls in entry of GI wives and fiancées. G. Forbes. il Air Transport 5:30-8 Jl '47
United States immigration policy. Int Labour R 54:221-3 S-O '46

IMMUNITY
Immunochemical studies on blood groups; further characterization of blood group A and O substances from individual hog stomachs. A. Bendich, E. A. Kabat and A. E. Bezer. bibliog Am Chem Soc J 69: 2163-7 S '47
Preparation of mumps vaccines and immunization of monkeys against experimental mumps infection. K. Habel. bibliog Pub Health Rep 61:1655-64 N 15 '46
Skin reaction in rabbits produced by intradermal inoculation of suspensions of killed pasteurella tularensis. C. L. Larson. Pub Health Rep 61:1797-806, pl 1 D 13 '46

See also
Agglutination
Antigens and antibodies
Infectious diseases
Inoculation
Toxins and antitoxins
Vaccines

IMPACT
Deformation of metals during single and repeated tensile impact. J. A. Pope. bibliog il diags Iron & Steel Inst J 157:31-54 S '47
Development of a single-blow impact test for cast iron. A. B. Everest and others. bibliog diags Iron & Steel Inst J 152:403-23, pl 40-1 no 2 '45; Same cond. Engineering 161:117-23 F 1 '46; Abstract. Metal Prog 48:1354+ D '45; Discussion. Iron & Steel Inst J 152:423-7 no 2 '45
Impact and fatigue tests for metals. H. N. Lyle. Oil & Gas J 46:113 Ag 9 '47
Impact strength increased by removing material; landing gear fork. il diags Product Eng 17:131-3 D '46
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup 372-432 Jl '47

IMPACT decelerator
Design for an impact decelerator. H. R. Bierman. il diag Science 104:510-13 N 29 '46

IMPATIEFF, Vladimir Nikolaevich, 1867-
Impatieff prize. por Chem & Eng N 25:829 Mr 24 '47

IMPEDANCE
Capacity per unit length and characteristic impedance of coaxial cables with one slightly non-circular conductor. P. Parzen. diag J Ap Phys 18:774-6 Ag '47
Characteristic impedance of lines; chart. K. Zimmermann. Elec World 126:92 O 26; 126 N 9; 102 N 23; 122 D 7; 82 D 21 '46
Characteristics of r.f. cables; determination of impedance and propagation constants. N. C. Stamford and R. B. Quarmby. diags Wireless Eng 23:295-8 N '46
Comparator for coaxial line adjustments. O. M. Woodward, jr. il diags Electronics 20: 116-20 Ap '47
Design of constant impedance equalizers. A. W. J. Edwards. diags Wireless Eng 24:8-14 Ja '47
Effective impedance of a sphere in a magnetic field. T. S. E. Thomas. Wireless Eng 23:322-4 D '46
Elements of wave propagation using the impedance concept. H. G. Booker. bibliog diags Inst E E J 94 pt 3:171-98; Discussion. 199-202 My '47
Equivalent circuit for a plane discontinuity in a cylindrical wave guide. J. W. Miles. bibliog diags Inst Radio Eng Proc 34:728-42 O '46
High impedance pulse voltmeter. D. E. Howes. diag R Sci Instr 16:322 N '45; Abstract. Electronics 20:178+ S '47
Impedance measurement on transmission lines. D. D. King. bibliog diag Inst Radio Eng Proc 35:509-14 My '47
Impedance measurements. diag Electronics 20:194+ F '47
Impedance measurements at vhf. E. G. Hills. diags Electronics 20:124-8 Jl '47
Impedance network for production-testing current-limiting reactors. S. C. Leonard. il diags Gen Elec R 50:31-5 O '47
Input impedance of a folded dipole. W. van B. Roberts. diags RCA R 8:289-300 Je '47
Microwave impedance-plotting device. W. Altar and J. W. Coltman. il diags Inst Radio Eng Proc 35:734-7 Jl '47
Mutual impedance between short earth-return circuits. R. O. Carter. Inst E E J 94 pt 1:275-7 Je '47
Precision measurement of impedance mismatches in waveguide. A. F. Pomeroy. bibliog il diags Bell System Tech J 26:446-59 Jl '47
Shunt circuit impedance in spot welding ⅛-, ¼- and ½-in. mild steel. R. H. Blair. diags Welding J 26:843-8 O '47
Transmission line impedance calculations. E. W. Hamlin and R. A. Galbraith. Elec Eng 66:743-4 Jl '47
Visual null indicator for impedance bridge measurements at radiofrequencies. P. J. Brine and J. W. Whitehead. diags R Sci Instr 17:537-9 D '46

IMPERIAL chemical industries, limited
I.C.I. dyestuffs division. Chem Age (Lond) 57:107 Jl 26 '47
Statement by the chairman at 20th ordinary general meeting. H. D. McGowan. Economist 152:737 My 10 '47

IMPERIAL tobacco company of Great Britain and Ireland
Statement by the chairman. Lord Dulverton. Economist 152:437 Mr 22 '47

IMPORTS
Do salesmen need world trade? M. J. Fox. Sales Management 58:135-9 Ja 15 '47
DCAT told need of increased imports; abstract. E. I. McClintock. Oil Paint & Drug Rep 151:7+ Je 30 '47
Foreign trade; why it's a two-way business. A. J. Wieland. Sales Management 59:146+ S 15 '47
Implementing increased imports. H. F. Grady. Comm & Fin Chr 164:2470+ N 14 '46
Import trade promotion. P. J. Stevenson. Comm & Fin Chr 166:1635+ O 23 '47

IMPORTS—*Continued*
Imports at U.S. ports; list by ports of chemical products, with amounts and consignors. Published in weekly numbers of Oil, paint and drug reporter
Practical promotion of our import trade; radio discussion. W. M. Friedlaender and others. il For Comm W 26:3-4+ Ja 4 '47
Purchases from Pan-American areas bring benefits to U.S.; imports strengthen economy, raise living standards. D. R. Crone. il For Comm W 27:8-11 Ap 12 '47
See also
Commerce
Free trade and protection
Tariff

Statistics
Postwar trends in U.S. trade to midyear 1946; with charts and tabulations. G. A. Witherow. il For Comm W 25:6-19 D 7 '46
U.S. trade up to mid-point in this year of crucial issues; with charts and tabulations. G. A. Witherow. For Comm W 29:3-5+ O 18 '47
U.S. world trade in 1946 witnessed remarkable shifts. G. A. Witherow. For Comm W 27:4-8 My 17 '47

IMPROVED products. See Products, Improved

INCENDIARY bombs. See Bombs, Incendiary

INCENDIARY materials

Analysis
Analysis of thermite-type incendiary and pyrotechnic mixtures. C. E. Danner and J. Goldenson. bibliog Anal Chem 19:627-30 S '47

INCENTIVE pay. See Wage payment plans

INCENTIVES in industry
Best incentives for salesmen in a competitive market; do not over emphasize the importance of financial incentive. B. R. Canfield. Adv & Sell 39:53-4+ O; 53-4+ N '46
Keyman; supervisory incentives. J. A. Lowden. Advanced Management 12:7-13 Mr '47
See also
Bonus system
Profit sharing
Wage payment plans

INCINERATORS, Refuse. See Refuse incinerators

INCINERATORS, Sewage. See Sewage incinerators

INCOME
Consumer-spendable income, spending, savings, credit. R. S. Tucker. Comm & Fin Chr 164:3214+ D 19 '46
Continuous information on net income development. H. Meyerheim. Dun's R 55:18-20+ My; 18-20+ Je '47
Financial position and buying plans of consumers, July 1947. D. M. Holthausen. Fed Res Bul 33:1212-15 O '47
Methods of measuring the marginal propensity to consume. T. Haavelmo. Am Stat Assn J 42:104-22 Mr '47
Relationship between consumers' expenditures, savings, and disposable income; discussion (Five views on the consumption function) by G. Katona and R. Likert, L. H. Bean, I. Friend, D. S. Brady, E. G. Bennion, W. S. Woytinsky. R Econ Stat 28:197-224 N '46
Three year study of business income, its concepts and terminology, started by Institute. P. F. Brundage. J Account 84:116-17 Ag '47
Where consumer money lies; anatomy of incomes and liquid asset holdings. Bsns W p19 Jl 19 '47
See also
Farm income
Profit
Salaries
Wages

Accounting
Deferred credits. H. R. Howell. J Account 83:325-6 Ap '47
Wife's use of family partnership income. J Account 84:330 O '47
See also
Income statements

Statistics
Appraisal of methods for estimating the size distribution of a given aggregate income. E. Clark and L. Fishman. R Econ Stat 29:43-6 F '47
Better tool for business; complete revision of Commerce dept.'s estimates of national income and national product, with statistics for 1929-1946. Bsns W p32+ Jl 26 '47
Breakdown of national income. graph Mag of Wall St 80:139-40 My 10 '47
Commerce department reports record individual incomes in 1946. Comm & Fin Chr 166: 828 Ag 28 '47
Economy in reconversion; national income and national product in 1946; with figures for other years. Survey of Cur Bsns 27:5-10 F '47
Effective buying income in 1946, Sales Management estimates. Sales Management 58: 65, 68, 88, 92, 96 My 10 '47
Gross national product, national income, and income payments, annual totals, 1939-1946 and seasonally adjusted annual rates by quarters for 1945. Fed Res Bul 33:88 Ja '47 [cont monthly]
How real income of employees has changed. Bsns W p20 F 15 '47
Income and goods. D. V. Eells. Bsns W p44+ Ap 5 '47
Income data; planning tool, Census bureau study of distribution of families by income levels. Bsns W p94-7 My 17 '47
Macfadden estimates family income distribution. Ptr Ink 219:92 My 23 '47
Major revisions in national income and product data. Survey of Cur Bsns 27:9 Jl '47
Map shows dominant source of income in each county; Printers' ink market exploration. W. P. Burn. Ptr Ink 217:45-8 D 13 '46
National income statistics revised by Commerce dept. Comm & Fin Chr 166:337 Jl 24 '47
National income up 100 billion dollars in 10 years. H. Zeisel. Ptr Ink 217:39-41 N 15 '46
National product and income in the first half of 1947. Survey of Cur Bsns 27:4-7 Ag '47; Correction. 27:24 S '47
Per capita income payments to individuals; 1945 as compared with 1939; map. Automotive & Aviation Ind 96:80 Mr 15 '47
Personal income trends, 1945-June 1947; graphs. Survey of Cur Bsns 27:1 S '47
Retail sales and consumer income. Survey of Cur Bsns 27:9-11 Jl '47
Revised estimates of national income and products. Mo Labor R 65:325-8 S '47
Revision of national income and product statistics; with data for 1929-1946. Fed Res Bul 33:1105-14, 1167-8 S '47
Sampling for the 1947 survey of consumer finances. R. Goodman. Am Stat Assn J 42: 439-48 S '47
68% of U.S. families received 65% of national income in 1946. D. Starch. Adv & Sell 40:107-8+ Mr '47
State income payments in 1946; with tabulations for selected years, 1929-1946. C. F. Schwartz and R. E. Graham, jr. maps Survey of Cur Bsns 27:9-24 Ag; 24 S '47; Excerpts. Dom Comm 35:9-14 S '47
Survey of consumer finances. D. M. Holthausen. Fed Res Bul 33:647-63, 788-802, 951-62 Je-Ag '47; Abstract (pt 1-2). Mo Labor R 65:329-31 S '47
U.S. buying power breakdown. Bsns W p52+ Ag 30 '47
What normal economy would be like after living on a roller coaster. C. V. Kinter. Ind Marketing 32:43-5+ S '47
What's happened to the carriage trade. W. J. Platt. Sales Management 59:164+ S 15 '47
White-collar incomes score largest gain. Am Gas Assn Mo 29:393 S '47

Canada
National accounts income and expenditure, 1938-1946. 19p pa 50c Canada. Dominion bur. of statistics, Ottawa '47

Czechoslovakia
National income higher; with figures for selected years, 1929-1947. For Comm W 28: 13 S 13 '47

INCOME—*Continued*

Great Britain

National income; comment on annual white paper. Economist 152:592-4 Ap 19 '47

Southern states

Income in the South. S. Shapiro. Mo Labor R 63:495-510 O '46

United States

Finds decline in national income growth. S. Kuznets. Comm & Fin Chr 165:10+ Ja 2 '47

Income on the West coast. S. Shapiro. Mo Labor R 64:599-609 Ap '47

Liquidation of the middle brackets. Fortune 35:136+ Ja '47

Pre-war U.S. per capita income was at record high; National Bureau analysis of 1919-1938 national income. S. Kuznets. Comm & Fin Chr 164:3217 D 19 '46

U.S. enters '47 with real income up 6%. Weekly Underw 156:707 Mr 8 '47

INCOME statements

Would revision of auditing make income more fairly stated? J Account 84:339 O '47

INCOME tax

British tax treaty. D. B. Chase. J Account 83:58-9 Ja '47

Income versus property taxation for state and local governments. H. M. Groves. J Land & Pub Util Econ 22:346-51 N '46

State and federal taxation; A.B.A. committee report. Trusts & Estates 85:317-28 O '47

State and federal taxation, 1945-46; A.B.A. committee report. Trusts & Estates 83:503-7 N '46

Taxes now 1948's riddle. Bsns W p 17 Je 21 '47

Voters think man and wife should be allowed to split income to save on taxes; Gallup poll. Iron Age 159:107 Mr 27 '47

See also

Corporations—Taxation

Excess profits tax

Accounting

Accelerated depreciation and the Treasury's new declining balance method of computation. P. D. Seghers. J Account 83:113-16 F '47

Accounting and the accountant in the administration of income taxation. G. O. May. bibliog J Account 83:370 84 My '47

Accounting and the accountant in the administration of income taxation; a footnote. G. O. May. J Account 84:69-70 Jl '47

Business loss offsets studied by U.S. panel. Oil Paint & Drug Rep 152:50 O 27 '47

Calls for change in handling of depreciation reserves; abstract. C. R. Cox. Iron Age 160:134-5 O 9 '47

Declining balance depreciation can work under T.D. 4422 plus I.T. 3818. W. L. Ashbaugh. J Account 83:394-401 My '47

Declining balance depreciation permitted by Internal Revenue is not realistic. P. T. Norton, jr. J Account 84:32-4 Jl '47

Employes' trust data for plan termination; queries of income tax unit. East Underw 48:13 Je 27 '47

How to assign income from invention royalties with minimum tax to donor. S. A. Gutkin and D. Beck. J Account 84:304-9 O '47

IRB modifies ruling on severance payment from benefit plans. Nat Underw (Life ed) 51:7 Ag 1 '47

Need for realistic depreciation of machine tools. H. H. Pease. Mach 53:137+ Ag '47

Net operating loss. J. L. Bierman. J Account 83:320 Ap '47

Non-compete agreements. J. S. Seidman. J Account 83:322 Ap '47

Plague on both their houses; the accountant-lawyer differences over tax practice. L. S. Goldberg. bibliog J Account 84:188-95 S '47

Tax accounting incongruities. J. K. Lasser. bibliog J Account 83:221-8 Mr '47

Tax court holds Nash-Kelvinator trust setup is actually bonus. Nat Underw (Life ed) 51:8 Jl 4 '47

Tax revision in 1948; implications for employee retirement plans. F. L. Morton. Spectator (Life ed) 155:22-3+ Ag '47

Taxable income can be reduced by modernization and building. A. C. Kiechlin. Inland Ptr 119:39-41 S '47

Urges amortization of machine tools used in war output be given. G. S. Eaton. Iron Age 160:146-8 Jl 24 '47

What is accelerated depreciation? F. S. Blackall, jr. Am Mach 91:105-7 Jl 17 '47

When can a bad debt or worthless security be claimed as a tax deduction? T. J. Green. bibliog J Account 84:216-22 S '47

See also

Income tax—Deductions

Capital gains tax

Capital gains tax hampers investment. R. M. Ross. Comm & Fin Chr 165:1126 F 27 '47

How to minimize your taxes; analysis of capital gain and loss position. J. A. Finley. Mag of Wall St 81:70-1+ O 25 '47

NYSE informs members of tax status of option transactions. J. C. Korn. Comm & Fin Chr 165:59 Ja 2 '47

Pension ruling clarifies distributee tax question; employe's separation from service and capital gains provision involved. Nat Underw (Life ed) 51:4 Mr 7 '47

Tax court rules on thorny real estate problems; losses on sale of property used in the trade or business of the taxpayer. Credit & Fin Management 49:20 Mr '47

Year-end tax considerations. H. Silverson. Comm & Fin Chr 164:3347+ D 26 '46

Deductions

Are unreported business expenses making you pay unnecessary additional taxes? H. J. Ashe. Inland Ptr 120:57-8 O '47

Clarification is awaited of agents' tax issues; question of expense deduction allowances and status as independent contractor. Nat Underw (Life ed) 51:9 Mr 14 '47

Depreciation and your income tax. H. J. Ashe. Radio N 37:112+ Ja '47

Discussion of McWilliams case; section 24 (b) tax liability. S. S. Mintz. J Account 84:328-9 O '47

Let's lift federal taxes from housing. H. U. Nelson. Arch Rec 101:85 F '47

Profits after taxes, if any. F. Monacell. Metal Finishing 45:65-7 Ag '47

Tax allowance for costs of tree planting sought. E. W. Tinker. Paper Tr J 125:7+ Jl 10 '47

Tax court in error in holding all rental property is used in trade or business. E. T. Roehner. J Account 83:477-82 Je '47

Tax credit plan for re-establishing private support of pure science. R. W. King. Science 105:593-4 Je 6 '47

Taxpayers have costly misconceptions of what may be acceptable as depreciations. H. J. Ashe. Inland Ptr 118:44 Ja '47

What you can deduct for advertising costs in your income tax returns. J. K. Lasser. Adv & Sell 39:58+ D '46

When can a bad debt or worthless security be claimed as a tax deduction? T. J. Green. bibliog J Account 84:216-22 S '47

Canada

Budget features income-tax cuts. For Comm W 27:12-14 My 24 '47

Income taxes cut. Bsns W p96-7 My 3 '47

China

Income tax and special excess-profits tax. For Comm W 28:14-15 Jl 5 '47; Correction. 28:16 Jl 19 '47

Great Britain

Income tax assessment procedure. Chem Age (Lond) 57:216 Ag 16 '47

Mexico

Personal income-tax rates revised. For Comm W 27:18 Ap 19 '47

Newfoundland

Increase in income supertax. For Comm W 26:21-2 Mr 1 '47

INCOME tax—*Continued*

Sweden

Sweden's Dalton; new taxation proposals. Economist 152:544 Ap 12 '47

Switzerland

Change in method of collecting national defense tax levied on alien incomes. For Comm W 27:20 Je 28 '47

United States

Americans poorly informed about income tax paid by families in upper income brackets; Gallup poll. Iron Age 159:111+ F 6 '47
Argues for income tax relief. D. A. Reed. Comm & Fin Chr 164:3352+ D 26 '46
Award and prizes as income. J Account 83: 60-1 Ja '47
Budget and taxes; radio discussion. R. A. Taft; B. Ruml; R. Blough. Comm & Fin Chr 165:1381+ Mr 13 '47
Case for tax reduction now. H. L. Lutz. Comm & Fin Chr 165:2199+ Ap 24 '47
Chart showing present taxable status for aliens. J Account 83:60 Ja '47
Clifford regulations analyzed; trustee's responsibility in income taxation of irrevocable trusts. W. H. Avery, jr. Trusts & Estates 83:645-8 D '46
Comments on sixteen proposals for revising federal taxes; a symposium. R. S. Bock and others. J Account 83:463-76 Je '47
Community property taxation. Economist 152:146-7 Ja 25 '47
CIO's Mr Rich beats income tax. H. L. Lutz. Comm & Fin Chr 165:1245+ Mr 6 '47
Debt retirement vs. tax reduction. R. A. Foulke. Dun's R 55:15-17+ My '47
Effect of Treasury regulation v. judicial decision, legislation. J Account 84:330-1 O '47
Executives need an incentive; taxes rise faster than take-home pay. Bsns W p 15-16 Jl 5 '47
Exemption of security interest from income taxes in the United States; an economic and statistical analysis. L. Derrick. bibliog J Bsns 19 pt 2:1-81 O '46
Extensions of time for filing income tax returns. J Account 84:173-6 Ag '47
Federal tax problems confronting the mortgagor and mortgagee. V. D. Edwards. Banking Law J 64:165-74 F '47
Foreign income; abstract. W. J. L. Patton. J Account 84:54-5 Jl '47
Grounds for immediate tax relief; statement before Senate finance committee. H. E. Humphreys, jr. Comm & Fin Chr 165:2334+ My 1 '47
High personal taxes slash stock values. C. Davidson, jr. Comm & Fin Chr 165:3228+ Je 19 '47; Abstract. Barron's 27:25 Je 23 '47
Income tax detour; community property laws. Bsns W p34-5 D 21 '46
Income tax requirements affect foreign service of American engineers. E. H. Lang. il Civil Eng 17:610-12+ O '47
Income taxes of employes in profit sharing plans. East Underw 48:17 Ap 18 '47
Ingenious taxpayer. Fortune 35:108-11+ F '47
IBA head for both debt and tax reduction. E. Hopkinson, jr. Comm & Fin Chr 165: 2604+ My 15 '47
Lauds tax reduction plan. R. A. Taft. Comm & Fin Chr 165:2977+ Je 5 '47
Lower federal costs and tax cuts in order; statements before Committee on ways and means, House of representatives. R. Magill; J. W. Hanes. Comm & Fin Chr 165:1514+ Mr 20 '47
Minimizing tax outgo through business policies in purchase and sale of property. J. K. Lasser. J Account 84:106-12 Ag '47
Misdirected taxation; address before Academy of political science; abstract. R. Magill. Trusts & Estates 85:166 Ag '47
New tax bill. H. Knutson. Comm & Fin Chr 165:140 Ja 9 '47
No need of tax reduction; statement before Ways and means committee, House of representatives. J. W. Snyder. Comm & Fin Chr 165:1515+ Mr 20 '47
Proposals to cut federal income taxes; Gallup poll. Iron Age 158:157-8 D 12 '46
Relief for an overtaxed economy. H. E. Humphreys, jr. Comm & Fin Chr 164:3352+ D 26 '46
Right kind of tax reduction. H. L. Lutz. Comm & Fin Chr 166:1733+ O 30 '47
Ruling that only licensed accountant may prepare tax return. J Account 84:347 O '47
Second thoughts on taxes. Bsns W p 17-18 N 30 '46
Tax battle on the Potomac. H. L. Lutz. Comm & Fin Chr 166:11+ sec 2 Ag 28 '47
Tax cut on ice. Bsns W p21-2 Ap 12 '47
Tax digest for investors and business men. B. V. Tornborgh. Published in Barron's
Tax on enterprise. E. O. Shreve. Comm & Fin Chr 166:1649+ O 23 '47
Tax reduction vs. debt reduction. R. W. Kean. Comm & Fin Chr 165:1515+ Mr 20 '47
Tax reductions will pay for themselves. W. R. Burgess. Comm & Fin Chr 165:2199 Ap 24 '47
Tax relief needed to retire debt; statement before Senate finance committee. L. P. Smith. Comm & Fin Chr 165:2332 My 1 '47
Tax relief takes shape. Bsns W p 17 My 24 '47
Tax revision in 1948. F. L. Morton. Spectator (Life ed) 154:12-15+ Je; 155:18-19+ Jl; 22-3+ Ag '47
Taxes must not be reduced; statement before Senate finance committee. J. W. Snyder. Comm & Fin Chr 165:2195+ Ap 24 '47
20% cut as temporary expedient approved; report of Committee on postwar tax policy. Comm & Fin Chr 165:874+ F 13 '47
Urgent changes needed in federal tax laws. W. Vernon, jr. Comm & Fin Chr 165:1701+ Mr 27 '47
Use of trusts in federal estate tax planning. G. E. Ray and O. W. Hammonds. J Account 83:283-90 Ap '47
Voters prefer to use tax money to cut public debt; Gallup poll. Iron Age 159:107 Je 12 '47
Why tax reductions immediately; statement before Senate finance committee. J. W. Hanes. Comm & Fin Chr 165:2332+ My 1 '47
Will high taxes pass soon? H. Rust. Life Ins Courant 52:274-7 Jl '47

See also
Excess profits tax

Decisions

Amended Clifford regulations. A. J. Casner. Trusts & Estates 85:249-50 S '47; Correction. 85:886 O '47
American Dental; reviewing status of cases dealing with cancellation of obligations. W. H. Friedman. J Account 83:247-8 Mr '47
Income tax and death claim proceeds of life insurance; Treasury decision 5515. D. Olson. Life Ins Courant 51:492-4 N '46
Interest received on notes before transfer to corporation exempt from income tax. Banking Law J 64:703-7 S '47
Recapitalizations. J Account 84:227-8 S '47
Section 736 (a). T. G. Thurston. J Account 84:229-30 S '47
Tax benefit developments; illustrated by three recent Tax court decisions. J Account 83: 321-2 Ap '47
Tax court in error in holding all rental property is used in trade or business. E. T. Roehner. J Account 83:477-82 Je '47
Tax deduction for estate planning fees; U.S. Tax court decision; Bagley vs Commissioner. East Underw 48:8 Ja 31 '47
Taxation of incomes under T.D. 5488 as modified by proposed amendments to Clifford regulations. A. J. Casner. Trusts & Estates 84:233-45 F '47

INCOME tax, State

Income versus property taxation for state and local governments. H. M. Groves. J Land & Pub Util Econ 22:346-51 N '46
State income taxes as a cost in termination of subcontracts. J Account 83:90 Ja '47

INCORPORATED municipal electrical association

Annual meeting, Bournemouth, June 23-27. Engineer 184:14-15 Jl 4 '47; Engineering 164:18-19, 30 Jl 4-11 '47; Elec R (Lond) 140: 1047-50; 141:3-16 Je 27-Jl 4 '47; Electrician 138:1736; 139:34-45 Je 27-Jl 4 '47

INCORPORATED municipal electrical association—*Continued*
Annual report. Elec R (Lond) 140:1019 Je 20 '47; Electrician 138:1684 Je 20 '47

INDAN
Steric effect of methylene groups. R. T. Arnold and E. Rondestvedt. bibliog Am Chem Soc J 68:2176-8 N '46

INDENE
Isolation of indene from heavy naphthas. R. D. Haworth, C. Lindley and D. Woodcock. Chem Soc J p369-70 Mr '47
Preparation and properties of indene and coumarone. J. N. Breston and A. W. Gauger. bibliog Am Gas Assn Proc 1946: 492-507

INDENONE. See Indone

INDEPENDENT citizens' committee of the arts, sciences, and professions
ICCASP does not speak for chemist; editorial. W. J. Murphy. Chem & Eng N 24: 2758-9 O 25 '46; Discussion. 24:3108+, 3252+; 25:53-4, 124, 198 N 25-D 10 '46, Ja 6-20 '47
Prominent scientists resign from the ICCASP. Chem & Eng N 24:3029 N 25 '46; Discussion. 24:3422-4 D 25 '46
Should chemists support the ICCASP? Can Chem & Process Ind 30:31-2 N '46

INDEPENDENT grocers' alliance of America
Candid wire recordings put new life into IGA dealers meetings. H. R. Gerhard. il Sales Management 59:118+ Ag 15 '47

INDEPENDENT insurance adjusters, National association of. See National association of independent insurance adjusters

INDEPENDENT natural gas association of America
Annual meeting, 2d, Fort Worth, Nov. 22. Oil & Gas J 45:39-40 N 30 '46
Annual meeting, 3d, Oklahoma City, Oct. 24. Oil & Gas J 46:40-1 N 1 '47

INDEPENDENT petroleum association of America
Annual meeting, 18th, Oklahoma City, Sept. 27-30. Nat Pet N 39:17-18 O 8 '47; Oil & Gas J 46:40-1+ O 4 '47

INDEX number institute, inc.
About the Index number institute. Sales Management 58:150 F 15 '47

INDEX numbers (economics)
American appraisal company construction cost trend index, 1914-1946. Eng N 138:603 Ap 17 '47
Building and construction cost indexes, 1913 through 1946. Eng N 138:599+ Ap 17 '47
Cost of living; passing of the 33-year old index number. Economist 152:447 Mr 29 '47
Economic theory of cost of living index numbers. M. J. Ulmer. Am Stat Assn J 41:530-42 D '46
ENR construction and building cost indexes, 1903-1946; with fold chart. Eng N 138:598 Ap 17 '47
Ira Haupt & co. holds production index portends recession; with chart showing relation of durable to nondurable goods production compared with Federal reserve board index of industrial production. Comm & Fin Chr 165:2635 My 15 '47
Monthly business trend; new sensitive overall index. Sales Management 58:148+ F 15 '47 [cont monthly]
New indexes of hourly and weekly earnings compiled by the Federal reserve bank of New York. G. Garvy and R. E. Lewis. Am Stat Assn J 42:256-70 Je '47
New yardstick for cost of living. Economist 152:971 Je 21 '47; For Comm W 28:17 Ag 9 '47; Mo Labor R 65:195-6 Ag '47
Process equipment cost estimation; indexes in the plant cost picture. Chem Eng 54: 109-11 My '47
Store samples for retail food prices. J. W. Lethco and J. S. Middaugh. Mo Labor R 64:90-100 Ja '47

See also
Stocks—Price indexes and averages

INDEXES
Here's how to produce an index. E. N. Teall. Inland Ptr 119:43-4 My '47
Technical data at your fingertips? more indexing needed. M. Bedinger. Power Pl Eng 51:67+ Je '47

See also
Bibliography
Periodicals—Indexes

Bibliography
Local indexes in American libraries; a union list of unpublished indexes. 221p $5 F. W. Faxon co, 83 Francis st, Boston '47

INDEXING
Recent developments in Keysort cards. G. J. Cox and others. J Chem Educ 24:65-70 F '47
Round table discussion; indexing and classifying results of chemical research in relation to punched-card investigations. J. W. Perry and others. J Chem Educ 24:71-4 F '47
Simple method for cross-indexing a reference file. J. G. Aldous. Science 106:109 Ag 1 '47

INDEXING (machine work)
Automatic pneumatic indexing drilling jig. il diags Engineering 162:440-1 N 8 '46
Device for indexing, locating, and feeding lock-washer blanks. J. W. Gulliksen and J. W. Hillhouse. diags Mach 53:194-5 Ja '47
Dial feeds synchronized by air. J. F. Budnick. diags Am Mach 91:101-3 N 6 '47
Drilling closely spaced multiple holes; Zagar drill head and index fixture. il Iron Age 158:71 D 5 '46
Friction clutch initiates indexing motion; Kingsbury Fleximatics. il diags Product Eng 18:112-15 S '47
Helical-gear indexing mechanism. C. F. Smith. diags Mach 53:189-91 Ap '47
Indexing drill jig simplifies machining of electrical housings. R. Mawson. diags Steel 121:95 Ag 4 '47
Kingsbury automatic indexing machines. il Mach 54:166 S '47
Marley precision indexing attachment. il Engineering 162:585 D 20 '46; Automobile Eng 37:60 F '47
Mechanism for operating dial feed and radially positioned multiple punches. C. F. Smith. diags Mach 53:164-5 Ag '47
Pneumatic system indexes machine; automatic drilling and countersinking machine. K. H. Pond. Machine Design 19:109-10 Ap '47
Simple lock clamps index plate between notches. F. L. Keller. diag Am Mach 91: 144 Jl 17 '47
Small index base. il Engineer 182:501 N 29 '46
Small index plate attachment doubles all hole combinations. F. L. Keller. diags Am Mach 91:125 Je 5 '47
Wedging eccentric clamps index plates tightly. L. Bastrup. diags Am Mach 91:145-6 Jl 17 '47

INDIA

See also
Banks and banking—India
Cotton trade—India
Electric industries—India
Hydroelectric plants—India
Petroleum industry and trade—India
Public health—India
Sugar industry and trade—India
Textile industry—India

Boundaries
North of India; problem of frontiers. map Economist 152:245-6 F 8 '47

Commerce
Economics of Indian partition; United States trade prospects. map Nat City Bank p 105-7 S '47
Partition of India; implications for United States trade. V. L. Horoth. il map Mag of Wall St 80:483-5+ Ag 2 '47
United States trade with India reaches unprecedented levels; with tabulations for selected years 1911-1946. D. A. Kearns-Preston; G. A. Witherow. il For Comm W 27:6-8+ Je 28 '47

Commercial policy
Exchange control in India. Economist 152: 297 F 15 '47
Import restrictions liberalized for specified goods of any origin. For Comm W 25:25+ N 9 '46

INDIA—Commercial policy—*Continued*
India and Pakistan; imports not revalidated. For Comm W 29:16-17 N 1 '47
India's new import trade-control policy. For Comm W 27:15 My 31; 28:15 Jl 12 '47
Listing of prohibited imports. For Comm W 28:18-20 Ag 16; 29:15 O 18 '47
Ports of entry to be specified on import licenses; Pakistan to continue Indian trade regulations. For Comm W 28:18 S 6 '47
Temporary agreement on sterling balances. For Comm W 29:15-16 O 11 '47

Economic conditions

How two Indias will vary economically; Pakistan can feed herself, while Hindustan is more industrial. P. A. Johnston. Barron's 27:35 S 15 '47
India's economic transition. Economist 152: 546-8 Ap 12 '47
India's rough economic road; partition has confused all problems. Bsns W p86+ Ag 23 '47
Inflation in India. il Bsns W p88 Ag 2 '47
News by countries. For Comm W 28:18-19 Jl 26; 29:15-16 N 1 '47

Economic policy

Economic and social planning in India. Int Labour R 55:419-24 My '47

Foreign relations

Great Britain

Debt to India. Economist 152:204-6 F 1 '47
Realities in India. Economist 152:381-2 Mr 15 '47

United States

Grady confirmed as ambassador to India. Comm & Fin Chr 165:2116 Ap 17 '47

Industries and resources

Big plans for Hyderabad. map Bsns W p109-10 Ap 19 '47
India; heading into a smash? production falls below 1939 levels. il Bsns W p 109-10 O 25 '47
India now pondering nationalization. J. Nehru. Comm & Fin Chr 165:2488 My 8 '47
Industrial research in India presages broad advances. R. C. Leslie. il For Comm W 27:4-6+ Je 7 '47
Industrialists in India and England plan for development of India. Iron Age 159:154+ My 22 '47

Partition

Agreed division. map Economist 152:873-5 Je 7 '47
Agreement to separate? Economist 152:747-9 My 17 '47
Economics of Indian partition. map Nat City Bank p 105-7 S '47
How two Indias will vary economically; Pakistan can feed herself, while Hindustan is more industrial. P. A. Johnston. Barron's 27:35 S 15 '47
India divides for unity. map Bsns W p 109-10+ Je 14 '47
Indian boundary award. map Economist 153: 313 Ag 23 '47
Is it well with India? Economist 153:93-4 Jl 19 '47
Mountbatten's India. Economist 152:986 Je 21 '47
Pakistan. map Economist 152:404-6 Mr 22 '47
Partition of India. V. L. Horoth. il map Mag of Wall St 80:483-5+ Ag 2 '47
See also
Pakistan

Politics and government

India and Britain. Economist 151:986-7 D 21 '46
Indian princes. map Economist 153:183-4 Ag 2 '47
Scramble for power in India. Economist 152: 716-17 My 10 '47
Terror in the Punjab. Economist 153:407 S 6 '47
Unscrambling the Indian eggs. P. Einzig. Comm & Fin Chr 165:3225+ Je 19 '47

INDIAN standards institution
First inaugural meeting, January. V. S. Swaminathan. Chem & Eng N 25:1144 Ap 21 '47

INDIANA gas and water company
Public utility securities. Comm & Fin Chr 166:216 Jl 17 '47

INDIANAPOLIS

Industries

Selling a city; permanent exposition in Union station. il Bsns W p28 N 23 '46

Rapid transit

When this plan is perfected system costs must come down; safety program of Indianapolis railways. H. L. Myers. Mass Transportation 43:609 Ja '47

INDIANAPOLIS power and light company
Public utility securities. Comm & Fin Chr 166:1740 O 30 '47

INDIANS of North America

Canada

Indians of Canada. T. F. McIlwraith. Ann Am Acad 253:164-8 S '47

INDICATORS (for internal combustion engines)
Aircraft detonation indicators; abstract. J. S. Bogen and W. J. Faust. Pet Processing 2:90-1 F '47
Electronic detonation indicator. D. R. de-Boisblanc and others. diags Oil & Gas J 45:50-3+ Ja 18 '47
Engine indicator; details of the Standard-Sunbury electromagnetic design. S. Hill. diags Automobile Eng 37:19-23 Ja '47
Knock indicator based on the principle of pressure acceleration. F. Lichtenberger. Automotive Ind 97:30-1+ Ag 1 '47
NACA balanced diaphragm dynamometer-torque indicator. C. S. Moore and others. diags Automotive & Aviation Ind 96:41+ Je 1 '47
New pressure-duration indicator for routine testing of multi-cylindered engines. K. J. De Juhasz. bibliog il diags Automotive & Aviation Ind 96:22-4+ Mr 1; 42-5 Ap 1 '47
New pressure indicator design; piezoelectric type combined with spark plug. F. M. Mayes and M. A. Lindeman. il diags Automotive & Aviation Ind 96:38-9+ My 1 '47
Three new photoelectric instruments for high-speed engine research. K. J. De-Juhasz. il diags Automotive Ind 97:36-9+ Jl 1 '47

INDICATORS, Radioactive. See Radioactive tracers

INDICATORS and test papers
2,2′-Bipyridine ferrous complex ion as indicator in the determination of iron. F. W. Cagle, jr. and G. F. Smith. bibliog Anal Chem 19:384-5 Je '47
Derivatives of diphenylamine as oxidation-reduction indicators in alkaline solution. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:167-70 Mr '47
Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47
Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69: 1296-301 Je '47
New pH indicators for determination of total alkalinity in water; disodium 4,4′-bis(*p*-dimethylaminophenylazo) - 2,2′-stilbenedisulfonate and disodium 4,4′-bis(*o*-tolyltriazeno)-2,2′-stilbenedisulfonate. M. Taras. bibliog Anal Chem 19:339-41 My '47
Spectral changes in some dye ions and their relation to the protein error in indicators. I. M. Klotz and F. M. Walker. bibliog J Phys & Colloid Chem 51:666-80 My '47

INDIGO
History of West African styles. F. Crompton. Soc Dyers & Col J 62:307-8 O '46

Manufacture

Continuous processes for indigo; Hoechst and Ludwigshafen processes. J. G. Kern and H. Stenerson. Chem & Eng N 24:3164-7+ D 10 '46

INDIGO carmine
Sensitized catalysis; the fundamental facts; oxidation of acid indigo. H. J. Kauffmann. Am Chem Soc J 69:899-903 Ap '47

INDIGOSOL printing. See Textile printing—Patents

INDIUM
Contributions to the chemistry of indium; observations on the formation of magnesium indate. T. Moeller and J. G. Schnizlein, jr. bibliog il J Phys & Colloid Chem 51:771-5 My '47
Method of measuring half-lives. A. C. Graves and R. L. Walker. bibliog Phys R 71:1-3 Ja 1 '47
Slow neutron resonances in indium. B. D. McDaniel. bibliog diags Phys R 70:832-41 D 1 '46
Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens jr. and others. Phys R 71:165-73 F 1 '47
Tracer experiments with radioactive indium. K. L. Knox and J. W. T. Spinks. Can Chem & Process Ind 30:85-8 N '46

INDIUM chlorides
Absorption spectrum of InCl. H. M. Froslie and J. G. Winans. bibliog il diag Phys R 72:481-91 S 15 '47

INDIUM compounds
Electrometric study of the reaction between chromate and indium ions. A. Palm. Am Chem Soc J 69:224-5 F '47

INDIUM poisoning
Contribution to the study of experimental indium poisoning; abstract. L. Vignoli and others. J Ind Hygiene 29:sup94-5 S '47

INDIVIDUALITY
Biochemical individuality and its implications. R. J. Williams. bibliog Chem & Eng N 25: 1112-13 Ap 21 '47

INDOANILINE
Indoaniline dyes; effect of multiple substitution on the absorption of phenol blue. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 69:152-5 Ja '47
Indoaniline dyes; some phenol blue derivatives with substituents in the phenol ring. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 68:2235-9 N '46

INDO-CHINA, French
Crisis in the French empire. map Economist 152:70-1 Ja 11 '47; Correction. 152:108 Ja 18 '47

Commercial policy
Imports continue under strict government control. For Comm W 25:26 N 16 '46

Economic conditions
News by countries. For Comm W 28:16-17 Ag 2 '47

INDOLINONES
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; the stabilities of acrylic acid derivatives from sodium 1-arylazo-β-naphthaquinone-1-sulphonate and its derivatives, and an investigation of derived *iso*indolinones. F. M. Rowe, W. T. McFadyen and A. T. Peters. Chem Soc J p468-73 Ap '47

INDONE
Structure of the organomagnesium complex in carbonyl bridge indenones. C. F. H. Allen and J. A. VanAllan. bibliog Am Chem Soc J 68:2387-90 N '46

INDORSEMENT
Consent of indorser to release principal debtor; Howard national bank & trust co. v. Newman, Supreme court of Vermont. Banking Law J 64:631-9 Ag '47
Indorsement and negotiation; what the law says; what it means. Bankers Mo 64:13-16 Ja '47
Non-consenting endorser liable. C. R. Rosenberg, jr. Burroughs Clearing House 31:59-60 Ag '47
Sight draft endorsement by number not in compliance with requirement of statute that endorsement must be in writing. Burroughs Clearing House 31:45-6 Jl '47
Use of number for indorsement on sight draft not sufficient to pass title as holder in due course. Banking Law J 64:671-6 S '47
Waiver of restrictive endorsement for collection. Banking 39:66 D '46

INDUCTANCE
Inductance of wires and tubes. A. H. M. Arnold. Inst E E J 93 pt 2:532-40 D '46
R-f inductance meter. H. A. Wheeler. il diags Electronics 20:105-7 S '47

INDUCTANCE coils
Electrodeless discharges and some allied problems. G. I. Babat. bibliog il diags Inst E E J 94 pt 3:27-37 Ja '47
Multiple-position coils speed induction heating. F. W. Curtis. il diags Am Mach 91:90-3 O 23 '47

INDUCTION heating, High frequency. See Electric heating, Industrial—High frequency heating

INDUCTION motors. See Electric motors, Induction

INDUCTIVE interference. See Electric lines—Inductive interference

INDUSTRIAL accidents. See Accidents, Industrial

INDUSTRIAL airplanes. See Airplanes, Industrial

INDUSTRIAL arbitration. See Arbitration, Industrial

INDUSTRIAL arts
See also
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Paper making
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Printing
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Rubber
Shipbuilding
Soap
Tanning
Technology
Textile industry
Weaving

INDUSTRIAL automobiles. See Automobiles, Industrial

INDUSTRIAL brushes. See Brushes, Industrial

INDUSTRIAL buildings
Analysis of stepped-column mill bents. D. S. Ling. diags Am Soc C E Proc 73:1271-92 O '47
Architectural Record's building types study; in collaboration with Mill and Factory. il diags Arch Rec 100:91-110 D '46
Expansion slows; Commerce dept. cuts estimate of business spending for new plant, equipment. Bsns W p26+ Ap 26 '47
Industrial plant buildings; thirteenth annual special section. il Factory Management 105: B41-124 pt 2 Ap '47
Plant expansion tapering off; with list of recent industrial construction projects. Bsns W p21-2 N 9 '46
Welded frame building designed for heavy loads; raisin-packing plant in Fresno, Calif. M. Falk. il diags Eng N 137:640-2 N 14 '46
See also
Chemical plants
Factories
Foundries
Guest houses, Industrial
Machine shops
Metallurgical plants
Munition factories
Office buildings, Industrial
Petroleum refineries
Printing offices
Store buildings
Warehouses

Heating and ventilation
Mineral wool insulation of ducts cuts plant operating costs. il Sheet Metal Worker 38:100+ S '47
Warm air for industrial heating. il Sheet Metal Worker 38:92 O '47

INDUSTRIAL chaplains. See Chaplains, Industrial

INDUSTRIAL clinics. See Clinics, Industrial

INDUSTRIAL cooling. See Cooling, Industrial

INDUSTRIAL cooperation
Co-operation hits corrosion. T. C. Du Mond. il Sci Am 177:210-12 N '47
See also
Trade associations

INDUSTRIAL councils
Yankee peace plan; Vermont's joint labor-management conciliation group. Bsns W p88-90 D 7 '46

INDUSTRIAL courts. See Courts, Industrial

INDUSTRIAL demobilization
Postwar adjustment of aircraft workers in southern California. L. R. Linsenmayer and P. E. Warwick. Mo Labor R 63:706-11 N '46
Reconversion. J. B. Hubbard. R Econ Stat 29:31-8 F '47

Government plants

Big job still ahead in surplus plant disposal; many plants already sold or leased. Bsns W p21-2 F 1 '47
Canadian war plant multiple tenancy. J. Montagnes. Factory Management 104:294+ N '46
Conversion of war plant into industrial center, Birmingham, Ala. J. Adams. il Dom Comm 35:26-30 Mr '47
1400 surplus war plants costing $4 billion sold or leased. Am Mach 91:122-3 Ja 30 '47
Surplus government steel plants sold and leased to private industry; tabulations. Steel 120:70, 71 F 10 '47
Surplus plants costing $1,000,000,000 undisposed of in southern states; with list by states. il Manuf Rec 116:37+ Jl '47
Tenants wanted for big surplus plant at Henderson, Nev. Bsns W p44 O 4 '47
WAA reports steel projects disposal; list of surplus steel plants sold, leased, and awaiting disposal. Iron Age 159:112-13 F 13 '47
War surplus disposals. J. B. Epstein. Survey of Cur Bsns 27:13-15 O '47

INDUSTRIAL design. See Design

INDUSTRIAL development corporations
Operations of industrial development corporations. H. E. Leeper. il Dom Comm 34:19-25 D '46

INDUSTRIAL diamonds. See Diamonds, Industrial

INDUSTRIAL diseases. See Diseases, Industrial

INDUSTRIAL dispensaries. See Dispensaries, Industrial

INDUSTRIAL districts
Getting together; Boston industrial center for small firms. il Bsns W p31 O 11 '47
Organized industrial districts with special reference to the Chicago area. R. L. Wrigley, jr. maps J Land & Pub Util Econ 23: 180-98 My '47

INDUSTRIAL education
Educating for industry's needs. H. W. Rinehart. J Chem Educ 24:386-8 Ag '47
Industrial training for naval officers. Marine Eng 51:102 D '46
Training-film production problems. R. H. Ray. Soc Motion Picture Eng J 49:203-8 S '47

See also
Apprentices
Corporation schools
Employees, Training of
Engineering education
Industrial engineering—Study and teaching
Technical education
Textile education
Vocational education

Bibliography

Industrial education bibliography; a list of texts and other books for use in developing an effective training program; rev. and supplemented in 1946 by the Committee on industrial training. 22p National metal trades assn, 122 S. Michigan av, Chicago 3 '46

Cooperative plan

Custom made men; molding employee attitudes; National schools in Los Angeles. E. C. Stodel. il Diesel Power 25:44+ Je '47
Factory college; Ford, Wayne university set up course to train men for administrative jobs. il Bsns W p94+ S 6 '47
1,500 masonry apprentices to be a boon to Midwest producers. il Brick & Clay Rec 109:30 D '46
Stamping industry initiates program featuring cooperation with schools; to provide additional training for future die-makers. il Iron Age 159:127-8 Mr 6 '47
Training; key to better coal mining. W. A. Stanbury, jr. il Coal Age 52:74-81 O '47

INDUSTRIAL engineering
Engineering and quality control. P. L. Alger. Elec Eng 66:16-19 Ja '47
Engineers will mold the future. C. J. Lamb. il Sci Am 177:197-200 N '47
Industrial engineering; a survey of practice in 80 plants. R. M. Barnes. Factory Management 105:102-4 Mr '47
Industrial engineering in refinery maintenance. W. H. Reynolds. Pet Refiner 26: 123-6 Jl '47
Management control through industrial engineering. E. F. Gibian. S A E J 55:75-7 F '47
Pattern for decision. E. D. Hayward. Pet Eng 18:164+ Ja '47
Production engineering fundamentals; management data sheets. B. A. Moski, jr. Factory Management 105:136+ Ag '47
Specialist in know-how; Amer-Ind, inc, designs, builds, and trains personnel for industrial installations anywhere in the world. Bsns W p93-4 My 3 '47

See also
Engineering departments
Industrial management
Time study

Study and teaching

Comparison of industrial engineering curricula. J. M. Apple. J Eng Educ 37:821-4 Je '47
Educate industrial engineers for action. G. B. Carson. J Eng Educ 37:843-8; Discussion. 848-57 Je '47
Five year curriculum in industrial engineering. P. N. Lehoczky. J Eng Educ 37:246-51 N '46
Teaching the break-even chart. C. E. Bullinger. J Eng Educ 37:228-33 N '46

INDUSTRIAL engineers
Technical publicity offers bright future for engineers; how to organize publicity activities for industrial plants. V. W. Palen. il Ind Marketing 31:41-2+ D '46

INDUSTRIAL estates
Scotland's plan encourages small industries; Scottish industrial estates, ltd. A. Borthwick. il Am Bsns 17:19+ Jl '47

INDUSTRIAL fatigue. See Fatigue

INDUSTRIAL films. See Moving pictures in industry

INDUSTRIAL guns. See Guns, Industrial

INDUSTRIAL heating. See Electric heating, Industrial; Gas heating, Industrial; Heating, Industrial; Infrared rays—Industrial heating

INDUSTRIAL hospitals. See Hospitals, Industrial

INDUSTRIAL hydraulics, National conference on. See National conference on industrial hydraulics

INDUSTRIAL hygiene. See Hygiene, Industrial

INDUSTRIAL hygiene foundation of America
Annual meeting, 11th, Pittsburgh, Nov. 7. Chem & Eng N 25:3049 N 25 '46
Annual meeting, 11th, Pittsburgh, Nov. 6-8; abstracts of proceedings. Ind Med 16:72+ F '47

INDUSTRIAL insurance. See Insurance, Industrial

INDUSTRIAL insurers conference
Annual convention, 38th, Virginia Beach, May 8-10. East Underw 48:3+ My 16 '47; Nat Underw (Life ed) 51:16 My 16; 10 My 23 '47; Weekly Underw 156:1370-1 My 17 '47; Spectator (Life ed) 154:31-2+ Je '47
Committees appointed. East Underw 48:6 Ag 22 '47
Origin of Conference. L. Phillips. East Underw 47:41 N 15 '46

INDUSTRIAL life and health insurance company. See Life insurance company of Georgia

INDUSTRIAL lighting. See Factories—Lighting; Lighting, Industrial

INDUSTRIAL location. See Factories—Location; Location in industry

INDUSTRIAL locomotives. See Locomotives, Industrial

INDUSTRIAL management

Developing progressive management. P. Carroll, jr. Advanced Management 12:60-4 Je '47

Lessons from Sweden; management conference at Stockholm. G. O. McLean. Elec R (Lond) 141:258-9 Ag 15 '47

Making of scientific management. 3v L. Urwick and E. F. L. Brech. Review. v 1-2, by H. A. Hopf. Management R 36:59-64, 167-75 Ja, Mr '47

Putting management's house in order. P. K. Povlsen. Mech Eng 69:754-6 S '47

Trade unionists and scientific management. G. J. Anyon. Advanced Management 12: 65-73 Je '47

See also

Business management
Coal mines and mining—Management
Company towns
Efficiency, Industrial
Employees' representation in management
Employment management
Employment systems
Engineering departments
Factory management
Foremen
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Insurance, Business
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Machine shop management
Machinery, Replacement of
Mine management
Office management
Organization in industry
Planning
Public relations
Purchasing
Railroads—Management
Standardization
Suggestion systems
Time study
Wage payment plans

INDUSTRIAL market

Advertising reveals market pattern for 275 products. charts(p42-7) Ind Marketing 32: 40-1+ Ag '47

AMA plans case studies of industrial marketing. Ind Marketing 31:64+ D '46

Can we make engineers of salesmen, and vice versa? J. H. Collins. il Sales Management 58:101-2+ F 15 '47

Cannon's man-hunt for 60,000 industrial prospects for connectors. Sales Management 59:100 Jl 15 '47

Changing world; increasing demand for American equipment in foreign countries. J. J. DeMott. Ind Marketing 32:40+ Ap '47

Check list to help you introduce your new industrial products. U S Bur For & Dom Com, Economic Ser 53:1-26; pa 10c Supt. of doc. '46; Same. Ind Marketing 32:50-2+ Ja; 51-4 F; 47-8+ Mr '47

Employment; a key to appraising changes in industrial markets. A. H. Dix. Sales Management 58:46+ Je 1 '47

First steps in finding the market for a new industrial product; symposium. M. Hansen and others. Ind Marketing 31:56 D '46; 32: 44+ Ja '47

How much has the industrial market increased over prewar? A. H. Dix. Ind Marketing 31:36-8+ N '46

How to determine the markets and buyers for industrial products. A. R. Venezian. Ind Marketing 32:34-9 Ag '47

How we cracked a specialized industrial market; Resinous products & chemical co. R. P. Goodale. Ptr Ink 220:56+ Jl 25 '47

How we spot and analyze markets for mill supply salesmen; Raybestos-Manhattan. J. J. De Mario. il Sales Management 59: 60+ Ag 15 '47

Industrial marketers hear manufacturer liaison plea. Ptr Ink 217:120 D 13 '46

It's time to challenge marketing traditions. A. M. Staehle. Ind Marketing 32:33-4 Jl '47

Organizing for industrial marketing research. K. G. Fuller. Ind Marketing 31:39-40+ D '46

Population trends, what they mean to industrial marketers. V. D. Reed. maps Ind Marketing 31:51-2+ D '46

Problems in planning distribution channels for industrial goods. J. A. Proven. Ind Marketing 31:43+ S; 38+ O; 51-2+ N '46

Selling industrial products with the accent on selling. E. C. Bursk. Ind Marketing 32: 39+ S '47

Six tools for industrial selling; salesmen's calls, business papers, catalogs, expositions, mail, personal letters. R. H. Baldwin. Ptr Ink 218:40-1 Mr 28 '47

Wanted; new industrial markets for war-born synthetic sapphires; Elgin national watch co. R. F. Waindle. il Sales Management 57: 50+ N 10 '46

See also

Advertising, Industrial
Equipment industries
Farm market

INDUSTRIAL medicine. See Medical service, Industrial

INDUSTRIAL mobilization

Army-navy merger plan includes peace-time WPB. Elec World News ed 127:11 Mr 8 '47

Army-navy munitions board seeks industrial cooperation. K. Rannells. Iron Age 159: 104-5 F 13 '47

Factory army; War dept. to build reserve units in many plants. Bsns W p31 Je 7 '47

General Somervell says: industry must act now to stop World war III. il map Factory Management 105:66-71 Ag '47

Industrial mobilization studies. K. C. Royall. Iron Age 159:122 Mr 6 '47

Peacetime WPB? Truman's proposed civilian agency. Bsns W p16 Mr 8 '47

Push industrial mobilization plans. Steel 121:56-7 O 13 '47

United engineering & foundry co. sponsors reserve service unit. Iron Age 160:194+ O 16 '47

War department plans reserve service units within industry. Automotive Ind 97:146+ S 1 '47

War secretary Royall calls for industrial mobilization planning. Iron Age 160:122 Ag 21 '47

What is the ANMB doing? R. R. Deupree. Power Pl Eng 51:67+ O '47

INDUSTRIAL motor trucks. See Motor trucks, Industrial

INDUSTRIAL museums

National railway museum. E. W. Swan. Engineering 164:295 S 26 '47

INDUSTRIAL nursing. See Nurses and nursing, Industrial

INDUSTRIAL office buildings. See Office buildings, Industrial

INDUSTRIAL packaging engineers association of America

Annual exposition and forum, 2d, Chicago, April 29-May 1. Chem & Eng N 25:1439 My 19 '47

Prize-winning shipping packs; Industrial packaging engineers' contest. il Mod Packaging 20:142-3 Je '47

INDUSTRIAL painting. See Painting, Industrial

INDUSTRIAL pensions. See Pensions, Industrial

INDUSTRIAL photography. See Photography—Industrial applications

INDUSTRIAL poisons. See Poisons, Industrial

INDUSTRIAL psychology. See Psychology, Industrial

INDUSTRIAL railroads. See Railroads, Industrial

INDUSTRIAL rayon corporation

Industrial Rayon versus Celanese. G. L. Merton. il Mag of Wall St 80:705-7+ S 27 '47

INDUSTRIAL reconversion. See Industrial demobilization

INDUSTRIAL relations

About labor; is everyone being practical? M. Dodge. Management R 36:245-7 My '47

Accountant shows the road to industrial peace. M. H. Stans. J Account 84:19-28 Jl '47

INDUSTRIAL relations—*Continued*
Accounting and industrial peace. V. Z. Brink. J Account 83:385-93 My '47; Discussion. E. S. Feldman. 84:151-3 Ag '47
Adaptive capacity of workers. G. T. Bowden. Harvard Bsns R 25 no 4:527-42 [Jl] '47
Advertising can help settle labor disputes; case history. M. Davis. il Ptr Ink 217:77-8+ D 13 '46
Automotive industry gives increasing attention to industrial relations problem. A. H. Allen. Steel 121:61-2 O 27 '47
Changes in present management personnel relations. G. B. Arthur, jr. Iron Age 160: 150-2 Jl 3 '47
Class struggle isn't the answer; reprinted from Dec. 1946 Reader's digest. W. W. Cenerazzo. Power 91:210+ Mr '47
Coal and the coal miner. Coal Age 51:67-82 D '46
CED's plan for labor peace. Factory Management 105:77 Ap '47
Conflict and cooperation in labor relations. B. M. Selekman. Harvard Bsns R 25 no 3: 318-38 [Ap] '47
Democracy in industrial relations; address before California institute of industrial relations. L. B. Schwellenbach. Comm & Fin Chr 165:1701+ Mr 27 '47
Do employes accept management's message? M. Dodge. Trusts & Estates 84:26 Ja '47
Do the workers understand industrial peace? H. W. Steinkraus. Pub Util 39:342-51 Mr 13 '47
Dozen must's in human relations. T. G. Spates. Factory Management 105:238 Ag '47
Economic forums for employees; program of Monsanto chemical co. W. G. Keehn. Trusts & Estates 85:103-5 Ag '47
Employer-employee relationships discussed at NMTA convention. Steel 119:48-9 N 25 '46
Employer policy in prosecuting unions for unfair labor practices. C. E. French. Comm & Fin Chr 166:436 Jl 31 '47
Enlightened labor-management relations. D. B. Robertson. Comm & Fin Chr 164:3348+ D 26 '46
Evolution applied to industrial democracy. G. T. Christopher. S A E J 55:40-1 F '47
Favorable outlook for 1947 held dependent on labor policies. S. M. Foster. East Underw 48:1+ Ja 3 '47; Same. Life Ins Courant 52:12-14 Ja '47; Same. Spectator (Life ed) 154:12-15 Ja '47; Same. Weekly Underw 156: 100-2 Ja 4 '47; Abstract. Nat Underw (Life ed) 51:1 Ja 3 '47
From the workers' point of view; why the strikes? N. Sabsay. Harvard Bsns R 25 no 3:339-47 [Ap] '47
Give them the facts; Taft-Hartley act. L. Stessin. Management R 36:465-6 S '47
Give workers the common-sense facts behind their jobs. F. C. Crawford. Factory Management 104:100-3 O '46
Good-will; one dollar? prosperity depends on the will to use tools. G. Romney. Trusts & Estates 84:27 Ja '47
Government in economic and industrial relations. E. Clague. Comm & Fin Chr 166: 918+ S 4 '47
Growing importance of human relations. F. McCormick. Pub Util 40:376-7 S 11 '47
Guide through labor relations chaos. P. Eliel. Advanced Management 11:147-51 D '46
Guide to public relations published by Research institute. Ptr Ink 220:60 S 19 '47; Trusts & Estates 85:278 O '47
Hawaii replies in three tongues; industries take firm stand ruffled labor situation. il Bsns W p 104+ S 13 '47
Helping industry through labor relations. L. L. Narowetz. Sheet Metal Worker 37:57+ D '46
House magazine poll secures data for industrial relations manager of General aniline & film corp. Ptr Ink 221:60+ O 24 '47
How can we help workers grasp the truth about profits? K. Powlison. Sales Management 59:37-9 Ag 15; 141+ S 1 '47
How can we, the public, get America's labor relations back on even keel? W. W. Vandeveer. Nat Pet N 38:21-4 N 6 '46; Discussion. 39:31+ Ja 8 '47
How to get industrial peace. E. W. Davidson, comp. Sales Management 58:71 F 1 '47
How to make unionism serve the public interest; review of Challenge of industrial relations, by S. N. Slichter. Ry Age 123: 240 Ag 9 '47
Human behavior in employee-employer relations. J. A. Patton. Mech Eng 69:743-5+ S '47
Human relations and credit. R. V. McNally. Credit & Fin Management 49:30-1 F '47
Human relations in business. H. Woodhead. Elec West 99:71-3 Jl '47
Human relations in industrial civilization. P. Meadows. il Tech R 49:341-4+ Ap '47
Human relations, the day's management challenge. W. Whitney. Am Gas Assn Proc 1946:34-6
Incentives and enterprise. J. F. Lincoln. Iron Age 159:55-6 Mr 27 '47
Industrial assignment. H. M. Turner. Can Chem & Process Ind 30:58+ D '46
Industrial management looks ahead. L. Ruthenburg. Am Gas J 166:21-3+ Ap '47
Industrial relations and credit; employee morale can be a guide to credit risks. K. R. Bailey. Credit & Fin Management 49:6-7 Ja '47
Industrial relations in Standard oil company of New Jersey; abstract. S. Chase. Trusts & Estates 84:163 F '47
Industrial relations in the United States; statement by the president of the A. F. of L. W. Green. Int Labour R 54:87-92 Jl '46
Industry audits; case studies in industrial relations. G. E. Stedman. Personnel J 25: 259-66 F '47
Is AFL pointing the way to management-labor cooperation? W. Williams. Factory Management 105:119-20 F '47
Is there a field for accountants in the future of labor negotiations? management's side. F. E. King. J Account 84:10-12 Jl '47
It's everyone's job to make collective bargaining work. C. S. Ching. il Ptr Ink 221: 86-7+ O 31 '47
Job for today; top executives must outsell the crackpots! F. C. Crawford. Sales Management 58:57 Mr 1 '47
Jobs in industrial relations; in industry, labor, and government. D. Yoder. Personnel J 25:218-20 D '46
Labor and business look at each other. J. B. Carey; H. W. Steinkraus. Comm & Fin Chr 165:3337+ Je 26 '47
Labor and management. M. Hough. Rayon 28:415-16 Ag '47
Labor and management must bury the hatchet. P. G. Hoffman. Comm & Fin Chr 164:2890+ D 5 '46
Labor and management; one team, one furrow. R. Chaplin. Edison Elec Inst Bul 15: 225-8 Je '47; Excerpts. Elec World 127:100 Je 7 '47
Labor crisis; its causes and cures. Factory Management 105:67-88 Ja '47
Labor law will be repealed if you don't watch out. Factory Management 105:66-73 O '47
Labor-management conference as an aid to collective bargaining. G. W. Taylor. Ann Am Acad 250:53-8 Mr '47
Labor-management cooperation begins at home; welfare of both depends primarily on company teamwork. G. Romney. Trusts & Estates 84:381-3 Ap '47
Labor-management harmony; can selling catalyze it? P. Heyneman. Sales Management 58:37-9 Je 15 '47
Labor management problems in 1947. E. E. Witte. Comm & Fin Chr 165:1788+ Ap 3 '47
Labor management relations and the public interest. O. Tead. Advanced Management 12:48-52 Je '47
Labor management relations and the Taft-Hartley act. H. Carlson and O. D. Fitz. Gas Age 100:71-3+ O 2 '47
Labor-management relations under the Taft-Hartley act. E. E. Witte. Harvard Bsns R 25 no 4A:554-75 [O] '47
Labor policy of the NAM. R. W. Johnson. Iron Age 160:141-2+ Jl 24 '47
Labor recommendations in President's message to Congress on the state of the union. Mo Labor R 64:255-6 F '47

INDUSTRIAL relations—*Continued*
Labor relations and the public. H. Feldman, ed. Ann Am Acad 248:1-267 N '46
Labor relations crucial in 1947. M. Nadler. Comm & Fin Chr 165:492 Ja 23 '47
Labor relations on a hard-boiled basis. C. Luckman. Management R 36:509-11 O '47
Labor relations program calls for constant attention; 81 strifeless years. P. A. Johnston. Barron's 26:3+ D 16 '46
Labor thrives best under private enterprise. D. B. Robertson. Comm & Fin Chr 165: 2389+ My 1 '47
Labor's attitude and industrial peace. L. Pressman. Comm & Fin Chr 165:277+ Ja 16 '47
Labor's objectives. F. P. Fenton. Harvard Bsns R 25 no 4:463-72 [Jl] '47
Labor's responsibility for full productivity. E. Herrick. Advanced Management 12:14-19 Mr '47
Leaders again; war trained supervisors should try to dispel tension between labor and management. E. B. Lightfoot. Personnel J 25:285-6 F '47
Let's take the lead in giving workers economic facts. Factory Management 104:124-9 Je '46; Excerpts. Trusts & Estates 83:433-5 N '46
Lewis holds the answer. Bsns W p80 F 8 '47
Little things that count in personnel relations. E. M. Fitch. Air Transport 5:43-5 Ap '47
Look for better methods in labor relations, not government regulation. G. W. Taylor. Personnel J 26:87-91 S '47
Low productivity, a challenge to industrial marketers. R. M. Creaghead. Ind Marketing 31:45-6+ N '46
Man power vs. machine power; best tools useful only when in hands of workers who are in full sympathy with aims of employers. R. V. Wright. Ry Age 123:649-50 O 18 '47
Management leader's manual for operating executives, supervisors and foremen. J. O. Rice and M. J. Dooher, eds. 190p $3 American management assn, 330 W. 42d st, New York 18 '47
Mere labor bills will not settle your problems. E. L. Bernays. Mass Transportation 43:278-9 Jl '47
Mutual survival; labor-management problem. E. W. Bakke. Elec Eng 66:124-30 F '47
National association of motor bus operators labor relations session. Bus Transportation 26:42-5+ Je '47
National labor-management conference needed. W. P. Reuther. Comm & Fin Chr 165:8+ Ja 2 '47
National labor relations policy. J. H. Ball. Comm & Fin Chr 164:3014+ D 12 '46; Same abr. Pub Util 39:3-11 Ja 2 '47
Need for scientific study of human relations in industry. E. W. Bakke. Advanced Management 12:81-7 Je '47
Neither labor nor capital should endanger stability; inaugural address. T. E. Dewey. Comm & Fin Chr 165:127+ Ja 9 '47
New phase in management-labor relations seen as real thing; management makes changes in policies while steel labor bans tieups. T. Campbell. Iron Age 159:103-4 My 29 '47
Next steps in labor policy; abstract. L. Wolman. S A E J 55:97-8 My '47
1947; good strike year or bad? Bsns W p94+ Je 7 '47
Operation L-M-C; Labor-management-citizens committee. J. D. Biggers. Trusts & Estates 83:559-61 D '46
Outlook for freedom. P. G. Hoffman. Power Pl Eng 51:67+ F '47
Past is the gaslight era of staff relations. J. S. Lawrence. Banking 39:25+ Ja '47
Permanent national management-labor council proposed by CED. Comm & Fin Chr 165: 1122+ F 27 '47; Same. Credit & Fin Management 49:11-12 Mr '47
Personnel relations reach firmer ground. C. M. Bowden. Textile World 97:116 F '47
Plant as a place to work. R. Wank. il Arch Rec 100:91-4 D '46
Political meddling alarms union leader. D. B. Robertson. Ry Age 121:1089-91 D 28 '46
Power for peace; San Francisco employers council. Bsns W p 106-8 O 18 '47
Practical plan for industrial harmony. Mag of Wall St 79:475-6+ F 1 '47
Presidential adviser anticipates further labor trouble. J. D. Clark. Comm & Fin Chr 165: 2331+ My 1 '47
Pressbox quarterback; suggestion to management in two pictures. il Trusts & Estates 84:24-5 Ja '47
Production comes from people. B. Moreel. Ind Med 16:76+ F '47
Public names chief faults of business management; Gallup poll. Iron Age 159:103 Ap 24 '47
Reconversion in industrial relations. B. M. Stewart and W. J. Couper. Management R 36:261-4 My '47
Reducing costs through improving labor relations. A. C. White. il Dun's R 55:26-8 Ap '47
Removing inequalities; no. 1 industrial problem. A. P. Sloan, jr. Comm & Fin Chr 164: 3346+ D 26 '46
Role of labor in modern industrial society. C. S. Golden. Advanced Management 12: 35-8 Mr '47
Safety and industrial relations. J. L. Roy. il Safety Eng 92:22+ N '46
Sharing the facts; anthracite's road to better relations. W. A. Stanbury, jr. Coal Age 52:80-3 My '47
Significance of industrial relations in Canadian paper industry. R. M. Fowler. Pulp & Pa of Can 47:71-6 N '46
State of the unions. M. R. Franks. Factory Management 105:112-14 F '47
Stewardship; social contribution of the accountant to labor-management relations; labor viewpoint. M. H. Hedges. J Account 84:13-18 Jl '47
Teamwork in industry. G. Meany. Comm & Fin Chr 164:2891+ D 5 '46
Tell your workers their side of the portal-to-portal issue. F. Rudge and H. Hosking. Ptr Ink 218:31-3 Ja 17 '47
Three-point program is recommended to improve industry labor relations. Nat Pet N 39:36 Mr 19 '47
Time out for briefing. R. Olzendam. Advanced Management 12:39-44 Mr '47
Today's pattern of industrial relations. R. W. Stone. Mech Eng 69:750-3+ S '47
Town hall meetings for better human relations; Whiting corporation. S. H. Hammond. Factory Management 105:106-7 Ja '47
Trade unionists and scientific management. G. J. Anyon. Advanced Management 12: 65-73 Je '47
Transit industry labor-management policy. E. Dana; P. C. Groner; E. C. Houghton. Mass Transportation 42:435-41 O '46
Union brags about its company; American watch workers union (Waltham division). Factory Management 105:240+ Ja '47
Union relations. Coal Age 52:56-60 Ja '47
What the factory worker really thinks. Factory Management 104:81-8 O; 81-8 N '46
Where do we go from here? problems arising from modern industrial techniques. A. K. Rice. Engineer 182:594-5 D 27 '46; Discussion. 183:100-1 Ja 24 '47
Why I'm working on the railroad; New York Central discusses the economic side of its business with employees. Trusts & Estates 84:158-60 F '47
Why not industrial peace? H. W. Steinkraus. Comm & Fin Chr 165:402+ Ja 23 '47
Women's role in industrial peace. L. Dickinson. Comm & Fin Chr 164:3121+ D 12 '46
Worker independence again a factor in labor relations. W. Williams. Factory Management 105:94-6 Je '47

INDUSTRIAL relations—*Continued*
World the manager lives in. R. E. Gillmor. Mech Eng 69:541-3+ Jl '47

See also
Arbitration, Industrial
Building trades—Labor conditions
Collective bargaining
Company towns
Employees
Employees, Reports to
Employees' benefit plans
Employees' representation in management
Employment management
Labor and capital
Labor and laboring classes
Labor disputes
National war labor board
Open and closed shop
Profit sharing
Psychology, Industrial
Relief work in industry
Safety devices and measures
Shop stewards
Strikes
Suggestion systems
Trade agreements
Trade unions
Unemployment
United States—Conciliation service
Wage payment plans
Welfare work in industry

Bibliography

Industrial relations five-foot shelf. H. G. Heneman, jr. (Bul. no. 5) 18p Univ. of Minnesota press, Minneapolis '47
Reading list on labor and the public. H. Baker. Ann Am Acad 248:195-8 N '46

Study and teaching

University and labor education. E. E. Witte. Mo Labor R 65:36-40 Jl '47

INDUSTRIAL relations consultants
Industrial relations consultant not engaged in law practice in chancery of New Jersey. J Account 84:86-8 Jl '47

INDUSTRIAL research
Advertising and technical research. M. R. Budd. Ind Marketing 31:46+ D '46
American patent system and industrial research; some managerial aspects. C. W. Ooms. bibliog Chem & Eng N 24:3027-9 N 25 '46
Applied research budgets soar. R. M. Bleiberg. Barron's 27:3 F 17 '47
Britain spurs broad industrial research. R. C. Leslie. il For Comm W 26:3-4+ Ja 11 '47
Canada's industrial research experiences great expansion. R. C. Leslie. il For Comm W 28:7-8+ S 6 '47
Chicago production conference, March 17-19; chemical research discussion. Chem & Eng N 25:968-9 Ap 7 '47
Commercial research by universities threatens science and education. H. A. Toulmin, Jr. il Product Eng 18:81-3 Je '47; Discussion. 18:174-5 S; 156-7 O '47
Design of facilities for research. P. C. Smith. plans Ind & Eng Chem 39:444-7 Ap '47
Does patent consciousness interfere with cooperation between industrial and university research laboratories? L. A. Hawkins. Science 105:326-7 Mr 28 '47
Evaluating research activities. F. Olsen. Ind Marketing 32:31-2+ F '47
Fulmer research institute. il Automobile Eng 37:303-6 Ag '47; Engineer 184:37-9 Jl 11 '47; Engineering 164:43 Jl 11 '47
Future research in hydrocarbons; abstracts. M. E. Spaght. Chem & Eng N 25:1122 Ap 21 '47; Chem & Ind p241-2 My 3 '47
General Mills research laboratories reorganized; scientific and commercial research. Chem & Eng N 25:314 F 3 '47
Goodrich Chemical centralizes semi-works development; new general experimental plant at Avon Lake, Ohio. F. K. Schoenfeld. il Chem Ind 60:958-9 Je '47
Graduate training at the doctorate level; condensed summary of the main report of the Committee on professional training; information from Chemical industrial research directors and executives. E. M. Billings. Chem & Eng N 25:2076-81 Jl 21 '47
Harvester company establishes manufacturing research center. il Steel 121:72-3 N 3 '47
House of ideas; Harvester research center. Bsns W p18-19 Ja 25 '47
How American Cyanamid handles its research reports. H. C. E. Johnson. Chem Ind 60:217-18 F '47
How to increase research profits. il diag Chem Ind 60:421-2 Mr '47
How to meet competition with industrial research. G. E. Ziegler. il Ind Marketing 32: 62+, O '47
Incentives for research. R. E. Wilson. il Tech R 49:217-19+ F '47
Industrial chemical research and the theory of inquiry. R. Frankl. J Chem Educ 24: 399-403 Ag '47
Industrial research. C. Paterson. Engineer 183:215 Mr 14 '47
Industrial research advances in Australia and New Zealand. R. C. Leslie. il For Comm W 28:5-7+ Ag 9 '47
Industrial research and its relation to accounting. M. Smith. N A C A Bul 28:795-806 Mr 1 '47
Industrial research expenditures growing. Iron Age 159:132 Mr 27 '47
Industrial research in India presages broad advances. R. C. Leslie. il For Comm W 27:4-6+ Je 7 '47
Industrial research in Missouri. il Manuf Rec 116:124-5 Ja '47
Industrial research in South Africa and in British colonies. R. C. Leslie. il For Comm W 29:6-7+ O 11 '47
Industry and research conference. Elec R (Lond) 140:521 Ap 4 '47
Influence de la recherche scientifique de laboratoire sur le progrès industriel. E. C. Dodds. Chimie & Ind 58:15-16 Jl '47
Influence of business cycles on industrial research. M. Holland. il Dun's R 54:15-16+ D '46
Intelligence group in a technical team. R. E. Stradling. Assn of Sp Lib & Inf Bur Proc 1946:27-33
Large industrial research laboratory. D. M. Beach. il Ind & Eng Chem 39:448-53 Ap '47
Management's role in planning research; Chem. & Met. report. D. B. Hertz. bibliog Chem Eng 54:123-130 Ag '47
Managing a research department. A. G. Olsen. Food Ind 19:935-8 Jl '47
Manufacturing research concentrated by Harvester. Am Mach 91:117-19 Mr 27 '47
Mellon Institute enters the postwar era. il Chem & Eng N 25:1265-70 My 5 '47
New research projects to cut costs. M. Holland. Comm & Fin Chr 164:3356 D 26 '46
Opinion survey on outside research. J. Bjorksten. Chem & Eng N 24:3185-6 D 10 '46
Organization of the industrial research laboratory. E. H. Volwiler. Chem & Eng N 25: 1326-30 My 12 '47
Organized commercial chemical development; application research and technical service. W. H. Harding. Chem & Eng N 24:3329-33 D 25 '46
Patents stabilize research. J. A. Dienner. Chem & Eng N 25:302-4 F 3 '47
Research as a business. A. Abrams. Paper Ind 29:678-9 Ag '47
Research at your service; Stanford research institute. Barron's 27:34 Mr 17 '47
Research; its creative role in industry. Index 27 no 1:1-12 [Mr] '47
Research must expedite recovery. Chem Age (Lond) 56:400 Ap 5 '47
Research, opportunity and challenge. C. B. Veal. bibliog Mech Eng 69:757-62 S '47
Research programme of the Industrial relations section, Princeton university. H. Baker. J Doc 2:242-4 Mr '47
Retreat for progress. C. A. Thomas. Chem & Eng N 25:2559-61 S 8 '47; Abstracts. Paint Oil & Chem R 110:14+ Je 12 '47; Rayon 28:378 Jl '47
Science and industry; two-way traffic. D. T. A. Townend. Chem & Ind p139-40, 142-4 Mr 22 '47
Scientific approach to technical problems. J. Johnston. Iron Age 158:146+ D 19 '46
Selection of laboratory location. R. W. Cairns. il Ind & Eng Chem 39:440-3 Ap '47

INDUSTRIAL research—*Continued*
Shortage of scientific and technical personnel; what industry is doing about it. K. A. Meade. Science 105:457-61 My 2 '47
Technical colleges and research. Chem Age (Lond) 56:467-8 Ap 19 '47

See also
Agricultural research
Cement research
Ceramic research
Chemical research
Corrosion research
Cotton research
Electric research
Engineering research
Foundry research
Gas research
Glass research
Laboratories
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Metallurgical research
Paint research
Paper research
Petroleum research
Railroad research
Refrigeration research
Rubber research
Scientific research
Steel research
Textile research
Welding research
Wood research
Wool research

also British cast iron research association; Great Britain—Scientific and industrial research, Department of; Institute of industrial research, San Antonio, Texas; Louisville university—Institute of industrial research; Pittsburgh university, Mellon institute of industrial research; Southern research institute, Birmingham, Alabama; Sugar research foundation; Texas state research foundation; United States—Standards, National bureau of

Accounting

How we developed control of research and development costs. G. L. Smith. N A C A Bul 29:279-89 N 1 '47
Research and the balance sheet. L. G. Gabriel. Chem & Ind p418-20 N 23 '46
Subsidized and endowed research. J Account 84:337-8 O '47

Directories

Industrial research laboratories of the United States, including consulting research laboratories. C. Hull, comp. 8th ed Nat Res Council Bul 113:1-415 '46 ($5)

INDUSTRIAL research institute
Annual meeting, 9th, Swampscott, Mass. June 4-6. Chem & Eng N 25:1860-1 Je 30 '47
First award of Industrial research institute medal goes to Willis R. Whitney. il Chem & Eng N 24:2911-12 N 10 '46

INDUSTRIAL research institute, Chattanooga. See Chattanooga university—Industrial research institute

INDUSTRIAL roads. See Roads, Industrial

INDUSTRIAL sand association, National. See National industrial sand association

INDUSTRIAL statistics
Automotive and aviation industries 1947 statistical issue. il map Automotive & Aviation Ind 96:73-124 Mr 15 '47
Deferred demand for productive facilities still large; commercial groups' spending must close huge wartime gap. J. V. Sherman. Barron's 27:32 Je 16 '47
Expenditures for new plant and equipment in 1946. G. B. Wimsatt. Survey of Cur Bsns 26:14-17+ D '46
Industry 1947 plant and equipment expenditures to exceed last year's; SEC prediction. Comm & Fin Chr 165:2211 Ap 24 '47; Survey of Cur Bsns 27:8+ My '47
Industry seeking economic balance; with charts, tables, etc. V. Bell. il Steel 120: 324-31 Ja 6 '47
Plant and equipment expenditures in 1946. Survey of Cur Bsns 27:6-7 Ap '47
Plant and equipment survey; position at end of third quarter of 1947. Survey of Cur Bsns 27:11-12 Jl '47
Projected investment in plant and equipment. Survey of Cur Bsns 27:5-6 O '47

See also
Employment—Statistics
Manufactures—Statistics
Market statistics
Production—Statistics
Wages—Statistics

also subdivision Statistics under names of industries, e.g. Petroleum industry and trade—Statistics

INDUSTRIAL tours
Trade tourists spread commercial gospel of their areas. il Bsns W p 18-19 Jl 12 '47

INDUSTRIAL towns. See Company towns

INDUSTRIAL tractors. See Tractors, Industrial

INDUSTRIAL trusts. See Trusts, Industrial

INDUSTRIAL union of marine and shipbuilding workers of America
Marine workers, C.I.O.'s future district 50? Bsns W p88 My 3 '47
Shipyard tie-up; strike goes into third month. Bsns W p90 S 6 '47

INDUSTRIAL waste. See Trade waste

INDUSTRIES. See Industry

INDUSTRIES, Location of. See Factories—Location; Industry—Decentralization; Location in industry

INDUSTRY
Industrial trends and prospects for 1947. H. B. McCoy and others. Dom Comm 35:22-62 Ja '47
Latest developments in specific industries; review and outlook. Barron's 26:1+ D 30 '46
Our second industrial revolution. W. Gates. Mag of Wall St 79:296-7+ D 21 '46
Problems facing industry. C. E. Wilson. Comm & Fin Chr 164:3019+ D 12 '46
Processes have families; industrial developments initiate series of inventions, refinements, and modifications. E. L. Cady. il Sci Am 176:249-51 Je '47
Some social implications of natural resources. H. A. Meyerhoff. Ann Am Acad 249:20-31 Ja '47
Status of industrial groups as we enter the new year. G. W. Mathis. Mag of Wall St 79:303-5+ D 21 '46
Le IIIe Congrès national de l'organisation frangaise, Paris, 16-19 septembre 1946. Génie Civil 123:323-6 D 1 '46
Which industries offer best prospects for 1947? G. W. Mathis. il Mag of Wall St 79: 408-11+ Ja 18 '47

See also
Business
Cities and towns—Industries
Corporations
Diversification in industry
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also names of industries, e.g.
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Printing trade
Steel industry and trade
Textile industry

also subdivision Industries and resources under names of countries, e.g. Germany—Industries and resources; Great Britain—Industries and resources; Russia—Industries and resources

Decentralization

Bond decentralizes to beat labor shortage. Bsns W p69 Ja 18 '47
Control unit; newest techniques for controlling decentralized operations. J. B. Thurston. Advanced Management 12:74-80 Je '47
Decentralization is doing things for these industrial concerns. il Factory Management 104:144-9 D '46
Decentralization of industry. R. W. Babson. Comm & Fin Chr 164:3210+ D 19 '46
Industry fans out. map Bsns W p31-2 N 23 '46
Preface to post-industrialism. P. Meadows. il Tech R 49:101-3+ D '46

INDUSTRY—Decentralization—*Continued*
Why decentralization takes root in sales management. J. A. Murphy. il Sales Management 57:80+ N 10 '46

See also
Branch factories
Industrial estates

Migration

Geographical shifts in production, employment, capacity. maps Steel 120:sup20-1 Ja 6 '47
Industrial migration; rail traffic volume measure of decentralization. M. Halpern. map Trusts & Estates 84:65-6+, 427-30, 515-16+; 85:52-4 Ja, Ap-My, Jl '47
Power supplies in shifting plants overrated. Barron's 27:6 My 26 '47
Study of regional shifts in U.S. industry. J. D. C. Weldon. Mag of Wall St 79:535-6+ F 15 '47

INDUSTRY and state
Stateism growth; plea to expand public relations. R. T. Haslam. Nat Pet N 39:15-16 S 24 '47

See also
Commercial policy
Economic planning
Economic policy
Government aid to business
Government ownership
Government regulation of industry
Industrial demobilization
Industrial estates
Labor laws and legislation
Public utilities
Railroads and state
Right to labor
Tariff
Taxation

Canada

Government's place in the industrial outlook of Canada. E. C. Manning. Edison Elec Inst Bul 14:353-4 O '46

France

See also
Labor and laboring classes—France

Great Britain

Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46

United States

Crisis facing private enterprise; role of government. C. Bowles. Comm & Fin Chr 166:1745+ O 30 '47
Economic control and political freedom. C. E. Wilson. Comm & Fin Chr 165:2861+ My 29 '47
Forces patterning tomorrow's economic life; factors threatening the American system of voluntary society. B. B. Smith. il Dun's R 55:11-15+ F '47
Management's responsibility for constructive legislation. R. E. Thompson. Comm & Fin Chr 165:1387+ Mr 13 '47; Same. Mech Eng 69:489-90+ Je '47
Menace of expanding government. N. L. Miller. Comm & Fin Chr 165:2729+ My 22 '47
National defense for American industry. W. C. Mullendore. Pub Util 39:757-65 Je 5 '47

INERTIA, Moments of. See Moments of inertia

INFANTILE paralysis
Autolyzed brain tissue as a means of facilitating transmission of experimental poliomyelitis. A. Milzer and C. L. Byrd, jr. bibliog Science 105:70-2 Ja 17 '47
Biggest polio program. il Dom Eng 169:104-7 Je '47
Carious tooth as a portal of entry for poliomyelitis. H. H. Reese and J. G. Frisch. Ind Med 16:145-6 Mr '47
Curare for polio sufferers; abstract. D. L. Tabern. Chem Eng 54:262 F '47
Facts on polio program. Dom Eng 169:106-7+ F '47
Fly-abatement studies in urban poliomyelitis epidemics during 1945. J. L. Melnick and others. bibliog map Pub Health Rep 62: 910-22, pl 1-2 Je 20 '47
Incidence of poliomyelitis in 1946. C. C. Dauer. bibliog map Pub Health Rep 62: 901-9 Je 20 '47
Polio report; virus lives in water! E. A. Pisczcek. il Dom Eng 170:104-6; Discussion. 106-7+ S '47
Preparation of formaldehyde-inactivated poliomyelitis virus and its use as an immunizing agent in cotton rats. H. S. Loring and others. Science 106:104-5 Ag 1 '47
Sewage treatment to destroy infantile paralysis virus and remove eggs of intestinal parasites; South Africa studies sand filtration. Pub Works 78:25 F '47
Story of Carroll; how a poliomyelitis patient became a CPA. C. Forward. Credit & Fin Management 49:24+ Ap '47

INFANTS' food
Baby food grows up. S. Parker. Food Ind 19:1229+ S '47
How Swift finessed its entry into a huge new market for meat; all-meat foods for infants. L. B. Colby. Sales Management 58: 77+ Ja 15 '47
Merchandising helps stores attract better customers; Gerber provides service to help food stores serve young mothers. E. J. Dever, jr. il Ptr Ink 218:44-5 F 28 '47
That new product may need a separate sales staff; Swift & co. promotes meats for babies and juniors. H. E. Green. il Ptr Ink 219:30-1 Je 27 '47

INFANTS' supplies
Chicopee's babies. il Mod Packaging 20:116-20 Jl '47

Manufacture

Model packaging plant; Johnson & Johnson baby products plant. il diags Mod Packaging 20:90-6 Ag '47

INFECTION
Don't add infection to injury. Safety Eng 93:56-7 Je '47

INFECTIOUS diseases
Contagious nature of a lymphoid tumor in chickens. N. F. Waters. bibliog Science 106:246-7 S 12 '47
Infectiousness of coccidioidomycosis. S. R. Rosenthal and J. B. Routien. Science 104: 479 N 22 '46
Laboratory building for study of highly infectious diseases; National institute of health. il plan Eng N 139:460-3 O 2 '47
Rickettsialpox; a newly recognized rickettsial disease. R. J. Huebner and others. Pub Health Rep 61:1605-14, 1677-82; 62:777-80 bibliog(p780) N 8, 22 '46, My 30 '47

See also
Brucellosis
Chemotherapy
Dysentery
Infantile paralysis
Influenza
Malaria
Plague
Pneumonia
Rheumatic fever
Tsutsugamushi disease
Tuberculosis
Tularemia
Typhoid fever
Typhus fever
Viruses
Yellow fever

Statistics

Incidence of communicable diseases in the United States. Published in weekly numbers of Public health reports
Notifiable diseases, third quarter, 1946. Pub Health Rep 61:1822-6 D 13 '46
Notifiable diseases, fourth quarter, 1946. Pub Health Rep 62:360-4 Mr 7 '47
Notifiable diseases, year 1946. Pub Health Rep 62:404-8 Mr 14 '47
Notifiable diseases, first quarter 1947. Pub Health Rep 62:890-4 Je 13 '47

See also
Tuberculosis—Statistics

INFECTIOUS hepatitis. See Jaundice

INFLAMMABLE liquids
Chemical aspects of the petroleum acts. S. G. Burgess. bibliog Inst Pet J 33:363-88 Je '47
Chemical plant flash fire. Safety Eng 94:48 O '47
Cleaning and repairing flammable liquid tanks. il Safety Eng 93:18-19+ Ja '47
Explosive substances. Nat Safety N 55:150+ Mr '47
Flammable liquids in drums; indoor and outdoor storage. il Safety Eng 93:22-3+ Ap '47

INFLAMMABLE liquids—*Continued*
Minimum ignition temperatures and flash points of combustible liquids, gases and vapors; table. Am Gas Assn Proc 1946:521-4
Read all labels! Safety Eng 92:31 D '46
Safe use and storage of volatile paints and thinners; automobile repainting. W. T. Utley. il Safety Eng 93:18-19+ F '47
Self serve gas pumps may receive blow from fire protection group; text of proposal on farm storage of flammable liquids. Nat Pet N 39:28 My 21 '47
Storage tank design; low pressure tanks for liquid chemical storage. J. G. Henderson. diags Chem Eng 54:104-7+ Mr '47
Storing flammable mixtures. Safety Eng 93: 24 Ja '47
Tendency to smoke of organic substances on burning. A. E. Clarke and others. pl diags Inst Pet J 32:627-42, 643-55 O-N '46

INFLAMMABLE materials
Correct electrical equipment minimized explosive hazards; United Chromium. F. G. Bauer. il Factory Management 104:142-4 O '46
Fire and explosion; inflammable concentrations and ignition temperatures; abstract. J. H. F. Smith. Chem Age (Lond) 55:571 N 9 '46
Potential hazards from molten salt baths; recommended precautions; reference book sheet. Am Mach 91:133 Ja 30 '47

See also
Magnesium—Fire hazards
Textile fabrics—Inflammability

Testing
PI standard test methods for flammability. il Mod Packaging 20:148 Ja '47

INFLAMMABLE mixtures
Characteristics and hazards of gases. Locomotive 46:152-5 Ja '47; Same. Safety Eng 94:99-100 O '47
Electrostatic ignitibility of various solvent vapour-air mixtures. A. R. Boyle and F. J. Llewellyn. bibliog diag Soc Chem Ind J 66:99-102 Mr '47
Explosive substances. Nat Safety N 55:150+ Mr '47
Fire and explosion; inflammable concentrations and ignition temperatures. J. H. F. Smith. Engineering 162:476 N 15 '46
Fire protection for volatile gases. il Safety Eng 93:21+ Ap '47
Formation of static electric charges on agitating petroleum products with air. C. M. Klaerner. bibliog Ind & Eng Chem 39: 92-3 Ja '47
Gas-inflammability limits in air; data sheet. J. Constance. Power 91:651 S '47
How to select safety flooring for chemical plants. C. L. Jones. bibliog il Chem Ind 60: 414-17 Mr '47
Inflammability of dimethyl ether-dichlorodifluoromethane-air mixtures. G. W. Jones and F. E. Scott. 2pls U S Bur Mines Rep of Invest 4125:1-4 '47
Inflammability of gasoline vapor-air mixtures at low pressures. G. W. Jones and I. Spolan. 2pls U S Bur Mines Rep of Invest 3966:1-5 '46
Minimum ignition temperatures and flash points of combustible liquids, gases and vapors; table. Am Gas Assn Proc 1946:521-4
Purging of gas plant and holders. L. Silver. il Gas J (Lond) 249:317-18+, 374+ F 5-12 '47
Report of A.G.A. subcommittee on chemical aspects of safety and accident prevention. Am Gas Assn Proc 1946:510-26
Safety precautions when installing propane-air mixtures. L. R. Wenzel. Am Gas J 166:19+ Mr '47
Ten ways to make tanks safe for workmen. W. E. Rossnagel. il diags Power 91:322-3+ My '47

See also
Dust explosions
Fire damp

INFLAMMATION
Modern concepts of inflammation. V. Menkin. diag Science 105:538-40 My 23 '47
Unconsidered form of the part played by the nervous system in the development of disease. S. I. Frankstein. Science 106:242 S 12 '47

INFLATION (finance)
Accounting during inflation and deflation. P. Mason. N A C A Bul 28:933-40 Ap 1 '47
Balance between deflation and inflation? H. M. Tremaine. Mag of Wall St 79:532-4+ F 15 '47
Causes and remedies of present inflation; statement prepared for Congressional joint committee on the economic report. P. H. Nystrom. Comm & Fin Chr 166:1311+ O 2 '47
Current conditions affecting investments. M. Nadler. Comm & Fin Chr 165:738+ F 6 '47; Same cond. Trusts & Estates 84:198-200 F '47
Deflation threat in new inflation spiral. E. A. Krauss. il Mag of Wall St 81:8-10, 55 O 11 '47
Dollar inflation and 1947 stock market outlook. J. R. Bancroft. Comm & Fin Chr 166:1632+ O 23 '47
Effects of the price rise; the outlook. Nat City Bank p26-7 Mr '47; Same. Comm & Fin Chr 165:1260 Mr 6 '47
Federal reserve policy and inflationary pressures. O. P. Wheeler. Comm & Fin Chr 166:1411+ O 9 '47
Federal reserve system report for 1945. C. O. Hardy. Harvard Bsns R 25 no2:207-12 [Ja] '47
Gold and inflation; gold purchase policy. T. I. Parkinson. Comm & Fin Chr 166:908+ S 4 '47
High prices? here's a cause and a remedy. C. E. Wilson. Sales Management 59:82 O 1 '47
Inflation and common stocks. H. C. Yeager. Comm & Fin Chr 166:1630+ O 23 '47
Inflation and the money market; abstract. M. Shields. Management R 35:532-4 D '46
Inflation around the world. V. L. Horoth. il Mag of Wall St 81:19-21+ O 11 '47
Inflation cycle not yet complete. E. M. Zimmermann. Comm & Fin Chr 165:1509+ Mr 20 '47
Inflation danger, heritage of war finance. W. Thomas. Comm & Fin Chr 165:592+ Ja 30 '47
Inflation for the second half. H. M. Tremaine. Mag of Wall St 80:416-18+ Jl 19 '47
Inflation, interest rate and public debt management; address before California bankers association, San Diego. B. M. Anderson. Comm & Fin Chr 165:2849+ My 29 '47
Inflation; let's look at the record. T. I. Parkinson. Comm & Fin Chr 165:1251+ Mr 6 '47
Inflation over. Fortune 34:2 D '46
Inflation problems at home and abroad. I. B. Kravis. Mo Labor R 64:28-42 Ja '47
Inflationary experiences in France; effects on business. J. de Largentaye. Comm & Fin Chr 164:2601+ N 21 '46
Inflationary forces and the FRB. M. S. Eccles. Comm & Fin Chr 164:2201+ O 31 '46; Same. Fed Res Bul 32:1230-5 N '46
Inflationary spiral and the business outlook. A. H. Temple. Comm & Fin Chr 165:2730 My 22 '47
Inflationary spirals and the Paris report. M. Palyi. Comm & Fin Chr 166:1629+ O 23 '47
Inflations and deflations of my eighty years. I. Fisher. Comm & Fin Chr 165:1377+ Mr 13 '47
Is inflation over? I. Wright. Comm & Fin Chr 165:991+ F 20 '47
Is the money supply too large; address before U.S. Chamber of commerce. H. R. Bowen. Comm & Fin Chr 165:2329+ My 1 '47; Discussion. 165:2599+, 2728+, 3351 My 15, 22, Je 26 '47
Is there really too much money? address before New York state Chamber of commerce. A. Sproul. Comm & Fin Chr 165:3226+ Je 19 '47
Lays down anti-inflation policy. E. Bunting. Comm & Fin Chr 165:1842 Ap 3 '47
Lessons of reconversion; economic forecasting, inflation, bottlenecks. C. Hitch. R Econ Stat 29:16-20 F '47
Our current inflation and monetary problem. M. S. Szymczak. Comm & Fin Chr 166: 1642+ O 23 '47
Our grave inflationary danger. B. W. Dempsey. Comm & Fin Chr 164:3015+ D 12 '46
Progress of inflation in Europe. Comm & Fin Chr 165:2112 Ap 17 '47

INFLATION (finance)—*Continued*
Repressed inflation; economic cancer of Europe. W. Ropke. Comm & Fin Chr 166: 905+ S 4 '47
Roots and fruits of boom. B. B. Smith. Comm & Fin Chr 165:2058+ Ap 17 '47
Stop money inflation, and price inflation will end. M. Shields. Comm & Fin Chr 165: 2061+ Ap 17 '47
Sustaining prosperity and general stability; program for fighting inflation and deflation. E. P. Schmidt. Comm & Fin Chr 166:1410+ O 9 '47
Too much money. T. I. Parkinson. Comm & Fin Chr 165:1374+ Mr 13 '47; Abstracts. East Underw 48:18-19 Mr 14 '47; Nat Underw (Life ed) 51:23 Mr 14 '47
Under-valued investment dollars. H. B. Dorau. Trusts & Estates 84:319 Mr '47
Waning of inflation. R. E. Freeman. Mech Eng 69:229 Mr '47
See also
Deflation (finance)
Hedging

INFLUENCE lines
Influence lines for continuous structures by geometrical computation. D. F. Peterson, jr. diags Am Soc C E Proc 73:1009-25 S '47
See also
Structural engineering—Design

INFLUENZA
Consideration of vaccination against influenza; abstract. T. Francis, jr. Nat Safety N 55:48+ My '47
Incidence of reactions to a new type of influenza virus vaccine in industry. R. R. Bresler. bibliog Ind Med 16:301-3 Je '47
Influenza virus. M. A. Lauffer. bibliog il J Chem Educ 23:530-7 N '46
Mass immunization against influenza types A & B in an industrial plant; Bigelow-Sanford carpet co. B. S. Dignam. Ind Med 16:200+ Ap '47
Protective effect of vaccination against epidemic influenza B in an industrial plant. W. D. Norwood and R. R. Sachs. bibliog Ind Med 16:1-3 Ja '47
Purification and concentration of influenza virus by means of alcohol precipitation. H. R. Cox and others. Pub Health Rep 61:1682-3 N 22 '46
Respiratory ills and their control in industry; with special reference to influenza immunization. A. M. Baetjer. Ind Med 16:85-6 F '47
Sedimentation constants of purified preparations of strains of influenza virus. W. M. Stanley and M. A. Lauffer. il J Phys & Colloid Chem 51:148-56 Ja '47
Serological study of influenzal antibodies. S. S. Kalter and others. Science 105:499-500 My 9 '47
Should influenza vaccine A and B be used routinely by employers in plants? M. N. Newquist and others. Ind Med 16:313+ Je '47
Streptomycin as an aid in isolating influenza virus. A. P. McKee and W. M. Hale. Science 105:41-2 Ja 10 '47
Study of absenteeism during a five-month period following influenza A and B vaccination. M. N. Newquist and R. C. Page. Ind Med 15:676-7 D '46
Yeast autolysate; a culture medium for hemophilus influenzae. E. Neter. bibliog Science 106:350-2 O 10 '47

INFORMATION, Control of. See Censorship

INFORMATION service
Communication of specialist information to business executives. R. S. Hutton. Assn of Sp Lib & Inf Bur Proc 1946:57-63; Discussion. 63-5
Information service and the petroleum industry. B. H. Weil. bibliog Pet Refiner 26:152+ F '47
Report on the present position of information services in the Netherlands. F. Steggerda. Assn of Sp Lib & Inf Bur Proc 1946: 86-7
Technical information service in Sweden: an introduction. E. Hemlin. Assn of Sp Lib & Inf Bur Proc 1946:79-83
What an industrialist expects of an information service. A. Fleming and B. M. Dent. Assn of Sp Lib & Inf Bur Proc 1946:47-53; Discussion. 53-6
See also
American standards association—Library
Business information
Hooper-Holmes bureau, inc.
Railroads—Information service

INFORMATION service, Government
U.S. government publications in relation to industry. I. M. Meyer. Special Lib 38:35-8 F '47
Where you can get government market data; with chart. W. P. Burn. Ptr Ink 218:43-6 F 7 '47
See also
Canada—Technical information service
United States—International trade, Office of

INFRARED communication. See Light telephone

INFRARED photography. See Photography, Infrared

INFRARED rays
Determination of extinction corrections in infrared analysis of gaseous hydrocarbon mixtures. J. H. Lee. bibliog Ind & Eng Chem Anal ed 18:659-61 N '46
Function of fluxes in the preparation of infrared sensitive phosphors of the alkaline earth sulfides and selenides. W. Primak, R. K. Osterheld and R. Ward. bibliog Am Chem Soc J 69:1283-7 Je '47
High-sensitivity photoconductive cell. C. W. Hewlett. il diags Gen Elec R 50:22-5 Ap '47
High transmission windows for radiation of 3 to 14 microns wave-length. M. Hyman, jr. and B. H. Billings. Opt Soc Am J 37:113-18 F '47
How infra-red radiation is used for space heating; review of two British reports. C. Tasker. diag Heating-Piping 19:104-6 O '47
Improved infra-red polarizer. A. H. Pfund. bibliog diag Opt Soc Am J 37:558-9 Jl '47
Infra-red equipment for military purposes. Engineering 163:258 Ap 4 '47; Electrician 138:933-4 Ap 11 '47
Infrared equipment for night vision. Engineer 183:170 F 14 '47
Infra-red filters and cells of unpolished salt crystals. J. J. McGovern and R. A. Friedel. bibliog Opt Soc Am J 37:660-3 Ag '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H. Billings and M. Hyman, jr. Opt Soc Am J 37:119-21 F '47
Longitudinal dispersion of infrared rays in optically empty and turbid media, and molecular weights of substances. W. W. Lepeschkin. bibliog J Phys & Colloid Chem 51: 875-84 My '47
Longitudinal dispersion of infrared rays in polystyrenes. W. W. Lepeschkin. il J Phys & Colloid Chem 51:868-75 My '47
Optical silver chloride. H. C. Kremers. il Opt Soc Am J 37:337-41 My '47
Pneumatic infra-red detector. M. J. E. Golay. il diags R Sci Instr 18:357-62 My '47
Preparation of lanthanum oxysulfide and its properties as a base material for phosphors stimulated by infrared. J. J. Pitha, A. L. Smith and R. Ward. bibliog Am Chem Soc J 69:1870-1 Ag '47
Preparation of strontium selenide and its properties as a base material for phosphors stimulated by infrared. A. L. Smith, R. D. Rosenstein and R. Ward. bibliog diags Am Chem Soc J 69:1725-9 Jl '47
Selective infra-red gas analyzers. W. G. Fastie and A. H. Pfund. bibliog diags Opt Soc Am J 37:762-8 O '47
Sensitivity of the human eye to infra-red radiation. D. R. Griffin and others. bibliog diag Opt Soc Am J 37:546-54 Jl '47
Sniperscopes and snooperscopes. Illum Eng 41:797-8 D '46
Source of infrared radiation; steatite refractory. Electronics 19:228+ D '46
Superconductive radio-frequency detector. il Electronics 20:142+ F '47
Theoretical consideration in heat and infra-red detection, with particular reference to the pneumatic detector. M. J. E. Golay. diags R Sci Instr 18:347-56 My '47

INFRARED rays—*Continued*
Ultrasonic modulation of a light beam. R. F. Humphreys and others. diags J Ap Phys 18:845-6 S '47
Visible infra-red produced by phosphor containing lead key. G. R. Fonda. Sci Am 176: 77 F '47
X-ray storage properties of the infra-red storage phosphor and application to radiography. O. E. Berg and H. F. Kaiser. bibliog il diags J Ap Phys 18:343-7 Ap '47; Excerpts. Elec Eng 66:703 Jl '47

See also
Spectrum, Infrared

Industrial heating

British Thomson-Houston internally silvered infra-red lamp. il Engineer 183:548 Je 20 '47
Burn-off rust-proofing with infra-red rays; Burdett infra-red gas-fired burners. il Metal Finishing 45:103-4 Je '47
Cleaning improves infra-red efficiency. S. A. Karch. Factory Management 105:87 Ap '47
Container breakage reduced by infrared; lamps preheat jars before being filled with hot molasses. J. R. Heilman. il Food Ind 19:193 F '47
Degreasing and rust-inhibiting with infrared. Iron Age 159:51 My 15 '47
Dry flooded equipment with infrared lamps. C. W. Pinkel. il Elec World 127:131 My 24 '47
Drying redwood bark; infrared installation to useful commercial by-products; Sequoia products co. il Elec West 98:88-9 Ap '47
Faster baking and drying with infrared heat. P. H. Goodell. il Elec World 127:58-60 Je 21; 128:72-4 Jl 5 '47
Gas-fired infrared dryer used with automatic jigger; Sterling china co. O. O. Todd. il Cer Ind 48:70+ F '47
Gas or electricity for infra-red drying; with cost data. G. R. Van Kampen. il Paper Tr J 125:34+ O 9 '47
Infrared degreasing. il diag Steel 119:104+ N 18 '46
Infra-red direct reading moisture tester. R. B. Brock. il Chem & Ind p299-302 My 31 '47
Infrared drying method utilized in the processing of potatoes. Elec World 126:116 N 23 '46
Infra-red drying of sheet rubber. il Engineer 184:253 S 12 '47; Abstract. Elec R (Lond) 141:350 S 5 '47
Infrared finishing ovens. I. J. Barber. Paint Oil & Chem R 110:8+ Ap 3 '47
Infrared halves drying time in banknote printing. il Elec World 127:142 Mr 15 '47
Infrared heating applications in the paper industry. Pulp & Pa of Can 48:92 S '47
Infra-red heating by gas exhibition. il Engineer 183:571 Je 27 '47
Infra red heating by gas exhibition. Gas J (Lond) 250:717 Je 25 '47
Infra-red lamp with internal reflector. il Engineer 184:254 S 12 '47
Infra-red ray on the maintenance programme; mine motors. C. E. Dunlop. Can Min J 68: 729-30 O '47
More output, less space with infrared oven; Martin & Schwartz inc. J. F. Gschwind. il Elec World 127:56-7 Ap 26 '47
Some aspects of drying and heating textiles; use of infra-red radiation. J. M. Preston and J. C. Chen. bibliog Soc Dyers & Col J 62:364-8 D '46

Lamps

Lamp enables two-way talk over invisible searchlight beam. N. C. Beese. Franklin Inst J 242:339-40 O '46
Modulation of the resonance lines in a cesium arc. J. M. Frank and others. il diags Opt Soc Am J 37:718-25 S '47

Measurement

Superconducting bolometer for infrared measurements. R. M. Milton. bibliog il diags Chem R 39:419-33 D '46

INFRARED spectrophotometer. See Spectrophotometers

INFRARED spectrum. See Spectrum, Infrared

INGALLS shipbuilding corporation
Ingalls shipyards hum. il Bsns W p75-6+ O 11 '47

INGLIS, William Wallace, 1871-
Sketch. por Explosives Eng 25:100-1 Jl '47

INGOLD, Christopher Kelk, 1893-
Royal society medallists. por Chem Age (Lond) 55:705-6 D 7 '46

INGOTS, Steel. See Steel ingots

INHALATION (therapeutics)
Administration of micronized therapeutic agents by inhalation or topical application. G. V. Taplin and F. A. Bryan. il Science 105:502-3 My 9 '47; Discussion. H. A. Abramson. 106:316 O 3 '47
Inhalation of penicillin dust. L. Krasno and others. il Science 106:249-50 S 12 '47

INHERITANCE and succession
Environment of inheritance; fifty years ago and now. E. Woollen, jr. Trusts & Estates 84:143-6 F '47

See also
Executors and administrators
Inheritance tax
Life tenants and remaindermen
Wills

INHERITANCE tax
Beware of your rights under wills or trusts; if you have power to select beneficiaries, your estate may be taxed for what they get. J. P. Reeves. Barron's 27:27 My 19 '47
Death, taxes and your business. G. J. Laikin. Trusts & Estates 85:372-4 O '47
Double death taxes; abstract. A. S. Guterman. J Account 84:57-8 Jl '47
Double state inheritance. J Account 83:148 F '47
Estate liabilities often under-estimated. K. Kauffmann-Grinstead. Barron's 27:9 O 6 '47
Estate planning under Hallock case; effect of Treasury decision 5512. H. C. Smith. Trusts & Estates 84:337-43, 448-52 Mr-Ap '47
Estate tax apportionment; application to specific questions; uniform statute proposed. E. N. Polisher. bibliog Trusts & Estates 84: 99-105 Ja '47
Estate taxes may be payable in state executor lives in. J Account 84:331-2 O '47
Liability for payment of federal estate taxes; insurance company's liability; digest of recent cases. F. L. Morton. Spectator (Life ed) 154:22-5+ My '47
Possibilities of reacquisition and the federal estate tax. J. H. Alexander. J Account 83: 149 F '47
Proposed integration of estate and gift taxes by Treasury. East Underw 48:1+ O 17 '47
Repeal the Federal estate tax. R. C. Osgood. Trusts & Estates 84:246-52 F '47
Should estate and gift taxes be combined? analysis of Treasury study. M. M. Lore. Trusts & Estates 85:375-6 O '47
State and federal taxation; A.B.A. committee report. Trusts & Estates 85:317-28 O '47
State and federal taxation, 1945-46; A.B.A. committee report. Trusts & Estates 83: 503-7 N '46
Tax aspects of will draftsmanship. H. L. Shepherd and E. Pruyn. bibliog Trusts & Estates 84:599-606 Je '47
Tax elements for consideration in testamentary trusts. H. S. Koster. Trusts & Estates 84:181-2 F '47
Tax problems incident to community and jointly owned property. W. L. Nossaman. Trusts & Estates 85:295-302 O '47
Testamentary nature of life insurance; transfer in contemplation of death; digest of recent tax decisions. F. L. Morton. Spectator (Life ed) 154:22-3+ Ap '47
Transfers of life insurance; some comments on section 811 (C) of federal estate tax law. E. M. Thorè. East Underw 48:20+ pt 2 O 3 '47
Use of trusts in federal estate tax planning. G. E. Ray and O. W. Hammonds. J Account 83:283-90 Ap '47
Zahn estate decision puts burdens on companies; Fidelity Mutual letter. East Underw 48:8 My 16 '47

INHIBITORS
Evaluating pickling acid inhibitors; colorimetric test method. E. L. Colichman and others. bibliog Iron Age 159:55-7 Ap 24 '47

INHIBITORS—*Continued*
Inhibition of catalysed thermal decomposition of DDT. F. A. Gunther and L. R. Tow. bibliog Soc Chem Ind J 66:57-9 F '47

INHIBITORS of corrosion. See Corrosion and anti-corrosives

INJECTIONS, Intravenous
Simple quantitative method for intravenous injection of small volumes of fluid. H. L. Barnett and F. X. Fellers. il Science 106: 401-2 O 24 '47

INJUNCTIONS
Injunction tests; New Jersey mass picketing ban upheld. Bsns W p104+ D 14 '46

INJURIES (law). See Personal injuries

INJURIES, Industrial. See Accidents, Industrial

INJURIES from electricity. See Electricity, Injuries from

INK
Ball point ink mystery. Am Bsns 17:48 Ja '47
Experiments with writing inks. R. Neal and others. bibliog J Chem Educ 24:429-31 S '47
Fresh from the can, order ink as needed, or carry a considerable stock? Inland Ptr 118: 58-9 Mr '47
German printing ink industry; abstract. A. Voet. Chem & Eng N 25:3169 O 27 '47
Glass ink. Chem Ind 61:444 S '47
Ink plays important part in lithography. C. F. King. Inland Ptr 118:49-52 F '47
Mechanism of the ink penetration tests. W. S. Wilson. Paper Tr J 123:34-8 D 12 '46; Same cond. Paper Ind 28:438-9 Je '46
Petroleum products in the printing ink and allied industries. A. C. Healey and L. Ivanovszky. diags Inst Pet J 33:531-44 S '47; Abstract. Chem Age (Lond) 56:800 Je 21 '47; Discussion. Inst Pet J 33:544-51 S '47
Phenomenon of bronze in surface coatings. G. L. Buc and others. bibliog il pl diags Ind & Eng Chem 39:147-54 F '47
Pressmen aren't ink chemists. C. F. King. diags Inland Ptr 118:51-3 Mr '47; Discussion. 119:43-5 S '47
Tall oil in printing inks. C. J. Vander Valk and H. Burrell. Paper Tr J 123:53-6 N 14 '46
Troubles which prevent achieving uniformity in production printing. E. St John. Inland Ptr 118:38-9 Mr '47
Uniform supplies and techniques; producing satisfactory albumin plates. C. F. King. il Inland Ptr 119:49-53 S '47

Drying

Kilowatts dry ink for fast printing. E. D. Tillson. il Elec World 128:63-4 Ag 2 '47
Resin speeds drying of printing inks. Chem & Eng N 25:626 Mr 3 '47
Speed-dry inks. Chem Ind 60:943-4 Je '47

INK bottles
New ink family; Waterman's 15-cent size. il Mod Packaging 20:114-15 D '46

INLAND marine claims association
Reelects Roberts; other officers continued. East Underw 48:21 Je 20 '47

INLAND marine insurance. See Insurance, Inland marine

INLAND transport committee. See International labor organization—Inland transport committee

INLAND waterways corporation
Blows for a landing. T. N. Sandifer. Pub Util 38:746-53 D 5 '46
Railroads urge prompt sale of federal barge lines; hearings before committee on small business of the House of representatives. Ry Age 122:1050-1 My 17 '47

INNS. See Hotels

INOCULATION
Simplified techniques for inoculating chick embryos and a means of avoiding egg white in vaccines. W. I. B. Beveridge. Science 106:324-5 O 3 '47

INOSITOL
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene-tetrahydroxyquinone-rhodizonic acid. P. W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69:326-9 F '47

INQUIRIES
Inquiries; why still give 'em the wartime brush-off? H. A. Stephens. Sales Management 58:70 Ap 1 '47
No shells; handling inquiries from prospects for whom we have no goods. J. F. Spencer. Ptr Ink 213:112 Ja 31 '47

See also
Advertising—Inquiries
Advertising, Industrial—Inquiries

INSECT repellents
Chigger repellents. F. M. Snyder and F. A. Morton. Soap & San Chem 22:133+ N '46
Determination of 1,2,3,4-tetrahydro-2-naphthol in impregnated clothing. J. Goldenson and S. Sass. bibliog Anal Chem 19:322-4 My '47
New insect repellents. M. Pijoan. bibliog Soap & San Chem 23:124-7+ Mr '47
Preliminary report on some organic materials as tick repellents and toxic agents. J. M. Brennan. Pub Health Rep 62:1162-5 Ag 8 '47
Present status of repellent NMRI 448. Soap & San Chem 22:116-17 N '46
Wartime development of insecticides. H. L. Haller. bibliog(57 ref) il Ind & Eng Chem 39:467-73 Ap '47

See also
Fly sprays and repellents

INSECTICIDE and disinfectant manufacturers, National association of. See National association of insecticide and disinfectant manufacturers

INSECTICIDE and fungicide association, Agricultural. See Agricultural insecticide and fungicide association

INSECTICIDES
AIFA urges increased use of chemicals in food crisis. Oil Paint & Drug Rep 152:7 O 20 '47
Aerosol formula; abstract. A. H. Madden and others. Soap & San Chem 23:149 Ag '47
Aerosol; something new in insecticides. L. N. Markwood. il Dom Comm 34:50-6 N '46
Aerosol technique provides plant-scale insect control. E. C. Barnes and others. bibliog il diags Chem Ind 60:238-40+ F '47
Aerosols and their application; abstract. L. D. Goodhue. Soap & San Chem 22:139 D '46
Aerosols shoot for mass market with low pressure propellants, cheap containers. L. D. Goodhue, F. S. Schultz and P. H. Wilkins. bibliog il Chem Ind 60:602-4 Ap '47
Beer cans for aerosol dispensing. W. W. Rhodes; L. D. Goodhue. Soap & San Chem 23:122-3+ O '47
Benzene hexachloride, promising British insecticide takes hold here. il Chem Ind 60: 418-20 Mr '47
Blow-gun package; Swift telescoping, refillable paper tube functions as spray gun. il Mod Packaging 20:100-3 My '47
Bombmaking, peacetime style; Aer-a-sol insecticide bomb; illustrations with text. diag Iron Age 160:115 S 4 '47
Carpet-beetle control unsolved wool problem. H. N. Mitchell. Textile World 96:170+ N '46
Chemists fight for food, forage, fiber. D. H. Killeffer. il Sci Am 176:157-9 Ap '47
DDT analog; methoxychlor. Chem & Eng N 25:2924 O 6 '47
Effects of mists on insects; abstract. W. A. L. David. Soap & San Chem 23:155 Mr '47
Electric-furnace brazing for Aer-a-sol insecticide bomb. A. T. Cole and H. M. Webber. il diag Gen Elec R 50:25-31 Je '47
Emulsifying acaricides; abstract. H. J. Fluno, H. A. Jones and F. M. Snyder. Soap & San Chem 23:153+ O '47
Expanding field for aerosols. W. Dietz and H. R. Shepherd. bibliog Soap & San Chem 22:137-9 D '46
Furnace brazing steel insecticide bombs; Bridgeport brass co. A. T. Cole and H. M. Webber. il diag Steel 120:70-3+ Ja 27 '47
Hexaethyl tetraphosphate for insecticide use. Chem & Eng N 25:1070 Ap 14 '47
Highlights of NAIDM convention. Chem Ind 60:58-9 Ja '47

INSECTICIDES—*Continued*
Huge demand for farm chemicals, bug killers. Barron's 27:39 Mr 17 '47
Insect toxicant; Octa-Klor. Chem Eng 54: 166+ Mr '47
Insecticidal action of 1-trichloro-2,2-bis-(p-bromophenyl) ethane (Colorado 9). G. M. List and M. G. Payne. Science 105:182 F 14 '47
Insecticidal aerosol progress. E. R. McGovran and J. H. Fales. Soap & San Chem 23: 124-5+ F '47
Insecticidal component of eugenia haitiensis identified as 1,8-cineol. M. Jacobson and H. L. Haller. bibliog Am Chem Soc J 69: 709-10 Mr '47
Insecticide; monoxychlor. Chem Eng 54:168+ O '47
Insecticide vanishes after completing lethal mission; hexaethyl tetraphosphate. Oil Paint & Drug Rep 152:44 S 22 '47
Insecticides; chemical constitution and toxicity. H. Martin. bibliog Soc Chem Ind J 65:402-5 D '46
Insecticides modernes; genèse de la découverte du D.D.T.; études le concernant. A. Kling. Chimie & Ind 57:22-30 Ja '47
Insecticides studied for cotton pests. Oil Paint & Drug Rep 151:5 Ap 14 '47
Municipal insect control, an aid to health and comfort. R. S. Taggart and J. V. Osmun. il Pub Works 77:29-30+ N '46
NAIDM protests aerosol sales by War assets administration. Oil Paint & Drug Rep 152:7 Jl 21 '47
New specialties exploit chemical research; household insecticides. G. A. Mail. Chem Ind 61:400 S '47
New toxicants spur progress in household insect powders. G. A. Mail. il Chem Ind 61:218-20 Ag '47
Newer synthetic insecticides. E. F. Knipling. Soap & San Chem 23:127+ Jl '47
Novel mortar combats tree pests. il Chem Ind 60:623 Ap '47
Organic larvicides; abstract. C. C. Deonier and others. Soap & San Chem 23:149 Ag '47
Particle size in aerosols; abstract. L. D. Goodhue and R. L. Riley. Soap & San Chem 22:159+ D '46
Petroleum products in agriculture; the role of petroleum in plant protection. L. W. L. Cole. bibliog Inst Pet J 33:203-13; Discussion. 213:18 Ap '47
Preparation and chemical composition of difluoro-diphenyl-trichloroethane. H. L. Bradlow and C. A. VanderWerf. bibliog Am Chem Soc J 69:662-3 Mr '47
Rats and mites; chemical holding promise as both insecticide and rodenticide; tetraethyl pyrophosphate. il Chem Ind 60:765 My '47
Some phenol-chloral condensations. J. B. Niederl and A. A. Bothner-By. bibliog Am Chem Soc J 69:1172-3 My '47
Structure of insecticides; abstract. E. A. Prill and others. Soap & San Chem 23:157 O '47
Synergistic insecticides. H. Wachs. bibliog Science 105:530-1 My 16 '47
TEP, a new insecticide. Science 105:281 Mr 14 '47
Toxicity data on piperonyl cyclohexenone. Soap & San Chem 23:163 Jl '47
1 : 1 : 1-Trichloro-2 : 2-di-(4-ω-carbomethoxymethoxyphenyl)ethane. I. E. Balaban and F. K. Sutcliffe. Chem Soc J p848-9 Je '47
Viscosity and density of four liquefied-gas aerosol solutions containing DDT. L. D. Goodhue and A. C. Hazen. diags Anal Chem 19:248-50 Ap '47
Wartime development of insecticides. H. L. Haller. bibliog(57 ref) il Ind & Eng Chem 39:467-73 Ap '47
What's ahead for insecticides. S. A. Rohwer. Soap & San Chem 23:135-7+ Je '47

See also
DDT
Fly sprays and repellents
Hexachlorocyclohexane
Hexaethyl tetraphosphate
Insect repellents
Methyl bromide
Mothproofing preparations
Pyrethrum
Rotenone

Advertising

Moth-Ded goes national. Sales Management 58:97 F 1 '47

Analysis

Determination of chlorine in DDT insecticides. G. W. Fiero. Soap & San Chem 23: 147+ O '47

Law

Discuss regulations for Federal insecticide act at Washington hearing. Soap & San Chem 23:167 S '47
Economic poisons act terms outlined by Agriculture dept. Oil Paint & Drug Rep 152: 5+ Jl 14 '47
Economic poisons bill signed; Andresen bill. Oil Paint & Drug Rep 151:4 Je 30 '47
Economic poisons import rules being promulgated by USDA. Oil Paint & Drug Rep 152: 3+ O 13 '47
Economic poisons regulations discussed at USDA hearing. Oil Paint & Drug Rep 152: 3+ S 1 '47
Insecticide act regulations. Soap & San Chem 23:160a-160d O '47
New insecticide act. C. C. McDonnell. Soap & San Chem 23:114-17+ Ag '47
New insecticide bill. Soap & San Chem 23: 133+ F '47
Packaging of poisons, Finland. For Comm W 28:27 S 6 '47
To amend federal insecticide bill. Soap & San Chem 23:165 My '47

Testing

Development and use of a small spray chamber. W. M. Hoskins and A. H. Caldwell, jr. il diags Soap & San Chem 23:143-5+ Ap '47
Disinfectant, insecticide makers discuss evaluating tests. Oil Paint & Drug Rep 150:5+ D 9 '46
Flying larvicide tests. A. H. Madden and others. Soap & San Chem 23:141+ Mr '47
How insecticides are evaluated. il Chem Ind 59:851 N '46
Insecticidal tests with analogues of DDT. J. R. Busvine. bibliog Soc Chem Ind J 65:356-60 N '46
Mosquito larvicide tests; a résumé of tests of compounds related to DDT against larvae of anopheles quadrimaculatus. C. C. Deonier and others. bibliog Soap & San Chem 22:118-19+ N '46
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A. Stearns. bibliog Soap & San Chem 23:117-19+ Ja '47
Test method for commercial aerosol dispensers. L. D. Goodhue and others. il diag Soap & San Chem 23:119-21 S '47
Testing insecticidal residues; micro method for biological testing of non-fumigant type insecticidal residues on the housefly. M. H. Doner and C. V. Anderson. Soap & San Chem 23:124-5+ O '47
Testing insecticide residues; a review of methods. M. W. Doner. Soap & San Chem 23:139+ Je '47

INSECTS

See also
Arthropoda

INSECTS, Injurious and beneficial

Building construction and insect prevention. J. J. Davis. il Am Bld 69:90-1+ Ja '47
Insect destruction in British Columbia. H. A. Richmond. Pulp & Pa of Can 48:112+ Jl '47

See also
Airplanes in insect control
Blowflies
Borers (insects)
Carpet beetles
Chiggers
Cockroaches
Food—Insect infestation
Insecticides
Midges
Mosquitoes
Moths
Spiders

INSECTS as carriers of infection

See also
Fleas as carriers of infection

Terminology

Coined words of use to medical entomologists. C. B. Philip. Science 105:282 Mr 14 '47

INSERTS, Package. See Package inserts

INSOLATION
See also
Solar heating

INSOLUBLE residues
Terminology for insoluble residues. H. A. Ireland and others. bibliog fold chart Am Assn Pet Geologists Bul 31:1479-90 Ag '47

INSPECTION
Annual engineering review; testing and inspection. Materials & Methods 25:108-10 Ja '47
Concentricity checking. il Mech Eng 68:1069 D '46
Consolidated layout quadruples handling capacity; Parker appliance company combines inspection packaging and shipping departments in one work area. C. J. Giblin. il plan Factory Management 105:96-9 F '47
Electronic inspection; automaton detects and removes from line packages with foreign metal. P. A. Greenmeyer. il diags Mod Packaging 21:132-7 S '47
Gamma ray and supersonic equipment-inspection methods used in Continental Oil's eight refineries; Penetron and Audigage. L. S. McCaslin. il diags Oil & Gas J 46:100-3+ O 18 '47
Inspection efficiency and sampling inspection plans. M. Lavin. Am Stat Assn J 41:432-8 D '46
Inspecting incoming material. E. Goddess. il Steel 121:92-3+ Ag 18 '47
Machine tool show in print; inspection equipment. il Am Mach 91:287-9 S 11 '47
One in 10 an inspector; quality control system, Monroe auto equipment co. il Steel 119:70-2 D 30 '46
Problems involved in inspection of production departments by executives in the chemical industry. W. von Pechmann. Ind & Eng Chem 39:sup93A-4A My '47
Sheffield B-38, automatic roll selector. il Automotive & Aviation Ind 96:43-4 Je 1 '47
Small parts inspection by automatic gaging; Limitron. C. W. Warren. il Iron Age 159: 64-5 Je 19 '47
Statistical methods applied to the inspection of porcelain enamel. L. S. Kauffman. Cer Ind 49:61-2 Ag '47
Tapering for surface inspection. W. J. Darmody. il diags Am Mach 90:134-5 D 19 '46
Technical progress in metalworking; inspection and testing. Steel 120:296-8 Ja 6 '47
34th annual review number; layout and inspection. il Am Mach 91:184-91 Ja 16 '47

See also
Car inspection
Factory inspection
Gages
Magnetic testing
Motor bus lines—Inspection

INSPECTION cars. See Cars, Inspection

INSTALMENT plan
Competitive pattern in consumer credit. F. R. Wills. Comm & Fin Chr 164:3216+ D 19 '46
Confused consumer. B. A. Sueltz. Banking 39:50 F '47
Consumer credit boom. H. F. Travis. Mag of Wall St 80:253-5+ Je 7 '47
Consumer credit; summary of addresses at National consumer and installment credit conference, St Louis. H. V. Odle. Burroughs Clearing House 31:17-21 F '47
Does consumer credit cause business fluctuations? R. J. Saulnier. Comm & Fin Chr 165:1977+ Ap 10 '47
Easy credit back. Bsns W p22+ Je 7 '47
Trends in consumer credit. E. I. H. Bennett. Credit & Fin Management 48:26-30 D '46
What does the consumer know about consumer credit? results of survey of two hundred families in Richmond, Va. and Kansas City, Mo. Banking 39:34-5+ Mr '47
When terms enter the competitive arena. A. A. Friedrich. Banking 40:37 Ag '47

See also
Finance companies
Loans, Bank—Instalment payment
Loans, Bank—Small loans

Accounting

Installment accounting. T. G. Thurston. J Account 83:322-3 Ap '47

Finance

Appliance financing by commercial banks. L. J. Asterita. Radio N 38:50+ Ag '47
Banks will retard big credit expansion. Bsns W p67-8 Jl 12 '47
C.I.T. biggest retailer of installment credit is signing them up again. Fortune 36:86-91+ S '47
Financing and controlling credit sales of home appliances. R. D. Stith. Dom Comm 35:30-4 My '47
Sound terms for consumer credit; A.B.A. Committee on consumer credit. Banking 40:41 Ag '47

See also
Finance companies

Regulation

ABA calls for abolition of Regulation W. Comm & Fin Chr 164:3210+ D 19 '46
Attacks federal reserve credit and margin controls. S. Bridges. Comm & Fin Chr 164: 3211+ D 19 '46
Chamber of commerce of the state of New York wants end of consumer credit restrictions. Comm & Fin Chr 165:1992 Ap 10 '47
Consumer credit; revision of Regulation W; text. Fed Res Bul 32:1348-55 D '46
Consumer credit; status of rulings made prior to revision of Regulation W. Fed Res Bul 33:271-3 Mr '47
Consumer credit untied; Regulation W becomes a dead letter. Bsns W p21-2 O 25 '47
Credit controls relaxed. Bsns W p21-2+ N 23 '46
Dealers plan attack on Regulation W. Bsns W p36 Mr 1 '47
Disputed Regulation W due for change. S. A. Lauver. Manuf Rec 116:25+ Jl '47
Dollar down, dollar a week opposed by American bankers association. Barron's 27: 12 Ag 11 '47
Federal government must relinquish consumer credit control; bill to cancel Regulation W; H.R. 2443. J. C. Davis. Comm & Fin Chr 165:1789 Ap 3 '47
Future of Regulation W. R. O'Neill. Banking 39:35+ Ja '47
Government versus the underprivileged consumer; continuation of Regulation W. A. W. May. Comm & Fin Chr 164:3013+ D 12 '46
Instalment credit should be decontrolled. W. J. Cheyney. Comm & Fin Chr 165:395+ Ja 23 '47
Many a hurdle in consumer credit control. K. R. Cravens. Banking 39:33 My '47
President signs bill ending credit curbs. Comm & Fin Chr 166:635 Ag 14 '47
Record consumer credit as spur to business. H. M. Tremaine. il Mag of Wall St 79:311-12+ D 21 '46
Regulation W. B. Brown. Am Gas Assn Proc 1946:129-31; Discussion. 131-2
Regulation of consumer instalment credit; statement to Banking and currency committees of Senate and House. M. S. Eccles. Fed Res Bul 33:827-9 Jl '47; Excerpt. Comm & Fin Chr 165:3123 Je 12 '47
Regulation W changes. Burroughs Clearing House 31:30 D '46
Revision of consumer credit regulation. Fed Res Bul 32:1345-6 D '46; Excerpt. Comm & Fin Chr 164:2618 N 21 '46
Why consumer credit? Regulation W. A. A. Friedrich. Banking 39:46+ D '46

Statistics

Consumer credit statistics, total credit, by major parts; consumer instalment loans; 1929-1945 and monthly Oct. 1945-Nov. 1946. Fed Res Bul 33:84 Ja '47 [cont monthly]
Consumer instalment sale credit; consumer instalment credits of commercial and industrial banks and of industrial loan companies; furniture store statistics and ratio of collections to accounts receivable; tabulations for selected periods, 1929-Nov. 1946. Fed Res Bul 33:85-6 Ja '47 [cont monthly]
Retail credit survey, 1946. Fed Res Bul 33: 820-6 Jl '47
Revised consumer credit series; with monthly figures, 1930-May 1947. Fed Res Bul 33: 830-5 Jl '47

INSTALMENT premiums. See Insurance, Fire—Instalment premiums

INSTITUT de chimie, Paris
Le cinquantenaire de l'Institut de chimie de Paris. M. Vasselin. il Chimie & Ind 57:78-81 Ja '47

INSTITUTE of boiler and radiator manufacturers
Announces expansion of activities on broad front. Dom Eng 169:152+ Ja '47

INSTITUTE of British foundrymen
Annual meeting, 44th, Nottingham, June 17-20. Foundry 75:97+ Ag '47

INSTITUTE of ceramic engineers
Institute of ceramic engineers. R. Twells. Am Cer Soc Bul 26:237 Ag 15 '47
President's report; committee reports. Am Cer Soc Bul 26:222-5 Jl 15 '47

INSTITUTE of food technologists
Homecoming at Boston; seventh annual conference. Food Ind 19:913-18+ Jl '47
Program of Boston meeting, June 1-5, 1947. Food Ind 19:648 My '47

INSTITUTE of gas technology
Looking ahead in gas research. E. S. Pettyjohn. Gas Age 99:42-4+ Ja 23 '47

INSTITUTE of home office underwriters
Annual meeting, Chicago, Oct. 2-4. East Underw 48:6 O 3; 19 O 10 '47; Nat Underw (Life ed) 51:1+ O 3; 1+ O 10 '47

INSTITUTE of industrial research, Louisville. See Louisville university—Institute of industrial research

INSTITUTE of industrial research, San Antonio, Texas
Institute of industrial research opened in Texas. Chem & Eng N 25:1055+ Ap 14 '47

INSTITUTE of inter-American affairs
Boost for hemisphere policy. il Bsns W p97 Ag 16 '47

INSTITUTE of international education
International educational exchange; laboratory experiment in human relations. L. Duggan. Chem & Eng N 25:1178-81 Ap 28 '47

INSTITUTE of life insurance
Addresses at annual meeting. L. A. Lincoln and others. Spectator (Life ed) 154:7-15+ D '46
Annual meeting, 8th, New York, Dec. 11. East Underw 47:24+ D 13 '46; Weekly Underw 155:1440+ D 14 '46
Five appointed to Institute's women's advisory committee. Nat Underw (Life ed) 51:3 S 5 '47

INSTITUTE of metals
Annual general meeting, 39th, London, March 5-7. Engineer 183:221-2, 234-5, 257-9, 280-1 Mr 14-Ap 4 '47; Engineering 163:197, 245-6, 280-1 Mr 14, 28, Ap 11 '47
Annual meeting, Glasgow. Engineer 184:346-8, 358-9 O 10-17 '47; Engineering 164:329-30, 353-4, 379 O 3-17 '47
Meeting, Westminster, May 22. Engineer 183: 493-4 Je 6 '47

INSTITUTE of musical science (proposed)
Institute of musical science; a suggestion. H. Fletcher. Acoustical Soc Am J 19:527-31 Jl '47

INSTITUTE of paper chemistry. See Lawrence college—Institute of paper chemistry

INSTITUTE of petroleum
Annual report, 32d. Inst Pet J 33:331-40 My '47
Institute of petroleum hydrocarbon research group. bibliog Inst Pet J 33:580-2 S '47

INSTITUTE of power engineers
Annual convention, 6th, Toronto, Dec. 2-4. Water & Sewage 84:30+ D '46

INSTITUTE of radio engineers
Annual meeting, New York, March 3-6. Elec Eng 66:414-15 Ap '47; Inst Radio Eng Proc 35:499-503 My '47; Electronics 20:80-6 My '47
Awards; portraits. Inst Radio Eng Proc 35: 382-5 Ap '47
Constitution; as amended August 15, 1947. Inst Radio Eng Proc 35:940-1 S '47
Report of the secretary, 1946. Inst Radio Eng Proc 35:583-7 Je '47
Report on professional standing to the Canadian council of the Institute of radio engineers. Inst Radio Eng Proc 35:61-4 Ja '47
Reports of the committee on professional recognition on collective bargaining for engineers. bibliog Inst Radio Eng Proc 35: 58-60 Ja '47

INSTITUTE of scrap iron and steel
Annual meeting, 19th, New York, Jan. 6-8. Steel 120:52-3 Ja 13 '47; Iron Age 159:111 Ja 16 '47

INSTITUTE of textile technology
ITT combines degree granting with research. M. C. Powers. il Textile World 97:103-7 Je '47

INSTITUTE of the aeronautical sciences
Annual meeting, 15th, New York, Jan. 28-30. Automotive & Aviation Ind 96:31+ F 15 '47; Aeronautical Eng R 6:5+ Mr '47; Aviation 46:127-8 Mr '47
Annual summer meeting and 15th anniversary dinner, Los Angeles, Aug. 7-8. Aeronautical Eng R 6:18-25 S '47
Annual summer meeting, Los Angeles, Aug. 7-8. Aviation W 47:33-5 Ag 25 '47
Awards for 1946. Aeronautical Eng R 6:8-9 F '47
Council for 1947; portraits. Aeronautical Eng R 6:6-7 Mr '47
Honors night dinner and annual meeting program. Aeronautical Eng R 6:6-7 Ja '47
I.A.S. on advisory panel of the Air coordinating committee; to represent interests of aeronautical research. Aeronautical Eng R 5:5 D '46
Joint conference with Royal aeronautical society, London, Sept. 3-5. Aero Digest 55:25+ O '47
Joint meeting with Royal aeronautical society, London, Sept. 3-5; with abstracts of papers. Aeronautical Eng R 6:5 S; 12-25 O '47
National air transport meeting, 4th, Washington, D.C. Oct. 24. Aeronautical Eng R 5:7-9 N '46
Personal plane progress; highlights from the Detroit meeting, May 26-27. R. Upson. Aeronautical Eng R 6:18-27+ Jl '47
Straight appointed I.A.S. western manager. Aeronautical Eng R 6:5 Ja '47

INSTITUTION of chemical engineers
Annual general meeting, London, April 10. Chem & Ind p228-9 Ap 26 '47; Chem Age (Lond) 56:463-5 Ap 19 '47

INSTITUTION of civil engineers
Annual conversazione, July 10. Engineer 184: 60-1 Jl 18 '47; Engineering 164:65 Jl 18 '47
Institution of civil engineers. W. Halcrow. Engineering 162:473-4 N 15 '46; Same cond. Engineer 182:420-1 N 8 '46; Abstract. Electrician 137:1304 N 8 '46

INSTITUTION of electrical engineers
Annual report. Elec R (Lond) 140:813-14 My 16 '47; Electrician 138:1313 My 16 '47
Centre chairmen; brief biographies. Elec R (Lond) 141:475, 513, 551 S 26-O 10 '47
Officers for 1947-48. Elec R (Lond) 141:252 Ag 15 '47
Report of the Council for the year 1946-47. Inst E E J 94 pt 1:203-29 My '47
Section chairmen, 1947-48. Elec R (Lond) 141: 433 S 19 '47

INSTITUTION of gas engineers
Annual meeting, 84th, Birmingham. Gas J (Lond) 250:641-56+ Je 18 '47
Autumn research meeting, 12th, London. Gas J (Lond) 248:977-84 D 4 '46
Institution education scheme; report of the Board of examiners, 1947. Gas J (Lond) 251:666-7 S 24 '47
Seventh report of the chairmen's technical committee, 1945-46. Gas J (Lond) 248:932-5 N 27 '46

INSTITUTION of mechanical engineers
Annual meeting, London, March 28. Engineer 183:289-90 Ap 4 '47
Annual report of the Council for the year 1945. Inst Mech Eng J & Proc 154:Proc 233-51 D '46
Centenary. Engineer 183:497-8, 519-21 Je 6-13 '47; Engineering 163:504, 528-9 Je 13-20 '47
Centenary of the British Institution of mechanical engineers. R. H. Parsons. il Mech Eng 69:841-2 O '47
Mechanical engineers' centenary. Mech Handling 34:378-9 Jl '47

INSTITUTION of naval architects
Annual meeting, London, March 26-28, Engineer 183:268-9, 291, 304-6, 335-6, 350-1 Mr 28-Ap 25 '47; Engineering 163:244, 271, 319, 343-4, 366-7, 389-91, 413-14, 436 Mr 28-Ap 4, 18-My 23 '47
Autumn meetings, Portsmouth and Southampton, Sept. 23-26. Engineer 184:312-14, 333-5 O 3-10 '47; Engineering 164:331-2, 376-7, 425-6 O 3, 17, 31 '47

INSTITUTIONAL homes. See Homes, Institutional

INSTRUCTION cars. See Cars, Instruction

INSTRUCTION in use of product
Bendix uses 7,300 women to post-sell every customer; give home demonstrations. il Sales Management 57:53-4+ D 1 '46
Exploded product technique has many uses in visual aids. il Sales Management 57:97 N 10 '46

INSTRUCTION manuals
On the record; Buda Diesel model no. 6DC-844, operators' manual. A. B. Newell. il Diesel Power 25:64-6+ Jl '47
Pictorial instruction book becomes a selling tool; Horton's Invitation to ironing luxury. E. H. McConnell. il Ptr Ink 217: 44-5 N 29 '46
Put it to work; Public service electric & gas co. distributes reference manuals to architects, builders, finance institutions and others. H. P. Morehouse. il Am Gas Assn Mo 29:328-30 Jl-Ag '47
Reading instruction books. A. B. Newell. diags Diesel Power 25:88-9+ Mr '47
Shop manual on gage usage helps inspector and operator. W. P. Wehlau and D. Thorburn. il Am Mach 91:79-81 Ja 2 '47

INSTRUCTIONS
Job instruction sheets increase output per man-hour; Belmont radio corporation. W. L. Hardesty. il diags Factory Management 105:72-3 S '47
See also
Employees' manuals
Safety instructions and training

INSTRUMENT society of America
Annual conference, 2d, Chicago, Sept. 8-12. Steel 121:51 S 22 '47; Power 91:773 N '47
Conference 2d, Chicago, Sept. 8-12; abstracts of analytical papers. Anal Chem 19:817 O '47
Conference and exhibition, 2d, Chicago. Chem & Eng N 25:2980 O 13 '47
Instrument Society's $6 million show dramatizes expanding controls market. il Ind Marketing 32:47-8+ O '47

INSTRUMENTS
Annual engineering review; instrumentation and control. Materials & Methods 25:110 Ja '47
Economics of mill instrumentation. R. W. Porter. Paper Tr J 124:48-9 Mr 6 '47; Same cond. Paper Ind 29:593+ Jl '47
Electronics aids progress in refinery instrumentation. D. M. Considine. il diags Oil & Gas J 45:245-6+ Mr 22 '47
Estimation of instrument costs. D. M. Considine. Chem Eng 54:108-9+ Jl '47
Functions and responsibilities of a plant instrument department. J. G. Kerley. Pet Refiner 26:98-104 S '47
Functions of an instrument development laboratory. V. F. Hanson. il Chem Eng Prog 43:379-82 Jl '47
Gage and instrument standardization. il Diesel Power 25:43 S '47
General study of kraft mill instrumentation. R. M. Brown. Paper Tr J 125:45-8 Ag 7 '47
Improved plant instrumentation practices are presented at ISA conference; abstracts of papers. diags Pet Processing 2:750-2 O '47
Installation and use of instruments on open-hearth melting furnaces. R. C. Baker. il diags Iron & Steel Inst J 157:81-8 S '47
Instrument practice. Published monthly by United trade press, 24 Bride lane, Fleet st, London, E.C. 4
Instrument society of America, 2d conference and exhibition, Chicago. Chem & Eng N 25: 2980 O 13 '47
Instrument threads. G. A. Whipple and others. diag Inst Mech Eng J & Proc 155 (War emergency issue no 18):152-4 '46; Same abr. Engineering 160:39-40 Jl 13 '45
Instrumentation and process control; new equipment. R. W. Cermak. il Chem Ind 61:414-16 S '47
Instrumentation for pulp and paper mill operation. R. R. Fuller. Paper Tr J 125:41-4 Ag 28 '47
Instrumentation for tomorrow; digests of papers presented at first National instrument conference and exhibit. diags Pet Processing 1:219-27 N '46
Instrumentation in gas-cycling plants. G. L. Gudenrath. diags Pet Refiner 26:85-7 Ap '47
Instrumentation, measurement, and control; papers presented at the first National instrument conference. A. Klemin. il Sci Am 176:122-4 Mr '47
Instrumentation of cycling plants. A. J. L. Hutchinson. flow sheet diags Pet Refiner 26:115-19 S '47
Instrumentation program at the Institute of paper chemistry. J. A. Van den Akker. Pulp & Pa of Can (Convention no) 48:163-5+ [F] '47
Instrumentation to ensure safety in the gas industry. J. F. Anthes. Gas Age 100:21-3+ S 18 '47
Instruments in process control. E. D. Mattix. flow diags Oil & Gas J 46:83-4+ Ag 23 '47
Instruments or bombs? German instruments. G. Keinath. Fortune 35:40 Mr '47
Instruments speed oil refining. il Electronics 20:168+ N '47
Locke insulator makes wide usage of industrial instruments. C. W. Bowden, jr. il Cer Ind 49:86+ S '47
Management has recognized the utility of instruments; now it should discover the instrument man. R. H. Munch. Ind & Eng Chem 39:sup97A-8A S '47
New instruments and control equipment exhibited at National instrument conference. il Pet Processing 1:228 N '46
Organizing an instrument department; Monsanto chemical company. C. S. Comstock and H. U. Fisher. il Chem Eng Prog 43: 303-8 Je '47
Process instrumentation committee, Technical section of the Canadian pulp and paper association. J. N. Franklin and R. M. Brown. Pulp & Pa of Can 48:85-6 Jl '47
Process instrumentation; prepared by process instrumentation committee, Technical section of Canadian pulp and paper association. Pulp & Pa of Can 48:93 S '47
Review of power and mechanical equipment; meters and instruments. il diag Power 90: 905-11 Mid-D '46
Role of instruments in the atomic bomb project. W. P. Jesse. Chem & Eng N 24:2906-9 N 10 '46
Tests of instruments for the determination, indication, or recording of the specific gravities of gases. F. A. Smith and others. il U S Nat Bur Stand Misc Pub M177:1-143 '47 ($1)
Textile progress accents instrumentation. R. Pollack, jr. il diags Rayon 28:509-11, 546-8 S-O '47
Topics of interest to analytical chemists discussed at instrumentation conference. R. H. Müller. Anal Chem 19:sup25A-6A S '47
Two vets develop new glass instruments. H. Helfer. il Cer Ind 48:88 Mr '47
See also
Aeronautic instruments
Balances
Control equipment
Dynamometers
Electric instruments
Measuring instruments
Medical instruments and apparatus
Nautical instruments
Optical instruments
Radio instruments
Recording instruments
Scientific apparatus and instruments
Surgical instruments and apparatus

Bearings
Development of hard glasses. A. E. Pavlish and I. Mockrin. bibliog Am Cer Soc J 30: 54-63 F 1 '47

INSTRUMENTS—*Continued*

Exhibitions

Instrument Society's $6 million show dramatizes expanding controls market. il Ind Marketing 32:47-8+ O '47

1947 instrument show. R. M. Brown. Pulp & Pa of Can 48:95-6 O '47

Lubrication

Development of additives and lubricating oil compositions. D. C. Atkins, jr. and others. bibliog Ind & Eng Chem 39:491-7 Ap '47

Maintenance and repair

Instrument installation and maintenance methods and practices in a modern oil refinery; abstract. G. A. Larsen. diag Pet Processing 2:751-2 O '47

Study and teaching

Instruction in instrumentation. R. H. Müller. Anal Chem 19:sup25A-6A My '47

Instrumentation. D. F. Miner. J Eng Educ 37:216-21 N '46

Instrumentation in chemical analysis; technical training course. R. H. Lambert. J Chem Educ 23:610-12 D '46

INSTRUMENTS, Aeronautic. See Aeronautic instruments

INSTRUMENTS, Electric. See Electric instruments

INSTRUMENTS, Measuring. See Measuring instruments

INSTRUMENTS, Negotiable. See Negotiable instruments

INSTRUMENTS, Optical. See Optical instruments

INSTRUMENTS, Recording. See Recording instruments

INSULATING bricks. See Bricks, Insulating

INSULATING materials

Bell Telephone improves ceramic insulators. M. D. Rigterink. il Cer Ind 48:81-3 My '47

Electrical insulation, field for chemical exploitation. F. M. Clark. il Chem & Eng N 25:2976-8 O 13 '47

Fabrication of thin ceramic sheets for capacitors. G. N. Howatt and others. il diags Am Cer Soc J 30:237-42 Ag 1 '47

Gaseous dielectric; sulfur and fluorine combine. Chem Ind 61:40 Jl '47

Glass insulation; electrical applications to the processes of manufacture. il Elec R (Lond) 139:679-82 N 1 '46

Insulating plastic; Textolite #1422, General electric co. Chem Ind 59:860 N '46

Low-loss plastic insulation materials. J. H. Parliman. Electronics 20:116-21 (Buyers' guide) Mid-Je '47

Metal-ceramic vacuum seals. N. T. Williams. il diags R Sci Instr 18:394-7 Je '47

Preparation and properties of sulfur hexafluoride. W. C. Schumb. bibliog Ind & Eng Chem 39:421-3 Mr '47

Rapid insulator production with glass-bonded mica. A. J. Monack. bibliog flow chart il Cer Ind 48:59-60+ F; 76+ Mr; 98+ Ap; 76-7+ My; 49:74+ Jl '47

Silicones. G. L. Moses. Materials & Methods 24:1520 D '46

Silicones as electrical insulating materials. S. L. Bass and others. bibliog il Electrochem Soc Trans 90 (preprint 19):255-72 '46

Temperature records as an aid in depreciation study. W. A. Tripp. Elec Eng 66:182-6 F '47

Vulcanized fibre in arc interrupting devices. G. A. Albert. il diags Mod Plastics 24:88-90 Jl '47

See also

Barium titanate
Glass—Electric properties
Glass fibers
Insulating oil
Mica
Paper, Insulating
Polythene
Porcelain, Insulating
Rayon, Insulating
Resinous products—Insulating materials
Steatite
Varnish, Insulating

Testing

Improved re-entrant cavity for dielectric-loss measurements. S. I. Reynolds. il diags Gen Elec R 50:34-9 S '47

Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47

Silicone insulation as applied to naval power equipment. H. P. Walker. Elec Eng 66: 647-9 Jl '47

INSULATING oil

Acidity and sludge; their formation in transformer oil. J. A. Clegg. Elec R (Lond) 140:947-9 Je 6 '47

Buckeye develops two large oil purifying units for Dnieprostroi system. il Elec World News ed 127:21 Mr 8 '47

Prevention and extinguishing of insulating oil fires in power stations and substations. H. K. Sels. Edison Elec Inst Bul 15:379-81 O '47

Protection of stored transformer oil. il Ry Mech Eng 121:600 O '47

Silicone oils. D. R. Wilcock. bibliog Gen Elec R 49:14-18 N; 28 D '46

Transformer oil; characteristics and acidity development tests. G. V. Harrap. Elec R (Lond) 139:989-91 D 13 '46

Transformer oil reconditioned for 7 cents a gallon. H. A. Tynan. diag Elec World 127: 84 Je 21 '47

Standards

Insulating oils; case for a revision of B. S. 148-1933. A. Unsworth. Elec R (Lond) 140: 83-4 Ja 10 '47

Testing

Oxidation of transformer oil. P. M. Heertjes and others. bibliog diags Inst Pet J 33:552-73 S '47

Preliminary report on laboratory aging tests on class A insulation. Elec Eng 66:910-13 S '47

Water content unrelated to steam emulsion number. E. M. Kipp. Elec World 128:56 S 27 '47

INSULATING porcelain. See Porcelain, Insulating

INSULATING tape

Better welding transformers; Micanite tape separators. H. K. Whitehorn. diags Elec R (Lond) 140:271-2 F 7 '47

Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65: Trans 791-7 D '46

INSULATING varnish. See Varnish, Insulating

INSULATION (electric)

Dipole reflector insulation. J. A. Saxton and L. H. Ford. diags Wireless Eng 23:325-7 D '46

Electric strength of paraffins and some high polymers. A. E. W. Austen and H. Pelzer. bibliog diags Inst E E J 93 pt 1:525-32 N '46

Electrical insulation, field for chemical exploitation. F. M. Clark. il Chem & Eng N 25:2976-8 O 13 '47

Electrostatic sources of electric power. J. G. Trump. bibliog il diags Elec Eng 66:525-34 Je '47

Inside of electrical machines. R. H. Robinson. il diags Electrician 137:1203-7, 1361-3, 1509-13, 1669-72, 1822-5; 138:115-19+, 271-6, 501-5, 780-3 N 1, 15, 29, D 13, 27 '46, Ja 10, 24, F 14, Mr 28 '47

Insulation of high voltages in vacuum. J. G. Trump and R. J. van de Graaff. bibliog diag J Ap Phys 18:327-32 Mr '47

Iron reinsulated for 35,000-kw. unit in record time. il Elec West 99:90 S '47

New glass-fiber insulation developments will lead to apparatus improvements. il Elec World News ed 128:21-2 Ag 23 '47

Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47

Simplex favors synthetic compounds over natural rubber in wire and cable. H. A. Morss, jr. Elec World News ed 126:16 D 14 '46

Toughened glass insulators. il Elec R (Lond) 141:461-6 S 26 '47

INSULATION (electric)—*Continued*
Westinghouse high-temperature motor, silicone-insulated. il Mach 54:246C-246D S '47

See also
Dielectrics
Electric resistance
Insulating materials
Insulating oil
Potheads
Textolite

Testing

Brief absorption test index of dielectric condition. R. Blackway. il Elec World 127:101-3 Ap 12 '47
How often should I test insulation resistance? Power 91:491+ Jl '47
Inside of electrical machines. R. H. Robinson. diags Electrician 137:1669-72 D 13 '46
Insulation and unearthed d.c. G. W. Stubbings. diag Electrician 138:1007-8 Ap 18 '47
Insulation resistance measurements. E. W. Greenfield. diags Elec Eng 66:698-703 Jl '47
Lightning and 60-cycle power tests on woodpole line insulation. P. L. Bellaschi. il diag Elec Eng 66:672-7 Jl '47
Oscilloscope broadens insulation tests. R. Blackway. il Elec World 128:109-10 O 11 '47
Process testing of film continuity on Formex fine wire. B. Mulvey. il diags Gen Elec R 49:46-8 N '46

INSULATION (heat)
Better detail plate; insulation types and methods of application. R. J. Alexander. diags Am Bld 69:132-3 S '47
Boiler headers lose heat? insulate; with cost data. Dom Eng 168:143 N '46
Development and uses of structural insulation board. D. Linville. il Dom Comm 35:23-9 Jl '47
Duct insulation reduces fuel costs. Steel 121: 98 S 22 '47
Glass fibers as an engineering material. il Steel 120:96-9+ Mr 10 '47
Heat and sound insulation. L. M. Ball. il S A E J 54:39-40 D '46
Heat and sound insulation; abstract. L. M. Ball. Automotive & Aviation Ind 96:58+ Ja 1 '47
Heat insulation solves breeching and boiler troubles; Sayreville plant of the Jersey central power & light co. il Power Pl Eng 51:88-9 My '47; Same abr. Elec World 127: 72+ F 1 '47
Heating men should recommend insulation. H. J. Wingate. Sheet Metal Worker 38:74+ Jl '47
High-temperature insulation material; Refrasil. Chem Eng 54:159 Ja '47
Home insulation with mineral products. O. Bowles. U S Bur Mines Information Circ 7388:1-11 '46
How to estimate dollar savings by use of insulation to cut heat losses. Pet Processing 1:192 N '46
Insulating boiler headers can be profitable. il Pet Processing 2:125 F '47
Insulating for United States navy experimental gas turbine plant. H. A. Altorfer. il Marine Eng 52:90-2 O '47
Insulating unhoused plants. D. von Ludwig. il diags Chem Eng 54:114-17 Mr '47
Insulating your ceiling. C. H. Minster. diags Food Ind 18:1850-1 D '46
Insulation and fire safety; how insulation acts as a fire stop. W. Royce. il Spectator (Property ed) 12:10-12+ D 12 '46
Insulation data on a large combination unit. L. A. Hanson. il Pet Refiner 26:112-14 S '47
Insulation in rotary kilns. W. R. Cliffe. diags Rock Prod 50:145-7+ Ag '47
Insulation material; Santocel. Mech Eng 69: 772 S '47; Product Eng 18:168 S '47
Insulation of air lines saves $33,000. il Comp Air Mag 52:97-8 Ap '47
Insulation of glassmaking equipment. W. R. Kerr. bibliog il diag Am Cer Soc Bul 26: 261-8 S 15 '47
Insulation technique for oil-refinery structures. S. S. Parker. il Oil & Gas J 45:160-2 Ap 26 '47
Internally insulated piping and pressure vessels for high-temperature service. P. E. Darling. diags Pet Refiner 26:129-34 O '47
Maintenance of magnesia insulation; abstract. U. W. Smith. Marine Eng 52:86 O '47
Mexico's two new refineries models of newest insulation methods. H. R. Morris. il Pet Refiner 26:121-2 My '47
Mineral wool insulation of ducts cuts plant operating costs. il Sheet Metal Worker 38: 100+ S '47
Modern boiler, tank and line insulation; Salisbury axle plant. il Power Pl Eng 51: 84-6 S '47
NACA test lab requires enormous cooling plant. il Refrig Eng 54:342-3+ O '47
Number of inquiries doubled while cost per inquiry dropped 69%; Kimsul insulation. il Ptr Ink 218:49 F 14 '47
Outline of the insulation board industry. C. G. Muench. Paper Tr J 125:48-50 Jl 31 '47
Owners of well-insulated homes pay off the mortgage more quickly. W. Royce. il Bankers Mo 64:126+ Mr '47
Paper mill insulating problems; use of Foamglas. V. Sanders. il Paper Ind 29:531-3 Jl '47
Putting insulating properties of plastics to work; frankfurter cooker, baby bottle warmer and percolator handle. il Mod Plastics 24:134-5 F '47
Rapid method of determining the economical thickness of pipe insulation. U. W. Smith. Heating-Piping 19:118-21 O '47
Sheet metal + insulation = low-cost construction. il Sheet Metal Worker 38:68+ Jl '47
Technique for insulating boiler headers. il Power Pl Eng 51:126+ My '47
Thermal conductivity of insulating materials; table. Water & Sewage Works 94:R64 Jl '47
Thermal insulating and radiation suppressive coatings for aircraft power plant systems. Cer Ind 48:142 Ap '47
Thermal properties of walls; various applications of fiberglas insulation. diags Brick & Clay Rec 110:35 Mr '47
Three-in-one cavity wall, insulated, vapor-sealed and water-stopped. diags Brick & Clay Rec 111:28-31 O '47
Use of silica aerogel as a thermal insulation. F. F. Ogden and J. F. White. bibliog il Refrig Eng 52:411-14 N '46
What the power engineer needs to know about heat insulation. il Power Pl Eng 51: 77-9 O '47
Where to insulate. il diags Brick & Clay Rec 110:32 F '47
Wind-tunnel heat leakage decreased ninety percent by insulation. il Eng N 139:602 O 30 '47

See also
Asbestos
Building—Heating aspects
Fire brick
Glass, Heat absorbing
Glass fibers
Mineral wool
Refractory materials
Steam pipe coverings

Cost

Estimating magnesia insulation costs. F. C. Otto. Chem Eng 54:126-9+ S '47
Estimating mineral wool insulation. F. C. Otto. Chem Eng 54:102-6 Jl '47
Process equipment cost estimation; estimating cold insulation costs. F. C. Otto. Chem Eng 54:118-20 My '47

Testing

Low mean temperature thermal conductivity studies. F. B. Rowley and others. il Refrig Eng 53:35-9 Ja '47

INSULIN
Detection of hypoglycemic reactions in the mouse assay for insulin. D. M. Young and A. H. Lewis. bibliog il Science 105: 368-9 Ap 4 '47
Hyperinsulinism of menses. H. E. Billig, jr. and C. A. Spaulding, jr. bibliog Ind Med 16:336-9 Jl '47
Insulin industry of Czechoslovakia. For Comm W 27:25 Je 28 '47

INSURABLE interest
Coinsurance clause and insurable interest under the 1943 standard fire insurance policy. J. S. Foster. Weekly Underw 157: 817-20 O 4 '47
Incontestability clause is invalid in absence of insurable interest; Commonwealth Life vs. George. Nat Underw (Life ed) 51:2 F 7 '47
Insurable interest. J. D. Renn. Weekly Underw 157:174-6+ Jl 19 '47

INSURABLE interest—*Continued*
Is a uniform statute on insurable interest desirable? R. H. Hollenberg. Weekly Underw 157:127-9 Jl 12 '47
Ownership policies permitting designation of beneficiaries. F. H. Pease. Weekly Underw 156:183-5+ Ja 11 '47; Excerpt. East Underw 47:29 D 13 '46; Abstract. Nat Underw (Life ed) 50:23 D 13 '46
Texas public policy requiring insurable interest prevents recovery by divorced wife though named beneficiary. Weekly Underw 156:245 Ja 18 '47

INSURANCE
Casting off for 1947. C. G. Hale. Spectator (Property ed) 12:10-12+ Ja 9 '47; Same. Spectator (Life ed) 154:18-21+ Ja '47
Hartford Accident official carries torch for industry; insurance indispensable in peace and in war. W. C. Jainsen. Nat Underw 51:29 My 1 '47
Insurance flood; abstract. H. T. Rohs. Management R 36:441-2 Ag '47
Insurance, its theory and practice in the United States, by Albert H. Mowbray; review. East Underw 47:41 N 15 '46

See also
Benefit societies
Contracts, Government—Insurance aspects
Exhibits, Traveling—Insurance aspects
Insurance companies and other headings beginning Insurance
Pension trusts
Sports—Insurance aspects
Surplus products—Insurance aspects
Trade unions—Insurance plans
War damage corporation
also subdivision Insurance requirements under various subjects, e.g.
Airports
Banks and banking
Building and loan associations
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Distilling industries
Fish trade
Hotels
Merchants
Retail trade
Teachers
Traveling stores
also American bar association—Insurance section; American management association—Insurance division; Chamber of commerce of the United States—Insurance department

Adjustment of claims

Aggressive defense a good policy. J. Chambliss. Nat Underw (Life ed) 50:2 D 13 '46
Brokers blame companies for petty claims increase. Nat Underw 51:21 Je 12 '47
Current questions that puzzle the loss men. Nat Underw 51:4 Ja 23 '47
Excess insurer ruled liable; Loma dress company case. Spectator (Property ed) 13: 33-4 Jl 24 '47
Freeze out pot hunters, claim men advised; policy of paying worthless claims for nuisance value is scorched; abstracts. W. Ely. Nat Underw 51:19 S 4 '47; Weekly Underw 157:335+ O 4 '47
High court decision limits rights of claimant's attorney. Nat Underw 51:4 F 6 '47
How claims counsel can best serve the companies they represent. V. C. Gorton. Weekly Underw 157:386+ Ag 16 '47
Hurricanes shadow but don't dampen mutual loss managers' conference. Nat Underw 51: 11-12 O 23 '47
Insurance appraisal value, other questions are answered. C. W. Tierney. Nat Underw 51: 10 O 16 '47
Over 90 per cent of claims in Texas City paid. East Underw 48:19 Jl 4 '47
Performing the promise; loss and claim departments are big business. F. Van Orman. Nat Underw 50th anniv no:30-1 1947
Price ceiling exit brings some woes to insurance. Nat Underw 50:10 N 14 '46
Problems arising out of duplicate coverage. J. B. Donovan. East Underw 48:37 S 26 '47
Public relations in claims activities. G. A. White. East Underw 48:11 S 19 '47
Radical action needed to correct loose practices; W.U.A. loss adjustment committee finds disturbing situation, urges correction. Nat Underw 51:3+ Ap 24 '47
Strides have been made in arbitration; compensation claims should be paid promptly. E. A. Cowie. East Underw 47:44 N 15 '46

See also
Insurance adjusters
International claim association
National association of independent insurance adjusters
also subdivision Adjustment of claims under special subjects e.g. Insurance, Fire—Adjustment of claims

Loan receipts

Loan receipt device. Weekly Underw 155: 1498+ D 21 '46
Loan receipt taken on settlement of claim entitles theft insurer to maintain suit in name of insured. Weekly Underw 157:715 S 20 '47

Advertising

Bank runs ad urging full insurance protection; First trust & deposit co., Syracuse. East Underw 48:13 Ja 17 '47
Big task is to make coverage understood by the public; abstracts. J. W. Mason. East Underw 48:22 My 2 '47; Weekly Underw 156:1196+ My 3 '47; Ptr Ink 219:100 My 9 '47
Copy clinic; insurance company advertising. B. Tyler. Adv & Sell 39:44 D '46
Discusses public relations angles at Insurance advertising conference. H. P. Jackson. Weekly Underw 156:1090+ Ap 19 '47
Gallery; Ray Dreher. W. Weir. Adv & Sell 40:90+, 131 Ag '47; Excerpts. East Underw 48:17 Ag 22 '47
Good agency contacts vital. D. P. Ely. East Underw 48:26 Ap 18 '47; Same. Weekly Underw 156:1065+ Ap 19 '47
Sitting on a mile-stone; accelerated advertising demonstrates greater responsibility of insurance. T. W. Budlong. Nat Underw 50th anniv no:170-2 1947

See also
Insurance, Fire—Advertising
Insurance, Life—Advertising
Insurance advertising conference
Insurance agents—Advertising
Insurance companies—Advertising

Bibliography

Digest of insurance literature; index of articles in current periodicals. W. Hay. Weekly Underw 156:133 Ja 4 '47 [cont weekly]
Insurance book reviews. Published 10 times a year by Special libraries assn, Insurance group, Provident mutual life insurance co, Box 7378, Philadelphia 1 '46

Binders

Problems of the conflict of laws in relation to binding receipts. P. B. McHaney. Weekly Underw 156:1655-7+, 1701-3 Je 14-21 '47

Cancellation

Warns on cancellations; Ohio superintendent advises real estate buyers. W. Dressel. Weekly Underw 155:1349 D 7 '46

See also
Insurance, Automobile—Cancellation
Insurance, Fire—Cancellation
Insurance, Life—Cancellation

Catastrophe coverage

Important future for catastrophe covers; abstracts. D. Kadyk. Nat Underw 51:23+ S 25 '47; East Underw 48:24 S 26 '47
Santander conference; international catastrophe study looks far into future; Review of London. Nat Underw 51:7+ S 4 '47

Claims

See Insurance—Adjustment of claims

Collecting of premiums

See Insurance—Premiums, Payment of

Coverage

Accountants and insurance; should they be held responsible for opinions on coverage? J. Getz. Credit & Fin Management 49:8+ F '47

INSURANCE—Coverage—*Continued*
Coverage and liability questions answered. C. W. Tierney. Nat Underw 51:11 Mr 27 '47
Over- and under-insurance, wrong rates, gaps, penalties are remedied by audits. J. Roach. Nat Underw 51:15 F 27 '47

Credit aspects
Don't overlook credit men. H. E. Taylor. Rough Notes 90:17-18+ Ja '47
Insurance as a credit factor. R. S. Whitmore. Credit & Fin Management 49:11-13 Ap '47
Insurance in relation to credit. W. W. Clement. Credit & Fin Management 49:13-15 Jl '47

Employees' insurance
Broad benefits in pension plans best insured, A.M.A. told. N. H. Seefurth. Nat Underw (Life ed) 51:2 F 14 '47
Employe cover subject to approval of labor unions; AFL lawyer treats pending Inland Steel NLRB case. J. E. Gubbins. Nat Underw (Life ed) 51:3+ Ap 11 '47
Extent of insurance and pensions in industrial employment. H. W. Callaway. Mo Labor R 65:53-7 Jl '47
Insurance goal; benefits financed solely by employer. Bsns W p91 D 7 '46
Life company employes deserve standard benefits; outlines security programs. E. B. Stevenson. Nat Underw (Life ed) 51:19-20 My 16 '47
Sees service as answer to trust company competition. P. A. Hazard, jr. Nat Underw (Life ed) 51:2+ O 3 '47
Sickness protection and welfare funds gain favor throughout industry. Weekly Underw 156:288 Ja 25 '47
See also
Insurance, Group—Employees' insurance
Insurance, Health—Employees' insurance
Insurance, Life—Employees' insurance
Pension trusts
Pensions, Industrial

Fraudulent statements
See also
Insurance, Industrial—Fraudulent statements
Insurance, Life—Fraudulent statements
Insurance, Surety and fidelity—Fraudulent statements

Government policies
Agents assail navy centralized insurance deal on ships' service stores. H. C. Hallam. Nat Underw 51:1+ Mr 20 '47
F.I.A. cancels RFC business; puts end to 10 per cent discount; Marsh & McLennan takes over. Nat Underw 51:3+ Je 12 '47
Fight navy's ship service stores insurance setup. Nat Underw 51:17 Mr 13 '47
Work out insurance angles on Greek project; Liberty Mutual wins contract. H. C. Hallam. Nat Underw 51:54 O 16 '47
See also
Contracts, Government—Insurance aspects

Hemispheric conference
See Hemispheric insurance conference

History
Hartford, city insurance built; abstract. T. E. Murphy. East Underw 48:18 Ag 1 '47

International aspects
Bracket insurance with commerce in trade pact; decide against special reference in International trade organization. Nat Underw 50:12 N 21 '46
Gathering in Santander, Spain, hits at lack of adequate coverage for large risks; report of English-speaking section of international congress. East Underw 48:16+ Ag 22 '47
Santander conference; international catastrophe study looks far into future; Review of London. Nat Underw 51:7+ S 4 '47
Strive to include insurance in trade pacts; left out in cold in International trade organization. Nat Underw 51:1 Ja 9 '47
See also
Hemispheric insurance conference
Insurance companies—Foreign business
Insurance companies—Foreign branches

Law
See Insurance agents—Law; Insurance law

Losses
Blasts raise havoc in Texas City. C. K. Waters, jr. il Spectator (Property ed) 12: 12-15 Ap 24 '47
Carriers act quickly in Texas City disaster. Weekly Underw 156:1079 Ap 19 '47
Chicago explosion loss may reach $2½ million. il(p3) Nat Underw 51:1+ Mr 6 '47
Insurance loss tops $50 million; report Oil assn. has $28,500,000 on Texas City risk. il Nat Underw 51:1-2+ Ap 24 '47
Joint report on Texas City disaster by Fire prevention and engineering bureau of Texas and National Board. Nat Underw 51:2+ My 15 '47; East Underw 48:1+ My 16 '47
Los Angeles harbor loss estimate cut to $1,200,000. Nat Underw 51:3 Jl 17 '47
Loss in Los Angeles blast may be $2 million. Nat Underw 51:34 Mr 6 '47
Outlines of Texas City losses begin to grow clearer. Nat Underw 51:3 My 1 '47
Radical action needed to correct loose practices; W.U.A. loss adjustment committee finds disturbing situation, urges correction. Nat Underw 51:3+ Ap 24 '47
Spanish insurance pool may lose several million in explosion at Cadiz. Nat Underw 51:4 Ag 28 '47
Texas City and British insurers. Economist 152:688 My 3 '47
Texas City property damage loss figured around $50,000,000. East Underw 48:1+ Ap 25 '47
Texas disaster loss may be $50,000,000. J. C. Leissler, jr. Weekly Underw 156:1125+ Ap 26 '47; Same abr. East Underw 48:24+ Ap 25 '47; Same cond. Nat Underw 51:1+ Ap 24 '47
Western Adjustment reports; 1946 record shows increase in size and frequency of losses. Nat Underw 51:2 Ja 30 '47

Mail order selling
Canada bars mails to nine U.S. companies. East Underw 48:26 Ag 22 '47
Chicago newspapers report post office drive against insurers. Nat Underw 51:18 Ja 9 '47; Same. Nat Underw (Life ed) 51:3 Ja 10 '47
Nebraska mail order insurers to pay premium tax there. Nat Underw 51:28 O 9 '47; Same. Nat Underw (Life ed) 51:31 O 10 '47
Post office has no crack-down program up its sleeve. F. J. Delany. Nat Underw 51:17 Ja 23 '47; Same. Nat Underw (Life ed) 51:4 Ja 31 '47

Municipal policies
Dallas agents inspect city owned properties; master policy method of covering public property, taking politics out. East Underw 48:16 Jl 25 '47
Newark city property over-insured, survey says. East Underw 48:20 My 16 '47
Plan for insuring property of city of Richmond, Va. East Underw 48:19 F 14 '47; Same. Weekly Underw 156:454 F 15 '47; Same cond. Nat Underw 51:32 F 13 '47

Over the counter selling
Over-the-counter selling; Lagerquist-Allen agency, Albany, Ga. F. W. Lagerquist, jr. il Rough Notes 90:17-18 Jl '47
Story of Detroit's stop and shop insurance agency. D. W. Frisbee. il Sales Management 57:62+ N 10 '46

Periodicals
Agency bulletin. H. H. Putman. Nat Underw 50th anniv no:320 1947
See also
National underwriter (periodical)
Ohio underwriter (periodical)

INSURANCE—*Continued*

Policies

Contact lens cover is old story to Fire Association. Nat Underw 50:31 N 21 '46

Term policies

Budget premium plans; what's the best way to write term business? E. P. Carson. Rough Notes 90:30+ My '47

Pools

Companies and producers eye pool operations; what to do in non-regulated states. Nat Underw 51:1 Ag 7 '47

Premiums, Payment of

Agents cautioned to watch collections. G. T. Warfield, jr. East Underw 48:16 Ag 15 '47

Budget premium plans; what's the best way to write term business? E. P. Carson. Rough Notes 90:30+ My '47

Credit by broker for return unearned premiums not binding on insurer issuing replacing policies. Weekly Underw 157:942 O 11 '47

My collection policy; with sample letters. G. F. King and others. Rough Notes 89:24 D '46

Sound collections. R. C. Dreher. Rough Notes 90:30+ Jl '47

Premiums, Recovery of

Assured gets unearned premium which was paid by finance company. East Underw 47: 27 D 20 '46

See also

Insurance, Life—Premiums, Recovery of

Prospects

Don't overlook credit men. H. E. Taylor. Rough Notes 90:17-18+ Ja '47

Gold in your commercial risks. M. L. Lane. Rough Notes 90:52-4 Mr '47

Successful prospecting. A. M. O'Connell. Rough Notes 90:20+ My '47

See also

Insurance, Accident—Prospects
Insurance, Aviation—Prospects
Insurance, Automobile—Prospects
Insurance, Life—Prospects

Purchasing

Adequate insurance coverage at proper cost. H. L. Jamison. Management R 36:549-51 O '47

Agents assail navy centralized insurance deal on ships' service stores. H. C. Hallam. Nat Underw 51:1+ Mr 20 '47

Buyer tells how his firm cut insurance paper work; Canada dry ginger ale, inc. P. H. Littlefield. Nat Underw 51:2 My 15 '47; Excerpt. Nat Underw (Life ed) 51:7 My 16 '47

Buyers tell large agencies what they expect of them. F. G. Gillingham and others. Nat Underw 51:3, 32 O 23 '47

Buyers want more voice in insurance policy making; address before A.M.A. conference; abstracts. I. M. Carpenter. Nat Underw 51: 5+ My 8 '47; Weekly Underw 157:268 Ag 2 '47

Cheap insurance not always desirable; what buyer expects in way of coverage service. W. T. McWhorter. Weekly Underw 156: 997+ Ap 12 '47

Comprehensive action to expand market urged by New York brokers. Weekly Underw 157:976+ O 18 '47; Same. East Underw 48:22+ O 17 '47

Duty of the insurance buyer. P. M. Gahagan. Credit & Fin Management 49:26-32 Mr '47

Fight navy's ship service stores insurance setup. Nat Underw 51:17 Mr 13 '47

Graphic insurance audit. J. D. Hall. East Underw 48:42 F 21 '47

How agents can be of greater service to big buyers. H. Anderson. East Underw 48:16+ O 24 '47

How to buy a house; insurance to cover hazards; abstract. L. D. Meredith. East Underw 48:14 My 2 '47

How to buy insurance; the complete guide to better protection for less money. P. Gordis. 352p $4 W. W. Norton & co, 101 5th av, New York 3 '47

Important that management carry adequate insurance against possibilities of major loss; address before Risk research institute. E. L. Clark. Weekly Underw 157:20-1+ Jl 5 '47; Excerpts. East Underw 48: 18-19 Jl 4 '47

Is insurance doing the best job that it can? abstracts. W. D. Winter. Weekly Underw 156:309+ F 1 '47; East Underw 48:1+ Ja 31 '47

Practical guides to insurance buying. 39p pa 75c American management assn, 330 W. 42d st, New York 18 '47

Reducing paperwork in the insurance department; Canada dry ginger ale, inc. P. H. Littlefield. (In Insurance ser. no. 72, p3-10) pa 50c American management assn, 330 W. 42d st, New York 18 '47

Roam the plant, buyer tells agents at Akron rally. P. H. Schindler. Nat Underw 51:4 My 8 '47

Story of a buyer. L. H. Wiggers. Management R 36:396-7 Jl '47

What will it cost to replace your personal property today? expiring contents policies and personal property floaters should be increased to cover today's values. Rough Notes 90:43 F; 68 My; 31 Ag '47

Why coverage isn't always easy to purchase. W. A. Williams. Weekly Underw 156:1746 Je 28 '47

See also

Insurance, Accident—Purchasing
Insurance, Aviation—Purchasing
Insurance, Automobile—Purchasing
Insurance, Fire—Purchasing
Insurance, Life—Purchasing
Insurance, Surety and fidelity—Purchasing

Rates

Again attacks all-industry measures; address before Insurance brokers' association of Illinois. E. W. Sawyer. East Underw 48:30+ Ja 10 '47

All-industry bill in Massachusetts has competitor; fight made for locally-sponsored all-producers bill; action in other states. Nat Underw 51:21+ Mr 27 '47

All-industry bills amended; commissioners agree to changes at Chicago. Weekly Underw 156:309+ F 1 '47

All-industry bills go into Illinois hopper; action in Washington, D.C. and California. Nat Underw 51:21+ Ap 10 '47

All-industry bills pass in Michigan, die in Oklahoma; progress in other states. Nat Underw 51:23+ My 8 '47

Alternate filing method gets nod in Michigan; action in other states. Nat Underw 51:21 Ap 17 '47

America Fore group support of all-industry measures. B. M. Culver. East Underw 48: 26 F 7 '47

Answers Murphy on all-industry bills. C. I. Fisher. East Underw 48:29+ Ja 31 '47

Appeal for model bills at Arkansas rally; abstracts. J. M. McFall; D. Dorsett. Nat Underw 50:18+ D 12 '46; East Underw 47:90+ D 13 '46

Asks insurers to hold to rate level in Illinois. N. P. Parkinson. Nat Underw 51:11+ Ag 28 '47

Assert Illinois rate regulation bills favor combines. R. B. Alexander and others. Weekly Underw 156:209+ Ja 18 '47

Attacks all-industry bills; address before Rhode Island association of insurance agents; abstracts. E. W. Sawyer. East Underw 48:35 Ap 11 '47; Nat Underw 51:10 Ap 10 '47

Batter casualty bill in Washington code hearings. S. G. Thompson and others. Nat Underw 50:25 N 21 '46

Big test in administration of Iowa's rating laws. R. Murphy. Nat Underw 51:27 S 11 '47

Blasts A.I.C. bills; calls on all-industry foes to redouble efforts. O. Patterson. Nat Underw 51:25+ Mr 13 '47

Blasts critics of all-industry rate bills. O. G. Jackson. East Underw 48:25+ F 7 '47

INSURANCE—Rates—*Continued*
Brokers and casualty agents tell formal stand against model bills. Nat Underw 51:18 Ja 16 '47
Californians offer substitute for model bills; state could challenge rates alleged to be inadequate, discriminatory. Nat Underw 50: 1, 15 N 14 '46
Californians unite on regulatory bill. East Underw 47:32+ N 22 '46
Calls decisive state action essential. R. Murphy. East Underw 48:30+ Ja 17 '47
Chicago brokers hear three foes of model bills. E. W. Sawyer and others. Nat Underw 51:17+ Ja 9 '47
Come out for model bills at Illinois Federation meeting. N. P. Parkinson and others. Nat Underw 51:1+ F 6 '47
Commissioners seek uniformity in administration of rate laws. East Underw 48:23+ Je 13 '47
Commissions, equity rating fare well under model bills. D. A. Forbes. Nat Underw 51:1+ F 27 '47
Companies on guard against inclusion in fire rating laws; see danger if all-industry models are modified in enactment. Nat Underw (Life ed) 51:3+ Ja 3 '47
Defends all-industry bill, raps alternatives; answers brokers' charges before Chicago group. H. S. Moser. Nat Underw 50:23 D 26 '46
Dineen plan to sell rate service criticized. E. W. Sawyer. Nat Underw 51:11 F 13 '47
Dineen proposes selling rating information. Weekly Underw 156:311 F 1 '47
District of Columbia action is not a guidepost; review of rate bill activity in various states. Nat Underw 51:19+ Mr 6 '47
District of Columbia commissioners turn thumbs down on model bills; action in other states. Nat Underw 51:1+ F 20 '47
Duty of all to make rating laws work; address before Utah assn. of insurance agents. W. H. Brewster. Nat Underw 51:20 Ag 14 '47
Endorses all-industry measures. W. R. McCain. Weekly Underw 155:1393+ D 14 '46; Excerpts. East Underw 47:58-9 D 13 '46; Nat Underw 50:2 D 12 '46
English rating practices. A. J. Bohlinger. East Underw 48:19 S 26; 20-1 O 3 '47
For competitive freedom in rate laws. J. A. Diemand. Nat Underw 50:1+ N 28 '46
Fortified in position against rigid rate regulation. C. P. Daniel. East Underw 47:40 N 15 '46
Illinois governor urges insurers to hold line on rates. D. Green. Nat Underw 51:4+ S 11 '47
Industry bill case stated by U.S.F.&G. E. A. Davis. Weekly Underw 156:257+ Ja 25 '47; Same cond. Nat Underw 51:10 Ja 23 '47
Join battle on rating bill issue in Illinois; action in other states. Nat Underw 51:17+ Ja 23 '47
Judgment, in big measure, must be given recognition to accommodate large risks. R. B. Gallagher. Nat Underw 50:4 D 12 '46
Makes strong defense of all-industry commissioners rating bills before Life underwriters association of the city of New York. R. E. Dineen. Weekly Underw 155:1239+ N 23 '46
Missouri agents, Jackson part company on model bills; action in other states. Nat Underw 51:19+ F 6 '47
Moser amendments to all-industry bills are approved at Chicago; with text of revised amendments. East Underw 48:29+ Ja 31 '47; Nat Underw 51:1+ Ja 30 '47; Nat Underw (Life ed) 51:1 Ja 31 '47
N.A.I.A. warns agents of E. W. Sawyer proposals. Nat Underw 50:6 D 5 '46
National brokers association president opposes strict control over rates. A. T. Archer. East Underw 48:18 Ja 17 '47
New York bill would extend rate bureau services to other states. East Underw 48:25 Ja 31 '47; Same. Weekly Underw 156:311 F 1 '47
Pennsylvania industry bills make several changes in AIC proposals. East Underw 48:28 F 21 '47
Producers asked to rally to support of all-industry bills. J. M. McFall. Weekly Underw 155:1424+ D 14 '46
Rate bills only sound instruments of insurance defense. J. D. Dorsett. Spectator (Property ed) 12:24-5 D 26 '46
Rate control; the time is short. W. H. Hackett. Spectator (Property ed) 12:9+ N 28 '46
Rate laws in Texas. C. T. Smith. Spectator (Property ed) 12:12-13 My 22 '47
Rate legislation developments. Nat Underw 51:13 F 27 '47
Rate regulatory and related bills enacted in 1947 legislatures. Weekly Underw 157: 143 Jl 19 '47
Rate regulatory bills in the legislatures. Weekly Underw 156:259, 311, 379, 448, 524, 584, 660, 736, 804, 872, 932, 1000, 1068, 1128, 1188, 1324 Ja 25-My 3, 17 '47
Rating forum meeting, Richmond, Va. Sept. 16. East Underw 48:31+ S 19 '47; Nat Underw 51:4+ S 18 '47; Weekly Underw 157:667 S 20 '47
Replies to Patterson, says attack comprises sweeping generalities. R. Murphy. Nat Underw 51:25 Mr 13 '47
Risk Research drafts own regulatory bill. W. W. Clement. East Underw 48:31 Ja 10 '47
Risk research institute amends its rating bill. East Underw 48:31 F 28 '47; Nat Underw 51:2 F 27 '47
Risk research institute offers own rate bill. East Underw 48:20+ F 7 '47; Abstract. Nat Underw 51:19 F 6 '47
Sale of rating services explained. R. E. Dineen. Weekly Underw 156:449 F 15 '47
Scorecard by states on all-industry legislation. Nat Underw 51:14 Ap 3 '47
Sees rate regulation bringing higher costs; hits system used in New York. E. L. Clark. East Underw 48:18-19 Jl 4 '47
$64 question; what will happen where no rate laws pass? Nat Underw 51:20 Je 5 '47
States position on all-industry bills for National association of casualty & surety agents. C. P. Daniel. East Underw 48:28 Ja 17 '47
Supervision and rate regulation; address before National association of insurance commissioners. R. E. Dineen. Weekly Underw 156:1517+ Je 7 '47; Same abr. East Underw 48:1+ Je 6 '47; Abstract. Nat Underw 51:1 Je 5 '47
Tells Detroit agents points on which he opposes industry bills. E. C. Stone. Weekly Underw 156:257+ Ja 25 '47
Theory over, time to make it work; address before Richmond rating forum. W. W. Sampson. Nat Underw 51:2 S 18 '47
Urges agents to shape rating laws. J. A. Diemand. East Underw 48:18 Ja 24 '47
Vermont study group bill provides for merely challenge of rate filings. Nat Underw 50:3 N 21 '46
Watch Bureau test of Kansas rate statute; may provide clues as to needed changes in all-industry bills. Nat Underw 50:21 N 21 '46
Why all-industry measures are opposed. J. F. Crafts. Weekly Underw 155:1172+ N 16 '46; Same. East Underw 47:28 N 15 '46

Rating bureaus
Commissioners accept report on examination of rating bureaus. Nat Underw 50:15A D 12 '46
Denies rating costs are prohibitive. R. E. Dineen. East Underw 48:26 F 21 '47; Same abr. Weekly Underw 156:523 F 22 '47
Dineen plan to sell rate service criticized. E. W. Sawyer. Nat Underw 51:11 F 13 '47
Independents set up Midwestern independent statistical service. Nat Underw 51:23+ O 9 '47
New York bill would extend rate bureau services to other states. East Underw 48: 25 Ja 31 '47; Same. Weekly Underw 156: 311 F 1 '47
Sale of rating services explained. R. E. Dineen. Weekly Underw 156:449 F 15 '47

INSURANCE—Rating bureaus—*Continued*
Views on rate bureaus. M. M. Gorman. Nat Underw 51:1 O 9 '47

See also
Insurance, Aviation—Rating bureaus
Insurance, Casualty—Rating bureaus
Insurance, Fire—Rating bureaus
Insurance, Inland marine—Rating bureaus
also National bureau of casualty underwriters

Reinsurance

European survey of reinsurance conditions in post-war period; Review of London describes developments in different countries. East Underw 48:24+ Ja 10; 20 Ja 17 '47
Half a century of reinsurance. A. R. W. Wang. Nat Underw 50th anniv no:300 1947
How to simplify statement blank as to reinsurance. Nat Underw 50:21 D 26 '46
Insurance market glutted; inventory rise on top of dollar increase makes big lines hard to swallow. Nat Underw 51:3 Mr 13 '47
North America enters field of reinsurance. Nat Underw 50:1 D 26 '46
Post war reinsurance trends as viewed from London. W. Juul. Nat Underw 50:18-19 D 26 '46
Reinsurance review. Nat Underw 50:13-14+ D 26 '46
Retroactive tax in Argentina riles alien reinsurers. Nat Underw 51:4 Je 19 '47
Review of London sizes up results of leading U.S. reinsurance companies. East Underw 48:32 Ja 3 '47
Skillful shaping of treaty is worthwhile project. C. H. Pritchard. Nat Underw 50:14+ D 26 '46
Swiss reinsurance company shows worldwide 1946 results. Nat Underw 51:1 Jl 31 '47
Thirtieth year of establishment of reinsurance firm; Sterling offices, ltd. East Underw 48:25 F 28 '47
Treaties could be made even more lucid than they are. A. Fougner. Nat Underw 50:16+ D 26 '46

See also
Insurance—Pools
also subdivision Reinsurance under special subjects, e.g. Insurance, Fire—Reinsurance

Risks

Big insured canvass all corners for cover. Nat Underw 51:2+ Ag 7 '47
Gathering in Santander, Spain, hits at lack of adequate coverage for large risks; report of English-speaking section of international congress. East Underw 48:16+ Ag 22 '47
Important future for catastrophe covers; abstracts. D. Kadyk. Nat Underw 51:23+ S 25 '47; East Underw 48:24 S 26 '47
Need for incentive for agents to improve selection. W. H. Leonhart. Nat Underw 50:14+ D 26 '46
Santander conference; international catastrophe study looks far into future; Review of London. Nat Underw 51:7+ S 4 '47
Solving the problem of risk; Royal-Liverpool booklet. Weekly Underw 157:391-3 Ag 16 '47
Trans-Arabian pipe line insured in U.S. Spectator (Property ed) 13:23 S 25 '47; Nat Underw 51:27 S 11 '47

Self insurance

See also
Insurance, Fire—Municipal self insurance

Social aspects

Protecting workers and families from worry of age or disability. W. R. Williamson. Weekly Underw 155:1312 N 30 '46

Study and teaching

Education and training; a review of the past, a look at the present, and an estimate of the future. J. E. Hedges. Nat Underw 50th anniv no:232-6 1947
Educational survey completed by Insurance institute of America. East Underw 48:14+ Ag 29 '47
Insurance goes to college; suggested minimum program. D. McCahan and H. J. Lomar. Spectator (Property ed) 12:10-12+ F 13 '47
Insurance institute of Ontario gets incorporation charter; formerly Toronto institute. East Underw 48:16 Ag 1 '47
Insurance study by mail open to all war veterans. Weekly Underw 157:239 Jl 26 '47
Michigan agents have outstanding educational course. Nat Underw 51:8 Ag 14 '47
Monarch Life opens new college at Springfield for its field men. il East Underw 48:30 O 3 '47; Nat Underw (Life ed) 51:7 S 26 '47
North America will open new school for agents. East Underw 48:1+ Ja 10 '47
S. S. Huebner foundation announces graduate fellowships, scholarships. East Underw 48:12 F 7 '47
S. S. Huebner foundation award winners. East Underw 48:10 My 30 '47
Syracuse university insurance education plan completes second successful year. East Underw 48:30 S 12 '47

See also
Insurance, Life—Agents—Training
Insurance agents—Training
also subdivision Study and teaching under various insurance headings, e.g. Insurance, Life—Study and teaching
also American association of university teachers of insurance; American institute for property and liability underwriters; Insurance society of New York

Taxation

See also
Insurance, Life—Taxation
Insurance companies—Taxation

Valuation of property

Itemize building costs in valuation. R. Evans. Nat Underw 51:6 F 27 '47

See also
Insurance, Automobile—Valuation of property
Insurance, Fire—Valuation of property

Canada

Canadian department reports on 1946 results. Weekly Underw 156:802 Mr 22 '47
Canadian socialists draw argument from insurance dilemma; market stringency, C.C.F. leaders say, calls for government operation. Nat Underw 51:8+ S 11 '47
1946 Canadian premiums and losses higher; fire loss ratio over 58%; experience in other lines. G. D. Finlayson. East Underw 48:28 My 16 '47

Dallas

Dallas agents inspect city owned properties; master policy method of covering public property, taking politics out. East Underw 48:16 Jl 25 '47

Europe

Insurance man looks at Europe. H. J. Johnson. Weekly Underw 157:349 Ag 9 '47

France

Nationalisation of banks and industries in France. Int Labour R 54:209-10 S-O '46

Germany

Obligatory coverage spreads in Russian held German zones. E. C. Steefel. East Underw 47:1+ D 27 '46

Great Britain

Post war reinsurance trends as viewed from London; claims experience may harden. W. Juul. Nat Underw 50:18-19 D 26 '46

Korea

Experiences in valuing Korean business of 19 Japanese insurance companies. C. T. Foster. East Underw 48:14 Ja 24 '47

Mexico

Form new adjusting firm in Mexico city; Adjusters and surveyors, ltd. East Underw 48:16 Jl 11 '47; Weekly Underw 157:84 Jl 12 '47; Nat Underw 51:8 Jl 10 '47

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Nebraska

Traces Nebraska insurance development. B. R. Stone. Weekly Underw 156:807 Mr 22 '47

New York (state)

Activities of New York department; address before National association of insurance women. A. J. Bohlinger. East Underw 48: 19 Je 27 '47

Annual report to legislature; abstracts. R. E. Dineen. East Underw 48:34 Mr 14 '47; Nat Underw 51:6 Mr 13 '47; Weekly Underw 156:737 Mr 15 '47

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Insurance law—New York (state)

Peru

Insurance business in Peru shows gratifying gains. Weekly Underw 155:1282 N 30 '46

Philippine Islands

When currency is no good; premiums collected and policies issued for now worthless Japanese currency. L. M. Gardner. East Underw 47:25 N 15 '46

Southern states

1946 premium writings increased in South. M. R. McGruder. Weekly Underw 156:20+ Ja 4 '47

INSURANCE, Accident

A. & H. insurance a four-leaf clover. C. Typermass. East Underw 48:29 My 23 '47

Accident and health legislation; address before Industrial insurers conference; abstracts. H. R. Gordon. Weekly Underw 156: 1368 My 17 '47; East Underw 48:42+ My 9 '47; Nat Underw 51:18+ My 15 '47; Nat Underw (Life ed) 51:11+ My 9 '47

A.&H. model bill a good and wholesome measure. C. C. Fraizer. East Underw 48: 32+ My 30 '47

A. & H. picture for 1946. W. L. Clapp. East Underw 47:86+ D 13 '46

A.&H. program is considered by Agency management association. East Underw 48:6 Ja 3 '47

A. & H. regulatory bill now law in six states. J. F. Follmann. East Underw 48:35 Ap 18 '47

Accident cover gives great return; 1946 trends. E. A. McCord. Weekly Underw 156:72+ Ja 4 '47

Accident insurance holds public interest; premiums in 1946 exceeded $600,000,000. J. F. Follmann, jr. Weekly Underw 156:74-5+ Ja 4 '47

American health insurance corporation takes A. & H. business of Pennsylvania Casualty. Weekly Underw 156:170 Ja 11 '47; Same cond. Nat Underw 51:21 Ja 9 '47

Challenge to the institution of accident and health insurance. W. G. Gastil. il Spectator (Life ed) 155:12-17+ Jl '47; Same abr. Weekly Underw 157:288, 336, 394-5 Ag 2-16 '47; Excerpts. East Underw 48:35+ Je 27 '47

Commissioners' rulings on A. & H. opposed by Bureau; orders in Texas, Florida and Nevada declared contrary to original concept of official guide. Weekly Underw 157: 106-7 Jl 12 '47

Commissioners study A.&H. regulation; consider third proposal, embodying no advance approval but giving commissioner police powers. East Underw 47:39 N 15 '46

Compromise A.&H. bill best measure possible to obtain. J. Farley. East Underw 48:39+ My 30 '47

Consider revision of accident-health standard provisions; controversy on approval and filing section before N.A.I.C. committee. Nat Underw (Life ed) 51:2+ O 10 '47

Dineen names twelve to new A. & H. advisory group; to work with insurance department on examination of agents, brokers. East Underw 48:28 Ja 3 '47

Fair trade practices bill important in A. & H. field. R. F. Killion. Nat Underw 51:26 My 1 '47; Same. Nat Underw (Life ed) 51:3 My 2 '47

Four major objectives; address before H. & A. Conference. H. R. Gordon. Nat Underw (H. & A. conference no) 51:3+ My 30 '47

General regulatory laws; with particular application to health and accident business; tabulation by states. C. C. Frazier. Spectator (Property ed) 12:9 N 14 '46

Health and accident insurance; expanding horizons. H. R. Gordon. il Spectator (Life ed) 154:12-14+ Ap '47

Inroads of Crosser benefits on private cover negligible. Nat Underw 51:30 S 18 '47; Same. Nat Underw (Life ed) 51:2+ S 19 '47

Leaders' ideas of top A. & H. problems. G. H. Knight and others. Nat Underw 51:20+ O 23 '47

Legislative and regulatory trends affecting accident and health insurance; Pittsburgh address; abstracts. J. F. Follmann. Weekly Underw 156:555 F 22 '47; East Underw 48: 35 F 28 '47; Nat Underw 51:22 F 20 '47; Nat Underw (Life ed) 51:20 F 21 '47

Legislative score card; many states acted on group A. & H. at '47 sessions. Nat Underw 51:15 Jl 24 '47; Nat Underw (Life ed) 51: 3+ Ag 1 '47

Long-range public relations program of H. & A. Conference shaping up. East Underw 48: 36+ Mr 7 '47

NAIC gets attitude of industry on A. & H. guide. East Underw 48:36 Je 6 '47

New Chicago A. & H. company begins business; American income assurance of Chicago. Nat Underw 51:24 Mr 6 '47; Same. Nat Underw (Life ed) 51:7 Mr 7 '47

New Jersey bill insuring school athletes passes Assembly. East Underw 48:41 Mr 21 '47

New York law seen as likely model for A.&H. regulation. Nat Underw 50:13 D 5 '46; Same. Nat Underw (Life ed) 50:3 D 6 '46

1947 accident premiums may rise 20%; developments during past year; address at Health and accident underwriters conference annual meeting. E. H. McCord. Weekly Underw 156:1482+ My 31 '47

1947 regulatory legislation for A. & H.; address before Bureau of accident & health underwriters. J. F. Follmann, jr. East Underw 48:39+ S 12 '47

Pearson elected zone 4 chairman; accident-health requirement again suspended; seek nation-wide basis. Nat Underw 51:17 My 15 '47; Same. Nat Underw (Life ed) 51:4 My 16 '47

Pennsylvania accident & health insurance co. to begin business. Nat Underw 51:15 Ja 2 '47

Problems and future of group accident and health. A. Pike, jr. Nat Underw 50th anniv no:292-4 1947

Problems in writing group accident-health. P. G. Korn and others. Nat Underw 51:20+ F 13 '47; Same abr. Nat Underw (Life ed) 51:1+ F 14 '47

Public relations; importance to accident insurance. J. F. Follmann, jr. Weekly Underw 155:1554+ D 28 '46; Same. Spectator (Life ed) 154:32+ Ja '47; Abstract. Nat Underw 50:20 D 19 '46

Railroad line holding up despite Crosser bill. Nat Underw 51:31 Ap 17 '47; Same. Nat Underw (Life ed) 51:14-15 Ap 18 '47

Text of proposed A.&H. regulatory legislation approved by NAIC. East Underw 47:114 D 13 '46; Same. Nat Underw 50:19 D 19 '46; Same. Nat Underw (Life ed) 50:4 D 20 '46

U.S. Life expands A.&H. program under Rhodebeck; adds two to staff. East Underw 48:31 Ja 3 '47; Same cond. Nat Underw 51:20 Ja 2 '47; Same cond. Nat Underw (Life ed) 51:12 Ja 3 '47

Urges sales research program in A.&H. field. R. B. Smith. Nat Underw 50:16 N 28 '46; Same abr. Nat Underw (Life ed) 50:2 N 29 '46

Visualizes great future for accident and health industry. G. H. Knight. Weekly Underw 157:1058 O 25 '47

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Insurance, Disability
Insurance, Liability
Insurance, Life—Disability provisions
Insurance, Workmen's compensation

also Bureau of accident and health underwriters; Health and accident underwriters conference; National association of accident and health underwriters

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Accounting

A. & H. data preserves business competition. W. Manzelmann. East Underw 48:46 Mr 21 '47

H. & A. Conference to give especial attention to accident-health statistics. Nat Underw 51:22 Je 5 '47

Industry asks delay on zone 4 experience call. Nat Underw 51:18 Ja 23 '47; Same abr. Nat Underw (Life ed) 51:5 Ja 24 '47

Wants statistical reports. S. S. Battleson. East Underw 48:35 My 30 '47

Zone 4's proposals to NAIC on A. & H. experience study; text. East Underw 48:38 Je 13 '47

Adjustment of claims

Dies while pushing stalled car; no recovery. Nat Underw 51:26 Ja 16 '47

Human factor in A. & H. insurance. C. J. Haight. East Underw 48:30 Ap 4 '47

Insured wins round on waiver agreement issue; Oonk vs. Monarch Accident. Nat Underw 51:27 F 13 '47; Same. Nat Underw (Life ed) 51:19 F 14 '47

Rule drowning exceeds limits of travel policy; Carpenter vs. Life & Casualty. Nat Underw (Life ed) 51:27 F 28 '47

Treatment of claimants held paramount in building public relations; report of Health and accident underwriters conference. Weekly Underw 156:404+ F 8 '47

Agents

A. & H. agents average $8,200 annual income by using these tips. T. Wallace. Weekly Underw 156:418 F 8 '47

Ace producer of Federal Life & Casualty in Maine sees bright future. W. W. Morse. East Underw 48:32+ F 14 '47

Agents' role in public relations. C. W. Young. East Underw 48:34+ Je 27 '47

Continental's A. & H. dept. steps up pace; new merchandising aids. East Underw 48: 43 Mr 14 '47

Dignan Ohio A. & H. chief; notable sales talks given at Columbus. Nat Underw 51: 29+ Ap 17 '47

Gets results with increased benefits rider. G. H. Knight. East Underw 48:28 Jl 25 '47

Logic can be effectively employed in selling accident protection. C. A. Ernst. Weekly Underw 157:48-9 Jl 5 '47

Model qualification law for A. & H. agents considered. Nat Underw 51:28 My 8 '47; Same. Nat Underw (Life ed) 51:20 My 9 '47

Organized selling. H. A. Graham; G. Neale. Rough Notes 89:34+ D '46

Plan for production. Rough Notes 90:38 F '47

Producers should remember human factor in accident and health insurance. C. J. Haight. Weekly Underw 156:902-3 Mr 29 '47

Sell non-occupational A. & H. insurance. F. Scudder. East Underw 48:33 pt 2 Je 20 '47

Selling large A. & H. buyers. G. J. Richards. East Underw 48:48-9 Ap 25 '47

Selling starts with home office. J. H. Garneau. Nat Underw 50:18 N 28 '46

Took near fatality to lead agent into accident and health selling. F. P. White. East Underw 48:15 Je 27 '47

Sales conventions

Need change of pace; A. & H. sales plans given at Boston. H. H. Nunamaker and others. Nat Underw 51:8+ Je 26 '47

Organize selves for sales, accident-health men urged. G. J. Richards and others. Nat Underw 51:12 Ja 16 '47

Sales tips abound at congress of accident salesmen in St Louis. Weekly Underw 156: 1234-5 My 3 '47

Women agents

Woman's A. & H. association formed in New Jersey. Nat Underw 51:22 F 6 '47

Aviation risks

Aviation accident policy issued by Associated aviation underwriters. Rough Notes 90:66+ F '47

Aviation accident; sales ideas. R. M. Fox. Rough Notes 90:25-6 Jl '47

Aviation exclusion clauses in insurance contracts and the trend towards court interpretations which nullify these restrictions on air travel. C. S. Rhyne. Weekly Underw 156:1495 My 31 '47

Aviation observations contained in report of Bureau of accident and health underwriters. Weekly Underw 157:621 S 13 '47

Ill-fated passengers in three recent airline accidents took $285,000 coverage. D. D. M. Scarritt. Weekly Underw 156:1706 Je 21 '47

Insurograph boosts aviation accident policy sales. Nat Underw 50:12 D 5 '46

New accident ticket; Travelers cos. offer protection in all parts of world including scheduled aircraft travel. East Underw 48: 28 Ag 8 '47

Claim complaints

Analyze accident assureds' complaints in Illinois and Michigan. Weekly Underw 155: 1333+ D 7 '46; Same abr. Nat Underw 50: 23+ D 5 '46; Same abr. Nat Underw (Life ed) 50:3+ D 6 '46

Criticizes some cover practices; settling underwriting questions, after claim is made. C. F. J. Harrington. Weekly Underw 156: 1765+ Je 28 '47

Farm volunteer policies

Continue farm volunteer accident policies. Nat Underw 51:28 Ap 10 '47; Nat Underw (Life ed) 51:18 Ap 11 '47; Weekly Underw 156:1029 Ap 12 '47

Finance

Accident and health insurance in 1946 by states; hospitalization plans included; tabulation. Spectator (Property ed) 13:20 O 9 '47; Same. Spectator (Life ed) 155:48 O '47

A.& H. net premiums for 1946 compared with 1945 for 45 companies; tabulation. East Underw 48:32-3 F 14 '47

A.&H. results for first ten months point to 1946 as banner year; summaries for selected companies. East Underw 47:106 D 13 '46

New York state A. & H. business reported; premiums and losses in 1946; tabulation by company. Nat Underw (Life ed) 51:18 Mr 21 '47

Ranking position in net premiums written on individual accident and health policies for 1946 and comparisons 1943-1945; tabulation by company. Spectator (Property ed) 13: 21-3 O 9 '47; Same. Spectator (Life ed) 155:54-6 O '47

Losses

Dineen hits unduly low loss ratios on some A. & H. policies. Nat Underw 51:18 Ja 16 '47; Same. Nat Underw (Life ed) 51:3 Ja 17 '47

Noncancellable policies

Optimistic on non-can. A. & H. future. J. L. Ullman. East Underw 48:32-3 My 23 '47

Policies

Athletic accidents. T. E. Hopkins. Rough Notes 90:38+ Jl '47

Bankers Life & Casualty is pioneer of no claim bonus. Nat Underw 51:26 F 13 '47; Same. Nat Underw (Life ed) 51:19 F 14 '47

California O.K.s vending machine policy. Nat Underw 51:29 My 22 '47

Continental Casualty extends coverage for teams; new policy covers amateur or semi-professional baseball and softball teams. East Underw 48:46 My 30 '47

Coverages and forms; A & H policies afford variety of benefits. Spectator (Property ed) 12:26 N 28 '46

Lack of uniformity in official guide on policy forms. H. R. Gordon. East Underw 48: 33+ My 30 '47

Manufacturers Casualty issues new A. & H. policy; introduces franchise plan of non-occupational coverage; has health and hospital benefits. East Underw 48:32 S 5 '47

National A.&H. is issuing new family policy. Nat Underw 50:24 N 14 '46; Same. Nat Underw (Life ed) 50:15 N 15 '46

New employees' sickness and non-occupational accident policy issued by Travelers. Rough Notes 90:63 My '47

INSURANCE, Accident—Policies—*Continued*
No-claim award under A. & H. policy O.K. in Michigan. Nat Underw 51:14 F 6 '47; Nat Underw (Life ed) 51:8 F 7 '47; Weekly Underw 156:406 F 8 '47

Provident Life & Accident broadens its student athletic coverage. East Underw 48:28 Ag 8 '47

Student accidents covered; St Louis university officers arrange with Columbian national life insurance co. for coverage. East Underw 48:8 S 5 '47

Travelers issues non-occupational A. & H. policy. Nat Underw 51:26 F 13 '47; Same. Nat Underw (Life ed) 51:19 F 14 '47

See also
Insurance, Accident—Aviation risks
Insurance, Accident—Noncancellable policies
Insurance, Accident—Farm volunteer policies

Prospects

Buying protection; fear held chief motive of those who insure. P. McDowell. Weekly Underw 157:231 Jl 26 '47

Local athletic teams clue to large accident cases. Nat Underw 51:8 Ja 2 '47

Opportunities in athletics. J. W. Sedgwick. Rough Notes 89:18+ N '46

See also
Insurance, Accident—Women as prospects

Purchasing

Various accident and sickness cover points for women. H. R. Gordon. Weekly Underw 156:485-6 F 15 '47

Rates

Model A. & H. rating law being prepared by Bureau of personal accident & health underwriters. R. A. Payne. East Underw 48:37, 40 S 12 '47

Risks

Insurers shy from team accident on New Jersey schools. Nat Underw 51:20 Je 26 '47

See also
Insurance, Accident—Aviation risks
Insurance, Accident—Substandard risks

Statistics

Survey by Chamber of commerce shows extent of disability cover. Weekly Underw 155:1537+ D 28 '46; Same abr. East Underw 47:35 D 27 '46

U.S. chamber of commerce survey; 40% of employes in industry have voluntary A. & H. plan; with summary of accident & health insurance of United States residents, 1945. Nat Underw 51:15 Ja 2 '47; Same. Nat Underw (Life ed) 51:6 Ja 10 '47

Substandard risks

Chicago A. & H. underwriting forum discusses impaired risks. Nat Underw 51:29 O 9 '47; Nat Underw (Life ed) 51:40 O 10 '47

Women as prospects

Various accident and sickness cover points for women. H. R. Gordon. Weekly Underw 156:485-6 F 15 '47

Nebraska

Clarifies Nebraska position on A. & H. policy approval. F. E. Landis. Nat Underw 51:23 F 27 '47; Same. Nat Underw (Life ed) 51:10 F 28 '47

New York (state)

Dineen disapproves 15 A. & H. policies; seven companies involved. East Underw 48:38 O 10 '47

Switzerland

Compulsory accident insurance in Switzerland from 1938 to 1942. Int Labour R 54: 179-96 S-O '46

INSURANCE, Agricultural
Canada's farmers; Saskatchewan province scheme of crop insurance. il Spectator (Property ed) 12:14+ N 14 '46

Restricted crop cover legislation approved. Weekly Underw 157:89 Jl 12 '47

Tobacco coverage broadened. East Underw 48:23 Ja 24 '47

See also
Federal crop insurance corporation
Insurance, Accident—Farm volunteer policies
Insurance, Cotton
Insurance, Fire—Farm policies
Insurance, Hail
Insurance, Live stock

INSURANCE, Aircraft damage
Aircraft liability and property damage policy issued by Aero insurance underwriters. Rough Notes 90:65-6 My '47

INSURANCE, Airplane cargo
Air freight boom keeping cargo insurers on alert. Nat Underw 51:10 F 6 '47

Insuring air freight. Rough Notes 90:51 F '47

INSURANCE, Airport public and property damage liability
Airport liability. Rough Notes 90:47 Je '47

Airport liability insurance policy issued by Aero insurance underwriters. Rough Notes 90:77-8 Mr '47

INSURANCE, Assessment
Canada; British Columbia's assessment clubs. Spectator (Life ed) 154:48+ Mr '47

INSURANCE, Automobile
Advice to insurers; reply to Insurers turn down business. H. W. Horton. Bsns W p44+ S 20 '47

Auto insurance solution will be found. R. A. Duffus. East Underw 48:58 O 17 '47

Auto line headache gets more splitting; agents face daily scramble for market as insurers apply controls. Nat Underw 51:16 Ja 2 '47

Automobile and aviation insurance number. Nat Underw (Auto & aviation no) 51:1-4+, 10-12, 14-25 Ap 18 '47

Automobile picture for 1947. A. E. Spottke. East Underw 48:32 My 16 '47

Automobile underwriters predict high loss ratios will continue; outlook for 1947. East Underw 47:64+ D 13 '46

C.&S. association to survey tight auto insurance market. J. D. Dorsett. East Underw 48:27+ Jl 18 '47; Same. Weekly Underw 157:141+ Jl 19 '47; Same cond. Nat Underw 51:10 Jl 17 '47

Casualty volume problem shows no prospect of relief; new financial responsibility laws to add more auto business. Nat Underw 51:19 Je 5 '47

Connecticut agents rap companies for stand on auto business; insurers have moral obligation to provide market. Nat Underw 51:1 Je 12 '47; East Underw 48:28 Je 13 '47

Control of auto line stressed at State Farm 25th anniversary rally. Nat Underw 51:19 Je 12 '47

Front line underwriting is key to market easing. R. J. Beech. Nat Underw 51:26-7 S 18 '47

Insurers turn down business. Bsns W p64-6 Jl 26 '47

Keep controls off auto business. I. J. Maurer. Nat Underw 50:20 N 14 '46

Keystone folding has wide repercussions; rush for new protection. East Underw 48: 27+ Jl 18 '47

Mutuals criticise new cars as loss ratio ruiners; study rate regulation, automobile prospects at Chicago meeting. Nat Underw 51:21+ Mr 27 '47

Policies canceled; auto-insurance companies start lopping off business. Bsns W p39-41 My 10 '47

Ray of hope is now visible in automobile field. Nat Underw 51:15 Ag 21 '47

Reasons for unsatisfactory underwriting results; address before Washington association of insurance agents. W. H. Brewster. Weekly Underw 157:313+ Ag 9 '47; Abstracts. East Underw 48:24+ Ag 8 '47; Nat Underw 51:18+ Ag 7 '47; Rough Notes 90: 18+ S '47

Rough Notes; special automobile issue. il Rough Notes 90:15-23+ Mr '47

Significant developments in auto liability insurance. A. E. Spottke. Nat Underw 50th anniv no:224 1947

INSURANCE, Automobile—*Continued*
Sizes up auto insurance situation. W. H. Brewster. East Underw 48:30+ F 14 '47

See also
Insurance, Motor bus
Insurance, Motor truck
Insurance, Taxicab
also National automobile underwriters association

Accounting

Automobile statistical plan of Independent Insurers. V. Lemmon. Weekly Underw 156: 1415+ My 24 '47

Adjustment of claims

Adjusters plagued by those high cost, shortage, front end blues; repair work problems. Nat Underw 51:21 Ap 24 '47
Assured's judgment creditor can recover only limit of policy though insurer negligent in failing to settle. Weekly Underw 157:579 S 6 '47
Auto claim men consider problem of fair new and used car values. East Underw 48: 38 F 21 '47
Automatic cover clause construed; Hoffman vs. Illinois National Casualty. Nat Underw 51:30 F 20; 22 Mr 6 '47
Automobile decisions on insuring agreement, repairs and negligence. J. Simpson. East Underw 48:29 F 28 '47
Breach of cooperation clause not waived by insurer's defense of damage suit under reservation of rights. Weekly Underw 156: 859 Mr 22 '47
Claim men declare war on gouging tow-car operators. Nat Underw 51:8 Ja 16 '47
Claimant loser in decision on Ohio responsibility law. Nat Underw 51:22 Ap 17 '47
Court favors plaintiff in car case; bases decision on loss of earnings. East Underw 48:22 Jl 25 '47
Court finds for auto insurer on concealment question; Government employees insurance co. vs. Powell. Nat Underw 51:12 Mr 27 '47
Direct action against automobile insurer; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:30-1 N 28 '46
Direct action against liability insurer not barred by 82-day delay in giving notice of accident. Weekly Underw 156:987 Ap 5 '47
Federal court holds drive other cars primary coverage; American Automobile vs. Penn Mutual Indemnity. Nat Underw 51:17 Ap 17 '47
Fire in motor of automobile is held mechanical breakdown, not covered. East Underw 48:32 Je 13 '47
Fire mortgagee clause protection not applicable in collision case. East Underw 48:26 Ap 4 '47
Garage exception no defense in action on liability policy where borrowed servant rule found applicable. Weekly Underw 157:130 Jl 12 '47
High court decides underwriting point held reason for automobile losses; breaking of defective latch a mechanical breakdown; Lunn v. Indiana lumbermens mutual insurance co. Weekly Underw 156:1694-5+ Je 21 '47
Hold mortgagee relief not applicable to collision; Texas statute. Nat Underw 51:15 Ja 16 '47
Illinois supreme court holds permissive user must cooperate to same extent as named insured. Nat Underw 50:15D D 12 '46
Insurer recovers from assured who failed to start subrogation action. East Underw 48: 20 Ag 15 '47
Mechanical breakdown is held as proximate cause; Lunn, etc. vs. Indiana Lumbermen's Mutual. Nat Underw 51:15 My 22 '47
Mechanical breakdown under comprehensive coverage; Lunn v. Indiana lumbermens mutual insurance co. J. L. Roesch. Spectator (Property ed) 13:10-11+ Jl 24 '47
Medical witnesses bear watching. O. T. Toebaas. Nat Underw 51:16A S 25 '47
Motor damage not covered by comprehensive policy. Nat Underw 51:3 Jl 10 '47
Mutual claim men attack auto problems in grass roots style at Chicago. W. Dressel and others. Nat Underw 51:9-10 Je 26 '47
NAIC condemns knock for knock plan to reduce subrogation suits. East Underw 48:32 Je 13 '47
New way of handling collision line. W. Keller. Nat Underw 51:6 O 16 '47
Notice to insurer; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11+ Ap 24 '47
Omnibus coverage; employees' use of vehicle; State farm mutual automobile insurance company v. Cook. J. L. Roesch. Spectator (Property ed) 13:50+ O 9 '47
Option to repair gives assured no choice. Nat Underw 50:32 N 14 '46
Regular use, not purpose of specific trip, determines coverage under automobile collision policy. Weekly Underw 156:187 Ja 11 '47
Release preventing exercise of subrogation rights entitles collision insurer to recover amount paid insured. Weekly Underw 157: 459 Ag 23 '47
Repair costs must be less than market diminution. East Underw 48:15 Ag 8 '47
Replacement provision in automobile policy; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11 My 22 '47
Right to a declaratory judgment; multiplicity of suits; American indemnity company v. Hale. J. L. Roesch. Spectator (Property ed) 13:10-11+ S 25 '47
Rights of mortgagee bank in auto collision case defined by court. East Underw 48:26 S 5 '47
Separate exception from comprehensive coverage of loss due to mechanical or electrical breakdown not ambiguous; Hemel v. State farm mutual automobile insurance company. Weekly Underw 156:1251 My 3 '47
Son not member of father's household during term of military service. Weekly Underw 155:1219 N 16 '46
Subrogation, split causes of action; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:30-1 F 27 '47
Transfer of car by parking lot operator not use within exception of liability policy. Weekly Underw 155:1381 D 7 '46
Two insurers share equally in auto fire loss following a collision; Colonial fire underwriters branch of National fire of Hartford v. Utica Mutual. East Underw 48:28 Je 27 '47; Weekly Underw 156:1779 Je 28 '47

See also
Insurance, Automobile—Theft claims

Agency management

Errors lower profits; suggestions to eliminate policywriting errors. B. E. Wortman. Rough Notes 90:30+ Mr '47

Agents

Agent must pay insurer's loss in delayed report. Nat Underw 51:24 Ja 23 '47
Concrete plan for agents to stem adverse auto experience. East Underw 48:40 Mr 7 '47
Experience test upheld; Pennsylvania agents win victory on auto dealers licensing. Nat Underw 51:1 Ja 16 '47; East Underw 48:17 Ja 17 '47
Licensing of motor car men as agents one of topics at Kentucky agents Louisville meeting. Weekly Underw 156:1466 My 31 '47
Ohio judge holds invalid rules barring auto dealers as agents; Motors insurance corporation case. East Underw 48:20 Ja 10 '47; Nat Underw 51:3 Ja 9 '47; Weekly Underw 156:145+ Ja 11 '47
Selection by agent key to automobile success in future. M. Stockton. Nat Underw 51:11 Je 5 '47
Tennessee appeal court upholds license refusal to Motors agent. East Underw 47:23 D 27 '46; Weekly Underw 156:5+ Ja 4 '47
Test year for automobile. J. W. Randall. Rough Notes 90:15-16 Mr '47
This salesmen's contest is paying its own way; trip to convention in Los Angeles offered by Farmers automobile inter-insurance exchange. L. Nordgren. il Ptr Ink 219:46+ Je 6 '47

INSURANCE, Automobile—Agents—*Cont.*

Commissions

Auto commission question gets oblique approach; N.A.U.A. sheds jurisdiction but sets 25 per cent factor in rating formula. Nat Underw 51:1+ O 23 '47

NAUA approves 25 per cent top limit for local agents' commissions. East Underw 48:34 O 24 '47

Assigned risks

Assigned risk auto plan now effective in Missouri. O. G. Jackson. Weekly Underw 156:698 Mr 8 '47

Assigned risk plan used in 29 states. Nat Underw 51:20 Ag 14 '47

Assigned risk plans forming in some states; dumped Keystone business leads to requests in several states. Nat Underw 51:11 Jl 31 '47

Auto assigned risk plan is being perfected in Missouri. Nat Underw 50:24 D 26 '46; Weekly Underw 155:1557 D 28 '46

Automobile assigned risk plan; how it operates in Kentucky. L. Y. Johnson. East Underw 48:40+ Mr 21; 36+ Ap 18 '47

Canadian committee advises adjustments in assigned risk plan. East Underw 48:28 Ag 22 '47

Fleet risk assignments are on equitable basis; situation following collapse of Keystone Mutual Casualty. Nat Underw 51: 17 Jl 17 '47

Hodges appeals to companies on auto acceptances; North Carolina car owners unable to get coverage due to their race or color. East Underw 48:26 Ag 1 '47

Illinois auto assigned risk plan is booming. Nat Underw 51:33 S 18 '47

Keystone debacle puts to test assigned risk plans. Nat Underw 51:17 Jl 10 '47

Cancellation

Cancellation of automobile policies; legal decisions. Rough Notes 90:61-2 Je '47

Denial of receipt insufficient to overcome otherwise uncontradicted proof of mailing of cancellation notice. Weekly Underw 156: 1054 Ap 12 '47

Insurer wins cancellation issue; State Farm Mutual vs. Sharp. Nat Underw 51:20 F 13 '47

Insurer's unsuccessful efforts to induce insured to continue policy does not vitiate proper notice of cancellation. Weekly Underw 156:789 Mr 15 '47

Must address cancellation notice precisely as shown in policy contract. Nat Underw 51:28 F 20 '47

Classification of risks

Simplified classifications. B. McLean. Rough Notes 90:40-1 My '47

Dealers' policies

N.A.U.A. proclaims auto floor plan form and rates. Nat Underw 51:1+ Ja 23 '47; Same abr. East Underw 48:25 Ja 31 '47

Wholesale floor plan endorsement. Rough Notes 90:77 Mr '47

Finance

Auto underwriters report huge gains in premium income for first half year. East Underw 48:1+ Jl 11 '47

Automobile casualty experience, 1944-1946; tabulation. Spectator (Property ed) 12:30 Je 26 '47

Automobile premiums and losses of stock casualty, reciprocal, mutual, Lloyds and stock full cover companies, 1946 and comparisons; tabulation. Nat Underw (Auto & aviation no) 51:18-19, 21-4 Ap 18 '47

Automobile premiums and losses of stock fire companies in 1946 and 1945; tabulation. Nat Underw (Auto & aviation no) 51:16+ Ap 18 '47

Automobile premiums of fire and stock casualty companies, 1943-1946. East Underw 48:33-4, 36-8, 40-4, 46 Ap 25 '47

Experience of New York companies shows how car writing went adverse. Weekly Underw 156:1700 Je 21 '47

Motor vehicle production and loss record for all stock fire companies, 1940-1946; tabulation. Spectator (Property ed) 13:40 O 9 '47

1946 automobile results of mutual fire companies and comparison with 1945; tabulation. Nat Underw (Auto & aviation no) 51: 12 Ap 18 '47

Ranking of company groups in point of auto premiums, 1945 and 1946. Nat Underw (Auto & aviation no) 51:10-11 Ap 18 '47

Sad story of '46 auto line; tabulation by company. Nat Underw 51:18 Je 19 '47

Financed automobiles

Aim to curb auto dealers; several states other than New York trying to limit insurance activities of car sellers. East Underw 48:30 Ap 18 '47

Auto dealers' broker firms violating law in covering financed cars, N.Y. attorney general holds. East Underw 48:22+ Mr 28 '47; Same cond. Nat Underw 51:13 Mr 27 '47; Same cond. Weekly Underw 156:873 Mr 29 '47

Auto payment contracts cause Texas complaints. Weekly Underw 156:618 Mr 1 '47; Same abr. East Underw 48:28 F 28 '47

Bank-agent auto plan runs against problems. C. J. Schoen. Weekly Underw 157:965 O 18 '47

Dewey signs favorite broker bill; guarantees owner or purchaser of encumbered real and personal property right to place insurance with agent or broker of his own choice. East Underw 48:24 Mr 28 '47; Nat Underw 51:27 Mr 20 '47; Weekly Underw 156:812 Mr 22 '47

Dineen proposes new financed car ruling. East Underw 48:22 Ja 31 '47; Same cond. Nat Underw 51:17 Ja 30 '47; Same cond. Nat Underw (Life ed) 51:11 Ja 31 '47

Eastern agents weigh competition of General motors insurance cos. East Underw 48:26 O 17 '47

Loan sharks in Texas organize auto carriers. Weekly Underw 156:1468 My 31 '47

New N.Y. regulations safeguarding financed automobile policyholders. East Underw 48: 22 Ap 25 '47

New York ruling on financed autos now effective. Nat Underw 51:26 Ap 24 '47

Plan that produces; bank and agent plan. C. J. Schoen. Rough Notes 90:22+ Mr '47

Undesirable financed car practices combatted in Missouri. Weekly Underw 155:1192 N 16 '46

Urges New York producers to support bank-agent plan. C. G. Hallowell. Weekly Underw 156:1286+ My 10 '47; Excerpt. Nat Underw 51:6a My 8 '47

Financial responsibility laws

Accident report system revised; companies cooperate with New York Motor vehicle bureau to aid public. Weekly Underw 157: 435 Ag 23 '47; Same. East Underw 48:25 Ag 22 '47; Same cond. Nat Underw 51:7 Ag 21 '47

Auto crash echo; 41 states consider financial responsibility laws and compulsory motor vehicle insurance. Bsns W p30+ Ap 26 '47

Claimant loser in decision on Ohio responsibility law. Nat Underw 51:22 Ap 17 '47

Impasse in Massachusetts; Harrington asks company aid in compulsory rate tangle. Nat Underw 51:19 O 23 '47

Iowa responsibility law. H. F. Neu. Nat Underw 51:25 S 18 '47

Motorists must insure in five Canada provinces. Weekly Underw 157:702 S 20 '47

New auto accident reporting form; New York revision should reduce trouble. Nat Underw 51:13 Jl 31 '47

New type of safety responsibility; emphasis on preparedness before accident occurs. A. E. Spottke. East Underw 48:37 F 28 '47

New Washington for-hire car license law in effect. Nat Underw 51:20 Je 19 '47

North Carolina legislature has financial responsibility bill. Weekly Underw 156:260 Ja 25 '47

Praises new auto law procedure in New York. C. J. Fletcher. East Underw 48:23 Ag 29 '47

Require 20/20 limits for Connecticut certified risks. Nat Underw 51:23 S 4 '47

INSURANCE, Automobile—Financial responsibility laws—*Continued*
Responsibility law score now is 18 states. Nat Underw 51:24 My 8 '47
Seize uninsured cars in accidents in British Columbia. Nat Underw 51:23 Ag 21 '47
See also Automobile laws and regulations —Financial responsibility laws

Fleet coverage

Business increasing for auto fleet renting firms. Nat Underw 51:19 Jl 10 '47
Fleet risk assignments are on equitable basis; situation following collapse of Keystone Mutual Casualty. Nat Underw 51:17 Jl 17 '47
Fleets may be rented or leased; insurance angles. Nat Underw 51:4 My 1 '47
Preparing auto fleet policies. J. Rainwater. Rough Notes 90:26 S '47
Taxicab tie-up; Pennsylvania closes Keystone Mutual. Bsns W p38+ Jl 19 '47
See also Insurance, Automobile—Rates—Fleet rates

Garage owners' and dealers' liability policies

Automobile garage liability policy. Rough Notes 90:61-2 Ag '47
Broad cover available for garage risks. Spectator (Property ed) 12:34-5+ Ja 9 '47
Garage keeper's liability; must produce all evidence available in order to relieve himself of liability for auto fire. East Underw 48:22 S 5 '47
Look askance at garage risks; producers are finding the line a tough one to place today. Nat Underw 51:15 Mr 27 '47
New Illinois law affecting garage keepers causes insurance problems. Nat Underw 51: 21 O 2 '47

History

First automobile policy, 1898. Nat Underw 50th anniv no:72 1947
Troubles of insuring early autos. T. Jones. Nat Underw 50th anniv no:162+ 1947

Losses

Automobile loss for 1946 estimated at $150 million. Nat Underw 51:29 F 20 '47
Company survey shows young driver big loss hazard. Nat Underw 51:18 Ja 2 '47
No claim cost relief in sight; lack of figures on auto losses hampers rate rise. W. H. Brewster. Nat Underw 51:19 F 13 '47
Surveys pin down causes for higher accident frequency. R. W. Dick. Nat Underw 51:17 F 20 '47

Policies

Allstate introduces illustrated auto policy. Nat Underw 51:24 My 8 '47; Weekly Underw 156:1332 My 17 '47
Casualty's leading coverage; basic automobile bodily injury and property damage liability policy. R. Murray. Rough Notes 90:17-19+ Mr '47
Comprehensive automobile liability policy; endorsements; partnership as named insured. Rough Notes 90:66 My '47
Insuring hired cars. H. F. Gee. Rough Notes 90:18 Ap '47
Insuring non-owned cars; non-ownership liability. H. F. Gee. Rough Notes 90:20+ Mr '47
Language of the contract. L. Cartwright. Nat Underw 50th anniv no:200-2 1947
Medical payments under auto policies. J. A. Kluwin. Weekly Underw 157:554 S 6 '47
Omnibus clause. W. S. Drewry. Rough Notes 90:32+ Mr '47
Reducing expenses; policy without description of car would save money. Nat Underw 51:12 Ap 24 '47
Seven independents try new auto endorsement in Washington; statement as to use of automobile. Nat Underw 51:24 Ag 7 '47
Terms and conditions of auto liability. Spectator (Property ed) 12:30-1 D 12 '46
Views divided on value of A-1 auto risk endorsement. Nat Underw 51:27 S 11 '47
Without regard to liability; automobile medical payments endorsement. J. B. Roberts. Rough Notes 89:28 D '46

Preventive work

Agents urged to act on automobile killings. G. T. Warfield, jr. Weekly Underw 157: 435+ Ag 23 '47
Asks industry to lead safety drive. C. W. Seabury. East Underw 48:36 F 7 '47
Conservation Bureau lists ten publications on driver education material for schools. East Underw 48:34 Je 6 '47
Hartford 1947 ads are stoppers. Nat Underw 51:2 Ja 30 '47
Insurers strike hard in safety crusade. B. Gartlan. Nat Underw (Auto & aviation no) 51:15+ Ap 18 '47
Minnesota agents put emphasis on accident frequency reduction. East Underw 48:60 O 17 '47
Nation's newspapers unite to start traffic accident reduction drive; Association of casualty and surety executives and President's highway safety conference sponsor program. East Underw 48:29+ My 2 '47
Philadelphia Inquirer continues its campaign for highway safety; cooperation with Aetna Life affiliated companies. East Underw 48: 26 Ag 22 '47
Safety-minded insurance agents. W. L. Clapp. East Underw 48:3+ pt 2 Je 20 '47
Safety opportunities; agents can help promote safe driving. D. S. Berry. Rough Notes 90:21+ Mr '47
To support driver education; annual awards will be granted to states by National conservation bureau. Weekly Underw 157:894 O 11 '47; Same abr. East Underw 48:40 O 10 '47
Travelers insurance co. prints motorists' quiz. East Underw 48:38 F 7 '47
U.S.F. & G. prepares ad mats on traffic safety for use of agents. East Underw 48: 25 Ag 29 '47

Prospects

$1 per license number, by telephone; agent gets owners' names and other data from state's records; contacts new prospects by phone. T. Erbe. Rough Notes 90:40-3 Ap '47

Purchasing

Dewey signs favorite broker bill; guarantees owner or purchaser of encumbered real and personal property right to place insurance with agent or broker of his own choice. East Underw 48:24 Mr 28 '47; Nat Underw 51:27 Mr 20 '47; Weekly Underw 156:812 Mr 22 '47
New Tennessee law covers agent selection; guarantees right of purchaser to designate insurer of automobile. Weekly Underw 156: 1030 Ap 12 '47

Rates

Auto B.I. and P.D. rates higher in 27 states. East Underw 48:39+ F 21 '47; Nat Underw 51:17+ F 20; Correction. 51:19 Mr 6 '47; Spectator (Property ed) 12:27+ F 27 '47; Weekly Underw 156:543 F 22 '47
Auto casualty rate making. A. E. Spottke. East Underw 48:29+ S 26 '47
Auto changes in Kansas. Nat Underw 50:15 D 5 '46
Auto liability rates advanced in Tennessee. Weekly Underw 156:1696 Je 21 '47
Auto liability tariffs go up in four states. Weekly Underw 156:893 Mr 29 '47; Excerpt. Nat Underw 51:22 Mr 27 '47
Auto rates cut 10 per cent in Alberta province. East Underw 48:25 Jl 4 '47
Auto rates follow increased car values, West Coast producers told. East Underw 48:24 Je 27 '47
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Bureau man tells Wisconsin group reason for raise. W. H. Brewster. Nat Underw 51:32 Ap 3 '47
Canadian survey shows auto rate rise justified. Nat Underw 50:32 N 14 '46
Causes of auto rate increase; address before Vermont agents. W. H. Brewster. East Underw 48:29+ My 30 '47
Illinois automobile liability rates up. Spectator (Property ed) 12:18 Mr 27 '47

INSURANCE, Automobile—Rates—*Continued*
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Massachusetts compulsory liability rates increased 6%. Nat Underw 50:19 N 14 '46
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N.A.U.A. files increased auto rates in New York. Nat Underw 51:3 F 20 '47
National bureau justifies auto rate jump in Illinois. East Underw 48:43 Mr 21 '47
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Public liability, property damage hike through in Virginia despite opposition. Nat Underw 50:28 N 21 '46
Quebec automobile rates given general increase. Weekly Underw 156:280 Ja 25 '47
Rate consideration for non-drinking drivers; Seattle insurance exchange. Weekly Underw 156:1024 Ap 12 '47
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Texas auto rate, rule adjustments effective May 1. Nat Underw 51:19 Ap 24 '47
Travelers urges agents to be sure clients know why auto rates rise. East Underw 48:34 Ap 4 '47
Why automobile insurance costs have risen; with charts. Spectator (Property ed) 13:21 Ag 21 '47
Why did the rates rise? W. H. Brewster. Rough Notes 90:23+ Mr '47
Win Kansas auto rate increase without court battle. Nat Underw 51:15 Ja 2 '47

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New Texas fleet plan. Nat Underw 51:32 Ja 16 '47

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Car rental firms multiply; insurers are wary. Nat Underw 51:17 Jl 10 '47
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Insurance, Automobile—Assigned risks

Statistics

Automobile premiums of fire and stock casualty companies, 1943-1946. East Underw 48: 33-4, 36-8, 40-4, 46 Ap 25 '47
Number of suits outstanding per $100,000 of earned premiums; total second period liability (including automobile) business, Dec. 31, 1946 and comparisons for other periods; tabulation by company. Spectator (Property ed) 13:24 O 9 '47

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Loan receipt taken on settlement of claim entitles theft insurer to maintain suit in name of insured. Weekly Underw 157:715 S 20 '47
Lock your car campaign urged by auto squad chief. G. Brown. Nat Underw 51:3 Mr 20 '47
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Parting with auto to prospective buyer held not theft under policy. East Underw 47:26 D 20 '46
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British auto experience parallels that of U.S. Nat Underw 51:10 Jl 17 '47

Massachusetts

Bay State allows 50% hike in auto death awards. Nat Underw 51:20 Ja 16 '47

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Association of casualty & surety executives calls auto cover security fund creeping socialism. Nat Underw 51:22 Mr 6 '47
Automobile security fund idea; editorial. Nat Underw 51:14 F 20 '47
Dewey approves auto security fund bill. East Underw 48:34 Ap 18 '47; Nat Underw 51: 21 Ap 17 '47; Weekly Underw 156:1091 Ap 19 '47
Dineen asks auto B.I. and P.D. security fund. Nat Underw 51:17+ F 20 '47; East Underw 48:39 F 21 '47
Enact auto security fund bill. Nat Underw 51:23 Mr 20 '47; East Underw 48:39 Mr 21 '47
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New York lawyers rap security fund measure. Weekly Underw 156:931 Ap 5 '47
Socialism in motor security bill; case against proposal of New York insurance department. R. Murphy. Weekly Underw 156: 657+ Mr 8 '47; Abstract. East Underw 48: 33 Mr 7 '47
Stock insurers hit N.Y. auto security fund; mutuals for it. Nat Underw 51:25+ Mr 13 '47

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INSURANCE, Aviation
Aviation branch of the business, still young, looks to the future. K. Force. Nat Underw 50th anniv no:278-9 1947
Aviation groups exercised over anti-trust situation; excluded from state regulation. Nat Underw 51:23 O 9 '47
Aviation problems aired at mutual insurers' meet. T. L. Osborn; T. R. Cook. Nat Underw 51:7 My 15 '47
Aviation record in 1946 is dark. R. B. Mitchell. Nat Underw (Auto & aviation no) 51:13+ Ap 18 '47
Blame lack of manpower for air cover difficulty. Nat Underw 51:20 F 20 '47
Bright future ahead; air cover premiums may hit $120 millions in 1955. J. R. Graham. Nat Underw 51:28 My 1 '47
Claims head tells insurance position in aviation losses; liability towards passengers; discusses West Virginia disaster. G. W. Orr. East Underw 48:1+ Je 27 '47
Gives views to House body. J. Lederer. Nat Underw 51:29 F 20 '47
Higher labor costs hit aircraft writing. E. C. Stone. Weekly Underw 156:73 Ja 4 '47

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Insurance problems of air expansion; fine year of progress during 1946. W. H. Rodda. Weekly Underw 156:30 Ja 4 '47
International association of insurance counsel reports on casualty, surety and aviation. East Underw 48:29 Ag 29 '47
Light plane market is fast disappearing. Nat Underw 51:4 Ja 2 '47
Losses make insurance companies leave personal plane market. S. Altschul. Aviation W 47:18 O 6 '47
Mutual aircraft writers becoming more selective, insist on safety precautions; abstracts. W. H. Rodda. Weekly Underw 155:1199 N 16 '46; Nat Underw 50:3 N 14 '46
Reporting aircraft forms. Rough Notes 90:50-1 Mr '47

See also
Insurance, Accident—Aviation risks
Insurance, Aircraft damage
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Insurance, Employers' liability—Aviation risks
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Lapses in aviation laws. J. J. Goldberg; D. L. Corbin. Nat Underw 51:32 S 25 '47

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Aviation accident claims good sales arguments. B. Klemm. Weekly Underw 157:498 Ag 30 '47
Aviation underwriting, from producers' viewpoint, reviewed at NAIA annual meeting. Weekly Underw 157:1002 O 18 '47
Building aviation business. B. H. Roos. Rough Notes 90:42-3 Ag '47
Companies look to agents to select profitable aviation risks. J. Lederer. East Underw 47:57+ D 13 '46
I say pilot-salesmen should sell aviation insurance. R. A. Latimer. Sales Management 57:87-8 N 20 '46
Learning to sell aviation. B. H. Lowy. Rough Notes 89:17 D '46

Finance
Aircraft experience for 1946; tabulation by company. Nat Underw 51:11 F 27; 11 Mr 13; 10 Mr 20; 2 Mr 27 '47
Board of aviation underwriters compiles 1946 experience tables. East Underw 48:34 S 19 '47
1946 experience of aviation insurers; New York insurance department tabulations; with comparisons for other years. Nat Underw 51:16B-16C S 25 '47

Losses
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Aviation accident statistics; tabulation. Nat Underw (Auto & aviation no) 51:3 Ap 18 '47
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Insured losses on two plane crashes exceed $1 million; United airlines and Eastern airlines accidents. Nat Underw 51:19 Je 5 '47
Insurers getting headaches from small planes, too. Nat Underw 51:4 Jl 24 '47
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Syrian crash loss put at $900,000. Nat Underw 51:1 Je 26 '47
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New hull and liability policies by USAIG. Weekly Underw 156:1160 Ap 26 '47; Nat Underw 51:31 My 8 '47
Non-ownership aircraft cover; U.S.A.U. adapts present liability policy to cover gap. Nat Underw 51:11 Ag 28 '47

See also
Insurance, Accident—Aviation risks
Insurance, Life—Aviation risks

Preventive work
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Prospects
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North America companies announce new plan for rating aircraft hulls. East Underw 48:32 Mr 7 '47; Same. Spectator (Property ed) 12:43+ Mr 13 '47; Same. Weekly Underw 156:699 Mr 8 '47; Same cond. Nat Underw 51:4 Mr 6 '47

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Aviation and insurance. Economist 151:507 S 28 '46; Same. Weekly Underw 155:1508-9 D 21 '46

INSURANCE, Bailees' customers
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Fire, inland marine agreement of guiding principles. W. R. Cunningham. Spectator (Property ed) 12:10-14+ Ja 23 '47; Same abr. East Underw 47:24 D 20; 26-7 D 27 '46; Same cond. Nat Underw 51:6+ Ja 2 '47
Improving the bailees' customers loss ratio. Rough Notes 90:34+ Jl '47

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Cleaning industry—Insurance requirements
Insurance, Furriers' customers

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INSURANCE, Boiler
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See also
Insurance, Power plant

INSURANCE, Bridge
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Heavy bridge U. & O. claim filed due to floods. Nat Underw 51:3 Jl 24 '47
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Builders' risk. H. M. Failing and others. Rough Notes 90:21-6 F '47
Builder's risk insurance now important line for producers. W. L. Reid. East Underw 48:25 Jl 18 '47
Market for builders' risk insurance is expanding. Spectator (Property ed) 12:26-7 D 26 '46

INSURANCE, Building collapse (proposed)
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INSURANCE, Burglary
Bank burglary insurance. D. Quinn. Weekly Underw 156:230-2+, 412-16+ Ja 18, F 8 '47
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Federal court holds premium return unessential to policy cancellation. East Underw 47:28 N 29 '46
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New Washington burglary rates. Nat Underw 51:11 Ja 16 '47

INSURANCE, Burial
Michigan attorney general rules on burial contracts. Nat Underw (Life ed) 51:11 Ja 31 '47

INSURANCE, Business
Asks more settlement option liberality with business cover. J. R. Montgomery. Nat Underw (Life ed) Daily ed 51:22 S 10 '47; Same abr. East Underw 48:66 pt 2 O 3 '47
Bring up negative angles early in business case. V. R. Miletti. Nat Underw (Life ed) Daily ed 51:37-9+ S 12 '47
Business insurance. C. E. Fritsche. il Spectator (Life ed) 164:8-11+ F; 22-3+ Mr '47
Business insurance. M. L. Lane. Rough Notes 90:54-6 Ap '47
Business insurance seminar at St Louis. P. F. Millet. Nat Underw (Life ed) 51:8 My 2 '47
Business interest valuation needs rechecking. W. J. Wheeler. Nat Underw (Life ed) Daily ed 51:6+ S 10 '47; Abstract. East Underw 48:12 S 12 '47
Concealment of heart attack suffered prior to delivery of life policy ground for cancellation. Weekly Underw 156:1379 My 17 '47
Credit value of a life. W. R. C. Rowan. Credit & Fin Management 49:13-16 S '47
Death, taxes and your business. G. J. Laikin. Trusts & Estates 85:372-4 O '47
Fear motivates business insurance sales. M. M. Matson. Nat Underw (Life ed) Daily ed 51:22 S 12 '47
Headaches and solutions in transfer of business interests to heirs. S. A. Monroe. Nat Underw (Life ed) 51:7 Ja 24 '47
High premium plan makes inviting business cover deal. M. M. Matson. Nat Underw (Life ed) 51:11 Ja 24 '47
Interesting estate planning case. G. J. Laikin. Nat Underw (Life ed) 51:11+ F 7 '47
Is corporate ownership of life insurance best plan? P. A. Hazard, jr. Nat Underw (Life ed) Daily ed 51:41 S 12 '47
Key-man insurance the big field now. W. T. Earls. Nat Underw (Life ed) Daily ed 51: 20+ S 10 '47
Mutual Benefit reports business insurance gains. East Underw 48:13 My 23 '47
Need for business life insurance. W. B. Minehan. Nat Underw (Life ed) 51:9+ Ja 24 '47
Panel discusses business insurance. A. B. Coffman and others. East Underw 48:14 Je 27 '47
Protect human values as well as property. J. D. McLaren. East Underw 48:86+ pt 2 O 3 '47
Protecting small business. B. B. Hoffman. East Underw 48:84+ pt 2 O 3 '47
Small corporation prospects. M. L. Lane. Rough Notes 90:44-5+ My '47
Sole proprietors and small partnerships. H. R. Kuhn. Spectator (Life ed) 155:20-1+ Jl '47
Some old insurance problems in the light of some new trends. W. B. Minehan. East Underw 48:34+ pt 2 O 3 '47
Until yesterday at 4:35 P. M; advertising booklet by H. D. Josephson; text. Spectator (Life ed) 154:18-19 Ap '47
Warns of responsibilities in writing business cases. C. E. Fritsche. Nat Underw (Life ed) 51:4 O 24 '47
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Partnership interest
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Sharing agency profits with deceased partner's estate may prove costly. H. C. Smith. Nat Underw 51:2 O 16 '47; Same abr. Nat Underw (Life ed) 51:12 O 24 '47
Treasury to quiet furor over ruling on partnerships. Nat Underw (Life ed) 51:20 S 19 '47

Stock liquidation agreements
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Stock retirement sales presentation. W. N. Hiller. Spectator (Life ed) 155:18-21+ Ag '47; Same. Life Ins Courant 52:404-8 O '47; Excerpt. East Underw 48:18 Je 13 '47
Uses of business liquidation insurance. E. J. Mintz. Trusts & Estates 85:203-4 S '47

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INSURANCE, Cast. See Insurance, Theatrical cast

INSURANCE, Casualty
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Casualty-surety leaders foresee underwriting losses for 1947. J. S. Daniel. East Underw 48:25-7 Ag 15 '47
Company chiefs see 1946 volume largest ever; view 1947 outlook. W. L. Clapp. East Underw 48:27+ Ja 24 '47
International association of insurance counsel reports on casualty, surety and aviation. East Underw 48:29 Ag 29 '47
Looking ahead in casualty insurance. B. Rush, jr. Comm & Fin Chr 165:1789+ Ap 3 '47; Abstracts. East Underw 48:31 Ap 4 '47; Nat Underw 51:26 Ap 3 '47
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1946 proved difficult year. E. C. Stone. Weekly Underw 156:64+ Ja 4 '47

INSURANCE, Casualty—*Continued*
Ohioans get strong capsule of education; fire and casualty conference at Columbus. Nat Underw 51:7 Mr 20 '47
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Pleads for casualty cooperation. C. B. Morcom. Weekly Underw 157:725+ S 27 '47
Presidential address before Casualty actuarial society; abstracts. C. J. Haugh. East Underw 47:30+ N 29 '46; Nat Underw 50: 15+ N 28 '46; Nat Underw (Life ed) 50:1 N 29 '46
Trends in casualty insurance and their significance to producers. C. J. Haugh. East Underw 48:8+ pt 2 Je 20 '47

See also
Insurance, Accident
Insurance, Automobile
Insurance, Aviation
Insurance, Burglary
Insurance, Flood
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Insurance, Money and securities
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also Association of casualty and surety companies; Casualty actuarial society; International association of casualty and surety underwriters; Keystone mutual casualty company

Adjustment of claims

Casualty, inland marine agreement of guiding principles (1945); losses involving residence and outside theft insurance versus personal effects floaters. W. R. Cunningham. Spectator (Property ed) 12:9-10+ Mr 13 '47
Problems of claim payments; abstracts. H. D. Combs. Nat Underw 50:18 N 28 '46; East Underw 47:31+ N 22 '46; Weekly Underw 155:1229+ N 23 '46

Agents

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Company relations

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Camp fees refund policies

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Coverage

Progress in the growth of coverages. J. C. O'Connor. Nat Underw 50th anniv no:176-7 1947

Finance

Aggregates of stock casualty, surety and miscellaneous companies, mutual casualty companies, 21 reciprocals, inter-insurers exchanges and Lloyds organizations for 1946; with underwriting and investment profit and loss exhibit; tables. Spectator (Property ed) 13:20-3 S 11 '47
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Assets per dollar of liabilities and premiums per dollar of policyholders surplus, stock casualty companies, 1937-1946; charts. Spectator (Property ed) 13:24-5 S 11 '47
Billion dollar stock casualty-surety '46 volume shown in Bureau exhibit. East Underw 48:28 My 30 '47; Same abr. Weekly Underw 156:1478+ My 31 '47; Same abr. Nat Underw 51:15 My 29 '47
California casualty net premiums and paid losses in 1946. Nat Underw 51:25-6 Mr 20 '47
California casualty premium leaders in 1946 and 4-year record; tabulation. Nat Underw 51:19 Mr 27 '47
Casualty expense exhibit for the year ended Dec. 31, 1946; tabulations. Nat Underw 51: 14, 18 My 29 '47
Casualty insurance by states for 1946; tabulation. Spectator (Property ed) 13:24-7 Ag 21 '47
Casualty insurance in the United States in 1946; tabulation by company. Spectator (Property ed) 12:14-17 My 22 '47
Comparative financial and operating results of fire and casualty companies for year ending Dec. 31, 1946 and 1945; tabulation. Spectator (Property ed) 12:9 F 13; 16-17 Mr 13 '47
Country-wide underwriting results 1942-46 of companies licensed in New York state; tabulations. East Underw 48:6-7+, 10+ pt 2 Je 20 '47
50-year progress of stock casualty companies, 1896 and 1945 compared; tabulation. Nat Underw 50th anniv no:222 1947
Financial growth of stock casualty insurance companies, 1937-1946; tabulation. Spectator (Property ed) 13:32 O 9 '47
Fire and casualty premiums of stock companies since 1896; graph. Nat Underw 50th anniv no:38 1947
Illinois net premiums and paid losses in 1946. Nat Underw 51:24+ Ap 10 '47
Illinois premium leaders in 1946 and five-year record; tabulation. Nat Underw 51:29 Ap 17 '47
Iowa net premiums and paid losses in 1946. Nat Underw 51:22-3 My 15 '47
Kansas net premiums and paid losses in 1946. Nat Underw 51:20-1+ My 15 '47
Michigan casualty premium leaders in 1946 and 5-year record; tabulation. Nat Underw 51:31 Ap 3 '47
Michigan net premiums and paid losses in 1946. Nat Underw 51:24-6 Mr 27 '47
Minnesota casualty premium leaders in 1946 and 5-year record; tabulation. Nat Underw 51:31 Ap 3 '47
Minnesota net premiums and paid losses in 1946. Nat Underw 51:4+ Mr 27 '47
Missouri net premiums and paid losses in 1946. Nat Underw 51:26+ Ap 10 '47
Missouri premium leaders in 1946 and five-year record; tabulation. Nat Underw 51:27 Ap 17 '47
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New Jersey casualty premium leaders in 1946 and 4-year record; tabulation. Nat Underw 51:19 Mr 27 '47
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New Jersey studies ratios that touch upon capacity; tabulations. W. H. Bittel, comp. Nat Underw 51:53+ O 16 '47
New York casualty premium leaders in 1946 5-year record; tabulation. Nat Underw 51: 24 Mr 20 '47
New York net premiums and paid losses in 1946. Nat Underw 51:28+ Mr 13 '47
News of the casualty companies; figures from annual statements. Nat Underw 51: 26-7 F 6; 25-6 F 13; 25+ F 20; 18-21 F 27; 27-9 Mr 6; 35-6 Mr 13; 28 Mr 20; 28 Mr 27 '47
1946 casualty-surety results of all companies for New York state; tabulation. East Underw 48:14+ pt 2 Je 20 '47
Ohio casualty premium leaders in 1946 and 4-year record; tabulation. Nat Underw 51: 26 Ap 24 '47
Ohio net premiums and paid losses in 1946. Nat Underw 51:24-6 Ap 17 '47
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Pennsylvania net premiums and paid losses in 1946. Nat Underw 51:33-4 Mr 20 '47
Percentage of premium increase for stock casualty-surety companies over 1945; loss ratios for 1946; charts. Spectator (Property ed) 12:20-1 Ap 24 '47

INSURANCE, Casualty—Finance—*Continued*
Sees profit in casualty company stocks; surveys twenty companies. G. Geyer. East Underw 48:35+ Mr 28 '47
26 years of casualty insurance by lines; net premiums written by stock companies, 1920-1945; tabulation. Nat Underw 50th anniv no:222 1947
$2.6 billion is 1946 casualty premium total; increase is 23.8 per cent according to Argus chart. Nat Underw 51:23+ My 1 '47
Underwriting and investment profits and losses of 100 casualty, surety and miscellaneous companies, 1937-1946; tabulation. Spectator (Property ed) 13:30-1 O 9 '47
Underwriting gain and net premiums earned by stock casualty companies, 1937-1946; graph. Spectator (Property ed) 13:20 Jl 24 '47
Who foots the bill? with earnings position of representative fire and casualty companies. F. R. Walters. Mag of Wall St 80:328-9+ Je 21 '47
Wisconsin casualty leaders in 1946 and 4-year record; tabulation. Nat Underw 51:36 My 1 '47
Wisconsin net premiums and paid losses in 1946. Nat Underw 51:28-30 Ap 24 '47

History

Beginnings of casualty business; troubles numerous and volume meager in 1900-10. W. S. Crawford. Nat Underw 50th anniv no:36-8 1947
Casualty record in 50 years. J. W. Randall. Nat Underw 50th anniv no:23-4 1947
Record challenges future. H. P. Stellwagen. Nat Underw 50th anniv no:142+ 1947

Policies

Language of the contract. L. Cartwright. Nat Underw 50th anniv no:200-2 1947

Preventive work

Describes crime wave in detail; Newark detective explains relationship of police work and insurance. F. O'Neill. Nat Underw 51:26 Mr 13 '47
Fire and accident prevention interlocked; some company executives' views on conservation. J. S. Daniel. East Underw 48:5+ pt 2 Je 20 '47
Good service can avert legislation. C. D. Bridges. Nat Underw 51:22 F 27 '47
Insurance representatives pace National safety congress at Chicago. Nat Underw 51:27 O 9 '47
Markel service for truck and bus line to A.F. & C. policyholders. Fortune 36:146+ O '47
Safety men continue to tackle the basic risk; Greater New York safety council meeting. W. F. Lund and others. Nat Underw 51:33 Ap 3 '47
Safety-minded insurance agents; programs of two southern agencies. East Underw 48:28 Jl 4 '47
Stresses human relationships in safety work. M. F. Welsh. East Underw 48:37+ pt 2 Je 20 '47

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Battle lines drawn in Washington state on casualty bill; action in other states. Nat Underw 51:1+ F 13 '47
Brickbats fly in Indiana; Gallagher urges moderation; take Hoosier battle to public. Nat Underw 51:19+ F 6 '47
C. & S. regulatory bills pass in twelve states. East Underw 48:39+ Mr 21 '47
Compromise District of Columbia casualty rate bill passes House. Nat Underw 51:18 Jl 17 '47
Compromise looms on District of Columbia casualty rating measure. Nat Underw 51:17+ My 15 '47
National Bureau's rating plan puts emphasis on flexibility. East Underw 48:30 Jl 4 '47
Outline probable rating procedure under Indiana law. Nat Underw 51:20 S 4 '47
Retrospective rating in operation; flexible procedures predicted for future. W. J. Heinreich. Weekly Underw 156:605-6+ Mr 1 '47

Rating bureaus

Growth of rating organizations. J. J. Magrath. Nat Underw 50th anniv no:214-16 1947
Rate filings of National bureau of casualty underwriters under Pennsylvania rating laws. J. M. Cahill. Nat Underw 51:26+ O 16 '47

Reinsurance

Record casualty reinsurance year. Nat Underw 50:17 D 26 '46

California

Adopts nationwide exhibit; Garrison discontinues use of special schedule W. East Underw 47:41 N 15 '46

Indiana

Brickbats fly in Indiana; Gallagher urges moderation; take Hoosier battle to public. Nat Underw 51:19+ F 6 '47

New York (state)

New York department eyes casualty figures with extra scrutiny; bad auto experience, stock market drop are main reasons. Nat Underw 51:25 Ap 3 '47

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Recess time status of casualty bills reported. I. P. Mehigan. Nat Underw 51:12 Jl 31 '47

INSURANCE, Compulsory
Compulsory accident insurance in Switzerland from 1938 to 1942. Int Labour R 54: 179-96 S-O '46
No need for compulsory disability programs. R. A. Hohaus. Nat Underw 51:16-17 S 25 '47; Same abr. Nat Underw (Life ed) 51: 3+ S 26 '47; Excerpts. East Underw 48:12+ S 26 '47
Opposes compromising with compulsory idea. E. A. McCord. Nat Underw (H. & A. conference no) 51:7+ My 30 '47
See also
Insurance, Automobile—Financial responsibility laws
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INSURANCE, Contractors' equipment floater
Contractors' equipment. Rough Notes 90:48 Ap '47
Contractor's equipment floater. R. DeGray and others. Rough Notes 90:19-24 Je '47

INSURANCE, Contractors' property damage liability. See Insurance, Manufacturers' and contractors' property damage liability

INSURANCE, Contractors' public liability
Coverages and forms; manufacturers and contractors liability policy. Spectator (Property ed) 13:8-9 Ag 21 '47
Liability insurance as related to California highway contracts. K. A. Keyes. Pub Works 77:28 N '46

INSURANCE, Cooperative
Charters N.Y. city co-op; Group health cooperative, inc. East Underw 47:43 N 15 '46
Co-operative policy; twelve New York companies in Association combine to issue cover. Weekly Underw 155:1544 D 28 '46
Doctors and Wisconsin co-ops agree on sick care pattern. Nat Underw (Life ed) 51:20 My 23 '47
Five cooperative insurers now have central office in St Paul. Nat Underw 51:23 Ja 9 '47; Same. Nat Underw (Life ed) 51:11 Ja 10 '47
Sickness plans by cooperatives favored in Wisconsin bill. Weekly Underw 156:1392 My 24 '47

INSURANCE, Cotton
Fire packed cotton bales troubling underwriters. Nat Underw 51:19 Jl 31 '47
Government crop insurance requirements for filing suit must be observed. East Underw 47:26 D 6 '46
Government's claim for fire loss on policy to CCC is sustained. East Underw 48:32 S 12 '47
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National buying undermines cotton export coverage. Nat Underw 51:2 Mr 13 '47
Other insurance held by court to be cover only of same nature. East Underw 48:35 O 10 '47
Pool presses cotton men to segregate new bales; nationwide fight against cotton fires. Nat Underw 50:14 D 5 '46
Trucker's insurer must pay; shipper's insurer relieved; damage by fire to truck load of cotton. Nat Underw 51:5 F 27 '47

INSURANCE, Credit
Coverages and forms; credit insurance. Spectator (Property ed) 12:34-5 Mr 27 '47; Same. Management R 36:291-3 My '47
Credit insurance. J. E. Beahn. Rough Notes 90:18-19 My '47
Credit risk protection. G. Lowe. Elec R (Lond) 140:167-8 Ja 24 '47

INSURANCE, Crop. See Insurance, Agricultural

INSURANCE, Deferred payment
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See also
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INSURANCE, Depreciation
Depreciation cover cannot be written in Mississippi. Weekly Underw 156:671 Mr 8 '47
Depreciation cover expounded for Pittsburgh buyers group. D. W. McStea. Nat Underw 51:3 Ja 2 '47
Depreciation insurance form. Rough Notes 90:62 Jl '47
Depreciation insurance rules issued in Oregon. Nat Underw 50:2 N 14 '46
Endorsements issued by New York fire insurance exchange; depreciation; abstracts. E. C. Niver. East Underw 48:18+ Mr 21 '47; Nat Underw 51:2+ Mr 13 '47
Massachusetts to permit writing of replacement cost insurance. East Underw 48:31 Je 13 '47
Repair, replace rule adopted for New England. Nat Underw 51:1 Je 12 '47
States not in accord on depreciation endorsement. N. E. Shade. il Spectator (Property ed) 12:10-13 N 14 '46

INSURANCE, Disability
Disability cover; types of policies for business women. H. R. Gordon. Weekly Underw 156:402, 485-6 F 8-15 '47
Disability income can be profitable line. Nat Underw (Life ed) 51:1 Jl 18 '47
Disability insurance in California. T. H. Mugford. Personnel J 25:222-7 Ja '47
Growth in disability volume; result of response to public wants. W. T. Grant. Nat Underw 50th anniv no:84+ 1947
Recovery for confining illness warranted where insured substantially but not actually confined to house. Weekly Underw 157:355 Ag 9 '47
Social security board advises state temporary disability insurance coordinated with unemployment compensation. East Underw 48:34+ F 28 '47; Same. Nat Underw (Life ed) 51:6 F 28 '47; Abstract. Nat Underw 51:14 F 27 '47
Total disability clause. R. B. Ely, 3d. East Underw 48:40 S 12 '47
Urges return of income disability cover. C. J. Zimmerman. Nat Underw (Life ed) 51:2 My 30 '47
Writing of disability for industrial risks. B. Coarsey. Weekly Underw 157:340-1 O 4 '47

See also
Insurance, Accident
Insurance, Health
Insurance, Life—Disability provisions
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INSURANCE, Elevator
Elevator liability policy. Spectator (Property ed) 13:9 Ag 7 '47

INSURANCE, Employers' liability

See also
Insurance, Workmen's compensation

Aviation risks
Aviation workmen's compensation. K. R. Thompson. Weekly Underw 156:770-3 Mr 15 '47

INSURANCE, Explosion
Chicago explosion loss may reach $2½ million. il(p3) Nat Underw 51:1+ Mr 6 '47
Details of cover in big Los Angeles explosion. Nat Underw 51:18 Mr 13 '47
Insured loses on boiler exclusion in explosion cover; Ranney vs. Camden Fire. Nat Underw 51:9 My 22 '47
Off-premises boiler explosion policy. Rough Notes 89:66 N '46

INSURANCE, Fidelity. See Insurance, Surety and fidelity

INSURANCE, Fire
Adjusting coverage to current replacement costs; abstract. G. Colburn. Management R 35:539-40 D '46
Advice to insurers; reply to Insurers turn down business. H. W. Horton. Bsns W p44+ S 20 '47
Another profitless prosperity; fire losses. Fortune 34:183 D '46; Abstract. Nat Underw 50:8 D 5 '46
Appraisals for insurance cover; not enough emphasis on securing adequate protection; proof of loss. R. D. Tebbetts. Weekly Underw 156:40-4 Ja 4 '47
Fire companies' adjustment bureau corporate title changed to General adjustment bureau. East Underw 48:21 Je 6 '47
Fire insurance for merchants. J. D. Phelan and others. Rough Notes 90:19-24+ Ap '47
Fire insurance laws, taxes and fees; data on state insurance statutes in 1946-1947 edition. Spectator (Property ed) 12:27 Ja 9 '47
Fire insurers still have doors open for good business; underwriting is tighter but rumors of shut up shops are unfounded. Nat Underw 51:1+ My 15 '47; Discussion. 51:6 My 29 '47
Fire underwriters' dilemma; losses rising; companies becoming more selective. Bsns W p34+ My 10 '47
Insurers turn down business. Bsns W p64-6 Jl 26 '47
Jurisdictional bodies and effect on fire business. C. M. Cartwright. Nat Underw 50th anniv no:288 1947
Legislation present worry of industry. F. H. Morasch. Weekly Underw 156:16+ Ja 4 '47
Lumber interests plan own fire company in Arkansas. Nat Underw 51:10 Je 5 '47
Ohioans get strong capsule of education; fire and casualty conference at Columbus. Nat Underw 51:7 Mr 20 '47
Pays tribute to fire companies. D. D. Eisenhower. Weekly Underw 156:1467 My 31 '47
Progress in fire public relations program reviewed; WUA report. East Underw 48:1+ Ap 18 '47
Promotional gleam is seen in many eyes today; new stock fire ventures are still but brain children. Nat Underw 51:3 Jl 24 '47
Safer America goal of fire insurance; National Board address. F. A. Christensen. East Underw 48:1+ My 30 '47
Selling more insurance to value; sales kit prepared by Boston and Old colony insurance companies. East Underw 47:27 N 15 '46
Surge of business continues; brakes are ineffective. Nat Underw 51:5 Ap 10 '47
What will it cost to rebuild your property? expiring policies should be increased to cover today's values (cont). Rough Notes 90:30 Ja; 34 Ap; 32 Jl; 32 O '47

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What will it cost to replace your personal property today? expiring contents policies and personal property floaters should be increased to cover today's values. Rough Notes 90:43 F; 68 My; 31 Ag '47

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Insurance, Bridge
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also Factory insurance association; Fire underwriters association of the Pacific; General adjustment bureau, inc.; Interstate underwriters board; National board of fire underwriters; New York fire insurance exchange; Western underwriters association

Accounting

Asks accurate statistics for rating; earned premiums, incurred losses should be basis for rates. J. R. Barry. East Underw 48: 20+ S 19 '47

Fire company profit formulas studied by NAIC subcommittee. East Underw 47:1+ D 6 '46

Preliminary report on uniform accounting investigation issued to NAIC by New York insurance department. East Underw 47: 62+ D 13 '46

To report N.Y. fire experience on revised standard classification. East Underw 47:35 N 15 '46

What is value of equity in premium reserve if any? Nat Underw 51:27 S 18 '47

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Architect's fee must go to him if loss payment is increased to cover. Nat Underw 50:17 D 5 '46

Buyer describes settling department store loss. N. W. Bramley. Nat Underw 51:2 Jl 24 '47

Change of insured's name; legal ownership of marital property; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 30-1 D 26 '46

Commissioners protest agents' adjustments; agents deny practice of making adjustments without company knowledge is general. J. L. White and others. East Underw 48:20+ Je 6 '47

Companies take reins on Coast loss adjusting. D. B. Sherwood. Nat Underw 51:2 O 2 '47

Court enforces honesty clause in reporting form. Nat Underw 51:3 Mr 13 '47

Explains National Board's catastrophe plan. D. B. Sherwood. Nat Underw 51:6 Ap 3 '47

Fieldmen should control losses; let-down has occurred in handling of claims. J. A. North. East Underw 48:15 Jl 25 '47; Same cond. Nat Underw 51:3 Jl 24 '47

F.C.A.B. new monthly news letter treats disputed points. Nat Underw 51:4 F 6 '47

Helping the merchant adjust his loss. W. J. E. Webber. Rough Notes 90:22+ Ap '47

Hold adjusting loss commits company to pay insured; Farley et al vs. Security of New Haven. Nat Underw 51:2 Jl 3 '47

Honesty clause useless? filing after fire cures incorrect report; decision of Pennsylvania supreme court. Nat Underw 51:30b My 8 '47

How agents can help adjust fire losses. H. W. Rutledge. Rough Notes 90:17-18+ My '47

How catastrophe service of National Board swung into Texas action. Weekly Underw 156:1465+ My 31 '47

Inventory of goods requirement held waived by Maryland court; Taubman v. Allied fire insurance co. of Utica. East Underw 48:21 Ag 8 '47

Lack of trained men adjustment problem. G. B. Raine. Weekly Underw 157:14 Jl 5 '47

Modern adjustment. Nat Underw 50th anniv no:164-5 1947

Need for top men to act on adjusting reform. G. M. Blum. Nat Underw 51:2+ Ag 21 '47; Discussion. 51:11 S 4 '47

New York decision causes concern as to subrogation rights; Alexandria restaurant vs. New Hampshire Fire. D. Ticktin. Nat Underw 51:1 Jl 17 '47

Pressure cookers causing claims under extended coverage endorsement. Nat Underw 51:6 Ja 23 '47

Repairs permitted by fire policy; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:38-40 Mr 27 '47

Sale of land only held not to be violation of ownership provisions. East Underw 48: 23 Jl 18 '47

Seattle companies get verdict in subrogation action; defendants had created hazard by violating ordinance. Weekly Underw 156: 1338 My 17 '47

Strong W.U.A. report made; urge insurers to hold loss handling reins. Nat Underw 51: 1+ S 18 '47

Subrogation and soft hearts; editorial. Nat Underw 51:10 F 27 '47; Discussion. 51:3 Ap 17 '47

Timeliness of suit on fire policy; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:34-6 Ja 23 '47

What can I tell them after the fire? Rough Notes 89:18+ D '46

Wind, rather than weight of snow, held to have caused fall of roof; Metz vs. Travelers Fire. East Underw 48:25 Ap 4 '47

Winecoff insurers are joined in damage suits. Nat Underw 51:1 F 6 '47

Wisconsin Supreme court rules on total loss under fire policy; time limit for suit. East Underw 48:36 F 21 '47

Advertising

Great Baltimore fire facts to be broadcast on National Board program. East Underw 48:18 Ja 24 '47

Historic fires and stage stars in new Sunday radio thriller of National Board. Spectator (Property ed) 12:32 N 14 '46

Agents

Cincinnati fire underwriters association abolishes sole agency qualification rule; code system described. Nat Underw 51:12 Ap 24 '47

Emphasizes agents' duty to cooperate with rate revisions. W. F. Martineau. East Underw 48:20+ Je 27 '47; Excerpts. Nat Underw 51:3; Editorial comment. 14 Je 26 '47

Field expense percentage is down, dollar cost up. Nat Underw 51:6 Ap 24 '47

Four panels on fire insurance cover many problems at New York suburban agents meeting. Nat Underw 51:18 Ap 24 '47

How agents can help adjust fire losses. H. W. Rutledge. Rough Notes 90:17-18+ My '47

Sales opportunities in the field of fire insurance. F. S. Dauwalter. Weekly Underw 156:1534-5+ Je 7 '47

Selling fire insurance for residences. Rough Notes 90:19-24 S '47

Commissions

Big commission decisions reached; report excepted scale is set at 20, 25, 30. Nat Underw 51:1 O 9 '47

Fire people eye contingent deals. Nat Underw 51:2 Jl 3 '47

Many agents acknowledge justice of plans to cut excess commissions. East Underw 48: 21 O 3 '47

North America holds to old rates in Chicago; departure is bracketed in street discussion with commission issue. Nat Underw 51:1+ S 25 '47

Biography

Notables in fire insurance. J. F. Stafford. Nat Underw 50th anniv no:219-21 1947

Cancellation

Penny receipt cancellation notice is held valid. Nat Underw 51:8 F 27 '47

Classification of risks

Field testing starts in rating research program of Insurance executive assn. Nat Underw 51:1+ F 27 '47

INSURANCE, Fire—Classification of risks—*Continued*
New classification of risks now in operation; coding of daily reports. East Underw 48: 26 Ja 10 '47; Nat Underw 51:3 Ja 9 '47
New York adopts new fire classification system of N.A.I.C. Nat Underw 50:4 N 14 '46
New York publishes study of fire occupancy clauses. Nat Underw 51:2 Jl 10 '47

Coinsurance

Appraisal has only current force, U.S. court holds; coinsurance clause penalty; Friel vs. National Liberty. Nat Underw 51:2 Je 19 '47
Average clause held not to waive coinsurance on small fire losses. B. B. Gracey. East Underw 48:33-4 O 24 '47
Coinsurance clause and insurable interest under the 1943 standard fire insurance policy. J. S. Foster. Weekly Underw 157:817-20 O 4 '47
Prior appraisal not effective to prevent defense that increased value made co-insurance clause applicable. Weekly Underw 157:859 O 4 '47

Coverage

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Demolition and replacement policies

Agents urged to sell demolition risks to cover zoning provisions. H. E. Jordan. East Underw 48:24 Mr 14 '47

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Farm policies

Insurance on only that part of farm building described as cow barn held valid. Weekly Underw 156:1507 My 31 '47
New farm forms; North America fire companies issue new building and personal property covers for selected farms. East Underw 48:28 Je 13 '47
Nix, say insurers to blanketing farm implements. Nat Underw 51:18 O 2 '47
North America offers farm cover innovations. Nat Underw 51:2 My 22 '47
North America's farm plan in Indiana provides test. Nat Underw 51:5 My 29 '47
Off-premises cover in new Washington farm contract. Nat Underw 51:34 Ap 17 '47
Policy termination date governs, not date of payment of premium. East Underw 48: 29 Je 20 '47
Proper underwriting of farm risks necessary to hold down high losses. A. B. Potts. East Underw 47:26 D 20 '46
Tough field of farm underwriting explored at mutual men's meeting at Sturbridge, Mass. L. F. Cheever and others. Weekly Underw 156:1744+ Je 28 '47

Farmers as prospects

Pointers on selling farmers. R. E. Austin. Nat Underw 51:13 My 29 '47

Finance

Actual cash earnings of 50 largest stock fire insurance companies, 1942-1946; tabulation. Spectator (Property ed) 13:48-9 O 9 '47
Aggregates of stock and mutual fire companies for 1946. Spectator (Property ed) 13: 23-4, 26 Jl 24 '47
Chicago area fire premiums for year ended June 30, 1947 and comparisons, 1945-1946; tabulation by company. Nat Underw 51: 16D S 25 '47
Classification report is published; New York '45 fire premiums top $68 million. Nat Underw 50:3 D 5 '46
Comparative financial and operating results of fire and casualty companies for year ending Dec. 31, 1946 and 1945; tabulation. Spectator (Property ed) 12:9 F 13; 14-15 Mr 13 '47
Financial growth of stock fire insurance companies, 1937-1946; tabulation. Spectator (Property ed) 13:26 O 9 '47
Fire and casualty premiums of stock companies since 1896; graph. Nat Underw 50th anniv no:38 1947
Fire companies auto losses soar; with tabulation by company showing net premiums and losses for 1946. East Underw 48:36-7 Mr 14 '47
Fire company experience in 1946 by lines; tabulation. Nat Underw 51:3 F 6; 12 F 13; 3 F 20; 2 F 27; 2 Mr 6; 12 Mr 13; 4 Mr 20; 2 Mr 27 '47
Fire company 1946 statement figures in tabloid; tabulation. Nat Underw 51:3 F 6; 13 F 13; 3 F 20; 4 F 27; 3 Mr 6; 4 Mr 13; 4 Mr 20; 2 Mr 27 '47
Fire insurance aggregate results for country-wide and New York state experience for years, 1944-1946. East Underw 48:22 S 5 '47
Fire insurance by states, 1946; summary of fire, marine and miscellaneous lines. Spectator (Property ed) 13:20, 22-5 Ag 7 '47
Fire insurance in the United States in 1946; tabulation by company. Spectator (Property ed) 12:12-17 Ap 10 '47
Fire insurance 1946 results; New York department figures for stock and mutual companies, factory mutuals, reciprocals, advance premium cooperatives and reinsurance companies. Nat Underw 51:14A-14D S 4 '47
Fire insurance rate increases and stocks situation. F. L. Brokaw. Weekly Underw 156:1265+ My 10 '47
Fire insurance underwriting results for 1946. Spectator (Property ed) 12:10+ Mr 27 '47
Fire premiums up 30% over '46 level in New York city. Spectator (Property ed) 12:32 Mr 27 '47
High yield available on National Union Fire shares; with comparison of book values of leading fire insurance companies. Barron's 27:35 S 29 '47
Loss and expense ratios of stock fire companies, 1896-1945; graph. Nat Underw 50th anniv no:220 1947
Mackubin, Legg & co. holds fire company stocks good investment. East Underw 48:19 Mr 7 '47
Market changes during 1946 of 25 fire and 8 casualty insurance stocks. E. A. Van Deusen. Comm & Fin Chr 165:278 Ja 16 '47
Nation-wide fire insurance net premiums and losses paid in 1946; tabulation by company. East Underw 48:26 Mr 14 '47
Net premium and loss figures for 1946 on fire specialty lines; with tabulation by company. East Underw 48:1+ Mr 14 '47
Net premiums written and net earnings per share of 25 representative stock fire insurance companies, 1945 and 1946 compared; tabulation. E. A. Van Deusen. Comm & Fin Chr 165:1660 Mr 27 '47
New Jersey premiums and incurred losses of fire and marine companies during 1946; tabulation. East Underw 48:22 Mr 21 '47
New Jersey studies ratios that touch upon capacity; tabulations. W. H. Bittel, comp. Nat Underw 51:53+ O 16 '47
New York city 1946 fire premiums show 30% gain; tabulation by company. Nat Underw 51:4+ Mr 13 '47
New York city standard fire classification report for 1945; tabulation. Spectator (Property ed) 12:12-13 N 28 '46
New York state figures of fire companies and federal taxes in '46; tabulation by company. Nat Underw 51:4+ Mr 13 '47
New York state fire insurance net premiums-losses paid during 1946; tabulation by company. East Underw 48:28 Mr 14 '47
New York state standard fire classification report for 1945; tabulation. Spectator (Property ed) 12:10-11 N 28 '46
1946 mutual fire results; tabulation by company. Nat Underw 51:7 Ja 23; 7 Ja 30; 14 F 6; 2 F 13; 15 F 20; 12 F 27; 8 Mr 6; 17 Mr 13; 6 Mr 20; 2 Mr 27 '47
Premiums up 28½ per cent in fire company classification; Argus chart analysis shows aggregate 1945 record; with tabulations. A. Riggs. Nat Underw 51:1+ Ap 3 '47
Progress of stock fire insurers over 50 years; tabulation by company. Nat Underw 50th anniv no:32-3 1947

INSURANCE, Fire—Finance—*Continued*
Promising long term outlook. H. W. Cornelius. Nat Underw 51:6 O 9 '47
Proportions of premiums written, selected years, 1874-1946; tabulation. Spectator (Property ed) 13:42 O 9 '47
Relationship of unearned reserves to net premiums, stock fire companies, 1937-1946; assets per dollar of liabilities, 1937-1946; chart and graph. Spectator (Property ed) 12:20-1 My 8 '47
Stock fire 1946 experience by lines, from new Argus fire chart; tabulation by company. Nat Underw 51:2-4 Ap 3 '47
Trends of stock market and fire losses held paramount fire stocks factor; Standard & Poor's survey. Weekly Underw 156:388+ F 8 '47
Underwriting and investment profits and losses in 1946; record of 100 leading stock fire insurance companies; tabulation. Spectator (Property ed) 12:22-3 My 8 '47
Underwriting and investment profits and losses of 100 leading fire companies in a decade, 1937-1946; tabulation. Spectator (Property ed) 13:36-7 O 9 '47
Underwriting gain and net premiums earned by stock fire companies, 1937-1946; graph. Spectator (Property ed) 13:21 Jl 24 '47
Underwriting results in 1946 for selected companies and comparisons, 1941-1945. E. A. Van Deusen. Comm & Fin Chr 165: 3236 Je 19 '47
Who foots the bill? with earnings position of representative fire and casualty companies. F. R. Walters. Mag of Wall St 80:328-9+ Je 21 '47

Fraudulent promotion

Indict Chicago broker on policy forgery charge. Nat Underw 51:2 Jl 31 '47

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History

Half century of fire insurance in the United States; with chronology. A. M. Best. Nat Underw 50th anniv no:26-9 1947
Rating and forms in early years; recollections of fire business and leaders in West beginning in 1887. W. S. Foster. Nat Underw 50th anniv no:140+ 1947

Improvements and betterments policies

Landlord repairs damage, tenant recovers insurance; Alexandra restaurant v. New Hampshire insurance company. J. L. Roesch. Spectator (Property ed) 13:10-11+ S 11 '47
Tenant may recover on improvements and betterments fire policy though loss was made good by landlord under lease. Weekly Underw 157:206 Jl 26 '47

Inspection

Ethical obligations of inspectors. J. W. Van Brunt. Nat Underw 51:8 Ap 3 '47
How to inspect garages. M. E. Bulske. Rough Notes 90:34+ Mr '47
Inspection of stores. M. E. Bulske. Rough Notes 90:21+ Ap '47
Roam the plant, buyer tells agents at Akron rally. P. H. Schindler. Nat Underw 51:4 My 8 '47
Two inspection services as they grew up in West; National inspection company of Chicago and Insurance service bureau. Nat Underw 50th anniv no:222 1947

Instalment premiums

Annual fire premiums. Bsns W p68 Ag 16 '47
Installment payment issue of North America companies in Virginia. Nat Underw 51:26 F 27 '47
North America wins installment plan victory in Mississippi; loses in Oklahoma. Nat Underw 51:10 S 18 '47

Investments

Stock fire companies holdings in industrial stocks and in government bonds, 1936-1946; charts. Spectator (Property ed) 13: 24-5 Jl 10 '47

Liability property damage policies

Active demand for fire legal liability cover on buildings occupied under lease; fear of subrogation action. Nat Underw 51:3+ My 29 '47
Chicago C.P.C.U. points up need for fire legal liability market. Nat Underw 51:12 S 25 '47
Neglected field; sale of fire legal liability cover. G. W. Clarke. Nat Underw 51:17+ Ag 7 '47

Losses

Atlanta tragedy stuns nation, demand end to epidemic. Nat Underw 50:1+ D 12 '46
Average monthly fire losses in the United States and in the United Kingdom and Eire, 1936-1946; charts. Spectator (Property ed) 13:18 Ag 7 '47
Cover upped in time; how fireproof Grand Rapids lodge building burned. Nat Underw 51:2 Je 12 '47
Drop in fire loss ratios has started, claim men contend. East Underw 48:1+ Jl 18 '47
Higher fire losses expected in Canada; first half total over 1946. East Underw 48:16 Ag 15 '47
Insurance in action for Princeton university; blanket cover aids replacement of burned gymnasium. W. Hay. il Weekly Underw 156:1616-17 Je 14 '47
Loss ratio of stock carriers up in 1945. Weekly Underw 155:1340+ D 7 '46
New York pier loss may run $1.6 million. Nat Underw 51:7 O 2 '47
San Francisco fire adjustments. il Nat Underw 50th anniv no:146+ 1947
Syracuse university loss in gymnasium fire may run $1 million. Nat Underw 51:6 Ja 16 '47

Mathematics

Easy formulae; calculating maximum term for minimum premium. C. Markel. Nat Underw 51:7 My 29 '47

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How I sell reporting policies. H. W. Capen. Rough Notes 90:18+ Ja '47
I.U.B. revises several forms, issues market value, selling price forms for reporting contracts. Nat Underw 51:1 Jl 31 '47; Same abr. East Underw 48:20 Ag 8 '47
Reporting covers are causing difficulties. C. T. Hubbard. Rough Notes 90:42-3+ My '47

Municipal policies

Baltimore insures all its property. Nat Underw 50:2 N 28 '46

Municipal self insurance

Self-insurance idea condemned in report on school coverage in Alberta, Canada. East Underw 48:1+ F 28 '47

Off premises coverage

Fire, inland marine agreement of guiding principles. W. R. Cunningham. Spectator (Property ed) 12:10-14+ Ja 23 '47; Same abr. East Underw 47:24 D 20; 26-7 D 27 '46; Same cond. Nat Underw 51:6+ Ja 2 '47
Off-premises cover in new Washington farm contract. Nat Underw 51:34 Ap 17 '47

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Arkansas forms and rules revised. Nat Underw 50:30 D 12 '46
Coinsurance clause and insurable interest under the 1943 standard fire insurance policy. J. S. Foster. Weekly Underw 157: 817-20 O 4 '47
Co-operative policy; twelve New York companies in Association combine to issue cover. Weekly Underw 155:1544 D 28 '46
Coverages and forms; official Texas standard fire policy; comparison with New York policy. Spectator (Property ed) 12:8-9+ Je 12 '47
New dwelling and contents form. Rough Notes 90:19-20 S '47
New W.U.A. tabular stop fire policy; filling in by typewriter can be done with four stops. Nat Underw 51:2 Je 12 '47
South Carolina valued policy law. J. Calhoun. Weekly Underw 156:953-5 Ap 5 '47

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W.U.A.'s new fire policy approved in most states. Nat Underw 51:30b My 8 '47

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Insurance, Fire—Improvements and betterments policies
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Extended coverage endorsements
Extended coverage endorsement. Rough Notes 89:65-6 D '46
Extended coverage endorsements. W. E. Wilson, jr. Rough Notes 90:24 S '47
Insured loses on boiler exclusion in explosion cover; Ranney vs. Camden Fire. Nat Underw 51:9 My 22 '47
Interprets recent fire clauses and endorsements issued by New York fire insurance exchange; abstracts. E. C. Niver. Nat Underw 51:2+ Mr 13 '47; East Underw 48:18+ Mr 21 '47
Vandalism and malicious trespass endorsement. Rough Notes 89:66 D '46
Widespread protection of extended coverage endorsement. L. S. Gregory. East Underw 48:18 Ag 1 '47
With off-shore wind, policy is held not to cover damage by high water. East Underw 48:24 S 5 '47

Term policies
Commissioners oppose term rule change. C. F. J. Harrington; B. R. Stone. Weekly Underw 157:521+ S 6 '47
Companies don't favor term change; believe shift to annual business unwarranted by present emergency. Nat Underw 51:2 Ag 14 '47
Easy formulae; calculating maximum term for minimum premium. C. Markel. Nat Underw 51:7 My 29 '47
Fire executives express term rule views; attitudes on Commissioner Sullivan's proposal to abolish system. Weekly Underw 157:417+ Ag 23 '47
Full statement of North America on term policies. Nat Underw 51:27 S 18 '47
Majority opinion in fire insurance backs writing term forms. East Underw 48:1+ S 5 '47
Nebraska commissioner opposes term abolition. B. R. Stone. East Underw 48:17+ S 5 '47; Same abr. Nat Underw 51:2 S 4 '47
Term ban best plan to date for easing market. D. H. Forbes. Nat Underw 51:23 S 11 '47
Urges abolition of term policies as capacity solution; abstracts. W. A. Sullivan. Nat Underw 51:1+ Ag 14 '47; East Underw 48:1+ Ag 15 '47; Weekly Underw 157:374 Ag 16 '47

Premiums, Payment of

See also
Insurance, Fire—Instalment premiums

Preventive work
Arkansas men have done something about preventing hotel fires. H. A. Ritgerod. il Nat Underw 50:3+ D 26 '46
Cutting loss big responsibility. J. A. North. Weekly Underw 157:141+ Jl 19 '47
Factory insurance association opens fire safety laboratory in Hartford; abstracts. C. W. Pierce. il East Underw 48:14 Jl 4 '47; il Nat Underw 51:3 Jl 3 '47; Weekly Underw 157:5+ Jl 5 '47
FIA sets forth explicit purpose of new fire safety laboratory. East Underw 48:22 Ag 1 '47
Insurance participates in annual conference of International association of fire chiefs. Weekly Underw 157:420 Ag 23 '47
Local agents battle fire waste. Weekly Underw 157:953+ O 18 '47
National Board campaign against arson; data on arrests, convictions, acquittals; 1934-1946. Weekly Underw 156:1539 Je 7 '47
New fire safety laboratory, Factory insurance association. il Safety Eng 94:30 Jl '47
No country can afford fires; international approach to fire prevention seen; Review of London. Nat Underw 51:11+ Ag 7 '47
Reinstate home inspections; war on careless smoking. P. Bugbee. Nat Underw 51:6 Ag 28 '47
Value of standards in complex American life; standardization in fire protection. C. W. Pierce. Weekly Underw 156:1678 Je 21 '47

See also
National fire waste council
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Prospects

See also
Insurance, Fire—Farmers as prospects

Purchasing
Minnesota agents solve mortgage situation; cancellation of existing insurance on mortgaged property to be eliminated. East Underw 48:20 Ap 4 '47
Ponder insurable values, coinsurance, and depreciation; buyers hear vital problems discussed at N.Y. parley. Nat Underw 50:14+ D 5 '46

Rates
Advocates for Canada pure loss plus individual loading plan. H. C. Mills. Nat Underw 50:4 D 5 '46
Asks agents to recognize implications of making rates. D. C. Bowersock. Weekly Underw 156:1458+ My 31 '47; Same cond. East Underw 48:24+ My 30 '47; Same cond. Nat Underw 51:4 My 29 '47
Dean schedule marked new era in rating of fire insurance. Nat Underw 50th anniv no:74+ 1947
Divorce politics from rate action. W. F. Martineau. Nat Underw 51:11 S 18 '47
Emphasizes agents' duty to cooperate with rate revisions. W. F. Martineau. East Underw 48:20+ Je 27 '47; Excerpts. Nat Underw 51:3; Editorial comment. 14 Je 26 '47
Extended coverage rate boosts in Massachusetts, Maine, Rhode Island. Nat Underw 51:9 O 2 '47
Field testing starts in rating research program of Insurance executives assn. Nat Underw 51:1+ F 27 '47
Fire insurance rate increases and stocks situation. F. L. Brokaw. Weekly Underw 156:1265+ My 10 '47
Fire insurance rates rise in New York state. East Underw 48:20+ My 9 '47; Excerpt. Nat Underw 51:3 My 8 '47
Fire insurance rating problems. E. F. Gallagher. Weekly Underw 156:48-50, 334-6 Ja 4, F 1 '47
Fire rate boost hot subject at New York local agents meeting. Nat Underw 51:3+ My 8 '47; East Underw 48:1+ My 9 '47
Fire rates too low because of rising labor, repair costs. C. P. Jervey. East Underw 47:1+ D 13 '46
Graduation of premiums by size for all types of risk seen; New York department's uniform accounting investigation. Nat Underw 50:17 D 12 '46
Greater uniformity in fire rating methods is goal; Insurance executives assn. launches field testing program in New Jersey. Nat Underw 51:1 Ja 30 '47
Hopes rate increase spiral not ahead. W. E. Allyn. Nat Underw 51:1 Ag 28 '47
Maryland fire rate increase ordered; rewriting barred. Nat Underw 51:1 Ag 21 '47
Massachusetts fire rates are increased. East Underw 48:28 F 14 '47; Weekly Underw 156:452 F 15 '47
Michigan grants fire insurance rate increases. Nat Underw 51:5 S 18 '47
Modest fire rate increase applied in Illinois. Nat Underw 51:19D S 18 '47

INSURANCE, Fire—Rates—*Continued*

New Jersey rating expert tells how to get speedier service. S. G. Lewis. Nat Underw 51:2 Mr 20 '47

New York fire insurance rate revision procedures. W. F. Martineau. East Underw 48:26 S 19 '47

North America goes non tariff in Chicago; deviates 10 per cent on dwellings, 15 per cent on other classes. Nat Underw 51:1 O 16 '47

North America holds to old rates in Chicago. Nat Underw 51:1+ S 25 '47

Rate making. G. E. Stecher. Weekly Underw 157:29-31+ Jl 5 '47

Rating methods are outmoded, cumbersome, N.Y. probe finds; report on examination of New York fire insurance rating organization. Nat Underw 51:2+ My 29 '47; Same abr. East Underw 48:30 Je 6 '47

Report paves way for revising 1921 N.A.I.C. profit basis; Dineen subcommittee explores alternative formulas, suggests hearings. Nat Underw 50:3+ D 5 '46

Responsibility for rate making; address before Ohio agents; abstracts. R. E. Dineen. Weekly Underw 157:727+ S 27 '47; Nat Underw 51:17 S 25 '47

Supports rating by individual classes; opposed to practice of horizontal rate changes. R. E. Dineen. East Underw 48:20 My 16 '47

Texas plan called model for others. G. F. Cox. Nat Underw 51:12 Mr 27 '47

Upward revision of rates supported by Phoenix president. G. C. Long, jr. East Underw 48:1+ F 21 '47

Vermont fire rates up on several classes. Weekly Underw 157:428 Ag 23 '47

Virginia rejects plea for higher minimum. East Underw 48:25 Ja 24 '47

Rating bureaus

Growth of rating organizations. J. J. Magrath. Nat Underw 50th anniv no:214-16 1947

Many companies become subscribers to new Pacific fire rating bureau. Nat Underw 51:27 Jl 10 '47

New Pacific fire rating bureau starts operations. East Underw 48:28 Ja 10 '47

Rating board is inviting use of its services by capital stock carriers; Pacific fire board. Nat Underw 51:40 Ap 3 '47

Rating methods are outmoded, cumbersome, N.Y. probe finds; report on examination of New York fire insurance rating organization. Nat Underw 51:2+ My 29 '47; Same abr. East Underw 48:30 Je 6 '47

Reinsurance

Data on reinsurance in force at end of '46 for companies licensed in New York state. Nat Underw 51:1+ Mr 6; 15 Ap 3 '47

1946 is year of the great glut in fire reinsurance field. R. B. Mitchell. Nat Underw 50: 13 D 26 '46

Reserves

American insurance company chart shows premium reserve operation. Nat Underw 51:4 Ap 10 '47

What is value of equity in premium reserve if any? Nat Underw 51:27 S 13 '47

Risks

Adjuster gives hints to examiners at Chicago. R. M. Beatty. Nat Underw 50:3 N 28 '46

Dehydrated alfalfa risk poses insurance problems. Nat Underw 51:8 O 16; 29 O 23 '47

Fire underwriting; dehydration of fruits and vegetables. W. O. Lincoln. Spectator (Property ed) 13:12+ S 25; 12 O 23 '47

Fire underwriting; electric light and power substations. W. O. Lincoln. Spectator (Property ed) 12:12 My 8 '47

Fire underwriting; magnesium. W. O. Lincoln. Spectator (Property ed) 13:12 Jl 24; 12+ Ag 7 '47

Fire underwriting; synthetic rubber manufacturing. W. O. Lincoln. Spectator (Property ed) 13:12 Ag 21; 12 S 11 '47

New chemicals and processes create new fire hazards. T. A. Fleming. Nat Underw 51:19D S 18 '47

New Jersey group hears of fire hazards. F. P. O. Potter. Nat Underw 51:4+ My 1 '47

New York city standard fire classification report for 1945; tabulation. Spectator (Property ed) 12:12-13 N 28 '46

New York state standard fire classification report for 1945; tabulation. Spectator (Property ed) 12:10-11 N 28 '46

Tackle problem of cover for Chicago Negro area. Nat Underw 51:2 Ag 28 '47

There's practically nothing here to burn, generally is fallacious. D. F. Lewis. East Underw 48:23 Ag 1 '47

To assist Parkinson; industry tackles problem of covering Chicago risks. Nat Underw 51:3 Je 26 '47

Underwriting losses call for higher rates, better selection. C. D. Minor. Nat Underw 51:9 My 1 '47

Urges pooling of talents to renovate poor risks. C. T. Hubbard. Nat Underw 51:2 Mr 27 '47

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Erie school policies held void; coverage exceeded charter power. East Underw 48:22 Ap 4 '47; Nat Underw 51:39 Ap 3 '47

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Increase cover on Michigan state-owned liquor stocks. Nat Underw 51:10 Mr 27 '47

Talmadge authorizes state property cover. Weekly Underw 156:738 Mr 15 '47

Statistics

Ranking of leading stock fire companies in 1946; admitted assets; net premiums written; with comparisons, 1937-1945. Nat Underw 51:1+ Mr 13 '47

Tobacco risks

Huge surplus of tobacco; Kentucky reports indicate drop in insurance values. East Underw 48:24 Ja 3 '47

Valuation of property

Appraisal has only current force, U.S. court holds; coinsurance clause penalty; Friel vs. National Liberty. Nat Underw 51:2 Je 19 '47

Appraisals for insurance cover. R. D. Tebbetts. Weekly Underw 156:40-4 Ja 4 '47

Effect of present costs on insurance. G. Colburn. Weekly Underw 155:1353-5+ D 7 '46; Excerpts. East Underw 47:27 N 22 '46

South Carolina valued policy law. J. Calhoun. Weekly Underw 156:953-5 Ap 5 '47

Urges insurers to quit making appraisals. A. Goldberger. Nat Underw 50:4 N 14 '46

Whisky risks

Downward trend is setting in, in whisky market. Nat Underw 51:3 Ja 2 '47

Many whiskey risks now over-insured due to fall in prices. East Underw 48:22 Je 27 '47

Marine insurers may now cover whisky in Kentucky; insurance director gives permission in inflated value emergency. Nat Underw 50:1+ N 21 '46

Protection of liquor; National Board brochure on processes, hazards and protection in manufacture of whiskey. East Underw 48: 23 Ap 4 '47

Solution to insurance problem up to distillers. Nat Underw 50:15a D 12 '46

Suggest improved protection for whisky warehouses to get more insurance; installing CO_2 gas protection. Nat Underw 51: 10 Ap 3 '47

Whiskey risk problems; 80% co-insurance clause being taken as assureds seek protection; whiskey values declining. East Underw 48:37 F 21 '47

INSURANCE, Fire—Whisky risks—*Continued*
Whisky warehouse insurance problem defies solution; value of carbon dioxide equipment not tested. Nat Underw 51:2 Jl 31 '47

Canada

Canada fire income shows 17% increase in 1946; losses also higher. East Underw 48: 1+ Mr 21 '47
Fire insurance in Canada. H. C. Mills. Spectator (Property ed) 12:16+ Je 26 '47; Excerpts. East Underw 47:21 D 6 '46
May organize company loss bureau. East Underw 48:19 Jl 18 '47
School group criticizes Alberta government rates. Nat Underw 51:27 F 27 '47
Self-insurance idea condemned in report on school coverage in Alberta. East Underw 48:1+ F 28 '47

Chicago

Much turmoil in Chicago fire insurance arena; North America's rate deviation has profound effect on business. Nat Underw 51:3+ O 23 '47
To assist Parkinson; industry tackles problem of covering Chicago risks. Nat Underw 51:3 Je 26 '47

Michigan

Michigan charges violations; dept. warns fire insurers not to use consequential loss, and work and materials clauses on dwelling risks. East Underw 48:24 F 14 '47

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Minnesota agents solve mortgage situation; cancellation of existing insurance on mortgaged property to be eliminated. East Underw 48:20 Ap 4 '47

Missouri

Anti-trust victory in McKittrick quo warranto action in Missouri. Nat Underw 51:1+ Ja 9 '47
Eight-year-old legal battle in Missouri ended; companies will have to pay $2,090,000 in fines, as Supreme court denies rehearing. Weekly Underw 156:749 Mr 15 '47
Missouri court fines companies for bribery; 122 stock carriers held guilty in connection with compromise of rate litigation in May, 1935. East Underw 48:18 Ja 3 '47; Nat Underw 51:1+ Ja 2 '47
Missouri metes out drastic punishment in rate violation; revokes licenses of General, Manufacturers; cites agents to prosecutors. Nat Underw 51:1+ F 13 '47

New York (state)

Dineen seeks protective law on insurance price fixing; legality of practices of New York fire insurance exchange weighed. Weekly Underw 156:447+ F 15 '47; Same abr. East Underw 48:20+ F 14 '47
New York fire insurance exchange acts on rates, rules and forms. East Underw 48:24 My 23 '47
Rating methods are outmoded, cumbersome, N.Y. probe finds; report on examination of New York fire insurance rating organization. Nat Underw 51:2+ My 29 '47; Same abr. East Underw 48:30 Je 6 '47

Shanghai

Shanghai fire loss ratio is good. Nat Underw 51:10 Ap 10 '47

Texas

Loss of fire credits leading Houston topic; cost to property owners figured at $200,000 annually. Weekly Underw 156:531 F 22 '47
Slow adjusting task saves $340,000 premiums; Dallas policyholders will get credit. Weekly Underw 156:590 Mr 1 '47

INSURANCE, Flood
How flood insurance is provided in Switzerland. Nat Underw 51:14D+ S 4 '47

INSURANCE, Forgery
Surety claims involving forgery. S. Maurice. Weekly Underw 156:841-3+, 899-901+ Mr 22-29 '47

See also
Bankers' blanket bond

INSURANCE, Franchise (term)
H. & A. Conference questionnaire returns show trends in franchise field. Nat Underw (H. & A. conference no) 51:10 My 30 '47
H.&A. Conference survey on franchise plan selling analyzed. T. T. McClintock. East Underw 48:37 My 30 '47

INSURANCE, Fraternal. See Benefit societies

INSURANCE, Fur
Drop in fur prices confuses adjustment picture. Nat Underw 50:4 D 26 '46
Personal fur floater; open season on furs stimulates production. Spectator (Property ed) 12:40 N 14 '46; Correction. 12:31 D 12 '46

INSURANCE, Furriers' customers
Broaden furriers' customers policy. Nat Underw 51:2 F 20 '47
Fur storage risks. W. O. Lincoln. Spectator (Property ed) 12:22 Ap 10 '47

Adjustment of claims

Court interprets terms of furriers' policy. Weekly Underw 156:1688 Je 21 '47
Inland marine case won by insurer; important decision holds furriers customer has no direct action. Nat Underw 50:6 D 26 '46

INSURANCE, Garage owners'. See Insurance, Automobile—Garage owners' and dealers' liability policies

INSURANCE, Grain elevator
Grain association rate boost approved in six key states. Nat Underw 51:2 Jl 10 '47
Minneapolis grain elevator fire loss is $2,400,000. Nat Underw 50:2 D 26 '46
Second Minneapolis grain elevator fire to cost $1,750,000. Nat Underw 51:1 Ja 2 '47

INSURANCE, Group
All signs indicate this is the time to sell group. Nat Underw (Life ed) 51:1 O 24 '47
Contribution of group insurance to American family solidarity. W. J. Graham. Weekly Underw 156:52-6 sec 2 My 10 '47
Group coverage and hospital insurance. H. R. Gordon. Weekly Underw 156:627 Mr 1 '47
Group coverages gain greatly in year, Life insurance association reports. Nat Underw (Life ed) 51:5 Jl 25 '47; Nat Underw 51: 15 Jl 24 '47; Weekly Underw 157:201+ Jl 26 '47
Group, franchise insurance reviewed at Health & accident underwriters conference, Chicago. Nat Underw 51:16 Ag 21 '47; Same. Nat Underw (Life ed) 51:3 Ag 22 '47; Same. East Underw 48:30 Ag 22 '47
Group insurance and group annuity coverage, United States business, 1945; all life and casualty insurance companies; tabulation. Life Ins Courant 51:565 D '46
Group insurance and group annuity coverage; United States business, 1946; all life and casualty insurance companies; tabulation. Life Ins Courant 52:342 Ag '47
Group plan is effected for Illinois medical society. Nat Underw 51:31 Mr 6 '47
H. & A. Conference report on group coverages; abstracts. East Underw 48:42-3 My 30 '47; Nat Underw (H. & A. conference no) 51:8+ My 30 '47
Legislative score card; many states acted on group A. & H. at '47 sessions. Nat Underw 51:15 Jl 24 '47; Nat Underw (Life ed) 51:3+ Ag 1 '47
Problems and future of group accident and health. A. Pike, jr. Nat Underw 50th anniv no:292-4 1947
Problems in writing group accident-health. P. G. Korn and others. Nat Underw 51:20+ F 13 '47; Same abr. Nat Underw (Life ed) 51:1+ F 14 '47
Prudential group cases show flexibility of such protection. East Underw 47:17 D 20 '46
Wide acceptance of group insurance. E. C. McDonald. East Underw 48:40+ pt 2 O 3 '47

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Agents' benefits; NALU committee lists companies with pensions, group, service fees. Nat Underw (Life ed) 51:7 Je 6 '47

INSURANCE, Group—Employees' insurance—*Continued*
Ballplayers' group and annuities; program adopted by Major leagues; coverage furnished by Equitable Society. A. B. Chandler. East Underw 48:12 Ap 11 '47
Baseball pensions. Bsns W p24+ S 27 '47
Employee benefit plans; trust or insurance facilities may be used. J. A. Hamilton. Trusts & Estates 83:583-7 D '46
Equitable underwrites baseball pension plan for players; National, American leagues involved. East Underw 48:8 F 7 '47; Nat Underw (Life ed) 51:1 F 7; 2 F 14 '47
Financing pension plans by insured methods. H. A. Kirsch. Trusts & Estates 85:214-17 S '47
General Electric employe plans. A. Marshall. East Underw 47:37 D 13 '46
Group annuity route forcefully championed; abstracts. M. F. Lipton. Nat Underw (Life ed) 50:7+ N 29 '46; East Underw 47:14 D 6 '46
Group coverage trend during 1946 toward complete programs. A. M. McCarthy. East Underw 47:1+ D 27 '46
Group insurance has outstanding year; some of important cases written in 1946. East Underw 47:48 D 13 '46
Group insurance program covers 30,000 workers of Aluminum company of America. Weekly Underw 157:291 Ag 2 '47
Group permanent method. D. N. Warters. East Underw 47:8 D 6 '46
Hotel-union group deal under fire in Pennsylvania; contract between Pittsburgh hotels and Local 237. Nat Underw 51:30 Mr 13 '47; Nat Underw (Life ed) 51:24 Mr 14 '47; East Underw 48:16 Mr 14 '47
Hotel union may take Malone into court; decision is extended. Nat Underw 51:21 Mr 27 '47; Same. Nat Underw (Life ed) 51:18 Mr 28 '47
Malone bars Pittsburgh hotel-union proposal; holds agreement illegal. East Underw 48:35+ Mr 28 '47; Same cond. Nat Underw 51:29 Mr 20 '47; Same cond. Nat Underw (Life ed) 51:18-19 Mr 21 '47
Manhattan Life workers get free life and hospital insurance. Weekly Underw 157:117 Jl 12 '47
No rest for group men; Taft-Hartley deadline climaxed busiest summer for employe covers. Nat Underw (Life ed) 51:1 Ag 29 '47
Pittsburgh hotels revise their group setup. Nat Underw 51:35 Ap 3 '47; Same. Nat Underw (Life ed) 51:13 Ap 4 '47
Prudential underwrites Yankee's non-players plan. East Underw 48:21 F 21 '47; Nat Underw (Life ed) 51:2 F 21 '47
Security against loss of wages. F. O. Dietter. Personnel J 25:353-7 Ap '47
Security programs for insurance personnel. E. B. Stevenson, jr. Spectator (Life ed) 154:22-5+ Je '47
See heavy demand for group cover in 1947 to ease labor tensions. Nat Underw 51:22 Ja 16 '47; Same. Nat Underw (Life ed) 51:7 Ja 10 '47
Seery & Henry write group on Yale & Towne. East Underw 48:4 Ag 22 '47
Standard Oil of Indiana liberalizes group annuities with Equitable Society. Nat Underw (Life ed) 51:3 S 5 '47
Steel group policy now in force thirty years; American rolling mill co. Weekly Underw 156:420 F 8 '47
Survey by Chamber of commerce shows extent of disability cover. Weekly Underw 155:1537+ D 28 '46; Same abr. East Underw 47:35 D 27 '46
Termination of employment under group policies. A. T. Collier. East Underw 47:29 D 13 '46
Trends in group coverages. Management R 36:489-90 S '47
Trust fund or group annuity? case for trusteed pension plans. E. B. Gardner. Trusts & Estates 84:45-51 Ja '47
Union politics is pervading group field. Nat Underw 51:24 S 25 '47; Same. Nat Underw (Life ed) 51:7 S 19 '47
Worker security next big union objective; health and welfare insurance. Factory Management 105:74-8 F '47

INSURANCE, Group life
Aetna writes United Nations group; covers members of UN staff. East Underw 48:10 Ap 25 '47
Chicago survey of agents' affairs wins local association approval; group insurance comments. East Underw 48:1+ Mr 7 '47
Figures deceptive; uncertainties serve to tighten up group market. Nat Underw (Life ed) 51:6 Je 13 '47
Group coverages at level premium; actuary outlines attractions and experience of such plans. D. A. Warters. Nat Underw (Life ed) 51:9 My 16 '47; Same cond. East Underw 48:5 My 16 '47
Group covers 14 million workers, Institute of life insurance reports. Weekly Underw 156:869+ Mr 29 '47; Same. East Underw 48:9 Ap 4 '47
Group permanent life insurance for retirement plans; abstract. Management R 35:490-1 N '46
Group ranking as of Dec. 31, 1946; tabulation by company. Life Ins Courant 52:163 Ap '47
In 35 years group life becomes a giant. W. J. Graham. Nat Underw 50th anniv no:242-5 1947
Large group life sales seen best method of providing protection U.S. families need. R. H. Belknap. Weekly Underw 157:856 O 4 '47
Mass coverage schemes chief worry of agents. J. B. Baumann. Weekly Underw 157:913, 915 O 11 '47; Same cond. East Underw 48:5 O 10 '47; Same cond. Nat Underw (Life ed) 51:24 O 10 '47
Mortgagor group policy; Prudential to cover lives of Brooklyn Dime Savings borrowers. Weekly Underw 155:1313 N 30 '46
New collective plan by Teachers insurance and annuity association. East Underw 47:13 D 6 '46; Nat Underw (Life ed) 50:19 D 6 '46; Weekly Underw 155:1377 D 7 '46
$120 million group life written by Metropolitan on Standard oil company of Indiana. Nat Underw (Life ed) 50:3+ N 29 '46
Prudential announces group creditor life for home borrowers. East Underw 48:8 Ap 4 '47; Nat Underw (Life ed) 51:1 Ap 4 '47
Royal-Liverpool group insures employees. Weekly Underw 156:1620 Je 14 '47
Ruling given on term premiums for employes' trust. Nat Underw (Life ed) 51:28 Mr 14 '47
Share of production plan permits workers to pay for own group life-pension plan; Continental paper co. Weekly Underw 157:1066 O 25 '47
Skandia official believes Swedish life companies will favor modified group plan. T. Larsson. Weekly Underw 157:1062 O 25 '47
Wants study to disclose if group sales threaten to undermine agency system. C. J. Zimmerman. Weekly Underw 157:1071 O 25 '47; Same. Nat Underw (Life ed) 51:1 O 24 '47

Adjustment of claims
Group insurance lessons in Texas City experience. R. A. Hohaus. Nat Underw 51:22 My 22 '47; Same. Nat Underw (Life ed) 51:6+ My 23 '47
Names of dead and missing, Texas City, not all known yet; Metropolitan group on Monsanto employes. East Underw 48:1+ Ap 25 '47; Nat Underw (Life ed) 51:1 Ap 25 '47

INSURANCE, Hail
Coverages and forms; hail insurance on growing crops. Spectator (Property ed) 12:8-9 Ap 10 '47
Don't overlook hail. S. K. Bjornson. Rough Notes 90:28 Ap '47
Hail experience for 1946; tabulation. Nat Underw 51:23 Mr 13; 12 Mr 20 '47
Hail storm insurance; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:34-5 D 12 '46
Illinois Mutual reports large gain in hail business. Nat Underw 51:4 F 6 '47
New hail underwriters association formed in Canada. East Underw 48:26 My 23 '47

INSURANCE, Hail—*Continued*
Record hail volume is indicated for 1947. Nat Underw 51:2 Je 19; 1 Jl 24 '47
Rise of hail cover; with 1945 premium figures for stock companies. Nat Underw 50th anniv no:208-9 1947

Rates

New hail rates in Kansas. Nat Underw 51:25 F 27 '47

INSURANCE, Health
Accident and health legislation; address before Industrial insurers conference; abstracts. H. R. Gordon. Weekly Underw 156:1368 My 17 '47; East Underw 48:42+ My 9 '47; Nat Underw 51:18+ My 15 '47; Nat Underw (Life ed) 51:11+ My 9 '47
A.&H. model bill a good and wholesome measure. C. C. Fraizer. East Underw 48: 32+ My 30 '47
Budgeting the costs of illness. H. L. Plumley. (Studies in individual and collective security no. 1) 66p pa 50c National industrial conference board, 247 Park av, New York 17 '47
Cash sickness benefit plans; actuaries evaluate importance of legislative movement. E. P. Whittaker; H. S. Beers. Nat Underw 51:17 My 15 '47; Same. Nat Underw (Life ed) 51:4 My 16 '47
Cash sickness plans. J. C. Conklin; G. W. Kemper. East Underw 48:32 My 2 '47
Commissioners' rulings on A. & H. opposed by Bureau; orders in Texas, Florida and Nevada declared contrary to original concept of official guide. Weekly Underw 157: 106-7 Jl 12 '47
Compromise A.&H. bill best measure possible to obtain. J. Farley. East Underw 48: 39+ My 30 '47
Compulsory health insurance. E. W. Wilson. (Studies in individual and collective security no. 3) 138p pa $1 National industrial conference board, 247 Park av, New York 17 '47
Compulsory health insurance deficiencies cause opposition of medical profession. J. W. Cline. Weekly Underw 156:353 F 1 '47
Four major objectives; address before H. & A. Conference. H. R. Gordon. Nat Underw (H. & A. conference no) 51:3+ My 30 '47
Group coverage and hospital insurance. H. R. Gordon. Weekly Underw 156:627 Mr 1 '47
Health and accident insurance; expanding horizons. H. R. Gordon. il Spectator (Life ed) 154:12-14+ Ap '47
Health-insurance plans surveyed. Bsns W p104 Ap 19 '47
House subcommittee charges Russian methods used in promoting cause of socialized medicine. Nat Underw 51:18 Ag 7 '47; Same. Nat Underw (Life ed) 51:2 Ag 8 '47
Is voluntary health insurance too expensive? E. W. Wilson. Weekly Underw 156:488-9 F 15 '47
No need for compulsory disability programs. R. A. Hohaus. Nat Underw 51:16-17 S 25 '47; Same abr. Nat Underw (Life ed) 51: 3+ S 26 '47; Excerpts. East Underw 48: 12+ S 26 '47
Problems and future of group accident and health. A. Pike, jr. Nat Underw 50th anniv no:292-4 1947
State cash sickness plans aired at N.A.I.A. gathering. J. C. Conklin and others. Nat Underw 51:29+ My 1 '47; Same. Nat Underw (Life ed) 51:1+ My 2 '47
Union health and welfare plans. L. M. Kramer and R. Theodore; N. M. Minkoff. Mo Labor R 64:191-214 F '47
Urges buyers study cash sickness plans. H. G. Waltner. Nat Underw 51:27 My 8 '47; Same. Nat Underw (Life ed) 51:3 My 9 '47
Voluntary health insurance in western Europe; its origins and place in national programs. G. St J. Perrott and J. W. Mountin. bibliog Pub Health Rep 62:733-67 My 23 '47
Voluntary health insurance plans. H. W. Steinhaus. Spectator (Life ed) 155:29-30+ Ag '47; Same. Spectator (Property ed) 13: 16+ S 11 '47
Voluntary plans seen on threshold of real accomplishment. H. L. Plumley. East Underw 48:30 Ag 1 '47

See also
Insurance, Accident
Insurance, Disability
Insurance, Hospitalization
Insurance, Medical expense
Insurance, Surgical expense
Medical service—Group and prepayment plans
also Bureau of accident and health underwriters; Health and accident underwriters conference; National association of accident and health underwriters

Employees' insurance

Collective bargaining in health; question of sick leave with pay, and health and hospital coverage. A. Fletcher. Min & Met 27: 552-3 N '46; Same cond. il Min Cong J 32: 44-5 D '46
Disability insurance in California. T. H. Mugford. Personnel J 25:222-7 Ja '47

Finance

Accident and health insurance in 1946 by states; hospitalization plans included; tabulation. Spectator (Property ed) 13:20 O 9 '47; Same. Spectator (Life ed) 155:48 O '47
Critique of A method of making actuarial estimates for a compulsory health insurance system. R. J. Myers. Am Stat Assn J 42:123-7 Mr '47
Ranking position in net premiums written on individual accident and health policies for 1946 and comparisons 1943-1945; tabulation by company. Spectator (Property ed) 13: 21-3 O 9 '47; Same. Spectator (Life ed) 155: 54-6 O '47

Legislation, Proposed

Chaotic condition in states passing sickness benefit bills. E. A. McCord. Weekly Underw 156:1490 My 31 '47
Do we need compulsory national health insurance; abstract. W. Kaempffert; L. H. Bauer. East Underw 48:27 Ag 29 '47
Federal government insurance program possible tyranny. H. H. Shoulders. Weekly Underw 156:1158 Ap 26 '47
Hearings continue on two health measures; issue drawn between Taft and Murray bills. East Underw 48:29+ Jl 18 '47
Lends support to Taft bill at Senate hearing; abstracts. J. R. Mannix. Nat Underw (Life ed) 51:5 Jl 4 '47; Weekly Underw 157:177 Jl 19 '47
Many cash sickness bills in '47, but none passed. E. H. O'Connor. Nat Underw 51: 16-17 Ag 28 '47; Same. Nat Underw (Life ed) 51:19 Ag 29 '47
New compulsory bill has several changes; local administration now provided for in Wagner-Murray-Dingell measure. Weekly Underw 156:1451 My 31 '47
Opposition to Wagner-Murray-Dingell bill was muffled at hearings. A. H. Scolten. Weekly Underw 155:1370 D 7 '46
Scores state health insurance scheme at New York hearing; opposes Ives-Condon bills. J. R. Garrett. East Underw 47:83 D 13 '46
Sets 25% of payroll as cost of social cover. E. Wilson. Nat Underw (Life ed) 51:6 Ag 1 '47
Socialized medicine bill; 1947 edition. E. W. Wilson. Weekly Underw 157:939-41 O 11 '47
Taft bill better than Wagner proposal; report of International association of insurance counsel. East Underw 48:30 Ag 22 '47
Taft health bill wins approval. H. R. Gordon. East Underw 48:45 F 21 '47
Truman repeats plea for national health program. Nat Underw 51:18 Ja 9 '47
Truman wants national health insurance plan; sends message to Congress. East Underw 48:28 My 23 '47
Washington; bills introduced in the 80th Congress. Spectator (Life ed) 154:42+ Mr '47

Policies

Coverages and forms; A & H policies afford variety of benefits. Spectator (Property ed) 12:26 N 28 '46
New employee sickness plan of Travelers. Weekly Underw 156:478 F 15 '47

INSURANCE, Health—*Continued*

Statistics

U.S. chamber of commerce survey; 40% of employes in industry have voluntary A.&H. plan; with summary of accident & health insurance of United States residents, 1945. Nat Underw 51:15 Ja 2 '47; Same. Nat Underw (Life ed) 51:6 Ja 10 '47

California

Doctors war against California compulsory bill. S. L. McClendon. Nat Underw 51:23 F 27 '47; Same. Nat Underw (Life ed) 51: 15 F 28 '47

Governor Warren's health insurance bill boosted. W. T. Sweigert. Weekly Underw 156:701 Mr 8 '47

Connecticut

State health plans meet opposition. M. C. Driscoll and others. Nat Underw 51:22 Ap 10 '47; Same. Nat Underw (Life ed) 51:7 Ap 11 '47

Europe

Health insurance programs and plans of western Europe. J. W. Mountin and G. St J. Perrott. bibliog (77 titles) Pub Health Rep 62:369-99 Mr 14 '47

Great Britain

National health service in Great Britain. Int Labour R 55:142-7 Ja-F '47

Nevada

Nip threat to oust insurers from cash sickness field; inconspicuous Nevada bill vetoed, averting raids on unemployment reserve. Nat Underw 51:25+ Ap 3 '47; Same. Nat Underw (Life ed) 51:1 Ap 4 '47

New Jersey

Cash sickness bill in N.J. stirs A. & H. men. S. Jacobi. East Underw 48:28+ Ja 17 '47

Defends proposed state fund. A. E. Driscoll. East Underw 48:30+ My 23 '47

Hold hearing on bills for cash sickness plan. Nat Underw 51:12 Ap 10 '47; Same. Nat Underw (Life ed) 51:1 Ap 11 '47

Jersey cash sickness plan; abstracts. H. R. Gordon. Weekly Underw 156:521+ F 22 '47; East Underw 48:45 F 21 '47; Nat Underw 51:13+ F 27 '47; Nat Underw (Life ed) 51:7 F 28 '47

New Jersey agents score state fund feature of disability insurance bill. J. S. Daniel. East Underw 48:21-2+ My 16 '47

Reverses position on cash sickness program; Eastman commission now favors non-exclusive state plan. East Underw 48:35+ Ap 11 '47

New York (state)

Compulsory sickness compensation for New York state; proposals, alternatives, costs. 184p National industrial conference board, 247 Park av, New York 17 '47

New Zealand

Health insurance in New Zealand. E. W. Wilson. Weekly Underw 156:1291-3 My 10 '47

Rhode Island

Rhode Island cash sickness bills passed. Weekly Underw 156:1224 My 3 '47

Wisconsin

Companies to have more authority in Wisconsin plan. Nat Underw 51:56 O 16 '47; Same. Nat Underw (Life ed) 51:2 O 17 '47

Compulsory health bill introduced in Wisconsin. Nat Underw 51:25 Ap 3 '47; Same. Nat Underw (Life ed) 51:13-14 Ap 4 '47

Doctors and Wisconsin co-ops agree on sick care pattern. Nat Underw (Life ed) 51:20 My 23 '47

Health bill in Wisconsin patterned on Wagner bill; would inaugurate compulsory state fund. East Underw 48:45 My 30 '47

Sickness plans by cooperatives favored in Wisconsin bill. Weekly Underw 156:1392 My 24 '47

INSURANCE, Horse

Air trips of insured livestock inject new hazard. Nat Underw 51:4 Jl 24 '47

INSURANCE, Hospitalization

Accident and health insurance in 1946 by states; hospitalization plans included; tabulation. Spectator (Property ed) 13:20 O 9 '47; Same. Spectator (Life ed) 155:48 O '47

Arkansas doctors to sponsor state prepaid medical plan. Nat Underw 51:32 F 6 '47; Same. Nat Underw (Life ed) 51:16 F 7 '47

Bankers National adds family hospital policy. Life Ins Courant 52:106 Mr '47

Blue cross can offer medical cover in Wisconsin. Nat Underw 51:27 Ap 10 '47; Same. Nat Underw (Life ed) 51:18 Ap 11 '47

Denies Connecticut Blue Cross hospitals are losing money. Nat Underw 51:21 Ja 23 '47

District of Columbia hospital increase. Nat Underw 51:2 F 27 '47

District of Columbia hospitals find Blue Cross payments insufficient. Nat Underw 51:21 Ja 9 '47

Flat rate hospital policy suggested at Boston A & H meeting. Nat Underw 51:34 S 18 '47; Same Nat Underw (Life ed) 51:9+ S 19 '47

Forbes of Michigan given power to correct hospital emergency clause. East Underw 48:32 S 5 '47

Group coverage and hospital insurance. H. R. Gordon. Weekly Underw 156:627 Mr 1 '47

H. & A. conference hospital insurance report; abstracts. East Underw 48:37 My 30 '47; Nat Underw (H. & A. conference no) 51:9+ My 30 '47

Hospital assn. approves simplified claim form. Nat Underw 51:20 Ap 3 '47; Same. Nat Underw (Life ed) 51:20 Ap 4 '47

Hospital service plan of New Jersey enrolls first million persons. Weekly Underw 156: 967 Ap 5 '47

Hospitalization for ex-GI's. Rough Notes 90: 52 Ap '47

John Marshall company extending its operations to 15 states. Nat Underw (Life ed) 51:2 Je 27 '47

Malone permits rise in Blue Cross rates in Pennsylvania. East Underw 48:42 Ap 11 '47

Massachusetts Blue cross running in red $2 million a year. Nat Underw 51:29+ S 18 '47; Weekly Underw 157:703 S 20 '47

Massachusetts Blue cross seeks to set $9 daily limit. Nat Underw 51:23-4 Ag 14 '47

Massachusetts hospitals object to Blue Cross proposals. Nat Underw 51:17 Ag 28 '47; Same. Nat Underw (Life ed) 51:19 Ag 29 '47

New York Blue cross forced to boost rates. Weekly Underw 156:234 Ja 18 '47; Same cond. Nat Underw 51:24 Ja 23 '47; Same cond. Nat Underw (Life ed) 51:18 Ja 24 '47

Philadelphia Blue cross adopts new contracts. Nat Underw 51:34 Ap 10 '47; Same. Nat Underw (Life ed) 51:18 Ap 11 '47

Plant hospitalization plan with unusual coverage; Hoffmann-La Roche, inc. Factory Management 105:117 S '47

Possibility of direct payments to hospitals called timely move. P. Bywaters. Nat Underw (H. & A. conference no) 51:9-10 My 30 '47

Put Massachusetts Blue cross under insurance laws. C. F. J. Harrington. Nat Underw 51:27 S 25 '47

Saginaw Hospital withdraws from Michigan Blue cross. Nat Underw 50:24 N 14 '46; Same. Nat Underw (Life ed) 50:15 N 15 '46

Saginaw Hospital's plan results in controversy in Michigan. Nat Underw 51:28 Ag 7 '47

Takes issue with Blue Cross statement that Rhode Island medical society plan will operate at much greater expense than as part of Blue cross. R. A. Derosier. Weekly Underw 156:970 Ap 5 '47

Texas agents protest Blue Cross boost; take issue with proclamation of Governor Jester. Weekly Underw 156:997+ Ap 12 '47

Texas Governor proclaims hospital insurance week; heeds protest against naming Blue Cross day. Nat Underw 51:22 Ap 10 '47; Same. Nat Underw (Life ed) 51:10 Ap 11 '47

Urge doctors and Blue cross to bury hatchet at Milwaukee meeting. G. M. Lull and others. Nat Underw 51:32 My 1 '47; Same. Nat Underw (Life ed) 51:8 My 2 '47

INSURANCE, Hospitalization—*Continued*
Virginia Blue cross hikes rates. Nat Underw 51:23 O 2 '47
Wisconsin Blue cross raises rates, reduces benefits. Nat Underw 51:19B S 18 '47

See also
Insurance, Medical expense
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Administrator of funds cannot claim agent role; refusal of hospital service corporation to assume liability. Nat Underw (Life ed) 51:17 Ja 24 '47
This time assured claims hernia not accidental; insurer denies liability; accidental means exclusion at issue. Nat Underw 51: 24 Ag 14 '47; Same. Nat Underw (Life ed) 51:15 Ag 15 '47

INSURANCE, Improvements and betterments. See Insurance, Fire—Improvements and betterments policies

INSURANCE, Industrial
Industrial insurers conference surveys practices. Nat Underw (Life ed) 51:3 My 30 '47
Industrial life and health insurance co. of Atlanta now Life insurance company of Georgia. East Underw 48:15 Je 6 '47
Prudential introduces industrial setup in Texas. Nat Underw (Life ed) 51:11 Je 20 '47

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Industrial insurers conference

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Knowledge of prior existing policy inferable from issuance of two policies on same life. Weekly Underw 155:1525 D 21 '46
Law for the layman; two policies on same life, two decisions; Maryland cases. Barron's 27:18 My 12 '47

Agents

Debit men star in meeting of Illinois round table. J. G. Carmen and others. Nat Underw (Life ed) 51:4 My 2 '47
Evolution of 50 years; the industrial agent; a profession. M. B. Williams. Nat Underw 50th anniv no:94+ 1947
Full staffs, high type men augur well for industrial. Nat Underw (Life ed) 51:9 F 7 '47
Life of Virginia debit men in four states walk out; statement by company. Nat Underw (Life ed) 50:10 N 22 '46
Transfer of small case men to debit successful. Nat Underw (Life ed) 50:13 D 27 '46

Salaries and commissions

United office and professional workers of America asks $50 guarantee; $10 a week increase. Nat Underw (Life ed) 51:9 Mr 21 '47

Finance

Industrial ranking as of Dec. 31, 1946; tabulation by company. Life Ins Courant 52: 163 Ap '47

Fraudulent statements

How Prudential handles misrepresentation. H. A. Gilbert. Nat Underw (Life ed) 51:14 My 30 '47

History

Industrial business; it takes protection to those who need it most. G. E. Wohlgemuth. Nat Underw 50th anniv no:185-6 1947

Risks

Gulf Life's industrial underwriting rules; abstracts. B. Coarsey. Nat Underw (Life ed) 51:4+ O 3 '47; Weekly Underw 157:840-1 O 4 '47
Urges closer check on moral hazard in industrial risks; abstracts. F. T. West. Nat Underw (Life ed) 51:4 O 3 '47; Weekly Underw 157:793+ O 4 '47

INSURANCE, Infantile paralysis
Continental Casualty issues new polio policy. East Underw 48:30 Ag 8 '47
Polio insurance, 1945; Century life insurance co. W. J. Laidlaw. Bsns W p40 N 9 '46
Polio riders may be added to coverage; nonprofit underwriting basis established by Continental Casualty. Weekly Underw 156: 1021 Ap 12 '47; Same cond. East Underw 48:36 Ap 11 '47

INSURANCE, Inland marine
Developments in marine market in the Middle West since 1900; growth of inland writings began in earnest after first World war. E. D. Lawson. Nat Underw 50th anniv no:132 1947
In buyer's interest; inland marine underwriting has been inventive and progressive. A. W. Barthelmes. Nat Underw 50th anniv no:286-7 1947
New aspects of inland marine insurance. G. Nixon. Nat Underw 51:5 O 2 '47

See also
Insurance, Airplane cargo
Insurance, Bailees' customers
Insurance, Contractors' equipment floater
Insurance, Fur
Insurance, Furriers' customers
Insurance, Jewelers, block
Insurance, Motor truck contents
Insurance, Registered mail
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also Inland marine claims association

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Casualty, inland marine agreement of guiding principles (1945); losses involving residence and outside theft insurance versus personal effects floaters. W. R. Cunningham. Spectator (Property ed) 12:9-10+ Mr 13 '47
Duration of risk under transportation floater policy. H. S. Daynard. Weekly Underw 156: 1144-6+ Ap 26 '47; Same abr. East Underw 48:27 Ja 17 '47; Same cond. Management R 36:111-13 F '47; Abstract. Nat Underw 51:4 Ja 16 '47
Exclusion is upheld; insurer not liable for loss of jewelry from car when attendant was not actually in vehicle; salesman's floater, commercial travelers' form. East Underw 48:32 Mr 7 '47
Fire, inland marine agreement of guiding principles. W. R. Cunningham. Spectator (Property ed) 12:10-14+ Ja 23 '47; Same abr. East Underw 47:24 D 20; 26-7 D 27 '46; Same cond. Nat Underw 51:6+ Ja 2 '47
Inland marine agreement of guiding principles; Inland-Inland agreement of 1942. W. R. Cunningham. Spectator (Property ed) 12:12-14 Mr 27 '47
Marine claims group hears talk on principal, agent; is bellboy an agent of owner? Nat Underw 51:4 F 27 '47
Mother, insured, can't sue for loss of son's property; Railway express agency vs. Huntress. Nat Underw 51:38-9 Ap 10 '47
Restrictions placed by courts on subrogation. C. R. Conklin. Nat Underw 51:3 My 22 '47
What is an unexplained shortage? jewelers' block policy exclusion reviewed; with digest of other inland marine decisions. H. S. Daynard. Weekly Underw 156:1624-6, 1745+ Je 14, 28 '47

Agents

Development in several marine lines reviewed at Suburban agents assn. educational conference in New York. G. Wightman and others. Nat Underw 51:4 Ap 17 '47
It pays to consider $10 minimum premium. M. L. Willets, jr. East Underw 47:38 N 15 '46
Many commercial inland marine forms overlooked. E. J. Brill. Nat Underw 51:8 My 15 '47
Sales opportunities that are now presented in ocean and inland marine field; Chicago insurance day address. P. J. Leen. Weekly Underw 156:1087-9+ Ap 19 '47

Coverage

Transportation insurance, why? J. Adam, jr. Management R 36:295-6 My '47

Finance

How the company groups stand on inland marine income in 1946; tabulations. East Underw 48:33-5 Mr 21 '47

INSURANCE, Inland marine—Finance—*Cont.*
Inland marine lines show large premium increases for 1946. East Underw 47:1+ D 20 '46
Inland marine premium writings for 1946 and comparisons for 1943-1945, with tabulation by company. East Underw 48:29+ Mr 21 '47
Inland marine premiums-losses for 1946; tabulation by company. East Underw 48:38+ Mr 21 '47
1946 inland marine premiums-losses; IMIB tables. East Underw 48:21 Ag 29 '47; Same. Nat Underw 51:17 Ag 14 '47

Policies

Bogus truckman; theft by impostor not covered by transit policy. Nat Underw 50:32 D 19 '46
Duration of risk under transportation floater policy. H. S. Daynard. Weekly Underw 156: 1144-6+ Ap 26 '47; Same abr. East Underw 48:27 Ja 17 '47; Same cond. Management R 36:111-13 F '47; Abstract. Nat Underw 51:4 Ja 16 '47
New named perils policy in Canada offered as substitute for PPF. East Underw 48:22 Jl 4 '47; Nat Underw 51:9 Jl 10 '47

Dealers' policies

California department makes floor plan ruling Weekly Underw 156:1654 Je 14 '47
Coverages and forms; all risks floor plan. Spectator (Property ed) 12:42-3 Mr 13 '47
Floor plan cover in California; Downey announces amendment to nationwide definition giving dealers broad coverage. East Underw 48:28 Je 20 '47
Floor plan floater. H. O. Molitor. East Underw 48:54+ O 17 '47
Floor plan insurance. G. W. Nixon. Rough Notes 90:26+ Je '47
Floor plan ruling issued by South Carolina department. Weekly Underw 156:1348 My 17 '47
Floor plan ruling made by Maine department. Weekly Underw 156:341 F 1 '47; East Underw 48:28 Ja 31 '47
Georgia commissioner rules on floor plan insurance. Weekly Underw 156:805 Mr 22 '47
Inland marine floor plan rates forms issued; single and double interest cover available on reporting basis. Nat Underw 51:11 F 6 '47; Same cond. East Underw 48:29 F 14 '47
Ten states permit floor plan sales. Nat Underw 51:2 Jl 3 '47

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Agents can bring PPF back to lower cost levels to public. E. M. Owen. East Underw 48:40 O 17 '47
Meaning of personal property in PPF analyzed. H. S. Daynard. East Underw 48:31+ O 24 '47
Outboard motors and boats insured on PPF. Rough Notes 90:43-4 Je '47
PPF proposals. Rough Notes 89:52-3 D '46; 90:48 Ja; 46-8 F; 38-40 S '47

Scheduled property floater

Insure medical equipment; physicians' and surgeons' instrument policy. Rough Notes 90:48 My '47

Stamp collection floater

Celebrate centenary of postage stamps; exhibition at International show in New York. W. Hay. il Weekly Underw 156:1470-1 My 31 '47

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Holds national experience proper for rating inland marine. H. L. Wayne. East Underw 48:28 S 26 '47; Abstract. Nat Underw 51: 19A S 18 '47
Opposes uniform inland marine conditions. W. H. Rodda. Nat Underw 51:9 S 18 '47
P.P.F. minimum raised in Ontario and Quebec. Nat Underw 51:7 My 15 '47
PPF rate increase not likely now; insistence by underwriters on 80% to value is getting results. Nat Underw 50:9 N 21 '46
PPF rate increases forecast in Canada but not in the U.S. East Underw 48:1+ Ap 4 '47
PPF rates boosted 25 per cent, minimums are increased. Nat Underw 51:1+ S 11 '47; Weekly Underw 157:606+ S 13 '47

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Inland marine insurance bureau approved by 15 states. Nat Underw 51:4 Ag 14 '47

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New named perils policy in Canada offered as substitute for PPF. East Underw 48:22 Jl 4 '47

INSURANCE, Jewelers' block
Assured not relieved at trial of suit of providing details of loss; Clements against St Paul fire & marine insurance company. East Underw 48:20 Ag 29 '47
Jewelers' block decision; court holds assured does not have to prove accuracy of statements of outside persons. East Underw 47: 28 N 22 '46
What is an unexplained shortage? H. S. Daynard. Weekly Underw 156:1624-6 Je 14 '47; Same. East Underw 48:22 Ag 8 '47; Excerpt. Nat Underw 51:4 Je 12 '47

INSURANCE, Leasehold
Gives counsel on insurance and hotel lease contract. F. W. Eckert. Nat Underw 51: 14D S 4 '47

INSURANCE, Liability
All insurers are scrutinizing hotel public liability risks. Nat Underw 50:17+ D 19 '46
Insurance soil fertilized by Saturday Evening Post liability article. Nat Underw 51:8 Je 12 '47
Interests that may be combined for comprehensive liability insurance; meaning of term legal entity. East Underw 47:36 D 27 '46
Liability by contract. J. J. Timmons. Rough Notes 90:19+ F '47
Medical payments for all risks in new general liability manual; other details. A. E. Spottke. Nat Underw 51:25+ Ap 24 '47; Same cond. Weekly Underw 156:1148+ Ap 26 '47; Same cond. East Underw 48:47+ Ap 25 '47
Much interest in Purdue University accident. Nat Underw 51:14 F 27 '47
Revise general liability rates and rules; complete editions of manuals being distributed. Weekly Underw 156:1480+ My 31 '47; Same. East Underw 48:29+ My 30 '47; Same. Rough Notes 90:17+ Je '47; Same cond. Nat Underw 51:15+ My 29 '47
Several changes are made in liability manuals. Nat Underw 51:24+ O 9 '47
Sympathy or service; liability insurance is service for the assured. C. K. Waters, jr. Spectator (Property ed) 13:16-19+ S 25 '47
Teachers held liable for student injuries; insurance to cover instructors under state law in Connecticut. Weekly Underw 155: 1200 N 16 '46
What the courts say about contractual liability; indemnity clauses. R. L. Ismond. Rough Notes 90:20+ Jl '47
When will you be sued? abstract. H. Hoover. East Underw 48:28 Ap 4 '47

See also

Insurance, Airport public and property damage liability
Insurance, Automobile
Insurance, Contractors' public liability
Insurance, Elevator
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Adjustment of claims

Contract to defend action; Howard v. Massachusetts Bonding; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 34-6 F 13 '47

Delay of forty-six days in giving written notice of accident bars recovery under liability policy. Weekly Underw 156:1589 Je 7 '47

Difference between occurrence and accident shown; Howard vs. Massachusetts Bonding. Nat Underw 51:20 Ja 30 '47

Illinois court victory for liability companies; Supreme court cuts down asking jurors about interest in insurance company. Nat Underw 51:21 Mr 27 '47

Public liability insurance; operating a fumigating business using hydrocyanic gas; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11+ My 8 '47

Agents

Agents have done poor job in selling comprehensive liability; abstracts. F. W. Potter. East Underw 48:38 F 28 '47; Nat Underw 51:11 F 20 '47

Comprehensive personal liability sold by direct mail and personal follow-up. W. H. Atkins. East Underw 48:38 Je 20 '47

Improved prospects for comprehensive. W. J. Bremer. Nat Underw 51:26 Ap 3 '47

Policies

Analyzes 1947 proposed model policy; abstracts. F. J. Marryott. East Underw 48: 29+ My 2 '47; Nat Underw 51:23+ My 1 '47

Buyers' proposal to broaden liability form; Risk research institute committee gives ideas for general liability policy. Nat Underw 51:23+ My 1 '47

Coverages and forms; comprehensive general liability policy. Spectator (Property ed) 13:8-9 S 25 '47

Coverages and forms; comprehensive personal liability policy. Spectator (Property ed) 12:8-9 Je 26 '47

Era of great expansion ahead for comprehensive liability line. F. Dey. East Underw 48:29 Jl 4 '47

Innkeepers' liability policy. Rough Notes 90: 70 Ap '47

Liability insurance, basic and supplemental coverages. Spectator (Property ed) 13:8-9+ Ag 7; 8-9 Ag 21; 8-9 S 11; 8-9 S 25 '47

Rates

Here it is; all about (or nearly all about) plan D. Nat Underw 51:23 S 25 '47

Need interstate treatment; urges overall retrospective rating; abstracts. W. J. Heinrich. Nat Underw 51:30 F 20 '47; East Underw 48:40 F 21 '47

Plan D proposal; optional interstate high-low scheme for all third party lines. C. J. Haugh. Nat Underw 51:29+ S 18 '47

Retrospective plan D to be filed shortly; applies to interstate risks. East Underw 48: 37+ O 10 '47

Statistics

Number of suits outstanding per $100,000 of earned premiums; total second period liability (including automobile) business, Dec. 31, 1946 and comparisons for other periods; tabulation by company. Spectator (Property ed) 13:24 O 9 '47

INSURANCE, Life

Achievements in 1946; address before Life insurance association of America. D. A. Satterfield, jr. Spectator (Life ed) 154:19-20+ D '46; Same abr. Nat Underw (Life ed) 50: 9+ D 20 '46; Same cond. Weekly Underw 155:1438+ D 14 '46; Excerpts. East Underw 47:4 D 20 '46

Combined American insurance co. enters life field. East Underw 47:8 D 20 '46

Current opportunities. H. E. Rust. Spectator (Life ed) 154:18-21+ Je '47

1896-1946; the actuarial view. P. Shepherd. Nat Underw 50th anniv no:237-41 1947

Favorable trends in life insurance for 1947. H. J. Johnson. East Underw 48:15 Ja 3 '47

Inter-Ocean will now write life insurance. Weekly Underw 155:1552 D 28 '46; Same cond. Nat Underw 50:25 D 26 '46; Same cond. Nat Underw (Life ed) 50:19 D 27 '46

John Newton Russell award winners. East Underw 48:10+ S 12 '47; Spectator (Life ed) 155:15 S '47

Last year's press clippings won't win this year's ball games; but are source of inspiration; Pittsburgh address. J. E. Rutherford. Life Ins Courant 52:88-92+ Mr '47; Same. Spectator (Life ed) 154:12-15+ F '47; Abstract. Nat Underw (Life ed) 51:1 F 21 '47

Life companies have stake in rating and fair trade. B. E. Shepherd. Nat Underw (Life ed) 51:17 My 16 '47

Life insurance achieved notable gains in 1946. C. C. Klocksin. Weekly Underw 156:104-6 Ja 4 '47; Same. Nat Underw (Life ed) 50: 2+ D 27 '46; Same. Life Ins Courant 52:8-11 Ja '47; Same. Spectator (Life ed) 154:8-11+ Ja '47; Excerpts. East Underw 47:3+ D 27 '46

Life insurance Hall of fame; announcement of John Newton Russell memorial award for outstanding service to life insurance. East Underw 48:3 Jl 11 '47

Life insurance in a new business era. L. A. Lincoln. Spectator (Life ed) 154:7-9+ D '46; Same. Comm & Fin Chr 164:3353+ D 26 '46; Same cond. Weekly Underw 155:1440+ D 14 '46; Excerpts. Nat Underw (Life ed) 50:1 D 13 '46

Life insurance is preparing for an increased responsibility. C. J. Zimmerman. Nat Underw 50th anniv no:248-50 1947

Life insurance philosophy. A. N. Mitchell. East Underw 48:3 O 24 '47

Life office management, 1897-1947. F. L. Rowland. Nat Underw 50th anniv no:82 1947

Metropolitan Life; a study in business growth. M. James. 480p bibliog(p457-64) pl $5 Viking Press, 18 E 48th St, N.Y. 17 '46

1947 market factors. D. B. Woodward. Spectator (Life ed) 154:26+ Ap '47; Same. Life Ins Courant 52:182+ My '47

Responsibilities of top management. G. W. Smith. Spectator (Life ed) 154:16-18+ D '46; Excerpts. East Underw 47:4 D 20 '46

Sees '47 challenge to life men. D. E. Satterfield, jr. Weekly Underw 156:92 Ja 4 '47

Vast growth of life insurance. D. L. Clarke. East Underw 48:10 Ja 3 '47

Year of consolidation predicted for 1947. C. J. Zimmerman. Weekly Underw 156:108-9 Ja 4 '47

See also

Annuities
Benefit societies
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Insurance, Industrial
Insurance, Military and naval service
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also American institute of actuaries; American life convention; American service bureau; Colonial life insurance company of America; Illinois bankers life assurance company; Institute of life insurance; John Hancock mutual life insurance company; Life insurance agency management association; Metropolitan life insurance company; New York life insurance company; Penn mutual life insurance company; Provident life and accident insurance company; Prudential insurance company of America; Western and southern life insurance company

Accounting

Mechanical brains; electronic machinery and potential insurance uses. E. C. Berkeley. Nat Underw (Life ed) 51:2 My 16 '47

Value of super-calculators. R. R. Seeber, jr Nat Underw (Life ed) 51:6 Ap 4 '47

Adjustment of claims

Claims in enemy occupied areas; with special reference to Pacific territories. J. N. Cunningham. East Underw 48;3 Mr 7 '47

INSURANCE, Life—Adjustment of claims—*Continued*
Consultation of physician as violation of sound health clause of life policy. Weekly Underw 155:1323 N 30 '46
Court finds limitation less limited than insurer thinks; not entitled to restricted meaning of term office building. Nat Underw 51:22 F 20 '47; Same. Nat Underw (Life ed) 51:19 F 21 '47
Equitable Society's handling of claims in Texas City disaster. East Underw 48:7 My 2 '47; Nat Underw 51:21 My 1 '47; Nat Underw (Life ed) 51:2 My 2 '47; Weekly Underw 156:1236+ My 3 '47
Hancock responsible for unissued policy, U.S. Circuit court decides; clauses intelligible only to trained insurance men cited as reasons. East Underw 48:17 Ap 11 '47
Letter giving notice of insured's death held compliance with policy requirement of due proof of death. Weekly Underw 157:243 Jl 26 '47
Life insurance policies under the Texas community property law. J. R. Wood. Nat Underw (Life ed) 51:31 O 10 '47
Life policy saving clause ruled out by U.S. court; case of Gaunt against John Hancock. E. J. Schmuck. Weekly Underw 157:120 Jl 12 '47
Names of dead and missing, Texas City, not all known yet; Metropolitan group on Monsanto employes. East Underw 48:1+ Ap 25 '47; Nat Underw (Life ed) 51:1 Ap 25 '47

See also
Insurance, Life—First year claims
Insurance, Life—War death claims
Insurance, Life—Suicide death claims

Advertising

Advertisers prepare for possible rainy day ahead; Eastern round table session of Life advertisers assn. Nat Underw (Life ed) 51:3+ Mr 21 '47; East Underw 48:10 Mr 21 '47
Advertising man looks at life insurance. H. C. Flower, jr. East Underw 48:8+ My 9 '47
Agents want more company publicity. Nat Underw (Life ed) 51:4 Je 27 '47
Direct-mail package of ad reprints and calendar blotters builds business for Penn Mutual's 360 agents. Ptr Ink 219:64+ Je 20 '47
$5,000,000 pay-off from mail campaign; New England Mutual Life. W. C. Gentry. il Sales Management 58:116+ Ja 15 '47
Greeting cards eighth LAA research project. East Underw 48:6 Jl 4 '47
Institute ad campaign to stress agents' service. Nat Underw (Life ed) 51:12 S 5 '47
Life insurance agents rank advertising as major need. Ptr Ink 220:77 Ag 15 '47
Maximums in motivation; life insurance advertising and sales promotion literature. K. H. Mathus. il Spectator (Life ed) 154: 30-4+ D '46; 22-5 Ja; 22-5+ F; 18-21+ Mr; 8-11+ Ap; 10-14+ My; 8-11+ Je '47
National advertising by companies growing in scope and effectiveness. P. Stamper. East Underw 48:24+ pt 2 O 3 '47
Until yesterday at 4:35 P. M; advertising booklet by H. D. Josephson; text. Spectator (Life ed) 154:18-19 Ap '47

See also
Life insurance advertisers association

Agency management

Advances in selling. J. M. Holcombe, jr. Nat Underw 50th anniv no:257-8+ 1947
Agency management problems eased by market research; abstracts. W. R. Jenkins. East Underw 48:6 O 10 '47; Nat Underw (Life ed) 51:1+ O 17 '47
Agency morale. V. B. Coffin. East Underw 48:8 Ap 11 '47
Antidote for higher expenses; ways of boosting production. T. G. Murrell. Nat Underw (Life ed) 51:17 Jl 4 '47
Avoid "I am" atmosphere. J. H. Jamison. Nat Underw (Life ed) 51:17 Ag 8 '47
Competitive race in selling insurance; management to blame for over-expansion in selling. O. J. Arnold. East Underw 47:1+ N 22 '46; Abstracts. Nat Underw (Life ed) 50:3+ N 22 '46; Weekly Underw 155:1206+ N 16 '46
General agent must build prestige for his producers. J. A. Hill. Nat Underw (Life ed) 51:16 Ag 1 '47
Guideposts to management success. H. S. Bell. Nat Underw (Life ed) Daily ed 51:8+ S 11 '47
How Home Life agents average $5,136 income. W. P. Worthington. Nat Underw (Life ed) 51:21+ Ap 11 '47
How to reduce turnover. R. B. Evans. Nat Underw (Life ed) 51:11 My 23 '47
How to uncover man's latent abilities. R. DePau, jr. Nat Underw (Life ed) Daily ed 51:6+ S 12 '47
Improve agency system; abstracts. C. J. Zimmerman. East Underw 47:5 N 15 '46; Nat Underw (Life ed) 50:2 N 15 '46
Limit seen to expansion of agency forces. S. Edmunds. Weekly Underw 156:112 Ja 4 '47
Management conference at Los Angeles develops ideas. Nat Underw (Life ed) 51:5+ Jl 18 '47
Management conference of NALU considers agent selection, training and supervision. Weekly Underw 156:1372 My 17 '47
Manager must sell to agents. P. B. Hobbs. Nat Underw (Life ed) 51:6 Ja 31 '47
Mutual Benefit's general agents meeting, Boca Raton, Fla. East Underw 48:3-4 Ap 11 '47; Nat Underw (Life ed) 51:8+ Ap 11 '47
Mutual Life agency heads confer at Hollywood, Florida. Nat Underw (Life ed) 51:3 Ap 4 '47
North California conference takes up management problems. Nat Underw (Life ed) 51: 2+ O 10 '47
Penn Mutual general agents meeting, Hot Springs, Va. East Underw 47:3 D 6 '46; Nat Underw (Life ed) 50:9+ N 29 '46
Planned process is essential in agency management. B. N. Woodson. Nat Underw (Life ed) Daily ed 51:8+ S 11 '47; Same abr. Spectator (Life ed) 155:29+ S '47
Problems confronting life insurance business. W. F. Hanselman. East Underw 47:4+ N 15 '46; Excerpts. Nat Underw (Life ed) 50:1+ N 15 '46; Weekly Underw 155:1202+ N 16 '46
Responsibilities of management theme of Chicago panel. A. Helle and others. Nat Underw (Life ed) 51:6 My 2 '47
Special meetings of agency staff aid as morale boosters. J. A. McNulty. Nat Underw (Life ed) 51:8 Ag 8 '47
Supervisor's job outlined. F. M. Bean. Nat Underw (Life ed) 51:12 My 23 '47
Systems of top agencies told Pennsylvania managers' group. O. Bethea and others. Nat Underw (Life ed) 50:5+ N 15 '46
Today's challenge to management. J. A. Stevenson. Spectator (Life ed) 154:26-9+ Je '47; Same. Life Ins Courant 52:318-22 Ag '47

See also
Life insurance agency management association

Costs

Laying the ground work for a cost control program. E. J. Moorhead. Spectator (Life ed) 155:28-9+ Jl '47
New York managers association eyes rising agency costs. Nat Underw (Life ed) 51:8 Je 6 '47

Agency managers

Every man a supervisor; men vie monthly for post of production manager. L. S. Broaddus. Nat Underw (Life ed) 50:6 N 15 '46
Good agents' contract prerequisite for adequate pay of managers. L. S. Morrison. Nat Underw (Life ed) 50:10 N 15 '46
Julius Selling agency celebrates 5th anniversary. Weekly Underw 155:1570-1 D 28 '46

INSURANCE, Life—Agency managers—*Cont.*
Manager's part in training. G. J. Spahn. Life Ins Courant 52:46-50+ F '47; Excerpts. East Underw 47:7 N 15 '46; Abstract. Nat Underw (Life ed) 50:22 N 15 '46
Praises both managers of agencies and their assistants. C. M. Shanks. East Underw 48:3-4 My 9 '47; Abstract. Nat Underw (Life ed) 51:22 My 9 '47
Urges professional standards for agency department heads. F. D. Russell. Nat Underw (Life ed) 51:30 O 10 '47

Agents

Adequate program of his own helps agent sell. C. H. Orr. Nat Underw (Life ed) 51: 6 O 3 '47
Agent has mobile phone; Sidney Weil of Cincinnati. Weekly Underw 156:240 Ja 18 '47
Agent of tomorrow. D. Dowell. il Spectator (Life ed) 154:15-17 Ap '47
Agents are bastion of freedom. W. P. Lynch. Nat Underw (Life ed) 51:22 My 23 '47
Agent's obligation. D. Warshawsky. il Spectator (Life ed) 154:35-8 D '46
Agents urged to be frank in discussing death with clients. H. Davis. Nat Underw (Life ed) 51:22 My 23 '47
Alter national quality award requirements. Nat Underw (Life ed) 50:2 N 15 '46
Aversion to selling as career noted in survey; what agents can do. G. A. Florez. Nat Underw (Life ed) 51:4 My 30 '47
Best agents are artists. P. L. Rohrer. Nat Underw (Life ed) 51:4+ O 10 '47
Blind agent of Aetna masters estate control the Braille way; A. S. Forman. East Underw 48:3+ Ja 17 '47
Brain power investment seen as important factor. G. R. Collins. Nat Underw (Life ed) 51:11 O 3 '47
Chicago millionaires tell some of their methods. P. W. Cook and others. Nat Underw (Life ed) 51:25+ Mr 14 '47
Chicago survey of agents' affairs wins local association approval. East Underw 48:1+ Mr 7 '47; Abstract. Nat Underw (Life ed) 51:1 Mr 7 '47
Custard pie days over for agent. C. Adams. Nat Underw (Life ed) 51:6 Ja 31 '47
Echoes from the 1947 million dollar round table; summaries of addresses. F. A. McMaster and others. Spectator (Life ed) 155: 18-22+ S '47
Emphasizes need for cultivating proper mental attitude. F. A. Ritchie. East Underw 48:12 Ag 15 '47
Even Russia has insurance agents. E. C. McDonald. East Underw 48:3+ My 23 '47
Explains his selling technique. C. P. Dawson. East Underw 48:5 Mr 7 '47
Five suggestions to make the most of an opportunity when the policy is delivered. Weekly Underw 157:1015 O 18 '47
Follow-ups count. M. L. Lane. Rough Notes 90:42-4 Jl '47
Get ready for increased resistance. C. J. Zimmerman. Nat Underw (Life ed) 50:12 D 6 '46
Gets the money; power of suggestion gets check with application. H. Davis. Nat Underw (Life ed) 51:23 S 5 '47
Gold book of life insurance selling. East Underw 48:11-151 pt 2 O 3 '47
How to get action at final interview. J. M. Bash. Nat Underw (Life ed) 50:13 D 6 '46
How to sell life insurance, by M. L. Lane; review. East Underw 48:8 F 21 '47
How to write million without being a salesman. H. S. Parsons. Nat Underw (Life ed) 51:10 S 19 '47
Insurance without agents not cheap. J. A. Stevenson. East Underw 48:1+ Je 13 '47
Knowledge, skill, equipment, prestige, assistance stressed. R. C. Johnson. Nat Underw (Life ed) 51:8 Ap 4 '47
Lauds efforts of life insurance men. J. W. Randall. Weekly Underw 155:1201 N 16 '46; Same cond. Nat Underw (Life ed) 50:3 N 15 '46
Life marketing not exact science. R. E. Evans. Nat Underw (Life ed) Daily ed 51: 16+ S 11 '47
Live in tomorrow. P. F. Clark. Nat Underw (Life ed) 51:2 Ap 18 '47; Correction. 51:6 My 16 '47
Magic of life insurance. C. B. Metheny. Spectator (Life ed) 154:18-20+ My '47
Main characteristics of million dollar round table salesmen shown in analysis. Weekly Underw 156:1170 Ap 26 '47
Merchandising life insurance. E. M. Schwemm. Nat Underw 50th anniv no: 270-2 1947
Million dollar round table list sets record; with roster of members. Nat Underw (Life ed) 51:2+, 8+ S 5 '47
Mutual Benefit's new Analagraph fits into coat pocket; mechanical device for use of agents. il East Underw 48:3+ O 3 '47
My most dramatic story of life insurance in action; Penn Mutual award winner. E. G. Branch. Spectator (Life ed) 154:16-17 My '47
N.Y. Life limits writing to licensed agents; will refuse business direct from managers or salaried workers. Weekly Underw 155: 1375 D 7 '46; Nat Underw (Life ed) 50:1 D 6 '46
1947 national quality award won by 4,962 agents. Weekly Underw 156:1651 Je 14 '47; Nat Underw (Life ed) 51:2 Je 13 '47
1947 sales slants. L. L. Joseph. Spectator (Life ed) 154:15-16+ My '47
1947 struggle for markets. W. R. Jenkins. Spectator (Life ed) 154:8-11+ Mr '47
Picture million dollar producer in action. R. Stever and others. Nat Underw (Life ed) Daily ed 51:38-9+ S 10 '47
Put life insurance selling on business basis. D. A. Kaufman. Nat Underw (Life ed) Daily ed 51:5+ S 11 '47
Read it and sweep; selling over and over again. M. L. Lane. Rough Notes 90:43-5 F '47
Reviews market changes. L. J. Ackerman. Nat Underw (Life ed) 51:16 F 28 '47
Revision of N.A.L.U. guiding principles statement offered; agency practices committee submits new draft at Milwaukee mid-year meet. Nat Underw (Life ed) 51: 1+ Mr 14 '47
Sales plans which by-pass agent unfair. W. P. Worthington. East Underw 48:4 Jl 4 '47
Sees bright future. C. O. Fischer. Nat Underw (Life ed) 51:2 Mr 21 '47
Should life agents be learned in the law? W. F. Haldeman. East Underw 48:38+ pt 2 O 3 '47
Social security for agents. J. Carson; J. Utter. Nat Underw (Life ed) 50:20 D 6 '46
Stresses agents' four-fold responsibility. R. Hull. Nat Underw (Life ed) 51:20 S 5 '47
Success as a salesman. A. D. Panet. Spectator (Life ed) 154:21+ My '47
Three prestige builders. M. L. Lane. Rough Notes 90:44-6 Ja '47
Two cases a week vitally important. H. R. Smith. Nat Underw (Life ed) 51:2 My 16 '47
U.S. Life's outstanding producer, Takao Yamauchi. East Underw 48:9 My 2 '47
Vital role of agents. O. J. Arnold. Nat Underw (Life ed) 51:17 Ap 25 '47
Warns against ducking business, taxation coverages. W. J. Wheeler. Nat Underw (Life ed) 51:4 S 19 '47
What's prestige? M. L. Lane. Rough Notes 89:38+ D '46
When your company says, no; cases refused by the home office. R. E. Imig. Life Ins Courant 52:176-81 My '47
Years have proved soundness of agency system and protection. D. Dowell. Nat Underw 50th anniv no:227-8 1947

See also
Insurance, Life—Prospects
Trust companies—Life underwriters' cooperation
also Life underwriters association of the city of New York; National association of life underwriters

Approach

Agent makes sales to husband through appeal to wife. Nat Underw (Life ed) 51:26 S 5 '47
Approaching doctors and dentists. Nat Underw (Life ed) 50:11+ D 13 '46

INSURANCE, Life—Agents—Approach—*Cont.*
Balanced estates. F. S. Darrell. East Underw 47:18 N 29 '46
Five usable sales ideas. M. Lane. Nat Underw (Life ed) 51:10 Ap 18 '47
Method of approach. L. L. Lifshey. East Underw 48:15 My 30 '47
Personal sinking fund sells business men for New York man. P. B. Fleming. Nat Underw (Life ed) 51:8 Jl 18 '47
Six vital points. F. M. See. Nat Underw (Life ed) 51:21 Mr 28 '47
Slow but sure. R. Leitman. Spectator (Life ed) 155:59 S '47
Social security opportunities for the underwriter. Life Ins Courant 52:103+, 148-9, 230, 415-16 Mr-Ap, Je, O '47
Tax approach. P. F. Millett. Nat Underw (Life ed) 51:8 Mr 7 '47

Commissions

Broaden 60 cents fee plan of Provident Mutual. East Underw 48:11 O 24 '47
Commissions should go to man designated in contract, Arkansas court declares; Yarrington vs. John Hancock. Nat Underw (Life ed) 51:16 My 30 '47
Hit national lethargy; Detroit report backs theory that compensation study begins at home. Nat Underw (Life ed) 51:6+ Je 20 '47
Indianapolis association of general agents and managers adopts resolutions on compensation. Nat Underw (Life ed) 51:1+ Ag 29 '47
N.A.L.U. compensation report is altered. Nat Underw (Life ed) Daily ed 51:6 S 12 '47
N.A.L.U. urged to study career agent pay; committee proposes continuing work in basic research. Weekly Underw 156:782-3 Mr 15 '47
New York agent sues reneging applicant for commission; Monat vs. Ettinger. Nat Underw (Life ed) 51:3 Ap 11 '47
Pensions will outweigh vesting with new agents. H. K. Nickell. Nat Underw (Life ed) 51:8 S 19 '47
State Farm Life's new plan for compensation. East Underw 48:14 Ap 25 '47

See also
Insurance, Industrial—Agents—Salaries and commissions
Insurance, Life—Agents—Salaries

Company relations

Agents' benefits; NALU committee lists companies with pensions, group, service fees. Nat Underw (Life ed) 51:7 Je 6 '47
Berkshire Life's new career agents contract. East Underw 48:12 F 21 '47; Nat Underw (Life ed) 51:8 F 14 '47; Weekly Underw 156:492 F 15 '47
Book on new agent financing by Agency management association shows most companies have plans under which home office bears all or part of cost. East Underw 48:13 My 23 '47
Confidence game; questions, answers and recommendations based on the job opinion and job satisfaction surveys conducted by the Life insurance agency management association. C. J. Zimmerman. Spectator (Life ed) 155:24-7+ Jl '47
Home Beneficial Life loses labor case in high court. Nat Underw (Life ed) 51:6 Ja 17 '47
Indianapolis association of general agents and managers adopts resolutions on compensation. Nat Underw (Life ed) 51:1+ Ag 29 '47
Investigating job satisfaction. D. E. Lynch. Management R 36:325-8 Je '47
Life men more satisfied with jobs than average of those in other businesses. S. Habbe. Weekly Underw 156:107+ Ja 4 '47
NALU compensation subcommittee fires thick questionnaire at companies. Nat Underw (Life ed) 51:1 Jl 11 '47
State Farm Life's new plan for compensation. East Underw 48:14 Ap 25 '47

Conventions

Illinois association of life underwriters annual meeting, Chicago. Nat Underw (Life ed) 51:4 My 2 '47
Iowa association of life underwriters annual meeting, Des Moines. Nat Underw (Life ed) 51:10 My 23 '47
Kansas association of life underwriters annual meeting, Topeka. Nat Underw (Life ed) 51:4 My 23 '47
Missouri life underwriters association annual meeting, Kansas City. Nat Underw (Life ed) 51:8+ My 23 '47
New York state association of life underwriters annual meeting, Buffalo, May 9-10. East Underw 48:16 My 16; 13 My 30 '47; Nat Underw (Life ed) 51:3 My 16 '47
Ohio association of life underwriters; annual meeting, Columbus. East Underw 48:13 My 16 '47; Nat Underw (Life ed) 51:7 My 16 '47
Pennsylvania state association of life underwriters annual convention, Harrisburg. Nat Underw (Life ed) 51:3+ Je 27 '47
Texas association of life underwriters annual meeting, Houston, June 5-7. Nat Underw (Life ed) 51:9+ Je 13 '47
Virginia association of life underwriters annual meeting, Old Point Comfort. Nat Underw (Life ed) 51:16 Je 13 '47
Wisconsin association of life underwriters annual meeting, Sheboygan. Nat Underw (Life ed) 51:14 Je 20 '47

Legal status

Agents' social security status may go to court. W. Montgomery. Nat Underw (Life ed) 51:15 F 28 '47
Agents' SS status still moot despite recent decisions. Nat Underw (Life ed) 51:9 Jl 18 '47
Clarification is awaited of agents' tax issues; question of expense deduction allowances and status as independent contractor. Nat Underw (Life ed) 51:9 Mr 14 '47
Deny job cover in Pennsylvania to commission-compensated agents. Nat Underw (Life ed) 51:24 Ja 31 '47
Employe concept greatly broadened by U.S. Supreme court decisions. Nat Underw (Life ed) 51:21 Je 20 '47
Few commission agents apply for social security; Dec. 31 deadline for establishing full OASI coverage. Nat Underw (Life ed) 50:1+ D 27 '46
Social security covers full time Security Mutual agents. F. D. Russell. East Underw 48:5 F 7 '47; Same. Weekly Underw 156:422 F 8 '47
State Farm agents began social security payments in 1945. Nat Underw (Life ed) 51:4 F 21 '47
Treasury rules Security Mutual agents under social security. Nat Underw (Life ed) 51:1+ F 7 '47

Letters to prospects

What makes direct mail click? G. E. Speakman. Spectator (Life ed) 154:33+ Ja '47
Winslow Russell introduced use of direct mail. C. M. Cartwright. Nat Underw 50th anniv no:82+ 1947

Part-time agents

Career agents seek action on problem of part-timers. Nat Underw (Life ed) 51:3+ O 17 '47
Idea of part timer ban gains strength; company sentiment leans to ending employment in places over 10,000. Nat Underw (Life ed) 51:3 Ag 15 '47

Pensions

Agents' benefits; NALU committee lists companies with pensions, group, service fees. Nat Underw (Life ed) 51:7 Je 6 '47
Atlantic Life starts its retirement plan. East Underw 48:10 Ap 11 '47; Nat Underw (Life ed) 51:6-7 Ap 11 '47
Hit national lethargy; Detroit report backs theory that compensation study begins at home. Nat Underw (Life ed) 51:6+ Je 20 '47
Pension plans called open field for revision. D. B. Maduro. Nat Underw (Life ed) Daily ed 51:13 S 12 '47
Pensions will outweigh vesting with new agents. H. K. Nickell. Nat Underw (Life ed) 51:8 S 19 '47

INSURANCE, Life—Agents—Pensions—*Cont.*
Tax recommendations of two life organizations include agents' pension plans. Weekly Underw 157:295 Ag 2 '47

Public relations

Agent's part in public relations. A. B. Wood. East Underw 48:13 Ap 25 '47
W. E. North employs publicity on the agency level; experience of northern Illinois manager for New York Life. Nat Underw (Life ed) 51:6 Ag 22 '47

Salaries

Salary contracts for field representatives; Guardian Life plan. J. A. McLain. East Underw 48:3+ Ag 29 '47; Same. Weekly Underw 157:502-4 Ag 30 '47; Excerpts. Nat Underw (Life ed) 51:1+ Ag 29 '47

Sales conventions

Aetna Life's regionnaires, western conference, Lake Tahoe. East Underw 48:3 Je 27 '47
Continental Assurance regional Pyramid club convention, Atlantic City, Sept. 11-12. East Underw 48:3+ S 19 '47
Getting back to work is stressed at Boston association of life underwriters sales congress. Nat Underw (Life ed) 51:9 Mr 28 '47
Important ideas advanced at Chicago sales congress. P. B. Hobbs and others. Nat Underw (Life ed) 51:1 My 2 '47
Jamison & Phelps agency holds annual sales congress. Nat Underw (Life ed) 51:14 Ja 17 '47
John Hancock's agents' association convention, Ottawa, Canada. East Underw 48:3+ S 5 '47; Nat Underw (Life ed) 51:6+ S 5 '47
Many sales tips at Peoria congress. Nat Underw (Life ed) 51:19 Mr 28 '47
Massachusetts Mutual agents association convention, Atlantic City. East Underw 48:1, 3-5+ Je 20 '47; Nat Underw (Life ed) 51:1+ Je 20 '47
N.A.L.U. sales congress at Milwaukee. Nat Underw (Life ed) 51:3+ Mr 21 '47
Northwestern Mutual agents association annual meeting, Milwaukee. East Underw 48: 1, 3-4 Jl 25 '47; Nat Underw (Life ed) 51: 1+ Jl 25 '47
Northwestern Mutual's eastern regional meeting, New York. East Underw 48:3 Ja 10 '47; Nat Underw (Life ed) 51:3+ Ja 10 '47
Oklahoma life underwriters association annual sales congress, Oklahoma City. Nat Underw (Life ed) 51:3 F 7 '47
Provident Mutual regional meeting, French Lick Springs, Indiana. East Underw 48:4 S 5 '47; Nat Underw (Life ed) 51:10+ S 5 '47
Provident Mutual round table at Palm Beach. East Underw 48:17 Mr 28 '47; Nat Underw (Life ed) 51:3+ Mr 28 '47; Weekly Underw 156:912+ Mr 29 '47
Sales skit main feature of Cleveland congress. Nat Underw (Life ed) 51:12 F 28 '47
State Mutual Life victory conference, Hot Springs, Va. East Underw 47:3-5+ N 29 '46
Wisconsin National's field convention, Oshkosh. East Underw 48:5+ My 30 '47

Selection

Chicago canvass indicates recruiting torrent has slowed down to a trickle. Nat Underw (Life ed) 50:9+ N 15 '46
Drop in life insurance agent recruiting noted by survey; high turnover persists. Weekly Underw 156:702 Mr 8 '47
How he finds, trains men with gray matter. R. E. Myer. Nat Underw (Life ed) 50:27 D 6 '46
Ideal agency recruit. H. R. Smith. Nat Underw (Life ed) 51:16 Je 20 '47
L.I.A.M.A. survey shows current recruiting off 7%. Nat Underw (Life ed) 51:1 S 12 '47
L.I.A.M.A. to keep five year tab on recruits. Nat Underw (Life ed) 51:8 Mr 14 '47
Metropolitan refines selection; pursue research on tests to predict success. Nat Underw (Life ed) 50:2 D 20 '46
New York managers find many good men are available. Nat Underw (Life ed) 51:26 S 5 '47
Program of long-range objectives recruiting aid. C. W. Campbell. Nat Underw (Life ed) 51:5 Ag 1 '47
Recruiting subsides, new agents' sales rise, L.I.A.M.A. reports. Nat Underw (Life ed) 50:2 D 6 '46
Success of aptitude tests. W. B. Cornett. East Underw 48:122 pt 2 O 3 '47
Tests of agents are resumed by Life insurance agency management assn. Nat Underw (Life ed) 51:2 F 21 '47
What agents need today. R. E. Myer. East Underw 47:15 N 15 '46

Service

Adviser-client relation between agents and public is basis of American system. H. G. Kenagy. Weekly Underw 156:28+ sec 2 My 10 '47
American insurance agents started programming in 1832. J. O. Stalson. East Underw 48:30 pt 2 O 3 '47
Audits, surveys, digests? M. L. Lane. Rough Notes 90:40-2 Ag; 34-5+ S; 52-4 O; 42-4 N; 38-40 D '47
Double duty dollars for small policyholders; professional service. A. W. Swain. East Underw 48:142 pt 2 O 3 '47
Method of service. H. B. Normand. East Underw 47:4+ N 29 '46
Moving pictures from real life. P. Easley. Spectator (Life ed) 154:16-19+ F '47
Programming opportunities. Life Ins Courant 52:59-60 F '47
Real chance to expand life service; address before NALU convention. P. F. Clark. Weekly Underw 157:645+ S 13 '47
Seattle hospital story shows how life insurance aids a community; policy proceeds help build endowment fund. W. E. Schneider. Nat Underw 50th anniv no:90+ 1947
Service is prospecting. S. L. Wolkenberg. Spectator (Life ed) 154:29-31+ My '47

Training

Agency training. H. W. Persons. East Underw 48:11 My 16 '47
Commonwealth Life adopts army's standard operating procedure. B. N. Woodson. Nat Underw (Life ed) 50:8 N 15 '46
Company training programs. H. P. Gravengaard. Nat Underw (Life ed) 51:9 Ja 31 '47
Counsels managers to create personal objectives for agents. W. W. Hartshorn. Nat Underw (Life ed) 50:2 N 29 '46
How T.W.I. works successfully in agency practice. R. E. Murphy. Nat Underw (Life ed) 50:10 N 15 '46
Institute survey bares need for employee training. R. D. Kip. Nat Underw (Life ed) 51:1+ S 5 '47
Intermediate trainer; Zalinski named director of joint institutional plan. Nat Underw (Life ed) 51:8 Mr 14 '47
Joint field work keystone of Metropolitan's program. K. H. Kreder. Nat Underw (Life ed) 51:10 F 14 '47
Managers more dubious on vet training subsidy. Nat Underw (Life ed) 51:18 Jl 4 '47
Manager's part in training. G. J. Spahn. Life Ins Courant 52:46-50+ F '47; Excerpts. East Underw 47:7 N 15 '46; Abstract. Nat Underw (Life ed) 50:22 N 15 '46
Modern training of agents. B. N. Woodson. Nat Underw 50th anniv no:182 1947
Monarch Life opens new college at Springfield for its field men. il East Underw 48:30 O 3 '47; Nat Underw (Life ed) 51:7 S 26 '47
Mutual Life uses Audograph in perfecting sales talks. Nat Underw (Life ed) 51:24 Ap 18 '47
Northwestern Mutual Life starts series of new career schools. il East Underw 48:18 F 21 '47; Nat Underw (Life ed) 51:4 F 28 '47
Training of men. V. B. Coffin. East Underw 47:6 N 22 '46
Training program. W. W. Hartshorn. East Underw 48:10-11 My 16 '47
Training the new man. R.N. Lewis. Spectator (Life ed) 154:28-30 F '47

INSURANCE, Life—Agents—Training—*Cont.*
Training within industry seminar of Life insurance agency management association. Spectator (Life ed) 154:9+ N '46
See also Life underwriter training council

Women agents

Enjoys meeting strangers. J. M. Frank. Weekly Underw 157:345 Ag 9 '47
Four applications a week for 12 years, Muriel F. Briggs record. Nat Underw (Life ed) 51:5 Ag 1 '47
Life selling has become a profession for women. E. M. Putnam. Nat Underw 50th anniv no:229-30 1947
Million dollar writer's widow finds it stimulating to sell. E. V. Levy. East Underw 48:4+ Je 13 '47
1947 women's quarter million qualifiers. East Underw 48:13 Ap 4 '47
Sales-slanted excerpts from what the ladies had to say at Boston. L. L. Joseph and others. Spectator (Life ed) 155:23-7 S '47
Women find it easy to write men. M. Divver. East Underw 48:68-9+ pt 2 O 3 '47
Women's quarter million table now totals 78. East Underw 48:15 Je 27 '47; Nat Underw (Life ed) 51:3 Je 27 '47

California

Life agents given greater leeway in California pension cases. Nat Underw (Life ed) 51:5 O 10 '47

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Applications

Applicants declined and accepted in 1946. Weekly Underw 156:10 sec 2 My 10 '47

Aviation risks

Appeals court defines aeronautic flight; Raymond Clapper case. East Underw 47:11 D 6 '46
Appraises aviation risks. C. F. Harris. East Underw 47:16 N 29 '46
Atlantic Life adopts new aviation program. Spectator (Life ed) 154:62 D '46
Aviation exclusion clauses in insurance contracts and the trend towards court interpretations which nullify these restrictions on air travel. C. S. Rhyne. Weekly Underw 156:1495 My 31 '47
Aviation underwriting; summary of recent changes. Life Ins Courant 51:550-1 D '46
Connecticut General aviation underwriting revised. Life Ins Courant 51:514 N '46
Connecticut Mutual aviation and military underwriting regulations revised. Life Ins Courant 52:106 Mr '47
Fatality record still good; air crashes haven't changed underwriting attitude. Nat Underw (Life ed) 51:3 Ja 31 '47
Incontestability clause doesn't bar defense that death in airplane crash not covered by life policy. Weekly Underw 156:1309 My 10 '47
Insurer by invoking aviation rider does not contest but insists upon policy; Rossman v. Metropolitan Life. Weekly Underw 157:406 Ag 16 '47
Liberalization in life insurance attitude towards air line passengers continues. Weekly Underw 156:352 F 1 '47; East Underw 48:1+ Ja 31 '47
Life insurance recognition of lower airline fatality rate; comparison of rates and fatalities for 1935, 1940 and 1945-1946; chart. Life Ins Courant 52:164 Ap '47
New York Supreme court holds unsigned unattached rider is ineffective; Blatz et al. vs. Travelers. Nat Underw (Life ed) 51:8 Ap 18 '47
Overseas air travel insurance better. Aviation N 7:33 My 12 '47.
Pacific Mutual aviation rules. Nat Underw (Life ed) 51:7 Ap 25 '47
Penn Mutual aviation underwriting rules revised. Life Ins Courant 51:558 D '46
Prudential eases double indemnity clause; to cover all air passengers. East Underw 48:9 Ja 17 '47; Nat Underw (Life ed) 51:19 Ja 17 '47; Nat Underw 51:26 Ja 16 '47; Weekly Underw 156:229 Ja 18 '47
Restriction of coverage in aviation rider not conflicting with Delaware statutory incontestable clause. Weekly Underw 155:1466 D 14 '46
Slight improvement in airline pilot fatality rate. J. E. Hoskins. Nat Underw 51:24 My 15 '47; Same. Nat Underw (Life ed) 51:6 My 16 '47
Standard insurance now common in air travel. Bsns W p76+ My 24 '47
Survey conducted by Institute of life insurance shows constant aviation liberalization. Weekly Underw 156:1233 My 3 '47; Nat Underw (Life ed) 51:6 My 2 '47; East Underw 48:15 My 2 '47
Western and Southern aviation underwriting rules. Life Ins Courant 51:517-18 N '46

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We have with us today; some interesting personalities in the life insurance business; their careers and backgrounds. pors East Underw 47:10-11+ D 13 '46

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Concealment of heart attack suffered prior to delivery of life policy ground for cancellation. Weekly Underw 156:1379 My 17 '47

Children's policies

Institute notes smaller juvenile percentage in 1946. Nat Underw (Life ed) 51:9 F 28 '47
Juvenile experience. R. S. Rust. East Underw 48:3 My 30 '47
Juvenile life sales increase during 1946. East Underw 48:16 Mr 14 '47
Payor clauses; information on companies practices; tabulation. Life Ins Courant 51: 513 N '46
Return of premium juvenile form seems doomed. Nat Underw (Life ed) 51:9 Je 20 '47
See swing to juvenile contracts with full benefit at age one. Nat Underw (Life ed) 51:2 Jl 11 '47
When your energy runs low, it's time to concentrate on juvenile insurance. R. W. McWilliams. Spectator (Life ed) 154:26-7+ F '47

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Cost

Cost of income; tabulations by company showing income to wife cost study. Life Ins Courant 52:374-6 S '47
Cost of retirement; payments for income at 65 and cost of income at 65; with tabulations by company. Life Ins Courant 52: 418-20 O '47
Current scales; tables of average costs based on present dividend scales, for policies of ordinary life type. Life Ins Courant 52:236-9 Je '47
Low investment yields raise insurance cost. L. W. Douglas. East Underw 48:14 Mr 7 '47
Rising costs due to low interest. W. T. Grant. East Underw 48:9 Jl 4 '47
20-year histories; dividends actually paid on life policies issued in 1927; average yearly payments; net costs. Life Ins Courant 52: 330-3 Ag '47

Disability provisions

Annuity reserve strengthening; with tabulation by company showing 1946 figures for annuities, disability and double indemnity. Nat Underw (Life ed) 51:2+ Mr 14 '47
50 years of disability coverage. E. Ullrich. Nat Underw 50th anniv no:230-1 1947

INSURANCE, Life—Disability provisions—*Cont.*
Probably the first; disability clause appeared in 1889 policy of Security mutual life association. Nat Underw 50th anniv no:96 1947
Prudential takes off limit on premium waiver. Nat Underw (Life ed) 51:7 Je 27 '47
Renewal option not lost by disability payments. Nat Underw (Life ed) 50:7 D 6 '46

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Accident or suicide question for jury where insured found dead from carbon monoxide in garage. Weekly Underw 156:299 Ja 25 '47
Appeals court defines aeronautic flight; Raymond Clapper case. East Underw 47:11 D 6 '46
Assault factor defeats recovery; Equitable and Mutual Life vs. Mitchell. Nat Underw (Life ed) 51:3 F 28 '47
Dies in steam bath; no double indemnity award. Nat Underw (Life ed) 51:2 Ja 17 '47
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Pearl Harbor blow was war; no double indemnity. Nat Underw (Life ed) 51:6 Ja 24 '47
Prudential eases double indemnity clause; to cover all air passengers. East Underw 48:9 Ja 17 '47; Nat Underw 51:26 Ja 16 '47; Nat Underw (Life ed) 51:19 Ja 17 '47; Weekly Underw 156:229 Ja 18 '47
Scores courts' stretching of accident definition. J. G. Kelly. Nat Underw 51:26 S 25 '47; Same. Nat Underw (Life ed) 51:3+ S 26 '47
War at Pearl Harbor; New York life insurance co. v. Bennion. L. A. Burke. Spectator (Life ed) 154:64 D '46

Economic aspects

American thrift builds security. D. L. Clarke. Spectator (Life ed) 154:16-17 Ja '47; Same abr. Weekly Underw 156:116 Ja 4 '47
Changed world conditions demand new concepts. H. J. Johnson. Spectator (Life ed) 155:14 S '47
Credits insurance record to free enterprise system. A. B. Wood. Nat Underw (Life ed) 51:9 S 12 '47
Danger in Treasury control of interest rates; State Mutual letter to policyholders. G. A. White. East Underw 48:1+ Je 27 '47; Same abr. Nat Underw (Life ed) 51:2 Je 20 '47
Economic position of the American family; how life insurance bolsters its security. W. A. Berridge. Weekly Underw 156:14-15+ sec 2 My 10 '47
Economic security for every American. A. E. Patterson. Weekly Underw 156:32-3 sec 2 My 10 '47
Economic situation reviewed at New York field convention of Metropolitan Life. F. H. Ecker. East Underw 48:3+ F 21 '47
Evolution of money economy; shift from rural to urban living and to reliance on dollars has brought huge increase in life insurance volume. A. J. McAndless. Nat Underw 50th anniv no:197-9 1947
Good business ahead; greater use of life insurance. J. S. Thompson. East Underw 48:3-4 O 3 '47
High praise to anti-inflation crusade. A. Hansen. Nat Underw (Life ed) 51:10 F 14 '47
Life insurance in economic crises; with graphs. J. S. Thompson. Nat Underw 50th anniv no:40+ 1947
Life policy is antidote for communism. J. C. Benson. Nat Underw (Life ed) 51:7 Mr 28 '47
Prepare for adverse times now; lush business cannot last. W. E. Allyn. East Underw 48:8 Ap 18 '47
Scans future; means to finance heavy buying to continue. A. J. McAndless. Nat Underw (Life ed) 51:11 F 14 '47
Too much money. T. I. Parkinson. Comm & Fin Chr 165:1374+ Mr 13 '47; Abstracts. East Underw 48:18-19 Mr 14 '47; Nat Underw (Life ed) 51:23 Mr 14 '47

Educational endowment policies

College incomes. Life Ins Courant 52:280-2, 327-9 Jl-Ag '47

Employees' insurance

Deferred compensation plans open new vistas. Nat Underw (Life ed) 51:2 Ag 1 '47
Life insurance plans for funding employe benefits defended. F. R. Olsen. Weekly Underw 155:1262-3 N 23 '46
Special aspects of deferred compensation problems. G. Simons. East Underw 48:18 Ap 11 '47

Endowment policies

Seattle hospital story shows how life insurance aids a community. W. E. Schneider. Nat Underw 50th anniv no:90+ 1947

Estate protection

Analytical approach to estate planning. W. C. Abbey. Nat Underw (Life ed) 51:24 Mr 28 '47
Difference between estate analysis and estate planning. H. T. Powers. East Underw 48: 54+ pt 2 O 3 '47
Estate analysis in action; the lawyer and insurance advice. H. T. Powers. Trusts & Estates 85:195-8 S '47
Estate analysis method. R. B. Anthony. Nat Underw (Life ed) 51:7 Mr 21 '47
Estate planners of future must know what motivation means. S. Huber. East Underw 48:96-7 pt 2 O 3 '47
Estate planning tips. H. S. Redeker. Nat Underw (Life ed) 51:7+ F 21 '47; Excerpt. East Underw 48:15 F 21 '47
Functions of life insurance and annuities in estate planning. F. L. Morton. il Spectator (Life ed) 154:28-9+ D '46
How to sell estate planning. C. P. Dawson. Nat Underw (Life ed) 51:4+ Jl 18 '47
How to use facts in estate planning. J. M. Hammer. Nat Underw (Life ed) Daily ed 51:47-8 S 12 '47
Initiating an estate plan. E. J. Myers. Trusts & Estates 85:132-4 Ag '47
Lawyer and the underwriter. G. E. Lackey. Spectator (Life ed) 154:39+ D '46
Life called major factor in estate planning program. A. Hirst. Nat Underw (Life ed) 51:7 O 10 '47
Much estate planning is faulty on integration score. S. Huber. Nat Underw (Life ed) 51:11 O 24 '47
Programming small estates. E. L. Reiley. East Underw 48:98+ pt 2 O 3 '47
Role of insurance in settlement of estates. W. F. Haldeman. East Underw 48:3-4 Je 13 '47
St Louis forum considers joint tenancy; tax angles. M. A. Shattuck and others. Nat Underw (Life ed) 51:10+ Mr 21 '47
Typical estate plan; submitted at 1946 convention of Financial advertisers association. F. M. Flint. Trusts & Estates 84:298-301 Mr '47
Why I specialize in estate analysis. H. J. Kirkpatrick. Trusts & Estates 85:23-6 Jl '47
Will high taxes pass soon? use of life insurance as source of income eliminates tax burden. H. Rust. Life Ins Courant 52: 274-7 Jl '47

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Family income policies

Phoenix Mutual adds family income rider. Life Ins Courant 51:559 D '46
Start of family income contract. Nat Underw (Life ed) 51:19 Ap 25 '47

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Farm ownership of Metropolitan Life below $1,000,000. F. W. Ecker. East Underw 48:4 F 21 '47

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Farmers as prospects

Farmers good life insurance prospects. E. P. Connolly. Weekly Underw 156:497 F 15 '47; Same cond. East Underw 47:3 D 6 '46

Farmers' insurance opportunities. Life Ins Courant 52:284 Jl '47

Farmers will be good prospects for two more years, Equitable asserts. Nat Underw (Life ed) 51:9 Ap 25 '47

Finds selling farmers by air expeditious; C. R. Waggoner, Bankers Life of Nebraska agent. Nat Underw (Life ed) 51:8 My 2 '47

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Aetna changes to CSO basis; new rates and values; with tabulations. Life Ins Courant 52:240-4 Je '47

Aetna Life adopts C.S.O. basis. Nat Underw (Life ed) 51:19 Ap 25 '47

Annual statements hit all-time highs; excerpts from company reports. Spectator (Life ed) 154:24-6 Mr; 30-3 Ap '47

Annuity reserve strengthening; with tabulation by company showing 1946 figures for annuities, disability and double indemnity. Nat Underw (Life ed) 51:2+ Mr 14 '47

California results for 1946, new business and in force. Nat Underw (Life ed) 51:1+ Ap 4 '47

Company rankings in 1946 shown by assets, total income, premium income, insurance written, insurance gained, paid policyholders, ordinary in force and group in force; tabulation. Nat Underw (Life ed) 51:18-20 Je 27 '47

Connecticut Mutual changes to CSO 2.5 per cent; with tabulations. Life Ins Courant 52:422-3 O '47

Connecticut Mutual goes to 2½ per cent reserve basis; C.S.O. changes. Weekly Underw 157:844 O 4 '47; East Underw 48:1+ O 3 '47; Same. Nat Underw (Life ed) 51:3+ O 3 '47

Further particulars of new Ohio National Life CSO 2½% program. M. R. Dodson. Nat Underw (Life ed) 50:4+ D 27 '46

Guarantee Mutual adopts CSO 2.5 per cent reserves and values. Life Ins Courant 51: 553-4 D '46

Hardest are the first hundred million; tabulation by company, showing dates when peak volumes were reached. Nat Underw 50th anniv no:248 1947

Insurance gains; new-policy record in 1946. Bsns W p19 Ja 4 '47

Iowa figures for 1946, new business and in force; tabulation. Nat Underw (Life ed) 51:11 Mr 14 '47

John Hancock changes to CSO 2.5 per cent basis; all figures revised; with tabulations. Life Ins Courant 52:424-6 O '47

John Hancock policy revision; adopt CSO 2½% for rates and 2% for options. Nat Underw (Life ed) 51:1+ Jl 18 '47; Same. Spectator (Life ed) 155:62+ Ag '47; Same abr. East Underw 48:3+ Jl 18 '47

Life insurance aggregates, 1946; tabulation. Spectator (Life ed) 155:16-17 Ag '47

Life insurance companies; business of 1946 and condition December 31, 1946; tabulation. Weekly Underw 156:78-82 sec 2 My 10 '47

Massachusetts Mutual to adopt C.S.O. table, 2½% interest. Nat Underw (Life ed) 51:4 Je 20 '47

Massachusetts Mutual's new rates and rules; changing to C.S.O. 2½ per cent basis. Nat Underw (Life ed) 51:16 S 19 '47; Same. East Underw 48:1+ S 19 '47

Michigan results for 1946; new business and in force; tabulation. Nat Underw (Life ed) 51:5 Mr 28 '47

Misleading Reader's Digest article on old age security; incorrect statements about life companies. M. A. Linton. Life Ins Courant 52:272-3 Jl '47

Missouri 1946 figures, new business and in force. Nat Underw (Life ed) 51:2+ Ap 18 '47

Mutual Life, Canada; rates and values revised; tabulations. Life Ins Courant 52: 295-6 Jl '47

New York state results for 1946 and federal taxes; tabulation by company. Nat Underw (Life ed) 51:6 Mr 14 '47

1945 business, ordinary, group and industrial for New York and Oklahoma. Life Ins Courant 51:522 N '46

1946 business, ordinary, group and industrial for Arizona, Connecticut, Florida, Maine, Minnesota, Nevada, New Mexico, Oklahoma, Rhode Island, South Dakota, Utah and Vermont; tabulations. Life Ins Courant 52:250, 252-4, 256, 258 Je '47

1946 business, ordinary, group and industrial for Arkansas, Delaware, Michigan, Nebraska, New Jersey, Ohio, South Carolina and Tennessee; tabulations. Life Ins Courant 52:385-9 S '47

1946 business; ordinary, group and industrial for Colorado, Kentucky, Montana, North Dakota and Oregon; tabulations. Life Ins Courant 52:301-3 Jl '47

1946 business; ordinary, group and industrial for Indiana, New York and West Virginia; tabulations. Life Ins Courant 52: 344-5 Ag '47

1946 business, ordinary, group and industrial for Iowa, Massachusetts and New Hampshire; tabulations. Life Ins Courant 52:204, 206 My '47

1946 figures for Rhode Island, new business and in force; tabulation. Nat Underw (Life ed) 51:8 My 9 '47

1946 insurance results; new business and in force for Illinois, Minnesota, New Jersey and Pennsylvania. Nat Underw (Life ed) 51:11-13 Mr 21 '47

1946 results and comparison with 1945; new business and in force; tabulation by company. Nat Underw (Life ed) 51:4 Ja 17; 2 Ja 24; 8 Ja 31; 8 F 14; 11 F 21; 12 F 28 '47; 24 Mr 14 '47

North Carolina 1946 business, ordinary, group and industrial; tabulation. Life Ins Courant 52:437 O '47

North Dakota 1946 figures, new business and in force. Nat Underw (Life ed) 51:11 Jl 4 '47

Northwestern Mutual adopts CSO 2 per cent basis; all figures revised. Life Ins Courant 52:25-8 Ja '47

Northwestern Mutual contract changes based on 2% interest and C.S.O. table. M. J. Cleary. Nat Underw (Life ed) 50:10 D 27 '46

Northwestern Mutual goes on 2% basis for new business; adopts CSO table; American 3% for business in force. East Underw 47:1+ D 6 '46; Same. Nat Underw (Life ed) 50:1 D 6 '46

Ohio National adopts CSO 2.5 per cent basis January 1; other changes. Life Ins Courant 52:66-8 F '47

Ohio National switches to CSO table, 2½% interest. Nat Underw (Life ed) 50:4 D 20 '46

Ohio 1945 business, ordinary, group and industrial; tabulation. Life Ins Courant 51: 566 D '46

Ohio scores for 1946, new business and in force. Nat Underw (Life ed) 51:10-11 Ap 11 '47

Operating on modern mortality table basis. H. H. Peirce. East Underw 48:3-4 Je 20 '47

Ordinary business as of Dec. 31, 1945 and 1946; tabulation by company. Life Ins Courant 52:122 Mr '47

Ordinary, group and industrial ranking as of Dec. 31, 1946; tabulation by company. Life Ins Courant 52:162-3 Ap '47

Rank of leading life insurance companies on January 1, 1947 by insurance in force, new business paid for, premium income, payments to policyholders, admitted assets and surplus funds. Weekly Underw 156:1303-6 My 10 '47

Rate of interest payable in 1947 on dividends left to accumulate, withdrawable, not withdrawable, interest earned in 1946; tabulation by company. Spectator (Life ed) 154: 64 F; 64 Mr '47

Results of operations of life insurance companies, as of Dec. 31, 1946 and 1945; tabulation by company. Spectator (Life ed) 154: 34 F; 28-30 Mr '47

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Six months results of ordinary operations (excluding group) during first half of 1947 compared with first halves of 1946 and 1945; tabulation by company. Life Ins Courant 52:341 Ag '47
Succession of plus signs in 1946; excerpts from annual statements. Nat Underw (Life ed) 51:3 Ja 24; 2 Ja 31; 1+ F 7; 6+ F 14; 3 F 21; 2 F 28; 2 Mr 7; 15 Mr 14 '47
36 companies in 1896, and how they grew; comparison with 1945; tabulation. Nat Underw 50th anniv no:92 1947
U.S. insurers' Canadian record. Nat Underw (Life ed) 50:2 D 13 '46
Wisconsin figures for 1946, new business and in force; tabulation. Nat Underw (Life ed) 51:18 Ap 25 '47

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$24,140,000 paid in 1946 on 29,640 ordinary and industrial 1st-year deaths; with case histories. il Weekly Underw 156:3-8+ sec 2 My 10 '47

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Escaped convict status should be declared in application, court says. Nat Underw (Life ed) 51:5 Ja 17 '47
Fraud of soliciting agent in filling out application for life policy basis of estoppel of insurer. Weekly Underw 157:302 Ag 2 '47
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Health conservation service

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Education theme of National heart week. East Underw 48:16 F 7 '47
Metropolitan's nurses answer critical need. Nat Underw (Life ed) 51:2 O 24 '47
100 million nursing calls paid for by Metropolitan; service started in 1909. Weekly Underw 156:1714 Je 21 '47
Work of North American life insurance companies in improving public health. D. B. Armstrong. Weekly Underw 156:40-3 sec 2 My 10 '47

History

Broadened public responsibility; Armstrong investigation marked turning point in life insurance and its practices. H. J. Johnson. Nat Underw 50th anniv no:112+ 1947
What has happened in 100 years of life insurance. M. A. Linton. Nat Underw 50th anniv no:24-6 1947

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Income policies

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Investment value

Bequest opportunities; college graduating classes may insure each member with alma mater as beneficiary. Life Ins Courant 51: 547-8 D '46
Last message on life insurance. I. Bendiner. East Underw 47:1+ N 15 '46
Life insurance good property. W. E. Hays. East Underw 48:17 S 12 '47; Same. Spectator (Life ed) 155:27+ S '47; Same abr. Nat Underw (Life ed) Daily ed 51:16 S 11 '47
Life insurance leads as way of saving, University of Michigan poll shows. Nat Underw (Life ed) 51:19 S 5 '47
Non-profit opportunities; hospitals, colleges, and other non-profit institutions may insure lives of donors. Life Ins Courant 51: 507-8 N '46
What to do with surplus dollars. K. Wyard. Nat Underw (Life ed) 51:21 Mr 28 '47
Will high taxes pass soon; life insurance as a deferred income investment. H. Rust. Life Ins Courant 52:274-7 Jl '47

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British Prudential government holdings. G. L. Barstow. East Underw 48:9 My 2 '47
Capital vs. debt obligations; business has economic responsibility to aid in process of capital formation. G. T. Conklin, jr. Nat Underw 50th anniv no:187-8 1947
Coal as investment field. J. D. Francis. East Underw 48:7 O 24 '47
Common stocks as life insurance investments. R. F. Maine. Comm & Fin Chr 165:992+ F 20 '47; Abstracts. East Underw 48:4 Ja 31 '47; Nat Underw (Life ed) 51:1+ Ja 31 '47
Common stocks for life insurance companies. B. R. Smith. Comm & Fin Chr 164:1926+ O 17 '46; Same cond. Trusts & Estates 83:635-9 D '46; Abstract. Nat Underw (Life ed) 50:28 O 11 '46
Drop in yields hurts insurers. Bsns W p80+ Je 14 '47
$80 million in new security issues go to life companies; municipals again attractive. Nat Underw (Life ed) 50:13 D 27 '46
Explores idea of equities and reserve flexibility. H. C. Sauvain. Nat Underw (Life ed) 51:20+ O 10 '47
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42% of life company investments in 1946 put in securities of U.S. business firms; with tabulation. Weekly Underw 156:640 Mr 1 '47
GI loan experience. J. P. Fordyce. East Underw 48:8 Ap 4 '47
Insurance companies figure in big realty and loan situations. East Underw 48:6 Je 27 '47
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Insurance company private lending. W. W. Bodine. Comm & Fin Chr 165:740+ F 6 '47; Abstracts. Nat Underw (Life ed) 51:21 Ja 31 '47; East Underw 48:4 Ja 31 '47; Discussion. L. R. Engstrom. Comm & Fin Chr 165:1005 F 20 '47
Insurers take big share of A.T.&T. issue. Nat Underw (Life ed) 51:4 Mr 28 '47
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Investment legality of International Bank bonds by state classification. C. A. McLain. East Underw 48:3 Jl 18 '47
Investment opportunities in preferred stocks. R. F. Maine. Nat Underw (Life ed) 51:36 O 10 '47
Investment seminar at Indiana university is rated one of best. East Underw 48:1+ Jl 11 '47; Nat Underw (Life ed) 51:3+ Jl 11 '47
Investment situation. A. J. McAndless. East Underw 48:3+ Ap 4 '47
Lack of investment supply is dangerous. D. Bradshaw. Nat Underw (Life ed) 51:29 O 3 '47
Life companies invest heavily in business, industry. Nat Underw (Life ed) 51:27 S 5 '47
Life firms' security holdings top $35 billion. Barron's 27:38 S 1 '47
Life insurance invested funds aid all areas. East Underw 48:10 F 14 '47
Life insurance investments and inflation. T. I. Parkinson. Comm & Fin Chr 165:1003 F 20 '47

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Loan departments getting choosey in mortgage purchases. Nat Underw (Life ed) 51:12 Ja 10 '47
Low investment yields raise insurance cost. L. W. Douglas. East Underw 48:14 Mr 7 '47
Massachusetts commissioner O.K.s bill to widen investment base. Nat Underw (Life ed) 51:14 F 14 '47
Mortgage purchases up 60% in nine months. Nat Underw (Life ed) 50:23 D 6 '46
Much digging required to find good investments today. Nat Underw (Life ed) 51:14-15 F 21 '47
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$1,000,000 loan on 19,000 acre farm made by Prudential; Seabrook farms, Bridgeton, N.J. Weekly Underw 156:1571 Je 7 '47; East Underw 48:10 Je 6 '47
Outlets for life insurance investment. S. Edmunds. Harvard Bsns R 25 no 4:409-31 [Jl] '47; Excerpt. Nat Underw (Life ed) 51:2 Jl 11 '47
Program of investment research. J. J. O'Leary. East Underw 48:4 O 10 '47; Same cond. Nat Underw (Life ed) 51:17 O 10 '47
Prudential to extend farm mortgage lending. East Underw 48:6 Ap 4 '47
Retailers unload real estate; life insurance companies and colleges lead among buyers. Bsns W p48+ Ja 4 '47
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$10 billion for mortgages in five years predicted by First Boston corporation. Nat Underw (Life ed) 51:14 F 14 '47
Terms of non-marketable federal issue; life insurance maximum purchase under formula about $375 million. Nat Underw (Life ed) 51:3 S 12 '47
Trend of life insurance mortgage and security purchases, 1944-1946; chart. Life Ins Courant 52:164 Ap '47
U.S. to issue 2¼ per cent non-marketable long-term bond; designed for life companies and other industrial investors. Nat Underw (Life ed) 51:1 Ag 22 '47
Utilities will need $500 million yearly from investors. P. P. Stathas. Nat Underw (Life ed) 51:28-9 O 10 '47
Views on mortgage field. J. P. Fordyce. Nat Underw (Life ed) 51:14 Mr 28 '47
World bank bonds on market; insurance companies will buy many. East Underw 48:1+ Jl 18 '47
World bank hopes for life company aid. E. Meyer. Weekly Underw 155:1442+ D 14 '46; Abstracts. East Underw 47:4 D 20 '46; Nat Underw (Life ed) 50:3+ D 20 '46
Yield declines on life insurance investments in 1946, Institute of life insurance reports. Comm & Fin Chr 165:2855 My 29 '47; Same abr. East Underw 48:13 My 30 '47; Same cond. Nat Underw (Life ed) 51:1 My 30 '47; Same cond. Weekly Underw 156: 1496 My 31 '47

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Lapses and surrenders

Life insurance policy lapses increase in '46. East Underw 48:8 Jl 11 '47; Same cond. Nat Underw (Life ed) 51:1 Je 27 '47
Life policy lapse rate and business activity, 1900-1945; graph. Nat Underw 50th anniv no:234 1947
Penn Mutual lapse, surrender trend up; abstracts. M. Adam. Nat Underw (Life ed) 51:2 F 28 '47; East Underw 48:15 F 28 '47
Predicts slumps will have less effect on surrenders. V. Sundelson. Nat Underw (Life ed) Daily ed 51:22 S 11 '47
Ratio of lapses and surrenders for insurers licensed in New York up to 2.15%; tabulation by company. Nat Underw (Life ed) 51:6 Mr 14 '47
Surrenders and lapses increase; with figures for 1945 and 1946. Weekly Underw 156:34-5 sec 2 My 10 '47

See also
Insurance, Life—Policies—Non-forfeiture benefits

Lawyers' cooperation

Estate analysis in action; the lawyer and insurance advice. H. T. Powers. Trusts & Estates 85:195-8 S '47
Lawyer and the underwriter. G. E. Lackey. Spectator (Life ed) 154:39+ D '46

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See also
Association of life insurance counsel

Level premium

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Mathematics

Cash value graph. Life Ins Courant 52:192-3 My '47
Cash values; whole life, CSO 2.25 and 2%, NL; charts. Life Ins Courant 52:235, 282-3 Je-Jl '47
CSO values; whole life CSO 3%; with chart. Life Ins Courant 52:334-5 Ag '47
Deferred incomes; with tables. Life Ins Courant 52:194-7 My '47
How long an income? special tables give answers. Life Ins Courant 51:509-11 N '46
Mutual Benefit's new Analagraph fits into coat pocket; mechanical device for use of agents. il East Underw 48:3+ O 3 '47
Sample values; whole life, CSO 2.75%; table and chart. Life Ins Courant 52:380-1 S '47
Sample values, whole life, CSO 2.5 per cent; table and chart. Life Ins Courant 52:416-17 O '47
Slide rule; uses for the life insurance agent. Life Ins Courant 52:370-2, 412-14 S-O '47
Throwing away the tables; finding the income which a given amount of insurance will produce. Life Ins Courant 51:544-6+ D '46

See also
Insurance, Life—Tables

Medical departments

Urges certification for life insurance medical directors; abstracts. J. R. B. Hutchinson. East Underw 48:6 My 30 '47; Nat Underw (Life ed) 51:1 My 30 '47

Medical examinations

See also
Insurance, Life—Risks

Medical laboratories

Chemistry and a life insurance company; Aetna life insurance company. S. H. Roberts. J Chem Educ 23:568-71 N '46

Medical research

Medical research fund announces new grants. East Underw 48:15 Je 13 '47
Medical research fund issues report for 1946. East Underw 48:11 My 30 '47; Same cond. Nat Underw (Life ed) 51:3 My 30 '47
Reports on Medical research fund. M. A. Linton. il Spectator (Life ed) 154:11-13+ D '46; Same. Life Ins Courant 52:140-2+ Ap '47; Same abr. Weekly Underw 155:1446-7+ D 14 '46; Abstracts. East Underw 47:28+ D 13 '46; Nat Underw (Life ed) 50:4 D 13 '46

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Mortgage redemption policies,

Continental has new mortgage payment policy. Nat Underw (Life ed) 50:14 N 29 '46
John Hancock adds mortgage redemption plan. Life Ins Courant 52:108-9 Mr '47
John Hancock has mortgage plan; with tables. Nat Underw (Life ed) 51:20 Ja 24 '47

INSURANCE, Life—Mortgage redemption policies—*Continued*
Mortgage life insurance. M. L. Lane. Rough Notes 89:44-6 N '46
Mortgagor group policy; Prudential to cover lives of Brooklyn Dime Savings borrowers. Weekly Underw 155:1313 N 30 '46
Occidental life of California announces three mortgage plans. East Underw 48:9 Je 20 '47; Nat Underw (Life ed) 51:18 Je 20 '47; Weekly Underw 156:1769 Je 28 '47
Prudential announces group creditor life for home borrowers. East Underw 48:8 Ap 4 '47; Nat Underw (Life ed) 51:1 Ap 4 '47

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Guardian to revamp its policy contracts. J. L. Cameron and others. East Underw 48:16 F 14 '47
John Hancock policy revision; adopt CSO 2½% for rates and 2% for options. Nat Underw (Life ed) 51:1+ Jl 18 '47; Same. Spectator (Life ed) 155:62+ Ag '47; Same abr. East Underw 48:3+ Jl 18 '47
Life insurance forms increase expected; simplification suggested by Life insurance association of America. B. E. Shepherd. Weekly Underw 155:1398+ D 14 '46
New England Mutual's new policies. Nat Underw (Life ed) 51:7 S 26 '47; East Underw 48:3-4 S 26 '47
Ownership policies permitting designation of beneficiaries. F. H. Pease. Weekly Underw 156:183-5+ Ja 11 '47; Excerpt. East Underw 47:29 D 13 '46; Abstract. Nat Underw (Life ed) 50:23 D 13 '46
Review makeup of Northwestern Mutual new policy series. Nat Underw (Life ed) 50:18 D 13 '46
Simplifying life insurance policies. N. Harper. Life Ins Courant 51:496-8, 538-41 N-D '46
Standard Life ruling on semi-annual policy; require minimum of $2,000. East Underw 48:7 Ja 3 '47

See also
Insurance, Life—Children's policies
Insurance, Life—Disability provisions
Insurance, Life—Double indemnity provisions
Insurance, Life—Educational endorsement policies
Insurance, Life—Endowment policies
Insurance, Life—Family income policies
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Insurance, Life—Veterans' policies
Insurance, Life—War risks

Non-forfeiture benefits
A.B.C. of the standard valuation and non-forfeiture laws. M. H. LeVita. Life Ins Courant 51:534-6 D '46
C.S.O.; the company, the standard, the opportunity; standard non-forfeiture and valuation laws; address before Million dollar round table. A. N. Guertin. Weekly Underw 157:700-2, 761-3 S 20-27 '47; Same cond. Nat Underw (Life ed) Daily ed 51: 16+ S 10 '47
Guertin law effect. W. O. Menge. Nat Underw 51:5+ Je 6 '47
Impending changes facing business. J. B. Maclean. East Underw 47:6+ N 15 '46; Abstract. Nat Underw (Life ed) 50:22 N 15 '46
Metropolitan Life's level of rates will not be increased; Guertin status. East Underw 48:5-6 F 21 '47
New law on cash values; text of standard nonforfeiture law; with commentary. Life Ins Courant 52:188-91 My '47

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Renewal option not lost by disability payments. Nat Underw (Life ed) 50:7 D 6 '46

Policies, Illegal
Arizona association of life underwriters supports director in outlawing dollar maker policy of Commercial Life of Phoenix; benefit fund provisions at issue. Nat Underw (Life ed) 51:11+ Je 6 '47

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Affirmative act not mere intent of insured necessary to effect change of beneficiaries. Weekly Underw 157:782 S 27 '47
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Beneficiary change OK without submitting policy; Marley vs. New York Life. Nat Underw (Life ed) 50:25 D 6 '46
Beneficiary provisions decision by N.Y. court; Connecticut Mutual Life vs. Arn. East Underw 48:16 Mr 28 '47
Change in designation from wife to former wife not change of beneficiary. Weekly Underw 157:1019 O 18 '47
Court reaffirms Texas rule against divorcee getting proceeds. Nat Underw (Life ed) 50: 8 D 27 '46
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Minnesota court rules on beneficiary change; formal written notice held not essential to accomplish insured's known desire. Weekly Underw 156:1648 Je 14 '47
Non-profit opportunities; hospitals, colleges, and other non-profit institutions may insure lives of donors. Life Ins Courant 51: 507-8 N '46
Ownership policies permitting designation of beneficiaries. F. H. Pease. Weekly Underw 156:183-5+ Ja 11 '47; Excerpt. East Underw 47:29 D 13 '46; Abstract. Nat Underw 50:23 D 13 '46
Parents recover; ex-wife won't give up policy; soldier's will involved. Nat Underw (Life ed) 50:21 D 27 '46
Seek to clarify creditor exemption statute wording. Nat Underw (Life ed) 51:6 F 7 '47
Texas public policy requiring insurable interest prevents recovery by divorced wife though named beneficiary; Dial vs. Fisk. Weekly Underw 156:245 Ja 18 '47

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Again uphold disability dividend distinction in Ohio Supreme court. Nat Underw (Life ed) 51:2 F 7 '47
Canada Life; extra dividends reduced; with tabulations. Life Ins Courant 52:336 Ag '47
Canada Life's dividend scale. Nat Underw (Life ed) 51:5 Je 27 '47
Comparisons; dividend scales effective in 1937 compared with actual histories; tabulation by company. Life Ins Courant 52: 285-8 Jl '47
Connecticut General dividend scale, interest same; action by other companies. Life Ins Courant 52:22-4, 28-9, 30, 62-6, 68-70, 106, 107, 110+, 150-2+ Ja-Ap '47
Dividend actions; tabulation by company. Life Ins Courant 52:38 Ja '47
Dividend scale changes; tabulation by company. Nat Underw (Life ed) 50:18 D 6 '46
Equitable, New York, has new dividend scale. Nat Underw (Life ed) 51:19-20 Ja 10 '47
How 1946 life policy dividends were used by policyholders; chart. Nat Underw (Life ed) 51:23 My 9 '47
Indianapolis Life avoids friction in omission of dividend payments on paid up policies. Nat Underw (Life ed) 51:5 Jl 18 '47
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Metropolitan Life to continue present dividend scale. Nat Underw (Life ed) 51:10 F 21 '47
New rates and dividends of Northwestern Mutual Life. Nat Underw (Life ed) 51:20 Ja 17 '47

INSURANCE, Life—Policy dividends—*Cont.*
1946 dividends paid by life insurance companies. Comm & Fin Chr 165:2526 My 8 '47; Same. Weekly Underw 156:1236 My 3 '47; Same cond. Nat Underw (Life ed) 51:5 My 2 '47
1947 dividend actions; tabulation by company. Nat Underw (Life ed) 51:22 Ja 31 '47
Prudential's new dividend scale. Nat Underw (Life ed) 51:18 F 7 '47
Rate of interest payable in 1947 on dividends left to accumulate, withdrawable, not withdrawable, interest earned in 1946; tabulation by company. Spectator (Life ed) 154: 64 F; 64 Mr '47
20-year histories; dividends actually paid on life policies issued in 1927; average yearly payments; net costs. Life Ins Courant 52: 330-3 Ag '47

Policy holders

Insurance human side; case histories from New York Life's records. G. L. Harrison. East Underw 48:15 Ap 18 '47
Most policyholders shown satisfied with treatment; Northwestern National survey. East Underw 48:1+ Ap 11 '47; Nat Underw (Life ed) 51:4 Ap 11 '47
Penn Mutual policy matures at age 96 for Indiana man; William J. Walters. East Underw 48:1+ Ag 22 '47
Policyholder relations; program of Institute of life insurance. A. E. Patterson. Spectator (Life ed) 154:14-15+ D '46; Same abr. Weekly Underw 155:1452-3 D 14 '46; Excerpt. Nat Underw (Life ed) 50:9 D 13 '46
Prominent life payments in 1946; lists by occupation, by state and by town. Nat Underw (Life ed) 51:8+ sec 2 My 23 '47
Public relations in life insurance. A. B. O'Hara. Weekly Underw 156:604-5 Mr 1 '47

See also
Insurance, Life—First year claims
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Policy loans

Bank seeks to cancel eight per cent policy loan; text of letter received by New England Mutual from Colorado bank. Nat Underw (Life ed) 51:2 O 3 '47
Banks increasing life policy loans; insurance companies lose business. Nat Underw (Life ed) 51:2 Jl 25 '47
Hits Mutual Life policy loan interest story. R. R. Lounsbury. Nat Underw (Life ed) 51:24 Ja 24 '47
Life insurance policy loans at new low in 1946. East Underw 48:14 Ap 4 '47
Mutual Life's policy loan plan wins business from banks. Nat Underw (Life ed) 50:1+ D 27 '46
Reaction to Mutual Life's loan interest reduction. Spectator (Life ed) 154:62 Ja '47

Policy settlement

Beginnings of settlement options. Nat Underw 50th anniv no:274 1947
Deferred incomes; with tables. Life Ins Courant 52:194-7 My '47
Future of many policies clouded by District of Columbia decision; creditor exemption statute is given disconcerting twist. Nat Underw (Life ed) 51:2 Ja 17 '47
How long an income? special tables give answers. Life Ins Courant 51:509-11 N '46
Income plus lump sum. Life Ins Courant 52: 19-21, 99-101 Ja, Mr '47
Income use of benefits reached new high in '46. Nat Underw (Life ed) 51:1 Ag 1 '47
Insurance check recalls Upton Sinclair's father's falling. Nat Underw (Life ed) 51:4 Ja 3 '47
Insurance planning. C. Looker. J Account 84:140 Ag '47
Optional modes of settlement; new tax decision makes income tax-free installment payments to beneficiary when that method is elected by beneficiary. East Underw 48:11 Ja 3 '47
Payments to minors; another advance by life insurance. J. Barker. East Underw 48:118 pt 2 O 3 '47
Pitfalls to dodge in settlement plans. F. P. McGuire. Nat Underw (Life ed) 50:11 D 13 '46
Power of settlement options. O. F. Grahame. Nat Underw 50th anniv no:192-3 1947
Rights of creditors of insured and beneficiary. C. C. Jones, jr. East Underw 48:138 pt 2 O 3 '47
Varying incomes. Life Ins Courant 52:232-4 Je '47

Unclaimed policies

Connecticut bill seeks to grab unclaimed funds for state. Nat Underw (Life ed) 51:6 Mr 28 '47
Decision modified as to abandoned property; New York court of appeals. East Underw 48:4 Jl 11 '47
Life companies ask Supreme court to review New York escheat law. Nat Underw (Life ed) 51:6 S 26 '47
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U.S. Supreme court to hear abandoned property appeal; lower decisions' status. East Underw 48:1+ O 24 '47

Policy valuation

A.B.C. of the standard valuation and nonforfeiture laws. M. H. LeVita. Life Ins Courant 51:534-6 D '46
Cash value graph. Life Ins Courant 52:192-3 My '47
Cash values: whole life, CSO 2.25 and 2%, NL; charts. Life Ins Courant 52:235, 282-3 Je-Jl '47
C.S.O.: the company, the standard, the opportunity; standard non-forfeiture and valuation laws; address before Million dollar round table. A. N. Guertin. Weekly Underw 157:700-2, 761-3 S 20-27 '47; Same cond. Nat Underw (Life ed) Daily ed 51: 16+ S 10 '47; Excerpts. East Underw 48: 10+ S 12 '47
CSO values; whole life CSO 3%; with chart. Life Ins Courant 52:334-5 Ag '47
Guertin law effect. W. O. Menge. Nat Underw 51:5+ Je 6 '47
Impending changes facing business. J. B. Maclean. East Underw 47:6+ N 15 '46; Abstract. Nat Underw (Life ed) 50:22 N 15 '46
Metropolitan Life's level of rates will not be increased; Guertin status. East Underw 48:5-6 F 21 '47
New law on cash values; text of standard nonforfeiture law; with commentary. Life Ins Courant 52:188-91 My '47
Stress essentials of Guertin bills. J. S. Thompson. Nat Underw (Life ed) 51:4 Je 13 '47

Premium financing

Bank loans to buy policies again popular with wealthy. Nat Underw (Life ed) 51:6 Ag 8 '47; Correction. 51:11 S 5 '47; Discussion. 51:5 Ag 22 '47
Chase bank offers plan to pay life premiums each month. Weekly Underw 157:109 Jl 12 '47; Nat Underw (Life ed) 51:2 Jl 18 '47

Premiums

Life-insurance premiums. J Account 83:63-4 Ja '47

Premiums, Payment of

Effect of repeal of war laws on premium guarantee. Weekly Underw 157:471 Ag 30 '47
Group coverages at level premium; actuary outlines attractions and experience of such plans. D. A. Warters. Nat Underw (Life ed) 51:9 My 16 '47; Same cond. East Underw 48:5 My 16 '47
Guaranteed premiums under Civil relief act now an issue. East Underw 48:1 F 7 '47
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Big executives' need for coverage. V. L. Thompson. Nat Underw (Life ed) 51:21 S 5 '47

Dentists need life insurance. R. Fleischner. Weekly Underw 157:182 Jl 19 '47

Find group policyholders ripe for ordinary cover. Nat Underw (Life ed) 51:17 Ap 4 '47

1947 struggle for markets. W. R. Jenkins. il Spectator (Life ed) 154:8-11+ Mr '47

Panel on prospecting is staged in Chicago. A. Silver and others. Nat Underw (Life ed) 51:10+ Mr 21 '47

Points method of rating best insurance prospects. F. W. Allcorn, 3d. Weekly Underw 156:639 Mr 1 '47

Professional opportunities. Life Ins Courant 52:415-16 O '47

Prospecting as every-day process. S. L. Wolkenburg and others. Nat Underw (Life ed) 51:11+ Mr 28 '47

Selling friends is good prospecting. T. W. Foley. Nat Underw (Life ed) 51:11 F 21 '47

Tell people you are in the life insurance business. P. M. Mucci. East Underw 48: 16 S 12 '47

Uses direct mail and premium to select best prospects from broad lists. H. E. Stout. Weekly Underw 157:451 Ag 23 '47

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Insurance, Life—Farmers as prospects

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Public acceptance of life insurance at peak. E. M. Schwemm. Nat Underw (Life ed) 51:10+ O 24 '47

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Buyer's market. P. F. Clark. Spectator (Life ed) 155:16+ S '47; Excerpts. East Underw 48:10 S 19 '47

Equitable Society finds 45 per cent gain in size of average policy paid for since 1941. Weekly Underw 157:932 O 11 '47

Five-ten year surge of insurance sales forecast by Travelers. Nat Underw (Life ed) 51:4 Ag 15 '47

Insurance family greatest unit in U.S.A. D. L. Clarke. Weekly Underw 157:869+ O 11 '47

L.I.A.M.A. hails Federal Reserve report on policy ownership. Nat Underw (Life ed) 51:6 S 26 '47

New York state ranks first in life protection. Weekly Underw 157:778 S 27 '47; Same abr. East Underw 48:12 S 19 '47

Northwestern National analysis forecasts 4½% sales decline; estimate based on rising prices' effect on spending power. Nat Underw (Life ed) 51:3 Mr 14 '47

Statistics point to big future life market. D. B. Woodward. Weekly Underw 157:1072-4 O 25 '47

Women purchases set record in 1946. East Underw 48:12 Ap 18 '47

Rates

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Companies on guard against inclusion in fire rating laws; want no control of life rates. Nat Underw (Life ed) 51:3+ Ja 3 '47

Connecticut Mutual's new rates. Nat Underw (Life ed) 51:20 O 17 '47

Don't blame rate developments on Guertin laws. B. E. Shepherd. East Underw 48:1+ Ag 8 '47

Meaning of Guertin law changes; increased costs not due to valuation law. O. J. Arnold. East Underw 48:1+ Ag 29 '47; Same abr. Nat Underw (Life ed) 51:7 Ag 29 '47

New premiums for John Hancock mutual life insurance co. Nat Underw (Life ed) 51:26 O 3 '47

New rates and dividends of Northwestern Mutual Life. Nat Underw (Life ed) 51:20 Ja 17 '47

Western and Southern ordinary and industrial rates revised. Life Ins Courant 51: 517-18 N '46

Real estate operations

Bearish on low rent housing by insurers. P. Bestor. Nat Underw (Life ed) 51:2+ S 19 '47

Big real estate purchase deals by life companies. East Underw 48:11 Ja 31 '47

Business property purchases boost returns for insurance firms, thaw frozen capital. Barron's 27:33 S 8 '47

Buying income property; address before American life convention. P. Bestor. Weekly Underw 157:916+ O 11 '47; Same cond. Nat Underw (Life ed) 51:20+ O 10 '47

Canadian companies plan housing projects. East Underw 48:4 Ag 15 '47

Connecticut Mutual Life apartment house project; illustration with text. Nat Underw (Life ed) 50:3 N 15 '46

Connecticut Mutual to erect building for doctors; Hartford hospital annex. East Underw 48:13 Mr 21 '47

Factors exist for about face in real estate market; abstracts. L. D. Meredith. Nat Underw (Life ed) 51:4 Jl 11 '47; East Underw 48:6 Jl 4 '47

Facts about Hancock Village. East Underw 48:16 Je 13 '47; Same abr. Weekly Underw 156:1709 Je 21 '47

Financing by lease; public utility can acquire new office building or garage, the easy way. F. J. McDiarmid. Pub Util 40: 278-84 Ag 28 '47

Housing as investment outlet. G. S. Van Schaick and others. Nat Underw (Life ed) 51:10 Ja 31 '47

Housing for the middle income group. F. H. Allen. East Underw 48:3 F 7 '47

Housing investment easing needed in laws. T. I. Parkinson. Nat Underw (Life ed) 51:3+ My 23 '47

Illinois senate seeks casing of investment curb. Nat Underw (Life ed) 51:2 Je 6 '47

Insurance companies figure in big realty and loan situations. East Underw 48:6 Je 27 '47

Insurance funds in housing. G. Zismer. il Nat Underw 50th anniv no:34-5 1947

Insurance housing aids American families. V. N. Bates. Weekly Underw 156:26+ sec 2 My 10 '47

Insurance offset; Prudential joins trend of big companies to invest in real estate. Bsns W p78-9 Jl 12 '47

Insurer builds for industry; New York Life invests in four new plants for leasing to Continental can co. Bsns W p70+ Ja 18 '47

Leasehold investment comes within new law; Metropolitan Life's lease of Vanderbilt site for improvement gets approval by N.Y. attorney general. East Underw 48:1+ Ja 17 '47

Life companies add to real estate holdings; non-housing purchases rise. East Underw 48:16 Ap 18 '47

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Mutual Life to build laboratory for drug company. East Underw 48:4 Jl 18 '47
New York Life buys car barn block for housing project in New York. Nat Underw (Life ed) 50:1 N 29 '46
New York Life engages to build and lease to Continental Can $10 millions in plants. Weekly Underw 156:176 Ja 11 '47; Same abr. East Underw 48:15 Ja 10 '47
New York Life housing at Fresh Meadows open. East Underw 48:9 S 5 '47
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New York Life's rental housing program. G. L. Harrison. East Underw 48:9 F 28 '47
Pennsylvania housing finance bill out of Senate committee. Nat Underw (Life ed) 51:23 F 28 '47
Political and monetary aspects of real estate situation. T. I. Parkinson. Comm & Fin Chr 165:735+ F 6 '47
Realty ownership marks new investment epoch. L. J. Philip. East Underw 48:50 pt 2 O 3 '47
Rockefeller Center's bonds of Metropolitan now under $7 million. East Underw 48:15 Mr 28 '47
Schwab mansion property bought by Prudential. Weekly Underw 156:1369 My 17 '47
Tennessee investment act broadened. Nat Underw (Life ed) 51:18 Mr 7 '47
Uniform accounting for real estate investments; regulation issued by Supt. Dineen of New York. Weekly Underw 156:1520 Je 7 '47; Same. East Underw 48:5 Je 6 '47; Same abr. Nat Underw (Life ed) 51:15 Je 6 '47

Reinsurance

Life reinsurers hold unique industry place; abstracts. L. J. Kalmbach. Weekly Underw 155:1211 N 16 '46; Nat Underw (Life ed) 50:6+ N 15 '46
Present-day reinsurance situation. A. J. Robinson. East Underw 47:3+ N 22 '46
To sell Lincoln National reinsurance abroad. East Underw 48:14 Ja 10 '47
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Retirement income policies

Best sellers; retirement income. K. H. Mathus. il Spectator (Life ed) 154:10-14+ My; 8-11+ Je '47
Sales idea of 50 years; insurance as income still is magic formula to big volume; interview with F. Pennell. R. B. Mitchell. Nat Underw 50th anniv no:194-6 1947

Risks

Atom insurance; life underwriters set up job code. Bsns W p 19 S 6 '47
Excessive mortality on big risks in next slump held unlikely. C. Edwards. Weekly Underw 157:853 O 4 '47
H.O.L.U. group weighs bacteriological and atom workers' hazards; other risks. Nat Underw (Life ed) 50:3, 13 N 22 '46
Increased research is price of better underwriting. H. B. Kennedy. Nat Underw (Life ed) 51:32 +O 3 '47
Many veterans who were poor risk now get favorable rate. W. H. Dallas. East Underw 47:1+ D 13 '46
Measuring underwriting performance. P. Shepherd. East Underw 47:11 N 15 '46; Excerpt. Nat Underw (Life ed) 50:8 N 15 '46
Objectives for home office underwriter. E. M. McConney. East Underw 47:3+ N 22 '46; Abstracts. Nat Underw (Life ed) 50:2 N 22 '46; Weekly Underw 155:1169+ N 16 '46
Progress in selection of risks. L. Cruess. Nat Underw 50th anniv no:88+ 1947
Qualify your risks. H. W. Dingman. Nat Underw (Life ed) 51:13 F 28 '47
Recent changes by Connecticut General. Spectator (Life ed) 154:61-2 Ap '47
Selection muddled today by long life. C. B. Ahlefeld. Nat Underw (Life ed) 51:8 O 3 '47
Suggests applying financial test to income after U.S. tax; problem of the large application. W. H. Harrison. Nat Underw (Life ed) 51:6 O 10 '47
Tips on pitfalls to selection men. V. J. Skutt. Nat Underw (Life ed) 51:8 O 3 '47
Underwriter builder of morale in agencies; administering the selection of risks. H. Goodwin. Weekly Underw 155:1216 N 16 '46
Underwriters must eye business cover along with personal; suggests avoiding borderliners. F. P. Todd and others. Nat Underw (Life ed) 51:20 Jl 4 '47
When vaccination scars were necessary; old policy rider covering smallpox. East Underw 48:14 My 16 '47
When your company says, no; cases refused by the home office. R. E. Imig. Life Ins Courant 52:176-81 My '47

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Insurance, Life—Travel risks
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Salary savings plan

Insurance dollar does $2 job on salary savings. A. W. Swain. East Underw 48:19 Je 13 '47
Payroll allotment plans popularity growth seen. W. B. Ferguson. Weekly Underw 156: 1770 Je 28 '47
Professional service through salary allotment. A. W. Swain. Life Ins Courant 52: 363-7 S '47; Excerpt. East Underw 48:19 Je 13 '47

Social aspects

Asks insurance to bolster our dynamic economy by needed policy forms. D. L. Clarke. Weekly Underw 156:1576-7 Je 7 '47
How the policy owner and the life insurance companies can jointly safeguard the interest of the American family. H. V. Wade. Weekly Underw 156:16+ sec 2 My 10 '47
Life insurance as a measure of life values. S. S. Huebner. Nat Underw 50th anniv no:178-80 1947
Life insurance is essence of democracy; address at New York Life's centennial dinner; abstracts. G. L. Harrison. East Underw 48: 3-4+ Ap 18 '47; Nat Underw (Life ed) 51: 3+ Ap 18 '47
Life insurance must back our democracy. J. A. Stevenson. Weekly Underw 156:1646-7 Je 14 '47
Warns on threat of communism; life insurance best example of democracy. W. Montgomery. East Underw 48:10 Je 6 '47

Statistics

Cities drawing biggest life premium; tabulation. Nat Underw (Life ed) 50:15+ D 6 '46
Family insurance ownership up in '46; total payments and credits to holders nearly $6 billions. Weekly Underw 156:88 Ja 4 '47
Life insurance has large gains in 1946. East Underw 48:14 Ja 3 '47
Life premiums by city, 1897; tabulation. Nat Underw 50th anniv no:275 1947
Living benefits up 9%; death pay rise slight in '46. Nat Underw (Life ed) 51:2 F 28 '47; Comm & Fin Chr 165:1420 Mr 13 '47; Weekly Underw 156:711 Mr 8 '47
1946 life insurance distributions; names of insured and statistics. Nat Underw (Life ed) 51;3-48 sec 2 My 23 '47

INSURANCE, Life—Statistics—*Continued*

Ordinary, group and industrial ranking as of Dec. 31, 1946; tabulation by company. Life Ins Courant 52:162-3 Ap '47

Policy premiums paid, high in 1946. Comm & Fin Chr 165:3038 Je 5 '47; Same. East Underw 48:11 Je 27 '47; Same abr. Nat Underw (Life ed) 51:7 My 30 '47; Same abr. Weekly Underw 156:1502 My 31 '47

Policy size; companies ranked by policy size. Life Ins Courant 52:291-2 Jl '47

Ranking of life companies by in force; tabulation. Nat Underw (Life ed) 51:2-3 Ap 11 '47

Sales records by states in '46. Nat Underw (Life ed) 51:7 Ja 31 '47

Sharp increase in size of average policy; study by Equitable Society. East Underw 48:7 Ag 15 '47

Total ordinary sales by states, 1946 and comparison with 1945; tabulation. Weekly Underw 156:636 Mr 1 '47

Up and up. Bsns W p41-2 Jl 19 '47

While U.S. population has doubled, life insurance owned has increased twenty-fold; chart. Nat Underw (Life ed) 50:24 D 6 '46

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Insurance, Life—Finance

Insurance, Life—First year claims

Insurance, Life—War death claims

Study and teaching

Campus training plan results lauded. C. J. Zimmerman. Nat Underw (Life ed) 51:24 Mr 14 '47

Confer on veterans' tuition allowances for life marketing courses. Nat Underw (Life ed) 51:1 Ag 8 '47

Educational activities being greatly expanded in life insurance business. East Underw 48:8 F 14 '47

L.O.M.A. reviews teaching technique. Nat Underw (Life ed) 51:2 F 21 '47

Second CLU institute at University of Connecticut. O. J. Jones. East Underw 48:3 Jl 4 '47

University of Connecticut gets Texas Christian's life market course. East Underw 48:1+ Ap 4 '47; Nat Underw (Life ed) 51: 3+ Ap 4 '47

University of Connecticut marketing school is now being closed. Nat Underw (Life ed) 51:8 S 12 '47

See also

American college of life underwriters

Insurance, Life—Agents—Training

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Substandard risks

Continental Assurance eases diabetic policy. East Underw 47:12 N 29 '46

Manufacturers Life leader in insuring diabetics. Nat Underw (Life ed) 51:22 F 21 '47

Mutual Benefit issues special class policies. Spectator (Life ed) 155:62-3 S '47

Mutual Benefit to write substandard. Nat Underw (Life ed) 51:18 Ag 29 '47; East Underw 48:10 Ag 29 '47

Substandard is fifty years old. L. F. Abbott. Nat Underw 50th anniv no:274-5 1947

Underwriting of diabetic cases. P. H. Rogers. East Underw 48:35 S 26 '47

Views vary widely on family history as factor in tuberculosis. Nat Underw (Life ed) 51:3 F 14 '47

Suicide death claims

Accident or suicide question for jury where insured found dead from carbon monoxide in garage. Weekly Underw 156:299 Ja 25 '47

Accident or suicide question of fact where death due to carbon monoxide poisoning; Brady v. Metropolitan life insurance company. Weekly Underw 156:1658 Je 14 '47

Statutory penalty not recoverable where proofs of death furnished by beneficiary showed suicide as cause. Weekly Underw 157:510 Ag 30 '47

Tables

Cost of income; tabulations by company showing income to wife cost study. Life Ins Courant 52:374-6 S '47

Current scales; tables of average costs based on present dividend scales, for policies of ordinary life type. Life Ins Courant 52: 236-9 Je '47

How long an income? special tables give answers. Life Ins Courant 51:509-11 N '46

Income plus lump sum. Life Ins Courant 52: 19-21, 99-101 Ja, Mr '47

Nelson & Warren tables are winning favor. Nat Underw (Life ed) 51:3 Je 20 '47

New mortality tables; educational program needed to display benefits to the public. A. N. Guertin. Nat Underw 50th anniv no:158 1947

Sample values; whole life, CSO 2.75%; table and chart. Life Ins Courant 52:380-1 S '47

Taxation

Asks IRB to reconsider rule on taxing installment cash value payments. M. Elrod, jr. Nat Underw (Life ed) 51:8 Ja 31 '47

Committee report on tax proposal of N.A.L.U. to Congress. Nat Underw (Life ed) Daily ed 51:32-3 S 11 '47

Contemplation of death; an old bogey in a new light. L. M. Bregy. East Underw 48: 136+ pt 2 O 3 '47

Court puts nearly all group proceeds in gross estate. Nat Underw (Life ed) 51:6 F 21 '47

Double taxation is hit. D. L. Clarke. Nat Underw (Life ed) 51:15 Mr 21 '47

Federal taxation of life insurance. M. A. Shattuck. Weekly Underw 157:352-4 Ag 9 '47

Income tax and the death claim proceeds of life insurance; Treasury decision 5515. D. Olson. Life Ins Courant 51:492-4 N '46

Insurance proceeds tax revised in New York. East Underw 48:11 Ja 10 '47

Insurer held liable for taxes on policy proceeds already paid out. Nat Underw (Life ed) 51:4 F 14 '47

Legal incidents of ownership in policy retained, Tax court finds. Nat Underw (Life ed) 50:23 N 15 '46

Liability for payment of federal estate taxes; insurance company's liability; digest of recent cases. F. L. Morton. Spectator (Life ed) 154:22-5+ My '47

Optional modes of settlement; new tax decision makes income tax-free installment payments to beneficiary when that method is elected by beneficiary. East Underw 48: 11 Ja 3 '47

Pension plans for key men; tax aspects of insurance payments. P. F. Millett. bibliog Trusts & Estates 83:524-7 N '46

Proposed integration of estate and gift taxes by Treasury; application to life insurance. East Underw 48:1+ O 17 '47

Recent tax decisions (cont). Spectator (Life ed) 154:32+ N '46; 155:32+ S; 57+ O '47

Some beneficiary-selected installment plans taxable. G. Gordon. Nat Underw (Life ed) 51:21 F 7 '47

Some tax aspects of annuities and pension plans. W. D. Freyburger. Weekly Underw 156:1051-3, 1098-1100 Ap 12-19 '47; Same. bibliog Life Ins Courant 52:220-4 Je '47; Same. Spectator (Life ed) 155:30+ Jl; 31-2+ Ag '47; Excerpts. East Underw 48:9 Ap 4 '47; Nat Underw (Life ed) 51:7 Ap 4 '47

Tax hazards in deferred compensation. C. Cover and others. Nat Underw (Life ed) 51: 22+ O 10 '47

Tax question clarified by Internal revenue; cash surrender value to be treated as cost of contract. Nat Underw (Life ed) 51:3 F 28 '47

Tax revision in 1948. F. L. Morton. Spectator (Life ed) 154:12-15+ Je; 155:18-19+ Jl; 22-3+ Ag '47

Taxation of life insurance; suggestions for changes in incidence of tax; address before American society of chartered life underwriters. M. A. Shattuck. Trusts & Estates 83:655-7 D '46

Testamentary nature of life insurance; transfer in contemplation of death; digest of recent tax decisions. F. L. Morton. Spectator (Life ed) 154:22-3+ Ap '47

INSURANCE, Life—Taxation—*Continued*
Transfers of life insurance; some comments on section 811 (C) of federal estate tax law. E. M. Thorè. East Underw 48:20+ pt 2 O 3 '47
Treasury tax integration plan would tax at death values not covered by transfer tax. Nat Underw (Life ed) 51:1+ S 19 '47
Treasury to quiet furor over ruling on partnerships. Nat Underw (Life ed) 51:20 S 19 '47
Variety of insurance tax proposals being heard by House. Nat Underw (Life ed) 51: 1+ Jl 25 '47
Views on annuity tax; premium credit. J. W. Snyder. Nat Underw (Life ed) 51:1 My 23 '47
Zahn estate decision puts burdens on companies; Fidelity Mutual letter. East Underw 48:8 My 16 '47

Tontine policies

Arizona association of life underwriters supports director in outlawing dollar maker policy of Commercial Life of Phoenix; benefit fund provisions at issue. Nat Underw (Life ed) 51:11+ Je 6 '47

Trust company cooperation

See also
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Veterans' policies

Social security opportunities; need for supplementary private insurance. Life Ins Courant 52:148-9 Ap '47

War death claims

Equitable Society defends full payment of war clause claims. East Underw 48:5 Ap 25 '47; Weekly Underw 156:1162 Ap 26 '47; Nat Underw (Life ed) 51:3 Ap 25 '47
Explains Equitable Society's war clause position. T. I. Parkinson. East Underw 48:3 Ag 8 '47
McCormack takes stand; urges others to follow Equitable on war payments. Nat Underw (Life ed) 51:5 My 30 '47; East Underw 48:1+ My 30 '47
$313 millions in war claims on servicemen. East Underw 47:17 D 6 '46
War claim payments by Equitable Society sustained; Federal court in New York dismisses action of policyholder claiming waste. East Underw 48:1+ Jl 4 '47; Same abr. Nat Underw (Life ed) 51:1 Jl 4 '47
War death totals of Mutual Life of New York. East Underw 48:14 Ja 10 '47; Same cond. Weekly Underw 156:176 Ja 11 '47
War mortality and its effect upon life insurance in Canada. H. F. Gundy. Nat Underw (Life ed) 51:8 My 23 '47

War risks

Annuitant had right to convert to life policy without insertion of war clause; Rosenbloom, et al vs. New York Life. Nat Underw (Life ed) 51:17 S 12 '47
Claims under war clauses criticised. J. M. McCormack and others. East Underw 48: 16 Je 6 '47
Companies getting fairer break in war clause cases. R. H. Kastner. Nat Underw (Life ed) 51:23 O 10 '47
Connecticut Mutual aviation and military underwriting regulations revised. Life Ins Courant 52:106 Mr '47
Hold Pearl Harbor death war result, not accident; New York Life vs. Bennion. Nat Underw (Life ed) 50:10 D 6 '46
Pearl Harbor attack act of war within exclusion of double indemnity provision of life policy; New York Life v. Bennion. Weekly Underw 156:645 Mr 1 '47
Pearl Harbor blow was war; no double indemnity. Nat Underw (Life ed) 51:6 Ja 24 '47
United States engaged in war until proclamation of cessation of hostilities by Executive; Stinson v. New York life insurance company. Weekly Underw 156:1115 Ap 19 '47
U.S. Maritime commission halts writing cover; liability under seamen's policies. Weekly Underw 155:1549 D 28 '46
War at Pearl Harbor; New York life insurance co. vs. Bennion. L. A. Burke. Spectator (Life ed) 154:64 D '46

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See Insurance, Life—Agents—Women agents

Women as prospects

Woman's place in this man's world. D. B. Woodward. il Spectator (Life ed) 154:12-15+ Mr '47
Women; $3 billion a year! K. H. Mathus. Spectator (Life ed) 155:8-11+ Jl; 24-8+ Ag '47
Women's insurance opportunities. Life Ins Courant 52:18 Ja '47

Alberta

1945 business, ordinary, group and industrial; tabulation. Life Ins Courant 51:566 D '46

Argentina

South American life insurance seen as fifteen years behind U.S. H. Mascarenhas. East Underw 48:8 Jl 25 '47

Arizona

Arizona association of life underwriters supports director in outlawing dollar maker policy of Commercial Life of Phoenix. Nat Underw (Life ed) 51:11+ Je 6 '47

British Columbia

1945 business, ordinary, group and industrial; tabulation. Life Ins Courant 51:566 D '46
1946 business; ordinary, group and industrial; tabulation. Life Ins Courant 52:343 Ag '47

Canada

More than $10 billion in force for Canada; increase of 10.9% in 1946. East Underw 48: 18 Mr 28 '47
1946 business; ordinary, group and industrial; tabulation. Life Ins Courant 52:303 Jl '47
Overseas life insurances valued; international good will and confidence built by Canadian underwriters. E. C. McDonald. Weekly Underw 156:103+ Ja 4 '47
Unique record of Canadian companies; legal reserve life carriers there place great responsibility on their actuaries. R. L. Foster. Nat Underw 50th anniv no:118+ 1947
War mortality and its effect upon life insurance in Canada. H. F. Gundy. Nat Underw (Life ed) 51:8 My 23 '47
See also Canadian life insurance officers association

China

Philippine business goes from good to better; Chinese operations impossible. G. Litchfield. Nat Underw (Life ed) 51:10 F 28 '47

Far East

Claims in enemy occupied areas; with special reference to Pacific territories. J. N. Cunningham. East Underw 48:3 Mr 7 '47
Conditions in Far East. P. R. Danner. East Underw 48:17 Mr 14 '47

Germany

Life insurance in Russian-occupied Germany. E. C. Steefel. East Underw 47:26 D 13 '46

Great Britain

Equity and law life assurance society; National mutual life assurance society; Britannic assurance company, limited; annual meetings. Economist 152:514-15, 517 Ap 5 '47
Life assurance records. Economist 152:77-8 Ja 11 '47

INSURANCE, Life—Great Britain—*Continued*
National provident institution; Standard life assurance company, annual meetings. Economist 152:434, 438 Mr 22 '47
New business gained in Great Britain in 1946. East Underw 48:9 Je 27 '47
Refuge assurance company, limited; Wesleyan and general assurance society; annual general meetings. Economist 152:560-1 Ap 12 '47
Sun life assurance society; Scottish equitable life assurance society; annual general meetings. Economist 152:474-5 Mr 29 '47
Terms English good life prospects. H. J. Johnson. Nat Underw (Life ed) 51:19 Ag 8 '47

Japan

Status of life insurance in Japan. H. M. McLellan. Nat Underw (Life ed) 51:8 Ja 17 '47

Korea

Sidelights on insurance in Korea. J. K. Flack. Nat Underw (Life ed) 51:20 F 7 '47

Manitoba

1946 business, ordinary, group and industrial; tabulation. Life Ins Courant 52:250 Je '47

New Brunswick, Canada

1946 business, ordinary, group and industrial; tabulation. Life Ins Courant 52:251 Je '47

Nova Scotia

1945 business, ordinary, group and industrial; tabulation. Life Ins Courant 51:566 D '46

Ontario

1946 business, ordinary group and industrial; tabulation. Life Ins Courant 52:303 Jl '47

Philippine Islands

Philippine business goes from good to better; Chinese operations impossible. G. Litchfield. Nat Underw (Life ed) 51:10 F 28 '47

Puerto Rico

1946 business, ordinary; tabulation. Life Ins Courant 52:254 Je '47

Quebec

1946 business, ordinary, group and industrial; tabulation. Life Ins Courant 52:251 Je '47

Russia

Even Russia has insurance agents. E. C. McDonald. East Underw 48:3+ My 23 '47

Saskatchewan

1946 business; ordinary, group and industrial; tabulation. Life Ins Courant 52:343 Ag '47

Sweden

Skandia official believes Swedish life companies will favor modified group plan. T. Larsson. Weekly Underw 157:1062 O 25 '47

Washington (state)

Washington state seeks to bar company; Federal Old Line of Seattle ordered to cease writing by Sullivan. Nat Underw (Life ed) 51:16 S 12 '47

INSURANCE, Liquor law liability
Illinois liquor cover rates upped by London Lloyds. Nat Underw 51:6 Ag 21 '47

INSURANCE, Live stock
Insuring livestock. W. H. Timmons. il Rough Notes 17:25+ N '46
See also
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INSURANCE, Machinery
Boiler and machinery manual is revised. East Underw 48:28 Ja 3 '47
Insure the machinery too! G. H. Prall. Rough Notes 90:15-16+ S '47
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Insurance, Power plant

INSURANCE, Malpractice liability
American Surety to write malpractice in Washington. Nat Underw 51:23 F 13 '47
Malpractice suits increasing. L. Ragan. Nat Underw 51:30-1 Ap 17 '47

INSURANCE, Manufacturers' and contractors' property damage liability
Liability insurance as related to California highway contracts. K. A. Keyes. Pub Works 77:28 N '46

INSURANCE, Manufacturers' public liability
Coverages and forms; manufacturers and contractors liability policy. Spectator (Property ed) 13:8-9 Ag 21 '47
Injuries sustained by explosion of pop bottle on retailer's premises not covered by manufacturer's policy. Weekly Underw 155:1269 N 23 '46

INSURANCE, Marine
Ask removal of foreign bars. H. H. Reed; A. L. Kirkpatrick. Nat Underw 51:1 Ja 16 '47
Cargo coverage increases despite box car bottleneck. Nat Underw 51:4 Mr 6 '47
Developments in marine market in the Middle West since 1900. E. D. Lawson. Nat Underw 50th anniv no:132 1947
Great Lakes shipping soon opens; big year seen. Nat Underw 51:5 Ap 10 '47
Hope marine cover will get attention in maritime study. H. C. Hallam. Nat Underw 51:1 Ag 21 '47
Hull and Builder's Risk Syndicates, U.S. salvage assn., hold elections. East Underw 48:34 Mr 28 '47
Increased cargo volume writing in 1946. E. R. King. Weekly Underw 156:54-5+ Ja 4 '47
London Institute chairman discusses problems of international interest. H. H. Mummery. Weekly Underw 156:392+ F 8 '47
Marine insurance and new standard bills of lading. C. Christensen. Weekly Underw 157: 887-9 O 11 '47
Marine underwriters face war's aftermath. W. I. Plitt. East Underw 47:55+ D 13 '46
Marine underwriters report increases in premiums over 1946. East Underw 48:1+ Ag 22 '47
Market for hull cover in U.S. today is unparalleled. Nat Underw 51:12 Mr 6 '47
Ocean cargo is flourishing and sought after. Nat Underw 51:1+ S 4 '47
Relation of marine market to government. P. Chubb. Weekly Underw 155:1418+ D 14 '46
Report on cover on U.S. vessels privately chartered. Nat Underw 51:30 F 20 '47
Travelers Fire in ocean marine field on a limited scale. East Underw 48:1+ F 7 '47
25% of cover on surplus ships sold in U.S. market. Nat Underw 50:15b D 12 '46
See also
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Adjustment of claims

Deviation is ruled voluntary, not caused by restraint of princes. East Underw 47:29 N 29 '46
Highlights of the law of deviation. R. E. Hill. Weekly Underw 156:1554-6 Je 7 '47
Insurance interested in the use of radar as legal evidence in marine navigation; radar chart photography. Weekly Underw 157: 481+ Ag 30 '47
Repair or replacement fine legal point decided by U.S. district court. Weekly Underw 155:1357-8 D 7 '46
Salvage, insurance claims present problem in SS American Farmer case. Spectator (Property ed) 12:16+ N 28 '46

Agents

Development in several marine lines reviewed at Suburban agents assn. educational conference in New York. G. Wightman and others. Nat Underw 51:4 Ap 17 '47
Sales opportunities that are now presented in ocean and inland marine field; Chicago insurance day address. P. J. Leen. Weekly Underw 156:1087-9+ Ap 19 '47

Finance

Marine experience for 1946; tabulation by company. Nat Underw 51:3 F 27; 23 Mr 13; 8 Mr 20; 12 Mr 27 '47

INSURANCE, Marine—Finance—*Continued*
New Jersey premiums and incurred losses of fire and marine companies during 1946; tabulation. East Underw 48:22 Mr 21 '47
Ocean marine prospects are bright; with tabulation by company showing net premiums and losses for 1946. East Underw 48: 36-7 Mr 14 '47
Underwriting experience of carriers for different marine lines in 1946; tabulation by company. Weekly Underw 156:829-31 Mr 22 '47

History

Half century of marine insurance. H. C. Thorn. Nat Underw 50th anniv no:66+ 1947

Losses

U.S. built ships; experience of war constructed vessels. J. G. B. Beazley. Weekly Underw 156:1409 My 24 '47
Unsuitable materials for packing cause of losses. J. Platt. Weekly Underw 156:1351 My 17 '47

See also
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Basic ocean marine cargo insurance. Spectator (Property ed) 12:30-1 F 13 '47

Preventive work

Safety aboard ships at sea presents vital marine problem. Weekly Underw 156:272-3 Ja 25 '47

Rates

Combined marine surcharges upheld in Britain as a temporary measure. D. King-Page. East Underw 48:29 F 7 '47
Marine base rate and surcharges merged; some reductions made. East Underw 48:27 My 30 '47; Same. Weekly Underw 156:1472 My 31 '47
New schedule of marine surcharges. East Underw 48:24 Ag 1 '47
Protection and indemnity rates same for safe and substandard ships. Nat Underw 51:4 F 27 '47
Stormy world conditions keep marine rates high. Weekly Underw 156:757 Mr 15 '47

Risks

Underwriters study Cargocaire system; losses from excessive moisture and inadequate ventilation serious problem. O. D. Colvin. Weekly Underw 156:52+ Ja 4 '47

Theft losses

Competition seen as key to cargo pilferage puzzle. Nat Underw 51:11 Mr 13 '47
Conroy directs drive against pier pilferage. Weekly Underw 156:466+ F 15 '47
Delay in getting data to consignees ups marine thefts. Nat Underw 50:4 N 21 '46
Drive initiated against waterfront pilferage. Weekly Underw 155:1548 D 28 '46
Outlines aims and present work of Bureau to reduce pilferage. E. E. Conroy. East Underw 48:30 Ap 18 '47
Reducing theft of cargo in transit. C. E. Holmes. Weekly Underw 156:56+ Ja 4 '47
Theft bureau to start; organization in New York will wage war on dock thieves. East Underw 48:26 Ja 24 '47

War risks

Floating mine dangers. Weekly Underw 156: 53 Ja 4 '47
Marine Underwriters revise war risk form. Spectator (Property ed) 12:37 Ap 24 '47
Marine war risks rates increased due to many losses from mines. East Underw 48:28 My 2 '47
War risk cover is still needed due to loose mines. Nat Underw 51:13 Mr 27 '47

Great Britain

British commentator, discussing underwriting results, sees period of declining profits. D. King-Page. Weekly Underw 157:218 Jl 26 '47
Combined marine surcharges upheld in Britain as a temporary measure. D. King-Page. East Underw 48:29 F 7 '47
New type of cover; insurance on shipowners' interest in Britain due to taxation. Weekly Underw 157:747 S 27 '47
1946 marine developments. Lord Brand. Weekly Underw 156:1411 My 24 '47

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Philippine pilferage problem. J. Sachs. Nat Underw 51:27 F 20 '47

INSURANCE, Medical expense
Continental's surgical-medical contract possesses attractive features. Weekly Underw 157:839 O 4 '47
Medical expense cover, a mare's nest; editorial. Nat Underw 51:16 F 13 '47; Same. Nat Underw (Life ed) 51:12 F 14 '47
Medical men ask, what is wrong with private insurance? Rhode Island medical journal; abstract. Weekly Underw 156:955 Ap 5 '47
Prepaid medical care plans in Connecticut. C. B. Gibson. Weekly Underw 156:172 Ja 11 '47
Voluntary pre-payment plans of medical care; need for responsible insurance companies to enter this field. T. V. McDavitt. East Underw 47:35 D 20 '46

See also
Insurance, Surgical expense

INSURANCE, Military and naval service
Asks terminal date for service life insurance. P. B. Hobbs. East Underw 48:7 Mr 14 '47
Certain waiver rights run out on GI insurance. Weekly Underw 157:180 Jl 19 '47
Cheap insurance is not always desirable, twisting would be in the public interest; editorial. Weekly Underw 156:507 F 15 '47; Discussion. A. E. Patterson. 156:854 Mr 22 '47
GI insurance extension bill passed. Comm & Fin Chr 165:1180 F 27 '47
Government insurance termination suggested. P. B. Hobbs. Weekly Underw 155:1203 N 16 '46
House group blames Breining for NSLI inefficiency, delays. Nat Underw (Life ed) 51:1+ O 24 '47
Liberalizations in National service life insurance. Life Ins Courant 52:246 Je '47
More veterans reinstating service life insurance. East Underw 48:14 F 7 '47
National Service Life; new rates, settlement options. Life Ins Courant 51:556-7 D '46
Realistic peace time policy sought by agents on service life insurance. D. F. Barnes. Nat Underw 50th anniv no:86+ 1947
VA handling of insurance matters is criticised by House committee. Nat Underw (Life ed) 51:3 Ag 8 '47

Policy beneficiaries

Change of beneficiary effective though notice not received by insurer for several months after insured's death. Weekly Underw 157: 189 Jl 19 '47
Cousin held in NSL case not in loco parentis. Nat Underw (Life ed) 51:11 F 28 '47

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Rule original NSLI schedule pays beneficiaries over 30 for life. Nat Underw (Life ed) 51:2 Je 20 '47

INSURANCE, Money and securities
Broad form money and securities. R. A. Hubbard and others. Rough Notes 90:21-6+ Ag '47

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INSURANCE, Morticians' liability
For undertakers only. Rough Notes 90:36+ F '47
Liability; mental anguish insurance. Rough Notes 90:38 Ap '47

INSURANCE, Motor boat
How do I insure a boat? R. H. Watson. Rough Notes 90:19-20+ Jl; 20+ Ag '47

INSURANCE, Motor boat—*Continued*
Insurance coverage and restrictions with which boat owners should be familiar. D. H. Sparkman. Weekly Underw 157:278 Ag 2 '47
Outboard motors and boats insured on PPF. Rough Notes 90:43-4 Je '47
Yacht cover liberalized; add medical payments. Nat Underw 51:21 Ap 3 '47

INSURANCE, Motor bus
Cover for trucks and busses; organization of special syndicate suggested to solve problem. H. P. Stellwagen. Weekly Underw 157: 725+ S 27 '47
North Carolina broadens truck and bus requirements. Nat Underw 51:28 O 23 '47
North Carolina ruling on school bus insurance. Weekly Underw 157:523 S 6 '47
Pennsylvania school bus decision causes insurers concern; Vogel vs. Stupi and Johnstown traction co. Nat Underw 51:18 Ag 21 '47
Truck and bus insurance minimums set by Wyoming. East Underw 48:29 Ja 3 '47

INSURANCE, Motor truck
Auto experience terrible on trucks bought via GI bill. Nat Underw 51:12 F 13 '47
Cover for trucks and busses; organization of special syndicate suggested to solve problem. H. P. Stellwagen. Weekly Underw 157: 725+ S 27 '47
How producer holds down claim cost; truck drivers cooperate in program of Leo H. Waldman. K. Force. Nat Underw (Auto & aviation no) 51:2 Ap 18 '47
North Carolina broadens truck and bus requirements. Nat Underw 51:28 O 23 '47
Truck and bus insurance minimums set by Wyoming. East Underw 48:29 Ja 3 '47

Adjustment of claims
Intent of unauthorized taker to return automobile to owner question of fact for jury. Weekly Underw 156:1437 My 24 '47
Lessee's permission to drive; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:10-11 Ap 10 '47
No I.C.C. permit, no insurance; Commercial Standard vs. Robertson. Nat Underw 51:14 F 27 '47
Oil truck makes overflow delivery; fire ensues; auto P.D. insurer liable. Nat Underw 51:28 Ap 3 '47
Owner may qualify as witness as to loss-of-use value of damaged car. East Underw 48:21+ S 5 '47

INSURANCE, Motor truck contents
Anything in transit target for hijackers. J. Seide. Weekly Underw 156:1687 Je 21 '47
Coverages and forms; problems in insuring common motor carriers; with text of American institute cargo clauses. Spectator (Property ed) 12:8-9 My 22 '47
Difficulties in handling long haul trucking risks; abstracts. A. E. Spottke. Weekly Underw 157:44-5 Jl 5 '47; Nat Underw 51: 18+ Je 26 '47
Eight factors governing insurance costs. W. H. Rodda. Weekly Underw 156:1703+ Je 21 '47; Same. East Underw 48:34 Je 13 '47; Same abr. Nat Underw 51:6 Je 12 '47
Improving cargo risks. G. W. Mahoney. il Rough Notes 89:15-16+ D '46
Long-haul truck business offers major problem; collapse of Keystone Mutual. Nat Underw 51:7 Jl 3 '47
Long-haul truck insurance problem may be eased by catastrophe loss fund. A. E. Spottke. East Underw 48:12+ pt 2 Je 20 '47
Loss prevention efforts in interest of public. J. Mulvehill. Weekly Underw 157:607 S 13 '47
Places truck cargo losses at $25,000,000 in '46. J. Seide. Weekly Underw 156:270 Ja 25 '47; Same. East Underw 48:26 Ja 24 '47
Problems of truckers and insurance. W. W. Belson. East Underw 48:25 O 17 '47; Same cond. Nat Underw 51:36 O 16 '47
Truck thefts studied; textiles main loss target this year with clothing second and liquor third. East Underw 48:32 Je 6 '47
Trucker's cargo cover costs one per cent of revenue. Nat Underw 51:17 S 4 '47
Trucker's insurer must pay; shipper's insurer relieved; damage by fire to truck load of cotton. Nat Underw 51:5 F 27 '47
Truckers plan to render themselves acceptable risks; buyers' meeting at Chicago reveals insurance plight. Nat Underw 51: 19+ Ag 14 '47

INSURANCE, Multiple location. See Insurance, Fire—Multiple location policies

INSURANCE, Mutual
Aggregates of stock casualty, surety and miscellaneous companies, mutual casualty companies, 21 reciprocals, interinsurers exchanges and Lloyds organizations for 1946; with underwriting and investment profit and loss exhibit; tables. Spectator (Property ed) 13:20-3 S 11 '47
Big fraternal is proposing to mutualize; A.O.U.W. of North Dakota. Nat Underw (Life ed) 51:3+ S 26 '47
Comparative financial and operating results of mutual casualty companies for year ending Dec. 31, 1946 and 1945; tabulation. Spectator (Property ed) 12:17 Mr 13 '47
Comparative financial and operating results of mutual fire companies for year ending Dec. 31, 1946 and 1945; tabulation. Spectator (Property ed) 12:15 Mr 13 '47
Considerable rise in 1946 losses for Associated factory mutuals. Nat Underw 51:6 F 27 '47
Country-wide underwriting results 1942-46 of companies licensed in New York state; tabulation. East Underw 48:10+ pt 2 Je 20 '47
Gives mutuals tips on gearing for rating statistics. R. J. Icks. Nat Underw 51:2+ O 9 '47
Hurricanes shadow but don't dampen mutual loss managers' conference. Nat Underw 51:11-12 O 23 '47
Insurer insolvent when contract was issued; Tennessee court invalidates assessment on Central Mutual assured. Nat Underw 51:16 O 2 '47
Mutuals tell stand on writing power definition. Nat Underw 50:2 D 19 '46
1946 automobile results of mutual fire companies and comparison with 1945; tabulation. Nat Underw (Auto & aviation no) 51: 12 Ap 18 '47
1946 mutual fire results; tabulation by company. Nat Underw 51:7 Ja 23; 7 Ja 30; 14 F 6; 2 F 13; 15 F 20; 12 F 27; 8 Mr 6; 17 Mr 13; 6 Mr 20; 2 Mr 27 '47
1,000 mutual men gather at Buffalo; Cooper resigns. Nat Underw 50:3 N 14 '46
Strict regulation menace even to mutual agents. E. W. Sawyer. Nat Underw 51:16 My 29 '47
Union Central mutualization plan over last hurdle. Nat Underw (Life ed) 51:1 Jl 4 '47
Western and Southern mutualizes. Spectator (Life ed) 154:27-30 Ja '47
See also National association of mutual insurance companies

INSURANCE, Owners' landlords' and tenants' public liability
Coverages and forms; liability insurance. Spectator (Property ed) 13:8 Ag 7 '47
O. L. & T. cover rates advanced in New York. Weekly Underw 156:894 Mr 29 '47; Same. East Underw 48:29 Ap 4 '47; Same abr. Nat Underw 51:8 Mr 27 '47

INSURANCE, Partnership. See Insurance, Business—Partnership interest

INSURANCE, Paymaster robbery
Paymaster robbery policy. Rough Notes 90:65 F '47

INSURANCE, Personal property floater. See Insurance, Inland marine—Policies—Personal property floater

INSURANCE, Plate glass
Bureau limits glass policies to one year. East Underw 48:30 My 2 '47; Nat Underw 51:2 My 1 '47; Weekly Underw 156:1226 My 3 '47
Chicago plate glass service bureau operations start. Weekly Underw 157:38+ Jl 5 '47

INSURANCE, Plate glass—*Continued*
Coverages and forms; comprehensive glass policy. Spectator (Property ed) 13:8-9 Jl 24 '47
Replacement biggest factor in plate glass. East Underw 48:29 Ja 24 '47

Rates

Glass insurance manual changes now effective; rates increased as replacement costs advance; new minimum premium rule adopted. Weekly Underw 157:40-1 Jl 5 '47; Same abr. East Underw 48:25 Jl 4 '47; Same cond. Nat Underw 51:15+ Jl 3 '47
Glass insurance rates up 21.5% in open states. East Underw 48:40 Mr 21 '47; Nat Underw 51:23 Mr 20 '47; Spectator (Property ed) 12:37 Mr 27 '47; Weekly Underw 156:836 Mr 22 '47
Glass rates advanced; rising costs boost tariffs. Weekly Underw 156:961, 1022 Ap 5-12 '47
Premium discount plan adopted for glass risks. East Underw 48:42 Je 27 '47
Rate increase indicated; skyrocketing glass and installation costs studied. Nat Underw 51:14 Ja 30 '47

INSURANCE, Power plant
Boiler and machinery manual is revised. East Underw 48:28 Ja 3 '47
Boiler and machinery policy. W. Lynch. East Underw 48:29 Ap 4 '47
Boiler line shows much strength this year. Nat Underw 51:17 Ag 7 '47
Insure the machinery too! G. H. Prall. Rough Notes 90:15-16+ S '47
Power plant manual revised, enlarged, but rate unchanged. Nat Underw 51:18 Ja 2 '47; Correction. 51:19 Ja 23 '47
Shower of questions on boiler coverages at American management association's insurance conference. Nat Underw 51:23 My 8 '47

INSURANCE, Products liability
Coverages and forms; products liability. Spectator (Property ed) 13:8-9 S 11 '47
How to sell product liability. J. M. Downey and others. Rough Notes 89:19-24 N '46
Products liability problems raised by Analbis fear. Nat Underw 51:14 Mr 27 '47

INSURANCE, Public liability. See Insurance, Liability

INSURANCE, Rain
Sell rain insurance. A. Leifflen. Rough Notes 90:18+ Je '47

INSURANCE, Reciprocal
Hearing held on Massachusetts bill to admit reciprocals. Nat Underw 51:31 F 20 '47

INSURANCE, Registered mail
Bank spokesman cheers changes in mail, express cover. J. E. Baum. Nat Underw 51:8 Mr 6 '47
Registered mail and express insurance rate cut. Banking 39:112-13 Mr '47
Registered mail rates reduced and insuring conditions extended. East Underw 48:32 F 21 '47; Same. Nat Underw 51:28 F 20 '47; Same. Spectator (Property ed) 12:27 F 27 '47; Same cond. Weekly Underw 156:539 F 22 '47

INSURANCE, Rent
Rent insurance; coverage and rates. Spectator (Property ed) 12:26 F 27 '47
Rent insurance; Midland Mutual's sales talk and chart. Spectator (Life ed) 154:32 My '47

INSURANCE, Residence and outside theft. See Insurance, Theft

INSURANCE, Robbery. See Insurance, Burglary; Insurance, Paymaster robbery; Insurance, Theft

INSURANCE, Safe deposit box
Bank burglary insurance; safe deposit box. Weekly Underw 156:415-16+ F 8 '47
Chase Bank official urges safe deposit cover change. K. C. Bell. Nat Underw 51:24+ O 9 '47
Want safe deposit liability in bank blanket coverage. F. B. Post. Nat Underw 51:16 My 15 '47
Wisdom of safe deposit insurance. P. S. Parris. East Underw 48:62 O 17 '47

INSURANCE, School bus. See Insurance, Motor bus

INSURANCE, Self. See Insurance, Fire—Municipal self insurance

INSURANCE, Sickness. See Insurance, Health

INSURANCE, Social
See also
Insurance, Compulsory
Insurance, Health
Insurance, State
Insurance, Unemployment
Old age pensions

Bibliography

Social security reading list, 1947. R. M. Ball. 40p American council on education, 744 Jackson place, Washington 6, D.C. '47
Social security; selected list of references on unemployment, old age and survivors', and health insurance. M. A. Kelly and H. C. Benjamin, comps. rev ed 60p pa 75c Industrial relations section, Princeton univ, Princeton, New Jersey '47

Cost

Social security and its tax potentialities. T. L. Evans. Comm & Fin Chr 166:1214+ S 25 '47

Finance

Misleading Reader's Digest article on old age security. M. A. Linton. Life Ins Courant 52:272-3 Jl '47
Social security and its tax potentialities. T. L. Evans. Comm & Fin Chr 166:1214+ S 25 '47
Social security fund going broke as it rises; size of reserve conceals fact that future obligations mount faster. R. M. Bleiberg. Barron's 27:7-8 N 3 '47

Argentina

Insurance for industrial workers in Argentina. Int Labour R 55:580-2 Je '47

Belgium

Belgian social security scheme. P. Goldschmidt. Int Labour R 55:46-61 Ja-F '47

Canada

Canadian social services. H. M. Cassidy. Ann Am Acad 253:190-9 S '47

Colombia

Social insurance scheme in Colombia. Int Labour R 55:577-80 Je '47

France

Frenchmen and their social services. Economist 152:719-20 My 10 '47

Germany

German experience with social insurance. W. Sulzbach. (Studies in individual and collective security no. 2) 134p pa $1 National industrial conference board, 247 Park av, New York 17 '47

Great Britain

Social security legislation in Great Britain. Int Labour R 54:227-35 S-O '46

Russia

Social insurance in the Soviet Union. Int Labour R 55:261-73 Mr-Ap '47

Spain

Spanish social security program costs 25 per cent but benefits are small. S. P. Brewer. East Underw 48:31 S 5 '47

Sweden

Reform of the Swedish national pension scheme. Int Labour R 54:384-7 N '46

United States

Agents' social security status may go to court. W. Montgomery. Nat Underw (Life ed) 51:15 F 28 '47
Agents' SS status still moot despite recent decisions. Nat Underw (Life ed) 51:9 Jl 18 '47
Board urges broadening of social security. Comm & Fin Chr 165:1047 F 20 '47

INSURANCE, Social—United States—*Cont.*
Casualty industry unites to urge reversal of Crosser amendment; argue at Washington hearing. East Underw 48:31 Je 20 '47
Dangers of social security expansion. W. B. Cornett. East Underw 48:36 Ja 10 '47
8,200,000 permanently insured; social security statistics at end of first decade. A. J. Altmeyer. Nat Underw (Life ed) 51:2 Ja 10 '47
Employed gain advantage filing for social security at 65. Nat Underw (Life ed) 51:4 My 9 '47
Few commission agents apply for social security. Nat Underw (Life ed) 50:1+ D 27 '46
Insurers agree on Crosser act amendment; unite on bill to remove non-occupational benefits from retirement act. Nat Underw 51:25 Mr 13 '47; Same. Nat Underw (Life ed) 51:3 Mr 14 '47
Many social security benefit losses reported; failure to make applications at first opportunity cited by Institute of life insurance. Weekly Underw 156:1502 My 31 '47
Repeal of Crosser amendment urged. G. T. Warfield, jr. Weekly Underw 156:1424 My 24 '47
Report on social taxes for '46. Comm & Fin Chr 165:1172 F 27 '47
Schwellenbach's social security plan would liberalize law. Nat Underw (Life ed) 51:14 Mr 28 '47
Social security. M. A. Linton. Nat Underw (Life ed) 51:6 O 17 '47
Social security expansion dangers. H. D. Van Schaick; T. D. Bayley. East Underw 48: 31+ Ja 17 '47
Social security for agents. J. Carson; J. Utter. Nat Underw (Life ed) 50:20 D 6 '46
Social security fund going broke as it rises; size of reserve conceals fact that future obligations mount faster. R. M. Bleiberg. Barron's 27:7-8 N 3 '47
Social security opportunities for the underwriter. Life Ins Courant 52:103+, 148-9, 230, 415-16 Mr-Ap, Je, O '47
Social security vet amendment often misconstrued; to aid survivors of veterans who die within three years of discharge. Nat Underw (Life ed) 51:23 F 14 '47
State Farm agents began S.S. payments in 1945. Nat Underw (Life ed) 51:4 F 21 '47
Treasury rules Security Mutual agents under social security. Nat Underw (Life ed) 51: 1+ F 7 '47
Union health and welfare plans. L. M. Kramer and R. Theodore; N. M. Minkoff. Mo Labor R 64:191-214 F '47
U.S. Chamber modifies stand on social security. Nat Underw (Life ed) 51:5 My 9 '47

Yugoslavia

Social insurance and assistance. Int Labour R 55:312-14 Mr-Ap '47

INSURANCE, Soldiers' and sailors'. See Insurance, Military and naval service

INSURANCE, Stamp collection floater. See Insurance, Inland marine—Policies—Stamp collection floater

INSURANCE, State
Canada's farmers; Saskatchewan province scheme of crop insurance. il Spectator (Property ed) 12:14+ N 14 '46
Canadian socialists draw argument from insurance dilemma; market stringency, C.C.F. leaders say, calls for government operation. Nat Underw 51:8+ S 11 '47
Muster good will of assured to meet government threat; socialism's challenge. F. C. Watkins. Nat Underw (Life ed) 51:3 My 2 '47; Same. Nat Underw 51:6 My 1 '47

See also
Insurance, Military and naval service
Insurance, Unemployment
Insurance, Social

INSURANCE, Storekeepers' burglary. See Insurance, Burglary

INSURANCE, Surety and fidelity
Broadening covers featured '46 bonding. A. F. Lafrentz. Weekly Underw 156:69-70+ Ja 4 '47
Casualty-surety leaders foresee underwriting losses for 1947. J. S. Daniel. East Underw 48:25-7 Ag 15 '47
Challenge of the post-war period; dishonesty insurance more necessary than ever. J. F. Eierman. East Underw 48:34+ pt 2 Je 20 '47
Check cashers. S. Moritz, jr. Weekly Underw 156:1155-7, 1213-17+ Ap 26-My 3 '47; Abstract. Nat Underw 51:14 F 27 '47
Correct bond dating; American casualty co. explains why applications for bonds must be dated prior to bond date. East Underw 48:25 Ag 29 '47
Defalcation in relation to audit, internal control, and fidelity bonds. J. L. Carey. J Account 83:353-5 Ap '47
Federal bond writing limits are announced by Treasury department; tabulation. Weekly Underw 156:1758 Je 28 '47
Fidelity protection for merchants and manufacturers. C. R. Sweet and others. Rough Notes 90:21-7 My '47
Fidelity-surety results and outlook. W. L. Clapp. East Underw 48:34 Ja 24 '47
House passes bill to bond House sergeant-at-arms employes. Nat Underw 51:29-30 Ap 10 '47
House sergeant-at-arms was bonded for $50,000 by Great American. Nat Underw 51:13 Ja 30 '47
International association of insurance counsel reports on casualty, surety and aviation. East Underw 48:29 Ag 29 '47
Investment of trust funds by fiduciaries; how problem affects sureties; abstracts. G. Fiedler. East Underw 48:36+ S 26 '47; Nat Underw 51:14 S 25 '47
NAIA surety report. T. Bailey. East Underw 48:37 O 24 '47; Same abr. Weekly Underw 157:998 O 18 '47
New Amsterdam Casualty publishes booklet on dishonesty insurance. East Underw 48: 35 F 7 '47
New bond for bank's legal liability proving popular. Nat Underw 51:27 My 22 '47
Nickel case spurs sales; Mergenthaler loss is powerful surety object lesson. Nat Underw 50:20 N 14 '46
No surety on appeal bonds for John L. Lewis and U.M.W. Nat Underw 50:15d D 12 '46
North America now on U.S. surety bond list; April 1947 and comparisons; tabulation by company. Nat Underw 51:15 Je 12 '47
Problems of stock brokers and transfer agents arising from questioned securities. S. W. Donovan. Weekly Underw 155:1564-6; 156: 284-6, 552-3 D 28 '46, Ja 25, F 22 '47
Rate regulation great adventure in surety field; problems that lie ahead; Chicago address. M. Lewis. Nat Underw 51:13+ Ja 30 '47
Result of agents' poll on surety questions reported at N.A.I.A. Oklahoma City meeting. T. Bailey. Nat Underw 51:23+ My 1 '47
Solicits aid of surety bond producers; New Orleans address. M. W. Lewis. East Underw 48:28 Ja 24 '47; Same. Weekly Underw 156:274 Ja 25 '47
Sugar beet support program bond designed for Commodity credit corp. Nat Underw 51: 11 Jl 17 '47
Suggests plan for measuring adequacy for fidelity bond. J. A. Rooney. Nat Underw 51:23+ My 8 '47; Same abr. Rough Notes 90:28+ Je '47
Surety bonds covering unusual situations. C. W. Laird. East Underw 48:42 Mr 7 '47
Today's problems in crime insurance; abstracts. L. E. Eldridge. Spectator (Property ed) 12:26+ D 12 '46; East Underw 47:84 D 13 '46
Towner Bureau research; study of proper building and loan blanket bond cover. Nat Underw 50:23 D 5 '46
U.S. may sue on bond involving Congress shortage; cumulative liability is question. Nat Underw 51:15 Jl 24 '47

See also
Bankers' blanket bond
Surety claim men's forum
Insurance, Forgery
also Association of casualty and surety companies; Surety association of America

INSURANCE, Surety and fidelity—*Continued*

Adjustment of claims

Courts divided on subrogation rights of fidelity companies. F. E. Pausch. East Underw 48:38 S 26 '47; Same cond. Nat Underw 51:25 O 2 '47

Sole-actor doctrine; handling of claims where two separate bonds cover single individual with authority in more than one capacity. F. H. Kelly. Weekly Underw 157:443-5, 494-5 Ag 23-30 '47

Agents

Agents hold casualty and surety meetings at Dallas and Houston. East Underw 48:30 Ja 31 '47

Gives production tips to agents on fidelity-surety bonds. D. Porter. East Underw 48: 31 My 16 '47

Alien fiancée bonds

For GI bridegrooms; alien fiancée bonds. Rough Notes 90:49 F '47

Contract bonds

Bond protection and claim collection procedure on public and private contracts. C. G. Roth. Weekly Underw 157:999-1001+, 1055-7, 1110-11 O 18-N 1 '47; Abstract. Credit & Fin Management 49:11-14 O '47

FHA accepts substitute for corporate surety. Nat Underw 51:17 Ap 17 '47

Government contracts; contract agents oust judicial control. A. H. Heron. East Underw 47:36 D 20 '46

New bonds for private builders. P. A. Dow. Rough Notes 89:17+ N '46

Payment bonds on government work. F. V. Bonzagni and J. Reich. Eng N 139:258-60 Ag 21 '47

Price stabilization big factor in contract bonds. C. W. Laird. Weekly Underw 156: 546 F 22 '47

Relation of U.S. surety and contractor under bond. Nat Underw 51:27-8 Ap 17 '47

Surety seeks to recover from bank that falsified contractor's fiscal status. Nat Underw 51:29 Ap 10 '47

Three sureties join on huge Mississippi River bond; Locks 27 job; bond amount $16,626,000. East Underw 48:25+ Ag 1 '47

Today's construction costs at peak; need more education on value of bonds. C. H. Bauer, jr. East Underw 47:43 N 15 '46; Abstract. Nat Underw 50:25 N 14 '46

Truman's order limiting civil works to affect contract bonds. East Underw 47:32 D 27 '46

Finance

Aggregates of stock casualty, surety and miscellaneous companies, mutual casualty companies, 21 reciprocals, inter-insurers exchanges and Lloyds organizations for 1946; with underwriting and investment profit and loss exhibit; tables. Spectator (Property ed) 13:20-3 S 11 '47

Country-wide underwriting results 1942-46 of companies licensed in New York state; tabulations. East Underw 48:6-7+, 10+ pt 2 Je 20 '47

Fidelity and surety insurance aggregates, 1944-1946. Spectator (Property ed) 13:30 Jl 24 '47

New Jersey casualty-surety writings during 1946; tabulation by companies and by lines. East Underw 48:38-41+ Mr 28 '47

New York department reviews fidelity and surety experience; tabulations. Nat Underw 51:3, 26 Jl 10 '47

1946 casualty-surety results of all companies for New York state; tabulation. East Underw 48:14 pt 2 Je 20 '47

Underwriting and investment profits and losses of 100 casualty, surety and miscellaneous companies, 1937-1946; tabulation. Spectator (Property ed) 13:30-1 O 9 '47

Fraudulent statements

Surety seeks to recover from bank that falsified contractor's fiscal status. Nat Underw 51:29 Ap 10 '47

Guardian bonds

Bonds for veterans' estates. C. W. Laird. Rough Notes 90:30+ F '47

Termination of surety's liability on guardian's bond. O. R. U. del Giudice. Weekly Underw 155:1012-14, 1253-5, 1309-10 O 26, N 23-30 '46

History

Maturity brings greater burdens; fidelity and surety lines have steadily offered more for less. C. R. Miller. Nat Underw 50th anniv no:78 1947

Judicial bonds

Judicial bond production builds prestige and is remunerative. G. H. Burnett. East Underw 48:28 Ag 1 '47

Liquor bonds

Reduce 3.2% beer bond rate in Missouri. Nat Underw 51:30 Ap 24 '47

Losses

Another fidelity loss through phony invoices; Pyle-national company of Chicago. Nat Underw 51:21+ Ap 17 '47

Another large bonding loss develops in New York; Wall Street customers' man charged with taking $100,000 in 13 years. Nat Underw 51:21 My 22 '47

Illinois aid bureau man is held as embezzler. Nat Underw 51:13 Ag 28 '47

Lloyds is insurer; Walgreen company embezzlement loss may be $100,000. Nat Underw 51:17 Je 26 '47

$96,000 pulp magazine loss is uninsured. Nat Underw 51:13 Ja 30 '47

No surety loss in New Castle embezzlement Nat Underw 51:15 Ja 23 '47

$142,000 bank loss lies undetected for eleven years; Bristol, Conn., case. Nat Underw 51: 19 Ag 14 '47

Pool salvage operations in Mergenthaler case. Nat Underw 51:28 Ap 3 '47

Repair bill padding costs St Louis bank $95,000. Nat Underw 51:23 Mr 20 '47

Rising loss ratios in fidelity line of concern. East Underw 48:27+ S 5 '47

Story of Wm. T. Knott co. defalcation. R. T. Wood. East Underw 48:37 Mr 28 '47

Union, with $43,000 shortage, has $2,000 cover. Nat Underw 51:19 Jl 17 '47

United States Fidelity and Guaranty pays $108,000 bank loss nine hours after confession. Nat Underw 51:19+ Je 19 '47

Yearly dishonesty losses now put at $500,000,000. C. R. Sweet. Weekly Underw 157: 227 Jl 26 '47

Policies

Don't forget to add dishonesty protection; DDD policy. W. J. Nichols. Rough Notes 90:22-3 Ag '47

Extend scope of 3-D policy; open stock cover now optional. Nat Underw 51:16 Jl 24 '47

For small loan companies; standard form 26. Rough Notes 90:51 Je '47

Losses covered under 3D that are not insured under limited forms. M. Smith. Nat Underw 51:14 Mr 27 '47

3 D policy. M. J. Hally. Weekly Underw 156: 719-21 Mr 8 '47

Preventive work

Prevention of fidelity and crime losses. C. A. Sullivan. Management R 36:227-9 Ap '47

Program to combat loss trend in fidelity, surety; National Surety tackles problem; W. L. Flynn placed in charge. Nat Underw 51:21 Ap 10 '47

Public officials bonds

Termination of surety's liability under public official bonds. C. W. Kuhn. Weekly Underw 156:1760-2 Je 28 '47

Purchasing

How buyer should appraise fidelity needs; abstracts. C. R. Sweet. Nat Underw 51:18 F 20 '47; Weekly Underw 156:549 F 22 '47

Rates

C. & S. regulatory bills pass in twelve states. East Underw 48:39+ Mr 21 '47

Improve fidelity manual setup, slash rates. R. F. Steinke. Nat Underw 51:29 S 18 '47

Sullivan revokes Hobbs order; settles Kansas rate issue. Nat Underw 51:13 Ja 30 '47

INSURANCE, Surety and fidelity—*Continued*

Study and teaching

Bond courses big need; Aetna educational head gives tips at Ohio State conference. A. E. Redding. Nat Underw 51:31 Mr 20 '47

Texas

Texas O.K.'s Towner Bureau rates and riders. Nat Underw 51:23 Ag 7 '47

INSURANCE, Surgical expense

Continental's surgical-medical contract possesses attractive features. Weekly Underw 157:839 O 4 '47

Rhode Island doctors name committee to study surgical care benefits. Weekly Underw 156: 700 Mr 8 '47

Rhode Island surgical and obstetrical plan. Nat Underw 51:28 O 2 '47; Nat Underw (Life ed) 51:2 O 3 '47; East Underw 48:30 O 3 '47

INSURANCE, Taxicab

Constructive notice insufficient for cancellation of policy issued pursuant to New Jersey taxi cab act. Weekly Underw 156:1717 Je 21 '47

Keystone failure upsets taxi service in Michigan and Ohio communities. Spectator (Property ed) 13:31 Jl 24 '47

INSURANCE, Teams' public liability

Coverages and forms; teams liability policy. Spectator (Property ed) 13:9 Ag 21 '47

INSURANCE, Theatrical cast

Insure boy actor for $3,000,000; Richard Tyler; coverage in Lloyd's; production itself insured in stock company. R. Rhodes. East Underw 47:12 D 27 '46; Discussion. 48:10 F 7 '47

Richard Tyler, boy actor, insured for $3,000,000. P. A. McDonnell. Spectator (Life ed) 154:26+ Ja '47

INSURANCE, Theft

Burglary insurance trends; residence and outside theft. P. A. Laterza. East Underw 48:54 Ap 25 '47

Continue to debate mysterious disappearance in residence theft policy. Nat Underw 50:24 N 21 '46

Much residence theft at old rate. Nat Underw 51:17 O 2 '47

Mysterious disappearance losses only 13% of total. Nat Underw 51:15+ Ja 30 '47

Predicts poor residence theft showing till 1949. J. J. Iago. Nat Underw 50:26+ D 5 '46

Residence theft forms need more cover to value. J. J. Iago. Nat Underw 51:18+ Jl 10 '47

See also

Insurance, Automobile—Theft claims
Insurance, Burglary
Insurance, Paymaster robbery

Adjustment of claims

Casualty, inland marine agreement of guiding principles (1945); losses involving residence and outside theft insurance versus personal effects floaters. W. R. Cunningham. Spectator (Property ed) 12:9-10+ Mr 13 '47

First mysterious disappearance case reported; North Carolina decision. Nat Underw 51: 17+ Ja 16 '47

Theft question for jury despite presumption created by proof of mysterious disappearance. Weekly Underw 156:435 F 8 '47

INSURANCE, Title

United nations gets title insurance commission on policy to protect world capital site. East Underw 48:50 Ap 25 '47

INSURANCE, Tobacco. See Insurance, Agricultural; Insurance, Fire—Tobacco risks

INSURANCE, Tornado

Florida senators propose federal storm insurance. Nat Underw 51:2 O 2 '47

Revise conception of maximum width of tornado. Nat Underw 51:19 My 8 '47

Storm warning applicants for hurricane coverage; practices that have developed. W. Hay. Weekly Underw 157:804-5 O 4 '47

Adjustment of claims

Assureds win cases involving damage by water and windstorms. East Underw 48:29 F 28 '47

Companies refuse to pay architect fee, water damage losses; hurricane unites stock, mutual against local Gulf Coast concepts. Nat Underw 51:3, 32 O 23 '47

Court holds wind, and not waves, caused damage to house on shore. East Underw 48:27 Ja 31 '47

Mere agreement to sell is held sole ownership clause violation. East Underw 47:26 N 15 '46

Recovers under wind policy for New Jersey 1944 loss; Marks vs. Lumbermen's. Nat Underw 51:2 Ja 2 '47

Require 60 days to clear claims from Oklahoma-Texas tornado. Nat Underw 51:20 Ap 24 '47

Wind or collapse? wind wins, Travelers loses. Nat Underw 50:9 D 19 '46

Wind, rather than weight of snow, held to have caused fall of roof. East Underw 48: 25 Ap 4 '47

Losses

Arkansas tornado damage $150,000; sudden twister hit rural areas mainly. Nat Underw 51:3 Je 5 '47

Farm insurers deluged with wind losses. Nat Underw 51:17 My 1 '47

Insured loss in storm may reach $15 million. Nat Underw 51:2+ S 25 '47

$9,700,000 Panhandle twister. Weekly Underw 156:1517+ Je 7 '47

Peg hurricane loss at $24 million; 65,000 claim total. Nat Underw 51:17 O 9 '47

Texas-Oklahoma blow may cost insurers $3 million. Nat Underw 51:1+ Ap 17 '47

Tornado, winds cause heavy loss in Arkansas and Tennessee. Nat Underw 51:6 My 8 '47

Rates

Study undertaken to zone Texas for windstorm rates. Nat Underw 51:30 Ja 16 '47

INSURANCE, Tourist baggage

Carrier's liability for baggage. H. S. Daynard. Weekly Underw 156:538+ F 22 '47; Same abr. East Underw 48:38 F 21 '47

INSURANCE, Tuition fees

How Michael H. Levy of New York has created a market in private camp insurance. East Underw 48:30+ pt 2 Je 20 '47

Kids is dynamite; summer-camp tuition payment refund insurance. Fortune 36:120 Jl '47

Tuition fees insurance. Rough Notes 90:36 Ap '47

INSURANCE, Turkey

Turkey brooder losses heaviest in years. Weekly Underw 156:1131 Ap 26 '47

Turkey loss ratio low. East Underw 47:22 N 22 '46

INSURANCE, Unemployment

Plugs use of job cover funds for disability plans; Social security administration lauds California, R. I. procedures. Nat Underw (Life ed) 51:2 F 7 '47

Social security board advises state temporary disability insurance coordinated with unemployment compensation. East Underw 48:34+ F 28 '47; Abstract. Nat Underw 51:14 F 27 '47; Same. Nat Underw (Life ed) 51:6 F 28 '47

Unemployment tax cut plan opposed; Howell bill to amend Crosser law. Ry Age 123: 113+ Jl 19 '47

Use of job cover funds for disability programs. Nat Underw 51:23 Ja 23 '47

Rates

Merit ratings for utilities; proposals to reduce unemployment compensation tax rates to reward maintenance of stable employment. B. Jones. Pub Util 39:364-7 Mr 13 '47

California

Disability benefits

Analyzes California unemployment disability statute. E. H. O'Connor. East Underw 47: 33 D 6 '46

California disability law now operative. East Underw 47:34 D 6 '46

Disability insurance in California. T. H. Mugford. Personnel J 25:222-7 Ja '47

Disability law fears fail to materialize. E. H. Neuschwander. Nat Underw 51:18 Jl 3 '47; Same. Nat Underw (Life ed) 51:4 Jl 4 '47

INSURANCE, Unemployment—California—Disability benefits—*Continued*
Facts of Monasch plan to comply with California disability act. Weekly Underw 155: 1310 N 30 '46
More benefits added under California law. W. B. Cornett. East Underw 48:26 Jl 11 '47
685 voluntary plans covering 94,000 employes filed under new law. Nat Underw (Life ed) 50:2+ D 13 '46; Same abr. Nat Underw 50: 18+ D 12 '46
6,100 voluntary plans; record as of May 1 under California unemployment compensation disability act. East Underw 48:38 Je 13 '47
Unemployment disability plan now in effect; insurance interests are striving to popularize voluntary route. Nat Underw 50:23+ D 5 '46; Same. Nat Underw (Life ed) 50:1+ D 6 '46

Michigan
Jobless pay barred; state court ruling on eligibility for unemployment compensation during a strike. Bsns W p78 Ag 9 '47

Nebraska
Disability benefits
35,000 Nebraska railroad men under new plan; amendments to Railroad unemployment insurance act. Weekly Underw 156: 1450 My 31 '47

Nevada
Disability benefits
Nip threat to oust insurers from cash sickness field; inconspicuous bill vetoed, averting raids on unemployment reserve. Nat Underw 51:25+ Ap 3 '47; Same. Nat Underw (Life ed) 51:1 Ap 4 '47

New Jersey
Chamber of commerce will oppose nest egg for sickness cover; money should remain in unemployment compensation fund. Nat Underw 50:21 N 21 '46
Invitation to embezzle; New Jersey benefit plan hit as leading to sickness clubs. Nat Underw 50:18 D 5 '46; Same. Nat Underw (Life ed) 50:1 D 6 '46

Pennsylvania
Deny job cover in Pennsylvania to commission-compensated agents. Nat Underw (Life ed) 51:24 Ja 31 '47

United States
Idle by choice. Bsns W p88+ Ja 25 '47

Washington (state)
Washington agents outside of job cover law. Nat Underw 51:29 F 6 '47; Same. Nat Underw (Life ed) 51:6 F 7 '47

INSURANCE, Use and occupancy
Advocates quarterly check-up on U. & O. B. E. Kelley. East Underw 47:72 D 13 '46
Business interruption cover as valuable in lean as well as lush years. C. A. Snow. Weekly Underw 156:602-3+ Mr 1 '47; Abstract. Nat Underw 51:1+ F 20 '47; Same abr. East Underw 48:30+ F 21 '47
Business interruption form A (use and occupancy). Rough Notes 90:57-8 S '47
Business interruption insurance sales packet of Fireman's Fund. East Underw 48:22 O 24 '47
Closed for repairs; business interruption insurance affords security to manufacturers and merchants. W. H. Hackett. Spectator (Property ed) 12:10-12+ F 27 '47
Compares gross earnings form with other plans. A. J. Snow. Nat Underw 51:9 Ag 21 '47
Contingent U. & O. forms now published in West. Nat Underw 51:14 S 13 '47
Department stores basing U. & O. estimates on no volume rise. Nat Underw 51:6 Ap 24 '47
Drop weekly U.&O. forms in New England. Nat Underw 50:4 D 5 '46
Gross earnings for small merchants. C. T. Hubbard. il Rough Notes 90:19+ Ag '47
Gross earnings form strongly advocated; problems in the U.&O. field. H. C. Klein. East Underw 47:31+ S 13; 19-20 S 20 '46; Same cond. Nat Underw 50:5+ S 12 '46; Same cond. Rough Notes 90:15-16+ Ja '47
Gross earnings or contribution form; how to determine by chart the most advantageous business interruption form. F. P. O. Potter. Rough Notes 90:16-17 Ap '47
Indirect boiler losses; opportunity for use and occupancy sale. A. N. Graves. Rough Notes 90:32 Ag '47
Insurance buyers briefed on U.&O. B. M. Butler. Weekly Underw 155:1281+ N 30 '46
Limit contingent U.&O. at unnamed locations in New England. Nat Underw 51:11 Je 12 '47
Limit of liability in new adjustable U. & O. form argued. Nat Underw 51:3+ S 25 '47
Need analytical underwriting of U. & O. H. R. Thiemeyer. Nat Underw 51:4 Ja 23 '47
New reporting U. & O. form. Nat Underw 51:19A, 19B S 18 '47
Premium adjustment U. & O. endorsement; analysis of new contract. G. V. Whitford. Nat Underw 51:21-4 S 18 '47
Revise U. & O. forms in Minnesota. Nat Underw 51:2 F 13 '47
Rider listing hotel merchandise costs may solve U. & O. snarl; narrow definition has caused imposition of coinsurance penalties. Nat Underw 51:1 Mr 27 '47
U.&O. most fertile line for new business, new accounts. H. T. Lewis. Nat Underw 50:19 D 5 '46
U. & O. sales tips. G. V. Whitford. Nat Underw 51:30 Ap 3 '47
See also
Insurance, Bridge

Adjustment of claims
Court holds assignment of U.&O. policy invalid as to future loss. East Underw 48: 23 Jl 18 '47
N.Y. Supreme court decision on appraisal clause in U. & O. policy. East Underw 48: 27 F 28 '47
Seek to forestall tangled litigation in Coast U.&O. loss; Pickering lumber company case. Nat Underw 51:3 Jl 17 '47
U & O loss petition signed by 37 companies; Pickering lumber corporation case. Spectator (Property ed) 13:34-5 Jl 24 '47

INSURANCE, Valuable papers
Destruction of records policy; credit bureau form. Rough Notes 90:57 S '47
Protection of records from fire vital to business concerns. Weekly Underw 157:88-9 Jl 12 '47
Valuable papers policy. Rough Notes 90:69-70 Ap '47

INSURANCE, Vandalism. See Insurance, Fire—Policies—Extended coverage endorsements

INSURANCE, War risk
See also
Insurance, Life—War risks
Insurance, Marine—War risks
Insurance, Military and naval service
War damage corporation

Adjustment of claims
Ask recovery for cost of shipping by rail to dodge submarines during war. Nat Underw 50:21 D 5 '46

INSURANCE, Warehousemen's liability
Warehousemen's liability policy. Rough Notes 90:61 Je '47

INSURANCE, Water damage
Water damage prospects. Rough Notes 89:32+ D '46

INSURANCE, Weather. See Insurance, Hail; Insurance, Rain; Insurance, Tornado

INSURANCE, Windstorm. See Insurance, Tornado

INSURANCE, Workmen's compensation
Coal mine cover increased after Centralia loss. Nat Underw 51:21 Ap 10 '47
Liability of an insurer under the provisions of the standard compensation policy for employes illegally employed. J. F. Hynes. Nat Underw 51:20 O 2 '47

INSURANCE, Workmen's compensation—*Cont.*
National Council's test payroll audit study continues; to study schedule P. East Underw 48:33 Je 13 '47
Production control plan functions for Coal operators casualty co. East Underw 48:32 Jl 18 '47
Seeds sown in past may bring harvest of trouble in future; compensation, never big profit maker, cannot now be carried by other lines. R. Tuchbreiter. Nat Underw 50th anniv no:172-4 1947
Seven states now have compensation monopoly. F. Lang. Weekly Underw 157:387 Ag 16 '47
Sounds alarm on compensation line. R. Tuchbreiter. Nat Underw 50:20 D 12 '46

See also
Employers' liability
Workmen's compensation

Accounting

Compensation expense study is being shaped; many preliminary steps needed, National Council tells N.A.I.C. Nat Underw 50:17+ D 19 '46

Adjustment of claims

Evidence of claimant and wife sufficient to sustain award despite all medical testimony to contrary. Weekly Underw 156:571 F 22 '47

Heart ailment claims; compensation recovery ruled out by Michigan courts. Weekly Underw 155:1512 D 21 '46

Mere proof of assault by unknown assailant insufficient to show injury arose out of employment. Weekly Underw 157:61 Jl 5 '47

New York Appeals court compensation decision; holds company not liable when worker is injured at premises not named in policy. East Underw 48:27 Ag 22 '47; Same cond. Nat Underw 51:20 Ag 14 '47

U.S. Supreme court's ruling in compensation case; employe paid $2 a day for transportation; killed riding on highway; widow's claim upheld. East Underw 48:38 Mr 14 '47

Workmen's compensation; additional award in another state; Industrial commission of Wisconsin et al. v. E. E. McCartin and Continental casualty company. J. L. Roesch. Spectator (Property ed) 13:10-11+ Ag 21 '47

Advertising

Advertising helps build insurance premium volume; Industrial indemnity company, San Francisco. T. G. McGuire. Ptr Ink 220:36-7 Ag 29 '47

Finance

Compensation insurance results for 1946-1947; New York insurance department aggregates of stock, mutual and reinsurance companies and state fund. Spectator (Property ed) 13:28 Jl 10 '47

Compensation record; N.Y. department studies results; with tabulation by company. Nat Underw 51:26 Je 26 '47

1944-1946 workmen's compensation aggregate results, cuntry-wide and New York state; tabulation. East Underw 48:42 Je 27 '47

History

Beginnings and growth of workmen's compensation. W. Schobinger. Nat Underw 50th anniv no:148 1947

Industrial diseases

Dewey approves silicosis bill. East Underw 48:28 Ap 4 '47; Nat Underw 51:34 Ap 3 '47

1947 occupational disease legislation. T. C. Waters. Weekly Underw 157:228-30+ Jl 26 '47; Abstract. East Underw 48:28 Jl 18 '47

Tuberculosis in general hospitals from insurance company's viewpoint. B. E. Kuechle. East Underw 48:30 Jl 25 '47

Rates

Base rates on compensation insurance for construction, April 1, 1947. Eng N 138:639 Ap 17 '47

California compensation rates lowered. East Underw 47:35 D 6 '46
Carey bans compensation rate plans for New Jersey. East Underw 48:35+ Ap 11 '47
Compensation rates in Rhode Island low. Weekly Underw 156:759 Mr 15 '47
5.5% cut in comp. rate level in New Jersey. East Underw 47:34 N 29 '46
Limiting payrolls for compensation premium rating; report of National council on compensation insurance. East Underw 47:98+ D 13 '46; Nat Underw 50:17+ D 12 '46
Massachusetts compensation rates up 9.7%. East Underw 48:34 Ja 31 '47
Michigan rates up ½%. Nat Underw 50:28 N 21 '46
New compensation rate schedule for Texas. Weekly Underw 157:419 Ag 23 '47; Same cond. Nat Underw 51:7 Ag 7 '47
N.J. commissioner vetoes Council plan; payroll limitation accomplishes little. East Underw 48:33 Ja 3 '47
New Jersey revision; compensation rates will be reduced 5.5%. Weekly Underw 156:1560 Je 7 '47; East Underw 48:36 Je 6 '47
New Texas comp. schedule; rate increase averages 2.6%. East Underw 47:35 D 27 '46; Same abr. Nat Underw 51:24 Ja 9 '47
New York rating board ruling; compensation rate lower for non-striking employes. East Underw 48:30 Ag 8 '47
North Carolina reduction ordered by Hodges. Nat Underw 51:33 S 18 '47
$100 weekly compensation limitation in calculating premiums; summary of final action by states. Rough Notes 90:74 Mr '47
Report to National Council; abstracts. W. F. Roeber. East Underw 47:32+ D 6 '46; Weekly Underw 155:1333+ D 7 '46
Results of study of multiple injury accidents in Pennsylvania. G. B. Elliott. East Underw 47:31 D 20 '46

Retrospective plan

Here it is; all about (or nearly all about) plan D. Nat Underw 51:23 S 25 '47
New Jersey disapproves retrospective plan. Nat Underw 51:27 Ap 10 '47
Plan D proposal; optional interstate high-low scheme for all third party lines. C. J. Haugh Nat Underw 51:29+ S 18 '47
Retrospective plan D to be filed shortly; applies to interstate risks. East Underw 48:37+ O 10 '47
Retrospective rating in operation; flexible procedures predicted for future. W. J. Heinreich. Weekly Underw 156:605-6+ Mr 1 '47; Abstracts. Nat Underw 51:30 F 20 '47; East Underw 48:40 F 21 '47

Risks

Physically handicapped termed safe workers. J. D. Dorsett. Weekly Underw 157:898 O 11 '47

Statistics

Number of suits outstanding per $100,000 of earned premiums; total second period workmens compensation, Dec. 31, 1946 and comparisons for other periods; tabulation by company. Spectator (Property ed) 13:25 O 9 '47

California

Fight many California compensation increases. Nat Underw 51:19 My 15 '47

Connecticut

Connecticut agents say new rating law is losing them big compensation lines. Nat Underw 51:16 My 1 '47

Illinois

Illinois firm doubles compensation cover on employes; A. E. Staley manufacturing co. Nat Underw 51:32 My 1 '47

Massachusetts

Boston Elevated insurer denies state auditor charges; Transit Mutual case. E. E. Whiting. Nat Underw 51:26 Ap 24 '47
Insurer is problem in Boston elevated railway public ownership; fate of Transit Mutual. Nat Underw 51:17 Ap 17 '47
No company is prohibited from filing premiums other than those of Bureau. C. F. J. Harrington. East Underw 47:40 N 15 '46

INSURANCE, Workmen's compensation—*Cont.*

New York (state)

Appellate division decides variety of compensation cases. East Underw 47:38 N 22 '46

Compensation coverage for domestic workers; report to Compensation insurance rating board. H. D. Sayer. Weekly Underw 156:346 F 1 '47

Critical of insurance carriers. M. Donlon. East Underw 48:28 Ag 15 '47

Dewey signs compensation bill on executive officers; must be covered under act. East Underw 48:31 Ap 18 '47

Household help liability law sells coverage. Nat Underw 51:14 F 27 '47

Legislation on unclaimed workmen's compensation awards put off; N.Y. proposal put off under agreement with companies. Nat Underw 51:22 Ap 10 '47

Local agents dislike state fund activity. J. C. Stott. Weekly Underw 156:1284 My 10 '47

May now bracket compensation and comprehensive liability in N.Y. Nat Underw 50:22 N 14 '46

New rulings in New York on premium charges for executive officers approved. East Underw 48:26 Ag 29 '47

New York state group report on insurance. Sheet Metal Worker 38:124+ Ja '47

Reminds carriers of new N.Y. compensation law; covers executive officers of corporations; charitable and municipal officers by election. H. D. Sayer. East Underw 48:33 Je 6 '47

To write compensation for domestic workers in New York. H. D. Sayer. East Underw 47:39 N 15 '46; Same abr. Weekly Underw 155:1189 N 16 '46

Workmen's compensation measures introduced by Condon; provisions outlined. East Underw 48:39 Mr 7 '47

Pennsylvania

Probe alleged frauds in state fund. Nat Underw 51:20 Ag 14 '47

Results of study of multiple injury accidents in Pennsylvania. G. B. Elliott. East Underw 47:31 D 20 '46

Rhode Island

Minor children under eighteen years of age entitled to compensation for full statutory period. Weekly Underw 157:1078 O 25 '47

Wisconsin

Wisconsin Board prods insurers to speed compensation payments. H. A. Nelson. Nat Underw 51:6 S 4 '47

INSURANCE, Yacht. See Insurance, Motor boat

INSURANCE accountants association

Meeting, Atlantic City. Nat Underw 51:4+ O 16 '47

INSURANCE accounting and statistical association

Annual meeting, Chicago, May 15-17. East Underw 48:14, 32+ My 23 '47; Nat Underw 51:21+ My 22 '47; Nat Underw (Life ed) 51:3 My 23 '47

INSURANCE actuaries

Actuarial club of the Pacific, meeting, Arrowhead Springs, Calif. Nat Underw (Life ed) 50:6 D 6 '46

Actuarial club of the Pacific spring meeting. East Underw 48:11 Jl 4 '47

Actuaries shouldn't fear anti-trust witch hunters. E. W. Marshall. Nat Underw (Life ed) 51:1+ My 9 '47; Excerpts. East Underw 48:1+ My 9 '47

Actuary; his role and historical origin. E. G. Fassel. Spectator (Life ed) 155:31+ Jl '47

1896-1946; the actuarial view. P. Shepherd. Nat Underw 50th anniv no:237-41 1947

F. Stuart Brown is actuary for NAIA. por East Underw 48:42+ Mr 21 '47

See also

Actuarial society of America
American institute of actuaries
Casualty actuarial society

INSURANCE adjusters

Answers criticisms of independent adjuster. P. B. Reed. Nat Underw 51:4 Jl 31 '47

Current questions that puzzle the loss men. Nat Underw 51:4 Ja 23 '47

Form new adjusting firm in Mexico city; Adjusters & surveyors, ltd. East Underw 48:16 Jl 11 '47; Nat Underw 51:8 Jl 10 '47; Weekly Underw 157:84 Jl 12 '47

Increase in claims for 1947 seen; calls adjuster mirror reflecting company. R. W. Dick. Weekly Underw 156:548 F 22 '47

Lack of industrial statesmanship in insurance field; role of the claim adjuster. H. G. Helm. East Underw 48:44 S 12 '47

Public relations in action; claims man can be ideal adjuster and public relations man in one. H. G. Helm. East Underw 48:34 Ja 31 '47

Radio telephone in cars; Employers' group convinced that new facility will speed up claim settlement. East Underw 48:42 Mr 14 '47

Reed incorporates adjusting concern. East Underw 48:18 Ja 3 '47

Shortage in claim work trainees. Nat Underw 51:14 Mr 27 '47

See also National association of independent insurance adjusters

INSURANCE advertising conference

Annual meeting, West Dennis, Mass. Sept. 15-16. East Underw 48:1+, 21, 28 S 19 '47; Nat Underw 51:1+ S 18 '47; Spectator (Property ed) 13:26-8 S 25 '47; Weekly Underw 157:665+, 674+ S 20 '47

Spring meeting, New York, April 17. East Underw 48:47+ Ap 25 '47; Nat Underw 51: 25 Ap 24 '47

INSURANCE agents

Agent today has twofold selling job. R. Wilkerson. East Underw 48:34 My 23 '47

Agents defiant to companies' move on local board rules; with text of I.E.A. letter. Nat Underw 51:1+ Ap 24 '47

Calls on agents to be alert to vital changes. W. W. Hamilton. East Underw 48:18 Ag 15 '47

Chicago insurance day panels. W. W. Hamilton and others. Nat Underw 51:1+ Ap 17 '47

Company representation; old style and new style. J. Rygel. Nat Underw 50th anniv no: 216-18 1947

Dayton educational conference provides variety. W. T. McWhorter and others. Nat Underw 51:8-9+ Ap 17 '47

Facts of sales competition. J. H. Eglof. Weekly Underw 156:348+ F 1 '47

Future of industry; local agent a dominant factor. G. T. Warfield, jr. East Underw 48:34 Ja 17 '47

Good business ethics; counsels taking objective view of insurance industry. F. C. Beazley. Nat Underw 51:1+ Ag 14 '47

Gordon MacKay, Travelers agent, also editor of Maine newspaper. East Underw 48:30 Jl 11 '47

Green Bay, Wis., agents analyze relations with company fieldman. M. Abrams. East Underw 47:70 D 13 '46

Increasing insurance by telephone. W. W. Hargert. Rough Notes 90:34+ Ja '47

Joyce & co. of Chicago marks 50th anniversary. S. Welton. Nat Underw 51:18 Mr 13 '47

Let buyer beware not insurance sales idea. J. P. Gibbs. Weekly Underw 155:1294 N 30 '46

National Liberty manager using auto radiotelephone; Harold J. Samsel. il East Underw 48:27 Mr 28 '47

Outlines proper rules for agents' associations; tells what may be illegal. M. M. Gorman. East Underw 48:20+ Je 20 '47; Abstract. Nat Underw 51:1 Je 19 '47

Principles salesmen can't neglect. F. W. Potter. Weekly Underw 157:589+ S 13 '47

Professional status treated at mutual agents' mid-year meeting. J. E. Larson; B. G. Sager. Nat Underw 51:13 Ap 3 '47

Public interest demands qualified agents; address before Oregon association of insurance agents. S. B. Thompson. Weekly Underw 157:469+ Ag 30 '47; Same abr. East Underw 48:15+ Ag 29 '47

INSURANCE agents—*Continued*
Smiles, surveys, congratulatory letters, all help sales. W. H. Roddy. East Underw 47:26 N 22 '46
Tells Illinois field men what local agents want. C. H. Metzner. Nat Underw 51:3 Ja 30 '47
Urges thorough study of small premium business by agents. O. S. Johnson. East Underw 48:32 Ap 11 '47

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Insurance brokers
also subdivision Agents under various forms of insurance, e.g. Insurance, Industrial—Agents; Insurance, Life—Agents
also American association of insurance general agents; National association of insurance agents

Accounting

Liability expense gradation. R. W. Howe; W. M. Sheldon. East Underw 48:27 O 17 '47
New Dineen rules to govern fund mingling; applies to Section 125. East Underw 48:23+ Mr 14 '47
Underwriting profit or loss and the effect of unearned premiums. V. L. Gallagher. Weekly Underw 156:1363-6 My 17 '47

Advertising

Advertising with pictures; Norman Hobart of Kansas City makes picture taking hobby a business asset. Rough Notes 89:21-2 D '46
Comprehensive personal liability sold by direct mail and personal follow-up. W. H. Atkins. East Underw 48:38 Je 20 '47
How this letter clicked; problem of underinsurance. W. D. Schlitz. Rough Notes 89: 30 N '46
How to build a mailing list. E. N. Mayer, jr. il Rough Notes 90:17-18+ Ag '47
Local agency should weigh advertising media carefully. H. E. Taylor. Nat Underw 51:25 S 11 '47; Same. East Underw 48:18 S 5 '47
Newspaper advertising valuable when properly used. E. S. Anderson. East Underw 47: 29 N 22 '46
Our agency house organ helps us build customers; Siegfried agency, Tulsa, Oklahoma. R. H. Siegfried. il Rough Notes 90: 30-1 Ag '47
Practical agency advertising. E. R. Hurd, jr. Rough Notes 90:20+ F '47
Recommends direct mail as backbone of agency advertising. E. R. Hurd, jr. East Underw 48:28 Ag 29 '47
Routine to newcomers; H. W. Bradshaw of Delphi, Ind. does it with three simple cards. il Rough Notes 90:25 Je '47
Story of Detroit's stop and shop insurance agency. D. W. Frisbee. il Sales Management 57:62+ N 10 '46
Toby succeeds Jerry on Bickel's annual greeting. Nat Underw (Life ed) 51:24 F 7 '47

Agency management

Fair sex to play important insurance role; part they fulfill in operation of successful office. J. C. Stott. Weekly Underw 156: 1669+ Je 21 '47
Green Sheet system for starting new solicitors. J. P. Murphy. Rough Notes 90:16-17+ S '47
Honeymoon is over; let's return to work. W. H. Roddy. East Underw 48:27+ Jl 25 '47
How agents may prepare for end of sellers' market in insurance. E. S. Whitcombe. East Underw 48:24 Ja 3 '47
Insurance tools that may be used to increase both production and profit. O. Beling. Weekly Underw 156:534-5+ F 22 '47; Same abr. East Underw 48:28 Mr 7 '47
Interests of local and general agents closely allied in insurance functioning. R. H. McLarry. Weekly Underw 156:1230 My 3 '47
Local agency partnership arrangements. Rough Notes 90:36+ My '47
Much of the success of any agency lies in cashier's hands. N. T. Carson. East Underw 48:21 O 10 '47
New employees; training and supervision. A. V. Cain. Rough Notes 89:19-20 D '46
Office space shortage handicaps New York agencies. Nat Underw (Life ed) 51:22 S 5 '47
Organization of a successful agency; Hank Moran of Oklahoma City. J. R. Gregory. il diag Rough Notes 90:15-16+ Je '47
Records for the small agency. H. W. Bradshaw. Rough Notes 89:23+ D '46
Successful agency must take advantage of every opportunity offered. R. C. Larson. Weekly Underw 157:102 Jl 12 '47
Tightening up is in order. G. T. Warfield. Nat Underw 51:6 Ag 14 '47
Turning losses to profits; handling small policies; mailing by third class mail. Rough Notes 89:26 D '46

Costs

Actuaries analyze agency expenses. East Underw 48:11 O 10 '47
Behind what's happening; character of business has changed for the agent; necessity of reducing costs the chief problem today. W. Fetzer, jr. Nat Underw 50th anniv no: 98+ 1947
NAIA big city agents' report. W. M. Sheldon. East Underw 48:20 O 24 '47

Agency managers

General agencies; bona fide use of system extends benefits of company organization to local region. H. C. Stebbins. Nat Underw 50th anniv no:166-7 1947

Agency system

General agencies; bona fide use of system extends benefits of company organization to local region. H. C. Stebbins. Nat Underw 50th anniv no:166-7 1947
Wants study to disclose if group sales threaten to undermine agency system. C. J. Zimmerman. Weekly Underw 157:1071 O 25 '47; Same. Nat Underw (Life ed) 51:1 O 24 '47
Who was the first agent operating in modern manner? Nat Underw 50th anniv no:169 1947

Agents' wives

Come, and bring the wife! D. Ross. Ptr Ink 220:92+ S 26 '47
School for wives results in good prospects. East Underw 48:7 Mr 21 '47

Collecting of premiums

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Commissions

Agent's compensation regulation in rating bills unthinkable. G. T. Warfield, jr. Weekly Underw 156:600+ Mr 1 '47; Same. East Underw 48:20 Mr 7 '47
Assails Texas commission reductions. D. G. Foreman. Nat Underw 51:3 Ag 21 '47
Big group moves to shave excepted city scale. Nat Underw 51:1 S 11 '47
Brokers advocate new production cost program; plan would eliminate debatable commission distinction between brokers and agents. W. W. Clement. East Underw 48: 27 S 5 '47
Canadian agents may be caught in squeeze play on commissions. F. J. Jordan. East Underw 48:26 O 24 '47
Chicago class I agents hold parley on commissions. Nat Underw 51:1+ O 2 '47
Commission issue absorbing topic at W.U.A. parley; excepted cities situation. C. M. Cartwright. Nat Underw 51:1+ S 18 '47
Commission question coming strongly to fore; excess arrangements being terminated. Nat Underw 51:1+ S 4 '47
Commissions, equity rating fare well under model bills. D. A. Forbes. Nat Underw 51: 1+ F 27 '47
Texans claim five per cent extra on windstorm is earned. D. G. Foreman. Nat Underw 51:8 S 4 '47

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Insurance, Automobile—Agents—Commissions
Insurance, Fire—Agents—Commissions
Insurance, Industrial—Agents—Salaries and commissions
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Company relations

Stresses aids to agents by companies. J. N. Cosgrove. East Underw 48:17 Ag 15 '47

Conventions

Alabama association of insurance agents annual convention, Mobile. Nat Underw 51: 19D S 18 '47

Arizona association of insurance agents annual meeting, Douglas. Nat Underw 50:19+ N 14 '46

Arkansas association of insurance agents annual meeting, Hot Springs. Nat Underw 51:1+ My 22 '47

Come, and bring the wife! D. Ross. Ptr Ink 220:92+ S 26 '47

Far West agents conference, meeting, Oklahoma City, April 22. East Underw 48:26 My 2 '47

Georgia association of insurance agents annual meeting, Savannah. Nat Underw 51:5+ Ag 14 '47

Illinois association of insurance agents annual meeting, Springfield, Ill. Nat Underw 51:21+ S 18 '47

Illinois fire underwriters association annual meeting, Wawasee, Ind. Nat Underw 51:11 Je 26 '47

Iowa association of insurance agents annual meeting, Des Moines. Nat Underw 51:25 S 18 '47

Louisiana association of insurance agents annual meeting, Alexandria. Nat Underw 51: 6+ Ap 17 '47

Maryland association of insurance agents annual convention, Baltimore. Nat Underw 50:1+ N 28 '46

Michigan association of insurance agents annual convention, Mackinac Island. Nat Underw 51:23-5 S 11 '47

Minnesota association of insurance agents annual meeting, Duluth. Nat Underw 51:3+ O 9 '47

Minnesota underwriters association annual meeting, Brainerd. Nat Underw 51:4 Je 26 '47

Mississippi association of insurance agents annual meeting, Biloxi. Nat Underw 51:1+ My 29 '47

Missouri association of insurance agents annual meeting, St Louis. Nat Underw 51:2 O 9 '47

Montana association of insurance agents annual meeting, Missoula. Nat Underw 51:7 Ag 21 '47

New England associations of insurance agents meeting, Swampscott, Mass. Weekly Underw 156:1669+ Je 21 '47

New Jersey association of insurance agents midyear meeting, Asbury Park, May 7-8. East Underw 48:21-2+ My 16 '47; Nat Underw 51:1+ My 15 '47

New Mexico association of insurance agents annual convention, Albuquerque. Nat Underw 50:1+ N 14 '46

New York state association of local agents, annual meeting, Syracuse, May 4-7. East Underw 48:1, 21-2+ My 9 '47; Nat Underw 51:3 My 8 '47

North Carolina association of insurance agents annual convention, Pinehurst, May 1-4. Nat Underw 51:5+ My 8 '47

Ohio association of insurance agents annual convention, 50th, Toledo. Nat Underw 51: 17-19 S 25 '47

Oregon association of insurance agents annual meeting, Eugene. Nat Underw 51:11+ Ag 28 '47

Pennsylvania association of insurance agents annual convention, Atlantic City. Nat Underw 51:53+ O 16 '47

South Carolina association of insurance agents annual meeting, Myrtle Beach, May 29-30. Nat Underw 51:3+ Je 5 '47

South Dakota association of insurance agents annual meeting, Aberdeen. Nat Underw 51:3 My 22 '47

Texas association of insurance agents annual meeting, Galveston, May 15-17. Nat Underw 51:1+ My 22 '47; Weekly Underw 156:1389+ My 24 '47

Utah association of insurance agents annual convention, Salt Lake City. Nat Underw 51:1+ Ag 21 '47

Virginia association of insurance agents annual meeting, Roanoke. Nat Underw 51:1+ Jl 3 '47

Washington association of insurance agents annual meeting, Spokane. Nat Underw 51: 1+ Ag 14 '47

West Virginia association of insurance agents annual meeting, Huntington. Nat Underw 51:3+ S 18 '47

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Insurance, Life—Agents—Conventions

Law

Agent licensing procedure in Illinois to be simplified. Nat Underw 51:10 Ag 14 '47

Agent must pay insurer's loss in delayed report. Nat Underw 51:24 Ja 23 '47

Agent's indebtedness for balance of premiums after deduction of commission not dischargeable in bankruptcy. Weekly Underw 156:722 Mr 8 '47

Agents required to account for premium collected; Greenwald vs. American Surety. Nat Underw 50:25 D 26 '46

Agree on new qualification measure in California. Nat Underw (Life ed) 51:4 Ap 18 '47

Arkansas license plan simplified. Nat Underw (Life ed) 51:2 Ja 3 '47

California changes ruling on analysts; when agent may charge fee. East Underw 48: 18 O 10 '47

California plan for licensing reformed applicants out. Nat Underw 51:27 F 27 '47

Experience test upheld; Pennsylvania agents win victory on auto dealers licensing. Nat Underw 51:1 Ja 16 '47; East Underw 48:17 Ja 17 '47

High court kills Indiana agent law; holds prohibition of licensing salaried men unconstitutional; Schoonover case. Nat Underw 51:1 My 22 '47

Insurance agent and the law; wages and hours law. R. W. Botts. Rough Notes 90: 32+ F; 32+ Ap '47

Liability of agent who fails to renew. Nat Underw 51:12 Mr 27 '47

Licensing fundamentals. H. C. Wolff. Weekly Underw 155:1393+ D 14 '46; Same abr. East Underw 47:22 D 20 '46

Licensing-qualification questions illuminated at N.A.I.A. Oklahoma City meeting. H. C. Wolff and others. Nat Underw 51:8 My 1 '47

Licensing reciprocity in Illinois for all but one state. Nat Underw (Life ed) 51:4 O 17 '47

Life agents given greater leeway in California pension cases. Nat Underw (Life ed) 51:5 O 10 '47

Menace to agent; individual boycott provision in trade practices bill. J. C. Stott. Nat Underw 50:1 D 12 '46

New Dineen rules to govern fund mingling; applies to Section 125. East Underw 48:23+ Mr 14 '47

New license regulations in Maine. Weekly Underw 157:427 Ag 23 '47

New licensing regulations announced by Pennsylvania insurance department. East Underw 48:39 Mr 14 '47; Nat Underw 51:8 Mr 13 '47; Nat Underw (Life ed) 51:1+ Mr 14 '47

New ruling on California examination procedure. Nat Underw 51:23 Ag 21 '47

Ohio judge holds invalid rules barring auto dealers as agents; Motors insurance corporation case. East Underw 48:20 Ja 10 '47; Nat Underw 51:3 Ja 9 '47; Weekly Underw 156:145+ Ja 11 '47

Producers' groups reach agreement on agents' licensing principles. East Underw 48:22 F 28 '47; Same. Nat Underw 51:1+ F 27 '47; Same. Weekly Underw 156:581+ Mr 1 '47

Producers interested in new Washington insurance code. R. D. Williams. Weekly Underw 157:806-7 O 4 '47

Qualification bill chief aim of Wisconsin producers. J. H. Carney. Weekly Underw 155:1540 D 28 '46

Qualification bill under study in North Carolina. East Underw 48:20+ Ja 24 '47

Resident agent laws and interstate commerce. A. C. Thomas, jr. East Underw 48: 136+ pt 2 O 3 '47

INSURANCE agents—Law—*Continued*
Stiff examinations for California licenses. East Underw 48:7 Ag 1 '47
Tennessee appeal court upholds license refusal to Motors agent. East Underw 47:23 D 27 '46; Weekly Underw 156:5+ Ja 4 '47
32 states legislated on agents' licensing. Weekly Underw 157:955+ O 18 '47; Same abr. East Underw 48:42 O 17 '47
Travelers wins countersignature issue in Idaho. Nat Underw 51:20 O 23 '47
Vermont law revision stiffens licensing section. Weekly Underw 155:1395 D 14 '46
Washington agents outside of job cover law. Nat Underw 51:29 F 6 '47; Same. Nat Underw (Life ed) 51:6 F 7 '47

See also
Insurance, Life—Agents—Legal status

Letters to prospects

How to use direct mail. E. R. Hurd, jr. Nat Underw 51:6b My 8 '47
Improving your letters. K. B. Horning. Rough Notes 90:28+ Ja '47

Multiple line selling

Competition for life agencies; Chicago's large fire and casualty agencies expand life departments. Nat Underw 51:13 S 25 '47; Same. Nat Underw (Life ed) 51:32 O 10 '47
Successful life agent, tells accident account value to life man. S. Hayes. East Underw 48:28 Ag 15 '47

Offices

How you can redesign your office. E. G. Rahe. il plan Rough Notes 90:28+ S '47
Progress of the local agency; in comfort, efficiency and appearance modern office is a great improvement. O. Beling. Nat Underw 50th anniv no:174-5 1947

Part-time agents

See also
Insurance, Life—Agents—Part-time agents

Policy execution

Travelers wins countersignature issue in Idaho. Nat Underw 51:20 O 23 '47

Public relations

Favors report to assureds; agents should enlighten public. W. P. Welsh. Weekly Underw 155:1169+ N 16 '46
Field clubs actively supporting programs to aid public relations. East Underw 48:19 Ja 24 '47

Records

Comparison of company account current-policy register systems. Rough Notes 90:44 Mr '47
Errors lower profits; suggestions to eliminate policywriting errors. B. E. Wortman. Rough Notes 90:30+ Mr '47
Keeping account, from 1897 to 1947; records of the sales, expirations and financial transactions of agencies evolve with the years. A. J. Wohlgemuth. Nat Underw 50th anniv no:102+ 1947
Loss reference file. E. A. Colbert. Rough Notes 90:26 Ap '47
Records build business. Rough Notes 90:36+ Mr '47
Records for the small agency. H. W. Bradshaw. Rough Notes 89:23+ D '46

Rural agents

Smaller agencies discuss rural, one man agent problems. J. C. Hearn. Nat Underw 51:10 O 23 '47

Sales conventions

Buckeye Union executives give agents insight into company workings. Nat Underw 51:6 O 23 '47
Tips on coverages and claims given N.Y. group by question-answer panel. A. I. Jaffe and others. Nat Underw 50:14+ N 14 '46

Selection

Using research to find the best insurance agents. F. Lang. Adv & Sell 40:84 Jl '47

Service

Client confidence. J. Eglof. East Underw 48:38 My 9 '47
Effective survey method for brokers. J. R. Blades. Nat Underw 51:15 Mr 6 '47
Good method of keeping clients' cover up to date. D. Evey. Nat Underw 51:29 Ap 3 '47
How agents can be of greater service to big buyers. H. Anderson. East Underw 48:16+ O 24 '47
Safety-minded insurance agents; programs of two southern agencies. East Underw 48:28 Jl 4 '47
Survey selling requires knowledge and courage. E. H. Luecke. Nat Underw 51:14 O 16 '47
Surveys are research in the field of risk. J. R. Blades. East Underw 48:41+ F 21 '47
Surveys sell increased coverage. G. M. Weigand. Rough Notes 90:34+ My '47
Surveys sell our service. S. G. Croom. Rough Notes 90:24+ Ap '47

Training

Approve Florida program of on-the-job training. Nat Underw 51:14 Mr 6 '47
Describes training concerns and problems. H. R. Smith. Nat Underw (Life ed) 51:2 Ap 18 '47
Education and training; a review of the past, a look at the present, and an estimate of the future. J. E. Hedges. Nat Underw 50th anniv no:232-6 1947
Hanover's practical schooling aids in holding man's interest. Nat Underw 51:9 Ag 14 '47
H.&A. Conference management session; speakers feature training ideas. J. D. Westra; H. L. Knight. East Underw 48:36 My 30 '47
New problems arise in GI job training programs; VA insists on wage progression; disqualifies men on commission. Nat Underw 51:1 Ja 23 '47; Same. Nat Underw (Life ed) 51:1+ Ja 24 '47
1946 a big year in popularity for Travelers cos. schools for agents. East Underw 48:36 Ap 11 '47
Training management session of H. & A. Conference. H. L. Knight and others. Nat Underw (H. & A. conference no) 51:4+ My 30 '47
VA clarifies points on GI insurance training. H. V. Stirling. Nat Underw 51:16 Ap 3 '47; Same abr. Nat Underw (Life ed) 51:11+ Ap 4 '47

See also
Insurance—Study and teaching
Insurance, Life—Agents—Training

Unions

Disclose further provisions of Monumental Life settlement. Nat Underw (Life ed) 51:2 Ap 25 '47
Labor Board order issued to Mutual Casualty at Boston. Nat Underw 51:23 Mr 6 '47
NLRB orders issued in cases concerning Peoples Life of Washington and Polish national alliance. Nat Underw (Life ed) 51:8 Ap 4 '47
Strike against Peoples Life, D.C., collapses. Nat Underw (Life ed) 51:7 Ag 8 '47
United office and professional workers of America asks $50 guarantee; $10 a week increase. Nat Underw (Life ed) 51:9 Mr 21 '47

Women agents

Women in insurance have achieved service prestige. A. V. Doyle. Nat Underw 50th anniv no:168-9 1947

See also
Insurance, Accident—Agents—Women agents
Insurance, Life—Agents—Women agents

Canada

Canadian agents may be caught in squeeze play on commissions. F. J. Jordan. East Underw 48:26 O 24 '47

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New York (state)

New York suburban agents' conference attracts big crowd; educational panels prove highly popular feature. Nat Underw 51: 2+ Ap 17 '47; East Underw 48:20+ Ap 18 '47

Pennsylvania

Pennsylvania agents' association thrives under Stanley Cowman's leadership. East Underw 47:88+ D 13 '46

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INSURANCE associations

Ask strong local boards; NAIA conference in New York. East Underw 48:22 F 14 '47

Outlines proper rules for agents' associations; tells what may be illegal. M. M. Gorman. East Underw 48:20+ Je 20 '47; Abstract. Nat Underw 51:1 Je 19 '47

See also names of associations, e.g.

Factory insurance association
Federation of insurance counsel
Institute of life insurance
Insurance federation of New York
Interstate underwriters board
National association of insurance agents
National Negro insurance association

INSURANCE board of Cleveland

Annual meeting, 101st. Nat Underw 51:2 My 22 '47

INSURANCE brokers

Auto dealers' broker firms violating law in covering financed cars, N.Y. attorney general holds. East Underw 48:22+ Mr 28 '47; Nat Underw 51:13 Mr 27 '47; Weekly Underw 156:873 Mr 29 '47

Blind student receives N.Y. Society certificate. il East Underw 48:18 My 23 '47

Brokerage overhead up to ¾ of income. Nat Underw 51:2 Ja 23 '47

Brokers advocate new production cost program; plan would eliminate debatable commission distinction between brokers and agents. W. W. Clement. East Underw 48:27 S 5 '47

Brokers ask single production cost allowance. Nat Underw 51:25 S 4 '47

Brooklyn brokers' group scores lack of insurance market. M. L. Nathanson and others. Nat Underw 51:3 My 15 '47

Brooklyn brokers install officers for 1947; all-industry bills debated. East Underw 47:107 D 13 '46

Credit by broker for return unearned premiums not binding on insurer issuing replacing policies. Weekly Underw 157:942 O 11 '47

Desirable brokerage business welcome. V. Howell. East Underw 48:4 My 9 '47

Effective survey method for brokers. J. R. Blades. Nat Underw 51:15 Mr 6 '47

How a successful broker sells insurance; Franklin Burns of Chicago. J. R. Gregory. Rough Notes 90:17-19+ F '47

Indict Chicago broker on policy forgery charge. Nat Underw 51:2 Jl 31 '47

Producers' groups reach agreement on agents' licensing principles. East Underw 48:22 F 28 '47; Same. Nat Underw 51:1+ F 27 '47; Same. Weekly Underw 156:581+ Mr 1 '47

What brokers should know about the insurance survey. J. R. Blades. East Underw 48:41+ F 21 '47

See also Insurance brokers' association of New York; National association of insurance brokers

INSURANCE brokers, National association of. See National association of insurance brokers

INSURANCE brokers' association of New York

Annual meeting, 49th, New York, April 10. East Underw 48:22 Ap 18 '47

INSURANCE commissioners

Alabama names new insurance commissioner; L. L. Gwaltney, jr. Weekly Underw 156: 379 F 8 '47

Alexander to succeed Fischer as Iowa commissioner. Weekly Underw 156:805 Mr 22 '47

Bernard R. Stone Nebraska insurance director. Nat Underw 50:2 D 12 '46; Same. Nat Underw (Life ed) 50:5 D 13 '46

David B. Soule approved for commissioner in Maine. Weekly Underw 156:1671 Je 21 '47; Nat Underw 51:3 Je 19 '47; Nat Underw (Life ed) 51:3 Je 20 '47

David S. Butler named new West Virginia commissioner. Weekly Underw 157:7 Jl 5 '47

Dealing with insurance commissioners; editorial. Nat Underw 51:16 Ag 14 '47; Same. Nat Underw (Life ed) 51:10 Ag 8 '47; Discussion. Nat Underw 51:5 S 4 '47; Nat Underw (Life ed) 51:12 S 5 '47

Hanley named in Maryland. Weekly Underw 156:1323 My 17 '47

Lee Shield new Ohio superintendent. Nat Underw 51:2 Ja 16 '47; Same. Nat Underw (Life ed) 51:5 Ja 17 '47

Named commissioner; James Hubbard first to get title in Idaho. Weekly Underw 156: 1731 Je 28 '47

New California commissioner, Wallace K. Downey. East Underw 48:12 Je 6 '47

New Iowa commissioner, Sterling A. Alexander. por Nat Underw (Life ed) 51:24 My 2 '47; Same. Nat Underw 51:4 Ap 24 '47

New Pennsylvania insurance commissioner; James F. Malone, jr. Weekly Underw 156: 381 F 8 '47

Perkins to Union Mutual; Maine commissioner takes company post. por Nat Underw (Life ed) 51:6 Mr 14 '47

Rhode Island commissioner leaves for fire company post. Nat Underw 51:4 Ja 30 '47

Wallace Downey named commissioner for California to succeed Garrison; James F. Malone new Pennsylvania commissioner. Weekly Underw 156:200 Ja 18 '47

Wallace Downey named successor; Garrison goes to Fireman's Fund. Nat Underw 51:1 Ja 16 '47; Same. Nat Underw (Life ed) 51:1 Ja 17 '47

See also Association of superintendents of insurance of the provinces of Canada; National association of insurance commissioners

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INSURANCE companies

Clement Stone adds Pennsylvania Casualty to fleet. Nat Underw 50:23 D 26 '46

Form North Carolina insurer with Van Iderstine as president; Old North State. Nat Underw 51:2 Ja 30 '47

New Chicago A.&H. company begins business; American income assurance of Chicago. Nat Underw 51:24 Mr 6 '47; Same. Nat Underw (Life ed) 51:7 Mr 7 '47

New companies organized in 1946; mergers, changes of control, etc. Weekly Underw 156:129-30 Ja 4 '47

United Benefit Fire getting under way. Spectator (Property ed) 12:34 N 14 '46

See also
Insurance—Pools
Lloyd's, London

Accounting

Amounts written data required by certain states. W. E. Mallalieu. Weekly Underw 156:17 Ja 4 '47

Cost analysis sadly neglected in life insurance. F. B. Richardson. Nat Underw (Life ed) 50:25 D 6 '46

Expanded role for accountants in home office operations. D. C. Bowersock. Nat Underw 50:17 N 21 '46

Few states want amounts written figure. Nat Underw 51:3 Ja 9 '47

Fire company profit formulas studied by NAIC subcommittee. East Underw 47:1+ D 6 '46

Gives mutuals tips on gearing for rating statistics. R. J. Icks. Nat Underw 51:2+ O 9 '47

Graduation of premiums by size for all types of risk seen; New York department's uniform accounting investigation. Nat Underw 50:17 D 12 '46

INSURANCE companies—Accounting—*Cont.*
Insurance accounting. S. C. Davis. East Underw 48:45 Mr 21 '47
Insurance companies' accounts, by S. J. Lengyel; review. W. Hay. Weekly Underw 157:74 Jl 12 '47
Insurance session of Controllers institute of America. Nat Underw 51:27 O 23 '47
Many new demands soon to be made on accountant. D. R. Sanderson and others. Nat Underw 51:4+ O 16 '47
N.A.I.I. casualty, auto statistical plan. V. Lemmon. Nat Underw 51:22 My 22 '47
Preliminary report on uniform accounting investigation issued to NAIC by New York insurance department. East Underw 47:62+ D 13 '46
Report paves way for revising 1921 N.A.I.C. profit basis; Dineen subcommittee explores alternative formulas, suggests hearings. Nat Underw 50:3+ D 5 '46
Size up insurance statistics; how marketing of an intangible is handled. F. Lang; S. C. Davis. East Underw 48:43 Mr 28 '47
To report N.Y. fire experience on revised standard classification. East Underw 47:35 N 15 '46
Underwriting profit or loss and the effect of unearned premiums. V. L. Gallagher. Weekly Underw 156:1363-6 My 17 '47
Uniform accounting for real estate investments; regulation issued by Supt. Dineen of New York. Weekly Underw 156:1520 Je 7 '47; Same. East Underw 48:5 Je 6 '47; Same abr. Nat Underw (Life ed) 51:15 Je 6 '47
What New York department wants in schedule M. A. J. Bohlinger. Nat Underw 51:6 My 22 '47

Advertising

Advertising program of Institute outlined; family finances stressed. H. C. Flower. East Underw 47:8 D 20 '46
Canada to bar advertising of non-licensed U.S. companies. East Underw 48:38 Je 20 '47
Companies urged to advertise even though oversold. F. Bremier. East Underw 48:42 S 26 '47
New relations program by Security companies; popular magazines will be used to inform public. Weekly Underw 156:154 Ja 11 '47; Nat Underw 51:4 Ja 9 '47; East Underw 48:18+ Ja 10 '47
Personal sales appeal; new trend in insurance advertising. A. Joyce. East Underw 47: 104 D 13 '46
This consumer campaign is really aimed at the salesmen; Central manufacturers mutual insurance company. P. W. Purmort. Ptr Ink 220:42+ Jl 11 '47
Trade journal and radio advertising. K. H. Mathus. il Spectator (Life ed) 154:8-11+ Ap '47

Consolidation

Republic National absorbs Republic Life of Oklahoma. Nat Underw (Life ed) 51:3 S 19 '47; Spectator (Life ed) 155:40 S '47
Standard Surety & Casualty to merge with Century Indemnity. Weekly Underw 156: 257+ Ja 25 '47

Costs

Insurers can reduce expenses; sees excess use of paper. R. E. Dineen. East Underw 47:27 N 15 '46; Excerpt. Nat Underw 50:2 N 14 '46
Life insurance expense ratio advances in 1946; new figure 15.5%, against 13.7%. Weekly Underw 157:294 Ag 2 '47
Prices 50% over pre-war for 15 years seen; warns against mounting insurance expenses. H. W. Foskett. Weekly Underw 157:768 S 27 '47

Employees

California-Western employes get cost of living allowance. East Underw 47:16 D 27 '46: Nat Underw (Life ed) 50:3 D 27 '46
Employe relations in Bankers, N.J. W. B. Chambers. East Underw 48:9 My 30 '47; Abstract. Nat Underw (Life ed) 51:10 My 23 '47
Employe suggestion plan proves worth to insurer; experience of American Surety. C. H. Hall. Nat Underw (Life ed) 51:10 My 9 '47; Excerpt. Weekly Underw 156: 1227 My 3 '47
Higher pay rates spur boosting of efficiency. Nat Underw (Life ed) 51:4 Ja 10 '47; Same. Nat Underw 51:3+ F 6 '47
Historical note; a 50-year-old prediction of great accuracy; abstract. R. M. Green. J Account 84:148-9 Ag '47
Institute survey bares need for employee training; few companies now conduct courses for non-sales personnel. R. D. Kip. Nat Underw (Life ed) 51:1+ S 5 '47
Life company employes deserve standard benefits; outlines security programs. E. B. Stevenson. Nat Underw (Life ed) 51:19-20 My 16 '47
Life insurance personnel at new high of 297,700. Nat Underw (Life ed) 51:2 My 2 '47; East Underw 48:14 My 9 '47
Manhattan Life workers get free life and hospital insurance. Weekly Underw 157:117 Jl 12 '47
NLRB orders issued in cases concerning Peoples Life of Washington and Polish national alliance. Nat Underw (Life ed) 51:8 Ap 4 '47
Northwestern Mutual employes' families tour home office. Nat Underw (Life ed) 51:3 Je 13 '47
Orientation and training of employes of the Travelers companies. S. T. Tooker. East Underw 48:9 My 30 '47
Personnel problems trouble home office executives. Nat Underw 51:6 O 16 '47
Policy of business firms when transferring employes. Nat Underw 50:13 N 21 '46; Same. Nat Underw (Life ed) 50:24 D 6 '46
Reward superior worker. F. L. Rowland. Nat Underw 51:4 Ap 17 '47
Royal-Liverpool group insures employees. Weekly Underw 156:1620 Je 14 '47
Security plan approved; 95% of Mutual Life salaried employees to come under benefit. Weekly Underw 156:235 Ja 18 '47
Thousands of British insurance men scrapped; decision to abandon the Approved societies. Nat Underw 50:31 N 21 '46; Same. Nat Underw (Life ed) 51:4 F 7 '47
Training supervisors big challenge. R. J. W. O'Toole. Nat Underw (Life ed) 51:1 O 3 '47

Employees' pensions

Atlantic Life sets up retirement plans for full-time employes and agents. Nat Underw (Life ed) 51:6-7 Ap 11 '47; East Underw 48:10 Ap 11 '47
Boston Mutual pensions; retirement plan open to home and field workers 30 to 70. Weekly Underw 156:235 Ja 18 '47
Colonial Life employes offered annuity. Nat Underw (Life ed) 51:4 Ja 17 '47; East Underw 48:7 Ja 17 '47; Weekly Underw 156:290 Ja 25 '47
Mutual Benefit adopts new retirement plan. East Underw 48:4 Mr 28 '47; Same. Weekly Underw 156:909 Mr 29 '47; Same cond. Nat Underw (Life ed) 51:2 Mr 28 '47
Security programs for insurance personnel. E. B. Stevenson, jr. il Spectator (Life ed) 154:22-5+ Je '47

Examination

Allen's prominence causes Home report to attract dailies. Nat Underw 50:4+ D 19 '46
Departmental examination of the Home insurance company. East Underw 47:19 D 20 '46
Dispose of most items in Home's examination report; management given unanimous vote of commendation; letter to Dineen. Nat Underw 51:8 Ap 10 '47; Same cond. East Underw 48:28 Ap 11 '47
Mutual commerce casualty of Kansas City, stops writing new lines; halt called by Supt. Jackson. East Underw 48:30 S 5 '47
Observe growth in police powers of N.Y. insurance dept; state examiners, under Section 66, require that disbursement vouchers be authentic. East Underw 48:1+ Mr 14 '47
Pool examination plan well received in New York state. Nat Underw 50:3 D 19 '46

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Exhibits

Penn Mutual has historical display for centennial. Nat Underw (Life ed) 51:2 Ja 24 '47

Finance

Aggregates of stock, fire and marine companies, mutual fire companies, 37 reciprocal, inter-insurers exchanges and Lloyds organizations for 1946. Spectator (Property ed) 13:23-6 Jl 24 '47

Fifty leaders graded by assets and premiums; tabulation. Nat Underw 51:21 Ap 17 '47

More companies study plans for added financing. S. C. Davis. Nat Underw 51:1 Jl 31 '47

Net premium and loss figures for 1946 on fire specialty lines; with tabulation by company. East Underw 48:1, 32-3 Mr 14 '47

Preferred Accident strengthened by RFC loan of $3,000,000. East Underw 48:30 F 14 '47; Nat Underw 51:19+ F 13 '47

Preferred gets $2 million more from RFC. Nat Underw 51:20 O 23 '47; East Underw 48: 35+ O 24 '47

Premiums up 28½ per cent in fire company classification; Argus chart analysis shows aggregate 1946 record; with tabulations. A. Riggs. Nat Underw 51:1+ Ap 3 '47

Qualities of management are always revealed in operating expense control. F. L. Brokaw. East Underw 48:15+ Ag 1 '47

Stock fire 1946 experience by lines, from new Argus fire chart; tabulation by company. Nat Underw 51:2-4 Ap 3 '47

Underwriting and investment profits and losses of 100 casualty, surety and miscellaneous companies, 1937-1946; tabulation. Spectator (Property ed) 13:30-1 O 9 '47

See also names of companies, e.g. Metropolitan life insurance company

Foreign branches

American international underwriters corporation covering Americans abroad. Weekly Underw 155:1402 D 14 '46; Same. East Underw 47:26 D 20 '46; Same cond. Nat Underw 50:18 D 19 '46; Same cond. Nat Underw (Life ed) 50:20 D 27 '46

U.S. Life opens branch office in Venezuela. East Underw 48:5 Mr 14 '47

Foreign branches (in United States)

Revoke ruling on tax credit for British insurers. Nat Underw 51:2 Ja 23 '47

Treaty relieves British insurers of double tax. Nat Underw 51:3 F 13 '47

Foreign business

Chubb & son form Cathay insurance company to write in Far East and in U.S. East Underw 48:27 Ap 18 '47

Foreign cover problems. L. C. Irvine. Weekly Underw 156:1336 My 17 '47; Same cond. East Underw 48:34 My 9 '47

Insurance abroad and world trade; American participation is substantial and is growing. N. H. Wentworth. Nat Underw 50th anniv no:136+ 1947

Insurance company of North America expands in Latin America. East Underw 48:18 Je 27 '47

Sun Life's worldwide operations. A. B. Wood. East Underw 48:3 Ap 4 '47

U.S. Chamber assails restrictions; U.S. insurers' foreign premiums should be 5% of exports, U.S. interests abroad. Nat Underw 51:1 Ja 23 '47

Forms, blanks, etc.

Ask continuation of war time simplifications. Nat Underw (Life ed) 51:26 Mr 21 '47

Blanks committee reports on changes. East Underw 47:23 N 29 '46

How to simplify statement blank as to reinsurance. Nat Underw 50:21 D 26 '46

Life insurance forms increase expected; simplification suggested by Life insurance association of America. B. E. Shepherd. Weekly Underw 155:1398+ D 14 '46

Mechanics of daily report handling published by American casualty company. East Underw 48:34 Je 20 '47

New W.U.A. tabular stop fire policy; filling in by typewriter can be done with four stops. Nat Underw 51:2 Je 12 '47

Sees complete modernization of blanks for company annual statements. T. C. Morrill. East Underw 48:18+ My 23 '47

Simplifying life insurance policies. N. Harper. Life Ins Courant 51:496-8, 538-41 N-D '46

See also

Insurance companies —Notarization requirements

Investments

Broader insurance investments. Bsns W p70+ D 21 '46

Insurance companies' investments since war. Comm & Fin Chr 164:2812 N 28 '46

Investments. E. L. Hall. Spectator (Property ed) 12:18 Ap 10; 22 Ap 21; 14 My 8; 20+ My 22; 18 Je 12; 14 Je 26; 13:14 Jl 10; 14 Jl 24; 14 Ag 7; 14 Ag 21; 14 S 11; 14 S 25; 54 O 9 '47

Power and light securities; their desirability from a large institutional investor's standpoint. W. W. Bodine. Pub Util 39:746-50 Je 5 '47

See also

Insurance, Fire—Investments

Insurance, Life—Investments

Valuation

N.A.I.C. foreign bond valuation plan like most insurers. Nat Underw 51:1 Jl 24 '47; Same. Nat Underw (Life ed) 51:6 Ag 1 '47

Report of NAIC committee on valuation of securities. East Underw 48:1+ Je 6 '47

State has much leeway in evaluating assets, Michigan attorney general holds. Nat Underw 51:8 F 13 '47

Stock market at low point for critical Dec. 1 test; annual statement values soon determined; not far below year ago. Nat Underw 50:15 N 28 '46

Tighten amortization rule; commissioners approve new statement formula. Nat Underw 51:1 Je 5 '47; Same. Nat Underw (Life ed) 51:1 Je 6 '47

Legal departments

Law department has vital public relations role. H. C. Bates. Nat Underw (Life ed) 51:27 O 10 '47

Life company's law department. W. F. Haldeman. East Underw 48:8 Ja 10 '47

Legal service

Life company's law department. W. F. Haldeman. East Underw 48:8 Ja 10 '47

Management

Higher pay rates spur boosting of efficiency; keeping operating expenses from getting out of line. Nat Underw (Life ed) 51:4 Ja 10 '47; Same. Nat Underw 51:3+ F 6 '47

Life office management, 1897-1947. F. L. Rowland. Nat Underw 50th anniv no:82 1947

Need young executives; more complicated era opening up for insurance management. P. B. Sommers. Nat Underw 50th anniv no:250 1947

Responsibilities of top management. G. W. Smith. Spectator (Life ed) 154:16-18+ D '46

Reviews chief problems; sees industry at crossroads and suggests remedies. J. F. Crafts. Weekly Underw 157:600-1+ S 13 '47; Same abr. East Underw 48:27+ S 12 '47; Same cond. Nat Underw 51:1+ S 11 '47

Multiple line writing

Effect of broader writing powers in New York slow in showing; insurers are taking advantage of new opportunities gradually. Nat Underw 51:3 Ap 10 '47

Joint NAIC industry committee scores Appleton rule as broad power barrier. East Underw 48:22 Je 13 '47

Multiple line bills entered in New York; favored by Risk research institute. East Underw 48:30 F 28 '47; Weekly Underw 156: 583 Mr 1 '47

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Multiple line writing qualifications outlined. R. Harris. Weekly Underw 156:1734-5 Je 28 '47
New York deputy suggests caution in entirely eliminating Appleton rule. A. J. Bohlinger. Nat Underw 51:3 Je 19 '47
Problems, advantages in full underwriting powers. Nat Underw 51:6 S 18 '47
Sanctions full auto and aircraft physical damage cover; Knowlton explains procedure required to exercise privileges under new New Hampshire law. East Underw 48:28 Jl 18 '47
Status of multiple line underwriting legislation, 1947. Weekly Underw 157:255, 367 Ag 2, 16 '47
Status of multiple line underwriting powers for casualty companies; list by states. C. C. Fraizer. Nat Underw 51:16 O 2 '47
Suggests Appleton rule repeal; address before American management association. W. D. Winter. Weekly Underw 156:1266+ My 10 '47; Excerpts. East Underw 48:28+ My 9 '47
Urges continued fight for multiple underwriting powers. W. D. Winter. Nat Underw 51:5 Ja 30 '47; Abstract. East Underw 48: 1+ Ja 31 '47

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Notarized forms out for Mutual of New York; program to cut red tape and streamline administrative procedures. A. E. Patterson. East Underw 48:4 My 30 '47

Officials
Brief review of events occurring in 1946; official changes in 1946; death roll. Weekly Underw 156:122-9, 130-2+ Ja 4 '47
Commercial Union-Ocean changes in executive posts. East Underw 48:1, 24 O 24 '47; Nat Underw 51:1+ O 23 '47
Eight promotions in the Manufacturers companies. East Underw 47:34 D 27 '46
Fitzgerald heads Northwestern Mutual; Robinson new vice-president. pors Nat Underw (Life ed) 51:1-2 Ap 25 '47
Floyd N. Dull elected president of Preferred Accident and affiliate. por East Underw 48: 39 Mr 21 '47; Nat Underw 51:23 Mr 20 '47
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Metropolitan brings E. C. McDonald here in group sales duties; other changes. East Underw 47:1+ D 20 '46
Mutual Benefit Life Public service dept. under H. G. Kenagy; other changes. East Underw 48:1+ Ja 24 '47
Need young executives; more complicated era opening up for insurance management. P. B. Sommers. Nat Underw 50th anniv no:250 1947
New York Life names three vice presidents. pors East Underw 47:5 D 27 '46 Nat Underw (Life ed) 50:1 D 27 '46
New York Life promotes many supervisory officials and revamps territories. Nat Underw (Life ed) 51:1+ Ja 3 '47
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When New York managers feted presidents; portraits. Nat Underw (Life ed) 50:18 D 20 '46

Public relations
Discusses public relations angles at Insurance advertising conference. H. P. Jackson. Weekly Underw 156:1090+ Ap 19 '47
Favorable public opinion industry's best defense. H. G. Helm. Nat Underw 51:18 Ja 30 '47
Financial relations with the press. C. Cefola. Trusts & Estates 84:479 My '47
Life leaders cite need for industry-wide front. R. L. Hogg; P. B. Hobbs. Nat Underw 50:8 D 19 '46; Same. Nat Underw (Life ed) 50:5 D 20 '46
List lobbying expenses. Nat Underw (Life ed) 51:2 Ag 22 '47
Long-range public relations program of H. & A. Conference shaping up. East Underw 48:36+ Mr 7 '47
Meet the public. H. J. Johnson. Spectator (Life ed) 154:10+ D '46
Mutual Benefit public service group coordinates various activities in publications and public relations fields. Weekly Underw 156:365 F 1 '47
Policyholder relations; program of Institute of life insurance. A. E. Patterson. Spectator (Life ed) 154:14-15+ D '46; Same abr. Weekly Underw 155:1452-3 D 14 '46; Excerpt. Nat Underw (Life ed) 50:9 D 13 '46
Program of public relations. G. W. Carter. Nat Underw 50th anniv no:280-2 1947
Progress in fire public relations program reviewed; WUA report. East Underw 48:1+ Ap 18 '47
Public ignorant on role of insurance; more effective, aggressive and widespread program of instruction vital. C. M. Marshall. Weekly Underw 156:733+ Mr 15 '47
Public relations; importance to accident insurance. J. F. Follmann, jr. Weekly Underw 155:1554+ D 28 '46; Same. Spectator (Life ed) 154:32+ Ja '47; Abstract. Nat Underw 50:20 D 19 '46

Purchasing
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Real estate operations
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Central Mutual decision in New Jersey; assessment not barred because insurer unlicensed. Nat Underw 51:17 Ja 9 '47
Central Mutual policyholder in Iowa discovers an out. Nat Underw 51:14 Ja 30 '47
Insurer insolvent when contract was issued; Tennessee court invalidates assessment on Central Mutual assured. Nat Underw 51:16 O 2 '47
Keystone Mutual remains delivered to commissioner; see court fight on assessability of non-assessable contract. Nat Underw 51:15+ Jl 3 '47
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Old management's libel is held receiver's burden; Missouri judgment against Chicago Lloyds. Nat Underw 51:23 Ja 23 '47
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Records
Booklet on mechanics of daily report handling published by American casualty co. East Underw 48:34 Je 20 '47
New classification of risks now in operation; coding of daily reports. East Underw 48:26 Ja 10 '47; Nat Underw 51:3 Ja 9 '47

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Again attacks all-industry bills in answer to Jackson; St Louis address. E. W. Sawyer. East Underw 48:34 F 14 '47
All-industry bills pass in Pennsylvania, meet rebuff in Massachusetts; fair trade law goes to Governor in Michigan. Nat Underw 51:19 Je 5 '47
All-industry legislation; report before Industrial insurers conference; abstracts. B. E. Shepherd. Weekly Underw 156:1263-4 My 10 '47; East Underw 48:3+ My 16 '47; Nat Underw (Life ed) 51:17 My 16 '47

INSURANCE companies—Regulation—*Cont.*
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Anti-monopoly bill and others opposed in New York at hearing of Senate and Assembly insurance committees. Nat Underw 51:3+ Mr 13 '47
Anti-trust victory in McKittrick quo warranto action in Missouri is of major proportions; suggests guideposts in new legislation. Nat Underw 51:1+ Ja 9 '47
Attitude of agents on all-industry bills; report of committee of NAIA. Weekly Underw 156:1127+ Ap 26 '47
Battle of the bills proceeds; legislative pace is dizzy. Nat Underw 51:8 Mr 20 '47
Bloys committee's report; PL 15 legislation to date summarized by bar group; with tabulation by states. Nat Underw 51:1+ Jl 10 '47
Calls for united support of regulatory laws; address before American bar association; abstracts. P. McCarran. East Underw 48: 1+ S 26 '47; Nat Underw 51:1+ S 25 '47
Casting off for 1947. C. G. Hale. Spectator (Property ed) 12:10-12+ Ja 9 '47; Same. Spectator (Life ed) 154:18-21+ Ja '47
Commissioners study proposals dealing with FTC problems. East Underw 47:1+ N 15 '46
Compromise A.&H. bill best measure possible to obtain. J. Farley. East Underw 48:39+ My 30 '47
Court decision initiated new era; state regulation requirements. M. M. Gorman. Weekly Underw 157:880+ O 11 '47; Same abr. East Underw 48:1+ O 10 '47
Danger of disunity in business. J. M. McFall. East Underw 48:40 F 21 '47; Abstract. Nat Underw 51:20 F 20 '47
Dealing with insurance commissioners; editorial. Nat Underw 51:16 Ag 14 '47; Same. Nat Underw (Life ed) 51:10 Ag 8 '47; Discussion. Nat Underw 51:5 S 4 '47; Same. Nat Underw (Life ed) 51:12 S 5 '47
Defends action of all-industry group; replies to Patterson; abstracts. R. Murphy. Weekly Underw 156:764+ Mr 15 '47; East Underw 48:38+ Mr 14 '47; Nat Underw 51:25 Mr 13 '47
District of Columbia action is not a guidepost; state's right question not involved. T. I. Parkinson. Nat Underw 51:19 Mr 6 '47
Draft of proposed unfair practices bill offered by NAIC committee. East Underw 47:63+ D 13 '46
English rating practices. A. J. Bohlinger. East Underw 48:19 S 26; 20-1 O 3 '47
English supervisory system reviewed; abstracts. A. J. Bohlinger. Weekly Underw 156:1344 My 17 '47; Nat Underw 51:5 My 15 '47
FTC, A.&H. and Robinson-Patman reports made by N.A.I.C. committees. Nat Underw 50:19+ N 14 '46; Nat Underw (Life ed) 50: 4 N 15 '46
Finds merit in all-industry bills. G. T. Warfield, jr. East Underw 47:20+ N 22 '46; Abstracts. Nat Underw 50:17+ N 21 '46; Weekly Underw 155:1229+ N 23 '46
Frankfurter on state regulation; excerpt from dissenting opinion in case of Morris vs. Jones. Nat Underw 51:3 F 13 '47; Same. Nat Underw (Life ed) 51:7 F 14 '47
Illinois lawyers discuss model bills, regulatory problems. H. Moser and others. Nat Underw 50:19-20+ N 14 '46
Indiana Bar group hears analysis of PL 15 problem. R. Murphy; C. Smith. Nat Underw 51:17 Ja 16 '47
Industry bill case stated by U.S.F.&G. E. A. Davis. Weekly Underw 156:257+ Ja 25 '47; Same cond. Nat Underw 51:10 Ja 23 '47
Insurance and anti-trust laws; address before Insurance law section, American bar association. W. Berge. Comm & Fin Chr 164: 2341+ N 7 '46; Same. Spectator (Life ed) 154:30-1+ N '46; Excerpts. East Underw 47: 1+ N 1 '46; Nat Underw 50:1+ O 31 '46; Weekly Underw 155:1049+ N 2 '46
Insurance anti-trust law suggested by House subcommittee on monopoly. Nat Underw 51:18 Ja 2 '47
Insurance bills fight threat of U.S. control. P. A. Johnston. Barron's 27:36 Mr 24 '47
Legislative and regulatory trends affecting accident and health insurance; Pittsburgh address; abstracts. J. F. Follmann. Weekly Underw 156:555 F 22 '47; East Underw 48: 35 F 28 '47; Nat Underw 51:22 F 20 '47; Nat Underw (Life ed) 51:20 F 21 '47
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Magnuson denies favoring federal control. Nat Underw (Life ed) 51:2 Ag 8 '47
Many governors have word to say on insurance issue. Nat Underw 51:3 Ja 16 '47
Move to set ahead PL 15 deadline by six months; moratorium extension bill is desired by congressional leaders. Nat Underw 51:15+ Jl 3 '47; Same abr. Nat Underw (Life ed) 51:3+ Jl 4 '47
NAIC amendments to bill covering unfair trade practices explained. East Underw 47:21+ D 20 '46
Nationalization drive worries Massachusetts commissioner; developments in other countries. C. F. J. Harrington. Weekly Underw 157:665+ S 20 '47
New York allays jitters as it opens study of Clayton act. Nat Underw 51:1 Jl 10 '47; Same. Nat Underw (Life ed) 51:3 Jl 11 '47
Plans no crack-down on insurance; abstracts. T. C. Clark. Nat Underw 51:9+ My 15 '47; East Underw 48:20 My 16 '47
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Public law 15 concerns life too; address before Life underwriters association of city of New York; abstracts. R. E. Dineen. East Underw 47:8, 30+ N 29 '46; Nat Underw 50:1+ N 28 '46; Nat Underw (Life ed) 50:1+ N 29 '46
Regulation vs. conduct of business. J. S. Phillips. East Underw 48:37+ My 9 '47; Abstract. Nat Underw 51:8 My 8 '47
Reviews efforts to agree on unfair trade practices act. J. C. Stott. East Underw 48:26 My 2 '47
Scorecard by states on all-industry legislation. Nat Underw 51:14 Ap 3 '47
Solons comment on moratorium action. Weekly Underw 157:73+ Jl 12 '47
State of incorporation should make rules. A. D. Pingree. Nat Underw 51:16A S 25 '47; Same abr. Nat Underw (Life ed) 51: 8 S 26 '47
State regulation is on trial; address before American bar association. R. Murphy. East Underw 48:36+ S 26 '47
State supervision is moving forward. R. E. Dineen. Weekly Underw 156:14+ Ja 4 '47
Supervision and rate regulation; address before National association of insurance commissioners. R. E. Dineen. Weekly Underw 156:1517+ Je 7 '47; Same abr. East Underw 48:1+ Je 6 '47; Abstract. Nat Underw 51:1+ Je 5 '47
Supervision is dual. M. Garrison. East Underw 48:12 Ja 3 '47; Excerpt. Nat Underw 50:10 O 31 '46
Takes issue with Warfield; N.A.I.A. directors never agreed to provisions of all-industry bills. C. I. Fisher. Weekly Underw 155:1281+ N 30 '46
Text of proposed A. & H. regulatory legislation approved by the NAIC. East Underw 47:114 D 13 '46
Token regulation camp playing with fire. A. V. Gruhn. Nat Underw 50:1+ N 21 '46

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Reports

American of Newark group report presented in layman's language. East Underw 48:26 Ap 11 '47
Penn Mutual films its report; animated annual statement. il East Underw 48:14 Mr 14 '47; Nat Underw (Life ed) 51:10 Mr 14 '47; Weekly Underw 156:784 Mr 15 '47; Spectator (Life ed) 154:20-1+ Ap '47
Penn Mutual Life puts 1947 annual report on film. il Sales Management 58:45 Ap 1 '47

INSURANCE companies—Reports—*Continued*
Provident Mutual sees preference for short annual reports. M. A. Linton. Weekly Underw 156:354 F 1 '47
Visual report to insurance stockholders; Penn mutual life insurance co. Trusts & Estates 84:388 Ap '47

Securities

Aetna stock issue impresses New York financial market. Nat Underw 51:2 Ag 7 '47
Companies' long dividend record; tabulation showing dates from which major companies have paid without interruption. Nat Underw 50th anniv no:283 1947
Fire insurance rate increases and stocks situation. F. L. Brokaw. Weekly Underw 156:1265+ My 10 '47
General market paces insurance stock prices. P. A. Johnston. Barron's 27:23 Je 2 '47
High yield available on National Union Fire shares; with comparison of book values of leading fire insurance companies. Barron's 27:35 S 29 '47
Mackubin, Legg & co. holds fire company stocks good investment. East Underw 48:19 Mr 7 '47
Market changes during 1946 of 25 fire and 8 casualty insurance stocks. E. A. Van Deusen. Comm & Fin Chr 165:278 Ja 16 '47
100th consecutive dividend declared by Employers Reinsurance. Nat Underw 51:26 My 8 '47
Qualities of management are always revealed in operating expense control; investor's viewpoint. F. L. Brokaw. East Underw 48:15+ Ag 1 '47
Range of insurance stock prices in 1946 for selected companies; tabulation. H. W. Cornelius, comp. Nat Underw 51:3 Ja 9 '47
Sees profit in casualty company stocks; surveys twenty companies; abstracts. G. Geyer. East Underw 48:35+ Mr 28 '47; Nat Underw 51:1 Mr 27 '47
Tests for investment value of fire-casualty stocks; abstracts. G. Geyer. Nat Underw 51:3 O 9 '47; Nat Underw (Life ed) 51:7 O 17 '47; East Underw 48:3+ O 24 '47
Trends of stock and fire losses held paramount fire stocks factor; Standard & Poor's survey. Weekly Underw 156:388+ F 8 '47
Who foots the bill? with earnings position of representative fire and casualty companies. F. R. Walters. Mag of Wall St 80: 328-9+ Je 21 '47

Service

Commends Association of casualty and surety executives; lauds work for impaired. P. Faulkner. East Underw 47:38 N 22 '46; Same cond. Nat Underw 50:31 N 21 '46
Production control plan functions for Coal operators casualty co. East Underw 48:32 Jl 18 '47

Statistics

Insurance statistics as market research source. S. C. Davis; T. F. Tarbell. Nat Underw 51:3 Mr 27 '47
Percentage of premium increase for stock fire-marine companies over 1945; loss ratios of stock fire-marine companies in 1946; charts. Spectator (Property ed) 12: 26-7 Ap 10 '47
Spectator, property insurance review; statistical issue. Spectator (Property ed) 13:5-49 O 9 '47

Taxation

Calls for sound fiscal policy; state premium tax legitimate; opposes penalty taxes. D. L. Clarke. Nat Underw (Life ed) 51:3+ My 9 '47
Casualty insurers' 1946 federal taxes for companies licensed in New York; tabulation. Nat Underw 51:26 Mr 13 '47
Companies fight bill to boost taxes in Connecticut. Nat Underw 51:35 Ap 17 '47; Same. Nat Underw (Life ed) 51:4 Ap 18 '47
Fire companies resist Chicago tax gouge; Fireman's fund, et al vs. Louis E. Nelson, county treasurer. Nat Underw 51:1 Je 26 '47
Fire insurance laws, taxes and fees; data on state insurance statutes in 1946-1947 edition. Spectator (Property ed) 12:27 Ja 9 '47
Insurance tax revenue of states is up 17.4 per cent. Nat Underw 51:14C S 4 '47
Insurers ask lower and simplified taxes in Louisiana. Nat Underw 51:3 Ag 28 '47; Same abr. Nat Underw (Life ed) 51:20 Ag 29 '47
Kill Vermont tax on surplus. Nat Underw 51:9 My 1 '47; Same. Nat Underw (Life ed) 51:13 My 2 '47
Massachusetts Mutual wins retaliatory tax decision in New Hampshire. Nat Underw (Life ed) 51:2 Ag 15 '47
Mutual companies pay income tax in Canada. G. D. Finlayson. East Underw 48:23 Ag 22 '47
Nebraska mail order insurers to pay premium tax there. Nat Underw 51:28 O 9 '47; Same. Nat Underw (Life ed) 51:31 O 10 '47
New Oklahoma tax law signed. Nat Underw 51:4 My 15 '47; Same. Nat Underw (Life ed) 51:9 My 16 '47
New York state figures of fire companies and federal taxes in '46; tabulation by company. Nat Underw 51:4+ Mr 13 '47
North Carolina life insurers ask change in tax. Nat Underw (Life ed) 51:6 Ja 17 '47
Oklahoma 1945 premium tax payments to be returned. Nat Underw 51:8 Je 12 '47; Same. Nat Underw (Life ed) 51:2 Je 13 '47
Out of state companies held liable in Oklahoma for tax in 1944. Nat Underw 51:11 Mr 20 '47; Same. Nat Underw (Life ed) 51: 26 Mr 21 '47
Penn Mutual wins Georgia tax fight involving tax on intangibles. Nat Underw (Life ed) 51:6 Ja 17 '47; East Underw 48:5 Ja 17 '47
Retroactive tax in Argentina riles alien reinsurers. Nat Underw 51:4 Je 19 '47
Revoke ruling on tax credit for British insurers. Nat Underw 51:2 Ja 23 '47
Taxes (including real estate taxes), life, fire and casualty, 1937-1946; chart. Spectator (Property ed) 13:7 O 9 '47; Same. Spectator (Life ed) 155:10 O '47
Treaty relieves British insurers of double tax. Nat Underw 51:3 F 13 '47

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Argentina

Argentine decree of May 30, 1946, approved by legislators with some minor amendments. Weekly Underw 156:1747-8 Je 28 '47
Retroactive tax in Argentina riles alien reinsurers. Nat Underw 51:4 Je 19 '47

Canada

Canada bars mails to nine U.S. companies. East Underw 48:26 Ag 22 '47
Canada to bar advertising of non-licensed U.S. companies. East Underw 48:38 Je 20 '47

Ecuador

Insurance in Ecuador; four American companies now operating. Weekly Underw 155:1510 D 21 '46

Germany

Cologne new insurance center in Germany as companies move west. East Underw 47: 77 D 13 '46
Obligatory coverage spreads in Russian held German zones. E. C. Steefel. East Underw 47:1+ D 27 '46

Great Britain

Commercial union assurance company, limited; Legal and general assurance society, limited; Employers' liability assurance corporation, limited; Eagle star insurance company, limited; Alliance assurance company limited; General accident fire and life assurance corporation, limited; English and Caledonian investment company, limited; Merchants' marine insurance company, limited; annual meetings. Economist 152: 819-21 My 24 '47
English rating practices. A. J. Bohlinger. East Underw 48:19 S 26; 20-1 O 3 '47

INSURANCE companies—Great Britain—*Cont.*
English supervisory system reviewed; abstracts. A. J. Bohlinger. Weekly Underw 156:1344 My 17 '47; Nat Underw 51:5 My 15 '47
Insurance and nationalisation. Economist 153: 80 Jl 12 '47
Mercantile and general reinsurance company, limited, ordinary general meeting, London. Economist 153:662 O 18 '47
1946 Liverpool and London and Globe results. P. R. England. Weekly Underw 156:1399+ My 24 '47
Phoenix assurance company, limited; Atlas assurance company, limited; Union insurance society of Canton, limited; Equitable life assurance society; Friends' provident and century insurance offices; annual general meetings. Economist 152:908, 911, 912, 917 Je 7 '47
Royal exchange assurance; Liverpool and London and Globe insurance company limited; Caledonian insurance company; London assurance; Guardian assurance company; limited; annual general meetings. Economist 152:738-42 My 10 '47
Scottish union and national insurance company; Royal insurance company, limited; Licenses and general insurance company, limited; annual meetings. Economist 152: 779-80 My 17 '47
Sun insurance office, limited; Norwich union insurance societies; annual meetings. Economist 152:870 My 31 '47
United Kingdom provident institution, annual general meeting. Economist 152:605 Ap 19 '47
See also
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India
Bombay insurance company executive concludes trip here; interview with M. G. Mody. East Underw 48:1+ Ag 29 '47

Korea
Experiences in valuing Korean business of 19 Japanese insurance companies. C. T. Foster. East Underw 48:14 Ja 24 '47

Norway
Christiania General of Oslo observing 100th anniversary. Weekly Underw 156:1270 My 10 '47; East Underw 48:20+ My 9 '47; Nat Underw 51:8 My 8 '47

Southern states
Southern company begins nationwide expansion; Industrial life and health insurance company. Manuf Rec 115:54 N '46

Switzerland
Accident and Casualty of Winterthur is little affected by conditions. Weekly Underw 155: 1304 N 30 '46
Switzerland insurance supervision. E. C. Steefel. East Underw 48:12 Ap 25 '47

INSURANCE company buildings
Additional space for Home Life; photograph with text. Nat Underw (Life ed) 50:2 D 6 '46
Colonial Life to erect own home office in East Orange, New Jersey. il East Underw 48:8 My 2 '47
Empire state mutual life insurance company formally opens new home office in Jamestown. il East Underw 48:7 Jl 11 '47
Home State Life new home in Oklahoma City. Nat Underw (Life ed) 51:11 My 2 '47
Insurance offices avoid the colonial; building for Standard life insurance company of Indiana, Indianapolis. il plans Arch Rec 102: 137 O '47
John Hancock's addition will be Boston's tallest building. il East Underw 48:3 O 17 '47
Prudential's Pacific headquarters; illustration with text. East Underw 48:8 Ap 4 '47
Standard Life's new home office building; illustration with text. East Underw 47:17 D 6 '46
Travelers buy 80 John St. Weekly Underw 157:334 Ag 9 '47
Welded steel piles support 26-story skyscraper; Boston home of John Hancock life insurance co. il Civil Eng 17:113-16 Mr '47

INSURANCE conventions
Annual Pittsburgh insurance day meeting, Feb. 17. East Underw 48:40 F 21 '47; Nat Underw 51:1+ F 20 '47
How to help reporters; press relations at a conference or meeting. R. S. Hutchings and C. C. Nash. East Underw 47:14+ D 13 '46
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Insurance agents—Conventions

INSURANCE counsel, International association of. See International association of insurance counsel

INSURANCE departments
Activities of New York department; address before National association of insurance women. A. J. Bohlinger. East Underw 48:19 Je 27 '47
Consultants recommend Wisconsin department changes. Nat Underw 51:3 Je 5 '47; Same. Nat Underw (Life ed) 51:8 Je 6 '47
Idaho now has separate insurance department. Weekly Underw 156:931 Ap 5 '47
Iowa state insurance department; history and personnel. O. Weber. pors East Underw 47:6+ D 13 '46
Story of teamwork in insurance supervision; capable advisers, ex-superintendents, aid one administration of New York department. G. S. Van Schaick. Nat Underw 50th anniv no:264+ 1947

INSURANCE executives association
Agents defiant to companies' move on local board rules; with text of I.E.A. letter. Nat Underw 51:1+ Ap 24 '47

INSURANCE federation of New York
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INSURANCE institute of Ontario
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INSURANCE law
A.B.C. of the standard valuation and nonforfeiture laws. M. H. LeVita. Life Ins Courant 51:534-6 D '46
All-industry and related legislation in 1947; Bloys committee report; tabulation by states. Spectator (Life ed) 155:22 Jl '47; Same. Spectator (Property ed) 13:16-17 Jl 24 '47
Assured's judgment creditor can recover only limit of policy though insurer negligent in failing to settle. Weekly Underw 157:579 S 6 '47
Bloys committee's report; PL 15 legislation to date summarized by bar group; with tabulation by states. Nat Underw 51:1+ Jl 10 '47
C.S.O.; the company, the standard, the opportunity; standard non-forfeiture and valuation laws; address before Million dollar round table. A. N. Guertin. Weekly Underw 157:700-2, 761-3 S 20-27 '47; Same cond. Nat Underw (Life ed) Daily ed 51: 16+ S 10 '47; Excerpts. East Underw 48: 10+ S 12 '47
Fire insurance laws, taxes and fees; data on state insurance statutes in 1946-1947 edition. Spectator (Property ed) 12:27 Ja 9 '47
General regulatory laws; with particular application to health and accident business; tabulation by states. C. C. Frazier. Spectator (Property ed) 12:9 N 14 '46
Guertin measure progress; all states but Oklahoma have legislation; District of Columbia hasn't. East Underw 48:1+ Ag 1 '47
Legislative, legal activities and litigation of 1946. B. E. Shepherd. East Underw 47:3+ D 20 '46
New law on cash values; text of standard nonforfeiture law; with commentary. Life Ins Courant 52:188-91 My '47
New legal insurance committee of Association of the bar of city of New York. East Underw 47:74 D 13 '46

INSURANCE law—*Continued*
New state laws are reviewed by N.A.L.U. committee. Nat Underw (Life ed) Daily ed 51:34-5 S 11 '47
Passing judgment; the Guertin bills. H. D. Josephson. Spectator (Life ed) 154:38-9 N '46
Problems of the conflict of laws in relation to binding receipts. P. B. McHaney. Weekly Underw 156:1655-7+, 1701-3 Je 14-21 '47
Rate regulatory and related bills enacted in 1947 legislatures. Weekly Underw 157:143 Jl 19 '47
Rate regulatory bills in the legislatures. Weekly Underw 156:259, 311, 379, 448, 524, 584, 660, 736, 804, 872, 932, 1000, 1068, 1128, 1188, 1324 Ja 25-My 3, 17 '47
Reports on 1947 legislation. E. H. O'Connor. East Underw 48:24 Ag 29 '47
Rights of creditors of insured and beneficiary. C. C. Jones, jr. East Underw 48: 138 pt 2 O 3 '47
Status of life insurance non-forfeiture and valuation legislation. Weekly Underw 156: 1189 My 3 '47
What's new in insurance legislation. 32p pa 50c American management assn, 330 W. 42d st, New York 18 '47

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Insurable interest
Insurance, Automobile—Financial responsibility laws
Insurance agents—Law
Insurance companies—Regulation
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Argentina
Argentina gets ready to spike U.S. insurers. Nat Underw 51:3 F 6 '47
Argentine decree of May 30, 1946 approved by legislators with some minor amendments. Weekly Underw 156:1747-8 Je 28 '47
Argentine decrees on insurance confused. Weekly Underw 157:481+ Ag 30 '47
Clarifies Argentine situation. J. Sachs. Nat Underw 50:11 N 21 '46
New Argentine decree alters that of May 1946; abstracts. J. Sachs. Weekly Underw 155:1186 N 16 '46; Nat Underw 50:2 N 14 '46

California
California names reciprocal states under law dealing with unlicensed activities. Nat Underw 51:28 Ap 17 '47; Same. Nat Underw (Life ed) 51:2 Ap 18 '47
Review legislative prospects in California with Garrison. Nat Underw 50:2 N 28 '46; Nat Underw (Life ed) 50:3+ N 29 '46

Colorado
Lobbyists, poor auto practices hit; reviews achievements of General assembly session. L. J. Kavanaugh. Nat Underw 51:3 My 1 '47
Shape Colorado legislation; no A.&H. rate control; no prior or subsequent disapproval. Nat Underw 50:3 N 28 '46; Same. Nat Underw (Life ed) 50:6 N 29 '46

Great Britain
English supervisory system reviewed; abstracts. A. J. Bohlinger. Weekly Underw 156:1344 My 17 '47; Nat Underw 51:5 My 15 '47

Illinois
Illinois rating bills praised; reviews other legislation; Chicago insurance day address. W. W. Hamilton. Nat Underw 51:1+ Ap 17 '47
Rate bills pass as Illinois legislature adjourns for 1947; other measures. Nat Underw 51: 15 Jl 3 '47
Watching Illinois legislation to protect life policyholders; work of legislative committee of Chicago association of life underwriters. C. Baldwin. East Underw 48:3+ Ag 8 '47

Maine
New insurance laws cover wide range; include fire and casualty rate statutes and new fire policy; tax law enacted. Weekly Underw 156:1452 My 31 '47

Massachusetts
Massachusetts bills opposed at hearing; life companies object to outlawing conservation commissions. Weekly Underw 156:199 Ja 18 '47
Several new insurance laws. Weekly Underw 157:203 Jl 26 '47

New Jersey
New Jersey bills. Weekly Underw 156:583 Mr 1 '47

New York (state)
Anti-monopoly bill and others opposed in New York at hearing of Senate and Assembly insurance committees. Nat Underw 51:3+ Mr 13 '47
Dineen seeks protective law on insurance price fixing. Weekly Underw 156:447+ F 15 '47; Same abr. East Underw 48:20+ F 14 '47
Guertin bill now law. East Underw 48:12 Mr 28 '47; Same cond. Nat Underw (Life ed) 51:20 Mr 28 '47
Make last try for Guertin law in New York. Nat Underw (Life ed) 51:1 Ja 17 '47
Modified Guertin measure passed by legislature. Nat Underw (Life ed) 51:1 F 28 '47
New York bills to strengthen rating control, prohibit unfair practices. East Underw 48: 27 F 21 '47
New York has new angle on anti-monopoly bill; amends Donelly act. Weekly Underw 156:735 Mr 15 '47

Pennsylvania
Pennsylvania industry bills make several changes in AIC proposals. East Underw 48: 28 F 21 '47

Rhode Island
Failure to pass rating bill worries insurance men; belief expressed that Federal government may take over regulation. Weekly Underw 156:1519+ Je 7 '47

South Carolina
Introduce code revision bill; measure represents recommendations of state committee on insurance laws. Weekly Underw 156: 1067 Ap 19 '47
South Carolina valued policy law. J. Calhoun. Weekly Underw 156:953-5 Ap 5 '47

Tennessee
Tennessee passes fair trade practices measure; insurance commissioner wins legislative fight for fire prevention bill. Weekly Underw 156:803 Mr 22 '47

Texas
Rate laws in Texas. C. T. Smith. Spectator (Property ed) 12:12-13 My 22 '47

Utah
Utah law answers public law 15; Salt Lake City address. W. H. Brewster. East Underw 48:29 Ag 15 '47

Washington (state)
Highlights of new code. Nat Underw (Life ed) 51:27 Mr 21 '47
Mortgage lenders fight Washington coercion clause; aircraft made surplus line; delete inland marine. Nat Underw 50:34 D 5 '46
Washington code passes Senate after battle. Nat Underw (Life ed) 51:15 F 28 '47

Wisconsin
Recess time status of casualty bills reported. I. P. Mehigan. Nat Underw 51:12 Jl 31 '47

INSURANCE lawyers
How claims counsel can best serve the companies they represent. V. C. Gorton. Weekly Underw 157:386+ Ag 16 '47
Increasing complexity of legal practice. E. A. Roberts. East Underw 48:20 S 12 '47; Excerpt. Nat Underw (Life ed) 51:17 S 12 '47
Some members of insurance law firms. pors East Underw 47:61+ D 13 '46

INSURANCE libraries
Librarian Mabel B. Swerig's 25 years with library of Insurance society of New York. East Underw 48:17+ Ap 4 '47

INSURANCE literature
Maximums in motivation; life insurance advertising and sales promotion literature. K. H. Mathus. il Spectator (Life ed) 154: 30-4+ D '46; 22-5 Ja; 22-5+ F; 18-21+ Mr; 8-11+ Ap; 10-14+ My; 8-11+ Je '47

INSURANCE news. See Newspapers—Insurance news

INSURANCE society of New York
Insurance leaders praise insurance society of New York. F. A. Christensen and others. East Underw 48:15+ Ja 17 '47

Librarian Mabel B. Swerig's 25 years with library. East Underw 48:17+ Ap 4 '47

New directors; important changes in courses. pors East Underw 48:13 Jl 4 '47

INSURANCE surveys, Agents'. See Insurance, Life—Agents—Service; Insurance agents—Service

INSURANCE trusts
How to sell life trust policies. J. J. Magovern, jr. Nat Underw (Life ed) 50:5 N 29 '46

INSURANCE women
Ethel Smith successful A. & H. manager. East Underw 48:29 Ag 1 '47

Fair sex to play important insurance role; part they fulfill in operation of successful office. J. C. Stott. Weekly Underw 156: 1669+ Je 21 '47

First woman director; Mrs Douglas Horton on board of New York Life. Weekly Underw 157:448 Ag 23 '47

Kathryn M. Coulston, first president Women's insurance society of Philadelphia. D. M. Smith. East Underw 48:28 pt 2 Je 20 '47

Mildred Hammond; secretary of American life convention. S. Welton. East Underw 48:8+ S 26 '47

National association of insurance women's head is supervisor of office; Helen Stombs. East Underw 48:20 Jl 18 '47

See also
Insurance, Life—Agents—Women agents
Insurance agents—Women agents
also National association of insurance women

INSURED mortgages. See Federal housing administration—Insured mortgage plan

INTEGRAL equations
Integral equations between distribution functions of molecules. J. E. Mayer. J Chem Phys 15:187-201 Ap '47

Some integral equations of potential theory. H. Bateman. bibliog J Ap Phys 17:91-102 F '46; Correction. F. W. J. Olver. 17:1127 D '46

Variational method for asymptotic neutron densities. E. R. Marshak. bibliog Phys R 71:688-93; Discussion. B. Davison. 694-7 My 15 '47

INTEGRALS
Cam for introducing periodic functions into mechanical drives. K. P. Yates and G. Sinclair. diags R Sci Instr 18:454-5 Je '47

INTELLECTUAL cooperation
See also
Library cooperation, International
Students, Interchange of
United nations educational, scientific and cultural organization

INTELLECTUAL property
Protection
Pitfalls to avoid when you sell ideas. A. W. Gray. Sales Management 58:118+ Mr 15 '47

See also
Copyright
Patents

INTELLECTUAL workers
See also
Advertising copy writers
Office workers
Professional workers
Teachers

INTER-AMERICAN cooperation, Council for. See Council for inter-American cooperation, inc.

INTER-AMERICAN council of commerce and production
Third plenary session held in Montevideo, April 8-11. For Comm W 27:19 My 24 '47

INTER-AMERICAN defense conference
Inter-American treaty a milestone; radio address. A. Vandenberg. Comm & Fin Chr 166:1012+ S 11 '47
Pan-American at Petropolis. Economist 153: 308-10 Ag 23 '47
Rio results, an inspiration; radio address. G. C. Marshall. Comm & Fin Chr 166: 1011 S 11 '47
Treaty of Petropolis. Economist 153:408 S 6 '47

INTER-AMERICAN highway. See Pan American highway

INTER-AMERICAN institute of agricultural science, Costa Rica
Recently received several grants. Science 106: 260 S 19 '47
Science and agriculture in inter-American affairs. R. H. Allee. Chem & Eng N 25: 1184-6 Ap 28 '47

INTERATOMIC distances. See Molecules

INTERCHANGE of freight cars. See Freight cars—Interchange

INTERCHANGEABLE mechanism
Interchangeability is goal of work on antifriction bearings. Ind Stand 18:87-8 Ap '47
Interchangeability of large machine parts; work of International standards commission. N. N. Sawin. diags Am Mach 91:88-91 Ja 2 '47

INTERCOMMUNICATING systems
Infrasonic switching. A. Montani. diags Electronics 19:214+ Mr '46; Discussion. 20:174+ Ag '47
Intercommunication sets; phenolic and cellulose acetate used. il Mod Plastics 24:184-7 Ag '47
Intercommunication system used on west Texas rig. W. J. Davis. il Pet Eng 18:55-6 My '47
Loud-speaker yard communication on the Kentucky & Indiana. il plan Ry Age 122: 448-50 Mr 1 '47
Loud-speakers on Rio Grande; installation in yard at Salt Lake City. il plan Ry Age 122: 594-5 Mr 22 '47
Two-tube intercom. E. B. Pray. il diags Radio N 38:54-5+ Ag '47
What type communication towers? il diags Ry Age 122:937-8+ My 10 '47

INTERCONNECTION of electric plants. See Electric plants—Interconnection

INTERESSEN gemeinschaft farbenindustrie aktiengesellschaft
I.G. Farben to be broken up in the U.S. zone. Chem & Ind p424 N 23 '46
I.G. Farben's post-war activities. Chem Age (Lond) 57:361 S 13 '47

INTEREST
Britain's cheap money drive. F. B. Makin. Banking 40:45 O '47
Cheap money in retrospect. Economist 151: sup3 N 16 '46
Cheap money now. Economist 153:25-6 Jl 5 '47
Commercial loan rates; averages of rates charged customers by banks in principal cities; yearly average, 1937-1946; quarterly, Dec. 1942-Dec. 1946. Fed Res Bul 33:63 Ja '47 [cont monthly]
Contract rate of interest applicable after maturity of promissory note. Banking Law J 64:586-90 Jl '47
Cost of cheap money. C. L. Benner. Comm & Fin Chr 165:2725+ My 22 '47
Economist urges higher interest rates, but sees idle funds restraining rise. B. M. Anderson. Barron's 27:25 Je 2 '47
Hard money theory of interest rates. W. Witherspoon. Comm & Fin Chr 164:2613+ N 21 '46
Implications of interest rate controls. S. M. Foster. Comm & Fin Chr 165:3225+ Je 19 '47
Inflation and the money market; abstract. M. Shields. Management R 35:532-4 D '46
Inflation, interest rate and public debt management; address before California bankers association, San Diego. B. M. Anderson. Comm & Fin Chr 165:2849+ My 29 '47

INTEREST—*Continued*
Institute of life insurance traces decline in yield on savings. Comm & Fin Chr 166:360 Jl 24 '47
Interest on past-due interest not allowed; Mississippi valley trust co. v. Oklahoma railway co. Banking Law J 64:325-30 Ap '47
Interest rate on call loans (renewals), time loans, prime commercial paper, high grade bonds and government bonds, 1920-1946; graph. Dun's R 55:22-3 My '47
Interest rate prevented from performing economic functions; Committee on public debt policy. Comm & Fin Chr 165:1656+ Mr 27 '47; Same. Banking 39:102 My '47; Abstract. Nat Underw (Life ed) 51:10 Mr 28 '47
Interest rate, price level and Keynesian ideology. G. E. Jackson. Comm & Fin Chr 166:105+ Jl 10 '47
Interest rate possibilities. S. R. Wendin. Comm & Fin Chr 166:716+ Ag 21 '47
Interest rates by loan size and geographical region. J. M. Hartwell, jr. Am Stat Assn J 42:242-5 Je '47
Liquidity preference and monetary policy; Fellner theory; statistical relationship between demand for cash balances and rate of interest. J. Tobin. R Econ Stat 29:124-31 My '47
Misplaced emphasis in contemporary business-fluctuation theory; erratic variation in quantity of money, has been ignored. C. Warburton. bibliog J Bsns 19:199-220 O '46
No authority for pegging interest rates. A. G. Lanston. Comm & Fin Chr 165:1373+ Mr 13 '47
Open-market money rates in New York city, 1944-1946 average, monthly, Dec. 1945-Dec. 1946, weekly Dec. 1946. Fed Res Bul 33:63 Ja '47 [cont monthly]
Open-market rates; United Kingdom, Germany, Netherlands, Sweden and Switzerland, yearly Oct. 1929-Oct. 1945, monthly Nov. 1945-Oct. 1946. Fed Res Bul 33:107 Ja '47 [cont monthly]
Outlook for interest rates. R. H. Craft. Comm & Fin Chr 165:390+ Ja 23 '47
Outlook for interest rates. G. R. Cutler. Comm & Fin Chr 165:2340+ My 1 '47
Outlook for interest rates and bond prices. R. W. Valentine. Comm & Fin Chr 165: 1931+ Ap 10 '47
Restore Federal Reserve to its essential functions; impracticability of stabilizing the current pattern of rates. A. G. Lanston. Comm & Fin Chr 165:2061+ Ap 17 '47
Savings interest rates show firmer tone. R. M. Bleiberg. Barron's 27:7-8 Ag 25 '47
Short-term rates unpegged. Bsns W p22+ Jl 12 '47
Structure of interest rates on business loans at member banks; with tabulations on loans as of Nov. 20, 1946. R. Youngdahl. Fed Res Bul 33:803-19 Jl '47
Trend of interest rates. J. H. Clarke. Comm & Fin Chr 165:989+ F 20 '47
Unchanged basic interest rate predicted by First Boston corporation. Comm & Fin Chr 164:3213+ D 19 '46
Valuation should recognize present interest rates. W. F. Boericke. Eng & Min J 148:76-7 Ja '47

See also
Savings deposits—Interest
Usury

INTERFACES
Adapting a differential pressure controller to wide-range interface control. J. G. Kirkpatrick. diag Chem Eng 54:121-2 Mr '47
Application of the sliding thermocouple method to the determination of temperatures at the interface of a moving bullet and a gun barrel. E. L. Armi and others. il diag J Ap Phys 18:88-94 Ja '47
Measurement of potentials at the interface between vitreous silica and solutions of thorium chloride and lanthanum chloride. L. A. Wood and L. B. Robinson. Am Chem Soc J 69:1862-6 Ag '47
New method for forming sharp boundaries in diffusion experiments. D. S. Kahn and A. Polson. bibliog il J Phys & Colloid Chem 51:816-25 My '47
Unusual liquid interface. A. R. Olson and J. H. Hildebrand. il J Phys & Colloid Chem 51:567-8 Mr '47

INTERFERENCE (light)
Interference in thin parallel surfaced transparent plates as a source of error in spectroquantitative analysis. J. Stern. il Opt Soc Am J 36:654-8 N '46
Possibility of observing beat frequencies between lines in the visible spectrum. A. T. Forrester and others. diag Phys R 72:728 O 15 '47

INTERFEROMETERS
Coating thickness measurement by interferometry. M. F. Bechtold. bibliog il diag Opt Soc Am J 37:873-8 O '47
Current developments in instrumentation in analysis. R. H. Müller. Ind & Eng Chem Anal ed 18:sup21-2 N '46
Direct determination of wave-lengths from Fabry-Perot interferometer patterns. G. R. Harrison. bibliog il diags Opt Soc Am J 36:644-54 N '46
Interferometer studies of telescopic systems. H. S. Coleman and others. il diags Opt Soc Am J 37:671-84 S '47
Interferometers; Hilger instruments for comparative or absolute measurements in wave-lengths of light. il Automobile Eng 37:137-8 Ap '47
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47
Progress in industrial measurement; some new scientific aids described. L. Sanderson. diag Chem Age (Lond) 57:495 O 11 '47
Reflection and transmission interference filters. L. N. Hadley and D. M. Dennison. diags Opt Soc Am J 37:451-65 Je '47

INTERIOR, Department of. See United States—Interior, Department of

INTERIOR decoration
Decorating with phenolics and vinyls. il Mod Plastics 24:124-5 My '47
Modern interiors use standard materials. il Am Bld 69:130 F '47
Offices with a personality; designed by Gump's San Francisco interior decorating department. J. J. O'Rourke. il Am Bsns 17:28+ Ja '47
Prospects mixed for entering interior decorating business. il Dom Comm 34:60-4 D '46

See also
Furniture
House decoration
Ship decoration
Tapestry

INTERLIBRARY loans
International exchanges. R. B. Downs. Science 105:417-21 Ap 25 '47

INTERLOCKING devices
Interlocks; their use in machine controls. G. W. Heumann. il diags Machine Design 19:121-8 Ap '47
New Selsyn interlock selection system; for synchronizing of sound, camera, and projection motor operation. D. J. Bloomberg and W. O. Watson. il diags Soc Motion Picture Eng J 47:469-73 D '46

INTERMITTENT mechanism. See Mechanical movements

INTERNAL combustion engines
Application of internal-combustion engine power to rotary rigs. W. S. Crake. diags Oil & Gas J 46:180-2+ O 11 '47
Facteur d'usure et défauts des coussinets. F. Picard. diags Génie Civil 124:233-5 Je 15 '47
Free-piston compressor engines. H. O. Farmer. il diags Engineer 182:540-2; Discussion. 548-9 D 13 '46; Engineering 162:617-19 D 27 '46
Modern rotary drilling. J. Zaba. Oil & Gas J 46:317 S 20 '47
New replica techniques for evaluating engine wear; surface finishes reproduced in plastic. il diag Automotive & Aviation Ind 96: 36-7+ Ap 15 '47

INTERNAL combustion engines—*Continued*
Rototiller engine. diags Automotive & Aviation Ind 95:32 N 15 '46
Two-cycle engine, McCulloch Motors. il Sci Am 176:39 Ja '47

See also
Airplane engines
Automobile engines
Cylinders (engines, etc)
Diesel engines
Gas turbines
Indicators (for internal combustion engines)
Locomotives, Diesel
Motor bus engines
Motor cars (railroad)
Motor cycle engines
Motor truck engines

Air supply

Airbox method of measuring the air consumption of internal-combustion engines. L. J. Kastner. diags Engineering 163:345-8 Ap 25 '47
Induction ramming effects in single-cylinder four-stroke engines. L. J. Kastner. bibliog plans Inst Mech Eng J & Proc 153 (War emergency issue no 7):206-14; Discussion. 214-20 '45

Bearings

Aluminum alloy bearings. H. Y. Hunsicker. il diags Machine Design 19:121-7 Ja '47
Latest developments in engine bearings. P. M. Heldt. il diags Automotive & Aviation Ind 96:28-31+ Mr 1; 34-7+ Ap 1 '47

Cold weather operation

Designing for extreme cold. A. Raines. il Machine Design 19:105-6 My '47
Frigid starting and operation; fuels, lubricants and operating practices at sub-zero temperatures; abstracts. R. W. Goodale. il map Nat Pet N 39:27+ F 26 '47; S A E J 55:51-3 My '47

Combustion research

Diesel combustion temperatures; the influence of operating variables; flame-temperature data obtained with the electro-optical pyrometer. O. A. Uyehara and others. bibliog il A S M E Trans 59:465-75; Discussion. 475-7 Jl '47
Knock-free power. P. J. Gaylor. bibliog diags Pet Eng 18:43-8 D '46
New engine with knock-free combustion. diags Automotive & Aviation Ind 96:27 My 15 '47
Study by high-speed photography of combustion and knock in a spark-ignition engine. C. D. Miller. bibliog il diag U S Nat Advisory Com for Aeronautics 1942:15-37 '46
Symbols for combustion research; engineering data. Aviation W 47:29-30 O 13 '47

Control

King-Seeley hydraulic engine governor. il diag Automotive & Aviation Ind 95:64+ N 15 '46

Cooling

How to plan gas compressor stations for long-range efficiency. B. Thiel. il Power Pl Eng 51:69-71 Jl '47
Separate cooling on drilling rigs. il Oil & Gas J 46:99 S 13 '47
Special cooling arrangement for pump engine at Charlottetown. W. S. Lea. diag Water & Sewage 85:15+ Ja '47

Deposits

Evaluation of piston skirt deposits. A. C. Scholp, B. J. Conta and C. D. Russell. bibliog il diags Anal Chem 19:466-71 Jl '47

Design

Balance conditions in five-cylinder in-line engines. P. M. Heldt. diags Automotive & Aviation Ind 96:34-8+ Ja 15 '47
Cadillac twin V-8 power plant for light tanks. J. F. Gordon. il diags A S M E Trans 69: 29-34 Ja '47
Chrysler multibank power plant for medium tanks. H. T. Woolson. il diags A S M E Trans 69:1-10 Ja '47
Designing and developing Ford engines for medium and heavy tanks. P. H. Ponta. il A S M E Trans 69:21-7 Ja '47
Dynamic loading and some indications of its effect on internal combustion engines. C. W. Chapman. diags Inst Mech Eng J & Proc 153 (War emergency issue no 7):221-32; Discussion. 232-6 '45

See also
Automobile engines—Design

Detonation

Constant-gain knock pickup amplifier. R. P. Krebs and T. Dallas. diags Electronics 20: 87-9 Ja '47
Knock-free power. P. J. Gaylor. bibliog diags Pet Eng 18:43-8 D '46
Review of the chemical structure of fuels and their detonation in engines. A. G. Mazurkiewicz and V. G. Oberholzer. bibliog Inst Pet J 32:685-702 D '46

Exhaust

Ventilation involved in the use of gasoline-powered equipment in enclosed spaces (not in mines or tunnels). L. B. Berger. 4pls U S Bur Mines Information Circ 7404:1-8 '47

Fire hazards

S A E standards to douse fire due to engines. il S A E J 54:79-80 N '46

Fuel

Developments in fuels, lubricants, and lubrication. R. J. S. Pigott. Mech Eng 69:573-5 Jl '47
Experimental fuel blending. H. C. Walters. il Pet Processing 2:685-6+ S '47
Factors affecting quality and supply of internal-combustion-engine fuels. W. M. Holaday and others. Pet Refiner 26:79-85 My '47; Same cond. Oil & Gas J 45:112+ Ap 26 '47
Review of the chemical structure of fuels and their detonation in engines. A. G. Mazurkiewicz and V. G. Oberholzer. bibliog Inst Pet J 32:685-702 D '46

See also
Airplane engines—Fuel
Automobile engines—Fuel
Automotive fuel
Diesel engines—Fuel
Gasoline

Ignition devices

Engine ignition faults, and a new method of diagnosis and location during running. F. R. F. Ramsay and W. Nethercot. il diags Inst E E J 93 pt 2:629-35 D '46; Same cond. Engineer 181:542-3 Je 14 '46; Abstract. Engineering 161:417 My 3 '46; Discussion. Inst E E J 93 pt 2:635-41; 94 pt 2:665-6 D '46, D '47; Electrician 136:1162-4 My 3 '46
Mallory ignition distributor and speed governor. il Automotive & Aviation Ind 95:68 N 15 '46
Unorthodox ignition keeps engine going. W. B. Kennedy. diag Power 91:338 My '47

Knock testing engines

Temperature control for octane tests; vacuum-type relay circuit. P. J. Malraison. il diags Electronics 20:99-101 N '47

Lubrication

Analysis of the lubrication between the piston rings and cylinder wall of a running engine. J. S. Courtney-Pratt and G. K. Tudor. bibliog il diag Inst Mech Eng J & Proc 155 (War emergency issue no 21): 293-9 '46; Same, Engineering 161:69-71 Ja 18 '46; Same cond. Engineer 180:469-71 D 7 '45; Discussion. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21): 306-20 '46; Engineer 180:459-60, 480 D 7-14 '45
Developments in fuels, lubricants, and lubrication. R. J. S. Pigott. Mech Eng 69:575-6+ Jl '47
Experiments on the reproducibility of engine conditions for ring-sticking tests in a single-cylinder petrol engine. G. S. Cantle. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):323-9; Discussion. 330-2 '46

INTERNAL combustion engines—Lubrication—*Continued*
Exploratory study of oil grooves in plain bearings. D. Clayton. diags Inst Mech Eng J & Proc 155 (War emergency issue no 14): 41-9 '46; Same. Engineering 159:158-60, 178-80 F 23-Mr 2 '45; Summary. Engineer 179: 57-8 Ja 19 '45; Discussion. il Inst Mech Eng J & Proc 155 (War emergency issue no 14):53-64 '46
Kendall finds use of detergent type motor oil leaves pistons cleaner in two-cycle engines. Nat Pet N 39:33 O 1 '47
Lubrication of the portable air compressor. il diags Can Min J 68:485-9 Jl '47
Lubrication of 2-cycle engines. C. Boyd, jr. Nat Pet N 39:35-6+ Je 18 '47
Mechanical factors affecting ring gumming in petrol engines with particular reference to the rating of lubricating oils. B. Pugh. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):303-6 '46; Same. Engineer 180:491-3 D 14 '45; Same. Engineering 161:93-4 Ja 25 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 21):306-22 '46; Engineer 180:480-2 D 14 '45

Manufacture

Lightweight gasoline engines made from diecastings; McCulloch motors corp. R. P. McCulloch. il Iron Age 159:52-6 My 15 '47
New methods in mass producing lightweight engines; McCulloch motors corp. il diag Automotive & Aviation Ind 96:34-7+ F 15 '47
Pours engine castings in dry sand molds; Chicago pneumatic tool co. P. Dwyer. il plan Foundry 75:90-3+ My; 88-91+ Je '47
Unique engine assembly system; parts and accessories kits on conveyor moving with assembly line. il Automotive & Aviation Ind 96:25+ Mr 1 '47

Specifications

American gasoline engines; tabulation. Automotive & Aviation Ind 96:146-55 Mr 15 '47
Automotive Diesel and other heavy oil engines; tabulations. Automotive & Aviation Ind 96:156-9 Mr 15 '47
British Diesel and other heavy oil engines; tabulations. Automotive & Aviation Ind 96: 160-1 Mr 15 '47
Small gasoline power units; tabulation. Automotive & Aviation Ind 96:143 Mr 15 '47

Starting

Frigid starting and operation; fuels, lubricants and operating practices at sub-zero temperatures; abstracts. R. W. Goodale. il map Nat Pet N 39:27+ F 26 '47; S A E J 55:51-3 My '47
Recent developments in low-temperature starting of petrol and compression ignition engines; abstract and discussion. R. Barrington and others. Engineer 183:340 Ap 18 '47
Rock Island tries air-started caboose power-supply unit. il Ry Age 122:754 Ap 12 '47; Same, with additional diag. Ry Mech Eng 121:196-7 Ap '47

Temperature

Instrument for piston temperature measurement. A. C. Scholp and others. il diag S A E J 55:37-9 My '47

Testing

Engine ignition faults, and a new method of diagnosis and location during running. F. R. F. Ramsay and W. Nethercot. il diags Inst E E J 93 pt 2:629-35 D '46; Same cond. Engineer 181:542-3 Je 14 '46; Discussion. Inst E E J 93 pt 2:635-41 D '46

Valves

Nitrided steel hot formed after heat treatment; Jack & Heintz precision industries, inc. J. Frazier. il diag Materials & Methods 26:80-3 O '47

Vibration

Informal discussion on methods of investigation of engine vibration. Inst Mech Eng J & Proc 153 (War emergency issue no 3): 58-60 '45
Some practical applications of rubber dampers for the suppression of torsional vibrations in engine systems. R. W. Zdanowich and J. E. Moyal. bibliog il diags Inst Mech Eng J & Proc 153 (War emergency issue no 3):61-76; Discussion. 76-82 '45
Torsional vibration amplitudes at non-resonant speeds with special reference to the interpretation of torsiograph records. W. K. Wilson. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 3):83-98; Discussion. il 99-108 '45

INTERNAL combustion engines, Marine
Harbormaster line adds new gas motor. il Paper Tr J 125:32 S 4 '47
McCulloch gasoline engines. il Mech Eng 69: 237 Mr '47
Mariner inboard propulsion unit. il diag Engineering 162:537 D 6 '46; Engineer 182:551 D 13 '46
New features in Packard marine engines. il Automotive & Aviation Ind 96:49+ Ap 1 '47
New products disclosed by boat and engine manufacturers. Automotive & Aviation Ind 96:56+ F 1 '47

See also
Diesel engines, Marine
Internal combustion engines, Outboard
Motor ships

Exhibitions

Engineering and marine exhibition at Olympia. il diags Engineer 184:188-9, supp 1-12 Ag 29 '47
Engineering and marine exhibition at Olympia. il diags Engineering 164:196-9, 220-4 Ag 29-S 5 '47

Specifications

American gasoline engines; tabulation. Automotive & Aviation Ind 96:146-55 Mr 15 '47

INTERNAL combustion engines, Outboard
Lubrication of 2-cycle engines. C. Boyd, jr. Nat Pet N 39:35-6+ Je 18 '47
Novel outboard engine design. diags Automotive & Aviation Ind 96:39 F 15 '47

Specifications

American outboard motors; tabulation. Automotive & Aviation Ind 96:162 Mr 15 '47

INTERNAL friction. See Friction, Internal

INTERNAL revenue

See also
Excise tax
Income tax
Inheritance tax
Taxation—United States

INTERNAL revenue bureau. See United States—Internal revenue bureau

INTERNATIONAL advertising federation
Twelve countries act to revive international advertising group. Ptr Ink 220:84 Ag 1 '47

INTERNATIONAL air transport association
IATA general session starts in Petropolis. Aviation W 47:60 O 13 '47

INTERNATIONAL association of casualty and surety underwriters
Joint meeting with National association of casualty and surety agents, Swampscott, Mass. Sept. 22-25. East Underw 48:30-2 S 26; 25-6+ O 3 '47; Nat Underw 51:23+ S 25; 15+ O 2 '47; Weekly Underw 157:725, 752-5 S 27 '47

INTERNATIONAL association of cleaning and dye house workers
Union agreements; power laundries, cleaning and dyeing. C. Sorenson. Mo Labor R 65:158-66 Ag '47

INTERNATIONAL association of insurance counsel
Annual convention, 20th, Spring Lake Beach, N.J. Sept 6. East Underw 48:31 S 5; 37+ S 12 '47; Weekly Underw 157:553+, 567, 618 S 6-13 '47

INTERNATIONAL association of printing house craftsmen
Annual convention, 28th, Saratoga Springs, N.Y. Aug. 31-Sept. 3. Inland Ptr 120:37-41 O '47
History shows steady progress toward objectives. J. E. Cobb. Inland Ptr 119:62-8 Ag '47

INTERNATIONAL association of printing house craftsmen—*Continued*
International Craftsmen movement has had strong influence on printing industry. J. J. Deviny. Inland Ptr 119:47-8 Ag '47
International craftsmen's club organized in 1919 by the 21 founding fathers; with portraits and sketches. G. C. Compton. Inland Ptr 119:54-8 Ag '47
1947 club presidents; portraits. Inland Ptr 119:49-52 Ag '47
Officers; portraits. Inland Ptr 119:53 Ag '47

INTERNATIONAL associations
International agencies in which the United States participates. 322p $2.75 Public affairs press, 2153 Florida av, Washington 8, D.C. '47

INTERNATIONAL balance of payments. See Balance of payments

INTERNATIONAL bank for reconstruction and development
Appoints Chauncey G. Parker director of Administrative department. Comm & Fin Chr 165:1939 Ap 10 '47
Australia joins fund and world bank. Comm & Fin Chr 166:530 Ag 7 '47
Balance sheet, Dec. 31, 1946 and statement of profit and loss for the six months ended Dec. 31, 1946. Comm & Fin Chr 165:779 F 6 '47
Bonds of world bank. E. F. Dunstan. Comm & Fin Chr 165:2065+ Ap 17 '47
Bretton Woods begins. Economist 152:760-1 My 17 '47
Bretton Woods in practice. Economist 152: 339-41 Mr 8 '47
Bretton Woods in retrospect and prospect; address at University of Amsterdam. F. A. G. Keesing. Comm & Fin Chr 166:622+ Ag 14 '47
Britishers irked over world bank policies. Comm & Fin Chr 165:2644 My 15 '47
Colombia and Venezuela join. Comm & Fin Chr 165:59 Ja 2 '47
Denmark gets $40 million from world bank. Comm & Fin Chr 166:831 Ag 28 '47
Distribution of world bank bonds important job ahead. E. Hopkinson, jr. Comm & Fin Chr 165:2737 My 22 '47
Eugene Meyer quits world bank. Comm & Fin Chr 164:2884+ D 5 '46
Factors in world bank success. G. R. Ericson. Comm & Fin Chr 165:3347+ Je 26 '47
Fund and bank will cost Americans billions. W. Chamberlain. Comm & Fin Chr 165: 2598+ My 15 '47
International bank. Economist 152:17-18 Ja 4 '47
International bank. E. G. Collado. Comm & Fin Chr 165:599+ Ja 30 '47
International bank. C. A. McLain. Comm & Fin Chr 165:2735+ My 22 '47
International bank and how it functions; with comment on the French loan. J. J. McCloy. il Dun's R 55:13-16 Jl '47
International bank and increased world output. R. L. Garner. Comm & Fin Chr 166: 1646+ O 23 '47; Same. For Comm W 29:3-5 N 22 '47
International bank and its securities. E. G. Collado. Comm & Fin Chr 164:3048+ D 12 '46
International bank and world trade. C. C. Pineo. Comm & Fin Chr 165:2598+ My 15 '47
International capital investment and the world bank. J. J. McCloy. Comm & Fin Chr 165:2198+ Ap 24 '47
International fund and bank. Nat City Bank p56-9 My '47
Investment legality of International Bank bonds by state classification. C. A. McLain. East Underw 48:3 Jl 18 '47
Italy joins International fund and the world bank. Comm & Fin Chr 165:1798 Ap 3 '47
Italy poses problem for fund and bank; Savannah resolution indicates addition of Italian to institutions' boards, and by-passing of Australia, Sweden and Switzerland. Comm & Fin Chr 165:1935 Ap 10 '47
Luxembourg obtains $12,000,000 loan. For Comm W 28:32 S 13 '47
McCloy elected world bank president; other appointments. Comm & Fin Chr 165:1252+ Mr 6 '47
Marshall plan; aid to the International bank. E. H. Weinwurm. Comm & Fin Chr 166: 325+ Jl 24 '47
National advisory council report on participation of the United States in the fund and the bank to October 31, 1946. Fed Res Bul 33:123-9 F '47
Officials of bank; biographical sketches (cont). Comm & Fin Chr 164:3216; 165:2745 D 19 '46, My 22 '47
$195,000,000 world bank loan to Netherlands. Comm & Fin Chr 166:635 Ag 14 '47; Same cond. For Comm W 28:35 S 6 '47
Plan for world bank operation. E. A. Viner and C. E. Garnaus. Comm & Fin Chr 166: 6+ Jl 3 '47
Second annual report to Board of governors. Comm & Fin Chr 166:1121+ S 18 '47; Same. For Comm W 28:34-5 S 20 '47
Should investment bankers sell world bank debentures? H. Schouten. Comm & Fin Chr 165:2982+ Je 5 '47
State legislation on world bank securities making good progress; bank to open New York office. Comm & Fin Chr 165:1652 Mr 27 '47
Switzerland and Bretton Woods. Comm & Fin Chr 165:749 F 6 '47
Syria, Lebanon join fund and world bank. Comm & Fin Chr 165:2065 Ap 17 '47
Three years after Bretton Woods; appointment of John J. McCloy, Eugene Black and Robert L. Garner to head world bank. Banking 39:46+ Ap '47
Turkey joins International fund and world bank. Comm & Fin Chr 165:1531 Mr 20 '47
Two recent loans likely to prove potent trade stimuli; loans to Denmark and Netherlands. For Comm W 28:35-6 S 6 '47
What is the International bank? R. L. Garner. Comm & Fin Chr 165:2472+ My 8 '47
Will world bank securities meet accepted investment standards? M. H. Wood. Comm & Fin Chr 165:589+ Ja 30 '47
World bank; a conservative pioneer. E. F. Dunstan. Comm & Fin Chr 165:2735+ My 22 '47
World bank and a dynamic world economy. E. F. Dunstan. Comm & Fin Chr 165: 2982+ Je 5 '47
World bank and fund become agencies of UN. Comm & Fin Chr 166:729 Ag 21 '47
World bank and the private investor; address before Bond club of New York. J. J. McCloy. Comm & Fin Chr 165:2864+ My 29 '47
World bank and the SEC. R. L. Garner. Comm & Fin Chr 165:3346 Je 26 '47
World bank and U.S.-Canadian cooperation. E. Meyer. Comm & Fin Chr 165:274+ Ja 16 '47
World bank bond; what kind of security? A. W. May. Comm & Fin Chr 165:2729+ My 22 '47
World bank bonds subject to Ohio blue sky law. Comm & Fin Chr 165:1007 F 20 '47
World bank bonds widely distributed. Comm & Fin Chr 166:337 Jl 24 '47
World bank debentures sound. J. T. Madden. Comm & Fin Chr 166:122 Jl 10 '47
World bank files SEC registration statement; with text of SEC rules. Comm & Fin Chr 166:6+ Jl 3 '47
World bank functions. J. J. McCloy. Weekly Underw 156:1106 Ap 19 '47
World bank gets dangerous advice. E. H. Weinwurm. Comm & Fin Chr 164:2748+ N 28 '46
World bank goes to market. J. S. Lawrence. Banking 39:25-7+ My '47
World bank goes Wall Street. Bsns W p17 Mr 8 '47
World bank grants first loan to France; Significance of French loan. Comm & Fin Chr 165:2613+ My 15 '47
World bank hopes for life company aid. E. Meyer. Weekly Underw 155:1442+ D 14 '46
World bank in market debut. Bsns W p73-4+ Jl 12 '47
World bank in the spotlight. H. M. Bratter. Comm & Fin Chr 165:1785+ Ap 3 '47
World bank, its aims and importance; address before Life insurance association of America. E. Meyer. Comm & Fin Chr 164:3202+ D 19 '46
World bank loan requests now more than $2½ billion. C. C. Pineo. Comm & Fin Chr 165:3271 Je 19 '47

INTERNATIONAL bank for reconstruction and development—*Continued*
World bank loan to France and future of foreign private lending. E. H. Weinwurm. Comm & Fin Chr 165:3234+ Je 19 '47
World bank looks before it lends; interview with E. R. Black. H. Bratter. Banking 40:39+ S '47
World bank outlook causing Congressional dissatisfaction. Comm & Fin Chr 165:11+ Ja 2 '47
World bank relations to European relief. J. J. McCloy. Comm & Fin Chr 165:3237 Je 19 '47
World bank securities and SEC regulation; editorial. Comm & Fin Chr 166:423+ Jl 31 '47
World bank slur; Wisconsin puts proposed securities on blacklist. Bsns W p18 D 7 '46
World bank's bonds. Economist 152:470 Mr 29 '47
World bank's needs point to merger; funds difficult to obtain, while International fund's resources are fully available. J. Hirsch. Barron's 27:3 Mr 10 '47
World bank's presidency in retrospect. Comm & Fin Chr 165:275 Ja 16 '47
World bank's reconstruction loans. Economist 153:454+ S 13 '47

INTERNATIONAL basic economy corporation
Good neighbor, good business; corporation to aid economies of Latin American nations. Bsns W p17-18 Mr 1 '47
To aid progress in South America. E. Whitmore. il Am Bsns 17:26+ Je '47

INTERNATIONAL biometric conference
Meeting, 1st, Woods Hole, Mass. Science 106:125 Ag 8 '47

INTERNATIONAL brotherhood of electrical workers
Dealing with organized labor major problem for REA co-ops. Elec World 127:129+ Ja 18 '47

INTERNATIONAL brotherhood of teamsters, chauffeurs, warehousemen and helpers of America
Teamsters warned to respect Taft law penalties. Bsns W p22 Ag 23 '47

INTERNATIONAL business machines corporation
Cumulative growth stocks for long-term capital gains. H. S. Coffin. Mag of Wall St 79:257 D 7 '46
Lower tax brings rise in IBM net. Barron's 27:6 Ja 27 '47

INTERNATIONAL cancer research congress
Meeting, 4th, St Louis, Sept. 2-7. Science 106:124-5 Ag 8 '47

INTERNATIONAL chamber of commerce
Big business at Montreux. Economist 152:985 Je 21 '47
Freedom and economic progress; address before Eleventh congress, Montreux, Switzerland. W. W. Aldrich. Comm & Fin Chr 165:2977+ Je 5 '47
International chamber wins recognition of United nations. W. W. Aldrich. Comm & Fin Chr 165:2479+ My 8 '47
Urges private equity investment rather than government foreign loans; summary of resolutions adopted at meeting in Switzerland. Comm & Fin Chr 166:341 Jl 24 '47

INTERNATIONAL civil aviation organization
ICAO agrees on flight standards. J. Foster, jr. Aviation N 7:26-7 Je 23 '47
ICAO delegates from 42 nations meet in Montreal. CAA J 8:49+ My 15 '47
ICAO revamps council makeup; multilateral agreement shelved. J. Foster, jr. Aviation N 7:12 My 26 '47
Sixth and seventh regional meetings. CAA J 8:67 Je 15 '47
26 nations ratify International civil aviation organization. Ind Stand 18:81-3 Ap '47

INTERNATIONAL claim association
Annual meeting, Swampscott, Mass. Sept. 15-17. Nat Underw 51:19C S 18 '47; Nat Underw (Life ed) 51:6 S 19 '47; Weekly Underw 157:692+ S 20 '47
Names committee chairmen. East Underw 48: 6 F 14 '47; Same abr. Weekly Underw 156:467 F 15 '47; Excerpt. Nat Underw 51: 18 F 20 '47
Receives U.S. navy award. East Underw 48:8 Je 27 '47

INTERNATIONAL commission on illumination
Aims and activities. C. A. Atherton. Illum Eng 42:503-5 Ap '47
International relations in illuminating engineering; abstract. N. A. Halbertsma. Light & Lighting 40:102 Je '47

INTERNATIONAL committee on weights and measures
Meeting, Sèvres and Paris, Oct. 22-29. Science 105:40 Ja 10 '47

INTERNATIONAL communication. See Communication, International

INTERNATIONAL confederation of Christian trade unions
Ninth congress, Amsterdam, June 4-6, 1946. Int Labour R 54:100-1 Jl '46

INTERNATIONAL conference on high polymers
Meeting at Strasbourg. Science 105:120 Ja 31 '47

INTERNATIONAL conference on large high tension electric systems
Papers dealing with overhead line construction at International high tension conference in Paris; abstracts. Electrician 137:1841-3 D 27 '46

INTERNATIONAL conference on soil mechanics and foundation engineering
Second international conference on soil mechanics and foundation engineering, Rotterdam, Holland, June 1948. J Eng Educ 38:89 S '47

INTERNATIONAL conference on trade and employment
Seeking a new route to world trade. H. Bratter. Banking 39:42-3 D '46
Task of the United nations in developing international trade. D. K. Owen. Comm & Fin Chr 164:2464+ N 14 '46
Trade make-believe. Economist 151:859-60 N 30 '46
World trade group winds up first stage of trade, labor study. Iron Age 158:160+ D 19 '46

INTERNATIONAL conferences
Achievements of Geneva parley called little short of miracle; radio address from Paris. W. L. Clayton. For Comm W 28:5+ S 20 '47
Europe and the Geneva conference. Comm & Fin Chr 165:1840, 2057+ Ap 3, 17 '47
Preliminaries in Geneva. Economist 152:587 Ap 19 '47

See also
International conference on trade and employment
Pan American congress of mining and engineering geology

Moscow, 1947
Failure of a mission? Economist 152:521-2 Ap 12 '47
Mr Bevin's brief. Economist 152:362-4 Mr 15 '47
We cannot compromise on great principles; report on Moscow conference. G. C. Marshall. Comm & Fin Chr 165:2389+ My 1 '47

INTERNATIONAL congress for applied mechanics
Meeting, 6th, Paris, Sept. 22-29, 1946. Science 105:167-9 F 14 '47
Sixth International congress changes name to Union for theoretical and applied mechanics. Mech Eng 68:1097 D '46

INTERNATIONAL congress for microbiology
Congress, 4th, Copenhagen, July 20-26. Science 106:339 O 10 '47

INTERNATIONAL congress of experimental cytology
Meeting in Stockholm not open to German and Japanese scientists. T. Dobzhansky and others. Science 105:599 Je 6 '47

INTERNATIONAL congress of pure and applied chemistry
Chronological list of events. Chem & Ind p401-2+ Jl 12 '47
Meeting, 11th, London, July 18-24. Chem Age (Lond) 57:109-20+ Jl 26 '47; Chem & Eng N 25:2254-61+ Ag 11 '47; Chem & Ind p472+, 483-8 Ag 2-9 '47
Message from the president. Viscount Leverhulme. Chem & Ind p395 Jl 12 '47

INTERNATIONAL congress of pure and applied chemistry—*Continued*
Officers; subcommittees, section chairmen and secretaries; biographical notes. Chem & Ind p406+ Jl 12 '47
Summary of subjects and speakers. Chem Age (Lond) 56:830-1+ Je 28 '47
World representation at the Congress; 392 delegates from 28 countries. Chem Age (Lond) 57:87-8+ Jl 19 '47

INTERNATIONAL congresses on tropical medicine and malaria
Fourth conference, Washington, May 10-18, 1948. Science 106:223 S 5 '47

INTERNATIONAL cooperation
Calls for end of economic wars; text of Waco, Texas, address. H. S. Truman. Comm & Fin Chr 165:1429+ Mr 13 '47
Census of the Americas; vital facts for businessmen. J. C. Capt. For Comm W 27:12+ Ap 12 '47
Defense of North America. A. G. L. McNaughton. Elec Eng 66:754-7 Ag '47
Discusses world cooperation at Syracuse. W. A. Noyes, jr. Chem & Eng N 25:1430-1 My 19 '47
Economic cooperation versus war. P. D. Reed. Comm & Fin Chr 166:724-5 Ag 21 '47
International agencies in which the United States participates. 322p $2.75 Public affairs press, 2153 Florida av, Washington 8, D.C. '47
State department's new educational bill obviates objections of ASCE board; technological services to other countries. Civil Eng 17:211 Ap '47
Textile industry furthers good-neighbor policy; visit of Mexican textile officials to the United States. M. E. Poole. Dom Comm 34:40-2 D '46
U.S. technical assistance welcomed in Latin America by railroads. T. J. Murphy. For Comm W 27:8 Je 14 '47

See also
Aeronautics, Commercial—International aspects
Food and agriculture organization of the United nations
Institute of international education
Library cooperation, International
Money—International aspects
Peace
Reconstruction (World war, 1939-1945)
Standards, International
World health organization
also International trade organization (proposed)

INTERNATIONAL cooperative petroleum association
Co-op moves in international field stir interest of industry. W. W. Burns. il Oil & Gas J 45:47-8 Ja 11 '47
Cooperatives organize International association. Oil & Gas J 45:96 O 19 '46

INTERNATIONAL credit. See Credit, International

INTERNATIONAL detrola corporation
Annual report. Comm & Fin Chr 165:1193 Mr 3 '47

INTERNATIONAL education, Institute of. See Institute of International education

INTERNATIONAL electrotechnical commission
Second postwar meeting of the Council, Zurich, June 16. Ind Stand 18:194-6 Ag '47

INTERNATIONAL exchange. See Foreign exchange

INTERNATIONAL exchanges, Literary and scientific. See Exchanges, Literary and scientific

INTERNATIONAL exposition of textiles
Exposition, 1st, Grand Central palace, New York, June 2. il Textile Col 69:20-31 Je '47

INTERNATIONAL federation
Atomic dilemma. B. Brodie. Ann Am Acad 249:33-6 Ja '47
World government and the control of atomic energy. H. W. Briggs. bibliog Ann Am Acad 249:42-53 Ja '47

Bibliography
World organization; an annotated bibliography. 7th rev ed 28p pa 10c Woodrow Wilson foundation, 45 E. 65th st, New York 21 '46

INTERNATIONAL federation of commercial travelers insurance organizations
Annual convention, 48th, Swampscott, Mass. Weekly Underw 157:561-2+ S 6 '47

INTERNATIONAL finance. See Finance, International

INTERNATIONAL fishermen and allied workers of America
Fishermen found guilty in antitrust case. Bsns W p73 My 17 '47

INTERNATIONAL general electric company
I.G.E. catches up. Bsns W p101-2 F 8 '47

INTERNATIONAL harvester company
Annual report. Comm & Fin Chr 165:2414-15 My 5 '47
Harvester company establishes manufacturing research center. il Steel 121:72-3 N 3 '47
House of ideas; Harvester research center. Bsns W p18-19 Ja 25 '47
International harvester company establishing major southern plants, big distributor depot. il diag Manuf Rec 116:76-7+ Ja '47
International Harvester creates model organization for export. M. Kelly. Ind Marketing 32:66+ Je '47
Invading the cities; new line of freezers and refrigerators for homes. Bsns W p54-5 S 20 '47
$20 million plum; Harvester's price cut. Bsns W p16-17 Mr 15 '47

INTERNATIONAL house, New Orleans. See New Orleans—International house

INTERNATIONAL hydro-electric system
Financial news and comment. Pub Util 40: 41-2 Jl 3 '47
Last step toward dissolution. Barron's 26:7 D 2 '46
Market rise boosts asset value; program of liquidation. Barron's 27:34 Ag 11; 34 Ag 18 '47
Public utility securities. Comm & Fin Chr 166:1008 S 11 '47

INTERNATIONAL illumination commission. See International commission on illumination

INTERNATIONAL information and cultural affairs, Office of. See United States—International information and cultural affairs, Office of

INTERNATIONAL institute of agriculture

Bibliography
Bibliography of the history and activity of the International institute of agriculture (1905-1945). 38p International institute of agriculture, Villa Umberto 1, Rome '45

INTERNATIONAL labor conference
Twenty-eighth maritime session, Seattle, June 1946. Int Labour R 54:1-28 Jl '46
Twenty-ninth session. Mo Labor R 63:935-40 D '46
Twenty-ninth session, Montreal, September-October, 1946. Int Labour R 55:1-45 Ja-F '47

INTERNATIONAL labor office
98th session of the governing body. Int Labour R 54:64-74 Jl '46
99th session of the governing body. Int Labour R 54:353-64 N '46
101st session of the governing body. Int Labour R 55:410-18 My '47
One hundred sessions of the governing body. Int Labour R 55:201-26 Mr-Ap '47

INTERNATIONAL labor organization
I.L.O. and the United nations; the Director-general's address to the Assembly. Int Labour R 54:281-4 N '46
ILO record shows 27 years of international cooperation. Ind Stand 18:197-8 Ag '47
Oil committee of International labor group to weigh management-labor relations balance. Nat Pet N 39:30-1 Ja 1 '47
Textile committee of ILO sets high labor standards; meeting, Brussels. Textile World 96:236 D '46

Building, civil engineering and public works committee
First meeting, Brussels, Nov. 25-Dec. 3, 1946. Int Labour R 55:85-96 Ja-F '47

INTERNATIONAL labor organization—*Cont.*

Coal mines committee

Second session of the I.L.O. Coal mines committee. Int Labour R 55:404-9 My '47

Inland transport committee

Second session. Int Labour R 55:556-63 Je '47

Permanent migration committee

First meeting, Montreal, Aug. 26-31, 1946. Int Labour R 55:98-108 Ja-F '47

Petroleum committee

First meeting. Int Labour R 55:274-80 Mr-Ap '47

INTERNATIONAL ladies' garment workers' union

Trade-union welfare programs. N. M. Minkoff. Mo Labor R 64:201-14 F '47

Union pension. Bsns W p90+ F 8 '47

INTERNATIONAL law

See also

International relations
Maritime law
Passports
United nations

INTERNATIONAL law, Private

Private international air law developments; relations of CITEJA and PICAO. S. Latchford. Weekly Underw 157:559-60+, 651-2 S 6-13 '47

INTERNATIONAL management congress

Congress, 8th, Stockholm, July 3-8. Mech Eng 69:788-92 S '47

INTERNATIONAL marine insurance union

Annual meeting, Cannes, France, Sept. 16-18. Nat Underw 51:15-16 O 16 '47; Weekly Underw 157:1044+ O 25 '47

Many important problems discussed at Marine Union's Zurich meeting. H. Jackson. East Underw 47:58+ D 13 '46

Marine Union meeting at Zurich important international gathering. E. C. Steefel. East Underw 47:81-2 D 13 '46

INTERNATIONAL monetary and financial problems, National advisory council on. See National advisory council on international monetary and financial problems

INTERNATIONAL monetary fund

Announces initial par values of member currencies; statement to the press. C. Gutt. Comm & Fin Chr 164:3208+ D 19 '46

Australia joins Fund and world bank. Comm & Fin Chr 166:530 Ag 7 '47

Bretton Woods in practice. Economist 152: 339-41 Mr 8 '47

Bretton Woods in retrospect and prospect; address at University of Amsterdam. F. A. G. Keesing. Comm & Fin Chr 166:622+, 718+ Ag 14, 21 '47

Business abroad; Fund and Camille Gutt. Fortune 35:214 Ja '47

Executive director's statement for year ending June 30, 1947. Comm & Fin Chr 166: 1120 S 18 '47

Financial report for quarter ending May 31, 1947. Comm & Fin Chr 166:731 Ag 21 '47

First year. H. D. White. Ann Am Acad 252: 21-9 Jl '47

Free versus fixed exchanges. R. Leon. Comm & Fin Chr 164:3009+ D 12 '46

Fund and bank will cost Americans billions. W. Chamberlain. Comm & Fin Chr 165: 2598+ My 15 '47

Fund opens its doors. Economist 151:757-8 N 9 '46

Fund opens shop. H. M. Bratter. Comm & Fin Chr 165:1249+ Mr 6 '47

Fund's opening day; with list of initial par values of members' currencies. Economist 151:1054, 1061 D 28 '46

Harry D. White quits International monetary fund. Comm & Fin Chr 165:1935+ Ap 10 '47

International fund and bank. Nat City Bank p56-9 My '47

International fund and currency parities. C. Gutt. Comm & Fin Chr 165:11+ Ja 2 '47

International fund as reconstruction aid. C. Gutt. Comm & Fin Chr 165:2608 My 15 '47

International fund sees security in repurchase provisions. Comm & Fin Chr 165:1513+ Mr 20 '47

IMF and world disequilibrium. Economist 153:454 S 13 '47

International monetary fund and world prosperity. C. Gutt. Comm & Fin Chr 165:1250+ Mr 6 '47

International monetary fund par values; schedule showing par value of the currency of each member country in terms of gold or in U.S. dollars. Comm & Fin Chr 164: 3394 D 26 '46; Same. Fed Res Bul 33:12 Ja '47

International monetary fund should aid in European rehabilitation. E. H. Weinwurm. Comm & Fin Chr 166:1635+ O 23 '47

International monetary group acts to outlaw economic warfare; countries record currency par values. Oil Paint & Drug Rep 150:3+ D 23 '46

Italy joins International fund and the world bank. Comm & Fin Chr 165:1798 Ap 3 '47

Italy poses problem for fund and bank; Savannah resolution indicates addition of Italian to institutions' boards, and bypassing of Australia, Sweden and Switzerland. Comm & Fin Chr 165:1935 Ap 10 '47

Lending operations of the International monetary fund. A. Bourneuf. R Econ Stat 28: 237-47 N '46

Monetary fund and ITO. H. M. Bratter. Comm & Fin Chr 165:274+ Ja 16 '47

National advisory council report on participation of the United States in the fund and the bank to October 31, 1946. Fed Res Bul 33:123-9 F '47

Officials of Fund; biographical sketches (cont). Comm & Fin Chr 164:3047 D 12 '46

Overby becomes U.S. executive director. Comm & Fin Chr 166:33 Jl 3 '47

Pondering parities. Comm & Fin Chr 164: 2757+ N 28 '46

Statement concerning initial par values. Fed Res Bul 33:11 Ja '47

Step toward one world; the IMF sets exchange rates. H. D. White. Dun's R 55: 14-16, 46-7+ S '47

Studies next steps. H. M. Bratter. Comm & Fin Chr 164:3349+ D 26 '46

Switzerland and Bretton Woods. Comm & Fin Chr 165:749 F 6 '47

Syria, Lebanon join fund and world bank. Comm & Fin Chr 165:2065 Ap 17 '47

There'll be gold standards again. A. M. Sakolski. Comm & Fin Chr 165:1936+ Ap 10 '47

Transactions in gold at premium prices; statement by International monetary fund. Fed Res Bul 33:851 Jl '47; Same. Comm & Fin Chr 165:3360 Je 26 '47; Same. Economist 152:1037-8 Je 28 '47

Turkey joins International fund and world bank. Comm & Fin Chr 165:1531 Mr 20 '47

Undervalued sterling; criticizes Fund's currency parities. P. Einzig. Comm & Fin Chr 165:6+ Ja 2 '47

U.S. completes its Fund contribution. Comm & Fin Chr 165:1124 F 27 '47

World bank and fund become agencies of UN. Comm & Fin Chr 166:729 Ag 21 '47

World bank's needs point to merger; funds difficult to obtain, while International Fund's resources are fully available. J. Hirsch. Barron's 27:3 Mr 10 '47

INTERNATIONAL nickel company

International Nickel aids scientific study. Oil Paint & Drug Rep 151:69 Ja 27 '47

INTERNATIONAL organization for standardization

International standards body is now officially ratified. Ind Stand 18:96 Ap '47

Meeting, Zurich, June 17-20. Ind Stand 18: 168, 189-94 Jl-Ag '47

New group formed. Arch Rec 100:14 D '46

Twenty-five countries set up new international standards organization. Ind Stand 17:297 D '46; Am Mach 90:155 N 21 '46; Oil Paint & Drug Rep 150:36 N 11 '46; Comm & Fin Chr 164:2525 N 14 '46; Elec World News ed 126:17 N 30 '46

INTERNATIONAL paper company

Cuts charges ahead of common stock. Barron's 27:35 S 22 '47

INTERNATIONAL railway congress

Congress, 14th, Lucerne, June 23-28. Engineering 164:17-18, 29, 66, 101-2, 137-8 Jl 4-18, Ag 1-8 '47

INTERNATIONAL railways of Central America
Annual report. Comm & Fin Chr 165:2415 My 5 '47

INTERNATIONAL relations
Actions still are louder than words. E. N. Teall. Inland Ptr 118:71-2 D '46
Fortune survey; international organization. Fortune 35:30 Mr '47
House members go after facts on Europe's needs. E. Blair. Barron's 27:10 S 1 '47
International agreements and international trade; address before Academy of political science, New York city. W. I. Thorp. Comm & Fin Chr 165:2199+ Ap 24 '47
Outworn diplomacy must be abandoned. R. R. Young. Comm & Fin Chr 165:1247+ Mr 6 '47
Progress at New York. Economist 151:899-900 D 7 '46

See also
Aeronautics, Commercial—International aspects
Commercial treaties and agreements
International cooperation
International federation
Maritime law
Peace
Reconstruction (World war, 1939-1945)
United nations
United States—Economic relations

also subdivision Foreign relations under names of countries, e.g. France—Foreign relations; Great Britain—Foreign relations; Russia—Foreign relations; United States—Foreign relations

Encyclopedias

Dictionary of international affairs. A. M. Hyamson. 353p $3.75 Public affairs press, 2153 Florida av, Washington 8, D.C. '47

Study and teaching

Technology and international relations. N. J. Padelford. J Eng Educ 37:751-8 Je '47

INTERNATIONAL shoe company
Annual report. Comm & Fin Chr 165:686 F 3 '47

INTERNATIONAL standards. See Standards, International

INTERNATIONAL technical congress
Le Congrès technique international, Paris, 16-21 septembre 1946. P. Calfas. Génie Civil 123:291-4, 310-12 N 1-15 '46
Congress, Paris, Sept. 16-21. Ind Stand 17: 298 D '46

INTERNATIONAL telephone and telegraph company
Adjusts to new emphasis on manufacture; sale of three foreign operating subsidiaries turns investments into cash. M. H. Zink. Barron's 26:12-13 D 23 '46

INTERNATIONAL trade, Office of. See United States—International trade, Office of

INTERNATIONAL trade composition association)
Annual convention, 28th, Detroit, Aug. 28-30; name changed to International typographic composition association. Inland Ptr 120:79-80 O '47

INTERNATIONAL trade organization (proposed)
Achievements of Geneva parley called little short of miracle; radio address from Paris. W. L. Clayton. For Comm W 28:5+ S 20 '47
Bracket insurance with commerce in trade pact. Nat Underw 50:12 N 21 '46
Calls for strong world trade charter. C. Wilcox. For Comm W 25:18 N 9 '46
Equitable practices in foreign trade; goals of the International trade organization. C. Wilcox. il Dun's R 55:11-14+ Mr '47
Fate of private enterprise will hinge on success of ITO. C. Wilcox. Iron Age 159:177-8 Mr 6 '47
Freer trade vs. control. Fortune 35:2-4 F '47
Hearings scheduled on I.T.O. charter; with text. For Comm W 26:7-9 Ja 18 '47
Interim report on Geneva; charter debate. Economist 152:941-2 Je 14 '47
International Chamber of commerce criticizes proposed ITO charter. Comm & Fin Chr 165:2525+ My 8 '47
ITO charter drafted at Geneva. Comm & Fin Chr 166:829 Ag 23 '47
ITO hearings reveal varied views on benefits of charter. Oil Paint & Drug Rep 151:3+ Mr 3 '47
International trade practices under the ITO charter. R. F. Mikesell. Ann Am Acad 252:30-4 Jl '47
Is International trade organization workable? A. W. May. Comm & Fin Chr 165:593+ Ja 30 '47
Monetary fund and ITO. H. M. Bratter. Comm & Fin Chr 165:274+ Ja 16 '47
Seeking a new route to world trade. H. Bratter. Banking 39:42-3 D '46
Some defects in International trade organization's proposals. J. E. Lockwood. Comm & Fin Chr 164:2665+ N 21 '46
Suggested charter for an International trade organization of the United nations. Can Chem & Process Ind 30:55-6 N '46
Task of the United nations in developing international trade. D. K. Owen. Comm & Fin Chr 164:2464+ N 14 '46
Trade charter; a summary. Economist 153: 527-8 S 27 '47
Trade practices under ITO charter. R. F. Mikesell. Comm & Fin Chr 165:2199+ Ap 24 '47
U.S. prosperity; an international obligation? preparatory discussions of the ITO. M. L. Hoffman. il Dun's R 55:15-17+ Je '47
What lies ahead, what is at stake, in the plan for I.T.O.; radio broadcast. C. Wilcox; R. Lewis. For Comm W 26:3-5 F 15 '47

INTERNATIONAL trade secretariats. See World federation of trade unions

INTERNATIONAL trusts. See Trusts, Industrial—International trusts

INTERNATIONAL typographical union
New labor law causes ITU to refuse contracts. Inland Ptr 120:84 O '47
No contract? typographers warn Chicago publishers they might not sign. Bsns W p90+ Ag 16 '47
Printing problem. Bsns W p93 N 23 '46
T-H test case; A.F.L. typographers' efforts to get around closed-shop ban. Bsns W p 102-3 O 25 '47
Taft law test shapes up; A.F.L. printers vote to sign no contracts. Bsns W p84+ S 6 '47

INTERNATIONAL union of biological sciences
General assembly, 9th, Copenhagen, July 28. Science 106:364-5 O 17 '47

INTERNATIONAL union of chemistry
Conference, 14th, London. Chem & Eng N 25:2254-61+ Ag 11 '47
Creating world chemical standards; aims of current meetings. Chem Age (Lond) 57:91-2 Jl 19 '47
Rebuilding and advance. M. T. Bogert. Chem & Eng N 25:1426-8 My 19 '47; Same. Chem & Ind p447-9 Jl 26 '47
UNESCO has provisionally allocated it $26,448. Science 105:643-4 Je 20 '47

INTERNMENT camps. See Concentration camps

INTERPLANETARY flight
Challenge of the spaceship; abstract. A. C. Clarke. Mech Eng 69:230 Mr '47
Interplanetary travel; abstract. L. Spitzer, jr. Mech Eng 69:670-1 Ag '47
Problem of escape from the earth by rocket. F. J. Malina and M. Summerfield. bibliog J Aeronautical Sci 14:471-80 Ag '47

INTERREGIONAL highway plan. See Roads—United States—Interregional highway plan

INTERSTATE commerce
Engaged in interstate commerce? avoid these labor pitfalls. N. C. Rockwood. Chem Ind 60:72 Ja '47
Taft-Hartley act's bearing on transit operation. P. B. Willauer. bibliog Pub Util 40: 399-412 S 25 '47

See also
Federal trade commission
Insurance companies—Regulation
Railroad law

INTERSTATE commerce commission
Application of the antitrust laws to regulated industries. E. A. Smith. Pub Util 38:691-705 bibliog(p703-5) N 21 '46
Carriers get I.C.C. recognition; 60th annual report. Bus Transportation 26:59 F '47
Senator Reed defers I.C.C. investigation. Ry Age 123:666-7 O 18 '47
60th annual report. Ry Age 122:227-9 Ja 25 '47

Bureau of locomotive inspection
Annual report, 35th. Ry Mech Eng 121:169-72 Ap '47; Same cond. Ry Age 122:461-3 Mr 1 '47

Bureau of safety
Bureau of safety reviews fiscal '46. Ry Age 122:286-7 F 1 '47

INTERSTATE commission on the Delaware River basin
Interstate commission on the Delaware River basin. J. H. Allen. Paper Tr J 124:68-71 Ap 24 '47; Same cond. Paper Ind 29:718+ Ag '47

INTERSTATE compacts
See also
Colorado river

INTERSTATE oil compact commission
Interstate Oil Compact's birth marked start of real conservation. A. S. Davenport. Nat Pet N 39:34+ F 26 '47
Oil compact. E. Adams. Pet Eng 18:240+ Mr '47
Quarterly meeting, Birmingham, April 24-26. Nat Pet N 39:9-14 Ap 30 '47; Oil & Gas J 45:36-7+ My 3 '47
Quarterly meeting, Dallas, Dec. 9-11. Oil & Gas J 45:53 D 14; 51 D 21 '46; Nat Pet N 38:18-19 D 18 '46
Quarterly meeting, Great Falls, Mont. Aug. 11-13. Nat Pet N 39:18+ Ag 20 '47; Oil & Gas J 46:57 Ag 16 '47

INTERSTATE power company
Public utility securities. Comm & Fin Chr 166:1312 O 2 '47
SEC approves plan. Comm & Fin Chr 165: 539 Ja 27 '47
SEC issues opinion in connection with proposed financing. Comm & Fin Chr 166: 1580 O 20 '47
SEC's supplemental order denying permission to sell securities. Comm & Fin Chr 166:1480 O 13 '47

INTERSTATE underwriters board
Annual meeting, New York, Jan. 31. East Underw 48:20 F 7 '47; Nat Underw 51:3 F 6 '47; Weekly Underw 156:386 F 8 '47

INTERSTITIAL compounds
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47

INTERVIEWERS
How good are local interviewers in market research? A. S. Bennett. Ptr Ink 221:70+ O 17 '47

INTERVIEWING
Customers have ideas, too; Union electric company of Missouri customer research survey. J. C. Faris. Pub Util 39:671-7 My 22 '47
How the depth interview reveals attitudes toward new products. W. A. Yoell. Ptr Ink 218:50-2 F 7 '47
Interviews aid customer relations; Cleveland electric illuminating co. C. G. King. Elec World 128:110-11 O 11 '47
Problem of non-response in sample surveys. M. H. Hansen and W. N. Hurwitz. Am Stat Assn J 41:517-29 D '46
Technique of depth interviewing; camera-action technique develops basic copy, merchandising and product ideas; dish-washing as illustration. W. A. Yoell. Ptr Ink 218:33-5+ Ja 31 '47
Twice-a-year interviews help us stay acquainted with workers; Victor adding machine company. G. H. Turner. Factory Management 105:73 Ap '47
What does the consumer know about consumer credit? results of survey of two hundred families in Richmond, Va. and Kansas City, Mo. Banking 39:34-5+ Mr '47
When foreman deals with worker. L. M. Gilbreth and A. R. Cook. il Factory Management 105:115-20 Mr '47
See also
Employment systems—Interviews

INTESTINAL and parasitic worms. See Worms, Intestinal and parasitic

INTESTINES
Absorption of fat from the intestine. A. C. Frazer. bibliog il Chem & Ind p379-82 Jl 5 '47
Activity of protein synthesis by the intestine. F. Friedberg. Science 105:314-15 Mr 21 '47
Intestinal perfusion in the treatment of uremia. J. W. Rogers and others. Science 106:108 Ag 1 '47

Diseases
Bacillary dysentery and chronic ulcerative colitis in World war II. J. Felsen and W. Wolarsky. Science 105:213 F 21 '47

INTOCOSTRIN
Curare intocostrin. 292p E. R. Squibb & sons, 745 5th av, New York '46

INULIN
Results of creatinine, hippurate, and inulin clearance estimations in rats. J. A. Shannon and others. Science 106:127 Ag 8 '47; Replies. 106:265, 341 S 19, O 10 '47

INVASION currency. See Money, Military

INVENTIONS
Government-owned or controlled inventions. Engineer 182:476 N 22 '46
Green leaf guide; the guide to manufacturers' interests and requirements concerning unpublished inventions, circulating primarily to the patent bar as an invention marketing help to clients. 124p pa $2 Green leaf guide, Summit, New Jersey. '47
Hazard of new inventions. E. R. Abrams. Pub Util 38:651-7 N 21 '46
How technology changes society. W. F. Ogburn. Ann Am Acad 249:81-8 Ja '47
Importance of inventions. R. W. Babson. Comm & Fin Chr 165:1005 F 20 '47
Influence of invention on economic evolution. E. F. Moroney. il diag Inst Mech Eng J & Proc 156:Proc 135-8, pl 1-2 S '47
Invention in engineering development. D. W. McLenegan. Mech Eng 69:661-2+ Ag '47; Same. Gen Elec R 50:9-12 S '47
Inventor's council asks cooperation on military technical needs; 25 projects which armed forces want invented or improved. Iron Age 159:97-9 My 15 '47
Is it good-bye to the attic genius? J. W. Kittredge. Mech Eng 69:302-5 Ap '47
Patents stabilize research. J. A. Dienner. Chem & Eng N 25:302-4 F 3 '47
Richard Roberts, his life and inventions. H. W. Dickinson. Engineer 183:176-8, 189-90 F 14, Mr 7 '47
See also
Patents
Royalties

INVENTORIES
Advantages and hazards in today's corporate inventories; with indexes of value of manufacturers' inventories. J. C. Clifford. il Mag of Wall St 80:147-8+ My 10 '47
Business inventories short of current needs. V. L. Bassie. Barron's 27:11-12 Ap 28 '47
Card and quantity-chart system controls 32,000-item inventory. W. F. Lent. il Am Mach 91:121-4 Mr 13 '47
Closer inventory control helps double production. J. Wahowski. il Factory Management 105:126-7 O '47
Controlling material supply and inventories. B. W. Kinderman. N A C A Bul 29:201-12 O 15 '47
Expansionary force of inventory outlays. S. M. Livingston. Survey of Cur Bsns 27:9-13+ My '47
Factors governing the length of inventory cycles. L. A. Metzler. R Econ Stat 29:1-15 F '47
Inventories and business trends. C. F. Hughes. Comm & Fin Chr 164:2750+ N 28 '46
Inventory solace; Office of temporary controls decries fears that stocks are too high. Bsns W p21 D 21 '46

INVENTORIES—*Continued*
Inventory surge levels off. Bsns W p 19 S 13 '47
Manufacturers keep inventories down to head off new 1937 collapse. Barron's 27:13 Mr 17 '47
No bad inventory situation. A. M. Sullivan. Comm & Fin Chr 165:3340+ Je 26 '47
Outlook for individual companies under current inventory revisions. P. Dobbs. Mag of Wall St 79:186-7+ N 23 '46
Planning manufacturing. H. P. Dutton. Factory Management 104:127-9 D '46
Stock control plan to insure profits; E. R. Godfrey and sons, Milwaukee wholesale grocer. J. Turner. Am Bsns 17:12-13+ Ja '47
What close control of inventory means to management; Cutler-Hammer experience. J. C. Borden. Factory Management 105:105-8 F '47
Your inventory control system; abstract. K. W. Kingsland and R. Marien. Management R 36:92-4 F '47

See also
Production and sales, Coordination of
Retail trade—Stock

Accounting

Accountants ignore economic costs. A. R. Wells. Comm & Fin Chr 165:2977+ Je 5 '47
Accounting research bulletin no. 29: inventory pricing. J Account 84:196-201 S '47
Audit of work-in-process inventories. J Account 82:522 D '46
How inventory is audited in the packing house industry. L. E. Zraick. J Account 83:503-6 Je '47
How to test bulk inventories. G. C. Watt. J Account 84:143-4 Ag '47
Inventories; a method of costing. J Account 84:65, 336-7 Jl, O '47
Inventories and the internal auditor. G. A. Bricault and C. D. Marshall. N A C A Bul 28:377-90 N 15 '46
Inventory pricing. J Account 83:253 Mr '47
Inventory reserves. J Account 84:223-6 S '47
LIFO concerns safeguarded against slump by modest rise in inventories since 1939. A. Cotter. Barron's 27:33 S 1 '47
Physical contact with inventories. J Account 83:324 Ap '47
Plea for realistic use of inventory reserves. H. E. Nichols. J Account 84:150-1 Ag '47
Practical considerations affecting the use of LIFO. J Account 84:63 Jl '47
Problem of inventory pricing. G. S. Cochrane. Comm & Fin Chr 166:1650 O 23 '47
Selling overhead to inventory. P. Kramer. N A C A Bul 28:587-603 Ja 15 '47
Simplified inventory procedure. R. C. Fox. N A C A Bul 29:164-7 O 1 '47
Valuing flour mill inventories. R. C. McKibbin. N A C A Bul 28:1076-85 My 1 '47; Correction. 28:1238 Je 1 '47

Credit aspects

Credit official discusses business finance. F. M. Nicodemus. Manuf Rec 116:56+ O '47
Importance of inventory; credit must depend on sound appraisal. H. S. Almy. Credit & Fin Management 49:16-18 Jl '47
Inventory facts and credit. R. Logie. Credit & Fin Management 48:9-10+ N '46

INVENTORIES, Retail. See Retail trade—Stock

INVENTORS
Age of invention; peak of inventive productivity occurring for men in their forties. T. Spooner. Tech R 49:37-41+ N '46

See also
Clark, Anson

INVERTASE
Invertase of bottom fermentation yeast; abstract. H. P. Traub and M. C. Slattery. Science 106:11-12 Jl 4 '47
Pressure and reactivity of proteins with particular reference to invertase. H. Eyring, F. H. Johnson and R. L. Gensler. bibliog J Phys Chem 50:453-64 N '46

INVERTERS, Electric. See Electric inverters

INVESTMENT advisers
Goal; sell high, buy low. Fortune 35:146+ Mr '47
Investment management today; multiple requirements accent need for organization. O. F. Wadsworth. Trusts & Estates 84: 317-18 Mr '47

INVESTMENT bankers association of America
Annual meeting, 35th, Palm Beach, Dec. 1-6. Comm & Fin Chr 164:3009+, 3032-46+ D 12 '46
Central state group 11th annual conference, Chicago, March 13-14; portraits. Comm & Fin Chr 165:1533-6 Mr 20 '47
New officers. Comm & Fin Chr 165:2992 Je 5 '47
Texas group holds spring meeting in Monterrey, Mexico; portraits. Comm & Fin Chr 165:2219 Ap 24 '47

INVESTMENT banking
Basic problems in investment process. J. J. Caffrey. Comm & Fin Chr 164:3045+ D 12 '46
Contacts for sale; arranging introductions is a profitable sideline for finders. Fortune 35: 134+ Ap '47
Investment banking monopoly exists. G. H. Taylor. Comm & Fin Chr 165:2861 My 29 '47
Prospects of American investment banking in Mexico. E. A. Dittmar. Comm & Fin Chr 165:2201+ Ap 24 '47

See also
Financial placement and clearance center
Investment bankers association of America
Junior investment bankers and brokers association of Baltimore
Junior investment bankers and brokers association of New York

Study and teaching

Investor being served better today than previously; Smith, Barney & co. has employee training class. C. B. Harding. Comm & Fin Chr 165:1699 Mr 27 '47
Training investment bankers; the IBA educational program. 38p Investment bankers assn. of America, Education dept, Chicago 3 '46

INVESTMENT casting. See Lost wax process

INVESTMENT companies
Dewey approves changes in New York state Investment companies' act; Bewley bill. Comm & Fin Chr 165:2251 Ap 24 '47
When to mount a corporation. Fortune 36: 120+ S '47

See also
Investment trusts

Employees

Boston investment club reports on newcomers in investment field; why young men leave the business. Comm & Fin Chr 166: 1220 S 25 '47

INVESTMENT traders association of Philadelphia
Mid-winter dinner, 23d, Feb. 21; portraits. Comm & Fin Chr 165:insert A-D F 27 '47

INVESTMENT trusts
Investment companies bought in June quarter; with tabulations. H. A. Long. Comm & Fin Chr 166:714+ Ag 21 '47
Investment companies liquidated in first quarter; substantial selling by trust managers; with tabulations. H. A. Long. Comm & Fin Chr 165:2726+ My 22 '47
Investment companies' portfolio changes for three months ended June 30, 1947; tabulation. Barron's 27:22 Jl 21 '47
Investment companies wary since market break; analysis of fourth quarter operations. H. A. Long. Comm & Fin Chr 165: 990+ F 20 '47
Many trusts cushioned stock break with cash; analysis of third quarter operation. H. A. Long. Comm & Fin Chr 164:2458+ N 14 '46
Mutual funds; market performance, 1946. J. Dean. Comm & Fin Chr 165:406, 614 Ja 23-30 '47
Mutual funds; outlook for 1947. B. Williams. Comm & Fin Chr 165:20 Ja 2 '47

INVESTMENT trusts—*Continued*
Open end investment funds; the most significant development in the last fifty years. W. V. Troutman. Comm & Fin Chr 166: 1749+ O 30 '47
SEC rules on income segregation of investment companies. Comm & Fin Chr 164: 2938 D 5 '46
Twelve sponsors control 80 per cent of total assets of all mutual funds; with tabulation. Comm & Fin Chr 166:536 Ag 7 '47

See also
Commercial investment trust
Investors syndicate

Accounting

Allocating past dividends in statements filed by management investment companies. J Account 83:83-4 Ja '47
Revised requirements for statements filed by management investment companies. J Account 83:84-8 Ja '47

Finance

Investment companies continue expansion; with record of leading open-end investment companies as of June 30, 1947. W. J. Galligan. Barron's 27:3..-5 Jl 14 '47
Investment companies find demand growing; with records of leading open-end investment companies as of Sept. 30, 1947. W. J. Galligan. Barron's 27:34-5 O 13 '47
Investment companies in bull and bear cycles; with record of leading open-end investment companies, Dec. 31, 1946. W. J. Galligan. Barron's 27:3-9 Ja 13 '47
Investment company results in two opposing cycles; with record of leading open-end investment companies, March 31, 1947. W. J. Galligan. Barron's 27:26-7 Ap 14 '47

Securities

Investment company shares; their place in investment management. A. B. Stevenson. Trusts & Estates 84:416+, 521-8, 611-12+; 85:39-40+, 141-2+ Ap-Ag '47
Sales load abandoned by major investment fund; Scudder, Stevens & Clark. H. A. Long. Barron's 27:30 S 1 '47; Same abr. Trusts & Estates 85:236 S '47

INVESTMENTS
Bankers urged to apply risk method to rate securities. D. B. Woodward. Nat Underw (Life ed) 50:6 D 20 '46
Blue chip stocks outperform the averages. H. W. Abbot. Comm & Fin Chr 165:1119+ F 27 '47
Carnegie corp. investment saga; safety of principal cuts income. Bsns W p62-6 Mr 8 '47
Common stock investments for diversification and stability; indirect investment through parent company shares. R. Colston. Mag of Wall St 81:85-6+ O 25 '47
Conditions of employment stabilization; promoting investment stability. B. Ohlin. Comm & Fin Chr 165:1381+ Mr 13 '47
Cumulative growth stocks for long-term capital gains. H. S. Coffin. Mag of Wall St 79:256-8+ D 7 '46
Dangers of the depressed securities industry. N. L. Jarvis. Comm & Fin Chr 166:1308+ O 2 '47
Importance of inventions. R. W. Babson. Comm & Fin Chr 165:1005 F 20 '47
Institutional investor in the dynamic century. D. B. Woodward. Comm & Fin Chr 164:3205+ D 19 '46; Same cond. Trusts & Estates 84:71-2 Ja '47
Investing for a widow; seven years later. W. J. Galligan. Barron's 26:11+ N 18 '46
Investing in big and small cities. R. W. Babson. Comm & Fin Chr 165:1977+ Ap 10 '47
Investment company shares; their place in investment management. A. B. Stevenson. Trusts & Estates 84:416+, 521-8, 611-12+; 85:39-40+, 141-2+ Ap-Ag '47
Investment management through formula timing plans. M. D. Ketchum. J Bsns 20: 156-69 Jl '47
Investment market. H. E. Dickhuth. Banking 39:103 Ja '47 [cont monthly]
Investment yardsticks for 1947. W. C. Hanson. Mag of Wall St 79:294-5+ D 21 '46
Investments and the engineer. R. A. Knickiner. diags Chem Eng Prog 43:183-7; Discussion. 187-8 Ap '47
Know your investments; how to interpret financial reports. T. M. Luttrell. Pulp & Pa of Can 48:57-60 Mr '47
Lower interest trend enhances forest investment. D. Pingree. Barron's 27:4 My 26 '47
Methods of measuring the marginal propensity to consume. T. Haavelmo. Am Stat Assn J 42:104-22 Mr '47
Minimizing tax outgo through business policies in purchase and sale of property. J. K. Lasser. J Account 84:106-12 Ag '47
Problems of the postwar capital market. C. L. Dunn. Ann Am Acad 248:251-9 N '46
Right and wrong ideas about stocks. L. O. Hooper. Comm & Fin Chr 165:737+ F 6 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:210-11+, 274-5+, 330-1+, 386-7+ My 24-Jl 5 '47
Test for portfolio stability; measurement by arithmetical index suggested. G. E. Hale. Trusts & Estates 84:307-8+ Mr '47
30 growth stocks for postwar investment. T. R. Price, jr. Barron's 26:9 D 23 '46
Vassar plan for stock investments. Comm & Fin Chr 166:107+ Jl 10 '47
What should the investor do now? W. F. Edwards. Comm & Fin Chr 164:2881+ D 5 '46
What the new Congress means to the investor. F. Escher. Comm & Fin Chr 165: 268+ Ja 16 '47
Where public invests savings; Federal reserve board survey. Bsns W p34 Ag 23 '47
Widow's income higher, portfolio values lower. W. J. Galligan. Barron's 27:8-9 S 29 '47
Widow's unorthodox advisers raise her income. W. J. Galligan. Barron's 27:29-30 O 27 '47

See also
Banks and banking—Investments
Bonds
Building and loan associations
Colleges and universities—Finance
Hedging
Insurance, Life—Investments
Insurance companies—Investments
Interest
Investment banking
Investment trusts
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also subdivision Securities under special headings, e.g. Mining industry and finance—Securities; Public utilities—Securities; Railroads—Securities

Advertising

See also
Securities—Advertising

Advisers

See Investment advisers

Bibliography

Dealer-broker investment recommendations and literature. Published in weekly Thursday numbers of Commercial and financial chronicle

INVESTMENTS, Foreign
Development of international investment. W. L. Thorp. Comm & Fin Chr 166:1212+ S 25 '47
Domestic and foreign listing on N.Y. stock exchange. J. Haskell. Comm & Fin Chr 166:1114+ S 18 '47
Europe's poverty; facts vs. fiction; with data on foreign assets in the United States. M. Winkler. Comm & Fin Chr 166:1408 O 9 '47
Foreign issuers cannot by-pass SEC. E. M. Hanrahan. Comm & Fin Chr 166:1214+ S 25 '47
International chamber of commerce proposes international investment code. Comm & Fin Chr 165:2905 My 29 '47
New York stock exchange wants Securities acts simplified to aid listing of foreign issues. Comm & Fin Chr 164:2664 N 21 '46
Security exchanges in world finance. R. A. Foulke. il Dun's R 54:11-14+ D '46

INVESTMENTS, Foreign—*Continued*
Speculative interest in bonds of enemy countries noted on Wall Street. E. Germain. Comm & Fin Chr 165:2730+ My 22 '47
Trading possible in ex-enemy nation assets. Barron's 27:1+ F 24 '47

See also
Balance of payments
Council of foreign bondholders of London
Loans, Foreign
Petroleum industry and trade—United States—Foreign properties

China

Chinese holders of funds abroad to be required to surrender these to the government. For Comm W 29:11 O 4 '47

France

French government requisitions U.S. securities of resident French nationals. Comm & Fin Chr 166:122 Jl 10 '47

Germany

Reparations news; sales of German external assets. For Comm W 26:30 Mr 29; 27 Ap 19 '47
Sale of German external assets in neutral countries. F. L. Brooks. il For Comm W 27:6-7+ My 3 '47

Great Britain

Argentine rail compromise. Economist 152: 897-9 Je 7 '47
British dumping of American securities, held as collateral by RFC, improbable. L. S. Mott. Comm & Fin Chr 166:1013 S 11 '47

Netherlands

Dutch selling on the increase. Barron's 27:14 My 19 '47
Dutch switching of American securities reopened. Comm & Fin Chr 165:139 Ja 9 '47; Barron's 27:6 Ja 13 '47
Near-term commitments to cut Dutch U.S. holdings. W. T. F. Slee. Barron's 27:4 Ag 18 '47
Public sale of rayon shares out of alien property sought; loans to Algemeene kunstzijde unie of Arnhem. Barron's 27:34 N 3 '47
Question of foreign security liquidation; Dutch holdings of American stocks. Mag of Wall St 81:64 O 25 '47
Rush of Dutch to dump U.S. stocks is unlikely; with list of North American securities now quoted in Amsterdam. Barron's 27:29 Mr 24 '47

United States

American-owned property in United States zone; custodians should be designated before January 1, 1948. For Comm W 28:18-19 S 27 '47
Business and investment aspects of our foreign policy. J. Dana. Mag of Wall St 81: 14-15+ O 11 '47
Canada's financial position important to United States; American investments in Canada increase. Banking 39:20+ Mr '47
Our capital must move abroad. F. A. Truslow. Comm & Fin Chr 166:1414-15 O 9 '47
Outlook now for foreign bonds; and where servicing may resume on defaulted issues. J. C. Clifford. Mag of Wall St 79:429-31+ Ja 18 '47
Past record makes education prerequisite for foreign loans. M. Winkler. Comm & Fin Chr 165:2472+ My 8 '47
Private international investing prospects are enormous. J. W. Angell. Comm & Fin Chr 165:2249+ Ap 24 '47
Problems of direct investments abroad. L. D. Welch. Comm & Fin Chr 164:2465+ N 14 '46
Securities dealer says SEC hasn't been much help to holders of bonds of enemy countries. Comm & Fin Chr 165:2855+ My 29 '47
Treasury removes curbs on imports of foreign issues. Comm & Fin Chr 165:277 Ja 16 '47
United States; banker to the world. G. Purcell. Comm & Fin Chr 165:3354+ Je 26 '47
U.S. opportunity. il Fortune 35:83-5+ Je '47; Excerpts. Management R 36:402-4 Ag '47; Discussion. Fortune 36:26+ S '47
Yield on U.S. direct investments abroad reached peak in 1946; with data for 1940-1946. F. Cutler. il For Comm W 29:6-8+ O 18 '47

INVESTMENTS, Foreign (in Argentina)
Peron relaxes; Argentina begins to open door to foreign business again. Bsns W p 110+ O 25 '47

INVESTMENTS, Foreign (in Germany)
American-owned property in United States zone; custodians should be designated before January 1, 1948. For Comm W 28:18-19 S 27 '47
Transfer of management of property in the U.S. zone permitted. For Comm W 28:17-18 Jl 26 '47

INVESTMENTS, Foreign (in Italy)
Nationalization threat slows foreign investment in Italy. A. Giordano. Comm & Fin Chr 165:5+ Ja 2 '47

INVESTMENTS, Foreign (in Latin America)
What chance for private investment in the western hemisphere? H. Widenmann. Comm & Fin Chr 166:1204+ S 25 '47

INVESTMENTS, Foreign (in Mexico)
American investors can profit in Mexico; address before Pan American society. M. Aleman. Comm & Fin Chr 165:2476+ My 8 '47
Mexico; a field for American investment. R. Beteta. Comm & Fin Chr 165:2068+ Ap 17 '47
Money to Mexico; Dallas Rupe & son is lending $2 million to Mexican company to finance U.S. autos. Bsns W p 100-1 Je 21 '47
New interdepartmental commission to coordinate control of foreign investment. For Comm W 28:16 Ag 9 '47
Prospects of American investment banking in Mexico. E. A. Dittmar. Comm & Fin Chr 165:2201+ Ap 24 '47

INVESTMENTS, Foreign (in Netherlands)
Dutch bid high for stock in firm with American share. Barron's 27:30 O 13 '47

INVESTMENTS, Foreign (in Spain)
Fight with Franco; international power interests won't bow. Bsns W p26 O 18 '47

INVESTMENTS, Foreign (in United States)
British dumping of American securities, held as collateral by RFC, improbable. L. S. Mott. Comm & Fin Chr 166:1013 S 11 '47
Foreign held securities overhanging our markets. F. R. Walters. Mag of Wall St 80: 694-5+ S 27 '47
Foreign holders selling U.S. securities; report by New York Federal reserve bank. Comm & Fin Chr 166:927 S 4 '47
International capital transactions of the United States; net capital movement to United States since Jan. 2, 1935 by types and by countries. Fed Res Bul 33:97-102 Ja '47 [cont monthly]
Values of foreign holdings of U.S. securities up. R. M. Bleiberg. Barron's 27:9 Jl 14 '47

INVESTORS syndicate
Voting trust ended; control restored to stockholders. Comm & Fin Chr 165:338 Ja 20 '47

IODIDES

Analysis

Determination of iodide in developers. G. I. P. Levenson. bibliog Soc Chem Ind J 66: 198-200 Je '47

IODIMETRY. See Iodometry

IODINATION
Acid catalysis in the iodination of phenol; iodination by acyl hypoiodites. B. S. Painter and F. G. Soper. Chem Soc J p342-6 Mr '47
Chemistry of the higher silanes; tetrasilane. H. J. Emeléus and A. G. Maddock. Chem Soc J p 1131-4 D '46
Preparation and properties of the iodohistidines. K. J. Brunings. bibliog Am Chem Soc J 69:205-8 F '47
Preparation of iodinated mono- and diphenylacetic and -propionic acids. J. W. Barnett, F. A. Robinson and B. M. Wilson. Chem Soc J p202-4 F '47

IODINE
Acylation studies in the thiophene and furan series; iodine and hydriodic acid catalysts. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 68:2639-41 D '46
Chemistry of the pyrrocolines; the action of Grignard reagents and of iodine on 3-acetyl-2-phenylpyrrocoline. E. T. Borrows and D. O. Holland. Chem Soc J p670-2 My '47
Configuration of starch in the starch-iodine complex; Fourier projections from X-ray diagrams. R. E. Rundle. bibliog il Am Chem Soc J 69:1769-72 Jl '47
Conversion of liquid white phosphorus to red phosphorus; kinetics of the reaction. T. W. DeWitt and S. Skolnik. diag Am Chem Soc J 68:2305-9 N '46
Kinetics of the reaction between tin and solutions of bromine and iodine in organic solvents. A. F. Trotman-Dickenson and E. J. F. James. Chem Soc J p736-8 Je '47
Physiological availability of iodine in dithymol diiodide. R. R. Baldwin and others. il Science 106:317-19 O 3 '47
Reactions of the halogens with the silver salts of carboxylic acids. J. Kleinberg. Chem R 40:381-90 Je '47
Slow neutron absorption resonances in iodine. W. B. Jones, jr. bibliog plan diags Phys R 72:362-77 S 1 '47
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47
Solubility of iodine in concentrated hydriodic acid solutions. C. F. Powell and I. E. Campbell. diag Am Chem Soc J 69:1227-8 My '47
Vapor-phase sorption study of iodine and active magnesium oxide utilizing the McBain-Bakr sorption balance. R. C. Dunn and H. H. Pomeroy. bibliog J Phys & Colloid Chem 51:981-4 Jl '47

Isotopes

Interlaboratory comparison of measurements of I^{131}. L. F. Curtiss. Science 106:302 S 26 '47
Long-life radio-iodine. A. F. Reid and A. S. Keston. Phys R 70:987 D 1 '46
Note on the long-lived radio-iodine. L. E. Glendenin and R. R. Edwards. Phys R 71: 742-3 My 15 '47
Preliminary determination of the neutron absorption cross section of long-lived I^{129}. S. Katcoff. Phys R 71:826 Je 1 '47
Use of radioactive iodine as a tracer in the study of the physiology of teeth. H. J. Bartelstone and others. bibliog il Science 106:132-3 Ag 8 '47

IODINE chloride
Sulfur bond in vulcanizates; implications of halogen reactions. S. R. Olsen, C. M. Hull and W. G. France. bibliog Ind & Eng Chem 38:1273-82 D '46

IODINE fluoride
Alkyl- and aryl-substituted fluorides of sulphur, selenium, tellurium, and iodine. H. J. Emeléus and H. G. Heal. Chem Soc J p 1126-31 D '46

IODINE number
Determination of allyl groups in polyallyl ethers and esters. H. M. Boyd and J. R. Roach. bibliog Anal Chem 19:158-9 Mr '47

IODIZED salt. See Salt, Iodized

IODOHISTIDINE
Preparation and properties of the iodohistidines. K. J. Brunings. bibliog Am Chem Soc J 69:205-8 F '47

IODOHYDROXYQUINOLINE sulfonic acid
Determination of thorium and its separation from uranium by ferron. D. E. Ryan, W. J. McDonnell and F. E. Beamish. bibliog Anal Chem 19:416-17 Je '47

IODOMETHANE. See Methyl iodide

IODOMETRY
Analysis of anhydrous hydrogen fluoride. C. D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47
Analysis of mixtures of mercurous and mercuric mercury and sulfuric acid. B. Warshowsky and P. J. Elving. bibliog Anal Chem 19:112-14 F '47
Determination of beta-dicarbonyl compounds. W. Seaman, J. T. Woods and E. A. Massad. bibliog Anal Chem 19:250-1 Ap '47
Determination of small amounts of carbon monoxide in air by various reference methods. M. Shepherd. bibliog J Res Nat Bur Stand 38:351-8 Mr '47
Determination of tetraethyllead in aviation gasoline; rapid iodometric method. L. Newman, J. F. Phillip and A. R. Jensen. Anal Chem 19:451-3 Jl '47
Determination of the peroxide values of edible fats and oils; the iodimetric method. C. H. Lea. bibliog diag Soc Chem Ind J 65:286-91 O '46
Electrometric indicator to replace starch in iodine titrations of sulphurous acid in fruit juices. M. Ingram. bibliog Soc Chem Ind J 66:50-4 F '47
Estimation of bromide in presence of chloride. L. Farkas and M. Lewin. bibliog Anal Chem 19:665-6 S '47
Investigation of errors arising in iodometric determination of free sulphurous acid by the acetone procedure. M. Ingram. bibliog Soc Chem Ind J 66:105-15 Ap '47
Iodometric microtitration for mustard gas. V. E. Kinsey and W. M. Grant. Ind & Eng Chem Anal ed 18:794-7 D '46
Microiodometric method for the determination of glue or gelatin in paper. G. E. Naponen and others. bibliog Paper Tr J 125:45-7 Jl 31 '47
Micro-Kjeldahl determination of nitrogen; use of potassium biiodate in iodometric titration of ammonia. R. Ballentine and J. R. Gregg. bibliog Anal Chem 19:281-3 Ap '47
Quantitative method for the estimation of the arsenoso group. C. K. Banks and J. A. Sultzaberger. bibliog Am Chem Soc J 69:1-4 Ja '47

IODONIUM compounds
Reaction of iodonium salts with thiol compounds. R. B. Sandin and others. Am Chem Soc J 69:1550 Je '47

IODOPHENANTHRENE
Derivatives of phenanthrene; preparation of 9-amino-, 9-iodo- and 9-fluorophenanthrene. M. A. Goldberg, E. P. Ordas and G. Carsch. bibliog Am Chem Soc J 69:260-2 F '47

IODOSTYRENE
Substituted styrenes; preparation of *p*-iodo-, *p*-nitro- and *p*-dimethylaminostyrene and *α*-vinylthiophene. R. W. Strassburg, R. A. Gregg and C. Walling. bibliog Am Chem Soc J 69:2141-3 S '47

ION exchangers
Catalysis by acid-regenerated cation exchangers. S. Sussman. bibliog Ind & Eng Chem 38:1228-30 D '46
Chem. & Met. report on ion exchange. il diags Chem Eng 54:123-30 Jl '47
Design and operation of ion exchange installations. R. B. Thompson and E. J. Roberts. bibliog il Chem Eng Prog 43:97-102 Mr '47
Determination of phosphorus in phosphate rock; separation from cations by ion-exchange resin. K. Helrich and W. Rieman, 3d. bibliog diag Anal Chem 19:651-2 S '47
Ion exchange plant recovers sugar from fruit waste; Hawaiian pilot plant demineralizes 3,000 gals. of juice from pineapple shells daily. flow diags il Food Ind 18:1846-8+ D '46
l-Malic acid as by-product in apple sirup manufactured by ion exchange. R. E. Buck and H. H. Mottern. bibliog Ind & Eng Chem 39:1087-90 S '47
Plastics for ulcers; resinous pills for stomach ulcers. Mod Plastics 25:182 S '47
Purification of aqueous solutions. D. Ramondt. Chem & Ind p543-5 S 6 '47
Rates of anion exchange in ion-exchange resins. R. Kunin and R. J. Myers. bibliog J Phys & Colloid Chem 51:1111-30 S '47
Reaction of certain plant growth regulators with ion exchangers. R. J. Weaver. Science 106:268-70 S 19 '47

See also
Base exchanging compounds
Bases (chemistry)

IONIZATION, Electrolytic
Application of ultrasonic waves to the study of electrolytic solutions; a modification of Debye's equation for the determination of the masses of electrolytic ions by means of ultrasonic waves. J. Bugosh and others. bibliog J Chem Phys 15:592-7 Ag '47
Basic dissociation constants of some aliphatic hydroxyamines. S. Glasstone and A. F. Schram. Am Chem Soc J 69:1213-14 My '47
Dissociation constants of melamine and certain of its compounds. J. K. Dixon, N. T. Woodberry and G. W. Costa. bibliog Am Chem Soc J 69:599-603 Mr '47
Ionization constants of some weak acids in aqueous tertiary butyl alcohol. W. H. Fletcher. bibliog Am Chem Soc J 68:2726-8 D '46
Ionization of acridine bases. A. Albert and R. Goldacre. bibliog Chem Soc J p706-13 Ag '46
Ionization of ethyl nitrate in sulfuric acid. L. P. Kuhn. bibliog Am Chem Soc J 69: 1974-6 Ag '47
Nitration in sulphuric acid; migration of nitric acid to the cathode during electrolysis in oleum solution. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p875-80 O '46
Nitration in sulphuric acid; nature of the nitrating agent in nitric-sulphuric acid mixtures. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p869-75 O '46
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene-tetrahydroxyquinone-rhodizonic acid. P. W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69: 326-9 F '47
Polarographic determination of cupric glycinate and cupric alaninate complex ions. R. M. Keefer. bibliog Am Chem Soc J 68: 2329-31 N '46
Precise method for the determination of the ionization constants of some weak organic acids. R. S. Stearns and G. W. Wheland. bibliog Am Chem Soc J 69:2025-9 Ag '47
Properties of electrolytic solutions; conductance of choline and related picrates in ethylene chloride at 25°. D. J. Mead and others. Am Chem Soc J 69:528-30 Mr '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Separation of isomers; β-(2- and β-(1-naphthoyl)-propionic acid; their ionization constants and solubilities and method of separation. M. S. Newman and others. Am Chem Soc J 69:1784-6 Jl '47
Solubility, absorption spectrum and ionization constant for aloe-emodin. K. G. Stone and N. H. Furman. Am Chem Soc J 68: 2742 D '46
Solubility product of bismuth oxychloride and the ionization constant of tetrachloro-bismuth ion. R. K. McAlpine. J Chem Educ 24:395-8 Ag '47
Thermal ionization of impurity levels in semiconductors. B. Goodman and others. diags Phys R 71:191-4 F 1 '47
Ultraviolet absorption spectrum and the acid ionization constant of 8-hydroxyquinoline. K. G. Stone and L. Friedman. bibliog Am Chem Soc J 69:209-11 F '47

Study and teaching
Transference numbers by the moving boundary method. P. Bender and D. R. Lewis. il diag J Chem Educ 24:454-6 S '47

IONIZATION, Gaseous
Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46
Critical ionization potentials of uranium hexafluoride and hydrogen fluoride. J. R. White and A. E. Cameron. Phys R 71:907 Je 15 '47
Decomposition of organic compounds by ionizing radiations. W. M. Garrison. J Chem Phys 15:613-14 Ag '47
Effects of high-energy radiation on organic compounds. M. Burton. bibliog J Phys & Colloid Chem 51:786-97 My '47
Geomagnetic control of F_2 layer ionization. E. Appleton. Science 106:17 Jl 4 '47
Ionization and dissociation of *cis-* and *trans-*2-butene by electron impact. V. H. Dibeler. bibliog diag J Res Nat Bur Stand 38:329-36 Mr '47
Ionization by meteoric bombardment. J. A. Pierce. bibliog il Phys R 71:88-92 Ja 15 '47
Ionization yield of radiation; fluctuations of the number of ions. U. Fano. Phys R 72:26-9 Jl 1 '47
Mass-spectrometer study of the rare gases. V. H. Dibeler and others. bibliog J Res Nat Bur Stand 38:617-20 Je '47
Mechanism of the negative point corona at atmospheric pressure in relation to the first Townsend coefficient. L. B. Loeb. bibliog Phys R 71:712-14 My 15 '47
Metastable ion transitions in the mass spectra of the monochloropropenes. V. H. Dibeler and others. Phys R 71:381-2 Mr 15 '47
Molecular dissociation by electron bombardment; a study of $SiCl_4$. R. H. Vought. Phys R 71:93-101 Ja 15 '47
Peak contour and half-life of metastable ions appearing in mass spectra. J. A. Hipple. diag Phys R 71:594-9 My 1 '47
Polymerization of unsaturated hydrocarbons by ionizing radiations. W. M. Garrison. J Chem Phys 15:78 Ja '47
Probability of *K* ionization of nickel by electrons as a function of their energy. L. T. Pockman and others. bibliog Phys R 71: 330-8 Mr 15 '47
Self-quenching halogen counters. R. D. Present. bibliog Phys R 72:243-4 Ag 1 '47
Specific ionization by fission fragments. N. O. Lassen. bibliog diag Phys R 70:577-9 N 1 '46
Study of pulse shapes in a parallel-plate ionization chamber. R. Sherr and R. Peterson. bibliog il R Sci Instr 18:567-75 Ag '47
True height of an ionospheric layer. J. A. Pierce. bibliog Phys R 71:698-706 My 15 '47
Upper limit for the cross section for scattering of neutrinos by hydrogen. E. O. Wollan. Phys R 72:445-6 S 15 '47
See also
Kennelly-Heaviside layer

IONIZATION chambers
Absolute sensitivity of a graphite ionization chamber. M. Lax. Phys R 72:61-7 Jl 1 '47
Boron trifluoride neutron detector for low neutron intensities. E. Segrè and C. Wiegand. diags R Sci Instr 18:86-9 F '47
Further experiments on the elastic single scattering of electrons by nuclei. W. W. Buechner and others. Phys R 72:678-9 O 15 '47
Pulse analyser for nuclear research. H. F. Freundlich and others. bibliog il diags R Sci Instr 18:90-100 F '47
Specific ionization by fission fragments. N. O. Lassen. bibliog diag Phys R 70:577-9 N 1 '46
Study of pulse shapes in a parallel-plate ionization chamber. R. Sherr and R. Peterson. bibliog il R Sci Instr 18:567-75 Ag '47

IONIZATION gage
Detection of leaks in gas-filled and evacuated equipment. R. H. Munch. il Ind & Eng Chem 39:sup85A-6A Mr '47

IONONE
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S. L. Linden. bibliog Am Chem Soc J 69: 2042-6 Ag '47

IONOSPHERE. See Atmosphere, Upper

IONS
Application of ultrasonic waves to the study of electrolytic solutions; a modification of Debye's equation for the determination of the masses of electrolytic ions by means of ultrasonic waves. J. Bugosh and others. bibliog J Chem Phys 15:592-7 Ag '47

IONS—*Continued*
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47

Electrical discharge through gases. L. B. Loeb. bibliog(90 ref) Inst E E J 94 pt 1: 349-54 Ag '47; Same. Science 106:229-36 S 12 '47; Abstract. Electrician 138:1162-4 My 2 '47

Evidence for the ionic nature of certain crystal lattices. H. B. Friedman and K. E. Shuler. bibliog J Chem Educ 24:11-18 Ja '47

High energy ions in crystal lattices. A. H. W. Aten, jr. Phys R 71:641-2 My 1 '47

Influence of charge and configuration on the solvent power of benzene carboxylic acid ions. C. F. Failey. bibliog Am Chem Soc J 68:2619-24 D '46

Kinetics of the reaction of methanol with 3,3'-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47

Null method for the comparison of two ion currents in a mass spectrometer. A. O. Nier and others. diags R Sci Instr 18:294-7 My '47

Polarographic determination of cupric glycinate and cupric alaninate complex ions. R. M. Keefer. bibliog Am Chem Soc J 68: 2329-31 N '46

Spectra of the *p*-dimethylaminochalcones and of their ions. E. R. Katzenellenbogen and G. E. K. Branch. Am Chem Soc J 69:1615-19 Jl '47

See also
Activity coefficients
Electrons
Hydrogen ion concentration
Ionization, Electrolytic
Ionization, Gaseous
Micelles

Beams

Electrostatic analyzer for selection of homogeneous ion beam. R. E. Warren and others. plan diags R Sci Instr 18:559-63 Ag '47

Ion beams in high voltage tubes using differential pumping. E. S. Lamar and W. W. Buechner. bibliog diag J Ap Phys 18:22-7 Ja '47

Mobility

Conduction of electricity through cellulose; mobility of various ions in cellulose sheet. J. B. O'Sullivan. Textile Inst J 38:T298-306 Jl '47

Helium molecular energy states as detected by collisions of the second kind in helium. R. Meyerott. bibliog Phys R 70:671-9 N 1 '46

Quantitative interpretation of the electrophoretic patterns of proteins. L. G. Longsworth. bibliog J Phys & Colloid Chem 51: 171-83 Ja '47

IONYLIDENE acetone
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S. L. Linden. Am Chem Soc J 69:2042-6 Ag '47

IOWA-Illinois gas and electric company
Bonds offered. Comm & Fin Chr 166:269 Jl 21 '47

IOWA public service company
Bids invited. Comm & Fin Chr 166:1052 S 15 '47

Bonds offered. Comm & Fin Chr 166:1255-6 S 29 '47

IOWA university

Library

Modular library. plans Arch Rec 100:111-13 N '46

IPATIEFF, Vladimir Nikolaevich, 1867-
Life of a chemist. Chem & Ind p601-2 O 4 '47

IPATIEFF prize
Ipatieff prize to Louis Schmerling. Chem & Eng N 25:2813 S 29 '47

IPSOPHONE. See Telephone recorders

IRAN. See Persia

IRAQ
See also
Petroleum industry and trade—Iraq

IRELAND
See also
Banks and banking—Ireland

Commerce

Eire faces the dollar crisis. Economist 153: 567-8 O 4 '47

Eire's international balance of payments. Economist 151:755 N 9 '46

Economic conditions

Britain and Eire. Economist 152:965-6 Je 21 '47

Eire in transition; tackling obstacles, registers progress. H. E. Hall. il For Comm W 27:3-5 My 31 '47

News by countries; Eire. For Comm W 28:17 Ag 30 '47

News by countries; Northern Ireland. For Comm W 25:19 N 23 '46; 26:21-2 Mr 15; 28:21 Ag 30 '47

War-to-peace transition brings problems to Ireland. Mag of Wall St 79:425+ Ja 18 '47

IRIDITE process
Chemically generated film aids in corrosion control. il Steel 120:101-2+ Je 2 '47

IRIDIUM
Bent crystal neutron spectrometer and its application to neutron cross-section measurements. R. B. Sawyer and others. bibliog diags Phys R 72:109-15 Jl 15 '47

L-converted isomeric transition. M. Goldhaber and others. Phys R 71:372 Mr 15 '47

Measurement of neutron cross sections with a crystal spectrometer. W. J. Sturm. bibliog diags Phys R 71:757-76 Je 1 '47

Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others. bibliog diag Phys R 71:65-79 Ja 15 '47

Isotopes

Gamma-radiation from tantalum, iridium, and gold. J. M. Cork. il diag Phys R 72: 581-5 O 1 '47

Radioactive isotopes of Re, Os, and Ir. L. J. Goodman and M. L. Pool. bibliog Phys R 71:288-93 Mr 1 '47

Radiation from 60-day Ir^{192} and 27-day Pa^{233}. P. W. Levy. Phys R 72:352-3 Ag 15 '47

IRIDIUM alloys
Platinum-iridium alloys. O. E. Zvyagintsev and others. Materials & Methods 24:1516 D '46

IRON
Chemical engineering materials of construction; review of literature from start of World war II; iron, mild steels, and low alloy steels. R. B. Mears and S. C. Snyder. bibliog(134 ref) Ind & Eng Chem 39:1219-24 O '47

Contamination of silicate samples crushed in steel mortars. E. B. Sandell. Anal Chem 19:652-3 S '47

Determination of thiamine and riboflavin in the presence of reduced iron. E. De Ritter and S. H. Rubin. bibliog Anal Chem 19: 243-8 Ap '47

Effect of iron and silicon impurities on the tensile properties and heat-treatment characteristics of sand-cast aluminum-10 per cent magnesium alloy test bars. R. T. Parker and others. il Engineering 163:273-6 Ap 4 '47

Hydrogen sulphide removal by ammoniacal iron ammonium ferrocyanide liquors. H. C. Craggs and M. H. M. Arnold. diag Chem & Ind p571-3, 590-3 S 20-27 '47

Kinetics of oxide film formation on metals and alloys. E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29):431-61 '47

Magnetic study of the type of bonding existing in some complexes of ferric iron with sulfonated pyrocatechol. A. L. Jones and L. B. Yeatts. bibliog Am Chem Soc J 69: 1277-80 Je '47

IRON—*Continued*

Metachrome dyeing; minimizing the adverse effect of iron on fastness of chrome colors. C. H. A. Schmitt. Am Dyestuff Rep 36: 238-44 My 5 '47

Nature of the non-porphyrin bonding in derivatives of ferriheme. J. G. Erdman and A. H. Corwin. bibliog Am Chem Soc J 69:750-5 Ap '47

Neutron polarization and ferromagnetic saturation. F. Block and others. Phys R 70: 972-3 D 1 '46

Some factors in the reduction of the iron content of magnesium-base alloys; abstract and discussion. F. A. Fox and others. Engineering 163:280-1 Ap 11 '47

See also

Blast furnaces
Cast iron
Chilled iron
Corrosion and anti-corrosives
Foundry practice
Iron, Powdered
Iron, Sponge
Iron alloys
Iron founding
Iron metallurgy
Iron ores
Pig iron
Steel
Wrought iron

Analysis

Baird direct-reading spectrometer used for ferrous analyses. R. H. Müller. il diags Anal Chem 19:sup 19A-20A Jl '47

2,2′-Bipyridine ferrous complex ion as indicator in the determination of iron. F. W. Cagle, jr. and G. F. Smith. bibliog Anal Chem 19:384-5 Je '47

Colorimetric determination of iron in brass and bronze. W. Goodman. bibliog Anal Chem 19:141-2 F '47

Direct-reading spectrometer for ferrous analysis. R. O. Carpenter and others. diags Opt Soc Am J 37:707-13 S '47

Modified colorimetric determination of chromium in ferrous materials. E. H. Baker. Foundry 75:92+ Ja '47

Polarographic investigation of oxalate, citrate and tartrate complexes of ferric and ferrous iron. J. J. Lingane. bibliog Am Chem Soc J 68:2448-53 D '46

Rapid, accurate, economic analysis of iron and steel by means of the spectrograph. R. F. Lab. il Blast F & Steel Pl 34:1509-14 D '46

Spectrochemical determination of lithium, sodium, and iron in lithium-bearing ores. G. Oplinger. bibliog il Anal Chem 19:444-7 Jl '47

See also

Cast iron—Analysis
Steel—Analysis

Bibliography

Abstracts of current literature and book reviews. Iron & Steel Inst J 155:145-60, 297-318, 453-80, 627-39; 156:127-44, 307-20, 435-48, 571-92; 157:139-60 Ja-S '47

Review of iron and steel literature for 1946. E. H. McClelland. Blast F & Steel Pl 35: 227-9+ F '47 [reprinted with additions by Carnegie library, Pittsburgh]

Survey of literature on the manufacture and properties of iron and steel, and kindred subjects. Iron & Steel Inst J 152:1A-203A no 2 '45

Desulfurization

See Iron—Sulfur content

Isotopes

Comparison of the abundance ratios of the isotopes of terrestrial and of meteoritic iron. G. E. Valley and H. H. Anderson. bibliog diags Am Chem Soc J 69:1871-5 Ag '47

Radioactive blood cells; determining post-transfusion survival of blood cells by means of radioactive iron. J. G. Gibson, 2d and R. D. Evans. bibliog il Tech R 49:91-4+ D '46

Metallography

Annealing studies on cold-rolled iron and iron binary alloys. C. R. Austin and others. il Am Soc for Metals Trans 35:446-80 bibliog(p480); Discussion. 481-4 '45

Effect of microstructure on machinability of cast irons. M. Field and E. E. Stansbury. il A S M E Trans 69:665-82 Ag '47

Metallographic constituents of steels and cast iron as affecting flame hardening. O. M. Harrelson. il Welding J 26:771-5 S '47

Microstructure of commercial acid-resisting silicon-iron alloys. J. E. Hurst and R. V. Riley. bibliog 3pls Iron & Steel Inst J 155: 172-8 F '47

Mode of occurrence of tellurium in cast iron. H. Morrogh. bibliog pl Iron & Steel Inst J 155:21-3 Ja '47; Discussion. il 156:491-6 Ag '47

Neutralisation of sulphur in cast iron by various alloying elements. H. Morrogh. il Engineering 162:598-600, 621-3 D 20-27 '46

Preparation of iron powder compacts and powders for microscopic examination. H. M. Jamison and E. S. Byron. il Metal Prog 51:437-40 Mr '47

Rate of diffusion of molybdenum in austenite and in ferrite. J. L. Ham. Am Soc for Metals Trans 35:331-55 bibliog(p354-5); Discussion. il 355-61 '45

Segregation of molybdenum in phosphorus-bearing alloyed gray cast iron. F. B. Rote and W. P. Wood. il Am Soc for Metals Trans 35:402-25; Discussion. 425-34 '45

Silicon carbide addition in gray iron automotive castings. E. A. Loria and others. il Metal Prog 51:587-92 Ap '47

See also

Cast iron—Graphitization

Phosphorus content

Desulphurisation and dephosphorisation of iron; meeting of Iron and steel institute, Institute of British foundrymen and British iron and steel research association, London, March 19-20. Engineer 183:259-61, 281-2 Mr 28-Ap 4 '47

Research institute attacking problem of phosphorus in iron. Iron Age 160:124 Ag 28 '47

Segregation of molybdenum in phosphorus-bearing alloyed gray cast iron. F. B. Rote and W. P. Wood. il Am Soc for Metals Trans 35:402-25; Discussion. 425-34 '45

Prices

Average monthly quotations in 1946. Steel 120: 322 Ja 6 '47

Sulfur content

Control of sulfur content of sponge iron produced in rotary kilns. R. C. Buehl and others. bibliog 13pls U S Bur Mines Rep of Invest 4057:1-102 '47

Desulphurisation and dephosphorisation of iron; meeting of Iron and steel institute, Institute of British foundrymen and British iron and steel research association, London, March 19-20. Engineer 183:259-61, 281-2 Mr 28-Ap 4 '47

Neutralisation of sulphur in cast iron by various alloying elements. H. Morrogh. il Engineering 162:598-600, 621-3 D 20-27 '46; Abstract. Metal Prog 51:824+ My '47

Testing

Deformation of metals during single and repeated tensile impact. J. A. Pope. bibliog il diags Iron & Steel Inst J 157:31-54 S '47

IRON, Molten

Chromium-oxygen equilibrium in liquid iron; abstract. Hsin-Min Chen. Steel 119:40 N 25 '46

Determination of the equilibrium constant of the reaction between molten iron and hydrogen sulphide. J. White and H. Skelly. bibliog diags Iron & Steel Inst J 155:201-12 F '47; Discussion. 156:528-30 Ag '47

Emissivity of molten iron and steel. D. Knowles and R. J. Sarjant. bibliog diags Iron & Steel Inst J 155:577-92 Ap '47

IRON, Powdered

Advance in powder metallurgy; waterproofing with methyl chlorsilanes. Comp Air Mag 51:307 N '46

Economics of iron powder manufacture. J. F. Sachse. Iron Age 159:62-3 My 22 '47

Effect of particle size on iron powder properties. J. F. Kuzmick and others. Iron Age 158:72-6 D 5; 76-80 D 12 '46

Electrical constants of a material loaded with spherical particles. L. Lewin. diag Inst E E J 94 pt 3:65-8 Ja '47

MARTINS bank, limited
Statement by the chairman. F. A. Bates. Economist 152:167 Ja 25 '47

MARX, Karl, 1818-1883
Great delusion; where Marx went wrong. C. E. Wilson. Mech Eng 69:658-60 Ag '47

MASON, Lucy Randolph
Miss Lucy, southern blue blood for the C.I.O. por Bsns W p104 F 15 '47

MASON, William Pitt, 1853-1938
Pioneer in sanitation chemistry. H. S. van Klooster and J. B. Cloke. bibliog por(front) J Chem Educ 24:210-13 My '47

MASONITE
Fiber bonus. Chem Ind 61:208-9 Ag '47

MASONRY
Cracking tendencies in brick or stone masonry walls at the structural slab. Am Concrete Inst J 18:606-8 Ja '47
How to solve some masonry problems. diags Brick & Clay Rec 110:31-2 My '47
Making intricate cuts with a masonry saw. diags Brick & Clay Rec 110:40 Mr '47
Masonry details for modern brickbuilders. L. Maffett. diags Brick & Clay Rec 110:39-40 Ja; 21-2 F; 38-9 Mr; 36-7 Ap; 36-7 My; 33-4 Je '47
Outlaw masonry rules of thumb; be accurate: use a transit. il Brick & Clay Rec 110:33 My '47
Plaster and masonry fastenings. T. Trail. diags Power Pl Eng 51:90-1 My '47
Study on paints for masonry walls made by Bureau of standards. il Paint Oil & Chem R 110:43+ S 18 '47; Same abr. Eng N 139: 471 O 2 '47

See also
Brick construction
Concrete blocks

Study and teaching
Eight national trade associations confer on masonry training. Brick & Clay Rec 110:43 Ja '47
1,500 masonry apprentices to be a boon to Midwest producers. il Brick & Clay Rec 109:30 D '46

MASS (chemistry)
Mass and the disintegration products of the mesotron. C. D. Anderson and others. bibliog il Phys R 72:724-7 O 15 '47
Mass of cosmic-ray mesotrons. W. B. Fretter. bibliog il diags Phys R 70:625-32 N 1 '46
Mass of the mesotron as determined by cosmic-ray measurements. D. J. Hughes. bibliog Phys R 71:387-92 Ap 1 '47
Maximum β-energies and the mass of the neutrino. O. Kofoed-Hansen. Phys R 71: 451-2 Ap 1 '47
Neutron-hydrogen mass difference and the neutron mass. W. E. Stephens. bibliog Rs Mod Phys 19:19-24 Ja '47

MASS production. See Production

MASS spectra. See Spectrum—Mass spectra

MASS spectrometers. See Spectrometers, Mass

MASSACHUSETTS

Sanitary affairs
Massachusetts battles pollution. Eng N 138: 958 Je 12 '47

MASSACHUSETTS bonding and insurance company
Stock offered. Comm & Fin Chr 166:1482 O 13 '47

MASSACHUSETTS institute of technology
Licking the language problem; modern pedagogy saves time; M.I.T. methods. W. N. Locke. il Tech R 49:405-7+ My '47
Maintaining student health at M.I.T. D. L. Farnsworth. il Tech R 49:459-62+ Je '47

Hayden memorial library
Plans for a new library. Science 105:427 Ap 25 '47
Technology made human. il plans diags Arch Rec 100:99-110 N '46
Wreck of matter and the crush of worlds; philosophic basis for Charles Hayden memorial library. J. E. Burchard. Tech R 49: 65+ N '46

Radiation laboratory
Laboratory and office building designed for easy conversion to peacetime academic use. il plans diags Arch Forum 87:98-101 Jl '47

School of architecture
M.I.T. architectural department offices. il plans Arch Forum 87:102-3 Jl '47

MASSACHUSETTS mutual life insurance company
To adopt C.S.O. table, 2½ per cent interest. Nat Underw (Life ed) 51:4 Je 20 '47

MASSEY, Peter J. 1883-
P. J. Massey to receive TAPPI medal. por Paper Tr J 124:53 Ja 16 '47
Presentation of TAPPI medal award to Peter J. Massey, by L. Beeman; response by Mr Massey. Paper Tr J 124:98-9 F 27 '47
Sketch. por(cover) Chem & Eng N 25:911 Mr 31 '47

MASTER boiler makers' association
Annual meeting, 30th, Chicago, Sept. 15-18. Ry Mech Eng 121:566-76 O '47

MASURIUM (element 43). See Chemical elements

MATCH books

See also
Advertising mediums—Match books

MATCH plates. See Pattern making

MATCHABELLI, Georges Vasily
Story of Prince Matchabelli. J. A. Murphy. il Adv & Sell 40:33-4+ S '47

MATCHES
Diamond Match lists dealers' sights on sales potentials. V. R. Kendall. il Sales Management 59:102+ O 15 '47
Match trade in Panama. For Comm W 28:24 S 27 '47

Testing
Méthode de mesure des caractéristiques de combustion des pâtes d'allumettes. R. Kaslin. il diags Chimie & Ind 57:444-7 My '47

MATERIA medica

See also
Analgesics
Anesthetics
Anticonvulsants
Drugs
Hypnotics
Medicine
Mydriatics
Narcotics
Pharmaceutical research

MATERIAL control
Control procedures for special operating supplies. J. R. Haas. N A C A Bul 29:223-6 O 15 '47
Controlling raw materials to meet varying production; Armstrong cork company. R. L. Bowles. Factory Management 105:94-6 Ja '47
Inspecting incoming material. E. Goddess. il Steel 121:92-3+ Ag 18 '47
Materials control; storage, handling and specification testing of packaging materials. E. H. Balkema and F. J. Burk. il Mod Packaging 20:112-15 Ja '47
Simple board and four-part form control materials flow; Kittinger co., Buffalo. J. Batson. il Factory Management 105:100-1 Mr '47

See also
Inventories
Stores systems

MATERIAL handling
Containers are controlling factor in production increase; Euclid road machinery company, Cleveland. H. T. Monson. il diags Factory Management 105:89-92 Jl '47
Engineering approach to materials handling. R. W. Mallick and J. H. Sansonetti. il Steel 120:102-3+ My 5 '47
Evaluating materials handling layouts. W. G. Hudson. il diags Chem Eng 54:110-12 Ag '47
Every pick up adds to handling cost. C. M. Bowden. il Textile World 97:104-5 My '47
How to handle corn sirup. A. E. Filippon. il diags Food Ind 18:1686-7+ N '46

MATERIAL handling—*Continued*
Material handling in the motor industry. N. M. Loney. Mech Handling 34:195-9 Ap '47; Abstract. Automotive & Aviation Ind 96: 244+ Mr 15 '47
Materials handling. il Factory Management 104:162+ S; 166+ O '46
Materials handling. R. E. Wright. il diags Ind & Eng Chem 39:8-10, 40-2 Ja '47
Materials handling; Yale and Towne manufacturing company. Mech Eng 69:409-10 My '47
Palletized handling cost cut with nationwide exchange; Lawrence warehouse company. D. I. Pursley. il Food Ind 18:1870-1+ D '46
Plan for cutting production costs; improving material handling procedures. S. W. Gibb. flow chart il Iron Age 159:54-7 My 1 '47
Research in materials handling. R. F. Weber. Mech Handling 34:322-4 Je '47
Solve your handling problems with these three forms; Westinghouse Electric. R. W. Mallick. Factory Management 105:102-3 Je '47
Technical progress in metalworking; materials handling. Steel 120:301-2+ Ja 6 '47

See also
Coal handling
Conveying machinery
Electric trucks, Industrial
Factory transportation
Freight handling
Loading and unloading
Mechanical handling
Motor trucks, Industrial
Ore handling
Pallets
Steel handling
Storage

Cost

Materials-handling cost offers opportunity for savings. C. M. Bowden. il diag Textile World 97:121-3+ Ja '47

Safety measures

Manual material handling. H. J. Nordstrom. Safety Eng 94:62-3 O '47
Moving and handling oxygen cylinders. il diags Safety Eng 94:20+ O '47
Should a hand truck be pushed or pulled? panel discussion. Nat Safety N 56:24-5+ Ag '47

See also
Lifting

MATERIALS
Annual engineering review; materials, processing methods. il Materials & Methods 25: 87-110 Ja '47
Chemical engineering materials of construction; review of literature from start of World war II; codification of materials. C. S. Grove, jr., J. W. Perry and R. S. Casey. bibliog Ind & Eng Chem 39:1261-4 O '47
Condensed review of some recently developed materials, arranged alphabetically by trade names. Mach 54:169-81 O '47
Directory of materials. Machine Design 19: 179-246 O '47 [reprints $1]
Directory of materials for the construction of chemical equipment. Chem Eng 53:110-19 N '46
Effects of pressure cycling on physical properties of materials. T. C. Poulter. il diags Product Eng 18:81-5 Ag '47
Glass fibers as engineering materials. K. Rose. il Materials & Methods 25:82-5 Mr '47
Importance of standardizing specifications for engineering materials. B. Melnitsky. Steel 121:106+ O 20 '47
Materials and finishes for tropical service. C. D. Cook and C. Merritt, jr. il Materials & Methods 25:77-80 My '47
Materials handbook; an encyclopedia for purchasing agents, engineers, executives, and foremen. G. S. Brady. 6th ed 831p $6 McGraw-Hill book co, New York '47
New engineering materials. Iron Age 159:71-3 Mr 13 '47
Reducing material costs through standardization. H. R. Clauser. il Materials & Methods 26:63-7 S '47
Thermal properties of materials; tabulation; engineering file facts. Materials & Methods 25:123 Mr '47
Weight economy in engineering design. W. A. Semmion. il Materials & Methods 25: 59-62 My '47

See also
Airplanes—Materials
Automobiles—Materials
Building materials
Ceramic materials
Electric industries—Materials
Glass making materials
Insulating materials
Mechanical handling
Packaging materials
Paint materials
Paper making materials
Plastic materials
Raw materials
Refractory materials
Road materials
Silicones
Soap materials
Stores systems
Strength of materials
Tanning materials
Textile fibers

MATERIALS, Purchasing of. See Purchasing
MATERIALS distribution, Office of. See United States—Materials distribution, Office of
MATERNITY benefits
Sickness and maternity benefits for railroad workers. Mo Labor R 65:194-5 Ag '47
MATHEMATICAL association of America
Summer meeting, 29th, New Haven, Sept. 1-2. Science 106:142 Ag 15 '47
MATHEMATICAL physics
Meson theory of nuclear forces. L. L. Foldy. bibliog Phys R 72:125-30 Jl 15 '47
Motional mass of the electron; reconsideration of views supporting Lorentz and Einstein equations. C. A. Boddie. diags Elec Eng 66:45-60 Ja '47; Discussion. 66:319-21, 420-2, 624-6 Mr-Ap, Je '47
Newton's and Einstein's relations between mass and energy. J. J. Smith. bibliog Elec Eng 66:561-4 Je '47
Theory of automatic control systems. M. A. Melvin. diags J Ap Phys 18:704-22 Ag '47
Theory of communication. D. Gabor. bibliog il diags Inst E E J 93 pt 3:429-57 N '46

See also
Aerodynamics
Differential equations
Elasticity
Electricity
Gases
Hydrodynamics
Light, Scattering of
Magnetism
Optics
Potential, Theory of
Rotation
Sound
Tensors
Thermodynamics

MATHEMATICAL statistics

See also National research council—Committee on applied mathematical statistics

MATHEMATICIANS
Qualifications for professional positions in applied mathematics and related scientific fields. R. S. Burington and D. C. May. J Eng Educ 37:641-52 Ap '47
MATHEMATICS
Incommensurables. A. B. Field. Elec Eng 66:1005 O '47
Math tips (cont). P. Swain; J. King. diags Power 90:872; 91:56, 130, 204, 277, 349, 420, 495, 569, 646, 716, 791 D '46-N '47
Some mathematical difficulties explained. C. Turnbull. Electrician 138:1372 My 23 '47

See also
Bessel's functions
Calculus
Differential equations
Fourier's series
Graphic statics
Interest
Mathematical physics
Matrices
Mechanics
Statistical methods
Symmetric functions
Trigonometry
Vector analysis

Bibliography

Guide to the literature of mathematics and physics including related works on engineering science. N. G. Parke, 3d. 205p $5 McGraw-Hill book co, 330 W. 42d st, New York 18 '47

Study and teaching

Coordination in the teaching of mathematics to electrical engineers. L. V. Bewley. J Eng Educ 37:786-95 Je '47
Mathematics and electrical engineering. G. F. Corcoran. J Eng Educ 37:818-20 Je '47
Mathematics beyond calculus for engineering students. F. H. Miller. J Eng Educ 37:330-5 D '46
Mathematics in civil engineering. H. E. Wessman. J Eng Educ 37:378-82 Ja '47

MATHEMATICS—Study and teaching—*Cont.*
Report on mathematics preparation for engineering colleges. F. H. Miller and S. G. Roth. J Eng Educ 37:628-37 Ap '47
Teaching mathematics to engineers. L. E. Grinter. J Eng Educ 37:536-9 Mr '47
Undergraduate preparation for graduate study through applied mathematics. J. L. Synge. J Eng Educ 37:531-5 Mr '47

Tests and scales
Predictions of average class achievement by means of aptitude tests. W. C. Krathwohl. J Eng Educ 37:234-42 N '46

MATRICES
Higher angular momenta and long range interaction in resonance reactions. E. P. Wigner and L. Eisenbud. bibliog Phys R 72:29-41 Jl 1 '47
Matrix analysis of continuous beams. S. U. Benscoter. diags Am Soc C E Proc 72:1091-122 O '46; Discussion. 73:241-50, 543-56, 960-2 F, Ap, Je '47
Quarter wave coupled wave-guide filters. W. L. Pritchard. bibliog diags J Ap Phys 18: 862-72 O '47

MATTER
See also
Adsorption
Atoms
Chemistry
Colloids
Compressibility
Diffusion
Dynamics
Elasticity
Electrons
Gases
Ions
Molecules
Physics
Quantum theory
Radioactivity
Solids
Solution (chemistry)
Specific gravity
Transmutation (chemistry)
Viscosity
Wave mechanics

MATTRESSES
Little business can grow big; Taylor bedding company. R. McDaniel. il Am Bsns 17:10-11+ S '47

Rating
Innerspring mattresses. Consumers Res Bul 19:7-8 Je '47

MATTRESSES (hydraulic engineering)
Development of concrete revetments on the lower Mississippi. R. H. Haas. il plan diags Concrete 55:3-8+ Ap; 16-18+ My '47

MAXWELL, George Hebard, 1860-1946
He made deserts bloom. Comp Air Mag 52:21 Ja '47

MAXWELL-BOLTZMANN equation
Statistical mechanical theory of transport processes; transport in gases. J. G. Kirkwood. J Chem Phys 15:72-6 Ja '47

MAXWELL'S equations
Flux plotting method for obtaining fields satisfying Maxwell's equations, with applications to the magnetron. P. D. Crout. bibliog diags J Ap Phys 18:348-55 Ap '47

MAY department stores company
Securities offered. Comm & Fin Chr 165: 3395-6 Je 30 '47

MAYNZ, Theodore, 1889-
Power personality. por Power 91:327 My '47

MAYONNAISE. See Salad dressing

MAZEY, Emil, 1913-
Portrait. Bsns W p94 O 11 '47

MEADOWS, Henry, limited
Statement by the chairman. W. Hamill. Economist 152:355 Mr 8 '47

MEASUREMENT
Functional analysis of measurements. I. F. Kinnard. bibliog diags Elec Eng 66:11-15 Ja '47; Discussion. 66:210 F '47
Fundamental analysis gives four methods for finding groove radii. S. Framurz. diags Am Mach 91:143-4 My 8 '47
How to measure the radius of a short circular arc. J. Van Voast. diags Am Mach 90:143-4 D 19 '46
Measurements as an aid to design. F. G. Tatnall. Machine Design 19:194+ Ap '47
Measuring by electron microscopy. E. F. Fullam. bibliog il Gen Elec R 50:18-21 O '47
New system of measurement claimed to aid designer; invention of C. Le Corbusier. il Product Eng 18:142-3 Je '47
Significance of functional analysis of measurements. H. C. Dickinson. diags Gen Elec R 50:13-16 O '47
See also
Calipers
Calorimeters and calorimetry
Color measurement
Colorimeters and colorimetry
Distances—Measurement
Electric measurements
Flow meters
Frequency measurement
Gages
Gas flow
Gearing—Measurement
Length measurement
Magnetic measurements
Measuring instruments
Metric system
Micrometers
Optical measurements
Pressure measurement
Pyrometers and pyrometry
Radio measurements
Sound—Measurement
Statistical methods
Stream measurement
Surveying
Tanks—Measurement
Temperature—Measurement
Thermometers and thermometry
Thickness measurement
Units
Vacuum tubes—Measurement uses
Vibration—Measurement
Viscosity—Measurement
Water flow
Weights and measures
Wood measurement

MEASURING instruments
Checking concentricity of round parts. il Steel 120:127 F 3 '47
Concentricity checking. il Mech Eng 68:1069 D '46
Continuous measuring of soluble solids. N. C. Updegraff. diag Chem Eng 54:121 Jl '47
Cylindrometer for measuring large diameters; reference book sheet. I. N. N. Sawin. diags Am Mach 90:145, 147 D 19 '46
Direct-reading indicator measures concave or convex radii. D. Campbell. diags Am Mach 91:111 Ap 24 '47
Liner-wear and crankshaft alignment indicator. diags Engineering 162:512 N 29 '46
Measurement of surface waviness. C. Timms. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):337-9, pl 1-2 '45; Same. il Engineering 159:217-20 Mr 16 '45
Measures contours of surfaces; instrument designed by Harvard underwater sound laboratory. F. R. Nitchie, jr. il Machine Design 19:136 Jl '47
New equipment. il Iron Age 159:85-90 Mr 6 '47
Pinion advance indicator. il diags Ry Mech Eng 121:594 O '47
Practical aspects of surface finish measurement instrumentation. J. A. Broadston. il Iron Age 159:51-5 Mr 20 '47
Progress in industrial measurement; some new scientific aids described. L. Sanderson. diags Chem Age (Lond) 57:493-5 O 11 '47
Proving rings. il diags Engineering 164:169-72 Ag 22 '47
Simple device for measurement of angles of azimuth and deviation from the horizontal on glass tubes used for surveying diamond-drill holes. J. W. Townsend. 4pls U S Bur Mines Rep of Invest 4062:1-3 '47
34th annual review number; layout and inspection. il Am Mach 91:184-91 Ja 16 '47
See also
Calipers
Dilatometers
Gages
Gear testing machines
Micrometers
Pressure gages

MEASURING instruments, Electric
Electrical calipers for inspecting vertical and horizontal tubes. I. S. Roberts. il Oil & Gas J 46:117 O 18 '47
Evaluation of piston skirt deposits. A. C. Scholp, B. J. Conta and C. D. Russell. bibliog il diags Anal Chem 19:466-71 Jl '47
Functional analysis of measurements. I. F. Kinnard. bibliog diags Elec Eng 66:11-15 Ja '47; Discussion. 66:210 F '47

MEASURING instruments, Electric—*Cont.*
Some principles and methods of surface measurement. R. E. Reason. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):335-7 '45; Same. Engineering 159:216-17 Mr 16 '45

MEASURING instruments, Optical
Direct determination of wave-lengths from Fabry-Perot interferometer patterns. G. R. Harrison. bibliog il diags Opt Soc Am J 36:644-54 N '46
Inspecting and measuring jet-propulsion blades; Pant-O-Jector method. il diags Mach 53:185-8 Ja '47
Inspecting turbosupercharger blades by optical projection comparator; Pant-O-Jector. E. C. Polidor. il diags Iron Age 159:40-4 Ja 16 '47
Instrument for checking bore diameters in long cylinders. D. E. McDonald. Mach 52: 192 D '45; Discussion. C. H. Borneman. 54:182 O '47
Measuring equipment; exhibition arranged by Alfred Herbert ltd. il Automobile Eng 36: 492-6 N '46
Modern optical profile grinding machine. il Engineer 182:400 N 1 '46
Modern profile-grinding machine with optical control. il diags Engineering 163:80-2, 84 Ja 24 '47
Optical comparator; Pant-O-Jector. il Machine Design 19:106 F '47
Optical drill chuck. il diag Engineering 164:8 Jl 4 '47; Abstract. Mech Eng 69:775-6 S '47
Some principles and methods of surface measurement. R. E. Reason. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):335-7 '45; Same. Engineering 159:217 Mr 16 '45

See also
Interferometers

MEAT
Americans will eat record amount of meat this year, despite protests over high prices. Barron's 27:36 S 8 '47

See also
Beef
Drying (meat)
Fish as food
Horse meat
Mutton
Packing houses
Pork
Poultry

Prepackaging

Meat prepackaging soars; self-service grocery stores break bottleneck at meat counters. il Bsns W p62-6 O 25 '47
Milgram's meats. il Mod Packaging 21:104-7 O '47
Self-service meats. il Mod Packaging 20:95-100+ Jl '47

Preservation

Ultraviolet + refrigeration = health; use of Sterilamp. A. J. Dusault. il Refrig Eng 54: 125-6 Ag '47

Prices

Meat prices decline. Barron's 27:36-7 N 3 '47
Meat prices rise. Bsns W p44-5 Je 21 '47
Smaller meat supply and higher prices ahead. C. A. Burmeister. Comm & Fin Chr 166: 917+ S 4 '47

MEAT, Dried
Vitamin content of dehydrated meats; abstract. R. A. Whitmore and others. Food Ind 19:411 Mr '47

MEAT, Frozen
Freezer wraps; need for better locker papers. D. C. McCoy and others. il Mod Packaging 20:188-92 Mr '47
Frozen meat future dim. il Bsns W p62+ Mr 29 '47
Frozen meat home delivery inaugurated by Brooklyn packer. Refrig Eng 52:544 D '46
Proper packaging protects frozen meats. J. V. Ziemba. il Food Ind 18:1710-12 N '46
Study of frozen food wrapping materials. D. C. McCoy and others. il Refrig Eng 52:531-4+ D '46

See also
Beef, Frozen
Pork, Frozen
Sausage, Frozen
Turkeys, Frozen

Storage

Freezer storage effect on fresh meat quality. J. M. Ramsbottom. bibliog il Refrig Eng 53:19-23 Ja '47

MEAT delivery
Bigger trucks cut meat delivery costs. il map Food Ind 18:1877-8 D '46
Frozen meat home delivery inaugurated by Brooklyn packer. Refrig Eng 52:544 D '46

MEAT extracts
Nutritive value of meat extract. H. G. Rees and A. H. Salway. Chem & Ind p302-3 My 31 '47

MEAT industry and trade
Expensive victory; Safeway wins right to sell meat in San Francisco on Monday. Bsns W p75 My 17 '47
Next year's meat supply hinges on answer to corn crop puzzle and high-priced feeder cattle. Barron's 27:36 Ag 11 '47
Smaller meat supply and higher prices ahead. C. A. Burmeister. Comm & Fin Chr 166: 917+ S 4 '47

See also
Butchers' supplies industries—Advertising
Canned meat
Packing houses
Packing industry

Advertising

Colorful hams; Millar launches red cellophane wrap. il Mod Packaging 20:112-14 Jl '47

Canada

Egg and meat production and consumption in 1947. For Comm W 28:22-3 S 13 '47
1946 production and exports, Canada. For Comm W 27:23 My 3 '47

MEAT inspection
How to get M.I.D. label approval. C. H. Pals. il Food Ind 19:792-3+ Je '47

MEAT institute, American. See American meat institute

MECHANICAL draft
Boiler draught control; abstract. D. D. Rayner. Electrician 139:1147 O 17 '47
Boiler draught production by means of the jet air-pump. S. F. Benson. diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):311-21; Discussion. 321-7 '45
Evaluating cooling tower performance. J. G. De Flon. il diags Pet Eng 18:55-60+ Ap '47; Same. Oil & Gas J 45:129-32+ Mr 29 '47; Same. Pet Refiner 26:109-16 Ap '47; Same. Pet Processing 2:249-52, 433+ Ap, Je '47; Same. Heat & Ven 44:73-7 Je; 77-80 Jl '47; Same abr. Power Pl Eng 51:104-7 Je '47; Same cond. Comp Air Mag 52: 142-8 Je '47
Lockheed hydraulic remote-control gear; controlling draft fans of boilers. il diags Engineering 162:608-9 D 27 '46; Abstract. Mech Eng 69:242-3 Mr '47
Performance of small mechanical draft cooling towers. W. M. Simpson and T. K. Sherwood. bibliog diags Refrig Eng 52:535-43+ D '46
Proper fan installation reduces operating and maintenance costs. J. P. Holtzclaw. il diags Power 91:171-3+ Mr '47
Reliable electronic controls for fan and stoker drives. D. L. Greene and R. L. Jaeschke. il diags Elec World 126:75-7 N 23; 96-9 D 7 '46
Small duct change triples fan life, raises steam output 24 per cent. J. Cassie. diags Power Pl Eng 51:78-80+ Mr '47
Soot on the blades caused fan vibrations. J. F. Savinsky. Power Pl Eng 51:92 Ja '47
Steam jet blowers and fans on steam boilers at gas-works. R. L. Greaves. il Gas J (Lond) 250:288+ My 7 '47

Noise

Mouth organ engineering; how it reduces fan and duct noises; harmonica used to measure sound frequencies. J. Cassie. il diags Power Pl Eng 51:84-7 Ag '47

MECHANICAL drawing
Three-dimensional graphs. E. F. Hopkins. il Science 106:326-7 O 3 '47

See also
Drafting room practice
Engineering drawing
Geometrical drawing
Plumbing—Drawing
Projection, Axonometric

MECHANICAL engineering
Mechanical engineering and agriculture. S. J. Wright. diag Inst Mech Eng J & Proc 156:Proc 17-23, pl 1-4 Je '47; Same cond. Engineer 182:571-3, 584-6 D 20-27 '46; Same. Engineering 163:177-80, 202-3 Mr 7-14 '47
Mechanical engineering research; organization set up by government. Engineer 183: 499-500 Je 6 '47
Progress in railway mechanical engineering, 1945-1946. il diags Mech Eng 69:199-212 Mr '47

See also
Aeronautic engineering
Automobile engineering
Balancing of machinery
Boilers
Chemical engineering
Electric engineering
Hydraulic machinery
Locomotives
Lubrication and lubricants
Machine shop practice
Machine tools
Machinery
Marine engineering
Mechanical movements
Mechanics
Motor trucks
Power transmission
Pumping
Springs (mechanism)
Standardization
Steam engines
Tolerance

also American society of mechanical engineers

Bibliography

Additions to the library. Inst Mech Eng J p16-19 Ja '47 [cont monthly in Journal section]
A.S.M.E. papers and publications. A S M E Trans 69:51-3 sec 2 Ja '47
Reviews of books and notes on books received in the Engineering societies' library. Published in monthly numbers of Mechanical engineering

Exhibitions

See also National exposition of power and mechanical engineering

History

Engynes. H. Chatley. Engineering 162:388 O 25 '46; Discussion. H. P. Vowles. 163:41-2 Ja 10 '47

Study and teaching

Aims and content of under graduate courses in machine design. J. H. Billings. J Eng Educ 37:563-8; Discussion. 568-71 Mr '47
Alternative methods of velocity determination in mechanisms. I. W. Smith. J Eng Educ 37:540-50; Discussion. 550-7 Mr '47
Five-year mechanical engineering curriculum. R. C. Jordan. J Eng Educ 37:414-18 Ja '47
Uniform curriculum in mechanical engineering; symposium. Mech Eng 69:491-3 Je '47

Symbols

See also
Control equipment—Symbols

Tables, calculations, etc.

Centrifugal governors with flyweights of distributed mass. B. W. Millington. diags Engineering 163:232 Mr 28 '47
Deflexion of a thick plain ring under a uniformly distributed couple. A. E. Johnson. Inst Mech Eng J & Proc 155 (War emergency issue no 16):101-11; Discussion. 111-15 '46
Disk spring or Belleville washer. G. Ashworth. biblio il diags Inst Mech Eng J & Proc 155 (War emergency issue no 16): 93-100 '46
Elastic deformation of piston rings. H. W. Swift. Engineering 163:161-5 Mr 7 '47
External floating friction shoes; theoretical analysis and design. A. C. Rasmussen. diags Product Eng 18:119-21 O '47
Internal floating friction shoes; analysis and application. A. C. Rasmussen. diags Product Eng 18:106-10 Jl '47

MECHANICAL engineers

See also
Automobile engineers

MECHANICAL equipment of buildings

See also
Air conditioning equipment
Electric wiring, Interior
Elevators
Heating
Hot water supply
Houses—Mechanical equipment
Lighting
Plumbing
Power plants
Ventilation

MECHANICAL equipment of houses. See Houses—Mechanical equipment

MECHANICAL fans. See Fans, Mechanical

MECHANICAL handling
Advanced methods of aggregates handling and concrete proportioning; Domino builders supply co. B. Nordberg. il plan diags Rock Prod 50:122-6 Jl '47
American materials handling exposition; papers. il Mech Handling 34:186-99, 317-24 Ap, Je '47
Applying engineering principles to distribution. F. B. Turck. il Ind Marketing 32:49-50+ My '47
Automatic cloth lowerer handles 120 rolls per day. il Textile World 97:103 Mr '47
Automatic heat treating machine. J. R. Morrison. il Metal Prog 50:952-4 N '46
Automatic tongs can solve many handling problems. il Mech Handling 34:250-2 My '47
Better handling methods offer large savings. W. B. McGuire. diags Textile World 97: 117+ F '47
British industries fair; mechanical handling equipment. il Mech Handling 34:265-73, 303-4 My-Je '47
Bulk handling in the glass container plant. il diags Cer Ind 49:76-7 Ag; 84 S '47
Cases in work simplification; eight photographed improvements at Tonawanda. R. L. Dustman and D. R. Bell. Factory Management 105:97-9 S '47
Circular warehouse for mail order house. il plans Arch Forum 85:121-3+ N '46
Coal handling plant at a London power station. il diag Mech Handling 34:175-85 Ap '47
Compact plant with bucket elevators; Azusa rock and sand co. W. B. Lenhart. flow sheet il Rock Prod 50:94-7+ F '47
Economical handling in a warehouse. W. S. Wheeler. il Factory Management 105:126-8 Je '47
Effective layout and handling mean lower costs, more production; switchbox production at Square D. H. S. Wharen. diags Am Mach 91:114-15 Jl 17 '47
Electric control of material handling plants. B. Feltbower. il plan diags Mech Handling 34:472-9 S '47
Engineering and marine exhibition. Mech Handling 34:465-71 S '47
Facing the problem of materials handling. R. W. Mallick. Mech Handling 34:338-9 Je '47
First National materials handling convention and exposition. Steel 120:92-3+ Ja 20 '47
First National materials handling exposition. T. P. Callahan. il Chem Ind 60:278+ F '47
Fisher body devises aids for pressed-metal handling. R. Le Grand. il diags Am Mach 90:112-15 D 19 '46; 91:86-7 Ja 2 '47
Flights and chutes for between-operations handling, Fisher Body-Ternstedt division, Trenton. il Factory Management 105:88-9 My '47
From bags to bulk with mechanized handling. il Factory Management 105:78-9 Mr '47
From mine to rail; mechanical handling equipment manufacture of fertilizers at the Billingham division of Imperial chemical industries. il plans diag Mech Handling 34: 399-413 Ag '47
From plunger down to standpatter; mechanical handling equipment in paper mills. J. F. Moriarty. Paper Tr J 123:122+ D 5 '46
Glasgow technical exhibition. il Mech Handling 34:44-5+ Ja '47
Grapple speeds wool handling. A. M. Stevens. il Textile World 97:137 Jl '47
Handling and packing of bottled beer; National breweries. H. G. Jarman. il Mech Handling 34:259-62 My '47

MECHANICAL handling—*Continued*
Handling and transport of materials in a modern factory. W. L. Beeby. il Mech Handling 34:255-8+, 311-12 My-Je '47
Handling blast furnace materials. J. A. Oates. il plan diags Mech Handling 34:539-48 O '47
Handling in the printing trade. il diag Mech Handling 34:245-50, 299-302, 353-6 My-Jl '47
Handling mechanization boosts Monroe shock absorber and sway bar output. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 15 '47
Handling of crushed bricks. il Mech Handling 33:688-9 N '46
Handling of pre-fabs; mechanical equipment aid to mass production of prefabricated aluminum houses. J. A. Oates. il plan diags Mech Handling 33:631-43+ O '46
Handling of town refuse. il Mech Handling 34:145-50 Mr '47
Handling trends; new equipment for chemical industries. N. L. Cahners. il Chem Ind 61: 428-9 S '47
Hands off handling for high productivity; Norge division, Borg-Warner corporation. G. P. Kennedy. il diag Factory Management 105:125-8 Ja '47
How to palletize produce without using pallets; new clamp-lift device handles boxes of fruits and vegetables. il Food Ind 19:1202-3 S '47
Increased production through production methods. J. D. Sheahan. Edison Elec Inst Bul 15:135-6+ Ap '47
Mass production heat treating; special gas carburizing and carbonitriding installations. il diags Steel 120:88+ Mr 24 '47
Material handling, a profit factor. R. W. Mallick and J. H. Sansonetti. il Mech Handling 34:317-22 Je '47
Material-handling equipment. C. B. Risler. Mech Eng 69:591-2 Jl '47
Materials handling developments on the Great western railway. il Mech Handling 34:414-16 Ag '47
Materials handling exposition. R. W. Lahey. Chem & Eng N 25:396 F 10 '47
Materials handling on the railways; Illinois Central. B. T. Adams. il Mech Handling 34: 190-4 Ap '47; Same cond. Ry Age 122:360-2 F 15 '47
Mechanical aids to fertiliser manufacture; Ipswich factory of Messrs Fison ltd. il plan diags Mech Handling 33:612-19 O '46
Mechanical backs bear the burdens; production of heavy Autocar trucks demands ingenious handling aids. H. S. Wharen. il diags Am Mach 91:97-9 My 22 '47
Mechanical handling flexibility assures smooth flow of gear blanks; Westinghouse electric corp.'s Gearing division. il Steel 121:91 S 1 '47
Mechanical handling of gear blanks speeds production. O. P. Adams. il Materials & Methods 25:132 My '47
Mechanical handling saves money and labor; Avondale mills. P. M. Thomas. il diags Textile World 96:118-21 D '46
Mechanical muscles needed. il Bsns W p38+ Ja 25 '47
Mechanical pouring unit handles 11 tons per hour; American brake shoe co. J. R. Shepard and W. J. Olson. il diag Iron Age 158: 77-80 D 5 '46
Mechanical systems for handling textile materials. il Rayon 28:447-9 Ag '47
Mechanization means handling is five times faster; Grand Rapids chair company. B. M. Baker. il Factory Management 105:97-9 Ag '47
Mechanization of a cast iron foundry; Gloucester. il plan Mech Handling 33:740-5 D '46
Mechanized bakery; mass production of bread. Mech Handling 34:69-71 F '47
Mechanized handling cuts cycle time by two-thirds. W. S. Wheeler. il Factory Management 105:121-3 Jl '47
Modern method of rubber processing; Speke factory of the Dunlop rubber co. il Mech Handling 33:682-4 N '46
Moving, hot stuff for the fleet; lift trucks, small cranes and utility loaders for handling ammunition. G. F. Hussey, jr. il Ry Age 122: 232-4 Ja 25 '47
Muffler maker cuts material and manufacturing costs by installing equipment to handle coiled strip; Mackenzie muffler co. il Steel 121:88-9+ O 13 '47
New equipment. il Iron Age 158:99-100 N 14 '46; 159:71-4 Ja 9 '47
New stacking device. diags Mech Handling 34:160-1+ Mr '47
1947 inventory of foundry equipment; materials handling. Foundry 75:[91-5] insert S11-15 Mr '47
Oxide handling plant at a gas works. il Mech Handling 34:129-30 Mr '47
Plant layout for materials handling. H. M. Harman. diags Mech Handling 34:125-8 Mr '47
Review of power and mechanical equipment; mechanical transmission, materials handling. il Power 90:903-5 Mid-D '46
Scrap handling system paid for itself in two months; Shakeproof division, Illinois tool works. E. F. Sharpe. il Factory Management 105:84-5 F '47
Serial group for the manufacture of incandescent lamps. il Mech Handling 34:37 Ja '47
Standardized handling methods and layout integrate material movement; General Electric Erie works. F. E. Bliven. il Am Mach 91:78-82 Jl 31 '47
Straight-line methods treble former output; Kalamazoo stove and furnace company. A. L. Blakeslee. il Factory Management 104: 90-1 N '46
Streamlined flow speeds output of lubricants; handling and packaging equipment; Port Arthur refinery. il diags Oil & Gas J 45:74-7+ D 14 '46
Swarf handling. H. M. Harman. il diags Mech Handling 33:690-1 N '46
Technical progress in metalworking; materials handling. Steel 120:301-2+ Ja 6 '47
34th annual review number; plant service equipment. il Am Mach 91:195-203 Ja 16 '47
Three systems for handling and storing metal chips. S. Reibel. flow diag il plans A S M E Trans 69:413-20 My '47; Same. Mech Handling 34:528-34, 659+ O, D '47
25 per cent more products handled and stored by 63 per cent fewer people; Reliance electric & engineering company. C. R. Newpher. il Factory Management 105:90-3 Ja '47
Utilizing mechanized handling to speed maintenance; Bethlehem Steel. T. A. Lewis. il Factory Management 105:110-12 Ag '47
What I think of mechanization. S. B. Michael. Mech Handling 34:342-3+ Je '47
Who's going to help masons lay brick? il Brick & Clay Rec 110:31 F '47

See also
Ash handling
Assembling methods
Brick handling
Cableways
Car dumpers
Charging machines
Coal handling
Conveying machinery
Cranes, derricks, etc.
Dump cars
Dumping appliances
Electric trucks, Industrial
Elevators
Freight handling
Hoisting machinery
Lifting magnets
Loading and unloading
Manipulators, Welding
Mine haulage
Monorail conveyors
Motor trucks, Industrial
Ore handling
Packaging machinery
Pneumatic conveying
Sheet metal handling
Steel handling
Trucks
Turntables

Bibliography
Abstracts and references. Published in monthly numbers of Mechanical handling

Cost
Palletized handling; uses and misuses. J. I. Thompson. il Food Ind 19:776-7+ Je '47

History
Mechanical handling through the ages. H. M. Harman. il Mech Handling 33:746-8 D '46

MECHANICAL models
Transparent plastic puts lathe on view. il Mod Plastics 25:135-7 O '47

MECHANICAL movements
Compound eccentric for elliptical adjustment; dovetailing machines designed by Wysong & Miles co. il diags Product Eng 18:96-7 Ag '47

MECHANICAL movements—*Continued*
Device for automatic shifting between two cam-operated packing mechanisms; paper finishing machine. H. B. Schell. diags Mach 53:190-1 Ja '47
Hydraulic control of rotary motions creates new interest. L. R. Twyman. Steel 120:275 Ja 6 '47
Mechanism for controlling cutter-head slide of cam-generating device. C. Golosman and D. Golosman. diags Mach 54:184-6 O '47
Mechanism for converting rotary to constant-velocity reciprocating motion; artificial respiration machine. J. V. Neville. diags Mach 54:273-4 S '47
Mechanism for imparting oscillating motion to paper-cutting blade. C. F. Smith. diags Mach 53:179-80 My '47
Non-reversible rack and pinion motion. L. Kasper. diags Mach 53:175-6 Mr '47
Oscillating motion transmitted from vertical to horizontal plane. L. Kasper. diags Mach 54:183-4 O '47

See also
Escapement mechanism
Feed mechanism
Gearing
Machinery, Kinematics of
Springs (mechanism)

MECHANICAL pencils. See Pencils, Mechanical

MECHANICAL rubber goods. See Rubber goods, Mechanical

MECHANICAL stokers. See Stokers, Mechanical

MECHANICS
Dynamical analogue. N. Minorsky. bibliog diags Franklin Inst J 243:131-49 F '47
Math tips; how to figure leverage. P. Swain. diags Power 91:716, 791 O-N '47
Some fundamental theorems of structural mechanics in vector notation. R. J. Dunholter. J Eng Educ 37:207-9 N '46

See also
Acceleration
Aerodynamics
Aeronautics
Balancing of machinery
Deformation (mechanics)
Disks, Rotating
Dynamics
Elasticity
Fluids
Friction
Gases
Hydraulics
Hydrodynamics
Least work, Principle of
Liquids
Load (mechanics)
Machinery
Mechanical engineering
Mechanical movements
Moments of inertia
Physics
Power transmission
Rotation
Springs (mechanism)
Steam engines
Strains and stresses
Thermodynamics
Torsion
Vibration
Viscosity
Wave mechanics
also International congress of applied mechanics

Electric analogies
Electrical computor solves wing flutter problems. il Aviation 45:111 D '46
Electronic detonation meter for motor-fuel antiknock rating. D. R. deBoisblanc and H. M. Trimble. bibliog il diags Oil & Gas J 45:57-9 N 9 '46
Linear servo theory. R. E. Graham. diags Bell System Tech J 25:616-51 O '46

Study and teaching
Cooperation between departments of physics and mechanics in engineering colleges. R. Z. Williams. J Eng Educ 37:720-6 My '47
Coordination of teaching in physics and engineering mechanics. W. H. Michener. J Eng Educ 37:618-21; Discussion. 621-7 Ap '47

MECHANICS (persons)
Picking good bus mechanics. B. K. Van Allyn. Bus Transportation 26:77-9 Ja '47

See also
Airplane mechanics
Automobile mechanics

Training
Detroit Diesel service school. il Diesel Power 25:64-5 Ag '47
Formal training in mechanical and electrical maintenance. W. J. Brookings. il Factory Management 105:106-7 O '47

MECHANICS, Analytic
Alternative methods of velocity determination in mechanisms. I. W. Smith. J Eng Educ 37:540-50; Discussion. 550-7 Mr '47
Stresses by analysis and experiment. A. J. S. Pippard. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 13): 20-8; Discussion. il 28-40 '46

See also
Dynamics
Elasticity
Hydrodynamics
Hydrostatics
Statistical mechanics

MECHANICS, Applied
A.S.M.E. Applied mechanics division 13th annual conference, Schenectady, June 23-25. Mech Eng 69:708 Ag '47
Sixth International congress for applied mechanics. Engineering 162:398 O 25 '46

MECHANISM, Interchangeable. See Interchangeable mechanism

MECHANO-ELECTRONIC transducers
Mechano-electronic transducers. H. F. Olson. il diags Acoustical Soc Am J 19:307-19 Mr '47

MEDALS
First award of Industrial research institute medal goes to Willis R. Whitney. il Chem & Eng N 24:2911-12 N 10 '46
Franklin Institute 1947 medal day. Science 105:471 My 2 '47
Grondahl and Wight get Henderson medals; Franklin Institute's honors for contributions to art of railway signaling. Ry Age 122:708+ Ap 5 '47
I.E.S. medal presented to E. C. Crittenden at convention. Illum Eng 41:696-8 N '46
Medal day proceedings, Franklin institute. Franklin Inst J 244:73-89 Jl '47
Medals and awards. il Soc Dyers & Col J 63:5-7 Ja '47
1945 Samuel Wylie Miller memorial medalist; James F. Lincoln. il Welding J 25:1212 D '46
Peter J. Massey to receive TAPPI medal. Paper Tr J 124:53 Ja 16 '47
Presentation of citation and first gold-medal award of the American petroleum institute to Henry Ford. Am Pet Inst Proc 26(1): 69-70 '46
Presentation of TAPPI medal award to Peter J. Massey, by L. Beeman; response by Mr Massey. Paper Tr J 124:98-9 F 27 '47
Quick thinking and acting saves lives; EEI resuscitation awards prove. M. B. Woods. Edison Elec Inst Bul 15:87-93 Mr '47
S. P. Timoshenko awarded 1947 James Watt international medal. Mech Eng 69:338 Ap '47
United States newsletter; chemists singled out for notable accomplishments. C. J. Krister. Chem & Ind p370-2 Je 28 '47

See also
Chemical industry medal
Fritz, John, medal
Hoover medal
McGraw award
Olney medal
Perkin medal

MEDIATION board, National. See National mediation board

MEDICAL advertising

See also
Drug trade—Advertising
Medicines, Proprietary—Advertising

MEDICAL buildings
Medical-dental center, Oklahoma City. il plans diag Arch Rec 101:74-5 Ja '47

See also
Clinics
Health centers

MEDICAL centers
Wayne university medical center, Detroit. il plans Arch Rec 101:124-9 Je '47

See also
Health centers

MEDICAL colleges
Interim-progress report of a survey of undergraduate education in industrial medicine in medical colleges. E. W. Brown. Ind Med 16:389-91; Discussion. 391-4 Ag '47

MEDICAL colleges—*Continued*

Curriculum

Progress in the teaching of industrial medicine in American medical colleges. M. H. Kronenberg. Ind Med 16:387-9 Ag '47

MEDICAL corps. See United States—Army—Medical corps

MEDICAL departments

Layout

Medical departments in small plants; layout, equipment and cost. N. Millman. il plans Ind Med 16:174-80 Ap '47

MEDICAL economics

Mine doctors; contract practice. K. Barstow. Ind Med 16:101-3 F '47

MEDICAL education

See also
Medical colleges
Medicine—Study and teaching
Ophthalmology—Study and teaching
Public health—Study and teaching

MEDICAL ethics

Aspect of a code of ethics for workmen's compensation medical practitioners. W. L. Daily. Ind Med 15:654+ N '46

MEDICAL examinations. See Physical examinations

MEDICAL expense insurance. See Insurance, Medical expense

MEDICAL instruments and apparatus

Acrylic applicator. il Mod Plastics 24:194-5 Ag '47

Gasometer increases medical instrument safety; Insufflator designed by Charles Davies associates. il diags Product Eng 18:100-1 O '47

Medicine uses all types of plastics. il Mod Plastics 24:95-8 N '46

New method for the direct recording of prolonged time-dependent processes. W. von Wittern. il diag Science 105:342-4 Mr 28 '47

New rectal culture tube. J. Felsen. il Science 106:275 S 19 '47

Plastics improve medical accessories. il Mod Plastics 24:99-101 N '46

Tunnel clamp for use in controlling infusion rates. S. E. Bradley. diags Science 105: 214-15 F 21 '47

See also
Sphygmograph
Surgical instruments and apparatus

MEDICAL jurisprudence

Medical testimony in the courts and the Department of labor of Michigan. B. O. Shepherd. Ind Med 16:512+ O '47

MEDICAL laboratories

Fundamental research in the clinical specialties. V. E. Kinsey. Science 105:373-8 Ap 11 '47

Laboratory building for study of highly infectious diseases; National institute of health. il plan Eng N 139:460-3 O 2 '47

See also
Pharmaceutical laboratories
Public health laboratories

MEDICAL libraries

History of the library. 24p London univ. School of hygiene and tropical medicine, Keppel st, Gower st, London, W.C. 1 '47

List of medical libraries and information bureaux in the British Isles. W. R. Le Fanu. J Doc 2:119-46 D '46

Medical care second to none. M. L. Kent and M. M. Kinney. Special Lib 38:172-6 Jl-Ag '47

Medical treasures in the library of the American philosophical society; abstract. G. W. Corner. Science 106:120 Ag 8 '47

Preservation of historical records and the need of saving the ephemera of today. G. L. Annan. Special Lib 38:39-44 F '47

See also
United States—Army medical library

MEDICAL records

Cataloging X-ray experiences. F. J. Hodges. Pub Health Rep 68:1129-40 Ag 1 '47

Medical records. C. E. Martin. Ind Med 16: 228-35 My '47

MEDICAL research

American college of physicians offers limited number of research fellowships. Science 104: 538 D 6 '46

Committee on fellowships and awards of the American college of physicians. Science 105:428 Ap 25 '47

Committee on medical research of OSRD has announced final disposition of its accumulated records of research. Science 105:545 My 23 '47

Committee on scientific research of the American medical association; grants. Science 105:62 Ja 17 '47

Fellowships in the medical sciences. Science 104:509 N 29 '46

Fundamental research in the clinical specialties. V. E. Kinsey. Science 105:373-8 Ap 11 '47

Grant of $27,750 has been made to the University of Utah School of medicine. Science 104: 594 D 20 '46

Great impetus to progress; nucleonics to be life saver. N. J. Holter. Nat Underw (Life ed) 51:25 O 10 '47

Medical corps research and development. A. Leggin. il Chem & Eng N 25:168+ Ja 20 '47

Medical research in atmospheric environment; physical environment addition to research and educational hospitals at Chicago professional college campus. Science 104:467 N 15 '46

Medical research planned by Atomic energy commission. Chem & Eng N 25:2086-8 Jl 21 '47

New horizons in medical research. C. J. Van Slyke. Science 104:559-67 D 13 '46

Programs for medicine and national health in the USSR. S. Mudd. Science 105:269-73, 306-9 Mr 14-21 '47

Research and medical practice. E. W. Goodpasture. Science 104:473-6 N 22 '46

U.S. urged to increase medical research spending. Oil Paint & Drug Rep 152:3+ O 27 '47

Use of C^{13} and C^{14} in medical research. D. W. Wilson. Franklin Inst J 244:209-19 S '47

See also
Hygiene, Industrial—Research
Insurance, Life—Medical research
Pharmaceutical research

Finance

Financing cancer research. E. V. Cowdry. Science 105:53-7 Ja 17 '47; Reply. G. E. Wakerlin. 105:175 F 14 '47

MEDICAL service

Suggested plan for a preventive medical program in a Federal employees' health service. Pub Health Rep 61:1642-54 N 15 '46

See also
Clinics
Hospitals
Insurance, Health
United States—Public health service

Group and prepayment plans

A.M.A. council orders Wisconsin medical plan merger. Nat Underw 51:24 Je 19 '47; Same. Nat Underw (Life ed) 51:19 Je 20 '47

Arkansas doctors to sponsor state prepaid medical plan. Nat Underw 51:32 F 6 '47; Same. Nat Underw (Life ed) 51:16 F 7 '47

Budgeting the costs of illness. H. L. Plumley. (Studies in individual and collective security no. 1) 66p pa 50c National industrial conference board, 247 Park av, New York 17 '47

Mine doctors; contract practice. K. Barstow. Ind Med 16:101-3 F '47

Nevada new medical plan endorsed by physicians. Weekly Underw 156:971 Ap 5 '47

Prepaid medical care plans in Connecticut. C. B. Gibson. Weekly Underw 156:172 Ja 11 '47

Prepaid medical insurance under fire from Maine medical men. Weekly Underw 156: 845 Mr 22 '47

MEDICAL service—Group and prepayment plans—*Continued*
Stresses health education through voluntary hospital and medical care plans. J. E. Bryan. Weekly Underw 155:1434-5 D 14 '46
United medical service grants further increase in benefits. Weekly Underw 156:289 Ja 25 '47
Voluntary pre-payment plans of medical care; need for responsible insurance companies to enter this field; abstracts. T. V. McDavitt. East Underw 47:35 D 20 '46; Nat Underw (Life ed) 50:2 D 6 '46
Wisconsin doctors hire Milwaukee Surgical Care director; city group refuses to surrender. Nat Underw 50:15d D 12 '46; Same. Nat Underw (Life ed) 50:6 D 13 '46
Wisconsin's prepaid hospital plan; abstracts. N. E. Masterson. East Underw 47:31 N 29 '46; Nat Underw 50:15+ N 28 '46; Nat Underw (Life ed) 50:11 N 29 '46

Socialization

Socialized medicine. E. H. O'Connor; C. Frothingham. East Underw 48:32+ Ja 24 '47

MEDICAL service, College
Maintaining student health at M.I.T. D. L. Farnsworth. il Tech R 49:459-62+ Je '47

MEDICAL service, Industrial
Better use of laboratory procedures for more accurate diagnosis in industrial medicine. W. C. Dreessen and R. F. Sievers. Ind Med 15:621-6 N '46
Blueprint for industrial health. C. M. Peterson. Safety Eng 93:72-3 Mr '47
Chiropody and industry. N. D. Foote. Ind Med 16:355-6 Jl '47
Departmental integration brings top efficiency in safety and medical units. S. D. Steiner. il Safety Eng 93:62-5 Ap '47
Gynecological and obstetrical problems of the industrial physician. M. R. Burnell. Ind Med 16:478+ S '47
Health and safety on the credit side. J. C. Staehle. il Nat Safety N 56:38+ Ag '47
Health plan works; employer-financed medical service for St Louis members of retail union. Bsns W p88+ Ja 18 '47
Health project in small plants; advantages of group participation. Safety Eng 93:55 Je '47
How General Motors insures worker health in its 91 plants. il Factory Management 104:134-5 D '46
How the medical department helps a safety program. J. A. Hubata. il Safety Eng 94: 54-5+ Ag '47
Human relations; the key to good public relations. E. J. Knopf. Ind Med 16:499 O '47
Industrial medicine and surgery; abstracts of proceedings of annual meeting of Michigan association of industrial physicians and surgeons, Detroit, March 11, 1947. Ind Med 16:503+ O '47
Industrial medicine and surgery; abstracts of proceedings of midwinter scientific meeting of Central states society of industrial medicine and surgery, Dec. 6, 1946. Ind Med 16:238+ My '47
Industrial physician in the personnel program. D. F. Tver. Personnel J 26:30-2 My '47
Industrial physician is still practicing medicine. R. H. Wilson. Ind Med 16:284-6 Je '47
Mass immunization against influenza types A & B in an industrial plant; Bigelow-Sanford carpet co. B. S. Dignam. Ind Med 16:200+ Ap '47
Medical aspects of industrial safety. R. R. Bresler. Ind Med 16:397-400 Ag '47; Same. Nat Safety N 56:22-3+ S '47
Medical departments in small plants; layout, equipment and cost. N. Millman. il plans Ind Med 16:174-80 Ap '47
Medical service in the shoe industry in New Hampshire. D. W. Parker. il plan Ind Med 16:427-32 S '47
Medical supervision. Nat Safety N 55:183 Mr '47
Medical survey of the bituminous-coal industry. Mo Labor R 64:997-1002 Je '47
Minimum requirements for an industrial health program. P. A. Brehm. il Nat Safety N 54:34-5+ D '46; Same cond. Safety Eng 94:58-61+ Ag; 52-3 S '47
Modern concept of industrial hygiene. Safety Eng 93:55-6 F '47
Modernizing the dispensary; Heppenstall company. il Nat Safety N 55:22-3+ My '47
Recent experiments in medical service for small plants; abstract. F. E. Poole. Nat Safety N 56:58 S '47
Results of an industrial hygiene survey in a metropolitan area; abstract. R. H. Flinn. Ind Med 16:460 S '47
Role of the industrial physician. G. A. Wainwright. Ind Med 16:107-9 Mr '47
Sanitation in the food industry. P. A. Brehm. Safety Eng 94:90-1+ O '47
Silent values in industrial health. J. S. Felton. Ind Med 15:638-9 N '46
Standard Oil medical departments. Ind Med 356-7 Jl '47
Trends in industrial health administrative practices. C. O. Sappington. il Ind Med 16: 78+ F '47
Tropical diseases in industry. Z. T. Bercovitz. Ind Med 16:45-51 F '47
Unique medical centre; Mersey paper company. G. L. Scott. il Pulp & Pa of Can 48:63-5 S '47
What industry expects of medicine. H. Strong. Nat Safety N 55:52 Ja '47

See also
Dental service, Industrial
Diseases, Industrial
Eye—Examination
First aid in illness and injury
Hospitals, Industrial
Hygiene, Industrial
Nurses and nursing, Industrial
Physical examinations
Psychiatry, Industrial

Cost

Time and cost standards set in hygiene experiment. Ind Med 16:138+ Mr '47

History

Factory doctor's duties at an ironworks in 1724. H. R. Schubert. Iron & Steel Inst J 156:27-8 My '47

Study and teaching

Graduate course in industrial eye care at New York university College of medicine. Nat Safety N 55:86+ My '47
Interim-progress report of a survey of undergraduate education in industrial medicine in medical colleges. E. W. Brown. Ind Med 16:389-91; Discussion. 391-4 Ag '47
Progress in the teaching of industrial medicine in American medical colleges. M. H. Kronenberg. Ind Med 16:387-9 Ag '47

MEDICAL social work. See Social work, Medical

MEDICINE
See also
Anesthetics, Local
Antiseptics
Bacteriology
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Diseases
Drugs
First aid in illness and injury
Hospitals
Hygiene, Industrial
Infectious diseases
Medical service
Medical service, Industrial
Nurses and nursing
Physicians
Poisons
Public health
Surgery

Study and teaching

Adaptations and applications of 16-mm motion picture equipment to medical and scientific needs. M. W. La Rue and M. W. La Rue, jr. il diag Soc Motion Picture Eng J 49:241-7 S '47

Terminology

History of scientific English; the story of its evolution based on a study of bio-medical terminology. E. Andrews. 342p $7.50 Richard R. Smith, 120 E. 39th st, New York 16 '47

See also Insects as carriers of infection—Terminology

Russia

Programs for medicine and national health in the USSR. S. Mudd. Science 105:269-73, 306-9 Mr 14-21 '47

MEDICINE, Military
Internment-camp electrochemics. T. Haden. diags Chem & Ind p625-7 O 11 '47

MEDICINE, Military—*Continued*
Thousands of combat wounded lives saved; Metropolitan Life compares situation in World war II with that in previous wars. East Underw 48:16 Mr 28 '47

See also
United States—Army
—Medical and sanitary affairs

MEDICINE, Preventive
Suggested plan for a preventive medical program in a Federal employees' health service. Pub Health Rep 61:1642-54 N 15 '46

MEDICINES, Proprietary
Two cold cures. Consumers Res Bul 20:29-30 O '47

See also
Proprietary association of America

Advertising

Old-timer stages come-back; Ripans, originated by G. P. Rowell, still sells. Ptr Ink 218:46-7 F 28 '47

MEEHANITE
Meehanite; types, characteristics, uses, fabrication, etc. Machine Design 19:147-50 My '47

Permanent mold material. O. Smalley. il Steel 120:108+ F 3 '47

Tin coating meehanite. il Iron Age 159:57 Je 26 '47

MEEKS, Everett Victor, 1879-
Arbiter of the arts at Yale school of fine arts. por Arch Forum 86:74-6+ Je '47

MEGAVOLT research association
European electron induction accelerators. H. F. Kaiser. bibliog il diags J Ap Phys 18:3-11 Ja '47

MEGGERS. See Ohmmeters

MEINEL, William John, 1893-
Sketch. por(cover) Bsns W p8 Ag 9 '47

MEIOSIS. See Cell division (biology)

MEISSNER, Fred
Portrait. Fortune 36:91 S '47

MELAMINE
Absorption spectra and tautomerism of cyanuric acid, melamine and some related compounds. I. M. Klotz and T. Askounis. bibliog Am Chem Soc J 69:801-3 Ap '47

Cyanamide and melamine; the French process. Chem Age (Lond) 57:507 O 11 '47

Dissociation constants of melamine and certain of its compounds. J. K. Dixon, N. T. Woodberry and G. W. Costa. bibliog Am Chem Soc J 69:599-603 Mr '47

Nitration of melamine and of triacetylmelamine. J. Cason. Am Chem Soc J 69: 495-8 Mr '47

MELAMINE resins
Creep, long time tensile and flexural fatigue properties of melamine and phenolic-plastics. D. Telfair and others. bibliog A S M E Trans 69:789-93 O '47; Same. Mod Plastics 24:151-2+ My '47

Experimental manufacture of paper for war maps. C. G. Weber and M. B. Shaw. bibliog Paper Ind 28:1137-40 N '46; Same. J Res Nat Bur Stand 37:325-30 D '46

Melamine helps protect transformers; eight-cavity transfer mold. il Mod Plastics 24: 119 My '47

Melamine soda fountain jars are useful and sanitary. il Mod Plastics 24:96-8 Jl '47

Process cuts wrinkling in cotton fabrics; Monsanto's Resloom. C. Bsns W p43 S 6 '47

Repulping of melamine resin-treated wet-strength paper. D. D. Niemeyer and L. V. Forman. bibliog diag Paper Tr J 124:49-56 Ap 3 '47; Same cond. Paper Ind 29:1030-5 O '47

Resin-treated papers provide wet strength to wrappers. J. V. Ziemba. il Food Ind 19:612-13 My '47

Study of wet-strength mechanism; the effect of melamine resin on the bonding of paper fibers. D. J. Salley and A. F. Blockman. bibliog Paper Tr J 125:35-40 Jl 3 '47

Textile resins; including melamine treatment of wool. W. H. Jaeger. Am Dyestuff Rep 36:352-4 Je 30 '47

Three plastics add to beauty, usefulness of cookware line. il Mod Plastics 25:106-8 S '47

Urea and melamine resin products; properties and applications. M. H. Bigelow and J. A. Murray. il diags Product Eng 18:140-5 Ag '47

MELANINE
Constitution of melanin. H. Burton. Chem & Ind p383 Jl 5 '47

MELIBIOSE
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47

MELLON, Richard King, 1899-
Pittsburgh's new powers; bent upon rebuilding the city. por Fortune 35:69-77+ F '47

MELLON family
Pittsburgh's new powers; bent upon rebuilding the city. il Fortune 35:69-77+ F '47

MELLON institute of industrial research. See Pittsburgh university. Mellon institute of industrial research

MELTING points
History of a melting point. R. Macy. J Chem Educ 24:222 My '47

Illuminator for melting-point blocks. T. J. Haley. diag Science 105:604 Je 6 '47

Improvised hot-stage melting-point apparatus. W. Klyne and J. Rankeillor. diags Chem & Ind p224-5 Ap 26 '47

Melting point bath liquids useful up to 440° C. L. M. White. bibliog il Anal Chem. 19: 432-3 Je '47

Melting point calorimeter for purity determinations. J. G. Aston and others. bibliog il diag Anal Chem 19:218-21 Ap '47

Polymorphism of triolein. R. H. Ferguson and E. S. Lutton. bibliog pl Am Chem Soc J 69:1445-8 Je '47

Simple micro-melting-point apparatus. E. J. Hewitt. diag Chem & Ind p42 Ja 18 '47

Thermodynamics of crystallization in high polymers; dependence of melting points of polyesters on molecular weight and composition. R. D. Evans and others. J Chem Phys 15:685 S '47

Thermodynamics of crystallization in high polymers; simplified derivation of melting-point relationships. P. J. Flory. J Chem Phys 15:684 S '47

X-ray analysis of chromium-molybdenum and chromium-tungsten alloys. W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47

See also
Freezing points

MELVILLE shoe corporation
Thumbnail stock appraisal. Mag of Wall St 79:313 D 21 '46

MEMBRANES
Cultivation of microorganisms with the aid of cellophane membranes. G. W. Harmsen and W. J. Kolff. diags Science 105:582-3 My 30 '47

Electrochemistry of permselective collodion membranes. K. Sollner and H. P. Gregor. bibliog J Phys Chem 50:470-6 N '46; [cont as] J Phys & Colloid Chem 51:299-311 Ja '47

Studies on the permeability of mammalian membranes; abstract. L. B. Flexner. Science 105:635 Je 20 '47

Use of membrane electrodes in the study of soap solutions. C. W. Carr, W. F. Johnson and I. M. Kolthoff. bibliog J Phys & Colloid Chem 51:636-44 My '47

MEMPHIS, Tennessee

Bridges

Piers sunk by open-well dredging for Mississippi River bridge at Memphis. il diags Eng N 138:449-54 Mr 20 '47

MENASCO manufacturing company
Menasco pares production to concentrate on jet engines. Aviation N 7:15 Je 30 '47

MENDELSOHN, Erich, 1887-
Temples; Eric Mendelsohn's designs for Cleveland and St Louis. por Arch Forum 86:73-7 My '47

MENINGITIS
Development of streptomycin-resistant variants of meningococcus. C. P. Miller and M. Bohnhoff. bibliog Science 105:620-1 Je 13 '47

MEN'S furnishing goods
See also
Neckties

MEN'S stores
Front of gold with dual meaning; Eddy Harth's Beverly Hills, Calif. il plan Arch Rec 101:102-3 My '47
Haberdashery's splayed glass front adds footage to a distinguished design; Whitehouse & Hardy, New York. il plans diags Arch Forum 87:88-9 Ag '47
See also
Tailor shops

MEN'S suits
Worsted on way. Bsns W p22 My 24 '47

MENSTRUATION
Dysmenorrhea in industry; treatment with a new antispasmodic. F. A. Viggiano. bibliog Ind Med 15:632-5 N '46
Edrisal in the management of dysmenorrhea. C. F. Long. Ind Med 15:679-81 D '46
Hyperinsulinism of menses. H. E. Billig, jr. and C. A. Spaulding, jr. bibliog Ind Med 16:336-9 Jl '47

MENSURATION
See also
Metric system
Surveying

MENTAL diseases
Schizophrenia strikes one or two per cent of the population of United States. H. D. Goodale. Science 106:12 Jl 4 '47
See also
Neuroses
Psychology, Pathological

MENTAL hospitals. See Hospitals, Psychiatric

MENTAL hygiene
Mental hygiene in public health. P. V. Lemkau. Pub Health Rep 62:1151-62 Ag 8 '47
Programs for medicine and national health in the USSR. S. Mudd. Science 105:269-70 Mr 14 '47
Relation of the National mental health act to state health authorities. R. H. Felix. Pub Health Rep 62:41-9 Ja 10 '47
State planning for participation in the National mental health act. R. H. Felix. Pub Health Rep 62:1183-91 Ag 15 '47
See also
Neuroses

MENTAL hygiene, Industrial
Industrial physician in the personnel program. D. F. Tver. Personnel J 26:30-2 My '47

MENTAL hygiene clinics
Directories
Directory of psychiatric clinics in the United States and other resources, 1946. 78p pa 50c National committee for mental hygiene, 1790 Broadway, New York 19 '46

MENTHOL
Synthesis of racemic menthol. W. R. Brode and R. W. Van Dolah. bibliog Ind & Eng Chem 39:1157-60 S '47

MEPACRINE. See Atebrin

MERCANTILE buildings. See Store buildings

MERCANTILE insurance company of America
Fiftieth anniversary. East Underw 48:1+ Jl 25 '47

MERCAPSOL process. See Gasoline—Manufacture

MERCAPTANS
Conversion of certain mercaptans into acetates and sulfides. T. P. Dawson. Am Chem Soc J 69:1211-12 My '47
2 : 3-Dimercaptopropanol (British anti-lewisite) and related compounds. L. A. Stocken. Chem Soc J p592-5 My '47
Homogenizing apparatus for removing mercaptans; patent. diag Pet Processing 2: 540-1 Jl '47
Mercaptans as modifiers; abstract. I. M. Kolthoff and W. E. Harris. Mod Plastics 24:154 Ag '47
Preparation and properties of thiol-esters. C. E. Dalgliesh and F. G. Mann. Chem Soc J p559-60 Ap '47
Removal of mercaptans from gasoline; Old Dutch refining company. il Pet Refiner 26: 113-14 Ja '47
• Series of ω-alkylmercapto and ω-alkylsulfonyl acids. L. Rapoport, A. Smith and M. S. Newman. bibliog Am Chem Soc J 69:693-4 Mr '47
Unisol mercaptan extraction process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:280-1 Ap '47

MERCAPTOACETIC acid
Action of thioglycolic acid and thioglycolates on animals after subcutaneous introduction. C. P. McCord and others. Ind Med 16: 62-5 F '47
Addition of thio-compounds to olefins; reactions of thioglycollic acid, thiophenol, and *iso*pentanethiol. J. I. Cunneen. Chem Soc J p36-40 Ja '47
Physiologic properties of thioglycolic acid and thioglycolates. C. P. McCord. Ind Med 15: 669-76 D '46

MERCAPTOAMINES
Some aliphatic thiols and their derivatives; aliphatic mercaptoamines. J. Harley-Mason. Chem Soc J p320-2 Mr '47

MERCAPTOBENZOIC acid
Alkamine esters and amides of some aminoalkylmercaptobenzoic acids. J. J. Donleavy and P. C. Condit. bibliog Am Chem Soc J 69:1781-4 Jl '47

MERCAPTOBENZOTHIAZOLE
Use of corrosion inhibitors in products pipe lines. I. M. Parker. bibliog Am Pet Inst Proc 26(5):26-36 '46

MERCAPTO compounds
bis-(2-Chloroethylmercapto)-alkanes. T. P. Dawson. Am Chem Soc J 69:1176 My '47
Direct thiation of uracils. G. B. Elion and G. H. Hitchings. bibliog Am Chem Soc J 69:2138-9 S '47
Metal salts of 2-mercapto-4-phenyl-Δ^2-1,3,4-thiadiazoline-5-thione. G. W. Watt and M. E. Boyd. Am Chem Soc J 69:185 Ja '47
Series of ω-alkylmercapto and ω-alkylsulfonyl acids. L. Rapoport, A. Smith and M. S. Newman. bibliog Am Chem Soc J 69:693-4 Mr '47

MERCAPTOLS
Some steroid mercaptols. H. Hauptmann. bibliog Am Chem Soc J 69:562-6 Mr '47

MERCAPTOPROPIONIC acid
Addition of thio-compounds to olefins; reactions of thiolacetic and mono-, di-, and tri-chlorothiolacetic acids. J. I. Cunneen. Chem Soc J p 134-41 F '47

MERCAPTOPYRIMIDINE
Theory of reactions of cells to goitrogenic thiopyrimidines. L. Laufer and E. D. Stewart. bibliog Science 105:327-8 Mr 28 '47

MERCERIZING
Cleanliness is essential to quality winding; electrostatic cleaning of air; Dixie mercerizing co. P. M. Thomas. il Textile World 97:120-1 Ag '47
See also
Durene association of America

MERCHANDIZE cards
Carded merchandise. il Mod Packaging 20: 93-8 Je '47
Cards act as salesmen in self-service outlets. C. J. Swan. il Ptr Ink 218:39-41 Ja 10 '47

MERCHANDIZING
Carrying through a good idea; job is not finished till it is merchandised; toy washing machine. il Mod Plastics 24:117-18 Mr '47
Distribution without frills at Philco. W. A. McGarry. il Am Bsns 17:22-4+ Mr '47

MERCHANDIZING—*Continued*
Fire more shots at more targets to beat greater competition; profitable marketing, merchandising and advertising strategy calls for recognition of three vital multiples. H. L. Roth. Ptr Ink 219:35-7+ Ap 4 '47
Get them to see, pick up and read your package; 59 varieties of complementary ideas. F. L. McKibbin, jr. il Ptr Ink 221: 38-40 O 17 '47
Golden touch; Kroger's district manager Bracy. Bsns W p17-18 Ja 25 '47
How your host got his name on the cocktail napkins; Monogram company of California. il Sales Management 58:72-4+ Ap 1 '47
Keep your merchandising plans in tune with America's changing markets. L. J. McCarthy. il Ptr Ink 221:33-5 O 10; 41-3 O 17; 50+ O 24 '47
Merchandising trends; knitwear manufacturer looks forward to revitalization of merchandise quality and design. N. E. Handler. J Retailing 22:105-8 D '46
Puckett of Allied Stores. il map Fortune 35:122-5+ Mr '47
Rags to riches with Eversharp: a story of selling courage. T. Armstrong. Sales Management 58:48+ Ja 15 '47
Technical merchandising of paper. J. W. Crosson. Paper Tr J 125:46-8 Jl 10 '47
Wholesaling on borrowed time; Ely & Walker. il Fortune 36:122-5+ N '47
Your selling plans must be keyed to your outlets. il Mod Plastics 24:102-5 My '47

See also
Advertising
Buying habits
Catalogs
Chain stores
Clubs, Merchandizing
Delivery of goods
Department stores—Management
Display of merchandize
Electric apparatus and appliances—Merchandizing
Exhibits
Fashion
Gas industry—Merchandizing
Gasoline service stations—Side line selling
Jobbers
Mail order business
Marketing
Package goods
Premiums (merchandizing)
Price policies
Purchasing
Retail trade
Returned goods
Sales management
Sales promotion
Self service
Showrooms
Special sales
Specialties (merchandizing)
Warehousing

Definition
By way of definition. Aesop Glim. Ptr Ink 217:107+ N 8 '46; 218:51-3 Ja 3; 50+ Ja 31 '47

MERCHANT marine
Projected size of merchant fleets. Marine Eng 52:71 O '47
Status of world merchant tonnage. Marine Eng 51:81-4 N '46

See also
Harbors
Insurance, Marine
Seamen
Shipping
Steamboat lines
also Association technique maritime et aéronautique

Argentina
Shipbuilding orders placed by Argentina. For Comm W 28:25 S 20 '47

France
French shipping reconstruction. Economist 151:716 N 2 '46

Norway
Norway schools adopt 100 merchant ships. For Comm W 26:15 Ja 11 '47
Replacement in the shipping industry; Norwegian mercantile marine, 1932-39. J. Einarsen. R Econ Stat 28:225-30 N '46

United States
American Legion program for a strong merchant marine; resolution. Marine Eng 52: 88-9 O '47
American shipping slumbers. J. L. Luckenbach. Weekly Underw 156:467+ F 15 '47
Essential foreign trade routes. Marine Eng 51:70-4 D '46
Our lack of passenger ships. Marine Eng 52: 54-9 Ap '47
Passenger ships recommended for United States essential services; with cost estimates. Marine Eng 52:55-60 Jl '47
Report on the merchant marine. W. W. Smith. Marine Eng 51:86-8 N '46
Ship lines offer speedier passenger fleets. P. A. Johnston. Barron's 26:9+ D 30 '46
Shipowners recommend clarification of Merchant marine act of 1936. Marine Eng 52: 84 Je '47
Status of American merchant shipping. F. J. Taylor. Marine Eng 52:102+ Ja '47
Strong American merchant fleet declared essential to welfare of nation. J. A. Farrell, jr. and others. Weekly Underw 156:1476-7 My 31 '47
Truman names group to study merchant marine. Comm & Fin Chr 165:1568 Mr 20 '47

See also
Shipping—United States
United States—Maritime commission

MERCHANT ship sales act of 1946
Progress in selling the government fleet. P. M. Zeis. il Dom Comm 35:34-40 Mr '47
Vessels sold under provisions of Merchant ship sales act of 1946. Marine Eng 52: 58-62 F '47

MERCHANTS

Insurance requirements
Fire insurance for merchants. J. D. Phelan and others. Rough Notes 90:19-24+ Ap '47
How English merchants are insured with one package policy. Rough Notes 90:15-16 Ap '47

MERCK, George Wilhelm, 1894-
Chemical industry medal awarded to G. W. Merck. Oil Paint & Drug Rep 152:5 O 6 '47
Portrait. Fortune 35:106 Je '47
Sketch. por(cover) Chem & Eng N 25:3217 N 3 '47

MERCK and company
Eighth chemical engineering award goes to Merck for work on streptomycin. Chem Eng 54:179 O '47
Merck means over twelve hundred fine chemicals. il pors Fortune 35:104-11+ Je '47

MERCK fellowship board. See Scholarships and fellowships

MERCURATION
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 69: 773-85 Ap '47
Mercuration of benzene with mercuric nitrate. A. A. Morton and others. bibliog Am Chem Soc J 69:908-11 Ap '47
Methoxymercuration of cyclohexene. J. Romeyn and G. F. Wright. Am Chem Soc J 69:697-701 Mr '47

MERCURY
Alternate method of cleaning mercury. L. Segal. diag Science 105:625 Je 13 '47
Design of mercury delay lines for radar, computers, and memory devices. T. K. Sharpless. il diags Electronics 20:134-6+ N '47
Mercury and ammonia; an explosion hazard. J. J. Sampey. Chem & Eng N 25:2138 Jl 28 '47; Same. Refrig Eng 54:349 O '47
Mercury memory tanks in new EDVAC computer. diag Electronics 20:168+ My '47
Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46
Propagation of u. h. f. in mercury. G. R. Ringo and others. Phys R 72:87-8 Jl 1 '47
Quenching and depolarization of mercury resonance radiation by nitrogen and oxygen. L. O. Olsen and G. P. Kerr, jr. Phys R 72:115-17 Jl 15 '47
Ruben cell, a new alkaline primary dry cell battery. M. Friedman and C. E. McCauley. il diags Electrochem Soc Trans 92 (preprint 6):81-100 '47

MERCURY—*Continued*
Specular reflection from mercury vapor. J. M. Hansen and H. W. Webb. diags Phys R 72: 332-9 Ag 15 '47

Analysis

Analysis of mixtures of mercurous and mercuric mercury and sulfuric acid. B. Warshowsky and P. J. Elving. bibliog Anal Chem 19:112-14 F '47

Determination of mercury in air. E. C. Barnes. bibliog J Ind Hygiene 28:257-61 N '46

Determination of mercury in biological material. F. L. Kozelka. diag Anal Chem 19: 494-6 Jl '47

Determination of mercury in organic and inorganic compounds; stannous chloride reduction method. J. N. Bartlett and W. M. McNabb. bibliog diags Anal Chem 19:484-7 Jl '47

Leaching rate tests on anti-fouling compositions; testing method for inland stations. N. W. Hanson and R. F. Jervis. diag Soc Chem Ind J 65:329-33 N '46

Precipitation of mercuric chloride with dithiane. J. B. Schroyer and R. M. Jackman. J Chem Educ 24:146-8 Mr '47

Isotopes

Concentration of the isotopes of mercury by free evaporation in a 10-cell counter-current reflux still. A. K. Brewer and S. L. Madorsky. bibliog diags J Res Nat Bur Stand 38:129-35 Ja '47

Neutron cross sections for mercury isotopes. M. G. Inghram and others. Phys R 71:561-2 Ap 15 '47

Production of Hg^{198} as a possible source of an improved wave-length standard; transmutation of gold. J. H. Wiens. bibliog il Phys R 70:910-14 D 1 '46

MERCURY arc rectifiers. See Electric rectifiers

MERCURY cells. See Electrolytic cells

MERCURY chlorides
Banding of basic mercuric chloride in silica gel. R. I. Rush and others. il J Chem Educ 24:238-9 My '47

Furan arsenicals. J. F. Morgan and others. Am Chem Soc J 69:932-3 Ap '47

Precipitation of mercuric chloride with dithiane. J. B. Schroyer and R. M. Jackman. J Chem Educ 24:146-8 Mr '47

MERCURY compounds
Action of some organomercury complexes in the prevention of wheat decay; abstract. G. B. Marini-Bettolo and G. Borzini. Chem Eng 54:288+ Ap '47

Organic mercurials as disinfectants. J. P. O'Brien. bibliog Soap & San Chem 22: 141+ D '46

Oxynitration of benzene; studies relating to the reaction of mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47

Pyridylmercuric acetate as a prophylactic in fisheries management. W. M. Van Horn and M. Katz. Science 104:557 D 6 '46

MERCURY dimethyl
Detection of free radicals in hydrogen atom reactions. G. M. Harris and A. W. Tickner. J Chem Phys 15:686-7 S '47

MERCURY diphenyl
Aromatic substitution; the cleavage of diphenylmercury. A. H. Corwin and M. A. Naylor, jr. bibliog Am Chem Soc J 69:1004-9 My '47

MERCURY electrodes. See Polarography

MERCURY industry and trade
Industry viewpoint of metal subsidies, tariffs and stockpiling. S. H. Williston. Min Cong J 32:67-8 O '46

Mercury imports force domestic mines to close. Steel 120:82 Je 23 '47

Outlook for quicksilver. S. H. Williston. il Min Cong J 33:94-5 F '47

Statistics

Mercury, 1946. H. M. Meyer. Eng & Min J 148:81 F '47

MERCURY iodate
Chloride determination by mercurous iodate. K. Avaliani. Chem Age (Lond) 56:518 Ap 26 '47

MERCURY iodide
See also
Nessler's reagent

MERCURY mines and mining

Placer mining

Almaden placer yields cinnabar-rich gravels. E. H. Bailey and D. L. Everhart. il map Eng & Min J 148:77-9 Je '47

Alaska

Mercury deposits of southwestern Alaska. B. S. Webber and others. 28pls U S Bur Mines Rep of Invest 4065:1-57 '47

California

Almaden placer yields cinnabar-rich gravels. E. H. Bailey and D. L. Everhart. il map Eng & Min J 148:77-9 Je '47

Underground mechanization at New Idria. C. H. Lewis. il diag Min Cong J 33:21-4 My '47

Mexico

Geology of the Cuarenta mercury district, state of Durango, Mexico. D. Gallagher and R. P. Siliceo. map diag U S Geol S Bul 946-F:155-68, pl 51; pa 30c Supt. of doc. '46

Quicksilver-antimony deposits of Huitzuco, Guerrero, Mexico. J. F. McAllister and D. H. Ortiz. il map diags U S Geol S Bul 340-B:49-71, fold maps(pl 7-24); pa 75c Supt. of doc. '45

Texas

Terlingua mercury deposit, Brewster and Presidio counties. A. M. Evans and W. M. Traver, jr. U S Bur Mines Rep of Invest 3995:1-10 '47

United States

Quicksilver production uncertain as demand increases. il Min & Met 27:582 D '46

MERCURY nitrate
Mercuration of benzene with mercuric nitrate. A. A. Morton and others. bibliog Am Chem Soc J 69:908-11 Ap '47

MERCURY oxycyanide
Chemical sterilization of bacteriological media by means of mercuric oxycyanide and subsequent inactivation of the mercurial by thioglycolate. N. Grossowicz and D. Kaplan. bibliog Science 105:237 F 28 '47

MERCURY phosphates
See also
Ethyl mercury phosphates

MERCURY poisoning
Causes et prévention de l'empoisonnement par le mercure métallique et ses composés. F. Barillet. Génie Civil 124:236 Je 15 '47

Hazards in the use of mercury compounds in treating seeds. H. F. Schulte. Ind Med 16:443-4 S '47

Mercury; hazards and precautions. Nat Safety N 55:39-40+ Ja '47

Toxicity of chemicals in electroplating; mercuric salts. P. M. Van Arsdell. Metal Finishing 45:82-3 S '47

MERCURY turbines
For greater topping power use efficient mercury-steam cycle. C. G. Adams and J. B. McClure. il diag Power 91:10-14 Ja '47

MERCURY vapor electric lamps. See Electric lamps, Mercury vapor

MERGERS. See Business consolidations

MERIT rating. See Employees—Rating

MERLUCCIUS capensis, Cast. See Stockfish

MERRIAM, John Campbell, 1869-1945
Memorial. C. Stock. por(pl 9) Geol Soc Proc 1946:183-97 bibliog(p187-97) Jl '47

MERSOL
Development of Mersol. Soap & San Chem 23:81+ Ap '47

German synthetic fats; abstract. Soap & San Chem 23:69 Ag '47

MERSOL—*Continued*
Mersolate detergents; their production and blending with soaps. H. Groninger. Soap & San Chem 23:40-2+ Jl '47

MESAMOLL
Mesamoll plasticizers for polyvinyl chloride. Mod Plastics 24:151-6+ Mr '47

MESANTOIN
Mesantoin vs. dilantin. Chem & Eng N 25: 1888 Je 30 '47

MESCALINE sulfate
Ultraviolet absorption spectra of mescaline sulfate and β-phenylethylamine sulfate. K. Salomon and A. F. Bina. Am Chem Soc J 68:2403 N '46

MESITYL oxide
Acid-base catalysis in non-aqueous solvents; isomerisation of methyl mesityl oxide oxalate in chlorobenzene solution at 99°. R. P. Bell and S. M. Rybicka. Chem Soc J p24-31 Ja '47
Infrared and ultraviolet absorption spectra of two isomers of mesityl oxide. H. F. Gray, jr., R. S. Rasmussen and D. D. Tunnicliff. Am Chem Soc J 69:1630-1 Jl '47
Isolation and purification of two isomers of mesityl oxide. F. H. Stross, J. M. Monger and H. de V. Finch. bibliog Am Chem Soc J 69:1627-8 Jl '47

MESITYLENE
(Perhaloalkyl)benzenes; fluorinated derivatives of mesitylene. E. T. McBee and R. E. Leech. Ind & Eng Chem 39:393-4 Mr '47

MESONS. See Mesotrons

MESOTRONS
Average specific ionization of cosmic-ray mesons in hydrogen, helium, and argon. L. L. Skolil. bibliog diags Phys R 70:619-24 N 1 '46
Capture of negative mesotrons in matter. E. Fermi and E. Teller. Phys R 72:399-408 S 1 '47
Change of the mean life of negative mesotrons. H. K. Ticho and M. Schein. bibliog Phys R 72:248-9 Ag 1 '47
Decay of mesons stopped in light materials. T. Sigurgeirsson and A. Yamakawa. diag Phys R 71:319-20 Mr 1 '47
Decay of negative mesotrons in matter. E. Fermi and others. Phys R 71:314-15 Mr 1 '47
Disintegration of negative mesons. M. Conversi and others. bibliog diag Phys R 71: 209-10 F 1 '47; Correction. 71:557 Ap 15 '47
Disintegration of slow mesons stopped in an iron plate. M. Conversi and O. Piccioni. bibliog diags Phys R 70:874-81 D 1 '46
Effect of Pais' *f*-field on the symmetry of the meson field part of nuclear Hamiltonian. P. R. Zilsel and others. bibliog Phys R 72: 225-8 Ag 1 '47
Fine structure of zenithal curves of the cosmic radiation. G. Cocconi and V. Tongiorgi. bibliog Phys R 70:850-2 D 1 '46
γ-Instability of mesons. R. J. Finkelstein. Phys R 72:415-22 S 1 '47
Interaction between meson and nucleon. C. L. Critchfield. bibliog Phys R 71:908-9 Je 15 '47
Latitude effect of the hard component as a function of altitude. P. S. Gill and others. bibliog diag Phys R 72:733 O 15 '47
Mass and the disintegration products of the mesotron. C. D. Anderson and others. bibliog il Phys R 72:724-7 O 15 '47
Mass of cosmic-ray mesotrons. W. B. Fretter. bibliog il diags Phys R 70:625-32 N 1 '46
Mass of the mesotron as determined by cosmic-ray measurements. D. J. Hughes. bibliog Phys R 71:387-92 Ap 1 '47
Mean life of mesotrons at an altitude of 11,500 ft. H. K. Ticho. diag Phys R 72:255-6 Ag 1 '47
Mean life of slow mesons. M. Conversi and O. Piccioni. bibliog diags Phys R 70:859-73 D 1 '46
Mean lifetime of the meson. G. Cocconi and V. Tongiorgi. bibliog diags Phys R 70:855-9 D 1 '46
Measurement of the slow meson intensity at several altitudes. B. Rossi and others. bibliog diags Phys R 72:120-5 Jl 15 '47
Mechanism of capture of slow mesons. J. A. Wheeler. Phys R 71:320-1 Mr 1 '47
Meson production. W. Horning and W. Weinstein. Phys R 72:251 Ag 1 '47
Meson theory of nuclear forces. L. L. Foldy. bibliog Phys R 72:125-30 Jl 15 '47
Multiple scattering and the mass of the meson. H. A. Bethe. bibliog diags Phys R 70:821-31 D 1 '46
Nuclear capture of mesons and the meson decay. B. Pontecorvo. bibliog Phys R 72: 246-7 Ag 1 '47
Origin of the soft component of cosmic radiation. W. Heitler and S. Power. bibliog Phys R 72:266-72 Ag 15 '47
Probability of nuclear meson-absorption. G. Gamow. bibliog Phys R 71:550-1 Ap 15 '47
Production of cosmic-ray mesotrons by primary protons. M. Schein and J. Steinberger. Phys R 72:734-5 O 15 '47
Production of mesotrons by nuclear bombardment. W. G. McMillan and E. Teller. bibliog Phys R 72:1-6 Jl 1 '47
Production of mesotrons up to 30,000 feet at a magnetic latitude of 20° north. P. S. Gill. diag Phys R 71:82-4 Ja 15 '47
Production process of mesons. V. F. Weisskopf. Phys R 72:510 S 15 '47
Proposed detector for high energy electrons and mesons. I. A. Getting. diags Phys R 71:123-4 Ja 15 '47
Recent research in meson theory. G. Wentzel. bibliog Rs Mod Phys 19:1-18 Ja '47
Search for the transmutation products of gamma-meson reactions induced by 100-Mev X-rays. N. A. Bonner and others. bibliog il diag Phys R 71:511-20 Ap 15 '47
Some mesotron observations by simultaneous registration at two stations. F. A. Benedetto. bibliog Phys R 70:817-20 D 1 '46
Two-meson hypothesis. R. E. Marshak and H. A. Bethe. bibliog Phys R 72:506-9 S 15 '47
Vector mesotron. J. H. Bartlett. Phys R 72: 219-24 Ag 1 '47

MESQUITE gum
Constitution of mesquite gum; partial hydrolysis of mesquite gum. E. V. White. Am Chem Soc J 69:622-3 Mr '47

MESTA machine company
Thumbnail stock appraisal. Mag of Wall St 79:260 D 7 '46

MESYLOXY group
Direct replacement of the mesyloxy group by cyanide. M. Zief, H. G. Fletcher, jr. and H. R. Kirshen. Am Chem Soc J 68: 2743-4 D '46

METABOLISM
Application of metabolite antagonism to cancer research. D. M. Greenberg and M. P. Schulman. bibliog Science 106:271-2 S 19 '47
Fat absorption and metabolism; abstract. A. C. Frazer. Chem & Ind p438-9 D 7 '46
Improved alcohol check for rat metabolism apparatus. I. Goodman and R. G. Gustavson. diag Science 105:215 F 21 '47
Improved oxygen absorption bulb for the Carpenter-Haldane gas analysis apparatus. I. Goodman and R. G. Gustavson. diag Science 105:264 Mr 7 '47
Metabolism of polycyclic compounds; configuration of the dihydroxydihydroanthracenes produced from anthracene. E. Boyland and C. W. Shoppee. Chem Soc J p801-4 Je '47
Methionine metabolism and α-aminobutyric acid. C. E. Dent. Science 105:335-6 Mr 28 '47
Role of the liver in guanidoacetic acid metabolism in man. H. D. Hoberman and others. bibliog Science 104:619-20 D 27 '46

METAL box company, limited
Statement by the chairman at annual ordinary general meeting. R. Barlow. Economist 153:173 Jl 26 '47

METAL casting. See Foundry practice

METAL clad wood. See Wood, Metal clad

METAL cleaning
Application of metallic coatings. R. Mansell. il Metal Finishing 45:64-5 My; 91-3 Je '47
Bright zinc plating cuts costs at Philco plant. C. W. Smith. il Iron Age 160:46-50 Jl 10 '47

METAL cleaning—*Continued*
Chemical surface treatment of magnesium alloy sheet for spot welding. W. F. Hess and others. Welding J 26:sup170-90 Mr '47
Cleaning and polishing cloths. M. A. Lesser. bibliog Soap & San Chem 23:129-31+ F '47
Diphase metal cleaners; relation of detergent performance to emulsion cleaner stability; abstract. I. Reich and F. D. Snell. Soap & San Chem 23:42-3 O '47
Finishing magnesium alloys. A. G. Gray. il diags Steel 120:82-3+ Je 9 '47
How to clean metals. H. S. Wharen. diags Am Mach 91:109-24 N 6 '47
How to clean welds. T. L. Adas. il Iron Age 159:44-6 F 27 '47
Improved metal cleaning agents and equipment. il Materials & Methods 25:150-3 Je '47
Machine removes scale from welded axle housings. Comp Air Mag 52:230 S '47
Mechanism of metal cleaning. S. Spring and L. F. Peale. il Metal Prog 51:102-6 Ja '47
Metal cleaning; methods and results. J. R. Ewing. il Steel 120:100-1+ My 5 '47; Same. Metal Finishing 45:82-4 O '47
New equipment. il Iron Age 158:87-90 D 5 '46; 159:65-70 F 20; 70-2 Mr 27 '47
Nickel and high nickel alloys; cleaning and pickling. N. E. Woldman. Materials & Methods 24:1488 D '46
Obstacle in cleaning drawing compounds from enameling iron. W. H. Pfeiffer and V. A. Williamitis. Am Cer Soc J 30:90-4 Mr '47
Postwar metal cleaning methods. L. De Waltoff. Metal Prog 50:1064-5 N '46
Preparation of metals for painting. R. E. Gwyther. il Water & Sewage Works 94: R72-3 Jl '47; Same cond. Product Eng 18: 153-5 Mr '47
Preweld cleaning. W. J. Campbell. Steel 120: 96+ Ap 7 '47
Principles of metal cleaning. J. C. Harris. il Metal Prog 50:1063-4 N '46
Propose new federal specs for metal cleaners. Soap & San Chem 23:77 Je '47

See also
Aluminum—Cleaning
Bearings—Cleaning
Castings—Cleaning
Degreasing
Polishing materials
Sand blast

METAL coated paper. See Paper, Metal coated

METAL coating
Accident prevention through metallizing. W. C. Reid. il diag Safety Eng 92:16-17+ D '46
Application of metallic coatings. R. Mansell. il Metal Finishing 45:62-5 My; 91-4 Je '47
British metal-spray circuits. F. R. Brewster. il Electronics 20:158+ Jl '47
Capillarity of metallic surfaces. E. R. Parker and R. Smoluchowski. il diag Am Soc for Metals Trans 35:362-71; Discussion. 371-3 '45
Depositing overlaid surfaces by the submerged melt welding process. L. C. Bradburn and others. il Welding J 26:297-300 Ap '47; Abstract. Mach 53:165-6 Ja '47
Dust collector for metallizing operations. E. F. Fisher. diags Am Mach 91:146 My 8 '47
Flame spraying by the powder pistol; Schori process. W. D. Jones. il Engineering 163: 297-9 Ap 11 '47
Flame spraying of powdered materials; abstract. W. D. Jones. Materials & Methods 25:123 My '47
How to recondition worn shafts and rods; illustrated instructions. Power 91:571 Ag '47
Metal coated plastics. il Mod Plastics 24: 106-8 D '46
Metal spray reconditions plug valves for longer life; Hiram Walker & sons, inc. B. L. Baillie. il Power 91:312-13 My '47
Metal spray restores original efficiency of turbine seal rings. F. Britt. il diag Power 91:188 Mr '47
Metal spraying; reclamation of worn or faulty parts. J. Porter. il diags Automobile Eng 37:343-6 S '47
Metallic coatings and the superficial protection of castings. M. Ballay. Materials & Methods 25:128 F '47
Metallizing by the wire process. il diag Sheet Metal Worker 38:92-3 F '47
Metallizing glass and ceramic materials. A. J. Monack. Glass Ind 28:21-5+ Ja '47
Metallizing salvages material and cuts maintenance; Kemmerer coal co. il Coal Age 51: 90-1 N '46
Metallizing takes over. E. L. Cady. il Sci Am 176:201-3 My '47
New metallizing technique homogenizes alloy coatings to eliminate porosity. J. A. Looney. il Pet Processing 1:290+ D '46
New tin-zinc coatings protect steel from rusting. Materials & Methods 25:132 F '47
Painting with molten metal; Westinghouse radio-communication equipments. Metal Finishing 45:54 Mr '47
Production processes; their influence on design; metallizing. R. W. Bolz. il diags Machine Design 19:105-10 Ja '47
Resurfacing freeze rolls by metal spraying method. il Rubber Age 61:68 Ap '47
Spray-installing electrical circuits. J. T. Collier. il Steel 121:96+ S 15 '47
Spray-welding; hard-facing process uses a powder-flame spray gun. il Steel 119:74+ D 23 '46
Sprayed metal for wiring. il Electronics 20: 132 S '47
Technical developments of 1946. R. A. Mozer. bibliog and patent list(213 ref) il Metal Finishing 45:50-5, 95-9 Ja '47
Unique exhaust system for a unique process metal spraying of worn automobile crankshafts and parts. diags Sheet Metal Worker 38:53-4 Mr '47

See also
Alloys, Hard facing
Electroplating
Paper, Metal coated
Pipe coating
Zinc plating

METAL coloring

See also
Aluminum—Coloring

METAL congress, National. See National metal congress

METAL congress, Western. See Western metal congress

METAL cutting
Advantages of speed in machining; abstract. R. Delamare. Materials & Methods 24:1264+ N '46
Air scanning simplifies irregular contour work. il diag Steel 120:114 My 19 '47
Ball-pen tubular parts rotary-sliced to length; Eversharp fountain pens and mechanical pencils. J. W. Dean, jr. il diags Am Mach 91:108-10 F 13 '47
Brinell hardness does not measure machinability. G. Schlesinger. bibliog diags Am Mach 91:125-36 Jl 17 '47
La coupe négative des outils pour le travail des métaux. Génie Civil 123:297 N 1 '46
Cranky shapes yield; gear shapers can be set up to handle many odd-shaped pieces. diags Am Mach 91:106-8 O 23 '47
Cutting action of reamers. T. F. Githens. bibliog diags A S M E Trans 68:867-76 N '46
Cutting fluids, chipbreakers, etc. W. A. Carter. Inst Mech Eng J & Proc 155 (War emergency issue no 20):261-3 '46; Same. Engineering 161:582 Je 21 '46
Cutting speeds with high-speed steel tools; tabulation; reference book sheet. Am Mach 91:125 F 27 '47
Direction of maximum crystal elongation during metal cutting. G. H. Townend. J Ap Phys 18:489-90 My '47; Correction. 18:784 Ag '47
Discussion on machinability at conference, May 24, 1946. diags Inst Mech Eng J & Proc 155 (War emergency issue no 20): 267-91, pl 7-8 '46
Editorial citation to Kearney & Trecker corp. for achievement in machining of metals. il Materials & Methods 24:1170-1 N '46
Electric-arc-oxygen process speeds cutting of alloy steels. V. H. Laughner. il Mach 53: 174-7 Ja '47
Electrolytic saw; abstract. K. Y. Skornfakov. Mech Eng 69:30 Ja '47; Same. Iron Age 158:61 D 26 '46
Heat treating and machining magnesium alloys. A. G. Gray. il diags Steel 120:102-4+ F 3; 100-2+ F 10 '47
High-nickel materials; machining monel metals and iconel. Automobile Eng 37:145-6 Ap '47

METAL cutting—*Continued*
How to measure machinability in the shop. G. Schlesinger. bibliog il diags Am Mach 90:117-28 N 21 '46
How to use carbide cutters for milling. H. A. Frommelt. il diags Iron Age 159:44-9 F 13; 48-53 F 20; 47-52 F 27; 74-8 Mr 6; 52-6 Mr 13; 56-9 Mr 20; 58-62 Mr 27; 78-81 Ap 10; 58-63 Ap 17; 58-62 Ap 24; 75-9 My 8; 62-5 My 15; 77-9 My 22; 80-3 Je 5; 65-8 Je 12; 77-80 Je 19; 160:69-72 Jl 3; 66-8 Jl 10; 61-4 Jl 17; 68-70 Jl 24 '47
Machinability in heavy engineering. G. M. Baker. Inst Mech Eng J & Proc 155 (War emergency issue no 20):263-4 '46; Same. Engineer 181:498 My 31 '46; Same. Engineering 161:605 Je 28 '46
Machinability in light engineering. P. C. Redwood. Inst Mech Eng J & Proc 155 (War emergency issue no 20):266 '46; Same. Engineering 161:606 Je 28 '46
Machinability in medium engineering. L. Johnstone. Inst Mech Eng J & Proc 155 (War emergency issue no 20):264-5, pl 5-6 '46; Same. Engineer 181:499 My 31 '46; Same. Engineering 161:606 Je 28 '46
Machinability testing methods using pendulum machines. A. S. Kenneford. diags Inst Mech Eng J & Proc 155 (War emergency issue no 20):241-3, pl 2(p240) '46; Same. Engineering 161:599-600 Je 21 '46
Machining light alloys; abstract. R. Schweyckart. Materials & Methods 26:118-19 S '47
Machining of magnesium; abstract. Materials & Methods 25:127 F '47
Magnesium alloys; properties, fabrication, etc. T. C. DuMond. diags Materials & Methods 25:107-10 My '47
Mechanics of the cutting operation. R. N. Arnold and G. A. Hankins. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 20):238-40, pl 1 '46; Same. Engineering 161:574-6 Je 14 '46
Mechanisms of metal cutting. W. H. Oldacre and H. A. Erickson. il diag Mech Eng 69: 655-7 Ag '47
Metal cutting techniques. O. W. Boston. il diags Iron Age 160:185-9 S 11 '47
Metal rod cutter. il Sci Am 177:82-3 Ag '47
New oxygen-arc process for cutting ferrous and nonferrous alloys. H. R. Clauser. il Materials & Methods 25:78-81 Ja '47
Nickel and high nickel alloys; machining. N. E. Woldman. il Materials & Methods 24: 1484-6 D '46
Photographic studies contribute to better machining methods. N. Zlatin. bibliog il diags Steel 120:94-7+ Mr 17 '47
Planner cuts circular arcs. C. D. Mackinnon. diags Am Mach 91:110 S 25 '47
Powder-cutting and scarfing of oxidation-resistant materials. D. H. Fleming, jr. il diag Welding J 26:201-8 Mr '47
Recent research in metal machining. D. F. Galloway. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 4):113-27, pl 1-2 '45; Abstract. Mech Eng 68:565-7 Je '46; Discussion. Inst Mech Eng J & Proc 153 (War emergency issue no 4):128-32 '45
Relation of machinability to structure; nonferrous metallurgy. A. J. Murphy. bibliog Inst Mech Eng J & Proc 155 (War emergency issue no 20):236-8, pl 1(p240) '46; Same. Engineering 161:573-4 Je 14 '46
Soviets claim electroerosion revolutionizes metal cutting. R. Magidoff. Am Mach 91: 162 My 8 '47
Standardization of tools for machinability tests. C. H. Booth. Inst Mech Eng J & Proc 155 (War emergency issue no 20):246-7 '46; Same. Engineering 161:595-6 Je 21 '46
Technical progress in metalworking; machining. Steel 120:257-60+ Ja 6 '47
Tentative method of assessment of machinability. C. W. George. Inst Mech Eng J & Proc 155 (War emergency issue no 20):248-55, pl 3(p240) '46; Same cond. Engineering 161:621-2 Je 28 '46
Tolerance charts forecast accuracy. J. K. Matter. diags Am Mach 91:114-18 O 23 '47
Tough alloys cut like cheese. F. P. Peters. il Sci Am 176:149-52 Ap '47

See also
Broaching
Cutting tools
Drilling and boring (metal working, etc.)
Electric cutting
Gear cutting
Grooving
Lubrication and lubricants (cutting and grinding)
Machine tools
Machine work
Milling
Milling cutters
Oxyacetylene cutting
Pipe cutting
Saws, Metal working
Screw machines
Shears (machines)
Steel cutting
Thread cutting
Threading machines
Tool steel

Tables, calculations, etc.

Effect of speed, feed, and angle on machinability. W. W. Taylor. diag Inst Mech Eng J & Proc 155 (War emergency issue no 20): 258-9, pl 4(p240) '46; Same cond. Engineering 161:620-1 Je 28 '46
Thrust, in pounds, required for drilling; data sheet. Mach 53:257 Je '47

METAL cutting, Subaqueous
Theory of oxyarc cutting. H. C. Campbell. bibliog il diag Welding J 26:889-903 O '47
Underwater cutting and welding. C. Kandel. il Welding J 25:209-12 Mr '46; Abstract. Metal Prog 50:1030+ N '46
U.S. navy developments in underwater cutting; arc-oxygen cutting. B. Ronay and C. D. Jensen. il diags Welding J 25:201-9 Mr '46; Abstract. Metal Prog 51:304+ F '47

METAL detection. See Metals—Detection

METAL drawing
Cupping 27% chromium-iron. C. C. Higgins. Metal Prog 51:443 Mr '47
Deep drawing aluminum alloys at elevated temperatures. D. M. Finch and others. bibliog il diags Am Soc for Metals Trans 36: 254-81, 290-307 '46; Abstract. Iron Age 157: 70-3 F 14 '46; Discussion. Am Soc for Metals Trans 36:281-9, 307-10 '46
Deep drawn magnesium parts save weight. R. G. Gillespie. il Materials & Methods 25: 86-9 Mr '47
Deep draws with hot magnesium. F. P. Peters. il Sci Am 176:262-4 Je '47
Drawing and forming with zinc alloy dies. S. Menton. il Steel 120:92-3+ My 26; 104-5+ Je 2; 80-1+ Je 9; 94-6+ Je 16 '47
Drawing stainless without tearing or shearing. Sci Am 176:65 F '47
Effect of spacing between dies in the tandem drawing of tubular parts. G. Sachs and G. Espey. il diags A S M E Trans 69:139-43 F '47
Engine lathe becomes draw bench. J. C. Brenner. diags Am Mach 91:123 Ag 28 '47
Fluid punch draws sheet metal in one operation; Hydrodynamic process. il diags Steel 120:90-1+ Ap 14 '47
Forming magnesium alloys. A. G. Gray. il diags Steel 120:91+ Ap 21; 105-6+ Ap 28 '47
Honorable mention to Solar aircraft co. for achievement in drawing stainless steel. il Materials & Methods 24:1168-9 N '46
How to design carbide draw dies. E. Glen. diags Am Mach 91:101-3 Jl 31 '47
Mechanical cold drawbenches for ferrous and non-ferrous tubes. G. W. Garwig and A. L. Thurman. il Blast F & Steel Pl 35:348-54+, 461-6, 549-52 Mr-My '47
Phosphate coating as an aid in drawing metals. V. M. Darsey, and W. R. Cavanagh. Steel 119:148+ D 9 '46
Proper selection of steel simplifies deep-drawing. G. B. Nisbet. il Materials & Methods 25:108-12 Ap '47
Relationship between the deep drawing properties of autobody sheet, its austenitic grain size and McQuaid-Ehn carburizing characteristics. K. J. B. Wolfe. bibliog il diags Am Soc for Metals Trans 37:1-17; Discussion. 18-26 '46; Discussion. Steel 118:122+ Ap 29 '46
Rules for drawing round shells; reference book sheet. Am Mach 91:135, 137 Mr 27 '47
Successful drawing and redrawing thin-metal stampings. W. C. Mills. diags Am Mach 91:112-16 Je 19 '47

METAL drawing—*Continued*
Tool design streamlines drawing practice. G. W. Birdsall. il diags Am Mach 91:77-81 Mr 27 '47

See also
Lubrication and lubricants (metal drawing)

METAL exchange, London
London metal market again? Economist 153: 124 Jl 19 '47

METAL fabrics. See Metal weaving machine

METAL finishing
Annual engineering review; cleaning and pickling, finishing and coating. Materials & Methods 25:106-8 Ja '47
Conference on surface finish. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):331-51, pl 1-10 '45; Same. Engineering 159:215-20, 237-9, 258-60, 277-80, 299 Mr 16-Ap 13 '45; Same cond. Engineer 179:218-20, 230-1, 250-1 Mr 16-30 '45; Discussion. Inst Mech Eng J & Proc 153 (War emergency issue no 10):352-79 '45; Engineer 179:209-11, 234-6 Mr 16-23 '45
Control and measurement of surface finishes. J. A. Broadston. il Steel 120:82-3+ Ja 13 '47; Excerpts. Machine Design 19:184 Mr '47
Determining surface roughness. W. Mikelson. il Mech Eng 69:391-3 My '47
Detroit industrial finishing exposition displays latest methods and equipment. Metal Finishing 45:65-6 Jl '47
Drying industrial finishes on metals. H. R. Clauser. il diag Materials & Methods 24: 910-14, 1452-6 O, D '46
Effect of water conditioning on metal finishing operations. R. S. Herwig. il diag Iron Age 159:48-52 Mr 27 '47
Faxfilm dual projection unit for comparing surface finish. il Mach 53:197 F '47
Fine finishes and flatness obtained by surface grinding. il Mach 54:152-3 O '47
Finishing copper by oxidation with sodium chlorite. W. R. Meyer and G. P. Vincent. il Metal Finishing 45:61-3+ Mr '47
Finishing magnesium alloys. A. G. Gray. il diags Steel 120:82-3+ Je 9; 73-4+ Je 30 '47
Materials and finishes for tropical service. C. D. Cook and C. Merritt, jr. il Materials & Methods 25:77-80 My '47
Metal finishing in 1946. A. Bregman. il Iron Age 159:160-5 Ja 2 '47
Metal finishing problems; Research Association's work. Chem Age (Lond) 56:26 Ja 4 '47
Metal sprayed with molten porcelain enamel; air pressure blowgun, finishes metal surfaces with molten glass, metals or plastics. il Cer Ind 49:65+ S '47
Modern tumbling techniques cut finishing costs. H. Chase. il Iron Age 159:62-6 My 1 '47
New equipment. il Iron Age 158:87-90 D 5 '46; 159:65-70 F 20; 70-2 Mr 27 '47
New finish to end lube trouble; abstract. H. M. Bramberry. S A E J 55:81-3 O '47
New replica techniques for evaluating engine wear; surface finishes reproduced in plastic. il diag Automotive & Aviation Ind 96:36-7+ Ap 15 '47
Optical methods for evaluation of metal surfaces. A. A. Vernon and J. Broomfield. bibliog diags Metal Finishing 45:70-1 Ap '47
Plating and finishing guidebook. N. Hall and G. B. Hogaboom, jr, eds. 15th ed 266p pa $1 Metal industry pub. co, 11 W. 42d st, New York 18 '46
Postwar metal finishing. A. Bregman. Metal Prog 50:1061-3 N '46
Precision tumbling of metal parts. R. M. Lord. il Materials & Methods 24:1227+ N '46
Preparation of metals for painting. R. E. Gwyther. il Water & Sewage Works 94: R72-3 Jl '47; Same cond. Product Eng 18: 153-5 Mr '47
Protecting surface finish with strippable plastic coatings. H. R. Clauser. il Materials & Methods 26:70-4 Jl '47
Red Ring shaving machine for finishing rotors. il Mach 53:187 Mr '47
Smooth surfaces increase plain-bearing capacity. E. L. Hemingway. il diags Am Mach 91:92-5 Je 5 '47
Superfinishing methods and applications. E. L. Hemingway. il diags Mach 53:154-8 Mr; 168-71 Ap '47
Surface finishing light alloys; abstract. H. R. Fleck. Materials & Methods 24:1538 D '46
Surface-quality control does pay. J. A. Broadston. il Am Mach 91:102-3 Ap 10 '47
Tapering for surface inspection. W. J. Darmody. il diags Am Mach 90:134-5 D 19 '46
Technical developments of 1946. R. A. Mozer. bibliog and patent list(213 ref) il Metal Finishing 45:50-5, 95-9 Ja '47
Technical progress in metalworking; surface treatment. Steel 120:289-92+ Ja 6 '47
34th annual review number; cleaning and finishing. il diag Am Mach 91:192-4 Ja 16 '47
Tracer-point sharpness as affecting roughness measurements. D. E. Williamson. il diags A S M E Trans 69:319-23 My '47
Treatments for metal surfaces prior to painting. E. F. Hickson and W. C. Porter. il Product Eng 18:128-30 Ag '47

See also
Grinding
Honing
Lacquer and lacquering
Lapping
Pickling (metals)
Polishing
Polishing, Electrolytic
Shot peening
Steel—Finishing
Tumbling barrels

Bibliography
Recent publications on the testing of metallic finishes. M. B. Diggin and O. Kardos. Metal Prog 50:1072-4, 1078, 1080 N '46

Patents
Patents. Published in monthly numbers of Metal finishing
Technical developments of 1946. R. A. Mozer. bibliog and patent list(213 ref) il Metal Finishing 45:50-5, 95-9 Ja '47

Specifications
Drawing office specification; surface finish. H. J. Griggs. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10): 339-40 '45; Same. Engineering 159:237 Mr 23 '45
Rational specification of surface finish. W. A. Tuplin. Inst Mech Eng J & Proc 153 (War emergency issue no 10):340-1 '45; Same. Engineering 159:237 Mr 23 '45; Same cond. Engineer 179:230 Mr 23 '45
Requirements in surface finish. D. McConnell. Inst Mech Eng J & Proc 153 (War emergency issue no 10):341-2 '45; Same. Engineering 159:238 Mr 23 '45

Standards
Surface roughness, waviness and lay; American standard; reference book sheet. diags Am Mach 91:155 Ap 10 '47

METAL foils
See also
Aluminum foil
Gold leaf
Steel foil

METAL fumes
Lead and zinc fume hazards in ship-scrapping. Safety Eng 93:62 My '47
Studies on the toxicity of inhaled cadmium. H. M. Barrett and others. bibliog il plan J Ind Hygiene 29:279-301 S '47
Study of the hazards of exposure to metallic fumes and dust in brass foundries. W. W. Stalker. bibliog il J Ind Hygiene 29:96-112 Mr '47

METAL polishes. See Polishing materials

METAL powder association
Spring meeting, 3d, New York, May 27. Iron Age 159:84-6 Je 5 '47; Chem & Eng N 25:1740 Je 16 '47; Oil Paint & Drug Rep 151:5+ Je 2 '47

METAL powders
Annual engineering review. il Materials & Methods 25:94-5, 100-1 Ja '47
Bliss press for powdered metal parts. il Automotive Ind 97:46 Jl 15 '47
British committee reports on German powder metallurgy. Iron Age 160:132 Ag 14 '47
Carbides in powder metallurgy. J. R. Longwell. il diags Steel 119:130+ D 2 '46
Copper-lead bearings from metal powder; abstract. E. R. Darby. Iron Age 159:86 Je 5 '47

METAL powders—*Continued*
Diffusion in powdered metals. P. W. Selwood and J. Nash. diag Am Soc for Metals Trans 35:609-15 '45
Electrical and electronic components from powdered metals; abstract. E. I. Shobert, 2d. Iron Age 159:84-5 Je 5 '47
Extruded powder metal welding rods. F. C. Kelley and F. E. Fisher. il diags Iron Age 158:68-72 D 19 '46
Fernico from metal powders. E. E. Burger. il diag Gen Elec R 49:22-4 D '46
Few observations on solid phase bonding. G. Durst. diags Metal Prog 51:97-101 Ja '47
Flame spraying by the powder pistol; Schori process. W. D. Jones. il Engineering 163: 297-9 Ap 11 '47
Flame spraying of powdered materials; abstract. W. D. Jones. Materials & Methods 25:123 My '47
Ford utilizes extrusion method for producing metal powder gears. E. E. Ensign. il diags Automotive Ind 97:30-1+ Ag 15 '47
Impact of industrial revolution on powder metallurgy during the past 30 years. J. E. Drapeau, jr. il Metal Prog 52:606-8 O '47
Latest trends in powder metallurgy. W. G. Cass. bibliog Chem Age (Lond) 56:5-10, 199-202 Ja 4, F 1 '47
Magic or markets? powder metallurgy process. Bsns W p70 S 20 '47
Metallurgy in 1946. E. S. Kopecki. Iron Age 159:99-100 Ja 2 '47
Modern powder metallurgy. H. W. Greenwood. Engineering 163:492 Je 13 '47
Moment of active deformation; hot pressing of metal powders. H. L. Strauss, jr. il Metal Prog 51:254-5 F '47
New ceramic combines ceramic materials and powdered metals. H. H. Hausner. il diags Cer Ind 47:87-8+ O; 90+ N '46; Discussion. L. R. McCreight. 48:110 Ap '47
New developments in powder metallurgy. G. J. Comstock and J. D. Shaw. Iron Age 159:67-8 My 22 '47
Non-ferrous powder metallurgy; abstract. W. H. Tait. Automobile Eng 37:324 S '47
Polyvinyl acetate in powder metallurgy. H. L. Strauss, jr. Mod Plastics 24:196+ Je '47
Powder metallurgy data available. Oil Paint & Drug Rep 151:68 Ja 27 '47
Powder metallurgy; process or product? E. S. Patch. il Iron Age 159:64-6 My 22 '47
Powder metallurgy; progress in Great Britain reviewed. Chem Age (Lond) 57:93-4, 153-5 Jl 19, Ag 2 '47
Powder metallurgy; some queries. H. W. Greenwood. Engineer 183:471 My 30 '47
Powder metallurgy; study of solidified Kovar; abstract. Chem Eng 54:258 O '47
Powder metallurgy; symposium. Engineer 184: 52-3, 72-3, 106-8, 119-21, 152-4, 165-8 Jl 18-Ag 22 '47
Powder welding with a new flame tool; Powder weld co. Steel 119:108 D 30 '46
Powdered metals, here to stay. Bsns W p82+ Je 7 '47
Powdered metals in Britain. W. G. Cass. Chem & Eng N 25:120 Ja 13 '47
Precision powder spreader and other highlights of bearing strip process; Federal-Mogul corp. il Automotive Ind 97:46+ O 1 '47
Presses used for manufacturing powdered metal products; abstract. L. H. Bailey. Iron Age 159:140+ Je 26 '47
Pressing operation in powder metallurgy; abstract. R. P. Seelig and J. Wulff. Materials & Methods 24:1540 D '46
Production and uses of iron and other metal powders. Chem Age (Lond) 56:641-2 My 17 '47
Production processes; their influence on design; powder metallurgy. R. W. Bolz. il diags Machine Design 19:139-46 S '47
Progress in powder metallurgy; condensed from papers of Metal powder association. Materials & Methods 26:121-4 Ag '47
Sintered permanent magnets. S. J. Garvin. il diags Engineering 163:445-6, 465-7 My 30-Je 6 '47
Some consideration in designing parts for powder metallurgy. I. J. Donahue. diags Mech Eng 68:949-52 N '46; Abstract. Mach 53:169-71 D '46
Spray-welding; hard-facing process uses a powder-flame spray gun. il Steel 119:74+ D 23 '46
Stainless steel powder uses discussed. Chem & Eng N 25:1740 Je 16 '47
Symposium on powder metallurgy. Engineering 163:530-1 Je 20 '47

See also
Aluminum, Powdered
Brass, Powdered
Bronze, Powdered
Copper, Powdered
Iron, Powdered

Patents

Improvements in powder metallurgy; two new American patents. Chem Age (Lond) 57:192 Ag 9 '47
United States patents on powder metallurgy. R. E. Jager and R. E. Pollard. U S Nat Bur Stand Misc Pub M184:1-139; pa 30c Supt. of doc. '47

METAL protection
Acetic acid and chlorine vs. materials of chemical plant construction; protective coatings. Chem Eng 54:242+ My '47
Applying plastic coating to oil tanks; Resoweld. W. J. Davis. il Pet Eng 18:182+ Ja '47
Aquelco cathodic protection; protects metals from scale and corrosion. W. J. Marshall. il Water & Sewage 84:26-7+ N '46
Burn-off rust-proofing with infra-red rays; Burdett infra-red gas-fired burners. il Metal Finishing 45:103-4 Je '47
Coated drill pipe proves successful in Permian basin. G. Weber. il Oil & Gas J 45:40-1+ F 1 '47
Coating for air duct systems. il Heat & Ven 44:68 Ja '47
Coats make the product. C. A. Breskin. il Sci Am 176:256-8 Je '47
Cocoon packaging of machinery and equipment. il Engineer 184:102-3 Ag 1 '47
Cocooning; Army air forces' packaging technique protects whole B-29 bombers. il Mod Packaging 20:112-13 My '47
Formation and application of phosphate coatings. V. M. Darsey and W. R. Cavanagh. bibliog il Electrochem Soc Trans 91 (preprint 1):1-14 '46
Fundamental factors in corrosion control. H. H. Ehlig. bibliog diags Chem & Eng N 24: 3154-8 D 10 '46; Abstract. Mech Eng 69:161 F '47
Heat insulation solves breeching and boiler troubles; Sayreville plant of the Jersey central power & light co. il Power Pl Eng 51:86-9 My '47
Laying up the American navy. il plans Engineer 183:162-5 F 14 '47
Man-spun cocoon protects shipments. il Am Mach 91:88-9 Ja 30 '47
New anticorrosive finish gives 20 years protection; Zincilate. il Iron Age 159:76+ My 22 '47
New chemical coating to protect metals; polyvinylbutyral resin-phosphoric acid wash primer. il Chem Ind 59:1001 D '46
Nitrogen-containing organic inhibitors of corrosion. S. Ch'iao and C. A. Mann. bibliog diags Ind & Eng Chem 39:910-19 Jl '47
Ordnance develops compound spray for long-range storage of tools. Am Mach 91:160 My 8 '47
Organic coatings for corrosion protection. G. W. Seagren. Steel 121:124+ N 3 '47
Phosphate treatment of metals; abstract. H. A. Holden. Paint Oil & Chem R 110:49 Ag 21 '47
Plastic coating protects small ferrous parts. C. R. Considine. Factory Management 104: 162+ N '46
Protecting surface finish with strippable plastic coatings. H. R. Clauser. il Materials & Methods 26:70-4 Jl '47
Protective finishing of electrical equipment. F. Widnall and R. Newbound. Engineering 163:330 Ap 25 '47
Protective power and porosity of electrodeposits; abstract. N. Thon. Iron Age 160: 82 S 25 '47
Putting fighting ships in moth balls. R. G. Skerrett. il Comp Air Mag 52:136-41 Je '47
Recent developments; plastic protective coatings. il Product Eng 18:[121-2] insert 9-10 Ap '47

METAL protection—*Continued*
Scuff and wear resistant chemical coatings. F. C. Young and B. B. Davis. il S A E J 55:42-3 My '47
Selection of protective coatings for metals. K. G. Compton. il Steel 121:90-1+ N 3 '47
Solder stops steel tube-sheet corrosion; applied as coating to condenser tube sheets at the Long Beach steam plant. E. R. Stauffacher. il Elec World 128:67 Ag 16 '47
Stows away navy ordnance plant. il Steel 120:122 My 12 '47
Third annual symposium on modern metal protection, Cleveland, Sept. 27. Chem & Eng N 25:2975 O 13 '47
Treatments for metal surfaces prior to painting. E. F. Hickson and W. C. Porter. il Product Eng 18:128-30 Ag '47

See also
Alloys, Hard facing
Aluminum—Protection
Bonderizing
Chromium plating
Corrosion and anticorrosives
Electroplating
Enamel and enameling
Magnesium—Protection
Metal coating
Paint, Protective
Pipe coating
Pipe lines—Protection
Steel—Protection
Water pipes—Protection

METAL spraying. See Metal coating

METAL trade
Alloy metal ores in 1946. B. Burwell. il Min Cong J 33:96-7 F '47
Base metal boom. Economist 152:506-7 Ap 5 '47
Competitive battle between new and established metals; expanding use of aluminum and magnesium. W. Beecher. il Mag of Wall St 80:710-11+ S 27 '47
Metals; survey and forecast. H. H. Wanders and others. Eng & Min J 148:70-91 F '47
Trading in metal futures. J. B. Baer. Comm & Fin Chr 166:716+ Ag 21 '47

See also
Aluminum industry and trade
Copper industry and trade
Iron industry and trade
Lead industry and trade
Metal exchange, London
Metal workers
Metals, Non-ferrous
Mineral industries
Scrap metal industry
Sheet metal trade
Steel industry and trade
Tin industry and trade
Tin plate
Zinc industry and trade

Directories

See also Metal working industries—Directories

Securities

Outlook for metals and metal fabricators; with statistics on leading stocks. H. F. Travers. Mag of Wall St 79:675-7+ Mr 15 '47
Timely reappraisal of the metal stocks; financial data on non-ferrous metal and metal fabricator stocks. W. Beecher. il Mag of Wall St 80:545-7+ Ag 16 '47
What about non-ferrous metals now? with financial survey of principal mining companies. G. L. Merton. il Mag of Wall St 79:250-2+ D 7 '46

Statistics

Metallics output in 1946 valued at $1900 million, 4% under 1945. Steel 120:47 Ja 27 '47

Canada

Canada acts to reimburse metal producers for exports at world prices. Iron Age 158: 156 N 28 '46

Pacific coast

Nonferrous metal developments on the Pacific slope. R. J. Anderson. il map Chem & Eng N 25:2704-6 S 22 '47

United States

Metals and minerals; prospects for 1947. Dom Comm 35:52-4 Ja '47
Supply outlook for nonferrous metals. J. P. Sherman. Materials & Methods 26:75-9 O '47
View of the future of metals. E. E. Thum. il Metal Prog 50:844-6 N '46

METAL waste
Swarf handling. H. M. Harman. il diags Mech Handling 33:690-1 N '46
Three systems for handling and storing metal chips. S. Reibel. flow diag il plans A S M E Trans 69:413-20 My '47; Same. Mech Handling 34:528-34, 659+ O, D '47

See also
Aluminum waste
Brass works—Waste
Scrap metal
Slag
Steel waste

METAL weaving machine
Woven metal fabrics produced on machine that operates like loom. il Steel 120:137 Mr 3 '47

METAL work
Annual engineering review; materials, processing methods. il Materials & Methods 25: 87-110 Ja '47
Application to shaping processes of Hencky's laws of equilibrium. E. Siebel. bibliog diags Iron & Steel Inst J 155:526-34 Ap '47; Discussion. diags 156:511-22 Ag '47
Forming magnesium alloys. A. G. Gray. il diags Steel 120:91+ Ap 21; 105-6+ Ap 28 '47
Hardest man-made material; boron carbide applied to metalworking operations. il Am Mach 91:122-4 Je 19 '47
Industry embraces weldments. E. L. Cady. il Sci Am 175:245-8 D '46
1946 Materials and methods achievement award winners. il diags Materials & Methods 24:1153-90 N '46
Recent developments in metals and their processing. W. F. Craig, jr. and others. bibliog il Machine Design 19:71-8 O '47
Shaping and forming. W. Trinks. diags Blast F & Steel Pl 35:964-70+ Ag '47
Technical highlights of the Western metal congress. Steel 120:86-7+ Mr 31 '47
Technical progress in metalworking. Steel 120:212-18+ Ja 6 '47

See also
Aluminum work
Brass founding
Dies
Electroplating
Extrusion process
Flanges
Forging
Foundry practice
Heat treatment
Machine shop practice
Machine tools
Metal cutting
Metal drawing
Pickling (metals)
Plating
Polishing
Rolling (metal work)
Sheet metal work
Shells (metal work)
Shot peening
Solder and soldering
Stamping
Steel work
Stencils and stencil cutting
Tin plate
Tubes, Steel—Manufacture
Welding

Bibliography

Materials and methods digest; new developments and ideas in materials and their processing. Published in monthly numbers of Materials & methods
What's new in manufacturers' literature; metals, metal work, equipment, etc. Metal Prog 51:128a-128b Ja '47 [cont monthly]

METAL work, Architectural

See also
Copperwork, Architectural

METAL work, Decorative
Imported 'tins' of English boxes of aluminum, lithographed and embossed. il Mod Packaging 20:140-1 Mr '47
Woven metal fabrics produced on machine that operates like loom. il Steel 120:137 Mr 3 '47

METAL workers
Average earnings in metalworking industries; 1941-1946, tabulation. Am Mach 91:115 Ja 16 '47
Index of industrial training films has 159 titles on metals. Iron Age 158:86 N 28 '46
Merit rating. H. S. Wharen. Am Mach 90: 117-28 D 19 '46
More workers will be employed. Steel 120: sup12-19 Ja 6 '47
New challenges for the industrial hygienist. E. E. Dart. bibliog il Nat Safety N 55:24-5+ F '47

METAL workers—*Continued*
Pacific coast ranks high as metalworking and foundry center. Steel 120:84-5 F 10 '47
Pneumoconiosis in radiator and boiler finishers; abstract. L. Dunner and others. J Ind Hygiene 28:sup134-5 N '46
Stamping industry initiates program featuring cooperation with schools; to provide additional training for future die-makers. il Iron Age 159:127-8 Mr 6 '47
Union-accepted wage incentive plan based on group effort; Bundy tubing co. L. Westrate. Automotive & Aviation Ind 95: 17+ N 15 '46
What's happening to productivity. B. Finney. Am Mach 91:93-100 Ja 30 '47
See also
Foundries—Employees
Machine works—Employees
Sheet metal workers
Steel workers

METAL working industries
American Machinist survey; special report to metalworking executives. Am Mach 91:173-86 S 11 '47
Builders' hardware goes into mass production. L. E. Browne. il Steel 120:58-9+ Je 9 '47
Metalworking industry reports on prospects for 1947. maps Steel 120:sup1-32 Ja 6 '47
Technical progress in metalworking. Steel 120:212-18+ Ja 6 '47
See also
Sheet metal trade

Advertising
Greenfield marks 75th anniversary by changing from kodachromes to historical full color paintings. il Ind Marketing 32:42+ Mr '47

Directories
Where-to-buy; products directory of current advertisers in Steel. Steel 120:1-46 sec 2 F 17 '47

Finance
Cost reductions needed to bar additional price increases. Iron Age 160:100-1+ Jl 31 '47
High output helps metalworking industry's income to edge upward; second quarter of 1947; 50 representative companies. Steel 121: 62 Ag 18 '47
Metalworking industry's income up; tabulated data, first quarter 1940 and 1941, 1946 and first quarter 1947. Steel 120:67 My 26 '47
Survey shows metalworking plants are biggest borrowers. D. I. Brown. Iron Age 159:108-10 Mr 20 '47

Securities
Outlook for metals and metal fabricators; with statistics on leading stocks. H. F. Travers. Mag of Wall St 79:675-7+ Mr 15 '47
Timely reappraisal of the metal stocks; financial data on non-ferrous metal and metal fabricator stocks. W. Beecher. il Mag of Wall St 80:545-7+ Ag 16 '47

Statistics
Appraisal of metalworking, with a statistical summary. Am Mach 91:101-16 Ja 16 '47
Component inventories, shipments unbalanced. Steel 120:69-71+ Je 23 '47
Material stocks, deliveries improving; special report to industry. graphs Steel 120: 57-9+ Je 16 '47

Brazil
Major U.S. strikes hold back industrial expansion in Brazil. T. Campbell. il Iron Age 158:114-16 D 19 '46

Canada
Electric furnace practice in Canada. J. L. Balleny. il diags Elec Eng 66:774-8 Ag '47

Czechoslovakia
Czech metalworking industries expected to show large losses. Iron Age 158:159-61 D 5 '46

Germany
Allies differ on levels of German metalworking output. J. Christie. il Am Mach 91:117-20 Ap 24; 137-40 My 22 '47
Materials engineering in certain German industries. B. F. Shepherd. Comp Air Mag 51:338 D '46

Great Britain
Exports from Britain recover after power shortage cuts total. Iron Age 160:118+ Ag 28 '47
Wartime advances in nonferrous metallurgy in Britain. B. J. S. Bard. Metal Prog 51: 411-13+ Mr '47

Mexico
Welding in old Mexico. F. H. Berry. il Welding J 26:16-18 Ja '47

Ohio
Metalworking firms in Ohio planning new plants and additions. Iron Age 158:162+ N 14 '46

Pacific coast
Pacific coast ranks high as metalworking and foundry center. Steel 120:84-5 F 10 '47

Switzerland
Review of the Swiss metal and engineering industries. W. M. von Orelli. bibliog Iron & Steel Inst J 156:145-54 Je '47

METAL working machinery
Appraisal of metalworking, with a statistical summary. Am Mach 91:108-9 Ja 16 '47
Harnessed air. il Steel 121:94-8+ N 3 '47
Muffler maker cuts material and manufacturing costs by installing equipment to handle coiled strip; Mackenzie muffler co. il Steel 121:88-9+ O 13 '47
Production process; their influence on design; press brake forming. R. W. Bolz. il diags Machine Design 19:137-42 Je '47
Woven metal fabrics produced on machine that operates like loom. il Steel 120:137 Mr 3 '47
See also
Foundry machinery
Lathes
Machine tools
Presses
Sheet metal working machinery
Straightening machines
Wire forming machines

METAL working plants
Air rights give floor rights; tiering of stored materials. il Am Mach 91:108 Ap 10 '47
English foundry and machine shop make functional use of colors; David Brown & sons ltd. il Steel 121:114 Jl 7 '47
Lead-time chart insures close scheduling; Minneapolis-Moline power implement co. D. Peddie. il Factory Management 105:122-3 S '47
Metalworking plants plan more capacity. Steel 120:sup10-11 Ja 6 '47
See also
Aluminum works
Foundries
Machine works
Rolling mills
Steel works

Costs
Economic aspects in the use of aluminum and magnesium alloys. L. W. Eastwood. Materials & Methods 25:63-8 Je '47
Machinability in medium engineering. L. Johnstone. Inst Mech Eng J & Proc 155 (War emergency issue no 20):264-5, pl 5-6 '46; Same. Engineer 181:499 My 31 '46; Same. Engineering 161:606 Je 28 '46

Employees
See Metal workers

Equipment
American Machinist survey; special report to metalworking executives. Am Mach 91:173-86 S 11 '47
Component inventories, shipments unbalanced. Steel 120:69-71+ Je 23 '47
Extrusion of magnesium; Dow chemical co. C. S. Harris. il diags Mach 53:143-52 Mr '47
Fisher Body devises aids for pressed-metal handling. R. Le Grand. il diags Am Mach 90:112-15 D 19 '46; 91:86-7 Ja 2 '47
Handling mechanization boosts Monroe shock absorber and sway bar output. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 15 '47

METAL working plants—Equipment—*Cont.*
Heat treating fasteners by the million; Tinnerman products inc. H. Chase. il Steel 120:104-6+ My 5 '47
Lowering production costs of bumpers and springs; United States spring & bumper co. H. Laurent. il Automotive Ind 97:24-6+ Ag 1 '47
Manufacturers' literature. Published in monthly numbers of Materials & methods
New equipment. il Iron Age 159:85-90 Ap 10; 67-72 Ap 17; 65-8 Ap 24; 87-90 My 8; 67-70 My 15; 81-4 My 22; 73-6 My 29; 87-90 Je 5; 69-72 Je 12; 81-4 Je 19; 65-8 Je 26; 160:75-8 Jl 3; 69-72 Jl 10; 65-8 Jl 17; 71-4 Jl 24; 63-6 Jl 31; 85-8 Ag 7; 81-4 Ag 14; 85-8 Ag 21; 81-4 Ag 28; 83-6 S 4; 199-202 S 11; 83-6 S 18; 83-6 S 25; 84-8 O 9; 155-8 O 16; 63-6 O 23; 69-72 O 30 '47
New machine tools and production equipment. il Automotive Ind 97:75-119+ S 1; 49-51 S 15 '47
Plain bearings; products and manufacturing methods of Glacier metal co. il Automobile Eng 37:325-35 S '47
Seven conveyors in new layout return cost in four years; Weatherhead company, Cleveland. F. M. Bock. il plan diag Factory Management 105:73-6 My '47
Space-saving shift moves large finishing ovens to plant roof; Cavalier corp. il Steel 120:107 My 19 '47
Stamped bushings; National formental co. D. B. Wilkin. il Steel 119:64-6+ N 25 '46
Technical progress in metalworking; equipment. Steel 120:275-8+ Ja 6 '47
34th annual review number. il diags Am Mach 91:118-212 Ja 16 '47
Transfer machines and other specialized equipment at Detroit gear plant. J. Geschelin. il Automotive Ind 97:32-4+ O 1 '47
Transfer presses boost output at AC Spark Plug. H. L. Curtis. il Am Mach 91:100-1 My 22 '47
See also
Machine tools
Metal working machinery

Heating and ventilation

Design of exhaust systems; ventilating a retinning vat. F. H. Stebbins. diags Sheet Metal Worker 37:40-1 N '46
Effective exhaust for tanks. B. F. Postman and W. P. Battista. il diags Heat & Ven 44:53-6 Ja; 83-7 F '47

Management

Control in metalworking plants; production, inventory, quality, tool and maintenance. W. A. Ring and others. il Am Mach 91: 117-36 Mr 13 '47
Installing a quality control program. N. L. Enrick. il Materials & Methods 25:90-3 Mr '47
Merit rating. H. S. Wharen. Am Mach 90: 117-28 D 19 '46
Methods and tooling geared for change; Fisher Body-Ternstedt division. C. S. Ricker. diags Am Mach 91:118-22 Jl 3 '47
Storing engineering materials. B. Melnitsky. il Steel 120:103-4+ Mr 17 '47

Records

Controlling parts flow. J. T. Lancaster. diag Steel 120:66-7+ Je 30 '47

Safety measures

Potential hazards from molten salt baths; recommended precautions; reference book sheet. Am Mach 91:133 Ja 30 '47
Safety program with a forceful follow up; Chapman valve mfg. co. R. H. Cochran. il Steel 120:100-2+ Ap 7 '47

METALATION
Bonding in dimetalated diphenylethane. G. S. Myers, H. H. Richmond and G. F. Wright. Am Chem Soc J 69:710-11 Mr '47
Metalation of compounds that have meta-directing groups and the electrophilic character of organoalkali metal reagents. A. A. Morton. bibliog Am Chem Soc J 69: 969-71 Ap '47
Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47
Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A. Morton, M. L. Brown and E. Magat. bibliog Am Chem Soc J 69:161-7 Ja '47
Polymerization; reaction of organosodium reagents with styrene and 1,-1-diphenylethylene. A. A. Morton and H. C. Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47

METALITE
Sandwich materials; metal-faced balsa-core material; abstracts. H. B. Gibbons. diag Machine Design 19:144-5 Mr '47; Automotive & Aviation Ind 96:36+ F 1 '47

METALLIC fibers. See Textile fibers, Metallic

METALLIC films. See Films, Metallic

METALLIC soap. See Soap, Metallic

METALLIZING. See Metal coating

METALLOGRAPHIC specimens
Application of electrolytic polishing to ferrous metallography. H. J. Merchant. bibliog 3pls diags Iron & Steel Inst J 155:179-94 F '47; Discussion. il 156:524-6 Ag '47
Edge rounding avoided with cast iron grit. il Metal Prog 50:659 O '46
Electrolytic polishing and lapping for mirror finishes. J. Mazia. bibliog il diags Steel 120:84-7+ My 19 '47
Metallographic electropolishing. J. L. Waisman. il diags Metal Prog 51:606-10 Ap '47
New metallographic etchant for aluminum bronze and copper-beryllium alloys. W. C. Coons and D. J. Blickwede. bibliog il Am Soc for Metals Trans 35:284-97 '45
New method of electrolytic polishing of electron microscope samples. E. Der Mateosian. il diags Iron Age 159:51-3 Ja 16 '47
Polishing metallographic specimens with diamond dust. G. C. Woodside and H. H. Blackett. il Metal Prog 51:945-7 Je '47
Polishing technique for metallography. C. P. Kenyon and others. il diags Metal Prog 51: 260-4 F '47
Source of polishing scratches. D. J. Mack. il Metal Prog 52:105-6 Jl '47
To avoid staining around cracks. V. Kappel. Metal Prog 51:85 Ja '47

Mounting

Identifying metallographic specimens. M. H. Kalina. il Metal Prog 51:969-70 Je '47
Mount identification tool. O. L. Noftsinger. diag Metal Prog 52:250 Ag '47
Mounting for edge examination. A. Hone. il Metal Prog 51:435-7 Mr '47
Preparation of iron powder compacts and powders for microscopic examination. H. M. Jamison and E. S. Byron. il Metal Prog 51:437-40 Mr '47
Room temperature casting resin for metallographic mounts. G. L. Kehl and J. S. Church. Metal Prog 50:1089-90 N '46

METALLOGRAPHY
Anti-reflection films for metallographic objectives. J. R. Benford, il diags Am Soc for Metals Trans 36:452-70; Discussion. 470-2 '46
As-cast and aged structures of Cr-Co alloys; photomicrographs; data sheet. Metal Prog 52:400B S '47
Cobalt-base and nickel-base alloys for ultra-high temperature. F. S. Badger, jr. and F. C. Kroft, jr. il Metal Prog 52:394-400+ S '47
Contributions to the theory of beta-phase alloys. C. Zener. bibliog Phys R 71:846-51 Je 15 '47
Experimental evidence of the viscous behavior of grain boundaries in metals. T. Kê. bibliog diags Phys R 71:533-46 Ap 15 '47; Abstract. Engineer 184:196-7 Ag 29 '47
Exposure chart for Bausch and Lomb research metallograph; data sheet. A. L. Schaeffler. Metal Prog 50:1118 N '46
Fractographic structures in zinc. C. A. Zapffe. il Metal Prog 51:428-31 Mr '47
Graphite formation in cast irons and in nickel-carbon and cobalt-carbon alloys. H. Morrogh and W. J. Williams. bibliog(115 ref) diags Iron & Steel Inst J 155:321-71, pl 1-14 Mr '47; Discussion. il 156:491-6; 157: 193-7 Ag, O '47

METALLOGRAPHY—*Continued*

Identification of delta constituent in aluminum bronzes. D. J. Mack and M. A. Shurman. il Metal Prog 51:976-7 Je '47

Metallography for the electroplater. A. Blazy and J. B. Mohler. bibliog il diags Metal Finishing 45:54-7 Ap; 68-71 My '47

Metals through the microscope. P. R. Lewis. il Sci Am 177:21-5 Jl '47

Method for micro-spectrography of metals. F. R. Bryan and G. A. Nahstoll. bibliog il diag Opt Soc Am J 37:311-16 My '47

Microradiography with routine X-ray equipment. E. L. Salkovitz. il Metal Prog 50: 1091-6 N '46

Model which shows hardening and annealing mechanisms. E. C. Davis. il Metal Prog 51:248-9 F '47

Preparation and X-ray diffraction studies of a new cobalt carbide. L. J. E. Hofer and W. C. Peebles. bibliog il Am Chem Soc J 69:893-9 Ap '47

Selection of austenitic electrodes for welding dissimilar metals. A. L. Schaeffler. bibliog il Welding J 26:sup601-20 O '47

Some metallurgical aspects of cemented carbides. J. C. Redmond. bibliog il Iron Age 159:42-5+ Ja 30 '47

Stress relaxation across grain boundaries in metals. T. S. Kê. il Phys R 72:41-6 Jl 1 '47

Tensile strength of metals; why theory and practice conflict. E. Appleton. Chem Age (Lond) 57:17 Jl 5 '47

Use of coated lenses for metallography. E. Walden. il Metal Prog 50:1097-9 N '46

When metal atoms wander. E. L. Cady. il diag Sci Am 177:15-17 Jl '47

See also

Copper—Metallography
Etching (metals)
Iron—Metallography
Metallographic specimens
Steel—Metallography
Zinc—Metallography

METALLURGICAL analysis

Economic significance of direct reading spectrochemical analysis. M. F. Hasler. il Iron Age 160:71-3 Ag 14 '47

Metallurgical examinations, analyses aid FBI. J. E. Hoover. il Steel 120:52-3 Ja 20 '47; Same abr. Mech Eng 69:234-5 Mr '47

Report on standard samples for spectrochemical analysis. 23p American society for testing materials, 1916 Race st, Philadelphia 3 '47

Spectrochemical analysis of nickel alloys. E. K. Jaycox. Opt Soc Am J 37:159-62 Mr '47

Spectrochemical determination of lithium, sodium, and iron in lithium-bearing ores. G. Oplinger. bibliog il Anal Chem 19:444-7 Jl '47

Spectrographic analysis of a complex ferrous alloy. C. H. R. Gentry and G. P. Mitchell. bibliog il diag Soc Chem Ind J 66:226-32 Jl '47

See also

Aluminum—Analysis
Copper—Analysis
Electrographic analysis
Gold—Analysis
Iron—Analysis
Lead—Analysis
Magnesium—Analysis
Metals—Analysis
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Zinc—Analysis

METALLURGICAL apparatus

See also

Classifiers
Converters
Furnaces, Metallurgical
Magnetic separators
Metallurgical plants—Equipment
Tube mills

METALLURGICAL laboratories

British iron and steel research association's Sketty Hall laboratories. Engineer 184:42 Jl 11 '47

British laboratory for physical metallurgy. T. Bishop. Metal Prog 51:960-1 Je '47

Electrical sheet steel; research laboratories at Manor sheet iron works. Elec R (Lond) 139:648 O 25 '46; Electrician 137:1139-40 O 25 '46

Industrial research laboratories at Wolverhampton. Engineering 162:425 N 1 '46

Modern laboratory geared to production; metallurgical laboratory at White motor co. il plans Steel 119:64-6+ D 30 '46

National metallurgical laboratory at Jamshedpur, India. Science 105:385 Ap 11 '47

National metallurgical laboratory for India. Engineering 163:43 Ja 10 '47; Excerpt. Iron Age 159:135 F 13 '47

National metallurgical laboratory for India. G. P. Contractor. Metal Prog 51:265-6 F '47

Research institute to serve smaller British firms; Fulmer research institute. V. Delport. il Foundry 75:142 O '47

Research laboratory at Case institute of technology. Mech Eng 69:774-5 S '47

Theoretical physics in the metallurgical laboratory of Chicago. E. P. Wigner. bibliog J Ap Phys 17:857-63 N '46

METALLURGICAL laboratories, Portable

Mobile laboratory for the British iron and steel research association. Engineer 184:341 O 10 '47

Mobile laboratory speeds steel analysis. H. A. Tuttle and G. A. Nahstoll. bibliog il Iron Age 160:68-72 S 25 '47

METALLURGICAL patents

United States patents on powder metallurgy. R. E. Jager and R. E. Pollard. U S Nat Bur Stand Misc Pub M184:1-139; pa 30c Supt. of doc. '47

METALLURGICAL plants

Conditioning of Alabama iron ores. A. A. Nilsen and R. Yingling. il Steel 120:110+ Mr 31 '47

New prefabricated plant design; Mobil-Mill. flow sheet il Can Min J 68:403-4, 464 Je '47

Remote control a feature of ore-conditioning plant; Tennessee coal, iron & railroad co. A. A. Nilsen and R. Yingling. il Eng & Min J 148:74-9 Ap '47

See also

Aluminum works
Blast furnaces
Flotation plants
Iron works
Ore treatment
Smelting works
Steel works

By-products

Potash reclamation; recovery from ferrous and non-ferrous by-products. A. G. Arend. il diag Chem Age (Lond) 55:565-8 N 9 '46

Equipment

Aerofall bulk sampler. diag Can Min J 67: 1031-3 N '46

Centrifugal ball-mill classifier. C. E. Wuensch. il diag Min Cong J 33:22-5+ S '47

Economy, simplicity now watchwords in milling. R. H. Ramsey. il diag Eng & Min J 148:99-104+ F '47

Hasaga gold mines, limited. D. C. McLaren. Can Min J 68:173-4 Mr '47

Mesabi range changes heavy-media practice. E. C. Bitzer. flow sheets il diag Min Cong J 33:36-9 Je '47

Milling at Magnet Consolidated mines. A. C. Anderson. flow sheet il Can Min J 68: 393-8 Je '47

Milling practice at Perron gold mines; with cost data. B. Demarsh. flow sheet il Can Min J 68:5-9 Ja '47

Reclamation of aircraft aluminum; chlorine gas fluxing; Reynolds metals co. G. W. Birdsall. il diag Metal Prog 50:1232-8 D '46

St Joe's Balmat mill; Edwards division of the St Joseph lead co. J. Casale. il diag Eng & Min J 147:56-62 N '46

St Joseph lead enterprise; Compania minera Aguilar, S.A.; milling practice. W. L. Lew. flow sheet Min & Met 28:409-11 Ag '47

St Joseph lead enterprise; milling practice at the Balmat and Edwards mills. J. J. Burns. flow sheet il Min & Met 28:395-7 Ag '47

St Joseph lead enterprise; milling practices in southeast Missouri. H. R. Stahl. flow sheet il Min & Met 28:374-6 Ag '47

Some unusual features encountered in investigating cracked welds in 35/15 magnesium retorts. H. J. Nichols. il Welding J 26:881-4 O '47

See also

Converters
Ore treatment

METALLURGICAL plants—*Continued*

Experimental plants

Production of alumina from clay by a modified Pedersen process. T. P. Hignett. bibliog flow sheet il plans diags Ind & Eng Chem 39:1052-60 Ag '47; Correction. 39: 1334 O '47

Power

Hot lime soda and internal treatment condition 100% feedwater makeup; power plant, Nicaro nickel co. V. H. Brogdon. flow sheet il Power 91:82-4 F '47

Large rectifier station practice; operation in metallurgical and chemical plants. A. G. Dickinson. il Elec Eng 66:960-2 O '47

Safety measures

Some safety practices for metal mines, nonmetal mines (other than coal), mills, metallurgical plants, and quarries. U S Bur Mines Information Circ 7387:1-56 '46

Waste

See also
Brass works—Waste

METALLURGICAL research

British non-ferrous metals research association. Engineer 184:62-3 Jl 18 '47

Electrolytic lead for research purposes. A. G. Arend. Chem Age (Lond) 57:325-6+ S 6 '47

Fulmer research laboratory; new facilities for individual investigations. il Chem Age (Lond) 57:51 Jl 12 '47

Metallurgical research program of the Bureau of mines relating to the nonferrous metals. R. S. Dean and B. Silkes. 10pls U S Bur Mines Rep of Invest 4064:1-22 bibliog(p3-6) '47

Metals, minerals and research. C. Williams. il Min & Met 28:140-3 Mr '47

New metals for old. E. Appleton. Engineering 164:69, 90-1 Jl 18-25 '47

Office of naval research. H. G. Bowen. Welding J 26:489-93 Je '47

Research opportunities offered by U.S. colleges; many scholarships, assistantships, and fellowships in mineral technology available. S. P. Wimpfen. il Min & Met 28:504-7 O '47

Survey of metallurgical research in Japan during the war. S. A. Herres. il Metal Prog 51:273-90 F '47

Technical progress in metalworking; metallurgy. Steel 120:212-17 Ja 6 '47

Tomorrow's metallurgy. F. P. Peters. il Sci Am 177:56-8 Ag '47

See also
British cast iron research association
Corrosion research
Metallurgical laboratories

METALLURGISTS

See also
Boegehold, A. L.

METALLURGY

High vacuum technology; vacuum metallurgy. R. S. Morse. il diags Ind & Eng Chem 39:1068-71 S '47

Key to metal knowledge; wartime research available to all industries. Bsns W p85-6+ My 17 '47

Metallurgical advances. A. G. Arend. diags Chem Age (Lond) 56:77-80 Ja 11 '47

Metallurgical progress and the mining industry. L. Sanderson. Can Min J 68:723-5 O '47

Metallurgy at the International congress for pure and applied chemistry. Engineer 184:79 Jl 25 '47

Metallurgy in 1946. E. S. Kopecki. il diag Iron Age 159:96-103 Ja 2 '47

Reducing failures in metal parts; what a practicing metallurgist needs to know about design. A. E. Focke. il diags Min & Met 28:495-7 O '47

Technical progress in metalworking; metal production. Steel 120:240+ Ja 6 '47

Wartime advances in nonferrous metallurgy in Britain. B. J. S. Bard. Metal Prog 51: 411-13+ Mr '47

See also
Aluminum metallurgy
Blast furnaces
Cobalt metallurgy
Copper metallurgy
Electrodeposition of metals
Electrometallurgy
Flotation process
Flue dust
Flux
Furnaces, Metallurgical
Gold metallurgy
Iron metallurgy
Lead metallurgy
Magnesium metallurgy
Manganese metallurgy
Metallography
Metallurgical analysis
Metallurgical laboratories
Metallurgical plants
Metals
Nickel metallurgy
Open hearth process
Ore treatment
Pickling (metals)
Sintering
Slag
Smelting
Smelting works
Steel metallurgy
Tin metallurgy
Zinc metallurgy

Bibliography

Among the newer books. Published in monthly numbers of Mining and metallurgy

Book reviews. Published in monthly numbers of Materials & methods

Books for mining and metallurgical engineers, 1946. Min & Met 28:147+ Mr '47

Current institute papers. Published in Mining and metallurgy

Materials & methods digest; new developments and ideas in materials and their processing. Published in monthly numbers of Materials & methods

History

Working of metals is ancient industry. H. G. Wellman. Foundry 75:225 Ja '47

Japan

Survey of metallurgical research in Japan during the war. S. A. Herres. il Metal Prog 51:273-90 F '47

METALS

American society for metals, digest of technical papers. Steel 119:39-40+ N 25 '46

Annual engineering review; materials, processing methods. il Materials & Methods 25: 87-110 Ja '47

Atomic radii and interatomic distances in metals. L. Pauling. bibliog Am Chem Soc J 69:542-53 Mr '47

Average ultimate strength of materials; tabulation; engineering file facts. Materials & Methods 25:119 My '47

Coming changes in metal-economics. F. P. Peters. il Sci Am 175:258-60 D '46

Corrodibility of some common metals and alloys; tabulation, comp. by J. Strauss; revised (1946) by E. E. Thum; data sheet. Metal Prog 50:884b N '46

Development in aircraft engine metallurgy, 1920-46. W. E. Jominy. Metal Prog 50:687-90 O '46

Directory of materials for the construction of chemical equipment. Chem Eng 53:110-16 N '46

Internal stresses in metals and alloys; symposium. Engineer 184:393-4, 405-7, 431-3, 464-5, 476-8 O 24-N 21 '47; Engineering 164: 401-2, 426, 449-50, 473 O 24-N 14 '47

Length changes in metals under torsional overstrain. H. W. Swift. diags Engineering 163:253-7 Ap 4 '47

Metal-to-metal adhesives. Chem Age (Lond) 57:331-2 S 6 '47

Metallurgical substitutions. A. M. Portevin. Metal Prog 51:271-2 F '47

Metallurgy in 1946. E. S. Kopecki. il diag Iron Age 159:96-103 Ja 2 '47

National metal congress; abstracts of technical papers. Steel 121:110+ O 6 '47

New metals for old. E. Appleton. Engineering 164:69, 90-1 Jl 18-25 '47

Recent developments in metals and their processing. W. F. Craig, jr. and others. bibliog il Machine Design 19:71-8 O '47

Reducing failures in metal parts; what a practicing metallurgist needs to know about design. A. E. Focke. il diags Min & Met 28:495-7 O '47

METALS—*Continued*
Some thermodynamic constants for the solution processes of atoms in metallic solvents. S. Wang. bibliog J Chem Phys 14:643-7 N '46
Technical highlights of the Western metal congress. Steel 120:86-7+ Mr 31 '47
Thermal properties of metals; tabulation; engineering file facts. Materials & Methods 25:123 Ja '47
Tomorrow's metallurgy. F. P. Peters. il Sci Am 177:56-8 Ag '47

See also
Alloys
Aluminum
Antimony
Babbitt metal
Bearing metals
Beryllium
Bismuth
Brass
Bronze
Cast iron
Chromium
Cobalt
Copper
Corrosion and anti-corrosives
Creep of metals
Deformation (mechanics)
Electrodeposition of metals
Electrometallurgy
Fatigue in metals
Films, Metallic
Foundry practice
Geology
Glass—Joining to metal
Gold
Heat treatment
Iron
Lead
Lithium
Magnesium
Manganese
Mercury
Metal trade
Metallography
Metallurgy
Mines and mineral resources
Molybdenum
Monel metal
Nickel
Ore deposits
Pickling (metals)
Plastic materials—Joining to metal
Platinum metals
Potassium
Printing on metal
Radium
Rare earth metals
Scrap metal
Sheet metal
Silver
Slag
Sodium
Solder and soldering
Solutions, Solid
Steel
Stellite
Strength of materials
Strontium
Tantalum
Tarnishing of metals
Tin
Tungsten
Uranium
Welding
Zinc

Aging

Aging of high purity aluminum alloy containing 4 pct Cu; abstracts. M. L. V. Gayler. Iron Age 158:45 O 31 '46; Engineer 182:281 S 27 '46; Engineering 162:306 S 27 '46; Metal Prog 51:830+ My '47
Cold working of a high-purity aluminum alloy containing 4 percent of copper and its relation to age-hardening; abstract. M. L. V. Gayler. Product Eng 18:129 Je '47; Conclusions. Iron Age 158:45 O 31 '46
Effect of artificial aging on tensile properties and resistance to corrosion of 24S-T aluminum alloy. H. L. Logan, H. Hessing and H. E. Francis. bibliog il charts J Res Nat Bur Stand 38:465-89 My '47
Glenn Martin engineer offers new aging cycle for aluminum alloys. Iron Age 159:156 Mr 13 '47
Heat treatment and aging 61S sheet. J. A. Nock, jr. diags Iron Age 159:48-54 Ap 24 '47
New developments in high strength aluminum alloy products. E. H. Dix, jr. bibliog Am Soc for Metals Trans 35:130-48; Discussion. 149-55 '45
New short time aging practice for 75S aluminum alloy sheet. J. A. Nock, jr. and A. C. Wooll. Iron Age 159:57-9 Ja 30 '47
Study of age-hardening by the aid of the electron microscope. A. H. Geisler and F. Keller. Engineer 183:194-5 Mr 7 '47
Theory of the age hardening of aluminium-copper alloys, based on vacant lattice sites; abstracts. F. Röhner. Engineer 183:280 Ap 4 '47; Metal Prog 52:422+ S '47; Discussion. Engineer 183:280-1 Ap 4 '47
Über die alterungsempfindlichkeit von baustählen hoher festigkeit. A. Fry and L. Kirschfeld. bibliog il VDI 87:123-7 Mr 3 '43; Abstract (Aging of high tensile structural steel). Welding J 26:sup149-52 Mr '47

Analysis

Identification of plated coatings. G. Black and J. Sinner. Metal Finishing 44:529-30 D '46
Metal analysis by electron diffraction. Chem Ind 60:74+ Ja '47
Unitized mercury cathode apparatus for electrolytic removal of metals. H. O. Johnson, J. R. Weaver and L. Lykken. bibliog il diags Anal Chem 19:481-3 Jl '47

See also
Metallurgical analysis

Bibliography

Manufacturers' literature. Published in monthly numbers of Materials & methods
Materials & methods digest; new developments and ideas in materials and their processing. Published in monthly numbers of Materials & methods
Review of metal literature. E. C. Skarshaug. Special Lib 37:294-7 N '46

Cleaning

See Metal cleaning

Corrosion

See Corrosion and anti-corrosives

Detection

Detector for locating reinforcing bars in concrete. L. T. Cleaver. il Am Concrete Inst J 19:178-81 O '47
Electronic inspection; automaton detects and removes from line packages with foreign metal. P. A. Greenmeyer. il diags Mod Packaging 21:132-7 S '47
Locator probe aids medical science; indicates presence of metals in the body. il Gen Elec R 49:54-5 O '46; Same abr. Safety Eng 92:64 N '46
Metal detection for better plastic products. P. A. Greenmeyer. il diags Mod Plastics 24:137-42 Ap '47
Modern divining rod; metal locators, their design and limitations. A. B. Kaufman. il diags Radio N 37:41-3+ Ap '47
Tubes find iron in ore. Electronics 20:172 Ag '47

Erosion

See Erosion of metals

Failure

Brittle fracture of ductile metal. J. B. Friedman. Metal Prog 50:1208 D '46
Five theories of static failure explained and compared. C. Lipson. il Product Eng 18: 157-60 Je '47
Fracture of metals under combined stresses. D. J. McAdam, jr. bibliog diags Am Soc for Metals Trans 37:538-66 '46
Report on the fracture of metals; report submitted to the Bureau of ships of the U.S. navy. M. Gensamer and others. Welding J 26:sup443-84 bibliog(293 titles, sup469-72, 483-4) Ag '47
Thermodynamic criterion for the fracture of metals. E. Saibel. Phys R 70:779 N 1 '46

See also
Fatigue in metals

Fluidity

Flow of metals at elevated temperatures. J. H. Hollomon and J. D. Lubahn. bibliog diags Gen Elec R 50:28-32 F; 44-50 Ap '47
Fluidity of steel; experimental investigations in fluidity/temperature relationships. R. Jackson and others. bibliog diags Iron & Steel Inst J 157:1-21 S '47
Plastic flow of metals. J. H. Hollomon and J. D. Lubahn. bibliog Phys R 70:775 N 1 '46

Gas content

Controlling gas porosity in castings. A. J. Phillips. il Iron Age 159:63 Ap 17 '47
Gas and shrinkage in tin bronzes. E. F. Tibbetts. il Foundry 75:74-7+ S '47
Practical procedures for reducing gas porosity in nonferrous castings. A. E. St John. Iron Age 160:46-8 Jl 3 '47
Separation of gases from molten metals; abstract. A. J. Phillips. Iron Age 159:66 Mr 27 '47
Unsoundness caused by gases in copper-base alloys. L. W. Eastwood and J. G. Kura. bibliog il Foundry 75:80-2+ My; 82-3+ Je; 70-1+ Jl; 76-81+ Ag; 86-8+ S; 86-91 O; 94-9+ N '47

See also
Cast iron—Gas content

METALS—*Continued*

Hydrogen content

Gas porosity in aluminum alloys. H. Brown. il diags Foundry 75:88-9+ F '47

Gases causing unsoundness in copper-base alloys. L. W. Eastwood and J. G. Kura. bibliog il Foundry 75:70-1+ Jl '47

Hydrogen in metals. A. Portevin. Metal Prog 50:1206-8 D '46

Influence of the water-content of an electrode-coating on the hydrogen-content of weld metal. W. P. van den Blink. Welding J 26:sup369-70 Jl '47

Physiological effect

Toxicology of the newer metals; abstract. L. T. Fairhall. J Ind Hygiene 29:sup93 S '47

Polishing

See Polishing; Polishing, Electrolytic; Polishing materials

Prestressing

See Shot peening

Prices

Metal prices, 1897-1946; chart and table. Eng & Min J 148:insert 82a-82b, 83 F '47

Weekly average metal prices, 1946; table. Eng & Min J 148:83 F '47

Scaling

Resistance of metals to scaling. B. Lustman. bibliog Metal Prog 50:850-6+ N '46; Same abr. Steel 120:68-9+ Ja 20 '47

Shrinkage

See Shrinkage of metals

Stockpiling

See Minerals—Stockpiling

Temperature effects

Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdam, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46

Flow of metals at elevated temperatures. J. H. Hollomon and J. D. Lubahn. bibliog diags Gen Elec R 50:28-32 F; 44-50 Ap '47

High-temperature metals; special section. L. N. Rowley and B. G. A. Skrotzki. il diags Power 91:681-96 O '47

Magnesium-cerium-zirconium alloys; properties at elevated temperatures. A. J. Murphy and R. J. M. Payne. il Engineering 163:485-7 Je 6 '47

Properties of various alloys at sub-zero temperatures. Iron Age 158:75 N 14 '46

Seizing of certain metals at 750 F; engineering file facts. N. L. Mochel. Materials & Methods 26:113 S '47

Tensile testing at elevated temperatures; equipment for testing turbosupercharger and gas turbine parts. A. W. Brunot. il diag Steel 121:90-1+ Ag 4 '47

See also
Creep of metals

Testing

ASTM specification covering mechanical testing of metals; tabulation; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 24:1499 D '46

Annual engineering review; testing and inspection. Materials & Methods 25:108-10 Ja '47

Attenuation and scattering of high frequency sound waves in metals and glasses. W. P. Mason and H. J. McSkimin. bibliog diags Acoustical Soc Am J 19:464-73 My '47

Automatic Sonigage; measures thickness, tests metals and plastics for flaws and defective bond. W. S. Erwin and G. M. Rassweiler. il diags Iron Age 160:48-55 Jl 24 '47

Engineering significance of metals testing. B. D. Mills, jr. diags Iron Age 160:78-83 Ag 7 '47

High speed compression tests on copper. M. Greenfield and E. T. Habib. il diags J Ap Phys 18:645-50 Jl '47

How to measure machinability in the shop. G. Schlesinger. bibliog il diags Am Mach 90:117-28 N 21 '46

Impact and fatigue tests for metals. H. N. Lyle. Oil & Gas J 46:113 Ag 9 '47

Important considerations in Charpy and Izod testing. C. M. Schwitter. il diags Product Eng 18:106-9 O; 159-62 N '47

Jet alloys tested by rapid spinning at high temperatures. il Sci Am 177:77-8 Ag '47

Locating internal defects; Supersonic Reflectoscope. B. Carlin. il diags Am Gas Assn Mo 29:391-3 S '47

Method for predicting failure of metals; use of Du Mont Cyclograph. P. E. Cavanagh. bibliog il Pet Eng 18:120+; Discussion. 127-8 Ag '47

Oil-powder method of flaw detection. B. Ronay. il Welding J 26:407-9 My '47

Quick tests for identifying eight white metals and alloys. Paper Ind 29:574 Jl '47

Stress comparisons by correlation with high frequency magnetic and eddy current losses. P. E. Cavanagh. bibliog il diags Am Soc for Metals Trans 36:137-63; Discussion. 163-4 '46

Supersonic examination of materials. B. Carlin. il diags Product Eng 18:113-18 O '47

Supersonic flaw detector. diag Electronics 19:198+ D '46

Symposium on atmospheric exposure tests on non-ferrous metals. 145p pa $1.75 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46

Technical progress in metalworking; inspection and testing. Steel 120:296-8 Ja 6 '47

Tensile properties of several special steels and certain other materials under pressure. P. W. Bridgman. bibliog J Ap Phys 17: 201-12 Mr '46; Abstract. Metal Prog 51: 306+ F '47

Tentative method of assessment of machinability. C. W. George. Inst Mech Eng J & Proc 155 (War emergency issue no 20):248-55, pl 3 (p240) '46; Same cond. Engineering 161:621-2 Je 28 '46

See also

Corrosion and anti-corrosives—Testing	Hardness—Testing
Corrosion research	Magnetic testing
	Testing machines

Textile uses

See also

Aluminum—Textile uses	Textile fibers, Metallic

Wear

Chrome plating to reduce wear; survey of fleet operators' experience. R. O. Mathews. S A E J 55:33-5 O '47

Indentation method for measuring wear. S. A. McKee. il diags J Res Nat Bur Stand 39:155-61 Ag '47

Lead base babbitt alloys; fatigue and wear properties. H. P. George. il diag Product Eng 18:138-41 Ja '47

New replica techniques for evaluating engine wear; surface finishes reproduced in plastic. il diag Automotive & Aviation Ind 96:36-7+ Ap 15 '47

Reducing metal wear with abrasion-resisting castings. J. S. Vanick. il Am Cer Soc Bul 26:109-16 Ap 15 '47

Scuff and wear resistant chemical coatings. F. C. Young and B. B. Davis. il S A E J 55:42-3 My '47

Structure of sliding surfaces. G. I. Finch. Inst Mech Eng J & Proc 153 (War emergency issue no 10):331-2 '45; Same. Engineering 159:215 Mr 16 '45; Same cond. Automobile Eng 35:141 Ap '45

X ray inspection

Common-sense of engineering radiography. V. E. Pullin. Engineer 182:536-7 D 13 '46

Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel. N. P. Goss. bibliog il Steel 121:74-5+ S 29; 98-100+ O 6 '47

Limitations on precision cast parts. N. J. Grant. il Iron Age 160:62-6 Ag 7 '47

Measurement of depth of cold work on X-ray spectrometer. M. Field. il R Sci Instr 18: 451-3 Je '47

Metallurgical applications of the X-ray diffraction spectrometer. J. L. Abbott. bibliog il Iron Age 159:50-3 F 13; 57-61 F 20; 56-9 F 27 '47

METALS—X ray inspection—*Continued*
Railroad X-ray checks metal in cars, locomotives, rails, for internal flaws. il Sci Am 177:220-1 N '47
Simple technique for the X-ray determination of fiber-axes in electro-deposited metals. M. R. J. Wyllie. diags R Sci Instr 18: 425-9 Je '47
X-ray analysis of chromium-molybdenum and chromium-tungsten alloys. W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47
X-ray diffraction as a gage for measuring cold work produced in milling. F. Zankl and others. bibliog il diags A S M E Trans 69: 307-17 My '47; Same cond. Iron Age 159: 44-50 Ja 23 '47; Discussion. A S M E Trans 69:317-18 My '47
X-ray diffraction camera for microtechniques. F. G. Chesley. il diag R Sci Instr 18:422-4 Je '47
X-ray inspection promotes casting quality control. E. H. Grimm. il Foundry 75:94-6+ O '47; Same. Steel 120:110-12+ My 12 '47; Same cond. Automotive & Aviation Ind 96: 36-8+ My 15 '47
X-ray investigation of the embrittlement of platinum and platinum-rhodium wires. H. J. Goldschmidt and T. Land. 4pls Iron & Steel Inst J 155:221-6 F '47
X-ray negatives made through twenty inches of metal; betatron at Picatinny arsenal. il Mach 53:172 Ja '47
X-ray study of iron-rich iron-silicon alloys M. C. M. Farquhar and others. bibliog Iron & Steel Inst J 152:457-70, pl 44-5; Discussion. 471-2 no 2 '45
X-raying turbine parts. J. A. Pratt. il Steel 119:60-1+ D 23 '46

See also
Welding—X ray inspection

METALS, Clad
Few observations on solid phase bonding. G. Durst. diags Metal Prog 51:97-101 Ja '47

See also
Alclad
Steel, Clad

METALS, Cold treatment of
Coldest cold bath employed in research on super-cooled metals. il Sci Am 177:222 N '47
Expansion fits with liquid nitrogen; reference book sheet. diags Am Mach 91:151, 153 Je 5 '47
Expansion fitting with liquid nitrogen. C. H. Wick. il diags Mach 54:156-9 O '47
Improvised super-cooling unit. diag Mach 53: 153 My '47
Liquid nitrogen sub-zero cools parts for expansion fitting. E. J. Tangerman. il Am Mach 91:144-5 Je 5 '47
Making an expansion fit; bushing for Diesel engine. A. C. Jones. il Metal Prog 52:248-9 Ag '47
Stabilizing aluminum castings. A. C. Jones. Metal Prog 51:775-6 My '47
Sub-zero temperatures in treating and assembling metal parts. G. B. Olson. il Mach 53:149-56 Ap '47

See also
Steel, Cold treatment of

METALS, Cold working of
Annealing studies on cold-rolled iron and iron binary alloys. C. R. Austin and others. il Am Soc for Metals Trans 35:446-80 bibliog (p480); Discussion. 481-4 '45
Cold working and heat treatment of a 10-carat gold alloy. V. H. Patterson and B. N. Iannone. il diag Am Soc for Metals Trans 37:278-97; Discussion. 297-302 '46
Iron-manganese alloys; properties of cold-worked and heat treated alloys containing 1 to 7 per cent manganese. R. S. Dean and others, bibliog il Am Soc for Metals Trans 36:116-36 '46
Measurement of depth of cold work on X-ray spectrometer. M. Field. il R Sci Instr 18: 451-3 Je '47
Nickel and high nickel alloys; cold forming. N. E. Waldman. Materials & Methods 24: 1484 D '46
System of microstresses in cold-worked metal. N. M. Blachman. bibliog Phys R 70:698-704 N 1 '46
X-ray diffraction as a gage for measuring cold work produced in milling. F. Zankl and others. bibliog il diags A S M E Trans 69:307-17 My '47; Same cond. Iron Age 159:44-50 Ja 23 '47; Discussion. A S M E Trans 69:317-18 My '47

See also
Steel, Cold working of

METALS, Creep of. See Creep of metals

METALS, Effect of cold on. See Metals—Temperature effects; Metals, Cold treatment of

METALS, Heat resisting

See also
Alloys, Heat resisting

METALS, Molten
Determination of molten metal temperatures; abstracts. G. Vennerholm and L. C. Tate. Iron Age 159:85-6 My 8 '47; Metal Prog 52:426+ S '47
Dyeing process uses molten metal; fabric passed through molten-metal bath for aftertreatment. F. S. Richardson, comp. diag Textile World 97:133+ S '47
Fluidity testing of foundry alloys. K. L. Clark. bibliog(105 titles) il diags Foundry 74:92-6+ D '46
Sprinklers no hazard on molten metal. Nat Safety N 55:82 Je '47
Thermal properties of metals; tabulation; engineering file facts. Materials & Methods 25:123 Ja '47

METALS, Non-ferrous
Aircraft engines, application and possible development of nonferrous metals. E. Wood. Metal Prog 50:1252 D '46
Alloy metal ores in 1946. B. Burwell. il Min Cong J 33:96-7 F '47
Annual engineering review. Materials & Methods 25:93-4 Ja '47
British non-ferrous metals research association. Engineer 184:62-3 Jl 18 '47
Development and present position of the continuous casting of non-ferrous metals. H. Kästner. il diags Engineer 183:562-3 Je 27 '47
Krug finds Nation's nonferrous metal reserves being depleted. Steel 121:60-1 N 3 '47
Metallurgical research program of the Bureau of mines relating to the nonferrous metals. R. S. Dean and B. Silkes. 10pls U S Bur Mines Rep of Invest 4064:1-22 bibliog(p3-6) '47
Nonferrous alloy materials for mechanical springs. F. P. Zimmerli. il Product Eng 17: 85-7 D '46
Nonferrous metal developments on the Pacific slope. R. J. Anderson. il map Chem & Eng N 25:2704-6 S 22 '47
Non-ferrous metallurgists cut costs and slag losses. C. R. Hayward. il Eng & Min J 148: 112-14 F '47
Nonferrous metals in 1946. J. Anthony. il Iron Age 159:104-9 Ja 2 '47
Progress in review. Product Eng 18:108-9 Ap; 108-9 My '47
Relation of machinability to structure; nonferrous metallurgy. A. J. Murphy. bibliog Inst Mech Eng J & Proc 155 (War emergency issue no 20):236-8, pl 1 (p240) '46; Same. Engineering 161:573-4 Je 14 '46
Resources of nonferrous metals in Kazakhstan, U.S.S.R. For Comm W 26:20 Ja 11 '47
Smelting and refining of reclaimed nonferrous metals. A. E. St John. il Metal Prog 52: 609-12 O '47
Supply outlook for nonferrous metals. J. P. Sherman. Materials & Methods 26:75-9 O '47
Synthetic sand in the nonferrous foundry; Norfolk naval shipyard. S. W. Brinson. il Foundry 75:80-5+ Ja '47
Timely reappraisal of the metal stocks; financial data on non-ferrous metal and metal fabricator stocks. W. Beecher. il Mag of Wall St 80:545-7+ Ag 16 '47
Wartime advances in nonferrous metallurgy in Britain. B. J. S. Bard. Metal Prog 51: 411-13+ Mr '47

METALS, Non-ferrous—*Continued*
What about non-ferrous metals now? with financial survey of principal mining companies. G. L. Merton. il Mag of Wall St 79:250-2+ D 7 '46
See also
Brass
Bronze
also names of non-ferrous metals, e.g. Aluminum, Copper, Lead, Magnesium

Prices
Average monthly quotations in 1946. Steel 120:322 Ja 6 '47
Production costs under premium price plan. J. L. Maury. Eng & Min J 148:86-7 Jl '47

Testing
See also
Aluminum—Testing

METALS, Powdered. See Metal powders

METALS, Tarnishing of. See Tarnishing of metals

METAMORPHISM
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships, Quebec. C. Faessler and M. S. Badollet. bibliog diag Can Min J 68:157-67 Mr '47

METAPHOSPHATES
See also
Potassium metaphosphate

METASOMATISM
Metasomatic processes. W. T. Holser. bibliog Econ Geol 42:384-95 Je '47

METASTABILITY
Fine structure of the hydrogen atom by a microwave method. W. E. Lamb, jr. and R. C. Retherford. bibliog Phys R 72:241-3 Ag 1 '47
Metastable ion transitions in the mass spectra of the monochloropropenes. V. H. Dibeler and others. Phys R 71:381-2 Mr 15 '47
Metastable state of half-life about 10^{-6} second in Re^{187}. S. De Benedetti and F. K. McGowan. diag Phys R 71:380-1 Mr 15 '47
Metastable states of equilibrium in thermodynamics. J. L. Finck. Franklin Inst J 243: 1-12 Ja '47

METATHEBAINONE
Synthesis of possible degradation products of morphine and metathebainone. H. L. Holmes and K. M. Mann. bibliog Am Chem Soc J 69:2000-3 Ag '47

METCALFE, Art
Topflight craftsmen. por Inland Ptr 119:67 Jl '47

METEORITES
Comparison of the abundance ratios of the isotopes of terrestrial and of meteoritic iron. G. E. Valley and H. H. Anderson. bibliog diags Am Chem Soc J 69:1871-5 Ag '47
Experimental method for the estimation of the age of the elements. H. Brown. bibliog Phys R 72:348 Ag 15 '47
Isotopic composition of meteoritic copper. H. Brown and M. G. Inghram. bibliog Phys R 72:347 Ag 15 '47
Meteorite impact suggested by orientation of shatter-cones at Kentland, Indiana, disturbance. R. S. Dietz. bibliog Science 105: 42-3 Ja 10 '47
Production of helium in meteorites by cosmic radiation. C. A. Bauer. Phys R 72:354-5 Ag 15 '47
Relative abundance of some light nuclear species as determined from the composition of stony meteorites. H. Brown and C. Patterson. bibliog Phys R 72:456-7 S 15 '47

METEOROLOGICAL balloons. See Balloons, Meteorological

METEOROLOGICAL instruments
Device records cloud height and density to improve flying safety; General Electric ceilometer. il Iron Age 159:140+ My 1 '47
Location of thunderstorms by radio direction-finding. F. Adcock and C. Clarke. bibliog il diags Inst E E J 94 pt 3:118-25; Discussion. 133-40 Mr '47
Meteorological instruments and heating design. W. E. K. Middleton. diag Heating-Piping 19:115-18 My '47
See also
Atmometers
Coronagraph
Radio meteorographs
Thermometers and thermometry

METEOROLOGICAL optics
See also
Rainbow

METEOROLOGICAL research
See also
Radio meteorographs

METEOROLOGICAL stations
Weather eye on the pole. map Bsns W p 102 My 10 '47

METEOROLOGY
Visibility measurements by transmissometer. C. A. Douglas. il diags Electronics 20:106-9 Ag '47
See also
Atmospheric pressure
Balloons, Meteorological
Lightning
Rain and rainfall
Snow
Solar radiation
Weather

METEOROLOGY, Aeronautic
All-weather flying center develops new operational aids. R. Hotz. il Aviation W 47:11-12 O 27 '47
Analyzing winds for North Atlantic flight. F. M. Booth. Air Transport 5:36-8+ Ag '47
Transatlantic fliers get wind reports from CAA station. CAA J 7:139 N 15 '46
Weatherproofed communications; CAA's radio teletype weather information for Alaskan aviation. L. LeKashman. il Aero Digest 53:56+ N '46
See also
Atmosphere, Upper

METEORS
Detection of meteors by radio. L. A. Manning and others. Phys R 70:767 N 1 '46
Ionization by meteoric bombardment. J. A. Pierce. bibliog il Phys R 71:88-92 Ja 15 '47
Meteors detected by radar. il Electronics 20: 166 Ja '47
Radar observations during meteor showers, 9 October 1946. R. Bateman and others. il Science 104:434-5 N 8 '46

METER departments. See Electric utilities—Meter departments

METER reading
How to read an electric meter. P. C. Ziemke. il Can Min J 68:741-2 O '47
Reading megawatt meters. J. Falon. Power Pl Eng 50:103 N '46
Simplified meter reading. T. Trail. il Power Pl Eng 51:94 Je '47
Zone meter reading; its relation to office routine. G. E. Curtis. Am Gas Assn Proc 1946:123-7; Discussion. 127-8

METERS
See also
Air meters
Automobile parking—Meters
Dynamometers
Electric meters
Flow meters
Frequency meters
Gages
Gas meters
Meter reading
Orifice meters
Viscosimeters
Voltmeters
Water meters

METHACRYLATES. See Methyl methacrylate

METHACRYLIC acid
Liquid-vapour equilibrium data for the systems; methyl methacrylate-methanol and methyl methacrylate-methacrylic acid. D. E. Woods. Soc Chem Ind J 66:26-9 Ja '47
Methacrylic acid dimer. J. W. C. Crawford. Soc Chem Ind J 66:155-6 My '47

METHACRYLONITRILE
Unsaturated nitriles; the preparation of *trans*-cinnamonitrile and methacrylonitrile by oxime dehydration. D. T. Mowry and R. R. Morner. bibliog Am Chem Soc J 69:1831 Jl '47

METHANE
Aromatics from methane; patent. P. J. Gaylor. Pet Processing 2:264+ Ap '47
Catalytic formation of toluene from benzene and benzene-methane at high pressures. V. N. Ipatieff and G. S. Monroe. Am Chem Soc J 69:710 Mr '47

METHANE—*Continued*
Catalytic production of methane; abstract. E. T. Wilkins and L. J. Jolley. Am Gas J 167: 18 S '47
Determination of the self-diffusion coefficient of methane. E. B. Winn and E. P. Ney. Phys R 72:77-8 Jl 1 '47
Effect of pressure on nitration of methane. H. B. Hass and others. bibliog diags Ind & Eng Chem 39:919-24 Jl '47
Le gaz de fumier. I. Carré. il diags Chimie & Ind 57:448-52 My '47
Influence of water vapor and methane on the heat treatment of steel in a $CO:H_2$ gas atmosphere. H. M. Heyn. il diag Metal Prog 52:232-7 Ag '47
Methane in metal mines; explosion in underground workings of Pacific (eastern) gold mine, Aug. 18, 1947. Can Min J 68:739-41 O '47
Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W. N. Lacey. bibliog diag Ind & Eng Chem 39:77-82 Ja '47
Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H. H. Reamer and others. Ind & Eng Chem 39:206-9 F '47
Pressure broadening in the infra-red and optical collision diameters. N. D. Coggeshall and E. L. Saier. bibliog J Chem Phys 15:65-71 Ja '47
Solubility of nitrogen and methane in sulfur dioxide. M. R. Dean and W. S. Walls. diag Ind & Eng Chem 39:1049-51 Ag '47
Tetrahedral interactions and diamagnetic susceptibilities. J. R. Lacher. Am Chem Soc J 69:2067 Ag '47

See also
Chlorofluoromethanes
Fire damp

Analysis

Use of convection effects in gas analysis by thermal conductivity. C. C. Minter. il diag Anal Chem 19:464-5 Jl '47

Heavy methane

Mass spectrometric study of CH_3D dissociation probabilities of C—H and C—D bonds by electron impact. M. W. Evans and others. J Chem Phys 14:701-7 D '46
Studies of the solid state by means of nuclear magnetism. N. L. Alpert. Phys R 72:637-8 O 1 '47

METHANOL
Absorption of methyl alcohol and methylamine for 1.25-cm waves. W. D. Hershberger. Phys R 71:554 Ap 15 '47
Adsorption equilibria of liquid mixtures of carbon tetrachloride-methanol with charcoal. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1172-81 S '47
Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25° C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1154-71 S '47
Condensation and subcooling inside an inclined tube. J. B. Tepe and A. C. Mueller. bibliog diags Chem Eng Prog 43:267-76; Discussion. 276-8 My '47
Effect of vapour composition on the assessment of fractionating volumns in terms of heights of a transfer unit. J. A. Storrow. bibliog diags Soc Chem Ind J 66:41-8 F '47
Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47
First-order Stark effect in the microwave spectrum of methyl alcohol. B. P. Dailey. Phys R 72:84-5 Jl 1 '47
Industrial catalysis. B. B. Corson. il diag J Chem Educ 24:150-5 Mr '47
Kinetics of the reaction of methanol with 3,3'-dicarbazylphenylmethyl ion in alkaline solution. G. E. K. Branch and B. M. Tolbert. Am Chem Soc J 69:523-8 Mr '47
Liquid-vapour equilibrium data for the systems; methyl methacrylate-methanol and methyl methacrylate-methacrylic acid. D. E. Woods. Soc Chem Ind J 66:26-9 Ja '47
Mechanism of aromatic side-chain reactions with special reference to the polar effects of substituents; kinetic examination of the reaction of aryl *iso*cyanates with methyl alcohol. J. W. Baker and J. B. Holdsworth. Chem Soc J p713-26 Je '47
Methanol labeled with radioactive carbon 14 available from Clinton laboratories. Chem & Eng N 25:2292 Ag 11 '47
Methyl alcohol from lignite. Chem Age (Lond) 56:468 Ap 19 '47
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Restricted rotator thermodynamic properties from the old quantum theory. J. O. Halford. bibliog J Chem Phys 15:645-51 S '47
Streptomyces antibiotics; degradation of streptomycin and dihydrostreptomycin with methanol. N. G. Brink and others. bibliog Am Chem Soc J 68:2557-61 D '46
Synthesis of carbon radioactive methyl iodide and methanol from carbon dioxide. B. M. Tolbert. diag Am Chem Soc J 69:1529-31 Je '47
Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S. Nutting and L. H. Horsley. Anal Chem 19:601-2 Ag '47
Wood chemicals meet synthetic competition. W. Haynes. bibliog J Chem Educ 24:109-13 Mr '47

METHANOL poisoning
Methyl-alcohol poisoning. Safety Eng 92:61 D '46

METHIONINE
Chromatographic studies. A. A. Albanese. Science 105:645 Je 20 '47
Further evidence for the configuration of methionine. G. S. Fonken and R. Mozingo. bibliog Am Chem Soc J 69:1212-13 My '47
Improved synthesis of the selenium analogs of methionine and homocystine. H. J. Klosterman and E. P. Painter. Am Chem Soc J 69:2009-10 Ag '47
Methionine metabolism and α-aminobutyric acid. C. E. Dent. Science 105:335-6 Mr 28 '47
Plasma L-methionine levels following intravenous administration in humans. H. A. Harper and others. Science 106:319-20 O 3 '47
Synthesis of selenium analogs of *dl*-methionine and *dl*-homocystine. E. P. Painter. bibliog Am Chem Soc J 69:232-4 F '47

METHOXYBENZALDEHYDE
Reaction between 4-methoxybenzaldehyde and 2,3-dimethylquinoxaline. R. L. McKee, M. K. McKee and R. W. Bost. Am Chem Soc J 69:468-9 F '47

METHOXYBENZANTHRACENE
Polycyclic aromatic hydrocarbons; 2'-methoxy- and 2'-methoxy-9 : 10-dimethyl-1 : 2-benzanthracene. G. M. Badger. Chem Soc J p940-3 Jl '47

METHOXYBENZENEDIAZONIUM chloride
Chemical constitution and reactivity; decomposition of *o*-methoxybenzenediazonium chloride. M. L. Crossley and others. bibliog Am Chem Soc J 69:1160-4 My '47

METHOXYBENZYL chloride
Action of cuprous cyanide on *p*-methoxybenzyl chloride. S. Wawzonek and H. Hsu. Am Chem Soc J 68:2741 D '46

METHOXY ethanol. See Methyl cellosolve

METHOXY group
Decomposition of methylated sprucewood. F. E. Brauns and J. J. Yirak. bibliog Paper Tr J 125:55-60 S 18 '47
Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47

METHOXYMERCURATION. See Mercuration

METHOXYNAPHTHOL
Nitration of 1 : 5-dihydroxy- and 1 : 5-diacetoxy-naphthalene, 1-acetoxy-5-methoxynaphthalene, 5-methoxy-1-naphthol, and 1 : 5-dimethoxynaphthalene. R. H. Thomson, E. Race and F. M. Rowe. Chem Soc J p350-5 Mr '47

METHOXYNAPHTHOYLPROPIONIC acid
Synthesis of 2-hydroxy-17-equilenone. W. E. Bachmann and W. J. Horton. bibliog Am Chem Soc J 69:58-61 Ja '47

METHOXYNAPHTHYLBUTYRIC acid
Synthesis of 2-hydroxy-17-equilenone. W. E. Bachmann and W. J. Horton. bibliog Am Chem Soc J 69:58-61 Ja '47

METHOXYNITROQUINOLINE
Skraup reaction with acrolein and its derivatives; the preparation of 6-methoxy-8-nitroquinoline. H. L. Yale. bibliog Am Chem Soc J 69:1230 My '47

METHOXYPHENYLPROPIOLIC acid
Phenylpropiolic acids; the dimerisation of *o*-methoxyphenylpropiolic acid. F. G. Baddar. Chem Soc J p224-7 F '47

METHOXYQUINOLINE
8-Aminoquinolines with allylamine substituents. C. D. Hurd and R. J. Sims. Am Chem Soc J 68:2228 N '46
Methylene and *p*-phenylene analogs of plasmocid. C. C. Price, H. R. Snyder and E. M. Van Heyningen. bibliog Am Chem Soc J 68:2589-92 D '46

METHOXYTETRALIN
Synthesis of 6-methoxytetralin. J. H. Hunter and A. H. Nathan. bibliog Am Chem Soc J 69:2064 Ag '47

METHOXYTETRALONE
Base effect in catalytic hydrogenation; simple synthesis of 6-methoxy-α-tetralone. G. Stork. bibliog Am Chem Soc J 69:576-9 Mr '47

METHYL acrylate
Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47
Reaction of hydrogen sulfide with acrylonitrile, acrylic ester and crotonaldehyde. L. L. Gershbein and C. D. Hurd. bibliog Am Chem Soc J 69:241-2 F '47

METHYL alcohol. See Methanol

METHYL arabinoside
Reactions of β-methylarabinoside. M. A. Oldham and J. Honeyman. Chem Soc J p986-93 N '46

METHYL benzanthracene
New synthesis of 1,2-benzanthracene. M. S. Newman and R. T. Hart. bibliog Am Chem Soc J 69:298-300 F '47

METHYL bromide
Comparison of methyl bromide and hydrogen cyanide for the fumigation of empty bags in barges. W. B. Brown and S. E. Lewis. bibliog Soc Chem Ind J 65:241-5 S '46
Geometry of the molecules CH_3Cl and CH_3Br. B. Bak. bibliog J Chem Phys 14:698 N '46
Nuclear and molecular constants from microwave spectra; methyl chloride and methyl bromide. W. Gordy and others. Phys R 72: 344-5 Ag 15 '47
Permeability of proofed fabrics to fumigants. F. P. W. Winteringham and A. Harrison. diag Soc Chem Ind J 65:409-12 D '46

Analysis

Determination of fumigants; determination of low concentrations of methyl bromide. J. Russell. bibliog diags Soc Chem Ind J 66: 22-6 Ja '47

METHYL butene
Decenes formed from *t*-amyl alcohol and from 2-methyl-2-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69:146-9 Ja '47
Heat capacities, heats of fusion and entropies of the six pentenes. S. S. Todd, G. D. Oliver and H. M. Huffman. Am Chem Soc J 69:1519-25 Je '47
Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene. R. S. Rasmussen and R. R. Brattain. bibliog J Chem Phys 15:120-30 Mr '47
Sulfur linkage in vulcanized rubber; reaction of sulfur with 2-methyl-2-butene. M. L. Selker and A. R. Kemp. bibliog diag Ind & Eng Chem 39:895-900 Jl '47

METHYL butyl ketone
Photochemical studies; further study of the photochemistry of methyl *n*-butyl ketone. W. Davis, jr. and W. A. Noyes, jr. bibliog diag Am Chem Soc J 69:2153-8 S '47

METHYL cellosolve
Case of fatal poisoning from 2-methoxyethanol. E. G. Young and L. B. Woolner. bibliog J Ind Hygiene 28:267-8 N '46
Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51: 58-70 Ja '47

METHYL chloride
Geometry of the molecules CH_3Cl and CH_3Br. B. Bak. bibliog J Chem Phys 14:698 N '46
Nuclear and molecular constants from microwave spectra; methyl chloride and methyl bromide. W. Gordy and others. Phys R 72: 344-5 Ag 15 '47
Rectification of neutral salt baths; Neutra-Gas process. P. H. Kramer. il Iron Age 160: 52-4 O 23 '47
Water service pipe repair unit; methyl chloride forms ice seal during repair operations. il Engineer 182:491-2 N 29 '46; Abstract. Comp Air Mag 52:102 Ap '47

METHYL chloride poisoning
Acute and chronic toxicity of methyl chloride; hematology and biochemical studies. W. W. Smith. bibliog(34 titles) J Ind Hygiene 29:185-9 My '47
Acute and chronic toxicity of methyl chloride; mortality resulting from exposures to methyl chloride in concentrations of 4,000 to 300 parts per million. W. W. Smith and W. F. von Oettingen. bibliog(31 titles) J Ind Hygiene 29:47-52, 123-8 Ja-Mr '47

METHYL cinnoline
Cinnolines; 4-methylcinnolines. C. M. Atkinson and J. C. E. Simpson. Chem Soc J p808-12 Je '47

METHYL cyanide. See Acetonitrile

METHYL cyclohexane
Evaluation of azeotropic entrainers. L. Berg and J. M. Harrison. bibliog Chem Eng Prog 43:487-96 S '47
Fractionation of binary mixtures in packed columns. J. A. Storrow and B. D. Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47
Heat capacity of gaseous cyclopentane, cyclohexane and methylcyclohexane. R. Spitzer and K. S. Pitzer. Am Chem Soc J 68:2537-8 D '46
Solvent separation of hydrocarbon mixtures by vapor-liquid extraction. M. R. Fenske, C. S. Carlson and D. Quiggle. bibliog diags Ind & Eng Chem 39:1322-8 O '47
Vapor pressures and saturated liquid and vapor densities of cyclopentane, methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69:1273-7 Je '47

METHYL cyclohexanol
Epimeric alcohols of the *cyclo*hexane series; the optically active 3-methyl*cyclo*hexanols. A. K. Macbeth and J. A. Mills. Chem Soc J p205-8 F '47

METHYL cyclohexene
Addition of thio-compounds to olefins; reactions of thioglycollic acid, thiophenol, and *iso*pentanethiol. J. I. Cunneen. Chem Soc J p36-40 Ja '47
Addition of thio-compounds to olefins; reactions of thiolacetic and mono-, di-, and tri-chlorothiolacetic acids. J. I. Cunneen. Chem Soc J p 134-41 F '47

METHYL cyclohexenone
Synthesis of condensed ring compounds; new 9-methyloctalone. A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69: 117-19 Ja '47

METHYL cyclopentane
Vapor pressure and saturated liquid and vapor densities of cyclopentane, methylcyclopentane, ethylcyclopentane and methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69:1273-7 Je '47

METHYL cyclopropane
Methylcyclopropane; infrared absorption spectrum and synthesis from *i*-butyl chloride. F. E. Condon and D. E. Smith. Am Chem Soc J 69:965-6 Ap '47

METHYL decalone
Synthesis of 1-keto-$\Delta^{4a,10a}$-dodecahydrophenanthrene, *cis*-9-methyl-1-decalone, and other cyclic ketones. W. E. Bachmann and N. L. Wendler. bibliog Am Chem Soc J 68:2580-4 D '46

METHYL dichloroethylamine
Chlorination of methyldi-2-(chloroethyl)amine and related compounds. C. W. Crane and others. Chem Soc J p827-30 S '46

METHYL dioxane
Yields of Grignard reagents in 4-methyl-1,3-dioxane. R. B. Carline and L. O. Smith, jr. bibliog Am Chem Soc J 69:2007-8 Ag '47

METHYL dodecahydrochrysenedione
Synthesis of condensed ring compounds; total synthesis of a 10a-methyldodecahydrochrysene-1,4-dione (a 10-methyl-D-homosteradiene-15,17a-dione). A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69: 1165-70 My '47

METHYL ether
Some catalysed gas-phase reactions of aromatic hydrocarbons; interaction of benzene with methyl ether. P. H. Given and D. L. Hammick. Chem Soc J p928-35 Jl '47

METHYL ethyl ketone. See Butanone

METHYL ethyl phenylhydantoin. See Mesantoin

METHYL eugenol
Halogenated derivatives of methyleugenol; 6-bromomethyleugenol glycol and 6-bromohomoveratraldehyde. S. Kaufmann, G. Rosenkranz and J. López. Am Chem Soc J 68:2733-4 D '46

METHYL fluoride
Infra-red spectrum of methyl fluoride. K. P. Yates and H. H. Nielsen. bibliog il Phys R 71:349-59 Mr 15 '47

METHYL fluoroacetate
Some properties of methyl fluoroacetate and fluoroethanol. C. C. Price and W. G. Jackson. bibliog Am Chem Soc J 69:1065-8 My '47

METHYL fluorosilane. See Methyl fluorosilicane

METHYL fluorosilicane
Preparation of the methylfluorosilanes. A. E. Newkirk. Am Chem Soc J 68:2736-7 D '46

METHYL furan
Hydrogenation of furfuraldehyde to furfuryl alcohol and sylvan (2-methylfuran). J. G. M. Bremner and R. K. F. Keeys. diags Chem Soc J p 1068-80 Ag '47
Preparation of acetopropyl alcohol and 1,4-pentanediol from methylfuran. L. E. Schniepp, H. H. Geller and R. W. Von Korff. bibliog Am Chem Soc J 69:672-4 Mr '47

METHYL glucopyranoside
Methylation of β-methylglucopyranoside and αβ-methylxylopyranosides by thallous hydroxide and methyl iodide. C. C. Barker, E. L. Hirst and J. K. N. Jones. Chem Soc J p783-4 S '46

METHYL glucosaminic acid
Derivatives of N-methyl-L-glucosaminic acid; N-methyl-L-mannosaminic acid. M. L. Wolfrom and A. Thompson. bibliog Am Chem Soc J 69:1847-9 Ag '47
N-Methyl-L-glucosaminic acid. M. L. Wolfrom, A. Thompson and I. R. Hooper. bibliog Am Chem Soc J 68:2343-5 N '46

METHYL group
Effect of the symmetrical situation of methyl groups on the property of dimethyl-2,2'-bipyridyl to complex the ferrous ion. F. W. Cagle, jr. and G. F. Smith. bibliog Am Chem Soc J 69:1860-2 Ag '47
Evidence of rearrangement of polymethylol compounds related to neopentane. R. W. Brown and G. Dougherty. Am Chem Soc J 69:2232-3 S '47
Introduction of the angular methyl group. W. S. Johnson and H. Posvic. bibliog Am Chem Soc J 69:1361-6 Je '47
Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A. Morton, M. L. Brown and E. Magat. bibliog Am Chem Soc J 69:161-7 Ja '47

METHYL heptene
Infra-red absorption spectra of some octenes. R. S. Rasmussen and others. diags J Chem Phys 15:135-40 Mr '47

METHYL iodide
Analysis of the hyperfine structure in the microwave spectrum of the symmetric top molecule CH_3I. W. Gordy and others. Phys R 72:249-50 Ag 1 '47 .
Microwave spectra; methyl iodide. W. Gordy and others. Phys R 71:917 Je 15 '47
Synthesis of carbon radioactive methyl iodide and methanol from carbon dioxide. B. M. Tolbert. diag Am Chem Soc J 69:1529-31 Je '47

METHYL isobutyl ketone
Shell chemical corp. building plant at Houston for manufacture of methyl isobutyl ketone and methyl isobutyl carbinol. Chem & Eng N 25:1808 Je 23 '47

METHYL isoquinoline
Synthesis of 3-methyl*iso*quinolines. G. R. Clemo and J. H. Turnbull. Chem Soc J p533-5, 701-5 Ag '45, Ag '46

METHYL linoleate
Autoxidation of methyl oleate in presence of small proportions of methyl linoleate. F. D. Gunstone and T. P. Hilditch. Chem Soc J p 1022-5 N '46
Oxidation of methyl linoleate at various temperatures. W. O. Lundberg and J. R. Chipault. bibliog Am Chem Soc J 69:833-6 Ap '47

METHYL mannosaminic acid
Derivatives of N-methyl-L-glucosaminic acid; N-methyl-L-mannosaminic acid. M. L. Wolfrom and A. Thompson. bibliog Am Chem Soc J 69:1847-9 Ag '47

METHYL methacrylate
Acrylics make good plating barrels. il Mod Plastics 24:128-9 D '46
Briquettes with labels. E. E. Fairbanks. Science 105:186 F 14 '47
British lenses combine molding, casting. D. Starkie. il diags Mod Plastics 25:107-9 O '47
Brush with 55 molded acrylic parts; Bennart hairbrush. il Mod Plastics 24:134-5 Ja '47
Liquid-vapour equilibrium data for the systems; methyl methacrylate-methanol and methyl methacrylate-methacrylic acid. D. E. Woods. Soc Chem Ind J 66:26-9 Ja '47
Methacrylate polymers in Germany. G. M. Kline and others. il Mod Plastics 24:129-30+ Jl '47
Methacrylic acid dimer. J. W. C. Crawford. Soc Chem Ind J 66:155-6 My '47
New process for acrylic resins; manufacture of methyl methacrylate monomer, molding powder and transparent sheet. R. W. Porter. flow sheets Chem Eng 54:102-6 Ap '47
Techniques of extruding acrylic. J. Bailey. il diags Mod Plastics 24:131-9 D '46

METHYL naphthalene
Action of elementary fluorine upon organic compounds; vapor phase addition to certain deactivated or condensed aromatic rings. R. Y. Tompson, P. Tarrant and L. A. Bigelow. bibliog diag Am Chem Soc J 68:2187-92 N '46
Assembly and testing of 52-foot laboratory adsorption column; separation of hydrocarbons by adsorption. B. J. Mair, A. L. Gaboriault and F. D. Rossini. bibliog diags Ind & Eng Chem 39:1072-81 S '47
Side-chain bromination of some alkylnaphthalenes with N-bromosuccinimide. N. P. Buu-Hoï and J. Lecocq. Chem Soc J p830-2 S '46

METHYLOCTADECANOIC acid
Synthesis of tuberculostearic acid. F. S. Prout, J. Cason and A. W. Ingersoll. Am Chem Soc J 69:1233 My '47

METHYL oleate
Autoxidation of methyl oleate in presence of small proportions of methyl linoleate. F. D. Gunstone and T. P. Hilditch. Chem Soc J p 1022-5 N '46

METHYL orange
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47
Colorimetric determination of free chlorine with methyl orange. M. Taras. Anal Chem 19:342-3 My '47

METHYL pentadiene
Unsaturated nitriles; adducts of dienes with fumaronitrile. D. T. Mowry. bibliog Am Chem Soc J 69:573-5 Mr '47

METHYL pentanediol
Esters of 2-methyl-2,4-pentanediol. P. F. Tryon. Am Chem Soc J 69:972-3 Ap '47
Hexylene glycol. Chem & Eng N 25:1966 Jl 7 '47
2-Methyl-1,3-pentanediol. Chem Ind 61:438 S '47

METHYL phenylarsine
Derivatives of methylphenylarsine. E. J. Cragoe, jr. and others. Am Chem Soc J 69:925-6 Ap '47

METHYL pyridine. See Picoline

METHYL pyrimidine
Synthetic antimalarials; pyrimidine derivatives. F. H. S. Curd, F. L. Rose and others. Chem Soc J p713-37 Ag '46

METHYL pyrrocoline
Chemistry of the pyrrocolines. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1069-89 N '46

METHYL quinoline
Some derivatives of 7-methylquinoline. J. D. Capps. bibliog Am Chem Soc J 69:179-81 Ja '47
Some derivatives of 6-methylquinoline. J. D. Capps. bibliog Am Chem Soc J 69:176-8 Ja '47
Studies in the quinoline series; synthesis of certain 4-substituted quinoline derivatives. V. G. Ramsey, W. E. Baldwin and R. S. Tipson. bibliog Am Chem Soc J 69:67-70 Ja '47

METHYL red
Chorophyll—sensitized photoöxidation of phenylhydrazine by methyl red. R. Livingston, D. Sickle and A. Uchiyama. bibliog J Phys & Colloid Chem 51:775-86 My '47

METHYL siloxanes
Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott. bibliog Am Chem Soc J 68:2291-4 N '46
Organosilicon polymers; infrared spectra of the methylpolysiloxanes. N. Wright and M. J. Hunter. bibliog Am Chem Soc J 69:803-9 Ap '47

METHYL stearate
Reactions occurring during heat polymerization of unsaturated fatty acid esters. H. J. Lanson and P. E. Spoerri. bibliog diags Paint Oil & Chem R 110:13-16 Mr 20 '47

METHYL taurine
Synthesis of taurine and *N*-methyltaurine. J. W. Schick and E. F. Degering. flow sheet bibliog Ind & Eng Chem 39:906-9 Jl '47

METHYL thiazole
Derivatives of 2-amino-4-methylthiazole. J. M. Sprague, A. H. Land and C. Ziegler. bibliog Am Chem Soc J 68:2155-9 N '46

METHYL tolyl ketone
Stobbe condensation with methyl *p*-tolyl ketone; a synthesis of cadalene. W. S. Johnson and A. R. Jones. bibliog Am Chem Soc J 69:792-4 Ap '47

METHYL trichlorosilicane
Methyl trichlorosilane and its fluorination products. H. S. Booth and W. F. Martin. bibliog Am Chem Soc J 68:2655-7 D '46

METHYL xylopyranoside
Methylation of β-methylglucopyranoside and αβ-methylxylopyranosides by thallous hydroxide and methyl iodide. C. C. Barker, E. L. Hirst and J. K. N. Jones. Chem Soc J p783-4 S '46

METHYLAMINE
Absorption of methyl alcohol and methylamine for 1.25-cm waves. W. D. Hershberger. Phys R 71:554 Ap 15 '47

METHYLATION
Action of diazomethane on hydroxy-compounds and of diazomethane derivatives on phenanthraquinone. A. Schönberg and A. Mustafa. Chem Soc J p746-8 Ag '46
Constitution of cherry gum; products of hydrolysis of methylated cherry gum. J. K. N. Jones. Chem Soc J p 1055-9 Ag '47
Constitution of the mucilage from the bark of ulmus fulva (slippery elm mucilage); sugars formed in the hydrolysis of the methylated mucilage. R. E. Gill, E. L. Hirst and J. K. N. Jones. Chem Soc J p 1025-9 N '46
Decomposition of methylated sprucewood. F. E. Brauns and J. J. Yirak. bibliog Paper Tr J 125:55-60 S 18 '47
Introduction of the angular methyl group; alkoxymethylene blocking group. W. S. Johnson and H. Posvic. bibliog Am Chem Soc J 69:1361-6 Je '47
Methylation of β-methylglucopyranoside and αβ-methylxylopyranosides by thallous hydroxide and methyl iodide. C. C. Barker, E. L. Hirst and J. K. N. Jones. Chem Soc J p783-4 S '46
Some catalysed gas-phase reactions of aromatic hydrocarbons; interaction of benzene with methyl ether. P. H. Given and D. L. Hammick. Chem Soc J p928-35 Jl '47
Symmetrical tricarbocyanines having one or more methyl groups as substituents on the chain. F. M. Hamer and R. J. Rathbone. Chem Soc J p960-3 Jl '47
Synthesis of 3-methyl and 3 : 5-dimethyl *l*-arabinose. E. L. Hirst, J. K. N. Jones and E. Williams. Chem Soc J p 1062-4 Ag '47

METHYLENE
Some heterocyclic methylene bases and their anilomethyl derivatives. F. M. Hamer, R. J. Rathbone and B. S. Winton. Chem Soc J p954-9 Jl '47
Use of sodium in the preparation of methylene-linked silanes. J. T. Goodwin, jr., W. E. Baldwin and R. R. McGregor. Am Chem Soc J 69:2247 S '47

METHYLENE acetals. See Acetals

METHYLENE blue
Acid nature of vegetable fibres in relation to basic dye absorption. P. B. Sarkar and others. bibliog Soc Dyers & Col J 63:229-31 Jl '47
Test for selenium based on a catalytic effect. F. Feigl and P. W. West. Anal Chem 19: 351-3 My '47

METHYLENE butyrolactone
α-Methylene butyrolactone from erythronium americanum. C. J. Cavallito and T. H. Haskell. bibliog Am Chem Soc J 68:2332-4 N '46

METHYLENE chloride
Chlorinated hydrocarbons in solvent mixtures. Paint Oil & Chem R 110:26 F 20 '47
Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47

METHYLENE chloroamine
Methylenechloroamine; prepared by the action of monochloroamine on formaldehyde. M. Lindsay and F. G. Soper. Chem Soc J p791-2 S '46

METHYLENE group
Steric effect of methylene groups. R. T. Arnold and E. Rondestvedt. bibliog Am Chem Soc J 68:2176-8 N '46

METHYLENESUCCINIC acid. See Itaconic acid

METOL
Analysis
Application of methyl ethyl ketone to the analysis of developers for Elon and hydroquinone. V. C. Shaner and M. R. Sparks. bibliog Soc Motion Picture Eng J 47:409-17 N '46
Improved method for the determination of hydroquinone and metol in photographic developers. H. L. Baumbach. bibliog Soc Motion Picture Eng J 47:403-8 N '46

METRAZOL
Minimal electroencephalographic response to metrazol as a method for measuring the convulsive threshold for use in human beings. E. Ziskind and others. Science 104: 462 N 15 '46

METRIC system
Shall we cling to the inch? F. H. Colvin. Am Mach 91:139 Mr 13 '47
Why the metric system? A. Black. Aero Digest 54:151+ Ja '47; Reply (Why not a decimal system?) C. L. Bates. 54:32 My '47

METROPOLITAN districts
Express highway planning in metropolitan areas. J. Barnett. il maps Am Soc C E Proc 72:287-305 Mr '46; Discussion. 72:722-4, 1057-69, 1247-70; 73:533-40 My, S, N '46, Ap '47

METROPOLITAN districts—*Continued*
How to increase sales through better media selection; J. Walter Thompson co. survey. A. Hurd. fold map Sales Management 57: 96-101 N 20 '46
Summary of data by metropolitan counties. Sales Management 58:134, 136, 138 My 10 '47

See also
Boston—Metropolitan district
Los Angeles—Metropolitan district
Sanitary districts

METROPOLITAN Edison company
Bonds offered. Comm & Fin Chr 166:1685-6 O 27 '47

METROPOLITAN life insurance company
Annual convention of field managers, New York. East Underw 48:1+ F 21 '47; Nat Underw (Life ed) 51:1 F 21 '47
Life magazine gets mail about Metropolitan Life article. East Underw 48:3 Ag 22 '47
Metropolitan Life; a study in business growth. M. James. 480p bibliog(p457-64) pl $5 Viking press, 18 E 48th st, New York 17 '46; Review. East Underw 48:4 Ja 10 '47
1946 paid business tops $3 billion. Nat Underw (Life ed) 51:3 F 21 '47

METYCAINE
Statistical study of delivery with continuous caudal analgesia, as compared with other methods. S. D. Collins and others. bibliog diags Pub Health Rep 61:1713-35 N 29 '46

MEXICO
West Coast corridor; a chapter in the northward expansion of Mexico; abstract. H. E. Bolton. Science 106:118-19 Ag 8 '47

See also
Forests and forestry—Mexico
Mercury mines and mining—Mexico
Metal working industries—Mexico
Motor bus lines—Mexico
Moving picture industry—Mexico
Paper industry and trade—Mexico
Petroleum industry and trade—Mexico
Railroads—Mexico
Safety movement—Mexico

Commercial policy
Examples of commodities not included in import suspension of July 11, 1947. For Comm W 28:16 S 13 '47
Mexico acts to save exchange; delays curbs on advertising. Ind Marketing 32:130 S '47
Special rules on exemptions from prohibited importation under July 11, 1947 decree. For Comm W 28:18-19 S 6 '47
Tariffs and trade controls; Mexico suspends importation of certain goods regarded as nonessential, and increases import duties on additional commodities; with tabulations. For Comm W 28:20-3 Jl 19 '47; Correction. 28:18-19 Ag 2 '47

Economic conditions
Mexico; a field for American investment. R. Beteta. Comm & Fin Chr 165:2068+ Ap 17 '47
Mexico's economy in 1946. G. Kalmanoff. il For Comm W 27:3-7+ Ap 26 '47
News by countries. For Comm W 25:18-19 N 23; 31-2 D 21 '46; 26:20-1 Mr 1; 27:24-5 Ap 12; 16-17 My 24; 28:23-4 Jl 19; 20-1 Ag 16; 16-17 S 20 '47

Economic policy
Industrialization of Mexico. D. Roldan G. Elec Eng 66:26-31 Ja '47
Mexico holds to its programme. Economist 153:568-9, 609 O 4-11 '47
President inaugurates campaign for economic recuperation of Mexico. For Comm W 27: 18 My 10 '47

Expropriation policy
Mexican Eagle compensation. Economist 153: 417-18 S 6 '47

Foreign relations
United States
Mexican water treaty. M. G. Glaeser. J Land & Pub Util Econ 22:1-9, 352-62 F, N '46 (to be cont)

Industries and resources
Industrialization of Mexico. D. Roldan G. Elec Eng 66:26-31 Ja '47
Mexico rolls out the carpet for President Truman's visit. Bsns W p89-90 Mr 1 '47

MEXICO (city)
Architecture
Modern Mexico. A. B. Horn. il plan diag Arch Rec 102:70-83 Jl '47

MEXICO, Gulf of. See Petroleum—Gulf Coast region

MEYER, Eugene, 1875-
Quits world bank. Comm & Fin Chr 164: 2884+ D 5 '46

MEYER, Paul
Public relations director of Davis, Delaney, incorporated. F. Rundell. Inland Ptr 119: 62-3 Ap '47

MIAMI, Florida
Miami building surges. il Bsns W p63-4+ S 13 '47

Commerce
Miami broadens world-trade aims as figures show brisk progress. W. Seltzer and K. Fitzgerald. il map For Comm W 28:6-8+ Ag 23 '47

Streets
Miami improves traffic flow in central business district. E. J. Reeder. il Civil Eng 17:305 Je '47

MIAMI BEACH, Florida
Sewerage
How Miami Beach meets its special sewerage problems. D. Frank. il Pub Works 77: 26-7 N '46

MIAMI valley, Ohio
Flood control without power; Miami conservancy district, solved problem by construction of dams only. R. A. Schmidt. map Pub Util 40:333-9 S 11 '47
Miami conservancy district clears debt after 33 years of operation. Eng N 137:630 N 14 '46

MICA
Apache mica mine, Rio Arriba county, New Mexico. R. J. Holmquist. 2pls U S Bur Mines Rep of Invest 4037:1-5 '47
Capacitance stability of ruby muscovite mica. W. Schick. bibliog diag Inst E E J 94 pt 1: 371-6 Ag '47
Fine grinding mica. il Rock Prod 50:92-3 Jl '47
Mica windows as elements in microwave systems. L. Malter and others. diags RCA R 7:622-33 D '46
Rapid insulator production with glass-bonded mica. A. J. Monack. bibliog flow chart il Cer Ind 48:59-60+ F; 76+ Mr; 98+ Ap; 76-7+ My; 49:74+ Jl '47
Relation between chemical composition and paragenesis in the biotite micas of igneous rocks. S. R. Nockolds. bibliog Am J Sci 245:401-20 Jl '47
Southern mica production met acute wartime need. E. J. Lintner. il map Eng & Min J 148:78-80 S '47
Studies in the mica group; the biotite-phlogopite series. E. W. Heinrich. bibliog fold pl Am J Sci 244:836-48 D '46
Texas mica and feldspar co. Culberson and Hudspeth counties, Texas. S. P. Holt and J. A. Bowsher. 3pls U S Bur Mines Rep of Invest 4009:1-7 '47

Analysis
System for calculating analyses of micas and related minerals to end members. R. E. Stevens. bibliog In U S Geol S Bul 950: 101-19, pl 2 '46

MICA, Substitutes for
Fabrication of thin ceramic sheets for capacitors. G. N. Howatt and others. il diags Am Cer Soc J 30:237-42 Ag 1 '47
Polyvinyl carbazole resin. W. M. Shine. il diags Mod Plastics 25:130-2+ S '47
Scale glass as substitute for mica. J. M. Stevels. Glass Ind 27:607-8+ D '46
Synthetic mica developed in Germany. Chem & Eng N 24:3396 D 25 '46
Synthetic resin use as mica substitute. Oil Paint & Drug Rep 150:76 D 9 '46

MICE as carriers of infection
Rickettsialpox; a newly recognized rickettsial disease. R. J. Huebner and others. Pub Health Rep 61:1677-82; 62:777-80 bibliog(p780) N 22 '46, My 30 '47

MICELLES
Cryoscopic evidence for micellar association in aqueous solutions of non-ionic detergents. E. Gonick and J. W. McBain. bibliog Am Chem Soc J 69:334-6 F '47
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47
Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47
General theory of the mechanism of emulsion polymerization. W. D. Harkins. bibliog diags Am Chem Soc J 69:1428-44, pl 1-2 Je '47
Micelle structure in aqueous solutions of colloidal electrolytes. R. J. Vetter. bibliog J Phys & Colloid Chem 51:262-77 Ja '47
New structure for soap micelles and the polymerization of rubber; abstract. W. D. Harkins. Science 105:635-6 Je 20 '47

MICHAEL condensation. See Condensation, Chemical

MICHIGAN
See also
Roads—Michigan

MICHIGAN, Lake
$17,000,000 clean up program by Indiana industries polluting Lake Michigan. Water & Sewage Works 93:423 N '46

MICHIGAN consolidated gas company
Bonds offered. Comm & Fin Chr 165:3170 Je 16 '47
FPC approves pipeline competition in Detroit. Bsns W p18 D 7 '46

MICHIGAN gas and electric company
Public utility securities. Comm & Fin Chr 165:2604 My 15 '47

MICROANALYSIS
Amperometric titration of thiodiglycol with electrolytically generated bromine. J. W. Sease, C. Niemann and E. H. Swift. diags Anal Chem 19:197-200 Mr '47
Application of reflectance spectrophotometry to quantitative microanalysis. J. Sendroy, jr. and W. C. Granville. bibliog Anal Chem 19:500-1 Jl '47
Automatic microdetermination of carbon and hydrogen. R. O. Clark and G. H. Stillson. il diag Anal Chem 19:423-6 Je '47
Capillary absorption cells in spectrophotometry. P. L. Kirk, R. S. Rosenfels and D. J. Hanahan. bibliog diags Anal Chem 19:355-7 My '47
Chemical and microbiological differentiation of enantiomorphs of galactose and xylose. J. W. Appling, E. K. Ratliff and L. E. Wise. bibliog Anal Chem 19:496-7 Jl '47
Colorimetric determination of sulfur dioxide. W. M. Grant. Anal Chem 19:345-6 My '47
Colorimetric microdetermination of antimony with rhodamine B. T. H. Maren. bibliog Anal Chem 19:487-91 Jl '47
Colorimetric micromethod for determination of formic acid. W. M. Grant. bibliog Anal Chem 19:206-7 Mr '47
Detection and estimation of microquantities of cyanide. A. O. Gettler and L. Goldbaum. diags Anal Chem 19:270-1 Ap '47
Determination of carbon monoxide; microgravimetric method. J. M. Salsbury, J. W. Cole and J. H. Yoe. bibliog diag Anal Chem 19:66-8 Ja '47
Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47
Estimation of microquantities of cyanide. J. Epstein. bibliog Anal Chem 19:272-4 Ap '47
Fluorometric determination of microgram quantities of boron. C. E. White, A. Weissler and D. Busker. bibliog Anal Chem 19:802-5 O '47
Identification of plated coatings. G. Black and J. Sinner. Metal Finishing 44:529-30 D '46
Improved dithizone method for determination of lead; mixed-color micromethod at high pH. L. J. Snyder. bibliog Anal Chem 19:684-7 S '47
Iodometric microtitration for mustard gas. V. E. Kinsey and W. M. Grant. Ind & Eng Chem Anal ed 18:794-7 D '46
Method for micro-spectrography of metals. F. R. Bryan and G. A. Nahstoll. bibliog il diag Opt Soc Am J 37:311-16 My '47
Micro-analysis in wartime Germany. Chem Age (Lond) 57:507 O 11 '47
Microanalyzer for very small gas samples (0.4-1 mm.^{3}). W. E. Berg. diag Science 104:575-6 D 13 '46
Microdetermination of halogens and sulfur using the Grote combustion apparatus. O. C. Sundberg and G. L. Royer. bibliog il diags Ind & Eng Chem Anal ed 18:719-23 N '46
Microdetermination of tetraethyllead in gasoline. B. E. Gordon and R. A. Burdett. bibliog diags Anal Chem 19:137-40 F '47
Micro-Kjeldahl determination of nitrogen; use of potassium biiodate in iodometric titration of ammonia. R. Ballentine and J. R. Gregg. bibliog Anal Chem 19:281-3 Ap '47
Micromethod for determination of gaseous olefins. R. Pyke, A. Kahn and D. J. LeRoy. bibliog Anal Chem 19:65-6 Ja '47
Micromethod for the determination of 1-(+) lactic acid. M. E. Greig. Science 105:665-6 Je 27 '47
New scheme for the microchemical analysis of ferrous alloys. E. J. Vaughan and C. Whalley. bibliog il diags Iron & Steel Inst J 155:535-62 Ap '47; Abstract. Engineer 183:475 My 30 '47; Discussion. Iron & Steel Inst J 156:487-91; 157:191-3 Ag, O '47; Engineer 183:475 My 30 '47
Oxidative bromination in the determination of malic acid and aspartic acid; micromethod for determination of beta-alanine. H. Suomalainen and E. Arhimo. bibliog Anal Chem 19:207-9 Mr '47
Oxygen in organic compounds; direct microdetermination by the Unterzaucher method. V. A. Aluise and others. bibliog il diags Anal Chem 19:347-51 My '47
Semimicroanalysis of light hydrocarbon mixtures by multiisothermal distillation. L. S. Echols, jr. and E. Gelus. bibliog diags Anal Chem 19:668-75 S '47
Simultaneous determination of carbon, fluorine, and chlorine in halocarbons; semimicromethod. R. O. Teston and F. E. McKenna. bibliog diag Anal Chem 19:193-6 Mr '47
Source of error in the Gutzeit method for arsenic. N. I. Goldstone. bibliog diags Ind & Eng Chem Anal ed 18:797-9 D '46
Spot testing for aluminum. W. E. Thrun and C. R. Heidbrink. Iron Age 158:68-9 N 28 '46
Spot tests for steel. W. E. Thrun and C. H. Bartelt. Iron Age 160:40-2 O 23 '47
Sub-micro analysis; valuable applications in a widening field. C. L. Wilson. bibliog diags Chem Age (Lond) 56:505-8 Ap 26 '47
Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19:675-7 S '47

MICROBALANCES. See Balances

MICROBIOLOGICAL assays. See Biological assays

MICROBURET. See Burets

MICROCHEMISTRY
Applications of microchemistry in Great Britain. C. L. Wilson. Chem & Ind p353-5 Je 21 '47
Modification of the Hallett microadaptation of the Menzies and Wright method of determining molecular weight. D. Ketchum. diags Anal Chem 19:504-5 Jl '47
Simple devices for measuring out small quantities of liquid. F. C. Calkins. diags J Chem Educ 23:604-8 D '46
See also
Microanalysis

MICROCLIMATOLOGY
Microclimatology; facts for architects, realtors and city planners on climatic conditions at the breathing line. il Arch Forum 86:114-19 Mr '47

MICROFILM records
How photography helps production. R. Le Grand. il Am Mach 91:107-8 Je 5 '47
Microfilm as an engineering tool; experience of the Timken roller bearing co. E. S. Kopecki. il Iron Age 159:46-8 Ja 16 '47
Microfilm magic. P. D. Green. il Sci Am 177:60-3 Ag '47
Microfilming saves weight and space; preserves records of first 25 years, Federal reserve bank of Cleveland. Bankers Mo 63: 576 N '46
One road microfilms 25 million records; Denver & Rio Grande Western. D. K. Taylor. il Ry Age 122:598-600 Mr 22 '47
Sales figures to the field; American Home Foods uses microfilm copies of sales analysis figures, kept on visible cards in home office. G. L. Harris. il Am Bsns 16:12-13 D '46

MICROFILMS
ASLIB microfilm service; the story of its wartime activities; with list of films available in the A.M.S. library. L. Moholy. J Doc 2:147-73 D '46
Microcard libraries. M. A. Hanna. Am Assn Pet Geologists Bul 31:393-4 F '47
New microfilm machine makes 45 exposures a minute. Barron's 27:6 Ag 11 '47
What about microfilm and such? il diags Arch Rec 100:118-19 N '46

Bibliography
Titles of films available in the A.M.S. library. J Doc 2:162-70 D '46

MICROHARDNESS tester. See Hardness—Testing

MICROMANOMETER. See Manometers

MICROMATIC hone corporation, Detroit
Micromatic hone. il diags Fortune 35:84-9+ F '47

MICROMETERS
Bent-leg inside mike reaches around boring bar. H. Landauer. diags Am Mach 91:147 F 13 '47
Continuous wire measurer. diag Sci Am 176: 155-6 Ap '47
Electronic micrometer. Sci Am 177:171-2 O '47
Micrometer attachments measure tubes. S. Framurz. diags Am Mach 91:126 Ag 28 '47
Micrometer layout tool gives greater accuracy. H. Fox. il diags Am Mach 91:108 Jl 31 '47
New crankshaft micrometer. il Diesel Power 25:51 O '47
Precision taper measurement with micrometer calipers. S. Framurz. diags Am Mach 91:131-3 My 22 '47
Shielding principle provides electronic micrometer. Franklin Inst J 244:309-11 O '47; Same abr. R Sci Instr 18:373-4 My '47; Same abr. Product Eng 18:151 N '47
Technical data on electronic micrometer. il diags Electronics 20:172+ N '47

MICROORGANISMS
API research project 43A; the role of microörganisms in the transformation of organic matter into petroleum. C. E. ZoBell. Am Pet Inst Proc 25(4):96-100 '45
Fundamental aspects of the prevention of the microbiological degradation of cotton textiles. R. G. H. Siu. Am Dyestuff Rep 36:320-3 Je 16 '47
Macromolecules synthesised by micro-organisms. M. Stacey. Chem Soc J p853-64 Je '47
Microorganisms help bacteriologists to study chemistry. Chem & Eng N 25:1583 Je 2 '47
Micro-organisms in raw and refined sugar and intermediate products. H. C. S. de Whalley and M. P. Scarr. bibliog Chem & Ind p531-6 Ag 30 '47; Discussion, p44 Ja 18 '47
Progress of studies relating to microbiology of sediments. C. E. ZoBell. Am Assn Pet Geologists Bul 31:180-1 Ja '47

See also
Bacteria
Fungi
Micropaleontology
Mildew
Molds (botany)
Viruses

MICROORGANISMS, Fossil. See Micropaleontology

MICROPALEONTOLOGY

Bibliography
Status of micropaleontology in eastern Gulf region. H. V. Howe. bibliog (211 titles) Am Assn Pet Geologists Bul 31:713-30 Ap '47

MICROPHONES
Area factor in microphone (*S/N*) ratio. D. W. Martin. Acoustical Soc Am J 19:254 Ja '47
Cellulose acetate microphones look and sound well. il Mod Plastics 24:132-3 Ja '47
Effect of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. diag Acoustical Soc Am J 19: 120-5 Ja '47
Magnetic throat microphones of high sensitivity. D. W. Martin. il diags Acoustical Soc Am J 19:43-50 Ja '47
Mechano-electronic transducers. H. F. Olson. il diags Acoustical Soc Am J 19:307-19 Mr '47
Proposed method of rating microphones and loudspeakers for systems use. F. F. Romanow and M. S. Hawley. diags Inst Radio Eng Proc 35:953-60 S '47
Recording and reproduction of sound; representative microphones widely used in recording. O. Read. il diags Radio N 38: 62-4+ S '47
Wireless microphone. il diag Radio N 38: 108+ S '47

See also
Hydrophones

Testing
Measurement of electromotive force of a microphone. R. K. Cook. diag Acoustical Soc Am J 19:503-4 My '47

MICROPLANKTON organisms. See Plankton

MICRORADIOGRAPHY. See Radiography.

MICRORADIOGRAPHY of metals. See Metallography

MICRORESPIROMETERS. See Respirometers

MICROSCOPE and microscopy
Application of microscopy to the textile field. G. L. Royer and C. Maresh. bibliog(52 ref) il 3pls diags Soc Dyers & Col J 63:287-93 S '47
Application of phase microscopy to textile fiber research; abstract. H. Reumuth. Am Dyestuff Rep 36:335 Je 16 '47
Comparison of optical and electron microscopy of pigments. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:261-4, pl 1-2 S '46
Cross-sections of undistorted human hair. S. M. Garn. bibliog diags Science 105:238 F 28 '47
Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. bibliog Soc Chem Ind J 65:305-8, pl 5-6 O '46
Federal 40″ microscope. il R Sci Instr 18:67 Ja '47
Maceration of woody tissue with acetic acid and sodium chlorite. W. E. Spearin and I. H. Isenberg. Science 105:214 F 21 '47
Micro-examination of eight steels for the inclusions sub-committee. J. H. Whiteley. 4pls Iron & Steel Inst J 157:89-97 S '47
Microscopic and X-ray investigation of some steatite bodies. M. D. Rigterink. bibliog il Am Cer Soc J 30:214-18 Jl 1 '47
Microscopic detection of cadmium oxide particles in lung tissue. R. E. Thiers and others. il J Ind Hygiene 29:129-33 Mr '47
Mirror device for studying lower surfaces of small objects using a dissecting microscope. R. S. Cowan. diag Science 105:555-6 My 23 '47
Morphology of lyogels. E. A. Hauser and D. S. le Beau. bibliog il J Phys & Colloid Chem 51:278-85 Ja '47
Most favorable absorption of the phase plate in phase contrast microscopy. A. T. Brice and P. H. Keck. bibliog Opt Soc Am J 37:647-51 Ag '47
New microscope technique unfolding elasticity secret; abstract. E. A. Hauser and D. S. le Beau. Rubber Age 61:457 Jl '47
New replica techniques for evaluating engine wear; surface finishes reproduced in plastic. il diag Automotive & Aviation Ind 96:36-7+ Ap 15 '47

MICROSCOPE and microscopy—*Continued*
Phase and polanret microscopes. diags Product Eng 18:159 Ja '47
Phase microscope. il R Sci Instr 17:518-19 N '46
Polanret microscope. H. Osterberg. bibliog diags Opt Soc Am J 37:726-30 S '47
Precise measurement of halftone dot depth now possible with engravers' microscope. il Inland Ptr 119:51 My '47
Preparation of standard powders for reference in particle-size measurement. E. L. Gooden and R. L. Updike, jr. Ind & Eng Chem Anal ed 18:802 D '46
Shadowed replicas of ground sections through teeth. D. B. Scott and R. W. G. Wyckoff. bibliog Pub Health Rep 62:422-5, pl 1-8 Mr 21 '47
Use of trisodium phosphate in microscopical technic. H. J. Van Cleave and J. A. Ross. Science 106:194 Ag 29 '47
Versatile microscope hot stage. W. A. Bonner. diag J Chem Educ 23:601-2 D '46
X-ray diffraction camera for microtechniques. F. G. Chesley. il diag R Sci Instr 18:422-4 Je '47

See also
Camera lucida
Electron microscope
Metallography
Photomicrography

Lighting

Factors in fluorescence microscopy. D. H. Hamly and C. Sheard. bibliog diag Opt Soc Am J 37:316-20 My '47
Improvements in microscope illumination. J. R. Benford. il diags Opt Soc Am J 37: 642-7 Ag '47

MICROSCOPIC slides
Technique for obtaining quickly permanent mounts of nonembedded botanical material. R. L. Steyaert. Science 105:47-8 Ja 10 '47
Use of phenol formaldehyde and vinyl resins in sealing liquid mounting media on microscope slides. E. S. Barghoorn. Science 106:299-300 S 26 '47
Use of polyvinyl alcohol to preserve fecal smears for subsequent staining. M. Goldman. Science 106:42 Jl 11 '47

MICROTOMES
High speed microtome. il R Sci Instr 18: 257-8 Ap '47

MICROWAVES. See Radio waves

MID-CONTINENT airlines
Profit, and how it grew. F. N. Buttomer. map Air Transport 5:25-7 Ag '47

MID-CONTINENT world trade council
New Mid-continent world trade council plans vigorous activity. For Comm W 25:19 N 9 '46

MIDDLE WEST

Industries and resources

New tempo of our North Central states. J. D. C. Weldon. Mag of Wall St 80:22-4+ Ap 12 '47

MIDDLE WEST corporation
Annual report. Comm & Fin Chr 165:2800-1 My 26 '47
Dissolution voted. Comm & Fin Chr 166:667 Ag 18 '47

MIDGES
British anti-midge lotion. Soap & San Chem 22:161 D '46

MIDGLEY, Thomas, jr. 1889-1944
Midgley plaque dedicated by Ethyl corporation. Chem & Eng N 24:3159 D 10 '46

MIDLAND, Pennsylvania

Water supply

New filtration plant. H. F. Holloway. il Am Water Works Assn J 39:361-5; Discussion. M. A. Slone. 365-8 Ap '47

MIDLAND bank limited
Statement by the chairman. Lord Linlithgow. Economist 152:165-7 Ja 25 '47

MIDWEST award
Ralston receives Midwest award. Chem & Eng N 25:834-6 Mr 24 '47

MIDWEST power conference
Conference, 10th, Chicago, March 31-April 2. Power 91:314-16+ My '47; Power Pl Eng 51:111+ My '47
Conference, 10th, Chicago; abstracts of papers. Heating-Piping 19:90-5 Je '47

MIDWEST research institute, Kansas City, Missouri
Basic research related to ceramics in progress at the Midwest research institute. G. W. Ward. Am Cer Soc Bul 26:6-7 Ja 15 '47
Extension plans. il Chem & Eng N 25:36 Ja 6 '47

MIES VAN DER ROHE, Ludwig, 1886-
Mies van der Rohe; exhibition, Museum of modern art, New York. por Arch Rec 102: 81-8 S '47

MIGRANT workers. See Migration of workers

MIGRATION
Right to move. H. Maurer. il maps Fortune 36:136-43+ O '47

MIGRATION of animals. See Animals—Migration

MIGRATION of industry. See Industry—Migration

MIGRATION of workers
First meeting of the I.L.O. Permanent migration committee. Int Labour R 55:98-108 Ja-F '47
Human problem. Mo Labor R 65:70-1 Jl '47
Labor supply in the South. S. C. Mendelsohn and L. M. Pearlman. map Mo Labor R 63: 484-9 O '46
Maybe our people are still able to choose their modes and places of living. Barron's 27:12 Ag 25 '47
Okies are still a labor problem. il Bsns W p80 Jl 5 '47

MIKOLITE. See Vermiculite

MILDEW
How to raise a family of promising new products; Mil-Du-Rid. W. Hansot. il Sales Management 58:46 Mr 1 '47
Mildew fighting. il map Chem Ind 60:622 Ap '47
Mildew problems of interest to paint, varnish and lacquer manufacturers. P. G. Benignus. Paint Oil & Chem R 110:10+ Ap 3 '47
Mildewproofing cloth; diphenyl derivatives. Am Dyestuff Rep 36:17 Ja 13 '47
Mildewproofing of paper mill felts; use of Preventol GD. F. A. Soderberg. Paper Tr J 122:153-4 Je 20 '46; Same. Pulp & Pa of Can 47:88-9 D '46; Same abr. Paper Ind 29:582-4 Jl '47
Mildewproofing protective coatings. A. Minich and M. Goll. il Paint Oil & Chem R 109: 6-7+ N 28 '46
New sales appeals born as chemists lick mildew menace. E. M. Kelley. il Sales Management 58:84-8 F 1 '47
Permanent sizes approved by test in QM project at ITT. il Textile World 97:122-3 F '47
3-164 durable mildewproof finish. Textile Col 69:22+ F '47

MILITARY administration
Use of civilian skills in the army air forces. T. W. Harrell. Science 106:26-8 Jl 11 '47

MILITARY aeronautics. See Aeronautics, Military

MILITARY airplanes. See Airplanes, Military

MILITARY airports. See Airports, Military

MILITARY and naval service insurance. See Insurance, Military and naval service

MILITARY architecture

See also
Armories

MILITARY art and science
Two wars; the last and the next. I. C. Eaker. Ind Stand 18:2-3+ Ja '47

See also
Aeronautics, Military
Atomic bombs
Chemical warfare
Communication, Military
Landing craft
Military bridges and other headings beginning Military
Mines, Submarine
Ordnance
Radio communication, Military
War

MILITARY bridges
Bailey bridge. S. A. Stewart. il Metal Prog 50:674-5 O '46
Les grands ponts des routes stratégiques reliant la Birmanie et l'Inde à la Chine. il map diags Génie Civil 124:305-7 Ag 15 '47
Welded steel tubular bridges; used for sea forts off British coast. il plan diag Engineering 162:391, 396 O 25 '46

Testing

Inspection. A. W. Sproull. Engineering 163: 90-1 Ja 24 '47

MILITARY buildings
Army engineers design new arctic-type shelter. Eng N 139:92 Jl 17 '47
Blockhouse for V-2 rocket tests. il diag Engineering 163:31, 36 Ja 10 '47
See also
Armories
Barracks

MILITARY camps. See Camps, Military

MILITARY communication. See Communication, Military; Radio communication, Military

MILITARY education
See also
Military training

MILITARY engineering
Army engineer show; engineering equipment under development or tests at the testing laboratories at Fort Belvoir. il Eng N 139: 160-1 Jl 31 '47
Diesel pile hammers used by Germans. il diags Eng N 138:522-4 Ap 3 '47
Emergency repairs to continental ports. il map Engineering 164:337-8, 348, 385-7 O 10, 24 '47 (to be cont)
Generating plant for military equipment; abstract. K. H. Tuson. Engineering 163:545 Je 27 '47
Lighting systems for military construction at night. O. P. Cleaver and others. il diags Illum Eng 41:881-96 D '46
See also
Military bridges
Ordnance
Radio apparatus—Military use
Water supply for armies

MILITARY fabrics
Ether esters, plasticizers for vinyl coating. F. J. Tuttle and E. B. Kester. diag Mod Plastics 24:163-6 D '46

MILITARY hospitals. See Hospitals, Military

MILITARY hygiene
See also
Water supply for armies

MILITARY insurance. See Insurance, Military and naval service

MILITARY libraries
See also
Germany—Allied military government—Intelligence library

MILITARY lighting
Lighting systems for military construction at night. O. P. Cleaver and others. il diags Illum Eng 41:881-96 D '46
Luminous ammunition. T. C. Ohart. il diags Illum Eng 41:654-71 S '46

MILITARY maps. See Maps, Military

MILITARY money. See Money, Military

MILITARY motor vehicles. See Motor vehicles, Military

MILITARY occupation
See also
Austria—Allied military government
Germany—Allied military government

MILITARY photography. See Photography, Military

MILITARY posts
Biofiltration experiences at Columbia (S.C.) army air base. J. M. Brown. flow diag il Water & Sewage Works 94:301-3 Ag '47
See also
Post exchanges

MILITARY psychology. See Psychology, Military

MILITARY research
Industry-military link forged; army-navy appropriations for research bring development contracts. il Bsns W p20-2+ N 16 '46
Inventor's council asks cooperation on military technical needs; 25 projects which armed forces want invented or improved. Iron Age 159:97-9 My 15 '47
Nature and development of operations research. C. Kittel. Science 105:150-3 F 7 '47
Ordnance department research and development. A. Leggin. il Chem & Eng N 24: 3350-1 D 25 '46

MILITARY roads. See Roads, Military

MILITARY service
See also
Military training

Insurance aspects

Army gets Comparogram prepared by Woodson; amounts saved in insurance, annuities, etc. through enlistment in army. Nat Underw (Life ed) 51:19 Ap 25 '47
Guaranteed premiums under Civil relief act now an issue; personal liability of veterans for repaying government. East Underw 48: 1 F 7 '47
Son not member of father's household during term of military service. Weekly Underw 155:1219 N 16 '46
VA administrator is upheld on premiums; veterans' personal liability for premiums guaranteed in excess cash values under Civil relief act of 1940. East Underw 48:15 Mr 21 '47
Veterans administration answers inquiry on Relief act issue. Nat Underw (Life ed) 51:8 F 14 '47
Veterans group may sue VA on insurance issue; resist efforts to collect excess of premiums advanced over cash value. Nat Underw (Life ed) 51:3 F 7 '47
See also
Insurance, Life—Veterans' policies
Insurance, Military and naval service

MILITARY service, Compulsory
CIO opposes peacetime military conscription. Comm & Fin Chr 164:2889 D 5 '46
President Truman urges end of draft law. Comm & Fin Chr 165:1431 Mr 13 '47
Wants world to abandon peacetime conscription. G. W. Landis. Comm & Fin Chr 165: 747 F 6 '47

Great Britain

Is conscription necessary? Economist 151: 819-20 N 23 '46

MILITARY tanks. See Tanks, Military

MILITARY tractors. See Tractors, Military

MILITARY training
Attitude of public toward present military training program; Gallup poll. Iron Age 159:148+ F 6; 103 Je 26 '47
Balancing civilian and military educational needs. F. J. Brown. Comm & Fin Chr 164:2887+ D 5 '46
Educational implications of women's military training. D. Schaffter. Ann Am Acad 251: 157-64 My '47
Ideas on compulsory training. H. S. Truman. Comm & Fin Chr 164:3353+ D 26 '46
National security and the training of chemists. M. H. Trytten. Chem & Eng N 25: 499-502 F 24 '47
National security in the atomic age. Metal Prog 52:77 Jl '47
President's commission reports on military training. Comm & Fin Chr 165:3030-1 Je 5 '47
Sleeping brass; opposes compulsory military training in peacetime. P. H. Jordan. Comm & Fin Chr 166:911 S 4 '47
Universal military training a must. R. P. Patterson. Comm & Fin Chr 165:747+ F 6 '47
Universal military training, step toward statism. C. Bargeron. Comm & Fin Chr 166: 319+ Jl 24 '47
Universal military training worthless. A. A. Bates. Comm & Fin Chr 166:318+ Jl 24 '47

MILK
Milk production; revised data; monthly figures and averages, 1940-1945; tabulation. Survey of Cur Bsns 27:19 Ap '47
Photoinactivation of milk fat lipase and the origin of bitter flavor in milk. V. N. Krukovsky. bibliog Science 105:286-7 Mr 14 '47
Soft curd milk; abstract. S. Hilton. Chem & Ind p59-60 Ja 25 '47
See also
Whey
Analysis
Colorimetric determination of DDT in milk and fatty materials. M. S. Schechter, M. A. Pogorelskin and H. L. Haller. bibliog Anal Chem 19:51-3 Ja '47
Estimation of DDT in milk by determination of organic chlorine. R. H. Carter. Anal Chem 19:54 Ja '47
Spectroturbidimetric study of the proteins of milk. A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51:460-73 Mr '47
Bacteriology
Biological stability in condensed, evaporated, and sterilized milk; abstract and discussion. E. R. Hiscox. Chem & Ind p413-14 N 16 '46
Isolation of brucella melitensis from cow's milk. S. R. Damon and R. Fagan. Pub Health Rep 62:1097-8 Jl 25 '47
Pasteurization
Pasteurization test. Chem & Eng N 25:2651 S 15 '47
Preservation
See also
Milk, Dried
Milk, Frozen
Sterilization
Biological stability of condensed, evaporated and sterilized milk. E. R. Hiscox. Chem & Ind p365-7 Je 28 '47
MILK, Condensed
Biological stability of condensed, evaporated and sterilized milk. E. R. Hiscox. Chem & Ind p365-7 Je 28 '47
MILK, Dried
Grading test for powdered milk. A. E. Leighton. Food Ind 18:1857 D '46
Analysis
Rapid method for estimation of whey proteins as an indication of baking quality of nonfat dry-milk solids; abstract. H. A. Harland and U. S. Ashworth. Food Ind 19: 1441 O '47
MILK, Evaporated
Biological stability of condensed, evaporated and sterilized milk. E. R. Hiscox. Chem & Ind p365-7 Je 28 '47
Effect of oxygen on color and flavor of heated milk. N. P. Tarassuk. bibliog il Food Ind 19:781-3 Je '47
Profits from contented cows; Carnation co. Bsns W p96-8 O 4 '47
MILK, Frozen
Frozen homogenized milk; abstract. C. J. Babcock and others. Food Ind 19:118+ Ja '47
MILK, Powdered. See Milk, Dried
MILK bottles
Merchandising an innovation; integrated promotion won acceptance for square milk bottle. G. A. Mellor. Ptr Ink 219:54+ Je 20 '47
Method of washing milk bottles; patent. Glass Ind 28:521 O '47
MILK cans
Manufacture
Electronic heating speeds up can production. il Mach 53:191 Ap '47
Localized heating of milk can necks. il Electronics 20:172+ Je '47
MILK containers
See also
Milk bottles
Milk cans
MILK delivery
Orange juice delivered by the milk man. E. Mauldin. il Food Ind 18:1713 N '46
Time studies show how to reduce distribution costs; evaluation of milk distributor efficiency. A. Morrow. il Food Ind 19:794-6+ Je '47
MILK plants
Equipment
Milk for half a million; Dairylea milk plant. R. G. Skerrett. il Comp Air Mag 52:80-4 Ap '47
Waste
Dairy waste disposal. H. A. Trebler and H. G. Harding. bibliog flow sheet il diags Chem Eng Prog 43:255-66 My '47
Milk losses and milk waste disposal. P. S. Davy and M. J. Noth. flow diag il plan Pub Works 78:22-3+ Jl '47
MILK products
What's ahead in milk processing. M. E. Parker and E. S. Stateler. il plan diag Food Ind 19:333-5+, 468-70+, 609-11 Mr-My '47
See also
Butter
Casein
Cheese
MILK sugar. See Lactose
MILK supply
Nation's milk supply and its best use; abstract and discussion. E. Capstick. Chem & Ind p162-3 Mr 29 '47
Publication of lists of sanitary ratings of interstate milk shippers. T. Parran. Pub Health Rep 62:278-9 F 21 '47
MILK trade
Milk industry turns cautious. Bsns W p46-9 N 30 '46
Time studies show how to reduce distribution costs; evaluation of milk distributor efficiency. A. Morrow. il Food Ind 19:794-6+ Je '47
What's ahead in milk processing. M. E. Parker and E. S. Stateler. il plan diag Food Ind 19:333-5+, 468-70+, 609-11 Mr-My '47
See also
Milk delivery
Advertising
Borden repackages milk products to increase national advertising effect. il Ptr Ink 220: 43 S 5 '47
How to merchandise your annual report; Borden co. uses it as public relations tool. V. Dallaire. il Ptr Ink 219:40-1 Je 13 '47
MILKY way
Magnetic field of the Milky way and its effect on cosmic radiation. M. S. Vallarta. Phys R 72:519 S 15 '47
MILLAR, Richard William, 1899-
Portrait. Fortune 36:114 O '47
MILLER act, 1935
Bond protection and claim collection procedure on public and private contracts. C. G. Roth. Weekly Underw 157:999-1001+, 1055-7 O 18-25 '47; Abstract. Credit & Fin Management 49:11-14 O '47
MILLER and Rhoads, inc.
Preferred stock offered. Comm & Fin Chr 165:1194 Mr 3 '47
MILLERS national federation
Meeting, May 5-7. Food Ind 19:958+ Jl '47
MILLING
Air fixtures speed hollow milling; washing-machine wringer. K. F. Brooks. il diag Am Mach 91:106-7 Mr 13 '47
Carbides on railroad jobs. C. Edgar. il diags Ry Mech Eng 121:242-5 My '47
Contour milling device uses cam and one-way clutch. E. J. Hills. diags Am Mach 91:138 Ap 10 '47
Crosshead milling job. il Ry Mech Eng 120: 667-9 D '46
Effect of microstructure on machinability of cast irons. M. Field and E. E. Stansbury. il A S M E Trans 69:665-82 Ag '47
Energy flowsheet in milling practice; abstract. W. F. Carey and E. M. Halton. Chem & Ind p29-30 Ja 11 '47
Follower mechanism for contour milling of grooves. C. E. Lambert. diags Mach 53: 163 Ag '47
Hopper feed speeds milling operation. il Iron Age 160:80 S 25 '47

MILLING—*Continued*
How to set up carbide milling jobs. H. A. Frommelt. il diags Am Mach 91:77-100 Ap 24 '47
Influence on tool life and power of nose radius, chamfer, and peripheral-cutting-edge angle when face-milling a 40,000-psi cast iron O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:117-24 F '47
Lathe milling can be practical. R. Isetts. diags Am Mach 91:151-2 Je 19 '47
Practice and theory in carbide milling; abstract. M. Field. Steel 121:100 S 29 '47
Rise and fall milling speeds manifold machining; Buick's engine plant. il Steel 120: 125 F 17 '47
Surface finish of steel in face-milling. A. O. Schmidt. bibliog il diags A S M E Trans 69:325-7; Discussion. A. W. Meyer. 327-8 My '47
Tone stylus provides precise duplicating; tension on stylus converted to sound, allows milling of thin contour sections to close limits. H. L. Seekins. il diags Am Mach 91:109-11 Je 19 '47
Worm wheel milling without centers. C. W. Metter. diags Am Mach 91:141 F 13 '47
X-ray diffraction as a gage for measuring cold work produced in milling. F. Zankl and others. bibliog il diags A S M E Trans 69:307-17 My '47; Same cond. Iron Age 159: 44-50 Ja 23 '47; Discussion. A S M E Trans 69:317-18 My '47

MILLING cutters
Don't make form cutters too complicated. A. R. Rasel. diags Am Mach 91:113 Ja 30 '47
Flytool milling cutter removes sand or scale. A. B. Miller. diags Am Mach 91:142 Mr 13 '47
Herbert milling cutters. il Automobile Eng 37:302 Ag '47
How to design form milling cutters. H. M. Huffman. il diags Am Mach 91:85-7 O 23 '47
How to use carbide cutters for milling. H. A. Frommelt. il diags Iron Age 159:44-9 F 13; 48-53 F 20; 47-52 F 27; 74-8 Mr 6; 52-6 Mr 13; 56-9 Mr 20; 58-62 Mr 27; 78-81 Ap 10; 58-63 Ap 17; 58-62 Ap 24; 75-9 My 8; 62-5 My 15; 77-9 My 22; 80-3 Je 5; 65-8 Je 12; 77-80 Je 19; 160:69-72 Jl 3; 66-8 Jl 10; 61-4 Jl 17; 68-70 Jl 24 '47
Inclined internal fly cutter mills elliptical punches. W. W. Brubaker. diag Am Mach 91:109 Jl 31 '47
Inserted-bit milling cutter is easy to make and maintain. S. Stark. diags Am Mach 91: 134 My 22 '47
Inset-disk cutters give long tool wear. P. Riggio. diags Am Mach 91:144 F 13 '47
Negative-rake carbide-tipped milling cutters. il Engineering 164:297 S 26 '47
Production processes; their influence on design; production milling. R. W. Bolz. il diags Machine Design 19:123-31 Mr; 169-74 Ap '47
Report of committee on shop tools; Locomotive maintenance officers' assn. il diags Ry Mech Eng 121:580-2 O '47
Research makes milling cutters behave. A. O. Schmidt. il Am Mach 91:83 Jl 31 '47
Some face-milling observations. A. O. Schmidt. Am Mach 91:106 My 22 '47

Sharpening
Cincinnati contour-cutter sharpening machine. il Mach 53:184-5 Jl '47; Automotive Ind 97:46 Jl 1 '47; diags Am Mach 91:174 Jl 17 '47
Devised; better method for sharpening carbide face mills. G. W. Sharp. il diags Am Mach 91:108-10 Mr 13 '47
How to sharpen milling cutters; illustrations with text. H. S. Wharen. Am Mach 91: 105-11 Ag 28 '47
Milling cutter grinder. il Engineer 184:64-5 Jl 18 '47

Standards
Nomenclature for milling cutter teeth; reference book sheets. diags Am Mach 91:309, 311, 313 S 11 '47
Nomenclature for milling cutter teeth; supplement to American standard for milling cutters (ASA B5c—1930). 14p pa 70c American society of mechanical engineers, 29 W. 39th st, New York 18 '47

Testing
Effect of varying relief angles when face-milling cast iron with sintered-carbide-tipped cutters. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:657-63 Ag '47
Influence on tool life and power of nose radius, chamfer, and peripheral-cutting-edge angle when face-milling a 40,000-psi cast iron. O. W. Boston and W. W. Gilbert. il diags A S M E Trans 69:117-24 F '47
Single indicator setting tests inserted cone cutters. E. Anderson. diags Am Mach 91: 135 Ap 10 '47
Surface finish of steel in face-milling. A. O. Schmidt. bibliog il diags A S M E Trans 69:325-7; Discussion. A. W. Meyer. 327-8 My '47
X-ray diffraction as a gage for measuring cold work produced in milling. F. Zankl and others. bibliog il diags A S M E Trans 69:307-17 My '47; Same cond. Iron Age 159: 44-50 Ja 23 '47; Discussion. A S M E Trans 69:317-18 My '47

MILLING machines
Adcock and Shipley, three-headed keyway milling machine. il Engineer 182:553 D 13 '46; Automobile Eng 37:18 Ja '47
Automatic milling machines solve spar cap production problem at Douglas. V. C. Fergen and C. R. Wulffsohn. il Automotive Ind 97:38-40 O 15 '47
Behind the steel curtain; chain guard for milling machines. R. M. Smith. il diags Am Mach 91:73 Ja 2 '47
Childs small knee type milling machine. il Mach 53:202 F '47
Cincinnati knee-and-column milling machines. il Ry Mech Eng 121:493-9 S '47
Cincinnati milling machine, 2 MT. il Automobile Eng 36:501-2 N '46
Cincinnati milling machines and grinders. il Mach 54:210-11 S '47
Cincinnati milling machines, No 2 MI and 2 ML. il Ry Mech Eng 121:266 My '47
Cincinnati plain and universal milling machines. il Mach 53:201 Ap '47
Combination boring and milling machines developed by Germans. Iron Age 160:150-1 Ag 7 '47
Davis & Thompson vertical milling machine. il Mach 53:182 Ag '47
De Vlieg Jigmil. il Product Eng 18:141 S '47
De Vlieg precision jig-boring and milling machine. il Engineering 163:167-8 Mr 7 '47; Automobile Eng 37:98-100 Mr '47
Herbert precision boring and milling machine. il Engineer 183:180 F 14 '47
Kearney & Trecker automatic-cycle milling machines. il Mach 54:157 S '47
Kent-Owens automatic miller feeds, mills and cuts off shaped bar. il diag Machine Design 19:150-1 Jl '47
Kent-Owens 2-20 hydraulic milling machine. il diag Product Eng 18:96-7 S '47
Large horizontal boring and milling machine. il Engineer 184:203-5 Ag 29 '47
Machine tool show in print; milling. il Am Mach 91:240-7 S 11 '47
Miller saves time on generator reassembly alignment problem. il Elec World 126:124 D 7 '46
Milling; review of American inventions in milling machines. G. Hubbard. il Steel 121: 90-2+ Jl 7 '47
New equipment. il Iron Age 159:67-9 Ja 16 '47
Portable milling machine decreases down time of generators; used for realinement at Hell Gate generating station. il Mach 53: 155-6 Ja '47
Production processes; their influence on design; production milling. R. W. Bolz. il diags Machine Design 19:123-31 Mr; 169-74 Ap '47
Reed-Prentice milling and die-sinking machine. il Mach 53:199-200 Ja '47
Reed-Prentice no. 12-V milling machine. il diag Product Eng 18:153 S '47
Reed-Prentice universal miller. il Am Mach 91:138 Ja 30 '47
Reed-Prentice's milling machine. il Am Mach 91:162 Ap 10 '47
Sip large-size precision jig boring and milling machine. il Mach 53:185-6 My '47

MILLING machines—*Continued*
Speed chart for milling machines; reference book sheet. P. C. Ziemke. Am Mach 91: 217 Ja 16 '47
Sundstrand three-head milling machine. il diags Product Eng 18:84-6 S '47
Sundstrand triplex milling machine and automatic lathes. il Mach 54:178-9 S '47
Two Swiss machine tools; hydraulic broaching machine, milling cutter milling machine. il Engineer 184:64 Jl 18 '47
Van Norman horizontal milling machine. il diags Product Eng 18:132-3 S '47
Van Norman ram-type milling machine is built with universal cutterhead. il Am Mach 91:129 Ja 2 '47
Woodruff keyway milling machine. il Engineer 183:250 Mr 21 '47

Control

Electronic feed drives for milling machines; abstract. M. Morgan. Product Eng 18:135-6 Ag '47
Master cams control cutters; turn miller, developed by Gisholt machine co. il diags Product Eng 18:98-9 O '47

Fixtures

Air cylinders improve milling machine fixture. J. E. Spellman. il Am Mach 91:115 Ap 24 '47
Cam-cutting attachment fits any milling machine. S. Framurz. diags Am Mach 91:111 S 25 '47
Disk eccentrics drive key-seating fixture. A. F. Scoblic. diag Am Mach 91:109 Ja 30 '47

MILLIVOLT meters. See Voltmeters

MILLS, Ball. See Ball mills

MILLS, Tube. See Tube mills

MILLS college

Ceramic guild

Mills college ceramic guild is cooperative project under guidance of Carlton Ball. il Cer Ind 49:94+ Ag '47

MILNE'S equation
Milne's problem. G. Placzek and others. bibliog Phys R 72:550-66 O 1 '47
Spherical harmonic method as applied to the Milne problem for a sphere. R. E. Marshak. Phys R 71:443-6 Ap 1 '47

MILWAUKEE
Streamlined zoning law basis for master plan. Eng N 138:513 Ap 3 '47
Wanted; an unbalanced budget; Milwaukee business men want municipal improvements. Bsns W p24+ F 22 '47

Streets

Milwaukee considers huge traffic-easing plan. map Eng N 138:84 Ja 16 '47
Milwaukee snow blitzed! account of January '29 blizzard. H. J. McKeever. il Roads & Sts 90:74-6+ My '47
Milwaukee's normal snow plowing plan. H. B. Nelson. il Roads & Sts 90:78 My '47

MIMEOGRAPH

Advertising

Specific, personalized copy days dividends for A. B. Dick; mimeograph maker. il Ind Marketing 32:42-3+ Ja '47

MINAZZI, A. J.
New business: offering scarce goods for rent. Bsns W p64 My 24 '47

MINE accidents
Health and safety in mining; review of 1946. C. M. Fellman. Min & Met 28:77-8 F '47
Methane in metal mines; explosion in underground workings of Pacific (eastern) gold mine, Aug. 18, 1947. Can Min J 68:739-41 O '47
National safety competition of 1946, Bureau of mines; with list of winners, 1925-1946; honorable mention awards, 1946. F. T. Moyer. il Explosives Eng 25:71-9+ My '47
Ontario committees report on safety in hoisting. Eng & Min J 147:76-7+ N '46
Safety and low costs are inseparable. J. K. Richardson. il Eng & Min J 148:82-4 Jl '47
Safety in mining. S. H. Ash. Min Cong J 33: 35-8 F '47

See also
Coal mines and mining—Accidents and explosions
Coal mines and mining—Safety measures
Electricity in mining—Safety measures
Mine fires
Mine rescue work
Mining engineering—Safety measures

Statistics

Accident experience, iron-ore mines; Lake Superior district, 1940-45. F. E. Cash. U S Bur Mines Information Circ 7410:1-11 '47

MINE air
Carbon monoxide in the mine; how to keep it from following you. diags Coal Age 52: 84+ Ja '47
Cooling makes warm air sweat; gasified water is lighter than air. diags Coal Age 51:106+ N '46
Diesel equipment in underground mining. D. Harrington and J. H. East, jr. bibliog 13pls U S Bur Mines Information Circ 7406:1-87 '47; Same cond. Eng & Min J 148:70-6 Je '47
Effects of mine-atmosphere qualities; their control by ventilation. J. W. Harris. Coal Age 52:110+ Jl '47
How atmospheric pressure affects safety of entombed men. diags Coal Age 52:110+ F '47

See also
Mine ventilation

MINE buildings
Portal relocation paces mining improvements at Hubbard mine. il plan Coal Age 52:79-84 Mr '47

See also
Mine shops

MINE cages
Installation of a model man cage at the Avoca shaft of the Heidelberg coal co. Avoca, Luzerne county, Pa. E. H. McCleary and J. V. Mather. 18pls U S Bur Mines Information Circ 7407:1-5 '47
Origin, type and mechanism of cage safety dogs at the Hollinger mine. W. H. Pritchard. il diags Can Min J 68:399-403 Je '47

MINE cars
Effect of large capacity mine cars on loading machine performance; abstract. J. D. Reilly. Min Cong J 33:70 Je '47
Haulage safety device for steep grades; method of automatically removing friction shoes from beneath the wheels of mine cars. L. L. Maus. il diags Min Cong J 33: 28-31 S '47
High production from track loaders and large cars; Osage mine in northern West Virginia. H. Hines. il diags Min Cong J 33: 25-7 My '47
Productivity lifted by shuttle cars and new mining method; Clayton coal co. il plans Coal Age 52:76-8 Mr '47
Time studies to improve mechanical operation. D. R. Mitchell and R. L. Ash. Min Cong J 33:26-30 Jl '47
Types and sizes of mine cars currently used; tabulation. A. H. Hubbell. Eng & Min J 148:87 Ap '47

See also
Dump cars
Mine haulage

MINE construction
Constructive planning in the mining industry. A. Nelson. Can Min J 68:575-80 Ag '47
Time factor and production planning; mine development schemes and erection jobs. A. Nelson. Can Min J 68:316-20 My '47

See also
Concrete construction in mines
Mine buildings
Mine shafts

MINE doors
Door design assures improved service. diags Coal Age 51:110 D '46

MINE drainage

See also
Mine water

MINE dust
Dust control in anthracite mining operations. R. E. Doherty. il diag Coal Age 52:105-8 Ap '47
Dust control in iron ore mines; methods and results in Lake Superior mines. E. C. J. Urban. diags Nat Safety N 55:24-5+ Ja '47
Dust control in mining. W. Schweisheimer. Can Min J 68:504-5 Jl '47
Mine-dust control. M. I. Signer and others. bibliog il diags Colorado School of Mines [Golden] Quarterly 42 no 1:1-64 Ja '47 (pa $1)

See also
Coal dust
Mine air
Silicosis

MINE equipment
Hinged scraper saves wear. diags Eng & Min J 148:85 Jl '47
Light alloys as applied to mining and general engineering. W. F. Fennell. il Mech Handling 34:133-7 Mr '47
Underground mechanization at New Idria. C. H. Lewis. il diag Min Cong J 33:21-4 My '47

See also
Coal mines and mining—Equipment
Electricity in mining
Mine cages
Mine cars
Mine hoisting
Mining machinery
Rock drills

MINE explosions

See also
Coal mines and mining—Accidents and explosions
Rock bursts

MINE filling
Lean ore for backfilling; Sullivan mine at Kimberly, B.C. Comp Air Mag 51:335 D '46

MINE fires
Some data about fire-fighting facilities at metal mines in the United States. D. O. Kennedy. U S Bur Mines Information Circ 7374:1-9 '46
Stevens mine Fogocar; fire fighting equipment. il Can Min J 68:725-6 O '47

See also Coal mines and mining—Fires and fire protection

MINE foremen
Checker-playing mine foremen. J. J. Rutledge. Explosives Eng 25:54-5 Mr '47
Cutting cost of materials and supplies; how the foreman can do his part. Coal Age 52: 102+ Ag '47
Foundations for better supervision; new proverbs for bosses. P. W. Swain. Coal Age 52:100+ My '47
Human relations; key coal factor. Coal Age 52:56-60 Mr '47
Mañana mine foreman. J. J. Rutledge. Explosives Eng 25:117-18+ Jl '47
Mine foreman of s small mine. J. J. Rutledge. Explosives Eng 24:182-3 N '46

See also United clerical, technical and supervisory association of America

MINE gases
Methane in metal mines; explosion in underground workings of Pacific (eastern) gold mine, Aug. 18, 1947. Can Min J 68:739-41 O '47

See also
Fire damp
Mine air
Mine ventilation

MINE haulage
Advances in mining practice; abstracts of papers, American mining congress, Western division. Min Cong J 32:77-8 O '46
Belt conveyors for main haulage. R. J. Perin. il Mech Handling 33:624-8 O '46
Bituminous haulage marked by locomotive and conveyor rise; with statistical data. W. H. Young and R. L. Anderson. Coal Age 52:78-82 Ja '47
Coal mine haulage accidents. A. J. Bartlett. Min Cong J 33:53-5 O '47
Haulage for efficiency with conveyor mining. J. H. Dickerson. plans diag Coal Age 52:90-4 My '47
Mine haulage accidents. A. J. Bartlett. Min Cong J 33:42 Jl '47
Modern methods put Piney Fork in high efficiency class. R. R. Richart. il plans diags Coal Age 51:76-89 N '46
Supply haulage in trackless mining; abstract. R. Fletcher. Min Cong J 33:69 Je '47
Survey of mining progress. A. H. Hubbell. Eng & Min J 148:65-7+ Mr '47
Underground belt haulage; how and why. C. W. Thompson. il plan Min Cong J 32:30-3+ D '46; 33:32-3+ Ja '47
Underground iron ore haulage by belt conveyor; Inland Steel's Sherwood mine. P. D. Pearson. il plan diags Min Cong J 33:20-5 Ag '47
Underground main line haulage. Min Cong J 33:39-40 Jl '47

See also
Electric locomotives, Mine
Locomotives, Mine
Mine cars
Mine tracks
Motor trucks in mining

Cost

Coal mine haulage; joint report of the Conveyor and the Haulage roads committees; cost data. Min Cong J 33:47-50 Ag '47

Safety measures

Haulage safety device for steep grades; method of automatically removing friction shoes from beneath the wheels of mine cars. L. L. Maus. il diags Min Cong J 33: 28-31 S '47

MINE hoisting
Automatic decking plant at Bold pit. il diag Engineer 184:320-2 O 3 '47
Improved scow-mining system; Jewel mining co. G. W. Reitz. il diags Coal Age 52: 92-5 O '47
New ways to apply scraper hoists to mining. R. Pierce. il plans Eng & Min J 148: 60-3 My '47
Skip winding; installation at Bickershaw colliery. Mech Handling 33:769-70 D '46

See also
Mine haulage

Safety measures

Cage safety gates swing from wall recesses. il Coal Age 52:110 S '47
Improved cage safety catch developed at Canadian mine. R. K. Kilborn. diags Eng & Min J 148:68-70 Mr '47
Inspection, key to longer rope life. A. Domico. il Eng & Min J 148:92-3 Ag '47
Installation of a model man cage at the Avoca shaft of the Heidelberg coal co. Avoca, Luzerne county, Pa. E. H. McCleary and J. V. Mather. 18pls U S Bur Mines Information Circ 7407:1-5 '47
Mine cage safety dog with predictable deceleration. A. W. Lancaster. diags Can Min J 67:1039-42, 1118-19 N-D '46
Ontario committees report on safety in hoisting. Eng & Min J 147:76-7+ N '46
Origin, type and mechanism of cage safety dogs at the Hollinger mine. W. H. Pritchard. il diags Can Min J 68:399-403 Je '47
Shaft safety device for man truck. diags Eng & Min J 148:90 Mr '47
Triple king-bolt safeguards skips and cages. diags Eng & Min J 148:92 Mr '47

MINE hoisting, Electric
Dynamic braking promotes efficiency in slope hoisting. J. A. Setter. il diags Coal Age 52:98-104 Jl '47
Installing Bunker Hill's large underground hoist. A. C. Stevenson and others. il diags Eng & Min J 148:68-73 Jl '47
Variable voltage system; Mt Hope mine of the Warren foundry & pipe corporation. H. Davenport. il Eng & Min J 148:76-7 Ag '47

MINE inspectors' institute of America
Annual meeting, 37th, Denver, June 2-4. Coal Age 52:132-4+ Jl '47

MINE lighting
Coal-mine lighting. Elec R (Lond) 141:289 Ag 22 '47
Improved lighting in mines; future of the fluorescent lamp. C. T. McMillan. il diag Light & Lighting 40:156-61 S '47
Lighting in coal mines. J. I. Graham. Light and Lighting 40:47-8 Mr '47

MINE lighting—*Continued*
Lighting in coal mines; abstract and discussion. W. Ferguson. Light & Lighting 40:94 My '47
Special lighting installed in new underground shop. il Coal Age 52:116+ Jl '47

MINE locomotives. See Locomotives, Mine

MINE management
Constructive planning in the mining industry. A. Nelson. Can Min J 68:575-80 Ag '47
Engineers criticize mining industry personnel policies. E. Just. Eng & Min J 148:64-7 Ja '47
Labor and manpower problems; abstracts of papers, American mining congress, Western division. Min Cong J 32:74-6 O '46
Plane-of-vein maps used to settle stope contracts. G. C. Waterman. diags Eng & Min J 148:72-5 S '47
Tribulations of a small-mine operator; Standard cyaniding company. H. L. Hazen. Min & Met 28:279-81 Je '47

See also
Coal mines and mining—Management
Mine foremen

MINE maps
Plane-of-vein maps used to settle stope contracts. G. C. Waterman. diags Eng & Min J 148:72-5 S '47
Profile technique useful in mapping stope geology. A. H. James. map Eng & Min J 147:74-5 N '46

MINE, mill and smelter workers union
Family squabble; left-wing feuds flare up in three C.I.O. unions. Bsns W p91-2+ Mr 8 '47
Revolt on the right; group of locals secedes from Smelter Workers. Bsns W p94+ F 15 '47
Trouble in brass; C.I.O. disapproves action of shipbuilding union in absorbing 25,000 brass workers. Bsns W p94+ My 24 '47

MINE pumping
Laxey pumping wheel; Laxey lead and zinc mine in the Isle of Man. A. Bray. il Can Min J 68:175-6 Mr '47

MINE pumping, Electric
Borehole cable installed to cut power bills; Silver King coalition mines co. L. J. Battey. il diag Eng & Min J 148:91-2 Je '47
Problems in the application of peak load control; off peak pumping at Perron gold mine. C. E. Dunlop. diag Can Min J 68:489-90 Jl '47

MINE pumps
Application of vertical (deep-well type) pumps in the anthracite industry; abstract. L. D. Lamont. Coal Age 51:136 D '46
Aunor underground pump. A. E. Alpine. il diags Can Min J 67:1033-4 N '46; Abstract. Eng & Min J 147:65 D '46
Simplified pump repairs. diags Eng & Min J 148:109 Jl '47

History
Preserve the Cornish pump; Cornish engines preservation society. J. T. Kemp. il Min & Met 28:509-11+ O '47

MINE rescue work
Approval of newly developed self-contained breathing apparatus, instructions in its care and use, and training procedure. G. W. Grove and E. E. Quenon. U S Bur Mines Information Circ 7413:1-18 '47
Training squads for mine rescue work. Safety Eng 93:30 Je '47

MINE roofs
Mine roof studies. P. H. Price. Min Cong J 33:42 Jl '47
Underground mining men may learn about mine roofs by examining strip mines; overburden materials; abstract. S. L. Galpin. Coal Age 52:134 Ag '47
What roof conditions permit pillar recovery? H. P. Greenwald. il Min Cong J 33:56-7 Mr '47

See also
Mine timbering

MINE salting
History of famous mines; great diamond swindle. J. McCaleb. Can Min J 68:726-7 O '47

MINE sanitation
Medical survey of the bituminous-coal industry. Mo Labor R 64:997-1002 Je '47
Mine sewage-disposal study. R. T. Artz. bibliog 2pls U S Bur Mines Information Circ 7392:1-8 '46

MINE shafts
Bureau inspects old shafts with portable headframe; Leadville area in Colorado. N. Ebbley, jr. il Eng & Min J 148:93-4 Je '47
Drifters sink Hecla shaft from pneumatic jumbo. J. B. Huttl. il diags Eng & Min J 148:96-7 Ap '47
Economic limit of shafts and slopes; abstract. C. C. Conway. Min Cong J 33:68-9 Je '47
Handling supplies and repairs in shaft mines; abstract. H. A. Quenon. Min Cong J 33: 69-70 Je '47
Mechanical mucking in inclines; with cost data. C. A. Fitch, jr. il Min Cong J 33: 29-31 Ja '47
Portal relocation paces mining improvements at Hubbard mine. il plan Coal Age 52:79-84 Mr '47
Shaft problems; how some difficulties have been overcome. K. O'Donnell. il plans diags Can Min J 67:1023-6 N '46
Sinking a mine shaft in South Africa. il diags Comp Air Mag 52:8-12 Ja '47
Two-way shaft communications; Homestake mining company. C. N. Kravig and R. Tario. il Min Cong J 33:20-4 Ja '47
Two-way shaft communications system. C. N. Kravig and R. Tario. Min Cong J 32: 78 O '46

See also
Shaft sinking

MINE shops
High productivity goal in maintenance at Kenilworth mine. il plan Coal Age 52:98-101 F '47
Shop aids belt maintenance; Panther coal co. il Coal Age 52:90-1 S '47
Special lighting installed in new underground shop. il Coal Age 52:116+ Jl '47

MINE signals
Signal system for long mine trains. P. C. Ziemke. diag Rock Prod 49:67 D '46
Two-way shaft communications system. C. N. Kravig and R. Tario. Min Cong J 32:78 O '46

MINE stoppings
Stoppings sealed with plastic. il Coal Age 52:112+ O '47

MINE subsidences
Stope cave and resulting flooding of the Josephine mine. il diag Can Min J 68:10-12 Ja '47

MINE surveying
Adjustable transit bar for raise surveys. diags Eng & Min J 148:94 Ja '47
Engineering staff calculates expected survey accuracy. C. J. Barber. diags Eng & Min J 147:79-81+ D '46
Levelling problem. B. G. Patterson. diag Can Min J 68:647-8 S '47

See also
Borehole surveying
Dip and strike, Determination of

MINE telephone
Description of typical mine-telephone systems and suggestions for making improved installations. C. L. Brown. U S Bur Mines Information Circ 7385:1-17 '46
Two-way shaft communications; Homestake mining company. C. N. Kravig and R. Tario. il Min Cong J 33:20-4 Ja '47

See also
Radio telephone in mines

MINE timber
L'approvisionnement en bois de soutènement des mines françaises. P. Razous. Génie Civil 124:211-13 Je 1 '47

MINE timbering
Blocking shaft timber. K. O'Donnell. diags Can Min J 68:651-3 S '47
Machine timbering promotes high efficiency at Gay mines. J. H. Edwards. il plan Coal Age 52:100-4 Ap '47
Mine timbering machines; abstract. H. S. Gay. Min Cong J 33:73 Je '47

MINE timbering--*Continued*
Pins and jacks facilitate face timbering at Arkwright. F. H. Brooks. il Coal Age 52: 64-5 Ja '47
Roof support at the working face. J. G. Creveling. Safety Eng 93:28 My '47; Same. Nat Safety N 55:104-5 Je '47
Safe timbering of working places in mobile loading; abstract. E. F. Miller. Coal Age 51:140 D '46
Timbering machines cut cost and promote safety at Isabella. R. R. Richart. il plans diag Coal Age 52:102-5 F '47

MINE tracks
Coal mine haulage; joint report of the Conveyor and the Haulage roads committees; cost data. Min Cong J 33:47-50 Ag '47
Lift gate in trolley permits truck passage. il Coal Age 52:106 My '47
Prefabricated track boosts track-loader tonnage at Norco. R. R. Richart. il plans diags Coal Age 51:83-9 D '46
Pre-fabricated track for mobile loading; abstract. S. S. Lanier, 3d. Min Cong J 33:71 Je '47
Putting knee action in trolley systems. diags Coal Age 52:104 My '47
Signal system for long mine trains. P. C. Ziemke. diag Rock Prod 49:67 D '46

MINE transportation
See also
Mine cars
Mine haulage
Mine hoisting
Mine tracks
Motor trucks in mining

MINE valuation
Chart determines ore values. A. F. Horle. Eng & Min J 148:71 S '47
Valuation should recognize present interest rates. W. F. Boericke. Eng & Min J 148: 76-7 Ja '47

MINE ventilation
Auxiliary ventilation for better mechanical mining. J. H. Dickerson. il diags Coal Age 52:96-101 O '47
Dust control in iron ore mines; methods and results in Lake Superior mines. E. C. J. Urban. diags Nat Safety N 55:24-5+ Ja '47
Good mine ventilation. D. W. Halstead. Coal Age 52:104 S '47
Mine-dust control. M. I. Signer and others. bibliog il diags Colorado School of Mines [Golden] Quarterly 42 no 1:1-64 Ja '47 (pa $1)
Mine ventilation improved by proper auxiliary equipment. J. H. Dickerson. diags Coal Age 51:96-8 D '46
Providing bleeder headings for ventilating gob areas. G. H. Sambrook. diag Coal Age 52:90-1 Ag '47
Separate splits for sections help double air supply; Barnes & Tucker co. il diag Coal Age 52:105-7 Jl '47
Survey of mining progress. A. H. Hubbell. Eng & Min J 148:86-7 Ap '47
See also
Brattice cloth

MINE waste
See also
Coal mines and mining—Waste disposal

MINE water
Acid mine drainage. J. R. Hoffert. bibliog il Ind & Eng Chem 39:642-6 My '47
Flood-prevention projects at Pennsylvania anthracite mines; progress report for 1945. S. H. Ash and others. 28pls U S Bur Mines Rep of Invest 4109:1-64 bibliog(p62-4) '47
Fluoride removal; treatment plant of Climax molybdenum co. R. Wamsley and W. E. Jones. flow sheet il plan diags Water & Sewage Works 94:272-6 Ag '47
Levelling problem. B. G. Patterson. diag Can Min J 68:647-8 S '47
Light eliminates water-level gaging errors. il diag Coal Age 52:108 Ag '47
Role of microorganisms in acid mine drainage; a preliminary report. A. R. Colmer and M. E. Hinkle. bibliog Science 106:253-6 S 19 '47
Stope cave and resulting flooding of the Josephine mine. il diag Can Min J 68:10-12 Ja '47
Treatment of acid mine water for breaker use in the anthracite region of Pennsylvania. L. H. Johnson. bibliog 5pls U S Bur Mines Information Circ 7382:1-14 '46

MINERAL engineering (term)
Mineral engineering as a profession. Min & Met 28:2-3 Ja '47; Discussion. E. Steidle. 28:167-8 Mr '47

MINERAL industries
Enrollment in mineral engineering schools at all-time high. W. B. Plank and F. W. Bloecher, jr. Min & Met 28:221-3 My '47
Mineral economics; review of 1946. E. W. Pehrson. il Min & Met 28:50-5 F '47
Nonmetallic industrial minerals; review of 1946. G. W. Josephson. il Min & Met 28: 85-90 F '47
Nonmetallic mineral industries; annual review and forecast. C. L. Harness and G. W. Josephson. il Min Cong J 33:109-12 F '47
Non-metallics continue in strong demand. G. R. Gwinn and W. H. Waggaman. il Eng & Min J 148:105-7+ F '47
See also
Aggregates
Coal trade
Feldspar
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Mines and mineral resources
Mining industry and finance
Petroleum industry and trade
Phosphates
Quarries and quarrying
Rock products industry
Salt
Stone, Crushed
Sulfur industry and trade

Statistics
Record 1946 mineral production. Chem & Eng N 25:177 Ja 20 '47

Great Britain (colonies)
Juggernauts in the colonies? Economist 151: 989-90 D 21 '46

United States
Metals and minerals; prospects for 1947. Dom Comm 35:52-4 Ja '47

MINERAL lands
Public land policies in relation to mining. J. D. Wolfsohn. Min Cong J 32:83 O '46
Public lands show increase in production of minerals. W. E. Wrather. Franklin Inst J 242:308 O '46
See also
Ore deposits

MINERAL waters
Psyche on wing; local-franchise distribution, sideline beverages. Bsns W p70+ Mr 29 '47

MINERAL wool
Estimating mineral wool insulation. F. C. Otto. Chem Eng 54:102-6 Jl '47
Insulating boiler headers can be profitable. il Pet Processing 2:125 F '47
Insulating unhoused plants. D. von Ludwig. il diags Chem Eng 54:114-17 Mr '47
Insulation technique for oil-refinery structures. S. S. Parker. il Oil & Gas J 45:160-2 Ap 26 '47
Making wool by a continuous automatic process; rock wool plant of Federal portland cement co. B. Nordberg. il Rock Prod 50: 110-12+ Ja '47
Manufacture of mineral wool; abstract. J. C. Gillespie and L. V. Robinson. Rock Prod 50:88+ Mr '47
Mexico's two new refineries models of newest insulation methods. H. R. Morris. il Pet Refiner 26:121-2 My '47
Mineral wool insulates boiler water wall. il Elec World 126:84 D 21 '46
Mineral wool insulation of ducts cuts plant operating costs. il Sheet Metal Worker 38: 100+ S '47
NACA test lab requires enormous cooling plant. il Refrig Eng 54:342-3+ O '47
Pipe-line insulation minimizes steam losses; Jones & Laughlin steel corp. il Steel 120: 107+ F 17 '47
Technique for insulating boiler headers. il Power Pl Eng 51:126+ My '47
Wind-tunnel heat leakage decreased ninety percent by insulation. il Eng N 139:602 O 30 '47

MINERALOGICAL analysis
Composition of roscoelite. R. C. Wells and W. W. Brannock. In U S Geol S Bul 950: 121-7 '46
Examination of polished specimens of refractories by reflected light. J. R. Hensler and S. Zerfoss. bibliog il Am Cer Soc J 30:105-8 Ap 1 '47
Identification and estimation of the montmorillonite group of minerals, with special reference to soil clays. D. M. C. MacEwan. bibliog Soc Chem Ind J 65:298-304, pl 3-4 O '46
Identification and qualitative chemical analysis of minerals. O. C. Smith. 351p $6.50 D. Van Nostrand co, 250 Fourth av, New York '46
Quantitative estimation of potash and soda feldspars in pegmatite rock by means of chemical coloration; review of selected literature. G. A. Munson and E. P. Barrett. bibliog U S Bur Mines Information Circ 7412:1-5 '47
Spectrochemical analysis of rocks and minerals. E. W. Claffy. bibliog Am J Sci 245: 35-48, pl 1-2 Ja '47
Spectrochemical determination of the major constituents of minerals and rocks. A. Kvalheim. bibliog Opt Soc Am J 37:585-92 Jl '47
System for calculating analyses of micas and related minerals to end members. R. E. Stevens. bibliog In U S Geol S Bul 950:101-19, pl 2 '46

MINERALOGY
Alteration of feldspar and its products as studied in the laboratory. R. L. Folk. bibliog Am J Sci 245:388-94 Je '47
Hydrothermal alteration in the Castle Dome copper deposit, Arizona. N. P. Peterson and others. maps diag Econ Geol 41:820-40 D '46
Identification and qualitative chemical analysis of minerals. O. C. Smith. 351p $6.50 D. Van Nostrand co, 250 Fourth av, New York '46
Lead-silver mineralization in the Clark Fork district. A. L. Anderson. Econ Geol 42: 305-6 My '47
Model to aid in the explanation of interference figures. M. E. Willard. diags Am J Sci 245:518-21, pl 1-2 Ag '47
Relation of clay mineralogy to origin and recovery of petroleum. R. E. Grim. bibliog il Am Assn Pet Geologists Bul 31:1491-9 Ag '47
Research opportunities offered by U.S. colleges; many scholarships, assistantships, and fellowships in mineral technology available. S. P. Wimpfen. il Min & Met 28:504-7 O '47

See also
Abrasives
Crystallography
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Geology
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MINERALS
Demands for industrial minerals increasing; A.I.M.M.E. meeting, Columbus, Oct. 23-24. Rock Prod 49:71+ D '46
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships, Quebec. C. Faessler and M. S. Badollet. bibliog Can Min J 68:157-67 Mr '47
Epithermal mineralization at the Last Chance and Hornsilver mines, Lava Creek district, Butte county, Idaho. A. L. Anderson. bibliog maps Geol Soc Bul 58:451-82, pl 1-4 My '47
Higher mineral arsenides of cobalt, nickel, and iron. R. J. Holmes. diags tables Geol Soc Bul 58:299-391, pl 1-5 bibliog(p 385-91) Ap '47
Industrial uses of selected minerals; guide list. U S Office of Dom Com Industrial Ser 72:1-35; pa 30c Supt. of doc. '47
Inorganic constituents of coal. H. E. Crossley. Gas J (Lond) 248:1000 D 4 '46
Luminescent phenomena as aides in the localization of minerals in polished sections. H. Yagoda. bibliog il diags Econ Geol 41: 813-19 D '46
Nonmetallic industrial minerals; review of 1946. G. W. Josephson. il Min & Met 28:85-90 F '47
Nonmetallic mineral industries; annual review and forecast. C. L. Harness and G. W. Josephson. il Min Cong J 33:109-12 F '47
Non-metallics continue in strong demand. G. R. Gwinn and W. H. Waggaman. il Eng & Min J 148:105-7+ F '47
Salvaging commercial minerals from oil field brines. R. H. Dott. flow sheet Pet Processing 2:512 Jl '47
Transport and deposition of the non-sulphide vein minerals. F. G. Smith. bibliog il diag Econ Geol 41:57-63; 42:251-64 Ja '46, My '47
Wartime dependence on foreign minerals. A. M. Bateman. Econ Geol 41:308-27 Je '46; Discussion. C. L. Sagui. 41:851-3 D '46

See also
Aggregates
Asbestos
Chromite
Clay
Coal
Dolomite
Feldspar
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Potash
Quartz
Rocks
Salt
Sand
Spinels
Sulfur
Talc
Vermiculite
Wittichenite
Zircon

Stockpiling
Mineral raw materials for future security. O. O. Niergarth. Min Cong J 32:64 O '46
U.S. stockpiles. K. Rannells. Iron Age 159: 116-19 Ja 2 '47

MINERALS in plants. See Plants—Mineral content

MINERS
Communism menaces the mining industry. R. H. Ramsey. il Eng & Min J 148:74-81 Jl '47
Labor and manpower problems; abstracts of papers, American mining congress, Western division. Min Cong J 32:74-6 O '46
Mine doctors; contract practice. K. Barstow. Ind Med 16:101-3 F '47
Portal-to-portal legislation. J. D. Conover. Min Cong J 33:23-4+ F '47
Safety and welfare; Hans Hummer and miners' Christmas. H. B. Hicks. il Can Min J 67:1125-8 D '46
Selling mining to the miner. W. Williams. Eng & Min J 147:57-9 D '46
Wartime and postwar experiences of nonferrous-metal miners. Mo Labor R 64:770-9 My '47
Wartime migration of miners. Eng & Min J 148:76 Je '47

See also
Coal miners
Mine foremen
Mine rescue work
Mining towns
United mine workers of America

Diseases and hygiene
Health and miscellaneous hazards in metal mines; metal-mine accident-prevention course. bibliog il diags U S Bur Mines Miners' Circ 57:1-70; pa 20c Supt. of doc. '46
Keeping miners healthy. H. B. Hicks. Can Min J 68:180-2 Mr '47
Medical facts revealed by aluminum therapy tests. W. D. Robson. Eng & Min J 148: 64-7 My '47
Miners live longer. Can Min J 68:336 My '47
Mining in very high altitudes and deep level mines. W. Schweisheimer. Can Min J 68: 657-8 S '47
Report on silicosis and tuberculosis among mine workers in the Gold Coast; abstract. A. J. Murray and J. A. Crocket. J Ind Hygiene 29:sup46-7 My '47
Skin trouble of miners; new research on prevention and protection. W. Schweisheimer. Can Min J 67:1122-3 D '46

See also
Coal miners—Diseases and hygiene
Miners' nystagmus

Training
See Mining schools and education

MINERS' nystagmus
Miners' nystagmus; whence does it come. W. Schweisheimer. Can Min J 68:737-8 O '47

MINES, Bureau of. See United States—Mines, Bureau of

MINES, Military
See also
Mines, Submarine

MINES, Submarine
British mine locators. il Electrician 138:1080 Ap 25 '47
Floating mine dangers. Weekly Underw 156: 53 Ja 4 '47
Symposium of papers on degaussing. il diags Inst E E J 93 pt 1:429-52, 487-522 O-N '46; Discussion. 93 pt 1:452-5, 522-4 O-N '46; Abstracts. Engineering 161:343 Ap 12 '46; Electrician 136:953-4 Ap 12 '46; Elec R (Lond) 138:565-6 Ap 12 '46

MINES and mineral resources
Foreign ore reserves of copper, lead, and zinc. W. P. Shea. Eng & Min J 148:53-8 Ja '47
Future mineral supply. Comp Air Mag 52:48 F '47
Man as a geological force; engineering and agricultural operations are reshaping earth's surface. P. Cohen. il Tech R 49:469-71 Je '47
Mineral economics; review of 1946. E. W. Pehrson. il Min & Met 28:50-5 F '47
U.S. still leads world in mineral resources; with data on world distribution of reserves. J. V. Sherman. Barron's 27:11 Ja 13 '47
World mineral resources studied; conference held in conjunction with meeting of American institute of mining and metallurgical engineers. Iron Age 159:64-5 Mr 27 '47

See also
Bauxite
Coal mines and mining
Copper mines and mining
Geology
Gold mines and mining
Iron mines and mining
Lead mines and mining
Lignite
Magnesite
Manganese mines and mining
Mercury mines and mining
Minerals
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Oil shales
Ore deposits
Petroleum
Petroleum supply
Phosphates
Prospecting
Quarries and quarrying
Salt domes
Salt mines and mining
Shale
Sulfur
Zinc mines and mining

Bibliography
Among the newer books. Published in monthly numbers of Mining and metallurgy
Bureau of mines papers published in the technical press, January 1, 1938, to January 1, 1946. M. E. Winslow and H. J. Stratton, comps. 230p U.S. Bur. of mines, Washington, D.C. '47

Alaska
Alaska's minerals as a basis for industry. H. F. Bain. 5pls U S Bur Mines Information Circ 7379:1-89 '46
Exploration of a nickel-copper-cobalt deposit at Funter bay, Admiralty island. S. P. Holt and J. M. Moss. flow sheet U S Bur Mines Rep of Invest 3950:1-15, pl 1-6 '46
Exploration of argentiferous lead-copper deposits of the Sana district. R. L. Thorne. U S Bur Mines Rep of Invest 3940:1-9, pl 1-4 '46
Mineral investigations of the geological survey in Alaska in 1943 and 1944. J. C. Reed. U S Geol S Bul 947-A:1-6; pa 5c Supt. of doc. '46
Nickel-copper prospect near Spirit mountain, Copper River region, Alaska. J. Kingston and D. J. Miller. maps U S Geol S Bul 943-C:49-57; pa 10c Supt. of doc. '45

See also
Copper mines and mining—Alaska
Iron ores—Alaska
Sulfur mines and mining—Alaska
Tungsten mines and mining—Alaska

Arizona
Ajo mining district. J. Gilluly. maps (in pocket) U S Geol S Professional Pa 209:1-112, pl 1-27 '46
Ajo mining district, Arizona. J. Gilluly. maps diags U S Geol S Professional Pa 209:1-112, pl 1-27 '46
Arizona asbestos deposits, Gila county, Ariz. L. A. Stewart and P. S. Haury. bibliog 22pls U S Bur Mines Rep of Invest 4100:1-28 '47
Johnny Bull-Silver Knight lead-zinc property, Cerbat mountains, Mohave county. S. L. Tainter. 3pls U S Bur Mines Rep of Invest 3998:1-14 '47

Arkansas
Exploration for barite in Hot Spring county, Arkansas. R. B. McElwaine. 3pls U S Bur Mines Rep of Invest 3963:1-21 '46
Exploration of barite deposits in Montgomery county. R. B. McElwaine. U S Bur Mines Rep of Invest 3971:1-24, pl 1-10 '46
Exploration of the Magnet Cove rutile co. property, Magnet Cove area, Hot Spring county, Ark. R. V. Spencer. 7pls U S Bur Mines Rep of Invest 3900:1-23 '46
Featuring Arkansas. il Manuf Rec 116:108-12 Ag '47

Australia
Metalliferous geochemical zones of Australia. E. S. Hills. maps Econ Geol 42:478-91 Ag '47
Some pipe deposits of eastern Australia. R. Blanchard. maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47

Bolivia
Engineer looks at Bolivia. R. Hammond. Engineer 183:509-11, 535-6 Je 13-20 '47

See also
Tin mines and mining—Bolivia

Brazil
Brazil develops mineral deposits. M. Belanger. Can Chem & Process Ind 31:829-30 S '47
Brazilian excursion. R. H. Ramsey. il Eng & Min J 148:62-4+ Mr '47
Quartz crystal deposits in the state of Goiaz, Brazil. D. F. Campbell. il maps diags Econ Geol 41:773-99 D '46

British Columbia
British Columbia and Yukon in 1946. F. H. Stephens. il Can Min J 68:79-84 F '47
Geology of the Red Rose tungsten mine, Hazelton, British Columbia. J. S. Stevenson. bibliog il map diags Econ Geol 42:433-64 Ag '47

Canada
Antimony in Canada; possible sources in various provinces. A. S. Dawson. Can Min J 68:20-1 Ja '47
Canada's mineral production well maintained in 1946. H. McLeod. Can Min J 68:72-8 F '47
Provincial mine ministers conference, Ingonish Beach, Cape Breton. Can Min J 68: 721-2 O '47
Treatment of new mining ventures in Canada and the United States. I. B. Joralemon. Min Cong J 32:80 O '46

See also
Coal mines and mining—Canada

Chile
Engineer looks at Chile. R. Hammond. Engineer 184:192-4, 226-7, 250-2 Ag 29-S 12 '47

Colorado
Exploration of vanadium region of western Colorado and eastern Utah. W. P. Huleatt and others. 40pls U S Bur Mines Rep of Invest 3930:1-30 '46
Northgate fluorspar, Jackson county, Colo. J. D. Warne. 11 pls U S Bur Mines Rep of Invest 4106:1-23 '47
Rico Argentine. C. J. Parry. flow sheet il plans Min Cong J 33:35-9 Mr '47
Scheelite in the Boulder district. O. Tweto. bibliog diags Econ Geol 42:47-56 Ja '47

MINES and mineral resources—*Continued*

Congo, Belgian

Foreign minerals survey; mineral resources of the Belgian Congo and Ruanda-Urundi. 14pls U S Bur Mines Foreign Minerals Survey v 2, no 6:1-95 bibliog(p94-5) '47

Connecticut

Beryl resources of Connecticut. E. N. Cameron and V. E. Shainin. maps plans diags Econ Geol 42:353-67 Je '47

Dominican Republic

Aluminous lateritic soil of the Sierra de Bahoruco area, Dominican Republic, W.I. S. S. Goldich and H. R. Bergquist. maps U S Geol S Bul 953-C:53-84, pl 15-19; pa 40c Supt. of doc. '47

Europe

See also
Coal mines and mining—Europe

Finland

See also
Copper mines and mining—Finland
Nickel mines and mining—Finland

Florida

See also
Phosphate rock—Florida

France

Les minéraux rares de la région de Montbelleux (Ille-et-Vilaine). V. Charrin. map Génie Civil 124:259 Jl 1 '47

War damage, obsolescence problems for French mines. M. Marsh. il map Eng & Min J 148:97-9 Je '47

See also
Coal mines and mining—France

Georgia

Cartersville ocher seeks new peacetime uses. E. D. White. flow sheet il Eng & Min J 148:82-3 Ag '47

Exploration of Georgia and South Carolina sillimanite deposits. W. C. Hudson. 16pls U S Bur Mines Rep of Invest 3927:1-44 '46

Georgia talc industry helped by geologic study. K. H. Teague. il Eng & Min J 147:63-5 N '46

Substitution of domestic minerals for India kyanite; refractory properties of Georgia massive kyanite. T. N. McVay and H. Wilson. il Am Cer Soc J 30:159-64 My 1 '47

Great Britain

Billingham anhydrite mine. flow sheet il Chem Age (Lond) 55:695-701 D 7 '46

See also
Tin mines and mining—Great Britain

Haiti

Manganese deposits of the Republic of Haiti. E. N. Goddard and others. maps U S Geol S Bul 953-B:27-52, pl 10-14; pa 15c Supt. of doc. '47

Idaho

Cobalt mineralization in the Blackbird district, Lemhi county. A. L. Anderson. bibliog il map Econ Geol 42:22-46 Ja '47

Concentration and determination of grade in tests on sillimanite in Idaho schist. K. G. Skinner and H. J. Kelly. il Am Cer Soc J 30:197-202 Jl 1 '47

Deep discoveries intensify Coeur d'Alene activities. R. E. Sorenson. bibliog map diag Eng & Min J 148:70-8 O '47

Deep mining developments in the Coeur d'Alene. H. Ingalls. il Min Cong J 33:37-9+ S '47

Epithermal mineralization at the Last Chance and Hornsilver mines, Lava Creek district, Butte county. A. L. Anderson. bibliog maps Geol Soc Bul 58:451-82, pl 1-4 My '47

Geology of the lead-silver deposits of the Clark Fork district, Bonner county, Idaho. A. L. Anderson. bibliog maps U S Geol S Bul 944-B:37-117, pl 5-13 '47

Structural control and wall-rock alteration at the Wilbert mine, Dome district, Butte county. A. L. Anderson. il map plan diags Econ Geol 42:368-83 Je '47

Illinois

Daisy fluorite mine, Rosiclare lead & fluorspar mining co. Hardin county, Ill. N. M. Muir. 11pls U S Bur Mines Rep of Invest 4075:1-16 '47

Fluorite and zinc on the J. J. Shelby and H. McGuire properties, Pope county. O. M. Bishop. map U S Bur Mines Rep of Invest 4048:1-9 '47

Fluorite on the Lee mine property, Hardin county. O. M. Bishop. U S Bur Mines Rep of Invest 3996:1-10, pl 1 '47

See also
Lead mines and mining—Illinois
Zinc mines and mining—Illinois

India

India's mineral policy keyed to nationalism. M. D. Lyons. il Eng & Min J 148:83-5 Ap '47

Kentucky

Exploration for fluorite, Crittenden and Livingston counties, Kentucky. X. B. Starnes and R. C. Hickman. 16pls U S Bur Mines Rep of Invest 3943:1-44 '46

Exploration for fluorite, Krausse estate property, Crittenden county, Kentucky. X. B. Starnes. 3pls U S Bur Mines Rep of Invest 3953:1-15 '46

Fluorite and zinc on the Eva Tanguay property, Crittenden county. X. B. Starnes. 2 maps U S Bur Mines Rep of Invest 4055:1-16 '47

Fluorite in the Mineral Ridge-Clay Lick fault system, Livingston county. N. M. Muir. 3pls U S Bur Mines Rep of Invest 4049:1-29 '47

J. D. Price fluorite deposit, Crittenden county, Ky. X. B. Starnes. pl U S Bur Mines Rep of Invest 4087:1-8 '47

Manitoba

Bentonite in the Miami-Deerwood area, Man. E. L. Cameron. Can Min J 68:643 S '47

Mining in Manitoba in 1946. J. P. de Wet. il Can Min J 68:93-6 F '47

Mexico

Finding and mining optical calcite crystals. C. R. King. Eng & Min J 148:94-6 Je '47

Mexico, silver treasure house. A. B. Parsons. Min & Met 28:487-8 O '47

Quicksilver-antimony deposits of Huitzuco, Guerrero, Mexico. J. F. McAllister and D. H. Ortiz. il map diags U S Geol S Bul 946-B:49-71, fold maps(pl 7-24); pa 75c Supt. of doc. '45

Scheelite deposits in the northern part of the Sierra de Juarez, northern territory, Lower California, Mexico. C. Fries, jr. and E. Schmitter. map U S Geol S Bul 946-C:75-101, fold maps(pl 25-38); pa 25c Supt. of doc. '45

Vistas of Mexican mining. E. Just. il diags Eng & Min J 147:74-6 S; 76-8 O; 76-8 D '46

See also
Antimony mines and mining—Mexico

Missouri

Minerals in the hub state of the Nation. il Manuf Rec 116:110-14 Ja '47

Montana

Bear Trap corundum deposit, Madison county. J. B. Hopkins and J. Taber. 2pls U S Bur Mines Rep of Invest 4039:1-6 '47

Chromite deposits near Red Lodge, Carbon county, Montana. H. L. James. maps plan diags U S Geol S Bul 945-F:151-89, pl 52-64; pa $1.75 Supt. of doc. '46

Gallatin corundum deposit, Gallatin county, Mont. R. D. O'Brien. 4pls U S Bur Mines Rep of Invest 4113:1-9 '47

Nevada

Exporation of the Crowell fluorspar mine, Nye county. R. W. Geehan. U S Bur Mines Rep of Invest 3954:1-9, pl 1-10 '46

MINES and mineral resources—Nevada—*Cont.*
Exploration of the gold, silver, lead and zinc properties, Eureka corporation, Eureka county. E. O. Binyon U S Bur Mines Rep of Invest 3949:1-18, pl 1-6 '46
Nevada travelogue. J. E. Hutfl. il Eng & Min J 148:98-101 Ap '47
Valery fluorspar deposit, Pershing county. V. E. Kral. 3 pls U S Bur Mines Rep of Invest 4014:1-8 '47

See also
Tungsten mines and mining—Nevada

New Brunswick

Mining in New Brunswick, 1946. R. J. Gill. il Can Min J 68:110 F '47

New England

Beneficiation of New England beryllium ores. F. D. Lamb. U S Bur Mines Rep of Invest 4040:1-9 '47

New Hampshire

Exploration of the Stoddard fluorite mine, Cheshire county, N.H. J. D. Bardill. 4pls U S Bur Mines Rep of Invest 3937:1-6 '46

New Mexico

Apache mica mine, Rio Arriba county. R. J. Holmquist. 2pls U S Bur Mines Rep of Invest 4037:1-5 '47
Exploration of Bishop Cap fluorspar project, Dona Ana county, New Mexico. F. J. Sur. 6pls U S Bur Mines Rep of Invest 3946:1-7 '46
Exploration of Florite Ridge fluorspar district, Luna county. P. L. Russell. 5pls U S Bur Mines Rep of Invest 3987:1-7 '47
Exploration of Grey Eagle, Grandview, and Royal John claims, Grant and Sierra counties, N.Mex. R. S. Hill. 6pls U S Bur Mines Rep of Invest 3904:1-31 '46
Exploration of Harding tantalum-lithium deposits, Taos county. J. H. Soule. U S Bur Mines Rep of Invest 3986:1-10, pl 1-6 '46
Gila fluorspar district, Grant county. P. L. Russell. 4pls U S Bur Mines Rep of Invest 4020:1-5 '47
Huckleberry spar mine, Catron county. F. J. Sur. 5pls U S Bur Mines Rep of Invest 4053:1-11 '47
Iron Mountain beryllium deposits, Sierra and Socorro counties. 10pls U S Bur Mines Rep of Invest 4024:1-13 '47
Langbeinite, mining and processing. G. T. Harley and G. E. Atwood. flow diags il Ind & Eng Chem 39:43-7 Ja '47
United States fluorspar co. property, Sierra county. M. J. Sheridan. 9pls U S Bur Mines Rep of Invest 4017:1-15 '47

See also
Copper mines and mining—New Mexico
Manganese mines and mining—New Mexico

North Carolina

Buck Creek corundum, Clay county. T. J Ballard. 5pls U S Bur Mines Rep of Invest 4052:1-34 '47
Corundum Hill mine, Macon county. T. J. Ballard. 3pls U S Bur Mines Rep of Invest 4042:1-10 '47
Industrial minerals of North Carolina. J. L. Stuckey and others. il maps Min & Met 28:321-5 Jl '47
North Carolina's vast untapped mineral resources. H. E. Swanson and N. C. Rockwood. bibliog il maps Rock Prod 50:124-5 Ja '47

Norway

Norwegian mine output drops during German occupation. T. Vogt. Eng & Min J 148: 92-4 O '47

Nova Scotia

Mineral industry of Nova Scotia, 1946. L. D. Currie. il Can Min J 68:111-12 F '47

Ontario

Caledonia gypsum deposit. D. C. McLaren. flow sheet il Can Min J 67:1101-8 D '46
Cobalt returns. il J Chem Educ 23:522-4 N '46
Ontario mining review, 1946. J. C. Browning. il Can Min J 68:97-103 F '47

See also
Coal mines and mining—Ontario
Gold mines and mining—Ontario

Oregon

Chromite-bearing sands of the southern part of the coast of Oregon. A. B. Griggs. bibliog map diags U S Geol S Bul 945-E:113-50, fold maps(pl 41-51); pa 55c Supt. of doc. '45

Pennsylvania

Geology and economic aspects of the more important high-calcium limestone deposits of Pennsylvania. F. M. Swain. bibliog fold maps Pennsylvania State College Mineral Industries Exp Sta Bul 43:1-31 '46 (pa 50c)

Peru

Story of Mina Ragra, premier vanadium find. D. F. Hewett. il Eng & Min J 148:59-63 Ja '47

Philippine Islands

Jap at Philippine mines. N. N. Lim. Eng & Min J 147:70 N '46
Mucking pans speed up shaft sinking; with cost data; San Mauricio mining co., Mambulao, Camerines Norte. F. N. Carpentier. il diags Eng & Min J 147:73-5 D '46

Quebec

Bachelor Lake area. W. W. Longley. maps Can Min J 68:22-4 Ja '47
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships. C. Faessler and M. S. Badollet. bibliog Can Min J 68:157-67 Mr '47
Quebec mining review, 1946. J. C. Browning. il Can Min J 68:104-9 F '47

Ruanda-Urundi

Foreign minerals survey; mineral resources of the Belgian Congo and Ruanda-Urundi. 14pls U S Bur Mines Foreign Minerals Survey v 2, no 6:1-95 bibliog(p94-5) '47

Russia

Development of the Kola peninsula, U.S.S.R.; varied and energetic activity looms. For Comm W 26:23 Ja 18 '47
Postwar Russia and her mineral deposits. W. H. Voskuil. map J Land & Pub Util Econ 23:199-213 My '47; Discussion. H. Blumenfeld. 23:439 N '47

Saskatchewan

Review of mining in Saskatchewan, 1946. C. A. L. Hogg. Can Min J 68:89-92 F '47

Siam

See also
Tin mines and mining—Siam

South Africa

See also
Copper mines and mining—South Africa

South America

High lights of the South American mining industry 1946. L. T. Higgins. Min & Met 27:584 D '46

South Carolina

Alexander-Barber sillimanite properties, Spartanburg county, S.C. R. C. Hickman. 3pls U S Bur Mines Rep of Invest 4118:1-5 '47
Exploration of Georgia and South Carolina sillimanite deposits. W. C. Hudson. 16pls U S Bur Mines Rep of Invest 3927:1-44 '46

Southern states

Southern mica production met acute wartime need. E. J. Lintner. il map Eng & Min J 148:78-80 S '47

Spain

Mining in Spain's Huelva district. A. H. Aleixandre. il Eng & Min J 148:90-2 O '47

See also
Coal mines and mining—Spain

MINES and mineral resources—*Continued*

Sweden

World's longest aerial ropeway; transporting ores from Boliden mine. il Mech Handling 34:549+ O '47 (to be cont)

Tennessee

See also
Iron ores—Tennessee

Texas

Badu feldspar deposit, Llano county, Tex. G. W. Huseman and W. D. McMillan. 5pls U S Bur Mines Rep of Invest 4102:1-11 '47

Celestine deposits; Brown, Nolan, Fisher, and Coke counties. W. E. Dennis and others. flow sheet 15pls U S Bur Mines Rep of Invest 4018:1-16 '47

Texas mica and feldspar co, Culberson and Hudspeth counties. S. P. Holt and J. A. Bowsher. 3pls U S Bur Mines Rep of Invest 4009:1-7 '47

Transjordan

Transjordan mineral resources; commercial possibilities. map Chem Age (Lond) 56: 287-8 Mr 8 '47

Uganda

Phosphate deposits of the Eastern Province, Uganda. K. A. Davies. bibliog map Econ Geol 42:137-46 Mr '47

United States

Clouds over mining; labor difficulties, unjust taxation, lowered tariffs, diminishing reserves. L. S. Cates. Min & Met 27:579-82 D '46

Discounts specter of depletion in U.S. metal, mineral reserves; abstract. H. I. Young. Steel 121:55 Jl 28 '47

Experts warn U.S. is moving into have-not class with regard to minerals. C. M. White and others. Barron's 27:32-3 Mr 24 '47

How the U.S.G.S. may serve the mining industry. R. N. Hunt. il Min Cong J 32:37-40 D '46

Interior department revises mineral reserve estimates. Eng & Min J 148:80-3 Je '47

Metals, minerals and research. C. Williams. il Min & Met 28:140-3 Mr '47

Mineral resources of the United States; some important reserves depleted by war. Index 26 no4:83-96 [D] '46

Mineral strength of U.S. discussed by AIME at 75th anniversary celebration. Chem & Eng N 25:966-7 Ap 7 '47

Minerals subsidies continuation favored by Public lands committee. Oil Paint & Drug Rep 151:5 My 5 '47

National mineral policies. J. A. Krug. Min Cong J 32:24-7 O '46

Need new exploration, development for U.S. minerals resources. Iron Age 160:152-3 Ag 7 '47

Ore reserves and future exploration. R. H. Sales. il Min Cong J 32:30-4 O '46

Present mineral wealth in the U.S. J. A. Krug. Iron Age 159:115-16 My 29 '47

Prospects for our natural resource industries. J. C. Cresswill. il Mag of Wall St 80:307-9+ Je 21 '47

Some aspects of our wasting assets. F. W. Willard. Min & Met 27:583-4 D '46

Treatment of new mining ventures in Canada and the United States. I. B. Joralemon. Min Cong J 32:80 O '46

U.S. and Canada warned on depletion of mineral resources. C. Williams. Iron Age 159:115 F 6 '47

Vanishing ore reserves theory scouted; abstract. E. H. Comstock. Iron Age 160:145-6 Jl 17 '47

See also
Coal mines and mining—United States
Gold mines and mining—United States
United States—Mines, Bureau of

Utah

Blue Bell fluorite deposits, Beaver county, Utah. E. Frey. 4pls U S Bur Mines Rep of Invest 4091:1-11 '47

Exploration of alunite deposits, Marysvale, Piute county. J. H. Hild. bibliog 24pls U S Bur Mines Rep of Invest 3972:1-74 '46

Exploration of vanadium region of western Colorado and eastern Utah. W. P. Huleatt and others. 40pls U S Bur Mines Rep of Invest 3930:1-30 '46

Virginia

Bush-Hutchins ilmenite, Roanoke county, Va. R. C. Hickman. 4pls U S Bur Mines Rep of Invest 4112:1-5 '47

Ilmenite deposit at Piney River. D. M. Davidson and others. bibliog il maps Econ Geol 41:738-48 N '46; Discussion. C. S. Ross. 42:194-8 Mr '47

Pyrites, Mineral, Louisa county, Va. R. C. Hickman. 3pls U S Bur Mines Rep of Invest 4116:1-3 '47

Virginia marl deposits, New Kent county, Va. R. C. Hickman. 3pls U S Bur Mines Rep of Invest 4114:1-4 '47

Washington (state)

Washington's vast olivine deposit. M. Roberts. il Min Cong J 33:29-32 Je '47

Western states

Declining metal output foreseen for western areas. E. W. Pehrson. Eng & Min J 148:76 S '47

History of famous western mines. J. McCaleb. Can Min J 68:320, 407, 503, 580-1, 642-3, 726-7 My-O '47

Wisconsin

Sampling the Fox and Mills tailing piles, Lafayete county. G. A. Apell. 4pls U S Bur Mines Rep of Invest 3991:1-7 '47

See also
Zinc mines and mining—Wisconsin

Wyoming

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Sulfur mines and mining—Wyoming

MINIMUM wage

Minimum wage fixing by law; testimony before subcommittee of Labor and education committee of House. E. P. Schmidt. Comm & Fin Chr 166:105+ Jl 10 '47

No more laws? Congress revives interest in minimum wage. Bsns W p86+ Jl 19 '47

Progress of state minimum-wage legislation, 1946. A. Angus and L. Sullivan. Mo Labor R 64:1040-51 Je '47

Strong sentiment favors raising minimum wage from 40¢ to 65¢ an hour; Gallup poll. Iron Age 159:103+ Je 26 '47

MINING companies

Foreign properties

Problems and procedure in acquiring foreign mining properties. C. W. Wright. Min & Met 28:144-7 Mr '47

MINING costs

Coniaurum makes own bit for less than 14 cents. diags Eng & Min J 148:96 Ag '47

Production costs under premium price plan. J. L. Maury. Eng & Min J 148:86-7 Jl '47

See also
Coal mines and mining—Costs

MINING engineering

A.I.M.E. anniversary meeting features world mineral resources and technology. Eng & Min J 148:109-10+ Ap '47

Appraising the hidden values in blasthole diamond drilling. C. H. Hopper. diags Eng & Min J 148:84-6 O '47

Constructive planning in the mining industry. A. Nelson. Can Min J 68:575-80 Ag '47

Metal mining practice during 1946. C. W. Livingston. il diags Min Cong J 33:26-30 F '47

Mining practice; review of 1946. P. B. Bucky. il Min & Met 28:59-60 F '47

Survey of mining progress. A. H. Hubbell. Eng & Min J 148:92-8 F; 65-7+ Mr; 86-8 Ap; 72-5 My '47

MINING engineering—*Continued*
Time factor and production planning; mine development schemes and erection jobs. A. Nelson. Can Min J 68:316-20 My '47

See also
Blasting
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Mine haulage
Mine management
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Mine shafts
Mine shops
Mine ventilation
Mining machinery
Mining methods
Quarries and quarrying
Rock drills
Shaft sinking

Bibliography

Current Institute papers. Published in Mining and metallurgy

Power

Variable voltage system; Mt Hope mine of the Warren foundry & pipe corporation. H. Davenport. il Eng & Min J 148:76-7 Ag '47

See also
Coal mines and mining—Power
Electricity in mining

Safety measures

Detecting loose rock or ore. diags Nat Safety N 54:42+ D '46
Diesel equipment in underground mining. D. Harrington and J. H. East, jr. bibliog 13pls U S Bur Mines Information Circ 7406:1-87 '47
Dust control in mining. W. Schweisheimer. Can Min J 68:504-5 Jl '47
Expanding safety to meet accelerated production in coal and ore mining. S. H. Mooney. il Safety Eng 93:21+ My '47
Explosive hazards. H. B. Hicks. il Can Min J 68:333-5 My '47
Health and miscellaneous hazards in metal mines; metal-mine accident-prevention course. bibliog il diags U S Bur Mines Miners' Circ 57:1-70; pa 20c Supt. of doc. '46
Housekeeping is the key; Copper Queen mines. C. Spangler. il Nat Safety N 55: 22-3+ Je '47
It's meant to explode; technique of using explosives underground. H. B. Hicks. il Can Min J 68:734-6 O '47
Lake Superior mining section of the National safety council annual meeting, Duluth, June 19-20. Eng & Min J 148:103-4 Jl '47
Loading and lighting. H. B. Hicks. Can Min J 68:654-6 S '47
Reflectorized signs for mines. E. J. Eisenach. il Can Min J 68:727-9 O '47
Roof support at the working face. J. G. Creveling. Safety Eng 93:28 My '47; Same. Nat Safety N 55:104-5 Je '47
Safe storage, handling, and use of commercial explosives in metal mines, nonmetallic mines, and quarries. D. Harrington and J. H. East, jr. bibliog 14pls U S Bur Mines Information Circ 7380:1-30 '46
Safety and low costs are inseparable. J. K. Richardson. il Eng & Min J 148:82-4 Jl '47
Safety codes will work if responsibility is fixed. D. A. Pifer. Eng & Min J 148:83-4 Ag '47
Safety pays off at Eagle-Picher. H. B. Hutchens. il Min Cong J 33:22-5 Jl '47
Safety practice at Wright Hargreaves. M. Hastie. Can Min J 67:1046-8 N '46
Shaft sinking hazards. H. B. Hicks. Can Min J 68:29-33 Ja '47
Some safety practices for metal mines, nonmetal mines (other than coal), mills, metallurgical plants, and quarries. U S Bur Mines Information Circ 7387:1-56 '46
Unsolved problem of rock bursts. R. G. K. Morrison. il Eng & Min J 148:80-2 Ap '47
Watch out for monoxide; among poison gases, fumes of blasting hold distinguished place. H. B. Hicks. Can Min J 68:254-6 Ap '47

See also
Coal mines and mining—Safety measures
Electricity in mining—Safety measures
Mine hoisting—Safety measures
Mine rescue work

Study and teaching

Enrollment in mineral engineering schools at all-time high. W. B. Plank and F. W. Bloecher, jr. Min & Met 28:221-3 My '47
Greater use of films urged as teaching aid. G. B. Clark. Eng & Min J 148:94-5 Ag '47
Post-war mineral engineering curricula. J. D. Forrester. J Eng Educ 37:201-6 N '46

See also
Mining schools and education

MINING engineers
Engineers criticize mining industry personnel policies. E. Just. Eng & Min J 148:64-7 Ja '47
Practical training for mining graduates. K. W. Langford. Can Min J 68:252-3 Ap '47

See also
Mining engineering—Study and teaching
Mining schools and education

MINING industry and finance
Eagle-Picher; this lead and zinc house presents a case study in industrial transition. il Fortune 36:78-83+ S '47
Informed stockholders can aid mining. T. Lyon. Eng & Min J 148:77-8 Ja '47
Problems and procedure in acquiring foreign mining properties. C. W. Wright. Min & Met 28:144-7 Mr '47

See also
Mine valuation
Mineral industries
Mines and mineral resources

Securities

SEC and mining securities. E. M. Hanrahan. Comm & Fin Chr 165:871+ F 13 '47
What about non-ferrous metals now? with financial survey of principal mining companies. G. L. Merton. il Mag of Wall St 79:250-2+ D 7 '46

British Columbia

Report of the B.C. Minister of mines for 1946. Can Min J 68:754-5 O '47

Canada

Canadian mining industry today. A. Skelton. Ann Am Acad 253:66-73 S '47

Latin America

South America wants share in new enterprises. R. H. Ramsey. il Eng & Min J 148: 68-71 My '47

South America

Mauricio Hochschild. Fortune 36:84-7+ Jl '47

United States

Boom in durable goods to continue after correction; economic factors affecting mining industry. E. Just. Eng & Min J 148:67-9 F '47
Clouds over mining; labor difficulties, unjust taxation, lowered tariffs, diminishing reserves. L. S. Cates. Min & Met 27:579-82 D '46
Value of mineral products of the U.S. in 1945, by states; tabulation. Min & Met 28:112 F '47

MINING law

Mexico

Mexico exempts old titles as to assessment work. A. T. Benitez. Eng & Min J 148:79-80 My '47

Ohio

New Ohio strip mining law. Min Cong J 33: 67 O '47

Spain

Provisions relating to taxation and foreign ownership in Spanish mining law. For Comm W 25:33-4 D 21 '46

MINING machinery
Coeur d'Alene one-man jumbo. J. W. Feiss. il diags Min Cong J 33:48-50 O '47
Demand for mining machinery becomes worldwide in scope. W. L. Beck. il Dom Comm 35:26-34 Ag '47
Drifters sink Hecla shaft from pneumatic jumbo. J. B. Huttl. il diags Eng & Min J 148:96-7 Ap '47

MINING machinery—*Continued*
Experiment in mechanization at Cripple Creek, Colo. Portland mine. M. H. Salsbury. il diags Min Cong J 33:88-90 Ap '47
Mechanical mucking in inclines; with cost data. C. A. Fitch, jr. il Min Cong J 33: 29-31 Ja '47
Mechanical mucking in vertical shaft sinking. G. M. Grismer. diag Min Cong J 32:32-3 N '46
Mechanization for greater productivity; abstracts of papers, American mining congress, Western division. Min Cong J 32:69-71 O '46
Mechanization of operations in potash mining. G. T. Harley. il Min Cong J 32:24-8+ N '46
Retractible boom on jumbo supports drill column. il diags Eng & Min J 147:90 N '46
St Joseph lead enterprise; mining practice in southeast Missouri. E. A. Jones and others. il Min & Met 28:369-73 Ag '47
Study of mine scraper buckets and their efficiency. J. D. Forrester and A. B. Clayton. il diags Mo U Sch Mines & Met Bul tech ser v 17 no 2:1-48 bibliog(p45-6) Je '46
Survey of mining progress. A. H. Hubbell. Eng & Min J 148:92-8 F; 65-7+ Mr '47

See also
Coal mining machinery
Electricity in mining
Mine haulage
Rock drills

Lubrication

Crawler track lubrication. K. L. Hollister and E. V. Albert. il Eng & Min J 148:97-8 Ag '47

MINING methods
A.S.&R.'s modern operation at Santa Eulalia; chimney-manto orebodies. il diags Eng & Min J 147:77-8 D '46
Billingham anhydrite mine. flow sheet il Chem Age (Lond) 55:695-701 D 7 '46
Deep mining problems in the Kolar gold field. J. Spalding. il Eng & Min J 148:70-5 Ag '47
Developments in underground drilling and blasting practice; National tunnel & mines co., Tooele, Utah. W. T. Warren. diags Min Cong J 32:39-41 O '46
Experiment in mechanization at Cripple Creek, Colo. Portland mine. M. H. Salsbury. il diags Min Cong J 33:88-90 Ap '47
Fresnillo develops flexible underhand stoping method. F. C. Pickard. diags Eng & Min J 148:89-91 Ap '47
From quarry to mine in limestone; Greer limestone company. C. J. Burton. il diag Explosives Eng 24:173-5 N '46
Fusion piercing for making blast holes in ore. il Can Min J 67:1043-5 N '46; Abstracts. Blast F & Steel Pl 35:59 Ja '47; Mech Eng 69:158 F '47; Civil Eng 17:73 F '47
Georgia talc industry helped by geologic study. K. H. Teague. il Eng & Min J 147:63-5 N '46
Hard iron ore yields to fusion-piercing; rotating blowpipe burning oxygen and flux bearing fuel. A. W. Knoerr. il Eng & Min J 147:66-9 N '46
Langbeinite, mining and processing. G. T. Harley and G. E. Atwood. flow diags il Ind & Eng Chem 39:43-7 Ja '47
Mechanization for greater productivity; abstracts of papers, American mining congress, Western division. Min Cong J 32:69-71 O '46
Metal mining practice during 1946. C. W. Livingston. il diag Min Cong J 33:26-30 F '47
Mining practice; review of 1946. P. B. Bucky. il Min & Met 28:59-60 F '47
Mining research evolves clover-leaf burn cut. C. W. Livingston. diags Eng & Min J 148:73-7 Mr '47
Narrow vein problem solved by scraper-slot stoping; Idaho Maryland mines corporation, Grass Valley, Calif. R. Farmin. il diags Eng & Min J 148:74-6 Ja '47
New ways to apply scraper hoists to mining. R. Pierce. il plans Eng & Min J 148:60-3 My '47
Potash mining in Germany, 1945. J. H. East, jr. 10pls U S Bur Mines Information Circ 7405:1-15 '47
St Joseph lead enterprise; Compania minera Aguilar, S. A.; mining methods. F. F. Redfield and D. M. Wade. Min & Met 28:408-9 Ag '47
St Joseph lead enterprise; geology and exploration at the Edwards and Balmat mines, N.Y.; mining practice. J. S. Brown; M. G. Jones. il maps plans diags Min & Met 28: 387-94 Ag '47
St Joseph lead enterprise; mining practice in southeast Missouri. E. A. Jones and others. il Min & Met 28:369-73 Ag '47
Trench scraping replaces storage-pocket loading. G. T. Hollett. il diags Eng & Min J 148:92-3 Ap '47

See also
Blasting
Coal mines and mining—Methods
Mine management
Mining engineering
Quarries and quarrying
Shaft sinking

Stripping operations

Bagdad copper adopts open-pit-mining; with cost data. E. R. Dickie. Min & Met 28:9 Ja '47
Chino copper. L. A. Luther. il map Comp Air Mag 51:286-8 N '46
Survey of mining practice; open-pit mining. A. H. Hubbell. Eng & Min J 148:72-5 My '47
Truck haulage, Castle Dome open pit. B. R. Coil. il plan Min Cong J 33:50-4 Mr '47

See also Coal mines and mining—Stripping operations

MINING research
Diamond-drill-core storage at Mount Weather testing adit. J. E. Hill. 8pls U S Bur Mines Information Circ 7394:1-3 '47
Mining research evolves clover-leaf burn cut. C. W. Livingston. diags Eng & Min J 148:73-7 Mr '47
Research opportunities offered by U.S. colleges; many scholarships, assistantships, and fellowships in mineral technology available. S. P. Wimpfen. il Min & Met 28:504-7 O '47

MINING schools and education
Directory of mineral engineering schools in the United States and Canada. Min & Met 28:223-4 My '47
Enrollment in mineral engineering schools of United States and Canada at all-time high; curricula are: mining, metallurgy, petroleum and natural gas, ceramics, geology, and fuels. W. B. Plank and F. W. Bloecher, jr. J Eng Educ 37:765-70 Je '47; Same. Min & Met 28:221-3 My '47
History of the University of Missouri, School of mines and metallurgy, 1871-1946. C. N. Roberts. 120p Missouri school of mines and metallurgy, Rolla, Mo. '46
Mineral industries education; review of 1946. J. R. Cudworth. Min & Met 28:65-6 F '47
Mineral industry educational trends. D. H. McLaughlin. Min & Met 28:329-31 Jl '47
Post-war mineral engineering curricula. J. D. Forrester. J Eng Educ 37:201-6 N '46
Training; key to better coal mining. W. A. Stanbury, jr. il Coal Age 52:74-81 O '47

See also Missouri university—School of mines and metallurgy

MINING towns
Miners' homes: study in contrasts. il Bsns W p108 Ap 26 '47
Sunnydale, a model mining town. W. C. Walker. il Min Cong J 33:40-3 Je '47

MINNEAPOLIS-HONEYWELL regulator company
Preferred stock offered. Comm & Fin Chr 164:3146 D 16 '46

MINNEAPOLIS-MOLINE power implement company
Annual report. Comm & Fin Chr 165:213 Ja 13 '47

MINNESOTA
Minnesota, vacation land. il map J Eng Educ 37:585-92 Ap '47

See also
Iron mines and mining—Minnesota
Roads—Minnesota
Rock products industry—Minnesota

MINNESOTA mining and manufacturing company
Securities offered. Comm & Fin Chr 166:1790 N 3 '47

MINNESOTA university
Beautiful Minnesota awaits you. il J Eng Educ 37:283-9 D '46

Institute of technology
University of Minnesota's institute of technology. il J Eng Educ 37:743-50 Je '47

MINNOW pails
Four-part polyester impregnated glass mat bucket; molding of durable, lightweight, rustproof minnow bucket. il Mod Plastics 24:112-14 Ag '47

MINORITIES
Housing problems of minority groups in Los Angeles county. C. B. Spaulding. Ann Am Acad 248:220-5 N '46

MINORS. See Children—Law

MIOTINE
Investigations on the influence of chemical constitution upon toxicity; compounds related to miotine. R. E. Davies and others. Chem Soc J p 191-6 F '47

MIRRORS
German semi-transparent mirrors. Product Eng 18:111 Ag '47
Method of making colored mirrors; patent assigned to Libby-Owens-Ford. diag Glass Ind 28:32+ Ja '47
Partially reflecting mirrors of high efficiency and durability. M. Banning. Opt Soc Am J 37:688-9 S '47
Various uses for a new transparent mirror. Barron's 26:5 D 9 '46
See also
Reflectors

MIRRORS, Parabolic
Electrophoresis apparatus using parabolic mirrors. S. M. Swingle. bibliog diags R Sci Instr 18:128-32 F '47
Investigation of the figure of small concave metal-replica mirrors. J. N. Shive. Opt Soc Am J 37:849-51 O '47
Making Fresnel off-axis parabolic mirrors by the evaporation technique. L. G. Schulz. diags Opt Soc Am J 37:349-54 My '47

MIRRORS, Telescope. See Telescope—Mirrors

MISSISSIPPI
How to sell a state via New York office; New York city office of state of Mississippi. Sales Management 59:94 Jl 15 '47

Industries and resources
Mississippi moves forward. G. Wirth. il Manuf Rec 116:36-7+ Mr '47

MISSISSIPPI power and light company
Bonds offered. Comm & Fin Chr 165:3170 Je 16 '47

MISSISSIPPI power company
Bonds and preferred stock offered. Comm & Fin Chr 166:469 Ag 4 '47

MISSISSIPPI river
Chain of Rocks project improves navigation on Mississippi river. R. E. Smyser, jr. il map Civil Eng 17:302-4 Je '47
Development of concrete revetments on the lower Mississippi. R. H. Haas. il plan diags Concrete 55:3-8+ Ap; 16-18+ My '47

Flood control projects
Engineer services of the U.S. waterways experiment station with special reference to the Mississippi Basin model. C. T. Newton. il map Boston Soc C E J 34:1-17 Ja '47
Little Sioux basin serves as miniature Mississippi valley for control studies. M. Elliott. il Civil Eng 17:136-9 Mr '47
Mississippi River cutoffs. G. H. Matthes. il maps Am Soc C E Proc 73:3-17 Ja '47; Discussion. 73:404-10, 949-52, 1089-92 Mr, Je, S '47
New project for stabilizing and deepening lower Mississippi river. C. Senour. maps Am Soc C E Proc 72:145-58 F '46; Discussion. 72:1020-2, 1295-6; 73:221-3 S, N '46, F '47

Floods
Fighting the floods at St Louis. J. R. Carr. il map diag Eng N 139:264-7 Ag 21 '47
Mississippi flood crests reach 103-year record high. Eng N 139:19+ Jl 10 '47
Special levee system protects pump station. D. Jones. il Oil & Gas J 46:219+ S 20 '47

MISSOURI
See also
Labor laws and legislation—Missouri
Roads—Missouri
Textile industry—Missouri

Industries and resources
Manufacturing in the hub state of the Nation. il Manuf Rec 116:92-9 Ja '47

MISSOURI Edison company
Stock offered. Comm & Fin Chr 166:306 Jl 21 '47

MISSOURI-Kansas-Texas railroad
Equipment trusts offered. Comm & Fin Chr 165:940, 1195 F 17, Mr 3 '47
Notes authorized. Comm & Fin Chr 165:76 Ja 6 '47

MISSOURI Pacific railroad
Equipment trusts offered. Comm & Fin Chr 165:2801 My 26 '47
I.C.C. asks return of M.P. revamp plan. Ry Age 123:407 S 6 '47
Missouri Pacific holders offered new Young plan. A. Jansen. Barron's 27:8-9 S 1 '47; Correction. 27:35 S 8 '47
Plan upheld by court. Comm & Fin Chr 165:812 F 10 '47

MISSOURI river
Development of the Missouri basin. B. H. Greene. map Elec Eng 66:140-5 F '47

MISSOURI university
School of mines and metallurgy
History of the University of Missouri, School of mines and metallurgy, 1871-1946. C. N. Roberts. 120p Missouri school of mines and metallurgy, Rolla, Mo. '46
Proceedings of seventy-fifth anniversary celebration of School of mines and metallurgy, University of Missouri. J. J. Jelinek, comp. Mo U Sch of Mines & Met general ser v 38 no 4:1-67 '46

MISSOURI utilities company
Stock offering. Comm & Fin Chr 165:2280 Ap 28 '47

MISSOURI Valley authority (proposed)
Grass-root sentiment does not favor an MVA. C. Gurney. Pub Util 40:547-55 O 23 '47

MISTS, Oil
Design of exhaust systems; removal of oil mists. F. H. Stebbins. plan diags Sheet Metal Worker 38:47-9 F '47
Oil mist can be eliminated; Precipitron electrostatic air cleaner. W. F. Herst and H. B. Heyl. il diag Am Mach 91:93 Ag 14 '47

MITCHELL, Don G.
Portrait. Fortune 35:115 My '47

MITCHELLS and Butlers, limited
Statement by the chairman at annual general meeting. R. H. Butler. Economist 151:926 D 7 '46

MITES
Recovery of western equine encephalomyelitis virus from wild bird mites (liponyssus sylviarum) in Kern county, California. W. C. Reeves and others. bibliog Science 105:411-12 Ap 18 '47
Rickettsialpox; a newly recognized rickettsial disease. R. J. Huebner and others. Pub Health Rep 61:1677-82 N 22 '46
See also
Chiggers

MITOSIS. See Cell division (biology)

MIXERS
Continuous-mixing process for manufacture of concentrated superphosphate. G. L. Bridger, R. A. Wilson and R. B. Burt. bibliog flow sheet il diag Ind & Eng Chem 39:1265-72 O '47
Mixing; new equipment. E. J. Lyons. il Chem Ind 61:419 S '47
Power absorption in mixers. R. B. Olney and G. J. Carlson. bibliog il diag Chem Eng Prog 43:473-80 S '47

MIXERS—*Continued*
Truck mounted mortar mixer speeds-up foundation work. il diag Brick & Clay Rec 111: 33 Ag '47

See also
Agitators
Asphalt mixers
Banbury mixers
Concrete mixers

MIXES, Cake. See Cake mixes

MIXING
Entropy of mixing of binary liquid mixtures. S. E. Wood. bibliog J Chem Phys 15:358-63 Je '47
Mixing. J. H. Rushton. bibliog Ind & Eng Chem 39:30+ Ja '47
Mixing of solid particles. P. M. C. Lacey. diags Inst Chem Eng Trans 21:53-9 '43
Three component mixing computed graphically. M. T. Howerton. Chem Eng 54:139-40 F '47

MIXTURES
Calculation method for complex mixtures. W. D. Harbert. bibliog Ind & Eng Chem 39:1118-24 S '47
Compressibilities of gas mixtures. J. Joffe. bibliog Ind & Eng Chem 39:837-8 Jl '47
Correlation of vapor-liquid equilibria data for nonideal ternary systems. E. G. Scheibel and D. Friedland. bibliog Ind & Eng Chem 39:1329-34 O '47
Measurements of ultrasonic absorption and velocity of liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47
Peculiar ultrasonic effect on a binary mixture of liquids. P. J. Ernst. bibliog il Acoustical Soc Am J 19:372 Mr '47
Rectangular coordinates for three variables; to plot data for three-component system. A. S. Smith. diag Chem Eng 54:123 Mr '47; Discussion and reply. 54:196+ Jl '47
Séparation par distillation d'un mélange de deux corps en présence d'un entraîneur. J. P. Zwilling. diag Chimie & Ind 57:336-40 Ap '47
Statistical mechanics of binary mixtures. A. R. Miller. bibliog J Chem Phys 15:513-17 Jl '47

See also
Hydrocarbons—Separation processes
Inflammable mixtures
Liquids
Solution (chemistry)

MIXTURES, Azeotropic. See Azeotropes

MIXTURES, Inflammable. See Inflammable mixtures

MOBILCORE. See Houses—Mechanical equipment

MOBILE, Alabama
Docks and terminals form striking embodiment of belief in world trade's unprecedented opportunities. il(cover) For Comm W 27:19 My 17 '47

MOBILIZATION, Industrial. See Industrial mobilization

MODEL houses. See Houses, Model

MODELS
Cardboard mock-ups. M. P. Matthew. il Product Eng 18:120-2 Ja '47
Low-cost models for plant layout. L. J. Bell. il Am Mach 91:114-16 F 13 '47
Miniature auto plant aids engineers in analyzing production layouts; Lincoln division of Ford motor co. il Steel 120:89+ F 17 '47
Miniature models aid mapping of salt-dome areas. il Oil & Gas J 45:85 N 9 '46
Miniatures in motordom; model automotive plant layout, Dodge truck division of Chrysler corp. il Steel 120:104 Ap 21 '47
New plant laid out faster and surer with model. J. H. Gillies. plans Factory Management 104:156-7 O '46
Photographs of scale model layout simplify plant changes; Victor adding machine co. R. F. Bartlett. il Factory Management 104:142-4 N '46
Plant model insures success in layout changes. W. F. Pioch. il Factory Management 105:130-2 Jl '47
Scale model helps plan multi-story handling. il diag Factory Management 105:74-5 Je '47
Scale-model planning gets five big cost-saving results; Nineteen hundred corp. E. Gray. il Factory Management 105:108-9 O '47
Three-dimensional model shows the shape of things to come; planning factory layouts. H. G. Jarman. il Mech Handling 33:685-7 N '46
Three-dimensional models cut office layout costs. il Am Bsns 16:32 N '46
Visual layout previews production; Ford Highland Park plant. H. S. Wharen. il plans diags Am Mach 91:113-16 Ag 14 '47
Visual production planning; employing three dimensional models of machines, benches and other equipment; Maytag co. il Iron Age 159:57 My 15 '47
Why three-dimensional layout. il Factory Management 104:93 D '46

See also
Airplane models
Architectural models
Bridges—Model testing
Hydraulic models
Piping—Models
Railroads—Models
Wind tunnels—Models

MODELS, Architectural. See Architectural models

MODELS, Plastic
Plastic models promote product and services. il Mod Plastics 24:116-18 My '47
Transparent plastic puts lathe on view. il Mod Plastics 25:135-7 O '47

MODULAR design. See Building—Standards

MOHAIR
Some measurements of the friction of wool and mohair. A. J. P. Martin and R. Mittelmann. bibliog diags Textile Inst J 37:T269-80 D '46

MOHAWK carpet mills, inc.
Big five in floor coverings. R. Colston. Mag of Wall St 81:33+ O 11 '47

MOIRÉ
Moiré finishing of today's fabrics. H. A. Holterhoff. il Am Dyestuff Rep 36:150-2 Mr 24 '47

MOISTURE
Aquatector measuring moisture content. il Electrician 137:1073 O 18 '46
Determination of the moisture content of cereals by measurement of specific inductive capacity. L. G. Groves and J. King. bibliog diags Soc Chem Ind J 65:320-4 O '46
Electrical moisture meter. L. G. Toplis. il diag Elec R (Lond) 141:523-5 O 3 '47
Estimation of moisture in solventless double-base powders; desiccation, cone-and-dish, carbon tetrachloride distillation, and Karl Fischer procedures. J. Hardy, W. D. Bonner, jr. and R. M. Noyes. bibliog Ind & Eng Chem Anal ed 18:751-3 D '46
Infra-red direct reading moisture tester. R. B. Brock. il Chem & Ind p299-302 My 31 '47
Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65: Trans 791-7 D '46

See also
Clay—Moisture content
Coal—Moisture content
Dampness in buildings
Evaporation
Humidity
Hygrometers
Paper—Moisture content
Soil moisture
Textile fibers—Moisture content
Wool—Moisture content

MOLASSES
Blackstrap molasses 1947 quotas. Oil Paint & Drug Rep 151:69 Ap 7 '47
Changing industrial alcohol picture; cost of production of alcohol from molasses, grain, petroleum, wood. R. S. Aries. Chem & Eng N 25:1792-3 Je 23 '47
Citric acid fermentation of beet molasses; abstract. P. Gerhardt and others. Food Ind 19:1296+ S '47
Colored labels do a double job; Colonial molasses co. il Ptr Ink 218:72+ Mr 14 '47
Container breakage reduced by infrared; lamps preheat jars before being filled with hot molasses. J. R. Heilman. il Food Ind 19: 193 F '47
Mexico's molasses trade. For Comm W 27:27 My 17 '47
New Lake cargo. Bsns W p32+ Ja 4 '47

MOLASSES—*Continued*
Production of 2 : 3-butylene glycol by fermentation of molasses. G. G. Freeman and R. I. Morrison. bibliog Soc Chem Ind J 66: 216-21 Jl '47
Production of citric acid in submerged culture. E. O. Karow and S. A. Waksman. bibliog Ind & Eng Chem 39:821-5 Jl '47
Protein from molasses developed in Jamaica. Food Ind 19:80+ Ja '47
Recovery of sucrose from cane blackstrap and beet molasses. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 69: 664-5 Mr '47

Tables, calculations, etc.
Weights per United States gallon and weights per cubic foot of sugar solutions. C. F. Snyder and L. D. Hammond, comps. U S Nat Bur Stand Circ C457:1-28; pa 10c Supt. of doc. '46

MOLDED products
Acrylic numbers. il Mod Plastics 24:214 My '47
All-plastic boat; molded of fiberglas and a low pressure thermosetting resin. il Mod Plastics 25:166 S '47
Cellulose acetate microphones look and sound well. il Mod Plastics 24:132-3 Ja '47
Cellulose propionate in the field; Forticel. J. J. Keville, jr. il Mod Plastics 24:127-30 Ja '47
Economics of low pressure plastics. il Mod Plastics 24:95-104 Ap '47
General properties and uses for molded plastics materials; data sheets. Mach 54:263 S; 231 O '47
How big can molded pieces be? il Mod Plastics 25:101-6 O '47
Laminates for outdoor displays; polyester resin impregnated glass mat and cloth used in molding tire display figures and stands. il diag Mod Plastics 24:100-1 Mr '47
Melamine soda fountain jars are useful and sanitary. il Mod Plastics 24:96-8 Jl '47
Molded golf club heads. il Mod Plastics 24: 101 Jl '47
Molded housing for electric manicurer. il Mod Plastics 24:109 D '46
Molded nylon faucet washers; injection molded in eight diameters. il Mod Plastics 24: 105 Je '47
Molding and marketing three lines of styrene bathroom fixtures. il Mod Plastics 24:126-8 My '47
Molding phenolic parts of target gun. il Mod Plastics 24:131-4 Ag '47
Nested dolls are now molded. il Mod Plastics 25:132-3 O '47
Phenolic massager. il Mod Plastics 24:146-7 Jl '47
Phenolics are being molded into card table tops. il Mod Plastics 24:120-1 Je '47
Plastic molding; utilization of wood waste. R. A. Caughey. Mech Eng 69:36 Ja '47
Plastic pencil case; molding company, launching a series of consumer products, applies engineering know-how to polystyrene box-making. il Mod Packaging 20: 144 Je '47
Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46
Problems in promoting proprietary items; market analysis, sales methods, functional design, economical molding combine to sell small, variously priced items. il Mod Plastics 24:124-5 D '46
Silverware chest molded of urea for beauty, utility. il Mod Plastics 24:96-8 F '47
SPI sponsors low-pressure conference; Jan. 23-24. Chem & Eng N 25:367 F 10 '47
Thermoplastic rubber. R. B. Stanton. il Mod Plastics 24:126-7 Ap '47
Trends in molded plastic housings; light weight, permanent finish, molded-in color. il Mod Plastics 24:126-9 Mr '47
Two-color thermosetting moldings. il Mod Plastics 25:148 O '47
Urea and melamine resin products; properties and applications. M. H. Bigelow and J. A. Murray. il diags Product Eng 18:140-5 Ag '47
Vinyl sheet formed into dispenser-display unit; Pepsi-Cola glass replica. il Mod Plastics 24:102-3 Ag '47
See also
Molds (for plastics)
Resinous products

Manufacture
Backrinding of molded products. E. L. Stangor. il diags Rubber Age 60:439-42 Ja '47
Bring down those costs and prices. Mod Plastics 24:98-9 My '47
Brush with 55 molded acrylic parts; Bennart hairbrush. il Mod Plastics 24:134-5 Ja '47
Developments at Ford's plastics plant. il Automotive & Aviation Ind 96:18-21+ Ja 15 '47
From music to plastics; saxophone and clarinet parts, other products made by Arnold Brilhart, ltd. A. S. Park. il Comp Air Mag 52:167-73 Jl '47
Heat control, metering molds permit long polystyrene parts; trim for Kelvinator refrigerators. W. F. Poupard. il diags Am Mach 91:117-20 Ag 14 '47
Plastics engineering in 1946. il Mod Plastics 24:144-6 Ja '47
Plastics in electrical industry; Tyseley works of Bakelite, ltd. T. J. Fielding. il Electrician 137:1196-9 N 1 '46
Ridge-formed sheet eliminates polishing. W. W. Farr and R. Tomlinson. il Am Mach 91. 118-19 Je 19 '47
Setting up a molding plant production schedule. D. A. Dearle. Mod Plastics 24:150-2 F '47
Vacuum plate method for casting in porous molds and patterns. L. Wilson. diag Materials & Methods 24:1505-6 D '46
See also
Molding
Molding machines (for plastics)

Standards
Molded plastics standards. J. Delmonte. il Machine Design 19:151-4 Ag '47

Testing
Plastics in electrical industry. T. J. Fielding. il diag Electrician 137:1281-5 N 8 '46
Quantitative tests on finished mouldings; abstract and discussion. W. D. Owen. Electrician 138:707 Mr 21 '47

MOLDED products, Mechanical
Atom smasher uses low pressure laminate; synchrotron 10 plastic parts. il Mod Plastics 24:91 Jl '47
Better tools from molded laminates; glass fabric impregnated with unsaturated polyester resins and addition-type polymers. L. Wittman. il Mod Plastics 24:132-7 Je '47
Comparing plastics with respect to their mechanical properties and those of metals. C. E. Staff and others. bibliog il Machine Design 19:112-16 Jl '47
Four phenolic parts in observer; good dielectric and weathering properties; Observoscope. il Mod Plastics 24:139 My '47
Molded and machined nylon. L. L. Stott. il diag Product Eng 17:103-7 D '46; Excerpts. Mech Eng 69:323-4 Ap '47
Nylon as an engineering material. E. L. Cady. il Materials & Methods 26:80-4 S '47
Phenolic adapter rings solve motor bearing problem. il Mod Plastics 24:84-5 Jl '47
Plastics improve textile machinery. il diags Mod Plastics 24:73-9 Jl '47
Three plastics make new compass possible. il Mod Plastics 25:113-15 S '47
See also
Bearings, Non-metallic

MOLDERS. See Foundries—Employees

MOLDING
Compound forming of acrylic sheets; abstract. W. W. Farr and O. L. Pierson. Mod Plastics 24:95 Je '47
Cost analysis of dielectric preheating. T. N. Willcox. Mod Plastics 24:131-5 Mr '47
Dielectric preheating in the plastics industry. G. F. Leland and others. Elec World 126: 126+ D 7 '46

MOLDING—*Continued*
Economics of low pressure plastics. il Mod Plastics 24:95-104 Ap '47
Four-part polyester impregnated glass mat bucket; molding of durable, lightweight, rustproof minnow bucket. il Mod Plastics 24:112-14 Ag '47
General techniques of molding and finishing low-pressure molding products; abstract. A. W. Wiles. Mod Plastics 24:123 Mr '47
German thermosetting resins; extrusion molding. il diags Mod Plastics 24:153-5+ My '47
Injection molding of large parts. E. F. Bachner, jr. India Rubber World 116:656 Ag '47; Same cond. Mod Plastics 24:100 Je '47
Materials supplies for compression molding; abstract. F. H. Carman. Mod Plastics 24:94 Je '47
Mechanical precision in molded plastics parts. S. K. Moxness. il India Rubber World 115:677-8 F '47; Same. Mech Eng 69:479-81 Je '47
Molding hollow thermosetting products. G. W. DeBell. il Mod Plastics 24:143 Ap '47
Molding replaces forming to produce plastic cup used as individual ice cube former. H. C. Haaxma. il Materials & Methods 26: 71-3 Ag '47
Preheating plastics with live steam. S. K. Moxness and J. Formo. il diags Mod Plastics 24:141-7 F '47
Processing polyvinylidene chloride. il Mod Plastics 25:97-101 S '47
Recent developments; low pressure molding and laminating. il Product Eng 18:[138-9] insert 26-7 Ap '47
Ridge forming acrylic sheet. W. W. Farr and R. Tomlinson. il Mod Plastics 24:114-16 Jl '47; Same. Aero Digest 55:76+ O '47
Stripping threaded molded closures; oil can closures. il Mod Plastics 24:228-32 Ap '47
Transfer moulding. M. Freund. il diags Inst Mech Eng J & Proc 156:Proc 43-8 Je '47; Same. Engineering 162:237-9 S 6 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 49-55 Je '47
Value of controls in molding; harmonica manufacture. C. W. Bowden, jr. and H. F. Hoyler. il Mod Plastics 24:194-6 My '47
Venturi fabricated faster by transfer molding. diags Am Mach 91:87 Jl 31 '47
Vinyl elastomers for extrusion and molding. G. W. Jargstorff. il India Rubber World 116:797-8 S '47

See also
Extrusion process
Nylon—Molding

MOLDING (metal). See Foundry practice

MOLDING machines
Fundamentals of molding machines. E. A. Blake. il Foundry 75:78-83 S '47
Rubber mountings minimize impact from jolt molding machines. H. J. Knell. il diags Iron Age 159:54-6 F 20 '47

MOLDING machines (for glass)
Lens molding machine patent assigned to Eastman Kodak company. diag Glass Ind 27:612 D '46

MOLDING machines (for plastics)
Automatic molding of thermosetting plastics; Hy-Jector machine. il diags Mach 53:206-7 Je '47
Bar controller regulates automatic press molding cycle. il Product Eng 17:96-7 D '46
Fellows-Leominster injection molding machine. il diags Mach 53:175-6 Ag '47; Am Mach 91:152 Ag 14 '47
Giddings & Lewis vertical plastics injection molding press. il Mach 53:190-1 My '47; Mod Plastics 24:218+ My '47
Hand-operated injection machine, the Minijector. il Mod Plastics 24:117 Jl '47
Hydraulic machinery plastic molder has electronic temperature control. il diag Am Mach 90:166 D 19 '46
Hydraulic plastic injection molding machine. il Mach 53:197 Ap '47; Am Mach 91:141 Ap 24 '47
Oil purifying systems for molding plants. J. B. Biggers. il diags Mod Plastics 24:186+ Je '47
One machine with 4 molding functions; Rockford machine tool co. il diags Mod Plastics 24:135-8 My '47
Plastics injection molder. il diags Machine Design 19:154 Je '47
Rockford Hy-Jector molding machine preforms, preheats, molds plastics. il Am Mach 91:156 Jl 3 '47
34th annual review number; forming, casting, molding. il Am Mach 91:172-3 Ja 16 '47
Tip molding machine. F. Moss. il Mod Plastics 24:148 D '46
Transfer moulding. M. Freund. il diags Inst Mech Eng J & Proc 156:Proc 43-8 Je '47; Same. Engineering 162:237-9 S 6 '46; Discussion. Inst Mech Eng J & Proc 156:Proc 49-55 Je '47

MOLDING machines (for rubber)
Injection feed in use on a rubber injection molding machine. il diag Machine Design 19:107-8 S '47
Injection molding machine. R. E. Davis. il diag Mech Eng 69:861-2 O '47

MOLDING plants
Setting up a molding plant production schedule. D. A. Dearle. Mod Plastics 24:150-2 F '47

Costs
Cost analysis of dielectric preheating. T. N. Willcox. Mod Plastics 24:131-5 Mr '47

MOLDING sand. See Sand, Foundry

MOLDINGS (architecture)
Better detail plate; interior mouldings and their application. R. J. Alexander. diags Am Bld 68:106-7 N '46

MOLDS (botany)
Factors affecting the development of mould on cotton fabrics and related materials. W. I. Illman and M. W. Weatherburn. bibliog il Am Dyestuff Rep 36:343-4+ Je 30 '47
Mold control. C. G. Lavers. bibliog Mod Packaging 20:185-7+ Mr '47
Penicillin types produced by P. chrysogenum Q-176. W. A. Winsten and A. H. Spark. il Science 106:192-3 Ag 29 '47
Studies on biological methylation; the fission of the mono- and di-sulphide links by moulds. F. Challenger and P. T. Charlton. Chem Soc J p424-9 Mr '47
Ultraviolet lamps to control fungi. R. Nagy. il Food Ind 19:928-9 Jl '47
Utility of sulfa drugs for the inhibition of mold respiration in grain. M. Milner. Science 104:463-4 N 15 '46

See also
Aspergillus
Fungi
Mildew
Penicillium

MOLDS (for casting)
Centrifugal casting of copper-alloy wheels in sand moulds. O. R. J. Lee and L. Northcott. il Engineering 163:556-9 Je 27 '47
Conditions affect choice of molding method. P. Dwyer. diags Foundry 75:82-3+ Ag '47
Effect of mold material on gas absorption by 85-5-5-5 alloy. L. W. Eastwood and J. G. Kura. Foundry 75:86-91+ O '47
How much venting power must green sand molds possess? E. C. Troy. il diags Foundry 74:82-5+ D '46
Matchplates provide both core and mold. diags Foundry 74:162 D '46
Mould and core paints and washes, and parting powders. W. J. Rees. Iron & Steel Inst J 152:57-60 no 2 '45; Same. Engineering 160:27-8 Jl 13 '45; Abstract. Iron Age 156:53 O 18 '45
New lifting device simplifies mold weight handling. W. K. Mitchell. il Foundry 75: 146+ Mr '47
New molding technique improves cast crankshaft at Ford Rouge plant. il Automotive & Aviation Ind 96:33 My 15 '47
Pours engine castings in dry sand molds; Chicago pneumatic tool co. P. Dwyer. il plan Foundry 75:90-3+ My; 88-91+ Je '47
Should molds be vented? J. R. Adams. il Foundry 75:86-7+ Je '47
Tilting mold eliminates casting defect. diags Iron Age 159:67 My 8 '47
Why metal penetrates cores and molds. D. M. Bachelor. il Foundry 75:80-1+ Je '47

See also
Cores
Sand, Foundry
Steel ingots—Molds

MOLDS (for casting)—*Continued*

Permanent molds

Aluminum hand truck cast in permanent mold. H. R. Noyes. il Iron Age 159:72-3 Mr 6 '47

Casting magnesium in metal molds. H. Chase. il Iron Age 160:73-6 S 25 '47

Permanent mold casting of aluminum. E. Bremer. il Foundry 75:86-9+ N '47

Permanent mold material. O. Smalley. il Steel 120:108+ F 3 '47

Refractory coatings for permanent molds. H. E. Bourassa. il Iron Age 159:58-9 F 6 '47

Solid and slush type zinc alloy permanent mold castings. H. Chase. il Iron Age 159: 58-63 My 29 '47

Plaster molds

Precision casting methods; abstract. G. Vennerholm. Foundry 75:114 F '47

Preservative coating that developed from cast fixtures; Plastiform, combination thermoplastic resin and ceramic material applied with brush to die portions of plaster casts. il Mod Plastics 24:112-13 Ap '47

Pressure casting matchplates. E. Bremer. il diags Foundry 75:124-6+ Ap '47

Rock-like plastic preserves valuable aircraft molds; material made by Calresin corp. il Aviation 46:60-1 My '47

Vacuum plate method for casting in porous molds and patterns. L. Wilson. diag Materials & Methods 24:1505-6 D '46

MOLDS (for glass)

Increased mold life may result from newly developed cleaning process; Ajax-Hultgren salt bath furnace. il Glass Ind 28:357+ Jl '47

Turning-out device for press molds; patent diags Glass Ind 28:184 Ap '47

MOLDS (for plastics)

Cosmetic gloves from electroformed molds; gloves for use over artificial hands. C. L. Milton, jr. and others. il Metal Finishing 45:61-2+ Ag '47

Ejection method depends on molded part. R. Kling. diags Am Mach 91:104-5 My 8 '47

Four outlets for fast curing phenolics. L. R. Miller. il Mod Plastics 25:118-20 S '47

How to cut costs of plastic molds; casting stainless-steel cavities, forces and inserts; pattern-making methods. H. L. Flynn. diags Am Mach 91:93-100 Mr 27 '47

How to select and treat mold steels. R. J. Hoensheid. il Am Mach 90:130-2 D 19 '46

Plastic mold cavities made of powdered metal; abstract. E. R. Walter. Materials & Methods 26:125 Jl '47

Plastics mold release. E. E. Ziegler. India Rubber World 114:826-9 S '46; Abstract. Mech Eng 69:160 F '47

Plastics stock molds. Published in monthly numbers of Modern plastics

Pointers for plastic-mold makers; reference book sheet. diags Am Mach 91:157, 159 Ap 10; 135, 137 Ap 24 '47

Refrigerator door tool design simplified; mold drawings simplified. G. M. Bleakley. diags Am Mach 91:88 Jl 31 '47

Sintered metal cavities. il diags Mod Plastics 24:144-5 Mr '47

Steel for plastic molds; abstract. E. T. Gill and G. N. Gee. Materials & Methods 26: 122-3 S '47

Stripping threaded molded closures; oil can closures. il Mod Plastics 24:228-32 Ap '47

Thermoplastic rubber. R. B. Stanton. il Mod Plastics 24:126-7 Ap '47

MOLDS (for rubber)

Backrinding of molded products. E. L. Stangor. il diags Rubber Age 60:439-42 Ja '47

Campbell collapsible V-belt curing mold. il Rubber Age 61:229 My '47

Hydromite, a new cement-resin combination for casting. Rubber Age 60:320 D '46

New mold cleaning method offered to rubber manufacturers. il Rubber Age 61:587 Ag '47

MOLECULAR association

Association of polymer molecules in dilute solution. P. Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51:32-57 Ja '47

Effect of molecular association and charge distribution on the gelation of pectin. R. Speiser, M. J. Copley and G. C. Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47

Molecular association in hydrogen fluoride vapor. H. A. Benesi and C. P. Smyth. bibliog J Chem Phys 15:337 My '47

Sound velocity and the temperature change of molecular association in water. A. Weissler. bibliog J Chem Phys 15:210-11 Ap '47

See also

Molecules—Clusters

MOLECULAR beams

Electric resonance method of radiofrequency spectroscopy; moment of inertia and electric dipole moment of CsF. H. K. Hughes. bibliog diag Phys R 72:614-23 O 1 '47

Free fall of atoms and the measurement of the velocity distribution in a molecular beam of cesium atoms. I. Estermann and others. diags Phys R 71:238-49 F 15 '47

Second-order magnetic perturbations in nuclear quadrupole spectra and the pseudo-quadrupole effect in diatomic molecules. H. M. Foley. bibliog Phys R 72:504-5 S 15 '47

MOLECULAR compounds

Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47

MOLECULAR distillation. See Distillation

MOLECULAR dynamics

Dynamics of a square lattice. E. W. Montroll. J Chem Phys 15:575-91 Ag '47

Intermolecular forces and energies of vaporization of liquids. S. W. Benson. bibliog J Chem Phys 15:367-73 Je '47

MOLECULAR rearrangements

Activation energies and entropies of activation in the rearrangement of allyl groups in three carbon systems. E. G. Foster, A. C. Cope and F. Daniels. Am Chem Soc J 69: 1893-6 Ag '47

Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47

Allylidene halides; structure and reactivity of cinnamal chloride. L. J. Andrews and S. L. Linden. bibliog Am Chem Soc J 69: 2091-4 S '47

Evidence of rearrangement of polymethylol compounds related to neopentane. R. W. Brown and G. Dougherty. Am Chem Soc J 69:2232-3 S '47

Hydrogen-halogen exchange reactions of triethylsilane; new rearrangement of neopentyl chloride. F. C. Whitmore, E. W. Pietrusza and L. H. Sommer. bibliog Am Chem Soc J 69:2108-10 S '47

Intramolecular rearrangement of chloromethyltrimethylsilane. F. C. Whitmore, L. H. Sommer and J. Gold. bibliog Am Chem Soc J 69:1976-7 Ag '47

Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47

Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46

Mechanism of the Beckmann rearrangement. J. Weiss. bibliog Chem & Ind p119 F 22-Mr 8 '47

Molecular rearrangement and displacement of arylamine residues in α-arylamino-ketones. R. M. Cowper and T. S. Stevens. Chem Soc J p 1041-5 Ag '47

Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47

Rearrangement in preparation of ester acid chlorides. J. Cason. Am Chem Soc J 69: 1548 Je '47

MOLECULAR rearrangements—*Continued*
Rearrangement in the reaction between benzylmagnesium chloride and ethyl sulfate. J. G. Burtle and R. L. Shriner. Am Chem Soc J 69:2059-60 Ag '47
Rearrangement of 2-benzenesulphenamidothiazoles. E. Hoggarth. Chem Soc J p 110-18 Ja '47
Rearrangement of *l*-phenacyl-α-phenylethyldimethylammonium bromide. A. Campbell, A. H. J. Houston and J. Kenyon. Chem Soc J p93-5 Ja '47
Rearrangement of 1,1,1,2-tetrachloro-2,2-bis-(*p*-chlorophenyl)-ethane, chloro-DDT, to 1,1,2,2-tetrachloro-1,2-bis-(*p*-chlorophenyl)-ethane. W. L. Walton. bibliog Am Chem Soc J 69:1544-5 Je '47
Rearrangement of the isomeric 1,2-dimethylaminochloropropanes; the synthesis of amidone. W. R. Brode and M. W. Hill. Am Chem Soc J 69:724 Mr '47
Rearrangements between primary ethanolamides of carboxylic acids and the corresponding aminoethylesters. A. P. Phillips and R. Baltzly. bibliog Am Chem Soc J 69:200-4 F '47
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Researches on acetylenic compounds; reactions of 2-chlorohex-3-en-5-yne and related compounds with ammonia and amines; reversed anionotropic rearrangements accompanying replacement. E. R. H. Jones, R. N. Lacey and P. Smith. Chem Soc J p940-4 O '46
Solvent effect in the Curtius rearrangement of benzazide. M. S. Newman, S. H. Lee, jr, and A. B. Garrett. bibliog Am Chem Soc J 69:113-16 Ja '47
Vapor phase rearrangement of pinacols. W. S. Emerson. bibliog Am Chem Soc J 69: 1212 My '47

MOLECULAR refraction. See Refraction, Molecular

MOLECULAR volume
Relation of yttrium to the lanthanons; a study of molecular volumes. J. K. Marsh. Chem Soc J p 1084-6 Ag '47

MOLECULAR weights
Approximate solution of the differential equation of the ultracentrifuge. W. J. Archibald. bibliog J Ap Phys 18:362-7 Ap '47
Average molecular weights of high polymers. S. R. Palit. J Chem Educ 24:199-200 Ap '47
Calculated theoretical increase in propane absorption by lowering lean oil molecular weight. R. M. Stewart and A. M. Hegwer. il Pet Refiner 26:104-6 Jl '47
Chemistry of sodium phosphates. O. T. Quimby. bibliog(140 ref) Chem R 40:141-79 F '47
Complete apparatus for determination of osmotic molecular weights. G. D. Sands and B. L. Johnson. bibliog il diag Anal Chem 19:261-4 Ap '47
Cyclo-diphenylsiloxanes. J. F. Hyde and others. bibliog il Am Chem Soc J 69:488-92 Mr '47
Demonstration of some new methods of determining molecular weights from the data of ultracentrifuge. W. J. Archibald. J Phys & Colloid Chem 51:1204-14 S '47
Determination of molecular weight by light scattering. W. H. Markwood, jr. Franklin Inst J 244:92-4 Jl '47
Determination of polymeric molecular weights by light scattering in solvent-precipitant systems. R. H. Ewart and others. J Chem Phys 14:687-95 N '46
Determination of the molecular weight of nylon. J. E. Waltz and G. B. Taylor. bibliog Anal Chem 19:448-50 Jl '47
Diffusion study of lignin sulfonic acids in sulfite waste liquor. D. Pennington and D. M. Ritter. bibliog Am Chem Soc J 69: 665-8 Mr '47
Distribution of the molecular weight of nylon as determined by fractionation in a phenol-water system. G. B. Taylor. bibliog Am Chem Soc J 69:638-44 Mr '47
Effect of molecular weight distribution on the reduced viscosity-concentration coefficient. W. E. Davis. bibliog Am Chem Soc J 69:1453-7 Je '47
Improved apparatus for determining vapor-liquid equilibrium. J. W. Rogers and others. diags J Chem Educ 24:491-3 O '47
Improved method for the interpretation of experimental data obtained in molecular weight determinations of petroleum fractions. J. G. Reynolds. bibliog Inst Pet J 33: 491-502 Ag '47
Longitudinal dispersion of infrared rays in optically empty and turbid media, and molecular weights of substances. W. W. Lepeschkin. bibliog J Phys & Colloid Chem 51: 875-84 My '47
Microdetermination of molecular weight by a vapor pressure comparison method. L. K. Nash. bibliog diags Anal Chem 19:799-802 O '47
Modification of the Hallett microadaptation of the Menzies and Wright method of determining molecular weight. D. Ketchum. diags Anal Chem 19:504-5 Jl '47
Molecular properties of hemicellulose fractions. M. A. Millett and A. J. Stamm. bibliog J Phys & Colloid Chem 51:134-48 Ja '47
Molecular properties of nitrocellulose; studies of molecular heterogeneity. R. H. Blaker, R. M. Badger and R. M. Noyes. bibliog J Phys & Colloid Chem 51:574-9 Mr '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47
Molecular-weight determination by light scattering. P. Debye. bibliog J Phys & Colloid Chem 51:18-32 Ja '47
Molecular weight determination with a vacuum micromanometer. W. S. Young and R. C. Taylor. bibliog diag Anal Chem 19: 135-7 F '47
Molecular weight of GR-S fractions; simple glass osmometer for use in hydrocarbon solvents. D. M. French and R. H. Ewart. bibliog diag Anal Chem 19:165-7 Mr '47
New optical method for observing sedimentation equilibrium. G. Kegeles. bibliog diags Am Chem Soc J 69:1302-5 Je '47
Properties of polymers as functions of conversion; molecular weights of bottle polymerized GR-S. F. T. Wall and L. F. Beste. bibliog Am Chem Soc J 69:1761-4 Jl '47
Radial density variation of gases and vapors in a centrifugal field. J. W. Beams. Phys R 72:433-4 S 1 '47
Relation of the viscosity of nylon solutions in formic acid to molecular weight as determined by end-group measurements. G. B. Taylor. bibliog Am Chem Soc J 69: 635-8 Mr '47
Sound-velocity determination of molecular weights. G. J. Dienes. J Ap Phys 18:848-9 S '47
Sound velocity method for determination of molecular weight of liquid polymers. A. Weissler and others. bibliog diags J Ap Phys 18:434-8 My '47
Synthesis and properties of hydrocarbons of high molecular weight. R. W. Schiessler and others. bibliog il Am Pet Inst Proc 26(3):254-302 '46
Viscometric investigation of dimethylsiloxane polymers. A. J. Barry. bibliog J Ap Phys 17:1020-4 D '46
Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51: 58-70 Ja '47

See also
Polymers

MOLECULES
Atomic radii and interatomic distances in metals. L. Pauling. bibliog Am Chem Soc J 69:542-53 Mr '47
Basic concepts in polymer science; abstract. P. J. Flory. Chem & Eng N 26:1502-3+ My 26 '47
Bond energies in polyatomic molecules. G. B. Kistiakowsky. Chem & Eng N 25:770-1 Mr 17 '47
Bond energy in diatomic molecules from the force constants, nuclear distances, and classical model theory. M. A. Cook. bibliog J Phys & Colloid Chem 51:407-14 Mr '47

MOLECULES—*Continued*
Calculation of the energy of activation for the racemization of 2,2′-dibromo-4,4′-dicarboxydiphenyl. F. H. Westheimer. bibliog J Chem Phys 15:252-60 My '47
Calculation of weight per cent ring and number of rings per molecule for aromatics. M. R. Lipkin and C. C. Martin. bibliog Anal Chem 19:183-9 Mr '47
Cellulose molecule; physical-chemical studies. bibliog il diag J Phys & Colloid Chem 51:1-18 Ja '47
Colour and constitution; the absorption of light by chemical compounds; the fourth John Mercer lecture. E. J. Bowen. diags Soc Dyers & Col J 63:281-7 S '47
Complex molecule symposium at Northwestern. Chem & Eng N 25:162-3 Ja 20 '47
Co-ordinate links formed by bonding electrons; suggestion regarding the structure of diborane. A. D. Walsh. diags Chem Soc J p89-92 Ja '47
Crystal and molecular structure of certain dicarboxylic acids. J. D. Dunitz and J. M. Robertson. diags Chem Soc J p 142-54 F '47
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47
Electron deficient molecules; aluminum alkyls. K. S. Pitzer and H. S. Gutowsky. bibliog Am Chem Soc J 68:2204-9 N '46
Electron deficient molecules; entropy of diborane. K. S. Pitzer. Am Chem Soc J 69: 184 Ja '47
Electrostatic field strengths in molecules and nuclear quadrupole moments. C. H. Townes. bibliog Phys R 71:909-10 Je 15 '47
Entropy of solution of molecules of different size. J. H. Hildebrand. bibliog J Chem Phys 15:225-8 My '47
Equilibria between linear and cyclic polymers in methylpolysiloxanes. D. W. Scott. bibliog il Am Chem Soc J 68:2294-8 N '46
Helium molecular energy states as detected by collisions of the second kind in helium. R. Meyerott. bibliog Phys R 70:671-9 N 1 '46
High pressure bands of carbon and the formation of C_2 molecules. G. Herzberg. bibliog Phys R 70:762-4 N 1 '46
Historic researches; molecular physics. Engineer 183:256-7, 278-9, 302-4, 324-6 Mr 28-Ap 18 '47
Integral equations between distribution functions of molecules. J. E. Mayer. J Chem Phys 15:187-201 Ap '47
Interpretation of electron diffraction patterns from hydrocarbon films. J. Karle and L. O. Brockway. il J Chem Phys 15:213-25 My '47
Liquid methylpolysiloxane systems. D. F. Wilcock. bibliog Am Chem Soc J 69:477-86 Mr '47
Mass spectrometric study of CH_3D dissociation probabilities of C—H and C—D bonds by electron impact. M. W. Evans and others. J Chem Phys 14:701-7 D '46
Mass spectroscopic analysis of the polyatomic gases in a fast counter. S. S. Friedland. Phys R 71:377-8 Mr 15 '47
Molecular size distribution in three dimensional polymers; post-gelation relationships. P. J. Flory. bibliog Am Chem Soc J 69:30-5 Ja '47
Native protein. D. Wrinch. bibliog Science 106:73-6 Jl 25 '47
New horizons in science; introducing dusts, germs, molecules, and atoms. W. J. Wiswesser. bibliog il J Chem Educ 24:21-7 Ja '47
New refinement technique for X-ray structure analysis. A. D. Booth. bibliog J Chem Phys 15:415-16 Je '47
Nuclear electric quadrupole spectrum of a homonuclear diatomic molecule in a magnetic field. H. M. Foley. Phys R 71:747-51 Je 1 '47
Parabolic relation between bond-order and interatomic distance. J. L. Kavanau. bibliog Am Chem Soc J 69:1827-8 Jl '47
Polymolecularity of cellulose; fractional precipitation method for its determination. J. E. Tasman and A. J. Corey. bibliog diag Pulp & Pa of Can (Convention no) 48:166-70 [F] '47
Relation between the force constant and the interatomic distance of a diatomic linkage; a modified Huggins relation. C. K. Wu and S. C. Chao. Phys R 71:118-21 Ja 15 '47
Relations between carbon-carbon bond energy, order, and interatomic distance. J. L. Kavanau. bibliog J Chem Phys 15:77-8 Ja '47
Rotational spectra of some linear molecules near 1-cm wave-length. C. H. Townes and others. Phys R 71:64 Ja 1 '47
Story of atomic energy. F. Soddy. Engineering 164:361-4, 409-11 O 17, 31 '47
Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47
Theory of the fine structure of X-ray absorption limits in polyatomic molecules. E. M. Corson. bibliog Phys R 70:645-52 N 1 '46
Theory of the racemization of optically active derivatives of diphenyl. F. H. Westheimer and J. E. Mayer. J Chem Phys 14:733-8 D '46
Unsolved problems of structural chemistry; Richards medal address. L. Pauling. bibliog Chem & Eng N 25:2970-3+ O 13 '47
Use of punched cards in molecular structure determinations; crystal structure calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:648-58 N '46
Use of punched cards in molecular structure determinations; electron diffraction calculations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14:659-64 N '46

See also
Atoms
Chemical bonds
Crystallography
Isomerism
Molecular rearrangements
Molecular weights
Polymers
Stereochemistry

Clusters
Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15:314-32 My '47

Rotation
Asymmetric rotor; analysis of 8.5-μ band of D_2O by punched-card techniques. G. W. King. bibliog J Chem Phys 15:85-8 F '47
Asymmetric rotor; analysis of the 3.7-μ band of H_2S by punched-card techniques. R. M. Hainer and G. W. King. bibliog J Chem Phys 15:89-91 F '47
Average square length and radius of unbranched long-chain molecules with restricted internal rotation. W. J. Taylor. J Chem Phys 15:412-13 Je '47
Comparative thermodynamic properties of the restricted rotator and the harmonic oscillator. J. O. Halford. J Chem Phys 15: 364-7 Je '47
Contribution of restricted rotation to electron scattering by gases. J. Karle. bibliog J Chem Phys 15:202-7 Ap '47
Lack of meaning of the phase inactive by internal compensation as applied to meso compounds. C. R. Noller. Science 102:508-9 N 16 '45; Discussion (Inactive by internal compensation). G. F. Wright. 104:190 Ag 23 '46; Reply. 105:546 My 23 '47
Molecular coupling effects. J. G. Valatin. bibliog Phys R 71:458 Ap 1 '47
Origin of low frequency Raman lines in organic crystals. A. Kastler and A. Rousset. bibliog Phys R 71:455-6 Ap 1 '47
Restricted rotator thermodynamic properties from the old quantum theory. J. O. Halford. bibliog J Chem Phys 15:645-51 S '47
Rotational structure of some electronic bands of chlorine dioxide. J. B. Coon. bibliog il diags J Chem Phys 14:665-86 N '46
Second-order magnetic perturbations in nuclear quadrupole spectra and the pseudo-quadrupole effects in diatomic molecules. H. M. Foley. bibliog Phys R 72:504-5 S 15 '47
Steroids and the Walden inversion; derivatives of androstane and cholestane. C. W. Shoppee. Chem Soc J p 1138-47 D '46

Size
Average square length and radius of unbranched long-chain molecules with restricted internal rotation. W. J. Taylor. J Chem Phys 15:412-13 Je '47

MOLECULES—Size—*Continued*
Size and vibration frequency of the excited benzene molecule. V. Griffing. bibliog J Chem Phys 15:421-30 Jl '47

Vibration

Approximate product rule for the E_g and F_u frequencies of the X_2Y_6 molecule. E. L. Pace. J Chem Phys 15:528 Jl '47
Contribution to the study of electronic spectra of bent triatomic molecules. J. Duchesne and B. Rosen. bibliog J Chem Phys 15:631-44 S '47
Dynamics of a square lattice. E. W. Montroll. J Chem Phys 15:575-91 Ag '47
Electrical network for the solution of secular equations. R. H. Hughes and E. B. Wilson, jr. diags R Sci Instr 18:103-8 F '47
Excitation of molecular vibrations by electrons. T. Wu. Phys R 71:111-18 Ja 15 '47
Heat capacity, heats of fusion and vaporization, vapor pressure, entropy, vibration frequencies and barrier to internal rotation of styrene. K. S. Pitzer, L. Guttman and E. F. Westrum, jr. bibliog Am Chem Soc J 68: 2209-12 N '46
Motions of molecules in condensed systems; infra-red spectra for cyclohexane solid II, solid I, liquid and vapor in the range from 3 to 15μ. G. B. Carpenter and R. S. Halford. bibliog J Chem Phys 15:99-106 F '47
Non-degenerate vibrations of dimethylacetylene, diacetylene, and dimethyldiacetylene. A. G. Meister and F. F. Cleveland. bibliog diags J Chem Phys 15:349-57 Je '47
Normal coordinate analysis of the vibrational frequencies of ethylene, propylene, *cis*-2-butene, *trans*-2-butene, and isobutene. J. E. Kilpatrick and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:191-209 F '47
Potentiometric secular equation computer. A. A. Frost and M. Tamres. bibliog il diag J Chem Phys 15:383-90 Je '47
Selection rules for ionic crystals. L. Couture. J Chem Phys 15:153 My '47
Size and vibration frequency of the excited benzene molecule. V. Griffing. bibliog J Chem Phys 15:421-30 Jl '47
Theoretical interpretation of vibration frequencies of paraffinic hydrocarbons. G. B. B. M. Sutherland and D. M. Simpson. J Chem Phys 15:153-4 Mr '47
Use of deuterium in the analysis of vibrational spectra. F. Halverson. bibliog(519 ref) il Rs Mod Phys 19:87-131 Ap '47
Vibrational frequencies of semirigid molecules; a general method and values for ethylbenzene. W. J. Taylor and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:1-17 Ja '47

MOLLIER diagrams
Meaning of entropy and how to use the Mollier chart. J. Yavitch. diags Power Pl Eng 50:102-5 D '46
Practical applications of the Mollier diagram. W. Heidecker. flow diag diags Power Pl Eng 51:88-90 Jl; 94 Ag; 88-9, 100 S; 90-1 O; 94-5 N '47

MOLLUSKS, Fossil
Distribution of fossil fresh-water mollusks. T. Yen. bibliog Geol Soc Bul 58:293-8 Ap '47
Molluscan fauna of the Alum Bluff group of Florida; ctenobranchia (remainder) aspidobranchia, and scaphopoda. J. Gardner. U S Geol S Professional Pa 142-H:493-638, pl 52-62; pa $1 Supt. of doc. '47
Studies of some Comanche pelecypods and gastropods. T. W. Stanton. 2 fold charts (in pocket) map U S Geol Professional Pa 211:1-256, pl 1-67 bibliog(p114-16) '47

MOLTEN glass. See Glass, Molten

MOLTEN iron. See Iron, Molten

MOLTEN metals. See Metals, Molten

MOLYBDATES
See also
Cobalt molybdate
Sodium molybdates

MOLYBDENITE
Some pipe deposits of eastern Australia. R. Blanchard. maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47

MOLYBDENUM
Abnormal creep in carbon steels; effect of manganese, silicon and molybdenum. J. Glen. il Iron & Steel Inst J 155:501-12 Ap '47
Amargosa (Esperanza) molybdenum-copper property, Pima county, Arizona. S. L. Tainter. 3pls U S Bur Mines Rep of Invest 4016:1-15 '47
Gamma-rays from tungsten and molybdenum. W. M. Schwarz and M. L. Pool. bibliog Phys R 71:122-3 Ja 15 '47
Kinetics of oxide film formation on metals and alloys. E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29):431-61 '47
Melting of molybdenum in the vacuum arc; abstract. R. M. Parke and J. L. Ham. diag Iron Age 158:65 N 28 '46
Molybdenum in cast iron. A. E. M. Smith. Engineering 163:55 Ja 17 '47
Molybdenum, 1946. E. K. Jenckes. Eng & Min J 148:87 F '47
New moly uses sought to offset export sales drop. Barron's 27:34 Jl 21 '47
Partition of molybdenum in hypoeutectoid iron-carbon-molybdenum alloys. F. E. Bowman. bibliog Am Soc for Metals Trans 36: 61-76; Discussion. 76-80 '46
Partition of molybdenum in steel and its relation to hardenability. F. E. Bowman. bibliog Am Soc for Metals Trans 35:112-25 '45; Same cond. Steel 115:82+ N 27 '44; Discussion. Am Soc for Metals Trans 35:128-9 '45
Properties and applications of molybdenum. J. Gelok. il Materials & Methods 26:86-9 S '47.
Rate of diffusion of molybdenum in austenite and in ferrite. J. L. Ham. Am Soc for Metals Trans 35:331-55 bibliog(p354-5); Discussion. il 355-61 '45
Refractory metal industry since 1914. A. L. Percy. il Metal Prog 52:600-2 O '47
Segregation of molybdenum in phosphorus-bearing alloyed gray cast iron. F. B. Rote and W. P. Wood. il Am Soc for Metals Trans 35:402-25; Discussion. 425-34 '45
Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47
Tungsten substitute. il Bsns W p55 Jl 19 '47

Isotopes

Radioactive isotopes of Mo and Tc (technetium, element 43). J. E. Edwards and M. L. Pool. bibliog il Phys R 72:384-9 S 1 '47

MOLYBDENUM alloys
See also
Iron alloys—Molybdenum alloys

Analysis

X-ray analysis of chromium-molybdenum and chromium-tungsten alloys. W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47

MOLYBDENUM oxides
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Picturesque oxidation of molybdenum vacuum-tube leads. H. A. Liebhafsky. il J Ap Phys 17:901-2 N '46

MOLYBDENUM steel
Carbide instability of carbon-molybdenum steel piping. R. W. Emerson. bibliog il Welding J 26:sup 104-14 F '47
Carbon-molybdenum steel for steam pipes; abstracts. L. Rotherham. Engineering 164: 343 O 10 '47; Metal Prog 52:646+ O '47
Creep properties of steels utilized in high-pressure and high-temperature super-heater and steam pipe practice; 0.5 per cent molybdenum steels. H. J. Tapsell and R. W. Ridley. Inst Mech Eng J & Proc 153 (War emergency issue no 6):181-92, pl 1-2 '45
Further observation of graphitization in aluminum-killed carbon-molybdenum-steel steam piping. R. W. Emerson and M. Morrow. bibliog il plan A S M E Trans 68: 597-607 Ag '46; Same. Welding J 26:sup139-49 Mr '47

MOLYBDENUM steel—*Continued*
Graphitization of steels at elevated temperatures. A. E. White. il Metal Prog 52:371-5 S '47
Low-carbon molybdenum steel. Engineering 164:214 Ag 29 '47
Molybdenum steel riveting. Engineering 162: 561 D 13 '46
Molybdenum steel riveting. diag Iron Age 159:49 F 13 '47
Steels for use at elevated temperatures. C. Sykes. bibliog Iron & Steel Inst J 156:321-9 Jl '47
Studies on susceptibility of casting steels to graphitization. J. J. Kanter. il A S M E Trans 68:581-7 Ag '46; Same. Welding J 26:sup121-7 F '47
Suppression of pearlite in manganese-molybdenum steels. C. R. Austin and J. R. Doig. bibliog Am Soc for Metals Trans 36:336-60 '46

MOLYBDENUM tubes. See Tubes, Molybdenum

MOMENTS of inertia
Asymmetric rotor; analysis of 8.5-μ band of D_2O by punched-card techniques. G. W. King. bibliog J Chem Phys 15:85-8 F '47
Asymmetric rotor; analysis of the 3.7-μ band of H_2S by punched-card techniques. R. M. Hainer and G. W. King. bibliog J Chem Phys 15:89-91 F '47
Electric resonance method of radiofrequency spectroscopy; moment of inertia and electric dipole moment of CsF. H. K. Hughes. bibliog diag Phys R 72:614-23 O 1 '47
Moment of inertia of rivets easily calculated. R. H. Chambers. Eng N 138:393 Mr 6 '47
Nomogram for polar moment of inertia by suspension; reference book sheet. H. F. Bariffi. Product Eng 18:177 Jl '47
Unsymmetrical sections; simple procedure facilitates calculation of properties. A. B. Cox. il diags Machine Design 19:129-32 F '47

MONAZITE
Nuclei of pleochroic haloes. C. O. Hutton. bibliog Am J Sci 245:154-7 Mr '47

MONEL metal
Double wall tubing. il Steel 120:76+ Ja 27 '47
Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdams, jr. and others. bibliog Am Soc for Metals Trans 37: 497-537 '46
Engineering properties of monel; data sheet. Metal Prog 50:890 N '46
High-nickel materials; machining monel metals and iconel. Automobile Eng 37:145-6 Ap '47
Identification of nickel or monel wire in a woven wire screen. R. L. Hackney. Metal Prog 51:87 Ja '47
Monel sucker rods. Oil & Gas J 46:95 Je 21 '47
New upsetting technique; latest development in blind riveting; cherry monel metal rivet. il diags Steel 120:118+ Je 23 '47
Unfired cylindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman. A S M E Trans 69: 337-43; Discussion. 343-4 My '47

MONETARY treaties. See Financial treaties and agreements

MONEY
Hard money theory of interest rates. W. Witherspoon. Comm & Fin Chr 164:2613+ N 21 '46
Liquidity preference and monetary policy; Fellner theory; statistical relationship between demand for cash balances and rate of interest. J. Tobin. R Econ Stat 29:124-31 My '47
Misplaced emphasis in contemporary business-fluctuation theory; erratic variation in quantity of money has been ignored. C. Warburton. bibliog J Bsns 19:199-220 O '46
Monetary reconstruction lags. J. D. Mooney. Comm & Fin Chr 165:2849+ My 29 '47
Restoration of monetary order; address before International chamber of commerce, Montreux. W. R. Burgess. Comm & Fin Chr 165:3115+ Je 12 '47
Tobacco standard; cigarette currency. Economist 152:526-7 Ap 12 '47; Same. Iron Age 159:113+ My 29 '47; Same cond. Fortune 35:42+ Je '47
Uranium metal suggested as monetary standard. Sci Am 176:62 F '47

See also
Banks and banking
Capital
Credit
Finance
Foreign exchange
Gold as money
Inflation (finance)
Investments
Prices
Silver as money

Devaluation
Agitation for further devaluation of our dollar. W. E. Spahr. Comm & Fin Chr 166:617+ Ag 14 '47

International aspects
Britain rations its dollars. Bsns W p85-6 Ag 30 '47
Canada to stop U.S. currency hoarding. Comm & Fin Chr 165:3032 Je 5 '47
Convertible currency and a free gold market. J. D. Mooney. Comm & Fin Chr 166: 1533+ O 16 '47
European currency convertibility. P. Einzig. Comm & Fin Chr 166:1538 O 16 '47
Exchange depreciation and international monetary stability. J. J. Polak. bibliog R Econ Stat 29:173-82 Ag '47
Free market evaluates foreign currencies; you can buy dinars at a bargain from New York dealers. F. Pick. Barron's 27:33-4 Ap 21 '47
Free sterling selling at sharp discount. F. Pick. Barron's 27:12 F 17 '47
Future of the sterling area. V. L. Horoth. il Mag of Wall St 79:730-2+ Mr 29 '47
International monetary problems; text of resolution by International chamber of commerce. Comm & Fin Chr 165:7+ Ja 2 '47
International vs. domestic money. R. Triffin. Comm & Fin Chr 165:599+ Ja 30 '47
Make the dollar as good as gold. L. H. Haney. Comm & Fin Chr 165:861+ F 13 '47
Need for world currency reform; pre-requisite to recovery. V. L. Horoth. Mag of Wall St 81:78-9+ O 25 '47
Sterling as international currency. P. Einzig. Comm & Fin Chr 166:1648 O 23 '47
Stresses stable currencies. H. E. Stassen. Comm & Fin Chr 166:1547 O 16 '47

See also
Bank for international settlements
Foreign exchange
International monetary fund

Africa, British West
Currency in West Africa. Economist 152:83 Ja 11 '47

Canada
Canadian dollar. Nat City Bank p55-6 My '47
Canadian dollar; Bank of Nova Scotia analyzes present position. Comm & Fin Chr 165:3240+ Je 19 '47
Canada's exchange position. Economist 152: 686+, 862+ My 3, 31 '47
Exchange controls tightened. For Comm W 27:15 Je 14 '47
Foreign exchange control board of Canada explains unofficial market in Canadian dollars. Comm & Fin Chr 166:2212+ Ap 24 '47
No change in Canadian dollar's status pending. E. C. Ertl. Barron's 27:35 S 15 '47

China
Chinese currency chaos. Economist 152:297 F 15 '47

Europe
Progress of inflation in Europe. Comm & Fin Chr 165:2112 Ap 17 '47
Stable money a prerequisite to European recovery. W. Chamberlain. Comm & Fin Chr 166:209+ Jl 17 '47

France
Dollar's value abroad; flight from the French franc. F. Pick. Barron's 26:9 D 2 '46
Urgent crisis of French franc. E. Kaskeline. Comm & Fin Chr 165:122+ Ja 9 '47

Germany
American plan for German currency reform; Colm-Dodge-Goldsmith plan. H. M. Bratter. Comm & Fin Chr 164:2754+ N 28 '46

MONEY—Germany—*Continued*
German currency reform. Economist 151:911-12 D 7 '46
Germany's money problem. il Bsns W p 105-6 O 11 '47

Great Britain
Nation's pocket money. Economist 152:732 My 10 '47

India
India abandons sterling-exchange standard. For Comm W 27:16 My 10 '47

Iraq
Iraq currency contraction. Economist 151: 724 N 2 '46

Italy
Italy and Poland devaluate currencies. Comm & Fin Chr 166:535 Ag 7 '47

Mexico
Monetary problems in Mexico. R. O. Mena. J Bsns 20:1-8 Ja '47

Netherlands
Netherlands government calls in gold and foreign currency. For Comm W 27:20 Je 21 '47

Netherlands Indies
Use of Netherands Indies government and Indonesian Republic currencies. For Comm W 26:15 F 8 '47

Nicaragua
More fractional money for Nicaragua. For Comm W 27:34 My 31 '47

Philippine Islands
Aftermath of Japanese currency in Philippines. F. Ortigas, jr. Comm & Fin Chr 165:1378+ Mr 13 '47

Poland
Italy and Poland devaluate currencies. Comm & Fin Chr 166:535 Ag 7 '47
Procedure for bringing paper currency into Poland. For Comm W 27:19 My 10 '47

Rumania
Currency-stabilization decree. For Comm W 28:18 S 20 '47
Exchange rate of leu set. For Comm W 29:19 O 11 '47
Rumania drastically devalues currency. Comm & Fin Chr 166:729 Ag 21 '47

Sweden
Sweden's currency policy defended; interview with D. Hammarskjoeld. H. M. Bratter. Comm & Fin Chr 165:2248 Ap 24 '47

United States
Agitation for further devaluation of our dollar. W. E. Spahr. Comm & Fin Chr 166:617+ Ag 14 '47
Economists' national committee on monetary policy suggest detailed monetary reform to the President and Congress. Comm & Fin Chr 165:1253+ Mr 6 '47
Is the money supply too large; address before U.S. Chamber of commerce. H. R. Bowen. Comm & Fin Chr 165:2329+ My 1 '47; Discussion. 165:2599+, 2728+, 3351 My 15, 22, Je 26 '47
Management of our monetary system. W. E. Spahr. bibliog Comm & Fin Chr 165:1510+ Mr 20 '47
Paper currency, by denominations, and coin in circulation, yearly 1933-1944 and monthly July 1945-Nov. 1946. Fed Res Bul 33:51 Ja '47 [cont monthly]
What is the money picture? W. E. Spahr. Comm & Fin Chr 165:2725+ My 22 '47

See also
United States—Mint

MONEY, Military
Aftermath of Japanese currency in Philippines. F. Ortigas, jr. Comm & Fin Chr 165:1378+ Mr 13 '47
Army remittance losses scandalize British; corresponding losses foisted on U.S. taxpayer. H. M. Bratter. Comm & Fin Chr 165:1978 Ap 10 '47
Making good on GI exchange loss; withdrawal of old army scrip in Europe and Japan. Comm & Fin Chr 165:1383 Mr 13 '47
Military money muddle. H. M. Bratter. Comm & Fin Chr 165:3239 Je 19 '47
Representative Jones queries Byrnes concerning invasion lira. R. F. Jones. Comm & Fin Chr 164:2763 N 28 '46

MONEY and securities insurance. See Insurance, Money and securities

MONEY market
See also
Brokers' loans
Interest

MONEY marketeers
Money marketeers; financial organization. Comm & Fin Chr 165:789+ F 6 '47

MONEY orders
See also
Postal service—Money orders

MONEY rates. See Interest

MONKEYS
Blood picture of normal laboratory animals; a review of the literature, 1936-1946. M. V. Gardner. bibliog Franklin Inst J 244: 155-61 Ag '47
Improved cage designs for use in handling monkeys. H. F. Brubach. diags Science 106: 18-19 Jl 4 '47

MONMOUTH park (New Jersey) jockey club
Rights to stockholders. Comm & Fin Chr 165:812-13 F 10 '47

MONNET plan. See France—Industries and resources

MONOCHROMATORS
Construction and performance of a large grating monochromator with a high energy output for photochemical and biological investigations. C. S. French and others. bibliog il diag R Sci Instr 18:11-17 Ja '47
Photoelectric spectrophotometry; performance of quartz double monochromator in improved and more versatile photoelectric spectrophotometer. F. P. Zscheile. bibliog il diags J Phys & Colloid Chem 51:903-26 Jl '47

MONOCOUPE airplane and engine corporation
Monocoupe reopens at Melbourne, Fla. Aviation W 47:42 N 3 '47

MONOCYTES. See Leucocytes

MONOGRAM company of California
How your host got his name on the cocktail napkins. il Sales Management 58:72-4+ Ap 1 '47
Party dress; Monogram of California packaging of gift novelties. il Mod Packaging 20:132-5 My '47

MONON. See Chicago, Indianapolis and Louisville railway

MONONGAHELA power company
Bonds offered. Comm & Fin Chr 166:1152 S 22 '47

MONOPOLIES
Causes and cure of present day trends toward business monopoly. W. S. Baren. Comm & Fin Chr 166:1536+ O 16 '47
Counters statement against monopoly. A. A. Potter. Comm & Fin Chr 164:3267 D 19 '46
FTC moves to restrict brass, copper control by producers. Iron Age 159:109-10 Mr 27 '47
FTC rules monopoly product cannot be fair-traded; Eastman decision. A. W. Gray. Sales Management 58:108+ Je 1 '47
Steel plans fight on FTC charge of price fixing and monopolistic practices. Steel 121: 46-7 S 1 '47
Titanium monopoly dissolution upheld. Oil Paint & Drug Rep 151:5+ Je 30 '47
U.S. charges monopoly in fiber glass field. Eng N 139:430 S 25 '47
Virtuous monopolist; comments on the inquiry into organisations dominating the manufacture of cement and of textile machinery. Economist 153:54-5 Jl 12 '47
Where does monopoly really lie; attacks FTC report. E. Bunting. Comm & Fin Chr 165: 2197+ Ap 24 '47

See also
Glass container industry
Trusts, Industrial

MONORAIL conveyors
Flexibility of chassis assembly widened by suspended conveying system; Chevrolet's new plant. J. C. Webb. il Steel 121:72-4+ S 8 '47
Spra-bonderizing; continuous carrier plant at works of Wolseley motors. il diag Automobile Eng 37:313-14 Ag '47
Trolley conveyors; design and application factors. S. Reibel. il diags Product Eng 18:124-9 F '47
Unique engine assembly system; time and labor saved as parts and accessories kits on conveyor moving with assembly line. il Automotive & Aviation Ind 96:25+ Mr 1 '47

Advertising

How American MonoRail handles inquiries. E. H. Doerger. il Ind Marketing 32:58+ Jl '47

MONSANTO chemical company
Atomic shift; commission is getting set for armament race. Bsns W p26+ Je 7 '47
Atom's industrial sponsors. il Bsns W p22+ Mr 29 '47
Monsanto suffers most in Texas City tragedy. J. V. Hightower. il Chem Eng 54: 144-5 My '47
Organizing an instrument department. C. S. Comstock and H. U. Fisher. il Chem Eng Prog 43:303-8 Je '47
Preliminary reports of Texas City damage from April 16 disaster emphasize effect of flying fragments and ground shock from explosion; contamination of ammonium nitrate as underlying cause. il Chem & Eng N 25:1198+ Ap 28 '47
Texas blast to defer Monsanto expansion. Barron's 27:8 Ap 21 '47
Texas City, a survey. W. H. Shearon, jr. il Chem & Eng N 25:1334-5 My 12 '47
$20,000,000 Monsanto plant blasted. L. D. Gruberg. il Chem Age (Lond) 56:498-501 Ap 26 '47

Clinton laboratories

See Clinton national laboratory

MONTANA
See also
Gold mines and mining—Montana
Iron ores—Montana
Mines and mineral resources—Montana
Water supply—Montana

Industries and resources

Montana's production; a statistical summary of the state's industries, 1930-1946. R. J. W. Ely. 60p Montana state univ, Bur. of business research, Missoula '46

MONTANA group
Upper Montana group, Golden area, Jefferson county, Colorado. J. D. Moody. bibliog maps diags Am Assn Pet Geologists Bul 31:1454-71 Ag '47

MONTERREY, Mexico
See also
Motor bus lines—Monterrey, Mexico

MONTEVIDEO, Uruguay

Rapid transit

City buys Montevideo's local streetcar system. For Comm W 26:31 Mr 22 '47

MONTGOMERY, D. C.
Service for busy retailers; company in Los Angeles takes and prices food-store inventories. Bsns W p30+ My 31 '47

MONTGOMERY Ward and company
Ward's earnings, assets priced lower than Sears'. Barron's 27:34 S 22 '47

MONTHLY labor review (periodical)
32 years of labor reporting. Mo Labor R 65: 15-19 Jl '47

MONTMORILLONITE
Acylation studies in the thiophene and furan series; natural and synthetic silica-metal oxide catalysts. H. D. Hartough, A. I. Kosak and J. J. Sardella. bibliog Am Chem Soc J 69:1014-16 My '47
Identification and estimation of the montmorillonite group of minerals, with special reference to soil clays. D. M. C. MacEwan. bibliog Soc Chem Ind J 65:298-304, pl 3-4 O '46
Reaction of different clay minerals with some organic cations. R. E. Grim and others. bibliog Am Cer Soc J 30:137-42 My 1 '47

MONTREAL

Streets

Extensive street improvements planned. C. E. Campeau. il maps plans Roads & Bridges 85:78-82+ O '47
Immediate expressway construction for Montreal urged. A. A. Cousineau; P. R. Walters. il maps Roads & Bridges 85:90-2+ Ap '47
Solving the urban traffic problem; master plan for future development. C. E. Campeau. Roads & Bridges 85:116+ S '47

Water supply

Reconditioning of trunk mains. F. Y. Dorrance. il diags Water & Sewage 85:74-9+ My '47

MOON
Projection of meteor trails on the moon. J. C. Bartlett, jr. Science 104:448 N 8 '46; Discussion. F. L. Tabrah. 104:514 N 29 '46
Radar trips to the moon. A. C. Omberg. il Aero Digest 53:80-1+ D '46
Radio reflection from the moon. Z. Bay. Electronics 20:196+ F '47
Rocket radio for moon to earth broadcasts foreseen. J. A. Hutcheson. Franklin Inst J 242:278 O '46

MOORE, Robert Jerome, 1892-1947
Sketch. por Chem & Eng N 25:180 Ja 20 '47

MOORE-MCCORMACK lines, inc.
Ship charters to protect Moore-McCormack profits; marginal vessels will be dropped first if freight tonnage declines. P. A. Murphy. Barron's 27:29-30 My 19 '47

MORAN, Gerald D.
Portrait. Bsns W p 18 Je 28 '47

MORATORIUM
Moratorium agreement executed by depositors of private bank held binding on proprietor individually and on bank. Banking Law J 63:904-11 D '46

MOREELL, Ben, 1892-
Sea-fresh view for a steel industry job. por Bsns W p19 F 22 '47

MORGAN, J. P., and company
Report to stockholders. G. Whitney. Comm & Fin Chr 165:494 Ja 23 '47

MORGAN, John Pierpont, 1867-1943
Left estate of $16 million gross, $4 ½ million net. Comm & Fin Chr 165:1389 Mr 13 '47

MORINGA oil
Component acids of West Indian ben and mango seed oil. H. C. Dunn and T. P. Hilditch. Soc Chem Ind J 66:209-11 Jl '47

MORPHINE
Possible route to the location of the nitrogen atom in morphine. H. L. Holmes and C. C. Lee. bibliog Am Chem Soc J 69:1996-7 Ag '47
Possible route to the location of the nitrogen atom in morphine; the synthesis of 3,4-dimethoxy-9-methylphenanthrene. H. L. Holmes, C. C. Lee and A. Mooradian. Am Chem Soc J 69:1998-9 Ag '47
Syntheses in the morphine series; derivatives of *bicyclo*[3 : 3 : 1]-2-azanonane. J. A. Barltrop. Chem Soc J p399-401 Mr '47
Synthesis of possible degradation products of morphine and metathebainone. H. L. Holmes and K. M. Mann. bibliog Am Chem Soc J 69:2000-3 Ag '47

Analysis

Adaptation of the silicomolybdic acid method for the estimation of morphine to the photoelectric colorimeter. F. E. Shideman and A. R. Kelly. Science 106:298-9 S 26 '47

MORPHOLINE
Auto-body polishes. J. M. Vallance. Soap & San Chem 23:153 Mr '47
Infrared absorption spectra of liquid and gaseous morpholine. R. A. Friedel and D. S. McKinney. bibliog diag Am Chem Soc J 69:604-7 Mr '47
Morpholine hydrochloride complexes of cuprous and cupric chloride. W. H. C. Ruegeberg, G. N. Jarman and R. B. Wearn. Am Chem Soc J 69:1222 My '47

MORPHOLINE—*Continued*
Pyridylthioacetmorpholides and pyridylacetic acids. R. L. Malan and P. M. Dean. bibliog Am Chem Soc J 69:1797-8 Jl '47
Studies on the Willgerodt reaction; anomalous synthesis of dithiooxalodimorpholide. F. H. McMillan and J. A. King. bibliog Am Chem Soc J 69:1207-8 My '47

MORRELL, John, and company
Thumbnail stock appraisal. Mag of Wall St 79:261 D 7 '46

MORRILL, Arthur B.
How an American sanitary engineer is selling water systems in China. T. Durin. por Eng N 138:390 Mr 6 '47

MORRIS, Philip, and company
Annual report. Comm & Fin Chr 166:307 Jl 21 '47
Company now in strongest financial condition in its history. Comm & Fin Chr 165: 3058 Je 9 '47

MORRIS plan bankers association. See Consumer bankers association

MORRIS plan banks
See also
Banks and banking, Industrial

MORRISON, Harry Winford, 1885-
Moles award for 1947. por Explosives Eng 25:19 Ja '47
Wins Moles' construction awards. por Comp Air Mag 52:20 Ja '47

MORRISTOWN, Tennessee
Industries
Magic Morristown; Tennessee industrial marvel. W. Ogden. il Manuf Rec 116:38-9+ S '47

MORROW, Walter Alexander, 1894-
President of American retail federation. por(cover) Bsns W p8 F 15 '47

MORSE, Charles Hosmer, 3d
Old company, young ideas; Fairbanks-Morse. por Bsns W p59-64 My 17 '47

MORSE, Philip McCord, 1903-
Receives Medal of merit. por Acoustical Soc Am J 19:703-4 Jl '47

MORSE, Robert Hosmer, 1878-
Pulling Fairbanks-Morse & Co. out of the red ink. por(cover) Bsns W p8 My 17 '47

MORSE, Robert Hosmer, jr., 1899-
Old company, young ideas; Fairbanks-Morse. por Bsns W p59-64 My 17 '47

MORTALITY
Doctor looks at executive deaths. I. H. Page. Am Bsns 17:23+ Jl '47
See also
Longevity
Statistics
Deaths from respiratory tuberculosis in institutions in the United States, 1945. R. V. Kasius and E. H. Halpin. map Pub Health Rep 62:1296-315 S 5 '47
Excellent health record in 1946 for policyholders. Weekly Underw 156:113 Ja 4 '47
Highway to destruction; automobile fatalities in 1946. T. J. V. Cullen. il map Spectator (Property ed) 13:12-18 O 9 '47; Same. Spectator (Life ed) 155:36-42 O '47
New low for industrial mortality is seen by Metropolitan Life. Weekly Underw 157:365+ Ag 16 '47
Occupational mortality experience of insured wage earners. L. I. Dublin and R. J. Vane. Mo Labor R 64:1003-18 Je '47
Overall death toll declined last year from prewar rate. Nat Underw (Life ed) 51:4 Ag 1 '47; Weekly Underw 157:348 Ag 9 '47
Tuberculosis (all forms) death rates per 100,000 population and number of deaths and cases, United States, 1944; maps. Pub Health Rep 62:342-3 Mr 7 '47
Tuberculosis (all forms) death rates per 100,000 population and number of deaths and cases, United States, 1945. maps Pub Health Rep 62:992-3 Jl 4 '47
Tuberculosis mortality in the United States and in each state, 1945. E. H. Pitney and R. V. Kasius. maps Pub Health Rep 62: 487-511 Ap 4 '47
See also
World war, 1939-1945—Casualties

MORTAR
Hydraulic structure maintenance using pneumatically placed mortar. W. L. Chadwick. il diags Am Concrete Inst J 18:533-47 Ja '47
Maintenance and reconstruction of concrete tunnel linings with treated mortar and special concrete. B. D. Keatts. il diags Am Concrete Inst J 18:813-26 Mr '47
Quantity of materials required for masonry mortar; table. Brick & Clay Rec 110:34 Mr '47
Truck mounted mortar mixer speeds-up foundation work. il diag Brick & Clay Rec 111:33 Ag '47
Using mortar color in brickwork. il Brick & Clay Rec 110:34 My '47
Testing
Testing for air content of masonry mortars. C. J. Knickerbocker. Rock Prod 49:85 D '46

MORTGAGE redemption policies. See Insurance, Life—Mortgage redemption policies

MORTGAGES
Again warns of inflationary mortgages. J. H. Fahey. Comm & Fin Chr 164:2809+ N 28 '46
Average home loan is bigger. M. Kane. Banking 39:51 D '46
Average size of new home mortgages up 55 per cent over '39. Comm & Fin Chr 165: 2209 Ap 24 '47
Banker students of housing; A.B.A. mortgage officers training course at University of Illinois. Banking 40:28-9 Ag '47
Brass tacks building conclave; Western mortgage conference sponsored by A.B.A. R. Maclean. Banking 39:60 My '47
Construction and real estate markets in 1947; mortgage debt on houses. Fed Res Bul 33: 643-5 Je '47
Current trends in size of average home mortgage; average size of nonfarm mortgage of $20,000 or less recorded by banks in the first three quarters of 1946 and percentage of increase over 1940 average; map. Banking 39:50 D '46
Dangers of present day real estate lending. R. Rodgers. Comm & Fin Chr 165:1922+ Ap 10 '47
Distinction between principal obligor and surety. Banking Law J 64:577-81 Jl '47
Eyes correspondent role in mortgage field. N. H. Nelson. Nat Underw (Life ed) 51:17 Mr 7 '47
FDIC chairman issues real estate warning. M. T. Harl. Burroughs Clearing House 31: 30+ D '46
Federal tax problems confronting the mortgager and mortgagee. V. D. Edwards. Banking Law J 64:165-74 F '47
GI loan experience. J. P. Fordyce. East Underw 48:8 Ap 4 '47
G.I. mortgage loans. N. P. Gregory. Burroughs Clearing House 31:31-2 Ap '47
Loan departments getting choosey in mortgage purchases. Nat Underw (Life ed) 51:12 Ja 10 '47
Mortgage debt reverses trend, starts up again. Bsns W p90 S 13 '47
Mortgage debt rising sharply. Mortgage bankers association of America reports. Comm & Fin Chr 166:913 S 4 '47
Mortgage financing rose in 1946. Comm & Fin Chr 165:1644 Mr 24 '47
New York state mortgage loans expanding at lower interest rates. E. V. Bell. Comm & Fin Chr 164:3223 D 19 '46
Outlook for real estate. C. E. Smith. Comm & Fin Chr 165:1522+ Mr 20 '47
Owners of well-insulated homes pay off the mortgage more quickly. W. Royce. il Bankers Mo 64:126+ Mr '47
Package mortgages. Arch Forum 85:8 D '46
Packaged mortgages for packaged homes; with chart showing FHA list of items of mechanical equipment eligible for inclusion in mortgage, by state and district FHA offices. Am Bld 69:60-3+ Ja '47
Private investment and the secondary market for GI home loans. T. B. King. Comm & Fin Chr 166:824 Ag 28 '47
Real estate financing highest in 1946. Comm & Fin Chr 165:1175 F 27 '47
Real estate loans of insured banks. Banking 39:96 Mr '47
Sales of mortgages by state member banks. Fed Res Bul 33:695 Je '47

MORTGAGES—*Continued*
Savings banks count on cuts in home costs. R. B. Cole. Barron's 27:25 My 19 '47
Studies in home lending; A.B.A. mortgage officers training course at University of Illinois. H. J. Boone. il Burroughs Clearing House 31:17-19+ S '47
Training for mortgage officers. H. B. Smith. il Banking 39:52+ Je '47
Two savings-mortgage conferences. Banking 39:59 Ja '47
Urban real estate mortgage debt by lender groups, end of calendar year, 1929-46; tabulation. Survey of Cur Bsns 27:16 S '47
Warns of low interest on mortgage loans. J. H. Fahey. Comm & Fin Chr 165:1165+ F 27 '47

See also
Chattel mortgages
Deeds of trust
also Federal housing administration—Insured mortgage plan

MORTGAGES, Farm
ABA opposes liberalizing land bank loans; presents testimony to House committee on banking and currency. Comm & Fin Chr 165:2920 My 29 '47
Confer in Washington on ways to halt farm price inflation; what lenders on farm mortgages can do. Nat Underw (Life ed) 51:5+ Je 13 '47
Curbs demanded on reckless farm loans now said to produce inflated values. R. I. Nowell. Weekly Underw 156:1648 Je 14 '47
Farm mortgage debt up first time in 17 years. Comm & Fin Chr 166:335 Jl 24 '47
Farm mortgage increase causes concern. Bsns W p68 Ag 9 '47
Farm values and farm mortgages. C. W. Bailey. Comm & Fin Chr 165:2733 My 22 '47
Future of government in the farm mortgage field. J. D. Black. J Land & Pub Util Econ 23:1-11 F '47
Normal value basis of land appraisal. P. L. Gaddis. Banking 40:73+ S '47
Opposes extension of Frazier-Lemke act. R. L. Hogg. Nat Underw (Life ed) 51:20 Ap 25 '47; Same. East Underw 48:5 Ap 18 '47
Prudential to extend farm mortgage lending. East Underw 48:6 Ap 4 '47
Settlement pursuant to Emergency farm mortgage act. Banking Law J 64:708-14 S '47
Time to use farm mortgage tests. A. G. Brown. Banking 39:49+ Mr '47

MORTICIANS' liability insurance. See Insurance, Morticians' liability

MORTIMER, Charles G. jr. 1900-
Portrait. Ptr Ink 218:103 Mr 21 '47

MOSCICKI, Ignacy, 1867-1946
Sketch. G. Druce. Chem & Ind p406 N 9 '46

MOSCOW conference of foreign ministers. See International conferences—Moscow, 1947

MOSER, Charles K. 1877-
Retires from OIT. For Comm W 29:15 O 11 '47

MOSER, Hans Friedrich, 1903-
Insurance commissioner of Switzerland. por East Underw 48:12 Ap 25 '47

MOSES LAKE, Washington
Moses Lake overflows. Bsns W p50 Ap 26 '47

MOSQUITOES
Use of aerosol OT in dissecting salivary glands of mosquitoes infected with malaria. E. S. Josephson and others. Science 105:650-1 Je 20 '47

Extermination
Aerosol technique provides plant-scale insect control. E. C. Barnes and others. bibliog il diags Chem Ind 60:238-40+ F '47
Comparative residual toxicity of DDT to anopheles quadrimaculatus when applied on different surfaces. J. M. Clapp and others. Pub Health Rep 62:158-70 Ja 31 '47
Comparative studies of DDT dusts, DDT-oil sprays, and paris-green dusts used routinely in anopheline larvae control. W. V. Mathis and others. Pub Health Rep 62: 95-103 Ja 17 '47
Comparative toxicity of DDT isomers and related compounds to mosquito larvae and fish. J. M. Ginsburg. Science 105:233-4 F 28 '47
Control of anopheline mosquito larvae by use of DDT-oil mists. F. F. Ferguson and others. bibliog Pub Health Rep 62:296-302 F 28 '47
DDT in oil as a larvicide in an area ordinarily considered difficult to treat. H. A. Johnson and M. W. Yates. Pub Health Rep 62:1085-95 Jl 25 '47
DDT in oil as a mosquito larvicide. H. A. Johnson and W. L. Goodman. Pub Health Rep 62:1191-8 Ag 15 '47
Duration of toxicity of several DDT residual sprays under conditions of malaria-control operations. F. L. Knowles and C. S. Smith. Pub Health Rep 61:1806-10 D 13 '46
Dynamite spells doom for insect menace; blasting drainage ditches. B. H. Ludwig. il Explosives Eng 25:119 Jl '47
Effectiveness of DDT residual house spraying against anopheles albimanus. H. Trapido. Science 105:432 Ap 25 '47
Effects of DDT mosquito larviciding on wildlife; effects of routine airplane larviciding on bird and mammal populations. A. B. Erickson. Pub Health Rep 62:1254-62 Ag 29 '47
Effects of DDT mosquito larviciding on wildlife; effects on surface organisms of the routine hand application of DDT larvicides for mosquito control. C. M. Tarzwell. fold table Pub Health Rep 62:525-54, pl 1-2 Ap 11 '47
Effects of DDT mosquito larviciding on wildlife; the effects on the plankton population of routine larviciding with DDT. E. L. Bishop. Pub Health Rep 62:1263-8, pl 1 Ag 29 '47
Extended laboratory investigations on the toxicity of DDT residues to adults of anopheles quadrimaculatus. R. W. Fay and others. Pub Health Rep 62:149-58 Ja 31 '47
Inactivation of DDT used in anopheline mosquito larvicides. W. M. Upholt. bibliog Pub Health Rep 62:302-9 F 28 '47
Mosquito larvicide tests; a résumé of tests of compounds related to DDT against larvae of anopheles quadrimaculatus. C. C. Deonier and others. bibliog Soap & San Chem 22:118-19+ N '46
New insect repellents. M. Pijoan. bibliog Soap & San Chem 23:124-7+ Mr '47
Observations on the nighttime resting and biting habits of anopheline mosquitoes in DDT-treated and -untreated buildings. C. M. Tarzwell and F. W. Fisk. Pub Health Rep 62:84-94 Ja 17 '47

MOSS, Sanford Alexander, 1872-1946
Sketch. por Aeronautical Eng R 5:16+ D '46
Tribute. Mech Eng 68:1027 D '46

MOTHPROOFING preparations
Cloth treatment; preventing moth damage by impregnating with DDT. il Mech Eng 69:153-4 F '47; Excerpt. Chem Ind 60:224, 252 F '47
DDT moth control process; Erustomoth. il Chem & Eng N 25:384 F 10 '47
Mothproofing with DDT during drycleaning. A. C. Smith. il diags Soap & San Chem 23:122-5 My '47
New chemical weapons spell doom for moths. G. A. Mail. il Chem Ind 60:790-2 My '47
New mothproofing larvicide; mixture of hexachlorethane with paradichlorobenzene, or with naphthalene. N. M. Molnar. Soap & San Chem 23:143+ Jl '47

MOTHS
Clothes moth control; abstract. D. L. Collins and R. D. Glasgow. Soap & San Chem 22: 161 D '46
Five advantages of acetate moth suffocator; vacuum cleaner attachment. il Mod Plastics 24:101 Ag '47
New chemical weapons spell doom for moths. G. A. Mail. il Chem Ind 60:790-2 My '47

MOTION
Non-linear invariants and the problem of motion. C. Gregory. Phys R 72:72-5 Jl 1 '47

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Acceleration
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MOTION picture research council
Succeeds former Research council of the Academy of motion picture arts and sciences. Soc Motion Picture Eng J 49:389 O '47

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MOTION study
Cases in work simplification; eight photographed improvements at Tonawanda. R. L. Dustman and D. R. Bell. Factory Management 105:97-9 S '47
Time and motion study in the chemical process industries. H. Rossmoore and R. S. Aries. bibliog diags Chem & Eng N 25: 3142-4 O 27 '47
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Time study

MOTOR boat insurance. See Insurance, Motor boat

MOTOR boat service stations
Profits-in-boats plan swells ranks of Socony marine dealers. E. Kinney. il Sales Management 59:44-6 Jl 15 '47

MOTOR boats
Airscrew propelled motor boats. il Engineer 183:402 My 9 '47
Copper sulphate distributing craft. S. S. Anthony. il Water & Sewage Works 94:343-4 S '47
Welded steel fishing boat by Welin. il Marine Eng 52:106+ F '47
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New products disclosed by boat and engine manufacturers. Automotive & Aviation Ind 96:56+ F 1 '47

MOTOR bus associations

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Index of bus associations, U.S. and Canada. Bus Transportation 26:97-9 Ja '47

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Bus driver in position to sell merits of bus travel. Bus Transportation 26:99 O '47
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Incentive pay program for Nueces bus drivers. R. McDaniel. Mass Transportation 42: 502-4 N '46
Which driver for the job? A. E. Neyhart. bibliog il diags S A E J 54:21-7+ N '46
Why is traffic toll 40% higher than last year. E. C. Houghton. Mass Transportation 42: 494-9 N '46

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Trojan 65, new British engine. diags Automotive & Aviation Ind 96:27 Ap 15 '47
Twin engine power plant has several advantages. diag Product Eng 18:100 Ja '47

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American gasoline engines; tabulation. Automotive & Aviation Ind 96:146-55 Mr 15 '47
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1947 motor bus engine specifications; tabulation. Bus Transportation 26:104-5 Ja '47

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1946 U.S. exports of new trucks, buses and chassis by tonnage rating and continental divisions; tabulation. Automotive & Aviation Ind 96:114 Mr 15 '47
92 million motor vehicles produced in 47 years; tabulation. Automotive & Aviation Ind 96:81 Mr 15 '47

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Buffalo gets new buses and everyone in town knows it. il Bus Transportation 26: 53-5 Mr '47

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Should he be hired? Los Angeles transit lines applies psychological tests to prospective employees. il Bus Transportation 26:60-2 O '47
Some effects of the Taft-Hartley act on the bus and transit industry. P. B. Willauer. Bus Transportation 26:56-9 O '47
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Wage trends in the bus operating industry. Bus Transportation 25:71 N '46

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Buyers' guide; bus parts, materials, accessories, shop equipment and tools. Bus Transportation 26:207-21+ Je '47

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Bus rate probe. Bsns W p26+ N 30 '46
Interstate commerce commission opens bus fare investigation. F. Kane. Bus Transportation 26:54-6 S '47
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Post war maintenance. E. B. Richardson. S A E J 54:68 D '46
Reclamation work cuts repair cost; abstract. W. W. Kunz. S A E J 55:60 S '47
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Motor bus lines
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Springs and suspension

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Problems in commercial vehicle suspensions and their elimination by torsion bars. N. E. Bateson. diags S A E J 55:32-4+ Ag '47; Abstract and discussion. Iron Age 159:110-12 My 1 '47

Rubber torsilastic suspension system. F. R. Fageol. il S A E J 55:56-8 Je '47; Same. Automobile Eng 37:347-9 S '47

Standards

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Ten years' experience with automotive transmissions in the bus field; abstract. O. H. Banker. S A E J 55:70 Ja '47

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New small engine design; two-stroke single cylinder equipped with floatless carburetor. diags Automotive & Aviation Ind 96:35 Ap 15 '47

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Motorship Esso Nicaragua. il Marine Eng 51: 120+ N '46
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Standard European motorships. il Marine Eng 52:89-91 Ap '47
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MOTOR truck drivers
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Fleet operator's safety record boosts sales and employee morale; Mistletoe express co. H. H. Goff. il Safety Eng 93:22-3+ My '47
For arbitration; trucking commission, now in Labor dept. settles disputes. Bsns W p74+ Mr 1 '47
Proper selection, training of drivers are profit factors in operation of trucks. H. Ridder. Nat Pet N 39:34+ Je 11 '47
Training truck drivers as LP-gas profit makers; abstract. F. N. Havens. Nat Pet N 39:26-7+ O 8 '47
Union wages and hours in the printing, trucking, local transit, and baking industries, 1946. J. P. Corkery and H. M. Abowitz. Mo Labor R 64:444-53 Mr '47
Which driver for the job? A. E. Neyhart. bibliog il diags S A E J 54:21-7+ N '46

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Milk delivery

MOTOR truck engines
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Gasoline injection truck engine converted from a Diesel; developed by J. I. Thornycroft and co. il diags Automotive Ind 97: 38-40+ O 1 '47
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Leyland heavy vehicles. il diags Automobile Eng 37:119-23 Ap '47
Trojan 15-cwt van. il diags Automobile Eng 37:357-61 O '47
Trojan 25-cwt. commercial vehicle. Engineering 162:415 N 1 '46

Bearings

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Petrol injection; 7.88-litre Thornycroft engine. il diags Automobile Eng 37:81-8 Mr '47

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Variable-speed hydraulic governor. J. Z. Bujak. il diags Inst Mech Eng J & Proc 153 (War emergency issue no 7):193-203; Discussion. 204-5 '45

Lubrication

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Temperature

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Testing

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Ventilating an engine room. P. R. Jordan. diags Sheet Metal Worker 38:42+ My '47

Valves

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Civilian trailer production, 1939-1941 and 1944; truck trailer production, 1942-1945, civilian and military; tabulations. Automotive & Aviation Ind 96:87 Mr 15 '47
Motor vehicle production in Canada, 1921-1946; Canadian motor vehicle registrations, 1941-1945; tabulations. Automotive & Aviation Ind 96:83 Mr 15 '47
1946 motor-vehicle factory sales to domestic and foreign markets; tabulation. Automotive & Aviation Ind 96:82 Mr 15 '47
1946 truck trailer production, by type and by months; tabulation. Automotive & Aviation Ind 96:86 Mr 15 '47
1946 U.S. exports of new trucks, buses and chassis by tonnage rating and continental divisions; tabulation. Automotive & Aviation Ind 96:114 Mr 15 '47
92 million motor vehicles produced in 47 years; tabulation. Automotive & Aviation Ind 96:81 Mr 15 '47
Passenger car and truck production by months, 1934-1946; tabulations. Automotive & Aviation Ind 96:86 Mr 15 '47
Truck production by capacities, 1936-1945; 1946 factory sales by gross vehicle weights; tabulations. Automotive & Aviation Ind 96:85 Mr 15 '47
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12-year record of new truck sales, by makes, 1932-1946; tabulation. Automotive & Aviation Ind 96:110 Mr 15 '47

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MOTOR truck service stations
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Bigger trucks cut meat delivery costs. il map Food Ind 18:1877-8 D '46
Butane-powered trucks in production at International's California plant. H. Ridder. Nat Pet N 39:41 Ja 22 '47
Chevrolet introduces postwar truck model. W. G. Patton. il Iron Age 159:70+ Je 26 '47
Chevrolet's new trucks. il diags Automotive & Aviation Ind 96:33-5+ Je 15 '47
Dallas builds own garbage trucks. il Eng N 138:45-6 Ja 9 '47
Details of front drive, torsion bar suspension and stressed body frame on Linn delivery coach. il Automotive & Aviation Ind 96:44 F 1 '47
Federal adds five truck models. il Automotive Ind 97:27+ Jl 15 '47
GMC announces line of eight Diesel-powered models. il Automotive Ind 97:24-7+ Jl 1 '47
Haulage of air-entrained concrete. J. W. Shaver. il diags Concrete 55:8-11+ Je; 10-13 Jl '47
Leyland heavy vehicles. il diags Automobile Eng 37:119-28 Ap '47
Light and medium duty line of trucks introduced by GMC. il Automotive Ind 97:38-9+ Jl 15 '47
Motor vehicle outlook. E. W. Jahn. Am Gas Assn Proc 1946:380-2; Same. Am Gas Assn Mo 29:25-6 Ja '47; Discussion. Am Gas Assn Proc 1946:382-4
New Federal six-wheel trucks. il Automotive & Aviation Ind 96:26-7+ Mr 1 '47
Paris automobile show; exhibits in the commercial vehicle section. il diag Automobile Eng 36:563-72 D '46
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S.A.E. National transportation and maintenance meeting, Chicago, Oct. 16-17. S A E J 54:56-8 D '46
SAE National transportation meeting, Chicago, April 16-18. S A E J 55:21-4 Je '47
SAE National west coast transportation and maintenance meeting, Los Angeles, Aug. 21-22. S A E J 55:17-20+ O '47
Sohio expands dry-cargo truck fleet. F. C. Sturtevant. il Nat Pet N 39:22-3+ Ag 6 '47
Telehoist tipping gear for heavy vehicles. il Automobile Eng 36:505 N '46
Textiles move on wheels; American yarn processing co.'s motor division. C. M. Bowden. il Textile World 97:131+ F '47
Transporting concrete in dump-trucks. J. A. Nicholson. il Eng N 138:201-3 F 6 '47
Trucks restyled; I.H.C. shows its postwar models. il Bsns W p40+ Ja 18 '47
Willys-Overland introduces new jeep truck. il diag Automotive & Aviation Ind 96:34-5 My 15 '47

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Electric trucks
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Accounting

Cost control for motor carrier operations. A. C. Kahl. N A C A Bul 29:213-22 O 15 '47
Cost keeping, a barometer of expense for truck operators. H. Ridder. Nat Pet N 39: 26-7+ My 28 '47
Delivery costs by the case; system devised by bottlers' association. Food Ind 19:476-7 Ap '47

Axles

Bantam tandem axle model features intra-axle torque tube. il Automotive Ind 97:41 Jl 15 '47
Two-speed rear axles; Eaton double reduction designs embodying epicyclic gears. diags Automobile Eng 37:335-6 S '47

Bodies

Aluminum and magnesium in highway transportation bodies; abstract. J. H. Dunn. S A E J 55:67 Mr '47
Fruehauf enters truck body field. il Automotive Ind 97:41+ Ag 1 '47
Light weight bodies of aluminum for trucks; abstract. F. O. Lewis. il S A E J 55:59 O '47
Motor haulage bodies of stainless steel. V. M. Drew. S A E J 55:24-6 Mr '47
Prefabricated shapes for magnesium truck bodies. diags Automotive Ind 97:31 S 15 '47

MOTOR trucks—Bodies—*Continued*
Standardization of truck bodies. S. F. Gale. plans Am Gas Assn Proc 1946:343-7; Same. Gas Age 97:17-19+ Ap 18 '46; Abstract. il Am Gas J 164:50 My '46
Steel truck body members standardized for mass production. N. E. Cole. il plans Steel 120:96-9+ My 5 '47
Truck bodies, dealer-made. il Bsns W p20 Jl 19 '47

Brakes

See Brakes, Motor truck

Chassis

Albion CX.1 goods chassis. il diags Automobile Eng 37:279-86 Ag '47
Trojan 15-cwt van. il diags Automobile Eng 37:357-63 O '47
What size truck chassis for ready mix haulage? abstract. H. F. Thomson. Rock Prod 50:210 Ag '47

Clutches

Ransom drive system designed to improve efficiency of multiple wheel drive vehicles. il diags Automotive Ind 97:24-6 S 15 '47

Cost of operation

See also
Motor trucks—Accounting

Design

Commercial vehicles. V. W. Pilkington. Automobile Eng 36:487-91 N '46
Elimination of causes of frequent servicing; operator's viewpoint. T. L. Preble. S A E J 55:43-7 Ag '47
Seating and other aspects of the driver's environment. A. E. Neyhart and C. G. Seashore. S A E J 55:37-9 S '47
Users examine truck design; symposium. S A E J 54:60-2 N '46

Electric equipment

Useful speed-time analyser; used in design of dynamos and other auxiliary equipment on automobiles. il diags Engineer 184:316-17 O 3 '47; Elec R (Lond) 141:450 S 19 '47

Equipment

New hydraulic applications for tomorrow's automotive designs. M. A. Hayden. il S A E J 55:42-3+ S '47
Truck stretchers; equipment makers doing record business. il Bsns W p47-8 S 13 '47

Factory use

See Motor trucks, Industrial

Heating

Advanced type of temperature control for buses and trucks. diags Automotive & Aviation Ind 96:40+ F 1 '47

Laws and regulations

Nine states are added to the list of those permitting the use of tandem-axle trailers.. Nat Pet N 38:48+ N 6 '46
Oil marketing trucking may be upset by ICC ruling; involves status of private carriers. D. L. Harbour. Nat Pet N 39:9-10 Mr 19 '47
Private, for-hire carriers tangle on ICC jurisdiction. D. L. Harbour. Nat Pet N 39:11-12 Mr 12 '47
Private truckers say ICC rule would eliminate them. Nat Pet N 39:9 Ap 9 '47
State length limits of tractor-semi-trailer units; table. Arch Rec 102:151 O '47

Length of service

Trucks in use by makes, by states and year of manufacture; tabulation. Automotive & Aviation Ind 96:100-7, 115 Mr 15 '47

Lubrication

Fleet lubrication. J. M. Sills. S A E J 55:67-8 Je '47

Maintenance and repair

Care of power tools and equipment. D. M. Van Norman. Am Water Works Assn J 39:515-19 Je '47
Chrome plating to reduce wear; survey of fleet operators' experience. H. O. Mathews. S A E J 55:33-5 O '47
Elimination of causes of frequent servicing; operator's viewpoint. T. L. Preble. S A E J 55:43-7 Ag '47
Fitting the motor equipment to the job insures efficient, low cost operation. H. Ridder. Nat Pet N 39:30-1+ My 21 '47
Maintenance of heavy-duty Diesel trucks on highways. H. E. Larson. S A E J 55:53-4 Ap '47
Training of maintenance supervisors; motor vehicle maintenance. C. G. Seashore. Am Gas Assn Proc 1946:337-40

Management

Program of training courses set up for fleet owners and supervisors. Nat Pet N 39:38 F 19 '47

Manufacture

Advanced methods in heavy duty truck building; Autocar co. J. Geschelin. il Automotive & Aviation Ind 96:30-3+ Ap 15 '47
After 19 years, Ford trucks return to Highland Park plant. Automotive & Aviation Ind 96:52 Mr 1 '47
Ford using Willow Run production control methods at Highland Park truck plant. W. G. Patton. Iron Age 159:72+ F 20 '47
General motors corporation; new plant for Truck & coach division at Pontiac, Mich. il Factory Management 105:B63-5 pt 2 Ap '47
Mechanical backs bear the burdens; production of heavy Autocar trucks demands ingenious handling aids. H. S. Wharen. il diags Am Mach 91:97-9 My 22 '47
New mechanical handling systems speed truck assembly; Ford truck plant; illustrations with text. Automotive & Aviation Ind 96: 38-9 Ap 1 '47
Unit-load handling protects products; Mack manufacturing corporation; illustrations with text. E. R. Klein. Am Mach 91:92-4 Ag 28 '47
Visual layout previews production; Ford Highland Park plant. H. S. Wharen. il plans diags Am Mach 91:113-16 Ag 14 '47

Noise

Practical approach to satisfactory acoustical design of automotive trucks. C. W. Thomas and B. G. Radin. il diags S A E J 55:43-5 Jl '47

Painting

Metal treatments prior to painting. V. M Darsey. il S A E J 55:57-8 S '47

Prices

International establishes new truck pricing policy. il Automotive & Aviation Ind 96: 18-19+ F 1 '47

Safety measures

Energy dissipators valuable adjunct to wheel brakes for safe transportation of motor freight. il diag Machine Design 19:105-6 Ag '47
Fleet operator's safety record boosts sales and employee morale; Mistletoe express co. H. H. Goff. il Safety Eng 93:22-3+ My '47

Size

22 state legislatures approve legislation liberalizing truck size, weight regulations. Nat Pet N 39:43-4 Jl 2 '47

Specifications

Truck specifications table. Automotive & Aviation Ind 96:128-33 Mr 15 '47

Speed

Truck speed and time loss on grades. J. W. Stevens. Am Soc C E Proc 72:919-38 S '46; Discussion. diag 72:1411-12 D '46

Springs and suspension

Problems in commercial-vehicle suspensions and their elimination by torsion bars; abstract and discussion. N. E. Bateson. Iron Age 159:110-12 My 1 '47
Processing torsion bars with special equipment; Fruehauf trailer co. il Automotive & Aviation Ind 96:52+ Je 15 '47
Torsion bar suspension; application on a trailer bogie. diags Automobile Eng 37:174 My '47

MOTOR trucks—*Continued*

Taxation

Excess-profits tax relief; United States Tax court decision in trucking case. R. Ash. Bus Transportation 25:65 N '46

Transmission

Modern methods of cutting truck transmission gears. il Mach 53:160-2 Ag '47

Transportation

LST's converted to trailerships for transporting loaded trucks and trailers. il Marine Eng 52:76-8 Ag '47

Weight

Heavy trucking grows despite legal limits. R. C. Norrie. S A E J 55:96-7 My '47

Light-weight trucks increase pay load. Civil Eng 17:140 Mr '47

22 state legislatures approve legislation liberalizing truck size, weight regulations. Nat Pet N 39:43-4 Jl 2 '47

Wheels

See also
Tire rims

MOTOR trucks, Amphibious

Tyre pressure control whilst running; amphibian vehicle. diags Engineer 182:108-9 Ag 2 '46; il Engineering 162:296-8 S 27 '46; Automobile Eng 36:441-2 O '46; Mech Eng 68:1074-5 D '46; Discussion. S. E. Opperman. Engineering 162:352 O 11 '46

MOTOR trucks, Industrial

Car-repair automotive equipment. il Ry Mech Eng 120:624-6 N '46

Coventry Climax fork truck. il Mech Handling 33:650 O '46

Demand for industrial trucks brisk. V. Bell. Steel 121:57-8 S 29 '47

Developments in high-lift trucks. F. H. Slade. diags Mech Handling 34:15-21 Ja '47

Douglas one ton high-lift truck. il diags Mech Handling 33:581-3, 645-6 S-O '46; Abstract. Engineering 162:405 O 25 '46

Fork lift truck sets 20,000 more brick daily; reduces setter crew from 8 to 2; United brick and tile co. W. C. Francis. il Brick & Clay Rec 110:52-4 Ap '47

Getting the best from equipment. H. E. Stocker. Mech Handling 34:454 S '47

Handling organized for mass production; Kaiser-Frazer corp. E. M. Argersinger. il Am Mach 91:98-100 O 23 '47

Lansing Bagnall petrol or electric 10/12 cwt platform truck. il Mech Handling 34:439-40 Ag '47

Lift trucks and crane handle all pipe sizes at Cannelton plant. il Brick & Clay Rec 110: 52+ Ja '47

Like a super-man on your payroll; Ross lift truck in construction. H. E. Getman. il Brick & Clay Rec 110:33-4 Ja '47

Material handling; fork truck and pallet system. D. C. Ling. il diags Automobile Eng 37:213-20, 239-47, 287-91 Je-Ag '47

Materials handling. il Factory Management 104:162+ S; 166+ O '46

Merlift fork lift trucks. il Mech Handling 33:711 N '46

Modern materials handling; a way to reduce costs. il Sheet Metal Worker 38:43-5 My '47

One plant off and one plant on; applications of the Towmotor in TWA's Kansas City overhaul base; illustrations with text. Air Transport 5:53-4 Ja '47

Planning avoids unnecessary handling; palletized loading of railway material and commercial freight. G. A. Goerner. il Ry Age 122:316-18 F 8 '47

Science of material handling. M. A. Goodwin. Paper Ind 29:432-3 Je '47; Same abr. Paper Tr J 124:36+ Je 5 '47

Stockport fork-lift industrial truck. il diags Engineering 162:559-60 D 13 '46; flow diag Mech Handling 33:717-19 N '46

Stores lead in mechanizing operations: Illinois central railroad. J. W. Cockrill. il Ry Age 122:1256-8 Je 21 '47

Unit-handling of steamship freight. il map Mech Handling 34:429-35 Ag '47

See also
Electric trucks, Industrial
Tractors, Industrial

Lubrication

54,000 lubrication points serviced on time schedule; Pettibone Mulliken corporation. K. D. Hartman. il Factory Management 104:114-17 D '46

Safety measures

Hoists and trucks add power to manpower. Nat Safety N 55:108 Mr '47

Safe operation of motorized materials-handling equipment. Safety Eng 92:56 O '46

Tiering trucks

Higher tiering features new Clark Carloader. il Concrete 55:29 O '47

Palletizing permits stockpiling for quick shipment; Thomas fertilizer. H. V. Lehn. il Factory Management 105:82-3 S '47

MOTOR trucks and roads

Median deflector for sharp curves; protection for trucks on Ridge route, between Los Angeles and San Joaquin valley. il plan diags Eng N 139:36-7 Jl 10 '47

Should roads be classified according to loads? J. G. Cameron. il Roads & Bridges 85:107+ Mr '47

Traffic trends on rural roads in 1945. T. B. Dimmick. map Pub Roads 24:268-74 O '46

Truck speed and time loss on grades. J. W. Stevens. Am Soc C E Proc 72:919-38 S '46; Discussion. diag 72:1411-12; 73:385-6 D '46, Mr '47

MOTOR trucks in agriculture

Cars, trucks and tractors on farms, by states; 1945 compared with 1940; tabulation. Automotive & Aviation Ind 96:108 Mr 15 '47

Twenty-five years of farm truck ownership; with tabulation. C. D. Bohannan. Pub Roads 24:312-14 Ap '47

MOTOR trucks in freight service

Air short hauls can compete with surface. R. H. Rush. il Air Transport 5:45-9 F '47

Best source book on motor transport; A.A.R. report. Ry Age 123:365-6 Ag 30 '47

Economic aspects of bus and truck transportation. J. Magee. Roads & Bridges 85: 125-6+ S '47

Food trucks keep loads at below zero temperatures. il Food Ind 19:1372-3 O '47

Freezer trucks hold foods at zero; Pacific intermountain express. il map diags Food Ind 19:628-9 My '47

Inside story of the East Texas case. W. T. Durant. J Account 82:460-9 D '46

New trucks mean increased profits; abstract. F. H. Atkins. Nat Pet N 39:28 My 7 '47

Oil marketing trucking may be upset by ICC ruling; involves status of private carriers. D. L. Harbour. Nat Pet N 39:9-10 Mr 19 '47

Oklahoma Express operates air freight pick-up service; Mistletoe-Braniff combine. il Manuf Rec 115:35+ N '46

Private, for-hire carriers tangle on ICC jurisdiction. D. L. Harbour. Nat Pet N 39:11-12 Mr 12 '47

Private truckers say ICC rule would eliminate them. Nat Pet N 39:9 Ap 9 '47

Shaw Transfer's Diesels. il Diesel Power 25: 98+ Je '47

Transportation of petroleum by for-hire motor carriers. S. F. Niness. Am Pet Inst Proc 26(5):16-19 '46

Truckloadings' volume for full year 1946 second only to war-time record set in 1943. Comm & Fin Chr 165:1291 Mr 6 '47

See also
Highway transportation
Keeshin freight lines
Motor trucks—Laws and regulations
Railroads—Motor vehicle auxiliaries

Rates

Would end forwarder pacts with truckers; I.C.C. examiners recommend that joint-rate arrangements be condemned. Ry Age 123: 579-80 O 4 '47

MOTOR trucks in mining

Diesel truck haulage at the Paxson mine; solving exhaust gas problem. S. S. Clarke. il Eng & Min J 148:54-6 Mr '47

MOTOR trucks in mining—*Continued*
Survey of mining practice. A. H. Hubbell. Eng & Min J 148:72-5 My '47
Truck haulage, Castle Dome open pit. B. R. Coil. il plan Min Cong J 33:50-4 Mr '47

MOTOR trucks in repair service
Store and tool rooms on wheels save time and paper work in refinery turnarounds. il Pet Processing 2:577 Ag '47
Stores trailer speeds maintenance work. il Pet Eng 18:86 Jl '47
Utility trucks are traveling workshops. F. Sanford. il diags Elec World 128:75-86 Jl 5 '47

MOTOR trucks in selling
Ozalid puts its sales offices on wheels. il Am Bsns 17:21 S '47

MOTOR trucks in the petroleum industry
How to make trucking operations pay. R. Swoape and R. J. Green. il Pet Eng 18:59-60 S '47

MOTOR trucks on rails
Coal handling equipment travels road or rail. il Elec World 127:96 Mr 29 '47
Evans postwar auto-railers. il Automotive & Aviation Ind 95:44 N 15 '46
Improved design of Evans auto-railer. il Ry Mech Eng 120:633 N '46

MOTOR vehicles
Jeep refueler speedy and economical. il Aviation 46:97 Je '47
Jeeps aid in laying pipe line. N. T. Regan. il Gas Age 98:25-6+ N 14 '46
Rubber-tired hauling equipment for off-the-highway service. H. L. Rittenhouse. S A E J 55:40-1 S '47

See also
Automobiles
Diesel engines, Automotive
Electric trucks
Highway transportation
Motor buses
Motor cars (railroad)
Motor trucks
Railroads—Motor vehicle auxiliaries
Taxicabs
Tractors
Trailers
Trolley buses

Law

Gasoline taxes, antidiversion bills head proposals in state legislatures. D. E. Button. Nat Pet N 39:35+ F 5 '47
1946 highway legislation in review. Roads & Sts 90:89-90 Ja '47

See also
Automobile laws and regulations
Motor bus lines—Laws and regulations
Motor trucks—Laws and regulations

Statistics

Cars in use by makes, states and year of manufacture; tabulation. Automotive & Aviation Ind 96:92-9 Mr 15 '47
Cars, trucks and tractors on farms, by states; 1945 compared with 1940; tabulation. Automotive & Aviation Ind 96:108 Mr 15 '47
Comparison of private and commercial motor vehicle registrations, 1945-1946; tabulated by states. Nat Pet N 39:52 My 21 '47
Estimate shows automobile and truck registrations rise in 1946; tabulation. Nat Pet N 39:30 Ja 1 '47
1946 motor vehicle factory sales; tabulations. Automotive & Aviation Ind 95:54 D 15 '46
1946 motor-vehicle registrations increase 3,106,000 over 1945; tabulation by states. Automotive & Aviation Ind 96:88-9 Mr 15 '47
1946 registrations up 2,854,000 over 1945. M. Ainsworth. Automotive & Aviation Ind 95: 45+ N 15 '46
Total registration soars due to low scrappage. M. Ainsworth. Automotive Ind 97:43+ O 15 '47
Total U.S. motor vehicle registrations by years, 1897-1946; tabulation and chart. Automotive & Aviation Ind 96:90 Mr 15 '47
Trends in motor-vehicle travel, 1936 to 1945. G. P. St Clair. Pub Roads 24:261-7 O '46
Trucks and buses registered in U.S.; tabulated by states. Nat Pet N 39:55 Je 4 '47
Trucks in use by makes, by states and year of manufacture; tabulation. Automotive & Aviation Ind 96:100-7, 115 Mr 15 '47
World registrations by continental divisions and countries; tabulations. Automotive & Aviation Ind 96:91 Mr 15 '47

Taxation

Motor taxation again. H. S. Rowell. Engineering 164:87-8, 112-13 Jl 25-Ag 1 '47

Track layer type

Crawler tracks, their lubrication and maintenance. K. L. Hollister and E. V. Albert. il diags Roads & Sts 90:94-8 Jl '47; Same cond. Eng & Min J 148:97-8 Ag '47
Traction as influenced by soils and their condition. W. A. Gross, jr. and A. D. Elliott. il diags S A E J 54:26-8 D '46

MOTOR vehicles, Military
General Motors two-cycle Diesel engines for ordnance vehicles. F. G. Shoemaker. il diags A S M E Trans 69:11-20 Ja '47
Scammell military vehicles. il diags Automobile Eng 37:159-68, 199-205 My-Je '47
Traction as influenced by soils and their condition. W. A. Gross, jr. and A. D. Elliott. il diags S A E J 54:26-8 D '46

Lubrication

High-speed testing of rear axles. C. E. Zwahl. S A E J 54:51; Discussion. H. R. Wolf. 51+ D '46
How army's universal gear oil specification was developed. P. V. Keyser. S A E J 54: 49-50; Discussion. H. R. Wolf. 51+ D '46
Low-speed, high-torque testing of gear lubricants. A. O. Willey. S A E J 54:50-1; Discussion. H. R. Wolf. 51+ D '46

Springs and suspension

Torsion bar springs; steel specifications, tests, treatment, etc. diags Metal Prog 51: 771-4 My '47

Testing

1000 hp, 45 mph truck dynamometer. il Automotive & Aviation Ind 95:44 N 15 '46

MOTORS. See Airplane engines; Automobile engines; Internal combustion engines; Motor bus engines; Motor truck engines

MOTORS, Electric. See Electric motors

MOTORSHIPS. See Motor ships

MOTZU
Philosopher of change. N. T. Johnson. Fortune 36:38+ Jl '47

MOULDINGS. See Moldings (architecture)

MOUNTAIN railroads
Diesel locomotives on Pikes Peak. il Ry Age 123:570+ O 4 '47
14,000 ft. up and going strong; Diesel-electric locomotive on the Pikes Peak cog railway. H. Walker. il Diesel Power 25:50-2 Ag '47
Railway to the sky with Diesel; Manitou & Pike's Peak railway. C. L. Brum. il Diesel Power 25:61-2+ F '47

MOUNTAIN roads
Arizona relocates a mountain highway. il diags Eng N 139:134-6 Jl 24 '47
Corrugated plate pipe culvert carries 61 ft. of fill; U.S. 40, in Colorado. il Roads & Sts 90:92 Ja '47
Road repairs in the clouds; Pike's Peak auto road. il Roads & Sts 89:76-7+ D '46
Snoqualmie tunnel plan provides low-level route through Cascade mountains. O. Singstad. il map diag Civil Eng 17:122-5+ Mr '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway. H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47
Two mile tunnel in Snoqualmie Pass proposed for Cascade Mountain road. map Eng N 138:255 F 20 '47; Discussion. H. M. Hadley. 138:580 Ap 17 '47

MOUNTAIN states power company
Stock offered. Comm & Fin Chr 165:1457-8 Mr 17 '47

MOUNTAINS
Elements of diastrophic history of northeastern Venezuela. C. G. de Juana. bibliog map Geol Soc Bul 58:689-701 Ag '47
Geosynclines; a fundamental concept in geology. M. F. Glaessner and C. Teichert. Am J Sci 245:465-82, 571-91 bibliog(p589-91) Ag-S '47

See also
Andes mountains
Paricutin
Rocky mountains
Sierra Nevada
Volcanoes

MOUNTING of machinery. See Machinery—Mounting

MOUTH

See also
Saliva

MOUTH organ. See Harmonica

MOUTHWASHES
Oral hygiene preparations sales show broad advances. M. D. Hall. Dom Comm 35:56-9 Je '47

MOVING boundary, Theory of
Moving boundary method for the measurement of non-electrolyte transport in mixed solvents. L. G. Longsworth. bibliog Am Chem Soc J 69:1288-91 Je '47
Quantitative interpretation of the electrophoretic patterns of proteins. L. G. Longsworth. bibliog J Phys & Colloid Chem 51: 171-83 Ja '47

MOVING boundary methods. See Ionization, Electrolytic—Study and teaching

MOVING of structures
Big tower towed from Jersey to Missouri. il map Pet Eng 18:51-4 Mr '47; Nat Pet N 39:31 Ap 16 '47
Mass house-moving cuts cost of urban right-of-way; problems solved by Indiana state highway department. il Eng N 139:38-9 Jl 10 '47
Move houses by rail to clear strip area; Jeddo-Highland coal co. il Coal Age 52:98-100 S '47
Moving the Bristol Brabazon I to assembly hall. il plan Engineer 184:363-4 O 17 '47
Shipyard hydraulic gantry; moving to new site. D. Rebbeck. il Mech Handling 33:733-7 D '46

See also
Bridge moving

MOVING picture actors
Glamor for safety; campaign by Motion picture and radio committee of the National safety council. Nat Safety N 56:24-5+ Jl '47
Screen actors will fight forced personal ads. Ptr Ink 218:106 Ja 17 '47

See also
Crosby, Bing

MOVING picture cameras
Fastax, tool for industry. il Product Eng 18:158 F '47
Kodachrome motion pictures of the human air and food passages. P. H. Holinger and J. D. Brubaker. il diags Soc Motion Picture Eng J 49:248-61 S '47
New series of camera lenses for 16-mm cinematography. W. B. Rayton. diags Soc Motion Picture Eng J 48:211-14; Discussion. 214-16 Mr '47
New 16-mm professional camera. F. F. Baker. il Soc Motion Picture Eng J 48:157-62 F '47
Optical problems of the image formation in high-speed motion picture cameras. J. Kudar. Soc Motion Picture Eng J 47:400-2 N '46
Photographing things to come; future AAF requirements for motion picture equipment to meet extremes of altitude and speed. M. W. Warren. Soc Motion Picture Eng J 49:82-8 Jl '47
Photometric calibration of lenses. R. Kingslake and others. bibliog il diags Soc Motion Picture Eng J 49:95-139 Ag '47
Physical properties and the practical application of the Zoomar lens. F. G. Back. il diags Soc Motion Picture Eng J 49:57-63 Jl '47
Special cameras and flash lamps for high-speed underwater photography. R. T. Knapp. il diags Soc Motion Picture Eng J 49:64-82 Jl '47
200,000 picture-a-camera. Product Eng 18:155 My '47
Zoom lens for motion picture cameras with single-barrel linear movement. F. G. Back. il diags Soc Motion Picture Eng J 47:464-8 D '46

Rating
Amateur motion picture equipment. il Consumers Res Bul 18:24-5 D '46
Motion picture equipment. il Consumers Res Bul 20:8-10 S '47; Correction. 21:13 Ja '48

MOVING picture film collections
Celluloid circus: a film about a film library. C. Dean. Assn of Sp Lib & Inf Bur Proc 1946:103-11
Preservation and postwar utilization of U.S. navy combat film. G. L. Sarchet. Soc Motion Picture Eng J 48:476-80 My '47
Specifications on motion picture film for permanent records. J. G. Bradley. Soc Motion Picture Eng J 48:167-8; Discussion. 168-70 F '47

MOVING picture films
Catalog of test films. Soc Motion Picture Eng J 49:162-70 Ag '47
Current black-and-white duplicating techniques used in Hollywood. N. L. Simmons and E. Huse. Soc Motion Picture Eng J 49:316-33 O '47
Development of an invisible 16-mm film splice. E. Baumert and J. V. Noble. il diag Soc Motion Picture Eng J 48:231-5; Discussion. 235-7 Mr '47
Motion picture film. Consumers Res Bul 20:24 Jl '47
New motion picture film splicer. I. I. Merkur. il Soc Motion Picture Eng J 48:238-42 Mr '47
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47
Photoelectric film cuing system. I. A. Moon. il diags Soc Motion Picture Eng J 49:364-71 O '47
Processing control sensitometer. G. A. Johnson. il diags Soc Motion Picture Eng J 47: 474-81 D '46
Processing of two-color prints by deep-tank methods. J. G. Stott. bibliog il Soc Motion Picture Eng J 49:306-15 O '47
Projection life of 16-mm film. C. F. Vilbrandt. il diags Soc Motion Picture Eng J 48:521-42 Je '47
Proposed standard for 35-mm flutter test films. Soc Motion Picture Eng J 49:160-1 Ag '47
Sensitometric control of the duping process. J. P. Weiss. il Soc Motion Picture Eng J 47: 443-9 D '46
Specifications on motion picture film for permanent records. J. G. Bradley. Soc Motion Picture Eng J 48:167-8; Discussion. 168-70 F '47
Studio production with two-color bipack motion picture film. J. W. Boyle and B. Berg. Soc Motion Picture Eng J 48:111-15 F '47

Reels
Projection reel of improved design. E. S. Miller. il Soc Motion Picture Eng J 48:261-8 Mr '47
Proposed film lock and identification band. G. Schwartz. il Soc Motion Picture Eng J 48:473-5; Discussion. 475 My '47

Standards
Proposed standard for 35-mm flutter test films. Soc Motion Picture Eng J 49:160-1 Ag '47
Recent American standards on motion pictures. diags Soc Motion Picture Eng J 49: 171-80 Ag '47

MOVING picture industry
Boxoffice pinch; theater owners may have to pay higher film rentals. Bsns W p62+ O 4 '47
Chain of flops; film exchanges. Fortune 36:144 O '47
Determining role of research in the future of the motion picture. B. Price. Soc Motion Picture Eng J 48:70-2 Ja '47
Motion pictures; prospects for 1947. N. D. Golden. Dom Comm 35:54-6 Ja '47
Movie jitters; foreign business is slipping away. Bsns W p70+ My 10 '47
Movie makers want some reciprocal trade. H. Davenport. Barron's 27:5 Mr 10 '47
Outlook for motion picture industry. P. Raibourn. Comm & Fin Chr 165:864+ F 13 '47
Report of the SMPE committee on progress. W. V. Wolfe. Soc Motion Picture Eng J 48:304-16 Ap '47

Advertising
Why Hollywood is doing more and better advertising; increased production costs and federal rulings against block-booking. L. F. Thomann. il Ptr Ink 219:38-9 Je 20 '47

MOVING picture industry—*Continued*

Directories

1946-47 international motion picture almanac. T. Ramsaye, ed. 1024p $3.25 Quigley pub. co, 1270 6th av, New York 20 '46

Employees

Makeup men sue. Bsns W p 108 Je 7 '47
Melodrama in movie strike. Bsns W p85 N 9 '46
Soundman. G. R. Groves. bibliog Soc Motion Picture Eng J 48:220-9; Discussion. 229-30 Mr '47

Finance

British tax trims Hollywood sails. S. B. Self. Barron's 27:9 S 1 '47
Earnings slash ahead? effect of new 75 per cent British tax. Bsns W p 15, 103 Ag 16 '47
Hollywood, a postwar record-breaker. Bsns W p96 D 7 '46
Hollywood on the ropes; proposed British import duty. Economist 153:364-5 Ag 30 '47
Paramount: Oscar for profits. il Fortune 35: 88-95+ Je '47

International aspects

American films abroad; importance of distribution of films overseas. O. H. Hicks. Soc Motion Picture Eng J 49:297-303; Discussion. 303-6 O '47

Regulation

Nobody's pleased; new movie decree regulating trade practices. Bsns W p16 Ja 11 '47

Securities

Look at the movies for 1947; with financial survey of principal producers. G. L. Merton. Mag of Wall St 79:620-1+ Mr 1 '47
Movies face realities of competition; with financial survey of principal motion picture companies. G. L. Merton. il Mag of Wall St 80:548-9+ Ag 16 '47
Picture stocks shake off decree's effects. D. C. Gillette. Barron's 27:12 F 10 '47

Statistics

See also
Moving picture theaters—Statistics

Taxation

Argentine Federal court decision in tax case. For Comm W 29:24 O 11 '47
Tax on movies; cities turn to levies on theater admissions. Bsns W p95 D 7 '46

Argentina

Argentine Federal court decision in tax case; law relative to the exhibition of Argentine films. For Comm W 29:24-5 O 11 '47
Developments in Argentine motion-picture trade. For Comm W 28:25 S 13 '47
Dubbing of French pictures in Argentina. For Comm W 26:25 Ja 4 '47

Bolivia

Monthly quota of foreign exchange for importing motion pictures into Bolivia. For Comm W 29:25 O 11 '47

Chile

Motion-picture industry in Chile during first half of 1947. For Comm W 28:23-4 S 20 '47

Cuba

Cuban motion-picture market in July 1947. For Comm W 29:22 O 18 '47

Czechoslovakia

Exhibition of feature films in Czechoslovakia, 1937-46. For Comm W 28:31 Jl 19 '47

Egypt

Motion-picture developments in Egypt. For Comm W 28:28 Ag 30 '47
Motion-picture notes. For Comm W 27:23-4 My 24 '47

France

Italo-French motion-picture agreement. For Comm W 26:23 F 8 '47
Recent statistics on the French motion-picture industry. For Comm W 26:39-40 Ja 25 '47

French West Africa

American documentary films in French West Africa. For Comm W 25:26-7 D 14 '46

Great Britain

Films tax and after. Economist 153:289-91 Ag 16 '47
Imported films; new tax basis? Economist 152:1038-9 Je 28 '47

See also Gaumont-British picture corporation

Italy

Italo-French motion-picture agreement. For Comm W 26:23 F 8 '47

Latin America

Motion-picture theaters in the Latin-American countries. N. D. Golden. For Comm W 27:15 Ap 12 '47

Mexico

Creation of National motion-picture commission. For Comm W 29:23 O 18 '47
Mexico's movie industry now confronts critical problems. N. D. Golden. il For Comm W 28:6-8 Jl 26 '47

Philippine Islands

Motion picture theaters in the Philippines. For Comm W 26:24 F 8 '47

Spain

Importation and exploitation of American films in Spain; record of American films as compared with other foreign countries, 1941-1946; tabulations. For Comm W 27:23 My 24 '47
Spain creates a superior board on motion picture guidance (censorship). For Comm W 25:26 D 28 '46

MOVING picture laboratories

Movie labs need refrigeration. A. J. Hess. diags Refrig Eng 53:507-9 Je '47

MOVING picture machines

B.T-H. sound film projector. il Electrician 137:1297-8 N 8 '46
Film projectors for television. R. V. Little, jr. bibliog il diags Soc Motion Picture Eng J 48:93-110 F '47
Magnetic sound for 8-mm projection. M. Camras. il diag's Soc Motion Picture Eng J 49:348-56 O '47
New method of counteracting noise in sound film reproduction. W. K. Westmijze. diags Soc Motion Picture Eng J 47:426-40 N '46
Projection life of 16-mm film. C. F. Vilbrandt. il diags Soc Motion Picture Eng J 48:521-42 Je '47
Some engineering aspects of amateur projection equipment for the mass market. P. H. Case. Soc Motion Picture Eng J 49: 139-46 Ag '47

Light sources

Characteristics and applications of concentrated-arc lamps for optical testing and demonstrating, microscopy, photographic enlarging and projection apparatus. W. D. Buckingham and C. R. Deibert. il diags Soc Motion Picture Eng J 47:376-99 N '46
Increased light for projection of 16-mm film with carbon arcs. R. J. Zavesky and W. W. Lozier. bibliog Soc Motion Picture Eng J 48:447-53 My '47
Motion picture screen light as a function of carbon-arc-crater brightness distribution. M. T. Jones. il diags Soc Motion Picture Eng J 49:218-40 S '47
Recent developments of super-high-intensity carbon-arc lamps. M. A. Hankins. bibliog il Soc Motion Picture Eng J 49:37-47 Jl '47
Screen illumination with carbon arc motion picture projection systems. R. J. Zavesky and others. bibliog Soc Motion Picture Eng J 48:73-81 Ja '47

Rating

Motion picture equipment. il Consumers Res Bul 20:8-10 S '47; Correction. 21:13 Ja '48

Standards

Proposals for 16-mm and 8-mm sprocket standards. J. S. Chandler and others. bibliog diags Soc Motion Picture Eng J 48:483-520 Je '47

MOVING picture machines—*Continued*

Testing

Postwar test equipment for theater servicing. E. Stanko and P. V. Smith. il diags Soc Motion Picture Eng J 47:457-63 D '46

MOVING picture photography

American cinematographer hand book and reference guide. J. J. Rose, comp. 5th ed 292p $5 American society of cinematographers, 1165 N. Berendo st, Hollywood, Calif. '46

Industrial applications

Baking under the microscope. S. H. Carleton. il Sci Am 177:216-18 N '47

Banker turns photographer; time lapse movies. il Bsns W p21-2 Je 21 '47

High-speed photography for study of high speed mechanisms. G. A. Hawkins and C. E. Balleisen. bibliog il diags Machine Design 19:122-6 S '47

High-speed photos show cutting tool breaking. il Iron Age 160:84 Ag 7 '47

How photography helps production. R. Le Grand. il Am Mach 91:109-12 Je 5 '47

Photographic investigation of the brightness temperatures of liquid steel streams. J. A. Hall. pl diag Iron & Steel Inst J 155:55-85 Ja '47; Abstract. Engineer 183:476 My 30 '47; Discussion. Iron & Steel Inst J 156: 497-500; 157:197-200 Ag, O '47; Engineer 183: 476 My 30 '47

Study by high-speed photography of combustion and knock in a spark-ignition engine. C. D. Miller. bibliog il diag U S Nat Advisory Com for Aeronautics 1942:15-37 '46

Study of the riding and wearing qualities of railway carriage tyres having various profiles. C. W. Newberry. diags Inst Mech Eng J & Proc 153 (War emergency issue no 2): 25-35, pl 1-2; Discussion. 35-40 '45

See also
Moving pictures in industry

Lighting

Electronic fire and gas light effect. H. Nye. il diags Soc Motion Picture Eng J 48:353-60 Ap '47

Flashtubes, potential illuminant for motion picture photography. F. E. Carlson. il diag Soc Motion Picture Eng J 48:395-404; Discussion. 405-6 My '47

Light control by polarization and the application of polarizers to the stereoscopic process. J. A. Norling. il diags Soc Motion Picture Eng J 48:129-44 F '47

Light generation by the high-intensity carbon arc. F. T. Bowditch. bibliog il diags Soc Motion Picture Eng J 49:209-17 S '47

Lighting and exposure control in color cinematography. R. A. Woolsey. il Soc Motion Picture Eng J 48:548-53 Je '47

Recent developments of super-high-intensity carbon-arc lamps. M. A. Hankins. bibliog il Soc Motion Picture Eng J 49:37-47 Jl '47

Medical applications

Adaptations and applications of 16-mm motion picture equipment to medical and scientific needs. M. W. La Rue and M. W. La Rue, jr. il diag Soc Motion Picture Eng J 49:241-7 S '47

Kodachrome motion pictures of the human air and food passages. P. H. Holinger and J. D. Brubaker. il diags Soc Motion Picture Eng J 49:248-61 S '47

Scientific applications

Cavity formation in water. E. N. Harvey and others. bibliog il J Ap Phys 18:162-72 F '47

Evolving a new speed record; apparatus used to measure speed of AAF-Lockheed P-80R Shooting Star. plan Aero Digest 55:81+ Ag '47

Motion pictures on operation crossroads. R. J. Cunningham. Soc Motion Picture Eng J 48:554-9 Je '47

Radar scope photography. R. C. Babish. il Soc Motion Picture Eng J 48:454-72 My '47

Special cameras and flash lamps for high-speed underwater photography. R. T. Knapp. il diags Soc Motion Picture Eng J 49:64-82 Jl '47

MOVING picture projection

Method for determining the shape of the image surface in 16-mm projection. F. J. Kolb, jr. and others. il Soc Motion Picture Eng J 48:569-85 Je '47

Synchronized 16-mm sound and picture for projection at 16 frames per second. G. E. H. Hanson. Soc Motion Picture Eng J 49:357-61 O '47

MOVING picture projectors. See Moving picture machines

MOVING picture screens

Motion picture screen light as a function of carbon-arc-crater brightness distribution. M. T. Jones. il diags Soc Motion Picture Eng J 49:218-40 S '47

MOVING picture sound recording

Combination scoring, rerecording, and preview studio. D. J. Bloomberg and others. il plans diags Soc Motion Picture Eng J 49:3-26 Jl '47

Console for dubbing. il Electronics 20:142, cover N '47

Convex wood splays for broadcast and motion picture studios. M. Rettinger. il diags Acoustical Soc Am J 19:343-5 Mr '47

Corrective networks. F. L. Hopper. diags Soc Motion Picture Eng J 48:253-60 Mr '47

De luxe film recording machine. M. E. Collins. il diag Soc Motion Picture Eng J 48: 148-55; Discussion. 156 F '47

High-quality recording power amplifier. K. Singer. il diag Soc Motion Picture Eng J 48:560-8 Je '47

Improved 200-mil push-pull density modulator. J. G. Frayne and others. il diags Soc Motion Picture Eng J 47:494-518 bibliog(p 513) D '46

Lead-sulfide photoconductive cells for sound reproduction. R. J. Cashman. diags Soc Motion Picture Eng J 49:342-6; Discussion. 346-8 O '47

Newly developed light modulator for sound recording. G. L. Dimmick. diags Soc Motion Picture Eng J 49:48-57 Jl '47

Practical problems of 16-mm sound. A. Jacobs. Soc Motion Picture Eng J 48:116-24; Discussion. 124-5 F '47

Preliminary report of Research council photocell subcommittee; cell to reproduce dye-image sound tracks associated with certain color motion pictures. L. T. Goldsmith. Soc Motion Picture Eng J 48:145-7 F '47

Recording and reproduction of sound. O. Read. il diags Radio N 37:61-3+ My '47

Soundman. G. R. Groves. bibliog Soc Motion Picture Eng J 48:220-9; Discussion. 229-30 Mr '47

Synchronized 16-mm sound and picture for projection at 16 frames per second. G. E. H. Hanson. Soc Motion Picture Eng J 49: 357-61 O '47

Three-band variable equalizer. L. D. Grignon. bibliog il diags Electronics 20:112-15 Ja '47

Tone control for rerecording. C. O. Slyfield. diags Soc Motion Picture Eng J 47:453-6 D '46

Foreign language synchronization

Dubbing of French pictures in Argentina. For Comm W 26:25 Ja 4 '47

Some special problems of post-synchronization mixing. T. Lawrence. Soc Motion Picture Eng J 48:317-23 Ap '47

History

Historical development of sound films. E. I. Sponable. il diags Soc Motion Picture Eng J 48:275-303, 407-22 bibliog and patent list (p302-3) Ap-My '47

Magnetic recording

Magnetic recording for motion picture studios. W. C. Miller. Soc Motion Picture Eng J 48:57-62 Ja '47

Magnetic sound for amateur movies. diags Electronics 20:140+ Mr '47

Magnetic sound for 8-mm projection. M. Camras. il diags Soc Motion Picture Eng J 49:348-56 O '47

Magnetic sound for motion pictures. M. Camras. il diags Soc Motion Picture Eng J 48:14-24; Discussion. 25-8 Ja '47

Magnetic sound recorder of advanced design. R. J. Tinkham and J. S. Boyers. il Soc Motion Picture Eng J 48:29-35 Ja '47

MOVING picture sound recording—Magnetic recording—*Continued*
Magnetic sound recording on coated paper tape. H. A. Howell. bibliog diags Soc Motion Picture Eng J 48:36-46; Discussion. 46-9 Ja '47
Magnetic tape recorder for movies and radio. R. H. Ranger. il diags Electronics 20:99-103 O '47
Recent developments in magnetic recording for motion picture film. M. Camras. il diags Acoustical Soc Am J 19:322-5 Mr '47
Recent developments in the field of magnetic recording. S. J. Begun. il diags Soc Motion Picture Eng J 48:1-12; Discussion. 12 Ja '47
Research council basic sound committee: discussion of magnetic recording. Soc Motion Picture Eng J 48:50-6 Ja '47

Noise reduction

New blooping device. G. Lewin. il Soc Motion Picture Eng J 48:343-7 Ap '47
Optimum width of illumination of the sound track in sound-reproducing optics. J. C. Frommer. Soc Motion Picture Eng J 49:361-3 O '47

Standards

Proposed standard for 35-mm flutter test films. Soc Motion Picture Eng J 49:160-1 Ag '47
Proposed standard specifications for flutter or wow as related to sound records. bibliog Soc Motion Picture Eng J 49:147-59 Ag '47

MOVING picture studios
Combination scoring, rerecording, and preview studio. D. J. Bloomberg and others. il plans diags Soc Motion Picture Eng J 49:3-26 Jl '47
Space acoustics. J. Y. Dunbar. il Soc Motion Picture Eng J 49:372-82; Discussion. 383-8 O '47

Air conditioning

Processed air important prop on Hollywood movie sets. G. Younkin. il Heating-Piping 19:111-12 S '47

Electric equipment

Colour films; plant alterations at Pinewood. il Elec R (Lond) 140:229-30 Ja 31 '47
Photoelectric film cuing system. I. A. Moon. il diags Soc Motion Picture Eng J 49:364-71 O '47

Equipment

Hollywood cooks with gas; Metro-Goldwyn-Mayer studio commissary. il Am Gas Assn Mo 29:180-1 Ap '47
Improved engineering designs for stage doors, transparency screens, and water tank bulkheads. A. C. Zoulis. Soc Motion Picture Eng J 48:348-52 Ap '47
New motion picture film splicer. I. I. Merkur. il Soc Motion Picture Eng J 48:238-42 Mr '47
New Selsyn interlock selection system; for synchronizing of sound, camera, and projection motor operation. D. J. Bloomberg and W. O. Watson. il diags Soc Motion Picture Eng J 47:469-73 D '46

Lighting

General electric co. arc lamp for film studios. il Electrician 137:1004 O 11 '46; Elec R (Lond) 139:624 O 18 '46
Report of the studio lighting committee. diags Soc Motion Picture Eng J 49:279-88 S '47

Safety measures

Hazards on location. B. Keele. il Nat Safety N 55:46 Ap '47

MOVING picture theaters
Entertainment ensemble; packaged movie house, Long Beach, Calif. il Bsns W p16 F 1 '47
Motion-picture theaters in the Latin-American countries. N. D. Golden. For Comm W 27:15 Ap 12 '47
Report of the committee on theater engineering, construction, and operation. H. Anderson. Soc Motion Picture Eng J 48: 173-5 F '47
Space acoustics. J. Y. Dunbar. il Soc Motion Picture Eng J 49:372-82; Discussion. 383-8 O '47
Theater starts to sell itself for sales meetings; San Francisco's Vogue. il Sales Management 59:62+ Ag 1 '47

Lighting

Problem of cinema lighting; abstract. H. Elder. Light & Lighting 39:213 D '46

Lobby selling

Cash in the lobby. il Bsns W p22 Mr 15 '47

Statistics

World movie-theater count; changes since before the war. N. D. Golden. For Comm W 27:8+ My 31 '47

Television

Statement of Society of motion picture engineers on revised frequency allocations for theater television. Soc Motion Picture Eng J 48:183-202 Mr '47
Television and the motion picture theater. L. B. Isaac. Soc Motion Picture Eng J 47: 482-6 D '46

MOVING pictures
Report of the SMPE committee on progress. W. V. Wolfe. Soc Motion Picture Eng J 48:304-16 Ap '47

See also
Slide films
Television broadcasting—Moving pictures

Documentary films

American documentary films in French West Africa. For Comm W 25:26-7 D 14 '46

Foreign versions

See also Moving picture sound recording—Foreign language synchronization

Military use

Photographing things to come; future of AAF requirements for motion picture equipment to meet extremes of altitude and speed. M. W. Warren. Soc Motion Picture Eng J 49: 82-8 Jl '47
Simulation of radar presentations for briefing purposes. J. Westheimer. il Soc Motion Picture Eng J 48:586-90 Je '47

See also
Moving pictures in naval education

News films

Newsreel; its production and significance. D. Doherty and others. Soc Motion Picture Eng J 47:357-75 N '46

Psychological aspects

See also
Moving pictures, Talking—Psychological aspects

Rating

Ratings of motion pictures. Consumers Res Bul 19:27-8 Ja '47 [cont monthly]

Settings and scenery

Electronic fire and gas light effect. H. Nye. il diags Soc Motion Picture Eng J 48:353-60 Ap '47
Research heads off historical anachronisms for Hollywood; technique might well be applied by advertisers. il Sales Management 59:118+ O 1 '47

Social aspects

Social uses of the motion picture. A. A. Mercey. Ann Am Acad 250:98-104 Mr '47

Standards

ASA sectional committee on motion pictures, Z22. C. R. Keith. Soc Motion Picture Eng J 48:67-9 Ja '47
International motion picture standards. D. E. Hyndman. Soc Motion Picture Eng J 48: 126-8 F '47
Report of sectional committee on motion pictures, Z22. Soc Motion Picture Eng J 48: 163-6 F '47
Report of the committee on standards. F. T. Bowditch. Soc Motion Picture Eng J 48: 170-3 F '47

MOVING pictures—*Continued*

Yearbooks

1946-47 international motion picture almanac. T. Ramsaye, ed. 1024p $3.25 Quigley pub. co, 1270 6th av, New York 20 '46

MOVING pictures, Colored

Colour films; plant alterations at Pinewood. il Elec R (Lond) 140:229-30 Ja 31 '47

Lighting and exposure control in color cinematography. R. A. Woolsey. il Soc Motion Picture Eng J 48:548-53 Je '47

Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47

Preliminary report of Research council photocell subcommittee; cell to reproduce dye-image sound tracks associated with certain color motion pictures. L. T. Goldsmith. Soc Motion Picture Eng J 48:145-7 F '47

Processing of two-color prints by deep-tank methods. J. G. Stott. bibliog il Soc Motion Picture Eng J 49:306-15 O '47

Rapid test for ferricyanide bleach exhaustion. L. E. Varden and E. G. Seary. Soc Motion Picture Eng J 47:450-2 D '46

Studio production with two-color bipack motion picture film. J. W. Boyle and B. Berg. Soc Motion Picture Eng J 48:111-15 F '47

MOVING pictures, Stereoscopic

Light control by polarization and the application of polarizers to the stereoscopic process. J. A. Norling. il diags Soc Motion Picture Eng J 48:129-44 F '47

Soviet stereoscopic cinema. For Comm W 27:25 My 31 '47

MOVING pictures, Talking

New method of counteracting noise in sound film reproduction. W. K. Westmijze. diags Soc Motion Picture Eng J 47:426-40 N '46

See also
Moving picture sound recording

History

Contribution of theater service to twenty years of motion picture sound progress. E. S. Seeley. Soc Motion Picture Eng J 48: 423-36 My '47

Historical development of sound films. E. I. Sponable. il diags Soc Motion Picture Eng J 48:275-303, 407-22 bibliog and patent list (p302-3) Ap-My '47

SMPE honor roll awards; pioneers in development of talking moving pictures. Soc Motion Picture Eng J 48:437-46 My '47

Psychological aspects

Psychology of the sound film. L. M. Francisco. Soc Motion Picture Eng J 49:195-202 S '47

MOVING pictures in advertising

Better films through agency-client-producer cooperation. B. N. Skellie. Ptr Ink 219:55+ Ap 4 '47

Combines consumer education and retail sales training; Sherwin-Williams Pestroy and Weed-no-more film; paint display. E. M. Housman. il Ptr Ink 219:36-7 Je 13 '47

Film Council may build huge audience for commercially sponsored motion pictures. H. E. Green. Ptr Ink 220:88 Ag 8 '47

Film departments in ad agencies. M. Frisbie. il Ptr Ink 219:53-6+ Ap 25 '47

Historical approach adds color to Inland Steel film. il Ind Marketing 32:35+ S '47

How to plan distribution for your new film. F. H. Arlinghaus. Adv & Sell 40:52+ Je '47

How to use films in advertising. R. De Rochemont. Adv & Sell 40:40+ My '47

Koret adds new twist to Hollywood fashion tie-ins. il Sales Management 58:76+ Ap 15 '47

New gas sound-color motion picture; Winning seals of approval. il Am Gas Assn Mo 29:280-1 Je '47

Penn Mutual Life puts 1947 annual report on film. il Sales Management 58:45 Ap 1 '47

Product film does sales and public relations job; Worthington Hydro-Barker. T. F. Clark. Ptr Ink 218:46-7 Ja 24 '47

Psychology of the sound film. L. M. Francisco. Soc Motion Picture Eng J 49:195-202 S '47

Seeing is believing; movies show use of Pestroy DDT and Weed-No-More 2,4-D. C. Toll. il Sci Am 177:160-1 O '47

Selling through eyes and ears; cuff-notes on current four merchandising movies and a slide film. Sales Management 57:43 N 10 '46

Viscose films romance of man-made fiber. il Sales Management 58:39 My 20 '47

See also
Advertising copy—Moving picture tie-in
Television advertising

MOVING pictures in education

Adaptations and applications of 16-mm motion picture equipment to medical and scientific needs. M. W. La Rue and M. W. La Rue, jr. il diag Soc Motion Picture Eng J 49:241-7 S '47

Blueprinting the classroom film. F. S. Cellier. Soc Motion Picture Eng J 48:243-52 Mr '47

Educational films for a democratic tomorrow. E. Albert. Soc Motion Picture Eng J 49: 191-4 S '47

Effective use of training films. J. S. Livingston and P. R. Ignatius. Harvard Bsns R 25 no 4A:637-51 [O] '47

Greater use of films urged as teaching aid. G. B. Clark. Eng & Min J 148:94-5 Ag '47

Passbook to better living; color sound movie presents story of Society for savings in Cleveland. il Banking 39:36-7+ Ja '47

Secretary's job shown in Underwood film. il Am Bsns 17:42 Je '47

Types of films in engineering education. M. C. Giannini. J Eng Educ 37:441-5 Ja '47

Catalogs

Educational film guide; formerly Educational film catalog. annual ed, Sept. 1947. D. E. Cook and B. Borden, comps. 548p H. W. Wilson co, New York '47

Educators guide to free films. M. F. Horkheimer and J. W. Diffor, comps. 7th annual ed 341p pa $5 Educators progress service, Randolph, Wis. '47

MOVING pictures in employee training. See Moving pictures in industry

MOVING pictures in industry

Bill Bailey and the four pillars; Clarksville, Tennessee, cooperates in making motion picture. il Banking 39:56-7 D '46

Critic's view of latest sales films. Sales Management 58:45 Mr 15 '47

Dye movie; du Pont motion picture, Harnessing the rainbow. Textile Col 68:23+ D '46

Effective use of training films. J. S. Livingston and P. R. Ignatius. Harvard Bsns R 25 no 4A:637-51 [O] '47

Five points to check before you make a film. G. L. Hough. Adv & Sell 40:76 O '47

Gang process charts in work simplification; Armstrong Cork. J. V. Valenteen. Factory Management 104:125-7 N '46

How to use movies and sound films. il Banking 39:16-17 Mr '47

Index of industrial training films has 159 titles on metals. Iron Age 158:86 N 28 '46

Lights! camera! moving pictures and slide films in employee training. J. H. Kostmayer. il Bus Transportation 26:56-7 Ag '47

Penn Mutual films its report; animated annual statement. il East Underw 48:14 Mr 14 '47; Nat Underw (Life ed) 51:10 Mr 14 '47; Weekly Underw 156:784 Mr 15 '47; Spectator (Life ed) 154:20-1+ Ap '47

Scenes for salutations and sales. il Bsns W p72 Mr 29 '47

Theater starts to sell itself for sales meetings; San Francisco's Vogue. il Sales Management 59:62+ Ag 1 '47

Training-film production problems. R. H. Ray. Soc Motion Picture Eng J 49:203-8 S '47

Try motion pictures for your change-over troubles. R. G. Wolff. il Ind Marketing 32: 52+ O '47

Visual aids for supervisors. H. R. Nissley. Factory Management 105:218+ Ag '47

Visual equipment and its use in woods operations. D. W. Emmerson. il Pulp & Pa of Can 47:110-12 N '46

MOVING pictures in industry—*Continued*

Catalogs

Index of training films; a comprehensive listing of more than 2,000 industrial motion pictures and slidefilms and their sources for reference and training use in industry and vocational education. 2d ed 128p pa $3 Eastman Kodak co, Rochester 4, New York '47

MOVING pictures in naval education

Preservation and postwar utilization of U.S. navy combat film. G. L. Sarchet. Soc Motion Picture Eng J 48:476-80 My '47

Technical problems of film production for the navy's special training devices. H. S. Monroe. Soc Motion Picture Eng J 47:487-93 D '46

MOVING pictures in public health education

Films and booklets sell sewage plants to the public. il Water & Sewage 84:63+ O '46

MOVING pictures in safety education

Oil company farm safety film proves a smash hit; Sinclair refining co. F. C. Sturtevant. Nat Pet N 39:34 O 29 '47

Shell Oil releases unusual safety film; Screw drivers and screw jays. Safety Eng 93:42 F '47

Visual education goes to the job; Standard register company. il Nat Safety N 56:37 S '47; Same. Safety Eng 94:64 O '47

MOVING pictures in science

Canadian scientific film association; aims, functions and organization. Can Chem & Process Ind 31:129+ F '47

See also Moving picture photography—Scientific applications

MOVING stairways. See Escalators

MOYES, Henry, 1750-1807

Dr Henry Moyes, Scotch chemist; his visit to America, 1785-1786. E. V. Armstrong and C. K. Deischer. por bibliog J Chem Educ 24:169-74 Ap '47

MUCILAGE

Chemistry of some plant gums and mucilages. E. L. Hirst and J. K. N. Jones. bibliog Soc Dyers & Col J 63:249-54 Ag '47

Constitution of the mucilage from the bark of ulmus fulva (slippery elm mucilage); sugars formed in the hydrolysis of the methylated mucilage. R. E. Gill, E. L. Hirst and J. K. N. Jones. Chem Soc J p 1025-9 N '46

MUCINS

Immunochemical studies on blood groups; further characterization of blood group A and O substances from individual hog stomachs. A. Bendich, E. A. Kabat and A. E. Bezer. bibliog Am Chem Soc J 69: 2163-7 S '47

MUCOITIN sulfuric acid

Uronic acid component of mucoitinsulfuric acid. M. L. Wolfrom and F. A. H. Rice. Am Chem Soc J 69:1833 Jl '47

MUD

Airport fill on soft bottom controlled to avoid mud waves; San Francisco municipal airport. il plan Eng N 138:104-7 Ja 23 '47

See also

Petroleum—Mud fluids

MUD fluids. See Petroleum—Mud fluids

MUD jacking

Soil characteristics for mudjacking studied by New Jersey. F. D. Woodruff. Pub Works 77:38 N '46

MUELLER, C. F., company

Nonprofit profits; New York university gets big stake in Mueller co.; earnings tax-free. Bsns W p89-90 O 18 '47

MUFFLERS. See Automobile engines—Mufflers

MULE spinners' cancer. See Cancer

MULLEN, Thomas R.

Portrait. Bsns W p35 N 30 '46

MULLER, Hermann Joseph, 1890-

American chemists awarded Nobel prizes at Stockholm. Chem & Eng N 25:300-1 F 3 '47

Awarded the Nobel prize in medicine and physiology. por(cover) Science 104:440 N 8 '46

MULLINS manufacturing corporation

Ever-changing products mark Mullins history. Steel 121:64 O 27 '47

MULTIMOLECULAR adsorption. See Adsorption

MULTIPLE line writing. See Insurance companies—Multiple line writing

MULTIPLE management. See Corporations—Directors, Junior

MULTIPLE punching. See Punched card system

MULTIPLE use buildings. See Buildings, Multiple use

MULTIPLEX broadcasting. See Radio broadcasting—Multiplex system

MULTIPLIER phototube. See Photoelectric cells—Multiplier tubes

MULTIVIBRATORS

Cathode-coupled half-shot multivibrator. R. K. F. Scal. diag Electronics 20:150+ S '47

One-shot multivibrator anticoincidence and recording circuit. S. J. du Toit. diags R Sci Instr 18:31-5 Ja '47

Self-switching r-f amplifier. H. M. Wagner and J. F. Herrick. il diags Electronics 20: 128-31 Je '47

Simple square-wave generator. J. C. Hoadley. il diags Radio N 36:48-9+ D '46

Tone burst generator; multivibrators serve as electronic switch for cathode-ray oscilloscopes, generation of square waves, investigation of code intelligibility and general audio research. R. G. Roush. il diags Electronics 20:92-6 Jl '47

Variable time constant; multivibrator employing diode crystals. T. Petrides. diags Electronics 20:138 O '47

MUMPS

Preparation of mumps vaccines and immunization of monkeys against experimental mumps infection. K. Habel. bibliog Pub Health Rep 61:1655-64 N 15 '46

MUNG bean sprouts. See Bean sprouts

MUNICIPAL accounting

Verification of taxes receivable in municipality. J Account 83:153 F '47

See also

Waterworks—Accounting

MUNICIPAL advertising

Cities and states, led by Florida, intensify advertising for tourists and industries. Ptr Ink 218:76 Ja 3 '47

New industry campaign produces concrete results; Los Angeles Department of water and power. Elec World 126:92+ D 21 '46

MUNICIPAL airports. See Airports, Municipal

MUNICIPAL bonds

Carlsbad bonds discount plan to pay back interest. Barron's 27:32 Jl 14 '47

Chicago transit bonds offered to investors. Comm & Fin Chr 166:524+ Ag 7 '47

Detroit pays; city officials are angered by 2.48% interest. Bsns W p90+ Mr 15 '47

Do you buy municipal bonds? W. F. Sarle. Comm & Fin Chr 166:1215+ S 25 '47

Financing improvements by revenue or general obligation bonds. W. S. Evatt. Am Water Works Assn J 39:331-6 Ap '47

Legislation for revenue bond financing; Los Angeles bonds for water and power. S. B. Robinson. Am Water Works Assn J 39: 1021-31 O '47

Municipal authorities in Pennsylvania. J. D. Ray. Am Water Works Assn J 38:1356-9; Discussion. 1359-66 D '46

Municipal bond sales rise sharply; graph. Bsns W p60 Mr 1 '47

Municipal bonds in the bank portfolio. I. A. Long. Comm & Fin Chr 165:3122+ Je 12 '47

New transit try. Bsns W p71-2+ Ag 16 '47

News and views of investments. Barron's 27:1 F 24 '47

Past year in municipals. L. S. Lebenthal. Comm & Fin Chr 165:124+ Ja 9 '47

Payment on Antwerp bonds. Comm & Fin Chr 165:2526 My 8 '47

Report of IBA Municipal securities committee. Comm & Fin Chr 164:3054+ D 12 '46

MUNICIPAL bonds—*Continued*
Representative Hinshaw revives Boren bill; with text. Comm & Fin Chr 165:1379 Mr 13 '47
State and city department bond proposals and negotiations. Published in weekly Monday numbers of Commercial and financial chronicle
Survey of potential municipal issues. F. Tilney, jr. Comm & Fin Chr 165:739+ F 6 '47
What next in municipals? Bsns W p70+ Je 21 '47
Why yields on tax-exempt bonds should increase. C. P. Burgess. Comm & Fin Chr 164:2760+ N 28 '46

MUNICIPAL buildings
See also
Health centers
Markets, Municipal

MUNICIPAL centers
Two important civic improvements approved by Toronto ratepayers; housing redevelopment and construction of civic square. plans Roads & Bridges 85:44-5+ Ja '47

MUNICIPAL corporations
Municipal authorities in Pennsylvania. J. D. Ray. Am Water Works Assn J 38:1356-9; Discussion. 1359-66 D '46

MUNICIPAL employees
Civil service comes to Alexandria. D. P. Moriarty. Water & Sewage Works 94:104 Mr '47
Courts outlaw city employee strikes. Eng N 137:759 D 5 '46
Significance of legislation forbidding strikes by public employees. W. R. LaDue. Am Water Works Assn J 39:844-54 S '47; Same. Water & Sewage Works 94:353-8 O '47
See also
Pensions, Municipal
Waterworks—Employees

MUNICIPAL engineering
Urban engineering problems discussed by new organization; City engineers' association technical meeting, Niagara Falls, Ont. Water & Sewage 85:58-9 O '47
See also
City planning
Municipal improvement
Pavements
Public works
Refuse collection
Refuse disposal
Sewage disposal
Sewerage
Snow removal
Streets
Water purification
Water supply engineering

MUNICIPAL engineers
Town engineers form association; membership limited to Canadian engineers. Water & Sewage 84:62+ O '46

Salaries
Chicago OK's engineers' salary raises. Eng N 138:25 Ja 9 '47

MUNICIPAL finance
California's local revenue problem. J. O. McClintic. Ann Am Acad 248:260-7 N '46
Cities plan pay-as-you-go finance. Eng N 139: 39 Jl 10 '47
Cities squeezed. Bsns W p36 Ag 23 '47
Financing public sanitation projects. R. W. Digges. Comm & Fin Chr 166:13+ sec 2 Ag 28 '47
Major problems in municipal finance. E. B. Thirkield. Comm & Fin Chr 165:2069+ Ap 17 '47
Municipal expenses soar; New York's billion-dollar budget leads. Bsns W p80+ Ap 12 '47
Reduction of municipal taxes and the support of public services. C. H. Chatters. Am Water Works Assn J 39:325-30 Ap '47
See also
Municipal bonds
Municipal taxation
Sewerage—Finance
Waterworks—Finance

Bibliography
State and local finance and taxation; a bibliography of materials published, 1941-1946. D. C. Tompkins, comp. (Postwar bibliographies no. 2) 98p pa $1.50 Univ. of Calif. Bur. of public administration, Berkeley '46

State aid
Problems of state aids in Minnesota. (State governmental research bul. 18) 43p Minnesota inst. of governmental research, 702 Empire bank bldg, St Paul 1 '47

MUNICIPAL forests. See Forests, Municipal

MUNICIPAL government
Consolidation; one answer to municipal ills. E. B. Thirkield. Comm & Fin Chr 166: 427+ Jl 31 '47
Detroit engineers' public activities. S. M. Dean. Mech Eng 69:193-6 Mr '47
See also
Cities and towns
Governmental research associations
Municipal corporations
Municipal employees
Municipal finance

Periodicals
New York municipal reference library periodical collection. Munic Ref Lib Notes [N.Y. Pub. Lib.] 30:62-76 Ja '47 (pa 20c)

MUNICIPAL housing projects. See Housing projects, Municipal

MUNICIPAL improvement
City planners and business leaders must guide communities' economic growth. N. C. Farr. il Civil Eng 17:262-4 My '47
Engineering by crystal ball; Los Angeles Substructure committee. J. H. Collins. Pub Util 38:734-9 D 5 '46
New Orleans plan includes union passenger terminal. il Civil Eng 17:453 Ag '47
St Louis, Milwaukee, New Orleans and Toledo reveal long-range rehabilitation plans. Eng N 138:168 Ja 30 '47
Wanted; an unbalanced budget; Milwaukee business men want municipal improvements. Bsns W p24+ F 22 '47
See also
Cities and towns—Cleanliness
City planning
Pavements
Streets
Water fronts

MUNICIPAL liability
City not liable for failure to provide water for sprinkler system. East Underw 47:28 N 22 '46
Law of municipal contract liability. L. T. Parker. Heat & Ven 44:78-81 Ag '47
Liability of municipalities; airports. Rough Notes 89:46-8 N '46

MUNICIPAL markets. See Markets, Municipal

MUNICIPAL officials
Directories
Municipal road officials in incorporated cities and towns, Canada. Roads & Bridges 85: 168+ Je '47

MUNICIPAL ownership
City-owned utilities report revenue rise in Kansas. Eng N 139:402 S 18 '47
See also
Airports, Municipal
Electric utilities—Municipal ownership
Forests, Municipal
Housing projects, Municipal
Rapid transit—Municipal ownership
Waterworks—Municipal ownership

MUNICIPAL pensions. See Pensions, Municipal

MUNICIPAL planning. See City planning

MUNICIPAL printing. See Printing, Public

MUNICIPAL purchasing. See Purchasing, Municipal

MUNICIPAL reference libraries
New York municipal reference library periodical collection. Munic Ref Lib Notes [N.Y. Pub. Lib.] 30:62-76 Ja '47 (pa 20c)

MUNICIPAL reports
Readable reports; San Diego city manager's annual accounting. Bsns W p52 Ja 4 '47

MUNICIPAL taxation
Case against city gasoline taxes. Nat Pet N 39:35 Jl 9 '47
Cities feel pinch. Bsns W p68-9 F 15 '47
Coordinating federal, state, municipal taxes; with tabulation showing national income and total federal, state and local tax revenues, 1916-1946. J. A. Finley. Mag of Wall St 80:82-3+ Ap 26 '47
Income taxing; Toledo and St Louis. Bsns W p51-2 Ap 26 '47

MUNICIPAL taxation—*Continued*
Income versus property taxation for state and local governments. H. M. Groves. J Land & Pub Util Econ 22:346-51 N '46
Reduction of municipal taxes and the support of public services. C. H. Chatters. Am Water Works Assn J 39:325-30 Ap '47
Tax on movies; cities turn to levies on theater admissions. Bsns W p95 D 7 '46
See also
Taxation—New York (city)

MUNITION factories
Work at the Royal ordnance factories. il Engineer 183:72 Ja 17 '47
See also
Atomic bombs—Manufacture

Employees
Wartime and postwar experiences of Connecticut small-arms workers. W. E. Northey, jr. Mo Labor R 64:215-23 F '47

Safety measures
Air-line answers; unusual adaptations of air line respirators and masks in production of fissionable materials. J. M. Brown and R. T. Bartnett. il Safety Eng 92:60+ O '46

MUNITIONS
How the Pulp and paper research institute aided Canada's war effort. il Pulp & Pa of Can 48:55-60 Ap '47
Military applications of electroplating in World war II. W. Blum. Metal Finishing 45:66-8 Ja '47
See also
Ordnance

MUNITIONS industry
Crack shots prove product precision for Winchester. W. S. Allen. il Sales Management 58:42-4 Je 15 '47
Rollcall of firms developing ordnance for U.S. army and navy. Bsns W p21-2 N 16 '46

Advertising
Simplify your literature library for retailers and distributors; Winchester repeating arms company policy. W. S. Allen. il Ptr Ink 221:46-7 O 10 '47

MUNRO, R. Gordon, 1895-
New world bank director for United Kingdom. Comm & Fin Chr 165:2737 My 22 '47

MUNTZ, Earl William
Madman; used-car dealer and Kaiser-Frazer distributor. Fortune 36:140 N '47

MURAL painting and decoration
Pictorial effects through plastic; Endicott corp. il Mod Plastics 24:106 N '46
Radiant murals. il Sci Am 175:268 D '46

MURDOCK, Abe
New NLRB team. por Bsns W p86+ Jl 26 '47

MURIATIC acid. See Hydrochloric acid

MURPHREE, Elger Vaughan
Portrait. Fortune 35:246 Ap '47

MURPHY, Frank, 1890-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

MURPHY, Justin
Mark Cross, once removed. por Sales Management 57:40 D 15 '46

MURRAY, Philip, 1886-
Portrait. Bsns W p94 Mr 22 '47

MURRAY, Thomas E. 1891-
Businessman named to Mine welfare board. por Bsns W p94 Ap 12 '47

MURRAY Hill hotel. See New York (city)—Hotels

MUSCLE
Versatile electronic stimulator for nerve and muscle. W. L. Nastuk and H. L. Borison. il diag R Sci Instr 18:669-72 S '47
See also
Adenylic acid

MUSCLES
Moist chamber for nerve-muscle experiments. F. A. Waterman. diags Science 105:294 Mr 14 '47
Prediction of speed of performance by muscle action potentials. J. L. Kennedy and R. C. Travis. Science 105:410-11 Ap 18 '47

MUSCONE
Biological derivation of civetone and muscone. R. W. Moncrieff. Can Chem & Process Ind 31:123-4 F '47

MUSCULAR power
Twenty men equal one horse; muscular energy expressed in watts. C. M. Ripley. il Power 91:186-7 Mr '47

MUSEUM libraries
Reorganization of a special library; Carnegie museum, Department of Carnegie institute. A. P. Wallgren. Special Lib 38: 167-72 Jl-Ag '47

MUSEUMS
See also
Art galleries and museums
Industrial museums
London—Science museum
Safety museums

MUSIC
Frequency range preference for speech and music. H. F. Olson. il plan diags Acoustical Soc Am J 19:549-55 Jl '47; Same cond. Electronics 20:80-1 Ag '47
High-fidelity reproduction of music. E. Toth. diags Electronics 20:108-13 Je '47
Music boom. Economist 152:53, 94-5 Ja 11-18 '47
See also
Institute of musical science (proposed)

Acoustics and physics
Decay rates of piano tones. D. W. Martin. bibliog il Acoustical Soc Am J 19:535-41 Jl '47
Place of acoustics in the future of music. H. Burris-Meyer. Acoustical Soc Am J 19:532-4 Jl '47
Slide rule for the study of music and musical acoustics. L. E. Waddington. bibliog il Acoustical Soc Am J 19:878-85 S '47

Physiological effect
See Music, Influence of

Psychology
Musical tone qualities as a factor in expressiveness. A. Pepinsky. Acoustical Soc Am J 19:542-4 Jl '47

Therapeutic use
See Music, Influence of

MUSIC, Influence of
Music as an aid to healing. R. C. Lewis and others. Acoustical Soc Am J 19:544-6 Jl '47

MUSIC in hospitals
Music as an aid to healing. R. C. Lewis and others. Acoustical Soc Am J 19:544-6 Jl '47

MUSIC in industry
Music in industry today. R. L. Cardinell and H. Burris-Meyer. Acoustical Soc Am J 19:547-9 Jl '47
Some banks say it with music; national survey. M. B. Leach. il Banking 39:40-1+ D '46; 42-3+ F '47

MUSIC publishers

Directories
Guide to the music publishers of the United States. R. H. Zorn. rev ed 36p pa $1 Rayco publications, Troy Grove, Ill. '47

MUSIC stores
Outlook for new music stores. A. D. Cotton. Dom Comm 35:34-7 Ap '47

MUSIC trade
Music in the air; instrument makers promotion campaign. il Bsns W p20 Je 14 '47
Musical instrument imports and manufacture, France. For Comm W 27:35 My 24 '47

Advertising
Symphony broadcast builds market for fine music products; Reichhold's Musical Digest magazine and Vox phonograph records. V. J. Dallaire. il Ptr Ink 220:35 Jl 11 '47

Directories
Billboard encyclopedia of music, 1946-1947. 2v 8th ed 810p $5 Billboard pub. co, 1564 Broadway, New York 19 '47

MUSIC trade—Directories—*Continued*
Purchaser's guide to the music industries with which is incorporated the Piano and organ purchaser's guide. 51st ed 313p pa $1 Music trades and musical America, 113 W. 57th st, New York 19 '47

MUSICAL education
Hancock concerts bring requests for scholarships. East Underw 48:3 F 14 '47
Music scholarships to be awarded at Tanglewood by John Hancock Life in conjunction with radio sponsorship of concerts. Weekly Underw 156:258 Ja 25 '47; East Underw 48:10 Ja 17 '47
Winners of Hancock music scholarships. East Underw 48:9 Ap 18 '47

MUSICAL instrument trade. See Music trade

MUSICAL instruments
Identification of musical instruments when heard directly and over a public-address system. H. V. Eagleson and O. W. Eagleson. Acoustical Soc Am J 19:338-42 Mr '47
Music business to promote more low-cost instruments. Ptr Ink 219:94 Je 13 '47
Wireless pre-amp; designed primarily as an amplifier for musical instruments. R. L. Parmenter. il diag Radio N 38:64-5+ O '47

See also
Accordion
Clarinet
Harmonica
Piano
Saxophone

MUSICAL intervals and scales
Slide rule for the study of music and musical acoustics. L. E. Waddington. bibliog il Acoustical Soc Am J 19:878-85 S '47

MUSICAL scales. See Musical intervals and scales

MUSICAL science, Institute of. See Institute of musical science (proposed)

MUSICRAFT recording corporation
Recapitalization and refinancing plan proposed. Comm & Fin Chr 165:1195 Mr 3 '47

MUSSELS
See also
Fouling organisms

MUSTARD gas
Alkaline fission of some 2-substituted dimethylethylsulphonium iodides. C. W. Crane and H. N. Rydon. Chem Soc J p766-72 Je '47
Apparatus for mustard gas treatment. J. G. Carr. Science 105:369 Ap 4 '47
Chemical production of mutations. C. Auerbach, J. M. Robson and J. G. Carr. bibliog Science 105:243-7 Mr 7 '47
Increasing the spreading coefficient of mustard gas. W. H. C. Rueggeberg. Science 105:532 My 16 '47
Induction of mutants in penicillium notatum by methyl-bis(β-chloroethyl)amine. M. A. Stahmann and J. F. Stauffer. bibliog Science 106:35-6 Jl 11 '47
Laboratory preparation of mustard gas. H. E. Bent. diag Science 106:374-5 O 17 '47
Polysulfides in Levinstein process mustard gas. R. Macy and others. bibliog Science 106:355-9 O 17 '47
Preparation of diethyldithiocarbamato-derivatives of 2 : 2′-dichlorodiethyl sulphide. R. A. Peters and R. W. Wakelin. Chem Soc J p849-50 Je '47
Preparation of highly purified mustard gas and its action on yeast. V. du Vigneaud and C. M. Stevens. bibliog Am Chem Soc J 69:1808-9 Jl '47
Reaction of mustard gas with proteins. S. B. Davis and W. F. Ross. bibliog Am Chem Soc J 69:1177-81 My '47
Thermal decomposition of 2 : 2′-dichlorodiethyl sulphide. A. H. Williams. Chem Soc J p318-20 Mr '47

Analysis
Determination of halogenated organic vapors in air by adsorption on specially prepared activated charcoal and preparation of charcoal. C. E. Danner and J. Goldenson. bibliog diags J Ind Hygiene 29:218-24 Jl '47
Iodometric microtitration for mustard gas. V. E. Kinsey and W. M. Grant. Ind & Eng Chem Anal ed 18:794-7 D '46
Methyl thioethers derived from 2 : 2′-dichlorodiethyl sulphide and its analogues; possible uses for analysis. E. M. Meade and R. C. G. Moggridge. Chem Soc J p813-14 S '46

MUTAROTATION. See Optical rotation

MUTATION (biology)
Beneficial mutations in laboratory strains of drosophila; abstract. T. Dobzhansky and B. Spassky. Science 105:634-5 Je 20 '47
Chemical production of mutations. C. Auerbach, J. M. Robson and J. G. Carr. bibliog Science 105:243-7 Mr 7 '47
Electron micrographs of X-ray-treated escherichia coli cells. A. Eisenstark and G. L. Clark. bibliog il Science 105:553-5 My 23 '47
Induction of mutants in penicillium notatum by methyl-bis(β-chloroethyl)amine. M. A. Stahmann and J. F. Stauffer. bibliog Science 106:35-6 Jl 11 '47
Mustard for molds. M. A. Stahmann and J. F. Stauffer. Chem Ind 61:380-1 S '47
Production of mutations in drosophila by treatment with some carcinogens; abstract. M. Demerec. Science 105:634 Je 20 '47

MUTATOCHROME
Pro-vitamin-A activity of mutatochrome. N. T. Gridgeman, R. F. Hunter and N. E. Williams. Chem Soc J p 131-2 Ja '47

MUTTON
Variation among lamb carcasses in the B vitamin content of meat. S. Cover and others. Science 105:364-5 Ap 4 '47

MUTUAL insurance. See Insurance, Mutual

MUTUAL insurance companies, National association of. See National association of mutual insurance companies

MUTUAL life insurance company of New York
Mutual Life aims for big achievements; address at Hollywood Beach, Fla. A. E. Patterson. Weekly Underw 156:929+ Ap 5 '47

MUTUAL telephone company, Honolulu
Rights. Comm & Fin Chr 165:76 Ja 6 '47

MYDRIATICS
Substituted benzilic acids and benzophenones. A. H. Ford-Moore. Chem Soc J p952-4 Jl '47
Synthetic mydriatics. A. H. Ford-Moore and H. R. Ing. Chem Soc J p55-60 Ja '47
Synthetic mydriatics; diphenylchloroace chloride as a reagent for the preparation of benzilic esters of tertiary amino-alcohols. F. E. King and D. Holmes. Chem Soc J p 164-8 F '47

MYERS, Howard, 1894-1947
Sketch. por Arch Forum 87:80b-80d O '47; Ind Marketing 32:76 O '47

MYLONITE
Dunite-mylonites of St Paul's rocks (Atlantic). C. E. Tilley. bibliog Am J Sci 245:483-91, pl 1-2 Ag '47

MYOGRAPH
Myographs used in studying sequence of heart action of dog and turtle. W. E. Gilson and J. A. E. Eyster. il diag Electronics 20:200+ N '47

MYOSIN
Myosin and adenosinetriphosphatase in muscular activity. W. F. H. M. Mommaerts. Science 104:605 D 20 '46

MYRISTYL lauryl caprin
X-ray investigation of glycerides; diffraction analyses of synthetic triacid triglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 69:1451-3 Je '47

N

NMRI 488. See Insect repellents

NADLER, Marcus
Money marketeers; financial organization. Comm & Fin Chr 165:789 F 6 '47

NAGASAKI, Japan
Water supply
Atomic bombing effects on Japanese water supply systems. il Pub Works 78:25-7 Ag '47

NAIL polishes
Manicure preparation sales reach $20 million annually. M. D. Hall. il Dom Comm 35:44-7 My '47
Non-tipping nail polish; new bottle, new carton, new shape. il Mod Packaging 20:120-1 D '46
Rise of Revlon. H. Golby. il Adv & Sell 40: 105-6+ Mr '47

NAILS
Uncommonly scarce: the common nail. Fortune 35:222 Ja '47

NAILS, Aluminum
Aluminum nail seen new factor in special purpose field. T. E. Lloyd. il Iron Age 159: 102-3 Mr 27 '47

NALYEDS. See Soils—Freezing

NAMES, Business. See Business names

NAMES, Corporate. See Corporate names

NAMES, Geographical
Dictionary of California land names. P. T. Hanna, comp. 360p $5 Automobile club of southern California, 2601 South Figueroa st, Los Angeles 54 '46
Geographical names of Antarctica. (Special publication, no 86) 253p pa bibliog(p 111-26) Dept. of the interior. U.S. bd. on geographical names, Washington, D.C.

NAMES, Trade. See Trade names

NAMPA, Idaho
See also
Retail trade—Nampa, Idaho

NAPALM
Liquid soaps from Napalm. diags Soap & San Chem 22:49-51 D '46

NAPHTHA
Calculation method for complex mixtures. W. D. Harbert. bibliog Ind & Eng Chem 39:1118-24 S '47
Catalytic desulfurization and reforming of naphthas over bauxite; abstract. G. M. Brooner and C. J. Helmers. Pet Refiner 26: 187+ Jl '47; Same cond. Oil & Gas J 46: 125-6 Je 28 '47
Catalytic reforming; fundamental hydrocarbon reactions of petroleum naphthas with molybdena-alumina and chromia-alumina catalysts. B. S. Greensfelder, R. C. Archibald and D. L. Fuller. bibliog diag Chem Eng Prog 43:561-8 O '47
Caustic sweetening of naphthas; patent. P. J. Gaylor. flow diag Pet Processing 2:182 Mr '47
Cold-starting abilities of various substitute motor fuels. R. E. Streets. bibliog J Res Nat Bur Stand 39:39-47 Jl '47
Converted topping unit makes close-cut naphthas and solvents from gasoline. flow diag il Pet Processing 2:191-2 Mr '47
Correlation of operating variables in the polyform process. J. H. Hirsch and others. Am Pet Inst Proc 26(3):247-53 '46; Same. Oil & Gas J 45:225+ N 16 '46; Same. Pet Refiner 25:136-40 N '46; Same. Pet Processing 2:61-2+ Ja '47
Homogenizing apparatus for removing mercaptans; patent. diag Pet Processing 2:540-1 Jl '47
Hydrogenation of catalytically cracked naphthas for production of aviation gasolines. A. Voorhies, jr., W. M. Smith and C. E. Hemminger. bibliog Ind & Eng Chem 39: 1104-7 S '47
Isolation of indene from heavy naphthas. R. D. Haworth, C. Lindley and D. Woodcock. Chem Soc J p369-70 Mr '47
Naphtha and gasoil polyforming process; Lummus company. flow diags Pet Refiner (Process Handbook sec) 26:198-9 Ap '47
Naphtha polyforming. W. C. Offutt and others. flow sheet il diag Am Pet Inst Proc 26(3):222-36 '46; Same. Pet Refiner 25: 120-8 N '46; Same. Pet Processing 1:267-8+ D '46; Same cond. Oil & Gas J 45:180-2+ N 16 '46
Naphthas from fluid catalyst cracking. C. E. Starr, jr., J. A. Tilton and W. G. Hockberger. bibliog Ind & Eng Chem 39:195-202 F '47
New odorless petroleum solvents synthesized; Soltrols. Nat Pet N 39:34 Ja 1 '47
Perco catalytic reforming process; Phillips petroleum company. flow diag Pet Refiner (Process Handbook sec) 26:208-9 Ap '47
Polyform process utilizes excess gases in upgrading naphthas and gasolines. W. F. Bland. il Pet Processing 1:243-4 D '46
Precise naphtha fractionation process; Foster Wheeler corporation. flow diag il Pet Refiner (Process Handbook sec) 26:224-5 Ap '47
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments at atmospheric pressures. E. A. Coulson and others. bibliog diag Soc Chem Ind J 65:396-8 D '46
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments in metal reaction tubes, and with increase of pressure above atmospheric. E. A. Coulson and R. Handley. diag Soc Chem Ind J 65:398-402 D '46
Special naphtha-rerun process; Lummus company. flow diag il Pet Refiner (Process Handbook sec) 26:256-7 Ap '47
Superfractionation studies; composition and octane numbers of 0.5% fractions of an Oklahoma City naphtha. C. C. Ward, R. M. Gooding and B. H. Eccleston. diags Ind & Eng Chem 39:105-9 Ja '47
Thermal reforming unit improves naphtha octane rating. flow diag il Pet Refiner 25: 141-2 D '46

NAPHTHACENE
Solvent quenching of fluorescence. E. J. Bowen and E. Coates. Chem Soc J p 105-9 Ja '47

NAPHTHALENE
New mothproofing larvicide; mixture of hexachlorethane with paradichlorobenzene, or with naphthalene. N. M. Molnar. Soap & San Chem 23:143+ Jl '47
Nitration of 1 : 5-dihydroxy- and 1 : 5-diacetoxy-naphthalene, 1-acetoxy-5-methoxynaphthalene, 5-methoxy-1-naphthol, and 1 : 5-dimethoxynaphthalene. R. H. Thomson, E. Race and F. M. Rowe. Chem Soc J p350-5 Mr '47
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Theoretical discussion of further substitution in disubstituted naphthalenes; a comparison of the sulphonation and nitration of polynitronaphthalenes, naphthalene polysulphonic acids and naphthalene nitrosulphonic acids. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63: 177-8 Je '47
Theoretical discussion of further substitution in disubstituted naphthalenes; the further nitration of the dinitronaphthalenes. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:141-4 My '47
Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; α- and β-naphthol, α- and β-naphthylamines, and their common monosulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63: 109-12 Ap '47
Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; naphthalene and its sulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:46-8 F '47
Analysis
Analysis of naphthalene-tetralin-decalin mixtures. W. J. Cerveny, J. A. Hinckley, jr. and B. B. Corson. bibliog il diag Anal Chem 19:82-6 F '47

NAPHTHALENEDIAMINE
Tetrazotisation of 1 : 5- and 1 : 8-naphthylenediamines and the tetranitration of 1 : 5- and 1 : 8-di-*p*-toluenesulphonamidonaphthalenes. H. H. Hodgson and J. S. Whitehurst. Chem Soc J p80-1 Ja '47

NAPHTHAZARIN
Magnetic anisotropy of coronene, naphthazarin, and other crystals. M. T. Rogers. bibliog diags Am Chem Soc J 69:1506-8 Je '47

NAPHTHENES
Analysis
Determination of aromatics and naphthenes in complex hydrocarbon mixtures containing olefins. R. M. Love and others. bibliog Anal Chem 19:37-42 Ja '47
Quantitative determination of paraffins and naphthenes in gasolines by the lamp method. S. G. Hindin and A. V. Grosse. bibliog Anal Chem 19:42-7 Ja '47

NAPHTHENIC acid
Naphthenic acids; boiling points and distribution in gas oil distillates. K. F. Coles. Inst Pet J 33:325-9 My '47
Naphthenic acids find wide commercial usage. Pet Processing 2:333 My '47
Salts of naphthenic acid. Chem Eng 54:167-8 S '47

NAPHTHIONIC acid
Mechanism of the Bucherer reaction; isolation of bisulphite compounds from naphthionic acid. W. A. Cowdrey. Chem Soc J p 1041-4 N '46

NAPHTHOL
Acid-catalyzed alcoholysis of β-naphthyl esters. M. Harfenist and R. Baltzly. Am Chem Soc J 69:362-5 F '47
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47
Preparation of β-tetralone by the catalytic reduction of β-naphthol. G. Stork and E. L. Foreman. bibliog Am Chem Soc J 68: 2172-4 N '46
Reaction of β-naphthol, β-naphthylamine and formaldehyde. R. S. Corley and E. R. Blout. bibliog Am Chem Soc J 69:755-69 Ap '47

NAPHTHOLBENZEIN
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47

NAPHTHOLS
Mechanism of the Bucherer reaction; isolation of bisulphite compounds from naphthionic acid. W. A. Cowdrey. Chem Soc J p 1041-4 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthols into naphthylamines. W. A. Cowdrey. Chem Soc J p 1046-50 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthylamines into naphthols. W. A. Cowdrey and C. N. Hinshelwood. Chem Soc J p 1036-41 N '46
Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; α- and β-naphthols, α- and β-naphthylamines, and their common monosulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63: 109-12 Ap '47

NAPHTHOLSULFONIC acid
Mechanism of the Bucherer reaction; kinetics of the reaction between naphtholsulphonic acids and sodium hydrogen sulphite. W. A. Cowdrey. Chem Soc J p 1044-5 N '46
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; derivatives of 2′ : 4′-dinitrobenzene-2-naphthol-1-diazosulphonate. F. M. Rowe and W. Osborn. Chem Soc J p829-37 Je '47
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; derivatives of 4′-nitro-2′-methoxybenzene-2-naphthol-1-diazosulphonate. F. M. Rowe and E. J. Cross. Chem Soc J p461-8 Ap '47
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; the stabilities of acrylic acid derivatives from sodium 1-arylazo-β-naphthaquinone-1-sulphonate and its derivatives, and an investigation of derived *iso*indolinones. F. M. Rowe, W. T. McFadyen and A. T. Peters. Chem Soc J p468-73 Ap '47

NAPHTHOQUINOLINE
Cyclization studies in the benzoquinoline and naphthoquinoline series. W. S. Johnson, E. Woroch and F. J. Mathews. bibliog Am Chem Soc J 69:566-71 Mr '47
Determination of cadmium oxide suspended in air. H. A. Bewick, A. J. Cruickshank and F. E. Beamish. Anal Chem 19:269-70 Ap '47

NAPHTHOYLPROPIONIC acid
Separation of isomers; β-(2- and β-(1-naphthoyl)-propionic acid; their ionization constants and solubilities and method of separation. M. S. Newman and others. Am Chem Soc J 69:1784-6 Jl '47

NAPHTHYL group
Relations between rotatory power and structure in the sugar group; some 2′-naphthyl 1-thioglycopyranosides and their acetates. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1668-72 Jl '47

NAPHTHYL methylcarbinol
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-803 S '46

NAPHTHYL thiourea
ANTU. J. C. Munch. Soap & San Chem 23: 147+ Ap '47
Epidemic control with DDT, ANTU and 1080. H. Elishewitz. Soap & San Chem 23:127-9+ My; 153+ Je '47
How ANTU and 1080 promise better rodent control. il Chem Ind 59:828-9 N '46

NAPHTHYLAMINE
Mechanism of the Bucherer reaction; isolation of bisulphite compounds from naphthionic acid. W. A. Cowdrey. Chem Soc J p 1041-4 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthols into naphthylamines. W. A. Cowdrey. Chem Soc J p 1046-50 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthylamines into naphthols. W. A. Cowdrey and C. N. Hinshelwood. Chem Soc J p 1036-41 N '46
Reaction of β-naphthol, β-naphthylamine and formaldehyde. R. S. Corley and E. R. Blout. bibliog Am Chem Soc J 69:755-69 Ap '47
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47
Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; α- and β-naphthols, α- and β-naphthylamines, and their common monosulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:109-12 Ap '47

NAPHTHYLAMINE hydrochloride
Study of the reaction of some nitrosoamines with α-naphthylamine hydrochloride; suitable for the quantitative determination of these nitrosoamines. C. A. Parker. Chem Soc J p772-5 S '46

NARCOLEPSY
Narcolepsy as cause of accident. Coal Age 51:102 D '46

NARCOTICS
Therapeutic chemicals; Alco-Dex. Chem Eng 54:167 F '47

NARINGIN
Determination of flavanones in citrus fruits. W. B. Davis. bibliog Anal Chem 19:476-8 Jl '47

NASH, John Henry, 1871-1947
Printer extraordinary, scholar, artist. por Inland Ptr 119:31-2 Jl '47

NASHVILLE, Tennessee
Industries
Consolidated Vultee changes to buses and home appliances at Nashville plane plant. B. L. Clark. il Manuf Rec 116:32-3+ Jl '47

NASHVILLE corporation
Convair holdings segregated in corporate financial twist; details of plan placing non-aviation properties in new Nashville corp. S. Altschul. Aviation W 47:48 N 3 '47

NATHAN report. See Wages—Economic aspects

NATIONAL academy of arbitrators
Labor arbitrators organize. Bsns W p88+ S 27 '47

NATIONAL academy of sciences
Elections. Science 105:492-3 My 9 '47
Meeting, 1947; abstracts of papers. Science 105:632-7 Je 20 '47
Report, 1944-1945. 161p National research council, Washington; pa 30c Supt. of doc. '46

NATIONAL accident and health association. See National association of accident and health underwriters

NATIONAL advisory council on international monetary and financial problems
Report of Council submitted to the President on June 24, 1947. Fed Res Bul 33:836-50 Jl '47
Uncle Sam's loan officer. Banking 39:44-5+ Ap '47

NATIONAL agricultural limestone association
First annual meeting, Washington, Jan. 15-16. Rock Prod 50:116+ F '47

NATIONAL aluminate corporation
Stock offered. Comm & Fin Chr 165:1195 Mr 3 '47

NATIONAL association of accident and health underwriters
Annual meeting, 17th, Boston, June 23-25. East Underw 48:30-8 Je 27; 26 Jl 4 '47; Nat Underw 51:17+ Je 26 '47; Nat Underw (Life ed) 51:1+ Je 27 '47; Spectator (Life ed) 155:32-3+ Jl '47; Spectator (Property ed) 12:16-17+ Jl 10 '47; Weekly Underw 156:1729, 1752, 1765-7 Je 28 '47
Dramatizes role of National Association in his blue print talk, G. H. Knight. East Underw 48:35+ O 24 '47
Launching public relations program. East Underw 48:29 Je 27 '47
Midyear meeting, Miami Beach, Jan. 8-10. East Underw 48:32+ Ja 10 '47; Nat Underw 51:17 Ja 9; 17+ Ja 16 '47; Nat Underw (Life ed) 51:3+ Ja 10; 3+ Ja 17 '47

NATIONAL association of broadcasters
New radio code; N.A.B. preparing rules to cut lengthy commercials. Bsns W p20 S 27 '47

NATIONAL association of casualty and surety agents
Joint meeting with International association of casualty and surety underwriters, Swampscott, Mass. Sept. 22-25. East Underw 48:30-2 S 26; 25-6+ O 3 '47; Nat Underw 51:23+ S 25; 15+ O 2 '47; Weekly Underw 157:725, 752-5 S 27 '47
Origin of the casualty agents' association. C. H. Burras. Nat Underw 50th anniv no: 284-6 1947

NATIONAL association of corrosion engineers
Annual meeting, 3d, Chicago, April 7-10. Iron Age 159:125+ Ap 24 '47; Chem & Eng N 25:1187 Ap 28 '47; Oil & Gas J 45: 66-7+ Ap 19 '47

NATIONAL association of cost accountants

Committee on research
Research; the key to improved industrial accounting. R. P. Marple. N A C A Bul 28: 531-9 Ja 2 '47

NATIONAL association of cotton manufacturers
Annual meeting, 92d, Boston, Oct. 10. Textile World 96:149+ N '46

NATIONAL association of credit men
Credit research foundation plan. Credit & Fin Management 48:34-5+ D '46
Golden anniversary credit congress, New York, May 11-15. Credit & Fin Management 49:33-6+ My '47
National committees for 1947-1948. Credit & Fin Management 49:36-9 Ag '47
Officers and directors. Credit & Fin Management 49:34 Je '47
Statement of policy of the 51st NACM credit conference. Credit & Fin Management 14: 38-9 My '47

Credit interchange bureau
Operations for 1946-47 in black; prospects bright. G. C. Klippel. Credit & Fin Management 49:35 Je '47

NATIONAL association of finishers of textile fabrics
Annual meeting, 33d. Textile Col 69:20-1+ F '47

NATIONAL association of home builders
Meeting, Chicago. Arch Rec 101:16+ Ap '47

NATIONAL association of independent insurance adjusters
Annual meeting, Los Angeles. Nat Underw 51:15+ O 2 '47; Weekly Underw 157:986 O 18 '47
Mid-year meeting of executive committee, Chicago. Nat Underw 51:3 F 27 '47; Weekly Underw 156:616 Mr 1 '47

NATIONAL association of insecticide and disinfectant manufacturers
Annual meeting, 33d, New York, Dec. 2-4. Oil Paint & Drug Rep 150:5+ D 9 '46; Chem & Eng N 24:3354 D 25 '46; Soap & San Chem 22:130-3+ D '46
Highlights of NAIDM convention. Chem Ind 60:58-9 Ja '47
Mid-year meeting, 33d, Chicago, June 9-11. Soap & San Chem 23:130-3 Je; 123-5+ Jl '47; Chem & Eng N 25:1802 Je 23 '47; Oil Paint & Drug Rep 151:7+ Je 16 '47

NATIONAL association of insurance agents
Agents defiant to companies' move on local board rules; with text of I.E.A. letter. Nat Underw 51:1+ Ap 24 '47
Annual convention, Atlantic City, Oct. 13-17. East Underw 48:1+, 23-31+ O 17 '47; Nat Underw 51:23+ O 16; 1+, 4 O 23 '47; Spectator (Property ed) 13:20-4+ O 23 '47; Weekly Underw 157:953+, 960-5 O 18 '47
Attitude of agents on all-industry bills; report of committee of NAIA. Weekly Underw 156:1127+ Ap 26 '47
Committee reports. Nat Underw 51:47-51 O 16 '47
F. Stuart Brown is actuary for NAIA. East Underw 48:42+ Mr 21 '47
Fifty years of organization. G. T. Warfield, jr. Nat Underw 50th anniv no:276-7 1947
Midyear meeting, Oklahoma City, April 21-25. East Underw 48:20+ Ap 25 '47; East Underw 48:26 My 2 '47; Nat Underw 51:1+ My 1 '47; Weekly Underw 156:1138+ Ap 26 '47; Spectator (Property ed) 12:16-18+ My 8 '47
NAIA public relations head; R. L. Bliss. East Underw 48:20 Ja 24 '47
President's report. East Underw 48:24 O 17 '47

NATIONAL association of insurance brokers
Brokers' association foundation is firm. A. T. Archer. Weekly Underw 156:18+ Ja 4 '47

NATIONAL association of insurance commissioners
Annual meeting, 78th, Atlantic City, June 1-4. East Underw 48:1, 12-13, 16 Je 6; 23+ Je 13 '47; Nat Underw 51:1+, 4+ Je 5; 1+ Je 12 '47; Nat Underw (Life ed) 51:1+ Je 6; 1+ Je 13 '47; Spectator (Life ed) 154: 16-17+ Je '47; Spectator (Property ed) 12: 20-1+ Je 12 '47; Weekly Underw 156:1538, 1540-5, 1602-3+ Je 7-14 '47
Central office plan opposed. J. J. Holmes. Weekly Underw 156:1391-2 My 24 '47
Commissioners approve central office scheme. Weekly Underw 156:1587 Je 7 '47
Commissioners committees. East Underw 48: 1+, 30 Ag 8 '47; Nat Underw 51:1+ Ag 7 '47; Nat Underw (Life ed) 51:1 Ag 8 '47; Weekly Underw 157:315 Ag 9 '47
Commissioners envision modest central office. Nat Underw 50:3, 10 D 12 '46; Same. Nat Underw (Life ed) 50:1+ D 13 '46
Dineen names new committee chairmen. Weekly Underw 156:659 Mr 8 '47; East Underw 48:18 Mr 7 '47; Nat Underw 51:12 Mr 6 '47
Executive committee meets in Chicago. East Underw 48:55+ O 17 '47
Midyear meeting, 78th, New York, Dec. 9-11. East Underw 47:46 D 13 '46; Nat Underw 50:1+ D 12 '46; Nat Underw (Life ed) 50: 1+ D 13 '46; Spectator (Property ed) 12: 10-13 D 26 '46; Spectator (Life ed) 154:22-5 D '46; Weekly Underw 155:1396-401 D 14 '46
President's address at annual meeting. R. E. Dineen. Weekly Underw 156:1517+ Je 7 '47; Same abr. East Underw 48:1+ Je 6 '47; Abstract. Nat Underw 51:1+ Je 5 '47

NATIONAL association of insurance women
Annual convention, New York, June 18-20. East Underw 48:1, 24+ Je 20 '47; Nat Underw 51:1+ Je 26 '47; Weekly Underw 156:1669+ Je 21 '47

NATIONAL association of legal aid organizations
1946 committee reports and proceedings. 124p pa $1 National assn. of legal aid organizations, 25 Exchange st, Rochester 4, New York '46

NATIONAL association of life underwriters
Annual convention, Boston, Sept 8-12. East Underw 48:1+, 3-4+ S 12 '47; Nat Underw (Life ed) 51:1+ S 12; 1+ S 19 '47; Nat Underw (Life ed) Daily ed 51:5-52 S 10; 5-52 S 11; 5-52 S 12 '47; Spectator (Life ed) 155:9-13+ S '47; Weekly Underw 157:589, 635, 640-1 S 13 '47
Committee reports at mid-year meeting. East Underw 48:12-13 Mr 14 '47
50 years of the N.A.L.U.; the past 25, the next 25. P. B. Hobbs. Nat Underw 50th anniv no:96+ 1947
General agents and managers section meeting, Chicago, May 8-9. East Underw 48:6+ My 16 '47; Nat Underw (Life ed) 51:1+ My 16 '47
Midyear meeting, Milwaukee, March 11-14. East Underw 48:8 Mr 21 '47; Nat Underw (Life ed) 51:1+ Mr 14; 1+ Mr 21 '47; Spectator (Life ed) 154:32 Mr '47; Weekly Underw 156:801+ Mr 22 '47
NALU tops 50,000 men; ranking of first twenty associations and by states. Life Ins Courant 52:346 Ag '47
National life underwriters' job. P. B. Hobbs. Weekly Underw 156:90 Ja 4 '47
New committee lineup. Nat Underw (Life ed) 51:1+ O 17 '47
1947 NALU convention highlights headliners; sketches of principal speakers. Spectator (Life ed) 155:12-15+ Ag '47
Platform of NALU. J. E. Rutherford. East Underw 48:16 F 21 '47

NATIONAL association of litho clubs
Lithographers meet; first anniversary of formation of the national organization. Inland Ptr 118:71 Mr '47

NATIONAL association of manufacturers
Annual congress, 51st, New York. Iron Age 158:120-1 D 12 '46; Steel 119:62-3 D 16 '46
Congress of American industry, New York, Dec. 4-6. Steel 119:60-1+ D 9 '46
NAM treatise upholds present system of government and business; stresses individual enterprise. Comm & Fin Chr 165:1846 Ap 3 '47
NAM's program for prosperity. Comm & Fin Chr 164:3023+ D 12 '46

NATIONAL association of master plumbers
Annual meeting, Milwaukee, May 26-29. Dom Eng 169:110-15 Je; 170:124-5+ Jl '47

NATIONAL association of motor bus operators
Annual meeting, 18th, Chicago, May 21-23. Bus Transportation 26:40-52 Je '47

NATIONAL association of mutual insurance companies
Annual meeting, Buffalo. Nat Underw 50:3 N 21 '46
Annual meeting, Columbus, Ohio. Nat Underw 51:3+ O 9 '47

NATIONAL association of mutual savings banks
Savings bankers' choice, E. B. Schwulst. Bsns W p68 My 17 '47

NATIONAL association of power engineers
Annual meeting, 64th, Boston, Aug. 25-29. Power 91:698 O '47

NATIONAL association of printing ink makers
Annual meeting, 33d, Washington, Oct. 1-3. Oil Paint & Drug Rep 152:5+ O 6 '47

NATIONAL association of public relations counsel
Officers. Ptr Ink 218:141 F 7 '47

NATIONAL association of purchasing agents
Annual convention, 32d, New York, June 2-4. Oil Paint & Drug Rep 151:7+ Je 9 '47

NATIONAL association of railroad and utilities commissioners
Annual meeting, 58th, Los Angeles, Nov. 12-15. Elec World 126:89 N 23 '46; Ry Age 121:873-4+ N 23 '46
Annual meeting, 59th, Boston, July 14-17. Ry Age 123:146-8 Jl 26 '47
Excerpts and digests from reports and addresses at annual convention. Pub Util 38:833-50 D 19 '46
Excerpts and digests from reports and addresses at annual convention. Pub Util 40:234-48 Ag 14 '47

NATIONAL association of real estate boards
Rents and the real estate lobby; wartime controls survive. Fortune 35:96-7+ Je '47

NATIONAL association of retail druggists
N.A.R.D. fined in New Jersey and New York trust suits. Oil Paint & Drug Rep 151:3 F 3; 4 F 10 '47

NATIONAL association of securities dealers
National committees appointed. Comm & Fin Chr 165:1262 Mr 6 '47
SEC reverses NASD ruling in Herrick, Waddell case. Comm & Fin Chr 165:1785+ Ap 3 '47
Self praise; editorial comment on Securities business comes of age, by E. Frazer. Comm & Fin Chr 165:2599+ My 15 '47; Discussion. 165:2852+ My 29 '47

NATIONAL association of wholesalers
Annual convention, New York. Oil Paint & Drug Rep 152:7+ O 13 '47

NATIONAL automobile underwriters association
Annual meeting, 17th, New York, May 28. East Underw 48:32 Je 6 '47

NATIONAL aviation trades association
Operator and his state ATA. C. A. Parker. il Aero Digest 55:70+ O '47
Reorganizes as state federation for legislative action. Aviation N 6:10 D 2 '46
Shows promise as spokesman for operators. A. McSurely. Aviation N 7:22-3 Mr 17 '47

NATIONAL banks. See Banks and banking, National

NATIONAL biscuit company
May increase dividend. Barron's 27:1 Ja 20 '47

NATIONAL board of fire underwriters
Annual meeting, 81st, New York, May 27. East Underw 48:19-20+ My 30 '47; Nat Underw 51:1+ My 29 '47; Weekly Underw 156:1454+ My 31 '47; Spectator (Property ed) 12:24-5 Je 12 '47
New committees. East Underw 48:23 Je 20 '47; Weekly Underw 156:1604 Je 14 '47

NATIONAL bond and share corporation
Annual report. Comm & Fin Chr 165:340 Ja 20 '47

NATIONAL bureau of casualty and surety underwriters. See National bureau of casualty underwriters

NATIONAL bureau of casualty underwriters (formerly National bureau of casualty and surety underwriters)
Annual meeting, New York, May 14. East Underw 48:29 My 16 '47; Weekly Underw 156:1321+ My 17 '47
Bureau subscribers in seventeen states. Nat Underw 51:53+ O 16 '47
National Bureau alters title of organization; other changes. Weekly Underw 157:329 Ag 9 '47; Nat Underw 51:17 Ag 7 '47; East Underw 48:24 Ag 8 '47

NATIONAL bureau of standards. See United States—Standards, National bureau of

NATIONAL bus traffic association
Annual meeting, 12th, Chicago, May 20-22. Bus Transportation 26:52-4 Je '47

NATIONAL can company
Rebuilds profit margins. Barron's 27:28 Mr 3 '47

NATIONAL canners association
Annual convention, 40th, Atlantic City, Jan. 20-24. Food Ind 19:205 F '47
Canners convention highlights; machinery exhibit; staff report. Food Ind 19:319+ Mr '47

NATIONAL characteristics, Chinese
Trouble with China is Confucius. H. Maurer. il Fortune 35:124-31+ Ap '47

NATIONAL city bank of New York
Annual report to stockholders. G. S. Rentschler. Comm & Fin Chr 165:497 Ja 23 '47

NATIONAL city lines, inc.
National City and others indicted by federal grand jury with conspiracy in restraint of domestic trade and monopoly in violation of anti-trust laws. Bus Transportation 26: 101-2 My '47
Time gallops for the Fitzgeralds. Mass Transportation 43:204 My '47

NATIONAL clay pipe manufacturers, inc.
Board of directors June meeting open to all N.C.P.M.I. members, Akron, June 12-13. Brick & Clay Rec 111:49+ Jl '47

NATIONAL committee for mental hygiene
Meeting, New York, Nov. 12-13, 1947. Science 106:263 S 19 '47

NATIONAL concrete masonry association
Annual meeting, 27th, Chicago, Feb. 17-20. Concrete 55:16+ Mr '47; Rock Prod 50:132-8+ Mr '47

NATIONAL conference of educational directors in industry
Proceedings of the third annual conference, Cleveland, March 6-8, 1947. 82p pa $1 National assn. of foremen, 321 West first st, Dayton 2, Ohio '47

NATIONAL conference on industrial hydraulics
Annual meeting, 3d, Chicago, Oct. 16-17. Science 106:262-3 S 19 '47

NATIONAL conference on labor legislation
Thirteenth conference, Washington, D.C. Dec. 2-4, 1946. Mo Labor R 64:268-71 F '47

NATIONAL container corporation
Companies forging ahead. Mag of Wall St 80:379 Jl 5 '47

NATIONAL cotton council of America
Annual meeting, 9th, Galveston, Jan. 28-30. Chem & Eng N 25:429 F 17 '47

NATIONAL cotton week. See Cotton trade—United States—National cotton week

NATIONAL council for stream improvement of the pulp, paper, and paperboard industries
Stream improvement research. Chem & Eng N 25:1579 Je 2 '47

NATIONAL council of independent petroleum associations
Meeting, Chicago, May 8-9. Nat Pet N 39: 9-12 My 14 '47
Views and objectives. G. Duke. Nat Pet N 39:20 Ja 15 '47

NATIONAL crushed stone association
Annual meeting, 30th, Chicago, Jan. 27-29. Rock Prod 50:76-85+ Mr '47
Directors' meeting, Hot Springs, July 3. Rock Prod 50:95+ Ag '47

NATIONAL defense mediation board
Tripartite labor control is ending. Bsns W p84 Ja 11 '47

NATIONAL district heating association
Annual meeting, 38th, Atlantic City. Heating-Piping 19:102-4 Ag; 108-10 S '47
Annual meeting, 38th, Atlantic City. Power 91:622 S '47

NATIONAL Dixie distributors, inc.
National Dixie distributors plan to expand and renew prewar policies of merchandising. Nat Pet N 38:44 N 6 '46

NATIONAL drug trade conference
Annual meeting, Washington, Nov. 8. Oil Paint & Drug Rep 150:7+ N 18 '46; Chem & Eng N 24:3176 D 10 '46

NATIONAL electrical code
Applying the code to homes. J. M. Evans. diags Elec West 97:84-5 O '46
National electrical code, 1947 edition. A. Small. Ind Stand 18:34-6 F '47

NATIONAL electrical contractors association
Annual meeting, 46th, San Francisco. Elec World News ed 128:13 S 20 '47
Annual meeting, 46th, San Francisco, Sept. 5-11. Elec West 99:88-91 O '47

NATIONAL electrical manufacturers association
Annual meeting, 20th, Atlantic City. Elec World 126:107-8 N 9 '46
NEMA formulates policy on testing and certification labeling. Ind Stand 18:63-6 Mr '47

NATIONAL electrical retailers association
What about the NERA. Elec West 98:101-3 Je '47

NATIONAL electrical wholesalers association
Pacific division convention, Boyes Springs, Calif., Nov. 13-15. Elec West 97:74-5 D '46

NATIONAL electronics conference
Second, Chicago, Oct. 3-5. Elec Eng 65:590 D '46

NATIONAL emergency steels. See Steel—Standards

NATIONAL enameling and stamping company
Promising stocks. Mag of Wall St 79:667 Mr 15 '47

NATIONAL exposition of power and mechanical engineering
Exposition, 17th, New York, Dec. 2-7. il Power Pl Eng 51:119-20 Ja '47
1946 power show. il Chem Eng 54:111-15 Ja '47
Power show preview, 1946; with list of exhibitors. il Power Pl Eng 50:112-16+ N '46

NATIONAL farm chemurgic council
Annual conference, 12th, Oklahoma City, March 26-29. Oil Paint & Drug Rep 151:7+ Mr 31 '47; Chem & Eng N 25:1123-4 Ap 21 '47
Mid-American conference, 5th, Cincinnati, Oct. 1-3. Oil Paint & Drug Rep 152:5+ O 13 '47

NATIONAL federation of sales executives
Annual convention, 12th, Los Angeles, June 2-4. Sales Management 58:73-6 Je 15 '47
Club extension; Jack Lacy's committee is responsible for the rapid growth of NFSE; with portraits of some regional directors. Sales Management 59:sup3-5 N 1 '47
N.F.S.E. board makes news after convention ends; to move head office to New York, appoint R. A. Whitney executive director. Sales Management 59:91-2 Jl 1 '47
1947-1948 administration committees. Sales Management 59:sup4-5 O 1 '47

NATIONAL federation of telephone workers
Affiliation fought. Bsns W p93 F 8 '47
Threat to unions' strategy. Bsns W p76+ Mr 29 '47
Triangular phone union fuss. Pub Util 39: 847 Je 19 '47
Union monopolies weak without goons. Barron's 27:1+ Ap 21 '47

NATIONAL federation of textiles
Celebrates 75 years of service. R. E. Ellsworth. Rayon 28:306-9 Je '47

NATIONAL fertilizer association
Annual meeting, 22d, Spring Lake, N.J. June 19-21. Oil Paint & Drug Rep 151:7+ Je 30 '47; Chem & Eng N 25:1944 Jl 7 '47
Annual Southern convention, 20th, Atlanta. Oil Paint & Drug Rep 150:5+ N 18 '46

NATIONAL fire protection association
Annual meeting, 51st, Chicago, May 25-29. Nat Underw 51:3+ My 29 '47; Weekly Underw 156:1449+ My 31 '47; East Underw 48:21+ Je 6 '47
NFPA drives to make public fire conscious. P. Bugbee. Weekly Underw 156:26-7 Ja 4 '47

NATIONAL fire waste council
Annual meeting, Washington, D.C. Nov. 1. East Underw 47:32 N 15 '46
Elects new executive members. Weekly Underw 156:1194 My 3 '47

NATIONAL flying farmers association
Wings for farms. il Bsns W p20 Mr 22 '47

NATIONAL foreign trade convention
Text of Convention's declaration of principles and recommendations and abstracts of principal addresses at New York meeting. il For Comm W 25:7-11+ N 30 '46

NATIONAL foreign trade council
Directors elected. Comm & Fin Chr 165:1144 F 27 '47
Elects new directors. Oil Paint & Drug Rep 151:51 F 17 '47
Inter-American cooperation council with Foreign Trade group; plan of affiliation. Comm & Fin Chr 165:2529 My 8 '47

NATIONAL foundation for infantile paralysis
Public health fellowships. Chem & Eng N 25:115 Ja 13 '47

NATIONAL founders' association
Annual meeting, 49th, New York, Nov. 7-8. Foundry 74:97+ D '46; Steel 119:56 N 18 '46

NATIONAL fraternal congress of America
Annual meeting, Detroit, Sept. 29-Oct. 3. Nat Underw (Life ed) 51:28-40 O 3; 42-3 O 10 '47
Committees appointed. Nat Underw (Life ed) 50:22 D 27 '46
See also
Fraternal field managers association

NATIONAL frozen food council
Council formed to promote frozen foods. Food Ind 19:1246-7 S '47

NATIONAL gas and oil corporation
Debentures offered. Comm & Fin Chr 165: 2801-2 My 26 '47

NATIONAL glass company
Stocks offered. Comm & Fin Chr 165:3396 Je 30 '47

NATIONAL graphic arts education association
Annual meeting, 22d, Chicago, June 16-18. Inland Ptr 119:78-81 Ag '47

NATIONAL gypsum company
National Gypsum president lays cornerstone for new $6,000,000 Baltimore plant. il Manuf Rec 115:46-7+ D '46
Private financing. Comm & Fin Chr 165:1870 Ap 7 '47

NATIONAL home and property owners foundation
Little man; realtors want third party for property owners but first try is a dud. Arch Forum 87:16 Jl '47

NATIONAL industrial advertisers association
Membership roster. Ind Marketing 31:1-47 sec 2 N '46
NIAA marks 25 years of progress. G. D. Crain, jr. Ind Marketing 32:37+ Je '47
25th Anniversary conference; addresses. A. M. Staehle and others. Ind Marketing 32: 33-51+, 70+ Jl '47

Library
NIAA mails first release on new Library of industrial marketing. Ind Marketing 31: 130+ D '46
Need thought-starters for promotional pieces? Sales Management 58:93 Ap 1 '47

NATIONAL industrial conference board
Annual meeting, 31st, New York. Steel 120: 51 Je 9 '47
Meeting, New York. Comm & Fin Chr 165:52 Ja 2 '47
National industrial conference board finds facts for industrial marketers. Ind Marketing 32:46+ F '47

NATIONAL industrial sand association
Annual meeting, Chicago, Oct. 24-25. Rock Prod 49:98+ D '46
Annual meeting, Hot Springs, Va. May 14-15. Rock Prod 50:88-91+ Jl '47

NATIONAL industrial traffic league
Annual meeting, New York. Ry Age 121:925 N 30 '46

NATIONAL institute for commercial and trade organization executives
Meeting, Northwestern university, Aug. 10-16. Dom Comm 35:81 Ag '47

NATIONAL institute of governmental purchasing
Meeting, New York, Sept. 8-11. Oil Paint & Drug Rep 152:7+ S 15 '47

NATIONAL institute of health
Laboratory building for study of highly infectious diseases; National institute of health. il plan Eng N 139:460-3 O 2 '47

NATIONAL instrument conference
Instrumentation, measurement, and control. A. Klemin. il Sci Am 176:122-4 Mr '47

NATIONAL labor relations act. See Labor laws and legislation—United States

NATIONAL labor relations board
Coping with boycott issue. Bsns W p80+ O 4 '47
Decision gives employers certain freedom of speech in union plants. Comm & Fin Chr 165:1979 Ap 10 '47
Free collective bargaining or government intervention? E. C. Brown. Harvard Bsns R 25 no2:190-206 [Ja] '47
Freedom of speech and the NLRB; employers' right; abstract. P. M. Herzog. Management R 36:24-6 Ja '47
How practical personnel men think the labor law will work; new Labor relations board. R. A. Lind. Factory Management 105:95-6 S '47
Inter-union fights claim NLRB notice. Steel 121:44-5 S 1 '47
Labor Board issues instructions for disposal of Wagner act cases. Steel 121:79 Jl 21 '47
Labor's increasing use of NLRB to help in securing recognition; graph. Bsns W p85 Mr 22 '47
Man on a hot spot, new general counsel of NLRB, R. N. Denham. Bsns W p67-8 Ag 23 '47
NLRB boycott; all unions to rely more on economic power. Bsns W p83-6 Jl 12 '47
NLRB gets set. Bsns W p74-6 Ag 9 '47
New NLRB team. Bsns W p86+ Jl 26 '47
Procedure under new L.-M.R.A. N. C. Rockwood. Rock Prod 50:73+ O '47
Slap at swapping. Bsns W p95 Mr 8 '47
Supreme court rules state board cannot rule on labor disputes covered by NLRA; New York Board's order for recognition by steel companies of foremen's unions. Comm & Fin Chr 165:2114 Ap 17 '47

NATIONAL lead company
Cumulative growth stocks for long-term capital gains. H. S. Coffin. Mag of Wall St 79: 258 D 7 '46

NATIONAL lime association
Annual meeting, 29th, Hot Springs, Va. May 5-8. Rock Prod 50:108-10+ Je '47

NATIONAL lubricating grease institute
Annual convention, 15th, Chicago, Oct. 16-18. Chem & Eng N 25:3217+ N 3 '47; Nat Pet N 39:38-9 O 29 '47

NATIONAL machine tool builders' association
Spring meeting, Atlantic City, April 14-16. Am Mach 91:149-51 My 8 '47; Steel 120: 66 Ap 21 '47

NATIONAL malaria society
Officers. Science 105:10 Ja 3 '47

NATIONAL materials handling association
Mechanical muscles needed. il Bsns W p38+ Ja 25 '47

NATIONAL mediation board
Mediation board sees bright side; annual report for fiscal year ended June 30, 1946. Ry Age 122:458 Mr 1 '47

NATIONAL metal congress
Annual meeting, 28th, Atlantic City, Nov. 18-22; with abstracts of A.S.M. papers. Steel 119:38-40+ N 25 '46; Automotive & Aviation Ind 95:32+ D 1 '46; Iron Age 158:52-66 N 28 '46
Congress, 28th, Atlantic City; technical programs. Steel 119:137-45 N 11 '46; Iron Age 158:83-8 N 14 '46; Materials & Methods 24: 1197+ N '46; Metal Prog 50:792-801 N '46
Congress, 29th, Chicago. Iron Age 160:49-61 O 30 '47
Congress and exposition, Atlantic City, Nov. 18-23. Chem & Eng N 24:3162-3 D 10 '46
Preview of the 29th National metal congress. Steel 121:102-3+ O 6 '47
Technical papers; abstracts. Steel 121:110+ O 6 '47
Technical program, Oct. 18-24. Materials & Methods 26:111-18 O '47; Steel 121:106-10 O 6 '47

NATIONAL metal exposition
Exhibitors list. Iron Age 158:88-90 N 14 '46; Materials & Methods 24:1213-14 N '46
Exhibitors list and floor plan. Steel 121:104-5 O 6 '47; Same, without plan. Materials & Methods 26:119-20 O '47
Metal show draws 372 exhibitors at Chicago. Am Mach 91:141-2 N 6 '47
Metals show emphasizes productivity. il Steel 121:45-6+ O 27 '47
Production equipment and methods highlight exhibits at metal show. il Am Mach 90:152-3 D 5 '46
Putting the audit on trade show audiences. W. H. Eisenman. Ptr Ink 221:65-6+ O 10 '47

NATIONAL metal trades association
Annual meeting, 47th, New York, Nov. 14-15. Iron Age 158:152-3 N 28 '46; Mach 53:180 D '46; Steel 119:48-9 N 25 '46

NATIONAL monuments
See also
Zion national monument, Utah
NATIONAL Negro insurance association
Annual meeting, Detroit. Nat Underw (Life ed) 51:6 Jl 11 '47
NATIONAL newspaper promotion association
Annual convention, 17th, Chicago. Ptr Ink 219:126 Ap 18 '47
NATIONAL paint, varnish and lacquer association
Annual convention, 58th, Atlantic City. Chem & Eng N 24:3038-9 N 25 '46; Oil Paint & Drug Rep 150:79 N 11 '46; Paint Oil & Chem R 109:5-7 N 14 '46
Names committee chairmen. Oil Paint & Drug Rep 151:78 Ap 28 '47
NPVLA and Contractors association form committee. Oil Paint & Drug Rep 152:7 S 15 '47
NATIONAL park rangers. See United States—National park service
NATIONAL park service. See United States—National park service
NATIONAL parks and reserves
National parks; portfolio of paintings and photographs. B. De Voto. Fortune 35:120-34 Je '47
See also
United States—National park service
Zion national monument, Utah
NATIONAL pest control association
Meeting, 14th, New Orleans, Oct. 28-30. Chem & Eng N 24:3052+ N 25 '46; Soap & San Chem 22:161+ N '46
NATIONAL petroleum association
Annual meeting, 45th, Atlantic City. Nat Pet N 39:13-14 S 24 '47
Semi-annual meeting, 44th, Cleveland, April 16-18. Nat Pet N 39:13-16 Ap 23 '47; Oil & Gas J 45:89-90 Ap 26 '47
NATIONAL petroleum council
NPC orders comprehensive probe of crude, refined products supply. H. A. Yocom. Nat Pet N 39:12 Ap 23 '47
NPC rejects four U. S. projects, adopts advice only policy. Oil & Gas J 45:23-4 F 1 '47
NPC reports to government stress oil industry's need for more steel. Nat Pet N 39:16-17 Jl 16 '47
NPC undertakes four new projects, including Marshall plan study. H. D. Ralph. Oil & Gas J 46:79 O 18 '47
Quarterly meeting, Washington, April 22. Oil & Gas J 45:42 My 3 '47
NATIONAL physical laboratory, Teddington. See Great Britain—National physical laboratory, Teddington
NATIONAL pickle packers association
Annual convention, 54th, Chicago. Food Ind 19:354 Mr '47
NATIONAL planning association
Goals of cooperation; joint statement by agriculture, business and labor members. Comm & Fin Chr 165:790 F 6 '47
NATIONAL provincial bank
Statement by the chairman. E. C. E. Smith. Economist 152:168-9 Ja 25 '47
NATIONAL publishers association
NPA's first open meeting puts magazine industry on exhibition before 1,000 persons. T. M. Jones. Ptr Ink 218:109 Ja 24 '47
NATIONAL ready mixed concrete association
Annual meeting, 17th, Los Angeles, March 4-7. Concrete 55:11-14 Ap '47; Rock Prod 50:94-105, 150, 166-71+ Ap '47
Directors mid-year meeting, French Lick Springs, Aug. 12. Rock Prod 50:118+ O '47
NATIONAL registry of rare chemicals
Wanted chemicals. Science 105:358, 385, 521, 598, 618; 106:145, 224, 366 Ap 4-11, My 16, Je 6-13, Ag 15, S 5, O 17 '47
NATIONAL research council
Fellowships in the medical sciences. Science 104:509 N 29 '46
NRC news. Science 106:185-6 Ag 29 '47

Chemical-biological coordination center

Chemical-biological coordination center now operating. Chem & Eng N 25:285, 597 F 3, Mr 3 '47
New agency to screen compounds for bioactivity. Chem Ind 60:481 Mr '47
Organization. Science 105:122 Ja 31 '47

Committee on applied mathematical statistics

Personnel and training problems created by recent growth of applied statistics in United States. Science 106:391-2 O 24 '47

Committee on atomic casualties

Meeting, 2nd, Washington, D.C. May 1. Science 105:597-8 Je 6 '47

Division of engineering and industrial research

Annual meeting, March 3. Science 105:331-2 Mr 28 '47

Division of physical sciences

New committee on high-speed calculating machines and other committees. Science 104:594 D 20 '46
Subcommittees of the Committee on radioactivity. Science 105:12 Ja 3 '47

Pacific science board

Pacific science board. Science 105:122 Ja 31 '47

Pacific science conference

Proceedings of the Pacific science conference of the National research council. Nat Res Council Bul 114:1-79 '46

NATIONAL research council of Canada
National research council reconverts to peace. Can Chem & Process Ind 31:26-32 Ja '47
Research council activities. S. J. Cook. Chem & Eng N 25:333 F 3 '47
Research in geodesy and geophysics coordinated. Can Chem & Process Ind 31:247 Mr '47

Laboratories

Industrial utilization of agricultural products; Prairie regional laboratory, Saskatoon, Sask. R. K. Larmour. Can Chem & Process Ind 31:853-4+ S '47

NATIONAL rural electric cooperative association
Annual meeting, 5th, Spokane. Elec World News ed 127:5 My 3 '47; Pub Util 39:709-12 My 22 '47

NATIONAL safety council
Auditor's report. Nat Safety N 55:36-7 Ap '47
National safety congress, 34th, Chicago. Nat Safety N 54:22-5 N '46; Safety Eng 92:18-20+ N; 44-7+ D '46
Officers, 1946-1947. Nat Safety N 54:26-8 D '46
Our first post-war year. T. F. Smith. Nat Safety N 54:18+ N '46

NATIONAL sand and gravel association
Annual meeting, 31st, Los Angeles. Rock Prod 50:94-105+ Ap '47
Directors mid-year meeting, French Lick Springs, Aug. 12. Rock Prod 50:116+ O '47

NATIONAL sanitary supply association
Annual convention, 24th, Chicago, April 21-25. Soap & San Chem 23:145+ My; 166A+ Je '47

NATIONAL sanitation foundation
Problem of sanitation. W. F. Snyder. il Safety Eng 93:62-3+ Mr '47; Abstract. Soap & San Chem 22:133 D '46

NATIONAL savings and loan league
New officers. Comm & Fin Chr 165:2909 My 29 '47

NATIONAL science foundation (proposed)
Bill for a National science foundation introduced by Senator H. Alexander Smith of New Jersey. Science 105:171 F 14 '47
Bill vetoed by President Truman. Science 106:141 Ag 15 '47
Comparison of the provisions of S. 525 and S. 526. Science 105:253-4 Mr 7 '47
Compton urges Science foundation in accepting Washington award. Chem & Eng N 25:765 Mr 17 '47
Conference, Washington, Feb. 23. Science 105:333 Mr 28 '47
Congress sends Science foundation bill to President. Chem & Eng N 25:2203-5; Discussion, 2191 Ag 4 '47

NATIONAL science foundation (proposed)—*Continued*
Does the ACS favor a foundation? R. F. Wolf. Chem & Eng N 25:1633-4 Je 2 '47
House committee completes hearings on Science Foundation bills. Chem & Eng N 25: 825 Mr 24 '47
House passes Science foundation bill, H.R.4102. Chem & Eng N 25:2127 Jl 28 '47
Inter-society committee for a national science foundation. Chem & Eng N 25:972 Ap 7 '47
Inter-society committee for a national science foundation announced results of survey. Science 105:329 Mr 28 '47
Inter-society committee for a national science foundation organizational meeting, Feb. 23. Science 105:227 F 28 '47
Inter-society committee on science legislation before Interstate and foreign commerce committee of House of representatives. E. E. Day. Science 105:249 Mr 7 '47
Interstate and foreign commerce committee current hearings. Science 105:277-8 Mr 14 '47
National science foundation? P. N. Powers. Science 104:614-19 D 27 '46
National science foundation? If so, what? R. J. Williams and others. Chem & Eng N 25:772-5, 843-5 Mr 17-24 '47
National science foundation setup falls under President Truman's axe. Nat Pet N 39: 45 Ag 13 '47
National science foundation; statements before Committee on interstate and foreign commerce, March 7, 1947. W. C. Foster; J. B. Conant; V. Bush. Science 105:297-305 Mr 21 '47
National science foundation? the forum of opinion. Chem & Eng N 25:772-5, 843-5, 907-8+ Mr 17-31 '47
Presentation of 1946 AAAS-George Westinghouse science writers' award. J. B. Conant. Science 105:6 Ja 3 '47
Proposed National science foundation act, 1947; S.526; text. Science 105:191-4 F 21 '47
Research prop. Bsns W p28 Ag 2 '47
S. 526, National science foundation legislation. Chem & Eng N 25:481 F 24 '47
Science foundation bill nears enactment in modified form. Oil Paint & Drug Rep 151: 3+ Mr 31 '47
Science foundation bills. Chem & Eng N 25: 600-8+ Mr 3 '47
Science foundation creation approved. Oil Paint & Drug Rep 152:5+ Jl 21; 7+ Jl 28 '47
Science foundation need subject of survey. Oil Paint & Drug Rep 151:5 Mr 24 '47
Scientists and professional men to administer new Science act. Steel 121:71 Ag 4 '47
Senate committee on labor and public welfare reported favorably on bill S. 526. Science 105:407 Ap 18 '47
Senate passed the National science foundation bill. Science 105:569 My 30 '47
Senate passes Science foundation bill, S.526, by vote of 79 to 8. Chem & Eng N 25:1561; Text. 1577-8, 1623-4 Je 2 '47
Toward a national science policy? analysis made by study group, Washington association of scientists. Science 106:385-7 O 24 '47
Truman board urges creation of National science foundation. Oil Paint & Drug Rep 152:5 O 20 '47
Truman veto. H. A. Meyerhoff. Science 106: 236-7 S 12 '47
Truman's memorandum of disapproval of S. 526. Science 106:237-9 S 12 '47
Why Truman vetoed the Science foundation bill. Eng N 139:306 S 4 '47

Bibliography
Bibliography articles in Chemical and engineering news. Chem & Eng N 25:233 Ja 27 '47

NATIONAL security traders association
Annual convention, 14th, Boston, Aug. 10-14. Comm & Fin Chr 166:1-67 sec 2 Ag 23 '47

NATIONAL service life insurance. See Insurance, Military and naval service

NATIONAL society of auctioneers
Auction forecast. Bsns W p22 Mr 1 '47

NATIONAL society of professional engineers
Annual meeting, 12th, Atlanta. Eng N 137: 833 D 19 '46
Objectives, membership, etc. Refrig Eng 52: 530+ D '46

NATIONAL sugar manufacturing company
Annual report. Comm & Fin Chr 165:1870 Ap 7 '47

NATIONAL supply company
Record net may bring early dividends. Barron's 27:35 N 3 '47

NATIONAL tea company
New leaf for National Tea. il Bsns W p48-50 S 20 '47

NATIONAL trailways bus system
National Trailways, its set up and method of operation. Bus Transportation 26:42-3 My '47

NATIONAL underwriter (periodical)
Fiftieth anniversary number, 1897-1947. Nat Underw 50th anniv no:1-320 1947

NATIONAL union fire insurance company
Stock sold. Comm & Fin Chr 166:1358 O 6 '47

NATIONAL vitamin foundation
Elects new officers. Oil Paint & Drug Rep 151:58 Ap 14 '47

NATIONAL wage stabilization board
Tripartite labor control is ending. Bsns W p84 Ja 11 '47
Wage board terminated. Comm & Fin Chr 165: 1168 F 27 '47

NATIONAL war labor board
Tripartite labor control is ending. Bsns W p84 Ja 11 '47
Wartime handling of labor disputes. E. E. Witte. Harvard Bsns R 25 no2:169-89 [Ja] '47

NATIONAL warm air heating and air conditioning association
Annual meeting, Cleveland, Jan. 29-30. Sheet Metal Worker 38:62+ F '47; Dom Eng 169: 141+ Mr '47; Gas Age 99:31-2 Mr 6 '47
Mid-year meeting, Chicago, June 5-6. Sheet Metal Worker 38:82+ Je '47; Dom Eng 170: 153+ Jl '47

NATIONAL wholesale druggists association
Annual meeting, 73d, Atlantic City, Oct. 20-23. Oil Paint & Drug Rep 152:7+ O 27 '47
Midyear meeting, Chicago, April 22-23. Oil Paint & Drug Rep 151:7+ Ap 28 '47

NATIONALISM
Eastern Europe in 1947. map Economist 152: 799-801, 853-4 My 24-31 '47

NATIONALIZATION of industry. See Government ownership

NATURAL dyes. See Dyes and dyeing—Natural dyes

NATURAL gas. See Gas, Natural

NATURAL gasoline. See Gasoline, Natural

NATURAL gasoline association of America
Annual meeting, 26th, Dallas, April 23-25. Oil & Gas J 45:40-1+ My 3 '47; Nat Pet N 39:49-51 Ap 30 '47; Pet Refiner 26:163-4 My '47
Place of natural gasoline and the NGAA in the petroleum industry. J. H. Dunn. Pet Refiner 26:158+ My '47; Same abr. Oil & Gas J 45:121+ Ap 26 '47

NATURAL history museums
See also Carnegie institute of technology, Pittsburgh—Museum

NATURAL resources
See also
Coal
Conservation of resources
Fisheries
Forests and forestry
Fuel
Gas, Natural
Mines and mineral resources
Oil lands
Oil shales
Ore deposits
Peat
Petroleum
Raw materials
Reclamation of land
Soil conservation
Water supply

NATURAL resources council of America
Organized at Mammoth Cave, Kentucky, Oct. 25-26. Science 105:63 Ja 17 '47

NATURAL selection. See Evolution

NAUTICAL charts. See Charts

NAUTICAL instruments
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46
See also
Direction finding apparatus
Sounding
NAVAL air service. See United States—Air service, Navy
NAVAL air stations
Les bases aéronavales flottantes utilisées par la Marine américaine pendant la guerre du Pacifique. il Génie Civil 124:205-7 Je 1 '47
NAVAL architects and marine engineers, Society of. See Society of naval architects and marine engineers
NAVAL architecture
Aspects of large passenger liner design. J. L. Bates and I. J. Wanless. Marine Eng 52: 76-80; Discussion. 80-4 F '47
Calculated and observed wave resistances for a series of forms of fuller mid-section; abstracts and discussion. W. C. S. Wigley and J. K. Lunde. Engineer 184:313-14 O 3 '47; Engineering 164:376-7 O 17 '47
Design and power of the Great Lakes bulk cargo carrier. L. A. Baier. Marine Eng 52:79-81 Ag '47
Dual-draft freighter Angèle Higgins. C. M. Jones. il diag Marine Eng 52:67-8 Ap '47
Examination of the records of the Greyhound experiments. A. M. Robb. bibliog Engineering 162:453-4 N 8 '46
Institution of naval architects and Institution of engineers and shipbuilders in Scotland, combined autumn meeting, Glasgow, Sept. 24-26. Engineering 162:328-9, 355, 376-8, 401-2 O 4-25 '46
New design C3-S-DB3 cargo ship. il plan Marine Eng 52:56-7 F '47
Passenger and cargo liner Del Norte. il plans diags Marine Eng 52:65-78 Ja '47
Pattern for research in naval architecture; abstract and discussion. E. A. Wright. Marine Eng 52:84-6 F '47
Section modulus calculation in the design of welded ships. diag Marine Eng 52:95 S '47
Submarine design. A. I. McKee. Mech Eng 69:218-20 Mr '47
See also
Freight ships
Ice breaking vessels
Marine engineering
Motor ships
Power plants, Floating
Propellers
Ship propulsion
Shipbuilding
Ships
Steamboats
Tank ships
Towboats
Warships
Whaling vessels

Designs and plans
C1-M-AV1 design. il plans Marine Eng 52: 58-61 Je '47
Passenger-cargo vessel Alcoa Cavalier. il plans diags Marine Eng 52:52-60 My '47
Preliminary ship design. M. M. Lachowski. Marine Eng 52:68-73 Mr '47
Sun-built T2-SE-A1 tankers. il plans diags Marine Eng 52:62-75+ Jl '47
T3 tanker Stanvac Calcutta. il plans diags Marine Eng 52:63-9 F '47
United fruit company adds nine Yaque class reefers to its fleet. plans diag Marine Eng 52:56-8 S '47
United Fruit refrigerated cargo ships. M. L. Sellers. il plans diags Marine Eng 52: 54-67 Ag '47

Study and teaching
See also Webb institute of naval architecture
NAVAL art and science
See also
Marine engineering
Navy yards and naval stations
Seamen
Shipbuilding
NAVAL boiler and turbine laboratory
Naval boiler and turbine laboratory. E. Kranzfelder. il layout Marine Eng 52:66-75 Je '47
NAVAL education
See also
Moving pictures in naval education
United States—Navy—Education
NAVAL guns
Control of naval gunfire. Engineering 163:409-10 My 16 '47
Putting the fleet in mothballs; sheet steel structures protect naval guns. il Sheet Metal Worker 38:45 Mr '47; Same cond. Steel 120:104-5 F 17 '47
NAVAL oil reserves. See Oil reserves (United States navy)
NAVAL research
Admiralty research and development. Engineer 183:403 My 9 '47
British naval research; Royal naval scientific service. V. S. Swaminathan. Chem & Eng N 25:1144 Ap 21 '47
House appropriations committee emphasizes research in appropriations bills for navy and Department of agriculture. A. Leggin. Chem & Eng N 25:1649 Je 9 '47
Office of naval research. H. G. Bowen. Welding J 26:489-93 Je '47
Ordnance research laboratory. E. A. Walker. il J Ap Phys 18:263-7 Mr '47
Research. R. O. Conrad. Mech Eng 69:150 F '47
Wartime activities of the San Diego laboratory of the University of California division of war research. F. N. D. Kurie and G. P. Harnwell. R Sci Instr 18:207-18 Ap '47
See also Pennsylvania state college—Ordnance research laboratory
NAVAL research, Office of. See United States—Navy department—Naval research, Office of
NAVAL research laboratory
Thomas A. Edison and the Naval research laboratory. A. H. Taylor. Science 105:148-50 F 7 '47
NAVAL reserve. See United States—Naval reserve
NAVAL stations. See Navy yards and naval stations
NAVAL stores
CCC naval stores loan program set. Oil Paint & Drug Rep 151:3 Je 2 '47
Chemical research again surges upward; naval stores. J. M. Shantz. Chem Ind 61: 392-3 S '47
Gum naval stores industry dependent on Nation's whims. C. F. Guignon. Paint Oil & Chem R 109:74-5 N 14 '46
Ire in Savannah over naval stores exchange. Bsns W p20-1 My 17 '47
Naval stores act revised by Department of agriculture. Oil Paint & Drug Rep 151:78 Ja 6 '47
Naval stores inspection service fees revised. Oil Paint & Drug Rep 151:5+ Ja 20 '47
Naval stores producers seek foreign outlets. Bsns W p26 Ja 18 '47
Naval stores situation. J. A. Daly. Manuf Rec 116:73+ Ag '47
Price declines will cut producers' profits. Barron's 27:25 Je 2 '47
Revigorated rosin; recently developed continuous still. Chem Ind 60:940 Je '47
See also
Rosin
Turpentine
also Wood naval stores export association

Manufacture
Pine gum processing labor and fuel costs. H. P. Poole and E. L. Patton. Chem Eng 54:102-3 Ag '47
NAVIES
See also
Naval architecture and other headings beginning Naval
Navy yards and naval stations
Submarine boats
Warships
NAVIGATION
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46
See also
Air navigation
Harbors
Lighthouses
Loran system
Nautical instruments
Radar aids to navigation
Radio aids to navigation
Shipping
Sounding
Steamboats
Waterways

NAVY yards and naval stations
Devonport dockyard, 1917-22. E. C. Smith. il plans diag Engineering 162:505-7, 533-4, 601-2 N 29-D 6, 27 '46
Historical review of Portsmouth dockyard. L. V. Morgan. il maps Engineer 184:300-2, 324-6 S 26-O 3 '47; Same cond. Engineering 164:414-16 O 31 '47
Overhead crane at naval yard capable of lifting 500 tons. il Steel 120:87 F 3 '47
Royal dockyards during the war. Engineering 162:461 N 15 '46

NEAL, W. M. 1886-
Coleman to retire as C.P.R. president; will be succeeded by W. M. Neal. por Ry Age 122:182+ Ja 18 '47

NEAR EAST
Britain and the Middle East. Economist 153: 6-7 Jl 5 '47
Coming show down in the Middle East. V. L. Horoth. il Mag of Wall St 80:535-7+ Ag 16 '47
See also
Engineering—Near East
Petroleum—Near East
Petroleum industry and trade—Near East
Railroads—Near East

NECKTIES
Countess Mara expands swank necktie business. Bsns W p61-2 S 20 '47
Jockey silks for Dad's day ties. Textile Col 69:35 O '47
Men's ties swipe design and promotion ideas from women's wear. N. S. Goldsmith. il Sales Management 58:60+ Je 15 '47

NEEDLE bearings. See Bearings, Needle

NEEDLEWORK
Puerto Rico needlework trades served by air. J. C. Nelson. Dom Comm 35:34-41 S '47

NEGLIGENCE
Building contractor's liability for negligence of subcontractor. il Am Bld 69:131 S '47
Family purpose doctrine; Cohen vs. Whiteman et al. J. L. Roesch. Spectator (Property ed) 12:10-11+ Je 26 '47
Lawyers discuss impleader and last clear chance. A. R. Watson. Nat Underw 51:18 Ja 30 '47
Review of new negligence law suits. L. T. Parker. Am Gas J 167:51-3 O '47
See also
Damages
Personal injuries

NEGLIGENCE, Contributory
Problem of liability for fire and explosion following accident. R. P. Hobson. Nat Underw 51:28 S 11 '47

NEGOTIABLE instruments
Consent of indorser to release principal debtor; Howard national bank & trust co. v. Newman, Supreme court of Vermont. Banking Law J 64:631-9 Ag '47
Indorsement and negotiation; what the law says; what it means. Bankers Mo 64:13-16 Ja '47
Stolen bearer bond. C. R. Rosenberg, jr. Burroughs Clearing House 31:61-2+ F '47
Stolen bearer bond; Chicago district electric generating corporation v. Evans, Appellate court of Indiana. Banking Law J 64:297-303 Ap '47
See also
Banks and banking—Collections
Bills of exchange
Certificates of deposit
Checks
Commercial paper
Indorsement
Letters of credit
Promissory notes
Warehouse receipts

NEGRO banks. See Banks and banking—Negro banks

NEGRO market
14 million negro customers. Management R 36:336-8 Je '47
Negro market highlights in three cities; weekly earnings of Negro families, 1945; pictographs. Sales Management 58:62 My 20 '47
Washington AFRO American; report on characteristics of the Washington Negro market; its product buying and brand preferences in 1945. 92p Washington AFRO American, 1800 11th st, NW, Washington 1, D.C. '46 [available to recognized agencies and firms interested in the Negro market]

NEGROES
Negro handbook, 1946-1947. F. Murray, ed. [3d biennial ed] 392p $5 A. A. Wyn, 67 W. 44th st, New York 18 '47
See also
Banks and banking—Negro banks

Bibliography
American Negro and American literature: a check list of significant commentaries. J. S. Lash. Bulletin of Bibliography [F. W. Faxon co, Boston] 19:12-15, 33-6 S '46-Ja '47
Encyclopedia of the Negro; preparatory volume with reference lists and reports. W. E. B. Du Bois and G. B. Johnson, eds. 2d rev & enl ed 215p $3.25 H. W. Wilson co, New York '46
Negro in the United States; a bibliography; a select reference and minimum college library resources list. P. B. Foreman and M. C. Hill. 24p Oklahoma A. and M. College [Stillwater] Bul 44, no5 '47

Employment
Negro personnel counselors. A. G. Freeman. Personnel J 25:215-17 D '46
Negro worker in Chicago industry. D. M. Powell. J Bsns 20:21-32 Ja '47

Housing
Housing problems of minority groups in Los Angeles county. C. B. Spaulding. Ann Am Acad 248:220-5 N '46
Planning for more flexible land use. R. C. Weaver. J Land & Pub Util Econ 23:29-41 F '47
Private builders provide better Negro housing in Oklahoma City. il plans Am Bld 69: 142-3 F '47

Segregation
Supreme court test; will race restrictive covenants be declared unconstitutional? Arch Forum 87:16 O '47
See also
Railroads—Negro passengers

NEGROES as policyholders. See Insurance, Life—Negroes as policyholders

NEIGHBORHOOD planning
See also
Shopping centers

NEKOOSA-EDWARDS paper company
Problems that NEPCO has overcome. J. E. Alexander. Paper Tr J 125:10+ Jl 31 '47

NELA PARK, Cleveland
G-E lighting institute demonstrations educate utilities for commercial sales. il Ind Marketing 32:42-3 F '47
G-E's lamp department performs architectural surgery at Nela Park, bringing lighting center up-to-date. il plans diags Arch Forum 86:101-5 Ja '47

NELSON, Sir George, 1887-
Sketch. por Electrician 139:469 Ag 15 '47

NELSON, Herbert Undeen, 1886-
Rents and the real estate lobby; wartime controls survive. Fortune 35:96-7+ Je '47

NEOBRUCINE
Strychnine and brucine; preparation of *neo*strychnine and *neo*brucine. R. N. Chakravarti and R. Robinson. Chem Soc J p78-80 Ja '47

NEOCYANINE
Some heterocyclic methylene bases and their anilomethyl derivatives. F. M. Hamer, R. J. Rathbone and B. S. Winton. Chem Soc J p954-9 Jl '47
Some trinuclear cyanine dyes; the synthesis of neocyanines; abstract. F. M. Hamer and others. Chem & Ind p374 Je 28 '47

NEODYMIUM
Total neutron cross section of dysprosium and neodymium. W. J. Sturm and G. P. Arnold. bibliog Phys R 71:556-7 Ap 15 '47

NEON
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Maximum inversion temperatures of helium, hydrogen, and neon. J. Joffe. Phys R 70: 766-7 N 1 '46

NEON—*Continued*

Isotopes

Protons from the deuteron bombardment of separated neon isotopes. F. K. Elder, jr. and others. bibliog Phys R 71:917-18 Je 15 '47

NEOPENTANE. See Dimethyl propane

NEOPENTYL chloride. See Chlorodimethylpropane

NEOPRENE

Applications for neoprene latex. R. H. Walsh. il Rubber Age 61:187-93 My '47; Abstract. India Rubber World 116:75 Ap '47

Coating for air duct systems. il Heat & Ven 44:68 Ja '47

Control of pH of neoprene latex. H. K. Livingston and R. H. Walsh. bibliog Ind & Eng Chem 38:1262-5 D '46

Creaming neoprene latex. H. K. Livingston. bibliog Ind & Eng Chem 39:550-4 Ap '47

Neoprene applications in product design. S. W. McCune, 3d. il diags Mach 53:167-71 Ja; 169-72 F '47

Neoprene in passenger car tires. M. F. Torrence. il Rubber Age 61:63-5 Ap '47

Stability of synthetic rubber dispersions; coagulation of neoprene latices by freezing. H. W. Walker. bibliog diag J Phys & Colloid Chem 51:451-60 Mr '47

Stability of synthetic rubber dispersions; low-temperature thickening of neoprene latex. H. K. Livingston. bibliog J Phys & Colloid Chem 51:443-50 Mr '47

Manufacture

Neoprene plant trip; illustrations with text. Chem & Eng N 25:1050-1 Ap 14 '47

NEOSHO river

Kansas plan for Neosho River basin development. R. V. Smrha. map Am Water Works Assn J 39:673-9 Jl '47

NEOSTIGMINE. See Prostigmine

NEOSTRYCHNINE

Strychnine and brucine; preparation of *neo*strychnine and *neo*brucine. R. N. Chakravarti and R. Robinson. Chem Soc J p78-80 Ja '47

NEOVITAMIN A. See Vitamins—Vitamin A

NEPAL

Emergent Nepal; its economic development and trade outlook. S. H. Day. il For Comm W 28:3-5+ Jl 26 '47

Foreign relations

United States

United States mission signs treaty with Nepal. For Comm W 27:21 My 17 '47

NEPHELOMETERS

Photoelectric nephelometer. N. Underwood and A. H. Doermann. diag R Sci Instr 18: 665-9 S '47

NEPTUNIUM

Fission cross section of Np^{237}. E. D. Klema. Phys R 72:88 Jl 1 '47

Plutonium and other transuranium elements. G. T. Seaborg. il Chem & Eng N 25:358-60+ F 10 '47

NERVES

Functions of the intercortical neurones in sensorimotor coordination and thinking in man. K. U. Smith. diags Science 105:234-5 F 28 '47

Intraneural bipolar stimulation: a new aid in the assessment of nerve injuries. F. E. Nulsen and F. H. Lewey. Science 106:301-2 S 26 '47

Production of electricity by nerve. T. C. Barnes and R. Beutner. bibliog Science 104:569-70 D 13 '46

Separate localization in the medulla oblongata of the vagal inspiratory and expiratory reflex centers O. A. M. Wyss. bibliog Science 106:322-3 O 3 '47

Staining of nerve endings in mouse epidermis by Feulgen's nucleal reaction. C. H. U. Chu. Science 106:70 Jl 18 '47

Versatile electronic stimulator for nerve and muscle. W. L. Nastuk and H. L. Borison. il diag R Sci Instr 18:669-72 S '47

Versatile square wave nerve stimulator. A. C. Guyton. diag R Sci Instr 17:553-6 D '46

NERVOUS system

Unconsidered form of the part played by the nervous system in the development of disease. S. I. Frankstein. Science 106:242 S 12 '47

Diseases

Neuropsychiatric conditions in railroad employees. F. G. Norbury. Ind Med 16:122-5 Mr '47

NESSLER'S reagent

Determination of nitrogen in ferro-alloys and other materials by direct Nesslerisation without distillation. W. C. Newell. bibliog Iron & Steel Inst J 152:333-7 no 2 '45; Same cond. Engineering 160:505 D 14 '45; Discussion. Iron & Steel Inst J 152:337-9 no 2 '45

NET fabrics

Production of fast shades on knitted cotton fabrics, nets and lace. E. R. Wiltshire. Soc Dyers & Col J 62:313-18 O '46

NETHERLANDS

See also

Airlines—Netherlands
Architecture—Netherlands
Bridges—Netherlands
Cigaret industry and trade—Netherlands
Finance—Netherlands
Radio broadcasting—Netherlands

Commerce

Dutch foreign trade problems. Economist 153: 111-12 Jl 19 '47

Holland's present international economic outlook. W. T. F. Slee. Comm & Fin Chr 164: 3011+ D 12 '46

New organizations and institutions for foreign-trade promotion established. For Comm W 26:22 F 1; 28:18 Jl 5 '47

Commercial policy

Documentation requirements. For Comm W 26:13 F 15 '47

Existing trade agreements extended; new agreements concluded. For Comm W 26:18-19 Ja 18 '47

Union for trade. Economist 152:150-1 Ja 25 '47

See also

Benelux Union

Economic conditions

Holland at the crossroads. H. De Leeuw. Comm & Fin Chr 165:2474+ My 8 '47

Two years of Dutch recovery. Economist 153: 70-1 Jl 12 '47

Economic relations

Germany

Dutch claims on Germany. map Economist 152:100 Ja 18 '47

Industries and resources

Postwar Holland embarks on industrial recovery plan. K. Rannells. il Iron Age 158: 110-12 N 21 '46

NETHERLANDS INDIES

Indonesia; the real issues. map Economist 153:157-8 Jl 26 '47

New Indonesian republic. H. De Leeuw. il Comm & Fin Chr 165:1123+ F 27 '47

United States of Indonesia. Economist 151: 835 N 23 '46

See also

Geology—Netherlands Indies

Commerce

Foreign trade in 1946. For Comm W 28:16-17 S 13 '47

Economic conditions

News by countries. For Comm W 27:19-20 My 3; 15-16 My 31; 28:24-5 Jl 19; 16-17 Ag 9; 29:17-18+ N 1 '47

NETHERLANDS WEST INDIES. See West Indies, Netherlands

NEURITIS, Multiple

Role of arsenic in the production of alcoholic polyneuritis. M. R. Brown and J. L. Hastings. Science 105:256 Mr 7 '47

NEUROSES, Traumatic

What do the injured think about? F. Kennedy. Nat Safety N 54:30-1+ N '46

NEUTRALENE gas producer
New heat treating atmosphere producer for neutralene gas. A. G. Hotchkiss and H. M. Webber. flow diag il diag Iron Age 158:48-55 N 21 '46; Same cond. Gen Elec R 49:21-7 N '46

NEUTRALIZATION
Acid neutralization. H. L. Jacobs. diags Chem Eng Prog 43:247-53; Discussion. 253-4 My '47

NEUTRALIZATION, Heat of
Calorimetric studies of neutralization reactions. J. G. Miller and others. bibliog J Chem Educ 24:121-2+ Mr '47

NEUTRINOS
Conservation of momentum in the disintegration of Li^8. R. F. Christy and others. bibliog il diags Phys R 72:698-711 O 15 '47
Electron-neutrino angular correlation in beta-decay. D. R. Hamilton. Phys R 71:456-7 Ap 1 '47
H^3 and the mass of the neutrino. E. J. Konopinski. Phys R 72:518-19 S 15 '47
Maximum β-energies and the mass of the neutrino. O. Kofoed-Hansen. Phys R 71: 451-2 Ap 1 '47
Nuclear capture of mesons and the meson decay. B. Pontecorvo. bibliog Phys R 72: 246-7 Ag 1 '47
Proposed methods of detecting the neutrino. K. C. Wang. bibliog Phys R 71:645-6 My 1 '47
Recoil of silver nuclei due to *K*-capture in cadmium. B. T. Wright. bibliog diag Phys R 71:839-41 Je 15 '47
Upper limit for the cross section for scattering of neutrinos by hydrogen. E. O. Wollan. Phys R 72:445-6 S 15 '47

NEUTRONS
Absorption cross section of gold for neutrons of energies from 0.01 to 0.3 ev. B. D. McDaniel and others. bibliog Phys R 72:729 O 15 '47
Action of neutrons on hafnium. A. H. W. Aten, jr. Science 105:386 Ap 11 '47
Activities induced by pile neutron bombardment of samarium. M. G. Inghram and others. Phys R 71:643 My 1 '47
Artificial activities produced in europium and holmium by slow neutron bombardment. M. G. Inghram and R. J. Hayden. Phys R 71: 130 Ja 15 '47
Boron trifluoride neutron detector for low neutron intensities. E. Segrè and C. Wiegand. diags R Sci Instr 18:86-9 F '47
Chemical forms assumed by C^{14} produced by neutron irradiation of beryllium nitride. P. E. Yankwich. bibliog J Chem Phys 15: 374-5 Je '47
Delayed neutrons from Pu^{239}. F. de Hoffmann and B. T. Feld. bibliog diag Phys R 72:567-9 O 1 '47
Delayed neutrons from Pu^{239}. R. R. Wilson. Phys R 71:560 Ap 15 '47
Delayed neutrons in plutonium and uranium fission. W. C. Redman and D. Saxon. bibliog diag Phys R 72:570-5 O 1 '47
Determination of the ranges of the fission fragments emitting delayed neutrons; chemical identification of the 4.51-sec. delayed neutron activity. N. Sugarman. bibliog diag J Chem Phys 15:544-51 Ag '47
Distribution of neutrons in the atmosphere. H. M. Agnew and others. bibliog Phys R 72:203-6 Ag 1 '47
Division of nuclear charge in fission. R. D. Present. bibliog Phys R 72:7-15 Jl 1 '47
Electron waves in the magnetic dipole field of a neutron. C. L. Critchfield. Phys R 71: 258-67 F 15 '47
Elementary theory of the chain-reacting pile. E. Fermi. Science 105:27-32 Ja 10 '47
Energy sensitivity of fast neutron counters. H. H. Barschall and H. A. Bethe. R Sci Instr 18:147-9 Mr '47
High energy ions in crystal lattices. A. H. W. Aten, jr. Phys R 71:641-2 My 1 '47
Hydrogen recoil proportional counter for neutron detection. J. H. Coon and R. A. Nobles. diags R Sci Instr 18:44-7 Ja '47
Isotopic changes in cadmium by neutron absorption. A. J. Dempster. il Phys R 71:829 Je 1 '47
Magnetic moments of the neutron and the deuteron. W. R. Arnold and A. Roberts. bibliog Phys R 70:766 N 1 '46
Magnetic moments of the neutron and the deuteron. W. R. Arnold and A. Roberts. diags Phys R 71:878-86 Je 15 '47
Measurement of neutron cross sections with a crystal spectrometer. W. J. Sturm. bibliog diags Phys R 71:757-76 Je 1 '47
Method for measuring neutron-absorption cross sections by the effect on the reactivity of a chain-reacting pile. H. L. Anderson and others. Phys R 72:16-23 Jl 1 '47
Neutron absorbing isotopes in gadolinium and samarium. R. E. Lapp and others. Phys R 71:745-7 Je 1 '47
Neutron-hydrogen mass difference and the neutron mass. W. E. Stephens. bibliog Rs Mod Phys 19:19-24 Ja '47
Neutron induced activities in lutecium, ytterbium, and dysprosium. M. G. Inghram and others. Phys R 71:270 F 15 '47
Neutron polarization and ferromagnetic saturation. F. Block and others. Phys R 70:972-3 D 1 '46
Neutron-proton exchange demonstrated; abstract. E. O. Lawrence. Chem & Eng N 25:3214 N 3 '47
Neutrons from C^{12} + D. W. E. Bennett and H. T. Richards. Phys R 71:565-7 My 1 '47
Nuclear isomerism in dysprosium 165. M. G. Inghram and others. Phys R 72:515-16 S 15 '47
Nucleonics and electronics. K. Henney. Electronics 20:80-1 Je '47
Photo-neutron sources and the energy of the photo-neutrons. A. Wattenberg. bibliog diags Phys R 71:497-507 Ap 15 '47
Preliminary determination of the neutron absorption cross section of long-lived I^{129}. S. Katcoff. Phys R 71:826 Je 1 '47
Preparation of pressed Ra+Be neutron sources. H. L. Anderson and B. T. Feld. R Sci Instr 18:186-8 Mr '47
Production of low energy neutrons by filtering through graphite. H. L. Anderson and others. diag Phys R 70:815-17 D 1 '46
Production of nucleons by the cosmic radiation. S. A. Korff and B. Hamermesh. bibliog Phys R 71:842-5 Je 15 '47
Reaction $_{38}Sr^{86}(n,\gamma)_{38}Sr^{87}$ produced by thermal neutrons. L. Seren and others. bibliog Phys R 71:454 Ap 1 '47
(*d-n*) Reactions at 15 Mev. R. B. Roberts and P. H. Abelson. bibliog Phys R 72:76 Jl 1 '47
Relativistic corrections to magnetic moments of nuclear particles. G. Breit. bibliog Phys R 71:400-2 Ap 1 '47
Slow neutron absorption resonances in iodine. W. B. Jones, jr. bibliog plan diags Phys R 72:362-77 S 1 '47
Slow neutron resonances in indium. B. D. McDaniel. bibliog diags Phys R 70:832-41 D 1 '46
Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens, jr. and others. Phys R 71:165-73 F 1 '47
Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others. bibliog diag Phys R 71:65-79 Ja 15 '47
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47
Some stationary distributions of neutrons in an infinite medium. M. Verde and G. C. Wick. Phys R 71:852-64 Je 15 '47
Spherical harmonic method as applied to the Milne problem for a sphere. R. E. Marshak. Phys R 71:443-6 Ap 1 '47
Studies of the delayed neutrons; decay curve and the intensity of the delayed neutrons; chemical isolation of the 56-second and the 23-second activities. A. H. Snell and others. bibliog diags Phys R 72:541-9 O 1 '47
Theory of the slowing down of neutrons by elastic collision with atomic nuclei. R. E. Marshak. bibliog(41 ref) Rs Mod Phys 19: 185-238 Jl '47
Variational method for asymptotic neutron densities. E. R. Marshak. bibliog Phys R 71:688-93; Discussion. B. Davison. 694-7 My 15 '47
Yield of photo-neutrons from U^{235} fission products in heavy water. S. Bernstein and others. diag Phys R 71:573-81 My 1 '47

Physiological effect
Progress of the Biochemical research foundation (1946). E. McDonald. bibliog diag Franklin Inst J 242:435-48 D '46

NEUTRONS—*Continued*

Scattering

Angular distribution of neutrons emerging from a plane surface. G. Placzek. Phys R 72:556-8 O 1 '47

Angular distribution of 2.5-Mev neutrons scattered by deuterium. J. H. Coon and H. H. Barschall. bibliog diags Phys R 70:592-6 N 1 '46

Application of a variational method to Milne's problem. J. LeCaine. bibliog Phys R 72:564-6 O 1 '47

Bent crystal neutron spectrometer and its application to neutron cross-section measurements. R. B. Sawyer and others. bibliog diags Phys R 72:109-15 Jl 15 '47

Capture cross section of boron for neutrons of energies from 0.01 ev to 1000 ev. R. B. Sutton and others. Phys R 71:272 F 15 '47

Collision cross sections of carbon and hydrogen for fast neutrons. W. Sleator, jr. bibliog diag Phys R 72:207-19 Ag 1 '47

Collision of neutrons with deuterons and the reality of exchange forces. H. S. W. Massey and R. A. Buckingham. Phys R 71:558 Ap '47

Collision of neutrons with deuterons and the reality of exchange forces. J. H. Williams. Phys R 71:908 Je 15 '47

Counter for use in scattering and disintegration experiments. P. G. Koontz and T. A. Hall. diag R Sci Instr 18:643-6 S '47

Diffraction of neutrons by a single crystal. W. H. Zinn. il diag Phys R 71:752-7 Je 1 '47

Directional properties of fission neutrons. R. R. Wilson. il plan Phys R 72:189-92 Ag 1 '47

Elastic backscattering of *d-d* neutrons. J. H. Manley and others. diags Phys R 70:602-5 N 1 '46

High energy neutron-proton scattering. J. L. Lopes. bibliog Phys R 72:355-6 Ag 15 '47

Inelastic scattering of neutrons in crystals. O. Halpern. Phys R 72:260-1 Ag 1 '47

Interaction of neutrons with electrons in lead. W. W. Havens, jr. and others. bibliog Phys R 72:634-6 O 1 '47

Interference phenomena of slow neutrons. E. Fermi and L. Marshall. bibliog diags Phys R 71:666-77 My 15 '47

Method for measuring neutron-absorption cross sections by the effect on the reactivity of a chain-reacting pile. H. L. Anderson and others. Phys R 72:16-23 Jl 1 '47

Milne problem for a large plane slab with constant source and anisotropic scattering. R. E. Marshak. bibliog Phys R 72:47-50 Jl 1 '47

Milne's problem in transport theory. G. Placzek and W. Seidel. bibliog Phys R 72:550-5 O 1 '47

Neutron cross-section studies with the rotating shutter mechanism. T. Brill and H. V. Lichtenberger. bibliog diags Phys R 72:585-90 O 1 '47

Neutron cross sections for mercury isotopes. M. G. Inghram and others. Phys R 71:561-2 Ap 15 '47

Neutron density near a plane surface. C. Mark. bibliog Phys R 72:558-64 O 1 '47

Neutron detector having uniform sensitivity from 10 Kev to 3 Mev. A. O. Hanson and J. L. McKibben. bibliog diags Phys R 72:673-7 O 15 '47

Neutron-proton and neutron-carbon scattering cross sections for fast neutrons. C. L. Bailey and others. bibliog diag Phys R 70:583-9 N 1 '46

Neutron-proton scattering cross section. D. Bohm and C. Richman. bibliog Phys R 71:567-72 My 1 '47

Neutron scattering in ortho- and para-hydrogen. M. Hamermesh and J. Schwinger. bibliog Phys R 71:678-80 My 15 '47

Phase of scattering of thermal neutrons by aluminum and strontium. E. Fermi and L. Marshall. Phy R 71:915 Je 15 '47

Scattering and absorption of particles by atomic nuclei. H. Feshbach and others. bibliog Phys R 71:145-58 F 1 '47; Correction. 71:564 Ap 15 '47

Scattering of fast neutrons by helium. T. A. Hall and P. G. Koontz. bibliog diag Phys R 72:196-202 Ag 1 '47

Scattering of fast neutrons by protons and deuterons. M. Ageno and others. bibliog diag Phys R 71:20-31 Ja 1 '47

Scattering of neutrons of energy between 12 Mev and 13 Mev by protons. J. S. Laughlin and P. G. Kruger. Phys R 71:736 My 15 '47

Scattering of slow neutrons by bound protons; harmonic binding, neutrons of zero energy. G. Breit and P. R. Zilsel. Phys R 71:232-7 F 15 '47

Scattering of slow neutrons by bound protons; intermediate energies. P. R. Zilsel and others. Phys R 72:576-80 O 1 '47

Scattering of slow neutrons by bound protons; methods of calculation. G. Breit. Phys R 71:215-31 F 15 '47

Spin dependence of scattering of slow neutrons by Be, Al, and Bi. E. Fermi and L. Marshall. Phys R 72:408-10 S 1 '47

Theory of the refraction and the diffraction of neutrons by crystals. M. L. Goldberger and F. Seitz. bibliog Phys R 71:294-310 Mr 1 '47

Thermal neutron velocity selector and its application to the measurement of the cross section of boron. E. Fermi and others. bibliog diag Phys R 72:193-6 Ag 1 '47

Total cross section of aluminum for fast neutrons. L. W. Seagondollar and H. H. Barschall. bibliog diag Phys R 72:439-44 S 15 '47

Total cross sections measured with photoneutrons. R. Fields and others. Phys R 71:508-10 Ap 15 '47

Total cross sections of carbon and hydrogen for neutrons of energies from 35 to 490 kev. D. H. Frisch. diags Phys R 70:589-92 N 1 '46

Total neutron cross section of dysprosium and neodymium. W. J. Sturm and G. P. Arnold. bibliog Phys R 71:556-7 Ap 15 '47

Total scattering cross sections of deuterium and oxygen for fast neutrons. R. G. Nuckolls and others. bibliog Phys R 70:805-7 D 1 '46

Transmission of slow neutrons through microcrystalline materials. E. Fermi and others. bibliog Phys R 71:589-94 My '47

NEVADA

See also

Mines and mineral resources—Nevada

Tungsten mines and mining—Nevada

NEVADA-Wyoming mines company

Stock offered. Comm & Fin Chr 165:3397 Je 30 '47

NEW BRUNSWICK university

Forestry department. J. M. Gibson. il Pulp & Pa of Can 48:117-18+ My '47

NEW businesses. See Business—New businesses

NEW ENGLAND

New England sets up vacation index. Sales Management 59:101 Ag 15 '47

Recreation business index for vacation establishments. Banking 40:96 Ag '47

Economic conditions

New England's decline in the American economy. S. E. Harris. bibliog Harvard Bsns R 25:348-71 [Ap] '47

Industries and resources

Incubators for baby businesses; New England Council's industrial development program. J. L. Cooley. Banking 39:38+ D '46

Jobs in New England at peak peacetime level. Barron's 27:32 Ap 28 '47

New American market. Bsns W p43-50 Ag 30 '47 [reprints 20c]

Regional research program of Federal reserve bank of Boston. Banking 39:106 F '47

War and postwar industry in New England. M. L. Deyo. Mech Eng 69:112-14+ F '47

NEW ENGLAND electric system (formerly New England power association)

Debentures offered. Comm & Fin Chr 165:3055-6 Je 9 '47

Public utility securities. Comm & Fin Chr 165:2856 My 29 '47

NEW ENGLAND gas and electric association

Alternate recapitalization plan. Comm & Fin Chr 164:2888 D 5 '46

Common shares offered. Comm & Fin Chr 166:569 Ag 11 '47

Plan near approval. Barron's 26:1+ D 23 '46

SEC accepts alternative plan; annual statement. Comm & Fin Chr 165:941 F 17 '47

Securities offered. Comm & Fin Chr 165:1870 Ap 7 '47

NEW ENGLAND gas association
Annual meeting, 20th, Boston, March 20-21. Gas Age 99:22-4+ Ap 3 '47; Am Gas J 166: 35-6 Ap '47

NEW ENGLAND geologists' conference
Annual field trip, 38th, Oct. 5-6. Science 104: 572 D 13 '46

NEW ENGLAND mutual life insurance company
Annual report. East Underw 48:3 F 28 '47

NEW ENGLAND power association. See New England electric system

NEW ENGLAND public service company
Plan for simplification gets limited SEC approval. Comm & Fin Chr 166:56 Jl 7 '47
Plans redemption of preferred. Comm & Fin Chr 164:3416 D 30 '46
SEC approves stock retirement plan Comm & Fin Chr 166:1153 S 22 '47

NEW ENGLAND sales management conference
Conference, 8th, Boston, Jan. 10-11. Sales Management 58:103 F 1 '47

NEW ENGLAND telephone and telegraph company
Debentures offered. Comm & Fin Chr 166: 1358-9 O 6 '47
New debt will weaken capital ratio. Barron's 27:32 Je 30 '47

NEW ENGLAND textile foundation
Launches fund raising campaign. Rayon 27: 590 N '46

NEW ENGLAND water works association
Annual meeting, 65th, Poland Spring, Maine. Water & Sewage Works 93:413-23 N '46
Annual meeting, 65th, Poland Spring, Maine, Sept. 17-20; annual reports; committees. N E Water Works Assn J 60:395-441 D '46
Annual meeting, 66th, Boston, Sept. 16-19. N E Water Works Assn J 61:332-78 D '47

NEW HAMPSHIRE
See also
Mines and mineral resources—New Hampshire

NEW HAVEN, Connecticut

Water supply
Chlorination experiences with surface supplies. S. Jacobson and M. S. Wellington. bibliog Am Water Works Assn J 39:65-9 Ja '47
Free-residual chlorination at the New Haven water company. S. Jacobson and M. S. Wellington. map N E Water Works Assn J 60:363-87 bibliog(p387); Discussion. 387-8 D '46

NEW JERSEY
See also
Gasoline industry—New Jersey
Roads—New Jersey

NEW JERSEY zinc company
Story behind a trademark; New Jersey zinc company's booklet. R. Davison. il Ind Marketing 32:41-2+ Je '47

NEW MEXICO
See also
Copper mines and mining—New Mexico
Cornudas mountains
Geology—New Mexico
Manganese mines and mining—New Mexico
Mines and mineral resources—New Mexico
Petroleum—New Mexico
Roads—New Mexico

NEW ORLEANS
New Orleans; gateway to the Nation's heart. il Manuf Rec 116:76-7 Ag '47
New Orleans plan includes union passenger terminal. il Civil Eng 17:453 Ag '47
See also
Motor bus lines—New Orleans

Commerce
Foreign trade zone dedicated at New Orleans is second in the United States. il Manuf Rec 115:50+ D '46
International week hits bull's-eye. H. C. Jackson. il For Comm W 25:6-7+ D 28 '46
Significance and value of New Orleans foreign-trade zone. T. E. Lyons. For Comm W 25:19 D 14 '46
What New Orleans is doing to build itself as a port; advertising, planning international trade mart, sponsorship of trade conferences, development of foreign trade zone, and organization of trade council. il Sales Management 59:138+ S 15 '47

International house
New Orleans: port of envy. il Bsns W p38+ Je 28 '47

Library
Where to find answers to world trade queries. il Sales Management 58:107 My 20 '47

Water supply
Precast concrete forms walls and roof of New Orleans clearwater reservoir. A. E. Marks. il Concrete 54:12-13+ N '46

NEW plastic corporation
Preferred stock offered. Comm & Fin Chr 164: 2695 N 25 '46

NEW YORK (city)
See also
Housing—New York (city)
Motor bus lines—New York (city)
Real estate business—New York (city)
Taxation—New York (city)

Bridges
N.Y. port authority paves center area of George Washington bridge. il Concrete 55: 16-17+ Ja '47
Palace, the [Brooklyn] bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. il Arch Forum 87:88-95 O '47
Stiffening the Bronx-Whitestone bridge. il diags Engineer 183:532-5 Je 20 '47
Two additional pavement lanes for George Washington bridge. il diag Roads & Sts 90:59-61 Ja '47
Widening and stiffening a suspension bridge; Bronx-Whitestone bridge. H. K. Glidden. il diag Roads & Sts 90:68-9+ Mr '47
Widening and stiffening Whitestone bridge. E. L. Pavlo. il diags Eng N 139:466-9 O 2 '47

Churches
See also
St Patrick's cathedral, New York

Finance
See Finance—New York (city)

Harbor
Tests assure adequate warning of marine borer attacks in New York harbor. W. F. Clapp. il diag Civil Eng 17:324-7+ Je '47

History
Old gives way to the new; historic buildings razed in construction of Brooklyn-Manhattan tunnel. R. G. Skerrett. il maps Comp Air Mag 52:62-5 Mr '47

Hospitals
Why lower New York needs Beekman-Downtown hospital. C. Axman. il East Underw 48:21+ Ja 31 '47

Hotels
Erewhon revisited or, the last days of the Murray Hill. il Fortune 34:152-5 D '46
Last of the old lady; Murray Hill. il Arch Forum 86:13 Mr '47

Industries
Expects 1947 prosperity for small N.Y. businessman; Commerce and industry association of New York. Comm & Fin Chr 165: 142+ Ja 9 '47
New York's dress industry battles for its future. R. J. Masiello. Barron's 26:11 N 25 '46

Madison Square Garden
Dust precipitators for air conditioning at Madison Square Garden. il Electronics 20: 162+ N '47
Madison Square Garden has new air conditioning system. il Heat & Ven 44:114 Ag '47

NEW YORK (city)—*Continued*

Markets

New wholesale produce market to dissolve truck congestion. E. B. Isaak. il plan Civil Eng 16:524-6 D '46

Metropolitan museum of art

Advertisers get ideas from Metropolitan museum of art. C. J. Swan. il Ptr Ink 219:35-7 My 2 '47

Costume institute reopens at the Met. Textile Col 68:24+ D '46

Rapid transit

Air transportation begins on the ground; New York survey of how transit to and from airports needs new development. O. H. Ehrlich. Mass Transportation 42:528-9 D '46

Major General Charles P. Gross; maybe he is the man they need in New York to fight Michael Quill. Mass Transportation 43:217-19+ Je '47

Memorandum: to all transit executives; New York transit fare issue. il Mass Transportation 43:100-4+ Mr '47

St Louis booby trap in New York. Mass Transportation 43:314-16 Ag '47

Sanitary affairs

Father Knickerbocker looks ahead; Diesel engines used by Sanitation department. il Diesel Power 24:1455+ D '46

Sewerage

Father Knickerbocker looks ahead; fourteen dual-fuel engines scheduled for sewage plants. il map diag Diesel Power 24:1070-4, 1330-3+ S, N '46

Mine in Seventy-second street; sewerage excavation work. C. H. Vivian. il plan diags Comp Air Mag 52:186-90 Ag '47

Sewage treatment in New York city. R. H. Gould. Boston Soc C E J 34:18-22 Ja '47

Sludge gas utilization; experience at New York City's sewage-treatment plants. R. H. Gould. il Water & Sewage 84:57+ O '46

Streets

Keeping Fifth avenue elite. Bsns W p48 F 8 '47

Plan $132 million N.Y. street solution. il Eng N 137:690 N 21 '46

Subways

Guarding a subway against fire; Independent subway system of New York city transit system. P. W. Eberhardt. il Nat Safety N 54:22-3 D '46

New cars for New York subways. B. F. Cordts. il Elec Eng 66:547-9 Je '47

New Yorkers to get more speed, comfort in new subway cars. Iron Age 159:136-7 My 29 '47

Tunnels

Brooklyn-Battery tunnel in New York city. il diags Eng N 138:930-7 Je 12 '47

Old gives way to the new; historic buildings razed in construction of Brooklyn-Manhattan tunnel. R. G. Skerrett. il maps Comp Air Mag 52:62-5 Mr '47

Under the Bay to Brooklyn. R. G. Skerrett. il plan diags Comp Air Mag 52:210-16, 246-50 S-O '47

NEW YORK (state)

Defends his legislative program. T. E. Dewey. Comm & Fin Chr 165:2249+ Ap 24 '47

See also

Safety movement—
New York (state)

Biography

Who's who in New York, 1947. W. S. Downs, ed. 11th ed 1235p $15 Lewis historical pub. co, 80 8th av, New York 11 '47

Industries and resources

East and West square off for business battle. W. Gates. il Mag of Wall St 80:583-5+ Ag 30 '47

NEW YORK academy of medicine

Graduate fortnight, 20th, New York, Oct. 6-17. Science 106:222-3 S 5 '47

NEW YORK board of trade

Drug, chemical and allied trades section

Annual meeting, 56th, New York, Nov. 19. Oil Paint & Drug Rep 150:5 N 25 '46

Annual meeting, 57th, Shawnee-on-Delaware, Pa, Sept. 24-26. Oil Paint & Drug Rep 152:5 S 29 '47

Insurance section

New officers. Nat Underw 50:2 D 26 '46

NEW YORK central railroad

Annual report for 1946. Ry Age 122:913 My 3 '47; Same abr. Comm & Fin Chr 165:2075 Ap 17 '47

Ask I.C.C. approval of C. & O.-N.Y.C. tie. Ry Age 122:759-60 Ap 12 '47

C.&O.-Central decision now in ICC's hands. Bsns W p82 S 27 '47

Equipment trust certificates. Comm & Fin Chr 165:340 Ja 20 '47

Equipment trusts offered. Comm & Fin Chr 164:3147 D 16 '46

Equipment trusts offered. Comm & Fin Chr 166:470 Ag 4 '47

Income account for calendar years, 1944-1946. Comm & Fin Chr 165:2140 Ap 21 '47

Investment survey of New York Central and Pennsylvania railroad. J. C. Clifford. il Mag of Wall St 79:680-1+ Mr 15 '47

New York Central, the 1929-1946 record. Bsns W p66 F 8 '47

New York Central's cost exceeds probable income. T. G. Campbell. Barron's 27:12 Mr 17 '47; Correction. 27:30 Mr 24 '47

See no N.Y.C. gain in tie with C. & O. Ry Age 123:537+ S 27 '47

Won't control N.Y.C. as director; R. R. Young's testimony at Interstate commerce commission hearings. Ry Age 123:492+ S 20 '47

NEW YORK (state) Chamber of commerce

Grimm again president; other officers. Comm & Fin Chr 162:2648 My 15 '47

NEW YORK, Chicago and St Louis railroad

Approves Nickel Plate control of Wheeling. Ry Age 121:1094+ D 28 '46

Equipment-trust certificates. Comm & Fin Chr 165:1072 F 24 '47

Equipment trusts awarded. Comm & Fin Chr 166:161, 1582 Jl 14, O 20 '47

Equipment trusts offered. Comm & Fin Chr 165:814 F 10 '47

Wheeling acquisition would transform Nickel Plate. Barron's 27:33 Je 30 '47

NEW YORK coffee and sugar exchange

Gardner president of Exchange; other officers. Comm & Fin Chr 165:665 Ja 30 '47

Sugar future trading in New York. J. C. Gardner. Comm & Fin Chr 166:717+ Ag 21 '47

NEW YORK cotton exchange

Refuses to negotiate until employees exercise right to leave union. Comm & Fin Chr 165:916 F 13 '47

State mediation board official obtains quick settlement of New York cotton exchange strike. Comm & Fin Chr 165:1252+ Mr 6 '47

This is the Cotton exchange. H. Caterson. il Textile Col 68:34-5+ O '46

NEW YORK curb exchange

Exchanges and free enterprise. F. A. Truslow. Comm & Fin Chr 165:1653+ Mr 27 '47

Governors meet; appoint committee members. Comm & Fin Chr 165:1012 F 20 '47

Indoors, it's still the Curb. il Bsns W p44+ Mr 15 '47

Listings for 1946. Comm & Fin Chr 165: 2049 Ap 14 '47

New president; Francis A. Truslow. Comm & Fin Chr 165:50 Ja 2 '47

NEW YORK fire insurance exchange

Annual meeting, New York. East Underw 48:25 Mr 21 '47

To drop rating activities. Spectator (Property ed) 12:40 My 22 '47

NEW YORK life insurance company

Annual report to policyholders. East Underw 48:1+ F 28 '47

Centennial meeting, April 10-11. East Underw 48:1+, 3+ Ap 18 '47; Spectator (Life ed) 154:24 Ap '47; Weekly Underw 156: 1065+ Ap 19 '47

Report for 1946. Comm & Fin Chr 165:340 Ja 20 '47

NEW YORK, New Haven and Hartford railroad
Equipment trusts issue offered. Comm & Fin Chr 165:2417 My 5 '47
Exchange of securities under plan of reorganization. Comm & Fin Chr 166:1484 O 13 '47
Howard S. Palmer continues as head of reorganized New Haven. map Ry Age 123: 616-17 O 11 '47
Reorganization goes into effect subject to ICC authorization. Comm & Fin Chr 166: 1054 S 15 '47
Reorganization plan. Comm & Fin Chr 166: 569 Ag 11 '47

NEW YORK paint, varnish and lacquer association
60 years old. Oil Paint & Drug Rep 151:7+ Mr 17 '47

NEW YORK security dealers association
Annual dinner, 21st, New York, March 7; portraits. Comm & Fin Chr 165:insert A-D Mr 13 '47

NEW YORK society of security analysts
Annual meeting, May 27. Comm & Fin Chr 165:2858 My 29 '47

NEW YORK state bar association

Banking law section
Organization meeting, Jan. 23. Trusts & Estates 84:303-4 Mr '47

NEW YORK state barge canal
Siphon culvert of Oswego lock gives long service. D. A. Watt. il diags Eng N 137: 872-4 D 26 '46

NEW YORK state electric and gas corporation
Bonds offered. Comm & Fin Chr 165:576 Ja 27 '47
Preferred stock offered. Comm & Fin Chr 165: 814 F 10 '47
Receives Coffin award. il Edison Elec Inst Bul 15:220 Je '47

NEW YORK state science council (proposed)
New York state science council. Science 105: 358-9 Ap 4 '47

NEW YORK state sewage works association
Annual meeting, 19th, New York, Jan. 17. Water & Sewage Works 94:55-8 F '47

NEW YORK stock exchange
All of Wall Street doesn't agree with Schram; Haskell's registration should be canceled. E. Germain. Comm & Fin Chr 165:184 Ja 9 '47
Annual report, 1946. Comm & Fin Chr 165: 1653+ Mr 27 '47
Cites changes in listing qualifications. E. Schram. Comm & Fin Chr 165:2254 Ap 24 '47
Domestic and foreign listing. J. Haskell. Comm & Fin Chr 166:1114+ S 18 '47
Governors of association of stock exchange firms recommend boost in NYSE commission rates. Comm & Fin Chr 165:1564 Mr 20 '47
Listings for 1946. Comm & Fin Chr 165:2047-9 Ap 14 '47
Members of NYSE believed inclined to favor substantial increases in commission rates. Comm & Fin Chr 165:1649+ Mr 27 '47
Monthly range of prices on the New York stock exchange. Comm & Fin Chr 165:501-20 Ja 23 '47
NYSE issues first quarterly report. Comm & Fin Chr 166:340 Jl 24 '47
NYSE says bulk of business originates in N.Y.; Pacific Coast and Rocky Mountain region supply less than 9 per cent; with tabulations of transactions for week beginning March 24th. Comm & Fin Chr 165: 2070+ Ap 17 '47
NYSE seeks to work out plan for revealing short sales on tape. Comm & Fin Chr 164: 2751+ N 28 '46
NYSE trading and savings deposits for 1910-46; graph. Comm & Fin Chr 166:828 Ag 28 '47
NYSE weighing desirability of closing down Saturdays and lengthening trading hours. Comm & Fin Chr 165:738 F 6 '47
Newcomers on the N.Y. stock exchange; with statistical information on new listings since May, 1946. W. A. Howell. Mag of Wall St 80:214-16+ My 24 '47
Opponents of incorporation may organize to fight. E. Germain. Comm & Fin Chr 164: 3017+ D 12 '46
Plan of increased N.Y.S.E. commissions. E. Schram. Comm & Fin Chr 166:1645 O 23 '47
Price down, volume up; activity of shares in 1946. Fortune 35:144 Mr '47
Requests data on member relations with investment trusts. F. J. Coyle, jr. Comm & Fin Chr 165:2251 Ap 24 '47
72 NYSE firms form committee to fight issue of permissive incorporation. E. Germain. Comm & Fin Chr 165:6+ Ja 2 '47
Stock exchange functions and over-regulation. W. W. Cumberland. Comm & Fin Chr 164:2745+, 2881+ N 28-D 5 '46
Stock exchange's opportunity. H. G. King. Comm & Fin Chr 165:184 Ja 9 '47
Stockholder and the NYSE. J. Haskell. Comm & Fin Chr 165:2857+ My 29 '47
Western brokers oppose Saturday closing but favor longer trading hours; interview with Emil Schram. E. Germain. Comm & Fin Chr 165:1004 F 20 '47

Building
Air conditioning the New York stock exchange. D. A. Kepler. il plans Heating-Piping 19:69-73 Ap; 84-8 Je; 87-91 Ag '47

Employees
No-strike impasse. Bsns W p82 N 9 '46
UFE and NYSE sign new contract extending to Jan. 31, 1948. Comm & Fin Chr 164:2615 N 21 '46
See also
United financial employees

Rules
New rule of NYSE on commodity accounts. Comm & Fin Chr 165:2254 Ap 24 '47
NYSE clarifies floor trading curbs. Comm & Fin Chr 166:324 Jl 24 '47

NEW YORK, Susquehanna and western railroad
Greater revenues in sight. Barron's 27:39 S 15 '47

NEW YORK telephone company
Accounting implications of the New York telephone company decision. G. O. May. J Account 82:456-9 D '46
Another milestone in regulation. G. O. May. J Land & Pub Util Econ 23:22-8 F '47
Bonds offered. Comm & Fin Chr 166:161 Jl 14 '47

NEW YORK university
Nonprofit profits; New York university gets big stake in Mueller co.; earnings tax-free. Bsns W p89-90 O 18 '47

Sanitary engineering laboratory
N.Y. university sanitary engineering laboratory and experimental station named the Lewis Van Carpenter laboratory. Water & Sewage Works 94:227 Je '47

NEW ZEALAND
See also
Insurance, Health—New Zealand
Labor laws and legislation—New Zealand
Roads—New Zealand

Commercial policy
Imports limited to essential goods. For Comm W 29:16 O 18 '47

Economic conditions
News by countries. For Comm W 27:16-17 Je 7; 28:19-21 Ag 30 '47

Industries and resources
Industrial research advances in Australia and New Zealand. R. C. Leslie. il For Comm W 28:5-7+ Ag 9 '47

Politics and government
New Zealand elections. Economist 151:1048-9 D 28 '46

NEWARK, New Jersey
Authority leases Newark air, sea ports. Eng N 139:575 O 30 '47

Water supply
Forest management for Newark. J. M. Heilman. Am Water Works Assn J 39:87-92 Ja '47

NEWBERRY, J. J., company
Selected stocks. Mag of Wall St 80:430 Jl 19 '47

NEWBURGH, New York
Water supply
How to feed fluorine; experiment to determine effect of fluorine in water supply on tooth formation and protection. C. R. Cox. il Eng N 139:67-8 Jl 10 '47

NEWBURGH steel company
Stocks offered. Comm & Fin Chr 165:2139-40 Ap 21 '47

NEWBURYPORT, Massachusetts
Bargain sale catches on. il Bsns W p 17-18 My 3 '47

NEWCOMEN society for the study of the history of engineering and technology
Summer meeting; Chepstow. Engineer 183: 523-4 Je 13 '47

NEWELL, William Stark, 1878-
All's shipshape; Bath Iron Works emerges from postwar letdown. por Bsns W p21 Ja 11 '47

NEWFOUNDLAND
Tenth province? Bsns W p 100 Ag 16 '47
See also
Geology—Newfoundland
Paper industry and trade—Newfoundland
Commercial policy
Relaxation of Newfoundland's foreign-exchange controls. For Comm W 26:22 Mr 1 '47
Economic conditions
1946 year of prosperity. For Comm W 27: 20-2 My 17 '47
Industries and resources
Newfoundland's basic industries operating close to capacity. J. C. Britton. Can Chem & Process Ind 31:739+ Ag '47

NEWMAN, William, 1876-
Waiting on the Main Line; John W. Holland co., Philadelphia. Fortune 35:136+ Ap '47

NEWNES, George, limited
Statement by the chairman. F. Newnes. Economist 153:261-2 Ag 9 '47

NEWPORT industries, inc.
Selected stocks. Mag of Wall St 80:539 Ag 16 '47

NEWS
How news affects coupon returns. M. Adams. Ptr Ink 219:116-17 Ap 18 '47

NEWS films. See Moving pictures—News films

NEWSPAPER advertising. See Advertising mediums—Newspapers

NEWSPAPER advertising executives association
January Chicago meeting. Ptr Ink 218:110-11 Ja 24 '47

NEWSPAPER libraries
Cooperation between newspaper libraries and school of journalism libraries. E. C. Mohr. Special Lib 38:216-18 S '47

NEWSPAPERS
Arizona times' conversion to daily tells story of building a newspaper. Ptr Ink 218:81-2 Mr 28 '47
Edison; boy printer and newspaper proprietor. A. Warren. Inland Ptr 119:41 Ap '47
How to get a good press, publish it. Bsns W p18 Mr 15 '47
One-newspaper town; Sun-Democrat has monopoly on Paducah's front porches but not on minds of its readers. il Fortune 36: 102-7+ Ag '47
Position of the press in a free society. A. Barth. Ann Am Acad 250:82-8 Mr '47
Smitty; newspaper and radio-station broker. Fortune 36:142+ N '47
See also
Advertising mediums—Newspapers
Freedom of the press
Journalism
Newsprint paper
Periodicals
Radio broadcasting stations—Newspaper cooperation
Radio broadcasting stations, Newspaper
Reporting
Trade journals
also names of newspapers, e.g. Chicago sun; Denver post; PM (newspaper)
Advertising mediums
See Advertising mediums—Newspapers
Advertising service
American newspaper publishers association announces Continuing monthly grocery audit. Sales Management 59:98-9 Jl 1 '47
Best-read ads in the latest newspaper survey; Niagara Falls gazette. J. Caples. il Adv & Sell 40:42+ S '47
Boost in promotion of retail advertising by newspapers to aid national manufacturers. D. Bruner. Ptr Ink 220:99 Jl 18 '47
Chicago Tribune's new selective-area co-op plan gives retailers low-cost mass ad coverage. H. E. Green. Ptr Ink 219:86 Je 13 '47
Family panel; a technique for diagnosing sales ills. D. D. Patterson and A. J. McAnally. Sales Management 59:134-6 O 1 '47
Hearst blueprints nine major markets. Sales Management 58:124 Je 1 '47
Hearst study confirms extent of influence of women on buying of consumer goods; percentage of total sales of 175 commodities tabulated. Ptr Ink 221:84+ O 17 '47
How newspapers are using the consumer panel. R. H. Ganly and R. D. Crisp. Ptr Ink 220:42+ S 12 '47
Huge sales operating control system set up for 9 U.S. markets by Hearst newspapers. E. J. Dever, jr. Ptr Ink 219:116+ My 23 '47
Illinois daily newspaper markets, inc. second annual consumer analysis. Sales Management 59:142+ N 1 '47
Indianapolis star issues first consumer analysis. Ptr Ink 217:58-9 D 27 '46
Merchandising helps for newspaper advertisers. Ptr Ink 219:38+ My 23 '47
National advertisers in Cincinnati enquirer offered reports on performance of copy. Ptr Ink 218:95 F 14 '47
Schenley survey of 320 newspapers shows merchandising services survived war cuts. D. Bruner. Ptr Ink 218:114 F 7 '47
Circulation
Network radio and newspaper circulation distribution. Sales Management 57:95-6+ D 1 '46
Newspapers' productive circulation areas to be determined by new trading region analyses. E. J. Dever, jr. Ptr Ink 221: 183 O 31 '47
See also
Audit bureau of circulations
Cooperation
Four Los Angeles newspapers cooperate to protect advertisers and readers. L. F. Thomann. Ptr Ink 218:98 F 28 '47
Directories
Working press of the Nation. T. Farrell and H. Muschel, eds. 646p $15 Farrell pub. corp, 420 Lexington av, N.Y. '47
Employees
Newspaper labor strife brings reactions. Bsns W p100 Mr 8 '47
Springfield measures effect on sales of newspaper blackout in its fifth month. Ptr Ink 218:96 F 14 '47
Insurance news
Financial relations with the press. C. Cefola. Trusts & Estates 84:479 My '47
Meeting the press. D. T. Lynch. East Underw 48:14 Ja 3 '47
New York writers of insurance news for daily press. East Underw 47:53 D 13 '46
Understand newspaper men. C. B. Reeves. Nat Underw (Life ed) 51:14-15 Je 6 '47
Printing
Cleveland newspapers hold conference on production of national advertisements. Inland Ptr 118:67-8 Mr '47
For picture newspapers in smaller communities is offset the answer? G. J. Church. il Inland Ptr 119:42-4 Ap '47
Lower costs on production through use of new method announced by William J. Higgins company. Inland Ptr 119:60 S '47
Machine for preprinted color insert in newspapers. il Inland Ptr 118:75 F '47

NEWSPAPERS—Printing—*Continued*
New printing method aims at cutting mechanical costs; eliminates use of typesetting machines, matrices and stereotype plates. Barron's 27:40 Jl 28 '47; Ptr Ink 220:98 Jl 25 '47

Reader interest

City versus town in newspaper readership. L. E. Borg. Adv & Sell 40:80 Jl '47
Marketing pictographs. Sales Management 58:65+ Ja 15 '47
Quiz on newspaper reading habits. J. Caples. Adv & Sell 40:35 My '47
Which newspaper features attracted most women readers? J. Caples. Adv & Sell 40: 33-4, 121 Ja '47

Scientific news

A.A.A.S. announces writing award fund. Ind Marketing 31:118 N '46
See also Westinghouse, George, science writing award

Weekly newspapers

Audited weeklies. Bsns W p53 D 21 '46

Camden, N.J.

Camden courier-post gets new owner. p21-2 My 10 '47

Great Britain

Daily mirror newspapers, limited; Sunday pictorial newspapers (1920) limited, annual general meetings. Economist 152:913-14 Je 7 '47
Daily news limited; statement by the chairman at annual general meeting. L. J. Cadbury. Economist 152:1044 Je 28 '47
Kemsley newspapers, limited, ordinary general meeting, London. Economist 152:653 Ap 26 '47
Ownership of the press. Economist 153:181-2 Ag 2 '47
Paper and papers. Fortune 34:3 D '46
What is wrong with the press? Economist 153:139-40 Jl 26 '47

Philadelphia

Stern bows out. Bsns W p16 F 8 '47

Toronto

Prolabor daily paper established in Toronto; Daily tribune. Bsns W p 104-5 My 10 '47

NEWSPAPERS and advertising. See Advertising mediums—Newspapers

NEWSPRINT paper
Espanola again makes newsprint to ease critical shortage. il Paper Ind 29:780-2+ S '47
Hardwoods for newsprint. G. E. Shipman. bibliog Pulp & Pa of Can 47:93-7 D '46
Investigation of newsprint will be made. Inland Ptr 118:69 Mr '47
K.V.P. starts operation at Espanola mill. Paper Tr J 125:12 S 11 '47
New method of pitch control in newsprint manufacture; use of polyphosphates. H. Freeman. Pulp & Pa of Can 48:73-5 Jl '47
Newsprint for democracy; summary of the supply situation. R. Willmot. il Pulp & Pa of Can 47:80-1 N '46
Newsprint industry in Japan. Pulp & Pa of Can 48:71-3 S '47
Newsprint quality, today and tomorrow. G. Larocque. bibliog Pulp & Pa of Can (Convention no) 48:94-9 [F] '47; Same cond. Paper Ind 28:1808-10 Mr '47
Newsprint supply conference. il Pulp & Pa of Can 47:76-82 D '46
Paper and papers. Fortune 34:3 D '46
Paper-making milestone; 80 years of newsprint from wood pulp. Comp Air Mag 52: 130 My '47
Planning a newsprint mill for minimum electrical maintenance. J. Eyton. Pulp & Pa of Can 48:91-4 O '47
Scandinavian newsprint situation. For Comm W 25:31 N 9 '46

Statistics

Newsprint paper in 1946. G. A. Ware. Paper Tr J 124:64+ F 27 '47; Same. Pulp & Pa of Can 48:49-53 Mr '47; Same abr. Paper Ind 28:1792-3 Mr '47
United Kingdom's production and imports of newsprint and other paper, 1938, 1940-1946. For Comm W 27:23 Je 7 '47
World production of newsprint paper. R. S. Kellogg. Pulp & Pa of Can 48:57-9 Jl '47

Testing

Carlsson printability test for newsprint. J. H. Bardsley and L. J. Morin. Pulp & Pa of Can (Convention no) 48:159-62 [F] '47; Same cond. Paper Ind 29:438-40 Je '47

NEWTON, Sir Isaac, 1642-1727
Newton and fluid mechanics. J. C. Hunsaker. J Aeronautical Sci 13:647-51 D '46
Sir I. Newton's correspondence; centenary celebration at Royal society of London. F. E. Brasch. Science 106:102-3 Ag 1 '47

NIACIN. See Nicotinic acid

NIAGARA Hudson power corporation
Annual report. Comm & Fin Chr 165:1871 Ap 7 '47
Plan to consolidate operating companies presented to Commission. Comm & Fin Chr 166:1687 O 27 '47

NICARAGUA

Economic conditions

News by countries. For Comm W 25:31 D 7 '46; 26:21 Ja 4; 23 F 1; 22-3 Mr 1; 28:15 Jl 12; 29:17 O 4 '47

NICHOLS medal
Kistiakowsky awarded Nichols medal for molecular studies. Chem & Eng N 25:770-1 Mr 17 '47
Nichols medal award to G. B. Kistiakowsky. Chem & Eng N 24:2881 N 10 '46

NICKEL
Acetic acid vs. materials of chemical plant construction; nickel, nickel alloys. W. Z. Friend. Chem Eng 53:218+ D '46
Chemical engineering materials of construction; review of literature from start of World war II; nickel and high-nickel alloys. W. Z. Friend. bibliog(99 ref) Ind & Eng Chem 39:1228-34 O '47
Construction and characteristics of evaporated nickel bolometers. B. H. Billings and others. il diag R Sci Instr 18:429-35 Je '47
Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels. N. A. Ziegler and W. L. Meinhart. il diag Am Soc for Metals Trans 37:360-99 bibliog(49 titles, p397-9); Discussion. 399-401 '46
Engineering properties of "A" and "L" nickel; data sheet. Metal Prog 50:836b N '46
Identification of nickel or monel wire in a woven wire screen. R. L. Hackney. Metal Prog 51:87 Ja '47
Lead-nickel glass of controlled chemical durability for storage battery use. F. J. Williams and J. A. Orsino. Am Cer Soc J 29:313-16 N 1 '46
Nickel and high-nickel alloys; classification, characteristics, fabrication, cleaning, corrosion, etc. N. E. Woldman. il Materials & Methods 24:1475-90 D '46
Nickel, 1946. H. W. Davis. Eng & Min J 148: 87 F '47
Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47
Probability of *K* ionization of nickel by electrons as a function of their energy. L. T. Pockman and others. bibliog Phys R 71: 330-8 Mr 15 '47
Some case histories of corrosion problems in chemical process equipment. W. Z. Friend and F. L. La Que. Am Inst Chem Eng Trans 42:849-62 O-D '46; Same. Pet Eng (Ref annual) 18:212+ Jl 1 '47
Steel industry largest consumer of nickel. R. C. Stanley. Blast F & Steel Pl 35:56 Ja '47
Sulphur dioxide vs. materials of chemical plant construction; nickel, nickel alloys. W. Z. Friend. Chem Eng 54:222+ Jl '47
Wartime applications of nickel and alloys continue expanded use. Iron Age 158:150+ D 5 '46

Analysis

Determination of nickel in cobalt steels and alloys. H. Kirtchik. bibliog Anal Chem 19: 95-6 F '47

NICKEL—Analysis—*Continued*
Spectrographic examination of organic precipitates; nickel dimethylglyoxime. M. Griffing, T. De Vries and M. G. Mellon. Anal Chem 19:654-5 S '47

Isotopes

Cobalt 61 radioactivity. T. J. Parmley and B. J. Moyer. Phys R 72:82 Jl 1 '47
Confirmation of assignment of 2.6 *h* Ni to a mass number of 65. E. E. Conn and others. Phys R 70:768 N 1 '46
Radioactivity of Cu^{60}. C. E. Leith and others. Phys R 72:732-3 O 15 '47

Raney nickel

Base effect in catalytic hydrogenation; simple synthesis of 6-methoxy-α-tetralone. G. Stork. bibliog Am Chem Soc J 69:576-9 Mr '47
Discoverer of Raney nickel. R. B. Seymour bibliog Chem & Eng N 25:2628 S 15 '47
Hydrogenation of lignin over Raney nickel. J. F. Saeman and E. E. Harris. bibliog Am Chem Soc J 68:2507-9 D '46

Testing

Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdams, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46

NICKEL, Powdered
Electrolytic preparation of powdered nickel; abstract. A. I. Levin. Chem Eng 54:268+ Ag '47

NICKEL alloys
Acetic acid vs. materials of chemical plant construction; Durimet and Chlorimet. W. D. Staley. Chem Eng 53:256+ N '46
Acetic acid vs. materials of chemical plant construction; Hastelloy. C. G. Chisholm. Chem Eng 53:206+ D '46
Acetic acid vs. materials of chemical plant construction; nickel, nickel alloys. W. Z. Friend. Chem Eng 53:218+ D '46
Cast nickel alloys; some important properties; tabulation; engineering file facts. R. S. Burpo, jr., comp. Materials & Methods 24:1223 N '46
Chemical engineering materials of construction; review of literature from start of World war II; nickel and high-nickel alloys. W. Z. Friend. bibliog(99 ref) Ind & Eng Chem 39:1228-34 O '47
Cobalt-base and nickel-base alloys for ultra-high temperature. F. S. Badger, jr. and F. C. Kroft, jr. il Metal Prog 52:394-400+ S '47
Corrosion; recent developments in alloys as construction materials for severe corrosion services and uses. M. G. Fontana. Ind & Eng Chem 39:sup 101A-2A O '47
Corrosion resistance of nickel base alloys and applications in processing equipment. R. B. Long. Steel 121:132+ N 3 '47
Corrosion-resistant alloys; Chlorimet no. 2 and Chlorimet no. 3; Duriron co. Chem Ind 59:876 N '46
Durimet, Chlorimet. J. L. Traub. Chem Eng 54:213 Mr '47
Fabricates caskets of chromium-nickel weldments; Ryan aeronautical co. il Steel 120: 112 Je 2 '47
Forging practice; high-nickel alloys. A. Ashburn. Am Mach 91:126 My 8 '47
Graphite formation in cast irons and in nickel-carbon and cobalt-carbon alloys. H. Morrogh and W. J. Williams. diag Iron & Steel Inst J 155:341-58 Mr '47; Discussion. il 156:491-6; 157:193-7 Ag, O '47
Hastelloy alloys, wrought and cast; properties, applications, fabrication, etc. Machine Design 18:155-8 N '46
Haynes alloys for high-temperature service. W. O. Sweeny. il diags A S M E Trans 69:569-81 Ag '47
Heat treatment of some chromium-nickel alloys. H. A. Campbell. bibliog il Iron Age 159:74-9 Je 5 '47
High nickel-chromium alloys increase thermocouple life; abstract. E. A. Murphy. Materials & Methods 25:133 Mr '47
High-nickel materials; machining monel metals and iconel. Automobile Eng 37:145-6 Ap '47
Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159:67-70 Mr 6 '47
Neutral density filters of Chromel A. M. Banning. Opt Soc Am J 37:686-7 S '47
New magnetic material of high permeability; supermalloy. O. L. Boothby and R. M. Bozorth. bibliog J Ap Phys 18:173-6 F '47; Abstract. Engineer 184:78-9 Jl 25 '47
Nickel alloys form multihelix thermometer element. il diag Product Eng 18:98 Ap '47
Nickel and high-nickel alloys; classification, characteristics, fabrication, cleaning, corrosion, etc. N. E. Woldman. il Materials & Methods 24:1475-90 D '46
Nickel-chromium alloys for gas-turbine service. C. A. Crawford. A S M E Trans 69: 609-12 Ag '47
Observations on the failure of 80 nickel-20 chromium alloy at excessive temperatures. H. D. Holler. bibliog Electrochem Soc Trans 92 (preprint 7):101-7 '47; Abstract. Steel 121:99 N 17 '47
Precision drop forging of high temperature alloys. S. G. Demirjian. il Materials & Methods 26:68-71 S '47
Quick tests for identifying eight white metals and alloys. Paper Ind 29:574 Jl '47
Sulphur dioxide vs. construction materials; Hastelloy. C. G. Chisholm. il Chem Eng 54:212+ S '47
Sulfur dioxide vs. materials of chemical plant construction; Durimets T and 20. W. A. Watkins. il Chem Eng 54:209-10 Ag '47
Sulphur dioxide vs. materials of chemical plant construction; nickel, nickel alloys. W. Z. Friend. Chem Eng 54:222+ Jl '47
Unfired cylindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman. A S M E Trans 69: 337-43; Discussion. 343-4 My '47
Wartime applications of nickel and alloys continue expanded use. Iron Age 158:150+ D 5 '46
Welding and other fabrication methods for Hastelloy alloys. C. G. Chisholm. il diags Welding J 25:1179-83 D '46
Wet and dry chlorine vs. materials of chemical plant construction; Hastelloy. C. G. Chisholm. Chem Eng 54:228+ F '47
Wet and dry chlorine vs. materials of chemical plant construction; nickel, inconel, monel and ni-resist. W. Z. Friend. Chem Eng 54:213-14+ Mr '47

See also
Chromium nickel steel
Iron alloys—Nickel alloys
Monel metal
Nickel steel
Worthite

Analysis

Spectrochemical analysis of nickel alloys. E. K. Jaycox. Opt Soc Am J 37:159-62 Mr '47

NICKEL arsenides
Higher mineral arsenides of cobalt, nickel, and iron. R. J. Holmes. diags tables Geol Soc Bul 58:299-391, pl 1-5 bibliog(p385-91) Ap '47

NICKEL chloride
Filters for the isolation of the 3130 A. spectral group of the mercury arc. R. E. Hunt and W. Davis, jr. bibliog Am Chem Soc J 69:1415-18 Je '47

NICKEL clad steel. See Steel, Nickel clad

NICKEL compounds
Magnetic susceptibility of some nickel complexes in solution. J. B. Willis and D. P. Mellor. bibliog Am Chem Soc J 69:1237-40 Je '47

Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47

NICKEL industry and trade
After the turn of the year. R. C. Stanley. Comm & Fin Chr 165:472 Ja 23 '47

NICKEL manganese chromium steel
Nickel-manganese-chromium steel wire for aircraft control cables. H. C. Boynton. il Materials & Methods 25:91-3 Ap '47

NICKEL metallurgy
Outokumpu's copper smelter doubles output during war. P. Bryk and others. il Eng & Min J 148:68-72 Ja '47

Electrometallurgy
Electric smelting of low-grade nickel ores. S. F. Ravitz. 4pls U S Bur Mines Rep of Invest 4122:1-39 '47

NICKEL mines and mining
Finland
Outokumpu's copper smelter doubles output during war. P. Bryk and others. il Eng & Min J 148:68-72 Ja '47

NICKEL ores
Exploration of nickel-copper-cobalt deposit at Funter bay, Admiralty island, Alaska. S. P. Holt and J. M. Moss. flow sheet U S Bur Mines Rep of Invest 3950:1-15, pl 1-6 '46
Nickel-copper prospect near Spirit mountain, Copper River region, Alaska. J. Kingston and D. J. Miller. maps U S Geol S Bul 943-C:49-57; pa 10c Supt. of doc. '45

NICKEL oxides
Determination of X-ray diffraction line widths. C. G. Shull. bibliog Phys R 70:679-84 N 1 '46
X-ray diffraction studies in the system $NiO-Al_2O_3$. W. O. Milligan and L. Merten. bibliog il J Phys Chem 50:465-70 N '46

NICKEL Plate road. See New York, Chicago and St Louis railroad

NICKEL plating
Analysis of plating baths; abstract. E. J. Serfass and W. S. Levine. Iron Age 160: 82+ S 25 '47
Automatic handling aids plating success; Daystrom corporation. M. E. Kilroy. flow chart il Am Mach 91:84-7 Mr 27 '47
Bulk nickel plating; abstract. H. Strow. Iron Age 160:75-6 Ag 21 '47
Codeposition of tungsten and nickel from an aqueous ammoniacal citrate bath. L. E. Vaaler and M. L. Holt. bibliog Electrochem Soc Trans 90 (preprint 9):151-62 '46; Abstract. Steel 119:88 D 9 '46
Control of pH in nickel plating solutions. H. Bandes. Electrochem Soc Trans 90 (preprint 34):423-37 '46
Deposition of nickel and cobalt by chemical reduction; abstract. A. Brenner and G. Riddell. Metal Finishing 45:49 Ag '47
Electrodeposition of cobalt and nickel from coordination compounds; cobalt ammines and nickel ammines. M. D. Kramer and others. bibliog Electrochem Soc Trans 90 (preprint 27):339-45 '46
Electroless plating of nickel, cobalt on metals by chemical reduction. il Sci Am 177:172-3 O '47; Chem & Eng N 25:2222 Ag 4 '47
Electroplating solution purification; abstract. B. C. Case. Iron Age 160:74-5 Ag 21 '47
Extraction methods applied to the analysis of electroplating baths and the determination of zinc and other impurities in nickel solutions; abstract. E. J. Serfass and W. S. Levine. Metal Finishing 45:51 Ag '47
Industrial plating of zinc base die castings. C. Temple. il Metal Finishing 45:82-3 Jl '47
No electric current used in new method of plating nickel and cobalt on metal surface. A. Brenner and G. E. Riddell. il diag Steel 121:84+ Jl 28 '47; Same. Chem Age (Lond) 57:156-7 Ag 2 '47; Same, without il. Mech Eng 69:767-8 S '47; Same. Franklin Inst J 244:479-81 D '47; Same cond. Automotive Ind 97:90 O 15 '47; Same cond. Product Eng 18:150 O '47; Abstracts. Comp Air Mag 52:281 N '47; Can Min J 68:908 D '47
Physical properties of electrodeposited metal; abstract. A. Brenner and C. W. Jennings. Metal Finishing 45:54 Ag '47
Plated zinc base die castings. E. J. Roehl. il Metal Finishing 45:63-7 O '47
Practical methods in heavy industrial nickel plating. E. J. Roehl. il Metal Finishing 45: 56-9+ My '47
Preparing steel for porcelain enameling. G. H. McIntyre. il Steel 121:102-3+ Jl 21 '47
Review of F.I.A.T. final report no. 879; peeling of nickel deposits. E. R. Thews. Chem Age (Lond) 57:330+ S 6 '47
Some effects of copper in nickel plating solutions; abstracts. D. T. Ewing and W. D. Gordon. Metal Finishing 45:52 Ag '47; Iron Age 160:136-7 S 25 '47
Surface area of chrome-plated nickel. C. Brown and H. H. Uhlig. bibliog il Am Chem Soc J 69:462-4 F '47
Thick nickel deposits for special surface protection; abstract. D. Chambaud. Materials & Methods 25:150 Ap '47

Testing
Buffability of nickel deposits; abstract. R. D. Miller and A. H. De Rose. il Iron Age 160:81-2 S 25 '47

NICKEL silver
Variation with frequency of the torsional modulus of German silver wire and its relation to gyromagnetic measurements. S. J. Barnett and D. S. Webber. diags Phys R 71:896-902 Je 15 '47

NICKEL steel
Modified isothermal treatments minimize distortion. O. E. Brown. il Iron Age 159:54-6 Ap 17 '47
New 9% nickel steel tubing; properties and processing. H. D. Newell and others. il diags Materials & Methods 25:62-7+ Ja '47
See also
Chromium nickel steel
Nickel manganese chromium steel

NICKEL tubes. See Tubes, Nickel

NICOTINAMIDE
Effect of nicotinamide on the solubility of riboflavin in water. D. V. Frost. bibliog Am Chem Soc J 69:1064-5 My '47

NICOTINIC acid
Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:990-3 Ag '47
Halogen-metal interconversion reaction and its application to the synthesis of nicotinic acid labeled with isotopic carbon. A. Murray, 3d and others. Science 106:277 S 19 '47
New bases from coal-tar. G. D. Bieber. il Chem Ind 61:51 Jl '47
Nicotinic acid content of coffee. E. B. Hughes and R. F. Smith. bibliog Soc Chem Ind J 65:284-6 O '46
Nicotinic anhydride. C. O. Badgett. Am Chem Soc J 69:2231 S '47
Nutritive value of canned foods. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Three sources of amino acids for niacin assay. A. R. Kemmerer and F. Shapiro. bibliog Anal Chem 19:358-9 My '47

NICOTINIC anhydride
Nicotinic anhydride. C. O. Badgett. Am Chem Soc J 69:2231 S '47

NIGERIA
Economic policy
Government to purchase and develop certain lands in the Cameroons. For Comm W 26:16 F 8 '47

NIGHT work
Night office staff; a case story. J. W. Riedell. Management R 36:459-61 S '47

NILE river, Egypt
Nile flood of 1946. Engineering 162:424 N 1 '46; Discussion. F. Newhouse. 162:496 N 22 '46

NILES Bement Pond company
Promising stocks. Mag of Wall St 79:667 Mr 15 '47

NINETEEN hundred and forty-six
Engineering News events of 1946; chronological summary. Eng N 138:260-1 F 20 '47
1946; a review of how its turmoil affected advertising. il Ptr Ink 218:25-8 Ja 3 '47

NINETEEN hundred and forty-seven
Metalworking industry reports on prospects for 1947. maps Steel 120:sup1-32 Ja 6 '47

NINHYDRIN
Determination of alpha-amino nitrogen as ammonia after oxidation of amino acids by ninhydrin. F. S. Schlenker. bibliog Anal Chem 19:471-4 Jl '47

NIQUIDINE
Synthesis of antimalarial compounds related to niquidine; alternative synthesis of dihydro-*x*-niquidine. T. S. Work. Chem Soc J p222-4 F '47

NI-RESIST. See Iron alloys—Nickel alloys

NITRAMINES. See Nitroamines

NITRATES
Engineer looks at Chile. R. Hammond. il Engineer 184:226-7, 250-2 S 5-12 '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47
Reductive acetolysis of nitrate esters. D. O. Hoffman, R. S. Bower and M. L. Wolfrom. bibliog Am Chem Soc J 69:249-50 F '47

See also
Ammonium nitrate
Sodium nitrate

Analysis

Polarographic analysis of nitrite and of nitrite—nitrate mixtures. B. Keilin and J. W. Otvos. bibliog Am Chem Soc J 68:2665-8 D '46

Transportation

Nitrates shipping rules tightened by government. Oil Paint & Drug Rep 152:3 S 8 '47

NITRATION
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47
Addition of dinitrogen tetroxide to olefins. N. Levy, C. W. Scaife and A. E. W. Smith. diag Chem Soc J p 1093-104 D '46
Anomalous nitration reactions. D. V. Nightingale. bibliog(91 ref) Chem R 40:117-40 F '47
Aromatic-aliphatic nitro compounds. L. F. Fieser and others. bibliog Am Chem Soc J 68:2248-53 N '46
Chemistry of the pyrrocolines; nitration. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1077-83 N '46
Discussion on nitration. Chem & Ind p28-9 Ja 11 '47
Effect of pressure on nitration of methane. H. B. Hass and others. bibliog diags Ind & Eng Chem 39:919-24 Jl '47
Effect of temperature on the proportions of isomers formed in the mononitration of toluene. W. W. Jones and M. Russell. Chem Soc J p921-3 Jl '47
Heterocyclic basic compounds; 4,8-diaminoquinoline and derivatives. R. W. Gouley, G. W. Moersch and H. S. Mosher. bibliog Am Chem Soc J 69:303-6 F '47
Improved method of nitrating aromatic *o*-hydroxy-carboxylic acids and their esters. H. C. Barany and M. Pianka. Chem Soc J p965-6 O '46
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 60:773-85 Ap '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47
N,N'-diacetylethylenediamine nitrate. F. S. Prout and J. Cason. Am Chem Soc J 69: 1228-9 My '47
Nitration in sulphuric acid; influence of nitric acid and other substances upon the oleum-water titration. J. C. D. Brand. Chem Soc J p880-4 O '46
Nitration in sulphuric acid; kinetics of the nitration of 2 : 4-dinitrotoluene. G. M. Bennett and others. Chem Soc J p474-92 Ap '47
Nitration in sulphuric acid; migration of nitric acid to the cathode during electrolysis in oleum solution. G. M. Bennett, J. C. Brand and G. Williams. Chem Soc J p875-80 O '46
Nitration in sulphuric acid; nature of the nitrating agent in nitric-sulphuric acid mixtures. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p869-75 O '46
Nitration of 1 : 5-dihydroxy- and 1 : 5-diacetoxy-naphthalene, 1-acetoxy-5-methoxynaphthalene, 5-methoxy-1-naphthol, and 1 : 5-dimethoxynaphthalene. R. H. Thomson, E. Race and F. M. Rowe. Chem Soc J p350-5 Mr '47
Nitration of melamine and of triacetylmelamine. J. Cason. Am Chem Soc J 69: 495-8 Mr '47
Nitration with mixed acids; abstract and discussion. G. M. Bennett. Chem & Ind p59 Ja 25 '47
Nitrations of swollen and collapsed cotton linters. R. K. Brown and C. B. Purves. bibliog Pulp & Pa of Can 48:100-7 My '47
Oxynitration of benzene; studies relating to the reaction mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47
Preparation of *o*- and *p*-nitroacetophenone from phenylmethylcarbinol and ethylbenzene. A. H. Ford-Moore and H. N. Rydon. Chem Soc J p679-81 Ag '46
Some amino-derivatives of dihydro-β-quinindene and tetrahydroacridine. V. Petrow. Chem Soc J p634-7 My '47
Some derivatives of 7-methylquinoline. J. D. Capps. bibliog Am Chem Soc J 69:179-81 Ja '47
Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; nitration and diazo-coupling. H. H. Hodgson and E. R. Ward. Chem Soc J p 1060-2 Ag '47
Structures of some nitrated fluorene derivatives. C. W. Bennett, W. G. Jewsbury and J. P. Dupuis. bibliog Am Chem Soc J 68: 2489-90 D '46
Tetrazotisation of 1 : 5- and 1 : 8-naphthylenediamines and the tetranitration of 1 : 5- and 1 : 8-di-*p*-toluenesulphonamidonaphthalenes. H. H. Hodgson and J. S. Whitehurst. Chem Soc J p80-1 Ja '47
Theoretical discussion of further substitution in disubstituted naphthalenes; a comparison of the sulphonation and nitration of polynitronaphthalenes, naphthalene polysulphonic acids and naphthalene nitrosulphonic acids. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:177-8 Je '47
Theoretical discussion of further substitution in disubstituted naphthalenes; the further nitration of the dinitronaphthalenes. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:141-4 My '47
Vapor-phase nitration of saturated hydrocarbons. H. B. Hass and H. Schechter. bibliog Ind & Eng Chem 39:817-21 Jl '47

See also
Denitration

NITRIC acid
Acid neutralization. H. L. Jacobs. diags Chem Eng Prog 43:247-53; Discussion. 253-4 My '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 141-2 N '46
Kinetics of nitrous gas absorption in aqueous nitric acid. K. G. Denbigh and A. J. Prince. diag Chem Soc J p790-801 Je '47
Nitration in sulphuric acid; influence of nitric acid and other substances upon the oleum acid and other substances upon the oleum-water titration. J. C. D. Brand. Chem Soc J p880-4 O '46
Nitration in sulphuric acid; kinetics of the nitration of 2 : 4-dinitrotoluene. G. M. Bennett and others. Chem Soc J p474-92 Ap '47
Nitration in sulphuric acid; migration of nitric acid to the cathode during electrolysis in oleum solution. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p875-80 O '46
Nitration in sulphuric acid; nature of the nitrating agent in nitric-sulphuric acid mixtures. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p869-75 O '46
Nitric acid digestion of wood in Germany; N-Cellulose; abstract. J. Kleine. Paper Ind 29:742 Ag '47
Nitric acid fume pneumonia. P. Treiger and C. Przypyszny. il Ind Med 16:395-7 Ag '47
Rate study of the oxidation of nitric oxide with nitric acid vapor. J. H. Smith. Am Chem Soc J 69:1741-7 Jl '47

NITRIC acid—*Continued*
Solvent extraction of humic acids from nitric acid; treated bituminous coal. T. S. Polansky and C. R. Kinney. bibliog Ind & Eng Chem 39:925-9 Jl '47
Vibration spectrum of nitric acid. O. Redlich. Am Chem Soc J 69:2240-1 S '47

Manufacture
Nitric acid production plant. Chem Age (Lond) 56:437 Ap 12 '47

NITRIDING process. See Case hardening—Nitriding process

NITRILES
Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47
Mechanism for the hydrolysis of cyanamide in acid solution. M. L. Kilpatrick. bibliog Am Chem Soc J 69:40-6 Ja '47
N-Methyl-L-glucosaminic acid. M. L. Wolfrom, A. Thompson and I. R. Hooper. bibliog Am Chem Soc J 68:2343-5 N '46
Reaction of N-hydroxmethyl phthalimide with nitriles. S. R. Buc. bibliog Am Chem Soc J 69:254-6 F '47
Unsaturated nitriles; adducts of dienes with fumaronitrile. D. T. Mowry. bibliog Am Chem Soc J 69:573-5 Mr '47
Unsaturated nitriles; the preparation of *trans*-cinnamonitrile and methacrylonitrile by oxime dehydration. D. T. Mowry and R. R. Morner. bibliog Am Chem Soc J 69:1831 Jl '47

NITRITES
Analysis
Polarographic analysis of nitrite and of nitrite—nitrate mixtures. B. Keilin and J. Otvos. bibliog Am Chem Soc J 68:2665-8 D '46

NITRO compounds
Acetals of nitro alcohols and corresponding amino acetals. M. Senkus. Am Chem Soc J 69:1380-1 Je '47
Addition of dinitrogen tetroxide to olefins. N. Levy, C. W. Scaife and A. E. W. Smith. diag Chem Soc J p 1093-104 D '46
Aromatic-aliphatic nitro compounds. L. F. Fieser and others. bibliog Am Chem Soc J 68:2248-53 N '46
Basis for the reported optical activity of the salts of aliphatic nitro compounds; 2-nitroöctane. N. Kornblum and others. bibliog Am Chem Soc J 69:307-13 F '47
Chemical society discusses nitro compounds. C. W. Scaife and others. Chem & Ind p340-2 Je 14 '47
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2118-19 S '47
Chemistry of the pyrrocolines; nitration. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1077-83 N '46
Nitroaryldichlorarsines and related compounds. J. F. Morgan and others. Am Chem Soc J 69:930-2 Ap '47
Nitroölefins by the vapor phase catalytic cleavage of esters of nitro alcohols. M. H. Gold. bibliog Am Chem Soc J 68:2544-6 D '46
Precise method for the determination of the ionization constants of some weak organic acids. R. S. Stearns and G. W. Wheland. bibliog Am Chem Soc J 69:2025-9 Ag '47
Preparation of some *o*-substituted cyclohexylbenzenes. T. H. McGuine and M. F. Dull. bibliog Am Chem Soc J 69:1469 Je '47
Replacement of the diazonium by the nitro-group; extension of the method to nitronaphthylamines, benzidine and 3 : 3'-dichlorobenzidine. H. H. Hodgson and E. R. Ward. Chem Soc J p 127-9 Ja '47
Some basically substituted diaryl sulfides and sulfones. H. Gilman and H. S. Broadbent. bibliog Am Chem Soc J 69:2053-7 Ag '47
Steric effects in the ultraviolet absorption spectra of aromatic nitro compounds. W. G. Brown and H. Reagan. bibliog Am Chem Soc J 69:1032-3 My '47

NITROACETIC acid
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2118-19 S '47

NITROACETOPHENONE
Acetylation of *o*-, *m*- and *p*-nitroacetophenones by the boron trifluoride method. H. G. Walker, jr and C. R. Hauser. bibliog Am Chem Soc J 68:2742-3 D '46
o- and *p*-Nitroacetophenones by liquid phase oxidation. W. S. Emerson and others. bibliog Am Chem Soc J 69:706 Mr '47
Preparation of *o*- and *p*-nitroacetophenone from phenylmethylcarbinol and ethylbenzene. A. H. Ford-Moore and H. N. Rydon. Chem Soc J p679-81 Ag '46

NITROAMINES
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47

NITROANILINES
See also
Dichloronitroaniline

NITROBENZALDEHYDE
Aromatic-aliphatic nitro compounds; condensation of nitrobenzaldehydes with nitromethane. L. F. Fieser and W. H. Daudt. bibliog Am Chem Soc J 68:2248-9 N '46

NITROBENZENE
Properties of electrolytic solutions; conductance of some salts in nitrobenzene at 25°. E. G. Taylor and C. A. Kraus. Am Chem Soc J 69:1731-5 Jl '47
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47
Study of anhydrous conditions in the preparation of lyophobic organosols. H. A. Nelson. bibliog diags J Phys & Colloid Chem 51:1103-11 S '47

NITROBENZENESULFENYL chloride
Derivatives of sulfenic acids; reactions of 2-nitrobenzenesulfenyl chloride, 2,4-dinitrobenezenesulfenyl chloride and of the corresponding sulfenyl thiocyanates with olefins and with methyl ketones. N. Kharasch, H. L. Wehrmeister and H. Tigerman. bibliog Am Chem Soc J 69:1612-15 Jl '47

NITROBENZOIC acid
Reduction of *p*-nitrobenzoic acid to hydrazo- and azo-benzene-4 : 4'-dicarboxylic acids by means of glucose. M. L. Tomlinson. Chem Soc J p756 Ag '46
Relative growth rates of bean and oat plants containing known amounts of a labeled plant-growth regulator (2-iodo^{131}-3-nitrobenzoic acid). J. W. Mitchell and others. Science 106:395-7 O 24 '47
Translocation of a radioactive plant-growth regulator in bean and barley plants. J. W. Wood and others. bibliog diag Science 105: 337-9 Mr 28 '47

NITROBUTANE
Dipole moment of 1-nitrobutane. J. G. Miller and H. S. Angel. bibliog Am Chem Soc J 68:2358 N '46

NITROCELLULOSE
Comparison of recently developed plasticizers for nitrocellulose, by Chicago paint and varnish production club. bibliog Paint Oil & Chem R 108:124-9 N 1 '45; 109:28+ D 12 '46
Determination of the heat of combustion of nitroglycerin and the thermochemical constants of nitrocellulose. J. Taylor and C. R. L. Hall. bibliog diags J Phys & Colloid Chem 51:593-611 Mr '47
Effect of molecular weight distribution on the reduced viscosity-concentration coefficient. W. E. Davis. bibliog Am Chem Soc J 69: 1453-7 Je '47
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47
Future use of nitrocellulose lacquer. J. B. Wiesel. Paint Oil & Chem R 109:70-1 N 14 '46

NITROCELLULOSE—*Continued*
Gélatinisation des nitrocelluloses. T. Petitpas. bibliog il diags Chimie & Ind 58:17-23 Jl '47; Abstract (Gelling of nitrocellulose). Chem Age (Lond) 57:625-6 N 8 '47
Mechanism of ammonia stabilization of cellulose nitrate. R. E. Reeves and J. E. Giddens. bibliog Ind & Eng Chem 39:1306-9 O '47
Molecular properties of nitrocellulose; studies of molecular heterogeneity. R. H. Blaker, R. M. Badger and R. M. Noyes. bibliog J Phys & Colloid Chem 51:574-9 Mr '47
Molecular properties of nitrocellulose; studies of viscosity. G. J. Doyle and others. bibliog J Phys & Colloid Chem 51:569-74 Mr '47
Nitrate covering for propeller blades. S. H. Fedan. il Mod Plastics 24:142-5 N '46
Nitrocellulose dilution ratio procedure. Oil & Gas J 46:70 Jl 12 '47
Properties of cellulose as applied in plastic materials. W. E. Gloor. bibliog J Chem Educ 24:214-21 My '47
Reaction between cellulose nitrate and sodium acetylide in liquid ammonia. P. C. Scherer and G. A. Saul. bibliog Rayon 28:474-5, 537-8 S-O '47
Reductive acetolysis of nitrate esters. D. O. Hoffman, R. S. Bower and M. L. Wolfrom. bibliog Am Chem Soc J 69:249-50 F '47
Some recent developments in nitrocellulose lacquers. J. R. Yeager. Paint Oil & Chem R 110:22+ Ap 17 '47
Stabilization of cellulose nitrate with ammonia. R. E. Reeves and J. E. Giddens. bibliog diag Ind & Eng Chem 39:1303-6 O '47
Sulfonamide plasticizers and resins. H. S. Bergen, jr. and J. K. Craver. bibliog Ind & Eng Chem 39:1082-7 S '47
Synthetic resins for use in the formulation of nitrocellulose paper lacquers. J. G. Little and C. D. Ender. Paper Tr J 124:43-7 Mr 6 '47
Thermochemistry of propellent explosives. J. Taylor, C. R. L. Hall and H. Thomas. bibliog J Phys & Colloid Chem 51:580-92 Mr '47

Physiological effect

Slow dissolving, non-irritating salt tablet for use in hot environments. W. V. Consolazio and others. bibliog il J Ind Hygiene 29:347-50 S '47

NITROCINCHONINIC acid
8-Nitrocinchoninic acids and related substances. E. R. Buchman, C. M. McCloskey and J. A. Senecker. bibliog Am Chem Soc J 69:380-4 F '47

NITROCINNAMYL alcohol
Properties of *m*-nitrocinnamyl alcohol. R. H. Snyder. Am Chem Soc J 69:475 F '47

NITRODIPHENYL
Observations on the effects of diphenyl, *o*- and *p*-aminodiphenyl, *o*- and *p*-nitrodiphenyl and dihydroxyoctachlorodiphenyl upon experimental animals. W. B. Deichmann and others. bibliog il diags J Ind Hygiene 29:1-13 Ja '47

NITROFLUORENE
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47

NITROFURALDEHYDE semicarbazone
Treatment of infected war wounds with a nitrofuran. N. C. McCullough. bibliog Ind Med 16:128+ Mr '47

NITROGEN
Active magnesia; surface areas and pore structures from nitrogen adsorption. A. C. Zettlemoyer and W. C. Walker. bibliog il Ind & Eng Chem 39:69-74 Ja '47
Active magnesia; X-ray versus nitrogen adsorption surface areas. A. C. Zettlemoyer and W. C. Walker. bibliog J Phys & Colloid Chem 51:763-7 My '47
Adsorption-desorption isotherm studies of catalysts; comparison of low temperature isotherms of ammonia and nitrogen. H. E. Ries, jr., R. A. Van Nordstrand and W. E. Kreger. bibliog Am Chem Soc J 69:35-40 Ja '47
Adsorption of hydrogen and nitrogen on chromium oxide gel. P. H. Emmett and M. Cines. bibliog Am Chem Soc J 68:2535-6 D '46
Heat transfer in a 3-1 hydrogen-nitrogen mixture at high pressure. A. P. Colburn, T. B. Drew and H. Worthington. bibliog diag Ind & Eng Chem 39:958-64 Ag '47
Heats of adsorption on carbon black. R. A. Beebe and others. bibliog diag Am Chem Soc J 69:95-101 Ja '47
Magnitude of the experimental error in the adsorption of nitrogen at 78°K on various surfaces. W. V. Loebenstein and V. R. Deitz. J Chem Phys 15:687-8 S '47
Mean free paths of cesium atoms in helium, nitrogen, and cesium vapor. I. Estermann and others. diags Phys R 71:250-7 F 15 '47
Nitrogen content of apple juice and its importance in cider making. D. W. Steuart. Chem & Ind p55-6 Ja 25 '47
Quadrupole moments and spins of Br, Cl, and N nuclei. C. H. Towns and others. bibliog Phys R 71:644-5 My 1 '47
Quenching and depolarization of mercury resonance radiation by nitrogen and oxygen. L. O. Olsen and G. P. Kerr, jr. Phys R 72:115-17 Jl 15 '47
Recent progress in the nitrogen industries. E. B. Maxted. Chem Age (Lond) 56:59-63 Ja 11 '47
Re-evaluation of the covalent radii of some of the elements. W. Gordy. bibliog J Chem Phys 15:81-4 F '47
Solubility of nitrogen and methane in sulfur dioxide. M. R. Dean and W. S. Walls. diag Ind & Eng Chem 39:1049-51 Ag '47
Sulphate of ammonia. Chem & Ind p50 Ja 25 '47

Analysis

Determination of alpha-amino nitrogen as ammonia after oxidation of amino acids by ninhydrin. F. S. Schlenker. bibliog Anal Chem 19:471-4 Jl '47
Determination of nitrogen in ferro-alloys and other materials by direct Nesslerisation without distillation. W. C. Newell. bibliog Iron & Steel Inst J 152:333-7 no 2 '45; Same cond. Engineering 160:505 D 14 '45; Discussion. Iron & Steel Inst J 152:337-9 no 2 '45
Kjeldahl determination of nitrogen; elimination of the distillation. K. Marcali and W. Rieman, 3d. bibliog Ind & Eng Chem Anal ed 18:709-10 N '46
Kjeldahl determination of protein for general chemistry. E. M. Collins and R. W. Shelton. diag J Chem Educ 23:549 N '46
Microiodometric method for the determination of glue or gelatin in paper. G. E. Naponen and others. bibliog Paper Tr J 125:45-7 Jl 31 '47
Micro-Kjeldahl determination of nitrogen; use of potassium biiodate in iodometric titration of ammonia. R. Ballentine and J. R. Gregg. bibliog Anal Chem 19:281-3 Ap '47
Organic nitrogen in paper; revision of TAPPI official standard T 418 m-45. Paper Tr J 125:39-40 Jl 31 '47
Oxidation of glycerinated solutions in the micro-Kjeldahl determination of nitrogen. P. E. Portner. Anal Chem 19:502-3 Jl '47
Rapid turbidimetric determination of inorganic nitrogen in soil and plant extracts. B. Wolf. bibliog Anal Chem 19:334-5 My '47

Industrial applications

Extinction of isobutane flames by carbon dioxide and nitrogen. G. W. Jones and G. S. Scott. 2pls U S Bur Mines Rep of Invest 4095:1-9 '47
Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65: Trans 791-7 D '46
Nitrogen-filled dry pipe sprinkler systems. il Safety Eng 93:28 Mr '47
Nitrogen, repressuring agent for new experimental secondary recovery project. L. S. McCaslin, jr. flow diag il map diag Oil & Gas J 46:72-3+ S 27 '47

Isotopes

Alleged gamma-ray of N^{13}. L. M. Langer and others. bibliog Phys R 71:906 Je 15 '47; Correction. 72:355 Ag 15 '47

NITROGEN—Isotopes—*Continued*
Energy levels of O^{17} obtained from $O^{16}(d,p)O^{17}$ and $N^{14}(\alpha,p)O^{17}$. E. Pollard and P. W. Davison. Phys R 72:736-7 O 15 '47
Isotopic nitrogen exchange between nitrogen pentoxide and dioxide. R. A. Ogg, jr. J Chem Phys 15:613 Ag '47
Separation of the nitrogen isotopes by the exchange reaction between ammonia and solutions of ammonium nitrate. I. Kirshenbaum and others. bibliog diags J Chem Phys 15:440-6 Jl '47

Statistics

Nitrogen world output, year ended June 30, 1946. Oil Paint & Drug Rep 151:5 F 10 '47

NITROGEN, Liquid
Expansion fits with liquid nitrogen; reference book sheet. diags Am Mach 91:151, 153 Je 5 '47
Expansion fitting with liquid nitrogen. C. H. Wick. il diags Mach 54:156-9 O '47
Liquid nitrogen sub-zero cools parts for expansion fitting. E. J. Tangerman. il Am Mach 91:144-5 Je 5 '47

NITROGEN compounds
Absorption spectra of organic compounds containing nitrogen; derivatives of hydantoin. R. E. Stuckey. Chem Soc J p331-4 Mr '47
Chemistry of carcinogenic nitrogen compounds; new derivatives of the angular benzacridines and of some related nuclei. N. P. Buu-Hoï. Chem Soc J p792-5 S '46
Chemistry of the pyrrocolines; 2-methyl- and 2-phenyl-pyrrocoline. E. T. Borrows, D. C. Holland and J. Kenyon. Chem Soc J p 1069-75 N '46
Fertilizer producers ask probe of nitrogen export situation. Oil Paint & Drug Rep 150:3+ D 2 '46
New competition for nitrogen makers; sale of government-owned synthetic plants. Barron's 26:7 N 18 '46
Nitrogen allocation for 1947-48 announced. Oil Paint & Drug Rep 151:3+ Je 30 '47
Nitrogen compounds in petroleum distillates; confirmation of presence of Bz-tetrahydroquinolines in California petroleum. P. L. Pickard and H. L. Lochte. bibliog Am Chem Soc J 69:14-16 Ja '47
Nitrogen-containing organic inhibitors of corrosion. S. Ch'iao and C. A. Mann. bibliog diags Ind & Eng Chem 39:910-19 Jl '47
Nitrogen overseas needs to lessen. Oil Paint & Drug Rep 150:5+ D 16 '46
Trends in nitrogen chemistry. L. F. Audrieth. bibliog Chem & Eng N 25:2552-4 S 8 '47

See also
Amines
Ammonium compounds
Cinnoline
Diazo compounds
Tetrazoles

NITROGEN dioxide. See Nitrogen oxides

NITROGEN fixation
Electric activation of chemical reactions; nitrogen fixation by a new type of electric discharge. W. J. Cotton. diags Electrochem Soc Trans 91 (preprint 34A):489-500 '47; Abstract. Chem Eng 54:252+ S '47

NITROGEN oxides
Activation in unimolecular reactions. O. K. Rice. bibliog J Chem Phys 15:689-90 S '47
Addition of dinitrogen tetroxide to olefins. N. Levy, C. W. Scaife and A. E. W. Smith. diag Chem Soc J p 1093-104 D '46
Addition of dinitrogen tetroxide to olefins; abstract. C. W. Scaife. Chem & Ind p340-1 Je 14 '47
Determination of olefinic unsaturation; nitrogen tetroxide method as applied to petroleum hydrocarbons in the gasoline boiling range. G. R. Bond, jr. diags Ind & Eng Chem Anal ed 18:692-6 N '46
Electric activation of chemical reactions; production of nitrogen oxides. W. J. Cotton. bibliog Electrochem Soc Trans 91 (preprints 34B-G):501-602 '47
Experimental determination of the intensities of infra-red absorption bands; measurements on ethylene and nitrous oxide. A. M. Thorndike, A. J. Wells and E. B. Wilson, jr. bibliog J Chem Phys 15:157-65 Ap '47
Investigation of the properties of cellulose oxidized by nitrogen dioxide. E. W. Taylor and others. bibliog diags Am Chem Soc J 69:342-61 F '47
Isotopic nitrogen exchange between nitrogen pentoxide and dioxide. R. A. Ogg, jr. J Chem Phys 15:613 Ag '47
Kinetics of nitrous gas absorption in aqueous nitric acid. K. G. Denbigh and A. J. Prince. diag Chem Soc J p790-801 Je '47
Mechanism of nitrogen pentoxide decomposition. R. A. Ogg, jr. J Chem Phys 15:337-8 My '47
Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47
Rate study of the oxidation of nitric oxide with nitric acid vapor. J. H. Smith. bibliog Am Chem Soc J 69:1741-7 Jl '47
Solubility of cellulose in mixtures of nitrogen tetroxide with organic compounds. W. F. Fowler, jr. and others. Am Chem Soc J 69:1636-40 Jl '47
Study of the kinetics of the reaction between nitrogen pentoxide and nitric oxide. J. H. Smith and F. Daniels. bibliog diag Am Chem Soc J 69:1735-41 Jl '47
Theory of accidental predissociation. I. Kovács and A. Budó. bibliog J Chem Phys 15: 166-73 Ap '47
Ultraviolet absorption spectrum of nitric oxide. H. J. Bernstein and G. Herzberg. bibliog J Chem Phys 15:77 Ja '47

NITROGLYCERIN
Determination of the heat of combustion of nitroglycerin and the thermochemical constants of nitrocellulose. J. Taylor and C. R. L. Hall. bibliog diags J Phys & Colloid Chem 51:593-611 Mr '47
Thermochemistry of propellent explosives. J. Taylor, C. R. L. Hall and H. Thomas. bibliog J Phys & Colloid Chem 51:580-92 Mr '47

See also
Smokeless powder

Manufacture

Advances in nitroglycerine manufacture. D. G. Brown. Chem & Ind p87-9 F 8 '47

NITROGUANIDINE
Guanidine nitrate from dicyandiamide and ammonium nitrate by pressure reaction. J. H. Paden, K. C. Martin and R. C. Swain. bibliog flow sheet diags Ind & Eng Chem 39:952-8 Ag '47
Improved preparation of guanidine nitrate. K. G. Herring and others. bibliog flow sheet Ind & Eng Chem 38:1315-19 D '46

NITROHYDROXYCINNOLINE
Cinnolines; 8-nitro-4-hydroxycinnoline. J. C. E. Simpson. Chem Soc J p237-8 F '47

NITROHYDROXYQUINOLINE
Quinoline derivatives from 3-nitro-4-hydroxyquinoline. G. B. Bachman and others. bibliog Am Chem Soc J 69:365-71 F '47

NITROINDENE
Synthesis of 5-nitroindene. R. D. Haworth and D. Woodcock. Chem Soc J p95-6 Ja '47

NITROMERCAPTOBENZOTHIAZOLE
Nitro Captax, 6-nitro-2-mercaptobenzothiazole, as a reagent for the identification of alkyl halides. H. B. Cutter and H. R. Golden. Am Chem Soc J 69:831-2 Ap '47

NITROMETHANE
Aromatic-aliphatic nitro compounds; condensation of nitrobenzaldehydes with nitromethane. L. F. Fieser and W. H. Daudt. bibliog Am Chem Soc J 68:2248-9 N '46
Condensation of nitromethane with D- and L-arabinose: preparation of L-glucose and L-mannose. J. C. Sowden and H. O. L. Fischer. Am Chem Soc J 69:1963-5 Ag '47
Entropy of nitromethane; heat capacity of solid and liquid; vapor pressure, heats of fusion and vaporization. W. M. Jones and W. F. Giauque. bibliog Am Chem Soc J 69:983-7 My '47
Olive oil as a solvent for certain organic vapors. R. Macy and B. Gehauf. Science 106:274-5 S 19 '47

NITRONAPHTHALENE
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47

NITRONAPHTHYLAMINE
Critical review of the various methods extant for the preparation of the mononitronaphthylamines. H. H. Hodgson and D. E. Hathway. bibliog(63 ref) Soc Dyers & Col J 63:231-3 Jl '47

Replacement of the diazonium by the nitro-group; extension of the method to nitronaphthylamines, benzidine and 3 : 3'-dichlorobenzidine. H. H. Hodgson and E. R. Ward. Chem Soc J p 127-9 Ja '47

Some reactions and derivatives of 6- and 7-nitro-2-naphthylamine; nitration and diazo-coupling. H. H. Hodgson and E. R. Ward. Chem Soc J p 1060-2 Ag '47

Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; bromination, halogeno-derivatives, and the preparation of the new 7-nitro-2-naphthol. H. H. Hodgson and E. R. Ward. Chem Soc J p327-31 Mr '47

NITROÖCTANE
Basis for the reported optical activity of the salts of aliphatic nitro compounds; 2-nitroöctane. N. Kornblum and others. bibliog Am Chem Soc J 69:307-13 F '47

NITROÖLEFINS
Carbohydrate C-nitroalcohols; the acetylated nitroölefins. J. C. Sowden and H. O. L. Fischer. bibliog Am Chem Soc J 69:1048-50 My '47

Studies in light absorption; nitro-olefins. E. A. Braude, E. R. H. Jones and G. G. Rose. Chem Soc J p 1104-5 Ag '47

NITROPARAFFINS

Physiological effect

Toxicity of 2-nitropropane. J. B. Skinner. bibliog Ind Med 16:441-3 S '47

NITROPHENOL
Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69:1296-301 Je '47

NITROPHENYL acetate
Preparation of *o*-nitrophenyl acetate. L. C. Galatis. Am Chem Soc J 69:2062-3 Ag '47

NITROPHENYLNITROMETHANE
Aromatic-aliphatic nitro compounds; condensation of nitrophenylnitromethanes with formaldehyde. L. F. Fieser and M. Gates. Am Chem Soc J 68:2249-52 N '46

NITROPROPANE
Reaction of 1-nitropropane with formaldehyde and ammonia. E. L. Hirst and others. Chem Soc J p924-8 Jl '47

Toxicity of 2-nitropropane. J. B. Skinner. bibliog Ind Med 16:441-3 S '47

NITROSTYRENE
Substituted styrenes; preparation of *p*-iodo-, *p*-nitro- and *p*-dimethylaminostyrene and α-vinylthiophene. R. W. Strassburg, R. A. Gregg and C. Walling. bibliog Am Chem Soc J 69:2141-3 S '47

NITROTOLUENE
Production of ortho and para mono-nitrotoluene from toluene; abstract. M. B. Donald and others. Chem & Ind p589 S 27 '47

NITROSOACETANILIDE
Synthesis of 2-arylfurans. A. W. Johnson. Chem Soc J p895-9 O '46

NITROSOAMINES
Study of the reaction of some nitrosoamines with α-naphthylamine hydrochloride; suitable for the quantitative determination of these nitrosoamines. C. A. Parker. Chem Soc J p772-5 S '46

NITROSO compounds
Chemistry of the pyrrocolines; nitroso-derivatives of some substituted pyrrocolines. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1075-7 N '46

Preparation of 4-aminophenyl sulphones; reaction between 4-acetamidobenzenesulphinic acid and aromatic nitroso-compounds. S. Pickholz. Chem Soc J p 1058-62 N '46

Preparation of unsymmetrical diaryl amines; 5 - phenylamino - 6 - methoxy - 8-(3-diethylaminopropylamino)-quinoline. H. R. Snyder and N. R. Easton. bibliog Am Chem Soc J 68:2641-3 D '46

Replacement of halogen by the nitro group in halogenated acetothiophenamides. H. M. Priestley and C. D. Hurd. Am Chem Soc J 69:1173-5 My '47

NITROSOTHIOANISOLE
Preparation and some reactions of 4-nitrosothioanisole. H. H. Hodgson, D. D. R. Sibbald and E. W. Smith. Chem Soc J p851-2 Je '47

NOBEL prizes
American chemists awarded Nobel prizes at Stockholm. il Chem & Eng N 25:300-1 F 3 '47

Lion's share, or back seat? Germany. G. G. Maltenfort. Chem & Eng N 25:1150 Ap 21 '47

1946 Nobel prizes in physics and chemistry. Science 104:483 N 22 '46

Otto Hahn received 1944 Nobel chemistry award for uranium fission. Chem & Eng N 25:769 Mr 17 '47

NOGENT-SUR-MARNE

Bridges

La reconstruction du viaduc de Nogent-sur-Marne sur la ligne de chemin de fer de Paris à Bâle. A. Chansigaud and M. Martin. il plans diags Génie Civil 124:145-9, 168-71 Ap 15-My 1 '47

NOISE
Acoustical concomitants of cavitation and boiling, produced by a hot wire. M. F. M. Osborne and F. H. Holland. bibliog il diags Acoustical Soc Am J 19:13-29 Ja '47

Design of speech communication systems for use in presence of noise. L. L. Beranek. bibliog diags Inst Radio Eng Proc 35:880-90 S '47

Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. diag Acoustical Soc Am J 19:120-5 Ja '47

Effects of impulsive interference upon a-m voice communication. J. C. R. Licklider and S. J. Goffard. bibliog diag Acoustical Soc Am J 19:653-63 Jl '47

Evaluation of some factors in the development of occupational deafness. W. R. MacLaren and A. L. Chaney. bibliog diags Ind Med 16:109-15 Mr '47

Factors governing the intelligibility of speech sounds. N. R. French and J. C. Steinberg. bibliog Acoustical Soc Am J 19:90-119 Ja '47

Muffler silences noisy laboratory equipment. W. E. Shaefer. diag Chem Eng 54:137-8 S '47

Noise, its character and measurement. C. R. Freberg. Refrig Eng 53:119-23+ F '47

Noise reduction in textile machinery due to the substitution of gears by chain drives. A. L. Mayor. Textile Inst J 37:p522-5 N '46

Principles of noise reduction in offices and factories. M. A. Smith. il Eng N 137:643-5 N 14 '46

Sensitivity to changes in the intensity of white noise and its relation to masking and loudness. G. A. Miller. diag Acoustical Soc Am J 19:609-19 Jl '47

Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton. bibliog J Ap Phys 17:940-71 N '46

See also
Airplanes—Noise
Airports—Noise
Gas burners—Noise
Mechanical draft—Noise
Phonograph—Noise reduction
Radio communication—Interference
Radio receiving apparatus—Noise
Sound absorbent materials
Soundproofing
Vacuum tubes—Noise

NOISE, Physiological
Physiological noise generated under earphone cushions. W. J. Brogden and G. A. Miller. il diag Acoustical Soc Am J 19:620-3 Jl '47

NOISE suppressor. See Phonograph—Noise reduction

NOMA electric corporation
Santa Claus diversifies. Bsns W p56+ D 28 '46

NOMENCLATOR animalium generum et subgenerum
Information wanted covering publication of final part. P. H. Oehser. Science 105:522 My 16 '47

NOMOGRAPHY
Batch distillation nomograph for binary or multicomponent mixtures. W. H. Stanton. Ind & Eng Chem 39:1042-3 Ag '47
Bonnet output nomograph. G. S. MacLeod. Heat & Ven 44:94-5 O '47
Cathode follower nomograph. M. B. Kline. Electronics 20:136 My; 136 Je; 130 Jl '47
Chart for making dilution calculations. W. C. Frishe. Pet Eng 18:182+ F '47
Combustion calculations for hydrocarbon fuels. H. R. Linden and D. F. Othmer. bibliog charts Chem Eng 54:115-19 Ap; 148-53 My '47
DB gain-loss calculator. L. A. Lohr. Electronics 20:134 F '47
Design nomograms for meter pivot bearings. G. F. Shotter. Elec World 127:108 Je 7 '47
Dilution calculation nomograph. W. C. Frishe. Chem Ind 60:1009-10 Je '47
Fuel and soda value of tall oil skimmings; use of nomographs. A. Pollak and P. R. Wiley. Paper Tr J 125:37-40 Ag 28 '47
Nomogram for energy, voltage, capacitance relationship; reference book sheet. Product Eng 18:179 S '47
Nomogram for polar moment of inertia by suspension: reference book sheet. H. F. Bariffi. Product Eng 18:177 Jl '47
Nomograph aids determination of torsional stresses in shafts; engineering data sheet. C. P. Nachod. Machine Design 18:157-8 D '46
Nomograph aids use of Boussinesq equation. I. J. Hooks and H. Gray. Civil Eng 17: 332-3 Je '47
Nomograph chart aids pumice-concrete slab design. A. E. Niederhoff. Civil Eng 17:613 O '47
Nomograph finds proportions for ethanol-water mixes. W. C. Frishe. Chem Eng 53: 163 N '46
Nomograph for allowable working stresses in steel parts; data sheet. C. K. Donoho. Metal Prog 51:968b Je '47
Nomograph for design of various concrete mixes. A. T. Smith. Concrete 55:9-10 Mr '47
Nomograph for determination of sludge filtration data. C. M. Gard. Water & Sewage Works 93:446-7 N '46
Nomograph for duct sizing. N. S. Shataloff. Heat & Ven 43:89 N '46
Nomograph for flash vaporization. M. Nord. Anal Chem 19:431-2 Je '47
Nomograph for normal boiling points of hydrocarbons. G. E. Mapstone. Pet Refiner 26:120-1 Mr '47
Nomograph-of-the-month. D. S. Davis, ed. Published in monthly numbers of Chemical industries
Nomograph simplifies planetary gear calculations; engineering data sheet. A. Cowie. diag Machine Design 19:155-6 S '47
Nomographic representation of engineering and chemical data. D. S. Davis. bibliog Chem Ind 59:840-1 N '46
Nomographic treatment of the results from the cupriethylenediamine method of determining the viscosity of cellulose. G. Beall. Paper Tr J 124:37-8 My 15 '47
Reverberation time nomographs. R. C. Coile. Electronics 20:142+ Ap '47
Square-wave response; nomograph. A. J. Baracket. Electronics 20:130 Ag '47
Voltmeter loading; use of nomograph. R. E. Lafferty. diag Electronics 20:132-3 N '47

NONAETHYLENE glycol laurate
Cryoscopic evidence for micellar association in aqueous solutions of non-ionic detergents. E. Gonick and J. W. McBain. bibliog Am Chem Soc J 69:334-6 F '47

NONANE
Heats of combustion and isomerization of six nonanes. W. H. Johnson and others. bibliog J Res Nat Bur Stand 38:419-22 Ap '47

NONCANCELLABLE policies. See Insurance, Accident—Noncancellable policies

NON-FERROUS metals. See Metals, Non-ferrous

NON-FORFEITURE benefits. See Insurance, Life—Policies—Non-forfeiture benefits

NON-METALLIC bearings. See Bearings, Non-metallic

NON-SCHEDULED air carriers. See Air carriers—Non-scheduled operations

NOODLES
Noodles in windows. il Mod Packaging 20: 97 Ag '47

NOPCO chemical company
Preferred stock offered. Comm & Fin Chr 165:3056 Je 9 '47

NORANDA oil corporation
Stock offered. Comm & Fin Chr 166:857 S 1 '47

NORBORNYLENE. See Bicycloheptene

NORCAMPHENE. See Bicycloheptene

NORCHOLANE
Basic derivatives of cholane and norcholane; synthesis of certain basic nitrogen derivatives of cholane and norcholane. S. P. James and others. Chem Soc J p665-70 Ag '46

NORDIHYDROGUAIARETIC acid
Synthesis of nordihydroguaiaretic acid. S. V. Lieberman, G. P. Mueller and E. T. Stiller. bibliog Am Chem Soc J 69:1540-1 Je '47

NORELAC
Polyamides; resins of the Norelac type for hot-melt and heat-seal coatings. A. G. Hovey. il Mod Packaging 21:143-8+ O '47

NORFOLK and western railway
Annual report. Comm & Fin Chr 165:1939, 2005 Ap 10-14 '47; Same abr. Ry Age 122: 769-70 Ap 12 '47

NORFOLK southern railway
New management takes charge of Norfolk Southern. Ry Age 122:1217 Je 14 '47

NORIE-MILLER, Sir Francis, 1859-1947
Sketch. por East Underw 48:25 Jl 11 '47; Weekly Underw 157:284-5 Ag 2 '47

NORLEUCINE
Synthesis of certain α-amino acid esters from malonic ester. J. C. Shivers and C. R. Hauser. bibliog Am Chem Soc J 69:1264-5 Je '47

NORTH AMERICA
Defense of North America. A. G. L. McNaughton. Elec Eng 66:754-7 Ag '47

NORTH AMERICAN aviation, inc.
Annual report. Comm & Fin Chr 165:1731-2 Mr 31 '47

NORTH AMERICAN company
Company reports for 1946. Comm & Fin Chr 165:1594-5 Mr 24 '47
Gives rights on Cleveland stock. Comm & Fin Chr 165:214 Ja 13 '47
Holdings shift no threat to earnings; stockholders' position unchanged despite liquidation of subsidiary stocks. E. R. Abrams. Barron's 27:31-2 S 8 '47
Public utility holding companies; the death sentence and the future. W. H. Anderson. bibliog J Land & Pub Util Econ 23:244-54 Ag '47
SEC approves plan of company for settlement of claims. Comm & Fin Chr 165:1319 Mr 10 '47
SEC asks amendment in plan to dissolve subsidiary. Comm & Fin Chr 165:3397 Je 30 '47

NORTH AMERICAN light and power company
Common may get more. Barron's 27:1+ Ja 27 '47
Financial news and comment. O. Ely. Pub Util 39:243 F 13 '47
Financial news and comment: with table showing estimated value of assets. O. Ely. Pub Util 39:375-6 Mr 13 '47
Issue over common stock. Pub Util 39:642-3 My 8 '47

NORTH AMERICAN refractories company
Plans recapitalization. Comm & Fin Chr 166: 668 Ag 18 '47

NORTH CAROLINA
See also
Iron ores—North Carolina
Mines and mineral resources—North Carolina
Petroleum—North Carolina
Tungsten mines and mining—North Carolina

Industries and resources
North Carolina industry active on expansion during 1946. Manuf Rec 116:42-3 Mr '47

NORTH DAKOTA
Bibliography
Dakota imprints, 1858-1889. A. H. Allen, ed. 221p $6.50 R. R. Bowker co, 62 West 45th st, New York 19 '47

NORTHEAST airlines
Northeast analyzes system for CAB. Aviation W 47:53 Ag 25 '47

NORTHEASTERN roofing, siding and insulating contractors association
Roofer, once a lone wolf with a single skill, is now a merchant. C. N. Nichols. il Sales Management 59:83-4+ S 15 '47

NORTHERN Indiana public service company
Stock offered. Comm & Fin Chr 165:1458 Mr 17 '47

NORTHERN natural gas company
Debentures offered. Comm & Fin Chr 165: 2317 Ap 28 '47
Expansion to raise capacity 25 per cent. Barron's 27:26 Je 23 '47

NORTHERN Pacific railway
Equipment trusts offered. Comm & Fin Chr 164:2696, 3295 N 25, D 23 '46
Growth sets pace for its rivals. M. Halpern. Barron's 27:24 Je 2 '47
Northwest transformed; shift to manufacturing reflected in Northern Pacific's traffic. M. Halpern. Trusts & Estates 85:52-4 Jl '47

NORTHERN states power company
Accord with SEC nearing. Barron's 27:30 Mr 17 '47
Amended plan. Comm & Fin Chr 164:3295 D 23 '46
Bonds offered. Comm & Fin Chr 165:2317 Ap 28 '47
Dissolution power of SEC challenged. Comm & Fin Chr 165:111 Ja 6 '47
New plans for integration. O. Ely. Pub Util 39:243-4 F 13 '47

NORTHROP, John Howard, 1891-
American chemists awarded Nobel prizes at Stockholm. por(cover) Chem & Eng N 25: 300-1 F 3 '47
Portrait. Science 104:cover N 22 '46

NORTHROP, John Knudsen, 1895-
Northrop wing. por Fortune 36:112-15+ O '47

NORTHRUP, Herbert
Portrait. Bsns W p69 D 28 '46

NORTHUMBERLAND academy
Pennsylvania associations of Joseph Priestley. J. S. Hepburn. Franklin Inst J 244:95-107 bibliog(67 titles, p105-7) Ag '47

NORTHWEST
See also
Electricity supply—Northwestern states

Economic conditions
Pacific Northwest economic outlook, 1947. N. H. Engle. bibliog Mo Labor R 64:636-49 Ap '47

Industries and resources
Industrial position of Northwest today. J. D. C. Weldon. il Mag of Wall St 79:595-7 Mr 1 '47
Northwest transformed; shift to manufacturing reflected in Northern Pacific's traffic. M. Halpern. Trusts & Estates 85:52-4 Jl '47

NORTHWEST, Canadian
Northland of Canada. maps Economist 152: 628-9, 678-9 Ap 26-My 3 '47

NORTHWEST airlines, inc.
Expansion director, Croil Hunter. Bsns W p8 Jl 19 '47
Northwest to the Orient; scheduled air traffic across the north Pacific. map Aero Digest 55:58 S '47
Report to shareholders. Comm & Fin Chr 165:2140-1 Ap 21 '47
Stock oversubscribed. Comm & Fin Chr 165: 2418 My 5 '47

NORTHWEST electric light and power association
Business development section meeting, Seattle, May 6-10. Elec West 98:114-16 Je '47
Each day is a new day; year's activities. J. H. Polhemus. Elec West 98:89-90 Je '47
Engineering and operation section annual meeting, Portland, April 9-11. Elec West 98:66-70 My '47

NORTHWEST mining association
Annual meeting, 52d, Spokane, Dec. 6-7. Eng & Min J 148:106 Ja '47

NORTH WEST utilities company
Amends dissolution plan. Comm & Fin Chr 165:1319 Mr 10 '47

NORTHWESTERN electric company
Merger with Pacific Power and Light approved. Comm & Fin Chr 164:3417 D 30 '46

NORTHWESTERN mutual life insurance company
Adopts CSO 2 per cent basis; all figures revised. Life Ins Courant 52:25-8 Ja '47

NORTHWESTERN public service company
Preferred and common stocks offered. Comm & Fin Chr 165:942 F 17 '47

NORTON, Victor Thane, 1904-
Norton steps up. por Bsns W p62 Je 14 '47

NORTON, William Harmon, 1856-1944
Memorial. F. M. Fryxell. por(pl 10) Geol Soc Proc 1946:199-208 bibliog(p206-8) Jl '47

NORVALINE
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47

NORWAY
See also
Chemical industries—Norway
Merchant marine—Norway

Economic conditions
News by countries. For Comm W 28:19-20 Ag 2 '47

German occupation
Norwegian mine output drops during German occupation. T. Vogt. Eng & Min J 148:92-4 O '47

NORWICH and Worcester railroad
Bonds offered. Comm & Fin Chr 165:1072 F 24 '47

NORWICH union fire insurance society, ltd.
150th anniversary. East Underw 48:1+ Je 13 '47

NOSE
Penetration of air-borne particulates through the human nose. H. D. Landahl and S. Black. bibliog flow diag J Ind Hygiene 29:269-77 Jl '47

NOSEMA
Control of nosema disease of potato tuber worm, a host used in the mass production of macrocentrus ancylivorus. H. W. Allen and M. H. Brunson. Science 105:394-5 Ap 11 '47

NOTARIZED forms. See Insurance companies—Notarization requirements

NOTCHED bar testing
Biaxial stresses in rigid vessel simulated in notched tension coupon. G. Brewer. il diags Metal Prog 51:91-6 Ja '47
Correlated brittle fracture studies of notched bars and simple structures. C. W. MacGregor and others. bibliog il diags Welding J 26:sup50-6 Ja '47; Discussion. W. P. Roop. 26:sup333-4; Reply. sup357 Je '47
Distribution of strength and ductility in welded steel plate as revealed by the static notch bar tensile test. W. F. Brown, jr. and others. bibliog il diags Welding J 26: sup545-54 O '47

NOTCHED bar testing—*Continued*
Effect of variations in composition and heat treatment on some properties of 4 to 6 per cent chromium steel containing molybdenum and titanium. G. F. Comstock. bibliog il Am Soc for Metals Trans 36:81-110; Discussion. 110-15 '46
Effect of welding on ductility and notch sensitivity of some ship steels. R. D. Stout and others. il diags Welding J 26:sup 335-57 Je '47
Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdams, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46
Effects of section size on the static notch bar tensile properties of mild steel plate. W. F. Brown, jr. and others. bibliog il diag Welding J 26:sup554-9 O '47
Important considerations in Charpy and Izod testing. C. M. Schwitter. il diags Product Eng 18:106-9 O; 159-62 N '47
Influence of shot peening on fatigue strength of 14ST alloy. C. B. Gleason. Iron Age 159: 62-4 Ja 9 '47
Method for determining the applicable welding procedure for steels. B. Ronay. il diags Welding J 25:sup736-47 N '46
Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog il diags Welding J 26:sup26-49 Ja '47
Notch effects in high strength aluminum alloys. L. Schapiro and others. il Iron Age 159:52-6 Je 12 '47
Notched bar impact test according to Schnadt. J. A. Haringx. diags Welding J 26:sup294 My '47
Notched-bar impact test-piece. diag Engineer 184:197 Ag 29 '47
Weldability of ship steels; effects of travel speed, preheat temperature and arc power level. E. F. Nippes and W. F. Savage. il diags Welding J 25:sup776-87 N '46
X-ray diffraction study of the effect of residual compression on the fatigue of notched specimens. J. T. Norton and others. bibliog il diag Welding J 25:sup729-35 N '46

NOURSE, Edwin Griswold, 1883-
Portrait. Ptr Ink 221:40 O 31 '47

NOVA SCOTIA
See also
Mines and mineral resources—Nova Scotia

NOVA SCOTIA research foundation. See Research foundation of Nova Scotia

NOYES, William Albert, jr. 1898-
Portrait. Chem & Eng N 25:2812 S 29 '47
Rochester honors Noyes. por Chem & Eng N 25:668-9 Mr 10 '47

NOZZLES
Air flow measurement in the laboratory. D. D. Wile. il diags Refrig Eng 53:515-21 bibliog(p520) Je '47
Automatic nozzle for garden hose. il diag Product Eng 17:97 D '46
Hydraulics for the practical water works man; effect of valves in pipes; flows through fire nozzles and metering nozzles. R. W. Angus. diags Water & Sewage Works 94:122-5 Ap '47
New fuel nozzle's finer atomization aids gas-turbine development. il Power 91:457 Jl '47; Heat & Ven 44:80 Jl '47
Principles of pressure spray nozzles. H. L. M. Larcombe. diags Chem Age (Lond) 57: 563-6, 596-8, 621-3 bibliog(p623) O 25-N 8 '47
Steam flow in nozzles; velocity coefficient at low steam speeds. E. Giffen and T. F. Crang. diags Inst Mech Eng J & Proc 155 (War emergency issue no 15):83-9 '46; Same. Engineer 180:273-4, 293-4 O 5-12 '45; Abstract. Engineering 160:255 S 28 '45; Discussion. Inst Mech Eng J & Proc 155 (War Emergency issue no 15):90-2 '46

NUCLEAR chemistry, Conference on. See Conference on nuclear chemistry

NUCLEAR spin
Angular distributions in nuclear reactions. E. Eisner and R. G. Sachs. Phys R 72:680-1 O 15 '47
Determination of nuclear spin from the Stark effect of microwave rotational spectra. W. V. Smith. Phys R 71:126-7 Ja 15 '47
Hyperfine structure and the nuclear spin of U^{235}. O. E. Anderson and H. E. White. Phys R 71:911 Je 15 '47
Hyperfine structure and the stark effect of the ammonia inversion spectrum. J. M. Jauch. bibliog Phys R 72:713-23 O 15 '47

NUCLEASES
Effect of specific nuclease and phosphoesterase on desoxyribonucleic acid prepared with the use of strong sodium hydroxide (method of Levene). C. A. Zittle. Franklin Inst J 243:334-6 Ap '47

NUCLEIC acids
Effects of X-radiation on thymus nucleic acid. B. Taylor and others. bibliog Science 105:263-4 Mr 7 '47
Ultraviolet absorption spectrum of cerebrospinal fluid; ascorbic versus nucleic acid. L. A. Strait and others. bibliog Science 106:64-5 Jl 18 '47
See also
Ribonucleic acid

NUCLEONIC research. See Atomic research

NUCLEONICS (term)
Nucleonics and electronics. K. Henney. Electronics 20:80-1 Je '47

NUCLEOPROTEINS
Genes and nucleoproteins in the synthesis of enzymes. S. Spiegelman and M. D. Kamen. bibliog Science 104:581-4 D 20 '46

NUCLEOSIDES
Experiments on the synthesis of purine nucleosides; configuration at the glycosidic centre in natural and synthetic pyrimidine and purine nucleosides. J. Davoll, B. Lythgoe and A. R. Todd. Chem Soc J p833-8 S '46
Experiments on the synthesis of purine nucleosides; configuration of some synthetic purine and pyrimidine glycosides. G. A. Howard and others. Chem Soc J p861-5 O '46
Experiments on the synthesis of purine nucleosides; improved method for the cyclisation of 4-glycosidamino-5-thioformamidopyrimidines. G. W. Kenner and A. R. Todd. Chem Soc J p852-5 O '46
Experiments on the synthesis of purine nucleosides; interpretation of some interconversion reactions of N-glycosides. G. A. Howard and others. Chem Soc J p855-61 O '46
Experiments on the synthesis of purine nucleosides; 9-β-*d*-mannopyranosidoadenine; a proof of the location of the sugar residue in adenosine. B. Lythgoe, H. Smith and A. R. Todd. Chem Soc J p855-7 Mr '47
See also
Cytidine

NUCLEOTIDES
Constitution of yeast ribonucleic acid; further studies on the nature of the carbohydrate radicals. G. R. Barker, K. R. Farrar and J. M. Gulland. Chem Soc J p21-4 Ja '47
Nucleotides; muscle adenylic acid and adenosine diphosphate. J. Baddiley and A. R. Todd. Chem Soc J p648-51 My '47

NUGENT, Donald R.
Portrait. Fortune 35:136 Mr '47

NUISANCE
Attractive nuisance liability. M. Springer. bibliog Am Gas Assn Mo 29:127-8 Mr '47

NUMBERING systems
Bearing industry offers standard numbering system; abstract. E. O. Smith. Blast F & Steel Pl 35:460 Ap '47
Interchangeability is goal of work on anti-friction bearings. Ind Stand 18:87-8 Ap '47
Numbers for use in item identification. P. G. Agnew. Ind Stand 18:135-6 Je '47

NUMBERS
See also
House numbers

NUMBERS, Complex
Simple quadrant speeds complex number conversion. L. Bruh. Elec World 128:128 O. 11 '47

NUREMBERG trials. See World war, 1939-1945—War criminals

NURSERIES, Day. See Day nurseries

NURSES and nursing
Economic status of nurses. L. M. David. Mo Labor R 65:20-7 Jl '47
Finding the nurses; comments on Working party report. Economist 153:430-1 S 13 '47
Nurse recruitment. Sales Management 58: 86+ Ap 15 '47

NURSES and nursing, Industrial
Administrative problems of the industrial consultant nurse. G. A. Jahncke. bibliog Ind Med 16:286-90 Je '47
Evaluation of the nurse's job. M. Moore. Nat Safety N 56:36+ S '47
Function of the nurse in industrial relations. R. Feinberg. il Safety Eng 94:50-1 S '47
Future of the nurse. C. R. Kefauver. il Safety Eng 92:98-9 O '46
Industrial nursing meets growing demands. K. M. Minogue. Safety Eng 94:98 O '47
Nurse in safety, from the safety engineer's viewpoint. D. F. Hayes. il Safety Eng 92: 92-4 O '46
On-duty system for nurses; 3-way light system. G. E. Whelan. Safety Eng 93:75 Ap '47
Part-time nurse in the small plant. H. A. Reischel. Nat Safety N 55:38-9+ Je '47
Physical restoration of the injured worker. Safety Eng 94:52+ Ag '47
Progress of industrial nursing. L. B. Bradley. Ind Med 16:509+ O '47
Real functions of standing orders; abstract. I. Tabershaw. Ind Med 16:462+ S '47
Standardization of industrial nursing service; abstract. W. W. Stalker and J. E. Grady. Nat Safety N 55:52 Je '47

NURSES and nursing, Public health
Working conditions of public-health nurses. L. M. David. Mo Labor R 65:302-3 S '47

NUTMEG
War gave Nutmeg Isle bigger spice-trade role; island of Grenada. C. H. Whitaker. il For Comm W 25:8-9+ N 23 '46

NUTRITION
Application of statistical methods to food problems; abstracts and discussion. D. J. Finney and others. Chem & Ind p43 Ja 18 '47
Comparative nutritive value of casein and lactalbumin for man. A. J. Mueller and W. M. Cox, jr. bibliog Science 105:580 My 30 '47
Description of physical signs possibly related to nutritional status. H. R. Sandstead and R. K. Anderson. Pub Health Rep 62:1073-85 Jl 25 '47
Food is a tool. Safety Eng 94:55-7 Jl '47
Human amino acid requirements. R. A. Harte and J. J. Travers. Science 105:15 Ja 3 '47
Nutrition. H. B. Lewis. bibliog Ann Am Acad 249:119-25 Ja '47
Nutrition symposium; arranged by Nutrition foundation, inc. Chem & Eng N 24:3187 D 10 '46
Nutritional status of aircraft workers in southern California; abstract. H. Borsook and D. G. Wiehl. Nat Safety N 54:54 D '46
Nutritive value of canned foods. J. R. Wagner and others. Ind & Eng Chem 39:985-1009 Ag '47
Nutritive value of fresh fruits and fruit juices. V. L. S. Charley. Chem & Ind p220-4 Ap 26 '47
Nutritive value of margarine and edible vegetable oils. H. Wilkinson. Chem & Ind p256-7 My 10 '47
Nutritive value of meat extract. H. G. Rees and A. H. Salway. Chem & Ind p302-3 My 31 '47
Nutritive value of nuts. R. Melville. Chem & Ind p304-6 My 31 '47
Nutritive value of preserves and honey. V. L. S. Charley. bibliog Chem & Ind p271-2 My 17 '47
Nutritive value of vinegar, pickles and condiments. H. Sarson. Chem & Ind p187-8 Ap 12 '47
Nutritive value of yeast, beer, wines and spirits. H. J. Bunker. bibliog Chem & Ind p203-5 Ap 19 '47
Present knowledge of the relation of nutrition to dental caries. Ind Med 16:202+ Ap '47
Progress in foods and nutrition, 1946. C. G. King. Chem & Eng N 25:88-9 Ja 13 '47
Some aspects of nutrition in post war Germany and Austria; abstract and discussion. M. Pyke. Chem & Ind p493-4 Ag 9 '47
Synthetic vitamins and human nutrition. R. R. Williams. Ind & Eng Chem 39:464-6 Ap '47; Same abr. Chem & Ind p123-6 Mr 15 '47
L'utilisation des amandes amères dans l'alimentation pendant la période 1940-1945. R. Talon. bibliog diags Chimie & Ind 57: 331-5 Ap '47
See also
Bread
Diet
Food
Lunches, Employees'
Metabolism
Plants—Nutrition
Proteins
Vitamins

NUTRITION foundation
Important advances in knowledge of nutrition. Science 104:593 D 20 '46

NUTRITION research
Apparatus for the determination of the tensile strength of healing wounds. J. Charney and others. diag Science 105:396-7 Ap 11 '47
Calorie intake and industrial output. H. A. Kraut and E. A. Muller. Science 104:495-7 N 29 '46
Chemist's view of nutrition. L. A. Maynard. Science 105:399-403 Ap 18 '47
Comprehensive survey of food and nutrition research being undertaken by Food and nutrition board, N.R.C. Science 106:223-4 S 5 '47
Environment and food intake in man. R. E. Johnson and R. M. Kark. Science 105:378-9 Ap 11 '47
Hereditary obesity and efficient food utilization in mice. G. E. Dickerson and J. W. Gowen. bibliog Science 105:496-8 My 9 '47
Methods of determining the nutritive value of proteins. H. Chicks. bibliog Chem & Ind p318-20 Je 7 '47
See also
Nutrition foundation

NUTS
Nutritive value of nuts. R. Melville. Chem & Ind p304-6 My 31 '47
See also
Walnuts

NUTS (machinery). See Bolts and nuts

NYASALAND
Commerce
Nyasaland market. Economist 152:72-3 Ja 11 '47

NYLON
Airborne aircraft arresting gear; use of nylon material, Unolyn. A. B. Schultz. diags S A E J 55:35-6 My '47
Constitution, propriétés, fabrication et emplois du nylon et d'autres polyamides. Génie Civil 123:300 N 1 '46
Determination of the molecular weight of nylon. J. E. Waltz and G. B. Taylor. bibliog Anal Chem 19:448-50 Jl '47
Diffusion of vapors in films. P. E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47
Distribution of the molecular weight of nylon as determined by fractionation in a phenol-water system. G. B. Taylor. bibliog Am Chem Soc J 69:638-44 Mr '47
Factors in the production of nylon hose. A. R. Munden. Textile Inst J 38:P156-60 Ap '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
1947 table of commercial synthetic yarns and fibers. Textile World 97:117-20 S '47
Nylon has advantages for watch straps. il Mod Plastics 25:127 O '47
Nylon in industry. il Rayon 28:489-90 S '47
Nylon is big business. il Chem Ind 60:776-9 My '47
Nylon knee for phonograph needle. il Sci Am 177:223 N '47
Nylon leads in tests of hosiery reinforcement. H. Wignall. Textile World 96:137 D '46
Nylon section. Rayon 28:21-8 Ja '47 [cont monthly]
Nylon show at Atlantic City; 38th Knitting arts exhibition. Rayon 28:327 Je '47

NYLON—*Continued*
Postwar trends in hosiery. N. Gowdy. il Rayon 28:200-2 Ap '47
Relation of the viscosity of nylon solutions in formic acid to molecular weight as determined by end-group measurements. G. B. Taylor. bibliog Am Chem Soc J 69:635-8 Mr '47
Some physical properties of nylon. J. B. Speakman and A. K. Saville. bibliog il diag Textile Inst J 37:P271-94 Jl '46
Spurned worm; showdown between silk and nylon stockings. Bsns W p21 F 22 '47
Suggestions for knitting ladies' nylon hosiery. Rayon 28:487-8, 552-3 S-O '47

Dyeing

See Dyes and dyeing—Nylon

Manufacture

Furfural is basis of new nylon process; abstracts. O. W. Cass. Oil Paint & Drug Rep 151:5+ Mr 31 '47; Mod Plastics 24:222-5 Ap '47
Nylon from corncobs; du Pont's electrochemicals department develops adiponitrile from furfural. S. D. Kirkpatrick. il Chem Eng 54:100-1 Ap '47
Nylon from furfural. Chem & Eng N 25:998 Ap 7 '47
Nylons from furfural. Rayon 28:386 Jl '47
Oat hulls→adiponitrile→nylon. O. W. Cass. flow diag Chem Ind 60:612-13 Ap '47

Moisture content

Effect of moisture on nylon yarns and fabrics. G. Loasby and H. O. Puls. bibliog Textile Inst J 38:P30-40 Ja '47

Molding

Improved record needles molded of nylon. il Mod Plastics 24:102-3 Jl '47
Molded and machined nylon. L. L. Stott. il diag Product Eng 17:103-7 D '46; Excerpts. Mech Eng 69:323-4 Ap '47
Molded nylon faucet washers; injection molded in eight diameters. il Mod Plastics 24: 105 Je '47
New uses for nylon. il Mod Plastics 24:148-50 Jl '47
Nylon as an engineering material. E. L. Cady. il Materials & Methods 26:80-4 S '47
Recent developments; nylon. il diag Product Eng 18:[130-1] insert 18-19 Ap '47

Patents

Review of the nylon patents. P. Wengraf. diags Rayon 28:34-5, 82, 140-2, 213-15, 279, 325-6, 383-5, 434-6, 490-1, 554-5 Ja-O '47

Testing

Measurement of the bending modulus of monofils; Cambridge fibre extensometer. P. W. Carlene. il diag Textile Inst J 38:T38-42; Discussion. T48-9 F '47

NYLON fabrics
Cracknyl, sensational fabrics. M. Montmerle. il Textile Col 69:20-1+ O '47
Nylon for high fashion. Textile Col 69:27 Ag '47
Nylon keeps right on working for Cheney Brothers. il Rayon 28:23-5 Ja '47
Nylon's possibilities in children's wear. P. D. Atwood. Rayon 28:492-3 S '47
Today's viewpoint on fashion fabrics in nylon. il Rayon 28:33-4, 143 F-Mr '47
Washing nylon fabrics. Rayon 28:28 Ja '47
Weaver considers nylon. R. E. Ellsworth. Rayon 28:382-3 Jl '47
Wrinkles in nylon goods. il Rayon 28:432-3 Ag '47

NYLON fibers
Drawing of nylon staple slivers. A. Boylston. il Rayon 28:209-12 Ap '47
Manufacture of modern textile fibers. C. Diamond. Rayon 28:421 Ag '47
1947 revision. Textile World's synthetic-fiber table. C. W. Bendigo, comp. Textile World 97:121-8 S '47
Nylon staple can increase strength of many fabrics. Sci Am 176:219-20 My '47
Nylon staple, its manufacture, handling and uses. L. L. Larson. Rayon 28:26-7, 77-8 Ja-F '47; Same cond. Am Dyestuff Rep 36:208-11 Ap 21 '47
Opening, picking and blending of nylon staple. A. Boylston. Rayon 28:29-31 Ja '47
Processing nylon staple requires machinery fitness. R. S. Crowsley. il Textile World 97:114-15+ Ag '47

NYLON finishing
Review of the nylon patents; methods for processing nylon fibers. P. Wengraf. Rayon 28:384-5 Jl '47

NYLON hosiery trade. See Hosiery trade

NYLON machinery
Developments in preparatory process machines for nylon yarns. H. Marsden. il Textile Inst J 37:P263-9; Discussion. P269-70 Jl '46
New 400-needle electronic ladies' nylon hosiery machine. il Rayon 28:203 Ap '47
Processing nylon staple requires machinery fitness. R. S. Crowsley. il Textile World 97: 114-15+ Ag '47

NYLON rope
Nylon rope for fire fighting. Safety Eng 93: 22 F '47
Nylon rope heads for new markets. R. E. Miskelly. il Mod Plastics 24:121-3 Ag '47

NYLON sizing
Automatic viscosity control for nylon sizing. V. A. Schiffer. il diag Rayon 28:321-3 Je '47
Sizing; polyvinyl alcohol, treated with magnesium compounds; patent. Am Dyestuff Rep 36:395-6 Jl 14 '47
Sizing with polyvinylalcohol, modified with barium chloride; patent. Am Dyestuff Rep 36:614-15 O 20 '47

NYLON spinning
Drawing of nylon staple slivers. A. Boylston. il Rayon 28:209-12 Ap '47
Processing nylon roving. J. L. Beacon. il Rayon 28:429-31 Ag '47
Processing nylon staple requires machinery fitness. R. S. Crowsley. il Textile World 97:114-15+ Ag '47
Spinning of nylon staple fibers on the cotton system. J. L. Beacon. il Rayon 28:549-51 O '47

NYLON thread
Great strength of nylon useful in sewing thread. W. E. Mahoney. Rayon 28:277-8 My '47
Over a century of thread-making know-how; experience behind Belding Heminway Corticelli nylon threads. R. T. Kropf. il Rayon 28:21-2 Ja '47
Successful sewing with nylon thread. R. E. Ellsworth. il Rayon 28:266-8 My '47

NYLON weaving
Weaving of nylon goods. H. K. Wenrich. il Rayon 28:79-81 F '47

NYLON yarn
Carding of nylon staple. J. L. Beacon. il Rayon 28:137-9 Mr '47
Developments in preparatory process machines for nylon yarns. H. Marsden. il Textile Inst J 37:P263-9; Discussion. P269-70 Jl '46
Effect of moisture on nylon yarns and fabrics. G. Loasby and H. O. Puls. bibliog Textile Inst J 38:P30-40 Ja '47
Extensive improvements aim at better nylon throwing; Hess, Goldsmith & co. G. B. M. Walker. il Textile World 97:97-9 Ap '47
Glass house for Duplan insulates for nylon throwing; Foamglas in side walls and roof protects against condensation. il Textile World 97:114-15 My '47
1947 outlook for nylon. W. A. Beh. Textile Col 69:30+ Mr '47
Nylon denier and yardage table. Rayon 28:81 F '47
Nylon may solve tricot problems. Rayon 28: 278 My '47

Testing

Stress-strain properties of certain yarns and knitted fabrics made of rayon, nylon and natural fibers. H. M. Fletcher and P. A. Gilmore. bibliog Rayon 28:476-8, 542-5 S-O '47

NYSTAGMUS, Miners'. See Miners' nystagmus

O

OAKES, Charles E. 1892-
Portrait. Edison Elec Inst Bul 15:186 Je '47

OATS
Oat preparations for printing thickeners; British patent. Am Dyestuff Rep 36:280 My 19 '47
Relative growth rates of bean and oat plants containing known amounts of a labeled plant-growth regulator (2-iodo^{131}-3-nitrobenzoic acid. J. W. Mitchell and others. Science 106:395-7 O 24 '47
Some effects of o-isopropyl n-phenyl carbamate upon cereals. W. B. Ennis, jr. Science 105:95-6 Ja 24 '47

Diseases and pests

Differential phytotoxicity of metabolic by-products of helminthosporium victoriae. F. Meehan and H. C. Murphy. il Science 106: 270-1 S 19 '47
Nutritional disease of oats apparently due to the lack of copper. H. C. Harris. Science 106:398 O 24 '47

OBESITY. See Corpulence

O'BRIEN, Eugene William, 1897-
Portrait. Mech Eng 69:54 Ja '47

OBSERVATORIES, Magnetic. See Magnetic observatories

OBSIDIAN
Making concrete that floats; lightweight aggregate from obsidian; Continental basic materials corp. L. G. Clapp. il Rock Prod 50:130-1 My '47

OBSOLESCENCE
Obsolescence is your business. C. W. Balch. il Chem Ind 60:952-3 Je '47

See also
Buildings—Obsolescence
Depreciation
Machinery, Replacement of

OBSTETRICS
Statistical study of delivery with continuous caudal analgesia, as compared with other methods. S. D. Collins and others. bibliog diags Pub Health Rep 61:1713-35 N 29 '46

OCCUPATIONS
Elbow room in the foundry? job opportunities. C. J. Freund. Foundry 75:83+ My '47
Job prospects in plastics products industry. S. Swerdloff and C. R. Winegarden. Mo Labor R 65:293-301 S '47
Jobs in industrial relations; in industry, labor, and government. D. Yoder. Personnel J 25:218-20 D '46
Young man and the foundry industry. A. W. Gregg. Foundry 75:98+ Je '47

See also
Ability tests
Handicapped
Job analysis
Office workers
Radio workers
Research workers

Bibliography

Occupations and what they offer. (Business literature v. 20, no. 1) p67-8 Business library, Newark public lib, Newark, N.J. S '47

Statistics

Occupational mortality experience of insured wage earners. L. I. Dublin and R. J. Vane. Mo Labor R 64:1003-18 Je '47
Recent occupational trends. H. Wool and L. M. Pearlman. Mo Labor R 65:139-47 Ag '47

OCCUPATIONS, Choice of
Aptitudes and engineering careers. J. Mills. Min & Met 28:317-20 Jl '47
Illusion of success. W. T. Nichols. Chem Eng Prog 43:sup15-19 Mr '47
Selecting jobs. R. W. Babson. Comm & Fin Chr 165:185+ Ja 9 '47

OCCUPATIONS, Dangerous

See also
Accidents, Industrial
Diseases, Industrial
Hygiene, Industrial
Poisons, Industrial

OCEAN
Concerning two oceans. J. E. Cavelti. J Chem Educ 24:406-12 Ag '47
Distribution of oceans and continents; a suggestion. W. G. Woolnough. il maps diag Am Assn Pet Geologists Bul 30:1981-2012 D '46; Discussion. 31:1300-4 Jl '47
Oceanography as related to petroleum geology. H. C. Stetson and F. B. Phleger, jr. Am Assn Pet Geologists Bul 31:175-8 Ja '47
Submarine geology studies in the Pacific. F. P. Shepard. Am Assn Pet Geologists Bul 31:178-80 Ja '47
Swedish deep sea expedition. F. B. Phleger, jr. Science 106:366 O 17 '47
Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47
Wave theoretical interpretation of propagation of 10-centimeter and 3-centimeter waves in low-level ocean ducts. C. L. Pekeris. bibliog Inst Radio Eng Proc 35: 453-62 My '47
World's greatest mine. S. J. Lloyd. il J Chem Educ 24:273-7 Je '47

See also
Continental shelf
Maine, Gulf of
Marine fauna
Sea water
Sound—Transmission thru sea water
Sounding
Tides

Transparency

Transparency of ocean water. F. A. Jenkins and I. S. Bowen. bibliog diag Opt Soc Am J 36:617-23 N '46

OCEAN bottom
Microbial transformation of molecular hydrogen in marine sediments, with particular reference to petroleum. C. E. ZoBell. Am Assn Pet Geologists Bul 31:1709-51 bibliog (200 titles, p 1745-51) O '47

See also
Sounding

OCEAN liners. See Motor ships; Steamboats

OCEAN travel
Future of the American shipping industry; foreign commerce and foreign travel. S. P. Simpson. Marine Eng 52:110+ F '47
Letter from the Pacific. Fortune 35:194+ Mr '47

OCHER
Cartersville ocher seeks new peacetime uses. E. D. White. flow sheet il Eng & Min J 148:82-3 Ag '47
South African chemical plants developing new processes in soap production from sludge. Chem Eng 54:206 F '47

O'CONNOR, Johnson, research foundation, inc.
Human engineering. R. L. Demmerle. Chem & Eng N 25:14-18+ Ja 6 '47

OCTACHLORODIPHENYL urea
Solubility as a criterion of purity. D. Thorp. Soc Chem Ind J 65:414-19 D '46

OCTAHYDROPHENANTHRENE
Some observations on Friedel-Crafts reactions involving unsaturated ketones; 9-keto-4b,5,6,7,8,8a,9,10-octahydrophenanthrene. C. D. Gutsche and W. S. Johnson. bibliog Am Chem Soc J 68:2239-45 N '46

OCTANE
Cracking of paraffin hydrocarbons in the presence of aluminum chloride. V. I. Komarewsky and S. C. Ulick. Am Chem Soc J 69:492-5 Mr '47

OCTANE number
Method of figuring octane numbers of gasolines. Oil & Gas J 45:55 F 1 '47
Octane ratings of agricultural motor fuels. C. F. Elder, F. R. Truby and R. Wiebe. bibliog Ind & Eng Chem 39:508-10 Ap '47
Superfractionation studies; composition and octane numbers of 0.5% fractions of an Oklahoma City naphtha. C. C. Ward, R. M. Gooding and B. H. Eccleston. diags Ind & Eng Chem 39:105-9 Ja '47

OCTENE
Infra-red absorption spectra of some octenes. R. S. Rasmussen and others. diags J Chem Phys 15:135-40 Mr '47
Peroxide-catalyzed addition of trichlorosilane to 1-octene. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore. bibliog Am Chem Soc J 69:188 Ja '47

OCTENOL
Reactions of carbinols in the presence of alkali; scission of αβ-ethylenic carbinols. G. H. Hargreaves and L. N. Owen. Chem Soc J p756-8 Je '47

OCTOPUS
Small specimen of octopus vulgaris. G. E. Pickford. Science 105:522 My 16 '47

OCTYL nitrite
2-Octyl nitrite. N. Kornblum and E. P. Oliveto. bibliog Am Chem Soc J 69:465-6 F '47

OCTYLENE. See Octene

ODORS
Effects of moisture content on the diffusion of odors in the air. R. L. Kuehner. bibliog diags Heating-Piping 18:115-20 D '46; Abstract. Heat & Ven 44:104 F '47
Effects of various kinds of perspiration on fabrics. L. C. Barail. il diag Rayon 28: 439-43 Ag '47
Industry gets nosey. D. H. Killeffer. il Sci Am 177:113-15 S '47
Odor classifications. il Chem Ind 60:846 My '47
Odor removal; ships' berthing spaces; abstract. W. V. Consolazio and L. J. Pecora. Heat & Ven 44:103 F '47
Odor sources in egg storage and methods of removal. C. R. Gross and others. il Food Ind 19:919-21+ Jl '47
Our business is curing products of halitosis; Magnus, Mabee & Reynard, inc. T. B. Tribble. il Sales Management 58:106+ Ap 15 '47
Use your nose; working with organic solvents. Safety Eng 92:87 O '46

See also
Deodorization
Perfumery
Water purification—Taste and odor removal

Measurement

Odor transmission. L. W. Elser, jr. bibliog il Mod Packaging 20:147-9 Je '47
Perspiration; what do textile men know about it? L. C. Barail. il Rayon 27:663-6; 28:93-7 D '46, F '47
Standards for evaluating odors. il Chem & Eng N 25:794 Mr 17 '47

OF-THE-MONTH clubs. See Clubs, Merchandizing

OFF premises coverage. See Insurance, Fire—Off premises coverage

OFFICE appliances
Business machines in the spotlight. il Am Bsns 16:36-40 N '46
Machine age comes to paper work; applications of new and improved office machines. il Ry Age 122:1034-9 My 17 '47

See also
Accounting—Mechanical aids
Calculating machines
Dictating machines

Exhibitions

National business show features new office equipment. W. Doty. il Ind Marketing 31: 49+ N '46

Maintenance and repair

Employment outlook for business machine servicemen. il U S Bur Labor Statistics Bul 892:1-11; pa 15c Supt. of doc. '47

Manufacture

Office machine production simplified by compressed-air operated devices; Kirk brevitype corp. il Steel 121:110+ Jl 21 '47

OFFICE buildings
Favors construction of new commercial buildings. C. F. Noyes. Comm & Fin Chr 165:1654+ Mr 27 '47
No vacancy; office space is nearly as tight as during war. il Bsns W p22 Ag 30 '47
Office building on New York's Park ave. il plans diags Arch Forum 86:94-7 Ap '47
Office buildings; Architectural Record's building types study. il plans diags Arch Rec 102:119-48 O '47
Portland, Ore. office building initiates prefabricated aluminum facing over reinforced concrete frame. il plans diags Arch Forum 86:98-101 Ap '47
Wright elephant in Buffalo. il Bsns W p18 Ap 26 '47

See also
Insurance company buildings
Medical buildings
Physicians' offices
Printing offices

Air conditioning

Built-in air conditioning for Universal pictures building, Park avenue, New York. il plan Arch Rec 102:147-8 O '47
Comfort reactions of 275 workers during occupancy of air conditioned offices. F. B. Rowley and others. Heating-Piping 19:113-16 Je '47; Discussion. 19:126-8 Ag '47
Conditions for comfort. C. S. Leopold. charts Heating-Piping 19:117-21 Je '47; Discussion. 19:125-6 Ag '47
Occupants not inconvenienced during conditioning installation. J. A. Evans. il Heating-Piping 19:69-71 F '47
Planning to air condition? report on planned air conditioning for office buildings. il Heating-Piping 19:82-4 My; 96-7 Je; 76-7 Jl; 81-2 Ag '47

Costs

Perhaps the best is actually the cheapest. L. Douglass. Arch Rec 102:122-3 O '47

Designs and plans

General Petroleum building, Los Angeles. il plans diags Arch Rec 102:134-6 O '47
Has the automobile made the skyscraper obsolete? two-story drive-in office building for Seaboard finance company, Los Angeles. il plans Arch Rec 102:124-9 O '47
New departures in office building design. L. Douglass. plan diags Arch Rec 102:119-22 O '47

Finance

Comparative operating statements prove hotel to be better real estate investment than office building. Arch Forum 85:102 D '46
Dark outlook for office building financing. R. H. Armstrong. Comm & Fin Chr 166:9+ Jl 3 '47

Lighting

See Office lighting

Power

Supercharged Diesel puts 500 kw in space originally provided for 300; new unit at No. 2 Park avenue, New York. il diags Power 91:461-3, 474-5 Jl '47

OFFICE buildings, Government
Proposed state office center for Michigan. il plans diags Arch Forum 86:79-87 F '47

See also
Veterans administration—Buildings

OFFICE buildings, Industrial
Distinctively designed small office building for fuel company receives architectural award; with floor plan, wall section detail and radiant heating plan. il plan Am Bld 69:128-9 Je '47
Earthquakeproof design of Rexall world headquarters in Los Angeles. H. J. Brunnier. il Concrete 55:3-5 O '47
Elevated building provides parking. il plans Arch Rec 102:133 O '47
For its own offices the client specified quality; Illinois tool works company, Chicago. il plans Arch Rec 102:128-32 O '47
Mr Oud embroiders a theme; Shell I.B.M. building, the Hague. il plans Arch Rec 100: 80-4 D '46
Savings will pay for new building; Hallicrafters company's modern, one-story plant and offices. il Am Bsns 17:14-18 Jl '47

Air conditioning

Unique system serves heating distributors; Bryant-Berg co. il Heating-Piping 19:78-9 Jl '47

Location

Cargill's country club office at Lake Minnetonka. V. F. Brink. il Am Bsns 16:22-3+ D '46

OFFICE employees international union
Third union enters Wall Street scene as UFE wins limited arbitration of wages at Kidder. E. Germain. Comm & Fin Chr 165:2197+ Ap 24 '47

OFFICE equipment
Do you need money for equipment? control of constantly recurring expenses saves money to purchase capital goods. J. Garth. Am Bsns 17:21+ Ja '47
Office engineer; abstract. W. E. Thomas. Management R 36:14-15 Ja '47
Wanted; a truly modern office. H. J. Ross. il Am Bsns 17:14-15+ Ja '47

See also
Office appliances
Office furniture

Standards
First steps taken to produce greater office efficiency; standardization studies on office equipment. il Ind Stand 18:132-5 Je '47

OFFICE equipment industry

Accounting
Synchronized budgeting in the business machine industry. R. Walker. N A C A Bul 28:1453-70 Ag 1 '47

Advertising
Job simplification case histories key ad theme for Standard Register. G. L. Staudt. il Ind Marketing 31:59+ D '46
Mail campaign makes sales, improves esprit de corps; TelAutograph. E. M. Housman. il Ptr Ink 218:44-5 Ja 31 '47
Office equipment ads. il Ind Marketing 32:80+ Mr '47
Specific, personalized copy pays dividends for A. B. Dick; mimeograph maker. il Ind Marketing 32:42-3+ Ja '47

Securities
Today's outlook for office equipment; with financial survey of leading stocks. C. F. Morgan. Mag of Wall St 79:556-7+ F 15 '47
What's ahead for office equipments; financial survey of stocks. R. Colston. il Mag of Wall St 80:600-1+ Ag 30 '47

Chile
Demand exceeds imports. For Comm W 29:24 N 1 '47

OFFICE furniture
Blind spots in the 1947 office. H. J. Ross. il Am Bsns 17:16-17+ F '47
Furniture showroom functions as sales office for Rucker-Fuller. il plans diags Arch Forum 87:92-4 Ag '47

See also
Desks
Executive furniture
guild

OFFICE lighting
Brightness engineering calculations for school and office lighting. W. Allphin. bibliog il Illum Eng 42:741-57 S '47
Ceiling installations; lighting level raised 500 per cent in Newark office building. il Arch Forum 87:122+ Jl '47
Good lighting for people at work in reading rooms and offices. A. H. Holway and D. Jameson. 43p bibliog(p42-3) pa 75c Harvard univ. Graduate school of business administration, Div. of research, Soldiers Field, Boston 63 '47
Illumination in offices and homes. A. A. Kruithof and H. Ziil. Light & Lighting 40: 13-14 Ja '47
Lighting tests aid office planning; GE's lighting institute in Cleveland. il Am Bsns 16: 16-17 N '46
Offices for Aluminum company of America demonstrate its product and a three-source lighting system. il plan diags Arch Forum 87:100-1 O '47
Recommended practice of office lighting; report of committee of Illuminating engineering society. il plans diags Illum Eng 42: 673-715 Jl '47
Sales office doubles as lighting laboratory. il Sales Management 58:87 Ja 1 '47

OFFICE management
Analyzing and determining the workload. H. L. Wylie. Management R 36:518-20 O '47
Clerical cost control; United States steel corp. H. F. Van Gorder. N A C A Bul 29:74-91 S 15 '47
Common faults in management. E. O. Griffenhagen and others. Am Bsns 16:9 D '46
Company-union committee evaluates office jobs. F. Westbrook, jr. Management R 36: 318-20 Je '47
Cost-savers for your office; abstract. Management R 35:505-6 D '46
Here's the office you've wanted. H. J. Ross. Am Bsns 17:28+ My '47
How one company developed a source of trained clerical workers; typing service department at Merck & company. P. Eastman. il Am Bsns 17:10-11+ Je '47
How to end office expense worries. F. M. Knox. il Am Bsns 17:24-5+ Jl; 16-17+ Ag; 28+ S '47
Keeping office work moving under current conditions; abstract. P. Carroll, jr. Management R 36:75-7 F '47
Making the office pay a profit. P. A. Lawrence. N A C A Bul 28:1396-1408 Jl 15 '47
Night office staff; a case story. J. W. Riedell. Management R 36:459-61 S '47
Office methods and operations. G. H. Sherwood, ed. J Account 83:66-7 Ja '47 [cont monthly]
Office operation in a small water company. C. M. Hartman. Water & Sewage Works 94:95-6 Mr '47
Office organization and personnel trends. I. O. Royse. J Account 84:343 O '47
Office service at Caterpillar tractor co. E. Whitmore. il Am Bsns 17:10-13+ F '47
Outline for a management audit. J Account 83:255-6, 331-2, 449-50 Mr-My '47
Personal phone calls in the office; abstract. Management R 35:507-8 D '46
Plan that steps up office production; subscription division of Time, inc., Chicago. il Am Bsns 17:22-5+ Je '47
Practical approach to office cost control. J. A. Handy, jr. Management R 36:514-17 O '47
Problems of a medium-sized public accounting office. R. B. Mayo. J Account 82:490-3 D '46
Reducing communication costs; abstract. Management R 36:12-13 Ja '47
Scheduling work in the office. J. S. Wiltse. Management R 36:140-1 Mr '47
Some experts view clerical job evaluation. S. C. Sufrin. Management R 36:365-8 Jl '47
Spotlight on high office costs. E. Whitmore. Am Bsns 16:8+ D '46
Suggestion programs in the office. Management R 36:137-9 Mr '47
21 questions about modern offices. H. J. Ross. Am Bsns 17:16-17+ Ap '47
Ways to get better office production. Am Bsns 16:34 D '46

See also
Accounting
Billing
Business management
Commercial correspondence
Credit departments
Executives
Files and filing (documents, etc.)
Forms and blanks, Business
Mailing departments
Office workers
Railroads—Office management

Reception rooms
How 20 companies welcome visitors. J. A. Murphy. il Am Bsns 17:17-20+ S; 24+ O '47
Offices styled in plastics; Bakelite corporation's new offices and reception rooms; illustrations. Am Bsns 17:18 S '47

OFFICE management association, Life. See Life office management association

OFFICE workers
Between-meal feeding in offices. Management R 36:253-4 My '47
Comfort reactions of 275 workers during occupancy of air conditioned offices. F. B. Rowley and others. Heating-Piping 19:113-16 Je '47; Discussion. 19:126-8 Ag '47
Drive on offices; campaign to organize white-collar workers in automotive companies. Bsns W p90-2 Je 21 '47

OFFICE workers—*Continued*
Duties of the office supervisor. Personnel J 26:146-9 O '47
Employee relations for office workers. M. Hale. Edison Elec Inst Bul 15:161-4 My '47
Employee relations in the white collar group. K. A. McIntyre. Am Gas Assn Proc 1946: 118-22
Equipping office workers; value of the private office; abstract. C. F. Braun. Mech Eng 69:676 Ag '47
How one company developed a source of trained clerical workers; typing service department at Merck & company. P. Eastman. il Am Bsns 17:10-11+ Je '47
How to develop successful office supervisors. R. S. Schultz. Personnel J 25:273-81 F '47
Humanizing office discipline. J. Turner. il Am Bsns 17:8-9+ S: 22+ O '47
Office rest facilities. Management R 36:320-2 Je '47
Office salaries in ten cities. V. Fry. Am Bsns 17:27-8+ Jl '47
On the job training for white collar employees. A. P. Coombs. Am Gas Assn Proc 1946:114-17
Outlook for office unionization. H. L. Wylie. Management R 36:187-9 Ap '47
Reception of clerical job-seekers; public employment offices, private agencies, and employment departments of companies. P. H. Kriedt and D. G. Paterson. Personnel J 25:236-41 Ja '47
Testing as applied to office workers. Management R 36:461-2 S '47
Weekly salaries of clerical workers in 20 cities, October 1946; table. Mo Labor R 64: 829 My '47
White-collar drive for wage rise. Bsns W p98 Ja 18 '47
Who is joining white-collar unions, and why. il Factory Management 105:97-100 My '47

See also
Bank employees

OFFICES
Double office and conference room W. N. Augsburger. il Am Bsns 17:19 Mr '47
Five office ideas. il Am Bsns 17:14-15 O '47
Get down to earth, America; some veterans need both a house and office or shop; structures for both living and working. il plans Am Bld 69:134-5 O '47
Offices for Aluminum company of America demonstrate its product and a three-source lighting system. il plan diags Arch Forum 87:100-1 O '47
Offices styled in plastics; illustrations. Am Bsns 17:18-19 S '47
Offices with a personality; designed by Gump's San Francisco interior decorating department. J. J. O'Rourke. il Am Bsns 17: 28+ Ja '47
Plans to help modernize executive offices; Sun electric corporation. il Am Bsns 17: 14-15 Ag '47
Plastics combine in a functional office. il Mod Plastics 24:133 N '46
Principles of noise reduction in offices and factories. M. A. Smith. il Eng N 137:643-5 N 14 '46
United Wallpaper's made-to-order offices. il Am Bsns 17:18-20 Ja '47
Wanted; a truly modern office. H. J. Ross. il Am Bsns 17:14-15+ Ja; 16-17+ F; 14-15 Mr; 16-17+ Ap; 28+ My '47

See also
Architects' offices
Brokers' offices
Contractors' offices
Dentists' offices
Designers' offices
Office lighting
Physicians' offices
Printing offices

Layout
How good is your office layout? Nat Safety N 55:6 Mr '47
Three-dimensional models cut office layout costs. il Am Bsns 16:32 N '46

OFFOR, Richard, 1882-
Bibliography of his printed works. J. W. Scott. J Doc 3:66-8 S '47
Retires from librarianship of the University of Leeds. G. Woledge. J Doc 3:63-5 S '47

OFNER'S method of sugar analysis. See Sugar analysis

O'HARA, John Bernard
Mr O'Hara's nickel drink; after sixty-three snug years in the South, Dr Pepper company wants national distribution. por Fortune 36:108-11+ O '47

OHIO
See also
Geology—Ohio
Metal working industries—Ohio

OHIO-APEX, inc.
Stock offered. Comm & Fin Chr 165:3287 Je 23 '47

OHIO associated telephone company
Preferred stock offered. Comm & Fin Chr 164:3417 D 30 '46

OHIO Edison company
Thumbnail stock appraisal. Mag of Wall St 79:315 D 21 '46

OHIO national life insurance company
Adopts CSO 2.5 per cent basis; other changes. Life Ins Courant 52:66-8 F '47
Further particulars of new CSO 2½% program. M. R. Dodson. Nat Underw (Life ed) 50:4+ D 27 '46
Switches to CSO table, 2½ interest. Nat Underw (Life ed) 50:4 D 20 '46

OHIO oil company
Marketing set-up outruns refinery capacity. Barron's 27:25 My 5 '47
Ohio Oil provides 60-year history for stockholders, employes, public. H. Taylor. il Nat Pet N 39:30-2 Ag 6 '47
Ohio Oil to lose little by oil land decision. Barron's 27:29 Je 16 '47
Ohio Oil's 60th anniversary. il Pet Eng 18: 140 Ag '47

OHIO state university
Ohio state university's low temperature laboratory. H. L. Johnston. il diags Refrig Eng 52:421-4 N '46

OHIO underwriter (periodical)
Formative years. G. W. Wadsworth. Nat Underw 50th anniv no:46+ 1947

OHM, Georg Simon, 1789-1854
Ohm and his law. Wireless Eng 24:284-7 O '47

OHMMETERS
Experience with the megger; ground resistivity meter used in locating corrosion leak in pipe line. W. H. Simpson. Oil & Gas J 46:192+ S 20 '47
Four uses of an ohmmeter in meter testing. J. Bowles. diags Elec World 127:174 Ja 18 '47
Low range ohmeter. S. C. Gainey. il diag Radio N 38:108 O '47
Pocket ohmmeter. il Sci Am 177:129 S '47

OHM'S law
Ohm and his law. Wireless Eng 24:284-7 O '47
Ohm's law. T. Carter. Elec R (Lond) 141: 167-8 Ag 1 '47
What is Ohm's law? some textbook definitions. G. W. Stubbings. Elec R (Lond) 140:225-6 Ja 31 '47

OIL. See Oils and fats

OIL, Gas. See Gas oil

OIL, Insulating. See Insulating oil

OIL, Lubricating. See Lubricating oils

OIL, Transformer. See Insulating oil

OIL analysis
Component acids and glycerides of Australian lumbang oil. F. D. Gunstone and T. P. Hilditch. bibliog Soc Chem Ind J 66:205-8 Jl '47
Component acids of West Indian ben and mango seed oils. H. C. Dunn and T. P. Hilditch. Soc Chem Ind J 66:209-11 Jl '47
Determination of acetyl number of fats and oils; modification of the method of Roberts and Schuette. K. Helrich and W. Rieman, 3d. bibliog Anal Chem 19:691 S '47
Determination of the peroxide values of edible fats and oils; the iodimetric method. C. H. Lea. bibliog diag Soc Chem Ind J 65:286-91 O '46
Rapid method for determining oil content of tung kernels. J. Hamilton and S. G. Gilbert. bibliog Anal Chem 19:453-6 Jl '47

OIL analysis—*Continued*
Some unsaponifiable constituents of the deodorisation distillates of vegetable oils. H. Jasperson and R. Jones. bibliog Soc Chem Ind J 66:13-17 Ja '47
South African fish products; application of the Fitelson method of squalene determination to some marine oils. M. L. Karnovsky and W. S. Rapson. bibliog Soc Chem Ind J 66:124-5 Ap '47
South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions of natural fats. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 65:425-8 D '46
See also
Gas oil—Analysis
Hexabromide number
Iodine number
Lubricating oils—Analysis
Oleomargarine—Analysis
Petroleum—Analysis

OIL and colour chemists' association
London section meeting, Sept. 18. Chem Age (Lond) 57:426 S 27 '47

OIL bulk stations
Competitors find future in partnership; Mid-South oil co. H. Taylor. il Nat Pet N 38: 30-1+ N 27 '46
Terminal construction expected to exceed that of bulk plants by ratio of 4 to 3. H. Ridder. il map Nat Pet N 39:31+ Ap 2 '47

OIL burner industry
Frown on sales of oil burners unless fuel supply is assured. Nat Pet N 39:15 Je 18 '47
Merchandise your sales helps, and dealers will pay for them; experience of Williams Oil-O-Matic. J. H. Read. il Ptr Ink 217:40-1 D 13 '46
Oil-burner industry staging rapid recovery. C. Muirhead. il Dom Comm 35:64-9 Ap '47
740,675 pot-type oil space heaters estimated sold first half of '47. Nat Pet N 39:38 O 22 '47

OIL burners
Cat-cracked fuel oils; application to various burners. W. A. Sullivan. Nat Pet N 39:46+ Je 4 '47
Effect of catalytically cracked fuels on heating system design. E. B. Delgass and B. S. Garrett. il Heat & Ven 44:61-3 Ja '47
Firing oil. W. L. Nelson. Oil & Gas J 45:109 F 15 '47
Fuel oil specifications for pot-type burners altered to conform with views of refiners. Nat Pet N 39:26 Ja 8 '47
Improvement of oil burner efficiency urged by OHI as means of easing supply situation. Nat Pet N 39:35+ Ag 20 '47
93% efficiency and high heat release claimed for oil burner unit of radically new design. Nat Pet N 39:32 Ja 22 '47
No radical changes in oil burners, nos. 5 and 6 oil. G. T. Kaufman. Heating-Piping 19: 89 Ja '47
Oil-burner economy. il Sci Am 176:78 F '47
Oil burner fires. il Safety Eng 93:44+ Ja '47
Porcelain enamel shop uses vapofiers 15 years. A. Vodicka. il Cer Ind 49:57 S '47
Quick changeover from gas provided by low pressure air oil burners; driers and kilns serving the brick industry. A. J. Nordenson. il diags Brick & Clay Rec 111:46-7 Ag '47
Recommends use of filters on oil burner fuel lines; S. Harvey, inc. overhauls burners in factory-type shop. F. C. Sturtevant. il Nat Pet N 38:27-8+ D 11 '46
Research data on jet type heating points up efficiency; Jet-Heet furnace. W. J. King. Nat Pet N 39:37-8 Ap 9 '47
Tailor-made industrial oil firing. R. J. Bender. il diags Power Pl Eng 51:101-3+ Mr '47
Twenty years of progress in industrial oil firing. R. J. Bender. il diags Power 91:90-2 F '47
Vapofier accomplishes change-over from gas to oil in few minutes. il Brick & Clay Rec 111:51 Ag '47; Same. Cer Ind 49:59 Ag '47
Vaporizing burner service requires special attention. A. B. MacLaren. il Nat Pet N 39:30-2 O 1 '47
Why flow through burner nozzle varies. Heating-Piping 19:97 F '47

Installation
Vet training programs for oil burner servicing; Oil heat institute of New England aids in planning instruction; job breakdown; list of tools. F. C. Sturtevant. Nat Pet N 38: 48-53 N 13 '46

Maintenance and repair
Burner service at a profit; C. A. Breed co. F. C. Sturtevant. Nat Pet N 39:23-4 Ja 8 '47
Company institutes its own program for training oil burner service men; Ray oil burner sales, inc. F. C. Sturtevant. il Nat Pet N 39:32-3+ My 14 '47
Vet training programs for oil burner servicing; Oil heat institute of New England aids in planning instruction; job breakdown; list of tools. F. C. Sturtevant. Nat Pet N 38:48-53 N 13 '46

Rating
Domestic oil burners. Consumers Res Bul 20:5-8 O '47

OIL camps. See Labor camps

OIL cans
Stripping threaded molded closures; oil can closures. il Mod Plastics 24:228-32 Ap '47

OIL chemists' society, American. See American oil chemists' society

OIL circuit breakers. See Electric circuit breakers

OIL compact commission, Interstate. See Interstate oil compact commission

OIL companies
Annual reports indicate great expansion program. E. Adams. Pet Eng 18:167-8+ Ap '47
Expanding LPG market offers oil jobber new opportunities for increased profits; Massie oil co. E. Lamm. il Nat Pet N 39:36+ Ap 23 '47
Jobber council to study program for stimulating healthy oil competition. Nat Pet N 39:19-22 O 1 '47
Lease-to-sale switch on farm tanks brings few complaints. E. Lamm. Nat Pet N 39: 7+ Je 18 '47
Major companies invite trouble for industry by giving small tanks to farm customers. Nat Pet N 38:19 O 30 '46; Discussion. 38: 18-19 N 6 '46
Most companies believe free storage tanks for farmers is a vicious practice. Nat Pet N 38:20 N 13 '46
NPN check shows 7 oil companies ordered more than 60,000 farm storage tanks in '46. Nat Pet N 38:18 N 27 '46
Oil jobber adds LPG; Charleston oil co. F. C. Sturtevant. Nat Pet N 39:19 Ja 1 '47
Oil jobber embarks on modernization program; Howe-Weiss oil co. H. Taylor. il Nat Pet N 39:38 My 7 '47
Oil tells its story. Bsns W p54 My 17 '47
Petroleum and agriculture team up to speed new scientific development; Shell oil company's research laboratory and experimental farm. R. Sneddon. il Pet Eng 18: 71+ N '46
Petroleum industry in the Chicago area. G. Egloff. Western Soc E J 52:16-27 Mr '47
Petroleum research and better farming; Shell's experimental farm and laboratory. il Nat Pet N 39:20-1 Ja 1 '47
Profits-in-boats plan swells ranks of Socony marine dealers. E. Kinney. il Sales Management 59:44-6 Jl 15 '47
Skelly battles untidy washrooms with approved service plan. H. S. Byrne. il Sales Management 59:110+ S 15 '47
What jobbers are thinking. H. Taylor. Nat Pet N 39:34+ Ap 16 '47
See also
Petroleum industry and trade—United States—Antitrust suit
also names of companies, e.g.
Standard oil company (New Jersey)

OIL companies—*Continued*

Accounting

Control system helps cut operating costs; Spartan petroleum co. F. C. Sturtevant. il Nat Pet N 38:23-4+ N 27 '46

Helping independents increase efficiency; uniform cost accounting. Nat Pet N 39:21-3 Ja 15 '47; Discussion. 39:41+ F 12 '47

Advertising

Company ad departments should aid, not compete with their agencies; Shell's organization. H. R. Hammerman. il Ptr Ink 220: 27-9 Ag 15 '47

Free enterprise, what is it and how does it work? Union oil co. of California advertisements. J. H. Collins. Sales Management 58: 37-9 F 1 '47

Personalized campaign achieves two goals; newspaper campaign of New Orleans petroleum co. D. Markstein. Ptr Ink 217:134 N 15 '46

Selling free enterprise; Union oil co. allocates 30 per cent of advertising appropriation to selling public on American way of life. D. Sweeney. Nat Pet N 39:30+ My 7 '47

Selling the farmer oil. F. C. Sturtevant. Nat Pet N 39:34 Ag 27 '47

Spring change-over; advertising campaign. F. C. Sturtevant. Nat Pet N 39:23-4 F 26 '47

Summer advertisements of oil industry emphasize brands, cleanliness, service. il Nat Pet N 39:26-7+ Jl 23 '47

Unidentified man is star salesman for Signal Oil; the Whistler, murder mystery. Sales Management 58:59 Ja 15 '47

Buildings

Oil industry construction boom indicated as forecasts promise eased restrictions. R. E. Bjorkback and D. L. Harbour. Nat Pet N 39:22+ F 19 '47

Oil's construction, equipment program will set new record. H. Ridder. Nat Pet N 39: 24+ Mr 19 '47

Terminal construction expected to exceed that of bulk plants by ratio of 4 to 3. H. Ridder. il map Nat Pet N 39:31+ Ap 2 '47

Credit problems

American petroleum credit assn. convention, Chicago, Sept. 15-17. Nat Pet N 39:24+ S 24 '47

Explains financing of installment selling of TBA at credit meeting. F. C. Sturtevant. Nat Pet N 39:26+ Ap 30 '47

National association of credit men, Petroleum division annual meeting, New York, May 14. Nat Pet N 39:20 My 21 '47

New oil credit organization formed. Oil & Gas J 46:56 S 27 '47

Nine-city survey gives data on credit card use, TBA, oil heat and brand preference. H. Taylor. Nat Pet N 39:30-1 O 29 '47

Employees

Association of industrial scientists seeks recognition as bargaining unit. Chem & Eng N 24:3349 D 25 '46

Easing road to education for oil company employes; six of 17 companies surveyed provide financial aid. F. Sturtevant. il Nat Pet N 39:37-8+ S 3 '47

Employe contest utilized to spread oil industry's story to the public. Nat Pet N 39:49 S 17 '47

Employes buy Union's drilling facilities, form independent firm. Oil & Gas J 45:38 Ja 18 '47

Esso opens school to qualify employes for promotions. E. M. Kelley. il Sales Management 58:132-4 Mr 15 '47

Esso training center designed to develop company leadership. Oil & Gas J 45:26 F 1 '47

How Standard Oil is developing management talent for tomorrow. E. M. Kelley. Sales Management 58:85+ F 15 '47

In-service technical training, a case in point; Humble lectures in science. W. H. Shearon, jr. Chem & Eng N 25:2432 Ag 25 '47

Industrial relations in Standard oil company of New Jersey; abstract, S. Chase. Trusts & Estates 84:163 F '47

Jersey plan hunts key job candidates, then trains them for top management. G. R. McKee, jr. Nat Pet N 39:25+ O 15 '47

Many oil unions accept company bonus proposals. Nat Pet N 38:12 D 4 '46

Oil companies pay cost-of-living bonuses. Nat Pet N 38:16 N 13; 12 N 20 '46

Supervisor training center; Standard oil company of New Jersey. il Mech Eng 69:238 Mr '47

Three-point program is recommended to improve industry labor relations. Nat Pet N 39:36 Mr 19 '47

Training center; Standard of N.J.'s new school. il Nat Pet N 39:31-3 F 19 '47

Union oil company's manufacturing department technical trainee program. W. K. Park. Pet Refiner 26:162 Ap '47

Visual aids in executive training for Standard Oil supervisors and technical personnel. il Factory Management 105:75-6 Mr '47

Finance

Oil marketing cost study urged to effect economies; Research foundation outlines proposal. Nat Pet N 39:17-18 O 15 '47

Tabulation of annual report figures reflects oil industry growth in '46. Nat Pet N 39: 38-9 My 21 '47

Management

Avoiding competition with dealer outlets builds confidence, loyalty for oil jobber; Interstate oil co. il Nat Pet N 39:30-1 F 5 '47

Competitors find future in partnership; Mid-South oil co. H. Taylor. il Nat Pet N 38: 30-1+ N 27 '46

Eliminating guesswork in oil management practices. Nat Pet N 39:31+ Jl 9 '47

Jobber looks ahead; Hambleton terminal corp. F. C. Sturtevant. il Nat Pet N 38:29+ N 6 '46

Program for oil to keep its freedom through cultivating healthy competition. W. C. Platt. Nat Pet N 39:16-20 Ja 29 '46; Discussion. C. G. Morrill. 39:21+ F 12 '47

Program of efficiency, analysis, is jobber's key to more profits. W. Hochuli. Nat Pet N 38:7+ O 23 '46; Reply. W. H. Wingrove. 38:25 N 6 '46

Securities

See Petroleum industry and trade—Securities

Side line selling

Building a TBA business; Service oil co. F. C. Sturtevant. il Nat Pet N 30:36+ Mr 5 '47

Jobber finds separate sales organization helps to increase volume of TBA sales; Spartan petroleum co. sets up separate company under name of Tire sales, inc. F. C. Sturtevant. il Nat Pet N 38:40+ D 4 '46

Oil jobber adds appliance department; Staebler-Kempf oil co. F. C. Sturtevant. il Nat Pet N 38:26-7 D 18 '46

Oil jobber adds tire distributorship, garners profits once taken by supplier; Western oil company. H. Taylor. il Nat Pet N 38: 30-1+ N 20 '46

Survey shows oil company unit sales of tires up 100 per cent in '46 over 1941. Nat Pet N 39:19-20 S 3 '47

OIL containers

Low-cost rack simplifies work of emptying oil drums. il Eng N 137:741 N 28 '46

Streamlined flow speeds output of lubricants; handling and packaging equipment; Port Arthur refinery. il diags Oil & Gas J 45: 74-7+ D 14 '46

Standards

Standard Oil economizes with standard containers. diags Ind Stand 17:284-5 N '46

OIL coolers

Oil cooler maintenance. il diags Diesel Power 25:71-3+ Mr '47

OIL delivery

Degree day system; how one company's plan operates; Sohio's procedure for controlling automatic fuel oil deliveries. il Nat Pet N 39:26-7+ Ag 20 '47

OIL delivery—*Continued*
Two-way radio may cut delivery costs; radio telephones on fuel oil trucks. F. C. Sturtevant. il Nat Pet N 39:34+ O 22 '47
See also
Tank trucks

OIL distillation
See also
Oil shales—Distillation
Petroleum distillation

OIL engines. See Diesel engines; Internal combustion engines

OIL films
Application of spreading measurements on oil tests. N. E. M. Hagethorn and F. H. Stieltjes. bibliog Inst Pet J 32:587-97 O '46
Floats 63-ton backup roll on oil film. il Steel 119:107 N 18 '46
Mechanism of metal cleaning. S. Spring and L. F. Peale. il Metal Prog 51:102-6 Ja '47

OIL filters
Filtration of air, oil and liquid fuel. C. G. Vokes. Engineer 182:401 N 1 '46
Filtration of Diesel lubricating oils. J. A. Nelson. diags Power Pl Eng 51:122+ Ap '47
Fuel oil filter at loading rack cuts burner servicing. F. C. Sturtevant. il Nat Pet N 39:28-9 Jl 9 '47
Induction brazing of oil-filter shells. il Mach 53:177 Ap '47
Newcon rotary self-cleaning filter. diags Engineering 162:488 N 22 '46
Oil purification, filtration and reclamation. B. Corrigan. il diags Marine Eng 52:87-93 F '47; Same. Iron Age 159:56-62 Ap 3 '47; Same abr. Ry Mech Eng 121:117-19+ Mr '47
Sales ideas? Fram gets them right out of the field. H. E. Robinson. Sales Management 57:113-14+ D 1 '46
Terminal filtration of Diesel fuel. R. E. Coughlan. il Ry Age 122:363-4 F 15 '47

Manufacture
Deep drawn magnesium parts save weight; oil filter, part of aircraft de-icing system; Bendix aviation corp. R. G. Gillespie. il Materials & Methods 25:86-8 Mr '47

OIL filters, Automobile
Full-flow filtering; Chrysler cars. il diags Machine Design 18:120-2 N '46

OIL fires
Airplane crash fire fighter is adaptable to running oil fires; patent. diag Pet Processing 2:272 Ap '47
Combating fires that have passed beyond incipient stage. H. W. Boggess. Oil & Gas J 45:97 Ap 12 '47
Emulsions bring safety to oil-fire fighting. D. Powell. il Safety Eng 93:16-17+ Mr '47
Equipment modernized to cut fire risks. Elec World 128:102-3 Jl 19 '47
Experiments on the rate of foam application of petrol fires. N. O. Clark and others. Inst Pet J 33:192-6; Discussion. 196-201 Mr '47
Fighting oil fires; Automatic tank extinguisher. il Ry Age 123:112 Jl 19 '47
Fire control methods learned in war; use of foam. R. B. Tuttle. il Oil & Gas J 45:84-5+ Ap 19 '47
Fires and explosions at oil installations, due to air raids. E. P. Lancashire. 6 pls Inst Pet J 33:131-46; Discussion. 146-58 Mr '47
Fires in open tanks of petroleum products; some fundamental aspects. J. H. Burgoyne and L. L. Katan. 6 fold pls Inst Pet J 33: 158-85; Discussion. 185-91 Mr '47
Oil burner fires. il Safety Eng 93:44+ Ja '47
Power plant fire protection. P. W. Eberhardt. il Power Pl Eng 50:76-7 D '46
Prevention and extinguishing of insulating oil fires in power stations and substations. H. K. Sels. Edison Elec Inst Bul 15:379-81 O '47
Report gives summary of petroleum tankage damage sustained during Texas City disaster. Nat Pet N 39:45 S 17 '47
See also Petroleum industry and trade—Fires and fire protection

OIL flow
Influence of temperature on oil yield from uncemented sands under gravitational flow. S. L. Zaks. bibliog diag Pet Eng 18:147-8+ N '46
Mechanism of countercurrent gas liquid flow through packed towers. F. A. Zenz. bibliog Chem Eng Prog 43:415-28 Ag '47
Orifice discharge coefficients in the viscous-flow range; units measuring lubricating-oil flow rates in aviation engines during flight. G. S. Peterson. il diags A S M E Trans 69:765-8 O '47
Pilot pipe-line unit for determining viscosity-temperature relationships. R. B. Beckmann, H. G. Corneil and R. J. Michael. flow diags Am Inst Chem Eng Trans 42:947-58 O-D '46; Same. Pet Eng (Ref annual) 18:263-4+ Jl 1 '47
Pipe-line flow formulas. B. Miller. bibliog Oil & Gas J 46:174-5+ S 20; 102-4+ S 27; 69-71+ O 4 '47
Pressure and oil flow in oil-filled cables at load variations. H. L. Knudsen. bibliog diag J Ap Phys 18:545-62 Je '47
Simplified pipe line computations. P. Bryan. Pet Eng 18:166+ N; 152+ D '46; 178+ Ja '47
Velocity and pipe size; chart. W. L. Nelson. Oil & Gas J 46:111 S 27 '47

OIL fuel
Analysis and properties of German synthetic polyethylene oils. C. M. Murphy and C. E. Saunders. bibliog Pet Refiner 26:111-16 My '47
Cat-cracked fuel oils: application to various burners. W. A. Sullivan. Nat Pet N 39:46+ Je 4 '47
Coal-oil plan halted. Chem Age (Lond) 56: 798 Je 21 '47
Conversion to fuel oil. F. J. Erroll. Chem Age (Lond) 55:671-3 N 30 '46
Effect of catalytically cracked fuels on heating system design. E. B. Delgass and B. S. Garrett. il Heat & Ven 44:61-3 Ja '47
Factors affecting quality and supply of internal-combustion-engine fuels. W. M. Holaday and others. Pet Refiner 26:79-85 My '47; Same cond. Oil & Gas J 45:112+ Ap 26 '47
Forging failure caused by carbon pick-up due to heating in oil fired furnaces. M. B. Graham. bibliog il Iron Age 160:65-7 Jl 24 '47
Fuel oil filter at loading rack cuts burner servicing. F. C. Sturtevant. il Nat Pet N 39:28-9 Jl 9 '47
How to store and handle fuel oil. R. J. Bender. il plan diags Power Pl Eng 51:118+ O '47
New 2,000-hp. gas-turbine generator burns Bunker C fuel oil. T. J. Putz. il Oil & Gas J 45:27 Ja 4 '47
No radical changes in oil burners, nos. 5 and 6 oil. G. T. Kaufman. Heating-Piping 19:89 Ja '47
Ratio of heating values of 1 bbl. of oil and 1,000 cu. ft. of gas; chart. Oil & Gas J 46: 107 Jl 5 '47
Scans transport's demands for fuel; I.C.C. bureau reports on requirements and supplies. Ry Age 123:579+ O 4 '47
Synthetic Diesel fuel oils; results of recent work. Chem Age (Lond) 57:398 S 20 '47
See also
Airplane engines—Fuel
Gasoline
Automobile engines—Fuel
Internal combustion engines—Fuel
Automotive fuel
Liquid fuel
Boilers—Oil firing
Locomotive boilers—Oil firing
Coal liquefaction
Oil burners
Diesel engines—Fuel
Oil fuel industry
also Arabian American oil company

Dehydration
Use of dehydration in combating internal corrosion in products pipe-line systems. H. K. Phipps. flow diag il Am Pet Inst Proc 26(5):37-40 '46; Same cond. Oil & Gas J 45:67+ N 23 '46

Manufacture
Czech national enterprises; synthetic fuel from Stalin works. Chem Age (Lond) 55: 679 N 30 '46

OIL fuel—Manufacture—*Continued*
Furfural refining process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:154-5 Ap '47
Gas-oil polyforming. W. C. Offutt and others. flow sheet Oil & Gas J 46:80+ S 27 '47

Prices

Competitive fuel prices; trends favor use of petroleum fuels. A. J. McIntosh. il Min & Met 28:447-50 S '47
Fuel oil price situation in East helps to explain independent agitation for marketing divorcement. Nat Pet N 39:23-4 Ag 20 '47
Many markets begin to narrow gap between no. 2 and gas prices. Nat Pet N 39:19 O 29 '47
Oil's price advantage over coal gains. A. J. McIntosh. Nat Pet N 39:34+ Ap 9 '47

Rating

Fuel oil. Consumers Res Bul 19:32-3 My '47

Specifications

API marketing division discusses new distillate fuel specifications. J. L. Minner. Nat Pet N 38:36+ N 20 '46
Fuel oil specifications for pot-type burners altered to conform with views of refiners. Nat Pet N 39:26 Ja 8 '47
Standard practices; fuel oil characteristics and general specifications. Diesel Power 25:82-5 O '47

Testing

Carbon-hydrogen ratios of distillate fuel oils. S. P. Cauley and E. B. Delgass. Oil & Gas J 46:83-4 Jl 19 '47
Combustion test unit to determine burning qualities of fuel oils developed under Oil heat institute of America. Nat Pet N 39: 36 Ja 29 '47
Ignition qualities of hydrocarbons in the Diesel fuel range; abstract. A. D. Puckett and B. H. Caudle. Oil & Gas J 46:125 Je 28 '47
New OHI test unit will measure fuel oils for smoking tendencies; abstract. G. T. Kaufman. Nat Pet N 39:40 Ap 9 '47
Smoking tendency determines burning oil performance. G. T. Kaufman. il Heating-Piping 19:78 My '47; Discussion. K. Steiner. 19:95-6 Jl '47

Transportation

Fuel-oil spills. S. M. Elonka. Marine Eng 52: 91-2 My '47

OIL fuel industry
Advantages to the public from oil's use of brand names. F. W. Lovejoy. Nat Pet N 38:49 N 20 '46
Annual fuel oil contracts an aid in utilizing all available storage. F. C. Sturtevant. Nat Pet N 39:44 Je 4 '47
Degree day system; how one company's plan operates; Sohio's procedure for controlling automatic fuel oil deliveries. il Nat Pet N 39:26-7+ Ag 20 '47
Diesel fuel situation. E. F. Miller and F. L. Nelson. diag Oil & Gas J 46:82+ Je 21 '47; Same. Diesel Power 25:38-42 Jl '47
Farm survey by Capper-Harman-Slocum, inc.; on gasoline and motor oil. Nat Pet N 38:40-1 N 6 '46
Fuel oil distributors act to boost customer and bulk plant storage. Nat Pet N 39:35+ My 14 '47
Fuel oil profit builders; program of selling aids by Coastal oil co. F. C. Sturtevant. Nat Pet N 39:26+ Je 18 '47
Gas competition with oil heat. J. R. Sherwood. Nat Pet N 38:38+ N 27 '46
Jobber has a definite place in oil industry picture. W. Hochuli. Nat Pet N 39:28+ O 22 '47
Nine-city survey gives data on credit card use, TBA, oil heat and brand preference. H. Taylor. Nat Pet N 39:30-1 O 29 '47
Oil burner users may shiver; industry scrambles to meet threatening fuel oil shortage next winter. Bsns W p48-50+ My 17 '47
Oil shortage hysteria generated by prospect of real shortages. Iron Age 159:95-7 Je 26 '47
Push summer fuel oil fill-ups; suppliers wary of commitments in renewing contracts. Nat Pet N 39:28 Je 18 '47
Railroad Dieselization points to important new fuel market. J. E. Boice. il Oil & Gas J 46:66-8 Je 21 '47
These dealer aids build business all along the line; Socony-Vacuum oil co.'s reseller program. J. D. Edwards. il Ptr Ink 219:33-5+ Ap 25 '47

Service

Automatic delivery, emergency service for burners enhance fuel oil profits. Nat Pet N 39:40+ Mr 12 '47
Vet training programs for oil burner servicing; Oil heat institute of New England aids in planning instruction; job breakdown; list of tools. F. C. Sturtevant. Nat Pet N 38:48-53 N 13 '46

Statistics

Battle for middle distillates a major refining problem. A. L. Foster. il Oil & Gas J 46: 163-4 S 20 '47
Fuel oil ration figures give clues of value in study of future markets. Nat Pet N 39: 36-7+ F 12 '47

Eastern states

Decline in distillate yield worries Atlantic seaboard. Nat Pet N 39:11-14 O 8 '47

Middle western states

Survey of jobber's product stocks points up difficulties in Midwest. Nat Pet N 39:20 Ag 27 '47
Wherry hears Midwest complaints on shortage. H. Ridder. Nat Pet N 39:11-15 Ag 27 '47

Minnesota

Opinion on jobber status varies among marketers. Nat Pet N 39:36+ Ag 13 '47

New York (state)

Spokesmen paint dark oil supply picture for New York marketers; Empire state petroleum association fall meeting, New York, Oct. 13-14. Nat Pet N 39:20-1+ O 22 '47

United States

Allocater blues; companies find allocating supply isn't easy. Nat Pet N 39:24 O 1 '47
Discussion on fuel oil supply and marketing operation divorcement. Nat Pet N 39:22+ S 10 '47
Facts on the oil supply-demand situation. Sheet Metal Worker 38:72+ O '47
Industry can expect to face tight supply for some time. A. L. Nickerson. Nat Pet N 39: 27-8 O 22 '47
Industry striving for fair allocation, hearings reveal. Nat Pet N 39:9-12 O 1 '47
Senate oil subcommittee hearings fail to uncover any new problems. H. Ridder. Nat Pet N 39:22+ O 8 '47
Widespread shortages seen by Krug; asks NPC study. Nat Pet N 39:15-16 O 22 '47

OIL gas. See Gas, Oil

OIL handling
Comparison of the carrying capacities of rough and smooth bore oil suction and discharge hose under simulative service conditions; fueling of ships. T. A. Werkenthin and others. bibliog il Rubber Age 61:685-96 S '47
Fuel-oil spills. S. M. Elonka. Marine Eng 52:91-2 My '47
Handling oil in TVA hydroelectric plants. H. J. Petersen. Power Pl Eng 51:116 Mr '47
How to store and handle fuel oil. R. J. Bender. il plan diags Power Pl Eng 51:118+ O '47
Standard practices; fuel oil storage and handling systems. diags Diesel Power 25: 102-5 Ap '47
See also
Oil storage

OIL heat institute of America
Annual meeting, 24th, Atlantic City, March 24-26. Nat Pet N 39:19-20 Ap 2 '47; Heat & Ven 44:114+ Ap '47; Dom Eng 169:148-9+ My '47

OIL heating
Automatic purifier for absorber oil adapted from commercial oil heater. il diag Pet Processing 2:17 Ja '47

OIL heating—*Continued*
Heating and cleaning Santa Maria heavy crude. R. L. Lauenstein. il diags Pet Eng 18:67-8+ Mr '47
Non-fouling refinery charge stocks. L. F. Schimansky. il Pet Refiner 25:119-21 D '46

OIL industries
Oils and fats in 1947. R. M. Walsh. Soap & San Chem 23:47-9+ F '47
Oilseeds research program outlined. Oil Paint & Drug Rep 152:7 Jl 14 '47

See also
Essential oils
Fish oil
Kerosene
Linseed oil
Lubricating oils
Oil companies
Oil fuel industry
Oils and fats
Petroleum industry and trade
Tung oil

Statistics
Vegetable oils and fats, 1941-1946; outlook for 1947. Chem Eng 54:120 F '47

Argentina
Vegetable oils from Argentina. Chem Age (Lond) 57:541 O 18 '47

Canada
Commercial oilseed cultivation. For Comm W 29:27 O 4 '47

Chile
Supply situation satisfactory. For Comm W 29:23 O 18 '47

China
Oils and oilseeds; 1946 supplies in China. For Comm W 25:39 D 21 '46

Cuba
Edible-oil supply. For Comm W 27:24 My 24 '47

France
L'évolution de l'huilerie française. P. Razous. il plan Génie Civil 123:321-3, 339-41 D 1-15 '46
French colonial oilseeds. Chem Age (Lond) 56:224 F 8 '47
French oils and fats. Chem Age (Lond) 57: 473-4, 567-8 O 4, 25 '47
French oilseed developments. W. G. Cass. Chem & Eng N 25:459 F 17 '47
French use of oleaginous products. W. G. Cass. Chem & Eng N 25:3242 N 3 '47
Oilseeds; production, 1942-1946. For Comm W 25:29 N 23 '46

Germany
Edible oil industry in Germany. W. H. Goss. flow sheet il Food Ind 19:184-7, 320-3 F-Mr '47

Italy
Italian oleaginous crops. W. G. Cass. Chem & Eng N 25:3173 O 27 '47

Mexico
Mexico's production and trade. For Comm W 28:25 S 13 '47

Nicaragua
Production and trade, sesame seed, cotton-seed, etc. For Comm W 26:25-6 Ja 18 '47

Norway
Marine oils of Norway. il Chem Age (Lond) 56:679-83 My 24 '47

Russia
Russian subtropical oleaginous plants. W. G. Cass. Chem & Eng N 25:459 F 17 '47

OIL lands
Classification of oil discoveries and fields in California. Pet Eng 18:124+ Ja '47
Landowner is mutual partner in oil recovery. F. R. Cozzens. Pet Eng 18:106+ Ap '47

See also
Oil reserves (United States navy)

Maps
Guide to world oil. Oil & Gas J 45:supp D 28 '46

Royalties
City suckers. Fortune 36:151 O '47

OIL measurement
API leaves temperature correction to be settled on individual basis. Nat Pet N 38: 38+ N 20 '46
How to figure oil quantities for various temperatures and gravities. Power Pl Eng 51: 102-3 Ja '47

OIL mists. See Mists, Oil

OIL pipe lines

See also
Petroleum pipe lines

OIL pipes
Centralized oil reclamation and distribution; International. Harvester's west Pullman ball bearing plant. il Steel 121:83-4+ Ag 11 '47
Sizing of refinery oil lines. W. L. Nelson. Oil & Gas J 46:153 O 18 '47

See also
Petroleum pipe lines

OIL pumps
Beacham high-pressure oil pump. il diag Engineering 164:193-4 Ag 29 '47
Free pump latest thing in hydraulics. R. Sneddon. il diags Pet Eng 18:60+ Ag '47
Influence of viscosity on centrifugal-pump performance. A. T. Ippen. il diags A S M E Trans 68:823-38 bibliog(p838); Discussion. 839-48 N '46
Low oil pressure, its causes and correction. H. L. Hemingway. diags Bus Transportation 26:76-7 Je '47
Pumping dually completed wells. T. P. Hoffer. diags Pet Eng 18:204+ S '47
Stothert and Pitt, variable delivery oil pump. il diags Engineer 184:supp 10-11 Ag 29 '47
Tank truck pumps; survey figures show high percentage of companies plan purchases. H. Ridder. Nat Pet N 39:29-30 Je 25 '47
Turbine-shaft centrifugal oil pump works with oil-driven booster pump. R. Sheppard and J. W. Barnett. il diags Power 91:78-81 F '47
Viscosity and centrifugal pumps. W. L. Nelson. Oil & Gas J 46:129-30 O 25 '47

See also
Gasoline pumps
Petroleum—Pumping
Pumps, Fuel

OIL purification
Oil purifying systems for molding plants. J. B. Biggers. il diags Mod Plastics 24:186+ Je '47

See also
Oil filters
Oil reclamation
Oil refining

OIL reclamation
Absorption oil purifying system; Petroleum engineering, inc. diag Pet Refiner (Process Handbook sec) 26:98-9 Ap '47
Automatic purifier for absorber oil adapted from commercial oil heater. il diag Pet Processing 2:17 Ja '47
Buckeye develops two large oil purifying units for Dnieprostroi system. il Elec World News ed 127:21 Mr 8 '47
Centralized oil reclamation and distribution; International Harvester's west Pullman ball bearing plant. il Steel 121:83-4+ Ag 11 '47
Good layout makes oil reclamation pay. plans diag Am Mach 91:88-9 O 9 '47
Handling oil in TVA hydroelectric plants. H. J. Petersen. Power Pl Eng 51:116 Mr '47
New filtering centrifuge; De Laval Puri-filter. il Diesel Power 24:1446 D '46
Oil purification, filtration and reclamation. B. Corrigan. il diags Marine Eng 52:87-93 F '47; Same. Iron Age 159:56-62 Ap 3 '47; Same abr. Ry Mech Eng 121:117-19+ Mr '47
Oil reclamation system paid for itself the first year; Wright Aeronautical. H. G. Knell and E. R. Keast. il Factory Management 105:78-81 S '47
Re-refining fits used lubricating oil for further use. il Sci Am 175:274 D '46
Transformer oil reconditioned for seven cents a gallon. H. A. Tynan. diag Elec World 127:84 Je 21 '47

See also
Oil filters

OIL refineries
L'évolution de l'huilerie française. P. Razous. il plan Génie Civil 123:321-3, 339-41 D 1-15 '46

OIL refineries—*Continued*
Swift to build fatty acid plant. il Soap & San Chem 23:55 Je '47

Equipment

L'industrie de l'huilerie. Y. Bagot. il plan diags Chimie & Ind 58:117-26, 238-49 Ag-S '47
Insulating unhoused plants. D. von Ludwig. il diags Chem Eng 54:114-17 Mr '47

Power

Industrial supply scheme; power plant of Scottish oils, ltd. il diags Elec R (Lond) 139:959-65 D 13 '46

OIL refining
Arkansas plant uses solvent to extract oil from cottonseed; Delta products co. il Manuf Rec 116:41+ Ap '47
Cold fractionation of fatty oils; Solexol. il Soap & San Chem 22:75+ D '46
Cottonseed process developed; solvent extraction of oil. Oil Paint & Drug Rep 151:7+ Mr 10 '47
Edible oil industry in Germany. W. H. Goss. flow sheet il Food Ind 19:184-7, 320-3 F-Mr '47
Fatty oil processing improvement claimed; Solexol. Oil Paint & Drug Rep 150:37 N 25 '46
Improves soya oil; Solexol process. Food Ind 18:1896+ D '46
Industrial oils advance; Kellogg co.'s Solexol process. il Bsns W p48+ N 23 '46
L'industrie de l'huilerie. Y. Bagot. il plan diags Chimie & Ind 58:117-26, 238-49 Ag-S '47
Kellogg announces Solexol. il Chem & Eng N 24:3188 D 10 '46
Oil extractor method; Solexol. Food Ind 18: 1894+ D '46
Refining vegetable oils by petroleum methods; Solexol process. il Chem Eng 53:120 D '46
Soap content of some commercially refined oils; effect of soap on the bleachability of the oils; abstract. W. Newby. Soap & San Chem 23:48 Je '47
Solexol process, a new tool for refining fats and oils. bibliog il Chem Ind 59:1016-17 D '46
Solexol process advances fat and oil refining art. Pet Processing 2:10 Ja '47
Some unsaponifiable constituents of the deodorisation distillates of vegetable oils. H. Jasperson and R. Jones. bibliog Soc Chem Ind J 66:13-17 Ja '47
Study of the caustic refining of vegetable oils; abstract. R. H. Fash. Soap & San Chem 23: 48-9 Je '47

See also
Oil reclamation
Petroleum refining

OIL reserves (United States navy)
Drilling problems in Alaska. K. M. Fagin. il maps Pet Eng 19:180+ O '47
Full-scale exploration under way by navy in Arctic Alaska. C. O. Willson. bibliog il map Oil & Gas J 46:62-4+ Ag 9; 62-6 Ag 16; 78-81+ Ag 23 '47
Oil prospecting in Alaska. K. M. Fagin. il maps Pet Eng 18:43-8 Ag; 150+ S '47
Oil shortage spotlights U.S. navy's reserves. Bsns W p22 Je 21 '47
Photogeology aids naval petroleum exploration. N. C. Smith and S. A. Wengerd. 4pls maps Am Assn Pet Geologists Bul 31:824-8 My '47
Special studies of reservoir oils in Naval petroleum reserve no. 1, Elk Hills field, Calif. A. B. Cook and G. B. Shea. 19 pls U S Bur Mines Rep of Invest 4054:1-60 '47

OIL reservoirs
Construction par soudure d'un réservoir pour liquides combustibles en forme de goutte, système A. Caquot. diags Génie Civil 123: 298 N 1 '46
Économies de matières dans les installations de stockage des produits pétroliers. G. Daric. diags Chimie & Ind 57:228-40 Mr '47

OIL sand
Influence of temperature on oil yield from uncemented sands under gravitational flow. S. L. Zaks. bibliog diag Pet Eng 18:147-8+ N '46
Method for determining simultaneously the oil and water saturations of oil sands. C. G. Rall and D. B. Taliaferro. bibliog(34 titles) U S Bur Mines Rep of Invest 4004: 1-16, pl 1-2 '46
Separation plant reclaims oil from Athabaska sands. W. E. Adkins. flow diag il Oil & Gas J 45:187+ Mr 22 '47

OIL seals
Ball and roller bearing seals. E. P. Stahl. diags Product Eng 18:103-6 Ap '47
Frictional properties of oil-seal materials. P. G. Forrester. il diags Engineering 164: 121-4 Ag 8 '47
Oil seals; Gaco M.I. component for rotating shafts. E. T. Jagger. il Automobile Eng 37: 383-5 O '47
Oil seals; how to install them carefully and cut repair costs. C. F. Zimmerman. il Roads & Sts 89:107-8+ O '46
Press-fit tolerances maintained in turning out millions of oil seals; National motor bearing corp. il Steel 121:86-7+ O 13 '47

OIL separators
Factors affecting the API design of separators for removal of oil from waste water effluents. S. T. Powell and E. I. Knoedler, jr. Pet Refiner 26:117-20 My '47
Four factors are major controls in design of an economical oil-water separator. W. B. Hart. bibliog diags Pet Processing 2:282+, 471-2+, 513-14+, 632-4+ Ap, Je-Ag '47
How one plant keeps oil out of boilers. C. R. Kenney. diag Power 91:118-19 F '47
Proper drainage of oil separators. T. W. Reynolds. diags Heat & Ven 44:81-2 Je '47
Refrigerating oil carryover at high temperatures. J. M. Lebeaux and L. H. Bartlett. bibliog diag Refrig Eng 53:203-7 Mr '47

OIL shales
Aerial oxidation of Scottish shale wax. A E. J. Pettet and W. S. Greaves. diags Soc Chem Ind J 66:126-30 Ap '47
Bureau of mines asks $30,000,000 more for synthetic liquid fuels research. W. F. Bland and W. C. Uhl. Pet Processing 2:87 F '47
Natural formation of petroleum-like hydrocarbons from oil shales. W. M. Felts. Science 106:41 Jl 11 '47
Oil-shale demonstration plant. il map Pet Eng 18:87+ Jl '47
Survey of the world's oil shales. A. A. Swinnerton. il diags Can Min J 68:229-35 Ap '47
Upper Ordovician shales in central Kansas. H. Taylor. bibliog 2pls map diag Am Assn Pet Geologists Bul 31:1594-607 S '47

See also
Torbanite

Distillation

Bureau of mines unveils $2 million oil shale plant May 17 in Colorado. il Nat Pet N 39:50 My 14 '47; Power 91:152b+ Jl '47
Examination of acid sludge from the treatment of cracked shale gasoline. G. E. Mapstone. bibliog Pet Refiner 26:86-8 Jl '47
German shale oil production; three Wurtemburg processes. Chem Age (Lond) 56:407 Ap 5 '47
Industrial supply scheme; power plant of Scottish oils, ltd. il diags Elec R (Lond) 139:959-65 D 13 '46
Method of assaying oil shale by a modified Fischer retort. K. E. Stanfield and I. C. Frost. 5pls U S Bur Mines Rep of Invest 3977:1-11 '46
Petroleum substitutes; past and present research, development and economics. H. H. Power. Pet Eng 18:72+ F '47
Retorting oil shale by the fluidized solids technique. F. H. Blanding and B. E. Roetheli. flow plan il Oil & Gas J 45:84+ F 15 '47
Swedish method of manufacturing liquid fuel from low-grade shales; with cost data. S. V. Bergh. plan diags Oil & Gas J 45: 250+ D 28 '46

By-products

Shale by-products; making sulphate of ammonia, bricks and candles. il Elec R (Lond) 139:863-7 N 29 '46

France

Les schistes bitumineux de l'Esterel (Var). map Génie Civil 124:319 Ag 15 '47

OIL shales—*Continued*

South Africa

Production of oil from coal and shale. F. W. Quass. Chem & Ind p412 N 16 '46

Sweden

Swedes recover oil from shale. Chem & Eng N 25:430 F 17 '47

Swedish method of manufacturing liquid fuel from low-grade shales; with cost data. S. V. Bergh. plan diags Oil & Gas J 45: 250+ D 28 '46

OIL stocks. See Petroleum industry and trade—Securities

OIL storage

How to store and handle fuel oil. R. J. Bender. il plan diags Power Pl Eng 51:118+ O '47

Oil storage depots on the G.W.R. il Engineer 183:388 My 2 '47

Roof steam coils eliminate cloud in lubricating oil storage C. M. Fabian. diags Pet Refiner 26:119 Mr '47

Standard practices; fuel oil storage and handling systems. diags Diesel Power 25: 102-5 Ap '47

Fire protection

Air foam system protects gas oil tank. J. A. McGuckin. il Gas Age 100:37-9 S 18 '47

OIL tankers. See Tank ships

OIL tanks

Design of low-pressure vapor-conservation tanks. F. L. Plummer. il diags Oil & Gas J 46:85-6+ Ag 16 '47

Design of sump tanks on certain turbine vessels. diags Marine Eng 52:70-1 S '47

Fires in open tanks of petroleum products; some fundamental aspects. J. H. Burgoyne and L. L. Katan. 6 fold pls Inst Pet J 33:158-85; Discussion. 185-91 Mr '47

Insulation technique for oil-refinery structures. S. S. Parker. il Oil & Gas J 45:160-2 Ap 26 '47

Lease-to-sale switch on farm tanks brings few complaints. E. Lamm. Nat Pet N 39:7+ Je 18 '47

Report gives summary of petroleum tankage damage sustained during Texas City disaster. Nat Pet N 39:45 S 17 '47

Selecting storage tanks for pipe line service. D. A. Leach. il diags Pet Eng 18:49-51 Je '47

Two jobbers meet major competition by selling underground farm tanks. Nat Pet N 38:27 D 25 '46

Cleaning

Tank ventilation. O. W. Johnson. Pet Eng 18:96+ N '46

Protection

Applying plastic coating to oil tanks; Resoweld. W. J. Davis. il Pet Eng 18:182+ Ja '47

Roofs

Proper operation and maintenance insures full advantages of floating roof tanks. F. L. Goldsby and C. M. Orr. il diags Pet Processing 2:199+ Mr '47

Standards

Report of committee on the standardization of tanks for oil storage. diag Am Pet Inst Proc 26(4):344-67 '46

Report of subcommittee on the standardization of tanks for oil storage. Am Pet Inst Proc 25(4):298-315 '45

OIL testing

Application of spreading measurements on oil tests. N. E. M. Hagethorn and F. H. Stieltjes. bibliog Inst Pet J 32:587-97 O '46

See also

Insulating oil—Testing
Lubricating oils—Testing
Viscosimeters

OIL well drills. See Drills, Oil well

OIL wells. See Petroleum—Well drilling

OILS, Cutting. See Lubrication and lubricants (cutting and grinding)

OILS, Lubricating. See Lubricating oils

OILS and fats

American oil chemists' society 38th annual meeting, New Orleans, May 20-22. Chem & Eng N 25:1662-3 Je 9 '47

Continuous hydrolysis of fats. H. D. Allen and others. flow diag diags Chem Eng Prog 43:459-66 S '47

Continuous process for hydrolysis of fats. Chem Age (Lond) 56:322 Mr 15 '47

Debate U.S. 1947 fat needs. Soap & San Chem 23:42 Ja '47

Determination of the peroxide values of edible fats and oils; the iodimetric method. C. H. Lea. bibliog diag Soc Chem Ind J 65:286-91 O '46

L'évolution de l'huilerie française. P. Razous. il plan Génie Civil 123:321-3 D 1 '46

Fats from coal seen deficient. F. H. Rein. Food Ind 19:1353+ O '47

Fats, oils controls opposed. J. B. Gordon. Oil Paint & Drug Rep 151:3 Je 16 '47

Fatty amines; new commercial chemical family. K. E. Johnson. il Chem Ind 59:838-40 N '46

Glyceride structure of natural fats. K. F. Mattil and F. A. Norris. bibliog Science 105: 257-9 Mr 7 '47

Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47

No early change expected in fats and oils situation. C. E. Lund. il Dom Comm 35:44-9 Ap '47

Norwegian fat-hardening progress. W. G. Cass. Chem & Eng N 24:3412+ D 25 '46

Nutritive value of margarine and edible vegetable oils. H. Wilkinson. Chem & Ind p256-7 My 10 '47

Oil chemists affected by shortages. Chem & Eng N 24:3036-7 N 25 '46

Oils and fats in 1947. R. M. Walsh. Soap & San Chem 23:47-9+ F '47

Prevention of water pollution by oil from engineering works. C. Hogg and others. il plan diags Engineering 163:513-16, 537-9 Je 20-27 '47

Silicone oils. D. F. Wilcock. bibliog Gen Elec R 49:14-18 N; 28-33 D '46

Solvent extraction of vegetable oils. S. E. Tray and C. W. Bilbe. flow sheet(p 160-3) il Chem Eng 54:139-41+ My '47

Synthetic fats. P. N. Williams. bibliog Chem & Ind p251-5 My 10 '47

See also

Acids, Fatty
Castor oil
Citronella oil
Cottonseed oil
Creosote
Drying oils
Emulsions
Essential oils
Fish oil
Gasoline
Insulating oil
Linseed oil
Lubricating greases
Lubricating oils
Lubrication and lubricants
Lumbang oil
Oil fuel
Oil industries
Oiticica oil
Oleomargarine
Olive oil
Onion oil
Peanut oil
Peppermint oil
Petroleum
Rancidity
Rapeseed oil
Shortening
Soap
Soybean oil
Stand oils
Tall oil
Tung oil
Viscosity

Analysis

See Oil analysis

Prices

Chemicals, oils, and drugs price records: 1939-1940, 1942, 1945-1946; tabulation. Oil Paint & Drug Rep 151:7 Ja 13 '47

Oil and fat prices advance sharply in fourth quarter. Soap & San Chem 23:44-5 O '47

Statistics

Bureau of census to undertake census of vegetable and animal fats. Chem & Eng N 25:2479 S 1 '47

Oils, fats and waxes. Published in weekly numbers of Oil, paint and drug reporter

Oils, fats consumption; July-Sept., 1946. Oil Paint & Drug Rep 150:7 D 23 '46

Present state of fats and soaps in France. Chem & Ind p306 My 31 '47

OILWELL drilling contractors, American association of. See American association of oilwell drilling contractors

OITICICA oil
Change in specification system urged. Oil Paint & Drug Rep 150:83 N 11 '46
Oiticica oil. O. Eisenschiml. Paint Oil & Chem R 109:43-4 D 26 '46

OKINAWA
Water supply
See Water supply—Okinawa

OKLAHOMA
See also
Petroleum industry and trade—Oklahoma
Industries and resources
New way to sell a state to industry. il Sales Management 59:45 Ag 1 '47

OKLAHOMA CITY
Architecture
Medical-dental center, Oklahoma City. il plans diag Arch Rec 101:74-5 Ja '47
Rapid transit
Oklahoma City arbitration. Mass Transportation 43:32+ Ja '47

OKLAHOMA gas and electric company
Public utility securities. Comm & Fin Chr 165:740 F 6 '47
Stock offered. Comm & Fin Chr 165:1319 Mr 10 '47

OKLAHOMA university
Petroleum engineering schools. il Oil & Gas J 46:66-7 O 4 '47

OLD age
Aging population. Fortune 34:250+ D '46
Economic effects of longevity. T. G. Klumpp. Comm & Fin Chr 164:2616+ N 21 '46
Old age. il Fortune 34:122-5+ D '46
Problems of gerontology. R. G. Hoskins. Science 105:590-2 Je 6 '47
See also
Age and employment
Longevity

OLD age homes
Old age; Ward Manor. il Fortune 34:122-5+ D '46

OLD age pensions
Misleading Reader's Digest article on old age security. M. A. Linton. Life Ins Courant 52: 272-3 Jl '47
Reform of the Swedish national pension scheme. Int Labour R 54:384-7 N '46
Social security grows up. il Bsns W p19-20 F 1 '47
See also
Pensions, Industrial
Rabbis—Pensions
Railroads—Pensions
Teachers—Pensions
Trade unions—Benefit funds
United nations—Employees' pensions

OLDER workers. See Age and employment

OLEFINS
Addition of dinitrogen tetroxide to olefins. N. Levy, C. W. Scaife and A. E. W. Smith. diag Chem Soc J p 1093-104 D '46
Addition of dinitrogen tetroxide to olefins; abstract. C. W. Scaife. Chem & Ind p340-1 Je 14.'47
Addition of thio-compounds to olefins. J. I. Cunneen. Chem Soc J p36-40, 134-41 Ja-F '47
Alcohols above C_3 produced from olefins, CO and hydrogen. il diag Chem Ind 60:232-3 F '47
Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69:633-4 Mr '47
Certain fundamental concepts relating to non-polar mechanisms in olefinic systems. E. H. Farmer. bibliog Soc Chem Ind J 66: 86-93 Mr '47
Cuprous chloride derivatives of C_5 diolefins. A. L. Ward and E. C. Makin, jr. bibliog Am Chem Soc J 69:657-9 Mr '47
Derivatives of sulfenic acids; reactions of 2-nitrobenzenesulfenyl chloride, 2,4-dinitrobenzenesulfenyl chloride and of the corresponding sulfenyl thiocyanates with olefins and with methyl ketones. N. Kharasch, H. L. Wehrmeister and H. Tigerman. bibliog Am Chem Soc J 69:1612-15 Jl '47
Determination of olefinic unsaturation; nitrogen tetroxide method as applied to petroleum hydrocarbons in the gasoline boiling range. G. R. Bond, jr. diags Ind & Eng Chem Anal ed 18:692-6 N '46
Electronic interpretation of the reaction of olefins with organic per-acids. D. Swern. bibliog Am Chem Soc J 69:1692-8 Jl '47
Fluorination of perhalogen olefins. W. T. Miller, jr. and others. bibliog diags Ind & Eng Chem 39:401-4 Mr '47
Infra-red absorption spectra of some octenes. R. S. Rasmussen and others. diags J Chem Phys 15:135-40 Mr '47
Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene. R. S. Rasmussen and R. R. Brattain. bibliog J Chem Phys 15:120-30 Mr '47
Methods for evaluating new diene-type polymers. A. E. Juve and C. H. Schroeder. il India Rubber World 115:515-17+ Ja '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Nitroölefins by the vapor phase catalytic cleavage of esters of nitro alcohols. M. H. Gold. bibliog Am Chem Soc J 68:2544-6 D '46
Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47
Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A. Morton, M. L. Brown and E. Magat. bibliog Am Chem Soc J 69:161-7 Ja '47
Polymerization; the alfin catalysts. A. A. Morton, E. E. Magat and R. L. Letsinger. Am Chem Soc J 69:950-61 Ap '47
Reactions of atoms and free radicals in solution; addition of bromotrichloromethane to olefins. M. S. Kharasch, O. Reinmuth and W. H. Urry. bibliog Am Chem Soc J 69: 1105-10 My '47
Reactions of atoms and free radicals in solution; addition of polyhalomethanes to olefins. M. S. Kharasch, E. V. Jensen and W. H. Urry. bibliog Am Chem Soc J 69: 1100-5 My '47
Reduction of unsaturated hydrocarbons at the dropping mercury electrode; mechanism of the dimerizing addition of sodium to olefins. S. Wawzonek and J. W. Fan. bibliog Am Chem Soc J 68:2541-4 D '46
Removal of hydrogen bromide from certain β-phenylalkyl bromides by means of potassium amide in liquid ammonia. C. R. Hauser and others. bibliog Am Chem Soc J 69:589-93 Mr '47
Synthesis of halobutanes. E. T. McBee and W. R. Hausch. bibliog Ind & Eng Chem 39: 418-20 Mr '47
Unsaturated nitriles; adducts of dienes with fumaronitrile. D. T. Mowry. bibliog Am Chem Soc J 69:573-5 Mr '47
Use of diarylvinyl bromides as diene components in the Wagner-Jauregg reaction. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1777-9 Jl '47
Analysis
Micromethod for determination of gaseous olefins. R. Pyke, A. Kahn and D. J. LeRoy. bibliog Anal Chem 19:65-6 Ja '47

OLEIC acid
Emersol process; staff report. R. L. Demmerle. bibliog flow sheet il diags Ind & Eng Chem 39:126-31 F '47
Fatty acid doublet; dimerization of polyunsaturated fatty acids. Chem Ind 61:606 O '47
Iso-oleic acid; abstract. A. Boemer and J. Stather. Paint Oil & Chem R 110:27-8 Mr 6 '47
TGA oleic and castor specifications. Soap & San Chem 23:77 My '47
X-ray and thermal examination of the glycerides; glycerides of erucic, brassidic, oleic, and elaidic acids. M. G. R. Carter and T. Malkin. Chem Soc J p554-8, pl 1-2 Ap '47

OLEIN
Polymorphism of triolein. R. H. Ferguson and E. S. Lutton. bibliog pl Am Chem Soc J 69:1445-8 Je '47

OLEIN—*Continued*
X-ray diffraction analyses of synthetic unsaturated monacid diglycerides. B. F. Daubert and E. S. Lutton. bibliog Am Chem Soc J 69:1449-51 Je '47

OLEOGRANULOMA
Oleogranuloma; the late effects of accidental injection of mineral oil under pressure; abstract. B. Moore. J Ind Hygiene 29:sup 91-2 S '47

OLEOMARGARINE
Changes in fats and oils during freezing and thawing. Food Ind 19:632-3 My '47
Margarine producers establish company, Denmark. For Comm W 27:25 My 3 '47
Margarin sales fee invalidated in Pennsylvania. Oil Paint & Drug Rep 150:5 D 30 '46
Nutritive value of margarine and edible vegetable oils. H. Wilkinson. Chem & Ind p256-7 My 10 '47
Tough going, but the margarine fight makes headway. E. M. Kelley. Sales Management 58:120+ Je 15 '47
Victory for oleo; Pennsylvania high court upsets margarine tax. Bsns W p24 F 8 '47

Advertising
Margarine manufacturers to fight for market with continuing association and brand ads. W. H. Davis. Ptr Ink 218:72 Ja 31 '47

Analysis
New spectrophotometric method for the determination of vitamin A; application to margarine. J. Awapara and others. bibliog Science 104:602-4 D 20 '46

Manufacture
Churngold margarine made by continuous process; adaptation of equipment, originally designed for continuous ice cream manufacture. J. E. Slaughter, jr. flow diag il Food Ind 19:1050-2 Ag '47

OLIVE oil
Olive oil as a solvent for certain organic vapors. R. Macy and B. Gehauf. Science 106:274-5 S 19 '47
Olive-oil production and exports, French Morocco. For Comm W 29:27 O 25 '47
Olive-oil production, Turkey, 1946. For Comm W 26:30 F 1 '47
Olive oil rancidity; abstract. S. A. Kaloyereas. Soap & San Chem 23:87 My '47
Olive oils standards to be set by USDA. Oil Paint & Drug Rep 152:3 O 27 '47

OLIVER corporation
Annual report. Comm & Fin Chr 165:2141 Ap 21 '47
Promising stocks. Mag of Wall St 79:665 Mr 15 '47
Stocks selling below current net assets. Mag of Wall St 80:703 S 27 '47

OLIVER iron and steel corporation
Labor joins in at Oliver iron corp.; union and management cooperate on time studies. Bsns W p76 Ag 30 '47

OLIVER law. See Accountants, Public—Law

OLIVES
Near-record production in 1947 of olives and olive oil, Greece. For Comm W 29:27-8 O 4 '47
Plastic used for brine tanks; Plexiglas used by processor of olives. il Food Ind 119:464 Ap '47
Production of olives, Greece, 1940-1946. For Comm W 25:33 N 16 '46

OLIVINE
Magnesia from olivine. E. A. Gee and others. bibliog 9pls U S Bur Mines Rep of Invest 3938:1-33 '46; Abstract. Oil Paint & Drug Rep 150:58 D 16 '46
Phosphate fertilizer by olivine-phosphate fusion. R. W. Moulton. flow sheet Chem Eng Prog 43:163-4 Ap '47
Washington's vast olivine deposit. M. Roberts. il Min Cong J 33:29-32 Je '47

OLNEY, Louis Atwell, 1874-
Portrait. Am Dyestuff Rep 35:561 D 2 '46; Textile Col 69:21 Ja '47
Presentation and acceptance of Olney portrait. Am Dyestuff Rep 36:84-6 F 24 '47

OLNEY medal
Olney medal award. Am Dyestuff Rep 36:86-90 F 24 '47

OMNIBUS corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:210-11 My 24 '47

ONION oil
Estimation of sulfur compounds in air. B. Feiner and others. bibliog J Ind Hygiene 28:276-7 N '46

ONIONS
Industrial hygiene survey of an onion dehydrating plant. B. Feiner and others. bibliog J Ind Hygiene 28:278-9 N '46

ONIONS, Dried
Browning of dehydrated vegetables during storage. R. R. Legault and others. bibliog Ind & Eng Chem 39:1294-9 O '47

ONIUM compounds
Properties of electrolytic solutions; conductance of several quaternary onium salts in ethylene chloride at 25°. L. F. Gleysteen and C. A. Kraus. bibliog Am Chem Soc J 69:451-4 F '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47

ONLAP (term)
Onlap and strike-overlap. F. A. Melton. diags Am Assn Pet Geologists Bul 31:1868-78 O '47

ONONDAGA pottery company
Onondaga Pottery's 75th anniversary shows America coming of age in the production of fine china. il Cer Ind 48:90-2+ Mr '47

ONTARIO
Future of northern Ontario. V. H. Evans. il Roads & Bridges 85:108+ Mr '47
See also
Coal mines and mining—Ontario
Gold mines and mining—Ontario
Mines and mineral resources—Ontario
Roads—Ontario

Hydroelectric power commission
Report for year ended Oct. 31, 1946. Electrician 139:1220 O 24 '47

ONTARIO good roads association
Annual meeting, 45th, Toronto, Feb. 25-26. Roads & Bridges 85:89-99+ Mr '47

ONTARIO road builders' association
Annual meeting, Toronto, Feb. 26. Roads & Bridges 85:100-3 Mr '47

O'OKIEP copper company
Nababeep and East O'okiep; from African copper mines, U.S. engineers are taking substantial profits. il map Fortune 36:76-81+ Jl '47; Same cond. Min & Met 28:440-3 S '47

OÖLITES
Oölite deformation in the South Mountain fold, Maryland. E. Cloos. map diags Geol Soc Bul 58:843-917, pl 1-13 bibliog(p915-17) S '47

OOMS, Casper W. 1902-
Portrait. Chem & Eng N 24:3027 N 25 '46

OPACIFICATION
See also
Glass—Opacification

OPACIFIERS
Developing opacity in ceramics. H. D. Prior. Cer Ind 48:53+ F '47
Vitreous enamel opacifier; patent. Glass Ind 28:418 Ag '47

OPACITY
Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37:826-32 O '47
See also
Opacifiers
Paper—Opacity

OPAL
Composition and genesis of opal. J Chem Educ 24:288 Je '47

OPEN and closed shop
Arizona fights closed-shop contracts. Eng N 137:702 N 28 '46

OPEN and closed shop—*Continued*
Ball bill would ban closed shop. Comm & Fin Chr 165:319 Ja 16 '47
Closed-shop fight. Bsns W p88+ N 30 '46
Closed-shop issue. N. C. Rockwood. Rock Prod 50:106+ F '47; Same abr. Chem Ind 60:248+ F '47
Closed shop issue headed for court ruling as 3 more states vote curbs. Nat Pet N 38: 41-2 N 27 '46
Closed shop; its economic significance and legal status. T. J. Anderson, jr. Comm & Fin Chr 165:121+ Ja 9 '47
Closed shop; off the record; Business week survey of employers. map Bsns W p84+ Mr 8 '47
Closed-shop tally; 1947 state legislation. Bsns W p96 Ap 12 '47
Distortion and abuse of closed shop principles need correction. A. M. Sakolski. Comm & Fin Chr 165:991+ F 20 '47
For goodwill Forstmann Woolen gives union shop voluntarily. Bsns W p 104+ Je 7 '47
How practical personnel men think the labor law will work; compulsory union membership. E. H. Van Delden. Factory Management 105:93-4 Ag '47
Industry's viewpoint on labor's demands. H. W. Steinkraus. Ann Am Acad 248:11-19 N '46
Iowa law bans closed shop. Comm & Fin Chr 165:2494 My 8 '47
Legislative restrictions on the closed shop; state laws. A. Acee. Mo Labor R 64:1056-9 Je '47
Little sympathy shown for closed shop principle; Gallup poll. Iron Age 159:105 Ja 30 '47
Stoppage sought; employers and unions waiting for court decision on closed-shop bans. Bsns W p100 Mr 22 '47
T-H test case; A.F.L. typographers' efforts to get around closed-shop ban. Bsns W p 102-3 O 25 '47
Taft law test shapes up; A.F.L. printers vote to sign no contracts. Bsns W p84+ S 6 '47
Turgot and the closed shop; an historical precedent; monopoly of French guilds in trades and professions. H. Gluck. Comm & Fin Chr 165:1923+ Ap 10 '47
Union security and its implications. L. Stark. Ann Am Acad 248:62-9 N '46

OPEN hearth furnaces
All-basic open hearth furnace to be used for experimental purposes. il Blast F & Steel Pl 35:1209-12 O '47
Basic ports and roofs in European open-hearth furnaces. P. Bettembourg. diags Metal Prog 52:403-10 S '47
Considerations in size distribution of clay firebrick; flue checker chambers for open-hearth regenerative systems. J. A. Pierce. il Steel 120:110-12 Ja 13 '47
Influence of port design on open-hearth furnace flames; summary. J. H. Chesters and others. Engineering 162:486-7 N 22 '46; Discussion. 162:497, 520 N 22-29 '46; Engineer 182:473-4, 486-7 N 22-29 '46
Installation and use of instruments on open-hearth melting furnaces. R. C. Baker. il diags Iron & Steel Inst J 157:81-8 S '47
Measurement of temperature in the open hearth. J. R. Green. il diags Blast F & Steel Pl 35:344-7, 443-7 Mr-Ap '47
Melting shop of the Turkish state iron and steel works. diags Blast F & Steel Pl 35: 333-9 Mr '47
New Homestead openhearths feature highly automatic control. R. Urquhart. il diags Iron Age 159:46-52 Ap 3 '47
New method for building open-hearth flues; use of refractory concrete made with lumnite cement. W. F. Conlin. il Steel 120:94+ Ja 20 '47
Photo-electric roof pyrometer for open-hearth furnaces. T. Land. bibliog pl diags Iron & Steel Inst J 155:568-76 Ap '47
Production of low-silicon basic iron using high-magnesia slags. M. E. Nickel. bibliog Steel 119:112-14+ D 9 '46; Same. Blast F & Steel Pl 34:1522-6 D '46
Significance of the open hearth layman. P. H. Patton. il Blast F & Steel Pl 34:1533-5 D '46
Silica vs. basic brick; rammed doors highlight steel refractory panel. il Brick & Clay Rec 111:68+ Jl '47
Studies steelmaking procedures in all-basic open hearth; Carnegie-Illinois steel corp. il Steel 121:112+ N 3 '47; Same cond. diags Brick & Clay Rec 111:55-7+ O '47

See also
Open hearth process

Charging
Iron substitutes in openhearth charges. R. R. Fayles. il Iron Age 159:57-9 Ja 23 '47
Manufacture of steel in the acid open-hearth furnace by the scrap-carbon process. B. Yaneske. Iron & Steel Inst J 155:24-6 Ja '47

Design
Experimental furnace for the investigation of open-hearth-furnace combustion problems. A. H. Leckie and others. bibliog il diags Iron & Steel Inst J 155:392-422 Mr '47; Discussion. 156:501-4; 157:201-6 Ag, O '47

Firing
Experimental furnace for the investigation of open-hearth-furnace combustion problems. A. H. Leckie and others. bibliog il diags Iron & Steel Inst J 155:392-422 Mr '47; Abstract and discussion. Engineering 163: 483 Je 6 '47

Fuel
Operation of open-hearth furnaces with coke-oven gas and pitch-creosote. D. Kilby. pl diags Iron & Steel Inst J 155:3-20 Ja '47; Same. Blast F & Steel Pl 35:563-70, 707-13 My-Je '47; Discussion. Iron & Steel Inst J 156:501-4 Ag '47

Lining
Effects of variations in raw materials on basic open hearth operations and production. C. R. FonDersmith. il Blast F & Steel Pl 34:1393-5 N '46
Operating a 180-ton open-hearth furnace with ends and main roof of basic construction. A. K. Moore. il Blast F & Steel Pl 35:92-4 Ja '47
Plastic lined furnace doors. J. N. Hornak. Blast F & Steel Pl 34:900 Jl '46; Same. il Brick & Clay Rec 110:76+ Mr '47
Refractory applications for acid open-hearth furnaces. R. R. Fayles. diags Blast F & Steel Pl 35:217-19 F '47

OPEN hearth process
Accelerating rate of carbon elimination of the open-hearth bath; abstract. J. N. Hornak. Steel 121:100 O 13 '47
Acid openhearth slag fluidity and its significance. G. R. Fitterer and others. Metal Prog 50:824 N '46
Application of slag control and an investigation of basic open-hearth furnace slags. T. Fairley. bibliog Iron & Steel Inst J 155: 161-71 F '47; Discussion. 156:505-10; 157: 206-7 Ag, O '47
Basic open hearth slag control. C. R. Funk. il diags Blast F & Steel Pl 35:939-43, 1098-104+, 1230-4 Ag-O '47 (to be cont)
Basic openhearth slags. K. L. Fetters and E. W. Mahaney. bibliog il Iron Age 159:62-6 Mr 6; 64-8 Mr 13 '47
Determination of the equilibrium constant of the reaction between molten iron and hydrogen sulphide. J. White and H. Skelly. bibliog diags Iron & Steel Inst J 155:201-12 F '47
Developments in open hearth practice in 1946. O. P. Luetscher. il Blast F & Steel Pl 35:68-71 Ja '47
Direct oxidation. E. B. Hughes. bibliog il diags Blast F & Steel Pl 35:677-86 Je '47; Abstracts. Iron Age 159:52-3+ My 1 '47; Steel 120:107-8 My 5 '47
Economics of oxygen use in steel making furnaces. Blast F & Steel Pl 35:813-16 Jl '47
Factors affecting basic open-hearth operating rates. R. H. Ede. Steel 121:94+ S 8 '47
Fluidity of furnace killed vs. ladle killed basic open hearth heats. D. J. Murphy. il Blast F & Steel Pl 35:558-9 My '47

OPEN hearth process—*Continued*
Improvement of the citric-acid solubility of basic open-hearth slags containing fluorspar. T. F. Pearson. Iron & Steel Inst J 152: 441-53; Discussion. 453-6 no 2 '45
Increases steel output by oxygen impingement technique. Steel 120:88 Mr 31 '47
Instrument for measuring open hearth flame radiation. E. M. Yard. bibliog il diag Blast F & Steel Pl 35:46+ Ap '47
Manufacture of steel in the acid open-hearth furnace by the scrap-carbon process. B. Yaneske. Iron & Steel Inst J 155:24-6 Ja '47
Melting shop of the Turkish state iron and steel works. diags Blast F & Steel Pl 35: 333-9 Mr '47
Mineralogical observations on some basic open-hearth slags. S. O. Agrell. bibliog Iron & Steel Inst J 152:19-55, pl 2-6 no 2 '45
National open hearth steel committee and Coke oven, blast furnace and raw materials committee of the American institute of mining and metallurgical engineers 30th conference program. Blast F & Steel Pl 35: 23-4+ Ap '47
National open hearth steel committee and Coke oven, blast furnace and raw material committee of the American institute of mining and metallurgical engineers 30th conference, Cincinnati, April 21-23. Steel 120:107-8+ My 5 '47; Iron Age 159:50-3+ My 1 '47; Metal Prog 51:972-5 Je '47
Oxide systems pertaining to steel-making furnace slags. A. H. Jay and K. W. Andrews. bibliog Iron & Steel Inst J 152:15-18 no 2 '45
Oxygen-accelerated combustion in open-hearth furnaces. S. T. W. Bailey. diags Steel 121:94+ Ag 11 '47; Abstract. Mech Eng 69:405-6 My '47
Oxygen in steelmaking. E. S. Kopecki. bibliog diag Iron Age 158:47-50 N 28 '46
Oxygen jet speeds openhearth steel output. il diag Iron Age 159:75-6 Je 19 '47
Possibilities for the extended use of oxygen in the British iron and steel industry. M. W. Thring. Iron & Steel Inst J 156:288-91 Je '47
Production of high-strength steels with improved machining characteristics; addition of sodium sulfite. F. O. Johnson. Metal Prog 52:565-7 O '47
Swedish acid openhearth practice. S. M. Wejle. il Iron Age 160:67-8 Jl 3 '47
30 years' advance in the basic open-hearth. J. J. Golden and M. F. Yarotsky. il Metal Prog 52:572-7 O '47
Use of oxygen in furnaces may revolutionize steelmaking. W. A. Lloyd. Iron Age 158: 104-5 N 21 '46
Use of oxygen in open-hearth and electric furnaces. W. G. Gude. il diags Foundry 75: 74-7+ O '47
Use of oxygen in openhearth furnaces; abstracts. J. J. Golden. diags Iron Age 159: 50-2 My 1 '47; Steel 120:107, 108+ My 5 '47; Blast F & Steel Pl 35:572+ My '47
Use of oxygen in the open hearth. G. V. Slottman and F. G. Kerry. il diags Steel 119:106-8+ D 2 '46
Use of oxygen in the open hearth; abstract. E. C. McDonald. il Steel 121:96+ O 13 '47
Use of oxygen in the openhearth bath. G. V. Slottman and F. B. Lounsberry. diag Iron Age 159:42-5 F 20 '47
Use of oxygen in the open hearth furnace. il diags Blast F & Steel Pl 35:949-56, 1091-5, 1224-6 Ag-O '47
Use of oxygen in the open hearth practice for carbon reduction; abstract. G. V. Slottman and F. B. Lounsberry. Iron Age 159: 66-7 My 29 '47
What about the use of oxygen in steelmaking? J. D. Knox. il diags Steel 120:106-8+ Je 23; 86-8+ Je 30 '47

See also
Steel metallurgy—Duplex process

OPEN pit mining. See Mining methods—Stripping operations

OPERA, Dutch

Bibliography
Early Dutch librettos and plays with music in the British museum. A. Loewenberg. J Doc 2:210-37 Mr '47

OPERATING rooms. See Hospitals—Operating rooms

OPERATION crossroads. See Atomic bombs—Testing

OPERATION Tessie. See Technical and scientific societies council of San Diego

OPERATIONS research (term)
Nature and development of operations research. C. Kittel. Science 105:150-3 F 7 '47

OPHTHALMOLOGY

See also
Eye
Lenses

Study and teaching
Graduate course in industrial eye care at New York university College of medicine. Nat Safety N 55:86+ My '47

OPIANIC acid
Decarboxylation of opianic acid. J. Weijlard, E. Tashjian and M. Tishler. Am Chem Soc J 69:2070-1 Ag '47

OPINION meter
New instrument to measure and indicate composite opinion. R Sci Instr 17:561 D '46

OPPENHEIMER, Ernest, 1880-
Seven golden houses; they dominate African mining. por Fortune 34:162-9+ D '46

OPTICAL cements. See Cements

OPTICAL glass. See Glass, Optical

OPTICAL illusions
Optical illusions created by design. il Mod Packaging 20:113 N '46

OPTICAL instruments
Apparatus for determining spherical aberration of convex surface of paraboloid of revolution; production of anti-aircraft searchlight reflectors. B. Goldberg and N. C. Benson. il diags Opt Soc Am J 37:186-91 Mr '47
Characteristics and applications of concentrated-arc lamps for optical testing and demonstrating, microscopy, photographic enlarging and projection apparatus. W. D. Buckingham and C. R. Deibert. il diags Soc Motion Picture Eng J 47:376-99 N '46
Electrophoresis apparatus using parabolic mirrors. S. M. Swingle. bibliog diags R Sci Instr 18:128-32 F '47
Light distribution in the optical image. M. Herzberger. il diags Opt Soc Am J 37: 485-93 Je '47
Mechanical integrator for studying the distribution of light in the optical image. A. Maréchal. Opt Soc Am J 37:403-4 My '47
New optical thickness gauge for flat glass; abstract. L. A. Shussett. Glass Ind 28:532 O '47
Physical society's exhibition of scientific instruments and apparatus. Light & Lighting 40:91-3 My '47
Plastics as optical cements. H. W. Coles and others. bibliog il diags Mod Plastics 24:141-8+ Je '47
Reflectivity and transmissivity of multiple thin coatings. W. Weinstein. Opt Soc Am J 37:576-81 Jl '47
Seeing against the sun; Icaroscope. Machine Design 18:104 N '46
Selective infra-red gas analyzers. W. G. Fastie and A. H. Pfund. bibliog diags Opt Soc Am J 37:762-8 O '47

See also
Camera lucida
Collimators
Densitometers
Diffraction gratings
Epidiascope
Interferometers
Measuring instruments, Optical
Microscope and microscopy
Monochromators
Nephelometers
Photometers
Polariscope
Prisms
Projection apparatus
Reflection (optics)
Spectrograph
Spectrometers
Spectrophotometers
Telescope
Tyndall meter

Testing
Method for making precise resolution measurements. H. S. Coleman and S. W. Harding. bibliog il diag Opt Soc Am J 37:263-71 Ap '47

OPTICAL instruments—Testing—*Continued*
Production and calibration of Foucault test objects of various contrasts. H. S. Coleman and D. G. Clark. il diag Opt Soc Am J 37:272-4 Ap '47
Reduction in image contrast caused by the aberrations in telescopic systems. H. S. Coleman. Opt Soc Am J 37:684-6 S '47
Stray light in optical systems. H. S. Coleman. il diags Opt Soc Am J 37:434-51 Je '47

OPTICAL measurements
Method for making precise resolution measurements. H. S. Coleman and S. W. Harding. bibliog il diag Opt Soc Am J 37:263-71 Ap '47
New calculus for the treatment of optical systems; experimental determination of the matrix. R. C. Jones. Opt Soc Am J 37:110-12 F '47
Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašiček. Opt Soc Am J 37:145-53 Mr '47
Production and calibration of Foucault test objects of various contrasts. H. S. Coleman and D. G. Clark. il diag Opt Soc Am J 37:272-4 Ap '47
Reduction in image contrast caused by the aberrations in telescopic systems. H. S. Coleman. Opt Soc Am J 37:684-6 S '47
Theoretical resolution angles for point and line test objects in the presence of a luminous background. H. S. Coleman and M. F. Coleman. Opt Soc Am J 37:572-6 Jl '47
Transmission measurements with the Beckman quartz spectrophotometer. K. S. Gibson and M. M. Balcom. il diag J Res Nat Bur Stand 38:601-16 Je '47; Same. Opt Soc Am J 37:593-608 Ag '47
Transparency of ocean water. F. A. Jenkins and I. S. Bowen. bibliog diag Opt Soc Am J 36:617-23 N '46

OPTICAL measuring instruments. See Measuring instruments, Optical

OPTICAL methods
Check right angles by optics. H. Harrison. diags Am Mach 91:110 My 8 '47
Improved theory of the light pattern method for the modulation measurement in groove recording. J. Hornbostel. Acoustical Soc Am J 19:165-9 Ja '47
New optical method for observing sedimentation equilibrium. G. Kegeles. bibliog diags Am Chem Soc J 69:1302-5 Je '47
Optical methods for evaluation of metal surfaces. A. A. Vernon and J. Broomfield. bibliog diags Metal Finishing 45:70-1 Ap '47
Optical study of acoustic fields near diffracting edges. J. C. Hubbard and others. bibliog il diags Opt Soc Am J 37:832-6 O '47

OPTICAL properties
See also
Fluorescence
Paper—Optical properties
Refractive index

OPTICAL pyrometers. See Pyrometers and pyrometry

OPTICAL rotation
Action of Grignard reagents on esters of optically active carboxylic acids. A. Campbell and J. Kenyon. Chem Soc J p436-7 Ap '47
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p803-7 S '46
Application of the method of molecular rotation differences to steroids; steroidal hormones and bile acids. D. H. R. Barton. bibliog(101 ref) Chem Soc J p 1116-23 D '46
Basis for the reported optical activity of the salts of aliphatic nitro compounds; 2-nitro-octane. N. Kornblum and others. bibliog Am Chem Soc J 69:307-13 F '47
Chemical and microbiological differentiation of enantiomorphs of galactose and xylose. J. W. Appling, E. K. Ratliff and L. E. Wise. bibliog Anal Chem 19:496-7 Jl '47
Cuprammonium-2,3-butanediol complexes. R. E. Reeves. Am Chem Soc J 69:1836 Jl '47
Epimeric alcohols of the *cyclo*hexane series; the optically active 3-methyl*cyclo*hexanols. A. K. Macbeth and J. A. Mills, Chem Soc J p205-8 F '47
L-Gulo-D-*talo*-heptitol (β-sedoheptitol) and its enantiomorph. A. T. Merrill and others. bibliog Am Chem Soc J 69:70-3 Ja '47
Magnetic optical rotatory powers and diamagnetic susceptibilities of the isomeric aromatic diazocyanides. D. Anderson, M. E. Bedwell and R. J. W. Le Fèvre. diag Chem Soc J p457-60 Ap '47
Optical activity from a new type of steric hindrance. M. S. Newman and A. S. Hussey. Am Chem Soc J 69:978-9 Ap '47
Rate of mutarotation of glucose in water-methanol mixtures catalyzed by acetic acid; ionization of acetic acid in these mixtures. J. J. Giuliano and D. G. Hill. bibliog Am Chem Soc J 68:2359-62 N '46
Rate of the thermal isomerization of α-pinene in the liquid phase. R. E. Fuguitt and J. E. Hawkins. bibliog Am Chem Soc J 69:319-22 F '47
Reaction of *d*-α-phenethyl chloride with silver nitrite. R. H. Eastman and S. D. Ross. bibliog Am Chem Soc J 68:2398 N '46
Rearrangement of *l*-phenacyl-α-phenylethyldimethylammonium bromide. A. Campbell, A. H. J. Houston and J. Kenyon. Chem Soc J p93-5 Ja '47
Relations between rotatory power and structure in the sugar group; some 2'-naphthyl 1-thioglycopyranosides and their acetates. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1668-72 Jl '47
Resolution of 2,3-diphenylbutane. H. H. Richmond and others. bibliog Am Chem Soc J 69:937-9 Ap '47
Suitability of parasantonide for asymmetric photolysis. S. Mitchell and E. J. Y. Scott. Chem Soc J p686-90 My '47

OPTICAL society of America
Proceedings of the thirty-first annual meeting; with abstracts of papers. Opt Soc Am J 36:708-22 D '46
Proceedings of the winter meeting of the Optical society of America; with abstracts of papers. Opt Soc Am J 37:515-29 Je '47

OPTICAL trade
War-surplus optical parts. Consumers Res Bul 19:22 Je '47

OPTICS
Generalized intensity formula for a system of retardation plates. H. Hsü and others. Opt Soc Am J 37:99-106 F '47
Intensity of the light reflected from or transmitted through a pile of plates. L. B. Tuckerman. bibliog Opt Soc Am J 37:818-25 O '47
International conference on optics, Paris, October, 1946. Light & Lighting 40:69-70 Ap '47
New calculus for the treatment of optical systems; experimental determination of the matrix. R. C. Jones. Opt Soc Am J 37:110-12 F '47
New calculus for the treatment of optical systems; more general formulation, and description of another calculus. R. C. Jones. diag Opt Soc Am J 37:107-10 F '47
Proceedings of the thirty-first annual meeting of the Optical society of America; with abstracts of papers. Opt Soc Am J 36:708-22 D '46
Proceedings of the winter meeting of the Optical society of America; with abstracts of papers. Opt Soc Am J 37:515-29 Je '47
Theoretical resolution angles for point and line test objects in the presence of a luminous background. H. S. Coleman and M. F. Coleman. Opt Soc Am J 37:572-6 Jl '47

See also
Absorption of rays
Color
Diffraction
Fluorescence
Lenses
Light
Luminescence
Measuring instruments, Optical
Photochemistry
Photographic optics
Photometry
Photomicrography
Polarization (light)
Prisms
Radiation
Reflection (optics)
Refractive index
Spectrum
Television

OPTICS, Geometrical
Differential method for introducing non-spherical surfaces into calculation of optical systems. D. S. Volosov. Opt Soc Am J 37:342-8 My '47

OPTICS, Geometrical—*Continued*
Focal plane diffraction anomalies in telescopic systems. A. I. Mahan. bibliog il diag Opt Soc Am J 37:852-67 O '47
High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays. J. W. M. DuMond. bibliog il diags R Sci Instr 18:626-38 S '47
Light distribution in the optical image. M. Herzberger. il diags Opt Soc Am J 37:485-93 Je '47
Method of computing correction plate for Schmidt system for near projection, with special reference to system for television projection. H. S. Friedman. diags Opt Soc Am J 37:480-4 Je '47
Parallel plate optics for rapid scanning. S. B. Myers. diags J Ap Phys 18:221-9 F '47
Theory and computation of an aspherical surface. A. E. Glancy. diags Opt Soc Am J 36:416-23 Jl '46; Correction. 37:663 Ag '47

OPTICS, Photographic. See Photographic optics

OPTICS, Physiological
Effect of a constant current on vision. S. V. Kravkov and L. P. Galochkina. bibliog Opt Soc Am J 37:181-6 Mr '47
Effect of atmospheric scattering upon the appearance of a dark object against a sky background. G. A. Fry and others. diags Opt Soc Am J 37:635-41 Ag '47
Photographic granularity and graininess; some characteristics of the visual system of importance in the evaluation of graininess and granularity. L. A. Jones and G. C. Higgins. bibliog il diags Opt Soc Am J 37:217-63 Ap '47
Relation of the configuration of a brightness contrast border to its visibility. G. A. Fry. diags Opt Soc Am J 37:166-75 Mr '47
Stiles and Crawford effect in polarized light. B. O'Brien. Opt Soc Am J 37:275-8 Ap '47

See also
Color sense
Eye
Sight

OPTIONS, Stock purchase. See Stock purchase options

ORANGE (color)
Like red, another tricky second color is orange. G. J. Church. il Inland Ptr 118: 73 D '46

See also
Orange OT

ORANGE juice
Orange juice delivered by the milk man. E. Mauldin. il Food Ind 18:1713 N '46

Analysis
Amperometric determination of dissolved oxygen in orange juice. V. M. Lewis and H. A. McKenzie. bibliog Anal Chem 19:643-6 S '47

ORANGE juice, Dried
Freeze-drying as applied to penicillin, blood plasma and orange juice. E. W. Flosdorf. il Chem Eng Prog 43:343-8 Jl '47; Same cond. Refrig Eng 54:226-30+ S '47
High vacuum technics utilized for drying orange juice; frozen orange concentrate; Vacuum food corporation. L. V. Burton. flow sheet il Food Ind 19:617-22+ My '47

ORANGE juice, Frozen
High vacuum technics utilized for drying orange juice; frozen orange concentrate; Vacuum food corporation. L. V. Burton. flow sheet il Food Ind 19:617-22+ My '47
Regulation of food freezing action. W. J. Finnegan and T. F. Carter. bibliog il Refrig Eng 54:132-4+ Ag '47

ORANGE OT
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47
Solubilization of water-insoluble dye in soap solutions; effects of added salts. J. W. McBain and A. A. Green. bibliog Am Chem Soc J 68:1731-6 S '46

ORANGES
Bagged oranges. il Mod Packaging 21:108-11 O '47
Citrus prospects look bright. Bsns W p52-4 S 27 '47
Orange market aid; new machines may shift the marketing pattern. il Bsns W p78 Ap 26 '47
Oranges wrapped in pliofilm by aid of vacuum. Comp Air Mag 52:203 Ag '47
Quick decline of orange trees, a virus disease. J. M. Wallace and H. S. Fawcett. Science 105:315-16 Mr 21 '47
Refrigeration of oranges in California. H. M. Hendrickson and J. R. MacRill. plans Refrig Eng 54:1-10 sec 2 S '47
Second skin; Florida tests machine that will stretch-wrap and seal oranges in thin pliofilm. il Mod Packaging 20:96-8 Ap '47
Sunkist man: adviser, idea man and diplomat. il Sales Management 58:109-10 F 1 '47

Transportation
Oranges by pallet. il Bsns W p52 Mr 8 '47

ORBITS
Physical significance of Birkhoff's gravitational equations. H. E. Ives. bibliog Phys R 72:229-32 Ag 1 '47

ORCHARD heaters
Isothermal and nonisothermal air-jet investigations. V. Cleeves and L. M. K. Boelter. bibliog diags Chem Eng Prog 43:123-32; Discussion. 132-4 Mr '47

ORCHARDS. See Fruit culture

ORCHIDS
Orchids to you; special packaging brings blooms from Venezuela. il Mod Packaging 20:107+ Jl '47
Undifferentiated growth of orchid embryos on media containing barbiturates. J. T. Curtis. Science 105:128 Ja 31 '47

ORDER blanks
Orderly orders; dress manufacturers and retailers may adopt standard order blank. Bsns W p78-9 Je 7 '47

ORDERS
Planning paperwork. H. P. Dutton. il Factory Management 104:130-1 D '46
Warehouse trains pick stock for retail grocery stores; National tea company. il plan Food Ind 19:53-5 Ja '47

ORDERS, Unfilled
Realistic re-appraisal of backlog orders. W. C. Hanson. Mag of Wall St 79:183-5+ N 23 '46

ORDNANCE
Army ordnance requirements more exacting. Steel 121:71 N 3 '47
Rollcall of firms developing ordnance for U.S. army and navy. Bsns W p21-2 N 16 '46

See also
Naval guns
Projectiles

ORDNANCE department. See United States—Ordnance department

ORDNANCE research laboratory. See Pennsylvania state college—Ordnance research laboratory

ORDOVICIAN period. See Geology, Stratigraphic—Ordovician

ORE analysis. See Metallurgical analysis; Ore sampling

ORE deposits
Ajo mining district, Arizona. J. Gilluly. maps (in pocket) U S Geol S Professional Pa 209: 1-112, pl 1-27 '46
Chojlla mine unusual in geological features. G. D. Bellows. il diags Eng & Min J 148: 68-70 S '47
Cobalt mineralization in the Blackbird district, Lemhi county, Idaho. A. L. Anderson. bibliog il map Econ Geol 42:22-46 Ja '47
Control of ore by primary igneous structures, Porcher Island, British Columbia. A. Smith. bibliog map Geol Soc Bul 58:245-61, pl 1-2 Mr '47
Deep discoveries intensify Coeur d'Alene activities. R. E. Sorenson. bibliog map diag Eng & Min J 148:70-8 O '47
Epithermal mineralization at the Last Chance and Hornsilver mines, Lava Creek district, Butte county, Idaho. A. L. Anderson. bibliog maps Geol Soc Bul 58:451-82, pl 1-4 My '47

ORE deposits—*Continued*
Geology of the lead-silver deposits of the Clark Fork district, Bonner county, Idaho. A. L. Anderson. bibliog maps U S Geol S Bul 944-B:37-117, pl 5-13 '47
Hydrothermal alteration in the Castle Dome copper deposit, Arizona. N. P. Peterson and others. maps diag Econ Geol 41:820-40 D '46
Metalliferous geochemical zones of Australia. E. S. Hills. maps Econ Geol 42:478-91 Ag '47
Mining geology; review of 1946. C. D. Hulin. Min & Met 28:56-8 F '47
Movement of mineralizing solutions in the Picher field, Oklahoma-Kansas. R. E. Stoiber. il map Econ Geol 41:800-12 D '46
Original sixteen to one gold-quartz vein, Alleghany, California. H. R. Cooke, jr. bibliog il maps diags Econ Geol 42:211-50 My '47
Porosity and ore deposition at Edwards and Balmat, New York. J. S. Brown. bibliog diags Geol Soc Bul 58:505-46, pl 1-10 Je '47
Principal theses of the genetic systematics of intrusive bodies. A. A. Polkanov. Am J Sci 244:849-53 D '46
St Joseph lead enterprise; geology and exploration at the Edwards and Balmat mines, N.Y.; mining practice. J. S. Brown; M. G. Jones. il maps plans diags Min & Met 28:387-94 Ag '47
Some physical characteristics of certain favorable and unfavorable ore horizons. O. N. Rove. bibliog(39 titles) il Econ Geol 42:57-77, 161-93 Ja-Mr '47
Some pipe deposits of eastern Australia. R. Blanchard. maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47
Statistical relation between TiO_2, Fe_2O_3, and FeO in rocks and ores during differentiation of a titaniferous magma. P. Evrard. bibliog Geol Soc Bul 58:197-210 Mr '47
Structural control and wall-rock alteration at the Wilbert mine, Dome district, Butte county, Idaho. A. L. Anderson. il map plan diags Econ Geol 42:368-83 Je '47
Temperature of crystallization of a fluorite crystal from Luna county, New Mexico. W. S. Twenhofel. bibliog diags Econ Geol 42:78-82 Ja '47
Transport and deposition of the non-sulphide vein minerals. F. G. Smith. bibliog il diag Econ Geol 41:57-63; 42:251-64 Ja '46, My '47
Ubiquity of gold values and their relation to zones of tensional dilation. W. J. Bichan. Econ Geol 42:396-403 Je '47

See also
Geology
Gold ores
Iron ores
Metasomatism
Mine maps
Mines and mineral resources
Pyrites

ORE docks
Ore dock unloading capacity increased by installing rectifier stations; Gary works of the Carnegie-Illinois steel corp. H. E. Reinhold. il diags Steel 120:114+ F 10 '47

ORE handling
Handling blast furnace materials. J. A. Oates. il plan diags Mech Handling 34:539-48 O '47
Pipeline transportation of ores. C. E. Wuensch. flow sheet Min Cong J 33:77-80 Ap '47
World's longest aerial ropeway; transporting ores from Boliden mine. il Mech Handling 34:549+ O '47 (to be cont)

See also
Chutes
Ore docks

ORE sampling
Aerofall bulk sampler. diag Can Min J 67: 1031-3 N '46
Drilling and sampling with a wagon drill. J. H. Soulé. 4pls U S Bur Mines Rep of Invest 3984:1-7 '47
Sampling diamond deposits in southern Africa. D. A. Pifer. il diag Eng & Min J 148:78-81 Mr '47
Sampling mineral deposits with a wagon drill. diag Comp Air Mag 52:256 O '47
Sampling the Fox and Mills tailing piles, Lafayette county, Wisconsin. G. A. Apell. 4pls U S Bur Mines Rep of Invest 3991:1-7 '47

ORE ships
Diesel-electric power propells ore carrier. il Steel 119:100+ D 16 '46

ORE testing
Rapid method of ore testing, the S.K. porosity test. H. L. Saunders and H. J. Tress. diag Iron & Steel Inst J 152:291-300; Discussion. 300-2 no 2 '45
Some physical characteristics of certain favorable and unfavorable ore horizons. O. N. Rove. bibliog(39 titles) il Econ Geol 42: 161-93 Mr '47

See also
Assaying
Ore sampling

ORE transportation

See also
Iron ores—Transportation
Ore ships

ORE treatment
Beneficiation of chromite ores from western United States. J. V. Batty and others. U S Bur Mines Rep of Invest 4079:1-26 '47
Beneficiation of oxide tin ores from the states of Zacatecas and Guanajuato, Mexico. W. G. Sandell and others. U S Bur Mines Rep of Invest 4080:1-10 '47
Beneficiation of western manganese ores. C. H. Schack and H. G. Poole. U S Bur Mines Rep of Invest 4117:1-38 '47
Centrifugal ball-mill classifier. C. E. Wuensch. il diag Min Cong J 33:22-5+ S '47
Conditioning of Alabama iron ores. A. A. Nilsen and R. Yingling. il Steel 120:110+ Mr 31 '47
Dressing minerals; editorial. Min & Met 27: 461 S '46; Discussion. 27:553-4, 600-1; 28: 21-2, 166-7 N '46-Ja, Mr '47
Economy, simplicity now watchwords in milling. R. H. Ramsey. il diag Eng & Min J 148: 99-104+ F '47
Engineering problems in the preparation of ores for blast-furnaces. D. C. Hendry. plans diags Iron & Steel Inst J 155:121-35 Ja '47; Discussion. il 156:415-28 Jl '47
Latest developments in ore dressing. S. R. Zimmerley. il Min Cong J 33:39-42 F '47
Mineral-dressing characteristics of the red iron ores of Birmingham, Ala. W. H. Coghill and G. D. Coe. bibliog(41 titles) pls fold map diags U S Bur Mines Bul 464:1-99; pa 35c Supt. of doc. '46
Ore concentration and milling; review of 1946. E. H. Rose. il Min & Met 28:67-72 F '47
Ore preparation plant. J. Vevers. flow diag diag Mech Handling 33:707-9+ N '46
Ore treatment by heavy-media separation. il diag Engineer 182:523 D 6 '46
Pilot mill concentration of Las Vegas Wash manganese ore, Boulder City, Nev. S. R. Zimmerley and C. H. Schack. 4pls U S Bur Mines Rep of Invest 4123:1-31 '47
Pilot-plant production of high-grade magnetite concentrates, Cranberry, N.C. F. D. Lamb and D. A. Woodard. U S Bur Mines Rep of Invest 3980:1-7, pl 1-3 '46
Remote control a feature of ore-conditioning plant; Tennessee coal, iron & railroad co. A. A. Nilsen and R. Yingling. il Eng & Min J 148:74-9 Ap '47
Research widens field for iron-ore beneficiation. G. J. Holt. il Eng & Min J 148:108-11 F '47
Retreatment of corundum tailings at Craigmont. A. G. Roach. bibliog flow sheet il Can Min J 68:563-8 Ag '47
St Joseph lead enterprise; milling practice at the Balmat and Edwards mills. J. J. Burns. flow sheet il Min & Met 28:395-7 Ag '47
St Joseph lead enterprise; milling practices in southeast Missouri. H. R. Stahl. flow sheet il Min & Met 28:374-6 Ag '47
Sulfur dioxide leaching tests on various western manganese ores. W. F. Wyman and S. F. Ravitz. bibliog U S Bur Mines Rep of Invest 4077:1-12 '47
Technology will solve our iron-ore problems. C. Zapffe. il Eng & Min J 148:88-90 Jl '47

ORE treatment—*Continued*
What needs doing in ore dressing. E. J. Pryor. il Min & Met 28:512-15 O '47

See also
Ball mills
Electrometallurgy
Flotation process
Gold metallurgy
Iron metallurgy
Metallurgy
Sintering
Tailings
Tube mills
Zinc metallurgy

Bibliography

Metallurgical research program of the Bureau of mines relating to the nonferrous metals; Bureau staff publications on ore dressing. R. S. Dean and B. Silkes. U S Bur Mines Rep of Invest 4064:3-6 '47

Study and teaching

New profession, mineral engineering, and its background. A. F. Taggart. Min & Met 28:432-5 S '47

ORE washing
Improved iron-ore concentrator; Wiedelmann washing tower. Comp Air Mag 52:206 Ag '47; Same abr. Mech Eng 69:503-4 Je '47
Iron-ore washing tower developed in Germany. Mech Eng 69:503-4 Je '47

OREGON
Oregon invites the tourist, and bones up on how to sell him. L. Newkirk. il Sales Management 58:40-2 My 20 '47

See also
Portland, Oregon

O'REILLY, Winifred
Miss O'Reilly of Slocum. pors Fortune 35: 128-31+ F '47

ORES
Chart determines ore values. A. F. Horle. Eng & Min J 148:71 S '47

See also
Copper ores
Geology
Gold ores
Iron ores
Lead ores
Manganese ores
Metallurgy
Metals
Mines and mineral resources
Ore deposits
Ore sampling
Ore treatment
Tin ores
Tungsten ores
Zinc ores

ORGANIC chemistry. See Chemistry, Organic

ORGANIZATION in industry
Adapting the industrial organization to changing conditions; abstract. H. A. Hopf. Management R 36:68-70 F '47
Administrative control of branch plant operations. J. L. Brennan. Management R 36: 49-58 Ja '47
Decentralized sales management; how it's working out at Sylvania. F. W. Mansfield. Sales Management 58:76+ F 15 '47
Departmental integration brings top efficiency in safety and medical units. S. D. Steiner. il Safety Eng 93:62-5 Ap '47
Engineering research. D. B. Hertz. Chem Eng 54:118-22 Ja '47
Ford shakeup forecasts pitched battle for auto sales supremacy. Sales Management 58: 75-6+ Mr 1 '47
Handling organized for mass production; Kaiser-Frazer corp. E. M. Argersinger. il Am Mach 91:98-100 O 23 '47
New staff from old employees; Walker's Austex chili company. R. McDaniel. il Am Bsns 17:16-17+ O '47
Organization, a neglected science. A. Brown. Tech R 49:408-10+ My '47
Organization of quality control as a management tool. T. D. Foy. Elec Eng 66:483-6 My '47; Same cond. Machine Design 18: 127-30 N '46
Organization plan for expansion; Johns-Manville reorganizes executive duties. E. Whitmore. Am Bsns 16:10-11+ N '46
Organization requirements for successful export business. G. W. Wolf. Mech Eng 69: 26-8 Ja '47
Organizing for industrial marketing research. K. G. Fuller. Ind Marketing 31:39-40+ D '46
Plan of organization. F. H. Rowland. Advanced Management 11:152-66 D '46
Plant organization and maintenance for civil engineering contractors. H. O. Parrack. Engineering 160:430, 456-7, 465 N 23-D 7 '45; Same. plan Inst Mech Eng J & Proc 154: Proc 285-94; Discussion. 294-302 D '46
Plant organization for quality control. D. E. Durst. Elec Eng 66:486-7 My '47
Principles of organization. E. W. Smith. Mech Eng 69:16-18+ Ja '47
Purpose and organization of a development department. R. D. Gartrell. il Product Eng 18:81-4 Ap '47
Refinery-engineering organization has manifold responsibilities at Shell's Wood River plant. J. F. Goldsberry. Oil & Gas J 45: 213-14+ Mr 22 '47
Semicircular chart shows who's who in the plant; Reynolds wire co. R. T. Finnell. Factory Management 105:92-3 O '47
Standard systems; vital aid to management; staffing and functioning of a systems department; types of publications. T. A. McMullen and J. H. Quick. il Iron Age 158: 48-50 D 26 '46
Study of relationship in industry. J. J. Gillespie and A. K. Rice. Engineer 183:544-6 Je 20 '47
What's wrong with organization charts? P. H. Littlefield. Management R 36:315-17 Je '47
Who the staff man is and what he does; Lockheed Aircraft. J. W. McFarland. il Factory Management 105:92-3 F '47

See also
Advertising departments
Credit departments
Employment departments
Engineering departments
Packaging departments
Research departments
Sales departments
Sales promotion departments

ORGANOSOLS. See Colloids

ORIENTATION (architecture)
Builder Sloan erects first all-sealed house in America; Glenview, Ill. home combines solar heat, mechanical heat and air conditioning. il plans Am Bld 69:96-105 Ap '47
Hillside house, Central Valley, N.Y. solves difficult problem of solar orientation. il plans diags Arch Forum 86:126-8 Ap '47
House in Toronto; solar construction planned for typical suburban lot. il plans Arch Forum 85:91-3 D '46
Northeastern solar house is compact, economical, relies on architectural restraint to conform to its locale; house in Weston, Mass. il plan diags Arch Forum 87:90-5 S '47
Solar house achieves privacy on a plot facing south in Winnetka, Ill. il plans Arch Forum 86:98-9 F '47
This Midwest house, with solar windows, water-cooled roof, cavity walls and cellular floors, masters a difficult climate. il plan diags Arch Forum 87:107-9 S '47
Wickes, inc. builds a house with packaged utilities, solar fenestration, prefab radiant heat. il plans diags Arch Forum 86:98-100 Ja '47

ORIENTATION (crystals). See Crystals

ORIFICE meters
Hydraulics for the practical water works man. R. W. Angus. diags Water & Sewage Works 94:245-8 Jl '47
Indications of an orifice meter. H. S. Bean. bibliog diags Am Gas Assn Mo 29:337-41+ Jl-Ag '47
Orifice discharge coefficients in the viscous-flow range; units measuring lubricating-oil flow rates in aviation engines during flight. G. S. Peterson. il diags A S M E Trans 69: 765-8 O '47
Orifice meters in oil pipe line service. Pet Eng 18:204+ Mr '47

ORNAMENTAL plants. See Plants, Ornamental

ORONITE
Oronite expands detergent plant capacity. Chem Eng 53:170 D '46

OROTIC acid
Intermediates in the synthesis of orotic acid from oxalacetic ester and urea. H. K. Mitchell and J. F. Nyc. bibliog Am Chem Soc J 69:674-7 Mr '47
Synthesis of orotic acid from aspartic acid. J. F. Nyc and H. K. Mitchell. bibliog Am Chem Soc J 69:1382-4 Je '47

ORPHANAGES
See also
Hershey industrial school

ORTHICON. See Television cameras

ORTHO effect
Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47
Ortho effects in the Wagner-Jauregg reaction. J. Szmuszkowicz and F. Bergmann. Am Chem Soc J 69:1779-80 Jl '47

ORTHOPEDIA
Low back pain; a different cause and treatment; pronation syndrome. L. Jones. il diag Ind Med 16:57-62 F '47

ORTHO-TOLIDINE. See Tolidin

ORTHOXYLENE. See Xylene

OSAKA, Japan
Osaka puts its port back together. il Bsns W p 112 O 4 '47

OSAZONES
Action of periodic acid on glucose phenylosazone. E. Chargaff and B. Magasanik. bibliog Am Chem Soc J 69:1459-61 Je '47
See also
Phenylosazones

OSCILLATIONS. See Vibration

OSCILLATIONS, Electric
Effects of magnetic field on oscillations and noise in hot-cathode arcs. J. D. Cobine and C. J. Gallagher. J Ap Phys 18:110-16 Ja '47
Noise and oscillations in hot cathode arcs. J. D. Cobine and C. J. Gallagher. bibliog Franklin Inst J 243:41-54 Ja '47

OSCILLATORS
Automatic frequency control of microwave oscillators. V. C. Rideout. diags Inst Radio Eng Proc 35:767-71 Ag '47
Bandswitching v.f.o. exciter. C. Hays. il diag Radio N 38:49-51+ S '47
Electrical noise generators. J. D. Cobine and J. R. Curry. bibliog il diags Inst Radio Eng Proc 35:875-9 S '47
Electrodeless discharges and some allied problems. G. I. Babat. bibliog il diags Inst E E J 94 pt 3:27-37 Ja '47
Electronic frequency stabilization of microwave oscillators. R. V. Pound. diags R Sci Instr 17:490-505 N '46
Electronic switch for the production of pulses. C. R. Smitley and R. E. Graber. il diags Electronics 20:128-30 Ap '47
Elementary theory of velocity-modulation oscillators. N. C. Barford and M. Bowman-Manifold. bibliog Inst E E J 94 pt 3:302-14 S '47
Excess noise in cavity magnetrons. R. L. Sproull. bibliog diags J Ap Phys 18:314-20 Mr '47
Experimental u.h.f. oscillator. C. W. Roeschke. il diags Radio N 37:35+ Ja '47
Frequency control for low-impedance oscillator tanks. V. M. Albers. diags Electronics 20:174+ Je '47
Grounded-grid amplifier valves for very short waves and Triodes for very short waves; oscillators for radar; discussion of papers by J. Foster; J. Bell and others. Inst E E J 94 pt 3:364-8 S '47
High frequency local oscillators; special type tubes. S. Fishman. il diags Radio N 37:54-5+ Ap '47
Improvements in phonograph oscillators. diags Electronics 20:176+ My '47
Improving stability of uhf oscillators. C. A. Helber. il diags Electronics 20:103-5 My '47
Inductance-capacitance oscillator as a frequency divider. E. Norrman. il diags Inst Radio Eng Proc 34:799-803 O '46
Linear sweep circuits. R. P. Owen. diags Electronics 19:136+ D '46
Magnetostriction resonant frequencies; nomograph; reference sheet. R. C. Coile. Electronics 20:130 S '47
Magnetron oscillator for dielectric heating. R. B. Nelson. il diags J Ap Phys 18:356-61 Ap '47
Measuring speed with WWV; harmonics of station's signal obtained for calibrating oscillator used in measurement of shaft speed. J. C. Coe. il diags Electronics 20:90-3 Ag '47
Medium-power triode for 600 megacycles. S. Frankel and others. il diags Inst Radio Eng Proc 34:986-91 D '46
Microwave electronics; properties of a self-excited oscillator; output, etc. J. C. Slater. diags Rs Mod Phys 18:489-95 O '46
Microwave measurements and test equipments. F. J. Gaffney. il diags Inst Radio Eng Proc 34:788-90 O '46
Microwave oscillators using disk-seal tubes. A. M. Gurewitsch and J. R. Whinnery. bibliog il diags Inst Radio Eng Proc 35:462-73 My '47
Millimeter-wave reflex oscillator. J. M. Laf ferty. bibliog il diags J Ap Phys 17:1061-6 D '46
Modified cavity oscillator for the generation of microwaves. G. G. Bruck. diags J Ap Phys 18:843-4 S '47
Neon tube oscillator. il diag Radio N 37:67 Ap '47
New uses for pentagrids. A. H. Taylor. diags Electronics 19:142+ D '46
Non-linear regenerative circuits; frequency and amplitude discrimination. D. G. Tucker. diag Wireless Eng 24:178-84 Je '47
One tube phono oscillator. A. Williams. il diag Radio N 37:52+ Je '47
Oscillator power relations. R. E. Burgess. bibliog diag Wireless Eng 23:237-40 S '46; Discussion. 23:341-2 D '46
Phase-shift oscillators. P. G. M. Dawe and A. S. Gladwin. diags Wireless Eng 24:125-6 Ap '47
Portable pulse generator. E. W. Titterton and V. L. Fitch. diags R Sci Instr 18:639-43 S '47
Pulse modulated oscillator. A. Easton. bibliog diags Electronics 20:124-9 Mr '47
Pulse rise and decay time measurement. A. Easton. diags Electronics 20:180+ S '47
RC audio oscillator. J. T. Goode. il diags Radio N 37:46-7+ Ja '47
R-f inductance meter. H. A. Wheeler. il diags Electronics 20:105-7 S '47
Reflex oscillators. J. R. Pierce and W. G. Shepherd. il diags Bell System Tech J 26: 460-681 Jl '47
Relay oscillator and related devices. R. L. Ives. il diags Franklin Inst J 242:243-77 O '46
Resistance-tuned frequency-modulated oscillator for audio-frequency applications. H. S. McGaughan and C. B. Leslie. diags Inst Radio Eng Proc 35:974-8 S '47
Ring oscillators for u.h.f. transmission. T. Gootée. diags Radio N 37:48-50+ Ja '47
Simple code practice oscillator. R. P. Turner. il diag Radio N 37:88 F '47
Simple 1000-cycle oscillator. A. P. Marion. diag J Chem Educ 24:394 Ag '47
Simple square-wave generator. J. C. Hoadley. il diags Radio N 36:48-9+ D '46
Simplified microwave afc; combinations of motor and electronic action for microwave oscillators; radio-relay system. E. A. Jenks. il diags Electronics 20:120-5 N; 132-6 D '47
Stability and frequency pulling of loaded unstabilized oscillators. J. R. Ford and N. I. Korman. diags Inst Radio Eng Proc 34: 794-9 O '46
Stabilized modulated oscillator. A. E. Hayes, jr. il diags Radio N 37:28-9 Ja '47
Synchronization of oscillators. R. D. Huntoon and A. Weiss. diags J Res Nat Bur Stand 38:397-410 Ap '47
Temperature-dependent resistors, use as electric circuit elements. W. H. B. Cooper and R. A. Seymour. il diags Wireless Eng 24:298-306 O '47
Theory of mode separation in a coaxial oscillator. P. J. Sutro. Inst Radio Eng Proc 34: 960-2 D '46
Vane-actuated controller. W. H. Wannamaker, jr. bibliog and patent list il diags Electronics 20:117-19 Je '47
Variable frequency oscillator. R. W. Field. il diag Radio N 38:65+ S '47
Versatile square wave nerve stimulator. A. C. Guyton. diag R Sci Instr 17:553-6 D '46
Wide-range sweeping oscillator. il diags Electronics 20:112-15 Ag '47

OSCILLATORS—*Continued*
Wide-tuning-range microwave oscillator tube. J. W. Clark and A. L. Samuel. il diags Inst Radio Eng Proc 35:81-3 Ja '47

See also
Klystron
Magnetron
Multivibrators

OSCILLATORS, Crystal
Bounded linear harmonic oscillator and phase transitions of second order. B. Suryan. Phys R 71:741-2 My 15 '47
Crystal controlled signal generator. H. G. Johnson. il diag Radio N 36:42-3+ D '46
Electronic crystal clock. V. E. Heaton. il Mech Eng 69:158-9 F '47; Same cond. with diag. Product Eng 18:141 My '47
Method for calibrating microwave wavemeter. L. E. Hunt. diags Inst Radio Eng Proc 35:979-81 S '47
Microwave frequency standard. R. G. Talpey and H. Goldberg. diags Inst Radio Eng Proc 35:965-9 S '47
New low-coefficient synthetic piezoelectric crystals for use in filters and oscillators. W. P. Mason. bibliog diags Inst Radio Eng Proc 35:1005-12 O '47
Shf heterodyne frequency meter. C. D. Jeffries. il diags Electronics 20:134-7 Ap '47
Stability of crystal oscillators. A. J. Zink, jr. bibliog diags Electronics 20:127-9 My '47
Wide-angle phase modulator; technique for phase modulating a crystal-controlled carrier. H. K. Bradford. diags Electronics 20: 100-3 F '47

OSCILLOGRAPHS
Blanking timer for electromechanical oscillograph. T. O. Meyer. il R Sci Instr 18:194-5 Mr '47
Compact power supply for high current. L. Fleming. il diag Electronics 20:162+ S '47
Micro-oscillograph. il R Sci Instr 18:592-3 Ag '47
Mobile laboratory measures stresses in steel trailers under road conditions. J. Parina, jr. il diags Steel 120:88-9+ Mr 10 '47
New method for the direct recording of prolonged time-dependent processes. W. von Wittern. il diag Science 105:342-4 Mr 28 '47
Single-element of oscillograph records three line voltages. F. R. Schleif. diags Elec World 127:69-70 Mr 1 '47
Versatile oscilloscope. il Sci Am 177:81 Ag '47

OSCILLOGRAPHS, Cathode ray
Application of the cathode ray oscillograph to polarography; abstract. J. E. B. Randles. Chem & Ind p91 F 8 '47
Automatic Sonigage; measures thickness, tests metals and plastics for flaws and defective bond. W. S. Erwin and G. M. Rassweiler. il diags Iron Age 160:48-55 Jl 24 '47
Cathode-ray presentation of three-dimensional data. O. H. Schmitt. diags J Ap Phys 18:819-29 S '47
Cathode ray scanning; general techniques. R. H. Müler. bibliog il diags Anal Chem 19: 74-7 F '47
Constant-gain knock pickup amplifier. R. P. Krebs and T. Dallas. diags Electronics 20: 87-9 Ja '47
Diagnosing engine trouble. il Electronics 20: 136 O '47
Electronic computer for X-ray crystal structure analyses. R. Pepinsky. il diag J Ap Phys 18:601-4 Jl '47
Electronics aids hydraulic circuit analysis. il diags Machine Design 19:121-2 Mr '47
Engine analyzer pinpoints flight trouble. il Aviation W 47:21-2 O 20 '47
Engine ignition faults, and a new method of diagnosis and location during running. F. R. F. Ramsay and W. Nethercot. il diags Inst E E J 93 pt 2:629-33 D '46; Same cond. Engineer 181:542-3 Je 14 '46; Discussion. Inst E E J 93 pt 2:635-41 D '46
Engine indicator; details of the Standard-Sunbury electromagnetic design. S. Hill. diags Automobile Eng 37:19-23 Ja '47
Locates grounds in shielded room. il Electronics 20:134+ O '47
Measuring pressures of industrial explosions. N. J. Thompson and E. W. Cousins. il diags Electronics 20:90-3 N '47
Method for calibrating microwave wavemeter. L. E. Hunt. diags Inst Radio Eng Proc 35:979-81 S '47
Mobile strain gauge recording. il Engineer 184:244-5 S 12 '47
New pressure indicator design; piezoelectric type combined with spark plug. F. M. Mayes and M. A. Lindeman. il diags Automotive & Aviation Ind 96:38-9+ My 1 '47
New uses for pentagrids. A. G. Taylor. diags Electronics 19:142+ D '46
Noise and oscillations in hot cathode arcs. J. D. Cobine and C. J. Gallagher. bibliog Franklin Inst J 243:41-54 Ja '47
Oscillograph study of dielectric properties of barium titanate. A. de Bretteville, jr. bibliog il diag Am Cer Soc J 29:303-7 N 1 '46
Oscilloscope broadens insulation tests. R. Blackway. il Elec World 128:109-10 O 11 '47
Oscilloscope time-base circuit. H. den Hartog and F. A. Muller. diags Wireless Eng 24: 287-92 O '47
Photoelectric lens bench. W. Herriott. il diag Opt Soc Am J 37:472-4 Je '47
Photographic preparation of oscillograms. R. Stollberg. il R Sci Instr 18:133-4 F '47
Producing tube curves on an oscilloscope. H. E. Webking. il diags Electronics 20:128-31 N '47
Pulse modulated oscillator. A. Easton. bibliog diags Electronics 20:124-9 Mr '47
Pulse-type tester for high-power tubes used for loran apparatus. E. C. Easton and E. L. Chaffee. diags Electronics 20:97-9 F '47
Quantitative determination of magnetic properties by use of the cathode-ray oscilloscope. J. Zamsky. diags Elec Eng 66:678-80 Jl '47
Spiral sweep oscilloscope timer. R. B. Moran, jr. il diags Electronics 20:120-3 O '47
Spotweld analyzer for maintenance work. D. F. Hays. il Iron Age 159:49-51 Je 12 '47
Strain gage and oscilloscope combined in hydraulic analyzer. il diag Product Eng 18: 96-7 Ap '47
Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton. bibliog J Ap Phys 17:940-71 N '46
Three inch oscilloscope. J. C. Hoadley. il diags Radio N 37:63-6+ Mr '47
Tone burst generator; multivibrators serve as electronic switch for cathode-ray oscilloscopes, generation of square waves, investigation of code intelligibility and general audio research. R. G. Roush. il diags Electronics 20:92-6 Jl '47
Visual measurement of receiver noise. D. Williams. diags Wireless Eng 24:100-4 Ap '47

OSHAWA, Ontario

Sewerage

Activated sludge sewage treatment plant for city of Oshawa. F. Williams. flow diags il diags Water & Sewage 84:13-17+ D '46
Many special features in Oshawa's new sewage-treatment plant. il Water & Sewage 84:13+ N '46

OSMIUM
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47

Isotopes

Radioactive isotopes of Re, Os, and Ir. L. J. Goodman and M. L. Pool. bibliog Phys R 71:288-93 Mr 1 '47

OSMIUM oxides
Oxidation of β-carotene with osmium tetroxide. G. C. L. Goss and W. D. McFarlane. bibliog Science 106:375 O 17 '47

OSMOMETERS
Dynamic osmometry. K. B. Goldblum. diags J Phys & Colloid Chem 51:474-9 Mr '47
Molecular weight of GR-S fractions; simple glass osmometer for use in hydrocarbon solvents. D. M. French and R. H. Ewart. bibliog diag Anal Chem 19:165-7 Mr '47

OSMOSIS
Application of electrosmosis to soil drainage. A. H. D. Markwick and A. F. Dobson. il diags Engineering 163:121-3 F 7 '47
Isotonic solutions; osmotic and activity coefficients of lithium and sodium perchlorates at 25° C. J. H. Jones. bibliog J Phys & Colloid Chem 51:516-21 Mr '47
Osmotic and activity coefficients of lithium bromide and calcium bromide solutions. R. A. Robinson and H. J. McCoach. Am Chem Soc J 69:2244 S '47

OSMOTIC pressure
Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. W. Working. J Phys & Colloid Chem 51:974-80 Jl '47
Complete apparatus for determination of osmotic molecular weights. G. D. Sands and B. L. Johnson. bibliog il diag Anal Chem 19:261-4 Ap '47
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47
Dynamic osmometry. K. B. Goldblum. diags J Phys & Colloid Chem 51:474-9 Mr '47
Molecular properties of nitrocellulose; studies of molecular heterogeneity. R. H. Blaker, R. M. Badger and R. M. Noyes. bibliog J Phys & Colloid Chem 51:574-9 Mr '47
Molecular weight of GR-S fractions; simple glass osmometer for use in hydrocarbon solvents. D. M. French and R. H. Ewart. bibliog diag Anal Chem 19:165-7 Mr '47
Physical-chemical characteristics of certain of the proteins of normal human plasma. J. L. Oncley, G. Scatchard and A. Brown. bibliog J Phys & Colloid Chem 51:184-98 Ja '47
Physical chemistry of protein solutions; derivation of the equations for the osmotic pressure. G. Scatchard. Am Chem Soc J 68:2315-19 N '46
Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46
Preparation and properties of serum and plasma proteins; osmotic equilibria in solutions of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68: 2320-9 N '46
Temperature dependence of the osmotic pressure of polyvinyl chloride solutions. P. Doty and E. Mishuck. bibliog diag Am Chem Soc J 69:1631-6 Jl '47
Theory regarding the osmotic pressure of colloids in membrane equilibrium. S. G. Chaudhury. bibliog J Phys Chem 50:486-8 N '46
Water immersion testing of metal protective paints; role of electroendosmosis in water absorption and blistering. W. W. Kittelberger and A. C. Elm. il Ind & Eng Chem 39:876-81 Jl '47

OSOTRIAZOLES
Action of copper sulfate on the phenylosazones of the sugars; phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47

OSTEND, Belgium
Harbor
Emergency repairs to continental ports. il map Engineering 164:385-7 O 24 '47

OSTRACODA, Fossil
Bibliography
Status of micropaleontology in eastern Gulf region. H. V. Howe. bibliog Am Assn Pet Geologists Bul 31:713-30 Ap '47

OSTRACODERMI
See also
Trematapis

OSWEGO (N.Y.) soy products corporation
Stock offered. Comm & Fin Chr 165:2802 My 26 '47

OTIS and company
Otis victory? Cleveland Electric puts off financing deal. Bsns W p86+ O 25 '47

OTTAWA, Ontario
Water supply
Further extension of Ottawa waterworks may soon be urgently required. C. T. Heeney. il plan Water & Sewage 84:18-20+ D '46

OTTAWA river
Highway and railway diversion along the Ottawa river; provide for backing-up of river behind dam of hydro-electric development at Des Joachims Rapids. il map Roads & Bridges 85:33-5+ Ja '47

OTTOMAN bank
Statement by the chairman at annual general meeting. E. Gore-Browne. Economist 153: 129 Jl 19 '47

OUABAIN
Inhibition of the enzymatic hydrolysis of ATP by certain cardiac drugs. T. E. Kimura and K. P. DuBois. Science 106:370-1 O 17 '47

OUD, Jacobus Johannes Pieter, 1890-
Mr Oud embroiders a theme; Shell I.B.M. building, the Hague, Rotterdam stock exchange and city center. il plans Arch Rec 100:80-4 D '46; Reply. J. J. P. Oud. 101:18 Mr '47

OUT-OF-PRINT books
Some notes on the acquisition of old books. F. W. Allen. Special Lib 38:73-6 Mr '47

OUTAGES. See Electric power—Interruptions

OUTBOARD engines. See Internal combustion engines, Outboard

OUTBOARD motors. See International combustion engines, Outboard

OUTDOOR advertising. See Advertising, Outdoor

OUTDOOR factories. See Factories, Outdoor

OUTDOOR fireplaces. See Fireplaces, Outdoor

OUTDOOR living areas
Planned for privacy. il plan Am Bld 69:111 Jl '47
Remodeled flat in San Francisco provides outdoor living in city. il plans Arch Forum 87:80-1 Ag '47

OUTPUT of workers. See Labor productivity

OVENS
New enameling system; Dodge division of Chrysler corp. il Steel 120:92-3+ F 17 '47
Space-saving shift moves large finishing ovens to plant roof; Cavalier corp. il Steel 120:107 My 19 '47
See also
Coke ovens
Core ovens
Gas ovens

OVER-the-counter marketing. See Securities—Over-the-counter marketing

OVERBY, Andrew N.
New director of the International monetary fund. por Bsns W p72 My 24 '47

OVERDRAFTS
Claim by bank against cashier for loss occasioned by permitting depositor to overdraw account; National bank of Peterstown v. Hansbarger. Banking Law J 64:285-92 Ap '47
Liability for overdraft. C. R. Rosenberg, jr. Burroughs Clearing House 31:53-4 Ap '47

OVERHEAD expense
Clerical cost control; United States steel corp. H. F. Van Gorder. N A C A Bul 29: 74-91 S 15 '47
Estimates and how to make them; check list on overhead. W. W. Hughes. Dom Eng 170:122-4 O '47
How modified cost systems vary agency overhead. L. W. Ellis. Adv & Sell 40:64+ S '47
Selling overhead to inventory. P. Kramer. N A C A Bul 28:587-603 Ja 15 '47

OVERLAP (term)
Onlap and strike-overlap. F. A. Melton. diags Am Assn Pet Geologists Bul 31:1868-78 O '47

OVERTIME
Avoid claims for overtime wages by classifying employes under federal law. Inland Ptr 118:41-3 F '47

OVERTIME—*Continued*
Extent of employer's obligation for overtime pay. M. M. Shipman. Oil Paint & Drug Rep 151:7+ Ja 20 '47
Labor relation trends; pyramiding of overtime pay. N. C. Rockwood. Rock Prod 50:68 Mr '47; Same. Inland Ptr 118:29-30 Mr '47; Same abr. Chem Ind 60:626 Ap '47
Premium pay provisions in selected union agreements. Mo Labor R 65:419-25 O '47
Requirements of the wage and hour law. M. M. Shipman. Oil Paint & Drug Rep 150: 3+ N 4; 3+ N 11 '46

OVERVOLTAGE (electric lines)
Overvoltage tests on generators. J. H. Vivian. Elec West 98:42-4 Ja '47
Reversed phase rotation from single-phase load. M. D. Grems and others. bibliog diags Gen Elec R 49:30-4 N '46

OWENS lake
Output of Owens Lake chemicals shown. G. D. Dub. Chem Eng 53:174+ D '46

OWENS-CORNING fiberglas corporation
Fiberglas. il Fortune 35:86-91+ Ja '47

OWNERS', landlords' and tenants' public liability insurance. See Insurance, Owners', landlords' and tenants' public liability

OXALACETIC ester. See Ethyl oxalacetate

OXALALDEHYDE. See Glyoxal

OXALATES
Polarographic characteristics of vanadium in oxalate solutions. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 69:1021-5 My '47

OXALIC acid
Application of the principle of the concentration cell to kinetic studies; oxidation of oxalic acid by ceric sulfate. S. D. Ross and C. G. Swain. Am Chem Soc J 69:1325-6 Je '47
Catalysis of the reaction of chlorine and oxalic acid; complexes of trivalent manganese in solutions containing oxalic acid. H. Taube. bibliog Am Chem Soc J 69:1418-28 Je '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 142-3 N '46
Crystal and molecular structure of certain dicarboxylic acids; oxalic acid dihydrate. J. D. Dunitz and J. M. Robertson. diags Chem Soc J p 142-8 F '47
Direct and sensitized photochemically induced reaction of chlorine and oxalic acid; comparison with the chemically induced reaction. I. L. Hochhauser and H. Taube. Am Chem Soc J 69:1582-9 Jl '47

OXAZOLE
New synthesis of oxazoles and iminazoles including its application to the preparation of oxazole. J. W. Cornforth and R. H. Cornforth. Chem Soc J p96-102 Ja '47

OXAZOLES
Formation of phenanthroxazole by the action of diazomethane on phenanthraquinoneimine. A. Schönberg and W. I. Awad. Chem Soc J p651-3 My '47

OXIDASES
Oxalate salt of p-aminodimethylaniline, an improved reagent for the oxidase test. C. M. Carpenter and others. Science 105:649-50 Je 20 '47

OXIDATION
Aerial oxidation of Scottish shale wax. A. E. J. Pettet and W. S. Greaves. diags Soc Chem Ind J 66:126-30 Ap '47
Air oxidation of high molecular weight petroleum hydrocarbons. H. W. Zabel. il diag Chem Ind 59:821-3 N '46
Application of the principle of the concentration cell to kinetic studies; oxidation of oxalic acid by ceric sulfate. S. D. Ross and C. G. Swain. Am Chem Soc J 69:1325-6 Je '47
Balancing equations for organic oxidation-reduction reactions. L. N. Ferguson. bibliog J Chem Educ 23:550-4 N '46
Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il Pet Refiner 25:97-102 D '46; Same abr. Oil & Gas J 45:59-60+ D 21 '46
Chlorophyll-sensitized photoöxidation of phenylhydrazine by methyl red. R. Livingston, D. Sickle and A. Uchiyama. bibliog J Phys & Colloid Chem 51:775-86 My '47
Cleavage or organic sulfides with chlorine. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 68:2636-9 D '46
Comparative oxidation of linseed and sardine oils. G. A. O'Hare and W. J. Withrow. bibliog Ind & Eng Chem 39:101-4 Ja '47
Course of the reaction at 100° C in the system paraffin/oxygen. D. J. W. Kreulen. Inst Pet J 32:656-9 N '46
Derivatives of diphenylamine as oxidation-reduction indicators in alkaline solution. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:167-70 Mr '47
Determination of alpha-amino nitrogen as ammonia after oxidation of amino acids by ninhydrin. F. S. Schlenker. bibliog Anal Chem 19:471-4 Jl '47
Determination of B.O.D. values by chemical oxidation. G. A. Rhame. Water & Sewage Works 94:192-4 My '47
Determination of chromium by oxidation with perchloric acid. S. Schuldiner and F. B. Clardy. bibliog diag Ind & Eng Chem Anal ed 18:728-9 N '46
Effect of oxidation on the plasticity and solubility of GR-S. R. D. Juve. bibliog India Rubber World 115:657-8 F '47
Effect of vat dyes on the rate of oxidation of cotton by hypochlorite solutions. D. A. Clibbens and A. H. Little. Textile Inst J 37:T219-26 O '46
Electrode potentials of carbon in acid electrolytes. N. M. Winslow. bibliog Electrochem Soc Trans 92 (preprint 3):33-48 '47
Electron diffraction study of oxide films formed on high temperature oxidation resistant alloys. J. W. Hickman and E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 32):467-83 '47
Influence of oxidation of pulp on wet strength. M. O. Schur and R. M. Levy. bibliog Paper Tr J 124:43-6 My 15 '47
Investigation of oxidation of copper by use of radioactive Cu tracer. J. Bardeen and others. bibliog J Chem Phys 14:714-21 D '46
Investigation of the properties of cellulose oxidized by nitrogen dioxide. E. W. Taylor and others. bibliog diags Am Chem Soc J 69:342-61 F '47
Investigation of the properties of cellulose oxidized by nitrogen dioxide; study of mechanism of oxidation in presence of carbon tetrachloride. P. A. McGee and others. bibliog diags Am Chem Soc J 69:355-61 F '47
Kinetics of oxide film formation on metals and alloys. E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29):431-61 '47
Kinetics of oxidizing-reducing potentials; abstract. A. L. Rotinyan, I. I. Appenin and V. G. Tkachenko. Chem Eng 54:256+ O '47
Laboratory apparatus for catalytic oxidations in the vapor phase. E. E. O'Banion. diags J Chem Educ 24:287-8 Je '47
Lead tetraacetate oxidations in the sugar group; crystalline 2,4,3,5-diethylidene-*aldehydo*-L-xylose and several of its derivatives. R. C. Hockett and F. C. Schaefer. bibliog Am Chem Soc J 69:849-51 Ap '47
Mechanism of oxidation and tarnishing. U. R. Evans. bibliog diags Electrochem Soc Trans 91 (preprint 5):73-96 '47
Mechanism of the oxidation of anthracene with lead tetraacetate. L. F. Fieser and S. T. Putnam. bibliog Am Chem Soc J 69: 1038-41 My '47
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 69:773-85 Ap '47
1-Methyl-4-carbostyrilcarboxaldehyde and certain condensation products. D. J. Cook and M. Stamper. bibliog Am Chem Soc J 69: 1467-8 Je '47
o- and *p*-Nitroacetophenones by liquid phase oxidation. W. S. Emerson and others. bibliog Am Chem Soc J 69:706 Mr '47
Oxidation of [2 : 2 : 1]*bicyclo*heptene-2 (norbornylene). S. F. Birch, W. J. Oldham and E. A. Johnson. Chem Soc J p818-20 Je '47
Oxidation of β-carotene in solution by oxygen. R. F. Hunter and R. M. Krakenberger, Chem Soc J p 1-4 Ja '47

OXIDATION—*Continued*
Oxidation of cotton cellulose by solutions of potassium permanganate in the presence of a reduced vat dye. D. H. Metha and H. A. Turner. Soc Dyers & Col J 63:15-20 Ja '47
Oxidation of GR-S and other elastomers. J. O. Cole and J. E. Field. bibliog Ind & Eng Chem 39:174-9 F '47
Oxidation of metals. W. E. Campbell and U. B. Thomas. diags Electrochem Soc Trans 91 (preprint 24):345-61 '47
Oxidation of methyl linoleate at various temperatures. W. O. Lundberg and J. R. Chipault. bibliog Am Chem Soc J 69:833-6 Ap '47
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Oxidation of transformer oil. P. M. Heertjes and others. bibliog diags Inst Pet J 33:552-73 S '47
Oxidation processes; a classification of reactions on the basis of the semiquinone theory. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1567-75 Jl '47
Oxidation processes; quinone catalysis in the autoxidation of hydroquinones. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1576-82 Jl '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47
Oxidations and dehydrogenations with selenium dioxide. G. M. Badger. Chem Soc J p764-6 Je '47
Oxidative degradation of vitamin Bc (pteroylglutamic acid). E. L. Wittle and others. Am Chem Soc J 69:1786-92 Jl '47
Oxygen-carrying synthetic chelate compounds; cycling properties and oxygen production. W. K. Wilmarth, S. Aranoff and M. Calvin. Am Chem Soc J 68:2263-6 N '46
Oxynitration of benzene; studies relating to the reaction mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47
Periodate oxidation of phenols. D. E. Pennington and D. M. Ritter. bibliog Am Chem Soc J 69:187-8 Ja '47
Physical and chemical properties of organometallic compounds. C. H. Bamford and D. M. Newitt. Chem Soc J p688-701 Ag '46
Polarographic oxidation of +4 vanadium. J. J. Lingane and L. Meites, jr. Am Chem Soc J 69:1882-6 Ag '47
Preparation of a dry cell depolarizer by air oxidation of manganous hydroxide. L. C. Copeland and others. bibliog il Electrochem Soc Trans 92 (preprint 8):109-13 '47
Production of fatty acids by air oxidation of paraffin wax. diag Chem Ind 60:64 Ja '47
Rapid oxidation of glauconite in glauconitic sand. W. H. Monroe. il Am Assn Pet Geologists Bul 31:1509-11 Ag '47
Rate of oxidation of aromatic hydrocarbons by lead tetraacetate. L. F. Fieser and S. T. Putnam. bibliog Am Chem Soc J 69:1041-6 My '47
Rate study of the oxidation of nitric oxide with nitric acid vapor. J. H. Smith. bibliog Am Chem Soc J 69:1741-7 Jl '47
Recent advances in the physics and chemistry of rubber; oxidation of rubber; kinetic approach. J. L. Bolland. bibliog Rubber Age 60:693-5 Mr '47
Recherches sur la catalyse d'oxydation. J. Ternisien and H. F. Mélot. il diag Chimie & Ind 57:11-21 Ja '47
Sensitized catalysis; the fundamental facts; oxidation of acid indigo. H. J. Kauffmann. Am Chem Soc J 69:899-903 Ap '47
Some formal oxidation-reduction potentials. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:462-3 Jl '47
Spectrophotometric investigation of the interaction between ions of different oxidation states of an element. J. Whitney and N. Davidson. Am Chem Soc J 69:2076-7 Ag '47
Spontaneous development of heat in mixed fertilizers. J. O. Hardesty and R. O. E. Davis. bibliog Ind & Eng Chem 38:1298-303 D '46
Streptomycin; reduction and oxidation products of streptomycin and of streptobiosamine. J. Fried and O. Wintersteiner. bibliog Am Chem Soc J 69:79-86 Ja '47
Strychnine and brucine; constitution of the neo-series of bases and their oxidation products. L. H. Briggs, H. T. Openshaw and R. Robinson. Chem Soc J p903-8 O '46
Synthetic ferroporphyrin complex that is passive to oxygen. A. H. Corwin and J. G. Erdman. bibliog diag Am Chem Soc J 68: 2473-8 D '46
Thin oxide films on aluminum. E. A. Gulbransen and W. S. Wysong. bibliog J Phys & Colloid Chem 51:1087-103 S '47
Use of liquid phase oxidation for the preparation of nuclearly substituted styrenes; *p*-vinylbenzyl acetate. W. S. Emerson and others. bibliog Am Chem Soc J 69:1905-6 Ag '47

See also
Combustion
Corrosion and anti-corrosives
Spontaneous combustion

Autoxidation

Autoxidation of methyl oleate in presence of small proportions of methyl linoleate. F. D. Gunstone and T. P. Hilditch. Chem Soc J p 1022-5 N '46
Evidence for the homolytic bond fission of positive halogen compounds. A. Robertson and W. A. Waters. Chem Soc J p492-7 Ap '47
Oxidation processes; quinone catalysis in the autoxidation of hydroquinones. J. E. LuValle and A. Weissberger. Am Chem Soc J 69:1576-82 Jl '47
Oxidation processes; the mechanism of autoxidation reactions in the presence of foreign catalysts and inhibitors. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1821-6 Jl '47
Study of the mechanism of oxidation with chromic acid. W. A. Waters. Chem Soc J p 1151-4 D '46

OXIDATION, Electrolytic
Electrolytic oxidation of quinoline and 3-picoline. M. Kulka. bibliog Am Chem Soc J 68: 2472 D '46
Oxidation and reduction of glasses by means of electrolysis. G. E. Rindone and others. bibliog diags Am Cer Soc J 30:314-19 O 1 '47

OXIDATION of rubber. See Rubber—Aging

OXIDATION-reduction potential. See Potential, Electric

OXIDES
Development of hard glasses. A. E. Pavlish and I. Mockrin. bibliog Am Cer Soc J 30: 54-63 F 1 '47
Energy additivity in oxygen-containing crystals and glasses. M. L. Huggins and K. Sun. bibliog J Phys Chem 50:319-28 Jl '46; [cont as] J Phys & Colloid Chem 51:438-43 Mr '47
Infrared absorption spectra of some experimental glasses containing rare earth and other oxides. R. Stair and C. A. Faick. bibliog diags J Res Nat Bur Stand 38:95-101 Ja '47
Oxide systems pertaining to steel-making furnace slags. A. H. Jay and K. W. Andrews. bibliog Iron & Steel Inst J 152: 15-18 no 2 '45
Oxides of the alkali and alkaline earth metals. W. H. Schechter and J. Kleinberg. bibliog J Chem Educ 24:302-3 Je '47
Physical properties and cation arrangement of oxides with spinel structures. E. J. W. Verwey and others. bibliog J Chem Phys 15:174-87 Ap '47

See also
Peroxides
also names of oxides, e.g. Alumina, Magnesia, Nitrogen oxides

OXIDIMETRY
Ferrous ethylenediamine sulfate as an oxidimetric standard. K. P. Caraway and R. E. Oesper. J Chem Educ 24:235-6 My '47

OXIRANE. See Ethylene oxide

OXYACETYLENE apparatus
Economical heat for railroad shop operations. F. C. Hasse. il Ry Mech Eng 121:425-6 Ag '47

OXYACETYLENE apparatus—*Continued*
Low temperature silver alloy brazing. A. M. Setapen. il Steel 121:76-7+ S 8 '47
Mechanized oxy-acetylene soft soldering; air-conditioning units. il Sheet Metal Worker 38:51-2 Jl '47; Same. Steel 120:98+ Ap 14 '47
Proper handling of gas welding equipment. C. C. Hermann. il Power Pl Eng 51:86-7 My '47
Spray-welding; hard-facing process uses a powder-flame spray gun. il Steel 119:74+ D 23 '46
Tighter grip improves pivoted joints; torch pipe-cutting machine. G. L. Landry. diags Am Mach 91:102 Ja 2 '47

Safety measures
Flashbacks in welding. Nat Safety N 56:78+ Jl '47
Safety hints for welding and cutting. Nat Safety N 55:52 F '47
Welding and cutting tips. il Safety Eng 92:44 N '46

OXYACETYLENE cutting
Automatic oxyacetylene operations. R. F. Helmkamp. il Welding J 26:419-25 My '47
Cutting corrosion-resistant alloys by the Flux-Injection method. il Mach 54:165-6 O '47
Electronically controlled tracing head applied to oxyacetylene machine cutting. il diags Product Eng 18:102-3 Je '47
Electrons guide the cutting torch. T. H. Ayling. il diags Sci Am 177:213-15 N '47
Flame cutting; structural shapes in quantity. il Steel 121:100-1 Jl 21 '47
Flux-injection cutting stainless steels. G. E. Bellew. il diag Steel 120:86-8+ F 17; 80-2+ F 24 '47
Heavy-cutting applications in foundry and steel mill. R. S. Babcock. il diags Welding J 26:5-11 Ja '47
Improved products by mechanized welding and cutting; manufacture of Terra Cobra scraper. E. Griffeth. il diags Welding J 26:670-4 Ag '47; Steel 121:80-4+ O 27 '47
Magnetic template tracing increases accuracy of shape-cutting. il diags Product Eng 18:92-6 F '47
Oxy-acetylene circle-cutting attachment. il Mach 53:199 F '47
Oxyacetylene cutting in sheet metal work. R. F. Helmkamp. il diags Sheet Metal Worker 38:46-9 Mr; 57-60+ Ap '47
Oxygen cutting of steel at elevated temperatures. J. F. Kiernan and J. S. Sohn. bibliog il diags Welding J 26:301-13 Ap '47
Pneumatic clamps for stack cutting. il Ry Mech Eng 121:27-8 Ja '47
Powder-cutting and scarfing of oxidation-resistant materials. D. H. Fleming, jr. il diag Welding J 26:201-8 Mr '47; Abstract. Metal Prog 52:1034+ D '47
Powder cutting of high alloys; iron-rich powder is introduced into oxygen stream of cutting torch. D. H. Fleming, jr. il Materials & Methods 25:73-6 F '47
Welding and flame cutting applied to stainless and clad steels; Dilts Hydrapulper installed in plant of National paper corp. S. F. Danes. il Materials & Methods 26:102-6 O '47
Work supports for machine cutting. J. A. Arnault. il diags Welding J 26:696-7 Ag '47
See also
Oxygen cutting

OXYACETYLENE flame
Flame hardened steel. S. T. Jazwinski. il Steel 120:108-9+ My 12 '47
Flame hardening locomotive brake and spring rigging pins and bushings. B. W. Covell. il Welding J 26:918-22 O '47
Metallographic constituents of steels and cast iron as affecting flame hardening. O. M. Harrelson. il Welding J 26:771-5 S '47
Shortening eyebars by heating with oxy-acetylene torch. Mech Eng 69:152 F '47
Shortening of eyebars to equalize the stress by heating with oxyacetylene torches. il diags Welding J 25:sup849-56 D '46; Excerpts. Civil Eng 17:205-6 Ap '47; Metal Prog 52:276+ Ag '47
Shorter flame hardening machine. il Engineer 183:236-7 Mr 21 '47

OXYACETYLENE welding
Butt-welded pipeline for natural gas. il Engineering 163:97-8, 108 Ja 31 '47
Deep fillet gas welding. diags Iron Age 159: 60-2 Ja 23 '47
How pressure welding works. il diags Eng & Min J 148:77 S '47
How to weld pipe. il diags Dom Eng 169: 106-7+ Mr; 112-13+ Ap; 120-3+ My; 170: 118-19+ Jl; 118-19+ Ag; 114-16 S; 120-1+ O '47
Increasing life of crankshafts. il Rayon 27: 675 D '46
Lead welding practices. L. S. Bowser. il diags Welding J 26:777-81 S '47; Same. Sheet Metal Worker 38:58-61+ S '47
Mechanical properties and microstructures of open-butt oxyacetylene compression welds. H. H. Chiswik. il diag Welding J 26: sup115-19 F '47
Multiple flame pressure welding; abstract. N. H. Cuke. diags Iron Age 160:57-8 O 30 '47
New flux-cored filler rods for torch welding. F. Danhier. il Welding J 26:sup252-3 Ap '47
Oxyacetylene flame brazing on commercial aluminium. Engineer 183:235 Mr 21 '47
Oxyacetylene pressure welding as it affects design. R. A. Kubli. il diag Product Eng 18:117-21 Mr '47
Pressure gas welding of alloy steel tubing; abstract. J. L. Zambrow and R. D. Williams. Iron Age 158:61 N 28 '46
Pressure welding of stainless steel. A. L. Rustay. il Metal Prog 52:238-42 Ag '47
Pressure-welding stainless steel rings. C. J. Burch and others. il diags Steel 120:88-90+ Ja 13 '47
Pressure-welding stainless steel rings. A. L. Rustay and others. il diags Welding J 26: 129-37 F '47
Weldability test for sheet metal in oxy-acetylene welding. R. Woirin. Welding J 26:790 S '47
Welding of copper and the copper-rich alloys; abstract. M. Cook and E. Davis. Engineering 163:378 My 9 '47
Welding small cables for conveyors. H. W. Young. il Mech Handling 34:206+ Ap '47

Testing
Oxyacetylene pressure welding of some low-alloy steels and non-ferrous alloys. K. H. Koopman. bibliog il Welding J 25:1069-76 N '46

OXYARC cutting. See Electric cutting—Oxy-arc process

OXYBIOTIN
Furan and tetrahydrofuran derivatives; the synthesis of the sulfonic acid analogs of oxybiotin and homooxybiotin. K. Hofmann, A. Bridgwater and A. E. Axelrod. Am Chem Soc J 69:1550-1 Je '47

OXYCELLULOSE
Analysis
Identification of acidic oxycellulose by means of aromatic amines and diamines; new qualitative method. M. Krajčinovič and M. Krajčinovič. bibliog Textile Inst J 38:T11-12 Ja '47

OXYGEN
Absorption of microwaves by oxygen. J. H. Van Vleck. Phys R 71:413-24 Ap 1 '47
Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-811 S '46
Comparison of rectification and desorption in packed columns; desorption tests on carbon dioxide-water and oxygen-water, and rectification tests on isopropanol-water. D. W. Deed, P. W. Schutz and T. B. Drew. bibliog diags Ind & Eng Chem 39:766-74 Je '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Effect of oxygen on color and flavor of heated milk. N. P. Tarassuk. bibliog il Food Ind 19:781-3 Je '47
Heat capacities of gaseous oxygen, isobutane, and 1-butene from —30° to +90° C. P. F. Wacker and others. bibliog diags J Res Nat Bur Stand 38:651-9 Je '47
Heats of adsorption on carbon black. R. A. Beebe and others. bibliog diag Am Chem Soc J 69:95-101 Ja '47

OXYGEN—*Continued*

Mechanism of emulsion polymerizations; effect of oxygen on the emulsion polymerization of styrene. I. M. Kolthoff and W. J. Dale. bibliog Am Chem Soc J 69:441-6 F '47

Mechanism of emulsion polymerizations; oxygen as a comonomer in the emulsion polymerization of styrene. F. A. Bovey and I. M. Kolthoff. bibliog diags Am Chem Soc J 69:2143-53 S '47

Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46

Model of an oxygen atom. W. O. Brooks. il J Chem Educ 24:245 My '47

Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46

Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of pH and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47

Quenching and depolarization of mercury resonance radiation by nitrogen and oxygen. L. O. Olsen and G. P. Kerr, jr. Phys R 72:115-17 Jl 15 '47

Re-evaluation of the covalent radii of some of the elements. W. Gordy. bibliog J Chem Phys 15:81-4 F '47

Solubility of oxygen in water. G. E. Mapstone. chart Chem Ind 60:662+ Ap '47

Total scattering cross sections of deuterium and oxygen for fast neutrons. R. G. Nuckolls and others. bibliog Phys R 70: 805-7 D 1 '46

See also

Oxidation

Steel—Oxygen content

Absorption

Rate of oxygen absorption by alpha ray cuprene. G. Glockler and C. A. Hollingsworth. Electrochem Soc Trans 92 (preprint 1):1-9 '47

Analysis

Amperometric determination of dissolved oxygen in orange juice. V. M. Lewis and H. A. McKenzie. bibliog Anal Chem 19: 643-6 S '47

Determination of oxirane oxygen. D. Swern and others. bibliog Anal Chem 19:414-15 Je '47

Determination of oxygen in steel by the vacuum fusion method. L. Alexander, W. M. Murray and S. E. Q. Ashley. bibliog il diags Anal Chem 19:417-22 Je '47

Oxygen in organic compounds; direct microdetermination by the Unterzaucher method. V. A. Aluise and others. bibliog il diags Anal Chem 19:347-51 My '47

Oxygen indicator. R Sci Instr 17:520 N '46

Rapid dissolved oxygen test for fresh citrus juices. J. R. Lindquist. bibliog il diag Food Ind 19:182-3+ F '47

Traces of oxygen in hydrogen or nitrogen. H. A. Liebhafsky and E. H. Winslow. Am Chem Soc J 68:2734-5 D '46

Industrial applications

Accelerating rate of carbon elimination of the open-hearth bath; abstract. J. N. Hornak. Steel 121:100 O 13 '47

Air purification in the reversing exchanger. W. E. Lobo and G. T. Skaperdas. bibliog diag Chem Eng Prog 43:69-74 F '47

Blast-furnace developments. E. Kirkendall. Min & Met 28:456-7 S '47

Blast furnace vitamins; carbon, oxygen and pressure. O. R. Rice. Blast F & Steel Pl 35:90 Ja '47

Blowing oxygen-enriched air into the blast furnace. K. Neustaetter. diag Blast F & Steel Pl 35:329-32 Mr '47; Same. Steel 120: 110+ My 19 '47

Burning matter. J Chem Educ 24:145 Mr '47

Cheap oxygen; will it change clay products and refractories industry? Brick & Clay Rec 111:62 O '47

Developments in open hearth practice in 1946. O. P. Luetscher. Blast F & Steel Pl 35:70-1 Ja '47

Direct oxidation. E. B. Hughes. bibliog il diags Blast F & Steel Pl 35:677-86 Je '47; Abstracts. Iron Age 159:52-3+ My 1 '47; Steel 120:107-8 My 5 '47

Economics of oxygen use in steel making furnaces. Blast F & Steel Pl 35:813-16 Jl '47

Economics of the blast furnace; top pressure, + beneficiation, + oxygen. B. S. Old and others. bibliog Iron Age 160:60-9 S 18 '47

Electric furnace rimmed steel; using oxygen for carbon reduction. D. I. Brown. il Iron Age 160:67-9+ Ag 7 '47

L'emploi de l'oxygène pour gazéifier les combustibles. J. Barral. diags Génie Civil 124: 333-5 S 1 '47

Furnace operation; increasing hot-blast temperature and use of oxygen-enriched blast; abstract. W. Bennett. Mech Eng 69:769-70 S '47

Future industrial position of oxygen; abstract. E. P. Stevenson. Science 106:123 Ag 8 '47

High-temperature flame makes blast holes in hard rock. il Roads & Bridges 85:84-5 My '47

Increases steel output by oxygen impingement technique. Steel 120:88 Mr 31 '47

Low-purity oxygen; a new industrial product. J. V. Sherman. Barron's 27:22 Je 23 '47

Metallurgical oxygen. E. E. Thum. il Metal Prog 52:67-70 Jl '47

Oxygen-accelerated combustion in open-hearth furnaces. S. T. W. Bailey. diags Steel 121:94+ Ag 11 '47; Abstract. Mech Eng 69.405-6 My '47

Oxygen by the ton. D. H. Killeffer. il Sci Am 176:204-6 My '47

Oxygen firm outlines its research program for steelmaking applications; Linde air products co. il Iron Age 159:109-10 Je 12 '47

Oxygen gasification of anthracite. C. C. Wright and L. L. Newman. diag Chem Eng 54:114-15 Je '47

Oxygen in steelmaking. E. S. Kopecki. bibliog diag Iron Age 158:47-50 N 28 '46

Oxygen in the steel industry; abstract. H. W. McQuaid. Steel 121:98+ O 13 '47

Oxygen jet speeds openhearth steel output. il diag Iron Age 159:75-6 Je 19 '47

Oxygen; past, present and prospects; Chem. & Met. report. il Chem Eng 54:123-31 Ja '47

Oxygen production and utilization in gas making processes. L. L. Newman. flow diags il diags Am Gas Assn Proc 1946:444-67

Oxygen steps into star role. Bsns W p72-4+ F 1 '47

Oxygen torch speeds blast holes for ore mining. il Iron Age 158:64 D 19 '46; Same. Eng N 138:461 Mr 20 '47

Possibilities for the extended use of oxygen in the British iron and steel industry. M. W. Thring. bibliog Iron & Steel Inst J 156:285-91 Je '47; Discussion. Engineering 164:67-8 Jl 18; 89 Jl 25 '47

Production of iron and steel with oxygen-enriched blast. R. Durrer. Iron & Steel Inst J 156:253-6 Je '47; Discussion. Engineering 164:67-8 Jl 18; 89 Jl 25 '47; Engineer 184: 83-4 Jl 25 '47; Iron & Steel Inst J 157:369-76 N '47

Production of oxygen for industrial purposes. W. E. Lobo. flow sheet il plan diag Chem Eng Prog 43:sup21-6 Ja '47

Le remplacement de l'air par l'oxygène dans les opérations métallurgiques. P. Guillaumeron. il Génie Civil 124:85-6 Mr 1 '47

Renewed interest in oxygen enriched blast. W. A. Haven. il Blast F & Steel Pl 35:95-6 Ja '47

Steelmaking oxygen presenting problems to delay applications. il Iron Age 160:113-15 Ag 7 '47

To test basic refractories and oxygen in open hearth at higher heat; Carnegie-Illinois steel corp. il diags Brick & Clay Rec 111: 55-7+ O '47

Tonnage oxygen. C. R. Downs and J. H. Rushton. bibliog Chem Eng Prog 43:sup 12-20 Ja '47

Use of oxygen in furnaces may revolutionize steelmaking. W. A. Lloyd. Iron Age 158: 104-5 N 21 '46

Use of oxygen in open-hearth and electric furnaces. W. G. Gude. il diags Foundry 75: 74-7+ O '47

Use of oxygen in the open hearth. G. V. Slottman and F. G. Kerry. il diags Steel 119:106-8+ D 2 '46

Use of oxygen in the open hearth; abstract. E. C. McDonald. il Steel 121:96+ O 13 '47

OXYGEN—Industrial applications—*Continued*
Use of oxygen in the openhearth bath. G. V. Slottman and F. B. Lounsberry. diag Iron Age 159:42-5 F 20 '47
Use of oxygen in the open hearth furnace. il diags Blast F & Steel Pl 35:949-56, 1091-5, 1224-6 Ag-O '47
Use of oxygen in openhearth furnaces; abstracts. J. J. Golden. diags Iron Age 159: 50-2 My 1 '47; Steel 120:107, 108+ My 5 '47; Blast F & Steel Pl 35:572+ My '47
Use of oxygen in the open hearth practice for carbon reduction; abstract. G. V. Slottman and F. B. Lounsberry. Iron Age 159: 66-7 My 29 '47
Uses of oxygen in steel production; abstract. J. H. Zimmerman. Steel 121:98 O 13 '47
What about the use of oxygen in steelmaking? J. D. Knox. il diags Steel 120:106-8+ Je 23; 86-8+ Je 30 '47

See also
Oxyacetylene flame
Oxygen cutting

Isotopes

Bacterial fractionation of oxygen isotopes. M. Dole, R. C. Hawkings and H. A. Barker. bibliog Am Chem Soc J 69:226-8 F '47
Energy levels of O^{17} obtained from $O^{16}(d,p)O^{17}$ and $N^{14}(\alpha,p)O^{17}$. E. Pollard and P. W. Davison. Phys R 72:736-7 O 15 '47
Enrichment of C^{13} and O^{18} by a countercurrent gaseous exchange process using thermal diffusion. T. I. Taylor and R. B. Bernstein. Am Chem Soc J 69:2076 Ag '47
Evidence for the reaction $O^{17}(n,\alpha)$ C^{14}. E. P. Hincks. Phys R 70:770-1 N 1 '46
Uses of the separated stable isotopes of oxygen; abstract. H. S. Taylor. Science 106:123 Ag 8 '47

Manufacture

Air purification in the reversing exchanger. W. E. Lobo and G. T. Skaperdas. bibliog diag Chem Eng Prog 43:69-74 F '47
Air separation, principles and technology; Chem. & Met. report. bibliog flow sheet (p136-9) diags Chem Eng 54:126-34 Mr '47 (reprints 35c)
Burning matter. J Chem Educ 24:145 Mr '47
Design of ribbon-packed exchangers for low temperature air separation plants. P. R. Trumpler and F. F. Dodge. il diags Chem Eng Prog 43:75-84 F '47
Developments in oxygen production. J. H. Rushton and E. P. Stevenson. flow sheets il Chem Eng Prog 43:61-8 F '47
Equipment for low cost oxygen production. M. J. Conway. il diag Pet Refiner 26:129-33 Je '47; Abstract. Pet Processing. 2:113-14 F '47
German use of low-grade fuel with rich oxygen. D. D. Howat. bibliog diags Chem Age (Lond) 55:661-9, 729-34 N 30, D 14 '46
High pressure gasification of coal in Germany. H. M. Weir. bibliog flow diags il Ind & Eng Chem 39:48-54 Ja '47
Inexpensive oxygen; Linde-Fraenkl process. Mech Eng 69:318-19 Ap '47
Large-scale production of oxygen. D. D. Howat. bibliog flow sheet diags Chem Age (Lond) 56:767-71, 801-5+, 835-7; 57:81-5 Je 14-28, Jl 19 '47
Linde Air holds editorial meeting on oxygen; gaseous-oxygen pilot plant now producing 200 tons daily. il diag Chem Eng Prog 43: sup 16-18+ Jl '47
Lots of oxygen for plenty of steel. il Bsns W p74 Je 14 '47
Low cost oxygen. Gas Age 98:51+ D 12 '46
Low pressure oxygen process. W. E. Lobo. flow diag il Pet Eng 18:120+ My '47; Same. Iron Age 160:49-53 Jl 17 '47
Oxygen; abstract. J. H. Rushton and C. R. Downs. diags Mech Eng 69:766-7 S '47
Oxygen by the ton. D. H. Killeffer. il Sci Am 176:204-6 My '47
Oxygen in steelmaking; Linde air products co. Chem & Eng N 25:1874+ Je 30 '47
Oxygen manufacture; simplified flow diagram. W. L. Nelson. bibliog diag Oil & Gas J 45:96-7 Mr 15 '47
Oxygen; past, present and prospects; Chem. & Met. report. il Chem Eng 54:123-31 Ja '47
Oxygen production and utilization in gas making processes. L. L. Newman. flow sheet Am Gas Assn Proc 1946:445-8
Oxygen production in the U.S.A. Chem Age (Lond) 57:127 Jl 26 '47
Past and present developments in oxygen generation. E. P. Stevenson. il diags Steel 121:114+ O 20; 98+ O 27 '47
Production of oxygen for industrial purposes. W. E. Lobo. flow sheet il plan diag Chem Eng Prog 43:sup21-6 Ja '47
Progress in low temperature refrigeration; research at M.I.T. S. C. Collins. il diags Tech R 49:161-2+ Ja '47
Regenerative unit for generating oxygen, cobalt disalicylal ethylene diamine. B. B. Fogler. bibliog il diags Ind & Eng Chem 39:1353-60 O '47
Reversing exchangers purify air for oxygen manufacture. S. C. Collins. il Chem Eng 53: 106-7 D '46
Tonnage oxygen. C. R. Downs and J. H. Rushton. bibliog Chem Eng Prog 43:sup 12-20 Ja 47
Turbo-expanders. J. S. Swearingen. il diags Chem Eng Prog 43:85-90 F '47

See also
Liquid air

OXYGEN, Liquid
Describes work on liquefied gases; abstract. L. I. Dana. Chem & Eng N 25:1575-6 Je 2 '47
Five years of applied science in the low-temperature field; liquid oxygen units for submarines and airplanes. F. G. Keyes. flow diag il Chem R 39:449-80 D '46
High altitude oxygen boost for aircraft engines. F. Masi and others. il diag Aviation 46:54-5 Ap '47; Abstract. Automotive & Aviation Ind 96:33 Ja 1 '47
Liquid oxygen in aircraft. H. Grayson-Smith and J. C. Findlay. diag Chem R 39:397-402 D '46
Liquid oxygen; pictured flowsheet. Chem Eng 54:136-9 Mr '47

OXYGEN apparatus
Application of basic physiologic data in the design of respiratory equipment. L. D. Carlson and V. J. Wulff. bibliog diags J Aeronautical Sci 14:229-36 Ap '47

See also
Oxyacetylene apparatus
Respiratory apparatus

Safety measures

Moving and handling oxygen cylinders. il diags Safety Eng 94:20+ O '47

OXYGEN bombs
Oven and bomb aging of GR-S at corresponding temperatures. J. R. Shelton and H. Winn. Ind & Eng Chem 39:1133-6 S '47
Volumetric semimicrodetermination of sulfur in organic compounds by use of oxygen bomb. E. C. Wagner and S. H. Miles. bibliog Anal Chem 19:274-7 Ap '47

OXYGEN-carrying compounds
Oxygen-carrying synthetic chelate compounds. M. Calvin and others. bibliog diags Am Chem Soc J 68:2254-78, 2612-18 N-D '46
Oxygen-carrying synthetic chelate compounds; preparation. R. H. Bailes and M. Calvin. Am Chem Soc J 69:1886-93 Ag '47
Regenerative unit for generating oxygen, cobalt disalicylal ethylene diamine. B. B. Fogler. bibliog il diags Ind & Eng Chem 39:1353-60 O '47

OXYGEN cutting
Flame cutting operating data. A. F. Chouinard. diags Welding J 25:1186-8 D '46
Oxygen cutting of very heavy steel sections il Engineer 183:236 Mr 21 '47
Stainless steel cutting. H. G. Hughey. il diags Welding J 26:393-9 My '47

See also
Electric cutting—
Oxyarc process
Oxyacetylene cutting

OXYGEN deficiency. See Anoxemia

OXYGENATION. See Oxygen-carrying compounds

OXYHEMOGLOBIN
Reaction of mustard gas with proteins. S. B. Davis and W. F. Ross. bibliog Am Chem Soc J 69:1177-81 My '47

OXYNITRATION. See Nitration

OYSTERS
Feeding of oysters in relation to density of microorganisms. V. L. Loosanoff and J. B. Engle. Science 105:260-1 Mr 7 '47
Oyster mortality study initiated. Chem & Eng N 25:1952-3 Jl 7 '47
Unfertilized egg of an oyster is pear shaped P. S. Galtsoff. Science 106:342 O 10 '47

OYSTERS, Frozen
Testing packaging materials for quick frozen oysters. S. R. Pottinger and others. il Food Ind 19:324-6+ Mr '47

OZONE
Accelerated ozone weathering test for rubber. J. Crabtree and A. R. Kemp. bibliog il diags Ind & Eng Chem Anal ed 18:769-74 D '46
Exposure cracking of rubber; effect of ozone. J. H. Fielding. il India Rubber World 115: 802-5 Mr '47
Ozone methods of bleaching yarns or fabrics; abstract. E. Howlett. Am Dyestuff Rep 36: 184 Ap 7 '47
Recent ozone investigations. A. W. Ewell. bibliog diag J Ap Phys 17:908-11 N '46
See also
Water purification—
Ozone treatment

OZONIZERS
Influence of water vapor on ozonizer efficiency. C. E. Thorp and W. J. Armstrong. bibliog flow sheet il Ind & Eng Chem 38: 1319-21 D '46

OZONOLYSIS
Derivatives of bisnor-5-cholenaldehyde. F W. Heyl, A. P. Centolella and M. E. Herr. bibliog Am Chem Soc J 69:1957-61 Ag '47
Ozonolysis of pyridine homologs, a method of structural elucidation. W. Shive, E. G. Ballweber and W. W. Ackermann. bibliog Am Chem Soc J 68:2144-8 N '46
Study of the structure of butadiene polymers by means of ozonolysis. N. Rabjohn and others. bibliog Am Chem Soc J 69:314-19 F '47

P

P.E.T.N. See Pentaerythritol tetranitrate

PM (newspaper)
Field retrenches; PM takes ads. Bsns W p32+ N 16 '46

P-V test. See Steel, Hardening of

PACIFIC, Islands of the. See Islands of the Pacific

PACIFIC airmotive corporation
It's new, it has a future; the airport superservice station; Pacific airmotive corporation, operators of 140 franchised dealerships. il Sales Management 59:58+ S 15 '47

PACIFIC chemical exposition and industrial conferences
Pacific chemical exposition will help integrate industrial economy of East and West. J. R. Callaham. Chem Eng 54:116-18 S '47

PACIFIC coast
See also
Chemical industries—
Pacific coast

Economic conditions
Income on the West coast. S. Shapiro. Mo Labor R 64:599-609 Ap '47

Industries and resources
Collective bargaining on the Pacific coast. C. Kerr. Mo Labor R 64:650-74 Ap '47
Facing west. M. L. Kastens. il Chem & Eng N 25:2692-5 S 22 '47
More people, more plants, more markets for Pacific process industries. J. R. Callaham and J. F. Cosgrave. il Chem Eng 54:92-5 S '47

PACIFIC coast electrical association
Annual meeting, 30th, Riverside, June 4-6. Elec West 99:68-81 Jl '47
Fall meeting, Fresno, Dec. 5-6. Elec West 98:54-9 Ja '47
Fall meeting, Fresno, Dec. 5-6. Elec World News ed 126:7 D 14 '46

PACIFIC coast gas association
Distribution and automotive conference, San Mateo, March 18-20. Gas Age 99:50+ Ap 3 '47

PACIFIC coast investment fund
Initial offering of shares. Comm & Fin Chr 165:3398 Je 30 '47

PACIFIC countries
See also
Population—Pacific countries

PACIFIC finance corporation of California
Stock offered. Comm & Fin Chr 166:953 S 8 '47

PACIFIC gas and electric company
Annual report. Comm & Fin Chr 165:2005-6 Ap 14 '47
Bonds offered. Comm & Fin Chr 166:1583 O 20 '47

PACIFIC industrial conferences
Conferences, San Francisco, Oct. 21-25. Chem & Eng N 25:2723+ S 22 '47

PACIFIC mills
Companies forging ahead. Mag of Wall St 80:380 Jl 5 '47
Net reflects output, plant changes. Barron's 27:26 Je 9 '47

PACIFIC ocean
Letter from the Pacific. Fortune 35:194+ Mr '47
Submarine geology studies in the Pacific. F. P. Shepard. Am Assn Pet Geologists Bul 31:178-80 Ja '47
See also
Islands of the Pacific
World war, 1939-1945—Pacific ocean

PACIFIC power and light company
Bonds offered. Comm & Fin Chr 166:374 Jl 28 '47
Merger approved by FPC. Comm & Fin Chr 165:815 F 10 '47
Progress of merger and refinancing. Comm & Fin Chr 165:1595 Mr 24 '47
SEC approves merger. Comm & Fin Chr 165: 2418-19 My 5 '47

PACIFIC science board. See National research council—Pacific science board

PACIFIC science conference. See National research council—Pacific science conference

PACIFIC southwest academy
Papers presented before the Pacific southwest academy, June 15, 1946. Ann Am Acad 248:199-267 N '46

PACIFIC telephone and telegraph company
Bonds offered. Comm & Fin Chr 166:1687-8 O 27 '47

PACKAGE design
Beauty shop packages. il Mod Packaging 20: 116-18 Ag '47
Better mouse traps; humorous packages sell Animal trap co. products. il Mod Packaging 20:108-10 Jl '47
Colgate preview. il Mod Packaging 20:136-9 Mr '47
Colorful birds; Birds Eye's redesigned packages use four-color reproductions. il Mod Packaging 21:102-3 O '47
Companions in use; new wet-strength towels and holder require related packages. il Mod Packaging 21:117 S '47
Cookies nationwide, in folding paper boxes. il Mod Packaging 20:103 N '46
Coordinated marketing; puts the package in the spotlight. R. C. Brewster. il Mod Packaging 20:91-4+ N '46
Cover package. Published in monthly numbers of Modern packaging
Cutlery, well marked and well protected; Camillus pocket knives. il Mod Packaging 20:119 D '46
Glass-plastic dispenser; O-Cedar's air freshener also uses paper, metal, cork, foil and felt. il Mod Packaging 20:110-11 F '47
Heating pads packaged as beauty aids. il Mod Packaging 20:124-5 F '47

PACKAGE design—*Continued*
Hobbyist's herb garden and how it grew. il Sales Management 58:119-21 Je 1 '47
How do your packages check on these 7 points? R. C. Brewster. il Adv & Sell 40: 41+ F '47
How to sell packaging to top management; abstract. W. J. Sanning. Mod Packaging 20:139-40 Ap '47
Impulse buying re-surveyed. H. D. Chickering. il Mod Packaging 20:126-9+ Ja '47
Item-by-item package refurbishing spotlights Carborundum trade-mark. M. S. Ireys. il Sales Management 57:55 N 20 '46
Many-purpose design; cartons displayed in a catchy pattern. W. F. Howell. il Ptr Ink 217:42-3 D 27 '46
New script for Scripto. il Mod Packaging 20: 138-9 Je '47
Package gets distribution for new line; Garrett toys. A. E. Aldridge. il Ptr Ink 217: 46 N 29 '46
Package space, your best ad medium and it's for free. J. Nash. il Mod Packaging 20:112-15 N '46
Pencil packages. il Mod Packaging 20:128 F '47
Private line cosmetics; Ohrbach's launches own popular-price brand. il Mod Packaging 20:97 F '47
Say it with flowers; AMC's new cosmetic private brand floral design. il Mod Packaging 20:139 Jl '47
Selective design; step-by-step study of Kryptar photo film carton. il Mod Packaging 21:138-40+ S '47
Swedish packaging. il Mod Packaging 21: 100-6 S '47
Transition; effect of self service on package goods. il Mod Packaging 20:98-102 Ja '47
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20:106-10+ Ap '47
What's new in packaging. il Ptr Ink 218:56+ F 21 '47
What's new in packaging; package with information, panels, die-cuts and Kodachromes. il Ptr Ink 219:41 My 2 '47
Yardstick for package design. G. E. Jordan. Ptr Ink 220:36 Ag 1 '47
Your package is your public relations agent; have you equipped it to do the job? W. G. Werner. il Mod Packaging 21:128-31+ S '47

See also
Package goods—Gift packages
Package goods—New packages

Family of products

Basic package design adaptable to a family of textiles, comprising sheets, pillow cases, hosiery, etc. Mod Packaging 20:99 Je '47
Borden repackages milk products to increase national advertising effect. il Ptr Ink 220:43 S 5 '47
Checkerboard family; Purina sanitation products. il Mod Packaging 21:130-2 O '47
Chicopee's babies. il Mod Packaging 20:116-20 Jl '47
Colonial's rooster; unique trademark pulls attention to Colonial Stores' private brands. il Mod Packaging 21:112-15 O '47
Family reunion; Seamless rubber co. reclassification for its 2,200 products, using package theme to tie all together. il Mod Packaging 20:118-21 Je '47
Hallmark for Ritter; stylized R as a trademark. il Mod Packaging 20:128-9 Je '47
Housewife's library; carrier packs for cleaning fluids. il Mod Packaging 20:128-9 N '46
New ink family; Waterman's 15-cent size. il Mod Packaging 20:114-15 D '46
One-brand labeling; Red & White voluntary grocery group's simplified new package family. il Mod Packaging 20:137 Je '47
Product makes the trademark; Hassall's line of special nails, rivets and screws. il Mod Packaging 20:104-6 N '46
Ritter re-designs packages to achieve family identity. P. J. Ritter. il Sales Management 59:42-3 S 1 '47
Road map to design; Penetone's automotive products lean heavily on the package. il Mod Packaging 21:108-9 S '47
60 new Fuller brush packages. il Mod Packaging 20:204 Ap '47
Three related lines organized as one department by new package; Chicopee repackages infants' specialty products. C. Judson. il Ptr Ink 220:66+ Ag 22 '47
23,000 items; Butler bros., quality branding and coordinated packaging program. H. C. Isaacs. il Mod Packaging 20:103-7+ Ja '47
Up from the barrel; new labels for Oelerich sirups, jams, etc. il Mod Packaging 20:134-6 Je '47
White family united after 70 years; White sewing machine co. il Mod Packaging 20: 103 D '46

PACKAGE goods
Automatic store; will it change your package; Grand union co. Food-O-Mat. il Mod Packaging 20:134-6 D '46
Automatic vendors. il Mod Packaging 20:75-80 Ag '47
Drills packaged to speak for themselves. il Mod Packaging 20:107 N '46
Foreign markets; golden opportunity to sell more packaged goods. il Mod Packaging 20:87-92+ F '47
Get them to see, pick up and read your package; 59 varieties of complementary ideas. F. L. McKibbin, jr. il Ptr Ink 221:38-40 O 17 '47
Lighting the package for effective selling. C. M. Cutler. il Mod Packaging 20:138-40 Ja '47
New dispensing unit for packaged foods; Grand Union's Food-O-Mat. il Food Ind 18: 1861-2 D '46
Package wallpaper? United finds it aids dealer, eliminates waste, preludes errors. il Mod Packaging 20:142-4+ Jl '47
Packaging puts it over; a dud in bulk sells in sets; Bo-Jo Christmas tree ornaments. il Mod Packaging 20:102 N '46
Prepackaging sells glassware. il Bsns W p70+ Je 7 '47
Prize winners; farm co-ops select best of their 1946 packages. il Mod Packaging 20: 132 F '47
Returned goods. C. A. Southwick, jr. Mod Packaging 21:149-51+ S '47
Transition; effect of self service on package goods. il Mod Packaging 20:98-102 Ja '47

See also
Candy trade
Canned food
Cigarets
Coffee
Containers
Food packages
Labels
Merchandize cards
Package design
Packaging
Packaging machinery
Toilet goods

Advertising

Colgate preview. il Mod Packaging 20:136-9 Mr '47
G-E builds campaign around new re-usable package; improved heating pads. il Ptr Ink 220:47 S 19 '47
Package gets distribution for new line; Garrett toys. A. E. Aldridge. il Ptr Ink 217: 46 N 29 '46
Package space, your best ad medium and it's for free. J. Nash. il Mod Packaging 20:112-15 N '46
Premiums; package is key medium for promotion. il Mod Packaging 20:89-94+ Ap '47
What's new in packaging; containers for sugar, pie and cleanser are theme of consumer advertising. il Ptr Ink 219:39 My 23 '47

See also
Package inserts

Color

Cannon shots of color; new packages for sheets and pillow cases. il Mod Packaging 20:152-4 Mr '47

Exhibitions

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Gift packages

Baby hangers; package has plenty of gift appeal. il Mod Packaging 20:101 F '47
Chicago perfumes; Melikov line for exclusive gift shop. il Mod Packaging 21:146 S '47
Cosmetic preview. il Mod Packaging 21:93-8+ S '47
Elgin compacts climb on the fashion ensemble bandwagon. W. D. Evans. il Sales Management 59:130+ O 15 '47

PACKAGE goods—Gift packages—*Continued*
Foil-fresh; delicacies in unusual gift packages. il Mod Packaging 20:126-7 N '46
How your host got his name on the cocktail napkins; Monogram company of California. il Sales Management 58:72-4+ Ap 1 '47
More gift ideas. il Mod Packaging 21:91-6+ O '47
1947 gift lines. il Mod Packaging 20:89-96 My '47
Party dress; Monogram of California packaging of gift novelties. il Mod Packaging 20:132-5 My '47
Plastics make good reuse packages. il Mod Plastics 24:94-5 D '46

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Inspection

Electronic inspection; automaton detects and removes from line packages with foreign metal. P. A. Greenmeyer. il diags Mod Packaging 21:132-7 S '47

Law

New trademark law; makes possible registration of package itself as a trade symbol. H. Mock. Mod Packaging 20:98-9+ My '47

New packages

Batteries; Eveready modernization program. il Mod Packaging 20:120-1+ Ag '47
Colgate preview. il Mod Packaging 20:136-9 Mr '47
Lyons tooth paste packaging. il Mod Packaging 21:98-101 O '47
New package to increase sales; Cannon sheets. il Ptr Ink 218:70 Mr 14 '47
New script for Scripto. il Mod Packaging 20:138-9 Je '47
Sugar salesmen; new packages for National Sugar families. il Mod Packaging 20:108-11 Ja '47

Protection

Cushion wrap; tool set protectively packed; cellulose crepe wadding. il Mod Packaging 20:142 Mr '47
Kinetics of package life. C. R. Oswin. Soc Chem Ind J 64:67-70, 224-5; 65:419-21 bibliog(p420-1) Mr, Ag '45, D '46; Same abr. Mod Packaging 20:143-6+ N '46
Science and packaging. G. L. Riddell. bibliog Chem & Ind p35-9 Ja 18 '47

See also
Packaging materials
Packing for shipment

Size

How to increase the unit of sale; new packaging device, larger package, wider assortment, price inducement, etc. Ptr Ink 219: 40-1 My 23 '47

Testing

Dear Mr Packager; opinion sampling to prevent costly errors. H. A. Trumbull. il map Mod Packaging 20:100-5 Ap '47
Evaluation of visual stimuli; Seagram visual laboratories; abstract. N. F. Girardot. Mod Packaging 20:152-3 Ap '47
Ottawa test sand; evaluation of gas permeability of sealed flexible packages. L. C. Cartwright. bibliog il diag Mod Packaging 20:145-7+ My '47; Same. Paper Tr J 124:51-3 Je 19 '47
Water vapor permeability of packages. Mod Packaging 20:129+ Ag '47

Sweden

Swedish packaging. il Mod Packaging 21: 100-6 S '47

PACKAGE inserts
Inserts; review of their functions. M. D. Penney. il Mod Packaging 21:112-16+ S '47

PACKAGING
American management association 16th annual packaging conference and exposition, Philadelphia, April 8-11; with abstracts of papers. Mod Packaging 20:139-54 Ap '47
Chemists in manufacturing should help solve problems of product design, redesign, and packaging. W. von Pechmann. Ind & Eng Chem 39:sup 105A-6A O '47
Consolidated layout quadruples handling capacity; Parker appliance company combines inspection packaging and shipping departments in one work area. C. J. Giblin. il plan Factory Management 105:96-9 F '47
Consumer packaging clinic. Mod Packaging 20:142-5 Ap '47
Developments in food packaging. J. V. Ziemba. il Food Ind 19:773-5+ Je '47
Efficiency in packaging; abstract. G. L. Riddell. Chem & Ind p580 S 20 '47
Engine parts wartime packaging experience is basis of Detroit Diesel's new selling program. il Mod Packaging 20:126-9+ Ap '47
Flowers for all; new concept of pre-packaged cut flowers. A. Laurie and W. Bryant. il Mod Packaging 20:110-13 Je '47
How Robert Gair blazed a trail for modern packaging. Sales Management 57:82 D 15 '46
Industrial packaging institute. Mod Packaging 21:206 S '47
Innovations in butter; heat-sealed wraps and further streamlining of packaging operations. il Mod Packaging 20:136-8 Jl '47
New food packaging problems and how to handle them; packaging committee. J. V. Ziemba. il Food Ind 19:309-11 Mr '47
New layout wipes out a storage; Day-Brite lighting fixtures. R. V. Wilk. il Factory Management 105:105 O '47
Outlook for '47. il Mod Packaging 20:87-96 Ja '47
Outlook in packaging; 16th packaging conference and exposition. Food Ind 19:603 My '47
Package helps place line with 10% of prospective jobbers; McKay welding electrodes. P. Hyde. Ptr Ink 218:62+ F 21 '47
Package problems; shortage of containers and equipment. Bsns W p32+ D 7 '46
Packaging characteristics of products. C. A. Southwick, jr. Mod Packaging 20:147-8+ Jl '47
Pre-packed lamps; put up in consumer units at the factory. il Mod Packaging 20:178-80 Mr '47
Product is the wrap; bowl cover package. il Mod Packaging 20:107 Ag '47
Production clinic; standardization in packaging. E. G. Thomssen. Soap & San Chem 22:81+ D '46
Service packaging; Behr-Manning's problem, to serve its dealers better. il Mod Packaging 21:138-40+ O '47
Simplified toy packs; Goodman packaging combines selling punch with production speed. il Mod Packaging 21:142-3 S '47
Solving a production problem in automatic soap flake packaging. il Soap & San Chem 23:38-9 S '47
Streamlined flow speeds output of lubricants; handling and packaging equipment; Port Arthur refinery. il diags Oil & Gas J 45:74-7+ D 14 '46
23,000 items; Butler bros., quality branding and coordinated packaging program. H. C. Isaacs. il Mod Packaging 20:103-7+ Ja '47
Two-in-one bread; Twin-pack. il Bsns W p54 Mr 1 '47
Waxed fibre can for frozen foods; introduced by Seabrook farms. il Mod Packaging 20:96-102 N '46
Work simplification cuts cost of skinning frankfurters. V. C. Stephens, jr. il Food Ind 19:604-5+ My '47

See also
Bottling
Closures (containers)
Food packages
Fruit—Prepackaging
Hosiery boxes
Meat—Prepackaging
Packaging machinery
Packaging materials
Packing for shipment
Sealing
Vegetables—Prepackaging

Cost

Program of packaging cost reduction; abstract. J. A. Warren. Mod Packaging 20: 140-2 Ap '47
Standardization offers great possibilities in reducing packaging and container cost. J. A. Warren. Chem & Eng N 25:1226 Ap 28 '47

PACKAGING—Cost—*Continued*
What is packaging cost? il Mod Packaging 20:100-3 D '46

Exhibitions

American management association 16th annual packaging conference and exposition, Philadelphia, April 8-11. il Chem & Eng N 25:1192 Ap 28 '47
American management association 16th annual packaging conference and exposition, Philadelphia, April 8-11; program and list of exhibitors. il Mod Packaging 20:124-5+ Mr '47
British packaging makes it. J. Cain. il Mod Packaging 20:116-19 N '46
Package show exhibits forecast design changes; A.M.A. annual packaging conference. Sales Management 58:90+ My 1 '47
Packages dress up for sales; annual packaging meeting in Philadelphia. il Bsns W p17-18 Ap 19 '47

Patents

U.S. patent digest. H. A. Levey. Published in monthly numbers of Modern packaging

Specifications

Joint army-navy (JAN) packaging specifications available to industry. Mod Packaging 20:130 Jl '47

PACKAGING, Government
Government packaging. C. K. Royce. Mod Packaging 20:126-31 Jl '47

PACKAGING, Technical committee on. See Federal specifications board—Technical committee on packaging

PACKAGING committees
Packaging committee; Winthrop companies packs over 900 medicinal products. il Mod Packaging 20:130-3 Ap '47

PACKAGING conference. See American management association—Packaging conference

PACKAGING departments
Difficult chemicals; Pennsalt packaging and labeling division. il Mod Packaging 20:126-31 My '47
Export pack; better protection at lower cost is the justification of the package engineering section. W. H. Wilson. il Mod Packaging 20:134-5 Ap '47
Versatile lines; Grove laboratories demonstrate ingenuity in equipment. il Mod Packaging 20:104-7 F '47

PACKAGING engineers association of America, Industrial. See Industrial packaging engineers association of America

PACKAGING Institute
Annual meeting, 8th, Chicago, Nov. 25-26. Mod Packaging 20:144a-144d D '46
Packaging institute annual meeting. Ptr Ink 217:132 D 6 '46

PACKAGING laboratories
How a food packaging laboratory functions. J. V. Ziemba. il Food Ind 19:1206-9 S '47
How to equip and organize a packaging laboratory. J. V. Ziemba. il plan Food Ind 19: 1072-4+ Ag '47
Kodak's new lab. il Mod Packaging 20:130-3 Ja '47
Why a packaging laboratory? J. V. Ziemba. il Food Ind 19:924-7+ Jl '47

PACKAGING machinery
Automatic cellophane bagging of frozen foods; making filling and heat sealing duplex bags. il Mod Packaging 20:143-5 Mr '47
Bagged cranberries; Ocean Spray turns out 165 a minute. il Mod Packaging 21:107+ S '47
Compression packaging; fibrous glass for building insulation. il Mod Packaging 20: 118-21 F '47
Ice cream packaging system. il Food Ind 19: 1223 S '47
Improved machines save labor on the packaging line. F. H. Mayoh. il diags Food Ind 19:1354-7 O '47
Second skin; Florida tests machine that will stretch-wrap and seal oranges in thin pliofilm. il Mod Packaging 20:96-8 Ap '47
What's wanted in machinery; better lubrication, simplified design, greater safety. Mod Packaging 20:104-7 My '47
Yeast machine makes and dates 85 packages per minute. il Mod Packaging 20:95 N '46

See also
Bag filling machines
Box making machines
Filling machines
Sealing machines
Wrapping machines

PACKAGING materials
Chemistry, foundation of good packaging; Dow's packaging products and their uses. L. Barnett. Chem & Eng N 25:258 Ja 27 '47
Cushion wrap; tool set protectively packed; cellulose crepe wadding. il Mod Packaging 20:142 Mr '47
Editorial citation to the Visking corp. for achievement in polythene plastics for packaging. il Materials & Methods 24:1188-9 N '46
Film manufacture; outline of methods. W. H. Aiken. il diags Mod Packaging 20:147-52 D '46
Frozen food; packaging requirements; report on a new dip-coat package. W. Rabak. il Mod Packaging 20:112-15+ F '47
Glass-plastic dispenser; O-Cedar's air freshener also uses paper, metal, cork, foil and felt. il Mod Packaging 20:110-11 F '47
Heat sealing acetate. W. F. Cullom. il diags Mod Packaging 21:152-3+ S '47
Kinetics of package life. C. R. Oswin. Soc Chem Ind J 64:67-70, 224-5; 65:419-21 bibliog(p420-1) Mr, Ag '45, D '46; Same abr. Mod Packaging 20:143-6+ N '46
Materials control; storage, handling and specification testing of packaging materials. E. H. Balkema and F. J. Burk. il Mod Packaging 20:112-15 Ja '47
Mold control. C. G. Lavers. bibliog Mod Packaging 20:185-7+ Mr '47
New packaging film from plastic latex; Reynolon. il Chem & Eng N 25:3168 O 27 '47
Odor transmission. L. W. Elder, jr. bibliog il Mod Packaging 20:147-9 Je '47
Outlook for '47. il Mod Packaging 20:87-96 Ja '47
Packaging hygroscopic tablets. Mod Packaging 21:154 O '47
Paper industry's leaders talk at second annual industrial packaging and materials handling exposition. Paper Tr J 124:7+ My 8 '47
Polyethylene packages in use. il Mod Packaging 20:118-22 Ja '47
Printing the new plastic films. il Mod Packaging 20:82-6+ Ag '47
Proper packaging protects frozen meats. J. V. Ziemba. il Food Ind 18:1710-12 N '46
Saran film 517; first report on physical properties. H. L. Schaefer and F. C. Dulmage, jr. il diags Mod Packaging 20:149-53 Jl '47
Vinylidene chloride film and latex; packaging and coatings. il Mod Plastics 25:128-31 O '47
Wax coating frozen foods. il Food Ind 19: 453+ Ap '47

See also
Adhesives
Aluminum foil
Cellophane
Packing for shipment
Paper, Waxed
Paper board
Vinylite
Waxes
Wrapping materials
Wrapping paper

Moisture content.
Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47
Packaging Institute standard test methods; moisture gain or loss (packages at 100° F.). il Mod Packaging 20:193-4+ Mr '47
Study of frozen food wrapping materials. D. C. McCoy and others. il Refrig Eng 52: 531-4+ D '46
What is the protective value of the double overwrap? W. Rabak and J. B. Stark. bibliog il Food Ind 18:1690-1+ N '46

Patents

U.S. patent digest. H. A. Levey. Published in monthly numbers of Modern packaging

Testing
Container strength measured by a new puncture tester. C. J. Falk. il Food Ind 19: 454-5+ Ap '47

PACKAGING materials—Testing—*Continued*
Cushioning curves; AAF develops graphic method of finding thickness of cushion required to protect product. Mod Packaging 20:139-43 F '47
Determination of gas permeability of saran films. T. W. Sarge. bibliog il diags Anal Chem 19:396-400 Je '47
Drop test. il Mod Packaging 20:144 F '47
Factors affecting measurement of water vapor permeability at low temperatures. W. H. Aiken. bibliog Paper Tr J 125:31-5 O 2 '47
Freezer wraps; need for better locker papers. D. C. McCoy and others. il Mod Packaging 20:188-92 Mr '47
Insects; package pests and storage conditions which favor growth. A. E. Michelbacher. il diags Mod Packaging 20:143-5+ Ja '47
Measurement of the gas permeability of sheet materials. L. C. Cartwright. bibliog diag Anal Chem 19:393-6 Je '47
Method for locating points of gas leakage in packages and packaging materials. H. H. Hartwig. il diags Paper Tr J 124:47-8 My 15 '47; Same abr. Paper Ind 29:1206-7 N '47
Ottawa test sand; evaluation of gas permeability of sealed flexible packages. L. C. Cartwright. bibliog il diag Mod Packaging 20:145-7+ My '47; Same. Paper Tr J 124: 51-3 Je 19 '47
PI standard test methods for block point. il Mod Packaging 20:147+ N '46
PI standard test methods for flammability. il Mod Packaging 20:148 Ja '47
Packaging Institute standard test methods for greaseproofness. il Mod Packaging 20: 165-6 Ap '47
PI standard test methods for tensile strength and elongation. il Mod Packaging 20:153+ D '46
Packaging Institute standard test methods; moisture gain or loss (packages at 100° F.). il Mod Packaging 20:193-4+ Mr '47
Science and packaging. G. L. Riddell. bibliog Chem & Ind p35-9 Ja 18 '47
Testing packaging materials for quick frozen oysters. S. R. Pottinger and others. il Food Ind 19:324-6+ Mr '47

PACKAGING plants
Model packaging plant; Johnson & Johnson baby products plant. il diags Mod Packaging 20:90-6 Ag '47

PACKAGING research
Dear Mr Packager; opinion sampling to prevent costly errors. H. A. Trumbull. il map Mod Packaging 20:100-5 Ap '47
General Foods' inside story. L. W. Elder, jr. il Mod Packaging 20:117-22 Mr '47
Science and packaging. G. L. Riddell. bibliog Chem & Ind p35-9 Ja 18 '47
See also
Packaging laboratories

PACKAGING trays. See Trays, Packaging

PACKERS, Oil well. See Petroleum—Well packers

PACKING
Dye insoluble in one component permits visual study of packing channeling. G. V. O'Connor. diag Chem Eng 53:162 N '46
Efficient packing for rectifying columns; portable liquid air distillation plant. H. O. McMahon. il diag Ind & Eng Chem 39: 712-14 Je '47
Heat transfer to gases through packed tubes; general correlation for smooth spherical particles. M. Leva. diag Ind & Eng Chem 39:857-62 Jl '47
Hot boxes in freight service. H. R. Longhurst. il Ry Mech Eng 121:19-21 Ja '47
Hydraulic O-ring packing for sealing cylinders and pistons. R. E. Allen. diags Product Eng 18:163-6 Jl '47
Liquid air fractionation; testing of both packed and tray-type towers. J. G. Aston, W. E. Lobo and B. Williams. bibliog il diags Ind & Eng Chem 39:718-31 Je '47
Mechanism of countercurrent gas liquid flow through packed towers. F. A. Zenz. bibliog Chem Eng Prog 43:415-28 Ag '47
Performance of small mechanical draft cooling towers. W. M. Simpson and T. K. Sherwood. bibliog diags Refrig Eng 52:535-43+ D '46
Pressure drop through packed tubes. M. Leva. Chem Eng Prog 43:549-54 O '47 (to be cont)
Reciprocating-pump; rod, piston and plunger packing; question and answers for power engineers. diags Power 91:346-8 My '47
See also
Gaskets

Testing
Explaining how to do your own friction testing and figuring. W. F. Schaphorst. diag Paper Ind 29:252 My '47
Performance of McMahon packing; tests in a 6½-inch-diameter fractionating column with benzene-ethylene dichloride mixtures. W. L. Forsythe, jr. and others. bibliog diag Ind & Eng Chem 39:714-18 Je '47
Rectification of liquid air in a packed column. J. A. Weedman and B. F. Dodge. bibliog il diag Ind & Eng Chem 39:732-44 Je '47

PACKING for shipment
Compression packaging; fibrous glass for building insulation. il Mod Packaging 20: 118-21 F '47
Cushioning curves; AAF develops graphic method of finding thickness of cushion required to protect product. Mod Packaging 20:139-43 F '47
Cutting transportation damage; reprint of article by Research institute of America. il Chem Ind 61:674+ O '47
Damaged goods; flimsy packaging causes big losses in export field. Bsns W p26+ O 18 '47
G.E. shipping packs; specifications and procedure. P. O. Vogt. il Mod Packaging 20: 140-4+ D '46
Government packaging. C. K. Royce. Mod Packaging 20:126-31 Jl '47
Great Northern tests pallets for l.c.l. il Ry Age 122:799 Ap 19 '47
Packaging expert helps railroad reduce freight losses. il Steel 120:99 My 19 '47
Packaging of metal parts; abstract. L. A. Holder. Mod Packaging 20:146 Ap '47
Packing for export must be good. For Comm W 26:37 Ja 18 '47
Practical palletizing pays off. B. R. Loeper and J. R. Hughes. il Am Mach 90:113-15 N 21 '46
Prize-winning shipping packs; Industrial packaging engineers' contest. il Mod Packaging 20:142-3 Je '47
Railroad container engineer and shippers; abstract. W. R. White. Ry Age 122:936 My 10 '47
Speeding deliveries and cutting claims; second annual Industrial packaging and materials handling forum and exposition, Chicago, April 29-May 1. il Ry Age 122:934-6 My 10 '47
Tailor-made protection. Management R 36: 283-5 My '47
Techniques of export packaging; abstract. J. Mount. Mod Packaging 20:153-4 Ap '47
X-ray tables packed to protect delicate mechanism and ease handling. D. R. Goodall. il Mod Packaging 20:123 My '47
See also
Containers (for shipping)
Packaging materials
Packaging machinery
Paper boxes
Shipment of goods
also Industrial packaging engineers association of America

PACKINGHOUSE workers of America, United. See United packinghouse workers of America

PACKING houses
Flat slabs on cast-iron columns increase usable space; hog-cooler building for a meat-packing plant; Wilson & co. il diags Eng N 138:216-17 F 6 '47

By-products
Byproducts of livestock reduce costs to consumers. E. G. Henning. il Dom Comm 34: 34-7 N '46

Employees
Q fever in the United States; outbreak among stock handlers and slaughter house workers; abstract. N. H. Topping and others. Nat Safety N 55:48 My '47

PACKING houses—*Continued*

Equipment

Arc-welded steel construction improves production of meat packing machinery. R. H. Davies. il Welding J 26:514 Je '47

Safety measures

Nurse's idea saves fingers; F. Silbaugh invents mesh glove for packinghouse workers. B. Christiansen. il Nat Safety N 54:32+ N '46; Same. Safety Eng 92:40-2 N '46
Safety in meat packing; Oscar Mayer & co. D. R. Blenis. il Safety Eng 93:28-9+ Ap '47

Sanitation

Slaughter house tough jobs. R. Walter. flow diag il diag Food Ind 19:1340-1+ O '47

Waste

Backwashing for a trickling filter installation to treat packing house waste. il Pub Works 78:21 Ag '47
Industrial wastes; packing house industry. F. W. Mohlman. bibliog flow chart il Ind & Eng Chem 39:637-41 My '47

PACKING industry

See also
Canned meat
Meat industry and trade
also American meat institute

Accounting

How inventory is audited in the packing house industry. L. E. Zraick. J Account 83: 503-6 Je '47

Advertising

See also
Meat industry and trade—Advertising

Securities

Big four in meat packing. R. Colston. il Mag of Wall St 80:439+, 440-1 Jl 19 '47
Profit potentials in meat packing stocks; with earning summary of leading packers. F. R. Walters. il Mag of Wall St 79:426-8+ Ja 18 '47

PADUCAH, Kentucky

One-newspaper town; Sun-Democrat has monopoly on Paducah's front porches but not on minds of its readers. il Fortune 36: 102-7+ Ag '47

PAGEANTS

Problem in outdoor sound; apparatus for Vancouver's anniversary pageant. A. B. Ellis and J. P. Gilmore. il plan diag Electronics 19:126-9 D '46

PAILS, Minnow. See Minnow pails

PAINE, Walter S. 1881-1947

Sketch. por Nat Safety N 55:21 Ap '47

PAINT

Ball-bearing enamel; Spred-Luster, Glidden's water-emulsion enamel. il Chem Ind 60:941 Je '47
Chemical study of paints; abstract. A. W. H. Barton. Chem Age (Lond) 56:799 Je 21 '47
Emulsion paints. G. M. Sutheim. bibliog il Chem Ind 60:948-51+ Je '47
German paint industry; review of F.I.A.T. final report 681. Chem Age (Lond) 56:289-90 Mr 8 '47
How to raise a family of promising new products; Setfast canvas paint. W. Hansot. il Sales Management 58:46+ Mr 1 '47
New paint by Snell and Shawinigan. Chem Eng Prog 43:sup24 O '47
Paint technology in France during the enemy occupation. G. C. Champetier. Paint Oil & Chem R 109:81-2 N 14 '46; Same. Oil Paint & Drug Rep 150:87-9 N 11 '46
Paradoxical paints. J. R. Patterson. il Sci Am 177:157-9 O '47
Phenomenon of bronze in surface coatings. G. L. Buc and others. bibliog il pl diags Ind & Eng Chem 39:147-54 F '47
Plastics in paints. C. A. Breskin. il Sci Am 177:13-14 Jl '47
Polymerized paint base. Sci Am 177:26 Jl '47
Post-war exterior house paints. S. Werthan. Paint Oil & Chem R 110:18+ Ap 3 '47
Post-war paints are a superior product. E. D. Peck. Paint Oil & Chem R 110:8 S 18 '47
Wartime type paints for future use; abstract. F. L. Browne. Paint Oil & Chem R 110:8 O 2 '47
Water paint vehicle. Chem Eng 54:167 O '47

See also
Factories—Painting
Lacquer and lacquering
Pigments
Varnish and varnishing

Analysis

Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. bibliog Soc Chem Ind J 65:305-8, pl 5-6 O '46
Volumetric determination of water in paints and varnishes. M. H. Swann. bibliog Ind & Eng Chem Anal ed 18:799-800 D '46
Water in paint test takes only one hour; abstract. Paint Oil & Chem R 110:39 S 4 '47

Cleaning

New federal spec for painted surface cleaner. Soap & San Chem 23:43 Ag '47

Color

Heat control, paint's third dimension. Cer Ind 49:49 Jl '47
Mix-magic breathes new life into Martin-Senour sales. W. M. Stuart. il Sales Management 59:37-9 N 1 '47
Paint color resists sunlight better. Sci Am 176:38 Ja '47

Drying

Briggs adopts special lacquer-drying ovens. J. Geschelin. il Automotive Ind 97:32-3+ Ag 1 '47
Drying industrial finishes on metals. H. R. Clauser. il diag Materials & Methods 24: 910-14, 1452-6 O, D '46
Drying of paints and plastics, radiant or connection heating. J. C. Lowson; R. F. Hayman. Chem Age (Lond) 55:593 N 16 '46
Effect of nitrogen-containing compounds on drying of paints. G. K. Wheeler. Ind & Eng Chem 39:1115-17 S '47
Faster baking and drying with infrared heat. P. H. Goodell. il Elec World 127:58-60 Je 21; 128:72-4 Jl 5 '47
Infrared finishing ovens. I. J. Barber. Paint Oil & Chem R 110:8+ Ap 3 '47
Investigation of methods for measuring drying time. il diag Paint Oil & Chem R 109: 57-9 N 14 '46
More output, less space with infrared oven; Martin & Schwartz inc. J. F. Gschwind. il Elec World 127:56-7 Ap 26 '47
Use of conveyor oven in rapidly curing paints by radiant heating. A. M. Lehmann. Chem Age (Lond) 55:594 N 16 '46

Manufacture

Paint making methods of I.G. Farben. Oil Paint & Drug Rep 150:66 D 30 '46
Study of pigment dispersion, report no. 1; measurement of fineness of grind. il Paint Oil & Chem R 109:76-81 N 14 '46

Prices

N.P.V.L.A. denies high price charge. Oil Paint & Drug Rep 151:5 My 19 '47
Paint makers margin under OPA revealed. Oil Paint & Drug Rep 152:3 S 22 '47

Shrinkage

Shrinkage of paint films; abstract. W. Koenig. Paint Oil & Chem R 109:48-9 D 12 '46

Storage

Viscosity changes in storage of paints containing basic pigments. Paint Oil & Chem R 109:18+ N 14 '46

Testing

ASTM paint groups report on undertakings. Oil Paint & Drug Rep 151:5+ Mr 10 '47
Detection of pores in paint coatings by electrical means; testing lacquered cans; abstract. G. Schikorr. Paint Oil & Chem R 109:46 O 17 '46
Experimental laboratory for paint testing; Newcomb-Detroit co. il Automotive & Aviation Ind 96:45 My 15 '47
Federation of paint and varnish production clubs papers on testing methods; abstracts. Oil Paint & Drug Rep 150:85 N 11 '46

PAINT—Testing—*Continued*
Floor paint vehicles. Paint Oil & Chem R 109:60-2 N 14 '46
Industrial paint tests expected to decrease maintenance costs. Steel 120:132 Je 23 '47
Paint evaluation discussed in ASTM symposium. Oil Paint & Drug Rep 151:5+ Mr 3 '47
Possible method of using reflectometer to determine hiding power. Paint Oil & Chem R 109:42-4 N 14 '46
Test methods for plant control; by Philadelphia production club. diags Paint Oil & Chem R 109:41-3+ D 12 '46
Tests on paints for masonry walls. il Concrete 55:14-15+ O '47
Water resistance; abstract. J. van Loon. Paint Oil & Chem R 110:42 My 29 '47
Weathering machine correlation in the Cleveland club area. il Paint Oil & Chem R 109:14+ N 28 '46
Weathering tests; abstract. R. N. Wheeler. Paint Oil & Chem R 110:29 Ja 9 '47

PAINT, Anti-fouling
Antifouling paints; inactivation of highly pigmented antifouling films applied to steel. A. L. Alexander and R. L. Benemelis. il Ind & Eng Chem 39:1028-32 Ag '47; Abstract. Product Eng 18:133-4 F '47
Anti-fouling paints research results. Oil Paint & Drug Rep 150:74 N 18 '46
Battelle institute develops antifouling paint. Marine Eng 51:122+ N '46
German antifouling paints data offered by OTS. Oil Paint & Drug Rep 152:59 O 27 '47
Hot plastic paint. H. L. Aldrich. il Paint Oil & Chem R 110:8+ Ja 23 '47
Navy researchers develop new anti-fouling paint; abstract. Paint Oil & Chem R 110: 13 Je 12 '47
Report on anti-fouling research, 1942-44; abstracts and discussion. J. E. Harris. Engineering 162:569 D 13 '46; Engineer 182:535 D 13 '46
Some acoustic properties of marine fouling. J. W. Fitzgerald and others. bibliog il diags Acoustical Soc Am J 19:332-7 Mr '47

Testing
Interim descriptive statement on the leaching-rate test for ships' anti-fouling compositions; abstracts and discussion. Engineering 162:569 D 13 '46; Engineer 182:535-6 D 13 '46
Leaching rate tests on anti-fouling compositions; testing method for inland stations. N. W. Hanson and R. F. Jervis. diag Soc Chem Ind J 65:329-33 N '46
Methods of assessment of anti-fouling compositions. K. A. Pyefinch. bibliog Iron & Steel Inst J 152:229-43 no 2 '45

PAINT, Fungicidal
Mildew problems of interest to paint, varnish and lacquer manufacturers. P. G. Benignus. Paint Oil & Chem R 110:10+ Ap 3 '47
Mildewproofing protective coatings. A. Minich and M. Goll. il Paint Oil & Chem R 109:6-7+ N 28 '46

PAINT, Heat resisting
Heat resistant finishes. il Paint Oil & Chem R 109:46-8 N 14 '46

PAINT, Insecticidal
Insecticidal paints; abstract. W. Carr. Paint Oil & Chem R 109:20 D 26 '46
Paints containing DDT; abstract. D. Gilmour. Soap & San Chem 23:155 S '47

PAINT, Luminous
Radioactive luminous paint; need for control measures in aircraft instrument overhaul as well as in dial painting. R. L. Shorkey. Nat Safety N 56:28-9 S '47

PAINT, Protective
Action of pigments in anticorrosive paints; abstract. H. Wagner. Paint Oil & Chem R 109:46 O 17 '46
Aluminum paint dries fast, resists attack by most chemicals. Sci Am 177:181-2 O '47
Anticorrosive paints on oil basis; abstract. J. Schrieber. Paint Oil & Chem R 110:40 Mr 20 '47
Anti-corrosive pigments. Chem Age (Lond) 55:636 N 23 '46
Chromates in metal protective paints; abstract. H. Wagner. Paint Oil & Chem R 109:49 D 12 '46
Evaluation of synthetic rubbers in organic protective coatings. Paint Oil & Chem R 109:85-6 N 14 '46
Formulation of anti-corrosive compositions for ships' bottoms and under-water service on steels; abstract and discussion. F. Fancutt and J. C. Hudson. Engineering 162:569 D 13 '46
Heat resistant finishes. il Paint Oil & Chem R 109:46-8 N 14 '46
Liquid roof insulation applied like paint; Gilsalume. il Am Bld 69:150+ Jl '47
New specialties exploit chemical research; protective coatings. G. M. Sutheim. Chem Ind 61:406-7 S '47
Organic coatings for corrosion protection. G. W. Seagren. Steel 121:124+ N 3 '47
Painting sheet metal. Paper Ind 28:1638 F '47
Preparation of metals for painting. R. E. Gwyther. il Water & Sewage Works 94: R72-3 Jl '47; Same cond. Product Eng 18: 153-5 Mr '47
Pretreatment of iron and steel surfaces; abstract. A. R. King. Paint Oil & Chem R 109:50 D 12 '46
Rust, industry's arch enemy. T. Trail. il Power Pl Eng 51:84-6 Je '47
Study of fire resistant house paints made with chlorinated paraffin. Paint Oil & Chem R 109:28+ N 14 '46
Sulfur dioxide vs. materials of chemical plant construction; protective coatings. Chem Eng 54:214 Ag '47
Use of metallic pigments in the preparation of protective paints. J. E. O. Mayne. bibliog diags Soc Chem Ind J 66:93-5 Mr '47

See also
Metal protection
Paint, Anti-fouling
Paint, Fungicidal
Paint, Insecticidal

Testing
Electrical detection of pores in paint films. Paint Oil & Chem R 110:26+ F 20 '47
Pore size in protective films by electrographic printing. W. E. Shaw and E. T. Moore. bibliog diags Anal Chem 19:777-9 O '47
Protective coating under test; Dow chemical co. plant, Freeport, Tex. il Chem Eng 54: 154-5 My '47
Water immersion testing of metal protective paints; role of electroendosmosis in water absorption and blistering. W. W. Kittelberger and A. C. Elm. il Ind & Eng Chem 39:876-81 Jl '47

PAINT and varnish production clubs, Federation of. See Federation of paint and varnish production clubs

PAINT brushes
Brushes from milk; Rubberset company's new plant at Salisbury, Md. L. B. Howard. il Manuf Rec 116:32-3+ Ap '47
Casein for brush bristles. il Chem Eng 54: 108-9 Mr '47
Paint brush boxes. H. R. Dampman. diags Sheet Metal Worker 38:47-8 O '47

Advertising
Copy chasers; review of NIAA panel exhibit winners; Rubberset nylon paint brushes. il Ind Marketing 32:99-100 Ag '47

PAINT cans
Containers. W. C. Stolk. Paint Oil & Chem R 109:14a-14b D 12 '46

PAINT factories
Employees
Technical education programs and how to promote them; Joint technical education committee of paint associations. C. H. Reed. Paint Oil & Chem R 110:23+ Ja 9 '47

Fires and fire protection
Prior planning best defense against paint fires. D. Bernhardt, jr. Paint Oil & Chem R 110:10+ My 29 '47

PAINT industry and trade
Assignments and bankruptcies. W. Rohs. Paint Oil & Chem R 110:22+ Je 12 '47
Glidden focuses training at the retail sales level. L. S. Fulton. il Sales Management 58:50+ F 15 '47

PAINT industry and trade—*Continued*
High prices may bring billion dollar paint year. H. Murphy. Barron's 27:30 Je 23 '47
Impediments in paint production. E. T. Trigg. Paint Oil & Chem R 110:35-7 Mr 6 '47
Mix-magic breathes new life into Martin-Senour sales. W. M. Stuart. il Sales Management 59:37-9 N 1 '47
Nu-Enamel strikes sales bonanza in face-lifting for shabby cars. L. Boyd. il Sales Management 58:37-9 My 1 '47
Public relations in the paint industry. R. W. Emerson. Paint Oil & Chem R 109:24+ O 17 '46
Seal-Kote paint claims hit by FTC. Oil Paint & Drug Rep 151:42 F 10 '47
State of the industry. E. T. Trigg. Paint Oil & Chem R 109:12+ N 14 '46
Survey of the paint, varnish, and lacquer industry for 1946. C. P. Neidig and H. Burrell. il Chem & Eng N 25:93-5 Ja 13 '47
What's ahead? R. W. Elton. Paint Oil & Chem R 110:10+ F 6 '47

See also National paint, varnish and lacquer association; Sherwin-Williams company

Advertising

Advertising campaign urged. E. D. Peck. Oil Paint & Drug Rep 150:81 N 11 '46
What can local associations do about the co-operative advertising campaign. R. W. Elton. Paint Oil & Chem R 109:72-3 N 14 '46

Exhibitions

Paint industries show. il Chem & Eng N 24:3040 N 25 '46

Statistics

Paint, varnish, lacquer sales, 1946. Oil Paint & Drug Rep 151:70 F 17 '47
Plastic, coldwater paint, calcimines sales, 1946. Oil Paint & Drug Rep 151:68 F 17 '47

France

Paint technology in France during the enemy occupation. G. C. Champetier. Paint Oil & Chem R 109:81-2 N 14 '46; Same. Oil Paint & Drug Rep 150:87-9 N 11 '46

Germany

Data on formulas and processes available in OTS report; investigation of the German paint industry. For Comm W 28:34-5 Ag 9 '47
German paint industry; review of F.I.A.T. final report 681. Chem Age (Lond) 56:289-90 Mr 8 '47

Great Britain

British paints for abroad; serious decline in export values. Chem Age (Lond) 55:604 N 16 '46

Southern states

Industrial finishes for the South. E. H. Trussell. Paint Oil & Chem R 110:12+ Ap 17 '47

Southwestern states

Surface coatings and the Southwest. W. H. Shearon, jr. il Chem & Eng N 25:3150-1 O 27 '47

Spain

Spanish paint industry. Chem Age (Lond) 57:295 Ag 30 '47
Spanish paint industry. W. G. Cass. Chem & Eng N 25:2848-9 S 29 '47

PAINT laboratories
Industrial paint producer opens new laboratory. Steel 121:68 Ag 11 '47
Paint research labs. Chem Age (Lond) 57: 428 S 27 '47
Research work on paints; Research association of British paint, colour, and varnish manufacturers. Engineering 164:356 O 10 '47

PAINT materials
Boiled linseed oil. Paper Ind 28:252-3 My '47
Chlorinated rubber; abstract. P. Henry. Chem Eng 54:258+ O '47
Distempers and water paints; abstract. H. C. Bryson. Paint Oil & Chem R 110:27 Mr 6 '47
Fast-drying resins. Chem & Eng N 25:1140-1 Ap 21 '47
Floor paint vehicles. Paint Oil & Chem R 109:60-2 N 14 '46
Investigation of aqueous acrysol, Geon and saran dispersions. Paint Oil & Chem R 109: 50-6 N 14 '46
Mould and core paints and washes, and parting powders. W. J. Rees. Iron & Steel Inst J 152:57-60 no 2 '45; Same. Engineering 160:27-8 Jl 13 '45; Abstract. Iron Age 156:53 O 18 '45
New pigment will conserve lead supply; abstract. F. J. Williams and A. R. Pitrot. Paint Oil & Chem R 110:17 O 2 '47
New specialties exploit chemical research; protective coatings. G. M. Sutheim. Chem Ind 61:406-7 S '47
Paints from wool grease. Chem Age (Lond) 56:485-6 Ap 19 '47
Physical studies of paint primers in two-coat paint systems applied to southern yellow pine. L. Wilkins and P. Weber. bibliog Georgia School of Technology State Eng Exp Sta [Atlanta] Reprint no 21:88-121 '47
Soybean oil in paint from a manufacturers viewpoint. F. J. Stark. Paint Oil & Chem R 110:43+ S 18 '47
Styrene copolymers in coatings; abstract. D. H. Hewitt and F. Armitage. Paint Oil & Chem R 109:47 O 17 '46
Surface coatings and the Southwest. W. H. Shearon, jr. il Chem & Eng N 25:3150-1 O 27 '47
Thermoplastic specialty resins. W. H. Aiken. il Mod Plastics 24:100-2 F '47
Treated natural resins; abstract. H. W. Chatfield. Paint Oil & Chem R 110:29 Ja 9 '47

See also
Carbon black
Drying oils
Finishing materials
Linseed oil
Pigments
Tall oil
Titanium oxides
Tung oil
Varnish and varnishing

Statistics

Protective coatings materials. Published in weekly numbers of Oil, paint and drug reporter

PAINT removers
Modern paint removers. L. E. Kuentzel and A. W. Liger. bibliog il Iron Age 160:78-83 O 9 '47

PAINT research
Diffuse spectral reflectance of paints in the near infra-red. J. A. Sanderson. bibliog diag Opt Soc Am J 37:771-7 O '47
Greater benefits from paint research. A. W. Steudel. Paint Oil & Chem R 110:28 S 4 '47
Investigation of aqueous acrysol, Geon and saran dispersion. Paint Oil & Chem R 109: 50-6 N 14 '46
Paint research station. Chem & Ind p608 O 4 '47
Paint research station of Research association of British paint, colour and varnish manufacturers. E. Appleton. Chem & Ind p624 O 11 '47
Physical studies of paint primers in two-coat paint systems applied to southern yellow pine. L. Wilkins and P. Weber. bibliog Georgia School of Technology State Eng Exp Sta [Atlanta] Reprint no 21:88-121 '47
Research in the paint industry, how and how much. L. O'Leary. Paint Oil & Chem R 110:16-17 O 2 '47
Study on paints for masonry walls made by Bureau of standards. il Paint Oil & Chem R 110:43+ S 18 '47; Same abr. Eng N 139: 471 O 2 '47

PAINT spraying
Lumber spray-painted before storage. Comp Air Mag 52:180 Jl '47
Spray coating precautions. Nat Safety N 55: 61 Mr '47
Spraying priming coat on new lumber; Canadian Pacific, Angus shops. il Ry Mech Eng 121:77 F '47

Booths

Plastic film cuts spray booth stripping costs. il Iron Age 159:69 My 29 '47
Safe light for spray booth. il Elec West 99:82 S '47

PAINT spraying, Electrostatic
Electrostatic painting. V. Zeluff. il Sci Am 175:252-4 D '46
Electrostatic painting; automobile garnish molding; abstract. G. Ferdon. il Mech Eng 69:678 Ag '47
Electrostatic spraying of steel wall panels. W. S. Reed. il Materials & Methods 25:77-9 F '47
Painting electrically speeds production. il Elec World 128:136+ O 11 '47
Spraying in electrostatic zones. J. Parina, jr. il Steel 120:106-7+ My 12 '47

PAINT, varnish and lacquer association, National. See National paint, varnish and lacquer association

PAINTING, Factory. See Factories—Painting

PAINTING, Industrial
Finishes for metal containers; abstract. M. G. Gardner. Product Eng 18:130-1 Mr '47
Postwar paints and painting methods. E. A. Zahn. Metal Prog 50:1075 N '46
Production increased three times by use of overhead conveyor; London pressed hinge co. il Mech Handling 34:436-7 Ag '47
Round table discussion on painting of southern yellow pine. Georgia School of Technology State Eng Exp Sta [Atlanta] Circ no 14:1-19 '47
Selection and application of mechanical finishes for aluminum. R. E. Pettit. Steel 120: 118 Mr 17 '47
Surface preparation and film thickness. H. L. Bottemiller. il diags Paint Oil & Chem R 110:14-15+ My 15 '47
Treatments for metal surfaces prior to painting. E. F. Hickson and W. C. Porter. il Product Eng 18:128-30 Ag '47
Use of a tin undercoat to improve the corrosion resistance of painted steel. E. S. Hedges and others. bibliog Iron & Steel Inst J 152:429-37, pl 42-3 no 2 '45; Same cond. il Engineering 160:505-8 D 14 '45; Same, without il. Steel 118:103+ Ap 22 '46; Abstract. Iron Age 156:64 D 6 '46; Discussion. Iron & Steel Inst J 152:437-40 no 2 '45

See also
Automobiles—Painting and finishing
Car painting and finishing
Concrete—Painting
Factories—Painting
Lacquer and lacquering
Machinery—Painting
Paint, Protective
Paint spraying
Ships—Painting
Varnish and varnishing

PAINTING and decorating contractors association
NPVLA and Contractors association form committee. Oil Paint & Drug Rep 152:7 S 15 '47

PAINTINGS
See also
Advertisements, Pictorial—Paintings

PAIS, A.
Pais' *f*-field theory and the mirror nuclei. A. S. Wightman. Phys R 71:447-8 Ap 1 '47

PAKISTAN
Modernization job. il Bsns W p 113-14 S 13 '47

PALEOBOTANY
See also
Pollen, Fossil

Pennsylvanian
Lime-secreting algae from the Pennsylvanian and Permian of Kansas. J. H. Johnson. bibliog map diags Geol Soc Bul 57:1087-119, pl 1-10 D '46

Permian
Lime-secreting algae from the Pennsylvanian and Permian of Kansas. J. H. Johnson. bibliog map diags Geol Soc Bul 57:1087-119, pl 1-10 D '46

PALEOCLIMATOLOGY
Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

PALEOGEOGRAPHY
Paleogeography of South America. L. G. Weeks. maps Am Assn Pet Geologists Bul 31:1194-241 bibliog(p 1230-41) Jl '47

See also
Continents
Glacial lakes

PALEONTOLOGY
Functions of vertebrate paleontology in the earth sciences. E. H. Colbert. Geol Soc Bul 58:287-91 Ap '47
Paleontologist or geologist. J. B. Knight. Geol Soc Bul 58:281-6 Ap '47

See also
Corals, Fossil
Crinoidea, Fossil
Fishes, Fossil
Graptolites
Mammals, Fossil
Micropaleontology
Mollusks, Fossil
Paleobotany
Reptiles, Fossil
Trilobites

Cambrian
New Cambrian fauna from western Newfoundland. J. C. Troelsen. bibliog diag Am J Sci 245:537-44, pl 1 S '47

Cenozoic
Holarctic mammalian faunas and continental relationships during the cenozoic. G. G. Simpson. bibliog Geol Soc Bul 58:613-87 Jl '47

Cretaceous
New upper cretaceous fossils from Mississippi and Texas. L. W. Stephenson. bibliog U S Geol S Professional Pa 210-E:161-96, pl 31-3 '47
Studies of some Comanche pelecypods and gastropods. T. W. Stanton. 2 fold charts(in pocket) map U S Geol S Professional Pa 211:1-256, pl 1-67 bibliog(p114-16) '47
Upper cretaceous ammonites from Haiti. J. B. Reeside, jr. bibliog U S Geol S Professional Pa 214-A:1-5, pl 1-3; pa 15c Supt. of doc. '47

Jurassic
Upper limit of the Jurassic system. A. F. Leanza. bibliog Geol Soc Bul 58:833-42 S '47

Miocene
New shrew from the Niobrara River upper miocene of Nebraska. J. R. Macdonald. diags Am J Sci 245:123-6 F '47

Mississippian
Three new genera of inadunate crinoids from the lower Mississippian. E. Kirk. bibliog Am J Sci 245:287-303, pl 1 My '47

Ordovician
Lower Ordovician fish remains from Missouri. A. K. Miller and others. bibliog Am J Sci 245:31-4, pl 1 Ja '47
Muscle scars in the Ordovician trilobite illaenus. G. W. Sinclair. bibliog Am J Sci 245:529-36, pl 1 S '47
New gastropods and trilobites critical in the correlation of lower Ordovician rocks. J. Bridge and P. E. Cloud, jr. bibliog map Am J Sci 245:545-59, pl 1-2 S '47
Ordovician trilobite dimeropyge. G. W. Sinclair. bibliog Am J Sci 244:854-60, pl 1 D '46
Two examples of inquiry in Ordovician trilobites. G. W. Sinclair. bibliog pl Am J Sci 245:250-7 Ap '47

Permian
Relationships of the Permian reptile protorosaurus. A. S. Romer. bibliog diags Am J Sci 245:18-30 Ja '47

America
Early man in America; index to localities and selected bibliography, 1940-1945. E. H. Sellards. diag Geol Soc Bul 58:955-77 bibliog(p970-7) O '47

Argentina
Upper limit of the Jurassic system. A. F. Leanza. bibliog Geol Soc Bul 58:833-42 S '47

Australia
Stratigraphy of Western Australia. C. Teichert. bibliog 4pls maps diags Am Assn Pet Geologists Bul 31:1-70 Ja '47

PALEONTOLOGY—*Continued*

Colorado

Upper Montana group, Golden area, Jefferson county, Colorado. J. D. Moody. bibliog maps diags Am Assn Pet Geologists Bul 31:1454-71 Ag '47

Cuba

Stratigraphic paleontology of Camagüey district. J. F. De Albear. map Am Assn Pet Geologists Bul 31:71-91 Ja '47

Florida

Molluscan fauna of the Alum Bluff group of Florida; ctenobranchia (remainder) aspidobranchia, and scaphopoda. J. Gardner. U S Geol S Professional Pa 142-H:493-638, pl 52-62; pa $1 Supt. of doc. '47

Haiti

Upper cretaceous ammonites from Haiti. J. B. Reeside, jr. bibliog U S Geol S Professional Pa 214-A:1-5, pl 1-3; pa 15c Supt. of doc. '47

Kentucky

Exploration for big bones at lower Blue Licks Spring. W. R. Jillson. Science 104: 555-6 D 6 '46

Mexico

Discovery of an upper pleistocene human skeleton at Tepexpan, Valley of Mexico; with editorial comment. H. de Terra. Science 105:493-4 My 9 '47

Mississippi

New upper cretaceous fossils from Mississippi and Texas; fossils from two deep wells in Mississippi. L. W. Stephenson. bibliog U S Geol S Professional Pa 210-E:161-85, pl 31-3 '47

Missouri

Lower Ordovician fish remains from Missouri. A. K. Miller and others. bibliog Am J Sci 245:31-4, pl 1 Ja '47

Nebraska

New shrew from the Niobrara River upper miocene of Nebraska. J. R. Macdonald. diags Am J Sci 245:123-6 F '47

New Mexico

Occurrence of Comanche rocks in Black River valley, New Mexico. W. B. Lang. map diags Am Assn Pet Geologists Bul 31:1472-8 Ag '47

Polished rocks of Cornudas mountain, New Mexico. W. B. Lang. Science 105:65 Ja 17 '47

Newfoundland

New Cambrian fauna from western Newfoundland. J. C. Troelsen. bibliog diag Am J Sci 245:537-44, pl 1 S '47

Peru

Collections of Peruvian fossils. Science 106: 144 Ag 15 '47

South Africa

Variation in the molars of the living African elephant and a critical revision of the fossil Proboscidea of southern Africa. H. B. S. Cooke. il diags Am J Sci 245:434-57, 492-517 Jl-Ag '47

Texas

Fossil bison and associated artifacts from Plainview, Texas. E. H. Sellards and others. il maps diags Geol Soc Bul 58:927-54, pl 1-5 bibliog(p952-4) O '47

New upper cretaceous fossils from Mississippi and Texas; a venericardia from Uvalde county, Texas. L. W. Stephenson. U S Geol S Professional Pa 210-E:185-7 '47

Utah

Reptilian fauna of the North Horn formation of central Utah. C. W. Gilmore. map diags U S Geol S Professional Pa 210-C: 29-53, pl 3-14; pa 30c Supt. of doc. '46

PALESTINE

Back to partition. Economist 153:227-8 Ag 9 '47

Palestine's Jordan River Valley plan emulates TVA development. E. E. Shalowitz. il maps Civil Eng 17:528-31+ S '47

Paralysis or partition? Economist 152:268-9 F 15 '47

Russians and Palestine. Economist 152:801-2 My 24 '47

Uno's plan for Palestine. map Economist 153: 387-8 S 6 '47

Withdrawal from Palestine. Economist 153: 545-6 O 4 '47

See also

Dead sea
Drug trade—Palestine
United nations—Palestine

Commerce

Palestine's international balance; figures for 1945 and 1946; tabulation. N. Devons. Economist 153:192 Ag 2 '47

Economic conditions

Economic renaissance in Palestine. Mag of Wall St 79:220 N 23 '46

Garrison prosperity in Palestine. Economist 152:502 Ap 5 '47

PALLADIUM

Aromatization studies; palladium dehydrogenation of arylcyclohexenones to phenols. E. C. Horning and M. G. Horning. bibliog Am Chem Soc J 69:1359-61 Je '47

Preparation of β-tetralone by the catalytic reduction of β-naphthol. G. Stork and E. L. Foreman. bibliog Am Chem Soc J 68:2172-4 N '46

Isotopes

Radiations from 60-day Ir^{192} and 27-day Pa^{233}. P. W. Levy. Phys R 72:352-3 Ag 15 '47

Results of H^3 bombardment of Ag leading to Pd^{109}. D. N. Kundu and M. L. Pool. bibliog Phys R 72:101-8 Jl 15 '47

PALLADIUM plating

Plating with platinum, palladium and rhodium. H. M. Haberman. bibliog Metal Finishing 45:56-8 Ja '47

PALLETS

Great Northern tests pallets for l.c.l. il Ry Age 122:799 Ap 19 '47

Handling trends; new equipment for chemical industries. N. L. Cahners. il Chem Ind 61:428-9 S '47

International starts paper pallet output. Paper Tr J 125:12 Ag 28 '47

Light weight pallets for easy handling of materials. T. O. Palmer. Mech Handling 34:100-2 F '47

Material handling; fork truck and pallet system. D. C. Ling. il diags Automobile Eng 37:213-20, 239-47, 287-91 Je-Ag '47

Monroe eight-way all-steel pallet. il Ry Age 123:536 S 27 '47

Pallet pool; nationwide service to keep pallets circulating among shippers and receivers. Bsns W p21 Ap 26 '47

Palletization. J. D. Sheahan. Mech Eng 69: 507-8 Je '47

Palletization stressed as effective method of cutting costs. J. D. Sheahan. Steel 120:127-8 Je 23 '47

Palletized handling cost cut with nationwide exchange; Lawrence warehouse company. D. I. Pursley. il Food Ind 18:1870-1+ D '46

Palletized handling; uses and misuses. J. I. Thompson. il Food Ind 19:776-7+ Je '47

Palletizing permits stockpiling for quick shipment; Thomas fertilizer. H. V. Lehn. il Factory Management 105:82-3 S '47

Planning avoids unnecessary handling; palletized loading of railway material and commercial freight. G. A. Goerner. il Ry Age 122:316-18 F 8 '47

Practical palletizing pays off. B. R. Loeper and J. R. Hughes. il Am Mach 90:113-15 N 21 '46

Re-use shippers; collapsible corrugated containers, with expendable pallets for Donaldson co. industrial products. il Mod Packaging 21:141 S '47

Saving in freight pays for expendable paper pallets; General electric co. E. H. Ashley. il Factory Management 105:108-9 Mr '47

Shipping pallets; simplified practice recommendation. Dom Comm 34:15 D '46

Standardization of pallets. Mech Handling 34:174 Ap '47

PALLETS—*Continued*
Standardized handling methods and layout integrate material movement; General Electric Erie works. F. E. Bliven. il Am Mach 91:78-82 Jl 31 '47
Stores lead in mechanizing operations; Illinois central railroad. J. W. Cockrill. il Ry Age 122:1256-8 Je 21 '47
Unit-handling of steamship freight. il map Mech Handling 34:429-35 Ag '47
Unit-load handling protests products; Mack manufacturing corporation; illustrations with text. E. R. Klein. Am Mach 91:92-4 Ag 28 '47
Warehousing nuts on pallets; fork-lift trucks handle 1750 tons of walnuts daily. il Food Ind 19:923+ Jl '47

PALM BEACH, Florida
See also
Banks and banking—Palm Beach, Florida

PALM oil
French oils and fats. Chem Age (Lond) 57: 473-4 O 4 '47

PALMER, Dwight R. G. 1886-
General Cable; big wiremaker is recharged with novel ideas. por Fortune 36:98-105+ O '47

PALMETTO
See also
Saw palmetto

PALMITOLACTONE
γ-Palmitolactone and γ-hydroxypalmitic acid. D. F. Houston. bibliog Am Chem Soc J 69:517 Mr '47

PALMITOYL casein
Higher fatty acid derivatives of proteins. W. G. Gordon, A. E. Brown and R. W. Jackson. bibliog Ind & Eng Chem 38:1239-42 D '46

PALMITYL myristyl laurin
X-ray investigation of glycerides; diffraction analyses of synthetic triacid triglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 69:1451-3 Je '47

PALMS
See also
Saw palmetto

PALUDINA vivipara hemocyanin. See Hemocyanins

PAN-AFRICAN congress on prehistory
First Pan-African congress on prehistory. W. Phillips. Science 105:611-13 Je 13 '47

PANAMA
Commerce
Panama ponders foreign-trade zone as trade-and-shipping aid. T. E. Lyons. il map For Comm W 26:10-11+ F 22 '47

Economic conditions
News by countries. For Comm W 25:22-3 N 30; 20-1 D 28 '46; 26:23-4 F 1; 23 Mr 1; 27:17 My 31; 28:17-18 S 13; 29:17-19 O 4 '47

PANAMA canal
Expect report on Panama canal for congressional action in 1947; engineering studies now in progress. il Eng N 138:175 Ja 30 '47
Harvard university's engineering laboratories are testing samples of soil and rock from Isthmus of Panama. Science 105:356-7 Ap 4 '47
Marine operating problems, Panama canal, and the solution. M. P. DuVal. maps diags Am Soc C E Proc 73:161-74 F '47
Panama canal must be modernized. R. Z. Kirkpatrick. il Comp Air Mag 52:19 Ja '47
Panama canal pilotage rates. Marine Eng 51: 75 D '46
Panama canal; third locks project. Engineering 162:462 N 15 '46
Puzzle in Panama; engineering study to determine adequacy of canal in both war and peace. W. G. Bowman. il maps diags Eng N 138:740-52 My 1 '47; Discussion. H. Jansson. 139:614 O 30 '47
Sea-level canal; U.S. engineers complete Panama survey. map Bsns W p94+ My 3 '47
Sea level plan for Panama canal. J. G. Claybourn. maps diags Am Soc C E Proc 73: 175-96 F '47

PANAMA Canal Zone
See also
Airlines—Panama Canal Zone

PAN AMERICAN airways
Airline puzzle; rumor has TWA and Pan American merging. Bsns W p18-19 Mr 1 '47
Hughes levels new charges in Pan American-TWA feud. Aviation W 47:11 Ag 11 '47
Hughes, PAA officials open TWA merger discussions. Aviation N 7:7-8 Mr 3 '47
PAA-Panagra pact settles old fight over Canal Zone-Miami route. Aviation N 7:30 Je 9 '47
Pan American circumavigates globe. map Aero Digest 55:25 Jl '47

PAN AMERICAN conferences
See also Inter-American conference; Pan American congress of mining engineering and geology

PAN AMERICAN congress of mining engineering and geology
Congress, 2d, Petropolis, Brazil, Oct. 1-15, 1946. Min & Met 28:114 F '47

PAN AMERICAN-GRACE airways
PAA-Panagra pact settles old fight over Canal Zone-Miami route. Aviation N 7:30 Je 9 '47

PAN AMERICAN highway
Pan-American highway in Coquimbo, Chile, progresses. For Comm W 26:30 Ja 4 '47
Truman to seek completion of Inter-American highway. map Eng N 139:79+ Jl 17 47; Discussion. H. W. Durham. 139:343-4 S 4 '47
Urge U.S. aid to complete Inter-American highway; House committee report. Eng N 138:23+ Ja 9 '47

PAN AMERICAN world airways
Clippers, in war and peace. S. F. Pryor. il Air Transport 4:39-42 D '46
Pan American's domestic plan. map Aero Digest 53:49 N '46

PANCREAS
Lesions of the pancreatic islets produced in cats by administration of glucose. F. C. Dohan and F. D. W. Lukens. Science 105: 183 F 14 '47

PANEL system of heating. See Electric heating—Panel system; Heating—Panel system; Hot water heating—Panel system

PANELING
Effect of panelling on intermittent heating. Heating-Piping 18:96-7 N '46
Electrostatic spraying of steel wall panels. W. S. Reed. il Materials & Methods 25: 77-9 F '47

PANHANDLE eastern pipe line company
Annual report. Comm & Fin Chr 165:2141-2 Ap 21 '47

PANTASOTE company
Hans Wyman makes big businesses; millionaire Czech refugee's industrial comeback in the new world. il Fortune 35:94-7+ Ap '47
Stock offered. Comm & Fin Chr 165:577 Ja 27 '47

PANTEPEC oil company of Venezuela
Middle East deals affect Venezuelan oil. Comm & Fin Chr 165:112 Ja 6 '47
Purchase ratified. Comm & Fin Chr 164:3418 D 30 '46

PANTOGRAPH engraving machines. See Engraving machines

PANTOTHENIC acid
Studies in chemotherapy; amides of pantoyltaurine. R. Winterbottom and others. bibliog Am Chem Soc J 69:1393-401 Je '47

PANTOYLTAURINE
Studies in chemotherapy; amides of pantoyltaurine. R. Winterbottom and others. bibliog Am Chem Soc J 69:1393-401 Je '47

PAPER
Oxford India paper. Inland Ptr 118:33 Mr '47
Paper for plastic laminates. J. C. Pitzer. Paper Tr J 125:49-51 Jl 24 '47

PAPER—*Continued*

Pliability in treated and finished papers; abstract. A. Matagrin. Paper Ind 28:1816 Mr '47

See also

Drawing paper
Envelopes
Filter paper
Newsprint paper
Paper board
Parchment paper
Photographic paper
Tissue paper
Vulcanized fiber
Waste paper
Wood pulp
Wrapping paper

Analysis

Analysis of fabrics, papers and boards containing wool and asbestos; abstract. P. Goldsmid. Paper Ind 28:1656 F '47

Analysis of fillers in boards and papers. Chene and others. Paper Ind 28:1512-13 Ja '47

Determination of carboxymethylcellulose in paper. R. W. Eyler and R. T. Hall. Paper Tr J 125:59-62 O 9 '47

Microiodometric method for the determination of glue or gelatin in paper. G. E. Naponen and others. bibliog Paper Tr J 125:45-7 Jl 31 '47

Organic nitrogen in paper; revision of TAPPI official standard T 418 m-45. Paper Tr J 125:39-40 Jl 31 '47

Brightness

Factors affecting the opacity of coated papers. W. R. Willets. Paper Ind 28:1458-60 Ja '47

Color

I.C.I. standard observer and co-ordinate system and their use in studies of the color of paper. J. A. Van den Akker. bibliog Paper Tr J 125:49-54 Jl 10 '47

Curling

Cause of and remedy for curling troubles experienced with offset printing papers. Inland Ptr 119:48 S '47

Curling of lithographic papers. R. F. Reed. il Paper Tr J 123:37-42 Jl 4 '46; Same cond. Paper Ind 28:1504-6 Ja '47

Dirt content

Evaluation of different methods of speck counts in paper. J. H. Graff. Paper Tr J 124:56-62 Je 26 '47; Same cond. Paper Ind 28:1798-1800 Mr '47

See also Paper making—Dirt problem

Moisture content

Curling of lithographic papers. R. F. Reed. il Paper Tr J 123:37-42 Jl 4 '46; Same cond. Paper Ind 28:1504-6 Ja '47

Moistening moving webs by air sprays. il diags Comp Air Mag 52:45-6 F '47

Moisture control; abstract. S. Hluchan. Paper Tr J 124:55-6 Mr 27 '47

Moisture equilibrium between gas space and fibrous materials in enclosed electric equipment. J. D. Piper. bibliog Elec Eng 65: Trans 791-7 D '46

Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47

Paper moisture control; moisture meter. E. L. Neal. Pulp & Pa of Can (Convention no) 48:100-2 [F] '47; Same cond. Paper Ind 28: 1810-11 Mr '47

Opacity

Factors affecting the opacity of coated papers. W. R. Willets. Paper Ind 28:1458-60 Ja '47

Optical properties

Preparation of magnesium-oxide standard for spectral reflectivity; TAPPI tentative standard T 633 m-47. Paper Tr J 124:51-2 Je 26 '47

Permeability

Apparatus for determining water-vapor permeability of moisture barriers. F. T. Carson and V. Worthington. il diags U S Nat Bur Stand C453:1-18; pa 10c Supt. of doc. '46

Application of the electric hygrometer to the determination of water-vapor permeability at low temperature. J. A. Van den Akker. bibliog diags Paper Tr J 124:51-6 Je 12 '47; Same cond. Mod Packaging 20:148-51+ My '47; Same cond. Paper Ind 29:108+ Ap '47

Factors affecting measurement of water vapor permeability at low temperatures. W. H. Aiken. bibliog Paper Tr J 125:31-5 O 2 '47

Method for the determination of water vapor permeability at low temperatures; frozen food containers. S. W. Pierce and J. F. Helms. bibliog il diags Paper Tr J 124:64-6 Ap 17 '47; Same. Mod Packaging 20:161-4 Ap '47

Sources of variability in water vapor permeability determinations. M. S. Renner. bibliog diags Paper Tr J 125:49-52 Ag 7 '47

Prices

Rise in profit margins in paper industry provides room for first major price cut. Barron's 27:25 My 5 '47

See also

Paper, Government

Printing properties

Carlsson printability test for newsprint. J. H. Bardsley and L. J. Morin. Pulp & Pa of Can (Convention no) 48:159-62 [F] '47; Same cond. Paper Ind 29:438-40 Je '47

Common troubles with lithographic papers. R. F. Reed. Paper Ind 28:1741-3 Mr '47

Float fibers; their effect on printing. T. L. Crossley. il Paper Ind 29:838-40 S '47

Measurement of printing smoothness. S. M. Chapman. bibliog il diags Pulp & Pa of Can (Convention no) 48:140-50 [F] '47

Mechanism of the ink penetration tests. W. S. Wilson. Paper Tr J 123:34-8 D 12 '46

Microsize process. Paper Tr J 125:18 Ag 14 '47

Newsprint quality, today and tomorrow. G. Larocque. bibliog Pulp & Pa of Can (Convention no) 48:94-9 [F] '47; Same cond. Paper Ind 28:1808-10 Mr '47

Paper problems in modern lithography; abstract. Paper Ind 29:742 Ag '47

Paper problems of the printer. O. Watson. Paper Ind 29:673-6 Ag '47

Printability of paper. W. R. Maud. Pulp & Pa of Can 48:94-5 S '47

Review of the literature on printability and allied subjects, 1945-1946. S. M. Chapman. bibliog Pulp & Pa of Can 48:75-81 Ap '47

Troubles which prevent achieving uniformity in production printing. E. St John. Inland Ptr 118:71-3 F; 38-9 Mr '47

Your part in lithography's future. W. E. Griswold. Paper Tr J 122:84+ Je 20 '46; Excerpts. Paper Ind 29:262+ My '47

Smoothness measurement

Measurement of printing smoothness. S. M. Chapman. bibliog il diags Pulp & Pa of Can (Convention no) 48:140-50 [F] '47

Standards

Development of standards for flexible caselining materials. B. W. Scribner and others. il diags U S Nat Bur Stand Misc Pub M182:1-23; pa 10c Supt. of doc. '46

French adopt standard paper sizes. il Ind Stand 18:201-3 Ag '47

Report of standards committee, 1946. R. C. Griffin. Paper Tr J 124:47-8 Ap 3 '47

Strength

Agricultural residue pulps; comparison with typical wood pulps. S. I. Aronovsky and others. bibliog il Paper Tr J 124:49-55 Mr 27 '47

Chemicals and wet strength; abstract. B. Ivarson and B. Steenberg. Paper Ind 28: 1816-17 Mr '47

Chemicals imparting wet strength to paper; abstract. B. Steenberg. Paper Ind 28:1656 F '47

High wet-strength paper. Franklin Inst J 243:152 F '47

Influence of oxidation of pulp on wet strength. M. O. Schur and R. M. Levy. bibliog Paper Tr J 124:43-6 My 15 '47

Influence of tension during drying upon paper strength. J. E. Sapp and W. F. Gillespie. bibliog Paper Tr J 124:120+ F 27 '47

PAPER—Strength—*Continued*
Paper gets webbed feet. W. L. Bassett. il Sci Am 175:265-8 D '46
Repulping of melamine resin-treated wet-strength paper. D. D. Niemeyer and L. V. Forman. bibliog diag Paper Tr J 124:49-56 Ap 3 '47; Same cond. Paper Ind 29:1030-5 O '47
Resin-treated papers provide wet strength to wrappers. J. V. Ziemba. il Food Ind 19:612-13 My '47
Study of wet-strength mechanism; the effect of melamine resin on the bonding of paper fibers. D. J. Salley and A. F. Blockman. bibliog Paper Tr J 125:35-40 Jl 3 '47

Bibliography
Wet strength of paper. C. J. West. (Bibliographic ser. no. 168) 65p Institute of paper chemistry, Appleton, Wis. '47

Testing
A.S.T.M. standards on paper and paper products (with related information); prepared by A.S.T.M. committee D-6. 232p pa $2 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
Development of standards for flexible caselining materials. B. W. Scribner and others. il diags U S Nat Bur Stand Misc Pub M182: 1-23; pa 10c Supt. of doc. '46
Developments in testing of paper and paperboard, 1945-1946. B. W. Scribner. bibliog Paper Tr J 125:33-4 Jl 3 '47
Gurley's new tester measures stiffness. Paper Tr J 125:18 Ag 7 '47
Improvements in the couching and pressing of sheets for pulp testing. J. d'A. Clark. diags Paper Ind 29:992-4 O '47
Method for evaluating the fungicidal properties of treated paper and paperboard. B. F. Shema. Paper Tr J 123:137-8 D 5 '46
Paper moisture control; moisture meter. E. L. Neal. Pulp & Pa of Can (Convention no) 48:100-2 [F] '47; Same cond. Paper Ind 28:1810-11 Mr '47
Planned career in the paper industry; paper laboratory. D. C. Yates. Pulp & Pa of Can 48:61-6 Mr '47
Preparation of magnesium-oxide standard for spectral reflectivity; TAPPI tentative standard T 633 m-47. Paper Tr J 124:51-2 Je 26 '47
Properties of flexible impregnated sheets; addition of synthetic resins. A. W. Oliner and F. W. O'Neil. bibliog Paper Tr J 125: 55-62 Ag 14 '47
Review of the literature on printability and allied subjects, 1945-1946. S. M. Chapman. bibliog Pulp & Pa of Can 48:75-81 Ap '47
Sources of variability in water vapor permeability determinations. M. S. Renner. bibliog diags Paper Tr J 125:49-52 Ag 7 '47
Study of wet-strength mechanism; the effect of melamine resin on the bonding of paper fibers. D. J. Salley and A. F. Blockman. bibliog Paper Tr J 125:35-40 Jl 3 '47
TAPPI annual meeting, 32d, New York; abstracts of papers. Mod Packaging 20:159-60 Ap '47
Use of bleached aspen semichemical pulp in groundwood book paper. J. N. McGovern. bibliog Paper Tr J 123:47-52 N 14 '46

See also
Paper—Printing properties

Water resistance
Apparatus for determining water-vapor permeability of moisture barriers. F. T. Carson and V. Worthington. il diags U S Nat Bur Stand C453:1-18; pa 10c Supt. of doc. '46

See also
Paper board—Water resistance

PAPER, Coated
Factors affecting the opacity of coated papers. W. R. Willets. Paper Ind 28:1458-60 Ja '47
Magnetic sound recording on coated paper tape. H. A. Howell. bibliog diags Soc Motion Picture Eng J 48:36-46; Discussion. 46-9 Ja '47
Your part in lithography's future. W. E. Griswold. Paper Tr J 122:84+ Je 20 '46; Excerpts. Paper Ind 29:262+ My '47

See also
Paper, Metal coated
Paper coating

PAPER, Drawing. See Drawing paper
PAPER, Filter. See Filter paper
PAPER, Government
Hitches in selling paper to U.S. government. E. W. Tinker. Pulp & Pa of Can (Convention no) 48:333+ [F] '47
PAPER, Greaseproof

Testing
Packaging Institute standard test methods for greaseproofness. il Mod Packaging 20: 165-6 Ap '47

PAPER, Insulating
Cationic exchange reactions of cellulose and their effect on insulation resistance. H. F. Church. Soc Chem Ind J 66:221-6 Jl '47
Effect of semiconducting liquids on the dielectric properties of cellulose insulation; development of new capacitor. F. M. Clark. il Gen Elec R 50:9-17 F '47

Testing
Preliminary report on laboratory aging tests on class A insulation. Elec Eng 66:910-13 S '47

PAPER, Laminated
Britain develops a new structural plastic; Holoplast, laminated board. il diag Mod Plastics 24:105-8 Mr '47
Laminating adhesives and their applications. A. Biddle. Paper Ind 28:1499-504 Ja '47
Methods for combining phenolic resins and paper. E. S. Bauer. Paper Tr J 125:50-2 Jl 17 '47
New form of lignin; development of Howard Smith paper mills, ltd. N. B. Powter. il Paper Ind 28:1744-6 Mr '47; Same cond. Mod Plastics 24:106-8 Ap '47
Paper for plastic laminates. J. C. Pitzer. Paper Tr J 125:49-51 Jl 24 '47
Some things old and some things new in plastics. F. B. Stanley. il S A E J 55:48-9 Mr '47

Bibliography
Paper-base plastics. C. J. West. (Bibliographic series no 167) 102p pa $5 Inst. of paper chemistry, Appleton, Wis. '46

PAPER, Lithographic
Common troubles with lithographic papers. R. F. Reed. Paper Ind 28:1741-3 Mr '47
Curling of lithographic papers. R. F. Reed. il Paper Tr J 123:37-42 Jl 4 '46; Same cond. Paper Ind 28:1504-6 Ja '47

PAPER, Metal coated
Bosch process. il Chem & Eng N 24:3356-7 D 25 '46
Metallized capacitor data. J. Cornell. Electronics 20:174+ Mr '47
Metallized capacitor tests. P. Godley and J. C. Balsbaugh. il diag Electronics 20: 112-15 Ap '47

PAPER, Newsprint. See Newsprint paper
PAPER, Parchment. See Parchment paper
PAPER, Photographic. See Photographic paper
PAPER, Recording
Electrolytic recorder paper. J. E. Currah and others. bibliog Ind & Eng Chem 39:1286-8 O '47

PAPER, Roofing
Electric heat keeps tar from sticking. il Elec World 128:99 Ag 16 '47

PAPER, Safety
24 pound paper considered standard weight for checks. W. T. Eldredge. Bankers Mo 63:619 D '46

PAPER, Tissue. See Tissue paper
PAPER, Waxed
Moldable paper products. H. R. Alley. diags Paper Ind 28:262+ My '46; Same. Paper Tr J 122:120+ Je 20 '46; Same. Pulp & Pa of Can 48:68-71 Mr '47

PAPER associations
Divisional group meetings and elections. Paper Ind 28:1768+ Mr '47

PAPER bags
Bag-wrap; new method of preforming custom-made bags. il Mod Packaging 20: 116-17 F '47
Increased popularity of paper shipping sacks. R. W. Lahey. Chem & Eng N 25:2854 S 29 '47
Packaging chemicals in paper bags. T. P. Callahan. il Chem Ind 59:878+ N '46
Paper box and bag industry in Canada during 1944. Pulp & Pa of Can 48:49-51 Ja '47
Paper gets webbed feet. W. L. Bassett. il Sci Am 175:265-8 D '46
Resin-treated papers provide wet strength to wrappers. J. V. Ziemba. il Food Ind 19: 612-13 My '47

PAPER board
Coated boxboard technique. E. St John. Inland Ptr 118:75-6 D '46
Compact cleaner; package for Lewyt vacuum cleaner, made of hinged panels of solid fibre serves as permanent storage receptacle. il Mod Packaging 20:111 Jl '47
Four-color fibre can. il Mod Packaging 20: 88-9 Ag '47
Lock-tab tray; lightweight board sets up into rigid tray automatically on widely adjustable machine. il diag Mod Packaging 20: 114-15 Ag '47
Uses of sulphate pulp. A. G. Durgin. Pulp & Pa of Can (Convention no) 48:137-9+ [F] '47

See also
Cardboard
Paper boxes

Manufacture

Drying of paperboard. A. E. Montgomery. bibliog Pulp & Pa of Can (Convention no) 48:171-4 [F] '47; Same cond. Paper Ind 28:1802-4 Mr '47
Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. bibliog Paper Tr J 124:43-52 Ja 16 '47
Paperboard manufacturing in Scandinavia. C. J. Bergendahl. il diags Pulp & Pa of Can (Convention no) 48:177-83 [F] '47; Same cond. Paper Ind 29:727-30 Ag '47
Postwar developments with emulsified asphalt sizing in cylinder boards. E. M. Lorenzini. Paper Tr J 124:43-4 Je 5 '47; Same. Paper Ind 29:1208-10 N '47
Pulping of straw with digestion liquors containing sodium sulphite. G. S. Hannaway. Paper Ind 29:714+ Ag '47
Pulping with sodium sulphite to produce strawboard. S. I. Aronovsky and others. Paper Ind 29:280-1+ My '47
Variations and similarities of paperboard mill white waters. W. Rudolfs and E. J. Axe. bibliog flow sheet Paper Tr J 125:53-8 Jl 17 '47

See also
Paper board mills

Testing

Container strength measured by a new puncture tester. C. J. Falk. il Food Ind 19:454-5+ Ap '47
Developments in testing of paper and paperboard, 1945-1946. B. W. Scribner. bibliog Paper Tr J 125:33-4 Jl 3 '47
Effect of the adhesive on the quality of paperboard. R. E. Green and others. bibliog il diag Paper Tr J 125:57-60 Jl 24 '47
Method for evaluating the fungicidal properties of treated paper and paperboard. B. F. Shema. Paper Tr J 123:137-8 D 5 '46

Water resistance

Penetration of water in insulation board. W. A. Wink and J. A. Van den Akker. bibliog diags Paper Tr J 125:54-8 Ag 21 '47; Same cond. Paper Ind 28:1795-8 Mr '47

PAPER board, Corrugated
Corrugated drum; with joints locked by wire strapping. il Mod Packaging 21:118-19 O '47
Effect of the adhesive on the quality of paperboard. R. E. Green and others. bibliog il diag Paper Tr J 125:57-60 Jl 24 '47
Saving in freight pays for expendable paper pallets; General electric co. E. H. Ashley. il Factory Management 105:108-9 Mr '47

Manufacture

Evaluation of nine-point straw for corrugating. N. F. Wilson. Paper Ind 29: 1026+ O '47

PAPER board industry
Public relations program increases waste paper supply. Paper Ind 29:841-3 S '47

Statistics

Paperboard industry in 1946. G. Whiting. Paper Tr J 124:50+ F 27 '47

Scandinavia

Paperboard manufacturing in Scandinavia. C. J. Bergendahl. il diags Pulp & Pa of Can (Convention no) 48:177-83 [F] '47; Same cond. Paper Ind 29:727-30 Ag '47

PAPER board mills
Pile driving started for $11,000,000 paper board plant at Savannah, Ga. il Manuf Rec 115:51+ D '46

Equipment

Blueprint description of Port Wentworth, (Ga.) mill. D. G. Moon. il Paper Ind 28: 1194+ N '46
Development of jacketed-type steel drier rolls. W. H. Funk. il diags Paper Tr J 123: 26+ D 26 '46; Same. Welding J 26:314-19 Ap '47; Same cond. Paper Ind 28:1496-9 Ja '47
Paperboard manufacturing in Scandinavia. C. J. Bergendahl. il diags Pulp & Pa of Can (Convention no.) 48:177-83 [F] '47; Same cond. Paper Ind 29:727-30 Ag '47
Southern Paperboard starts its new mill near Savannah. il Paper Tr J 123:66+ D 5 '46
White water clarification by means of the Marx filter. C. A. Benson and H. E. Brakewood. flow diag il diag Paper Tr J 124:72-4 Ap 24 '47; Same cond. Paper Ind 29:1357-8 D '47
White water system for cylinder board mill. O. E. S. Hedbring. Paper Tr J 124:39-40 My 15 '47; Same cond. Paper Ind 29:712+ Ag '47

Power

Over-all economy and steam-electric balance in board manufacture at National container corp. O. Winningham. Paper Ind 28:1642-4 F '47

PAPER box industry
Paper box and bag industry in Canada during 1944. Pulp & Pa of Can 48:49-51 Ja '47
Paper boxes in war and peace. C. V. Hodder. Pulp & Pa of Can 48:48-9 Mr '47

PAPER boxes
Application of wood and fiber to industrial packing. J. A. DeLuca. il diags A S M E Trans 69:172-4 F '47
Box makers' best; award winners for '47 on basis of art work, printing, ingenuity and originality. il Mod Packaging 20:114-15 Ap '47
Challenge of pre-packaging. Mod Packaging 20:134-5 N '46
Cookies nationwide, in folding paper boxes. il Mod Packaging 20:103 N '46
Oval pack for wafers; Rockwood single sheet window box. il Mod Packaging 20:160-1 Mr '47
Paper boxes in war and peace. C. V. Hodder. Pulp & Pa of Can 48:48-9 Mr '47
Period labels; Eaton links stationery boxes to women's tastes in home decor. il Mod Packaging 20:124+ Ag '47
Pocket 40's; new Old Gold cigaret package. il Mod Packaging 20:150-1 Mr '47
Spools of thread; shelf container a merchandising tool. M. McVickar. il Mod Packaging 21:120-2 S '47

See also
Hosiery boxes

Manufacture

He makes his own; Strange laboratories, Tucson, Ariz. makes own boxes. il Mod Packaging 20:116-19 Ap '47

PAPER chemicals
Analysis of sodium silicate; TAPPI tentative standard T 632 m-46. Paper Tr J 123:42-4 D 19 '46
Chemicals imparting wet strength to paper; abstract. B. Steenberg. Paper Ind 28:1656 F '47

PAPER chemicals—*Continued*
Glycerine's expanding role in paper production. G. Leffingwell and M. A. Lesser. bibliog and patent list Paper Ind 28:1598-9 F '47
New method of pitch control in newsprint manufacture; use of polyphosphates. H. Freeman. Pulp & Pa of Can 48:73-5 Jl '47
New specialties exploit chemical research; pulp and paper chemicals. E. N. Poor. Chem Ind 61:405-6 S '47
Nonfibrous raw materials report, 1946. E. N. Poor. Paper Tr J 125:49-54 S 18 '47
Sodium carboxymethylcellulose for papermaking. E. F. Horsey. bibliog Paper Tr J 125:52-6 Jl 24 '47

PAPER coating
Applications of starch viscosity to the paper industry; new viscometer developed. W. G. Bechtel and C. C. Kesler. bibliog il Paper Tr J 125:35-9 O 16 '47
Butyrate hot-melt coatings. M. Salo. diag Mod Packaging 20:127-8+ Ag '47
Cellulose ester melt-coating compositions. C. J. Malm, M. Salo and H. F. Vivian. bibliog(32 ref) Ind & Eng Chem 39:168-74 F '47
Coating on a paper machine. F. W. Egan. Paper Tr J 123:84+ D 5 '46
Coats make the product. C. S. Breskin. il Sci Am 176:256-8 Je '47
Dispersion of coating clays; its relation to the flow properties of clay slips and coating colors. B. K. Asdell. Paper Ind 29: 1035-42 O '47
Effect of urea resins on starch clay coating compositions. P. S. Hewett and others. il Paper Tr J 124:45-50 Je 12 '47
Microsize process. Paper Tr J 125:18 Ag 14 '47
Plastic film for coating paper. W. O. Lincoln. Spectator (Property ed) 12:18 My 22 '47
Synthetic resins for use in the formulation of nitrocellulose paper lacquers. J. G. Little and C. D. Ender. Paper Tr J 124:43-7 Mr 6 '47
Testing of clays for paper machine and brush coating. I. L. Lester and S. C. Lyons. bibliog il Paper Tr J 125:49-55 O 23 '47
Thermoplastic specialty resins. W. H. Aiken. il Mod Plastics 24:100-2 F '47

Testing
How to determine the desirable rheological properties of coatings. H. Green. bibliog diag Paper Tr J 125:49-53 S 11 '47
How to evaluate technical soya flour. G. Davidson and J. H. Cagle. il Paper Ind 29: 364-6 Je '47

PAPER containers
Display room for paper containers. il plan diags Arch Forum 87:102-3 O '47
Ice cream trends. il Mod Packaging 20:102-6 Jl '47
Paper box and bag industry in Canada during 1944. Pulp & Pa of Can 48:49-51 Ja '47
Science and packaging. G. L. Riddell. bibliog Chem & Ind p35-9 Ja 18 '47
Swedish packaging. il Mod Packaging 21:100-6 S '47
Uses of sulphate pulp. A. G. Durgin. Pulp & Pa of Can (Convention no) 48:137-8 [F] '47

See also
Paper bags
Paper boxes

Manufacture
Pulp and board moulded containers in Germany. Pulp & Pa of Can 48:167 O '47

Testing
Method for the determination of water vapor permeability at low temperatures; frozen food containers. S. W. Pierce and J. F. Helms. bibliog il diags Paper Tr J 124:64-6 Ap 17 '47; Same. Mod Packaging 20:161-4 Ap '47

PAPER cups, plates, etc.
Hospital as a market for paper products; paper dishes. R. Clevenger. il Pulp & Pa of Can 48:62-4 Je '47

PAPER cutting machines
Mechanism for imparting oscillating motion to paper-cutting blade. C. F. Smith. diags Mach 53:179-80 My '47
Seybold 36-inch paper cutter. il Inland Ptr 118:88 D '46

PAPER drapery
Now paper challenges textiles for window decoration market. il Sales Management 59: 130+ S 15 '47

PAPER drying
Air-drying of fine papers. J. H. Miller. il diags Paper Ind 29:973-5 O '47
Characteristics of the jacketed steel dryer roll. G. L. Snyder. Paper Ind 29:430-2 Je '47
Development of jacketed-type steel drier rolls. W. H. Funk. il diags Paper Tr J 123:26+ D 26 '46; Same. Welding J 26:314-19 Ap '47; Same cond. Paper Ind 28:1496-9 Ja '47
Drying of paperboard. A. E. Montgomery. bibliog Pulp & Pa of Can (Convention no) 48:171-4 [F] '47; Same cond. Paper Ind 28:1802-4 Mr '47
Heat balance and the paper machine drive. R. R. Baker. il diags Paper Tr J 125:41-4 Jl 3 '47
Influence of tension during drying upon paper strength. J. E. Sapp and W. F. Gillespie. bibliog Paper Tr J 124:120+ F 27 '47
Infrared heating applications in the paper industry. Pulp & Pa of Can 48:92 S '47
Physics of water removal. W. B. Campbell. Pulp & Pa of Can (Convention no) 48:103-9+ [F] '47
Pulsating steam flow; your key to faster heat flow and more production. P. Harrison. Paper Ind 28:1648-9 F '47
Study of dryer operation to determine cause of failures. H. M. Spring. il Paper Tr J 124:104+ My 29 '47; Same. Paper Ind 29: 1042-5 O '47

PAPER dust
Effect of paper dust; abstract. J Ind Hygiene 29:sup47 My '47

PAPER finishing
Commercial glyoxal clears new research paths. J. A. Field. bibliog il Chem Ind 60: 960-3 Je '47
Fundamentals of calendering. G. A. Schoonkind. bibliog diags Paper Ind 28:1443-6 Ja '47

See also
Paper coating
Paper sizing

PAPER industry and trade
Forestry and the pulp and paper industry. E. W. Tinker. Pulp & Pa of Can 48:71-2 F '47
Inadequate supply of paper calls for long-range plans. Inland Ptr 119:73-6 Je '47
Paper, a world commodity. E. W. Tinker. Paper Tr J 125:7+ O 30 '47; Same. Pulp & Pa of Can 48:55-6 D '47
Paper and pulp situation remains bleak despite expanded productive capacity. Inland Ptr 119:39-41 Ap '47
Paper production breaks records in 1946. Inland Ptr 118:68-9 Ja '47
Problems of the industry. R. B. Robertson. Paper Tr J 124:43+ F 27 '47
Review of kraft paper industry for 1946. G. Stuhr. Paper Tr J 124:62+ F 27 '47; Same. Paper Ind 28:1793-4 Mr '47
Some economic aspects of the pulpwood situation. R. Shallcross. Paper Ind 28:1213-14+ N '46
Statements relative to reciprocal trade agreements. Paper Ind 28:1640-1 F '47
Survey of planned new papermaking capacity for the years 1947 and 1948. Paper Ind 28: 1090 N '46
Technical merchandising of paper. J. W. Crosson. Paper Tr J 125:46-8 Jl 10 '47

See also
Newsprint paper
Paper board industry
Paper mills
Stationery

Advertising
Stunt-a-month letters pay off for 20 years; Fulton-Wassell paper company's direct mail promotion. Sales Management 58:76+ Je 1 '47

Finance
Is our industry topheavy? T. M. Luttrell. Pulp & Pa of Can 48:53-6 Jl '47
Media profits decline from '46 peak; paper companies more than double their net. Ptr Ink 220:64 Ag 29 '47

PAPER industry and trade—Finance—*Cont.*
Paper mills should make more money. J. D. Corrigan. Paper Ind 29:373-6 Je '47
Rise in profit margins in paper industry provides room for first major price cut. Barron's 27:25 My 5 '47

Law

Review of new lawsuits; decisions relating to manufacturers and sellers of paper and paperboard. L. T. Parker. Paper Ind 29: 376-8 Je '47

Securities

Another look at paper stocks; with position of leading companies. G. W. Mathis. Mag of Wall St 80:493-4+ Ag 2 '47
Will paper companies hold gains; with position of leading stocks. J. M. Gordon. Mag of Wall St 79:618-19+ Mr 1 '47

Statistics

Canada's pulp and paper industry establishes new records in 1945. Pulp & Pa of Can 47:82-7+ N '46
Modern trends in the protective coatings industry. D. R. Wiggam. Paint Oil & Chem R 110:16+ Ag 21 '47
Paper industry operation for 1946 tops previous records. Paper Ind 28:1738 Mr '47
Paper production achieves a new high. M. C. Dobrow. Paper Tr J 124:46+ F 27 '47
World shortage of pulp. Fortune 36:126-9 O '47

Australia

Australia wrestles with problems of shortage. Paper Tr J 124:22+ Ap 10 '47
Australian paper mill plans to extend its markets. Paper Tr J 124:28 Ja 16 '47
Pulp and paper manufacturing. F. W. Fraser. il Pulp & Pa of Can 48:91-2 My '47

Austria

Paper production in first five months of 1947. For Comm W 29:23-4 O 18 '47

Canada

Canada tells facts to Brown's party; committee of U.S. Representatives studying problem of getting additional allotments of Canadian newsprint. Paper Tr J 125:7+ O 16 '47
Canada's part in wood pulp supply. Pulp & Pa of Can 48:56-60 Ja '47
Canada's pulp and paper industry during the year 1946. D. W. Emmerson. il Pulp & Pa of Can 48:45-8 Ja '47
Canada's pulp and paper industry establishes new records in 1945. Pulp & Pa of Can 47: 82-7+ N '46
Canadian pulp and paper industry producing at all-time high. P. Glanzer. Paper Ind 28: 1143-4+ N '46
How the Pulp and paper research institute is aiding the industry. il Pulp & Pa of Can 48:61-6 Ap '47
Is our industry topheavy? T. M. Luttrell. Pulp & Pa of Can 48:53-6 Jl '47
Proud of record, confident of future; industry organized to provide means of progress to prosperity. R. M. Fowler. Pulp & Pa of Can (Convention no) 48:79-82 [F] '47; Excerpt. Paper Tr J 124:7-8+ F 6 '47
Pulp and paper industry achieves new peaks in output and exports. R. M. Fowler. Pulp & Pa of Can 48:52-4 F '47
Significance of industrial relations in Canadian paper industry. R. M. Fowler. Pulp & Pa of Can 47:71-6 N '46

Denmark

Situation in Denmark. For Comm W 26:20-1 Ja 11 '47

Finland

Central laboratory of the industries in Helsinki. B. Nybergh. Pulp & Pa of Can 48:74-5 S '47

France

Newsletter from France. Y. Prax. Chem & Ind p597-8 S 27 '47

Germany

Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. bibliog Paper Tr J 124:33-44 Ja 9; 43-52 Ja 16 '47; Excerpts. Pulp & Pa of Can 47:80-2 My '46
Paper from rye straw and esparto grass; German methods described. For Comm W 28:33 Ag 9 '47
Report from Germany. O. Goy. Paper Tr J 125:24+ Jl 31 '47
Report from Germany; cellulose industry. O. Goy. Paper Tr J 125:26 Ag 14 '47

Great Britain

British paper notes (October, 1946). Paper Ind 28:1258 D '46
Imports and exports of paper and paperboard, first quarter of 1947 compared with first quarter of 1946; tabulation. For Comm W 28:26 Ag 2 '47
Wiggins Teape and company (1919), limited; statement by the chairman at ordinary general meeting. L. W. Farrow. Economist 153:133 Jl 19 '47

Great Lakes states

Lake states forests and the pulp and paper industry. E. L. Demmon. Pulp & Pa of Can 48:92+ Je '47
Pulp and paper industry and pulpwood in the Lake states. E. W. Tinker. Pulp & Pa of Can 48:130+ S '47

Japan

Newsprint industry in Japan. Pulp & Pa of Can 48:71-3 S '47
Pulp and paper industry of Japan. R. J. Seidl. il Paper Ind 29:76-82 Ap '47

Mexico

Summary of Mexican paper industry. R. S. Aries and J. Serrano, jr. Paper Ind 29:69-71 Ap '47

New York (state)

Economic conditions of the pulp and paper industry in New York state. M. P. Catherwood. Paper Ind 28:1340+ D '46

Newfoundland

Pulp and paper industry important in economy of Newfoundland. J. C. Britton. Can Chem & Process Ind 31:319-20 Ap '47

Norway

Norwegian pulp and paper situation. For Comm W 25:30-1 N 30 '46

Poland

Present condition of the Polish paper industry. H. Marchlewka-Szrajer. Pulp & Pa of Can 48:68-9 Je '47

Scandinavia

Scandinavian research organizations. E. C. Jahn. bibliog il diag Paper Tr J 124:41-6 My 22 '47

Southern states

South's paper making opportunities. J. H. Allen. Manuf Rec 116:34+ My '47
Timber, the key to southern industrial expansion. J. W. Tucker, jr. and J. M. McClurd. Paper Ind 29:434+ Je '47

Sweden

Sweden's forest industry in peace and war. G. A. Hall. Pulp & Pa of Can 48:55-6 F '47

United States

How pulp paper demand grew. E. W. Tinker. Paper Tr J 124:7+ Ja 23 '47
Paper industry adds capacity to meet demand. J. V. Sherman. Barron's 27:32 O 27 '47
Paper industry now on sounder basis than ever before; abstract. W. H. Clifford. Paper Tr J 125:9+ O 23 '47
Paper investigation; testimony. E. W. Tinker. Paper Tr J 123:37+ D 5 '46
Pulp and paper outlook for 1947. Paper Ind 28:1587-90 F '47

PAPER industry and trade—United States—*Continued*
Rises in book and groundwood seen. E. W. Tinker. Paper Tr J 124:9+ Ap 3 '47; Same. Pulp & Pa of Can 48:67-8 Ap '47
20 million tons estimated as production goal for 1947. Paper Tr J 124:7+ Ja 9 '47

PAPER laboratories
Central laboratory of the industries in Helsinki. B. Nybergh. Pulp & Pa of Can 48: 74-5 S '47
Grinding the beating surfaces of the standard laboratory beater. L. V. Forman and D. D. Niemeyer. Paper Tr J 124:47-8 Ja 2 '47; Same cond. Paper Ind 28:722 Ag '46
Kimberly-Clark research and development organization. H. A. Rothchild. il Paper Ind 28:1591+ F '47
Laboratories of pulp and paper companies. il Pulp & Pa of Can 48:60-1 F '47
Planned career in the paper industry; paper laboratory. D. C. Yates. Pulp & Pa of Can 48:61-6 Mr '47
Planned career in the paper industry; pulp laboratory. D. C. Yates. Pulp & Pa of Can 47:83-5 D '46
Savannah would make Herty lab a college. P. Nugent. Paper Tr J 124:18 Ja 23 '47
Wallboard and groundwood industrial laboratories in Sweden; abstract. O. Brauns. Paper Ind 29:134 Ap '47

PAPER lining
Development of standards for flexible case-lining materials. B. W. Scribner and others. il diags U S Nat Bur Stand Misc Pub M182: 1-23; pa 10c Supt. of doc. '46

PAPER making
Abridgments from papers presented at annual meeting of Technical association of the pulp and paper industry, New York, Feb. 25-28, 1946. Paper Ind 27:1894-902+; 28:114+, 284-95, 422+, 576+, 712+, 878+, 1043-6+, 1499-507 Mr-O '46, Ja '47
Abridgments from papers presented at annual meeting of Technical association of the pulp and paper industry, New York, Feb. 24-27, 1947. Paper Ind 28:1795-8; 29: 100+, 271-81+, 712+, 879-82+, 1026+, 1204-10 Mr-My, Ag-N '47
Abridgments from papers presented at annual meeting of Technical section of the Canadian pulp and paper association, Montreal, Jan. 29-31, 1947. Paper Ind 28:1802-4; 29:122-8+, 724-31 Mr-Ap, Ag '47
Abridgments from papers presented at joint meeting of Southern and Southeastern division of American pulp and paper mill superintendents association, Jacksonville, Florida, Nov. 14-16, 1946. Paper Ind 28: 1642-51 F '47
Experimental manufacture of paper for war maps. C. G. Weber and M. B. Shaw. bibliog Paper Ind 28:1137-40 N '46; Same. J Res Nat Bur Stand 37:325-30 D '46
Glycerine's expanding role in paper production. G. Leffingwell and M. A. Lesser. bibliog and patent list Paper Ind 28:1598-9 F '47
Hemicelluloses, their importance to the pulp and paper industry. L. E. Wise. bibliog Paper Ind 29:825-9+ S '47
How the Pulp and paper research institute is aiding the industry. il Pulp & Pa of Can 48:61-6 Ap '47
Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. bibliog Paper Tr J 124:33-44 Ja 9; 43-52 Ja 16 '47
Methods for combining phenolic resins and paper. E. S. Bauer. Paper Tr J 125:50-2 Jl 17 '47
Paper makers discuss chemical products and mill operation. Chem & Eng N 25:3215 N 3 '47
Papermaking, an art or a science; abstract. F. Frost. Paper Ind 29:578-9 Jl '47
Quality control for the pulp and paper industry. C. A. Bicking. bibliog Paper Tr J 124:63-7 Ap 24 '47
Rapid measurement of an index of fibre length. R. de Montigny and P. Zborowski diag Pulp & Pa of Can (Convention no) 47: 99-112, 115, 294 [F] '46; Same. Paper Tr J 123:42-8 N 7; 29-34 N 28 '46; Same cond. Paper Ind 28:882+ S '46
Remote control engineering of stock preparation equipment. J. W. Coutre. diags Paper Ind 29:576-8 Jl '47
Repulping of melamine resin-treated wet-strength paper. D. D. Niemeyer and L. V. Forman. bibliog diag Paper Tr J 124:49-56 Ap 3 '47; Same cond. Paper Ind 29:1030-5 O '47
Sodium carboxymethylcellulose for papermaking. E. F. Horsey. bibliog Paper Tr J 125:52-6 Jl 24 '47
Summary of TAPPI convention papers. Paper Tr J 124:31-46 F 20 '47
Use of hardwoods in the pulp and paper industry; report on the Northeastern wood utilization conference. Pulp & Pa of Can 47:88-90 N '46

See also
Digesters (paper making)
Felts (paper making)
Paper board—Manufacture
Paper coating
Paper drying
Paper making machinery
Paper mills
Paper research
Paper sizing
Pulpstones
Wood pulp

Beating
Agricultural residue pulps; comparison with typical wood pulps. S. I. Aronovsky and others. bibliog il Paper Tr J 124:49-55 Mr 27 '47
Beater sizing with the silicones. C. J. Bergendahl and C. E. Libby. bibliog Paper Tr J 125:40-8 S 4 '47
Continuous beating and refining. D. M. Sutherland. il Paper Tr J 123:76-8+ D 5 '46
Fundamental nature of the beating process. J. Strachan. Pulp & Pa of Can 47:85-8 D '46
Notes and observations on beaters. B. M. Baxter. diags Paper Ind 28:1308-11, 1453-7, 1592-7, 1733-8 D '46-Mr '47
What do we know about beating? E. Sutermeister. bibliog Paper Ind 29:361-3, 542-7 Je-Jl '47

Bibliography
Index, technical section, Paper trade journal volume 123, July to December, 1946. Paper Tr J 124:41-4 F 6 '47

Bleaching
Bleaching groundwood-sulphite pulp by continuous peroxide process; St Regis paper co., Bucksport, Me. J. A. Lee. flow sheet (p 140-3) il diag Chem Eng 54:92-6 O '47
Bleaching of Bauer pulp from wood waste. A. J. Corey. Pulp & Pa of Can (Convention no) 48:308+ [F] '47
Bleaching of semichemical pulps. F. A. Simmonds and R. M. Kingsbury. bibliog Paper Tr J 124:53-60 Ja 23 '47
Bleaching pulp with mixtures of chlorine dioxide and chlorine. G. P. Vincent. Paper Tr J 124:53-5 Je 26 '47
Chlorite bleaching of southern pine kraft pulp. W. P. Lawrence. Paper Tr J 124:38-40 My 22 '47; Same cond. Paper Ind 29: 1358-60 D '47
Cold akaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Comparative studies in the chlorination of woodpulp. O. S. Sprout, jr. and T. W. Toovey. diag Paper Tr J 124:45-54 Mr 13; 55-8 bibliog(p58) Mr 20 '47; Same cond. Paper Ind 29:1352-7 D '47
Determination of available chlorine. W. H. Birchard. Pulp & Pa of Can 48:62 F '47
Effect of certain variables in the bleaching of groundwood with sodium peroxide. W. E. Stobo and J. K. Russell. bibliog Pulp & Pa of Can (Convention no) 48:224-32+ [F] '47
Effect of secondary factors on sulphite pulp bleaching. V. Oleskevich. bibliog Pulp & Pa of Can (Convention no) 48:123-6 [F] '47; Same cond. Paper Ind 29:1510-12 Ja '48
Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. Paper Tr J 124:38-40 Ja 9 '47
Use of bleached aspen semichemical pulp in groundwood book paper. J. N. McGovern. bibliog Paper Tr J 123:47-52 N 14 '46
What is available chlorine? R. C. Griffin. Pulp & Pa of Can 48:97-8 My '47

PAPER making—*Continued*

By-products

Collection of sulphate turpentine. W. P. Lawrence. diag Paper Tr J 124:128+ F 27 '47

River of chemicals; new uses for wood pulp by-products. Chem Age (Lond) 57:11-12 Jl 5 '47

Turpentine recovery in pulp mills. flow diag diags Pulp & Pa of Can 48:79-81 Je '47

See also

Tall oil

Chlorination

Comparative studies in the chlorination of woodpulp. O. S. Sprout, jr. and T. W. Toovey. diag Paper Tr J 124:45-54 Mr 13; 55-8 bibliog(p58) Mr 20 '47; Same cond. Paper Ind 29:1352-7 D '47

Dirt problem

Bird Dirtec and its application to the cleaning of paper stock. F. F. Frothingham. il diag Paper Tr J 124:68+ My 29 '47; Same. Paper Ind 29:433-4 Je '47

Dirt removing systems and improvements; use of Nichols Freeman Vortrap. H. E. Ingalls. Paper Tr J 122:76+ Je 20 '46; Same abr. Paper Ind 29:270-1 My '47

Fillers

Analysis of fillers in boards and papers. Chene and others. Paper Ind 28:1512-13 Ja '47

Freeness testing

Method of evaluating the unbeaten strength of unbleached chemical wood pulp. N. S. Grant and others. Pulp & Pa of Can (Convention no) 48:151-8 [F] '47; Same cond. Paper Ind 29:725-7 Ag '47

Patents

United States patents on papermaking, third quarter, 1946. C. J. West, comp. Paper Tr J 123:57-8 N 14 '46

United States patents on papermaking; fourth quarter, 1946. C. J. West, comp. Paper Tr J 124:50-1 Ja 30 '47

United States patents on papermaking, first quarter, 1947. C. J. West, comp. Paper Tr J 124:45-6 My 8 '47

United States patents on papermaking; second quarter, 1947. C. J. West, comp. Paper Tr J 125:36+ Jl 17 '47

United States patents on papermaking, third quarter, 1947. Paper Tr J 125:56-9 O 23 '47

Pitch problem

New method of pitch control in newsprint manufacture; use of polyphosphates. H. Freeman. Pulp & Pa of Can 48:73-5 Jl '47

Slime problem

New chemical effective in controlling slime; Preventol G-D. R. E. Horsey. Paper Ind 29:676-7 Ag '47

Studies in slime control, 1946. J. W. Appling and others. bibliog Paper Tr J 124:143-54 My 29 '47

Soda process

Soda black liquor generates steam at new S. D. Warren co. plant. R. E. Gilman. il diag Power Pl Eng 51:114-18 Ja '47

Study and teaching

See also Lawrence college—Institute of paper chemistry

Sulfate process

Additional data on the recovery of wet pulp mats from compressive deformation. C. O. Seborg and F. A. Simmonds. il diags Paper Tr J 125:63-7 O 9 '47; Excerpts. Paper Ind 29:275-7 My '47

Approach to a critical study of pulp washing at National container corporation. R. C. Richter. Paper Tr J 124:50-1 Mr 6 '47

Bleaching pulp with mixtures of chlorine dioxide and chlorine. G. P. Vincent. Paper Tr J 124:53-5 Je 26 '47

Brown corporation; Canada's largest sulphate producer. il map Pulp & Pa of Can 48:37-51 F '47

Chlorite bleaching of southern pine kraft pulp. W. P. Lawrence. Paper Tr J 124:38-40 My 22 '47; Same cond. Paper Ind 29:1358-60 D '47

Collection of sulphate turpentine. W. P. Lawrence. diag Paper Tr J 124:128+ F 27 '47

Commercial production of high yield sulphite and sulphate pulps. D. G. Sutherland. Paper Tr J 124:62+ My 29 '47

Conductometric method of vapor saturation measurement as applied to automatic gas-off control of a kraft digester; progress report. R. D. Cowherd. diags Paper Tr J 123: 52-8 N 21 '46

Conversion of Red Rock mill, Canada. il Engineer 184:2-5 Jl 4 '47

Corrosion in storage tanks for crude sulphate turpentine. S. G. Norton and others. Paper Tr J 124:34-5 My 1 '47

Cottrell precipitation installation at Ocean Falls. M. E. Patterson. il plan diag Pulp & Pa of Can 47:90-5 N '46

Determination of total solids in sulfate pulp mill evaporator feed liquor. B. B. Edmonds, jr. Anal Chem 19:820 O '47

Effect of certain variables in the operation of rotary vacuum pulp washers. M. Klein and others. bibliog flow sheet il diags Paper Tr J 124:44-9 Ja 30 '47

Effect of temperature on the slaking of reburned lime sludge. W. R. Cliffe. Paper Tr J 124:55-6 Mr 13 '47

Elimination of lime stack losses with the type N Roto-clone; Southland paper mills. C. C. Porter and others. il Paper Tr J 124: 33-6 F 6 '47

Fuel and soda value of tall oil skimmings; use of nomographs. A. Pollak and P. R. Wiley. Paper Tr J 125:37-40 Ag 28 '47

General study of kraft mill instrumentation. R. M. Brown. Paper Tr J 125:45-8 Ag 7 '47

Hot alkaline purification of cellulose; cooking of pine wood by the sulphate process in one and two stages; hot alkaline purification of pine sulphate pulp. A. Meller. bibliog Paper Tr J 123:49-54 D 26 '46

How a mill modernization program developed; Champion paper and fibre company. C. A. Stone. il Paper Ind 28:1739-40 Mr '47

Influence of oxidation of pulp on wet strength. M. O. Schur and R. M. Levy. bibliog Paper Tr J 124:43-6 My 15 '47

Influence of sodium sulphite and sodium thiosulphate in the sulphate pulping of Engelmann spruce. M. W. Bray and B. Singer. il Paper Tr J 125:49-53 Ag 21 '47; Excerpts. Paper Ind 29:279-80 My '47

Jordan refining of southern sulphate pulp. W. F. Gillespie and J. J. Goss. diags Paper Tr J 124:38-44 My 8 '47

Kraft brown stock refining at Bathurst power and paper company mill. G. F. Allo. il diags Pulp & Pa of Can (Convention no) 48:133-6 [F] '47; Same cond. Paper Ind 28:1804+ Mr '47

Kraft pulping of southern hardwoods. L. V. Forman and D. Niemeyer. Paper Ind 29:586-8 Jl '47

Lime recovery in the sulphate pulp industry. W. H. Tock. flow diag il diags Paper Ind 29:976-83 O '47 (to be cont)

Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. Paper Tr J 124:44 Ja 9 '47

Manufacture of viscose from sugar maple. C. W. Tasker and C. E. Libby. bibliog Paper Tr J 123:139-48 D 5 '46

Marathon, new bleached sulphate pulp producer. flow sheet il maps Pulp & Pa of Can 48:71-90 My '47

Modern recausticizing plant practice. R. F. Clemens. flow sheet Paper Ind 29:100+ Ap '47

Production control in a kraft pulp, paper, and specialty mill. R. E. Driessen. il Paper Ind 29:529-30+ Jl '47

Progress in alkaline pulping in 1946. S. D. Wells. bibliog(114 ref) Paper Tr J 125:42-7 O 30 '47

Progress report on continuous refining of high yield pulps at high temperatures and alkalinity. D. M. Sutherland. Paper Tr J 124:49-51 Ap 10 '47; Same cond. Paper Ind 29:120-2 Ap '47

PAPER making—Sulfate process—*Continued*
Rapid measurement of an index of fibre length; relationships of fibre length index in pulp properties; use for stock preparation control. R. de Montigny and P. Zborowski. Pulp & Pa of Can (Convention no) 47:107-12, 115 [F] '46; Same. Paper Tr J 123:29-34 N 28 '46
Recent developments in the Dorr continuous recausticizing system. R. F. Clemens. flow sheet il Paper Ind 29:218-21 My '47
Relation between chlorine number and permanganate number of kraft pulps. C. R. Mitchell and F. H. Yorston. Pulp & Pa of Can 48:83-4 Ag '47
Removal of salt cake fume from sulphate recovery furnace stack gases by scrubbing. T. T. Collins, jr. and others. il diags Paper Tr J 124:45-9 Je 5 '47
Review of kraft paper industry for 1946. G. Stuhr. Paper Tr J 124:62+ F 27 '47; Same. Paper Ind 28:1793-4 Mr '47
Scrubbing of sulphate recovery furnace stack gases. T. T. Collins, jr. bibliog il diag Paper Ind 29:680-6, 830-4, 984-6 Ag-O '47
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47; Excerpts. Paper Ind 29:1204-6 N '47
Sulphite vs sulphate. E. G. Kirby. Pulp & Pa of Can 48:66-9 O '47
Uses of sulphate pulp. A. G. Durgin. Pulp & Pa of Can (Convention no) 48:137-9+ [F] '47
Washing sulphate pulp with screw presses. G. W. Brumley. flow diag diag Paper Tr J 124:33-4 My 1 '47; Same cond. Paper Ind 29:722 Ag '47

Sulfite process

Bleaching groundwood-sulphite pulp by continuous peroxide process; St Regis paper co., Bucksport, Me. J. A. Lee. flow sheet (p 140-3) il diag Chem Eng 54:92-6 O '47
Bleaching of semichemical pulps. F. A. Simmonds and R. M. Kingsbury. bibliog Paper Tr J 124:53-60 Ja 23 '47
Commercial production of high yield sulphite and sulphate pulps. D. G. Sutherland. Paper Tr J 124:62+ My 29 '47
Effect of secondary factors on sulphite pulp bleaching. V. Oleskevich. bibliog Pulp & Pa of Can (Convention no) 48:123-6 [F] '47; Same cond. Paper Ind 29:1510-12 Ja '48
Equipment changes in the sulphite mill of Ontario paper company limited. W. K. Voss. il Pulp & Pa of Can 48:76-82 Jl '47
Forests and sulphite mills. J. M. Gibson. Pulp & Pa of Can 48:81-4 S '47
Improvements and extensions of sulphite facilities at Price brothers & company, limited, Riverbend mill. H. J. Barratt and H. H. Sears. flow diag il diag Pulp & Pa of Can (Convention no) 48:233-8 [F] '47; Same cond. Paper Ind 29:440-2 Je '47
Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. Paper Tr J 124:33-44 Ja 9 '47; Excerpts. Pulp & Pa of Can 47:80-2 My '46
Method of evaluating the unbeaten strength of unbleached chemical wood pulp. N. S. Grant and others. Pulp & Pa of Can (Convention no) 48:151-8 [F] '47; Same cond. Paper Ind 29:725-7 Ag '47
Modern sulphite acid making. T. Gerace. diags Paper Tr J 124:57-8 Ag 3 '47; Same cond. Paper Ind 29:881-2+ S '47
New developments in the sulphite industry. Pulp & Pa of Can 48:79-84 Ja '47
Review of literature of the sulphite process, Aug. 1945-Aug. 1946. G. J. C. Potter. bibliog Pulp & Pa of Can (Convention no) 48:249-50+ [F] '47
St Regis starts new machine at Deferiet on 45th anniversary. il Paper Ind 28:1251-2+ D '46
Sodium sulphite woodpulps. H. R. Murdock. Paper Tr J 124:51-2 Ja 23 '47
Some observations on cooking and acid making problems resulting from increased chip packing. A. Christensen. flow sheets il Pulp & Pa of Can (Convention no) 48:110-14 [F] '47; Abstract. Paper Ind 29:124-5 Ap '47
Sugar sulphonic acids formed in the sulphite cook; abstract. E. Adler. Paper Ind 28:1817 Mr '47
Sulphite process; its position in chemical and paper fields today. R. Vincent. Paper Tr J 122:136+ F 28 '46; Same cond. Paper Ind 28:1506-7 Ja '47
Sulphite pulps and papers from sawdust and chip mixtures. E. L. Keller and J. N. McGovern. Pulp & Pa of Can 48:72-5 Je '47
Sulphite vs sulphate. E. G. Kirby. Pulp & Pa of Can 48:66-9 O '47
Use of bleached aspen semichemical pulp in groundwork book paper. J. N. McGovern. bibliog Paper Tr J 123:47-52 N 14 '46
What constitutes the desirable sulphite mill? L. C. Kelley. Pulp & Pa of Can (Convention no) 48:115-22 [F] '47; Same cond. Paper Ind 29:1505-10 Ja '48

See also
Sulfite liquor

PAPER making machinery
Bird Dirtec and its application to the cleaning of paper stock. F. F. Frothingham. il diag Paper Tr J 124:68+ My 29 '47; Same. Paper Ind 29:433-4 Je '47
Cameron builds new factory to handle $4 million orders. il Paper Tr J 124:26 Mr 13 '47
Coating on a paper machine. F. W. Egan. Paper Tr J 123:84+ D 5 '46
Continuous beating and refining. D. M. Sutherland. il Paper Tr J 123:76-8+ D 5 '46
Device for automatic shifting between two cam-operated packing mechanisms; paper finishing machine. H. B. Schell. diags Mach 53:190-1 Ja '47
Dirt removing systems and improvements; use of Nichols Freeman Vortrap. H. E. Ingalls. Paper Tr J 122:76+ Je 20 '46; Same abr. Paper Ind 29:270-1 My '47
Distortion reduced in gears for paper production. Pulp & Pa of Can 48:122 Mr '47
Donnacona machine and its new electronic amplidyne drive. D. G. P. Sanderson. Pulp & Pa of Can 48:111-13 My '47
Evaluation of stock preparation equipment. C. H. Vickery. Paper Ind 29:125-7 Ap '47
Fundamental principles of machine head box and slice in relation to formation on the wire. S. M. Bratton. Paper Ind 28:1644-5 F '47
Grinding the beating surfaces of the standard laboratory beater. L. V. Forman and D. D. Niemeyer. Paper Tr J 124:47-8 Ja 2 '47; Same cond. Paper Ind 28:722 Ag '46
Heat balance and the paper machine drive. R. R. Baker. il diags Paper Tr J 125:41-4 Jl 3 '47
Importance of consistency control to sheet formation. J. R. Alman. Paper Ind 28:1649 F '47
Influence of tension during drying upon paper strength. J. E. Sapp and W. F. Gillespie. bibliog Paper Tr J 124:120+ F 27 '47
Jones composite. C. H. Vickery. il Paper Tr J 124:78+ My 29 '47
Jordan refining of southern sulphate pulp. W. F. Gillespie and J. J. Goss. diag Paper Tr J 124:38-44 My 8 '47
Kraft brown stock refining at Bathurst power and paper company mill. G. F. Allo. il diags Pulp & Pa of Can (Convention no) 48:133-6 [F] '47; Same cond. Paper Ind 28:1804+ Mr '47
Modern air operated devices for paper machines. F. R. Erbach. Paper Tr J 124:90+ My 29 '47
Multiple generator power for sectional paper machine drive. G. E. Plaisted. il diags Paper Ind 28:1447-52 Ja '47
New welded hydrapulper has many economical features. il Paper Tr J 124:155 F 27 '47; Same. Pulp & Pa of Can 48:73-4 Mr '47
Notes and observations on beaters. B. M. Baxter. diags Paper Ind 28:1308-11, 1453-7, 1592-7, 1733-8 D '46-Mr '47
Operation of the Cowan screen. M. A. Macdonald. Pulp & Pa of Can 48:75-6 Ag '47
Paper machine maintenance. E. D. Beachler. Paper Tr J 124:52-3 Ap 10 '47; Same cond. Paper Ind 29:128+ Ap '47
Progress report on continuous refining of high yield pulps at high temperatures and alkalinity. D. M. Sutherland. Paper Tr J 124:49-51 Ap 10 '47; Same cond. Paper Ind 29:120-2 Ap '47

PAPER making machinery—*Continued*
Progress report on stock preparation; Sutherland refiner. L. M. Sutherland. il Paper Tr J 124:112+ My 29 '47; Same. Pulp & Pa of Can 48:79-82 Ag '47; Same cond. Paper Ind 29:426+ Je '47
Remote control engineering of stock preparation equipment. J. W. Coutre. diags Paper Ind 29:576-8 Jl '47
Stapley pulper; de-inking and de-fibering method for waste paper. S. G. Stapley. il diags Pulp & Pa of Can (Convention no) 48:184-7+ [F] '47; Excerpt. Paper Ind 29: 724-5 Ag '47
Testing of clays for paper machine and brush coating. I. L. Lester and S. C. Lyons. bibliog il Paper Tr J 125:49-55 O 23 '47
Washing sulphate pulp with screw presses. G. W. Brumley. flow diag diag Paper Tr J 124:33-4 My 1 '47; Same cond. Paper Ind 29:722 Ag '47
Water-jet edge trimmer installed on Fourdrinier paper machine. il Machine Design 19:107 Ag '47
Welding and flame cutting applied to stainless and clad steels; Dilts Hydrapulper installed in plant of National paper corp. S. F. Danes. il Materials & Methods 26: 102-6 O '47
What do we know about beating? E. Sutermeister. bibliog Paper Ind 29:361-3, 542-7 Je-Jl '47

See also
Electric driving—Paper mills
Rolls (paper machinery)
Wood grinders

Control

Sectional paper machine output increased with electronic regulator. V. B. Baker. il diags Paper Ind 29:987-91+ O '47

Lubrication

Lubrication of antifriction bearings. D. T. Achorn. Paper Tr J 122:152-3 Je 20 '46; Same cond. Paper Ind 29:579-80 Jl '47
Modern dryer bearing lubricating systems. E. M. May. Paper Ind 29:580-2 Jl '47
Over-lubricated bearings may injure rubber rolls. Pulp & Pa of Can 48:85 Ag '47

PAPER making materials
Agricultural residue pulps; comparison with typical wood pulps. S. I. Aronovsky and others. bibliog il Paper Tr J 124:49-55 Mr 27 '47; Abstract. Paper Ind 29:277-9 My '47
Dobrow and Overton tell facts before Cotton rag council. Paper Tr J 124:7+ Mr 20 '47
Economics of straw utilization. E. C. Lathrop. Paper Tr J 125:59-60 Ag 21 '47
Fibrous raw materials committee report, 1946 J. Traquair. bibliog Paper Tr J 124:55-8 Ap 17 '47
Flax and rags make fine papers at Beauharnois; Howard Smith paper mills. D. W. Emmerson. il Pulp & Pa of Can 47:77-80 N '46
Inorganic papers; mineral found in France can be used in paper making; palygorskite, a hydrated aluminum silicate; abstract. M. Déribéré. Paper Ind 29:742 Ag '47
Preservation of straw in ricks; report of joint meeting of TAPPI fibrous agricultural residues committee and chemical preservative manufacturers. S. I. Aronovsky. Paper Tr J 124:35-7 My 22 '47
Properties of flexible impregnated sheets; addition of synthetic resins. A. W. Oliner and F. W. O'Neil. bibliog Paper Tr J 125: 55-62 Ag 14 '47

See also
Cellulose
Paper chemicals
Paper making—Fillers
Paper pulp
Paper sizing
Pine
Rags
Ramie
Straw
Wood pulp
Wood waste

PAPER mills
Paper mill insulating problems; use of Foamglas. V. Sanders. il Paper Ind 29:531-3 Jl '47
Problems that NEPCO has overcome. J. E. Alexander. Paper Tr J 125:10+ Jl 31 '47
St Regis starts new machine at Deferiet on 45th anniversary. il Paper Ind 28:1251-2+ D '46
St Regis takes over Time mills. Paper Tr J 123:7-8 D 26 '46
Simplified constant humidity room. J. d'A. Clark. il plans diag Paper Ind 28:1305-7 D '46

See also
Paper making

Accidents

Safety in Ontario, 1946. W. N. Corbett. Pulp & Pa of Can 48:149-50 My '47
Why accidents? J. A. Draper. Pulp & Pa of Can 48:118+ Je '47

Accounting

Post war future of the cost accountant. F. E. Wood. Pulp & Pa of Can 48:68-9 S '47
Principal factors in the costing of papermaking. C. H. Barker. Pulp & Pa of Can 48:50-8 Ag '47

Costs

Mathematics of profit making. J. D. Corrigan. Paper Ind 29:209-11+ My '47

Electric equipment

Electronic amplidyne sectional drive. W. A. Messervey. il diag Pulp & Pa of Can 48: 108-10 My '47
Motor application in the pulp and paper industry. W. L. Eliason. charts Pulp & Pa of Can (Convention no) 48:191-6 F '47; Same cond. Paper Ind 29:122-3 Ap '47
Operational survey of electrical equipment in paper mills. L. E. Beck. il Paper Tr J 124: 66+ My 29 '47; Same cond. Paper Ind 29: 887-9 S '47
Paper moisture control; moisture meter. E. L. Neal. Pulp & Pa of Can (Convention no) 48:100-2 [F] '47; Same cond. Paper Ind 28:1810-11 Mr '47
Planning a newsprint mill for minimum electrical maintenance. J. Eyton. Pulp & Pa of Can 48:91-4 O '47
Switchboard failure temporarily halts paper production. il Locomotive 46:200-2 Jl '47
Two sessions devoted to paper mill processes; summer meeting, AIEE. Elec Eng 66:818-20 Ag '47

Employees

Abitibi trains its engineers. B. Cowan. il Paper Ind 29:212-13 My '47
Activities of the Industrial relations section, C.P.P.A. D. O. McLennan. Pulp & Pa of Can (Convention no) 48:278+ [F] '47
Employee services; Powell River company. J. F. Flett. il Pulp & Pa of Can 48:55-61 Je '47
Grievance procedure. E. G. Amos. Paper Ind 28:1650-1 F '47
Human relations in industry. R. F. Bennett. Paper Ind 28:1645-6 F '47
Industrial relations in paper industry. E. G. Amos. Paper Ind 28:1342+ D '46
Morale survey improves management-employee relations. E. J. Benge. Paper Ind 28: 1141-3 N '46
Pacific Mills opens its community hotel. Paper Tr J 125:24 Ag 21 '47
Planned career in the paper industry. D. C. Yates. Pulp & Pa of Can 42:599-601, 652-3, 659-60, 727-8, 769-70; 43:17-21, 250-2, 301-3, 361-2 S '41-Ap '42; 47:63-5 My; 83-5 D '46; 48:61-6 Mr '47
Powell River hospital; its organization, equipment and service. P. Glanzer. il Paper Ind 29:538-41 Jl '47
Problem of the 40-hour week. S. E. Williams. Pulp & Pa of Can 48:93-6 My '47
Significance of industrial relations in Canadian paper industry. R. M. Fowler. Pulp & Pa of Can 47:71-6 N '46
Solving the employee-turnover problem. O. C. Cool. Paper Ind 29:687-8 Ag '47
Some reflections on the responsibilities of supervisors in the field of labor relations. G. R. Schenck. Paper Tr J 122:143-6 Je 20 '46; Same cond. Paper Ind 29:267-70 My '47
Unique medical centre; Mersey paper company. G. L. Scott. il Pulp & Pa of Can 48:63-5 S '47
Why and how of an employee recognition program; length-of-service pins; Gardner-Richardson co. R. W. Richardson. Paper Ind 29:366-7 Je '47

PAPER mills—*Continued*

Equipment

Air-drying of fine papers. J. H. Miller. il diags Paper Ind 29:973-5 O '47
Air scrubbers for tissue mills. W. K. Metcalfe. il Paper Tr J 124:128+ My 29 '47
American Envelope's Moraine mill to be in production by fall. il Paper Tr J 124:21-2 F 20 '47
Application of special steels to the pulp and paper industry. W. R. Dickie. Pulp & Pa of Can 48:77-9 O '47
Brown corporation; Canada's largest sulphate producer. il map Pulp & Pa of Can 48:37-51 F '47
Byproduct steam cuts fuel cost in large pulp and paper mill; Kalamazoo vegetable parchment co. il diags Power 91:518-21+ Ag '47
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48:71-4 Ag '47
Chain and its applications in pulp and paper mills. W. M. Hufnagel. Paper Ind 29:591-3 Jl '47
Conversion of Red Rock mill, Canada. il Engineer 184:2-5 Jl 4 '47
Co-operation between the paper-maker and equipment manufacturer. R. de Montigny. Pulp & Pa of Can 48:86-90 O '47
Cottrell precipitation installation at Ocean Falls. M. E. Patterson. il plan diag Pulp & Pa of Can 47:90-5 N '46
Diatomaceous filter aids for paper mill waters and effluents. G. G. Halvorsen. il Paper Tr J 125:37-41 O 30 '47
Economics of mill instrumentation. R. W. Porter. Paper Tr J 124:48-9 Mr 6 '47; Same cond. Paper Ind 29:593+ Jl '47
Effect of certain variables in the operation of rotary vacuum pulp washers. M. Klein and others. bibliog flow sheet il diags Paper Tr J 124:44-9 Ja 30 '47
Elimination of lime stack losses with the type N Roto-clone; Southland paper mills. C. C. Porter and others. il Paper Tr J 124:33-6 F 6 '47
Equipment changes in the sulphite mill of Ontario paper company limited. W. K. Voss. il Pulp & Pa of Can 48:76-82 Jl '47
Evaluation of stock preparation equipment. C. H. Vickery. Pulp & Pa of Can (Convention no) 48:175-6 [F] '47
Expansion at Fort Frances. J. F. MacKellar. Pulp & Pa of Can 48:135+ Je '47
Fluid drives for the pulp and paper industry. R. D. O'Neil. il diags Pulp & Pa of Can 48:70-4 Ap '47
From plunger down to standpatter; mechanical handling equipment in paper mills. J. F. Moriarty. Paper Tr J 123:122+ D 5 '46
General study of kraft mill instrumentation. R. M. Brown. Paper Tr J 125:45-8 Ag 7 '47
Hammermill traffic control speeds its operations. il Paper Tr J 124:21+ Mr 20 '47
High destiny pumping and pulping. T. Argonin. Paper Tr J 124:124+ My 29 '47
High pressure oscillating shower pipes and stainless steel plates with rotary screens. F. F. Frothingham. il Paper Tr J 124:118+ My 29 '47
How a mill modernization program developed; Champion paper and fibre company. C. A. Stone. il Paper Ind 28:1739-40 Mr '47
How Hoberg handles and stores pulpwood. R. C. Pratt. il map plan Paper Ind 29:214-17 My '47
Improvements and extensions of sulphite facilities at Price brothers & company, limited, Riverbend mill. H. J. Barratt and H. H. Sears. flow diag il diag Pulp & Pa of Can (Convention no) 48:233-8 [F] '47; Same cond. Paper Ind 29:440-2 Je '47
Improvements in evaporator engineering. R. E. Bergstrom and J. R. Lientz. diags Paper Tr J 124:42-6 Ja 2 '47
Instrumentation for pulp and paper mill operation. R. R. Fuller. Paper Tr J 125: 41-4 Ag 28 '47
Keeping paper stock consistent; Brammer control equipment. il plan diag Comp Air Mag 52:174-5 Jl '47
Mando program at Fort Frances provides for groundwood papers. Paper Tr J 124:16 My 15 '47
Marathon, new bleached sulphate pulp producer. flow sheet il maps Pulp & Pa of Can 48:71-90 My '47
Mexican company outlines improvement in two mills. il Paper Ind 29:161-2 My '47
Modernization of a groundwood mill. D. Bamford. Pulp & Pa of Can 48:70-3 O '47
Modernization program at Consolidated paper corporation. il Pulp & Pa of Can 48:55-8 O '47
New developments in the erection of transite pipe. J. W. Hemphill. diags Paper Tr J 125:22+ Jl 17 '47
New mill at Palatka, Florida. D. G. Moon. il map Paper Ind 29:868+ S '47
Open top diffusers. P. J. Hannan. Paper Tr J 124:63 Ap 17 '47; Same cond. Paper Ind 29:274-5 My '47
Performance record of flight conveyor. A. L. Roots. Pulp & Pa of Can 48:95-6 S '47
Powell River hydraulic barkers and new wood preparing plant. A. R. M. Stewart. il plan Pulp & Pa of Can 47:95-102 N '46
Process instrumentation committee, Technical section of the Canadian pulp and paper association. J. N. Franklin and R. M. Brown. Pulp & Pa of Can 48:85-6 Jl '47
Process instrumentation; prepared by process instrumentation committee, Technical section of Canadian pulp and paper association. Pulp & Pa of Can 48:93 S '47
Pump maintenance. H. Kingsbury. Paper Tr J 125:68-70 O 9 '47
Recent developments in the Dorr continuous recausticizing system. R. F. Clemens. flow sheet il Paper Ind 29:218-21 My '47
St Regis boosts its output at Deferiet by 37½ per cent. il Paper Tr J 123:49-50+ D 5 '46
Science of material handling. M. A. Goodwin. Paper Tr J 124:36+ Je 5 '47; Same abr. Paper Ind 29:432-3 Je '47
Some facts and thoughts about woodroom equipment. N. P. Wardwell. Paper Tr J 124:82+ My 29 '47; Same cond. diag Paper Ind 29:735-7 Ag '47
Some observations on cooking and acid making problems resulting from increased chip packing. A. Christensen. flow sheets il Pulp & Pa of Can (Convention no) 48:110-14 [F] '47
Supertherm heating system for paper mill process. S. Senko. il diag Paper Tr J 123:175-8 O 10 '46; Same cond. Paper Ind 29:588-90 Jl '47
Turpentine recovery in pulp mills. flow diag diags Pulp & Pa of Can 48:79-81 Je '47
What constitutes the desirable sulphite mill. L. C. Kelley. Pulp & Pa of Can (Convention no) 48:115-22 [F] '47; Same cond. Paper Ind 29:1505-10 Ja '48

See also

Digesters (paper making)
Paper making machinery
Wood grinders

Fires and fire protection

Everybody helped when the Ford mill burned. J. N. Stephenson. il Pulp & Pa of Can 48: 61-4 Ja '47

Maintenance and repair

How of maintenance for 24-hour operation; Riegel paper corporation. T. M. Walters. il Factory Management 105:124-7 Jl '47

Management

Making a research and development program work. W. Chilson. Paper Ind 29:222-3 My '47
Method for evaluating and reporting product quality. J. B. Catlin and J. G. Strieby. Paper Tr J 124:57-60 Ap 10 '47
Problems of a diversified specialty mill. R. G. Johnstone. Pulp & Pa of Can 48:63-5 O '47
Production control in a kraft pulp, paper, and specialty mill. R. E. Driessen. il Paper Ind 29:529-30+ Jl '47
Quality control for the pulp and paper industry. C. A. Bicking. bibliog Paper Tr J 124:63-7 Ap 24 '47
Safety in relation to other management functions. J. W. Meinhardt. Paper Ind 28:1204+ N '46

PAPER mills—*Continued*

Power

Champion-International adds 70,000-lb-per-hr boiler. L. B. Rogers. flow diag il plan diags Power Pl Eng 51:68-73 S '47

Heat balance and the paper machine drive. R. R. Baker. il diags Paper Tr J 125:41-4 Jl 3 '47

Is BTU accounting worth while in the power plant. J. E. A. Warner. Paper Ind 28:1360-1 D '46

Modern methods of feedwater conditioning for high pressure boiler plants. S. D. Distelhorst. Paper Tr J 125:41-4 Jl 31 '47

Multiple generator power for sectional paper machine drive. G. E. Plaisted. il diags Paper Ind 28:1447-52 Ja '47

Paper mill power ties. A. P. Schnyder. Elec Eng 66:983-4 O '47

Power distribution systems for paper mills. W. C. Bloomquist. il diags Paper Tr J 124: 35-46 F 13 '47

Power distribution systems for pulp and paper mills; high-voltage power distribution. G. M. McHenry and J. L. McKeever. diags Elec Eng 66:985-90 O '47

Power distribution systems for pulp and paper mills; low-voltage systems. A. C. Bird and W. C. Bloomquist. diags Elec Eng 66:998-1004 O '47

Power for Detroit sulphite pulp & paper co. flow diag il plan diags Power Pl Eng 51: 68-70 O '47

Second steam generator for Bathurst. W. S. Hosking. il diag Pulp & Pa of Can 48:57-60 F '47

Soda black liquor generates steam at new S. D. Warren co. plant. R. E. Gilman. il diag Power Pl Eng 51:114-18 Ja '47

Unit substations for power distribution. A. B. Sinclair. Pulp & Pa of Can 48:83-4 Jl '47

Safety measures

Foremen and the safety program. E. J. Calnan. Pulp & Pa of Can 48:141 O '47

Is safety your business? W. A. Cutter. Paper Ind 28:1210-12 N '46

Machines don't jump out and get you! B. H. Metternich. il Paper Ind 28:1145-7 N '46

National safety congress, 34th, Chicago, Oct. 7-11; Paper and pulp section. Paper Ind 28: 1152+ N '46

Results, or consequences; safety work at Tyrone mill of West Virginia pulp and paper company. C. E. Barr. Nat Safety N 55:28-9+ My '47

Safety at Kenora. A. E. Minor. Pulp & Pa of Can 47:133-4+ N '46

Safety in relation to other management functions. J. W. Meinhardt. Paper Ind 28:1204+ N '46

Waste

Alkali and heat recovery in deinking systems. H. P. Bailey and A. H. Nadelman. bibliog Paper Tr J 125:43-5 Jl 10 '47

Biochemical oxygen demand a new expression for the papermaker. L. E. McGrath. bibliog Paper Tr J 124:45-7 Mr 27 '47; Same cond. Paper Ind 29:1207-8 N '47

Byproduct steam cuts fuel cost in large pulp and paper mill; Kalamazoo vegetable parchment co. il diags Power 91:518-21+ Ag '47

Characteristics and methods for treatment of de-inking wastes. W. W. Hodge and P. F. Morgan. Water & Sewage 84:46-8+ O '46

Effect of temperature on the slaking of reburned lime sludge. W. R. Cliffe. Paper Tr J 124:55-6 Mr 13 '47

Fuel and soda value of tall oil skimmings; use of nomographs. A. Pollak and P. R. Wiley. Paper Tr J 125:37-40 Ag 28 '47

Irrigation with strawboard waste. Pub Works 78:31-2 Ap '47

Lignin as a fertilizer material. R. S. Aries. bibliog Paper Tr J 123:47-51 N 21 '46

New form of lignin; development of Howard Smith paper mills, ltd. N. B. Powter. il Paper Ind 28:1744-6 Mr '47; Same cond. Mod Plastics 24:106-8 Ap '47

Problems in the application of biochemical oxygen demand test in pulp and paper wastes; abstract. H. W. Gehm. Water & Sewage Works 94:57 F '47

Progress of pollution abatement in the Tennessee valley. W. G. Stromquist. Paper Tr J 124:41-2 My 15 '47; Same cond. Paper Ind 29:1360-1 D '47

Pulp and paper industry. L. F. Warrick. il Ind & Eng Chem 39:670-6 My '47

River reaeration; diffusing compressed air beneath surface of river which has been polluted. A. J. Wiley and others. plan Paper Tr J 124:59-64 Mr 20 '47

Soda black liquor generates steam at new S. D. Warren co. plant. R. E. Gilman. il diag Power Pl Eng 51:114-18 Ja '47

Stream improvement research. Chem & Eng N 25:1579 Je 2 '47

Treatment and control methods for industrial wastes. L. F. Oeming. il Water & Sewage Works 94:105-7 Mr '47

Treatment of waste white water at Beach & Arthur paper co. A. W. Redlin and J. J. Gilbert. flow diag il diags Paper Ind 28:49-52 Ap '46; Same cond. plan Pub Works 77: 35-6 N '46

Variations and similarities of paperboard mill white waters. W. Rudolfs and E. J. Axe. bibliog flow sheet Paper Tr J 125:53-8 Jl 17 '47

Water problem is economic, not bureaucratic. E. W. Tinker. Paper Tr J 124:18 Je 19 '47

White water clarification by means of the Marx filter. C. A. Benson and H. E. Brakewood. flow diag il diag Paper Tr J 124: 72-4 Ap 24 '47; Same cond. Paper Ind 29: 1357-8 D '47

See also
Bark
Sulfite liquor

Alabama

Childersburg newsprint mill advances toward construction. Manuf Rec 116:154 Ag '47

Brazil

Brazilian paper industry; names and addresses of leading paper-mills. Pulp & Pa of Can 48:64 Ja '47

British Columbia

Ocean Falls, 1912-17. L. Bloch. il Pulp & Pa of Can 48:66-7 S '47

Florida

New Florida plant of Hudson pulp and paper co. to make 200 tons of paper daily. il Manuf Rec 116:43+ O '47

New mill at Palatka, Florida. D. G. Moon. il map Paper Ind 29:868+ S '47

Mexico

Mexican company outlines improvements in two mills. il Paper Ind 29:161-2 My '47

Wood survey for new Mexican mill. L. A. Nix. il map Paper Ind 28:1131-6 N '46

Newfoundland

Anglo-Newfoundland development company limited; Bowater's Newfoundland pulp and paper mills. il Pulp & Pa of Can 48:61-7 Ag '47

Bowater's expansion program is now under way. il Paper Ind 28:1537-8 F '47

Ontario

Espanola again makes newsprint to ease critical shortage. il Paper Ind 29:780-2+ S '47

KVP converts long-idle Canadian mill for pulp production; Espanola mill. il Paper Ind 28:1083-4+ N '46

K.V.P. starts operation at Espanola mill. Paper Tr J 125:12 S 11 '47

Marathon, new bleached sulphate pulp producer. flow sheet il maps Pulp & Pa of Can 48:71-90 My '47

Pulp and paper mills on the Niagara peninsula. D. W. Emmerson. il Pulp & Pa of Can 48:54-6 Mr '47

Story of a pulp and paper town; Dryden. D. E. Scott. il Pulp & Pa of Can 47:73-6 D '46

Quebec

Brown corporation; Canada's largest sulphate producer. il map Pulp & Pa of Can 48:37-51 F '47

Everybody helped when the Ford mill burned. J. N. Stephenson. il Pulp & Pa of Can 48; 61-4 Ja '47

PAPER mills—Quebec—*Continued*
Flax and rags make fine papers at Beauharnois; Howard Smith paper mills. D. W. Emmerson. il Pulp & Pa of Can 47:77-80 N '46

PAPER money

Dictionaries

Dictionary of paper money. J. A. Muscalus. 16p pa $1.50 John A. Muscalus, Bridgeport, Pa. '47

PAPER patents. See Paper making—Patents

PAPER products
Hospitals as a market for paper products; paper dishes. R. Clevenger. il Pulp & Pa of Can 48:62-4 Je '47
How your host got his name on the cocktail napkins; Monogram company of California. il Sales Management 58:72-4+ Ap 1 '47
International starts paper pallet output. Paper Tr J 125:12 Ag 28 '47
Party dress; Monogram of California packaging of gift novelties. il Mod Packaging 20:132-5 My '47
Sales forecasts are four-way management tool at Dennison. H. C. Weeks. Sales Management 59:60+ S 1 '47
Uses of sulphate pulp. A. G. Durgin. Pulp & Pa of Can (Convention no) 48:137-9+ [F] '47
Uses of wood-fiber products in the home. F. M. Coston. il Dom Comm 35:56-61 Mr '47

See also
Paper boxes
Paper containers
Paper drapery
Paper towels

PAPER products plants
Measure of modern efficiency; plant for American paper goods company, Chicago. il Arch Rec 100:102-5 D '46

PAPER pulp
Repulping of melamine resin-treated wet-strength paper. D. D. Niemeyer and L. V. Forman. bibliog diag Paper Tr J 124:49-56 Ap 3 '47; Same cond. Paper Ind 29:1030-5 O '47
Stapley pulper; de-inking and de-fibering method for waste paper. S. G. Stapley. il diags Pulp & Pa of Can (Convention no) 48:184-7+ [F] '47

See also
Wood pulp

PAPER research
Application of the electric hygrometer to the determination of water-vapor permeability at low temperature. J. A. Van den Akker. bibliog diags Paper Tr J 124:51-6 Je 12 '47; Same cond. Mod Packaging 20:148-51+ My '47; Same cond. Paper Ind 29:108+ Ap '47
Cold alkaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Cold alkaline purification of wood cellulose; the influence of surface properties on resistant pentosans. A. Meller. bibliog Paper Tr J 125:57-60 S 11 '47
Co-operative research in wood products; New York state college of forestry and group of paper companies. Paper Ind 28:1338+ D '46
Drainage characteristics of groundwood pulp; constant pressure filtration. S. A. Collicutt. bibliog diag Pulp & Pa of Can 48:66-78 Ja '47
Hot alkaline purification of cellulose; cooking of pine wood by the sulphate process in one and two stages; hot alkaline purification of pine sulphate pulp. A. Meller. bibliog Paper Tr J 123:49-54 D 26 '46
How research differs from mill control. C. Q. Ives. Paper Ind 28:1446+ Ja '47
Instrumentation program at the Institute of paper chemistry. J. A. Van den Akker. Pulp & Pa of Can (Convention no) 48:163-5+ [F] '47
Making a research and development program work. W. Chilson. Paper Ind 29:222-3 My '47
New research laboratory of the Swedish cellulose company. E. Waldenstrom. il plan Paper Ind 29:534-7+ Jl '47
Nitrations of swollen and collapsed cotton linters. R. K. Brown and C. B. Purves. bibliog Pulp & Pa of Can 48:100-7 My '47
Organization and function of Empire state paper research associates, inc. A. W. Nickerson. Paper Ind 28:1346+ D '46
Research as a business. A. Abrams. Paper Ind 29:678-9 Ag '47
Scandinavian research organizations. E. C. Jahn. bibliog il diag Paper Tr J 124:41-6 My 22 '47
Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47
Your part in lithography's future. W. E. Griswold. Paper Tr J 122:84+ Je 20 '46; Excerpts. Paper Ind 29:262+ My '47

See also
Paper laboratories
also Lawrence college—Institute of paper chemistry; Pulp and paper research institute of Canada

PAPER sizing
Applications of starch viscosity to the paper industry; new viscometer developed. W. G. Bechtel and C. C. Kesler. bibliog il Paper Tr J 125:35-9 O 16 '47
Beater sizing with the silicones. C. J. Bergendahl and C. E. Libby. bibliog Paper Tr J 125:40-8 S 4 '47
Composition of rosin size precipitate; occurrence of alumina. D. Price. bibliog Ind & Eng Chem 39:1143-7 S '47
Factors that influence rosin sizing. P. Goldsmid. Paper Ind 29:456-7 Je '47
New condensation products of formaldehyde with amides and amines. H. Scheuermann. Paper Ind 28:1495-6 Ja '47; Same. Mod Plastics 24:161-2+ F '47
Ohio TAPPI discusses starch. Paper Tr J 124: 100+ F 27 '47
Postwar developments with emulsified asphalt sizing in cylinder boards. E. M. Lorenzini. Paper Tr J 124:43-4 Je 5 '47; Same. Paper Ind 29:1208-10 N '47
Resin acids; abstract. R. Lombard and M. Chêne. Paper Ind 28:1656 F '47
Studies of rosin sizing; use of sulfuric acid. D. Price and D. D. Cameron. bibliog Pulp & Pa of Can (Convention no) 47:142-8 F '46; Same. Paper Tr J 123:35-41 D 19 '46; Excerpts. Paper Ind 27:1890-3 Mr '46

Testing

Mechanism of the ink penetration tests. W. S. Wilson. Paper Tr J 123:34-8 D 12 '46; Same cond. Paper Ind 28:438-9 Je '46

PAPER textiles

See also
Paper drapery

PAPER towels
Companions in use; new wet-strength towels and holder require related packages. il Mod Packaging 21:117 S '47

PAPER waste. See Waste paper

PAR collection of checks. See Federal reserve banks—Par collection of checks

PARABOLIC mirrors. See Mirrors, Parabolic

PARACHUTES
Chair-back parachute seeks market as standard plane equipment. Sales Management 58: 109 Ja 15 '47
Hitting the silk in 1947. L. L. Irvin. il Aero Digest 54:55-6+ My '47
Rate of descent of parachutes from various altitudes. K. E. Penrod and others. bibliog J Aeronautical Sci 14:303-10 My '47

PARADICHLOROBENZENE. See Dichlorobenzene

PARADISO, Louis J.
Portrait. Bsns W p51 Je 7 '47

PARAFFIN
Generation in paraffin of ionizing penetrating particles by a neutral component of the cosmic radiation. C. Milone and V. Tongiorgi. diags Phys R 72:735-6 O 15 '47
Petroleum products in ceramic processing operations. H. T. Van Horn. Am Cer Soc Bul 26:229-31 Ag 15 '47
Production of fatty acids by air oxidation of paraffin wax. diag Chem Ind 60:64 Ja '47
Production of waxes from California crudes. R. A. David and P. M. Huemmer. flow sheet il Chem Eng Prog 43:174-6 Ap '47
Study of fire resistant house paints made with chlorinated paraffin. Paint Oil & Chem R 109:28+ N 14 '46

PARAFFIN—*Continued*
Union oil company produces high-melting paraffin waxes from lubricating oil cuts. J. C. Albright. il Pet Refiner 26:121-2 Jl '47
See also
Petroleum—Paraffin
problem
Testing
Course of the reaction at 100° C in the system paraffin/oxygen. D. J. W. Kreulen. Inst Pet J 32:656-9 N '46

PARAFFINS
bis-(2-Chloroethylmercapto)-alkanes. T. P. Dawson. Am Chem Soc J 69:1176 My '47
Chlorinated paraffins are finding quantity markets. Pet Processing 2:409 Je '47
Cracking of paraffin hydrocarbons in the presence of aluminum chloride. V. I. Komarewsky and S. C. Ulick. Am Chem Soc J 69:492-5 Mr '47
Electric strength of paraffins and some high polymers. A. E. W. Austen and H. Pelzer. bibliog diags Inst E E J 93 pt 1:525-32 N '46
Entropies and related properties of branched paraffin hydrocarbons. K. S. Pitzer and J. E. Kilpatrick. bibliog Chem R 39:435-47 D '46
Influence of neighbor bonds on additive bond properties in paraffins. J. R. Platt. J Chem Phys 15:419-20 Je '47
Resonance energies from thermal data. T. L. Cottrell and L. E. Sutton. bibliog J Chem Phys 15:685-6 S '47
Selective demethylation of paraffin hydrocarbons; preparation of triptane and neopentane. V. Haensel and V. N. Ipatieff. diag Ind & Eng Chem 39:853-7 Jl '47
Solubility of paraffin-chain compounds. A. Bondi. bibliog J Phys & Colloid Chem 51: 891-903 Jl '47
Structural determination of paraffin boiling points. H. Wiener. bibliog Am Chem Soc J 69:17-20 Ja '47
UOP paraffin alkylation processes; Universal oil products company. flow diags Pet Refiner (Process Handbook sec) 26:268-9 Ap '47
See also
Isoparaffins
Analysis
Micromethod for determination of gaseous olefins in the presence of paraffins. R. Pyke, A. Kahn and D. J. LeRoy. bibliog Anal Chem 19:65-6 Ja '47
Quantitative determination of paraffins and naphthenes in gasolines by the lamp method. S. G. Hindin and A. V. Grosse. bibliog Anal Chem 19:42-7 Ja '47

PARAGUAY
Economic conditions
News by countries. For Comm W 25:31-2 D 7 '46; 26:21 Ja 4; 16 F 8; 20-1 Mr 22; 27:19-20 Je 14; 28:20 Ag 2; 18-19 S 13; 29:19-20 O 25 '47

PARAHYDROGEN. See Hydrogen

PARALYSIS
See also
Infantile paralysis

PARAMECIUM
Direct observation of the transfer of pronuclei in living conjugants of paramecium bursaria. R. Wichterman. bibliog Science 104: 505-6 N 29 '46
Immobilizing paramecia for study in the introductory course. K. A. Stiles and D. A. Hawkins. Science 105:101-2 Ja 24 '47

PARAMOUNT pictures, inc.
Paramount; Oscar for profits. il Fortune 35: 88-95+ Je '47
Plans further expansion. B. Balaban. Comm & Fin Chr 166:307 Jl 21 '47

PARANITRANILINE
Acute paranitraniline poisoning; abstract. A. Anderson. J Ind Hygiene 29:sup99 S '47

PARAPROL
Paraprol as a prophylactic and therapeutic agent in nickel dermatitis and chrome sores. R. P. Scott. Ind Med 15:681 D '46

PARASANTONIDE
Suitability of parasantonide for asymmetric photolysis. S. Mitchell and E. J. Y. Scott. Chem Soc J p686-90 My '47

PARASITES
See also
Bacteria, Pathogenic
Fungi, Pathogenic
Insects, Injurious and beneficial
Worms, Intestinal and parasitic

PARCHMENT paper
Defibration of vegetable parchment; abstract. Doulat and J. Chiaverina. Paper Ind 29: 286 My '47

PARENAMINE
Sterile filling; plastic hooded machine for bottling parenamine. il Mod Packaging 20: 134-5 Ja '47

PARICUTIN
Studies on Paricutin volcano, Michoacan, Mexico. F. M. Bullard. bibliog map diags Geol Soc Bul 58:433-49, pl 1-8 My '47

PARIS green
Comparative studies of DDT dusts, DDT-oil sprays, and paris-green dusts used routinely in anopheline larvae control. W. V. Mathis and others. Pub Health Rep 62:95-103 Ja 17 '47

PARKE, Davis and company
Selected stocks with long dividend records. Mag of Wall St 79:202 N 23 '46

PARKER, Chauncey G. 1897-
International bank appoints C. G. Parker Director of Administrative department. por Comm & Fin Chr 165:1939 Ap 10 '47
World bank director. por Bsns W p90 Ap 12 '47

PARKING. See Automobile parking

PARKING meters. See Automobile parking—Meters

PARKINSON, Thomas Ignatius, 1881-
Portrait. Bsns W p74 N 9 '46

PARKS
See also
National parks and reserves

PARKWAYS
Los Angeles metropolitan area demands adequate freeway and parkway system. L. Aldrich. il map Civil Eng 17:250-3+ My '47
Traffic interchange plans for downtown Los Angeles parkways. map Eng N 138:574-5 Ap 17 '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway. H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47
Work resumed on Blue Ridge parkway. il map Eng N 137:880-4 D 26 '46
Work speeded on Penn-Lincoln parkway. E L. Schmidt. il map Eng N 139:608-9 O 30 '47

PARLIAMENTARY libraries. See Legislative reference libraries

PARLIAMENTARY practice
What every chairman should know. W. Weir. Ptr Ink 220:31 S 5 '47

PARMELEE, Cullen Warner, 1874-1947
45 years service to ceramics. por Cer Ind 49: 55 S '47
Sketch. por Brick & Clay Rec 111:46 S '47

PARSONS, Charles Algernon, 1854-1931
Parsons, the man and his work. C. D. Gibb. Inst Mech Eng J & Proc 156:Proc 213-18 S '47; Same cond. Engineer 183:558-60 Je 27 '47
Portrait. Inst Mech Eng J & Proc 156:front S '47
Sir Charles Parsons and the Turbinia. H. P. Spratt. il Mech Eng 69:585 Jl '47

PARTICLES
Active magnesia; surface areas and pore structures from nitrogen adsorption. A. C. Zettlemoyer and W. C. Walker. bibliog il Ind & Eng Chem 39:69-74 Ja '47
Active magnesia; X-ray versus nitrogen adsorption surface areas. A. C. Zettlemoyer and W. C. Walker. bibliog J Phys & Colloid Chem 51:763-7 My '47
Analysis of particle formation and growth by size-frequency determinations of the silver halide precipitations of photographic emulsions. R. P. Loveland and A. P. H. Trivelli. bibliog J Phys & Colloid Chem 51:1004-27 Jl '47

PARTICLES—*Continued*
Analysis of thermite-type incendiary and pyrotechnic mixtures. C. E. Danner and J. Goldenson. bibliog Anal Chem 19:627-30 S '47
Comparison of optical and electron microscopy of pigments. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:261-4, pl 1-2 S '46
Conversion of liquid white phosphorus to red phosphorus; particle size and surface area of red phosphorus as functions of the percentage conversion. S. Skolnik, G. Tarbutton and W. E. Bergman. bibliog diag Am Chem Soc J 68:2310-14 N '46
Determination of the particle size of monodispersed systems by the scattering of light. I. Johnson and V. K. La Mer. bibliog diags Am Chem Soc J 69:1184-92 My '47
Determination of the size of submicroscopic particles by X-rays. A. Guinier. bibliog 4pls U S Bur Mines Information Circ 7391:1-17 '46
Effect of particle size on iron powder properties. J. F. Kuzmick and others. Iron Age 158:72-6 D 5; 76-80 D 12 '46
Electrical constants of a material loaded with spherical particles. L. Lewin. diag Inst E E J 94 pt 3:65-8 Ja '47
Estimation of the fineness of grinding of chocolate; abstract and discussion. H. F. Bamford and H. M. Mason. Chem & Ind p421 N 23 '46
Flow of fluids through porous media. L. E. Brownell and D. L. Katz. bibliog Chem Eng Prog 43:537-44; Discussion. 544-8 O '47 (to be cont)
Instrument for measuring particle diameters and constructing histograms from electron micrographs. E. E. Hanson and J. H. Daniel. il diags J Ap Phys 18:439-43 My '47
Investigation of a method for the analysis of smokes according to particle size. W. N. Lipscomb and others. diags J Ap Phys 18: 72-9 Ja '47
Light scattering by spherical particles. D. Sinclair. bibliog Opt Soc Am J 37:475-80 Je '47
Light scattering studies of tobacco mosaic virus. G. Oster, P. M. Doty and B. H. Zimm. bibliog Am Chem Soc J 69:1193-7 My '47
Limitation of the determination of surface area by the point *B* method. L. White, jr. J Phys & Colloid Chem 51:644-7 My '47
Measuring the distribution of particle size in dispersed systems. W. M. Dotts. diag Anal Chem 19:283 Ap '47
Method of correcting low angle X-ray diffraction curves for the study of small particle sizes. J. W. M. DuMond. diags Phys R 72:83-4 Jl 1 '47
Mixing of solid particles. P. M. C. Lacey. diags Inst Chem Eng Trans 21:53-9 '43
Molecular-weight determination by light scattering. P. Debye. bibliog J Phys & Colloid Chem 51:18-32 Ja '47
Motion of a particle in an electromagnetic and gravitational field. H. C. Corben and M. Corben. Phys R 72:434 S 1 '47
New horizons in science; introducing dusts, germs, molecules, and atoms. W. J. Wiswesser. bibliog il J Chem Educ 24:21-7 Ja '47
Observations of crystal structure and particle shape in electron micrographs of several carbon blacks. J. H. L. Watson. il diags Electrochem Soc Trans 92 (preprint 4):49-61 '47
Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37:826-32 O '47
Particle growth in the electron microscope. V. E. Cosslett. il J Ap Phys 18:844-5 S '47
Particle size distribution of cracking catalysts. G. M. Webb. bibliog il Pet Processing 2:497-8+ Jl '47
Preparation of standard powders for reference in particle-size measurement. E. L. Gooden and R. L. Updike, jr. Ind & Eng Chem Anal ed 18:802 D '46
Pulse analyser for nuclear research. H. F. Freundlich and others. bibliog il diags R Sci Instr 18:90-100 F '47
Range-momentum measurements of particles emitted in nuclear disintegrations induced by 100-Mev X-rays. G. S. Klaiber and others. bibliog il diags Phys R 71:649-56 My 15 '47
Rate of fall of particles in air; nomograph; reference data. Heat & Ven 44:106a F '47
Shape of particles in finely ground powders. A. R. Steinherz. bibliog diags Soc Chem Ind J 65:314-20 O '46
Simple method of obtaining a particle mass distribution by inverting the X-ray intensity scattered at small angles. L. C. Roess. J Chem Phys 14:695-7 N '46
Solubility and melting point as functions of particle size; induction period of crystallization. L. Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47
Spectroturbidimetric study of the proteins of milk. A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51:460-73 Mr '47
Studies on the aging of precipitates and coprecipitation; compressibility of silver bromide powders. I. Shapiro and I. M. Kolthoff. bibliog diags J Phys & Colloid Chem 51: 483-93 Mr '47
Terminal velocity as the measure of dust-particle characteristics. R. B. Foley. il A S M E Trans 69:101-7 bibliog(p106); Discussion. 107-8 F '47
Thresholds for creation of particles. H. Feshbach and L. I. Schiff. Phys R 72:254 Ag 1 '47
X-ray scattering at small angles by finely-divided solids; exact theory for random distributions of spheroidal particles. L. C. Roess and C. G. Shull. bibliog J Ap Phys 18:308-13 Mr '47
X-ray scattering at small angles by finely-divided solids; general approximate theory and applications. C. G. Shull and L. C. Roess. bibliog il diag J Ap Phys 18:295-307 Mr '47

See also
Brownian movements
Colloids
Dispersion
Dust
Electrophoresis
Flue dust
Pigments
Powders
Sand
Sediments

PARTICLES, Scattering of. See Scattering of particles

PARTITIONS
Plastic partitions and windows; advantages and limitations of transparent acrylic plastic. il diags Arch Forum 87:121-4 O '47

PARTNERSHIP
Death, taxes and your business. G. J. Laikin. Trusts & Estates 85:372-4 O '47
Local agency partnership arrangements. Rough Notes 90:36+ My '47
Wife's use of family partnership income. J Account 84:330 O '47

See also
Insurance, Business —Partnership interest

Business liquidation agreements
Disposition of business interests by inter vivos and testamentary trusts. M. Garwood. Trusts & Estates 83:465-73 N '46

Taxation
Fiscal year for partnerships. J Account 84: 139-40 Ag '47
Partnership. J Account 84:55-6 Jl '47
Sharing agency profits with deceased partner's estate may prove costly. H. C. Smith. Nat Underw 51:2 O 16 '47; Same abr. Nat Underw (Life ed) 51:12 O 24 '47

PASS books. See Bank books, Depositors'

PASSAMAQUODDY tidal power project
Tide is running out at Passamaquoddy. il Bsns W p 18 My 31 '47

PASSENGER cars. See Cars

PASSPORTS
New efforts to lift or lighten burdensome barriers to travel; with text of U.N. Geneva meeting recommendations on passports and frontier formalities. H. A. Wilkinson. il For Comm W 28:3-5+ Jl 5 '47
Passport difficulties. B. J. Bok. Science 106: 341-2 O 10 '47

See also
Tourist cards

PASTEURELLA tularensis. See Tularemia

PASTEURIZERS
Pasteurizer employs hydraulically actuated cover. il diag Machine Design 19:136 Ja '47

PASTEURIZERS, Electric
Ex-Cell-O's baby; a quick high-temperature pasteurizer. Bsns W p76+ Ap 19 '47

PASTRY, Frozen
Tips on frozen pastry. E. L. Bride. il Food Ind 18:1856-7 D '46

PASTURES
Case history of pasture development. D. R. Francis. il Banking 39:45+ My '47

PATENT laws and legislation
American ceramic society, report of committee on patents; pending legislation. Am Cer Soc Bul 26:245-6 Ag 15 '47
Case histories in patent law (cont). H. A. Toulmin, jr. Product Eng 18:164 Ja; 158 Ap; 115 My; 123 Jl; 127 Ag '47

See also
Design—Protection
Trade marks

Egypt
Egyptian patent law. Chem Age (Lond) 55: 644 N 23 '46

France
Les possibilités d'améliorer la protection de la propriété industrielle en France. Roger-Petit. Génie Civil 124:256-7 Jl 1 '47

Great Britain
British adopt important new patent policy. Steel 121:70 O 20 '47
Government-owned or controlled inventions. Engineer 182:476 N 22 '46
Patent law reform. Economist 153:572-4 O 4 '47
Patents proposal; Departmental committee's second interim report. Elec R (Lond) 139: 703-5 N 1 '46

New Zealand
New Zealand patent law. Chem Age (Lond) 55:707 D 7 '46

Russia
Patent law in the U.S.S.R. Chem Age (Lond) 57:235 Ag 16 '47
Patents in the USSR. J. G. Tolpin. Chem & Eng N 25:434 F 17 '47
La propriété des inventions en Russie soviétique. G. Ficheux. Génie Civil 124:156-7 Ap 15 '47
World wide chemistry. W. G. Cass. Chem & Eng N 25:2654 S 15 '47

United States
Avoid patent law suits. L. T. Parker. Heat & Ven 44:100-2 S '47
Charting a patent course for chemical engineers; abstract. F. J. Larkin. Chem Eng Prog 43:sup30 S '47
Collaboration; key to success for the inventor-attorney team. G. H. Young. Chem & Eng N 25:594-7 Mr 3 '47
Current activities toward revision of patent law. P. J. Federico. Chem & Eng N 25:840-3 Mr 24 '47
Drug patents and compulsory licensing. T. G. Klumpp. Chem & Eng N 24:3174-6 D 10 '46
Flashed out? Supreme court and patent validity. Fortune 35:136+ F '47
New patent law affecting gas industry. L. T. Parker. Am Gas J 167:31-3 S '47
Patent challenge by licensee upheld. Oil Paint & Drug Rep 151:5+ Ja 13 '47
Patent improvement pacts held valid. Oil Paint & Drug Rep 151:5+ F 10 '47
Patent policy o.k.; putting atomic matters outside normal scope of patent system. Bsns W p48+ O 4 '47
Patent situation and society. E. R. Posnack. Mech Eng 68:720-2 Ag '46; Discussion. 69: 329-30 Ap '47
Patentability of uses in the chemical field. I. P. Tashof. Chem & Eng N 25:491-4 F 24 '47
Recent trends in patent law. W. J. Blenko. Am Cer Soc Bul 26:215-18 Jl 15 '47
U.S. patent system; its roots and origins. A. J. Nydick. Chem & Eng N 25:664-6 Mr 10 '47

PATENT lawyers
New anti-advertising rules. A. Crawford. Adv & Sell 40:70 S '47

PATENT office. See United States—Patent office

PATENTS
American patent system and industrial research; some managerial aspects. C. W. Ooms. bibliog Chem & Eng N 24:3027-9 N 25 '46
Classification of patents. N. T. Ball. Special Lib 38:11-16 Ja '47
Does patent consciousness interfere with cooperation between industrial and university research laboratories? L. A. Hawkins. Science 105:326-7 Mr 28 '47
Improvement in printed copies of U.S. patents; references cited. Glass Ind 28:134 Mr '47
Is it good-bye to the attic genius? J. W. Kittredge. Mech Eng 69:302-5 Ap '47
Patent investigations. G. Egloff and R. F. Davis. Chem & Eng N 25:1046-8 Ap 14 '47
Patent notes for engineers. 165p $2.50 Radio corporation of America, Princeton, New Jersey '47
Patent policies in educational institutions and nonprofit research organizations. A. M. Palmer. Science 105:154-5 F 7 '47
Patent policy to be surveyed by National research council. Chem & Eng N 25:435 F 17 '47
Patent situation and society. E. R. Posnack. Mech Eng 68:720-2 Ag '46; Discussion. 69: 329-30 Ap '47
Patents stabilize research. J. A. Dienner. Chem & Eng N 25:302-4 F 3 '47
What's new. M. L. Towner. il diags Dom Comm 35:87-91 Ja '47 [cont monthly]

See also
Acoustic patents
Automobiles—Patents
Chemical patents
Chromium plating—Patents
Glass manufacture—Patents
Inventions
Nylon—Patents
Packaging—Patents
Packaging materials—Patents
Paper making—Patents
Patent laws and legislation
Petroleum refining—Patents
Plastic materials—Patents
Radio apparatus—Patents
Royalties
Rubber—Patents
Rubber, Artificial—Patents
Sewage disposal—Patents
Textile patents
Trade marks
United States—Patent office
Water purification—Patents
Welding—Patents

Dedication
What's new; dedicated patents. T. P. Reynolds. il diags Dom Comm 34:87-91 D '46

Government ownership
Department of justice report on government patent practices and policies. Chem & Eng N 25:1785 Je 23 '47
Government-owned or controlled inventions. Engineer 182:476 N 22 '46

Licensing
American ceramic society, report of committee on patents. Am Cer Soc Bul 26:245-6 Ag 15 '47
Drug patents and compulsory licensing. T. G. Klumpp. Chem & Eng N 24:3174-6 D 10 '46
Glass manufacture trust suit settled. Oil Paint & Drug Rep 151:5 Je 2 '47
New setup for patent cross-licensing. L. Westrate. Automotive & Aviation Ind 96:208+ Mr 15 '47
Patent challenge by licensee upheld. Oil Paint & Drug Rep 151:5+ Ja 13 '47

Germany
L'accord de Londres du 27 juillet 1946 sur les brevets allemands. M. Glomot. Chimie & Ind 57:82-3 Ja '47

PATHOGENIC bacteria. See Bacteria, Pathogenic

PATHOGENIC fungi. See Fungi, Pathogenic

PATHOLOGICAL psychology. See Psychology, Pathological

PATHOLOGY
See also
Bacteriology
Diseases
Immunity
Inflammation
Medicine
Physiological chemistry

PATNODE, Winton Irving, 1904-
Portrait. Fortune 35:106 My '47

PATTERN making
Applying good management in the pattern shop. G. M. Dexter. il plans Foundry 75: 68-71+ F '47
How to cut costs of plastic molds; casting stainless-steel cavities, forces and inserts; pattern-making methods. H. L. Flynn. diags Am Mach 91:93-100 Mr 27 '47
Patterns made from cast plastics. C. R. Simmons. il Materials & Methods 24:1466-8 D '46
Plastic patterns. R. H. Herrmann. il Foundry 75:89+ Jl '47
Pressure casting matchplates. E. Bremer. il diags Foundry 75:124-6+ Ap '47
Selecting proper pattern equipment. R. Olsen. il Foundry 75:93+ S '47
What kind of pattern? J. E. Johnson, L. G. Gustafson and V. E. Zang. il Foundry 75: 70-1 Mr; 128-31 Ap; 86-9 My '47
See also
Sheet metal work—Pattern making

PATTERSON, Alexander Evans, 1887-
Patterson takes over as president of Mutual life insurance co. of New York. por Bsns W p93 Mr 15 '47
President of Mutual Life. pors Nat Underw (Life ed) 51:1 Mr 14 '47
President of Mutual life of New York. C. Axman. por East Underw 48:3-4 Mr 14 '47

PAUL, Randolph Evernghim, 1890-
Randolph Paul's tax philosophy; how taxation is used as a social tool. R. Magill. J Account 83:402-4 My '47

PAULING, Linus Carl, 1901-
Pauling gets Richards medal. por Chem & Eng N 25:1504-5 My 26 '47
Sketch. por Chem & Eng N 25:3058-9 O 20 '47

PAVATRINE
Dysmenorrhea in industry; treatment witn a new antispasmodic. F. A. Viggiano. bibliog Ind Med 15:632-5 N '46

PAVELLE, Leo
New York photofinisher. por Fortune 34:178+ D '46

PAVEMENT marking. See Traffic lines

PAVEMENTS
Flexible pavement evaluation chart. D. Lee. Civil Eng 17:614 O '47
See also
Bridges—Floors
Curbs
Roads
Streets

Cutting
CAA develops new high-speed core drill. il Civil Eng 17:63 F '47

Design
Design of asphalt surfaces. B. E. Gray. plan diags Aero Digest 55:46-7+ Ag '47
Houston's expressways; design of earth and pavement structures. W. J. Van London and others. diags Roads & Sts 90:69+ Jl '47
Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47

Foundations
50-000 cu. yd. daily for Baltimore airport. il plan diag Eng N 139:532-5 O 16 '47
Putting soils knowledge to work on airfield runways. E. E. Seelye. il diags Eng N 138:733-7 My 1 '47
Soil compaction essential to good paving results. A. O. Williamson. il Roads & Bridges 85:93-4+ Ap '47; Same. Roads & Sts 90:84+ My '47
Vibratory and impact methods for compaction of soils. G. P. Tschebotarioff. bibliog il Roads & Bridges 84:65-6+ D '46
Waterproofed mechanical stabilization in road construction; soil-bituminous roads. il Roads & Bridges 85:72-5+ F '47

Heating
Oregon installs radiant-heated road. Eng N 139:577 O 30 '47
Snow melting by embedded pipe; photo-electric control for delivery of hot water to pipes. T. N. Adlam. il diags Heat & Ven 44:61-4 Ag '47
Steam pipes keep steep road clear of snow and ice. il Eng N 138:556 Ap 10 '47
See also
Pavements, Concrete—Heating

Slipperiness
Skid-proofing Kentucky highways. H. H. Palmer. il Eng N 139:522-3 O 16 '47

Subgrades
Subgrade moisture conditions beneath highway and airfield pavements. M. S. Kersten. Roads & Sts 89:94+ O '46
See also
Roads—Subgrades

Testing
Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47

PAVEMENTS, Asphalt
Design of asphalt surfaces. B. E. Gray. plan diags Aero Digest 55:46-7+ Ag '47
Egg roller cuts cost of asphalt paved ditch. R. L. Winton. il Roads & Sts 90:69+ S '47
Surface heaters and heater-planers; asphalt resurfacing program in Los Angeles. L. Miller. il Roads & Sts 90:101-3 Ap '47
See also
Pavements, Bituminous
Pavements, Bituminous concrete

PAVEMENTS, Asphaltic concrete. See Pavements, Bituminous concrete

PAVEMENTS, Bituminous
Airfield for small planes inexpensively paved with mixed-in-place sand-asphalt emulsion. M. T. Decker. il Roads & Sts 90:83-4+ Je '47
Practices of western states in using sand and gravel in bituminous mixtures; abstract. E. C. Knowlton. Rock Prod 50:148-9 Ap '47
See also
Roads, Bituminous

Reinforcement
Mesh-reinforced hot-mix tried on Texas overlay project. il diag Roads & Sts 89: 57-9 D '46

PAVEMENTS, Bituminous concrete
AAF's proving ground airport. il diag Roads & Sts 89:65-70 O '46
Curbs built of asphaltic concrete to cut highway maintenance costs; U.S. route 1 in Maryland; with cost data. il Eng N 138: 810-11 My 15 '47
How to design asphaltic concrete paving mixtures. il diag Pub Works 78:19-20+ Ap '47
Putting soils knowledge to work on airfield runways. E. E. Seelye. il diags Eng N 138: 733-7 My 1 '47
Some basic principles concerning asphaltic concrete. G. H. Dent. Rock Prod 50:106 Mr '47

Testing
Texas method of molding asphaltic concrete density specimens. il Roads & Sts 89:59-60 D '46

PAVEMENTS, Concrete
Air entraining admixtures included in Public roads administration specifications. il Eng N 137:656-8 N 14 '46
Air entrainment control; test project completed in Chicago. C. J. Chambers. Roads & Sts 90:73+ Ag '47
AAF's proving ground airport. il diag Roads & Sts 89:65-70 O '46
Concrete features of ARBA convention. Concrete 55:38-40+ Ap '47
Development of concrete revetments on the lower Mississippi. R. H. Haas. il Concrete 55:16-18+ My '47
Fiber tubes imbedded in concrete slab increase effective span. E. R. Schofield. il diag Eng N 139:114 Jl 24 '47

PAVEMENTS, Concrete—*Continued*
Highway research board twenty-sixth annual meeting, Washington, D.C. Dec. 5-8. Concrete 55:22-6 Ja '47
Houston urban expressways. H. J. McKeever and others. il map plan diags Roads & Sts 90:61-2+ Je; 69+ Jl '47
Machine à épandre et à damer le béton des chaussées, système Waldvogel. diag Génie Civil 124:377-8 O 1 '47
Measuring, mixing and placing concrete. D. O. Robinson. il Roads & Bridges 84:67-8+ D '46
New formulas for stresses in concrete pavements of airfields. H. M. Westergaard. bibliog Am Soc C E Proc 73:687-701 My '47
New York Port authority paves center area of George Washington bridge. il Concrete 55:16-17+ Ja '47
Pavement evolution at March field. E. Koehm. il Eng N 139:122-5 Jl 24 '47
Paving for the B-36; Patterson field, Ohio. il diags Roads & Sts 90:55-9+ Ag '47
Repairs to Spruce Street bridge, Scranton, Pa. A. B. Cohen. il plans diags Am Concrete Inst J 18:241-8 N '46
Resurfacing Packard's famous test track. il diag Roads & Sts 89:57-63 N '46
Runway construction at London airport. il plan Eng N 138:56-60 Ja 9 '47
Steel and concrete deck replaces timber roadway on Eads bridge. N. J. Law, jr. il Civil Eng 17:394-6 Jl '47
Two additional pavement lanes for George Washington bridge. il diags Roads & Sts 90:59-61 Ja '47
University of Illinois students learn to fly at first concrete college airport. il plans diags Concrete 54:3-5+ D '46

See also
Floors, Concrete
Pavements, Bituminous concrete
Roads, Concrete
Sidewalks, Concrete
Walks, Concrete

Expansion joints

Better expansion joints in bridge floors. N. W. Morgan. plans diags Eng N 138:151-4 Ja 23 '47

Heating

Airport snow removal with heat. G. B. Coffey. il Heating-Piping 19:79 Mr '47
Snow removal; roadway leading into plant of American cyanamid co. Welding J 26:66+ Ja '47; Same. Safety Eng 93:26 Ja '47; Excerpts. il Civil Eng 16:537 D '46

Joints

Joints in concrete pavement sealed by truck mounted rig. il Eng N 139:204 Ag 7 '47
Load transfer unit meets heavier wheel-load requirements. il Civil Eng 17:612 O '47
Rubber-asphalt joint fillers. R. H. Lewis. Pub Roads 24:291-8 Ja '47
Saving paving; rubber-base compounds for sealing pavement joints. R. B. Jennings. diags Pub Works 78:25-6 Ap '47
Sealing joints with rubberized asphalt; Packard test track. B. Gould. il Roads & Sts 90:91-2+ F '47

Reinforcement

Distributed reinforcement in pavements found advantageous in Rhode Island. L. V. Spencer. Eng N 137:806-7 D 12 '46

Scaling

Air entrainment proves its value. il Concrete 55:3-5 My '47
Pavement performance; abstract. C. W. Allen and J. F. Barbee. Concrete 55:26 Ja '47

PAVEMENTS, Soil-cement
Modern stabilization methods; soil-cement placement on Texas airfield. il Roads & Sts 89:64-7+ D '46

PAVEMENTS, Steel
Bascule bridge leaves relieved of hidden load by cleaning of steel-mesh flooring. C. L. Wartelle. Eng N 139:324 S 4 '47
Open steel flooring used on Pennsylvania bridges. L. A. Porter. Roads & Sts 89:78 O '46

PAVEMENTS, Wood
Tar surface dressing for wood block pavement. Pub Works 78:36 S '47

PAVING machines
Machine à épandre et à damer le béton des chaussées, système Waldvogel. diag Génie Civil 124:377-8 O 1 '47

Safety measures

Concrete mixers and pavers; hazards and precautions. il plans Nat Safety N 55: 38-40+ Ap '47

PAXTON, Edwin John, 1877-
One-newspaper town; Sun-Democrat has monopoly on Paducah's front porches but not on minds of its readers. por Fortune 36:102-7+ Ag '47

PAXTON, Joseph, 1801-1865
Palace, the Bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. Arch Forum 87:88-95 O '47

PAYMASTER robbery insurance. See Insurance, Paymaster robbery

PAYMENT
Agreement settling payment of note by bank's agent held valid and binding upon bank. Banking Law J 64:613-14+ Ag '47
When is in full, not in full; acceptance of check marked in full. C. B. Everberg. Credit & Fin Management 49:17-18 Ag '47

See also
Accounts payable
Checks
Collecting of accounts
Collection laws
Instalment plan
Insurance—Premiums, Payment of
Wage payment plans

PAYROLL checks. See Checks

PAYROLLS
Adjusted manufacturing series of employment and pay rolls. Mo Labor R 64:926-30 My '47
Box-score; study of Portland pay rolls by the Oregon journal. Ptr Ink 217:110 N 15 '46

Accounting

Control of payroll funds. G. W. Adlam. J Account 83:124-8 F '47
How to make wage data readily available. J Account 83:493-6 Je '47
John Doe gets his dough; preparation of payrolls and checks; Niagara Hudson power corp. J. A. Williams. Am Gas Assn Mo 29: 185-8 Ap '47
Mechanizing payroll preparation; the Rich Run mine of the Elk River coal & lumber co. il Coal Age 52:79-81 S '47
Payroll accounting by punched card methods. S. Noah, jr. il N A C A Bul 28:1512-31 Ag 15 '47
Payroll, costs, and personnel figures from one system; Ferro machine & foundry company. J. Turner. il Am Bsns 16:16-17+ D '46
Payrolls and costs in one system; American seating company. G. E. Toles. il Am Bsns 16:20-2+ N '46
Speed plus control on payroll work; Socony vacuum oil company. L. M. Larsen. Am Bsns 17:16-17+ Ja '47

Statistics

Factory employment and pay rolls, by industries (without seasonal adjustment) monthly, Oct.-Nov. 1945 and July-Nov. 1946. Fed Res Bul 33:76-7 Ja '47 [cont monthly]
Indexes of production-worker pay rolls (weekly) in manufacturing and selected non-manufacturing industries, 1943 annual average, monthly indexes, May 1946-May 1947. Mo Labor R 65:99-102, 103 Jl '47 [cont monthly]
Production-worker employment and pay rolls in sawmills and logging camps; revised data, 1939-1946. Survey of Cur Bsns 27:23 O '47
Production-worker employment and pay rolls in the men's and women's clothing industries; monthly figures and monthly averages, 1939-1946; revised series. Survey of Cur Bsns 27:22 Je '47
Production-worker employment and pay rolls in the printing, book and job, industry; revised data, 1939-1946. Survey of Cur Bsns 27:23 O '47

PAYROLLS—Statistics—*Continued*
Total federal employment, total government employment and total federal pay rolls by branch and agency; selected years 1939-1944 and monthly May 1946-May 1947. Mo Labor R 65:105-6 Jl '47 [cont monthly]

PEABODY, George Foster, radio awards
Shirer and CBS share Peabody radio award. Ptr Ink 219:128 Ap 18 '47

PEABODY, Massachusetts
Sewerage
Grit and grease chamber reduces sewer cleaning and pollution problems; sewage from Salem and Peabody, Mass. carries wastes from leather-making industries, high in grease and silt content. F. L. Flood. il plans diags Eng N 139:391-3 S 18 '47

PEABODY coal company
Recapitalization approved. Comm & Fin Chr 166:858 S 1 '47

PEACE
Britain bases peace policy on UN; radio broadcast. E. Bevin. Comm & Fin Chr 165: 11+ Ja 2 '47
Declares optimism for peace with atomic bomb. A. H. Compton. Chem & Eng N 25: 1730-1 Je 16 '47
Engineer in building for peace. E. M. Hastings. Civil Eng 17:444+ Ag '47
Factors in preserving peace. H. Morrison. Comm & Fin Chr 164:2468+ N 14 '46
Foundations of enduring peace. R. E. Flanders. Chem Eng Prog 43:sup12-14 Mr '47
How President Truman can regain his lost prestige. A. Wilson. Comm & Fin Chr 165: 917+ F 13 '47
Needed; peaceful competition of social systems. R. M. Hutchins. Comm & Fin Chr 164:2753+ N 28 '46
Outworn diplomacy must be abandoned. R. R. Young. Comm & Fin Chr 165:1247+ Mr 6 '47
Peace in the atomic age. L. Szilard. Metal Prog 51:764 My '47
Pope Pius appeals for just peace. Comm & Fin Chr 165:193 Ja 9 '47
Preparedness for war essential to waging peace. P. V. McNutt. Comm & Fin Chr 166:628+ Ag 14 '47
Progress, but no illusion all's well for peace. A. H. Vandenberg. Comm & Fin Chr 165: 273+ Ja 16 '47
Task of world peace. J. F. Dulles. Comm & Fin Chr 166:727+ Ag 21 '47
To the boards of directors of American business; buy peace. Fortune 35:2-4 Je '47; Discussion. 36:28+ Ag '47
United nations and world peace. A. Sweetser. Comm & Fin Chr 165:132+ Ja 9 '47
U.S. task in promoting world peace. W. A. Harriman. Comm & Fin Chr 166:817+ Ag 28 '47
Waging world peace. Economist 152:712-13 My 10 '47; Same. Iron Age 159:121+ My 22 '47
We are seeking peace with justice. B. McMahon. Comm & Fin Chr 166:430+ Jl 31 '47
We mean to achieve peace; Inter-American defense conference, Petropolis, Brazil. Comm & Fin Chr 166:905+ S 4 '47
We must be strong to avoid war; Kansas City and Ottawa addresses. H. S. Truman. Comm & Fin Chr 165:3109+ Je 12 '47
What peace treaty with Germany? E. N. Van Kleffens. Comm & Fin Chr 165:610 Ja 30 '47
Will do our part in promoting peace. J. F. Byrnes. Comm & Fin Chr 165:273+ Ja 16 '47
World not at war but without peace; address before American Legion convention, New York. T. E. Dewey. Comm & Fin Chr 166:911+ S 4 '47
World-wide better living standards is road to peace; address before International management congress, Stockholm. W. L. Batt. Comm & Fin Chr 166:227+ Jl 17 '47; Same. Mech Eng 69:836-40 O '47
See also
Disarmament

PEACE treaties, 1946
Rush job of printing of peace treaties finished on schedule. G. C. Compton. Inland Ptr 118:48 Mr '47

PEACH juice
Special filtration yields more peach juice. D. S. Bentley. flow sheet il Food Ind 19:1359-62+ O '47

PEACHES, Dried
Ascorbic acid and carotene in dehydrated peaches; abstract. M. S. Eheart and M. L. Sholes. Food Ind 19:126+ Ja '47

PEALE, Mundi I.
Portrait. Bsns W p64 Ja 11 '47

PEANUT butter
Refrigeration of peanuts and peanut products. J. G. Woodroof and others. Refrig Eng 53: 126-7 F '47
Analysis
Physical and chemical methods for characterizing peanut butter. J. F. Vincent and L. Z. Szabo. bibliog diag Anal Chem 19:655-7 S '47

PEANUT oil
Oxidation of β-carotene in solution by oxygen. R. F. Hunter and R. M. Krakenberger. Chem Soc J p 1-4 Ja '47
Peanut acid oil duty decision reversed. Oil Paint & Drug Rep 151:5 Je 9; 5 Je 23 '47

PEANUTS
Groundnuts in British East Africa. W. G. Cass. Chem & Eng N 25:799 Mr 17 '47
Large-scale groundnut-production scheme launched in British East and Central Africa. For Comm W 27:13 My 24 '47
Peanut production and processing, Union of South Africa. For Comm W 29:24 N 1 '47
Protein from peanuts; patent. Food Ind 19: 117 Ja '47
Refrigeration of peanuts and peanut products. J. G. Woodroof and others. il Refrig Eng 53:124-8+ F '47
Advertising
Ads draw 100,000 inquiries; Snack jar plan booklet. Ptr Ink 219:90 Ap 4 '47

PEAR juice
La composition azotée des moûts de poires saines et des moûts de poires blettes; influence sur la fermentation des poirés. J. Tavernier and P. Jacquin. bibliog Chimie & Ind 58:135-9 Ag '47

PEARCE, Sir Leonard, 1873-1947
Sketch. por Engineer 184:391-2 O 24 '47

PEARLITE. See Steel—Metallography

PEARLS, Artificial
Artificial pearls; manufacturing methods. Mech Eng 69:770-1 S '47

PEARS
La composition azotée des moûts de poires saines et des moûts de poires blettes; influence sur la fermentation des poirés. J. Tavernier and P. Jacquin. bibliog Chimie & Ind 58:135-9 Ag '47

PEARSON, Drew, 1897-
Joyce demands retraction by Pearson; statements in reference to National Surety. Nat Underw 50:13 D 19 '46

PEARSON, Evelyn
Portrait. Fortune 35:136 My '47

PEAS
Effect of duration and temperature of blanch on proximate and mineral composition of certain vegetables. A. Kramer and M. H. Smith. bibliog Ind & Eng Chem 39:1007-9 Ag '47
Effect of duration and temperature of blanch on vitamin retention by certain vegetables. N. B. Guerrant and others. Ind & Eng Chem 39:1000-7 Ag '47
Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:990-3 Ag '47
Nutritive value of canned foods. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Cleaning
Using froth flotation to clean vined canning peas. A. M. Neubert. il diag Food Ind 19: 769-72+ Je '47

PEAS—*Continued*

Testing

Degree of maturity influences the quality of frozen peas. J. P. Nielsen and others. bibliog il Food Ind 19:305-8+, 479-82+ Mr-Ap '47

PEAS, Frozen

Degree of maturity influences the quality of frozen peas. J. P. Nielsen and others. bibliog il Food Ind 19:305-8+, 479-82+ Mr-Ap '47

PEASE-ANTHONY scrubbers

Fume scrubber effective on linseed oil kettles. J. C. Dittmer. bibliog il diags Chem Eng 54:110-13 Mr '47

PEAT

Chemical utilization of peat. C. W. Davis. Can Chem & Process Ind 30:86+ D '46; Excerpts. Rubber Age 60:573 F '47

L'extraction de la tourbe. il Génie Civil 123: 299 N 1 '46

Glacial age peat deposit near Pittsburgh. J. M. Schopf and A. T. Cross. bibliog 2pls map diag Am J Sci 245:421-33 Jl '47

Industrial utilization of peat. H. R. Soper. Inst Chem Eng Trans 21:48-52 '43

Peat can become money-saving industrial fuel; abstract. R. L. Fitzgerald. Civil Eng 17:452+ Ag '47; Power Pl Eng 51:73 S '47

Peat deposits of Florida, by J. H. Davis, jr. Review by R. B. Campbell. Am Assn Pet Geologists Bul 31:1516-18 Ag '47

Peat industry for Scotland; abstract. A. Tomter. Chem Age (Lond) 56:293 Mr 8 '47

Wax from British lignite and peat. W. G. Cass. Chem & Eng N 24:3391 D 25 '46

PEAT bogs

Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

Peat-bog fires; their origin and control. D. J. Parker and others. 4pls U S Bur Mines Information Circ 7411:1-12 '47

PEAT moss

Eire has ambitious plans for peat-moss exploitation. For Comm W 28:23 S 13 '47

Peat moss deposits in Canada. H. A. Leverin. bibliog maps 9 pls 102p pa 25c Canada. Dept. of mines and resources, Ottawa '46

Progress in peat moss production is climbing steadily. W. M. Bonham. il Can Min J 68:584-5 Ag '47

PEBBLE heaters

L'emploi de billes réfractaires pour transférer la chaleur à haute température. diags Génie Civil 123:348 D 15 '46

PEBBLES

Solution sculpturing in limestone pebbles. H. W. Scott. bibliog map diags Geol Soc Bul 58:141-52, pl 1-3 F '47

PECTIC acids

X ray diffraction investigation of pectinic and pectic acids. K. J. Palmer and others. bibliog il J Phys & Colloid Chem 51:710-20 My '47

PECTINIC acids

Acidic isolation of low-ester pectinic acids. R. M. McCready and others. bibliog Ind & Eng Chem 38:1254-6 D '46

Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Ketesz. bibliog Am Chem Soc J 68: 2178-9 N '46

Electrophoretic mobilities and fractionation of sodium pectinates. W. H. Ward and others. bibliog J Phys & Colloid Chem 51: 1137-43 S '47

Pectinic acids as related to texture and quality of dehydrated fruit products; abstract. G. L. Baker and W. G. Murray. Food Ind 19:1302+ S '47

X ray diffraction investigation of pectinic and pectic acids. K. J. Palmer and others. bibliog il J Phys & Colloid Chem 51:710-20 My '47

PECTINS

Acidic isolation of low-ester pectinic acids. R. M. McCready and others. bibliog Ind & Eng Chem 38:1254-6 D '46

Effect of molecular association and charge distribution on the gelation of pectin. R. Speiser, M. J. Copley and G. C. Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47

Guava-flavored pectin powder is rich in ascorbic acid. Y. Kanehiro and G. D. Sherman. flowsheet il Food Ind 18:1688-9+ N '46

New device for grading pectins; rigidometer for determining jelly grades. H. S. Owens and others. bibliog il diag Food Ind 19: 606-8+ My '47

Pectin and other hydrophilic powders; patent. Am Dyestuff Rep 36:337-8 Je 16 '47

Pectin and pectin-splitting enzymes. A. Hansen. bibliog J Chem Educ 24:223-31 My '47

Pectin studies; method of purification. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:121-4 Ap '47

Pectin studies; the effect of dry grinding. L. H. Lampitt and others. bibliog Soc Chem Ind J 66:157-60 My '47

Some polygalacturonidae *n*-alkylamides. J. F. Carson. Am Chem Soc J 68:2723-4 D '46

Sur la composition et le dosage des pectines industrielles. H. Le Corvaisier. bibliog Chimie & Ind 57:545-8 Je '47

Waterproofing textiles; latex modified with pectin solutions; patent. Am Dyestuff Rep 36:614 O 20 '47

See also

Pectic acids

Pectinic acids

PEDERSEN process. See Aluminum metallurgy

PEELING machines

It peels, blanches, cooks; fruits and vegetables processed in small batches. E. S. Stateler. il diag Food Ind 19:1053-5 Ag '47

PEENING

See also

Shot peening

PEGMATITES

Quantitative estimation of potash and soda feldspars in pegmatite rock by means of chemical coloration; review of selected literature. G. A. Munson and E. P. Barrett. bibliog U S Bur Mines Information Circ 7412:1-5 '47

PEIMINE

Conversion of peimine into peiminine and vice versa. T. T. Chu and T. Q. Chou. Am Chem Soc J 69:1257 Je '47

PEIMININE

Conversion of peimine into peiminine and vice versa. T. T. Chu and T. Q. Chou. Am Chem Soc J 69:1257 Je '47

PELECYPODS, Fossil. See Lamellibranchiata, Fossil

PELLAGRA

Production of experimental pellagra by adenine. S. B. Raska. Science 105:126-7 Ja 31 '47

PELLEY, John Jeremiah, 1878-1946

Many pay tribute. por Ry Age 121:880-1 N 23 '46

PENCIL leads

New script for Scripto. il Mod Packaging 20:138-9 Je '47

PENCILS

Dutch industry enters the pencil market. For Comm W 26:25 Ja 11 '47

Pencil packages. il Mod Packaging 20:128 F '47

Plastic pencil case; molding company, launching a series of consumer products, applies engineering know-how to polystyrene box-making. il Mod Packaging 20:144 Je '47

PENCILS, Mechanical

Shop shots from Eversharp; illustrations with text. Am Mach 91:82-3 Ja 30 '47

Manufacture

Ball-pen tubular parts rotary-sliced to length; Eversharp fountain pens and mechanical pencils. J. W. Dean, jr. il diags Am Mach 91:108-10 F 13 '47

Clutch slots punched in; Eversharp repeater pencils. J. W. Dean, jr. il diags Am Mach 91:116-18 Jl 17 '47

14-station die makes tip clutches for pencils; Eversharp pencil. G. Murphy. il diag Am Mach 91:104-5 Jl 31 '47

PENDULUM
Dynamical analogue. N. Minorsky. bibliog diags Franklin Inst J 243:131-49 F '47
Machinability testing methods using pendulum machines. A. S. Kenneford. diags Inst Mech Eng J & Proc 155 (War emergency issue no 20):241-3, pl 2 (p240) '46; Same. Engineering 161:599-600 Je 21 '46

PENETROMETERS
Army engineers develop cone penetrometer. il Eng N 137:809 D 12 '46

PENETRON
Gamma ray and supersonic equipment-inspection methods used in Continental Oil's eight refineries; Penetron and Audigage. L. S. McCaslin. il diags Oil & Gas J 46:100-3+ O 18 '47

PENICILLIC acid
Compounds related to penicillic acid; synthesis of dihydropenicillic acid. R. A. Raphael. Chem Soc J p805-8 Je '47
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68:2510-13 D '46

PENICILLIN
Administration of micronized therapeutic agents by inhalation or topical application. G. V. Taplin and F. A. Bryan. il Science 105:502-3 My 9 '47; Discussion. H. A. Abramson. 106:316 O 3 '47
Chemical study of penicillin; brief history. bibliog(68 ref) Science 105:653-9 Je 27 '47
Chemistry of penicillin; abstract. W. Baker. Chem & Ind p150 Mr 22 '47
Chilean market for penicillin. For Comm W 29:26 O 4 '47
Dichromate may distort experimental results by causing stimulation. R. Pratt and J. Dufrenoy. Science 105:574 My 30 '47
Effect of combining sodium benzoate with oral penicillins. E. H. Spaulding and others. bibliog Science 105:210-11 F 21 '47
Effect of rubber tubing upon the stability of penicillin and streptomycin solutions. J. B. Huelsebusch and others. Science 104:479-80 N 22 '46
Effect on the chick embryo of the simultaneous inoculation of stool, streptomycin, and penicillin. J. H. Hodges. bibliog Science 104:460-1 N 15 '46
Freeze-drying as applied to penicillin, blood plasma and orange juice. E. W. Flosdorf. il Chem Eng Prog 43:343-8 Jl '47; Same cond. Refrig Eng 54:226-30+ S '47
Hygroscopicity of penicillin salts. C. Carr and J. A. Riddick. Ind & Eng Chem 39:1021-3 Ag '47
Inactivation of penicillins G and K by liver and kidney. J. Tepperman and others. bibliog Science 105:18-19 Ja 3 '47
Inhalation of penicillin dust. L. Krasno and others. il Science 106:249-50 S 12 '47
Lack of influence of thiosulfate and metabisulfite on the antibiotic activity of penicillin. C. S. Leonard. bibliog Science 104: 501-2 N 29 '46; Reply (Penicillin site of action). C. J. Cavallito. 105:235-6 F 28 '47
Method for determining sensitivity to penicillin and streptomycin. R. E. Hoyt and M. G. Levine. il Science 106:171 Ag 22 '47
New concept of competitive inhibition of the renal tubular excretion of penicillin. K. H. Beyer. bibliog Science 105:94-5 Ja 24 '47
Ortho-hydroxyphenylacetic acid from an amorphous penicillin. H. Fischbach and others. bibliog Science 106:373-4 O 17 '47
Penicillin aerosol; contribution of the Chemical warfare service to medicine. R. W. Hufferd. bibliog Science 104:498-9 N 29 '46
Penicillin and streptomycin supplement each other in safeguarding man's health. R. E. Gruber. il Tech R 49:155-6+ Ja '47
Penicillin as an agent for sterilization of protozoan cultures. G. R. Seaman. Science 106:327 O 3 '47
Penicillin labeling rules amended. Oil Paint & Drug Rep 150:5 D 2 '46
Penicillin packaging regulations revised. Oil Paint & Drug Rep 152:5 Ag 11 '47
Penicillin synthesis announced. Chem & Eng N 24:2920 N 10 '46
Penicillin synthesized by Cornell group. Oil Paint & Drug Rep 150:3 N 11 '46
Penicillin; the effect of phenylacetic acid on penicillin production; abstract. A. J. Moyer and R. D. Coghill. Food Ind 19:1306 S '47
Penicillin types produced by P. chrysogenum Q-176. W. A. Winsten and A. H. Spark. il Science 106:192-3 Ag 29 '47
Preliminary report on a new method of penicillin therapy. M. W. Heilman. Ind Med 16:400-1 Ag '47
Procaine-penicillin developed by Pfizer. Oil Paint & Drug Rep 152:4 O 13 '47
Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:643-8 My 17 '47
Qualitative test for penicillin. F. Kavanagh. Science 105:189 F 14 '47
Simple method for administering nebulized penicillin. D. Glusker. Science 105:437 Ap 25 '47
Stability of crystalline sodium penicillin G. B. Berk, B. M. Shepard and C. Glaser. Science 105:239 F 28 '47
Stability of penicillin in glycerin and in glycols. R. J. Ferlauto and H. A. Clymer. bibliog Science 105:130-1 Ja 31 '47
Stability of penicillin products; abstract. J. C. Bird. Chem & Eng N 25:672 Mr 10 '47
Structural resemblance between penicillin and glutathione. E. Fischer. Science 106:146 Ag 15 '47
Synthesis of penicillin. R. Robinson. Franklin Inst J 244:5-6 Jl '47
Synthetic media for penicillin production. R. W. Stone and M. A. Farrell. Science 104: 445-6 N 8 '46
Synthetic penicillin. V. Du Vigneaud and others. bibliog Science 104:431-3+ N 8 '46
Thromboplastic properties of penicillin and streptomycin. D. I. Macht. bibliog Science 105:313-14 Mr 21 '47
Use of insoluble penicillin salts for the prolongation of penicillin blood levels. S. Monash. Science 106:370 O 17 '47
Vaginal absorption of penicillin. J. Rock and others. Science 105:13 Ja 3 '47
What do you mean, penicillin? J Chem Educ 23:563 N '46

Analysis

Chemical assay method for penicillin G. J. C. Sheehan, W. J. Mader and D. J. Cram. Am Chem Soc J 68:2407 N '46
Discrepancy in analysis of penicillin in blood by the Oxford cup method as revealed by the paper disc technique. M. B. Sherwood and E. J. de Beer. Science 105:414 Ap 18 '47
Estimation of types of penicillin in broths and finished products; microbiological method. K. Higuchi and W. H. Peterson. bibliog Anal Chem 19:68-71 Ja '47
Infrared analysis of crystalline penicillins. R. B. Barnes and others. bibliog il Anal Chem 19:620-7 S '47

Manufacture

British penicillin production. E. L. Smith. Soc Chem Ind J 65:308-14 O '46
China's first penicillin plant opens in Peiping on New Year's day. For Comm W 26:24 Ja 18 '47
Electronic drying of penicillin. Chem Age (Lond) 56:338 Mr 22 '47
Making penicillin. il Elec R (Lond) 139:1007-11 D 20 '46
New penicillin plant now operating in Mexico. il Chem Eng 54:108-9 O '47
Penicillin. T. H. M. Taylor. flow diags il Chem Eng Prog 43:155-9 Ap '47
Speke penicillin factory. Chem Age (Lond) 57:351 S 13 '47

PENICILLIUM
Ergosterol from the mycelium of penicillium notatum (submerged culture). K. Savard and G. A. Grant. bibliog Science 104:459 N 15 '46
Esters of 4-hydroxybenzoic acid and related compounds; relationships between the fungistatic activity, and physical and chemical properties of the esters. G. W. K. Cavill and J. M. Vincent. Soc Chem Ind J 66:175-82 Je '47
Induction of mutants in penicillium notatum by methyl-bis(β-chloroethyl)amine. M. A. Stahmann and J. F. Stauffer. bibliog Science 106:35-6 Jl 11 '47

PENICILLIUM—*Continued*
Mustard for molds. M. A. Stahmann and J. F. Stauffer. Chem Ind 61:380-1 S '47
Prevention of mold in kettled blueberries in no. 10 cans; abstract. E. H. Ruyle and others. Food Ind 18:1957 D '46

PENICK and Ford, ltd.
Increased output boosts Penick & Ford net. Barron's 26:6 D 23 '46
Outlook for companies in corn products field. E. A. Barnes. Mag of Wall St 80:217, 232 My 24 '47

PENN mutual life insurance company
Centenary conference, Philadelphia. East Underw 48:3-4 Je 13; 17 Je 20 '47; Nat Underw (Life ed) 51:1+ Je 13 '47
Century of security. J. A. Stevenson. East Underw 48:1+ Ja 10 '47
Gets Howard G. Ford award. Nat Underw (Life ed) 51:7 My 2 '47
100-year mark. Nat Underw (Life ed) 51:2 My 23 '47
Penn Mutual films its report; animated annual statement. il East Underw 48:14 Mr 14 '47; Nat Underw (Life ed) 51:10 Mr 14 '47; Weekly Underw 156:784 Mr 15 '47; Spectator (Life ed) 154:20-1+ Ap '47
Puts 1947 annual report on film. il Sales Management 58:45 Ap 1 '47

PENNEY, J. C., company
Investment audit. S. Devlin. il Mag of Wall St 79:253-5+ D 7 '46
Selected stocks. Mag of Wall St 80:486-7 Ag 2 '47

PENNROAD corporation
Annual report. Comm & Fin Chr 165:2549 My 12 '47
Court rejects appeals. Comm & Fin Chr 165: 578 Ja 27 '47

PENNSALT. See Pennsylvania salt manufacturing company

PENNSYLVANIA
Pennsylvania association of Joseph Priestley. J. S. Hepburn. Franklin Inst J 244:95-107 bibliog(67 titles, p105-7) Ag '47
See also
Coal—Pennsylvania

Sanitary affairs
Stream pollution abatement program proposes single plant for 100 municipalities; Allegheny County sanitary authority. J. F. Laboon. map Civil Eng 17:121+ Mr '47

PENNSYLVANIA-CENTRAL airlines corporation
Merger agreement with Northeast Airlines off; bank loan extended, etc. Comm & Fin Chr 165:3057 Je 9 '47

PENNSYLVANIA-DIXIE cement company
1948 outlook for cement companies. H. S. Coffin. Mag of Wall St 81:88 O 25 '47

PENNSYLVANIA grade crude oil association
Annual meeting, 23d, Pittsburgh, June 5. Nat Pet N 39:43-4+ Je 11 '47

PENNSYLVANIA railroad
Annual report, 100th. Comm & Fin Chr 165: 2419 My 5 '47
Equipment trust certificates. Comm & Fin Chr 165:943 F 17 '47
Equipment trusts offered. Comm & Fin Chr 165:578 Ja 27 '47
Investment survey of New York Central and Pennsylvania railroad. J. C. Clifford. il Mag of Wall St 79:680-1+ Mr 15 '47
Management-stockholder cooperation. Pub Util 40:381 S 11 '47

PENNSYLVANIA salt manufacturing company
Added lines bring new peak for Pennsylvania Salt sales. Barron's 27:34 Ag 11 '47
Pennsalt seeks new money. il Bsns W p49-50+ Ag 2 '47
Rights to stockholders. Comm & Fin Chr 166:374-5 Jl 28 '47
Selected stocks with long dividend records. Mag of Wall St 79:201 N 23 '46

PENNSYLVANIA state college
Ordnance research laboratory
Ordnance research laboratory. E. A. Walker. il J Ap Phys 18:263-7 Mr '47

PENNSYLVANIA water works association
Annual meeting, 50th, Atlantic City. Pub Util 38:673-8 N 21 '46

PENROSE medal
Presentation of Penrose medal to Thomas Wayland Vaughan. Geol Soc Proc 1946:69-75 Jl '47

PENS
See also
Fountain pens

PENSION trusts
Case studies of pension trusts. F. E. Whitmer. Burroughs Clearing House 31:22-3+ Ja '47
Currents in benefit planning; with summary table showing tax status of pension trust or annuity plans. W. P. Hughes. Trusts & Estates 84:410-11 Ap '47
Division of labor simplifies work of producers on pension trust cases. W. A. Arnold. Nat Underw (Life ed) 50:9 D 27 '46
Employe cover subject to approval of labor unions; AFL lawyer treats pending Inland Steel NLRB case. J. E. Gubbins. Nat Underw (Life ed) 51:3+ Ap 11 '47
Employe retirement plans; some readjustments are in order. M. M. Goldstein. Nat Underw 50th anniv no:120+ 1947
Financing plan through trust fund; abstract. R. L. McConnell. Trusts & Estates 85: 210-14 S '47
Insured pension plans. H. A. Kirsch. East Underw 48:5 Jl 25 '47
Investment of pension funds; abstract. Management R 35:485-6 N '46
Pension and profit-sharing trusts; A.B.A. committee report. Trusts & Estates 85:344-5 O '47
Pension and profit-sharing trusts; A.B.A. committee report; with specimen pension trust agreement. Trusts & Estates 83:485-6+ N '46
Pension plan is applied to commission salesmen; Alexander film company. Sales Management 59:48+ Jl 15 '47
Pension ruling clarifies distributee tax question; employe's separation from service and capital gains provision involved. Nat Underw (Life ed) 51:4 Mr 7 '47
Ruling given on term premiums for employes' trust. Nat Underw (Life ed) 51:28 Mr 14 '47
Rulings on pension plan terminations by Internal revenue commissioner. Nat Underw (Life ed) 51:13 Ap 11 '47
Some tax aspects of annuities and pension plans. W. D. Freyburger. Weekly Underw 156:1051-3, 1098-100 Ap 12-19 '47; Same. bibliog Life Ins Courant 52:220-4 Je '47; Same. Spectator (Life ed) 155:30+ Jl; 31-2+ Ag '47; Excerpts. East Underw 48:9 Ap 4 '47; Nat Underw (Life ed) 51:7 Ap 4 '47
Tax incentive still extant for pensions. P. H. Husch. Nat Underw (Life ed) 51:6 Ap 18 '47
Tax revision in 1948; implications for employee retirement plans. F. L. Morton. Spectator (Life ed) 155:22-3+ Ag '47
Trust fund or group annuity? case for trusteed pension plans. E. B. Gardner. Trusts & Estates 84:45-51 Ja '47; Abstract. Management R 36:345-8 Je '47
See also
Employees' trusts

PENSIONS
See also
Old age pensions
Pension trusts
Teachers—Pensions
United nations—Employees' pensions

PENSIONS, Industrial
Answers to pension and profit-sharing questions. M. M. Goldstein. Comm & Fin Chr 166:623+ Ag 14 '47
Ballplayers' group and annuities; program adopted by Major leagues; coverage furnished by Equitable Society. A. B. Chandler. East Underw 48:12 Ap 11 '47
Baseball pensions. Bsns W p24+ S 27 '47
British plant installs broad pension plan; Vauxhall motors. Factory Management 105: 244+ F '47
Building a retirement plan. J. H. Shreiner. East Underw 48:144+ pt 2 O 3 '47
Can't delay pension programs because of cost inhibitions. H. K. Kramer. Nat Underw (Life ed) 51:5 Jl 11 '47
Case for insured pension and profit-sharing plans. J. M. Hines. Management R 36:163-6 Mr '47

PENSIONS, Industrial—*Continued*
Combination pension plans; abstract. Management R 35:491-2 N '46
Combining pension, profit-sharing plans. D. B. Maduro. East Underw 47:17 N 15 '46
Current pension problems. M. B. Folsom. Management R 36:392-5 Jl '47
Eligibility of younger employees in retirement plans. Management R 36:287-9 My '47
Eligibility provisions of retirement plans. Management R 36:225-6 Ap '47
Employe pension plans; abstracts. W. P. Hughes. East Underw 48:7 Mr 7 '47; Trusts & Estates 84:410-11 Ap '47
Employe retirement plans; some readjustments are in order. M. M. Goldstein. Nat Underw 50th anniv no:120+ 1947
Employee pension plans; summaries of addresses at New Orleans conference, July 9-10. C. A. Bethel and others. Trusts & Estates 85:208-26 S '47
Employer's view of pension plans. F. B. Cliffe. Trusts & Estates 84:288-90 Mr '47
Equitable underwrites baseball pension plan for players; National, American leagues involved. East Underw 48:4 F 7 '47; Nat Underw (Life ed) 51:1 F 7; 2 F 14 '47
Extent of insurance and pensions in industrial employment. H. W. Callaway. Mo Labor R 65:53-7 Jl '47
Ford employees at Buffalo vote down proposed plan for pensions. Steel 121:63 S 15 '47
Ford pension benefits. J. S. Bugas. Steel 121:73-4 Ag 18 '47
How to put across pension plans to workers big topic at St Louis parley. J. D. Nevius; F. W. Huntington. Nat Underw (Life ed) 51:24 My 23 '47
Installment of retirement plans. J. H. Leaver. East Underw 48:58+ pt 2 O 3 '47
Insurance for industrial workers in Argentina. Int Labour R 55:580-2 Je '47
1,200 new pension plans installed in 1946. M. M. Goldstein. Nat Underw (Life ed) 51:9 Ap 4 '47
Past service benefits; Central Hanover pension bulletin. East Underw 48:3 Ag 15 '47
Pension plan; electrical contractors first in building to pension workers. Arch Forum 86:15-16 Ap '47
Pension plans called open field for revision. D. B. Maduro. Nat Underw (Life ed) Daily ed 51:13+ S 12 '47
Pension plans offered to small banks. Burroughs Clearing House 31:7 N '46
Pensions for hourly workers; Ford-U.A.W. contract. Bsns W p72+ Jl 5 '47
Philadephia pension conference covers wide range. W. S. Fliess and others. Nat Underw (Life ed) 50:2+ N 8; 2+ N 15 '46
Planning equitable retirement benefits; abstract. Management R 36:437-8 Ag '47
Planning flexible pension benefits. C. P. Dawson. Management R 36:491-3 S '47
Profit sharing plans today; current advantages in meeting retirement problem. N. McClave, jr. Trusts & Estates 84:607-10 Je '47
Prudential underwrites Yankee's non-players pension and insurance plan. East Underw 48:21 F 21 '47; Nat Underw (Life ed) 51:2 F 21 '47
Rebuff to pensions; why? Ford workers choose straight raise. il Bsns W p98+ S 27 '47
Recent growth in pension plans for bank employees shown in Bankers trust company's study. Comm & Fin Chr 166:457 Jl 31 '47
Retirement pensions may become UAW's main objective. W. G. Patton. Iron Age 160:105-6 Jl 10 '47
Retirement plan costs. J. H. Shreiner. East Underw 47:21 N 15 '46
Retirement plan of Continental paper co. East Underw 48:6 O 17 '47; Same cond. Weekly Underw 157:1066 O 25 '47
Retirement plan written into wage contract of Ford and United automobile workers. A. H. Allen. Steel 121:73 Jl 7 '47
Retirement plans in business management. J. H. Reese. Trusts & Estates 84:54-6 Ja '47; Excerpt. East Underw 47:12 N 15 '46
Retirement plans may be based on profit sharing. J. M. Zuber. Am Mach 91:104 Jl 3 '47
Retirement plans pay dividends. M. B. Folsom. Trusts & Estates 84:59-62 Ja '47
St Paul pension sessions cover extensive range. Nat Underw (Life ed) 50:1+ N 22 '46; East Underw 47:8, 14 D 6 '46
Tax court holds Nash-Kelvinator trust setup is actually bonus. Nat Underw (Life ed) 51:8 Jl 4 '47
Trend in bank pension plans. E. E. Mountjoy. Banking 39:37+ Mr '47
Trend to contributory pensions. F. P. McKenzie. Trusts & Estates 85:136-7 Ag '47
Trends in bank employee pensions. W. B. Dunckel. Banking 40:42-3+ Ag '47
What is a pension plan? G. W. Winters. Mech Eng 69:289-92 Ap '47
Where will the rising spiral of wages and prices end? economics of pensions. F. Rising. Steel 121:75-6+ Ag 4 '47
Why and how small banks may benefit from a pension retirement plan. C. A. Bethel. Bankers Mo 64:10-11 Ja '47
Why salesmen's pensions are gaining popularity. Sales Management 58:97+ Je 1 '47

See also
Insurance, Life—Agents—Pensions
Insurance companies—Employees' pensions
Railroads—Pensions

Accounting

Curtiss-Wright incentive compensation plan; testimony presented by George O. May. J Account 83:265-7 Mr '47

Finance

Financing pension plans by insured methods. H. A. Kirsch. Trusts & Estates 85:214-17 S '47
Reducing past-service benefit costs. Management R 36:482-3 S '47

Taxation

Income taxes of employes in profit sharing plans. East Underw 48:17 Ap 18 '47

PENSIONS, Municipal
Illinois utility pension plan. H. S. Merz. Am Water Works Assn J 39:789-91 Ag '47
Indiana retirement fund for public employees. R. Teckemeyer. Am Water Works Assn J 38:1383-4 D '46

PENSIONS, Old age. See Old age pensions; Pensions, Industrial

PENTACHLOROPHENOL
Use of pentachlorophenol and sodium pentachlorophenate in the preservation of wood; abstract. Chem Eng 54:260 O '47

PENTACHLOROSTYRENE
Pentachlorophenyl derivatives; the β-chlorination of ethylpentachlorobenzene and the preparation of pentachlorostyrene. S. D. Ross, M. Markarian and M. Nazzewski. bibliog Am Chem Soc J 69:1914-17 Ag '47

PENTADIENAL
Studies in pyrane chemistry. G. F. Woods and H. Sanders. Am Chem Soc J 68:2483-5 D '46

PENTADIENE
Infra-red absorption spectra of some C_4 and C_5 dienes. R. S. Rasmussen and R. R. Brattain. J Chem Phys 15:131-5 Mr '47

PENTAERYTHRITOL
How pentaerythritol resins are made; illustrations. Chem Ind 60:242-3 F '47
Tall oil in printing inks. C. J. Vander Valk and H. Burrell. Paper Tr J 123:53-6 N 14 '46

Analysis

Determination of dipentaerythritol in mixtures of pentaerythritol and dipentaerythritol. J. A. Wyler. Ind & Eng Chem Anal ed 18:777-8 D '46

PENTAERYTHRITOL tetranitrate
Crystal structure of pentaerythritol tetranitrate. A. D. Booth and F. J. Llewellyn. diags Chem Soc J p837-46 Je '47

PENTAGONAL apartment building. See Apartment houses—Designs and plans

PENTAMETHYLENE glycol
Pentamethylene glycol. Chem Ind 60:806 My '47

PENTANE
Dehydration of water gas tars. Am Gas Assn Mo 29:389-90 S '47

PENTANE—*Continued*
Derivatives of γ-valerolactone, 1,4-pentanediol and 1,4-di(β-cyanoethoxy)-pentane. R. V. Christian, jr., H. D. Brown and R. M. Hixon. bibliog Am Chem Soc J 69:1961-3 Ag '47
Isomerization of light hydrocarbons. S. F. Perry. flow plans Am Inst Chem Eng Trans 42:639-46 Ag '46; Same. Pet Eng (Ref annual) 18:185-8 Jl 1 '47
Shell liquid-phase isomerization process. flow diag Pet Refiner (Process Handbook sec) 26:248-9 Ap '47
Solubility of boron fluoride in normal pentane. G. N. Cade, R. E. Dunn and H. J. Hepp. Am Chem Soc J 68:2454-5 D '46

PENTANEDIOL
Dehydrogenation of 1,5-pentanediol. L. E. Schniepp and H. H. Geller. bibliog Am Chem Soc J 69:1545 Je '47
Derivatives of γ-valerolactone, 1,4-pentanediol and 1,4-di-(β-cyanoethoxy)-pentane. R. V. Christian, jr., H. D. Brown and R. M. Hixon. bibliog Am Chem Soc J 69:1961-3 Ag '47
Preparation of acetopropyl alcohol and 1,4-pentanediol from methylfuran. L. E. Schniepp, H. H. Geller and R. W. Von Korff. bibliog Am Chem Soc J 69:672-4 Mr '47

PENTANEDIONE. See Acetylacetone

PENTENE
Heat capacities, heats of fusion and entropies of the six pentenes. S. S. Todd, G. D. Oliver and H. M. Huffman. Am Chem Soc J 69:1519-25 Je '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47
See also
Trimethylpentene

PENTOSANS
Cold alkaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Cold alkaline purification of wood cellulose; the influence of surface properties on resistant pentosans. A. Meller. bibliog Paper Tr J 125:57-60 S 11 '47
Manufacture of viscose from sugar maple. C. W. Tasker and C. E. Libby. bibliog Paper Tr J 123:139-48 D 5 '46

PEORIA, Illinois
Buyer's market is still big; Silex co.'s market saturation test in Peoria area. il Bsns W p54+ Je 14 '47
Peoria conference; forum-dinners of clergy, labor, education, business and other civic leaders. il Trusts & Estates 83:565-6 D '46
What will normal sales be after market saturation? Silex company probes the Peoria area. J. M. Moore. Adv & Sell 40:62+ Ja '47

PEP boys—Manny, Moe and Jack
Pep boys—Manny, Moe & Jack. R. Cole. Adv & Sell 40:36+ Ap '47

PEPPER
Indian pepper crop and exports, 1945-46. For Comm W 25:24 D 28 '46
Inflated pepper. Bsns W p30 N 30 '46
Pepper production and exports, French Indochina. For Comm W 27:21-2 Je 7 '47
Situation on Indian pepper market. For Comm W 28:20 Jl 12 '47

PEPPERMINT oil
China's peppermint-oil industry. For Comm W 26:21 Mr 29 '47
Mint oils 1946 output decreased. Oil Paint & Drug Rep 150:60 D 30 '46

PEPSI-COLA
Advertising
Pepsi-Cola's Walter Mack. il Fortune 36:126-31+ N '47

PEPSI-COLA company
Pepsi-Cola's Walter Mack. il Fortune 36:126-31+ N '47
Twelve full ounces, that's a lot. Fortune 35:143 Ja '47

PEPSIN
Heat of the inactivation of pepsin. M. Bender and J. M. Sturtevant. bibliog Am Chem Soc J 69:607-12 Mr '47
Inactivation of staphylocoagulase by trypsin and pepsin. B. S. Walker and others. Science 106:347 O 10 '47

PEPTIC ulcers. See Stomach—Diseases

PEPTIDES
Ammonia nitrogen produced from isomeric peptides in kidney homogenate digests. J. M. Goncalves and others. bibliog Science 106:369-70 O 17 '47
Conjugation of peptides with 1,2-benzanthryl-10-isocyanate. L. Q. Green and H. J. Creech. bibliog Am Chem Soc J 68:2401-2 N '46
Infrared spectra and structure of natural and synthetic polypeptides. S. E. Darmon and G. B. B. M. Sutherland. Am Chem Soc J 69:2074 Ag '47
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47

PER acids
Electronic interpretation of the reaction of olefins with organic per-acids. D. Swern. bibliog Am Chem Soc J 69:1692-8 Jl '47
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47

PER compounds
Formation of per-compounds in relation to electronegativities. M. Haïssinsky. J Chem Phys 15:152-3 Mr '47
Formation of per-compounds in relation to electronegativities. A. D. Walsh. bibliog J Chem Phys 15:688 S '47

PER diem rules. See Freight cars—Interchange

PERACETIC acid
Oxidation reactions with aliphatic peracids. F. P. Greenspan. bibliog Ind & Eng Chem 39:847-8 Jl '47
Peracetic acid available in limited quantities. Chem & Eng N 25:2651-2 S 15 '47; Chem Ind 61:642 O '47

PERBUNAN-resin blends. See Rubber, Artificial—Mixing with resins

PERCHLORATES
Chlorates and perchlorates; Western electrochemical co., Los Angeles. J. C. Schumacher. flow sheet il Chem Eng Prog 43:177-9 Ap '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47

PERCHLORIC acid
Determination of chromium by oxidation with perchloric acid. S. Schuldiner and F. B. Clardy. bibliog diag Ind & Eng Chem Anal ed 18:728-9 N '46
Discharge characteristics of the perchloric acid cell. J. C. White and others. il Electrochem Soc Trans 91 (preprint 2):15-35 '47
Los Angeles plating plant explosion; perchloric acid being used for electrolytic polishing of aluminum. F. A. Herr. il Metal Finishing 45:72-3+ Mr '47
Perchloric acid, a bad actor; may cause shattering explosions. E. E. Thum. Metal Prog 52:231 Ag '47
Perchloric acid; friend or foe? J. H. Kuney. bibliog Chem & Eng N 25:1658-9 Je 9 '47
Preparation of fluorine perchlorate from fluorine and perchloric acid. G. H. Rohrback and G. H. Cady. bibliog diag Am Chem Soc J 69:677-8 Mr '47
Refrigeration failure said to have caused Los Angeles explosion. Heat & Ven 44:102 Mr '47
Stability and light absorption of the complex ion $FeSCN^{++}$. H. S. Frank and R. L. Oswalt. bibliog Am Chem Soc J 69:1321-5 Je '47

PERE MARQUETTE railway
C.&O.-P.M. merger approved. Ry Age 122:704-5 Ap 5 '47
Merger, etc. with Chesapeake & Ohio authorized. Comm & Fin Chr 165:1872 Ap 7 '47

PERFLUOROCYCLOBUTANE
Spatial configuration of perfluorocyclobutane. W. F. Edgell. Am Chem Soc J 69:660-1 Mr '47

PERFLUOROHEPTANE. See Hexadecafluoroheptane

PERFLUOROVINYL chloride
Production of polyperfluorovinyl chloride. E. A. Belmore, W. M. Ewalt and B. H. Wojcik. flow sheets diag Ind & Eng Chem 39: 338-42 Mr '47

PERFORATING
Perforating on the press. E. St John, Inland Ptr 118:76 D '46

PERFORMIC acid
Performic acid hydroxylation of αβ-unsaturated acids and esters. J. English, jr. and J. D. Gregory. bibliog Am Chem Soc J 69:2120-2 S '47

PERFUMERS society of the aromatics industry
Organization meeting. Oil Paint & Drug Rep 151:4+ Ap 28 '47; Soap & San Chem 23:54 My '47

PERFUMERY
Chicago perfumes; Melikov line for exclusive gift shop. il Mod Packaging 21:146 S '47
He makes his own; Strange laboratories, Tucson, Ariz. makes own boxes. il Mod Packaging 20:116-19 Ap '47
Ketals in perfume; abstract. R. W. Moncrieff. Soap & San Chem 23:99 Ap '47
Mexico forbids perfume base imports. Oil Paint & Drug Rep 152:43 Jl 28 '47
Perfume fixatives. Soap & San Chem 23:73 My '47
Pressurized perfume; an aerosol package. il Mod Packaging 20:107 D '46
Story of Prince Matchabelli. J. A. Murphy. il Adv & Sell 40:33-4+ S '47

Advertising

Is perfume advertising too sexy? Ptr Ink 217:39-40 D 13 '46
$1,000 test campaign sold hard-to-get buyers; small newspaper space created enough demand to sway department stores to stock Black Magic perfume. K. Rader. il Ptr Ink 217:54+ D 6 '46

PERFUSION apparatus
Intestinal perfusion in the treatment of uremia. J. W. Rogers and others. Science 106:108 Ag 1 '47

PERIODIC acid
Action of periodic acid on glucose phenylosazone. E. Chargaff and B. Magasanik. bibliog Am Chem Soc J 69:1459-61 Je '47

PERIODIC system
Atomic size and the periodic table. J. A. Campbell. il J Chem Educ 23:525-9 N '46
Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of groups 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47
Periodic chart for electroplaters. G. Dubpernell. Iron Age 158:51 N 28 '46
Periodic table and electron configurations. T. S. Wheeler. Chem & Ind p639-42 O 18 '47
(4*n*+1) Radioactive series. A. C. English and others. bibliog Phys R 72:253-4 Ag 1 '47
Relation of yttrium to the lanthanons; a study of molecular volumes. J. K. Marsh. Chem Soc J p 1084-6 Ag '47
Relative solubilities of salts of calcium, strontium, and barium. G. W. Watt. J Chem Educ 24:174 Ap '47
Studies in light absorption; auxochromic properties and the periodic system. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p948-52 O '46

PERIODICALS
1946 an outstanding year for magazine publishing industry. I. S. V. Patcevitch. Comm & Fin Chr 165:460 Ja 23 '47
Society vs. independent magazines. K. J. Evans. Ind Marketing 31:86+ D '46

See also
Advertising mediums—Periodicals
Aeronautics—Periodicals
Banks and banking—Periodicals
Biology—Periodicals
Chemistry—Periodicals
Employees' magazines
House organs
Insurance—Periodicals
Journal of commerce of New York
Newspapers
Trade journals
also National publishers association

Advertising

Time sponsors world trade advertisements. il Sales Management 59:170+ S 15 '47

Advertising service

Merchandising helps for magazine advertisers; third Deutsch & Shea study. Ptr Ink 220:64 S 12 '47

Bibliography

Classified list of reference books and periodicals for college libraries. W. S. Hoole, ed. rev ed 111p $2 Southern assn. of colleges and secondary schools, commission on institutions of higher education, 2041 21st av, South, Birmingham, Alabama '47
Little magazines. C. F. Ulrich and E. Patterson, comps. N Y Pub Lib Bul 51:3-25 Ja '47 [reprinted]
New periodicals. Published in monthly numbers of New York public library bulletin

Union lists

Union list of serials in the libraries of metropolitan Detroit; compiled as a joint project of the Michigan chapter of the Special libraries association and the Detroit public library. 670p pa $6 Wayne univ, 4841 Cass av, Detroit 1, '46
Union list of technical periodicals in two hundred libraries of the Science-technology group of the Special libraries association. E. G. Bowerman, comp. 3d ed 285p pa $6 Special libraries assn, 31 E. 10th st, New York 3 '47

Circulation

Good Housekeeping's new technique for counting readers per area. Ptr Ink 218:99 Mr 7 '47

See also
Audit bureau of circulations

Directories

America's educational press; a classified list of educational publications issued in the United States with a listing of foreign journals; twenty-first yearbook. 36p pa 50c Educational press assn. of America, 1201 Sixteenth st, NW, Washington 6, D.C. '47
Classified list of educational publications issued in the United States with a limited listing of foreign journals; twentieth yearbook. M. Michels, comp. 32p pa 50c Educational press assn. of America, 1201 Sixteenth st, NW, Washington 6, D.C. '46
Faxon librarians' guide to periodicals and American subscription catalog. 128p F. W. Faxon co, 83 Francis st, Boston '47
Ulrich's periodicals directory; a classified guide to a selected list of current periodicals, foreign and domestic. C. F. Ulrich, ed. 5th ed 399p $15 R. R. Bowker co, 62 W. 45th st, New York 19 '47

Finance

Ads in Coronet. Bsns W p21-2 Mr 1 '47

Indexes

Agricultural index, October 1945-September 1946. 584p H. W. Wilson co. New York '46
Annual magazine subject-index, 1945; including as part II, the Dramatic index, 1945. A. C. Sutherland and B. C. Rathbun, eds. 333p, 244p, 51p $15 F. W. Faxon co, 83 Francis st, Boston '46
Annual magazine subject-index, 1946; including as part II, the Dramatic index, 1946. A. C. Sutherland and B. C. Rathbun, eds. 340p, 293p, 71p $15 F. W. Faxon co, 83 Francis st, Boston '47
Development and use of a classified catalog for periodical literature in selected subject fields. M. J. Voigt. Special Lib 37:285-90 N '46
Education index, July 1944-June 1947. 1866p H. W. Wilson co, New York '47
Engineering index, 1946. 1307p $50 Engineering index, 29 W. 39th st, New York 18 '47
General index to the Library quarterly; vols. XI-XV. M. C. Budd, comp. 40p $1.50 Univ. of Chicago press '46
Index to dental literature, three years, 1942-1944. 354p $10 American dental assn, 222 E. Superior st, Chicago '46

PERIODICALS—Indexes—*Continued*
Index to Engineering news-record for the years 1928 to 1943 inclusive. C. R. Skillman, comp. 414p $8 McGraw-Hill pub. co, 330 W. 42d st, New York 18 '47
International index to periodicals. v 10, April 1943-March 1946. 1933p H. W. Wilson co, New York '47
Readers' guide to periodical literature, an author and subject index, May 1945-April 1947. 2275p H. W. Wilson co, New York '47
Review of metal literature. v3, 1946 811p American soc. for metals, Cleveland 3 47; Review, by E. C. Skarshaug. Special Lib 37:294-7 N '46

Printing

Modernizing magazine. Inland Ptr 119:55-6 S '47
Pointers simplifying magazine production on flatbed press for Puerto Rican printer. Inland Ptr 119:65-6 Ap '47

Reader interest

How plain talk increases readership 45 per cent to 66 per cent; Flesch formula used by Wallaces' farmer. D. R. Murphy. Ptr Ink 220:35-7 S 19 '47
Study of 22 magazines reveals shifts in women's interests; McCall surveys. D. E. Robinson. Adv & Sell 39:47-8+ D '46
Test proves short words and sentences get best readership; Wallace's Farmer split-run test. D. R. Murphy. Ptr Ink 218:61-2+ Ja 10 '47

Statistics

15 magazines dominate second class mail. Bsns W p22 F 8 '47
Periodical list of periodicals. E. J. Crane. Chem & Eng N 25:2075 Jl 21 '47

Subscription handling

Plan that steps up office production; subscription division of Time, inc., Chicago. il Am Bsns 17:22-5+ Je '47

Europe

Scientific publishing in continental Europe; notes on its war and postwar status. C. H. Brown. Science 106:54-8 Jl 18 '47

Germany

Condition of advertising in four zones of Germany. G. Baier. map Adv & Sell 40:48+ O '47
German scientific publications. Chem & Eng N 24:2846; 25:393 O 25 '46, F 10 '47
Scientific publishing in continental Europe: notes on its war and postwar status. C. H. Brown. Science 106:54-8 Jl 18 '47
Titles of films available in the A.M.S. library. J Doc 2:162-70 D '46

PERIPLOGENIN
Synthesis of glucosides of digitoxigenin, digoxigenin and periplogenin. R. C. Elderfield, F. C. Uhle and J. Fried. Am Chem Soc J 69:2235-6 S '47

PERISCOPE
Mechanical precision in molded plastics parts. S. K. Moxness. il India Rubber World 115: 677-8 F '47; Same. Mech Eng 69:479-81 Je '47
Periscope inspects reactor linings at 1000° F. il Pet Processing 1:178 N '46

PERISHABLE freight. See Freight, Perishable

PERKIN, William Henry, 1838-1907
Centenary celebrations of the Chemical society; industry's debt to science. J. Baddiley. Soc Dyers & Col J 63:206-8 Jl '47

PERKIN-KNOEVENAGEL reaction
Isomeric chlorinated long-chain esters. H. H. Guest. Am Chem Soc J 69:300-2 F '47

PERKIN medal
Perkin medal awarded to Robert R. Williams for synthesis of vitamin B_1. Ind & Eng Chem 39:462-4 Ap '47
R. R. Williams wins 1946 Perkin medal. Oil Paint & Drug Rep 150:7+ D 2 '46
Williams awarded Perkin medal for synthesis of vitamin B_1. Chem & Eng N 25:160-1 Ja 20 '47

PERLITE
From the movies to lightweight aggregates; AleXitE engineering division of Alexander film co. develops two lightweight aggregates; manufactures concrete brick. W. B. Lenhart. il Rock Prod 50:155-6+ O '47
Manufacture perlite concrete block; Chemicote perlite corp. W. B. Lenhart. il Rock Prod 50:172-3 O '47
Steam plus hot air for preshrinking; Builder's supply co., Phoenix, Ariz., makes its own perlite aggregate. W. B. Lenhart. il Rock Prod 50:198-9+ Ag '47

PERLMAN, I.
Sketch. Chem & Eng N 24:3032 N 25 '46

PERMAFROST. See Soils—Freezing

PERMANENT molds. See Molds (for casting)—Permanent molds

PERMANENT wave equipment
Beauty snarl; Helene Curtis Industries claims sole rights to cold processes. Bsns W p57 Ja 11 '47
Electronically controlled permanent wave machine. E. W. Nelson. il diags Electronics 20:140+ N '47

PERMANENT wave kits
How Toni taps vast hairdo market. il Sales Management 58:80 Mr 1 '47

PERMANENT wave solutions. See Hair preparations

PERMANGANATE number
Relation between chlorine number and permanganate number of kraft pulps. C. R. Mitchell and F. H. Yorston. Pulp & Pa of Can 48:83-4 Ag '47

PERMANGANATES
See also
Potassium permanganate

PERMEABILITY
Air-permeability tester for porous sheet materials. il diag Machine Design 18:155 D '46
Determination of gas permeability of saran films. T. W. Sarge. bibliog il diags Anal Chem 19:396-400 Je '47
Diffusion of vapors in films. P. E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47
Gurley permeometer. il R Sci Instr 18:71-2 Ja '47
Measurement of the gas permeability of sheet materials. L. C. Cartwright. bibliog diag Anal Chem 19:393-6 Je '47
New method to determine permeability. J. C. Calhoun, jr. bibliog diag Pet Eng 18: 103+ F '47
Science and packaging. G. L. Riddell. bibliog Chem & Ind p35-9 Ja 18 '47
Specific surface of powders; a modification of the theory of the air-permeability method. P. J. Rigden. bibliog diags Soc Chem Ind J 66:130-6 Ap '47
Studies of the physical properties of hardened portland cement paste; permeability and absorptivity. T. C. Powers and T. L. Brownyard. Am Concrete Inst J 18:865-80 bibliog(p880) Mr '47
Water vapor permeability of packages. Mod Packaging 20:129+ Ag '47
See also
Paper—Permeability
Rubber—Permeability
Textile fabrics—Permeability

PERMEABILITY, Magnetic. See Magnetic permeability

PERMEAMETERS
Control of permanent-magnet alloy quality. J. D. Seaver and R. E. Anderson. il diag Gen Elec R 50:44-7 O '47

PEROXIDES
Carcinogenesis. H. F. Park. Am Chem Soc J 69:2248-9 S '47
Hydrocarbon peroxides; abstract. A. Farkas and others. Chem Eng 54:268+ F '47
Organic peroxides. Chem Eng 54:172+ S '47
Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46
See also
Benzoyl peroxide
Hydrogen peroxide

PERPETUAL motion
Scientific approach reveals fallacies in paradoxical engineering. S. F. Borg. diags Civil Eng 17:397-8 Jl '47

PERRY, Bertrand J. 1874-
Completes fifty years with Massachusetts Mutual. por East Underw 48:9 Je 13 '47

PERSIA
Air conditioning in Iran; simple but practical means that have been used for many centuries. il Heat & Ven 44:93-4 Je '47

See also
Petroleum industry and trade—Persia

Commercial policy

Iran; import quotas and prohibitions modified. For Comm W 26:21 F 1 '47

Politics and government

Persian elections. map Economist 152:460 Mr 29 '47

PERSONAL accident and health underwriters, Bureau of. See Bureau of personal accident and health underwriters

PERSONAL injuries
Assumption of risk; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 46-7 Mr 13 '47
"Don't" bus law suits; driver practices that have caused injuries. L. T. Parker. Bus Transportation 25:48-50 D '46
Liability of charitable corporation to resident of home contracting typhoid fever. J. L. Roesch. Spectator (Property ed) 13:10-11+ Ag 7 '47
Owners' liability to uninvited persons; Carbone v. Mackchil realty corporation. J. L. Roesch. Spectator (Property ed) 12:10-11+ Je 12 '47
Release and mistake; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 38-40 Ja 9 '47
Scar over eyebrow width of lead in pencil not serious head or facial disfigurement. Weekly Underw 155:1579 D 28 '46
Scope of employment; employee driving employer's car injures guest passenger; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:42-4 N 14 '46
Teachers held liable for student injuries; Connecticut case. Weekly Underw 155:1200 N 16 '46

PERSONAL property floater. See Insurance, Inland marine—Policies—Personal property floater

PERSONALITY
Are you headed for success? game for doodlers. C. B. Petrie. Spectator (Life ed) 155:8-11 Ag '47

See also
Individuality

PERSONALITY tests
Aptitude tests are management's tool in scientific sales selection. M. Rafal. Ind Marketing 32:38+ Ap '47
Selection for appointments and advice on careers; P.T.D. method of assessment of candidates according to their personal qualities. H. G. Welch. Textile Inst J 38: P57-61 F '47
Semantic choice and personality structure. F. L. Goodenough. bibliog Science 104:451-6 N 15 '46

PERSONNEL counselors. See Employees' counselors

PERSONNEL departments. See Employment departments

PERSONNEL management. See Employment management

PERSONNEL service in education

Bibliography

Guide to guidance; a selected bibliography of 1946 publications of interest to deans, counselors, advisers, teachers and administrators. M. E. Hilton, ed. v 9 58p pa $1 Syracuse university press, Syracuse, N.Y. '47

PERSPECTIVE
Graphical construction of perspective diagrams. G. D. Hobson. bibliog diags Am Assn Pet Geologists Bul 31:1886-93 O '47

PERSPIRATION
Effects of various kinds of perspiration on fabrics. L. C. Barail. il diag Rayon 28:439-43, 496-8 Ag-S '47
Perspiration; what do textile men know about it? L. C. Barail. il Rayon 27:663-6; 28:93-7 D '46, F '47

PERSULFATES
Detection of radioactive persulfate fragments in emulsion polymerized styrene. W. V. Smith and H. N. Campbell. J Chem Phys 15:338 My '47

PERTUSSIS. See Whooping cough

PERU

See also
Mines and mineral resources—Peru

Commercial policy

Import and exchange regulations; revision requires licenses for all imports. For Comm W 28:17-18 S 20 '47
Recent exchange developments. For Comm W 28:16 Jl 12 '47
Reorganization of basic control over imports, exports, and foreign exchange. For Comm W 26:14 F 15 '47

Economic conditions

News by countries. For Comm W 25:20 N 23; 32-3 D 21 '46; 26:29 Ja 25; 23-4 Mr 1; 27: 20-1 Je 21; 28:19-20 Jl 26; 19-20 S 13; 29: 19-20 O 4 '47

PEST control association, National. See National pest control association

PESTS

See also
Cockroaches
Insects, Injurious and beneficial
Rats—Extermination

PETERBOROUGH, Ontario
Street improvements included in 30-year plan for development of Peterborough. il map plans Roads & Bridges 85:48-52+ Ja '47

PETERSEN earth coil
Ground-fault neutralizer application; engineering reference sheet. N. E. Dillow. Elec World 128:128 O 25 '47
Theory and operation of Petersen coils. J. H. Sumner. bibliog diags Inst E E J 94 pt 2: 283-98 Ag '47

PETRILLO, James Caesar, 1892-
Halo for Petrillo? Bsns W p92-3 Mr 22 '47
Petrillo blows hot; disc-making ban. por Bsns W p 101-2 O 25 '47

PETROLATUM

Bibliography

References on petrolatum. Oil & Gas J 46: 85 N 1 '47

PETROLEUM
Coal, petroleum and their newer derivatives; symposium arranged by the Royal institute of chemistry. Chem & Ind p437-9+, 450-2 Jl 19-26 '47
Significance of atomic energy to petroleum problems. J. D. Haseman. Pet Eng 18:70+ Ap '47

See also
Gas, Natural
Gasoline
Hydrocarbons
Kerosene
Liquefied petroleum gas
Liquid fuel
Oil fuel
Oil lands
Oil reserves (United States navy)
Oil shales
Petroleum distillation and other headings beginning Petroleum

Acidation of wells

Action of mud acids on well equipment. E. N. Jones. Oil & Gas J 45:137 Ap 19 '47
Case histories of mud acidization. E. N. Jones. Oil & Gas J 45:109 My 3 '47
Mud acidization may be helpful before squeeze cementing. E. N. Jones. Oil & Gas J 45:185 Ap 26 '47
Nature of multipay zones in Fullerton field necessitates care in selection of completion methods. G. Weber. diags Oil & Gas J 45: 63-4+ F 8 '47
Purpose of acidizing sand formations. E. N. Jones. diag Oil & Gas J 45:295 Mr 22 '47

PETROLEUM—Acidation of wells—*Continued*
Treating artificial-lift wells with mud acid. E. N. Jones. Oil & Gas J 45:105 Ap 12 '47

Analysis

Analysis of sludges from benzole recovery plants using petroleum oils. T. A. Dick, G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 66:238-48 Jl '47
Apparatus for the analysis of reservoir fluids. P. G. Exline and H. J. EnDean. bibliog il diags Oil & Gas J 45:82-3+ Mr 15 '47
Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47
Evaluation of crude oils for production of straight-run aviation gasolines. B. G. Adams. diags Pet Refiner 26:126-8 F '47
Laboratory testing of emulsified oil. L. T. Monson. il Pet Eng 18:67-8 N '46
Properties of Louisiana crude oils. O. C. Blade and E. L. Garton. bibliog U S Bur Mines Rep of Invest 4034:1-50 '46
Symposium on high-temperature analytical distillation. C. R. Reed and others. il diags Am Pet Inst Proc 26(3):9-79 '46
Thousands of samples from oil wells analyzed as aid in refining operations; Gulf laboratories. H. G. Smith. il Oil & Gas J 46: 265+ Jl 26 '47

Bacteriology

API research project 43A; the role of microörganisms in the transformation of organic matter into petroleum. C. E. ZoBell. Am Pet Inst Proc 25(4):96-100 '45
API research project 43A; the role of microörganisms in the transformation of organic matter into petroleum. C. E. ZoBell. bibliog Am Pet Inst Proc 26(4):159-63 '46
Bacterial release of oil from sedimentary materials. C. E. ZoBell. il Oil & Gas J 46: 62-5 Ag 2 '47
Oil bugs; bacteria facilitate extraction of otherwise unrecoverable oil. Bsns W p50 Ja 18 '47

Bibliography

Classified list of important papers given during preceding year. Pet Eng (Ref annual) 18:308+ Jl 1 '47

Chemical treatment of wells

Chemical treatment of new and producing wells. N. C. Wells. il diag Pet Eng 18:90+ Ap '47
Chemical well treating shows good results in Venezuela. C. W. Fowler. il Oil & Gas J 45:214+ D 28 '46
Is corrosion taking $ $ from your pocket? chemical treatment protects oil well equipment. B. J. Cotey. il diag Oil & Gas J 46: 68+ My 10 '47
See also
Petroleum—Acidation of wells

Chemistry

Abstracts of papers presented before Division of petroleum chemistry, American chemical society, Kansas City, Mo., June 23-25. Pet Refiner 26:182+ Jl '47; Oil & Gas J 46:124-6 Je 28 '47
Air oxidation of high molecular weight petroleum hydrocarbons. H. W. Zabel. il diag Chem Ind 59:821-3 N '46
American chemical society, Petroleum division meeting, Atlantic City, April 14-18; abstracts of papers. Oil & Gas J 45:72-3 Ap 19 '47; Pet Refiner 26:182+ Ap '47
Application of a new notation to petroleum hydrocarbons. G. M. Dyson. bibliog Inst Pet J 33:356-62 Je '47
Applications of thermodynamics to hydrocarbon processing. W. C. Edmister. bibliog Pet Refiner 26:77-82 Jl; 83-8 Ag; 105-11 S; 99-105 O; 110-17 N '47 (to be cont)
Aromatics from petroleum. H. Steiner. bibliog Inst Pet J 33:410-35; Discussion. 435-8 Jl '47
Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il Pet Refiner 25: 97-102 D '46; Same abr. Oil & Gas J 45:59-60+ D 21 '46
Basic petroleum chemistry for refinery employes. J. J. Stadtherr. bibliog diags Pet Refiner 25:115-16 Mr; 152-4 Ap; 116-18 My; 131-3 Je; 109-14 Jl; 136-42 Ag; 123-8 O '46; 26:115-19 Ja; 115-18 Mr; 137-40 Ap '47
Chemical aspects of the petroleum acts. S. G. Burgess. bibliog Inst Pet J 33:363-88 Je '47
Chemical constitution and aromatic groups in petroleum lubricants. C. Zerbe and K. Falkens. bibliog Pet Refiner 26:131-6 F; 122-4 Mr '47
Chemistry of coal and petroleum; representatives of many nations at St Andrews symposium. Chem Age (Lond) 57:39-47, 78-80 Jl 12-19 '47
Course of the reaction at 100° C in the system paraffin/oxygen. D. J. W. Kreulen. Inst Pet J 32:656-9 N '46
Digests of papers presented at A.C.S. Dallas meeting. Oil & Gas J 45:40+ D 21 '46
Manufacturing chemists hear of petroleum potentialities at annual meeting. Chem & Eng N 25:1798-9+ Je 23 '47
Most outstanding U.S. organic chemical development now in high gear; plants in Gulf Coast region. A. L. Foster. il Oil & Gas J 46:205-6+ My 31 '47
1947 process handbook. flow diags il Pet Refiner (Process Handbook sec) 26:97-297 Ap '47
Nitrogen compounds in petroleum distillates; confirmation of presence of Bz-tetrahydroquinolines in California petroleum. P. L. Pickard and H. L. Lochte. bibliog Am Chem Soc J 69:14-16 Ja '47
Petroleum as a base material for chemical industry. J. C. G. Boot. Inst Chem Eng Trans 21:41-5; Discussion. 45-7 '43
Petroleum chemistry abstracts; ACS division sessions, New York, Sept. 15-19. Pet Refiner 26:177+ O '47
Physical constants of low-boiling hydrocarbons and miscellaneous compounds. W. S. Hanna and R. Matteson. bibliog(91 ref) Oil & Gas J 45:61-4+ Ja 11 '47
Review of the chemical structure of fuels and their detonation in engines. A. G. Mazurkiewicz and V. G. Oberholzer. bibliog Inst Pet J 32:685-702 D '46
Second Texas ACS regional meeting stresses refinery technology. Pet Refiner 26:146+ Ja '47
Synthesis and properties of hydrocarbons of high molecular weight. R. W. Schiessler and others. bibliog il Am Pet Inst Proc 26(3):254-302 '46
Ten dimethylnaphthalenes, their physical properties, molecular compounds, and ultraviolet spectra. A. S. Bailey and others. Inst Pet J 33:503-26 bibliog(74 ref, p525-6) Ag '47

Concessions

U.S., British oil concessions held safe whatever U.N. decides on Palestine issue. W. W. Burns. il Oil & Gas J 46:44+ O 4 '47

Conservation

Économies de matières dans les installations de stockage des produits pétroliers. G. Daric. diags Chimie & Ind 57:228-40 Mr '47
Imports may hamper conservation programs; abstract. R. B. Brown. Oil & Gas J 46: 57-8 Ag 16 '47
Interstate Oil Compact's birth marked start of real conservation. A. S. Davenport. Nat Pet N 39:34+ F 26 '47

Dehydration

Central treating plant performs dual function; separation of oil and processing of water for formation injection purposes. N. Williams. flow diag il plan Oil & Gas J 45: 56-9 Mr 1 '47

Dewaxing

See Petroleum refining—Wax removal

Emulsions

Chemical resolution of oil-in-water emulsions. L. T. Monson. il Pet Eng 18:116+ D '46
Laboratory testing of emulsified oil. L. T. Monson. il Pet Eng 18:67-8 N '46
Separators and tanks on secondary recovery projects. W. L. McCloy, jr. diags Am Pet Inst Proc 26(4):40-4 '46; Same cond. Oil & Gas J 45:281-2 N 16 '46

PETROLEUM—*Continued*

Evaporation losses

Selecting storage tanks for pipe line service. D. A. Leach. il diags Pet Eng 18:49-51 Je '47

Gas mixtures

Effect of the crude gravity on the performance of gas drive reservoirs. M. Muskat and M. O. Taylor. Pet Eng 18:88+ D '46

Expansion and free-gas saturation. P. J. Jones. Oil & Gas J 45:71-3+ N 23 '46

General pressure-volume-temperature correlation for mixtures of California oils and gases. M. B. Standing. Oil & Gas J 46:95-7+ My 17 '47

Geology

American association of petroleum geologists, meeting, Los Angeles; abstracts of papers. Oil & Gas J 45:92+ N 9 '46

American association of petroleum geologists, regional meeting, Wichita, Jan. 16-17; abstracts of papers. Oil & Gas J 45:43+ Ja 11 '47

American association of petroleum geologists, the Society of exploration geophysicists, and the Society of economic paleontologists and mineralogists meetings; abstracts of papers. Oil & Gas J 45:113+ Mr 29 '47

Association round table; abstracts of Biloxi meeting, Oct. 24-25. Am Assn Pet Geologists Bul 30:1963-8 N '46

Atlantic coastal plain floor and continental slope of North Carolina. W. F. Prouty. map diag Am Assn Pet Geologists Bul 30:1917-20 N '46

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47

Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2 pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46

Delhi, biggest stratigraphic trap since east Texas. G. Weber. il map diag Oil & Gas J 46:108-10+ Je 14 '47

Development of structures in basin areas of northeastern United States; Illinois, Indiana, Ohio, northern Kentucky basins. J. R. Lockett. bibliog il map diags Am Assn Pet Geologists Bul 31:429-46 My '47

Electrical resistivity an aid in core-analysis interpretation. G. E. Archie. diag pl Am Assn Pet Geologists Bul 31:350-66 F '47

Evolution of geologic thought in prospecting for oil and natural gas. P. H. Price. bibliog (63 titles) Am Assn Pet Geologists Bul 31:673-97 Ap '47

Exceptional oil fields in Rocky Mountain region of United States. C. E. Dobbin. bibliog maps diags Am Assn Pet Geologists Bul 31:797-823 My '47

Final reports on a reconnaissance survey of research needs in petroleum geology. bibliog Am Assn Pet Geologists Bul 30:2042-63; 31: 161-81, 375-93 D '46-F '47

Geological group develops columnar section of pre-Permian formations along Central Basin platform. J. M. Barton. Oil & Gas J 45:106-7 D 14 '46

Geological interpretation of radioactivity well logs. J. E. Kilkenny. Pet Eng 18:137-8 Ag '47

Geological masks and prejudices. E. B. Noble. Am Assn Pet Geologists Bul 31: 1109-17 Jl '47

Geologist as an executive. Oil & Gas J 45:149 Ap 19 '47

Geology and occurrence of oil in Florida. E. D. Pressler. map diags Am Assn Pet Geologists Bul 31:1851-62 O '47

Gulf coast figures prominently in A.A.P.G. research program. S. W. Lowman. map Oil & Gas J 46:171+ My 31 '47

Hawkins field, Wood county, Texas. E. A. Wendlandt and others. fold chart maps Am Assn Pet Geologists Bul 30:1830-56 N '46

Linear reservoir. P. J. Jones. Oil & Gas J 45:62-3+ Mr 8 '47

Lithology and thickness of the traverse group in Michigan basin. G. V. Cohee. map Oil & Gas J 46:90-2 Jl 5 '47

Log map, new type of subsurface map. T. H. Bower. Am Assn Pet Geologists Bul 31:340-9 F '47

Microbial transformation of molecular hydrogen in marine sediments, with particular reference to petroleum. C. E. ZoBell. Am Assn Pet Geologists Bul 31:1709-51 bibliog(200 titles, p 1745-51) O '47

Modal analyses of well cores from basement complex in west Texas. L. T. Patton. Am Assn Pet Geologists Bul 31:308-17 F '47

Oceanography as related to petroleum geology. H. C. Stetson and F. B. Phleger, jr. Am Assn Pet Geologists Bul 31:175-8 Ja '47

Oil-reserve provinces of Middle East and southern Soviet Russia. F. J. Fohs. maps Am Assn Pet Geologists Bul 31:1372-83 bibliog(p1381-3) Ag '47

Open well policy; Standard of Jersey's test well makes available to scientists valuable data. Nat Pet N 39:36 Ja 22 '47

Oregon basin field, Park county, Wyoming. P. T. Walton. bibliog fold pl maps diags Am Assn Pet Geologists Bul 31:1431-53 Ag '47

Pacific A.A.P.G. has fall meeting. Pet Eng 18:174+ N '46

Petroleum on continental shelves. W. E. Pratt. Am Assn Pet Geologists Bul 31:657-72 Ap '47

Photogeology aids naval petroleum exploration. N. C. Smith and S. A. Wengerd. 4pls maps Am Assn Pet Geologists Bul 31:824-8 My '47

Progress report on A.P.I. research project 43, the transformation of organic material into petroleum. G. M. Knebel. Am Assn Pet Geologists Bul 30:1935-50 N '46

Relation of clay mineralogy to origin and recovery of petroleum. R. E. Grim. bibliog il Am Assn Pet Geologists Bul 31:1491-9 Ag '47

Relations between kinds of well data and apparent faulting. H. H. Suter. diags Am Assn Pet Geologists Bul 30:1910-17 N '46

Relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas; Research committee, Tulsa geological society. bibliog maps diags Am Assn Pet Geologists Bul 31:92-148 Ja '47; Discussion. B. Hubbard. 31:1512-15 Ag '47

Reservoir characteristics of Rattlesnake oil and gas field, San Juan county, New Mexico. H. H. Hinson. maps Am Assn Pet Geologists Bul 31:731-71 Ap '47

Southwest Antioch; new Oklahoma pool; development report. R. M. Swesnik. il map diag Oil & Gas J 45:82-3+ Ap 19 '47

Subnormal reservoir saturation, South Mayes field, Chambers county, Texas. O. L. Brace. map Am Assn Pet Geologists Bul 31:495-9 Mr '47

Trends in petroleum geology of the Gulf coast. M. T. Halbouty and G. C. Hardin, jr. diags Oil & Gas J 46:136-7+ My 31 '47

Unusual geology, with multiplicity of pay zones, features South Haldeman field. C. J. Deegan. maps diags Oil & Gas J 46:91+ Ag 23 '47

Vast research project begins to take tangible shape; A.A.P.G. research committee; subjects scheduled for study. C. J. Deegan. Oil & Gas J 45:102-3 Mr 29 '47

Venezuela, no. 2 oil-producing nation. C. J. Deegan and P. Reed. bibliog maps diags Oil & Gas J 45:236+ D 28 '46

See also

Petroleum—Prospecting

Salt domes

Bibliography

Review of petroleum geology in 1946. F. M. Van Tuyl, W. S. Levings and others. Colorado School of Mines [Golden] Quarterly 42 no 3:1-316 bibliog(p202-316) Jl '47 (pa $2.50)

Measurement

Orifice meters in oil pipe line service. Pet Eng 18:204+ Mr '47

Mud fluids

Application of the principles of clay chemistry to problems encountered when drilling in Trinidad clays. H. C. H. Darley. bibliog Inst Pet J 33:219-29 Ap '47

Case histories of mud acidization. E. N. Jones. Oil & Gas J 45:109 My 3 '47

PETROLEUM—Mud fluids—*Continued*
Composition of mud acid and its function in sand horizons. E. N. Jones. Oil & Gas J 45:107 Ap 5 '47
Control of mud properties in drilling anhydrite. G. R. Gray. Pet Eng 18:142+ Je '47
Deep drilling in south Texas necessitates close attention to adequate facilities for handling mud. N. Williams. il Oil & Gas J 46:73-5 S 6 '47
Developments in drilling-mud control. G. E. Cannon. Oil & Gas J 45:101-3 My 3 '47
Drilling-mud problems of the Rocky Mountain region. D. D. Varnell and W. B. Kimbrell. il Oil & Gas J 46:186 O 11 '47
Modern rotary drilling; circulating system. J. Zaba. Oil & Gas J 46:127 O 25; 89 N 1; 85 N 8 '47
Mud changes formation permeability and productivity. E. N. Jones. Oil & Gas J 45: 179 Mr 29 '47
Oil base drilling fluids. G. Miller. bibliog Pet Eng (Ref annual) 18:84+ Jl 1 '47
Practical application of carboxymethylcellulose in drilling muds. J. R. Pettigrove. il Oil & Gas J 46:170-3 O 11 '47
Recovery of barite from rotary drilling mud by centrifugal separation. C. A. Lindsay. il diags Oil & Gas J 45:92+ D 14 '46
Reverse-circulation drilling proves practical in west Texas. G. Weber. il Oil & Gas J 46:147-50 O 11; 70+ N 8 '47
Selection of mud fluid for completion of wells. H. E. Radford. bibliog Pet Eng 18: 72+ Je '47
Testing of drilling fluids. G. R. Gray. bibliog il Pet Eng (Ref annual) 18:100+ Jl 1 '47
Troublesome drilling problems solved by special muds. G. R. Gray. il Oil & Gas J 46: 142+ My 31 '47
Unusual mud problems encountered; drilling 51-11 Weller. R. M. Ross and W. L. Potter. il Oil & Gas J 45:167-8 Mr 29 '47

Paraffin problem

Experience with wax in the Stanpac line. il map diags Pet Eng 18:98+ My '47
Mechanically rotated scraper blades eliminate paraffin accumulation in tubing. B. Kingston. il diag Oil & Gas J 45:78-9 D 14 '46
Paraffin removal in south Texas. E. F. Bowers and H. Renfro. il Oil & Gas J 46:134-5+ My 31 '47
Scrapers on sucker rods reduce paraffin deposits. E. V. Garrett. il diags Pet Eng 18: 132+ Ag '47

Pressure maintenance

See Petroleum—Production methods

Pressure measurement

Expansion and free-gas saturation. P. J. Jones. Oil & Gas J 45:71-3+ N 23 '46
Field calibration technique for bottom-hole pressure measurement. E. R. Brownscombe. il Pet Eng 18:84-6+ Ag '47
Investigation of errors in bottom-hole-pressure measurement. H. W. Perkins and P. E. Chaney. Oil & Gas J 46:102+ Je 14 '47

Prices

Consumer still pays sub-normal prices for oil despite increases; complete text of IPAA report. Nat Pet N 39:17-18 Ap 2 '47
Crude petroleum prices in the United States 1936-1947; tabulation. Nat Pet N 39:38 Jl 9 '47
General boost in products prices seen as crude rises. J. P. Mosher, jr. Nat Pet N 39:18-19 O 22 '47
Grand jury investigates oil prices in Washington. H. A. Yocom. Nat Pet N 39:9 Ag 27 '47
IPAA challenges Holman's talk on crude prices. Nat Pet N 39:38-40 Jl 9 '47
Jersey's hold-line policy draws praise and censure. G. R. McKee, jr. Nat Pet N 39:9-10 Jl 30 '47
Present crude prices adequate in most cases. E. Holman. Nat Pet N 39:14-15 Je 25 '47
Tables showing new crude prices in Southwestern, Midwestern, and Rocky Mountain fields. Oil & Gas J 45:119-21 Ap 5 '47
Ten-cent price advance effective in all but two general regional areas; tabulations. Oil & Gas J 45:54-5, 57 N 30 '46

Production estimates

Calculated effect of pressure maintenance on oil recovery in Fullerton field, west Texas. R. L. Hoss. Oil & Gas J 45:58+ Ja 4 '47
Correlations between bubble-point pressures, bubble-point formation volumes, and gas-oil volume ratios in subsurface reservoirs; abstract. M. B. Standing. Chem & Eng N 25: 1665 Je 9 '47
Elongated reservoir. P. J. Jones. diags Oil & Gas J 45:90-2 My 3 '47
One producing unit. P. J. Jones. Oil & Gas J 45:147-8+ Mr 29 '47
Predictions by electronics; oil-pool analyzer. J. Markus. il Sci Am 176:207-9 My '47
Three producing units. P. J. Jones. diags Oil & Gas J 45:124+ Ap 19 '47
Utilization of logging data in estimating oil reserves. I. Kogan. diags Pet Eng 18:54+ Jl '47

Production methods

API research project 27; functions of water in the production of oil from reservoirs. F. E. Bartell. bibliog Am Pet Inst Proc 26(4): 154-6 '46
Case history of water flooding in Throckmorton county, Texas. P. C. Dean. map Oil & Gas J 45:78-81 Ap 12 '47
Central treating plant performs dual function; separation of oil and processing of water for formation injection purposes. N. Williams. flow diag il plan Oil & Gas J 45:56-9 Mr 1 '47
Chicago corp. successfully performs remedial work on dually completed wells. N. Williams. il diags Oil & Gas J 46:101-2+ S 13 '47
Consolidation of sands in oil and gas wells; use of liquid resin. G. G. Wrightsman and H. H. Spain. Oil & Gas J 46:73+ Jl 19 '47
Development and operation of secondary-recovery projects. W. L. McCloy, jr. and others. bibliog diags Oil & Gas J 45:281-312 N 16 '46
Distribution systems and surface injection equipment in secondary recovery. C. H. Keplinger. diags Am Pet Inst Proc 26(4): 33-6 '46; Same cond. Oil & Gas J 45:300+ N 16 '46
Effect of bacteria on oil production. C. J. Deegan. il map diag Oil & Gas J 46:78-9+ Je 21; 101-2+ Je 28 '47
Electric drive for water-flood recovery. W. G. Taylor. il Pet Eng 18:80+ Ag '47
11,667 productive acres repressured in West Pampa cooperative project. K. B. Barnes. il map Oil & Gas J 45:66-7+ N 9 '46
Expanded plant at West Pampa plays dual role; extracts gasoline, provides repressuring service. A. L. Foster. flow chart il Oil & Gas J 45:72-4+ N 9 '46
Flow meter for measuring input to water-injection wells. E. T. Young and O. L. Patterson. diags Oil & Gas J 46:60-1+ N 1 '47
Flowing water-flood production. T. F. Lawry. il Am Pet Inst Proc 26(4):45-50 '46; Excerpts. Oil & Gas J 45:284+ N 16 '46
Gulf Coast Golconda. L. A. Luther. il Comp Air Mag 52:66-70 Mr '47
Gun perforation design for uniform productivity. W. J. Jackson. bibliog Pet Eng 18: 113-14+ Mr '47
Haynesville water-injection program multiplies expected oil recovery. G. Weber. il map Oil & Gas J 46:80-1+ Je 21 '47
Improved-recovery advances aided by specialized equipment and tools. K. B. Barnes. il Oil & Gas J 46:198-9 Jl 26 '47
Inventory of gas-drive projects in north Texas. L. F. Peterson. map Oil & Gas J 45:91-2 Ap 12 '47
Inventory of gas-drive projects in west Texas and New Mexico. L. Flood. Oil & Gas J 45:94-6 Ap 12 '47
Low-cost injection program started in Texas Panhandle. L. S. McCaslin, jr. plan Oil & Gas J 46:97 S 13 '47
Marble shooting. J. G. Burch. Pet Eng (Ref annual) 18:114-15 Jl 1 '47
Nature of multipay zones in Fullerton field necessitates care in selection of completion methods. G. Weber. diags Oil & Gas J 45: 63-4+ F 8 '47

PETROLEUM—Production methods—*Continued*

Nitrogen, repressuring agent for new experimental secondary recovery project. L. S. McCaslin, jr. flow diag il map diag Oil & Gas J 46:72-3+ S 27 '47

Oil production by water. P. J. Jones. Oil & Gas J 45:64-5 N 2; 88-90 N 9; 314-16 N 16; 71-3+ N 23; 64-6+ N 30; 92+ D 7; 108+ D 14; 77-9 D 21 '46; 53+ Ja 4; 78+ Ja 11; 64+ Ja 18; 57-8+ F 1; 81-3+ F 15; 130-1 F 22; 67-8+ Mr 1; 62-3+ Mr 8; 147-8+ Mr 29; 124+ Ap 19; 90-2 My 3; 46:87-9+ My 10 '47

Penn State holds 11th secondary-recovery conference, Oct. 31-Nov. 1. Oil & Gas J 46: 38 N 1 '47

Practical aspects of water flooding outlined in three successful projects. H. M. McClain. map Oil & Gas J 45:152-4+ Ap 26 '47

Pressure maintenance and gasoline absorption plant, Santa Barbara field, Venezuela. H. M. Russell and E. Moncrief. flow diags il Oil & Gas J 45:164-8 D 28 '46

Pressure maintenance at Richard King designed to handle approximately 3,000,000 cu. ft. of gas daily. N. Williams. il diags Oil & Gas J 45:76-7+ F 15 '47

Pressure-maintenance project sets pattern for future programs of its kind. E. H. Short, jr. flow diag il plan Oil & Gas J 46: 79-80 Jl 5 '47

Problem of lifting oil at Brookhaven field. N. Williams. il map Oil & Gas J 46:94-7+ Je 14 '47

Production engineering; 1946. J. S. Bell. Min & Met 28:100-1 F '47

Production problems resulting from salt deposition in flowing wells. R. D. Snow. diags Oil & Gas J 45:71-3+ F 8 '47

Proper control of oil reservoirs. D. R. Knowlton. Oil & Gas J 45:273-4+ D 28 '46

Proposed unitization and pressure maintenance may treble oil production in West Cement pool. K. B. Barnes. map diags Oil & Gas J 45:80-1+ D 7 '46

Recent advances in selective exclusion of water in input wells. D. Martin and others. bibliog Oil & Gas J 45:106+ Ap 19 '47

Report of subcommittee on secondary-recovery methods. P. D. Torrey. Am Pet Inst Proc 25(4):60-4 '45

Reservoir performance and well spacing, Silica Arbuckle pool, Kansas. L. F. Elkins. map diags Oil & Gas J 45:201+ N 16 '46

Review of five years of operation at the Langlie unitized repressuring project. R. L. Gray. diags Am Pet Inst Proc 26(4):54-61 '46; Same cond. Oil & Gas J 45:295+ N 16 '46

Secondary-recovery forum creates committee to study problem. Oil & Gas J 46:61 My 24 '47

Secondary-recovery practices and oil reserves in the eastern part of the Delaware-Childers field, Nowata county, Okla. K. H. Johnston and C. H. Riggs. bibliog 28pls U S Bur Mines Rep of Invest 4019:1-50 '46

Six-year history of Rincon pressure maintenance. N. Williams. il plan Oil & Gas J 46:80-1+ My 24 '47

Some factors affecting success of south Texas workovers. H. N. Lyle. diags Oil & Gas J 46:130+ My 31 '47

Some practical aspects of water flooding operations. H. M. McClain. maps Pet Eng 18:128+ Ap '47

Source and purification of gas supply in secondary recovery. L. L. McWilliams. bibliog Am Pet Inst Proc 26(4):26-32 '46; Same cond. Oil & Gas J 45:306+ N 16 '46

Survey shows secondary-recovery possibilities in Arkansas. C. F. Hoot. Oil & Gas J 45:66 Ap 12 '47

Tenth technical conference in petroleum production, in cooperation: the Pennsylvania grade crude oil association, Nov. 1-2, 1946. Pennsylvania State College Mineral Industries Exp Sta Bul 45:1-82 '47 (pa $1)

Use of helium as a tracer in oil and gas fields. E. M. Frost, jr. il diags Pet Eng (Ref annual) 18:140+ Jl 1 '47

Utilization of old wells. W. A. Heath. bibliog Am Pet Inst Proc 26(4):18-23 '46

West Edmond's unitization and gas injection project would be one of largest. K. B. Barnes. Oil & Gas J 45:70-1 D 14 '46

Wider adoption, closer study urged for secondary recovery in Texas. G. Weber. Oil & Gas J 45:63+ Mr 15 '47

See also

Petroleum—Acidation of wells
Petroleum—Pumping
Petroleum—Unit operation of pools

Bibliography

Classified list of important papers given during preceding year; production. Pet Eng (Ref annual) 18:314-15 Jl 1 '47

1943-1945 supplement to the API bibliography on secondary recovery of oil. Am Pet Inst Proc 25(4):15-26 '45

1946 supplement to the API bibliography on secondary recovery of oil. Am Pet Inst Proc 26(4):65-75 '46

Patents

A.P.I. assigned ZoBell patent on use of bacteria in oil production. Oil & Gas J 45:36 Ja 18 '47

Oil bugs; bacteria facilitate extraction of otherwise unrecoverable oil. Bsns W p50 Ja 18 '47

Production rate

Control of per interval producing rates. P. J. Jones. Oil & Gas J 45:67-8+ Mr 1 '47

Meaning of MER reported by Interstate oil compact committee. T. A. Morgan. Oil & Gas J 46:92-3+ S 6 '47

Migration of oil. P. J. Jones. Oil & Gas J 45:64+ Ja 18 '47

Producing rate by expansion. P. J. Jones. Oil & Gas J 45:64-6+ N 30 '46

Well capacity. P. J. Jones. Oil & Gas J 45: 77-9 D 21 '46

Prospecting

Continental shelf exploration. Oil & Gas J 46:119 Jl 5 '47

Evolution of geologic thought in prospecting for oil and natural gas. P. H. Price. bibliog (63 titles) Am Assn Pet Geologists Bul 31: 673-97 Ap '47

Exploration in Appalachian area. C. J. Deegan. Oil & Gas J 46:129 My 17 '47

Exploration in Colombia extends from the Caribbean to the Llanos. K. B. Barnes. map Oil & Gas J 46:44-6 Jl 12 '47

Exploratory drilling in 1946. F. H. Lahee. maps Am Assn Pet Geologists Bul 31:917-30 Je '47

French geologists look to southwestern region in search for more oil. J. Asty. il Oil & Gas J 45:259+ D 28 '46

Full-scale exploration under way by navy in Arctic Alaska. C. O. Willson. bibliog il maps Oil & Gas J 46:62-4+ Ag 9; 62-6 Ag 16; 78-81+ Ag 23 '47

Highlights on developments in foreign petroleum fields. L. G. Weeks. maps Am Assn Pet Geologists Bul 31:1135-93 Jl '47

Jungle surveys for oil exploration in eastern Venezuela. P. Charles. il map Eng N 138: 519-21 Ap 3 '47

Large-scale exploration program outlined for France. C. Dufresne. il Oil & Gas J 46: 160-1 S 20 '47

Oil prospecting in Alaska. K. M. Fagin. il maps Pet Eng 18:43-8 Ag; 150+ S '47

Oil prospecting in southwest France. il map Pet Eng 19:106+ O '47

Oil search penetrates Ecuadorian jungle. R. Sneddon. il Pet Eng 19:144+ O '47

Photogeology aids naval petroleum exploration. N. C. Smith and S. A. Wengerd. 4pls maps Am Assn Pet Geologists Bul 31:824-8 My '47

Research to aid in finding oil. C. J. Deegan. Oil & Gas J 45:95 F 1 '47

Road to Muskeg; project to aid oil prospecting in Muskeg River section of Rocky Mountain foothills. il map Roads & Bridges 85:81-2+ F '47

Statistics of exploratory drilling. W. J. Dixon and R. M. Swesnik. bibliog Am Assn Pet Geologists Bul 30:2035-9 D '46

Three companies press widespread search for oil in Egypt. W. W. Burns. il map Oil & Gas J 45:46+ F 8 '47

Trends in discovery thinking. C. J. Deegan. Oil & Gas J 45:127 Ap 12 '47

PETROLEUM—Prospecting—*Continued*
Union Oil plans large program of exploration in Washington state. il map diag Oil & Gas J 46:64 Ag 30 '47
Western Canada; exploration, development program. L. S. McCaslin, jr. il map Oil & Gas J 46:71+ Ag 30 '47
Whither exploration. J. J. Jakosky. Am Assn Pet Geologists Bul 31:1118-24 Jl '47
Wildcat drilling in 1946. F. H. Lahee. maps Oil & Gas J 45:75-6+ Mr 29 '47
See also
Petroleum—Geology

Bibliography
Classified list of important papers given during preceding year; exploration and prospecting. Pet Eng (Ref annual) 18:311-13 Jl 1 '47

Geophysical methods
Airborne magnetometer surveys of Bahamas soon to start. W. W. Burns. il diag Oil & Gas J 45:92-3 Ap 26 '47
Exploration and the gravity meter. L. L. Logue and F. K. Fisk. maps diags Oil & Gas J 45:122-5 F 22 '47
Geophysicists entering a new era. C. J. Deegan. Oil & Gas J 46:129 My 17 '47
Helicopter aids oil search. C. J. Deegan. il Oil J Gas J 46:61-3 Je 7 '47
Improved marine equipment facilitates distant offshore exploration in the Gulf of Mexico. E. H. Short, jr. il map Oil & Gas J 45:63-5 Ja 4 '47
Men in boots. R. L. Kidd. il Manuf Rec 116: 80-1+ Ag '47
Midget aluminum spudder for drilling seismograph shot holes in Bahama islands. P. Reed. il Oil & Gas J 45:83 Ja 11 '47
Modern developments in geophysical prospecting. A. Van Weelden. Inst Pet J 33: 344-52; Discussion. 352-5 Je '47
Modern seismic techniques applied to geophysical exploration in west Texas. S. Harris. il map diag Oil & Gas J 46:60-3 Jl 19 '47
Past and future of oil exploration in Rocky Mountain area. J. G. Bartram. maps Oil & Gas J 46:178-9 O 11 '41
Petroleum geophysics; review of 1946. P. Weaver. il Min & Met 28:104-5 F '47
Portable equipment expedites inland marine seismic surveys. A. B. Hamil. il Oil & Gas J 46:146+ My 31 '47
Push air search for oil in Bahamas despite 14,587-ft. dry hole; using magnetometer. il Nat Pet N 39:41-2 My 7 '47
Recent trends in geological-geophysical exploration and methods of improving use of geophysical data. R. C. Coffin. Am Assn Pet Geologists Bul 30:2013-33 D '46; Same. Pet Eng (Ref annual) 18:47-53+ Jl 1 '47
Salt water scientists probe for oil beneath Gulf of Mexico. Can Min J 68:507-8 Jl '47
Society of exploration geophysicists meeting; abstracts of papers. Oil & Gas J 45: 120+ Mr 29 '47

Pumping
Computations of plunger travel. E. A. Stephenson. Oil & Gas J 45:93-4 Mr 1; 97-8 Mr 8 '47
Design, installation, and operation of gas lift equipment. L. F. Davis. diags Pet Eng 18:60+ D '46
Free pump latest thing in hydraulics. R. Sneddon. il diags Pet Eng 18:60+ Ag '47
Free pumping is first method to utilize full potentialities of hydraulic drive. H. David. il diags Oil & Gas J 46:94+ Ag 16 '47
Hydraulic pumpers for shallow wells. A. A. Hardy. il diags Oil & Gas J 46:102+ O 25 '47
Knockoff device provides safety in operation. N. Williams. il diags Oil & Gas J 46: 97+ S 6 '47
More than 8,000 wells will go on pump in last six months. Oil & Gas J 46:184 Jl 26 '47
New oil well pump cuts costs; development by Kobe, inc. il Bsns W p40+ Ag 9 '47
Operators' forecast of new pumping units, 1947. Oil & Gas J 45:273 Ja 25 '47
Pumping dually completed wells. T. P. Hoffer. diags Pet Eng 18:204+ S '47
Pumping equipment selection for secondary recovery developments. E. N. Kemler. bibliog Am Pet Inst Proc 26(4):37-9 '46; Same. Pet Eng (Ref annual) 18:155-7 Jl 1 '47; Same cond. Oil & Gas J 45:287+ N 16 '46
Pumping unit design lowers rod acceleration. J. B. Wrigley. diags Pet Eng 18:92+ Ja '47
Report of committee on the standardization of oil-field belting. diags Am Pet Inst Proc 26(4):181-6 '46
Report of committee on the standardization of pumping equipment and engines. diags Am Pet Inst Proc 26(4):305-31 '46
Report of special subcommittee on simplification of pumping machines. diags Am Pet Inst Proc 25(4):294-7 '45
Report of subcommittees of the Committee on the standardization of oil-field belting. diags Am Pet Inst Proc 25(4):126-39 '45
Report of subcommittees of the Committee on the standardization of pumping equipment and engines. diags Am Pet Inst Proc 25(4):272-93 '45
Selection of multi-cylinder gas engines. F. E. Hummel. il diag Pet Eng 18:120+ Ap '47
Subsidence of the Terminal Island-Long Beach area, California; effect of water and oil pumping. F. R. Harris and E. H. Harlow. il plans diags Am Soc C E Proc 73: 1197-218 bibliog(p 1217-18) O '47
Subsurface sucker-rod pumps. R. L. Chenault. diags Oil & Gas J 46:104+ O 18 '47
Treating artificial-lift wells with mud acid. E. N. Jones. Oil & Gas J 45:105 Ap 12 '47

Pumping, Electric
Motors and controls for beam-well pumping. W. G. Taylor. il Oil & Gas J 46:86-7+ S 13 '47
Phantom pumper enables remote control of wells, tanks from a centralized panel. L. S. McCaslin, jr. il diag Oil & Gas J 46: 60-1+ Ag 2 '47
See also
Petroleum pipe lines—Pumping stations, Electric

Repressuring
See Petroleum—Production methods

Salt content
Production problems resulting from salt deposition in flowing wells. R. D. Snow. diags Oil & Gas J 45:71-3+ F 8 '47
See also
Petroleum refining—Salt removal

Secondary recovery
See Petroleum—Production methods

Statistics
Americas meet world oil shortages. H. J. Struth. maps diags Pet Eng 19:51-60 O '47
Gulf Coast's fields have produced nearly 6 billion barrels. Oil & Gas J 46:243-6+ My 31 '47
Major fields vs. total United States reserves and production; tabulation. Oil & Gas J 46:191-2 Jl 26 '47
Major share of foreign wells in Latin America. Oil & Gas J 46:61 Jl 5 '47
Peacetime production exceeds that at peak of war. C. J. Deegan. Oil & Gas J 45:150-3 Ja 25 '47
Production; 1946. G. F. Moulton. Min & Met 28:98-9 F '47
Production outside U.S. due to reach 3,211,000 bbl. in 1947. W. W. Burns. Oil & Gas J 45:140-1 Mr 22 '47
World demand for oil growing rapidly; drop in U.S., Caribbean exports forecast. C. J. Bauer. map Nat Pet N 39:34-5+ Ap 30 '47
See also
Petroleum industry and trade—Statistics
Petroleum supply

Storage
Économies de matières dans les installations de stockage des produits pétroliers. G. Daric. diags Chimie & Ind 57:228-40 Mr '47

PETROLEUM—*Continued*

Stripper wells

Total of 299,146 stripper wells produced 230 million barrels in 1945. E. G. Dahlgren. Oil & Gas J 45:54-5 D 21 '46

Sulfur content

Cracking sulfur stocks with natural catalyst. R. C. Davidson. bibliog diags Pet Refiner 26:79-88 S '47

Sulfur in petroleum; boiling points, freezing points, densities, and refractive indices of some sulfur compounds. W. E. Haines and others. bibliog U S Bur Mines Rep of Invest 4060:1-42 '46

Testing

Pilot pipe-line unit for determining viscosity-temperature relationships. R. B. Beckman, H. G. Corneil and R. J. Michael. flow diags Am Inst Chem Eng Trans 42:947-58 O-D '46; Same. Pet Eng (Ref annual) 18:263-4+ Jl 1 '47

Tideland development

Court confirms tidelands ruling. Oil & Gas J 46:36 N 1 '47

Government files proposed decree in tidelands case. Oil & Gas J 46:153 S 20 '47

Government plans for tidelands administration awaited; decision held threat to property rights. Oil & Gas J 46:71 Jl 5 '47

Governors' conference calls for return of tidelands. Oil & Gas J 46:162 Jl 26 '47

Great oil potentialities on continental shelf and slope. W. E. Pratt. map Oil & Gas J 45:62 D 7 '46

Gulf leasing foreshadows much drilling. K. M. Fagin. map Pet Eng 18:49-52 My '47

High court rules for U.S. in tidelands controversy. R. E. Bjorkback. Nat Pet N 39: 16 Je 25 '47

Improved marine equipment facilitates distant offshore exploration in the Gulf of Mexico. E. H. Short, jr. il map Oil & Gas J 45:63-5 Ja 4 '47

International law vs. U.S. law enters California tidelands case. Nat Pet N 39:18 Mr 19 '47

Petroleum on continental shelves. W. E. Pratt. Am Assn Pet Geologists Bul 31:657-72 Ap '47

Portable equipment expedites inland marine seismic surveys. A. B. Hamil. il Oil & Gas J 46:146+ My 31 '47

Salt water scientists probe for oil beneath Gulf of Mexico. Can Min J 68:507-8 Jl '47

Standard Oil drilling on Maryland shore. Manuf Rec 115:58 N '46

U. S., California sign agreement on interim operation. H. D. Ralph. Oil & Gas J 46:36 Ag 2 '47

U.S. wins tidelands case in far-reaching decision. Oil & Gas J 46:74 Je 28 '47

Who's grabbing the oil-bearing tidelands off California? D. L. Sawyer. Min & Met 28: 19-20 Ja '47; Discussion. 28:170-1 Mr '47

Transportation

Crude oil tank car shipments top war peaks on T. & P. il map Ry Age 123:731-2 N 1 '47

Loss of USMC authority to operate tankers would threaten oil supplies. Nat Pet N 39: 11-12 My 7 '47

Tank ships; present world tonnage and other statistical data. B. Saurino. Oil & Gas J 45:160-3+ D 28 '46

Transport for oil. map Economist 153:160-1 Jl 26 '47

Transportation of petroleum by for-hire motor carriers. S. F. Niness. Am Pet Inst Proc 26(5):16-19 '46

See also

Petroleum pipe lines
Petroleum shipping terminals
Tank ships
Tank trucks

Unit operation of pools

DJ Cotton Valley suit raises question of state law's scope. Nat Pet N 39:40-1 S 3 '47

Proposed unitization and pressure maintenance may treble oil production in West Cement pool. K. B. Barnes. map diags Oil & Gas J 45:80-1+ D 7 '46

Review of five years of operation at the Langlie unitized repressuring project. R. L. Gray. diags Am Pet Inst Proc 26(4):54-61 '46; Same cond. Oil & Gas J 45:295+ N 16 '46

Spacing, pooling, and field-wide unitization. R. M. Myers. Pet Eng 18:64+ My '47

Unitization program for West Cement Medrano. K. M. Fagin. map Pet Eng 18: 160+ F '47

West Edmond unitization application filed; hearing scheduled for March 18. E. G. Dahlgren. Oil & Gas J 45:42+ F 8 '47

West Edmond's unitization and gas injection project would be one of largest. K. B. Barnes. Oil & Gas J 45:70-1 D 14 '46

Yates after 20 years. G. Weber. il Oil & Gas J 45:56-8 D 21 '46

Water flooding

See Petroleum—Production methods

Water problem

Chemical resolution of oil-in-water emulsions. L. T. Monson. il Pet Eng 18:116+ D '46

Effect of alkali and alkaline earth salts on the spectrographic determination of strontium. E. Fast and J. R. Nielsen. bibliog Opt Soc Am J 37:614-22 Ag '47

Production problems resulting from salt deposition in flowing wells. R. D. Snow. diags Oil & Gas J 45:71-3+ F 8 '47

Pumps dewater flooded oil zone. R. Sneddon. il diag Pet Eng 18:51-6 S '47

Restored-state method for determination of oil in place and connate water. W. A. Bruce and H. J. Welge. bibliog il diags Oil & Gas J 46:223+ Jl 26 '47

Subsurface disposal of inland oil-field brines conserves fresh water supply. O. S. Jones il diag Civil Eng 17:60-3 F '47

Water locator successfully used in Permian basin workover programs; electro-chemical method. L. S. McCaslin. il diag Oil & Gas J 46:77+ S 6 '47

See also

Petroleum—Well cementing and plugging

Wax content

See Petroleum—Paraffin problem; Petroleum refining—Wax removal

Well blasting

New oil-well shooting method utilizes the shaped charge principle. diags Oil & Gas J 45:86+ Ap 12 '47

Use of explosives in secondary recovery. R. C. Earlougher. Am Pet Inst Proc 26(4): 24-5 '46; Same cond. Pet Eng (Ref annual) 18:174+ Jl 1 '47; Same cond. Oil & Gas J 45:302 N 16 '46

Well casing

Casing perforating with shaped explosive charges. R. H. McLemore. il diags Oil & Gas J 45:268-71 D 28 '46

Data on casing failures and joint tightness. R. J. Kettenburg and others. Am Pet Inst Proc 26(4):234-43 '46

Determination of stresses in oil well casing in place. C. H. Oberg and R. W. Masters. il diags Pet Eng 18:149-50+ Je '47

Developments in casing standards and design. J. Wais, jr. Pet Eng 18:106+ Je '47

Gun perforation design for uniform productivity. W. J. Jackson. bibliog Pet Eng 18: 113-14+ Mr '47

Report of committee on the standardization of oil-country tubular goods. diags Am Pet Inst Proc 25(4):151-214 '45

Report of committee on the standardization of oil-country tubular goods. diag Am Pet Inst Proc 26(4):209-33 '46

Reports on casing failures. R. J. Kettenburg and others. Am Pet Inst Proc 25(4):215-21 '45

Tonnage report on casing, drill pipe, and tubing for the year 1946. W. O. Clinedinst. Am Pet Inst Proc 26(4):244-7 '46

Warm-worked casing; abstract. J. J. Dunn. Oil & Gas J 46:95 Je 21 '47

Well cementing and plugging

Action of mud acids on well equipment. E. N. Jones. Oil & Gas J 45:137 Ap 19 '47

PETROLEUM—Well cementing and plugging—*Continued*
D.V. multiple stage cementer. R. E. Edwards and F. W. Nussbaumer. diags Pet Eng 18:80+ Jl '47
Experimental observations on grouting sands and gravels. F. J. Smith. Am Soc C E Proc 73:936-40 Je '47
Heavy duty cementing equipment performs wide variety of operations. N. A. D'Arcy, jr. il Pet Eng 18:74+ Ag '47
Mud acidization may be helpful before squeeze cementing. E. N. Jones. Oil & Gas J 45:185 Ap 26 '47
Oil well cementing practice. R. E. Moeller and H. Roberts. bibliog il diags Am Concrete Inst J 18:893-911 Ap '47; Discussion. 19:912¹-912¹ pt 2 D '47
Portland cements in the oil industry. N. C. Ludwig. Oil & Gas J 46:101-2+ Ag 9 '47
Recent advances in selective exclusion of water in input wells. D. Martin and others. bibliog Oil & Gas J 45:106+ Ap 19 '47
Self-propelled cementing barge for offshore operations. N. Williams. il Oil & Gas J 45:84-5 Ap 12 '47
Series cementing in Venezuela's Quiriquire field. P. Reed. il diags Oil & Gas J 45: 220-1+ D 28 '46
Standard equipment successfully used in squeeze cementing at record depth. H. David. il diags Oil & Gas J 46:94+ S 27 '47
Thermo-setting plastics effective in well repair. O. O. Dale. il diags Pet Eng 18:90+ My '47
Use of plastics in consolidating loose sands in wells. R. H. Smith and A. C. Polk, jr. bibliog il Pet Eng (Ref annual) 18:177-8+ Jl 1 '47
Use of plugging agents. H. T. Kennedy. bibliog Am Pet Inst Proc 26(4):51-3 '46; Same cond. Oil & Gas J 45:289-90+ N 16 '46
Well completion and remedial work with plastics. A. A. Townsend and R. H. Smith. bibliog il diags Oil & Gas J 46:76-7+ My 10 '47

Well cleaning

Design and operation of swabs for oil wells. J. A. Wilson. il diags Pet Eng 18:72+ My '47
Paraffin removal in south Texas. E. F. Bowers and H. Renfro. il Oil & Gas J 46:134-5+ My 31 '47
Utilization of old wells. W. A. Heath. bibliog Oil & Gas J 45:304 N 16 '46

Well control

Blowout subdued under difficult conditions. R. Sneddon. diags Pet Eng 18:134+ N '46
Development of wellhead equipment. J. E. Eckel. il Pet Eng 18:188+ D '46
Dry ice man cometh; controlling an oil well. Pet Eng 18:129 Je '47
Oil and gas well fire and blowout control. W. Hawkins and C. B. Wallace. bibliog Pet Eng 19:194+ O '47
Remedial work accomplished by directionally drilled well. E. Short. il plan Oil & Gas J 46:192-4+ O 11 '47

Well drilling

Active rotary rigs by areas in the United States. C. J. Deegan. Oil & Gas J 46:113+ O 11 '47
Air-operated brakes successfully used in Gulf Coast drilling. E. H. Short, jr. il diag Oil & Gas J 45:78-9+ F 15 '47
A.c. auxiliaries for Diesel-electric drilling rigs. J. N. Poore. diags Oil & Gas J 46: 81+ Jl 12 '47
Application of internal-combustion engine power to rotary rigs. W. S. Crake. diags Oil & Gas J 46:180-2+ O 11 '47
Application of the principles of clay chemistry to problems encountered when drilling in Trinidad clays. H. C. H. Darley. bibliog Inst Pet J 33:219-29 Ap '47
Automatic drilling control. M. E. True and R. R. Crookston. il diags Oil & Gas J 46: 70-5 N 1 '47
Checking corrosion of oil well pipelines; abstract. N. Hackerman and D. A. Shock. Chem Eng 53:296+ N '46
Coated drill pipe proves successful in Permian basin. G. Weber. il Oil & Gas J 45:40-1+ F 1 '47
Conditions encountered in drilling south Texas' deepest test. N. Williams. il Oil & Gas J 46:73+ Je 7 '47
Contractor runs rotary rig at 460-ft. underground location in Hawaii. il Oil & Gas J 46:134 O 11 '47
Control of mud properties in drilling anhydrite. G. R. Gray. Pet Eng 18:142+ Je '47
Controlled vertical drilling. R. Sneddon. il diags Pet Eng 18:118+ S '47
Deep cable tool drilling in Appalachian area. H. W. Haupt. Pet Eng (Ref annual) 18: 72+ Jl 1 '47
Deep drilling in the Rocky Mountain region. N. Williams. il Oil & Gas J 45:61-2+ F 8 '47
Deep exploratory wells on increase; tabulated description of wells below 12,000 feet. E. Adams. map Pet Eng 18:51-6+ F '47
Deep rotary drilling applied to the Appalachians. B. R. Miller. il Oil & Gas J 45: 90+ Jl 6 '46; Same. Pet Eng (Ref annual) 18:75+ Jl 1 '47
Deeper and deeper for oil; well of Superior oil co. of California in Caddo county, Okla. Min & Met 28:331 Jl '47
Deepest well in the world is drilling below 17,000 ft. in Caddo county, Okla. K. M. Fagin. il Pet Eng 18:55-8 Mr '47
Drilling costs lowered 25 per cent in Rangely field. N. Williams. il Oil & Gas J 45:150-1+ Ap 26 '47
Drilling difficulties encountered in Olive field development. T. H. Sandoz. il Oil & Gas J 46:177+ My 31 '47
Drilling equipment moves steadily toward goal of reduced hole costs. N. Williams. il Oil & Gas J 46:195-6 Jl 26 '47
Drilling problems in Alaska. K. M. Fagin. il maps Pet Eng 19:180+ O '47
Drilling the world's deepest well. N. Williams. il map Oil & Gas J 45:160-2+ Mr 29 '47
18,000 wells, 68 million feet seen for last half of year. C. J. Deegan. Oil & Gas J 46:176-9 Jl 26 '47
Exploratory drilling in 1946. F. H. Lahee. maps Am Assn Pet Geologists Bul 31:917-30 Je '47
FM radio communication aids operation of rigs. K. M. Fagin. il diags Pet Eng 18: 174+ D '46
Fishing and cutting technique applied in recovering drill pipe from world's deepest well. E. H. Short, jr. il diag Oil & Gas J 46:80-1+ My 17 '47
Hard-rock drilling in the Permian basin; with cost data. D. Johnston. diag Oil & Gas J 45:62-4+ Ap 5 '47
How a well is drilled in affects profit and payout. K. M. Fagin. bibliog diags Pet Eng 18:191-2+ Ap '47
In-filled drilling in Illinois oil pools. A. H. Bell. Am Pet Inst Proc 26(4):144-7 '46
Intercommunication system used on west Texas rig. W. J. Davis. il Pet Eng 18:55-6 My '47
Larger drill pipe results in greater speed in drilling Gulf Coast wells. E. H. Short, jr. Oil & Gas J 45:147+ F 22 '47
Lateral drilling project. H. S. Norman. il diags Oil & Gas J 45:68-9+ D 21 '46
Meeting the drilling goal. Oil & Gas J 46: 301+ Jl 26 '47
Modern portable units in drilling and well servicing. H. S. Norman. il Oil & Gas J 45:77-8 N 30 '46
Modern practices in deep contract drilling. J. H. Abernathy. Oil & Gas J 46:87+ My 24 '47
Modern rotary drilling. J. Zaba. Oil & Gas J 45:75 Ja 4; 87 Ja 11; 83 Ja 18; 287 Ja 25; 69 F 1; 97 F 8; 107 F 15; 175-6 F 22; 91 Mr 1; 95 Mr 8; 99 Mr 15; 291-2 Mr 22; 175 Mr 29; 103 Ap 5; 99 Ap 12; 133 Ap 19; 181 Ap 26; 105 My 3; 46:97 My 10; 111 My 17; 111 My 24; 271 My 31; 99 Je 7; 129 Je 14; 117 Je 21; 147 Je 28; 46:103 Jl 5; 103 Jl 12; 95 Jl 19; 289 Jl 26; 95 Ag 2; 109 Ag 9; 115 Ag 16; 135 Ag 23; 105 Ag 30; 107 S 6; 121 S 13; 317 S 20; 115 S 27; 205 O 11; 155 O 18; 127 O 25; 89 N 1; 85 N 8 '47
More than 500 drilling operations now under way in the Gulf Coast region. N. Williams. il Oil & Gas J 46:166+ My 31 '47

PETROLEUM—Well drilling—*Continued*
New Diesel drilling-engine developments field tested; turbosupercharging and dual-fuel operation. G. F. Noltein. il diag Oil & Gas J 46:188-90+ O 11 '47
New drilling method demonstrated by inventor using working model; Electrodrill. L. S. McCaslin, jr. il Oil & Gas J 46:108+ Je 21 '47
Nine-speed drilling rig air-operated. J. P. Van Vorst. il Pet Eng 18:184+ N '46
1947 drilling footage to exceed all past records by wide margin. Oil & Gas J 46:124+ O 11 '47
1947 drilling footage will establish all-time record; wells drilled in 1946. H. David. Oil & Gas J 45:136-43 Ja 25 '47
Only steel shortage prevented record-breaking year of drilling. Oil & Gas J 46:180-3 Jl 26 '47
Plastic coating inside surface of drill pipe to combat corrosion fatigue failures. L. E. Trishman. il Pet Eng 18:194+ N '46
Practical aspects of directional drilling. D. K. Weaver. plan diag Oil & Gas J 45: 263-4+ N 16 '46
Recent trends in directional drilling on the Gulf coast. W. H. Cook. il diags Oil & Gas J 46:232+ My 31 '47
Remedial work accomplished by directionally drilled well. E. Short. il plan Oil & Gas J 46:192-4+ O 11 '47
Reverse-circulation drilling proves practical in west Texas. G. Weber. il Oil & Gas J 46:147-50 O 11; 70+ N 8 '47
Safety color code for drilling rigs. W. B. Cox. Oil & Gas J 46:94+ Ag 9 '47
Safety on rotary rigs; 100 major check points. Oil & Gas J 46:136-7 O 11 '47
Separate cooling on drilling rigs. il Oil & Gas J 46:99 S 13 '47
Shallow wells still make up the contractor's bread and butter. Oil & Gas J 46:130+ O 11 '47
Significance and future of horizontal drainage holes. J. A. Zublin. Oil & Gas J 45:72 D 21 '46
Sodium chromate used in Permian basin drilling to combat salt-water corrosion. G. Weber. il Oil & Gas J 45:103 D 7 '46
Sohio's 1 Howard; case history of Oklahoma's Eola field discovery well. F. H. Willibrand and D. L. Hyatt. diag Oil & Gas J 46:67-8+ Jl 12 '47
Speed, efficiency, safety increased by new designs in heavy west Texas rig. G. Weber. il Oil & Gas J 46:76-8 Jl 5 '47
Texas co. sets new world depth record for producing well 13,904 ft. il Oil & Gas J 46: 54-5 Ag 30 '47
Trends in drilling equipment and costs. I. S. Salnikov. Oil & Gas J 46:220-1+ Jl 26 '47
Troublesome drilling problems solved by special muds. G. R. Gray. il Oil & Gas J 46: 142+ My 31 '47
12,000-ft. drilling becoming common on Gulf coast. N. Williams. Oil & Gas J 46:214+ My 31 '47
U.S. drilling and producing depth records by states; tabulation. Oil & Gas J 45:141 Ja 25 '47
Wall-log system rides herd on operations of rotary rigs. L. S. McCaslin, jr. il Oil & Gas J 46:138+ O 11 '47
Wells drilled with horizontal drain holes; Zublin method. il Pet Eng 18:174+ F '47
World's safest (or ideal) rig. G. H. Creighton. il Oil & Gas J 46:110-14 O 18 '47

See also
Petroleum—Mud fluids
also American association of oilwell drilling contractors

Accounting
Cost accounting for contract drilling; accounting objectives of American association of oilwell drilling contractors. L. Breckenridge. N A C A Bul 28:438-51 D 1 '46
Drilling equipment records. M. Hart. Pet Eng (Ref annual) 18:68-9 Jl 1 '47
Simplified cost-accounting check system for drilling contractors. R. E. White. Oil & Gas J 46:153-4+ O 11 '47

Bibliography
Classified list of important papers given during preceding year; drilling. Pet Eng (Ref annual) 18:313-14 Jl 1 '47

Records
West Texas contractor devises new drilling records. B. R. Schabarum. il Oil & Gas J 46:90+ O 25 '47

Sampling
Bureau of mines report on tests made with the Carter pressure core barrel. Am Pet Inst Proc 25(4):78-88 '45
Core analysis; its interpretation and application in reservoir engineering. J. G. Caran. bibliog Pet Eng 19:228+ O '47
Core analysis; practical application to oil and gas reservoirs. J. H. Campbell. Pet Eng 18:100+ D '46
Diamond-bit coring at Rangely, N. Williams. il Oil & Gas J 46:141-2+ O 11 '47
Diamond-bit coring in the Rangely, Colorado field. N. Williams. il Oil & Gas J 45: 48-50+ Ja 4 '47
Diamond core drilling methods and problems. C. Deely. il Pet Eng 18:98+ Je '47
Diamond coring at Rangely, Colorado. R. W. Stuart. il Pet Eng 18:43-8 Ja '47
Effect of core-sampling interval upon mean porosity and permeability. Am Pet Inst Proc 26(4):128-35 '46
Electrical resistivity an aid in core-analysis interpretation. G. E. Archie. diags pl Am Assn Pet Geologists Bul 31:350-66 F '47
Method for determining simultaneously the oil and water saturations of oil sands. C. G. Rall and D. B. Taliaferro. bibliog (34 titles) U S Bur Mines Rep of Invest 4004:1-16, pl 1-2 '46
Modal analyses of well cores from basement complex in west Texas. L. T. Patton. Am Assn Pet Geologists Bul 31:308-17 F '47
New method to determine permeability. J. C. Calhoun, jr. bibliog diag Pet Eng 18: 103+ F '47
Quick freezing of cores; practical method of preserving the fluid content. J. D. Wisenbaker. Oil & Gas J 45:275-6+ Ja 25 '47; Same. Pet Eng 18:75+ Ja '47
Relative permeability measurements on small core samples. R. A. Morse and others. bibliog diag Oil & Gas J 46:109+ Ag 23 '47; Same. Pennsylvania State College Mineral Industries Exp Sta Tech Pa 124:1-6 '47 (pa 25c)
X-ray brings oil fields to the laboratory for study on how to increase yield of crude. il Nat Pet N 39:52 My 14 '47; Same. Pet Eng 18:53 Je '47; Same. Elec Eng 66:656 Jl '47; Same. Electronics 20:132 Jl '47

Study and teaching
New college work will help drilling contractors; young men given practical training at Kilgore college. il Oil & Gas J 46:151 O 11 '47

Well drilling, Subaqueous
Deep water drilling on Lake Maracaibo. P. Reed. il Oil & Gas J 45:56+ Ja 18 '47
Diesel electric barge rig, 2100-hp, designed to drill 15,000-ft. wells. K. M. Fagin. il Pet Eng 18:49-52 Ja '47
Drilling barge designed for 15-ft. water operation. E. H. Short, jr., il plan diag Oil & Gas J 45:62-3+ N 23 '46
Engineering characteristics of the Gulf Coast continental shelf; Marine construction. M. B. Willey and others. diag Oil & Gas J 46:130-1 O 18 '47
Giant barge drilling rig; one of most modern on Gulf coast. E. H. Short, jr. il plans Oil & Gas J 46:220+ My 31 '47
Holding up the off shore drilling rig. E. H. Short, jr. map diag Oil & Gas J 46:112+ Je 28 '47
Magnolia drills for oil in the Gulf of Mexico. K. M. Fagin. il map plan diags Pet Eng 18:82+ N '46
New Diesel-electric barge rig designed for routine drilling to 15,000 ft. il Oil & Gas J 45:59-60 Ja 11 '47
Offshore development in Gulf coast promises to be well under way by end of 1947. E. H. Short, jr. il maps Oil & Gas J 46:228-9+ My 31 '47

PETROLEUM—Well drilling, Subaqueous—*Continued*
Off-shore oil well. Sci Am 177:77 Ag '47
Planning multiple-well directional-drilling program for offshore locations. J. G. Jackson and J. B. Murdock, jr. plans Oil & Gas J 46:133+ O 18 '47
Portable equipment expedites inland marine seismic surveys. A. B. Hamil. il Oil & Gas J 46:146+ My 31 '47
Prefabricated caisson foundations for submarine oil wells under Lake Maracaibo. E. J. Cleary. il diag Eng N 137:859-67 D 26 '46
Prefabricated offshore drilling platform sets up in record time. E. H. Short, jr. il map plan diags Oil & Gas J 46:82-5+ Ag 9 '47
Recent innovations in lease work barges. E. H. Short, jr. Oil & Gas J 45:61+ Ap 5 '47
Refitted boiler barge; supplies power for drilling in Quarantine Bay field, Louisiana. E. H. Short, jr. il diags Oil & Gas J 45: 71-2 Mr 8 '47
Self-propelled cementing barge for offshore operations. N. Williams. il Oil & Gas J 45: 84-5 Ap 12 '47
Specially designed workover barges meet multiplicity of operational requirements. E. H. Short, jr. il Oil & Gas J 46:62-3+ My 10 '47

See also
Petroleum—Tideland development

Well liners

Control of unconsolidated sands in Wilmington oil field. R. Winterburn. bibliog Pet Eng 18:80+ Je '47
Explosives find many uses in oil production. M. M. Kinley and J. Kinley. diags Oil & Gas J 46:83+ Je 7 '47
Liner job well remedial work in east Texas field. D. W. Akins. map diag Pet Eng 18: 96+ Ja '47

Well logging

Capacitative commutator. S. A. Scherbatskoy and others. bibliog il diags R Sci Instr 18:415-21 Je '47
Electric logging. S. J. Pirson. bibliog diags Oil & Gas J 46:72+ O 4; 94-5+ O 25; 76-7+ N 1 '47
Electrical well logging; study of self-potential curve. C. C. White. Oil & Gas J 45:88-90 D 14 '46
Formation logging. R. E. Gile. diag Pet Eng 18:93-4+ Je '47
Geological interpretation of radioactivity well logs. J. E. Kilkenny. Pet Eng 18:137-8 Ag '47
Log map, new type of subsurface map. T. H. Bower. Am Assn Pet Geologists Bul 31:340-9 F '47
New electrical logging techniques in California. J. C. Stick and others. diags Oil & Gas J 46:82-3+ My 17 '47
Proposed API guide of recommended practice on standard heading for electrical logs. Am Pet Inst Proc 25(4):75-7 '45
Report of sub-committee on reservoir fluids, related constituents and conditions. bibliog Am Assn Pet Geologists Bul 31:375-93 F '47
Thermal surveys applied to oil field problems. H. G. Abadie. Pet Eng 18:47-8 Je '47
True resistivity determination from the electric log; its application to log analysis. H. G. Doll and others. bibliog diags Oil & Gas J 46:297-8+ S 20 '47
Utilization of logging data in estimating oil reserves. I. Kogan. diags Pet Eng 18:54+ Jl '47

Well packers

Packer problems in west Texas. T. H. Dwyer. diag Oil & Gas J 45:92-6 Ap 5 '47

Well pressure

Field calibration technique for bottom-hole pressure measurement. E. R. Brownscombe. il Pet Eng 18:84-6+ Ag '47
Producing rate by expansion. P. J. Jones. Oil & Gas J 45:64-6+ N 30 '46

Well spacing

Location and spacing of wells for the R-1 reservoir. P. L. Jones. Oil & Gas J 45:81-3+ F 15 '47
Location and spacing of wells on elongated reservoirs. P. J. Jones. diags Oil & Gas J 46:87-9+ My 10 '47
Optimum spacing of rows of oil wells in sands under hydrostatic pressure. I. A. Charnyi. Pet Eng 18:135-7 Jl '47
Reservoir performance and well spacing, Silica Arbuckle pool, Kansas. L. F. Elkins. map diags Oil & Gas J 45:201+ N 16 '46
Spacing, pooling, and field-wide unitization. R. M. Myers. Pet Eng 18:64+ My '47

Well surveying

Deep-well camera permits visual examination of bore holes. O. E. Barstow and C. M. Bryant. bibliog il diags Oil & Gas J 45:74-5+ Mr 15 '47

Well temperature

Geothermal gradients in Mid-continent and Gulf Coast oil fields. E. A. Nichols. map Pet Eng (Ref annual) 18:64+ Jl 1 '47
Heat flow value for a well in California. A. E. Benfield. bibliog map Am J Sci 245: 1-18 Ja '47
Influence of temperature on oil yield from uncemented sands under gravitational flow. S. L. Zaks. bibliog diag Pet Eng 18:147-8+ N '46
Temperature surveys in producing wells. C. R. Dale. Pet Eng 18:146+ S '47
Thermal surveys applied to oil field problems. H. G. Abadie. Pet Eng 18:47-8 Je '47

Well tubing

Explosives find many uses in oil production. M. M. Kinley and J. Kinley. diags Oil & Gas J 46:83+ Je 7 '47
Inflated postwar demand at root of pipe-supply difficulties. W. F. McConnor. Oil & Gas J 46:78-9 Je 28 '47
Mechanically rotated scraper blades eliminate paraffin accumulation. B. Kingston. il diag Oil & Gas J 45:78-9 D 14 '46
Report of committee on the standardization of oil-country tubular goods. diags Am Pet Inst Proc 25(4):151-214 '45
Report of committee on the standardization of oil-country tubular goods. diag Am Pet Inst Proc 26(4):209-33 '46
Scrapers on sucker rods reduce paraffin deposits. E. V. Garrett. il diags Pet Eng 18: 132+ Ag '47
Tonnage report on casing, drill pipe, and tubing for the year 1946. W. O. Clinedinst. Am Pet Inst Proc 26(4):244-7 '46

Alabama

Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Alaska

Full-scale exploration under way by navy in Arctic Alaska. C. O. Wilson. bibliog il maps Oil & Gas J 46:62-4+ Ag 9; 62-6 Ag 16; 78-81+ Ag 23 '47
Oil prospecting in Alaska. K. M. Fagin. il maps Pet Eng 18:43-8 Ag; 150+ S '47

See also Petroleum industry and trade—Alaska

Alberta

New field for Canada: Leduc field. J. Ness. il Pet Eng 19:111+ O '47
Separation plant reclaims oil from Athabaska sands. W. E. Adkins. flow diag il Oil & Gas J 45:187+ Mr 22 '47

Appalachian area

Development in Appalachian area in 1946. maps Am Assn Pet Geologists Bul 31:959-78 Je '47
Exploration in Appalachian area. C. J. Deegan. Oil & Gas J 46:129 My 17 '47

Arizona

Developments in Arizona, western New Mexico, and northern New Mexico in 1946. R. L. Bates. map Am Assn Pet Geologists Bul 31:1039-44 Je '47
Paleozoic seaways in western Arizona. E. D. McKee. bibliog map Am Assn Pet Geologists Bul 31:282-92 F '47

PETROLEUM—*Continued*

Arkansas

Developments in Arkansas and north Louisiana in 1946. J. R. Williams. map Am Assn Pet Geologists Bul 31:1084-1105 Je '47
Survey shows secondary-recovery possibilities in Arkansas. C. F. Hoot. Oil & Gas J 45:66 Ap 12 '47

Atlantic coast

Developments in Atlantic Coast states between New Jersey and North Carolina in 1946. H. G. Richards. Am Assn Pet Geologists Bul 31:1106-8 Je '47

Australia

Geology of Roma district, Queensland, Australia. F. Reeves. bibliog maps diags Am Assn Pet Geologists Bul 31:1341-71, pl 1 (fold map) Ag '47
Petroleum search in Australia. Chem Age (Lond) 57:301 Ag 30 '47

Bahama Islands

Airborne magnetometer surveys of Bahamas soon to start. W. W. Burns. il diag Oil & Gas J 45:92-3 Ap 26 '47
Push air search for oil in Bahamas despite 14,587-ft. dry hole; using magnetometer. il Nat Pet N 39:41-2 My 7 '47

California

Another California reservoir. Oil & Gas J 46:121 Ag 30 '47
Classification of oil discoveries and fields. Pet Eng 18:124+ Ja '47
Developments in California in 1946. G. B. Moody. maps Am Assn Pet Geologists Bul 31:931-46 Je '47
General pressure-volume-temperature correlation for mixtures of California oils and gases. M. B. Standing. Oil & Gas J 46:95-7+ My 17 '47
Heat flow value for a well in California. A. E. Benfield. bibliog map Am J Sci 245:1-18 Ja '47
Heating and cleaning Santa Maria heavy crude. R. L. Lauenstein. il diags Pet Eng 18:67-8+ Mr '47
High court rules for U.S. in tidelands controversy. R. E. Bjorkback. Nat Pet N 39:16 Je 25 '47
International law vs. U.S. law enters California tidelands case. Nat Pet N 39:18 Mr 19 '47
Light oil strike near Santa Maria. Oil & Gas J 46:163 Je 28 '47
Preliminary report on Salt Creek field, Kern county, California. J. C. Beach. diags Am Assn Pet Geologists Bul 31:1674-7 S '47
Production of waxes from California crudes. R. A. David and P. M. Huemmer. flow sheet il Chem Eng Prog 43:174-6 Ap '47
Special studies of reservoir oils in Naval petroleum reserve no. 1, Elk Hills field. A. B. Cook and G. B. Shea. 19 pls U S Bur Mines Rep of Invest 4054:1-60 '47
U. S., California sign agreement on interim operation. H. D. Ralph. Oil & Gas J 46:36 Ag 2 '47
U.S. wins tidelands case in far-reaching decision. Oil & Gas J 46:74 Je 28 '47

Canada

Developments in Canada in 1946. F. L. Fournier. maps Am Assn Pet Geologists Bul 31:947-58 Je '47

China

China's potential oil resources large. G. Egloff. map Oil & Gas J 45:243+ D 28 '46

Colorado

Geological survey completes new structure map for Rangely field. N. W. Bass. map Oil & Gas J 45:86-7+ N 30 '46

See also
Petroleum industry and trade—Colorado

Egypt

Three companies press widespread search for oil in Egypt. W. W. Burns. il map Oil & Gas J 45:46+ F 8 '47

Europe

Central European nations depending on oil to finance postwar rehabilitation. H. David. il map Oil & Gas J 45:44-6 N 30 '46

Far East

Foreign oil production reviewed in A.I.M.E. papers. Oil & Gas J 45:69 Mr 29 '47

Florida

Geology and occurrence of oil in Florida. E. D. Pressler. map diags Am Assn Pet Geologists Bul 31:1851-62 O '47

France

French geologists look to southwestern region in search for more oil. J. Asty. il Oil & Gas J 45:259+ D 28 '46
Les récentes recherches de pétrole en France. G. Vié. map Génie Civil 124:112-14 Mr 15 '47
La région pétrolifère de Bastennes (Landes). map Génie Civil 124:338-9 S 1 '47

Great Britain

British oilfields and oil exploration; abstract. G. M. Lees. Chem & Ind p165-6 Mr 29 '47
Crude oil of England. J. S. Parker. flow sheet 2pls Inst Pet J 33:230-53 Ap '47

Gulf Coast region

Engineering characteristics of the Gulf Coast continental shelf; Marine construction. M. B. Willey and others. diag Oil & Gas J 46:130-1 O 18 '47
Geothermal gradients in Mid-continent and Gulf Coast oil fields. E. A. Nichols. map Pet Eng (Ref annual) 18:64+ Jl 1 '47
Gulf coast figures prominently in A.A.P.G. research program. S. W. Lowman. map Oil & Gas J 46:171+ My 31 '47
Gulf coast, petroleum center. R. J. Gonzalez. Oil & Gas J 46:124-5 My 31 '47
Gulf Coast's fields have produced nearly 6 billion barrels. Oil & Gas J 46:243-6+ My 31 '47
Improved marine equipment facilitates distant offshore exploration in the Gulf of Mexico. E. H. Short, jr. il map Oil & Gas J 45:63-5 Ja 4 '47
More than 500 drilling operations now under way in the Gulf Coast region. N. Williams. il Oil & Gas J 46:166+ My 31 '47
Offshore development in Gulf coast promises to be well under way by end of 1947. E. H. Short, jr. il maps Oil & Gas J 46:228-9+ My 31 '47
Trends in petroleum geology of the Gulf coast. M. T. Halbouty and G. C. Hardin, jr. diags Oil & Gas J 46:136-7+ My 31 '47
12,000-ft. drilling becoming common on Gulf coast. N. Williams. Oil & Gas J 46:214+ My 31 '47

Illinois

Developments in Illinois and Indiana in 1946. A. H. Bell and R. E. Esarey. map Am Assn Pet Geologists Bul 31:979-87 Je '47
In-filled drilling in Illinois oil pools. A. H. Bell. Am Pet Inst Proc 26(4):144-7 '46

Indiana

Developments in Illinois and Indiana in 1946. A. H. Bell and R. E. Esarey. map Am Assn Pet Geologists Bul 31:979-87 Je '47
Indiana's pocket. H. H. Nowlan. maps diag Oil & Gas J 46:66-7+ S 6 '47

Italy

Oil and natural gas in Italy. Engineering 162: 402 O 25 '46

Japan

Petroleum exploration and production in western Pacific during World war II. L. W. Stach. maps diags Am Assn Pet Geologists Bul 31:1384-403 Ag '47
Production and resources of petroleum. C. M. Pollock and L. W. Stach. bibliog Am Assn Pet Geologists Bul 31:156-8 Ja '47

Kansas

Developments in north Mid-continent in 1946. E. A. Koester and V. B. Cole. map Am Assn Pet Geologists Bul 31:999-1005 Je '47
Middle Ordovician limestones in central Kansas. H. Taylor. bibliog il maps diags Am Assn Pet Geologists Bul 31:1242-82 Jl '47

PETROLEUM—Kansas—*Continued*
Relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas; Research committee, Tulsa geological society. bibliog maps diags Am Assn Pet Geologists Bul 31:92-148 Ja '47

Louisiana

Delhi, biggest stratigraphic trap since east Texas. G. Weber. il map diag Oil & Gas J 46:108-10+ Je 14 '47
Developments in Arkansas and north Louisiana in 1946. J. R. Williams. map Am Assn Pet Geologists Bul 31:1084-1105 Je '47
Developments in Louisiana Gulf coast in 1946. G. F. Shepherd. map Am Assn Pet Geologists Bul 31:1078-83 Je '47
Magnolia drills for oil in the Gulf of Mexico. K. M. Fagin. il map plan diags Pet Eng 18:82+ N '46
Properties of Louisiana crude oils. O. C. Blade and E. L. Garton. bibliog U S Bur Mines of Invest 4034:1-50 '46

Manchuria

Petroleum exploration and production in western Pacific during World war II. L. W. Stach. maps diags Am Assn Pet Geologists Bul 31:1384-403 Ag '47

Michigan

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47
Developments in Michigan in 1946. H. J. Hardenberg. map Am Assn Pet Geologists Bul 31:988-98 Je '47
Lithology and thickness of the traverse group in Michigan basin. G. V. Cohee. map Oil & Gas J 46:90-2 Jl 5 '47
Stratigraphy and structure of Traverse group in Afton-Onoway area. W. A. Kelly and G. W. Smith. bibliog maps diags Am Assn Pet Geologists Bul 31:447-69 Mr '47

Mid-continent region

Geothermal gradients in Mid-continent and Gulf Coast oil fields. E. A. Nichols. map Pet Eng (Ref annual) 18:64+ Jl 1 '47

Mississippi

Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Montana

Devonian system in central and northwestern Montana. L. L. Sloss and W. M. Laird. bibliog il map diags Am Assn Pet Geologists Bul 31:1404-30 Ag '47
Exceptional oil fields in Rocky Mountain region of United States. C. E. Dobbin. bibliog maps diags Am Assn Pet Geologists Bul 31:797-823 My '47

Near East

Foreign oil production reviewed in A.I.M.E. papers. il Oil & Gas J 45:66+ Mr 29 '47
Importance of Middle East oil to the world demands that story of oil company accomplishments be told. Nat Pet N 39:19-20 F 19 '47
Middle East crudes show promise as good lube oil stocks, Socony pilot plant tests indicate. W. C. Uhl. Nat Pet N 39:38 Ag 6 '47
Oil-reserve provinces of Middle East and southern Soviet Russia. F. J. Fohs. maps Am Assn Pet Geologists Bul 31:1372-83 bibliog(p1381-3) Ag '47
Petroleum-supply problem is world wide; nearby markets to take Middle East oil. L. F. McCollum. map Oil & Gas J 46:62+ My 17 '47
Vast area in Middle East awaiting exploration and development. F. J. Fohs. il map Oil & Gas J 46:46-8 Jl 19 '47

New Mexico

Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. Il 2pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46
Developments in Arizona, western New Mexico, and northern New Mexico in 1946. R. L. Bates. map Am Assn Pet Geologists Bul 31:1039-44 Je '47
Developments in west Texas and southeastern New Mexico in 1946. R. L. Boss and W. J. Hilseweck. bibliog fold map Am Assn Pet Geologists Bul 31:1018-38 Je '47
Reservoir characteristics of Rattlesnake oil and gas field, San Juan county. H. H. Hinson. maps Am Assn Pet Geologists Bul 31: 731-71 Ap '47

New York (state)

Possibilities for oil and gas in New York. E. T. Heck. maps diag Pet Eng 18:163-4+ Ag '47

North Carolina

Atlantic coastal plain floor and continental slope of North Carolina. W. F. Prouty. map diag Am Assn Pet Geologists Bul 30: 1917-20 N '46

Oklahoma

Anadarko basin discovery recheck. C. J. Deegan. Oil & Gas J 45:113 F 8 '47
Developments in Oklahoma in 1946. R. J. Cullen. map Am Assn Pet Geologists Bul 31:1006-14 Je '47
Relationship of crude oils and stratigraphy in parts of Oklahoma and Kansas; Research committee, Tulsa geological society. bibliog maps diags Am Assn Pet Geologists Bul 31:92-148 Ja '47
Sohio's 1 Howard; case history of Oklahoma's Eola field discovery well. F. H. Willibrand and D. L. Hyatt. diag Oil & Gas J 46:67-8+ Jl 12 '47
Southwest Antioch; new Oklahoma pool; development report. R. M. Swesnik. il map diag Oil & Gas J 45:82-3+ Ap 19 '47
Superfractionation studies; composition and octane numbers of 0.5% fractions of an Oklahoma City naphtha. C. C. Ward, R. M. Gooding and B. H. Eccleston. diags Ind & Eng Chem 39:105-9 Ja '47
West Edmond oil field, Central Oklahoma. D. A. McGee and H. D. Jenkins. maps Am Assn Pet Geologists Bul 1797-829 N '46

Palestine

Drilling to begin soon on Gaza well, first test in Palestine. Oil & Gas J 45:58 Mr 15 '47

Persia

Persian crude oils. W. L. Nelson. Oil & Gas J 45:80 D 21 '46

Philippine Islands

Oil discovery reported in test on Cebu in Philippines. Oil & Gas J 46:44 Jl 19 '47

Rocky Mountain region

Developments in Rocky Mountain region in 1946. E. W. Krampert. Am Assn Pet Geologists Bul 31:1283-8 Jl '47
Exceptional oil fields in Rocky Mountain region of United States. C. E. Dobbin. bibliog maps diags Am Assn Pet Geologists Bul 31:797-823 My '47
Past and future of oil exploration in Rocky Mountain area. J. G. Bartram. maps Oil & Gas J 46:178-9 O 11 '47

Russia

Oil and gas resources of southern border of European part of U.S.S.R. I. O. Brod. map Oil & Gas J 46:62-3 S 27 '47
Oil-reserve provinces of Middle East and southern Soviet Russia. F. J. Fohs. maps Am Assn Pet Geologists Bul 31:1372-83 bibliog(p1381-3) Ag '47

Sakhalin

Petroleum exploration and production in western Pacific during World war II. L. W. Stach. maps diags Am Assn Pet Geologists Bul 31:1384-403 Ag '47

South America

Refining South American crudes. D. Read and G. Egloff. Pet Eng 18:134+ My '47

Southeastern states

Southeastern states' total reserves nearing half-billion-barrel mark. A. M. Crowell. map Oil & Gas J 46:96+ My 24 '47

Texas

Anton, Irish fields may connect. C. J. Deegan. plans Oil & Gas J 46:83+ N 1 '47

PETROLEUM—Texas—*Continued*
Correlation of Permian of west Texas and southeast New Mexico. J. W. Skinner. il 2pls map diags Am Assn Pet Geologists Bul 30:1857-74 N '46
Del Monte field, Zavala county. G. H. Clark. map Am Assn Pet Geologists Bul 31:772-3 Ap '47
Developments in east Texas in 1946. T. C. Cash and G. J. Loetterle. map Am Assn Pet Geologists Bul 31:1059-70 Je '47
Developments in north and west-central Texas in 1946. J. F. Gibbs and C. D. Smith. map Am Assn Pet Geologists Bul 31:1045-51 Je '47
Developments in south Texas in 1946. B. Scrafford. map Am Assn Pet Geologists Bul 31:1052-8 Je '47
Developments in Texas Panhandle in 1946. P. A. Grant and A. W. Doshier. Am Assn Pet Geologists Bul 31:1015-17 Je '47
Developments in upper Gulf coast of Texas in 1946. A. P. Allison and C. B. Claypool. map Am Assn Pet Geologists Bul 31:1071-7 Je '47
Developments in west Texas and southeastern New Mexico in 1946. R. L. Boss and W. J. Hilseweck. bibliog fold map Am Assn Pet Geologists Bul 31:1018-38 Je '47
Dollar Hide extended north. Oil & Gas J 46:149 O 25 '47
Drilling difficulties encountered in Olive field development. T. H. Sandoz. il Oil & Gas J 46:177+ My 31 '47
Geological group develops columnar section of pre-Permian formations along Central Basin platform. J. M. Barton. Oil & Gas J 45:106-7 D 14 '46
Hawkins field, Wood county, Texas. E. A. Wendlandt and others. fold chart maps Am Assn Pet Geologists Bul 30:1830-56 N '46
King ranch riches multiply. Bsns W p22+ D 7 '46
Modal analyses of well cores from basement complex in west Texas. L. T. Patton. Am Assn Pet Geologists Bul 31:308-17 F '47
New Texas survey reveals gain in 1947 MER estimates. G. Weber. Oil & Gas J 46:40-1 Jl 12 '47
Possible big Clear Fork pool in west Texas. Oil & Gas J 46:167 O 18 '47
Some factors affecting success of south Texas workovers. H. N. Lyle. diags Oil & Gas J 46:130+ My 31 '47
Subnormal reservoir saturation, South Mayes field, Chambers county. O. L. Brace. map Am Assn Pet Geologists Bul 31:495-9 Mr '47
Unusual geology, with multiplicity of pay zones, features South Haldeman field. C. J. Deegan. maps diags Oil & Gas J 46:91+ Ag 23 '47
West Texas test finds thick pay. Oil & Gas J 46:117 O 4 '47
See also
Petroleum industry and trade—Texas

Trinidad

Application of the principles of clay chemistry to problems encountered when drilling in Trinidad clays. H. C. H. Darley. bibliog Inst Pet J 33:219-29 Ap '47

Turkey

Paleozoic-mesozoic section in southeastern Turkey. C. E. Tasman. map Am Assn Pet Geologists Bul 31:1500-2 Ag '47

United States

See also
Oil reserves (United States navy)
Petroleum industry and trade—United States
Petroleum supply—United States

Utah

Geology of the Green River desert-Cataract Canyon region, Emery, Wayne, and Garfield counties, Utah. A. A. Baker. bibliog U S Geol S Bul 951:106-20; pa $2 Supt. of doc. '46

Venezuela

Jungle surveys for oil exploration in eastern Venezuela. P. Charles. il map Eng N 138: 519-21 Ap 3 '47
Venezuela, no. 2 oil-producing nation. C. J. Deegan and P. Reed. bibliog maps diags Oil & Gas J 45:236+ D 28 '46

Washington (state)

Union Oil plans large program of exploration in Washington state. il map diag Oil & Gas J 46:64 Ag 30 '47

West Virginia

Future of oil in West Virginia. P. H. Price and others. map Oil & Gas J 46:104+ Ag 16 '47

Wyoming

Exceptional oil fields in Rocky Mountain region of United States. C. E. Dobbin. bibliog maps diags Am Assn Pet Geologists Bul 31:797-823 My '47
Oregon basin field, Park county, Wyoming. P. T. Walton. bibliog fold pl maps diags Am Assn Pet Geologists Bul 31:1431-53 Ag '47

PETROLEUM coke
Combustion of coke deposit on synthetic-bead cracking catalyst. W. A. Hagerbaumer and R. Lee. bibliog flow diag il diags A S M E Trans 69:779-83 O '47; Same. Oil & Gas J 45:76-8+ Mr 15 '47; Same. Pet Refiner 26:123-8 Je '47; Abstract. Pet Processing 2:308+ Ap '47
Delayed coking; pictured flowsheet, General petroleum corp's refinery. Chem Eng 54: 142-5 F '47
Delayed coking process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:130-1 Ap '47
Delayed coking unit processes residuum into gas oil charge for TCC unit. R. Maass and R. E. Lauterbach. flow diag il diags Pet Processing 2:11-16 Ja '47; Same. Pet Refiner 26:84-92 Ja '47; Same. Pet Eng 18: 110+ F '47; Same cond. Oil & Gas J 45: 44-7+ Ja 4 '47
Hydraulic decoking; abstracts. A. V. Welsh. Oil & Gas J 45:99 O 12 '46; Pet Processing 1:169 N '46
Thermal delayed coking process; Foster Wheeler corporation. flow diag il Pet Refiner (Process Handbook sec) 26:262-3 Ap '47

Analysis

Analyses of petroleum-coke ashes. R. C. Wells. In U S Geol S Bul 950:3-5 '46

PETROLEUM cooperative associations
Cooperative processing attacked in Cotton Valley suit. G. Weber. Oil & Gas J 46: 76+ Je 28 '47
Dissolution of Consumers cooperative assn. sought in Kansas state Supreme court action. Nat Pet N 39:16 Ap 16 '47
Kansas Supreme court holds co-op activities are authorized. Oil & Gas J 46:40 Jl 19 '47
Petroleum sales of 300 million gals. a year by 1951 set up as five-year goal of co-ops. Nat Pet N 38:17 N 27 '46
See also
International co-operative petroleum association

PETROLEUM corporation of America
Annual report. Comm & Fin Chr 165:578 Ja 27 '47

PETROLEUM distillation
Analysis of silica-alumina cracking catalysts; spectrographic determination of contaminants. R. A. Burdett and L. C. Jones, jr. bibliog Anal Chem 19:238-41 Ap '47
Aromatics from petroleum. H. Steiner. bibliog Inst Pet J 33:410-35; Discussion. 435-8 Jl '47
Atmospheric and vacuum distillation. flow diag Oil & Gas J 45:150 Mr 22 '47
Cadman lecture outlines fluid catalyst principle. R. P. Russell. Chem & Eng N 25: 1737 Je 16 '47
Calculation of relative volatility from boiling points. F. W. Melpolder and C. E. Headington. bibliog Ind & Eng Chem 39: 763-6 Je '47
Cascade-type tray introduces new fractionating principle. H. Litwin. flow chart il diags Oil & Gas J 45:237+ Mr 22 '47
Cat-cracked fuel oils; application to various burners. W. A. Sullivan. Nat Pet N 39:46+ Je 4 '47

PETROLEUM distillation—*Continued*
Cat cracking quiz; panel discussion, Western petroleum refiners assn. Pet Processing 2:425-6+ Je '47
Catalytic cracking still held way to meet higher octane numbers. W. Miller. Nat Pet N 39:40 F 26 '47
Combustion of coke deposit on synthetic-bead cracking catalyst. W. A. Hagerbaumer and R. Lee. bibliog flow diag il diags A S M E Trans 69:779-83 O '47; Same. Oil & Gas J 45:76-8+ Mr 15 '47; Same. Pet Refiner 26: 123-8 Je '47; Abstract. Pet Processing 2: 308+ Ap '47
Control of chemical reactions on a large scale; fluid catalyst process of oil refining; catalytic and gas-solid reactions. J. G. King. Chem Age (Lond) 56:795-7 Je 21 '47
Control of light hydrocarbon fractionators subject to variations in feed composition and quality. E. D. Mattix. flow diag diags Pet Refiner 26:130-4 S '47
Cost of catalytic cracking. W. L. Nelson. bibliog Oil & Gas J 46:87+ S 6 '47
Crude oil of England. J. S. Parker. flow sheet 2pls Inst Pet J 33:230-53 Ap '47
Distex hydrocarbon separation process. Chem Age (Lond) 56:838 Je 28 '47
Distillation properties of aromatic hydrocarbons. J. Griswold and J. A. May. bibliog il Pet Refiner 26:85-8 Mr '47
8000 b/d refinery converts thermal unit to catalytic cracking for $200-250/bbl; Leonard refineries, inc. W. F. Bland. flow diags diag Pet Processing 2:411+ Je '47
Filtrol fractionation process; Filtrol corporation. flow diag il Pet Refiner (Process Handbook sec) 26:148-9 Ap '47
Fractional distillation. R. R. White and W. T. Boyd. diags Pet Processing 1:151-5+, 230+, 319-22; 2:73-8, 147+, 228-32+, 371-3+, 862-7 O '46-Mr, My, N '47
Fractional distillation; patent. P. J. Gaylor. diag Pet Processing 1:187 N '46
Fractionation of petroleum. N. Mayer. bibliog flow sheet diags Pet Refiner 25:143-52 D '46
Fractionator pressure control. D. M. Boyd, jr. diags Pet Refiner 26:113-15 F '47
History, source, and general nature of asphaltic bitumen. A. J. Hoiberg. bibliog il diags Pet Refiner 26:77-83 Ja '47
Hydrocarbon absorption and fractionation process design methods. W. C. Edmister. bibliog diags Pet Eng 18:156+ My; 57+ Je; 39-44+ Jl; 49-54+ Ag; 130+ S; 19:200+ O '47 (to be cont)
Hydrocarbons in petroleum. F. D. Rossini. Chem & Eng N 25:230-3 Ja 27 '47
Hydrocarbons in the 102° to 108° C fraction of petroleum. A. R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38:621-6 Je '47
Increasing tower capacity by sacrificing fractionation. W. L. Nelson. diag Oil & Gas J 46:92+ Je 7 '47
Kitten cracker works out diet for commercial fluid units; Humble's pilot fluid catalyst cracking unit. il Pet Processing 2:518+ Jl '47
Laboratory low-temperature fractional distillation; optimum charging rates; samples analyzed by mass spectrometer. C. E. Starr, jr., J. S. Anderson and V. M. Davidson. bibliog Anal Chem 19:409-12 Je '47
Midget catalytic cracker starts operation at Detroit. A. L. Foster. flow diags il Oil & Gas J 46:80-1+ Ag 9 '47
Miscellaneous fractionating techniques. J. J. Cicalese and others. diags Am Pet Inst Proc 26(3):180-221 '46; Same. Pet Refiner 26:141-56 Ap; 127-43 My '47; Same abr. Pet Processing 1:296+ D '46; Excerpt. Oil & Gas J 45:90-1+ N 30 '46
Modern fluid catalytic cracking. E. Van Dornick. flow diag Pet Eng 18:149-50+ Ap '47
Naphthas from fluid catalyst cracking. C. E. Starr, jr., J. A. Tilton and W. G. Hockberger. bibliog Ind & Eng Chem 39:195-202 F '47
Naphthenic acids; boiling points and distribution in gas oil distillates. K. F. Coles. Inst Pet J 33:325-9 My '47
1947 process handbook. flow diags il Pet Refiner (Process Handbook sec) 26:97-297 Ap '47
Operating characteristics of Hypercal fractionating columns. P. L. Brandt and others. bibliog diag Am Pet Inst Proc 26(3):57-62 '46; Same. Oil & Gas J 45:86-8+ D 7 '46
Pipe-still outlet temperature. W. L. Nelson. Oil & Gas J 45:285 Ja 25 '47
Precise laboratory fractionating column. H. J. Hall and F. L. Jonach. bibliog il diags Am Pet Inst Proc 26(3):48-56 '46; Same. Pet Refiner 26:92-7 Ag '47
Product flexibility, low fuel consumption feature modernized Pemex refinery. R. O. Mena and others. flow diags il map Pet Processing 2:334-5+ My '47
Production of cresylic acids from petroleum. il diag Chem Ind 60:48-9 Ja '47
Properties of cracking catalysts. G. M. Webb and C. H. Ehrhardt. il Pet Processing 2:5-8 Ja '47
Regeneration of spent catalyst in fluid catalytic cracking. J. F. Snuggs. il diag A S M E Trans 69:785-8 O '47; Same. Oil & Gas J 45:88-91 Mr 15 '47; Same. Pet Eng 18:230+ Mr '47; Same. Pet Refiner 26: 107-10 Mr '47; Abstract. Pet Processing 2:311-12 Ap '47
Relationship of reflux to feed for a fractionating column. W. R. Pierce. bibliog Pet Refiner 26:92-7 S '47
Relative volatility method for calculating equilibrium-vaporization curves. D. A. Smith and G. W. Wilson. bibliog Am Inst Chem Eng Trans 42:927-37 O-D '46
Separation of oil gases. M. Ruhemann. bibliog diags Chem & Ind p347-50 Je 21 '47
Stopgap processes versus catalytic cracking; with cost data. D. Read. diags Pet Refiner 26:99-110 My '47; Same cond. Oil & Gas J 45:76-80+ My 3 '47
Superfractionation studies; composition and octane numbers of 0.5% fractions of an Oklahoma City naphtha. C. C. Ward, R. M. Gooding and B. H. Eccleston. diags Ind & Eng Chem 39:105-9 Ja '47
Suspensoid catalytic cracking at Imperial Oil's Sarnia refinery. C. H. Caesar. Oil & Gas J 46:69+ S 6 '47; Same. flow diag Pet Refiner 26:91-3 O '47; Same cond. Pet Processing 2:929-30 D '47
Symposium on high-temperature analytical distillation. C. R. Reed and others. il diags Am Pet Inst Proc 26(3):9-79 '46
Testing of cracking catalysts. M. E. Conn and G. C. Connolly. bibliog diags Ind & Eng Chem 39:1138-43 S '47
Thermal cracking. flow diag Oil & Gas J 45: 158 Mr 22 '47
Transfer-line pressure drop. W. L. Nelson. Oil & Gas J 45:171 F 22 '47
Universal Oil develops new cat cracker. flow diag Chem & Eng N 25:252 Ja 27 '47

See also
Houdry process
Oil shales—Distillation
Petroleum refining

Residuum

Factors affecting yields in thermal cracking of residue oils to liquid residues. G. Armistead, jr. bibliog Oil & Gas J 46:103-5+ My 17 '47
Thermal cracking of residual feed stocks to liquid residues. G. Armistead, jr. bibliog diags Oil & Gas J 45:94+ Ap 19 '47

Tables, calculations, etc.

Alignment chart for calculating allowable vapor velocity in plate towers. W. C. Frishe. Pet Refiner 26:110-11 Jl '47
Application of the log-log plot to fractionation problems. F. C. Fowler. Pet Eng 18: 57-8 S '47
Fractional distillation of multi-component mixtures; calculation of minimum reflux ratio. A. J. V. Underwood. bibliog Inst Pet J 31:614-26 O '46
Fractional distillation of ternary mixtures. A. J. V. Underwood. Inst Pet J 31:111-18; 32:598-613 Ap '45, O '46
Graphical method for distillation calculations. W. D. Harbert. Pet Processing 2:610+ Ag '47
Simplified charts for petroleum process calculations. E. G. Scheibel. bibliog diag Pet Refiner 26:94-102 Mr '47
Transfer-line vaporization. W. L. Nelson. Oil & Gas J 45:101 Mr 8 '47

PETROLEUM electric power association
Annual meeting, 18th, Tulsa. Oil & Gas J 45: 62 D 14 '46

PETROLEUM engineering
A.I.M.E. anniversary conference; abstracts of papers. Oil & Gas J 45:144-5+ Mr 22 '47
A.S.M.E. Tulsa meeting. Oil & Gas J 45:52 Mr 8 '47
American society of mechanical engineers, Petroleum division meeting, Houston, Oct. 5-8; abstracts of papers. Oil & Gas J 46: 147-8 O 18 '47
Creole's laboratory aids district operations and furnishes information to management. P. Reed. il Oil & Gas J 45:66-8 D 7 '46
Engineering characteristics of the Gulf Coast continental shelf; Marine construction. M. B. Willey and others. diag Oil & Gas J 46:130-1 O 18 '47
Engineering research; review of 1946. J. E. Sherborne. il Min & Met 28:103-4 F '47
Engineering techniques discussed by Standard (N.J.) groups. P. Reed. Oil & Gas J 45:81+ Mr 29 '47

See also
Petroleum—Production methods
Petroleum—Prospecting
Petroleum—Pumping
Petroleum—Well drilling
Petroleum distillation
Petroleum pipe lines
Petroleum refining

Bibliography
Classified list of important papers given during preceding year. Pet Eng (Ref annual) 18:308+ Jl 1 '47
1943-1945 supplement to the API bibliography on secondary recovery of oil. Am Pet Inst Proc 25(4):15-26 '45
1946 supplement to the API bibliography on secondary recovery of oil. Am Pet Inst Proc 26(4):65-75 '46

Power
Air-operated brakes successfully used in Gulf Coast drilling. E. H. Short, jr. il diag Oil & Gas J 45:78-9+ F 15 '47
A.c. auxiliaries for Diesel-electric drilling rigs. J. N. Poore. diags Oil & Gas J 46: 81+ Jl 12 '47
Application of internal-combustion engine power to rotary rigs. W. S. Crake. diags Oil & Gas J 46:180-2+ O 11 '47
Diesel electric barge rig, 2100-hp, designed to drill 15,000-ft. wells. K. M. Fagin. il Pet Eng 18:49-52 Ja '47
Flexibility of steam engines well suited to drilling. J. Zaba. Oil & Gas J 46:121 S 13 '47
Graphic method of selecting roller chain drives for multiple speed transmissions. W. Brown. Pet Eng 18:156+ N '46
Hydraulic drives in the oil fields. N. A. D'Arcy, jr. Pet Eng 18:90+ F '47
Mobile rotary drilling unit proves efficient in Rocky Mountain operations. N. Williams. il Oil & Gas J 45:50-1+ F 1 '47
Modern rotary drilling; compounding of engines and transmission equipment. J. Zaba. diags Oil & Gas J 46:155 O 18 '47
Modern rotary drilling; developments in electric power. J. Zaba. Oil & Gas J 46:117 Je 21; 107 S 6 '47
Modern rotary drilling; draw works. J. Zaba. Oil & Gas J 45:99 Ap 12 '47
Modern rotary drilling; effect of engine characteristics. J. Zaba. Oil & Gas J 45:103 Ap 5 '47
Modern rotary drilling; miscellaneous rotary-drive equipment. J. Zaba. diag Oil & Gas J 46:115 Ag 16 '47
Modern rotary drilling; power requirements. J. Zaba. Oil & Gas J 46:135 Ag 23 '47
Modern rotary drilling; steam-generating plants. J. Zaba. Oil & Gas J 46:105 Ag 30 '47
Modern rotary drilling; types of rotary drives. J. Zaba. Oil & Gas J 46:109 Ag 9 '47
New Diesel drilling-engine developments field tested; turbosupercharging and dual-fuel operation. G. F. Noltein. il diag Oil & Gas J 46:188-90+ O 11 '47
New Diesel-electric barge rig designed for routine drilling to 15,000 ft. il Oil & Gas J 45:59-60 Ja 11 '47
Nine-speed drilling rig air-operated. J. P. Van Vorst. il Pet Eng 18:184+ N '46
Refitted boiler barge; supplies power for drilling in Quarantine Bay field, Louisiana. E. H. Short, jr. il diags Oil & Gas J 45: 71-2 Mr 8 '47
Selection of multi-cylinder gas engines. F. E. Hummel. il diag Pet Eng 18:120+ Ap '47

See also
Electricity in the petroleum industry
Petroleum—Pumping, Electric
Petroleum pipe lines —Pumping stations, Electric

Radio communication
FM radio communication aids operation of rigs. K. M. Fagin. il diags Pet Eng 18: 174+ D '46

Reports
Improved field reports; idea chart. L. Lemmons. Oil & Gas J 46:98-9 S 6 '47

Safety measures
Knockoff device provides safety in operation. N. Williams. il diags Oil & Gas J 46:97+ S 6 '47
Safety on rotary rigs; 100 major check points. Oil & Gas J 46:136-7 O 11 '47
World's safest (or ideal) rig. G. H. Creighton. il Oil & Gas J 46:110-14 O 18 '47

See also
Petroleum industry and trade—Safety measures
Petroleum refineries —Safety measures

Study and teaching
Petroleum engineering schools. il Oil & Gas J 46:81+ S 6; 95+ S 13; 91 S 27; 66-7 O 4; 127-8 O 18; 74+ N 8 '47

Tables, calculations, etc.
Effect of the rude gravity on the performance of gas drive reservoirs. M. Muskat and M. O. Taylor. Pet Eng 18:88+ D '46
Petroleum conversion units. W. L. Nelson. Oil & Gas J 46:101 O 4; 203 O 11 '47
Petroleum engineer's continuous tables. Published in monthly numbers of Petroleum engineer
Predictions by electronics; oil-pool analyzer. J. Markus. il Sci Am 176:207-9 My '47
Reservoir volumes; barrels of free-gas space. J. C. Calhoun, jr. Oil & Gas J 46:125 O. 25 '47

PETROLEUM engineers
Petroleum engineer as a supervisor. T. C. Frick. Pet Eng 18:160+ Ja '47
What management expects of an engineer. A. C. Rubel. il Min & Met 28:188-91 Ap '47

PETROLEUM equipment industries
Future bright for oil field equipment. V. Bell. il Steel 121:57-9 Jl 7 '47
Oil-equipment price hikes below average, Journal survey shows. C. O. Willson. Oil & Gas J 46:58-9 Jl 5 '47

PETROLEUM geologists. See Geologists, Petroleum

PETROLEUM industry and trade
Complete oil-industry outlook reviewed by Texas association, 28th annual meeting, San Antonio, Oct. 16-17. Oil & Gas J 46: 68-9 O 25 '47
Develop markets abroad to absorb foreign oil output. J. C. O'Mahoney. Nat Pet N 39:16-17 Mr 19 '47
Increase of 16 per cent foreseen in world demand by 1950. E. Holman. Oil & Gas J 45:59 D 14 '46
Is it too late? B. Dewey. Chem & Eng N 25: 2430-1 Ag 25 '47
Looking forward in oil; world view. J. H. Pew. Am Pet Inst Proc 26(1):32-6 '46; Same. Comm & Fin Chr 164:2609+ N 21 '46
Oil industry's future. E. Holman. Comm & Fin Chr 165:3345+ Je 26 '47
Petro-chemicals, threat or promise? chemical and petroleum industries. H. W. Fisher; G. L. Parkhurst. Chem Eng 54:95 Jl '47
Petroleum demand continues to increase; staff report of 45th annual meeting of National petroleum association. Chem & Eng N 25:2904 O 6 '47
Petroleum industry in 1946. R. P. Russell. Chem & Eng N 25:86-7 Ja 13 '47
Petroleum industry in 1947. A. W. Peake. Comm & Fin Chr 165:1044 F 20 '47

PETROLEUM industry and trade—*Continued*
Positive action needed to combat state controls. R. T. Haslam. Oil & Gas J 46:55+ S 27 '47
Roundup of world oil activities. E. Adams. il Pet Eng 19:118+ O '47
Sees better oil outlook under free market. M. Thorpe. Comm & Fin Chr 164:3222 D 19 '46
World production gains outside U.S. more than offset losses. W. W. Burns. Oil & Gas J 45:157-8+ Ja 25 '47

See also
Electricity in the petroleum industry
Gasoline industry
Oil fuel industry
Petroleum laws and regulations
Petroleum supply
also American petroleum institute

Accidents

Accident-frequency rates. H. W. Boggess. Oil & Gas J 45:83 My 3 '47
Accident severity; injury index. H. W. Boggess. Oil & Gas J 46:105 Ag 23 '47
Increase in accident rates shown by A.P.I., Safety Council data. Oil & Gas J 46:54 N 1 '47
Oil industry accident rates show seven per cent increase. Nat Pet N 39:34-5 O 8 '47

See also
Petroleum industry and trade—Safety measures

Accounting

Chart of accounts used by Spartan petroleum under control system. Nat Pet N 38:26 N 27 '46

Costs

Huge building costs forced on oil industry. Barron's 27:8 Je 30 '47

Directories

Kansas petroleum directory, 1946. 134p pa $1.50 Petroleum records co, Box 487, Wichita, Kansas '46
Oklahoma petroleum directory 1946. 152p pa $3 Petroleum records co, Box 487, Wichita, Kan. '46

Equipment and supplies

Checking corrosion of oil well pipelines; abstract. N. Hackerman and D. A. Shock. Chem Eng 53:296+ N '46
Current and future supply of oil-country tubular goods. A. E. Walker. Oil & Gas J 46:81+ O 25 '47
Deep drilling in south Texas necessitates close attention to adequate facilities for handling mud. N. Williams. il Oil & Gas J 46:73-5 S 6 '47
Design and operation of swabs for oil wells. J. A. Wilson. il diags Pet Eng 18:72+ My '47
Development of wellhead equipment. J. E. Eckel. il Pet Eng 18:188+ D '46
Drilling equipment moves steadily toward goal of reduced hole costs. N. Williams. il Oil & Gas J 46:195-6 Jl 26 '47
Explosives find many uses in oil production. M. M. Kinley and J. Kinley. diags Oil & Gas J 46:83+ Je 7 '47
Field studies and data on corrosion problems in southeastern New Mexico. J. I. Laudermilk. il Oil & Gas J 45:105-6+ D 7 '46
Improved-recovery advances aided by specialized equipment and tools. K. B. Barnes. il Oil & Gas J 46:198-9 Jl 26 '47
Making a midget ad budget do the work of a giant; Acme fishing tool co. small-space campaign. J. H. Warburton. il Ptr Ink 220:62+ S 5 '47
Modern portable units in drilling and well servicing. H. S. Norman. il Oil & Gas J 45:77-8 N 30 '46
NPC committee on materials shortages sees foreign expansion as key to supply problem. Nat Pet N 39:14 Je 18 '47
Oil and gas equipment digest (cont). J. M. Spears. il diags Oil & Gas J 45:107-10 N 9 '46 [cont every other week]
Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47
Portland cements in the oil industry. N. C. Ludwig. Oil & Gas J 46:101-2+ Ag 9 '47
Report of Central committee on the standardization of oil-field equipment. diags Am Pet Inst Proc 25(4):105-315 '45
Report of Central committee on the standardization of oil-field equipment. diags Am Pet Inst Proc 26(4):168-367 '46
Rolling heavy rigs on wheels. G. Weber. il Oil & Gas J 46:58-9+ Ag 2 '47
Speed, efficiency, safety increased by new designs in heavy west Texas rig. G. Weber. il Oil & Gas J 46:76-8 Jl 5 '47
Test data on oil-field steels. H. N. Lyle. Oil & Gas J 46:97 Jl 19 '47
Use of formaldehyde to inhibit corrosion; injected into oil wells. J. A. Clay, jr. il diag Pet Eng 18:111-12+ N '46
Well-service units; list. E. A. Stephenson. Oil & Gas J 45:103 Mr 15 '47

See also
Airplanes in the petroleum industry
Drills, Oil well
Petroleum engineering—Power

Finance

Growth needs and costly replacements may check rise in oil industry dividends. R. E. Wilson. Barron's 27:25 My 26 '47
Oil company investors get small part of rise in profits because of mounting capital needs. Barron's 27:33 Ag 11 '47
32-company report reveals continued expansion of all phases of oil industry. F. J. Sansone. Oil & Gas J 46:74-6 My 24 '47

See also
Gulf oil corporation
Petroleum industry and trade—Securities

Fires and fire protection

Fire control methods learned in war; use of foam. R. B. Tuttle. il Oil & Gas J 45: 84-5+ Ap 19 '47
Pipe line fire protection. R. Sneddon. il Pet Eng 18:96+ Ap '47

See also Petroleum refineries—Fires and fire protection

International aspects

American oil industry and the world. P. H. Frankel. Nat Pet N 39:37-8 Je 25 '47
Anglo-American oil pact; hearing before Senate foreign relations committee. Nat Pet N 39:16 Je 4 '47
Charge by Swedes of Anglo-American cartel being studied by U.S. government officials. Nat Pet N 39:10-11 Ag 6 '47
Efforts to settle Romanian claim with Russia told by U.S. Oil & Gas J 46:42 Ag 2 '47
Foreign oil, I.P.A.A. forum. Oil & Gas J 46:55-6+ My 17 '47
Former official discloses U. S. wartime efforts to buy Arabian American. H. D. Ralph. Oil & Gas J 45:30-1 F 1 '47
French seek British court order against Jersey-Socony deal. W. W. Burns. Oil & Gas J 45:44-5+ Ja 18 '47
Importance of Middle East oil to the world demands that story of oil company accomplishments be told. Nat Pet N 39:19-20 F 19 '47
Legal opinion indicates Red line agreement still in force. W. W. Burns. Oil & Gas J 45:44 Mr 1 '47
Middle East deals legal, Jersey and Socony say as French company seeks to block them. Nat Pet N 39:19 Ja 15 '47
Out-of-court settlement sought in Cie. Francaise suit. W. W. Burns. Oil & Gas J 45:29 F 1 '47
Russia reported interested in joining projected international oil commission. W. W. Burns. Oil & Gas J 45:48-9 N 23 '46
Senate committee begins hearings on Anglo-American oil treaty. Oil & Gas J 46:36-7 Je 7 '47
South of the Caucasus; Russian moves in Persia. Economist 153:466-8 S 20 '47
Texas independents, Sinclair group present case against treaty. Oil & Gas J 46:91 Je 28 '47
Two worlds for oil. Bsns W p85-6+ Ap 5 '47
U.S., British oil concessions held safe whatever U.N. decides on Palestine issue. W. W. Burns. il Oil & Gas J 46:44+ O 4 '47

PETROLEUM industry and trade—International aspects—*Continued*
U.S. technical leadership, increasing demand, feature today's world oil outlook. C. O. Willson. il Oil & Gas J 46:114-16 My 31 '47
Vandenberg proposes amendments to Anglo-American treaty; hearings recessed. H. D. Ralph. Oil & Gas J 46:69-70 Je 14 '47
See also International cooperative petroleum association

Public relations

Address; public-relations problems of the oil industry; results of survey. C. Robinson. Am Pet Inst Proc 26(1):11-30 '46
A.P.I. urges all oil associations take part in pushing public relations program. Nat Pet N 38:15-16 N 20 '46
API's survey of public opinion about the oil industry. Nat Pet N 38:26-7+ N 13 '46
Century of public relations. R. C. Champlin. Nat Pet N 39:36-7 Mr 26 '47
83 named to API public relations operating groups in 5 districts. Nat Pet N 39:16 Ja 1 '47
Employe contest utilized to spread oil industry's story to the public. Nat Pet N 39:49 S 17 '47
Industry's public relations program enters new phase. Pet Eng 18:62 My '47
Oil's public relations campaign carried to public with ads in general magazines. il Nat Pet N 39:17 Jl 30 '47
Progressive public relations for the progressive petroleum industry. R. T. Haslam. il Am Pet Inst Proc 26(1):31-5 '46; Same abr. Oil & Gas J 45:44-5 N 23 '47
Public-relations forum. F. Eldean and others. Am Pet Inst Proc 26(1):117-47 '46
Public relations program of API begins to shape up; organization of five district committees. Nat Pet N 38:12-13 D 25 '46
Public relations program receives qualified support of jobber council. P. Wollstadt. Nat Pet N 39:11 F 12 '47
Public relations work book; public relation groups organized in seven districts. Nat Pet N 39:16-17 My 7 '47
Survey conducted by American petroleum institute on public's attitude toward the petroleum industry. Oil & Gas J 45:170-9 N 16 '46

Regulation

Vandeveer fears federal control in Majewski plan; program for scheduling of crude, co-ordination of transportation and allocation of product supplies. Nat Pet N 39:13-14 O 22 '47
See also Interstate oil compact commission; Petroleum laws and regulations

Safety measures

Closed vent system increases plant operating safety factor. R. G. Murray, jr. flow diag il Pet Refiner 26:94-8 O '47
Guard with goggles. H. W. Boggess. Oil & Gas J 46:89-90 S 6 '47
Safety color code for drilling rigs. W. B. Cox. Oil & Gas J 46:94+ Ag 9 '47
Safety program in Saudi Arabia. R. A. Coughlin. Pet Eng 18:190+ Ja '47
Tank ventilation. O. W. Johnson. Pet Eng 18:96+ N '46
Teamwork in safety cuts accident toll 82%; Shell pipe line corporation. H. H. Anderson. Safety Eng 92:20+ D '46

Securities

Appraising prospects for oils; with position of leading petroleum stocks. P. Dobbs. il Mag of Wall St 80:646-8+ S 13 '47
Changing status of oil stocks; with position of leading stocks. H. L. Blackburn. il Mag of Wall St 79:551-3+ F 15 '47
Diversified stake in dynamic oil industry; with thumbnail appraisals of leading companies. H. L. Blackburn. Mag of Wall St 80:90-2+ Ap 26 '47
Fuel industry in transition; with financial statistics on leading companies. H. S. Coffin. il Mag of Wall St 79:306-8+ D 21 '46

Statistics

Annual 1946 review and 1947 forecast. Oil & Gas J 45:136-58+ Ja 25 '47
Bulk of new oil reserves discovered in 1946 were additions to developed fields. H. J. Struth. Pet Eng 18:43-50 F '47
Bureau of mines revised forecast, 1947 United States supply and demand; table. Nat Pet N 39:12 Je 18 '47
Demand for oil products sets new records. Automotive Ind 97:152+ S 1 '47
Demand set at 3% higher in 1947 by oil compact's economics group. Nat Pet N 38:20-1 D 18 '46
Exploratory and development drilling; where it occurred and the results; tabulated by states. Oil & Gas J 45:241-2+ Ja 25 '47
Oil and gas exports for '46. Nat Pet N 39:56 My 14 '47
Petroleum almanac; a statistical record of the petroleum industry in the United States and foreign countries. 420p pa $4 National industrial conference board, 247 Park av, New York 17 '46
Reappraisal of the volumetric outlook for the petroleum industry for 1947. E. T. Knight and others. il Oil & Gas J 46:169-84 Jl 26 '47
Total of 299,146 stripper wells produced 230 million barrels in 1945. E. G. Dahlgren. Oil & Gas J 45:54-5 D 21 '46
United States production now exceeding that of war peak. Oil & Gas J 46:174-5 Jl 26 '47
World oil operations; production and refining. C. J. Deegan and W. W. Burns. maps Oil & Gas J 45:154-9 D 28 '46

War problems

Better handling of war's oil to be sought by ex-military. Nat Pet N 38:38+ N 6 '46
Handling of war oil one of peacetime's foremost problems. G. H. Vogel. Nat Pet N 39:16-19 Jl 2 '47
Simplify military petroleum supply functions. R. L. Webb. Nat Pet N 39:32+ O 8 '47

Alaska

Drilling problems in Alaska. K. M. Fagin. il maps Pet Eng 19:180+ O '47

Alberta

Alberta oil development; review of 1946. J. L. Irwin. il Can Min J 68:85-8 F '47
Half yearly Alberta oil review. J. L. Irwin. il Can Min J 68:731-3 O '47
Leduc oil field. J. L. Irvin. Can Min J 68: 569-71 Ag '47
Western Canada; exploration, development program. L. S. McCaslin, jr. il map Oil & Gas J 46:71+ Ag 30 '47

Appalachian area

Deep cable tool drilling in Appalachian area. H. W. Haupt. Pet Eng (Ref annual) 18: 72+ Jl 1 '47
Deep rotary drilling applied to the Appalachians. B. R. Miller. il Oil & Gas J 45:90+ Jl 6 '46; Same. Pet Eng (Ref annual) 18:75+ Jl 1 '47

Arabia

Former official discloses U. S. wartime efforts to buy Arabian American. H. D. Ralph. Oil & Gas J 45:30-1 F 1 '47
Global oil pattern develops; joint development of Saudi Arabia. Bsns W p19 D 21 '46
Letters show Moffett suggested expropriation to Arabian King. W. W. Burns. Oil & Gas J 45:51 My 3 '47
Out-of-court settlement sought in Cie. Francaise suit. W. W. Burns. Oil & Gas J 45:29 F 1 '47
Record use of aircraft features Arabian American operations. Oil & Gas J 46:47 Ag 2 '47
Safety program in Saudi Arabia. R. A. Coughlin. Pet Eng 18:190+ Ja '47
Texas co.'s Arabian venture begins to pay out. F. K. Nelson. Barron's 27:29 Jl 14 '47
World's largest oil deal pending in Arabian American negotiations. W. W. Burns. il maps Oil & Gas J 45:42-4+ D 21 '46

Arkansas

Haynesville water-injection program multiplies expected oil recovery. G. Weber. il map Oil & Gas J 46:80-1+ Je 21 '47

PETROLEUM industry and trade—*Continued*

Austria

Situation in Austrian industry, 1946. For Comm W 27:26 Ap 5 '47

Bahama islands

Midget aluminum spudder for drilling seismograph shot holes in Bahama islands. P. Reed. il Oil & Gas J 45:83 Ja 11 '47
Viewing the oil production, market potentials in Bahamas. W. C. Platt. il Nat Pet N 39:30-1+ Je 4 '47

Bolivia

Program for Bolivian oil fields. map Pet Eng 19:154+ O '47

Brazil

Brazil seeks crude self-sufficiency; more refineries planned. Oil & Gas J 45:46 N 23 '46
Brazilian activity; abstract. S. F. Abreu. Oil & Gas J 45:45-6 Ap 5 '46

California

California must import crude soon. D. Sweeney. map Nat Pet N 39:35 My 28 '47
New electrical logging techniques in California. J. C. Stick and others. diags Oil & Gas J 46:82-3+ My 17 '47
Pacific Coast petroleum industry. R. F. Faull and E. W. Gardiner. il Chem & Eng N 25: 2702-3 S 22 '47
Who's grabbing the oil-bearing tidelands off California? D. L. Sawyer. Min & Met 28: 19-20 Ja '47; Discussion. 28:170-1 Mr '47

Canada

Canada, 1947. F. K. Beach. il maps diags Pet Eng 19:68+ O '47

China

Chinese hold meager production despite patchwork equipment. H. Forman. il Oil & Gas J 46:48-9 My 10 '47

Colombia

Colombia urged to assist exploration; abstract. J. L. Kalb. Oil & Gas J 46:47 N 1 '47
Exploration in Colombia extends from the Caribbean to the Llanos. K. B. Barnes. map Oil & Gas J 46:44-6 Jl 12 '47
Modern camps, reservoir control feature Colombian operations. K. B. Barnes. il Oil & Gas J 46:62-4 Jl 5 '47
Report outlines economic position of Colombian oil industry. Oil & Gas J 46:61 S 27 '47

Colorado

Diamond-bit coring in the Rangely, Colorado field. N. Williams. il Oil & Gas J 45:48-50+ Ja 4 '47
Diamond coring at Rangely, Colorado. R. W. Stuart. il Pet Eng 18:43-8 Ja '47
Drilling costs lowered 25 per cent in Rangely field. N. Williams. il Oil & Gas J 45:150-1+ Ap 26 '47

Cuba

Conditions in Cuban industry and trade. For Comm W 26:28 Mr 8 '47

Ecuador

Ecuador has small but lively integrated petroleum industry. K. B. Barnes. il maps Oil & Gas J 46:46-8 Ag 30 '47
Oil search penetrates Ecuadorian jungle. R. Sneddon. il Pet Eng 19:144+ O '47

Ethiopia

Ogaden area considered Ethiopia's most favorable prospect. Oil & Gas J 45:44 My 3 '47

Europe

Europe's oil expectations under Marshall plan are revealed. H. D. Ralph. Oil & Gas J 46:37 O 4 '47

France

France projects large expansion of country's refining capacity. W. W. Burns. il Oil & Gas J 45:162-4 N 16 '46
French refining industry in process of repairing war-damaged properties. A. A. Martin. il maps Oil & Gas J 45:106-8 F 22 '47
Large-scale exploration program outlined for France. C. Dufresne. il Oil & Gas J 46:160-1 S 20 '47
Oil prospecting in southwest France. il map Pet Eng 19:106+ O '47

Germany

Crude-oil production, British zone. For Comm W 27:28 Je 14 '47
German geologists and geophysicists organize new society. Oil & Gas J 46:85 O 18 '47

Great Britain

British oil nationalization not likely. Nat Pet N 39:15-16 F 19 '47
British oil plan; Anglo-American co. expanding processing capacity. Bsns W p66 Ja 4 '47
British producers of petroleum chemicals seek new consuming outlets for their products. Chem Eng 54:210+ Jl '47
Petroleum interests in Great Britain plan large expansions in the field of chemicals. il Chem Eng 54:192+ Ap '47
Shell developments in U.K. and Holland. il Pet Eng 19:102+ O '47
Shell to expand its British chemical facilities. il Bsns W p102 Mr 29 '47

Gulf Coast region

Guide to Gulf Coast oil; map showing location of fields, refineries, shipping terminals, natural gasoline and cycling plants. Oil & Gas J 46:supp My 31 '47
Gulf Coast Golconda. L. A. Luther. il Comp Air Mag 52:66-70 Mr '47
Gulf Coast section. il maps plans diags Oil & Gas J 46:124-30+ My 31 '47
Larger drill pipe results in greater speed in drilling Gulf Coast wells. E. H. Short, jr. Oil & Gas J 45:147+ F 22 '47

Hawaiian Islands

Contractor runs rotary rig at 460-ft. underground location in Hawaii. il Oil & Gas J 46:134 O 11 '47

Hungary

Control of Maort is assumed by Hungary. Oil & Gas J 46:61 Ag 9 '47
Hungary's 1946 production 5,145,342 bbl.; down 1.3 million from 1943 high. il Oil & Gas J 46:66-7 My 24 '47

India

India oil market potential appears unlimited in future. C. B. Marshall. Nat Pet N 39:28 O 15 '47

Iraq

Legal opinion indicates Red line agreement still in force. W. W. Burns. Oil & Gas J 45:44 Mr 1 '47

Italy

End of the U.N.R.R.A. leaves Italy searching for oil supplies. Oil & Gas J 45:42-3 Ap 5 '47
Italian companies hope for early end to wartime restriction. W. W. Burns. il Oil & Gas J 46:64-5 Je 21 '47
Italian oil industry soon to resume on expanded scale. A. Giordano. il Oil & Gas J 45:210+ D 28 '46
New agreement to aid rebuilding of Italian refineries. Oil & Gas J 45:160 N 16 '46
Operations in Italy; abstract. C. Wiedenmayer. Oil & Gas J 45:45 Ap 5 '47

Japan

Japanese oil industry during 1945 and 1946; table. For Comm W 27:21 My 31 '47
Petroleum and products important to Japan's postwar economy. W. W. Burns. il Oil & Gas J 45:70-1 Ap 19; 45-6 My 3 '47

Kansas

Reservoir performance and well spacing, Silica Arbuckle pool, Kansas. L. F. Elkins. map diags Oil & Gas J 45:201+ N 16 '46

Louisiana

Gulf leasing foreshadows much drilling. K. M. Fagin. map Pet Eng 18:49-52 My '47
Haynesville water-injection program multiplies expected oil recovery. G. Weber. il map Oil & Gas J 46:80-1+ Je 21 '47

PETROLEUM industry and trade—Louisiana—*Continued*
Specially designed workover barges meet multiplicity of operational requirements. E. H. Short, jr. il Oil & Gas J 46:62-3+ My 10 '47
Texas co. sets new world depth record for producing well 13,904 ft. il Oil & Gas J 46:54-5 Ag 30 '47

Maryland
Standard Oil drilling on Maryland shore. Manuf Rec 115:58 N '46

Mexico
Limited private concession contract granted Mexican national. Oil & Gas J 45:144 D 28 '46
Mexican Eagle compensation. Economist 153: 417-18 S 6 '47
Mexico today. B. Irizarry and W. Rives. il map Oil & Gas J 45:42-4 N 2; 42-4 N 9 '46
Organization and operation of refining division of Petroleos Mexicanos. C. L. Corcuera. flow diags il Oil & Gas J 45:228+ D 28 '46
Product flexibility, low fuel consumption feature modernized Pemex refinery. R. O. Mena and others. flow diags il map Pet Processing 2:334-5+ My '47
Production and exports; selected figures, 1942-1946. For Comm W 27:29 Je 14 '47

Mississippi
Problem of lifting oil at Brookhaven field. N. Williams. il map Oil & Gas J 46:94-7+ Je 14 '47

Near East
11 companies organize for Middle East development. D. P. Thornton, jr. Nat Pet N 39:15 Ag 20 '47
Foreign oil operations marked by uncertainties and hidden costs. J. T. Duce. il Oil & Gas J 46:160-1+ Jl 26 '47
Great oil deals. il maps Fortune 35:138-43+ My '47
Independent company seeks grant in neutral zone, Yemen. Oil & Gas J 46:44-5 Ag 30 '47
Jersey statement tells story of Middle East oil history, policy. map Nat Pet N 39:12-15 Mr 19 '47
Middle East set to become no. 2 world oil producer. R. McKee, jr. Nat Pet N 39:36+ Jl 23 '47
New developments indicate scope of vast expansion due in Middle East. W. W. Burns. il Oil & Gas J 46:76-7 Je 14 '47
Oil companies expand enormously in Near East; pioneering work in Arabia on eve of paying huge dividends. map Barron's 27:7-8 Ap 14 '47
Oil politics. map Economist 152:1-3 Ja 4 '47
Saudi Arabia and Kuwait expansion features Middle East development. il Oil & Gas J 45:171+ D 28 '46
Senate opens Middle East inquiry following Moffett's charges. H. D. Ralph. Oil & Gas J 45:36-7 Ap 5 '47
Struggle for Middle East oil. H. De Leeuw. Comm & Fin Chr 165:1781+ Ap 3 '47

Netherlands
Shell developments in U.K. and Holland. il Pet Eng 19:102+ O '47

Netherlands Indies
N.E.I. refinery repaired. Pet Eng 19:153 O '47
Rehabilitation in the Netherlands East Indies oilfields. Pet Eng 18:138+ N '46

New Mexico
Field studies and data on corrosion problems in southeastern New Mexico. J. I. Laudermilk. il Oil & Gas J 45:105-6+ D 7 '46
Inventory of gas-drive projects in west Texas and New Mexico. L. Flood. Oil & Gas J 45:94-6 Ap 12 '47

Oklahoma
Deepest well in the world is drilling below 17,000 ft. in Caddo county. K. M. Fagin. il Pet Eng 18:55-8 Mr '47
Fast pace being set in Cotton county development. P. Reed. il maps Oil & Gas J 45:64-6 N 23 '46
Production almost doubled since 1941 in southwestern Oklahoma. C. J. Deegan. map Oil & Gas J 46:99-100 Je 14 '47
Proposed unitization and pressure maintenance may treble oil production in West Cement pool. K. B. Barnes. map diags Oil & Gas J 45:80-1+ D 7 '46
Secondary-recovery practices and oil reserves in the eastern part of the Delaware-Childers field, Nowata county. K. H. Johnston and C. H. Riggs. bibliog 28pls U S Bur Mines Rep of Invest 4019:1-50 '46
Unitization program for West Cement Medrano. K. M. Fagin. map Pet Eng 18:160+ F '47
West Edmond unitization application filed; hearing scheduled for March 18. E. G. Dahlgren. Oil & Gas J 45:42+ F 8 '47
West Edmond's unitization and gas injection project would be one of largest. K. B. Barnes. Oil & Gas J 45:70-1 D 14 '46

Pacific coast
Economics of the Pacific Coast petroleum industry. J. S. Bain. 3v 221p; 438p; 130p bibliog(v2 p435-6, v3 p125-7) v 1 $2.75; v 2 $6; v 3 $3 Univ. of Calif. press, Berkeley 4 '44-'47

Palestine
Expansion at Haifa refinery to result in capacity of more than 100,000 bbl. daily. il Oil & Gas J 45:42-3 Mr 8 '47

Paraguay
Union Oil stepping up exploration work in Paraguay's Chaco. maps Oil & Gas J 45: 32+ Ja 4 '47

Pennsylvania
Bradford celebrates 75th anniversary of opening of oil field. Iron Age 158:150 N 21 '46

Persia
Anglo-Iranian oil company, limited; statement by the chairman at ordinary general meeting. W. Fraser. Economist 153:174 Jl 26 '47
Baku decline seen as reason for Soviet-Iranian deal. Oil & Gas J 46:70 S 13 '47
Iran's benefits from oil; A.I.O.C.'s record of achievement. W. W. Burns. il Oil & Gas J 46:68-9 S 13 '47
Second major Middle East deal disclosed; Jersey, Socony to buy Iranian crude. W. W. Burns. il Oil & Gas J 45:30-1 Ja 4 '47
South of the Caucasus; Russian moves in Persia. Economist 153:466-8 S 20 '47

Peru
Consumption, production, and exports, 1945 and 1946. For Comm W 27:24 Je 7 '47
Peru; oil report. K. B. Barnes. il maps Oil & Gas J 46:46-8+ S 6 '47

Poland
Statistical data on Poland's petroleum industry for 1945 and 1946. For Comm W 27:24 Je 7 '47

Rocky Mountain region
Deep drilling in the Rocky Mountain region. N. Williams. il Oil & Gas J 45:61-2+ F 8 '47
Drilling-mud problems of the Rocky Mountain region. D. D. Varnell and W. B. Kimbrell. il Oil & Gas J 46:186 O 11 '47
Mobile rotary drilling unit proves efficient in Rocky Mountain operations. N. Williams. il Oil & Gas J 45:50-1+ F 1 '47

Rumania
Russian-Romanian partnership; abstract. R. P. Walters. Oil & Gas J 45:44-5 Ap 5 '47
Struggle for Rumania's oil. Economist 151: 1052-3 D 28 '46

Russia
Baku decline seen as reason for Soviet-Iranian deal. Oil & Gas J 46:70 S 13 '47
Indigenous production in Russia insufficient to meet demands. W. W. Burns. il Oil & Gas J 46:86+ O 18 '47
U.S.S.R. needs equipment to maintain its present operations and provide for future expansion. W. W. Burns. il Oil & Gas J 45:179+ D 28 '46

PETROLEUM industry and trade—*Continued*

Saskatchewan

Review of mining in Saskatchewan, 1946. C. A. L. Hogg. Can Min J 68:89-92 F '47

South America

Oil described as no. 1 opportunity in South America. K. B. Barnes. Oil & Gas J 46:113 My 31 '47

Southern states

Petroleum and coal products; South's fourth largest industrial group. C. R. Walker. Manuf Rec 116:40+ Je '47

Sweden

Sweden shifting to oil economy. G. Egloff. Oil & Gas J 45:44-5 F 8 '47

Swedish oil imports will grow in shift from coal. G. Egloff. Nat Pet N 39:40 F 12 '47

Texas

Calculated effect of pressure maintenance on oil recovery in Fullerton field, west Texas. R. L. Hoss. Oil & Gas J 45:58+ Ja 4 '47

Conditions encountered in drilling south Texas' deepest test. N. Williams. il Oil & Gas J 46:73+ Je 7 '47

Deep drilling in south Texas necessitates close attention to adequate facilities for handling mud. N. Williams. il Oil & Gas J 46:73-5 S 6 '47

11,667 productive acres repressured in West Pampa cooperative project. K. B. Barnes. il map Oil & Gas J 45:66-7+ N 9 '46

Expanded plant at West Pampa plays dual role; extracts gasoline, provides repressuring service. A. L. Foster. flow chart il Oil & Gas J 45:72-4+ N 9 '46

Hard-rock drilling in the Permian basin; with cost data. D. Johnston. diag Oil & Gas J 45:62-4+ Ap 5 '47

Hawkins field, Wood county, Texas. E. A. Wendlandt and others. fold chart maps Am Assn Pet Geologists Bul 30:1830-56 N '46

Inventory of gas-drive projects in north Texas. L. F. Peterson. map Oil & Gas J 45:91-2 Ap 12 '47

Inventory of gas-drive projects in west Texas and New Mexico. L. Flood. Oil & Gas J 45:94-6 Ap 12 '47

Modern seismic techniques applied to geophysical exploration in west Texas. S. Harris. il map diag Oil & Gas J 46:60-3 Jl 19 '47

Nature of multipay zones in Fullerton field necessitates care in selection of completion methods. G. Weber. diags Oil & Gas J 45: 63-4+ F 8 '47

Packer problems in west Texas. T. H. Dwyer. diag Oil & Gas J 45:92-6 Ap 5 '47

Paraffin removal in south Texas. E. F. Bowers and H. Renfro. il Oil & Gas J 46:134-5+ My 31 '47

Pressure maintenance at Richard King designed to handle approximately 3,000,000 cu. ft. of gas daily. N. Williams. il diags Oil & Gas J 45:76-7+ F 15 '47

Reverse-circulation drilling proves practical in west Texas. G. Weber. il Oil & Gas J 46:147-50 O 11; 70+ N 8 '47

Six-year history of Rincon pressure maintenance. N. Williams. il plan Oil & Gas J 46:80-1+ My 24 '47

South Texas giant; second largest oil and gas field; largest condensate reservoir. C. J. Deegan and N. Williams. il maps Oil & Gas J 45:60-4 N 9 '46

Water locator successfully used in Permian basin workover programs; electro-chemical method. L. S. McCaslin. il diag Oil & Gas J 46:77+ S 6 '47

Wider adoption, closer study urged for secondary recovery in Texas. G. Weber. Oil & Gas J 45:63+ Mr 15 '47

Yates after 20 years. G. Weber. il Oil & Gas J 45:56-8 D 21 '46

Transjordan

Convention provisions between Trans-Jordan and Petroleum development (Trans-Jordan) ltd. For Comm W 28:25 Ag 9 '47

Trinidad

Restoration of war-drained reserves occupies Trinidad leaseholds. map Oil & Gas J 45: 45-6 Ja 11 '47

United States

American oil industry and the world. P. H. Frankel. Nat Pet N 39:37-8 Je 25 '47

Developments in the petroleum industry. E. R. Smoley and T. T. Whipple. il diag Mech Eng 69:293-9 Ap '47

Field name, county, location, and initial production of discovery wells; listed by states. Oil & Gas J 45:200+ Ja 25 '47

Higher crude production improves outlook; abstract. A. J. McIntosh. Oil & Gas J 46: 53 Ag 2 '47

Looking ahead. R. T. Zook. Am Pet Inst Proc 26(1):77-81 '46

Looking forward in oil. E. Holman. Am Pet Inst Proc 26(1):71-6 '46

No oil shortage ahead. A. J. McIntosh. Comm & Fin Chr 166:341 Jl 24 '47

Oil industry needs both large and small companies. R. G. Dunlop. Oil & Gas J 46: 154 S 20 '47

Oil production outlook. E. Holman. Comm & Fin Chr 164:2895+ D 5 '46

Oil prospects, now and in years to come. M. L. Farrell; S. G. Ebert. Barron's 27:3+ Ja 20 '47

Oil's recurrent crises. Bsns W p 19 Ag 30 '47

Period of great expansion forseen for oil industry in next 20 years; viewpoints of industry leaders. Nat Pet N 38:24-7 D 25 '46

Petroleum firm organized for foreign operations; American independent oil company. Oil Paint & Drug Rep 152:5+ Ag 25 '47

Petroleum industry. W. R. Boyd, jr. Comm & Fin Chr 166:230 Jl 17 '47

Petroleum industry; review of 1946. H. F. Beardmore and others. Min & Met 28:96-105 F '47

Present crude prices adequate in most cases. E. Holman. Nat Pet N 39:14-15 Je 25 '47

President's address before American petroleum institute. W. R. Boyd, jr. Am Pet Inst Proc 26(1):39-41 '46

United States production now exceeding that of war peak. Oil & Gas J 46:174-5 Jl 26 '47

What kind of job have we done? R. H. Taylor. Am Pet Inst Proc 26(1):61-5 '46

See also

American petroleum institute

Cities service company

Gulf oil corporation

Antitrust suit

Cotton Valley oil trust suit filed. Oil Paint & Drug Rep 151:82 Je 23 '47

Exclusive-dealer contracts target of California antitrust suit. H. D. Ralph. Oil & Gas J 45:39-40 Ja 11 '47

Second exclusive dealing suit filed on West coast; Richfield oil corp. named in antitrust action. D. Sweeney. Nat Pet N 39:13 My 7 '47

Socal antitrust suit seen forerunner of other actions; with text of the exclusive dealing complaint. Nat Pet N 39:11, 41-3 Ja 8 '47

Sun raps DJ in API suit as jury probe of West coast prices looms. Nat Pet N 39:16 Je 18 '47

Foreign properties

Control of Maort is assumed by Hungary. Oil & Gas J 46:61 Ag 9 '47

Texas co.'s Arabian venture begins to pay out. F. K. Nelson. Barron's 27:29 Jl 14 '47

World's largest oil deal pending in Arabian American negotiations. W. W. Burns. il maps Oil & Gas J 45:42-4+ D 21 '46

Uruguay

ANCAP refinery at Montevideo, Uruguay. M. Cratzmar. il Pet Eng 19:61-2+ O '47

Venezuela

Chemical well treating shows good results in Venezuela. C. W. Fowler. il Oil & Gas J 45:214+ D 28 '46

Deep water drilling on Lake Maracaibo. P. Reed. il Oil & Gas J 45:56+ Ja 18 '47

Eastern Venezuela; status; report on operations. K. B. Barnes. il map Oil & Gas J 46:62-4+ Ag 23 '47

Maracaibo and adjoining areas world's largest producing, refining concentration. K. B. Barnes. il map Oil & Gas J 46:44-6 Ag 2 '47

PETROLEUM industry and trade—Venezuela—*Continued*
Phillips begins expanded development program in Venezuela. Oil & Gas J 45:40 N 9 '46
Pressure maintenance and gasoline absorption plant, Santa Barbara field, Venezuela. H. M. Russell and E. Moncrief. flow diags il Oil & Gas J 45:164-8 D 28 '46
Rising production, new refineries top Venezuelan developments. il Oil & Gas J 46: 72+ O 25 '47
Roads to riches in Venezuela; new roads being built by oil companies. E. J. Cleary. il map diag Eng N 138:432-6 Mr 20 '47
Royal Dutch-Shell group expands operations. il Oil & Gas J 45:62+ Ap 12 '47
Series cementing in Venezuela's Quiriquire field. P. Reed. il diags Oil & Gas J 45:220-1+ D 28 '46
Shelter and sanitation facilities for a tropical oil camp. E. J. Cleary. il map Eng N 138:814-19 My 15 '47
Small oil marketing firms defy hazards of future and bid for Venezuelan oil. Barron's 27:12 S 1 '47
Venezuelan discovery rate tops production. A. T. Proudfit. Oil & Gas J 45:40 Mr 8 '47

Western states

Chemical consuming industries; Pacific progress references. Chem Eng 54:110-11 S '47

PETROLEUM laboratories
Creole's laboratory aids district operations and furnishes information to management. P. Reed. il Oil & Gas J 45:66-8 D 7 '46
Features of new cold storage and blending laboratory; U.S. Bureau of mines petroleum experiment station, Bartlesville. il Oil & Gas J 46:78+ Ag 2 '47
Fuel research by mass production methods; Ethyl corp., Detroit laboratories. il Pet Processing 2:57-9 Ja '47
Mass spectrometer and the control laboratory. D. Milsom. diags Pet Refiner 26: 83-8 O '47
Oil and automobile technologists attend Ethyl laboratory open house. A. L. Foster. il Oil & Gas J 45:57 N 23 '46
Petroleum industry in the Chicago area. G. Egloff. Western Soc E J 52:16-27 Mr '47
Precise laboratory fractionating column. H. J. Hall and F. L. Jonach. bibliog il diags Am Pet Inst Proc 26(3):48-56 '46; Same. Pet Refiner 26:92-7 Ag '47
Research laboratories for Yacimientos petroliferos fiscales, Argentina. il plan diags Arch Forum 86:108-9 F '47
Shell's million-dollar research center taking shape in Houston. il Oil & Gas J 45:40 Mr 1 '47
Thousands of samples from oil wells analyzed as aid in refining operations; Gulf laboratories. H. G. Smith. il Oil & Gas J 46: 265+ Jl 26 '47
YPF research laboratory in Florencio Varela, Argentina. il plans Arch Rec 101:66-73 Mr '47

Equipment

Glass-blowing art in petroleum research. W. E. Barr. il Pet Refiner 26:103-6 F '47
Modern constant-temperature bath. M. R. Cannon and K. J. Heidrich. il diag Pet Refiner 26:123-5 F '47
Uniform gaskets can be cut quickly and accurately from vinylite plastic tubing. A. B. Kourt. il diags Pet Processing 2:350 My '47

PETROLEUM laws and regulations
DJ Cotton Valley suit raises question of state law's scope. Nat Pet N 39:40-1 S 3 '47
International law vs. U.S. law enters California tidelands case. Nat Pet N 39:18 Mr 19 '47
Spacing, pooling, and field-wide unitization. R. M. Myers. Pet Eng 18:64+ My '47

Colombia

Tropical expected to continue to manage De Mares concession after 1951. il Oil & Gas J 46:44+ N 1 '47

Peru

Peruvian president urges approval of new petroleum law. Oil & Gas J 46:44 S 6 '47

United States

Court confirms tidelands ruling. Oil & Gas J 46:36 N 1 '47
Government files proposed decree in tidelands case. Oil & Gas J 46:153 S 20 '47
Government plans for tidelands administration awaited; decision held threat to property rights. Oil & Gas J 46:71 Jl 5 '47
High court rules for U.S. in tidelands controversy. R. E. Bjorkback. Nat Pet N 39: 16 Je 25 '47
U.S. wins tidelands case in far-reaching decision. Oil & Gas J 46:74 Je 28 '47

PETROLEUM libraries
Information service and the petroleum industry. B. H. Weil. bibliog Pet Refiner 26: 152+ F '47

PETROLEUM patents. See Petroleum—Production methods—Patents; Petroleum refining—Patents

PETROLEUM pipe lines
Big-Inch future vague; WAA tells committee all bids rejected. H. D. Ralph. Oil & Gas J 45:38+ N 30 '46
California Standard's 18-in. San Joaquin line shipping 125,000 b/bl. crude daily. il map Oil & Gas J 46:201-2 S 20 '47
Disposition of surplus property with regard to use of Big and Little Inch. E. O. Thompson. Gas Age 99:21-2 Ja 9 '47
Equipment for increasing effectiveness of pipe-line operation. P. Reed. il Oil & Gas J 45:86-7 F 8 '47
Experience with wax in the Stanpac line. il map diags Pet Eng 18:98+ My '47
Gas for the East; Texas eastern co. to get full control of Big Inches. Bsns W p28+ O 18 '47
Gas through Inch lines to open new markets. R. M. Bleiberg. Barron's 27:27-8 Mr 24 '47
Great Lakes pipe line extension. F. H. Love. il Pet Eng 18:82+ D '46
Highest bid for Inch pipe lines made by Texas eastern transmission co. Am Gas J 166:50 Mr '47
Humble starts operations on 276-mile pipe line. il Manuf Rec 115:48+ N '46
Ickes, on stand at Inch hearing, attacks leasing to Tennessee co. Nat Pet N 38:14-15 D 4 '46
Industry moving to meet new geographical demand shifts. R. B. Tuttle. Oil & Gas J 46:195 S 20 '47
Inflated postwar demand at root of pipe-supply difficulties. W. F. McConnor. Oil & Gas J 46:78-9 Je 28 '47
New Shell-Texas line to increase Middle West crude-oil supplies. P. Reed. map Oil & Gas J 46:56 Ag 23 '47
1947, pipe line industry's banner year. F. H. Love. Pet Eng 18:121-2 Mr '47
Oil-gas fight on Inch lines goes to Congress; WAA asks quick sale. Nat Pet N 39:14 Ja 8 '47
Orifice meters in oil pipe line service. Pet Eng 18:204+ Mr '47
Pipe lines play big role in nation's economic reconversion; arc welding operations. R. H. Davies. il Pet Eng 18:182+ Mr '47
Recent developments in pipe-line technology. H. H. Anderson. Am Pet Inst Proc 26(5): 20-5 '46; Same. Pet Eng (Ref annual) 18: 252+ Jl 1 '47; Same cond. Oil & Gas J 45: 241+ N 16 '46
Report of committee on the standardization of oil-country tubular goods. diags Am Pet Inst Proc 25(4):151-214 '45
Report of committee on the standardization of oil-country tubular goods. diag Am Pet Inst Proc 26(4):209-33 '46
Report of tests on 2-in. line-pipe joints. G. McConnell. il Am Pet Inst Proc 26(4):248-52 '46
Review of 1947 construction; forecast for coming years. P. Reed. Oil & Gas J 46: 185-6+ S 20 '47
Submarine pipe lines at Ventura. F. E. Coyle and others. il diag Pet Eng 18:216+ Mr '47
Texas-Eastern Transmission tops bidders for Inch lines. D. L. Harbour. Nat Pet N 39: 9-11 F 12 '47
Those troublesome Inch pipe lines. J. J. Hassett. Pub Util 38:796-809 D 19 '46
28,000 miles of pipe line announced for 1947-49. P. Reed. Oil & Gas J 46:211+ Jl 26 '47
U.S. products pipelines expand. E. Lamm. il Nat Pet N 38:27+ D 4 '46

PETROLEUM pipe lines—*Continued*
Wanted, six million tons of steel for pipelines to be built in next few years. D. I. Brown. il map Iron Age 160:113-17 O 9 '47
WAA announces sale of Big Inch to Texas Eastern Transmission. Oil & Gas J 45:101 F 22 '47
WAA awaits end of probe before acting on Inch lines. D. L. Harbour. Nat Pet N 38: 11-12+ N 27 '46
WAA gets Congress' ok for disposal of Inch lines. Nat Pet N 39:9 F 5 '47
Widespread pipe-line expansion under way. P. Reed. Oil & Gas J 45:165-6 Ja 25 '47

Accounting
Mechanized accounting streamlines pipe line concern's paper work. Pet Processing 2:49-50 Ja '47

Construction
Arabian line presents unusual problems. R. Sneddon. il map Pet Eng 19:92+ O '47
Changes in pipe line construction methods. T. A. Hester. Pet Eng 18:174+ Ag '47
Magnolia's, 20 in. crude-oil line, longest in 1947. P. Reed. il Oil & Gas J 46:170-3 S 20 '47
Pipe-line construction making rapid advances toward assembly-line efficiency. il Oil & Gas J 46:242-3+ S 20 '47

Failures
Control of oil lines in watershed areas. D. N. Fischel. Am Water Works Assn J 38:1285-8 N '46

Finance
Record expansion under way; with financial data. J. E. Boice. Oil & Gas J 46:228+ S 20 '47

Gathering lines
Automatic equipment in gathering systems. G. B. Randels. il Oil & Gas J 45:57 Ja 4 '47

Location
Continuous-strip right-of-way photography. Oil & Gas J 46:227 S 20 '47

Maintenance and repair
Improved maintenance and operating methods of Magnolia pipe line. P. Reed. il Oil & Gas J 45:68+ N 30 '46
Inspector's job in pipe line reconditioning. F. H. Love. il Pet Eng 18:208+ Mr '47
Pigs seal pipe ends during cutting operations. P. Reed. il diag Oil & Gas J 45:143-4 Mr 29 '47
Safety-weld coupling on pipe-line maintenance work. J. B. Smith. il diags Oil & Gas J 46:193-4+ S 20 '47

Maps
Pipe-line construction, crude oil and products, 1947. Oil & Gas J 46:184-5 S 20 '47
U.S. products pipeline system; old, new, projected and rumored lines. Nat Pet N 38: 32-3 D 4 '46

Multiple fluid lines
Contamination control in products pipe lines. E. A. Birge. plan diag Oil & Gas J 46:176-9+ S 20 '47
Delaware River crossing laid in three-line sections. C. W. Shaeffer. il Oil & Gas J 46:182-3 S 20 '47
Early pipe-line batching. E. A. Birge. Oil & Gas J 46:269 S 20 '47
Wyco products pipe-line system is designed for Rocky Mountain service. il map Oil & Gas J 46:205-6 S 20 '47

Protection
Experience with underground lines. M. C. Alcorn. Pet Eng 18:130+ Mr '47
Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47
Use of corrosion inhibitors in products pipe lines. I. M. Parker. bibliog Am Pet Inst Proc 26(5):26-36 '46; Excerpt. Oil & Gas J 45:255-6+ N 16 '46

Pumping stations
Airplane engines used in pipe line service. il Pet Eng 19:192 O '47; Same cond. Nat Pet N 39:36 O 1 '47
Automatic control on Portland-Montreal pipe line. C. D. Batchelder and R. A. Rockwell. il diag Oil & Gas J 46:74-6+ S 27 '47
Equipment features of two Gulf pipe-line pump stations. P. Reed. il diag Oil & Gas J 45:72-3 Ja 11 '47
High speed oil; pumping station at McCrae, Pa. il map Diesel Power 25:75-7+ O '47
Special levee system protects pump station. D. Jones. il Oil & Gas J 46:219+ S 20 '47

Pumping stations, Electric
Advanced design features of new pump station; Texas-New Mexico pipe line. P. Reed. il plan Oil & Gas J 45:82+ D 14 '46
Magnolia's electric centrifugal pump stations designed for 20-in. crude-oil line. plan diag Oil & Gas J 46:215-16 S 20 '47
Use of variable capacity plunger pumps with electric motors for pipe lines. B. F. Thompson. Pet Eng 18:128+ F '47

Terminals
Humble dedicates products terminal. W. J. Davis. il Pet Eng 18:152+ N '46
Mercury switch smooths loading at Sinclair's new terminal in Detroit. W. C. Uhl. il diags Nat Pet N 39:24+ Mr 12 '47
Proportioning valves speed blending of gasoline, eliminates mixing tanks at pipe line terminal. diags Pet Processing 2:128+ F '47
Selecting storage tanks for pipe line service. D. A. Leach. il diags Pet Eng 18:49-51 Je '47
Terminal construction expected to exceed that of bulk plants by ratio of 4 to 3. H. Ridder. il map Nat Pet N 39:31+ Ap 2 '47

India—Burma—China
Railroad tunnels, submarine sections, climate pose rugged pipe-line problems; India-Burma-China products line. P. Reed. il diags Oil & Gas J 45:60-1+ Mr 8 '47

Mexico
Mexico today; refining, pipe-line activities. il Oil & Gas J 45:42-4 N 9 '46

Near East
Completion of new Kirkuk-Haifa line expected in spring of 1949. E. Aschner. il map Oil & Gas J 45:46-7 Mr 1 '47
Plans moving ahead for second Middle East pipe line. Oil & Gas J 46:158 S 20 '47

Trans-Arabian line
Arabian line presents unusual problems. R. Sneddon. il map Pet Eng 19:92+ O '47
Ground reconnaissance of Arabian pipe-line route completed. P. Reed. il Oil & Gas J 46:49 Jl 19 '47
Plans outlined for trans-Arabian pipe-line-station construction. P. Reed. il Oil & Gas J 46:60+ S 27 '47
Sidon, Lebanon, designated as Trans-Arabian terminus. map Oil & Gas J 46:66 S 13 '47
Tackling pipeline job in Middle East; Trans-Arabian pipe line co. project. il map Bsns W p 18 S 13 '47
Trans-Arabian granted license for export of Big-Inch pipe. Oil & Gas J 46:36 O 4 '47
Trans-Arabian pipe line becomes no. 1 Middle East project. W. W. Burns. il Oil & Gas J 45:62+ F 15 '47
Trans-Arabian pipe line insured in U.S. Spectator (Property ed) 13:23 S 25 '47; Nat Underw 51:27 S 11 '47

PETROLEUM products
Address; viewpoints and suggestions from the farm-machinery industry. J. L. McCaffrey. Am Pet Inst Proc 26(1):97-100 '46
Address; what the farmer wants from the oil industry. L. Haystead. Am Pet Inst Proc 26(1):89-91 '46
Basic oxygenated chemicals from C-1, C-2 and C-3 paraffins and olefins. J. C. Walker and H. L. Malakoff. bibliog il Pet Refiner 25:97-102 D '46; Same abr. Oil & Gas J 45:59-60+ D 21 '46
Basic petroleum chemistry for refinery employes; petrochemicals. J. J. Stadtherr. bibliog Pet Refiner 26:115-19 Ja '47
Catarole process; high temperature cracking produces a mixture of aromatic and olefinic hydrocarbons. Chem Ind 60:226-7 F '47
Chemical aspects of the petroleum acts. S. G. Burgess. bibliog Inst Pet J 33:363-88 Je '47

PETROLEUM products—*Continued*
Chemicals from petroleum and natural gas. G. Egloff. Oil & Gas J 46:88-9+ Ag 30 '47
Chemicals from petroleum; Shell company's venture. Chem Age (Lond) 56:319 Mr 15 '47
Coal, petroleum and their newer derivatives; symposium arranged by the Royal institute of chemistry. Chem & Ind p450-2 Jl 26 '47
Coal, shale and petroleum as sources of chemical products. W. M. Cumming. Chem Age (Lond) 57:41-6 Jl 12 '47
Color of petroleum oils. V. A. Kalichevsky. Pet Refiner 26:119-22 F '47
Critical chemicals and new chemical developments. J. Oostermeyer. Paint Oil & Chem R 110:16+ Je 26 '47; Same cond. il Pet Processing 2:651-4 S '47
Developments in the petroleum industry. E. R. Smoley and T. T. Whipple. il diag Mech Eng 69:293-9 Ap '47
English petrochemical plant taking shape near Manchester. il diags Oil & Gas J 46: 44+ Je 7 '47
Estimation of properties of solvent-refined products. V. A. Kalichevsky. Pet Refiner 26:93-8 Ja '47
Expanding use of petroleum waxes keeps industry busy meeting demand. G. R. McKee. Nat Pet N 39:36 S 10 '47
Farms, the oil they need; work of API Agricultural development committee. G. Krieger. Nat Pet N 39:31-2+ Ap 23 '47
Fluorination of petroleum oils in liquid phase with silver difluoride. W. S. Struve and others. diag Ind & Eng Chem 39:352-4 Mr '47
Fluorination of petroleum oils in vapor phase with cobalt trifluoride. C. F. Irwin and others. diag Ind & Eng Chem 39:350-2 Mr '47
Government corporations continue control of petroleum products in Japan. W. W. Burns. Oil & Gas J 45:45-6 My 3 '47
Government study sets 1950 demand at 2,200,000,000 bbl. H. B. McCoy. Oil & Gas J 46:40-1 Ag 2 '47
Higher demand for petroleum products are indicated by revised forecasts. L. J. Logan. Pet Refiner 26:150+ Ag '47
Industry's current operating level promises improved supply. J. W. Boatwright. Oil & Gas J 46:49+ Jl 12 '47
Is it too late? B. Dewey. Chem & Eng N 25: 2430-1 Ag 25 '47
Manufacture of sulpho-oxidized soaps from petroleum byproducts; abstract. Chem Eng 53:310 N '46
New products of the petroleum industry. H. W. Field. diags Franklin Inst J 243:95-116 F '47
1947 process handbook. flow diags il Pet Refiner (Process Handbook sec) 26:97-297 Ap '47
Oil companies invading coal-tar chemical field. S. B. Self. Barron's 27:32 Ag 18 '47
Oil industry biggest new thing in chemicals; raw materials in increasing numbers come from petroleum. S. B. Self. Barron's 27: 7-8 S 15 '47
Percolation filtration process; Attapulgus clay company. flow diag Pet Refiner (Process Handbook sec) 26:216-17 Ap '47
Petroleum and agriculture team up to speed new scientific development; Shell oil company's research laboratory and experimental farm. R. Sneddon. il Pet Eng 18: 71+ N '46
Petroleum and modern farming. A. W. Turner. Am Pet Inst Proc 26(1):92-6 '46
Petroleum as a source of organic chemicals. C. A. Rager. il Dom Comm 35:41-5 Mr '47
Petroleum chemicals showed marked gains in 1945. Pet Processing 1:245-6 D '46
Petroleum products in agriculture; the role of petroleum in plant protection. L. W. L. Cole. bibliog Inst Pet J 33:203-13; Discussion. 213-18 Ap '47
Petroleum products in the printing ink and allied industries. A. C. Healey and L. Ivanovszky. diags Inst Pet J 33:531-44 S '47; Abstract. Chem Age (Lond) 56:800 Je 21 '47; Discussion. Inst Pet J 33:544-51 S '47
Petroleum synthesis to dominate alcohol field; abstract. R. S. Aries. Pet Processing 2:409 Je '47
Petroleum wood preservative. W. L. Nelson. Oil & Gas J 45:93 F 8 '47
Plastic makers look to petroleum chemicals for raw materials. B. H. Weil. bibliog il diags Pet Processing 2:215+ Mr '47
Plastics from the petroleum industry. Chem Age (Lond) 57:271-2 Ag 23 '47
Printing inks from petroleum; abstract. A. C. Healy and L. Ivanovszky. Chem Age (Lond) 56:800 Je 21 '47
Production of chemicals from petroleum; Shell plant at Thornton-le-Moors. Engineering 163:248 Mr 28 '47
Production of cresylic acids from petroleum. il diag Chem Ind 60:48-9 Ja '47
Products from petroleum; list. Oil & Gas J 45:supp Mr 22 '47
Progress in petrochemical manufacture. W. L. Nelson. Oil & Gas J 45:100 Ap 12 '47
Progress in petroleum research. R. P. Russell. 8pls Inst Pet J 33:391-409 Jl '47; Same abr. Engineer 183:490-2, 508-9 Je 6-13 '47; Same cond. Engineering 163:507-8, 519 Je 13-20 '47
Refined products shortages hit some sections of nation. Nat Pet N 39:9-10 Mr 26 '47
Refinery yield patterns determined by shifting demand cycle. R. B. Tuttle. Oil & Gas J 45:146-7 Ja 25 '47
Research and development in the oil industry. E. V. Murphree. il diag Am Gas Assn Proc 1946:62-7
Resinous products from petroleum polymer sulfurization. M. G. Mayberry, P. V. McKinney and H. E. Westlake, jr. bibliog Ind & Eng Chem 39:166-7 F '47
Shell plans production of synthetic glycerine. Pet Processing 2:9-10 Ja '47
Simplify military petroleum supply functions. R. L. Webb. Nat Pet N 39:32+ O 8 '47
U.S. supply prospects improve; rigid contracts an obstacle. H. D. Ralph. Oil & Gas J 46:82+ Je 28 '47

See also
Butadiene
Gasoline
Hydrocarbons
Kerosene
Liquefied petroleum gas
Lubricating greases
Lubricating oils
Naphtha
Oil fuel
Paraffin
Petroleum coke
Petroleum distillation
Toluene

Analysis

Automatic determination of aniline point of petroleum products. C. W. Brown. bibliog il diag Ind & Eng Chem Anal ed 18:739-41 D '46

Prices

Jersey's hold-line policy draws praise and censure. G. R. McKee, jr. Nat Pet N 39:9-10 Jl 30 '47
Prices of principal petroleum products in the United States, 1936-1947; tabulation. Nat Pet N 39:38 Jl 9 '47
Ten per cent increase in rail freight rates brings quick rise in oil product prices in Midwest. J. P. Mosher, jr. Nat Pet N 39:15 O 15 '47

Specifications

Greater trend toward petroleum performance specifications in 1947. C. M. Larson. il diags Oil & Gas J 45:181-4 Mr 22 '47

Standards

A.S.T.M. standards on petroleum products and lubricants (with related information); methods of testing, specifications, definitions, charts and tables. 615p pa $4 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46 [issued annually]

Statistics

Analysis shows demand trend for four classes of oil products. P. Wollstadt. Nat Pet N 39: 32-4 S 10 '47
Demand for oil products sets new records. Automotive Ind 97:152+ S 1 '47
Petroleum derivatives. Published in weekly numbers of Oil, paint and drug reporter
Volumetric outlook for the oil industry during 1947. E. T. Knight. Oil & Gas J 45:218-19+ Mr 22 '47

Testing

A.S.T.M. standards on petroleum products and lubricants (with related information); methods of testing, specifications, definitions, charts and tables. 615p pa $4 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46 [issued annually]

PETROLEUM products—Testing—*Continued*
Copper-strip corrosion tests. J. A. Bolt. Oil & Gas J 46:99-100 Ag 9 '47; Same. Pet Refiner 26:118-20 Ag '47
Effect of oil on plastic properties of petroleum waxes and development of plasticity tests. W. L. Nelson and L. D. Stewart. Oil & Gas J 46:121 Je 28 '47

See also
Lubricating oils—Testing

Transportation

Plans for by-passing bulk plants revealed by majors in ICC hearings. Nat Pet N 39: 36 O 29 '47
Sohio expands dry-cargo truck fleet. F. C. Sturtevant. il Nat Pet N 39:22-3+ Ag 6 '47
Transportation of petroleum by for-hire motor carriers. S. F. Niness. Am Pet Inst Proc 26(5):16-19 '46

PETROLEUM refineries
Billion-dollar expansion program scheduled by Nation's refiners. R. B. Tuttle. il Oil & Gas J 46:201+ Jl 26 '47
Chemicals from petroleum; Shell company's venture. Chem Age (Lond) 56:319 Mr 15 '47
Colorado refinery being enlarged. il Pet Eng 18:142 Ag '47
Expanded refining facilities rank high in oil industry's construction program. H. Ridder. Nat Pet N 39:28+ Ap 9 '47
Expansion at Haifa refinery to result in capacity of more than 100,000 bbl. daily. il Oil & Gas J 45:42-3 Mr 8 '47
Expansion program at Sugar Creek refinery. il Oil & Gas J 45:52 Mr 1 '47
French refining industry in process of repairing war-damaged properties. A. A. Martin. il maps Oil & Gas J 45:106-8 F 22 '47
Gulf Coast refiners building program. A. L. Foster. il Oil & Gas J 46:126-9 My 31 '47
Italian oil industry soon to resume on expanded scale. A. Giordano. il Oil & Gas J 45:210+ D 28 '46
Mexico today; refining, pipe-line activities. il Oil & Gas J 45:42-4 N 9 '46
N.E.I. refinery repaired. Pet Eng 19:153 O '47
Nation's refineries get voluntary quotas for government supply. Oil & Gas J 46:54 S 27 '47
New refineries spur metal products demand. V. Bell. il Steel 121:64-5 Jl 14 '47
Organization and operation of refining division of Petroleos Mexicanos. C. L. Corcuera. flow diags il Oil & Gas J 45:228+ D 28 '46
Petroleum industry in the Chicago area. G. Egloff. Western Soc E J 52:16-27 Mr '47
Plant construction; tabulated data. Pet Refiner 26:138 O '47
Production of waxes from California crudes. R. A. David and P. M. Huemmer. flow sheet il Chem Eng Prog 43:174-6 Ap '47
Refinery building program is stupendous. L. J. Logan. Pet Refiner 26:89-90 O '47
Remodeling Richmond refinery long wharf. il Pet Eng 18:166+ Je '47
Shell developments in U.K. and Holland. il Pet Eng 19:102+ O '47
Tight refining situation likely to continue; steel big problem. F. Van Covern. Pet Refiner 26:134+ Jl '47

See also
Gasoline—Manufacture
Lubricating oils—Manufacture
Petroleum distillation
Petroleum refining

Corrosion

Continuous inspection record form helps minimize forced shutdowns in refinery. plans diags Pet Processing 2:18+ Ja '47
Corrosion of condensers by sulfide. W. L. Nelson. Oil & Gas J 46:269 My 31 '47
Corrosion of refinery equipment; abstracts. E. E. Kerns. Oil & Gas J 45:96 O 12 '46; Pet Processing 1:171-2 N '46
Corrosion resistance of 27% chrome alloy recorded high in plant service tests. H. D. Newell. bibliog il Pet Processing 2:116-17+ F '47
Corrosion studies for the petroleum refining industry. F. A. Rohrman. diags Pet Refiner 26:85-90 Je; 93-8 Jl; 109-13 Ag '47
Corrosion tests in distillation equipment. W. Z. Friend and J. F. Mason, jr. il Pet Eng 18:192+ My '47; Correction, 18:155 Ag '47
Gamma ray detection of internal corrosion. L. R. Keller. il diags Pet Eng 18:211-14 S '47
Mechanical and metallurgical control of sulfuric acid corrosion in petroleum processes; abstracts. E. R. Wilkinson. Oil & Gas J 45:96 O 12 '46; Pet Processing 1:174 N '46
Metals for refinery corrosion; abstract. B. B. Morton. Oil & Gas J 45:290 Mr 22 '47
Non-ferrous pipe minimizes sludge plant corrosion. diag Pet Refiner 26:138 Mr '47
Study of the corrosion of copper alloy condenser tubes. N. W. Mitchell. Pet Processing 1:176 N '46
Tower lining method reduces rivet head corrosion and cuts welding requirements. il Pet Processing 2:178 Mr '47

Costs

Alkylation and polymerization; effect on refinery earnings of the two processes. il Pet Eng 18:116+ N '46
Cost of catalytic cracking. W. L. Nelson. bibliog Oil & Gas J 46:87+ S 6 '47

Directories

North American operating refineries; capacities and locations; U.S. by states, Canada by provinces; Mexican refineries; government owned aviation gasoline plants. Oil & Gas J 45:281+ Mr 22 '47
Survey of world oil refineries. Oil & Gas J 45:197+ D 28 '46

Electric equipment

Floating pumphouse in river channel supplies refinery with cooling water. il Pet Processing 2:657 S '47

Employees

Basic petroleum chemistry for refinery employes. J. J. Stadtherr. bibliog diags Pet Refiner 25:115-16 Mr; 152-4 Ap; 116-18 My; 131-3 Je; 109-14 Jl; 136-42 Ag; 123-8 O '46; 26:115-19 Ja; 115-18 Mr; 137-40 Ap '47
Change house ventilation design for the Gulf coast. H. E. Bovay, jr. diag Pet Refiner 26:135-6 O '47
Chemical education from the viewpoint of a petroleum refiner. F. C. Lantz. Can Chem & Process Ind 30:51-3 D '46
Effect of Taft-Hartley act on refinery labor relationships. C. H. Metz, jr. Pet Processing 2:567-8 Ag '47
Engineer training methods; Magnolia petroleum company. C. O. Buttrill. Pet Refiner 26:123 My '47
Modernizing of on-the-job training programs undertaken by API group. H. D. Kolb. Pet Processing 2:748 O '47
Urinary fluoride excretion among men employed in alkylation plants using the hydrogen fluoride process. E. J. Largent. J Ind Hygiene 29:53-5 Ja '47

Equipment

ANCAP refinery at Montevideo, Uruguay. M. Cratzmar. il Pet Eng 19:61-2+ O '47
Analysis of rigid knee-braced bents used in petroleum and chemical plants. W. H. Blank. il diags Pet Refiner 25:111-18 D '46
Anchor-bolt design for all refinery vessels. S. W. Lewaren. diags Oil & Gas J 46:127 Je 14 '47
Application of automatic controls to gasoline plant and refinery processing. E. H. Reynolds and others. diags Pet Refiner 26: 132-6 Ap '47; Same abr. Oil & Gas J 45: 66-7+ Ap 5 '47
Application of steam-jet ejectors in the Houdry fixed-bed catalytic cracking process. P. Freneau and others. flow diag diags A S M E Trans 69:69-79 Ja '47
Big tower towed from Jersey to Missouri. il map Pet Eng 18:51-4 Mr '47; Nat Pet N 39: 31 Ap 16 '47
Butane isomerization; U.O.P. process. J. A. Chenicek and others. flow diag Chem Eng Prog 43:210-18 My '47
Calculation of heat recovery at Cities Service refinery with continuous blowoff system. M. C. McKeown. il diag Pet Refiner 26: 107-9 Jl '47
Cascade-type tray introduces new fractionating principle. H. Litwin. flow chart il diags Oil & Gas J 45:237+ Mr 22 '47

PETROLEUM refineries—Equipment—*Cont.*
Certified iso-octane by the car load. O. Gerbes and others. flow diag il Pet Processing 2: 734-6, 847-50 O-N '47
Cities Service tannin solutizer unit; its design, operation, results. R. B. Tuttle. flow diag il Oil & Gas J 46:84-5+ S 13 '47
Clay levels in hoppers shown instantly and controlled by electrical instrument. A. Krieg. diag Pet Processing 2:580 Ag '47
Color code for piping identifications aids in training refinery operators. W. C. Uhl. Pet Processing 2:210-11+ Mr '47
Combustion of coke deposit on synthetic-bead cracking catalyst. W. A. Hagerbaumer and R. Lee. bibliog flow diag il diags A S M E Trans 69:779-83 O '47; Same. Oil & Gas J 45:76-8+ Mr 15 '47; Same. Pet Refiner 26:123-8 Je '47
Commercial T.C.C. operations on partially vaporized charge stock. H. D. Noll and others. flow diag il diags Oil & Gas J 45: 116+ O 19 '46; Same. Pet Refiner 25:165-71 N '46; Abstract. Pet Processing 1:211+ N '46
Control and operation of de-ethanizers in the production of propane. A. J. L. Hutchinson. flow diag diag Pet Processing 2:792+ O '47
Converted topping unit makes close-cut naphthas and solvents from gasoline. flow diag il Pet Processing 2:191-2 Mr '47
Converted U.O.P. isomerization unit now makes polymer gasoline. L. C. Brown. flow chart il Oil & Gas J 46:91-4 My 17 '47
Cut costs on new 3000 b/d fluid cracker by using unified reactor-regenerator. W. F. Bland. flow diag il Pet Processing 2:670-2 S '47
Delayed coking; pictured flowsheet, General petroleum corp's refinery. Chem Eng 54: 142-5 F '47
Delayed coking unit in operation. il Chem & Eng N 24:2928 N 10 '46
Delayed coking unit processes residuum into gas oil charge for TCC unit. R. Maass and R. E. Lauterbach. flow diag il diags Pet Processing 2:11-16 Ja '47; Same. Pet Refiner 26:84-92 Ja '47; Same. Pet Eng 18: 110+ F '47; Same cond. Oil & Gas J 45:44-7+ Ja 4 '47
Design and operation of a small-scale thermofor catalytic cracking unit. G. Kelso and others. flow diag il Pet Refiner 26:98-103 Ag '47
Design of instrument air supply system for the process industry. W. C. Ludi. flow diag diags Pet Processing 1:225-7 N '46
Design of pressure vessels for high temperature-high pressure service; abstract. E. W. Jacobson and others. diag Pet Processing 1:168-9 N '46
Effect of leakage around cross-baffles in a heat exchanger. A. M. Whistler. diags Pet Refiner 26:114-18 O '47
8000 b/d refinery converts thermal unit to catalytic cracking for $200-250/bbl; Leonard refineries, inc. W. F. Bland. flow diags diag Pet Processing 2:411+ Je '47
Electronics aids progress in refinery instrumentation. D. M. Considine. il diags Oil & Gas J 45:245-6+ Mr 22 '47
Entrainment screens. W. L. Nelson. il Oil & Gas J 46:103 Ag 16 '47
Evaluating cooling tower performance. J. G. De Flon. il diags Pet Eng 18:55-60+ Ap '47; Same. Oil & Gas J 45:129-32+ Mr 29 '47; Same. Pet Refiner 26:109-16 Ap '47; Same. Pet Processing 2:249-52, 433+ Ap, Je '47; Same. Heat & Ven 44:73-7 Je; 77-80 Jl '47; Same. Power Pl Eng 51:104-7 Je; 76-9 Jl '47; Same abr. Chem Eng 54:112-16 Jl '47: Same cond. Comp Air Mag 52:142-8 Je '47
Facilities being built at Avon refinery. J. Seth. il Pet Eng 18:207 My '47
Field heat treating of refinery piping. W. H. Fortney. diags Pet Refiner 25:122-4 D '46
Fluid cat cracker designed to use new MS catalyst. D. P. Thornton, jr. il Pet Processing 2:173-6 Mr '47
Fluid cracker charges heavy distillate in post-war motor gasoline operation. il Pet Processing 2:46+ Ja '47
Fractionator pressure control. D. M. Boyd, jr. diags Pet Refiner 26:113-15 F '47
Gamma ray and supersonic equipment-inspection methods used in Continental Oil's eight refineries; Penetron and Audigage. L. S. McCaslin. il diags Oil & Gas J 46:100-3+ O 18 '47
Heat waste and vapor loss reduced by baffles inside catalyst stripper; patent. diag Pet Processing 2:623 Ag '47
Hydraulic decoking; abstracts. A. V. Welsh. Oil & Gas J 45:99 O 12 '46; Pet Processing 1:169 N '46
Hypersorption, new fractionating process. C. Berg and W. E. Bradley. il diags Pet Eng 18:115-16+ My '47
Idle isomerization unit converted to produce polymer gasoline. W. R. Newman. flow diags il Pet Refiner 25:91-3 O '46; Same. Pet Processing 1:257+ D '46; Same. Pet Eng 18:156+ F '47
Importance of flexible pipe supports. E. W. Stothart. diag Pet Processing 2:529+ Jl '47; Same. Pet Refiner 26:118-20 Jl '47
Improved plant instrumentation practices are presented at ISA conference; abstracts of papers. diags Pet Processing 2:750-2 O '47
Instrumentation in U.S. refineries. il Chem Age (Lond) 57:392-3 S 20 '47
Instruments in process control. E. D. Mattix. flow diags Oil & Gas J 46:83-4+ Ag 23 '47
Instruments speed oil refining. il Electronics 20:168+ N '47
Insulation data on a large combination unit. L. A. Hanson. il Pet Refiner 26:112-14 S '47
Insulation technique for oil-refinery structures. S. S. Parker. il Oil & Gas J 45:160-2 Ap 26 '47
Internally insulated piping and pressure vessels for high-temperature service. P. E. Darling. diags Pet Refiner 26:129-34 O '47
Light weight waste heat boiler is economical for cat crackers; patent. diag Pet Processing 2:271 Ap '47
Liquid level recorder design minimizes difficulties in alkylation unit settler. A. Krieg. diag Pet Processing 2:351 My '47
Mechanical device gives accurate results in measuring clay thruput from TCC kiln. A. Krieg. diag Pet Processing 2:527 Jl '47
Mechanism of failure of 18 Cr-8 Ni cracking still tubes. C. L. Clark and J. W. Freeman. il Am Soc for Metals Trans 35:298-326 '45; Same. Nat Pet N 36 pt 2:R854-6+ D 6 '44; Discussion. Am Soc for Metals Trans 35:326-30 '45
Mexico's two new refineries models of newest insulation methods. H. R. Morris. il Pet Refiner 26:121-2 My '47
Midget catalytic cracker starts operation at Detroit. A. L. Foster. flow diags il Oil & Gas J 46:80-1+ Ag 9 '47
Miscellaneous fractionating techniques. J. J. Cicalese and others. diags Am Pet Inst Proc 26(3):180-221 '46; Same. Pet Refiner 26:141-56 Ap; 127-43 My '47; Same abr. Pet Processing 1:296+ D '46
Modified type 405 stainless iron, satisfactory lining for petroleum refinery vessels. M. A. Scheil. il Metal Prog 52:91-102 Jl '47
More gasoline, less coke, from new cat cracker design. flow diag il Pet Refiner 26: 129-30 F '47; Same. Oil & Gas J 45:82-3 Mr 1 '47
Moving bed cracker is economic for throughputs up to 4000 b/d; patent. diags Pet Processing 2:783-4 O '47
New cat cracker incorporates war-developed improvements. il Oil & Gas J 45:80 D 14 '46
New design for heat exchangers relieves strain on tube sheet. S. Kopp and G. B. Farkas. bibliog il diags Pet Processing 2: 449-50 Je '47
New fluid catalytic cracker design. flow diag il Pet Eng 18:88+ Ja '47
New invisible eyes; gamma rays in liquid-level control; Gagetron. L. S. McCaslin, jr. il diags Oil & Gas J 46:100-1+ O 25 '47
150-h.p. transportable hoist for oil-refinery plant. il diags Engineering 163:428-9 My 23 '47
Particle size distribution of cracking catalysts. G. M. Webb. bibliog il Pet Processing 2:497-8+ Jl '47
Pipe and tubing sizes. W. L. Nelson. Oil & Gas J 46:87 N 1 '47
Pipestill coil design. W. D. Harbert. Pet Refiner 26:122-7 S '47

PETROLEUM refineries—Equipment—*Cont.*
Plant-built equipment grades catalyst on California polymerization unit. il Pet Processing 2:417 Je '47
Plant-process heat used to generate steam. R. B. Tuttle. il diag Oil & Gas J 45:73-4 Mr 8 '47
Process unit control instruments, their installation and initial operation. H. F. Moore. Pet Processing 1:219-20+ N '46
Product flexibility, low fuel consumption feature modernized Pemex refinery. R. O. Mena and others. flow diags il map Pet Processing 2:334-5+ My '47
Quality of lubricating oils improved by new furfural plant in Kansas refinery. L. C. Brown and C. F. Tears. diag il Oil & Gas J 46:58-9+ Jl 12 '47; Pet Processing 2:492+ Jl '47
Rapid graphical method of estimating tower diameter and tray spacing of bubbleplate fractionators. W. L. Bolles. diags Pet Refiner 25:103-10 D '46
Record run made by Avon cracking unit. J. Seth. Pet Eng 18:170+ N '46
Reduced structural height design feature of 25,000 bbl. fluid cat-cracker; Whiting refinery of Standard oil co. (Indiana). W. C. Uhl. il Pet Processing 1:163-4 N '46
Refinery pump service. W. L. Nelson. Oil & Gas J 46:133 Ag 23 '47
Refining processes and their automatic control; thirty-one flow diagrams of modern processes, with descriptive data. Oil & Gas J 45:149-80 Mr 22 '47
Removal of mercaptans from gasoline; Old Dutch refining company. il Pet Refiner 26: 113-14 Ja '47
Resistance thermometry. E. W. Hayes. diags Pet Refiner 25:139-40 D '46
Rotameter and petroleum refinery flow rate measurement. K. Fischer. il diags Pet Refiner 26:106-12 Ja '47
Selective thermal cracking processes; Lummus company. flow diags Pet Refiner (Process Handbook sec) 26:236-7 Ap '47
Service life of austenitic alloy furnace tubes. C. S. Pugsley, jr. Pet Refiner 26:119-20 O '47
Sharples acid treating process. flow diag Pet Refiner (Process Handbook sec) 26:238-9 Ap '47
Shell incorporates design refinements in fluid catalytic unit at Deer Park. L. S. Daniels. flow diag il Pet Refiner 26:95-102 F '47
Shield over section of cooling tower basin speeds up removal of oil from water. R. Elo. diags Pet Processing 1:177 N '46
Simple automatic composite sampling. J. W. Bertetti. il Pet Refiner 26:135 Mr '47
Simplified catalytic cracking unit. flow diag il Pet Refiner 26:120-1 S '47
Sizing of refinery oil lines. W. L. Nelson. Oil & Gas J 46:153 O 18 '47
Speed and safety with ignition system for down fired, induced draft heaters. E. W. Griscom. diags Pet Processing 1:255-6 D '46
Streamlined flow speeds output of lubricants; handling and packaging equipment; Port Arthur refinery. il diags Oil & Gas J 45:74-7+ D 14 '46
Suspended wall linings for catalytic regenerators and TCC kilns; abstract. H. O. Johanson. diags Pet Processing 1:171 N '46
Texas co. Fluid cat cracker seen as model of small-refinery planning. il Oil & Gas J 46:73 Ag 23 '47
Thermal conductivity. W. L. Nelson. Oil & Gas J 45:87 D 21 '46
Thermal cracker expanded into T.C.C. unit at Leonard refineries, inc. A. L. Foster. flow chart il diags Oil & Gas J 46:78-82 Ag 16 '47
Thermal reforming unit improves naphtha octane rating. flow diag il Pet Refiner 25:141-2 D '46
TCC unit built in record time. il Pet Eng 18:178+ My '47
Three-stage distillation process; E. B. Badger & sons company, Foster Wheeler corporation, Lummus company. flow diags il Pet Refiner (Process Handbook sec) 26: 268-73 Ap '47
Two-stage distillation process; Lummus company. flow diag il Pet Refiner (Process Handbook sec) 26:278-9 Ap '47
Well water conservation at Pan American refining corporation, Texas City refinery. P. Hurd. il diags Pet Refiner 25:132-4 D '46

Experimental plants
Kitten cracker works out diet for commercial fluid units; Humble's pilot fluid catalyst cracking unit. il Pet Processing 2:518+ Jl '47
Pilot plant aids operation of furfural extraction unit. L. C. Brown. flow diag il Oil & Gas J 46:112-14 Je 14 '47

Fires and fire protection
Even Utopia takes no chances when it comes to plant fires. F. J. Sluze. Pet Processing 2:662 S '47
Fire train poised for action; Port Arthur, Tex. works, Texas co. il Oil & Gas J 46: 96 Ag 23 '47
Foam towers carry firefoam to where it can do the most good. A. L. Foster. il Oil & Gas J 46:70 Jl 19 '47
Fundamental requirements for arrangement of drains and vents in processing units. J. H. Johnsen. diags Oil & Gas J 46:65-6+ Je 7 '47; Same. Pet Refiner 26:91-7 Je '47; Same cond. Pet Processing 2:504-9 Jl '47

Fuel
Refinery gas fuels. L. A. Mekler and C. G. Van Fredersdorff. il diags Pet Refiner 26: 81-94 F '47

Laboratories
See Petroleum laboratories

Maintenance and repair
Careful, detailed planning is key to efficient maintenance of fluid cat cracker. A. L. Foster. il Oil & Gas J 46:86-7+ O 25 '47
Carefully planned work schedules aid in clean-outs of refinery units. J. Wallen. il Pet Processing 2:226-7 Mr '47
First turnaround at Gulf's new plant. il Pet Eng 18:278 S '47
Fixture for repairing tube bundles. diags Oil & Gas J 45:71 Ja 4 '47
Forestalling breakdown of equipment by a systematic maintenance program. R. B. Tuttle. il Oil & Gas J 46:96-9+ Je 28 '47
Industrial engineering in refinery maintenance. W. H. Reynolds. Pet Refiner 26:123-6 Jl '47
Instrument installation and maintenance methods and practices in a modern oil refinery; abstract. G. A. Larsen. diag Pet Processing 2:751-2 O '47
Lesson in maintenance. Chem Eng 54:97 Ap '47
Maintenance of tubular heat exchangers. J. H. Housman. il Oil & Gas J 46:96-8 Je 21 '47; Same. Pet Processing 2:534+ Jl '47; Same abr. Pet Refiner 26:89-92 Jl '47
New metallizing technique homogenizes alloy coatings to eliminate porosity. J. A. Looney. il Pet Processing 1:290+ D '46
Portable scaffolds speed up maintenance, inspection, insulation of overhead equipment. il Pet Processing 2:741 O '47
Reconditioning heater tubes at Gulf's Port Arthur plant. R. B. Tuttle. il Oil & Gas J 46:90+ S 13 '47
Simple shaft straightener frees lathes for other refinery jobs. G. Cunningham. diags Pet Processing 2:661 S '47
Store and tool rooms on wheels save time and paper work in refinery turnarounds. il Pet Processing 2:577 Ag '47
Stores trailer speeds maintenance work. il Pet Eng 18:86 Jl '47
Time on overhauling job cut one-third. il Pet Eng 19:226 O '47
Trailers increase maintenance efficiency; portable tool rooms and storehouses at Magnolia petroleum company's refinery. J. A. Oslin. il Pet Refiner 26:107-8 F '47
Turnaround technique; coordinated inspection and repair programs reduce down time for catalytic cracking plant. il Pet Processing 2:569-74 Ag '47

Management
Functions and responsibilities of a plant instrument department. J. G. Kerley. Pet Refiner 26:98-104 S '47

PETROLEUM refineries—Management—*Cont.*
Refinery-engineering organization has manifold responsibilities at Shell's Wood River plant. J. F. Goldsberry. Oil & Gas J 45: 213-14+ Mr 22 '47

Power

Adequate maintenance and sound operating methods assure efficiency of steam power plants; with cost data. R. B. Tuttle. il Oil & Gas J 46:72-4+ My 10 '47
Application of conventional industrial instruments to power plant control; abstract. W. H. Fortney. Pet Processing 2:750-1 O '47
Boiler-water conditioning at Talco refinery. C. G. Rook, jr. il diag Pet Refiner 25:129-31 D '46
Chemical feeds for new water conditioner electrically operated, centrally controlled. C. E. Joos. flow diag Pet Processing 2:156-7 F '47
Electric power in oil refining. W. H. Stueve. Oil & Gas J 45:73-5 D 21 '46

Safety measures

Electrical division contributes to Utopia's safety record. F. J. Sluze. Pet Processing 2:262 Ap '47
Formation of static electric charges on agitating petroleum products with air. C. M. Klaerner. bibliog Ind & Eng Chem 39:92-3 Ja '47
Four workmen can obtain breathable air from single home-made portable blower. il Pet Processing 2:526 Jl '47
Refinery safety. D. Attaway. il Pet Eng 18: 94+ Ag '47
Strict tests precede each Utopian tank cleaning job. F. J. Sluze. il Pet Processing 2:353 My '47
Thermocouple actuates waste gas torch ignitor when pilot flame fails. A. Krieg. diag Pet Processing 2:258 Ap '47
Utopia; no refinery fires, no lost-time accidents. F. J. Sluze. Pet Processing 2:23, 104 Ja-F '47.
Utopia refinery pipefitters never injured on the job. F. J. Sluze. Pet Processing 2:180 Mr '47

Statistics

Average refinery growing bigger and bigger. Oil & Gas J 45:280 Mr 22 '47
Refineries have little operating margin, NPC committee reports. Nat Pet N 39:12 Jl 9 '47

Waste

Disposal of petroleum refinery wastes. W. B. Hart. bibliog diags Nat Pet N 38 pt 2:R11-14+, R97+, R225+, R292-4+, R371-2+, R467-73, R512-14+, R587-8+ Ja 2, F 6, Mr 6, Ap 3, My 1, Je 5, Jl 3, Ag 7 '46; [cont as] Pet Processing 1:21-2+, 102-3+, 193-4+, 248-50+; 2:31 4, 131+, 193-4+, 282+, 471-2+, 513-14+, 632-4+, 691-2+ S '46-Ap, Je-S '47
Factors affecting the API design of separators for removal of oil from waste water effluents. S. T. Powell and E. I. Knoedler, jr. Pet Refiner 26:117-20 My '47
Fumes from asphalt oxidation; method of disposal. W. L. Nelson. Oil & Gas J 46:99 O 25 '47
Inexpensive aeration tanks handle disposal problem; wash oil from silt. flow diag il Pet Processing 2:102-3 F '47
Refinery wastes face stricter control in pending anti-pollution legislation. W. F. Bland. il Pet Processing 2:165-7 Mr '47
Smokeless burning of refinery vent gases. A. K. Brumbaugh, jr. il diags Oil & Gas J 45:126+ F 22 '47; Same. Pet Eng 18:59-61+ Mr '47; Same. Pet Processing 2:168-70 Mr '47; Same. Pet Refiner 26:111-14 Mr '47
Water settling and emulsion breaking system; Oleum refinery, Union oil company of California. il Pet Refiner 26:114-15 Ag '47

Bibliography

Disposal of refinery wastes; list of references. W. L. Nelson. Oil & Gas J 45:81 Mr 1 '47

PETROLEUM refining
Applications of thermodynamics to hydrocarbon processing. W. C. Edmister. bibliog Pet Refiner 26:77-82 Jl; 83-8 Ag; 105-11 S; 99-105 O; 110-17 N '47 (to be cont)
Automatic control of processing is product quality insurance. R. H. Wehrle. il Pet Processing 2:365-6+ My '47
Basic petroleum chemistry for refinery employes; refinery of the future. J. J. Stadtherr. bibliog Pet Refiner 26:137-40 Ap '47
Chemical education from the viewpoint of a petroleum refiner. F. C. Lantz. Can Chem & Process Ind 30:51-3 D '46
Chemical refining of aromatic hydrocarbons from petroleum; toluene treating. P. L. Brandt, R. J. Lee and F. T. Wadsworth. bibliog il diag Ind & Eng Chem 39:1010-18 Ag '47
Chemistry in oil refining; abstract. H. G. Burks. Chem Eng 54:262+ Ag '47
Coal, shale and petroleum as sources of chemical products. W. M. Cumming. Chem Age (Lond) 57:41-6 Jl 12 '47
Delayed coking; pictured flowsheet, General petroleum corp's refinery. Chem Eng 54:142-5 F '47
Developments in the petroleum industry. E. R. Smoley and T. T. Whipple. il diag Mech Eng 69:293-9 Ap '47
Duo-sol solvent extraction; Max B. Miller & company. flow diag Oil & Gas J 45:171 Mr 22 '47
Estimation of properties of solvent-refined products. V. A. Kalichevsky. Pet Refiner 26: 93-8 Ja '47
Furfural solvent extraction; Texaco development corp. flow diag Oil & Gas J 45:172 Mr 22 '47
Gas-oil polyforming. W. C. Offutt and others. flow sheet Oil & Gas J 46:80+ S 27 '47; Same. Pet Processing 2:753-4+ O '47
Heating and cleaning Santa Maria heavy crude. R. L. Lauenstein. il diags Pet Eng 18:67-8+ Mr '47
Hydrocarbon absorption and fractionation process design methods. W. C. Edmister. bibliog flow diag diags Pet Eng 18:156+ My; 57+ Je; 39-44+ Jl; 49-54+ Ag; 130+ S; 19:200+ O '47 (to be cont)
Major process improvement marks 1947 refining developments. A. L. Foster. il Oil & Gas J 45:192-3+ Mr 22 '47
Modern petroleum refining; flow sheet. Oil & Gas J 45:supp Mr 22 '47
Modern refining processes (cont). G. Armistead, jr. bibliog il diags Oil & Gas J 45:94+ Ap 19; 103-5+ My 17 '47
New products of the petroleum industry. H. W. Field. diags Franklin Inst J 243:95-116 F '47
1947 process handbook. flow diags il Pet Refiner (Process Handbook sec) 26:97-297 Ap '47
Non-fouling refinery charge stocks. L. F. Schimansky. il Pet Refiner 25:119-21 D '46
Petroleum refining; review of 1946. W. Miller. Min & Met 28:101-3 F '47; Same. Oil & Gas J 45:79-80+ Mr 8 '47
Phenol solvent extraction; M. W. Kellogg co. flow diag Oil & Gas J 45:173 Mr 22 '47
Les progrès du raffinage du pétrole réalisés aux États-Unis de 1941 à 1945. diags Génie Civil 123:296-7 N 1 '46
Progress in petroleum research. R. P. Russell. 8pls Inst Pet J 33:391-409 Jl '47; Same abr. Engineer 183:490-2, 508-9 Je 6-13 '47; Same cond. Engineering 163:507-8, 519 Je 13-20 '47
Refinery planning. D. Read. bibliog Pet Refiner 26:73-7 Ag '47
Refinery yield patterns determined by shifting demand cycle. R. B. Tuttle. Oil & Gas J 45:146-7 Ja 25 '47
Refining processes and their automatic control; thirty-one flow diagrams of modern processes, with descriptive data. Oil & Gas J 45:149-80 Mr 22 '47
Refining South American crudes. D. Read and G. Egloff. Pet Eng 18:134+ My '47
Research and progress in petroleum refining. W. C. Edmister. bibliog(145 titles) Pet Eng 18:51-8 N '46
Second Texas ACS regional meeting stresses refinery technology. Pet Refiner 26:146+ Ja '47

PETROLEUM refining—*Continued*
Steady growth of demand shows need for increase in refining capacity. S. A. Swensrud. Nat Pet N 39:40-5 Ap 2 '47

See also
Gasoline—Manufacture
Lubricating oils—Manufacture
Petroleum distillation
Petroleum refineries

Bibliography

Classified list of important papers given during preceding year; refining. Pet Eng (Ref annual) 18:315-17 Jl 1 '47
Science and technology abstracts. Pet Refiner 26:158+ Ja '47 [cont monthly]

Edeleanu process

Edeleanu process. flow diag il Pet Refiner (Process Handbook sec) 26:142-3 Ap '47

Patents

Continuous catalyst flow achieved without using vapor-sealed valves; patent. diag Pet Processing 2:27 Ja '47
Digest of recently issued United States patents pertaining to petroleum refining. H. Heinemann, comp. Pet Refiner 26:176+ Ja '47 [cont monthly]
New process combines advantages of fluid and moving catalytic beds; patent. diags Pet Processing 2:110+ F '47
Patent trends in petroleum refining (cont). P. J. Gaylor. flow sheets flow diag Pet Processing 1:186-7, 261-2; 2:25-6, 106-7, 182+, 264+, 379-80, 421-2, 540-1, 620+, 701-2, 780+ N '46-O '47
Patents on refining processes and products; list. Inst Pet J 33:218A-29A Je '47

Salt removal

Petreco electrical desalting process; Petroleum rectifying company. flow diag il Pet Refiner (Process Handbook sec) 26:218-19 Ap '47
Temperature of feedwater for desalter controlled with steam pressure regulator. il diag Pet Processing 2:100 F '47
Tretolite desalting process. flow diag Pet Refiner (Process Handbook sec) 26:274-5 Ap '47

Sulfur removal

Catalytic desulfurization and reforming of naphthas over bauxite; abstract. G. M. Brooner and C. J. Helmers. Pet Refiner 26:187+ Jl '47; Same cond. Oil & Gas J 46:125-6 Je 28 '47
Catalytic desulfurization of high-sulfur stocks by the cobalt molybdate process. C. Berg and others. flow sheets il Chem Eng Prog 43:1-12 Ja '47; Discussion. 43:134 Mr '47
Catalytic desulfurization process; Universal oil products company. flow diag Pet Refiner (Process Handbook sec) 26:118-19 Ap '47
Cobalt molybdate desulfurization process; Union oil company of California. flow diag il Pet Refiner (Process Handbook sec) 26:124-5 Ap '47
Digest of United States patents on desulfurization. H. Heinemann, comp. Pet Refiner 25:238+ N '46
Evaluation of sulfur compounds in gasoline. F. C. Moriarty. Pet Refiner 25:106-8 O '46; Abstract. flow diag Pet Processing 1:208+ N '46
Gray catalytic desulfurization process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:160-1 Ap '47
Linde copper sweetening process. C. T. Schieman, jr. flow chart il Pet Eng 18:184+ My '47; Same cond. Pet Refiner 26:134-6 Je '47
Phosphate desulfurization. flow diag Oil & Gas J 45:168 Mr 22 '47
Shell phosphate process. flow diags Pet Refiner (Process Handbook sec) 26:250-1 Ap '47

Tables, calculations, etc.

Acid quality, plant and laboratory, tabulation. W. L. Nelson. Oil & Gas J 45:183 Ap 26 '47
Calculation of concentration change. W. C. Frishe. Pet Refiner 26:128-9 S '47
Chart for making dilution calculations. W. C. Frishe. Pet Eng 18:182+ F '47
Curve fitting and surface fitting; method of least squares. G. H. Hanson. Pet Refiner 26:83-5 Jl '47
50°-100° A.P.I. versus specific gravity; table. W. L. Nelson. Oil & Gas J 45:89 Ja 11 '47
Practical value of empirical equations. V. A. Kalichevsky. Pet Refiner 26:106-8 Je '47
Rotation speed in continuous filter operation. E. J. Reeves. Pet Refiner 26:104-5 Je '47
Stage estimation in lubricating distillate extraction. V. G. Skogan and M. C. Rogers. bibliog il Oil & Gas J 46:70+ Ag 2 '47
Volume of liquid at high temperatures; table. W. L. Nelson. Oil & Gas J 46:105 Jl 12 '47

Vapor recovery

Gas-concentration and stabilization process; Lummus company. flow diag il Pet Refiner (Process Handbook sec) 26:156-7 Ap '47
Hypersorption, new fractionating process. C. Berg and W. E. Bradley. il diags Pet Eng 18:115-16+ My '47
Hypersorption process for separation of light gases. C. Berg. il diags Pet Processing 2:300-1+ Ap '47
Light-ends fractionation and stabilization; E. B. Badger & sons company. il diag Pet Refiner (Process Handbook sec) 26:190-1 Ap '47
Naphtha polyforming with outside gas. W. C. Offutt and others. flow sheet il diag Inst Proc 263:237-46 '46; Same. Pet Refiner 25:129-35 N '46; Same. Pet Processing 1:278-9+ D '46
Refinery gas fuels. L. A. Meker and C. G. Von Fredersdorff. il diags Pet Refiner 26:81-94 F '47
Value of refinery gases. W. L. Nelson. Oil & Gas J 45:105 N 23 '46
Vapor recovery process; Foster Wheeler corporation. flow diag il Pet Refiner (Process Handbook sec) 26:294-5 Ap '47

Wax removal

MEK solvent dewaxing. flow diag Oil & Gas J 45:174 Mr 22 '47
Optimum dilution in viscous liquid filtration. E. J. Reeves. Ind & Eng Chem 39:203-6 F '47
Propane dewaxing process; M. W. Kellogg company. flow diag Oil & Gas J 45:176 Mr 22 '47
Propane dewaxing process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:232-3 Ap '47
Sharples Bari-Sol dewaxing process. flow diag il Pet Refiner (Process Handbook sec) 26:240-1 Ap '47
Sharples naphtha dewaxing process. flow diag Pet Refiner (Process Handbook sec) 26:242-3 Ap '47
Solvent dewaxing process; Texaco development corporation. flow diag Pet Refiner (Process Handbook sec) 26:254-5 Ap '47
Solvent refining and dewaxing of lubricating oil. W. E. Skelton. flow diags il Oil & Gas J 45:137+ F 22 '47

PETROLEUM research
American assn. of petroleum geologists puts official sanction on research committee projects. C. J. Deegan. Oil & Gas J 45:123 Ap 5 '47
A.I.M.E. Petroleum division's committee on engineering research lists live research topics. Min & Met 28:250-1 My '47
Analysis of alkylates and hydrocodimers. A. R. Glasgow, jr. and others. bibliog Pet Refiner 25:93-119 N '46; Same. J Res Nat Bur Stand 38:537-81 My '47; Same. Am Pet Inst Proc 26(3):127-69 '46; Excerpt. Oil & Gas J 45:236 N 16 '46
Compressibility of liquid hydrocarbons. E. W. Jacobson and others. bibliog Oil & Gas J 44:109-10 Mr 23 '46; Same. Am Pet Inst Proc 25(4):39-41 '45
Effect of bacteria on oil production. C. J. Deegan. il map diag Oil & Gas J 46:78-9+ Je 21; 101-2+ Je 28 '47
Engineering research; review of 1946. J. E. Sherborne. il Min & Met 28:103-4 F '47
Fundamental research in sedimentology. S. W. Lowman. Am Assn Pet Geologists Bul 31:501-12 Mr '47.
Hydrocarbons in petroleum. F. D. Rossini. Chem & Eng N 25:230-3 Ja 27 '47; Same. Pet Eng 18:58+ Ja '47; Same. Pet Refiner 26:103-5 Ja '47

PETROLEUM research—*Continued*
Improved method for the interpretation of experimental data obtained in molecular weight determinations of petroleum fractions. J. G. Reynolds. bibliog Inst Pet J 33:491-502 Ag '47
Influence of temperature on oil yield from uncemented sands under gravitational flow. S. L. Zaks. bibliog diag Pet Eng 18:147-8+ N '46
Institute of petroleum hydrocarbon research group. bibliog Inst Pet J 33:580-2 S '47
Laboratory distilling columns of high efficiency used in the work of the API research project 6. C. B. Willingham and F. D. Rossini. bibliog diags Am Pet Inst Proc 26(3):63-71 '46
Magnolia research program directed to problems of crude supply. G. Weber. il Oil & Gas J 46:76-8+ Jl 19 '47
Petroleum industry scholarship report. Oil & Gas J 45:68 F 1 '47
Physical research methods increase knowledge of catalysts, hydrocarbons. G. M. Webb. il Oil & Gas J 45:203-4+ Mr 22 '47
Progress in petroleum research. R. P. Russell. 8pls Inst Pet J 33:391-409 Jl '47; Same abr. Engineer 183:490-2, 508-9 Je 6-13 '47; Same cond. Engineering 163:507-8, 519 Je 13-20 '47
Progress report on A.P.I. research project 43, the transformation of organic material into petroleum. G. M. Knebel. Am Assn Pet Geologists Bul 30:1935-50 N '46
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Am Pet Inst Proc 26(3):170-9 '46; Same. Pet Refiner 25:141-7 N '46; Same cond. Oil & Gas J 45:215-16+ N 16 '46
Properties of hydrocarbons; American petroleum institute's research project 44. Chem & Eng N 25:904-6 Mr 31 '47
Purification, purity, and freezing points of 7 heptanes, 16 octanes, 6 pentenes, cyclopentene, and 7 C_9H_{12} alkylbenzenes of the API-standard and API-NBS series. A. J. Streiff and others. pl J Res Nat Bur Stand 37:331-78 bibliog(p337) D '46
Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkylcyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47
Relative permeability measurements on small core samples. R. A. Morse and others. bibliog diag Oil & Gas J 46:109+ Ag 23 '47; Same. Pennsylvania State College Mineral Industries Exp Sta Tech Pa 124:1-6 '47 (pa 25c)
Report of Advisory committee on fundamental research on occurrence and recovery of petroleum. Am Pet Inst Proc 25(4):89-104 '45
Report of Advisory committee on fundamental research on occurrence and recovery of petroleum. bibliog Am Pet Inst Proc 26(4): 148-67 '46
Research activities; illustrations with text. Pet Eng 18:59-60 N '46
Research and progress in petroleum refining. W. C. Edmister. bibliog(145 titles) Pet Eng 18:51-8 N '46
Research to aid in finding oil. C. J. Deegan. Oil & Gas J 45:95 F 1 '47
Secondary-recovery forum creates committee to study problem. Oil & Gas J 46:61 My 24 '47
Synthesis and properties of hydrocarbons of high molecular weight. R. W. Schiessler and others. bibliog il Am Pet Inst Proc 26(3):254-302 '46
Too long a time lag exists between research and practice. F. R. Cozzens. Oil & Gas J 46:279-80+ Jl 26 '47
Vast research project begins to take tangible shape; A.A.P.G. research committee; subjects scheduled for study. C. J. Deegan. Oil & Gas J 45:102-3 Mr 29 '47
See also
Petroleum laboratories

PETROLEUM shipping terminals
Arkansas fuel oil company dedicates new gasoline terminal at Nashville. D. Attaway. il Pet Eng 18:51-2 D '46

PETROLEUM storage
Estimation of field-erected tanks; correction for material, location, type of construction and other factors. L. E. Fox. Chem Eng 54:100-1+ Ag '47

PETROLEUM supply
Americas meet world oil shortages. H. J. Struth. maps diags Pet Eng 19:51-60 O '47
Guide to world oil; maps. Oil & Gas J 45: supp D 28 '46
Highlights on developments in foreign petroleum fields. L. G. Weeks. maps Am Assn Pet Geologists Bul 31:1135-93 Jl '47
Increase of 50 per cent seen in global oil output. W. W. Burns. Oil & Gas J 46:172-3+ Jl 26 '47
Oil stocktaking. Economist 152:426-7 Mr 22 '47
Outlook for oil. H. W. Page; L. F. McCollum. map Comm & Fin Chr 165:2986 Je 5 '47
Petroleum-supply problem is world wide; nearby markets to take Middle East oil. L. F. McCollum. map Oil & Gas J 46:62+ My 17 '47
Survey of world oil fields; statistics by countries and regions. Oil & Gas J 45:187-8+ D 28 '46
U.S. continues as net exporter of petroleum. Oil & Gas J 45:164 Ja 25 '47
U.S. technical leadership, increasing demand, feature today's world oil outlook. C. O. Willson. il Oil & Gas J 46:114-16 My 31 '47
World demand for oil growing rapidly; drop in U.S., Caribbean exports forecast. C. J. Bauer. map Nat Pet N 39:34-5+ Ap 30 '47
World oil operation; production and refining. C. J. Deegan and W. W. Burns. maps Oil & Gas J 45:154-9 D 28 '46
World oil shortage. Economist 153:619 O 11 '47

Australia
Australia's search for oil. map Economist 152:762-3 My 17 '47

Peru
Peru plans development of jungle oil resources. For Comm W 26:19 Ja 18 '47

Russia
Russia's Baku oil fields now combat grave output-slump. For Comm W 28:10+ Ag 23 '47
Soviet oil supply adequate. E. Adams. map Pet Eng 19:162+ O '47

United States
Analysis of U.S. refining capacity and supply. F. Van Covern. map Nat Pet N 39: 18-21 Je 4 '47
Annual and cumulative production, remaining reserves by fields; tabulations. Oil & Gas J 45:191+ Ja 25 '47
Crude runs of 4,805,000 bbl. daily needed in 1947. A. W. Peake. Oil & Gas J 45:59 F 15 '47
Discoveries; industry ends greatest wildcatting year. H. David. Oil & Gas J 45:148-9 Ja 25 '47
Doubts U.S. can import enough oil to ease pinch; papers at meeting of directors of Independent petroleum association of America. Nat Pet N 39:14-18 My 14 '47
5,000,000-bbl. production rate needed, economists report at Interstate oil compact commission quarterly meeting. Oil & Gas J 45:36-7+ My 3 '47
Five new major fields needed to maintain reserves. C. J. Deegan. Oil & Gas J 46:187+ Jl 26 '47
Geological masks and prejudices. E. B. Noble. Am Assn Pet Geologists Bul 31:1109-17 Jl '47
Government study sets 1950 demand at 2,200,000,000 bbl. H. B. McCoy. Oil & Gas J 46:40-1 Ag 2 '47
Guaranty trust company of New York sees foreign oil topping domestic supply. Comm & Fin Chr 166:925 S 4 '47
Higher demand for petroleum products are indicated by revised forecasts. L. J. Logan. Pet Refiner 26:150+ Ag '47
Highlights of domestic development in 1946. K. C. Heald. Am Assn Pet Geologists Bul 31:1125-34 Jl '47
Importance of domestic industry stressed in O'Mahoney report. H. D. Ralph. Oil & Gas J 45:38-9 F 8 '47

PETROLEUM supply—United States—*Cont.*
Imports, broad domestic oil program urged to bolster U. S. reserves. J. A. Krug. Nat Pet N 39:11 F 5 '47
Imports may hamper conservation programs; abstract. R. B. Brown. Oil & Gas J 46:57-8 Ag 16 '47
Imports of only 15.8 per cent of oil needs by 1965 are seen by Commerce dept. Nat Pet N 39:15-16 Ag 6 '47
Industry's current operating level promises improved supply. J. W. Boatwright. Oil & Gas J 46:49+ Jl 12 '47
I.O.C.C. Economics advisory committee calls for capacity operation by industry; excerpts from report. Oil & Gas J 46:57-8 Ag 23 '47
Light hydrocarbons to fore in new A.P.I. method of estimating reserves. C. J. Deegan. Oil & Gas J 45:136-7 Mr 22 '47
Major gives jobber council its views on supply outlook; meeting of Standard of Indiana officials and National council of independent petroleum assns. Nat Pet N 39:15-17 Ag 13 '47
Major oil supply from imports unlikely. R. L. Trisko. Oil & Gas J 46:75+ Ag 9 '47
Must the United States have a petroleum shortage? H. B. Fell. il Min & Met 28:498-500 O '47
National fuel reserves; relation to the future supply of liquid fuels. A. C. Fieldner. bibliog maps Mech Eng 69:221-6+ Mr '47; Same cond. Ry Age 122:142-5 Ja 11 '47
New reserves; discoveries, new pays, and extensions in 1946, their size, and where located. maps Oil & Gas J 45:170-1+ Ja 25 '47
1947 U.S. demand will exceed 1946 record requirements. Oil & Gas J 45:144-5 Ja 25 '47
Oil program in three words. J. A. Krug. Am Pet Inst Proc 26(1):42-7 '46
Peacetime production exceeds that at peak of war. C. J. Deegan. Oil & Gas J 45:150-3 Ja 25 '47
Petroleum fuel shortage. R. E. Wilson. Chem & Eng N 25:1731 Je 16 '47
Petroleum on the continental shelves. W. E. Pratt. Econ Geol 42:83-5 Ja '47
Petroleum reserves brought up to date. Pet Eng 18:245 Mr '47
Petroleum reserves seen as adequate. G. W. Malone and others. Oil Paint & Drug Rep 152:3 Jl 21 '47
Proven reserves increase despite record output. C. J. Deegan. Oil & Gas J 45:154-6 Ja 25 '47
Self-sufficiency stressed in Senate oil policy report; Senator Moore concurs in general. Nat Pet N 39:12-13 F 5 '47
Text of Compact's Economics advisory committee supply-demand report. Nat Pet N 39:12-14 Ap 30 '47
Text of proposed national oil import policy. R. B. Brown. Nat Pet N 39:20 Ag 20 '47
Text of report on supply and demand by Compact's economics committee. Nat Pet N 39:9-12 Ag 13 '47
Tomorrow's demand and what oil industry is doing to make sure supply is adequate; API report. Nat Pet N 39:26-7+ Ag 13 '47
U. S. crude reserves estimated at 24 billion bbls. Nat Pet N 39:14 Mr 12 '47
United States petroleum import prospects; abstract. R. L. Trisko. For Comm W 28:34 Ag 9 '47
Whither exploration. J. J. Jakosky. Am Assn Pet Geologists Bul 31:1118-24 Jl '47
See also
Oil reserves (United States navy)

PETROLEUM waste
Salvaging commercial minerals from oil field brines. R. H. Dott. flow sheet Pet Processing 2:512 Jl '47
Subsurface disposal of inland oil-field brines conserves fresh water supply. O. S. Jones. il diag Civil Eng 17:60-3 F '47
See also
Petroleum refineries —Waste

PETROLEUM workers
Congressional action on portal pay begins as 6 more oil suits are filed. Nat Pet N 39:12-13 Ja 8 '47
First meeting of the I.L.O. Petroleum committee. Int Labour R 55:274-80 Mr-Ap '47
Model camp construction on the oilfields; Humble oil and refining co. il plan Eng N 138:111-13 Ja 23 '47
Oil committee of International labor group to weigh management-labor relations balance. Nat Pet N 39:30-1 Ja 1 '47
Oil industry again may set wage pattern. Bsns W p85 D 7 '46
OWIU files strike notice against 63 companies; acts to cancel contracts. Nat Pet N 39:13-14 Ja 22 '47
Problems of the petroleum industry. Int Labour R 54:331-52 N '46
Scientists' union recognized by NLRB, election ordered; Shell development co. Nat Pet N 39:14 F 12 '47
Shelter and sanitation facilities for a tropical oil camp. E. J. Cleary. il map Eng N 138:814-19 My 15 '47
Training new employees in safety. D. Attaway. il Pet Eng 19:238+ O '47
Wages and conditions of work in private undertakings of the petroleum industry in Argentina. Int Labour R 54:379-80 N '46
See also
Petroleum refineries —Employees

PETTY, G. H.
Indianapolis printer enjoys interesting hobby. por Inland Ptr 119:50 Jl '47

PEWTER
Bibliography
Bibliography of pewter. C. Denman. 21p pa $1 Dr Madelaine R. Brown, 264 Beacon st, Boston '45

PFAUDLER company, Rochester, New York
Pfaudler equipment for many industries. R. G. Skerrett. il Comp Air Mag 51:292-7 N '46

PFITZINGER reaction
Effect of steric hindrance on the course of Pfitzinger reactions; between ketones and various isatins. N. P. Buu-Hoï. Chem Soc J p795-7 S '46
Tolylmercaptopropanones and their condensation with isatins. O. Newell and P. K. Calaway. Am Chem Soc J 69:116-17 Ja '47

PFIZER, Charles, and company
Plans expansion program. Oil Paint & Drug Rep 150:4+ D 23 '46
Selected stocks. Mag of Wall St 80:487 Ag 2 '47
Starts plant expansion in Connecticut. Oil Paint & Drug Rep 151:58 Mr 3 '47

PFUND, August Herman, 1879-
Portrait. Opt Soc Am J 37:front O '47

pH. See Hydrogen ion concentration

PHAGOCYTOSIS
Intercellular surface phagocytosis. W. B. Wood, jr. and M. R. Smith. il Science 106:86-7 Jl 25 '47

PHANOTRON
What you should know about industrial electronics; applications of phanotron and thyratron rectifiers. diags Am Mach 90:134 N 21 '46

PHARMACEUTICAL association, American. See American pharmaceutical association

PHARMACEUTICAL education
Pharmaceutical grants. Chem & Eng N 25:3099 O 20 '47

PHARMACEUTICAL laboratories
Combining research and production; building in Rio de Janeiro for Productos Roche. il plans Arch Rec 101:74-7 Mr '47

PHARMACEUTICAL manufacturers association, American. See American pharmaceutical manufacturers association

PHARMACEUTICAL research
Department of pharmacology, School of medicine, University of Maryland fellowships. Science 104:595 D 20 '46
Merck and company to support new series of fellowships. Science 104:508 N 29 '46
Pharmaceutical and medicinal developments in 1946. M. L. Moore. Chem & Eng N 25:91-3 Ja 13 '47

PHARMACISTS
Drug trade conference backs 4-year schooling. Oil Paint & Drug Rep 150:7+ N 18 '46
Druggists' plight; prescription business is declining. Bsns W p70+ S 6 '47

PHARMACOLOGY
See also
Antispasmodics
Chemistry, Medical and pharmaceutical
Chemotherapy
Drugs
Mydriatics
Narcotics

PHARMACOPEIAS
NF VIII published; official April 1. Oil Paint & Drug Rep 151:5 Ja 6 '47

PHARMACY
See also
Drugs

PHASE adjusters
Cascade phase shift modulator. M. Marks. bibliog il diags Electronics 19:104-9 D '46
Wideband phase shift networks. R. B. Dome. diag Electronics 19:112-15 D '46

PHASE indicators
Phase detectors; some theoretical and practical aspects. L. I. Farren. diags Wireless Eng 23:330-40 D '46

PHASE rule and equilibrium
Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A. P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47
Calculation method for complex mixtures. W. D. Harbert. bibliog Ind & Eng Chem 39: 1118-24 S '47
Chemistry of sodium phosphates. O. T. Quimby. bibliog Chem R 40:141-79 F '47
Coördination compounds of boron trichloride; systems with the propyl chlorides. D. R. Martin and A. S. Humphrey. bibliog J Phys & Colloid Chem 51:425-30 Mr '47
Correlation of vapor-liquid equilibria data for nonideal ternary systems. E. G. Scheibel and D. Friedland. bibliog Ind & Eng Chem 39:1329-34 O '47
Equilibrium between gaseous carbon dioxide and hydrogen sulphide and solutions of alkali carbonates, bicarbonates and hydrosulphides. I. G. C. Dryden. bibliog Soc Chem Ind J 66:59-64 F '47
Equilibrium properties of high polymer solutions and gels. G. Gee. Chem Soc J p280-8 F '47
Gas-condensate reservoir engineering; equilibrium factors. K. Eilerts. bibliog Oil & Gas J 45:100 F 15 '47
Hydrofluoric acid-water and hydrofluoric acid-hydrofluosilicic acid-water. P. A. Munter, O. T. Aepli and R. A. Kossatz. bibliog il diags Ind & Eng Chem 39:427-31 Mr '47
Improved apparatus for determining vapor-liquid equilibrium. J. W. Rogers and others. diags J Chem Educ 24:491-3 O '47
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. S. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47
Liquid-vapour equilibrium data for the systems; methyl methacrylate-methanol and methyl methacrylate-methacrylic acid. D. E. Woods. Soc Chem Ind J 66:26-9 Ja '47
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2. J. F. Schairer and N. L. Bowen. bibliog diags Am J Sci 245: 193-204 Ap '47
Metastable states of equilibrium in thermodynamics. J. L. Finck. Franklin Inst J 243: 1-12 Ja '47
Number of independent constituents and the phase rule. I. Prigogine and R. Defay. J Chem Phys 15:614-15 Ag '47
Oxygen-carrying synthetic chelate compounds; equilibrium with the solid compounds. E. W. Hughes, W. K. Wilmarth and M. Calvin. Am Chem Soc J 68:2273-8 N '46
Phase boundaries in concentrated systems of sodium oleate and water. R. D. Vold. bibliog J Phys & Colloid Chem 51:797-816 My '47
Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W. N. Lacey. bibliog diag Ind & Eng Chem 39:77-82 Ja '47
Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H. H. Reamer and others. Ind & Eng Chem 39:206-9 F '47
Phase nature of beta sodium palmitate. R. H. Ferguson, F. B. Rosevear and H. Nordsieck. bibliog 2pls Am Chem Soc J 69:141-6 Ja '47
Phase relations in heat transfer salt systems. J. Alexander, jr. and S. G. Hindin. diags Ind & Eng Chem 39:1044-9 Ag '47
Physical chemistry of lubricating oils; phase equilibria. A. Bondi. bibliog Pet Refiner 26:116-22 Je '47
Relative volatility method for calculating equilibrium-vaporization curves. D. A. Smith and G. W. Wilson. bibliog Am Inst Chem Eng Trans 42:927-37 O-D '46
Solid solution studies; equilibria in the binary systems of 2,2-dimethylbutane-2,3-dimethylbutane and 2,2-dimethylbutane-cyclopentane. H. L. Fink and others. Am Chem Soc J 69:1501-6 Je '47
Solvent separation of hydrocarbon mixtures by vapor-liquid extraction. M. R. Fenske, C. S. Carlson and D. Quiggle. bibliog diags Ind & Eng Chem 39:1322-8 O '47
Ternary systems *n*-butane-1-butene-furfural and isobutane-1-butene-furfural; vapor-liquid equilibrium data. J. A. Gerster, T. S. Mertes and A. P. Colburn. bibliog Ind & Eng Chem 39:797-804 Je '47
Thermal decomposition of 1 : 1 : 1-trichloro-2:2-di-(4-chlorophenyl) ethane (D.D.T.) and some of its phase equilibria. P. G. Scholefield and others. bibliog diag Soc Chem Ind J 65:354-6 N '46
Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S. Nutting and L. H. Horsley. Anal Chem 19:601-2 Ag '47
Water content of propane. F. H. Poettmann and M. R. Dean. diag Pet Refiner 25:125-8 D '46
See also
Chemical equilibrium

PHELLANDRENE
β-Phellandrene tetrabromide. P. A. Berry and A. K. MacBeth. Chem Soc J p 1039-41 Ag '47

PHELPS DODGE corporation
Net rises with copper prices. Barron's 26:13 D 23 '46

PHENACETIN
Analysis
Colorimetric determination of acetophenetidin. E. F. Degner and L. T. Johnson. bibliog Anal Chem 19:330-1 My '47

PHENANTHRAQUINONE. See Phenanthrenequinone

PHENANTHRAQUINONEIMINE. See Phenanthrenequinoneimine

PHENANTHRENE
Aromatic cyclodehydration; elimination of alkyl groups in cyclizations of the olefin oxide type. C. K. Bradsher, L. Rapoport and P. Anderson. bibliog Am Chem Soc J 68:2152-4 N '46
Aromatic cyclodehydration; use of intermediates obtained by the diene addition reaction. C. K. Bradsher and L. J. Wissow. bibliog Am Chem Soc J 68:2149-51 N '46
Colchicine and related compounds; 3 : 4 : 5 : 6-dibenz*cyclo*hepta-1 : 3 : 5-triene. J. W. Cook, G. T. Dickson and J. D. Loudon. Chem Soc J p746-50 Je '47
Derivatives of phenanthrene; preparation of 9-amino-, 9-iodo- and 9-fluorophenanthrene. M. A. Goldberg, E. P. Ordas and G. Carsch. bibliog Am Chem Soc J 69:260-2 F '47
New syntheses of heterocyclic compounds; 9-amino-6 : 8-dimethyl-7 : 10-diazaphenanthrenes. V. A. Petrow. Chem Soc J p884-8 O '46
Synthesis of hydroaromatic compounds containing angular groups; 9,4a(2)-iminoethanohydrophenanthrene series. M. S. Newman and B. J. Magerlein. bibliog Am Chem Soc J 69:942-4 Ap '47

PHENANTHRENE—*Continued*
Synthesis of 1-keto-$\Delta^{4a,10a}$-dodecahydrophenanthrene, *cis*-9-methyl-1-decalone, and other cyclic ketones. W. E. Bachmann and N. L. Wendler. bibliog Am Chem Soc J 68:2580-4 D '46

PHENANTHRENEQUINONE
Action of diazomethane on hydroxy-compounds and of diazomethane derivatives on phenanthraquinone. A. Schönberg and A. Mustafa. Chem Soc J p746-8 Ag '46
Photochemical reactions in sunlight; reactions with phenanthraquinone, 9-arylxanthens, and diphenyl triketone. A. Schönberg and A. Mustafa. Chem Soc J p997-1000 Ag '47

PHENANTHRENEQUINONEIMINE
Formation of phenanthroxazole by the action of diazomethane on phenanthraquinoneimine. A. Schönberg and W. I. Awad. Chem Soc J p651-3 My '47

PHENANTHRIDINE
Chemotherapy of phenanthridine compounds. L. P. Walls. bibliog Soc Chem Ind J 66: 182-7 Je '47
Contributions to the chemistry of phenanthridine; conversion of 9-(3'-pyridyl) phenanthridines into their quaternary salts and the preparation of some derivatives of potential biological interest; abstract. V. Petrow and W. R. Wragg. Chem & Ind p195-6 Ap 12 '47
Researches in the phenanthridine series; further investigation of trypanocidal types. L. P. Walls. Chem Soc J p67-74 Ja '47
Researches in the phenanthridine series; quaternary salts with urethane and urea substituents. L. P. Walls. Chem Soc J p 1031-3 N '46
Search for chemotherapeutic amidines; phenanthridines. H. J. Barber and others. Chem Soc J p84-7 Ja '47

PHENANTHROLINE
4,7-Phenanthroline. L. Haskelberg. Am Chem Soc J 69:1538-9 Je '47

PHENANTHROXAZOLE
Formation of phenanthroxazole by the action of diazomethane on phenanthraquinoneimine. A. Schönberg and W. I. Awad. Chem Soc J p651-3 My '47

PHENANTHRYLAMINE
Derivatives of phenanthrene; preparation of 9-amino-, 9-iodo- and 9-fluorophenanthrene. M. A. Goldberg, E. P. Ordas and G. Carsch. bibliog Am Chem Soc J 69: 260-2 F '47

PHENAZINE
Improved syntheses of phenazines; 1-aminophenazine and 1:3-diaminophenazine. A. Albert and H. Duewell. bibliog Soc Chem Ind J 66:11-13 Ja '47
Preparation of some 9-diethylaminoalkylphenazines. R. G. Jones and H. A. Shonle. bibliog Am Chem Soc J 68:2246-7 N '46

PHENETHYL chloride
Reaction of *d*-α-phenethyl chloride with silver nitrite. R. H. Eastman and S. D. Ross. bibliog Am Chem Soc J 68:2398 N '46

PHENOL
Acid catalysis in the iodination of phenol; iodination by acyl hypoiodites. B. S. Painter and F. G. Soper. Chem Soc J p342-6 Mr '47
Analysis of hypochlorite-hypobromite solutions. L. Farkas and M. Lewin. bibliog Anal Chem 19:662-4 S '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 143-4 N '46
Chlorination of aqueous phenol. B. Y. Walker and T. Hayes. Soc Chem Ind J 66:215 Jl '47
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Phenol (carbolic acid); hazards and precautions; first aid; data sheet. Nat Safety N 56:40+ S '47
Phenol solvent extraction; M. W. Kellogg co. flow diag Oil & Gas J 45:173 Mr 22 '47
Preparation of 2,4-D(2,4-dichlorophenoxyacetic acid) from phenol and monochloracetic acid. E. Ebel and others. J Chem Educ 24:449 S '47
Some preliminary investigations of the phenol-formaldehyde reaction. T. T. Jones. diags Soc Chem Ind J 65:264-75 S '46; Abstract. Chem & Ind p19-20 Ja 12 '46

Analysis
Determination of water in phenol. L. R. Pollack. bibliog Anal Chem 19:241-2 Ap '47

Manufacture
Manufacture of synthetic phenols, resorcinol, pure anthracene and pure carbazole. Chem Age (Lond) 56:676-7 My 24 '47
Phenol from monochlorobenzol. J. A. Lee. bibliog il diag Chem Eng 54:122-4 S '47
Phenol; pictured flowsheet. Chem Eng 54:140-3 S '47
Synthetic phenol. R. M. Crawford. il Chem & Eng N 25:235 Ja 27 '47
Synthetic phenol and chlorobenzene. Chem Age (Lond) 57:463 O 4 '47

PHENOL blue
Indoaniline dyes; effect of multiple substitution on the absorption of phenol blue. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 69:152-5 Ja '47
Indoaniline dyes; some phenol blue derivatives with substituents in the phenol ring. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 68:2235-9 N '46

PHENOL condensation products
Four outlets for fast curing phenolics. L. R. Miller. il Mod Plastics 25:118-20 S '47
Kinetics of cure of resol resins. M. N. Fineman and I. E. Puddington. bibliog Ind & Eng Chem 39:1288-93 O '47
See also
Bakelite

PHENOL red. See Phenolsulfonephthalein

PHENOLS
Aromatization studies; palladium dehydrogenation of arylcyclohexenones to phenols. E. C. Horning and M. G. Horning. bibliog Am Chem Soc J 69:1359-61 Je '47
Bromination of phenols and phenol alcohols. I. W. Ruderman. bibliog Ind & Eng Chem Anal ed 18:753-9 D '46
Dimethylaminomethyl phenols. Chem Ind 61: 70 Jl '47
Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 64:51-3; 66:48-50 F '45, F '47
Infra-red spectra of solid and liquid alkylphenols. T. A. Kletz and W. C. Price. Chem Soc J p644-8 My '47
Infrared spectroscopic investigations of hydrogen bonding in hindered and unhindered phenols. N. D. Coggeshall. bibliog Am Chem Soc J 69:1620-4 Jl '47
Periodate oxidation of phenols. D. E. Pennington and D. M. Ritter. bibliog Am Chem Soc J 69:187-8 Ja '47
Physical properties supporting the phenolic nature of a certain hindered phenol; a synthesis of *t*-butyl *p*-tolyl ether. J. B. McKinley. bibliog Am Chem Soc J 69:1624-6 Jl '47
Preparation of certain ethers of trifluoromethyl-substituted phenols. E. T. McBee and others. bibliog Am Chem Soc J 69:947-50 Ap '47
Reactions of alkyl*iso*formanilides; with phenols. E. B. Knott. Chem Soc J p976-8 Jl '47
Removal of phenols from gas works ammoniacal liquor; abstract. D. G. Murdoch. Chem & Ind p398 N 2 '46
Some new fluorinated phenolic aldehydes and acids. L. N. Ferguson, J. C. Reid and M. Calvin. bibliog Am Chem Soc J 68:2502-4 D '46
Some phenol-chloral condensations. J. B. Niederl and A. A. Bothner-By. bibliog Am Chem Soc J 69:1172-3 My '47
Synthetic resins from polyhydroxy phenols; abstract and discussion. E. G. Hancock. Chem & Ind p27-8 Ja 11 '47

PHENOLS—*Continued*

Analysis

Quantitative analysis of isomeric cresols and cresol-phenol mixtures by ultraviolet absorption spectra of vapors. W. W. Robertson, N. Ginsburg and F. A. Matsen. bibliog il Ind & Eng Chem Anal ed 18:746-50 D '46

PHENOLSULFONEPHTHALEIN

Luminosity and chromaticity of indicators as a function of *p*H. J. J. Van Wyk and W. M. Clark. bibliog Am Chem Soc J 69: 1296-301 Je '47

PHENOTHIAZINE

Some phenothiazine derivatives; course of the Friedel-Crafts reaction. R. Baltzly, M. Harfenist and F. J. Webb. bibliog Am Chem Soc J 68:2673-8 D '46

PHENOXSTIBINE

Configuration of heterocyclic compounds; preparation of phenoxstibines and resolution of 10-*p*-carboxyphenyl-2-methylphenoxstibine. I. G. M. Campbell. Chem Soc J p4-10 Ja '47

PHENOXYQUINOLINE

Structure proof for 4-(4-diethylamino-1-methylbutylamino)-7-phenoxyquinoline. R. O. Clinton and C. M. Suter. bibliog Am Chem Soc J 69:704-6 Mr '47

PHENYLACETIC acid. See Toluic acid

PHENYLALANINE

Competitive inhibition of the metabolism of α-amino acids by their halogenated analogs. H. K. Mitchell and C. Niemann. Am Chem Soc J 69:1232 My '47

Synthesis of certain α-amino acid esters from malonic ester. J. C. Shivers and C. R. Hauser. bibliog Am Chem Soc J 69: 1264-5 Je '47

Tryptophan as a competitive growth inhibiting analog of phenylalanine. E. Beerstecher, jr. and W. Shive. bibliog Am Chem Soc J 69:461-2 F '47

PHENYLARSENOXIDES

Filaricidal activity of substituted phenyl arsenoxides. G. F. Otto and T. H. Maren. bibliog Science 106:105-7 Ag 1 '47

PHENYLBUTADIENE

Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47

Preparation of 1-phenyl-1,3-butadiene. E. C. Coyner and G. A. Ropp. bibliog Am Chem Soc J 69:2231-2 S '47

PHENYLBUTENONE

Ultraviolet absorption spectra of α,β-unsaturated ketones conjugated with an aromatic nucleus. A. L. Wilds and others. bibliog Am Chem Soc J 69:1985-94 Ag '47

PHENYLBUTYROLACTONE

Malonic ester synthesis with styrene oxide and with butadiene oxide. R. R. Russell and C. A. VanderWerf. bibliog Am Chem Soc J 69:11-13 Ja '47

PHENYLCYCLOHEXANE

Preparation of some *o*-substituted cyclohexylbenzenes. T. H. McGuine and H. F. Dull. bibliog Am Chem Soc J 69:1469 Je '47

PHENYLCYCLOHEXANE carboxylic acid

Antispasmodics; derivatives of 1-phenylcycloparaffincarboxylic acids. A. W. Weston. bibliog Am Chem Soc J 68:2345-8 N '46

PHENYLDECAHYDROQUINOLINE

Angular aryl group; 10-phenyldecalhydroquinoline and 9-phenyldecalin. V. Boekelheide. bibliog Am Chem Soc J 69:790-2 Ap '47

PHENYLDICHLOROARSINE

Reaction products of phenyldichloroarsine and acetylene. C. K. Banks, F. H. Kahler and C. S. Hamilton. Am Chem Soc J 69: 933 Ap '47

PHENYLDINITROMETHANE

Aromatic-aliphatic nitro compounds; Ponzio reaction; 2,4,6-trinitrobenzyl nitrate. L. F. Fieser and W. von E. Doering. Am Chem Soc J 68:2252-3 N '46

PHENYLEICOSANE

Higher hydrocarbons; six phenyleicosanes and six cyclohexyleicosanes. F. C. Whitmore and others. Am Chem Soc J 69:235-7 F '47

PHENYLETHYLAMINE sulfate

Ultraviolet absorption spectra of mescaline sulfate and β-phenylethylamine sulfate. K. Salomon and A. F. Bina. Am Chem Soc J 68:2403 N '46

PHENYL group

Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47

PHENYLHEXAHYDROACETOPHENONE

Some observations on Friedel-Crafts reactions involving unsaturated ketones; 9-keto-4b, 5,6,7,8,8a,9,10-octahydrophenanthrene. C. D. Gutsche and W. S. Johnson. bibliog Am Chem Soc J 68:2239-45 N '46

PHENYLHYDANTOINS. See Hydantoins

PHENYLHYDRAZINE

Chlorophyll-sensitized photoöxidation of phenylhydrazine by methyl red. R. Livingston, D. Sickle and A. Uchiyama. bibliog J Phys & Colloid Chem 51:775-86 My '47

Preparation and properties of thionaphthindoles. C. E. Dalgliesh and F. G. Mann. Chem Soc J p653-8 My '47

PHENYL mercury hydroxide

Basicity of phenylmercuric hydroxide. R. M. Schramm. Am Chem Soc J 69:1831-2 Jl '47

PHENYLMETHYLCARBINOL

Alkyl-oxygen fission in carboxylic esters. M. P. Balfe and others. Chem Soc J p797-803 S '46

Preparation of *o*- and *p*-nitroacetophenone from phenylmethylcarbinol and ethylbenzene. A. H. Ford-Moore and H. N. Rydon Chem Soc J p679-81 Ag '46

PHENYLNITROCINCHONINIC acid

8-Nitrocinchoninic acids and related substances. E. R. Buchman, C. M. McCloskey and J. A. Seneker. bibliog Am Chem Soc J 69:380-4 F '47

PHENYLNITROMETHANE

Aromatic-aliphatic nitro compounds; condensation of nitrophenylnitromethanes with formaldehyde. L. F. Fieser and M. Gates. Am Chem Soc J 68:2249-52 N '46

PHENYLOCTADECANE

Aliphatic and aromatic sulfonates of phenyloctadecane. B. B. Schaeffer and A. J. Stirton. bibliog Am Chem Soc J 69:2071-2 Ag '47

PHENYLOSAZONE

Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47

Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47

Action of periodic acid on glucose phenylosazone. E. Chargaff and B. Magasanik. bibliog Am Chem Soc J 69:1459-61 Je '47

Identification of Emil Fischer's phenyl-volemosazone as D-mannoheptose phenylosazone. W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:1370-1 Je '47

PHENYLOSOTRIAZOLE

Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47

Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47

PHENYLPHENYL benzoate

Bromination of 4-phenylphenol and 4-phenylphenyl benzoate. S. E. Hazlet and L. C. Hensley. Am Chem Soc J 69:708-9 Mr '47

PHENYLPHOSPHONATE

Flameless plastic; Victor's new resin, diallyl phenyl phosphonate. Chem Ind 61:40 Jl '47

PHENYLPROPENYL carbinol
Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47
Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47

PHENYLPROPIOLIC acid
Phenylpropiolic acids; the dimerisation of *o*-methoxyphenylpropiolic acid. F. G. Baddar. Chem Soc J p224-7 F '47

PHENYLPROPIONIC acid
Electrolytic reduction of cinnamic acid; structure of the products. C. L. Wilson. Electrochem Soc Trans 92 (preprint 11):137-43 '47

PHENYLPROPYLHEXADECANE
High molecular weight hydrocarbons; five new hydrocarbons derived from sebacic acid. M. D. Soffer and others. bibliog Am Chem Soc J 69:1684-8 Jl '47

PHENYLPROPYLPENTADECANE
High molecular weight hydrocarbons; five new hydrocarbons derived from sebacic acid. M. D. Soffer and others. bibliog Am Chem Soc J 69:1684-8 Jl '47

PHENYLPYRROCOLINE
Chemistry of the pyrrocolines. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1069-89 N '46

PHENYLQUINOLINE
Reaction of aryllithium compounds with 2-arylquinolines. H. Gilman and G. C. Gainer. bibliog Am Chem Soc J 69:877-80 Ap '47

PHENYLSUCCINIC acid
Vinyl polymers; reaction of benzoyl peroxide and maleic ester. C. S. Marvel, E. J. Prill and D. F. DeTar. bibliog Am Chem Soc J 69:52-8 Ja '47

PHENYLSUCCINIMIDE
Formation of N-phenylsuccinimide in Ziegler reactions carried out in benzene. D. R. Howton. Am Chem Soc J 69:2060-1 Ag '47

PHENYLVOLEMOSAZONE
Identification of Emil Fischer's phenyl-volemosazone as D-mannoheptose phenylosazone. W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:1370-1 Je '47

PHENYLENEDIAMINE
9-(Dialkylaminoalkyl)-isoalloxazines. F. Kipnis, N. Weiner and P. E. Spoerri. bibliog Am Chem Soc J 69:799-800 Ap '47
New potential chemotherapeutic agents; basically-substituted *iso*alloxazines. F. E. King and R. M. Acheson. Chem Soc J p681-5 Ag '46

PHENYLENE diisocyanate
Use of polymers to make wool unshrinkable; di*iso*cyanates. T. Barr and others. Soc Dyers & Col J 62:338-45 N '46

PHILADELPHIA
Giant show; architect Stonorov makes city plan come alive. il Arch Forum 87:12 O '47
Philadelphia story; better Philadelphia exhibition to sell city planning. R. A. Protheroe. il Sales Management 59:118+ O 15 '47

Rapid transit
Where is vaunted economy of public operation; Philadelphia transportation company annual report. Mass Transportation 43:198-201 My '47

Sewerage
Modified activated-sludge plant replaces Imhoff tank installation. E. R. Schofield. il diags Eng N 139:192-5 Ag 7 '47

Water supply
Water quality improvement with ozone; with cost data. V. Hann. il Eng N 139:59-61 Jl 10 '47
Water system and the proposed supply from upland sources. N. B. Jacobs. Boston Soc C E J 34:32-54 Ap '47
Water system of the city of Philadelphia with augmented facilities. N. B. Jacobs. N E Water Works Assn J 61:151-9 Je '47
Water works extension problems in 1946. E. J. Taylor. Am Water Works Assn J 39:57-61; Discussion. N. T. Veatch. 61-4 Ja '47
Water works improvements for Philadelphia. E. J. Taylor. map Am Water Works Assn J 39:123-7 F '47

PHILADELPHIA company
Challenges SEC authority to dismember system. Comm & Fin Chr 165:943 F 17 '47
Clean bill for Philadelphia company. Comm & Fin Chr 166:526 Ag 7 '47
Files plan to simplify its gas properties. Comm & Fin Chr 166:1154 S 22 '47

PHILADELPHIA electric company
Bonds offered. Comm & Fin Chr 164:3148 D 16 '46
Preferred stock offered. Comm & Fin Chr 164: 2961-2 D 9 '46

PHILADELPHIA mediation council
Management and labor form mediation group. Factory Management 105:250+ O '47

PHILADELPHIA radio service men's association
Service associations can be successful. D. Krantz. il Radio N 37:48-9+ F '47

PHILADELPHIA textile institute
Proposed buildings of PTI. il Textile Col 68:29 D '46

PHILANTHROPY
See also
Community trusts
Foundations, Charitable and educational

PHILATELY. See Postage stamps

PHILCO corporation
Broadens horizons; sales and earnings in 1947 likely to exceed prewar peak. Barron's 27:24 Ap 7 '47
Radio deals; Philco takes over its supplier of refrigerators. Bsns W p26+ Ag 30 '47
Third place in refrigerator sales boosts Philco's net. Barron's 27:35 N 3 '47

PHILIPPINE ISLANDS
Army engineers reconstruct and expand war-damaged Philippine ports. C. L. Hall. il Civil Eng 17:328-31 Je '47
Philippine war damage commission off to flying start. For Comm W 25:47 N 9 '46
See also
Mines and mineral resources—Philippine Islands
Steel industry and trade—Philippine Islands
World war, 1939-1945—Philippine Islands

Commerce
Philippine trade tied to U.S. il Bsns W p105-6 Mr 22 '47

Commercial policy
Certificates of origin required on commercial invoices for shipments to the Republic of the Philippines. For Comm W 26:32-4 Ja 25 '47
Marks of origin and labeling requirements. For Comm W 26:24 F 1 '47
Three forms of certificates of origin provided for shipments to the Philippines. For Comm W 27:20+ Ap 26 '47

Constitution
Amendment to constitution voted approval; Parity amendment grants to citizens of the U.S. equal rights with citizens of the Philippines in the development and utilization of all natural resources. For Comm W 26:18 Mr 29 '47

Economic conditions
Mid-year developments. For Comm W 29:16-19 O 11 '47
News by countries. For Comm W 27:19-20 Ap 5; 17-19 Je 7; 21-2 Je 21 '47
Report and recommendations of the joint Philippine-American finance commission available. For Comm W 28:15 S 20 '47
Situation in 1946. For Comm W 26:30-4 Ja 25 '47

Economic policy
Philippine rehabilitation finance corporation. For Comm W 26:32 Ja 25 '47

PHILIPPINE ISLANDS—*Continued*

Industries and resources

Economic development in the Republic of the Philippines. T. Hibben and M. A. Pugh. il For Comm W 28:3-5+ S 13 '47

Japanese occupation

Jap at Philippine mines. N. N. Lim. Eng & Min J 147:70 N '46

Mines bureau at Manila suffered heavily in war. H. F. Bain. il Eng & Min J 147: 66-7 D '46

PHILIPPINE railway

Committee seeks additional deposits. Comm & Fin Chr 165:3398 Je 30 '47

PHILIPS technical review (periodical)

Alphabetical list of technical subjects appearing in Philips technical review between the years 1936-1942 inclusive. For sale by Elsevier book co, 215 Fourth av, New York 3 '47

PHILLIPS petroleum corporation

Diversified stake in dynamic oil industry. H. L. Blackburn. Mag of Wall St 80:91 Ap 26 '47

Phillips cashing in on natural gas development. F. K. Nelson. Barron's 27:13 S 15 '47

Production personnel 13th annual meeting, Bartlesville, Okla. Oct. 13-14. Oil & Gas J 46:80+ O 18 '47

PHILLIPS screw company

Justice department files suit against Phillips screw manufacturers. Iron Age 159:107 Ja 23 '47

PHILOSOPHY, Political. See Political philosophy

PHLOGOPITE

Studies in the mica group; the biotite-phlogopite series. E. W. Heinrich. bibliog fold pl Am J Sci 244:836-48 D '46

PHOENIX, Arizona

Water supply

Phoenix water supply improvements will meet needs to 1970. Eng N 138:219-20 F 6 '47

PHONOGRAPH

High-fidelity phonograph. il Electronics 19: 178+ D '46

High-fidelity reproduction of music. E. Toth. diags Electronics 20:108-13 Je '47

Improvements in phonograph oscillators. diags Electronics 20:176+ My '47

Low cost phono amplifier. G. R. Cryder. il diag Radio N 38:61 S '47

Periodic variations of pitch in sound reproduction by phonographs; wow meter study. U. R. Furst. bibliog il diags Inst Radio Eng Proc 34:887-95 N '46

Phono amplifier and power supply. il diag Radio N 38:78+ Ag '47

See also

Radio receiving apparatus—Phonograph combination

History

Recording and reproduction of sound. O. Read. il diags Radio N 37:50-2+ Ap '47

Noise reduction

Audio filter suppresses static and needle scratch. Sci Am 176:121 Mr '47

Background noise suppressor. diag Electronics 20:142+ Je '47

Dynamic suppression of phonograph record noise. H. H. Scott. il Electronics 19:92-5 D '46

Music without noise; dynamic noise suppressor. Fortune 35:148+ Je '47

Pickup

Measurement of mechanical compliance and damping of phonograph pick-ups. B. B. Bauer. il diags Acoustical Soc Am J 19: 319-21 Mr '47

Mechano-electronic transducers. H. F. Olson. il diags Acoustical Soc Am J 19:307-19 Mr '47

Recording and reproduction of sound; crystal pickup. O. Read. il diags Radio N 38:51-3+ O '47

Recording and reproduction of sound; miscellaneous phono pickups. O. Read. il diags Radio N 38:48-50+ N '47

Rating

Phonograph pickups. Consumers Res Bul 18: 11-17 N '46

Radio pickup

Five new radio receivers, two radio phonographs. Consumers Res Bul 18:22-4 N '46

High-fidelity, high-priced radio-phonographs. Consumers Res Bul 19:26 F '47

One tube phono oscillator. A. Williams. il diag Radio N 37:52+ Je '47

Speaker, amplifiers, pickups. Consumers Res Bul 19:23-5 Ap '47

Westinghouse table-model radio and a Westinghouse radio-phonograph combination. Consumers Res Bul 19:13 Mr '47

Rating

Five new radio receivers, two radio phonographs. Consumers Res Bul 18:22-4 N '46

Portable electric phonograph. il Consumers Res Bul 19:11 My '47

Record changers

Conveyors reduce process lag; General instrument corp. T. E. Keller and S. A. Karch. flow chart il Am Mach 91:74-7 F 27 '47

Joining complicated assemblies in one operation; record changers. il Steel 120:112+ My 5 '47

Rating

Three record changers. il Consumers Res Bul 19:11-13 My '47

Turntables

Assembling turntables with battery powered welders. il Iron Age 160:42 O 23 '47

Transcription turntable employs ball-race mechanism in drive. il diag Machine Design 18:152 D '46

PHONOGRAPH in education

New avenues of classroom communication. M. E. Kramer. Ann Am Acad 250:44-8 Mr '47

PHONOGRAPH needles

Improved record needles molded of nylon. il Mod Plastics 24:102-3 Jl '47

Jewel-tipped phonograph needles. il Consumers Res Bul 20:17-18 Jl '47

Nylon knee. il Sci Am 177:223 N '47

PHONOGRAPH records

After the turn of the year. J. Kapp. Comm & Fin Chr 165:444 Ja 23 '47

As Crosby goes, so goes Chopin. Fortune 35: 146+ My '47

Curvature meter for use in disk recording. L. W. Sepmeyer. bibliog il diag Acoustical Soc Am J 19:161-4 Ja '47

Distortion reducing stylus for disk reproduction. E. F. McClain, jr. Acoustical Soc Am J 19:326-8 Mr '47

Foreign recordings. W. F. Grueninger. Consumers Res Bul 20:25 Jl '47

How to build a record library; a guide to planned collecting of recorded music. P. Affelder. 256p $3.50 E. P. Dutton & co, 300 Fourth av, New York 10 '47

Improved theory of the light pattern method for the modulation masurement in groove recording. J. Hornbostel. Acoustical Soc Am J 19:165-9 Ja '47

Loew's new record division now fifth in the industry. Barron's 27:34 O 6 '47

M-G-M records. Bsns W p79+ F 15 '47

New guide to recorded music. I. Kolodin. rev ed 382p $3.50 Doubleday & co, 14 W. 49th st, New York 20 '46

New method for the direct recording of prolonged time-dependent processes. W. von Wittern. il diag Science 105:342-4 Mr 28 '47

Petrillo blows hot; disc-making ban. Bsns W p 101-2 O 25 '47

Phonograph-record market in Finland. For Comm W 27:21-2 Ap 19 '47

Proposed standard specifications for flutter or wow as related to sound records. bibliog Soc Motion Picture Eng J 49:147-59 Ag '47

Record market opens door to higher production. A. K. Kean. il Dom Comm 35:51-5 Mr '47

PHONOGRAPH records—*Continued*
Record retailing yearbook, 1946. 512p $5 M. & N. Harrison, inc. 274 Madison av, N.Y. 16 '46
Record unit offsets CBS broadcasting drop. Barron's 27:28 My 12 '47
Sale of record discs exceeds 165 million. P. Dobbs. il Mag of Wall St 79:371-2+ Ja 4 '47
Timing chart for 78:26 r.p.m. phonograph records. Radio N 38:60 O '47
Wear of phonograph records. il Consumers Res Bul 19:29-31 My '47

Rating

Phonograph records. W. F. Grueninger. Consumers Res Bul 19:31 Ja '47 [cont monthly]

Testing

Intermodulation distortion analysis as applied to disk recording and reproducing equipment. H. E. Roys. bibliog diag Inst Radio Eng Proc 35:1149-52 O '47

PHONOGRAPH records, Plastic
Molded vinyl phonograph records. il Mod Plastics 24:107-11 Jl '47

PHONOGRAPH styluses. See Styluses, Phonograph

PHOSGENE
Adaptation of the dosimetric method for use in smaller animals; the retained median lethal dose and the respiratory response in normal, unanesthetized, rhesus monkeys (macaca mulatta) exposed to phosgene. R. E. Weston and L. Karel. bibliog J Ind Hygiene 29:29-33 Ja '47
Biological assay of inhaled substances by the dosimetric method; the retained median lethal dose and the respiratory response in unanesthetized, normal goats exposed to different concentrations of phosgene. L. Karel and R. E. Weston. bibliog J Ind Hygiene 29:23-8 Ja '47
Rate of adsorption of phosgene and chloropicrin on charcoal. M. Dole. bibliog J Chem Phys 15:447-54 Jl '47
Respiratory stimulants; fully-substituted ureas derived from ωω-alkylenediamines. W. R. Boon. Chem Soc J p307-18 Mr '47
Sorption of chloropicrin and phosgene on charcoal from a flowing gas stream. M. Dole and I. M. Klotz. bibliog Ind & Eng Chem 38:1289-97 D '46

PHOSPHATASES
Acid phosphatase and lipids in the mast cells of the rat. W. Montagna and C. R. Noback. bibliog Science 106:19 Jl 4 '47
Adenosinetriphosphatase activity of human serum. A. Meister. bibliog Science 106:167-8 Ag 22 '47
Effect of specific nuclease and phosphoesterase on desoxyribonucleic acid prepared with the use of strong sodium hydroxide (method of Levene). C. A. Zittle. Franklin Inst J 243:334-6 Ap '47
Histochemical demonstration of alkaline phosphatase in decalcified dental and osseous tissues. R. O. Greep and others. Science 105:666 Je 27 '47
Inhibition of the enzymatic hydrolysis of ATP by certain cardiac drugs. T. E. Kimura and K. P. DuBois. Science 106: 370-1 O 17 '47
Ribonucleinase and non-specific phosphodiesterase in rat and rabbit blood and tissues. C. A. Zittle and E. H. Reading. bibliog Franklin Inst J 242:424-8 N '46
Serum phosphatases and alloxan diabetes. M. M. Cantor and others. bibliog Science 105:476-7 My 2 '47

PHOSPHATE coating
Formation and application of phosphate coatings. V. M. Darsey and W. R. Cavanagh. bibliog il Electrochem Soc Trans 91 (preprint 1):1-14 '46; Abstract. Steel 119:146+ D 9 '46
New bonderizing process for aluminum and steel. H. A. Knight. il Materials & Methods 26:99-101 O '47
New phosphating tunnels installed at Ford. H. Chase. il Iron Age 159:82-4 Ap 10 '47
Phosphate coating as an aid in drawing metals. V. M. Darsey and W. R. Cavanagh. Steel 119:148+ D 9 '46
Phosphate coating of aluminum. R. C. Gibson and W. S. Russell. bibliog il Ind & Eng Chem 38:1222-7 D '46
Phosphate processes for metals; abstract. H. A. Holden. Materials & Methods 24:1534+ D '46
Phosphate treatment of metals; abstract. H. A. Holden. Paint Oil & Chem R 110:49 Ag 21 '47
Pretreatment of iron and steel surfaces; abstract. A. R. King. Paint Oil & Chem R 109:50 D 12 '46
Production line rustproofing; Banox process; Newark stove co. A. D. Stout, jr. il Iron Age 160:64-5 O 30 '47
Protective filming process for tinplate; known as Protectatin. H. R. Clauser. il Materials & Methods 26:97-100 Ag '47

PHOSPHATE rock
Determination of phosphorus in phosphate rock; separation from cations by ion-exchange resin. K. Helrich and W. Rieman, 3d. bibliog diag Anal Chem 19:651-2 S '47
Fused tricalcium phosphate; production by defluorination of rock phosphate in a shaft furnace. T. P. Hignett and T. N. Hubbuch. bibliog il plan diags Ind & Eng Chem 38:1208-16 D '46
Phosphate fertilizer by olivine-phosphate fusion. R. W. Moulton. flow sheet Chem Eng Prog 43:163-4 Ap '47
Phosphate rock industry, 1946. B. L. Johnson. il Min Cong J 33:107-9 F '47

Florida

Mining and processing Florida phosphate. il Chem Eng 54:116-17 Ag '47

Uganda

Phosphate deposits of the Eastern Province, Uganda. K. A. Davies. bibliog map Econ Geol 42:137-46 Mr '47

PHOSPHATES
Industrial uses of phosphates. P. Logue. J Chem Educ 23:529 N '46
Influence of phosphates on zirconium-alizarin method of fluoride determination. D. M. Taylor and R. E. Frazier. Am Water Works Assn J 39:52-6 Ja '47
New method of pitch control in newsprint manufacture; use of polyphosphates. H. Freeman. Pulp & Pa of Can 48:73-5 Jl '47
Phosphate research group reviews radioactive tests. Oil Paint & Drug Rep 152:5 S 22 '47
Water softening; hot phosphate process. Oil & Gas J 45:121 D 7 '46

See also
Calcium phosphates
Hexosephosphates
Potassium meta-phosphate
Sodium hexameta-phosphate
Sodium phosphates

Analysis

Analysis of external deposits from boilers; method in use at British coal utilisation research association for the analysis of external boiler deposits rich in phosphates. A. H. Edwards. Soc Chem Ind J 65:254-6 S '46
Chemistry of sodium phosphates. O. T. Quimby. bibliog Chem R 40:141-79 F '47
Colorimetric phosphate tests for boiler waters containing tannin. L. Goldman and R. N. Love. U S Bur Mines Rep of Invest 3983:1-11, pl 1-2 '46; Same. Power Pl Eng 50:76-9 N '46

Manufacture

Continuous-mixing process for manufacture of concentrated superphosphate. G. L. Bridger, R. A. Wilson and R. B. Burt. bibliog flow sheet il diag Ind & Eng Chem 39:1265-72 O '47
La fabrication d'un phosphate assimilable sans emploi d'acide sulfurique. E. Lemaire. diags Génie Civil 124:195-7 My 15 '47
Flexible plans for fertilizer making; International minerals & chemical corporation, Hartsville, S.C. R. S. McBride. il Chem Eng 54:92-4 Jl '47
Fused tricalcium phosphate; production by defluorination of rock phosphate in a shaft furnace. T. P. Hignett and T. N. Hubbuch. bibliog il plan diags Ind & Eng Chem 38:1208-16 D '46

PHOSPHATES—Manufacture—*Continued*
Phosphate concentration; new flotation methods permit profitable concentration of low grade sands. J. A. Barr, jr. flow sheets il Rock Prod 50:89-91+ Mr '47
Phosphate fertilizer by olivine-phosphate fusion. R. W. Moulton. flow sheet Chem Eng Prog 43:163-4 Ap '47

PHOSPHITES
Isomerization of alkyl phosphites; reactions with chlorides of singular structure. G. M. Kosolapoff. Am Chem Soc J 69:1002-3 My '47
Studies on phosphorylation; further observations on the reaction of phosphites with polyhalogen compounds in presence of bases and its application to the phosphorylation of alcohols. F. R. Atherton and A. R. Todd. Chem Soc J p674-8 My '47

PHOSPHOESTERASE. See Phosphatases

PHOSPHONIC acids
Addition reactions in phospho-organic synthesis; addition of phosphorus pentachloride to olefins. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 68:2540-1 D '46
Isomerization of alkyl phosphites; reactions with chlorides of singular structure. G. M. Kosolapoff. Am Chem Soc J 69:1002-3 My '47
Phosphite isomerization in the synthesis of thiophene phosphonic acids. G. M. Kosolapoff. Am Chem Soc J 69:2248 S '47
Synthesis of aromatic phosphonic acids and their derivatives; the derivatives of benzene, toluene and chlorobenzenes. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 69:2020-1 Ag '47
See also
Aminophosphonic acid

PHOSPHOR bronze. See Bronze

PHOSPHORIC acid
Activity of orthophosphoric acid in aqueous solution at 25° from vapor pressure measurements. K. L. Elmore, C. M. Mason and J. H. Christensen. bibliog Am Chem Soc J 68:2528-32 D '46
Activity of orthophosphoric acid in aqueous solutions at 25° from e.m.f. measurements with the lead amalgam-lead phosphate electrode. C. M. Mason and W. M. Blum. bibliog il Am Chem Soc J 69:1246-50 Je '47
Chemical refining of aromatic hydrocarbons from petroleum; toluene treating. P. L. Brandt, R. J. Lee and F. T. Wadsworth. bibliog il diag Ind & Eng Chem 39:1010-18 Ag '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 144-6 N '46
Composition of strong phosphoric acids; abstract. R. N. Bell. Chem Eng 54:268+ Je '47
Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47
Phosphoric acid polymerization. flow diag Oil & Gas J 45:166 Mr 22 '47
Studies of fluorophosphoric acids and their derivatives; preparation of anhydrous monofluorophosphoric acid. W. Lange and R. Livingston. bibliog Am Chem Soc J 69: 1073-6 My '47

Analysis
Estimation of triphosphoric and pyrophosphoric acids in the presence of ortho- and metaphosphoric acids. R. N. Bell. bibliog Anal Chem 19:97-100 F '47

PHOSPHORIC anhydride. See Phosphorus oxides

PHOSPHORS. See Luminescence

PHOSPHORUS
Conversion of liquid white phosphorus to red phosphorus; kinetics of the reaction. T. W. DeWitt and S. Skolnik. diag Am Chem Soc J 68:2305-9 N '46
Conversion of liquid white phosphorus to red phosphorus; particle size and surface area of red phosphorus as functions of the percentage conversion. S. Skolnik, G. Tarbutton and W. E. Bergman. bibliog diag Am Chem Soc J 68:2310-14 N '46
Microstructure of wrought non-arsenical phosphorus-deoxidised copper containing small quantities of bismuth. T. H. Schofield and F. W. Cuckow. il Engineering 164: 190-1 Ag 22 '47
See also
Steel—Phosphorus content

Analysis
Colorimetric determination of phosphorus in steels. U. T. Hill. bibliog Anal Chem 19: 318-19 My '47
Determination of phosphorus in phosphate rock; separation from cations by ion-exchange resin. K. Helrich and W. Rieman, 3d. bibliog diag Anal Chem 19:651-2 S '47
Direct colorimetric method for phosphorus in all types of steel. H. L. Katz and K. L. Proctor. Anal Chem 19:612-14 Ag '47

Isotopes
Positively charged particles accompanying the beta-rays of P^{32}. T. H. Pi and C. Y. Chao. Phys R 72:639-40 O 1 '47
Radioactive phosphorus used in soil study; abstract. M. H. Lockwood. Oil Paint & Drug Rep 151:5+ F 3 '47
Soil studies using radioactive phosphorus. S. Barber and others. bibliog il Can Chem & Process Ind 31:757-8+ Ag '47
Standardization of radioactive phosphorus. T. Enns. Franklin Inst J 244:315-16 O '47
Study of fertilizer uptake using P^{32}. J. W. T. Spinks and S. A. Barber. Am Chem Soc J 68:2748 D '46

PHOSPHORUS compounds
Organic compounds of magnesium and phosphorus in relation to chlorophyll formation. J. H. C. Smith. Am Chem Soc J 69:1492-6 Je '47
Preparation and properties of 2-chloroalkyl esters of boric, silicic, and phosphoric acids. W. J. Jones and others. Chem Soc J p824-7 S '46

PHOSPHORUS halides
Experiments on the interaction of hydroxy-compounds and phosphorus and thionyl halides in the absence and in the presence of tertiary bases. W. Gerrard. Chem Soc J p741-4 Ag '46

PHOSPHORUS oxides
Intermolecular dehydrations by means of phosphorus pentoxide; preparation of substituted acetophenones. G. M. Kosolapoff. Am Chem Soc J 69:1651-2 Jl '47

PHOSPHORUS oxybromide
Preparation of phosphorus oxybromide. W. Gerrard, A. Nechvatal and P. L. Wyvill. Chem & Ind p437 Jl 19 '47

PHOSPHORUS oxychloride
Experiments on the interaction of hydroxy-compounds and phosphorus and thionyl halides in the absence and in the presence of tertiary bases. W. Gerrard, Chem Soc J p741-4 Ag '46

PHOSPHORUS pentachloride
Addition reactions in phospho-organic synthesis; addition of phosphorus pentachloride to olefins. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 68:2540-1 D '46
Allylidene halides; dichlorobutene prepared from crotonaldehyde. L. J. Andrews. bibliog Am Chem Soc J 68:2584-7 D '46

PHOSPHORUS pentoxide. See Phosphorus oxides

PHOSPHORYLASES
Histochemical method for the detection of phosphorylase in plant tissues. H. C. Yin and C. N. Sun. Science 105:650 Je 20 '47

PHOSPHORYLATION
Phosphorylcholine. E. Baer. Am Chem Soc J 69:1253-4 Je '47
Studies on phosphorylation; further observations on the reaction of phosphites with polyhalogen compounds in presence of bases and its application to the phosphorylation of alcohols. F. R. Atherton and A. R. Todd. Chem Soc J p674-8 My '47

PHOTELOMETERS
Color filters in filter photometry. S. S. Cooper. bibliog Anal Chem 19:254-60 Ap '47

PHOTOCHEMISTRY
Bromine-sensitized photochemical formation of hexabromoethane from carbon tetrabromide. L. B. Seely, jr. and J. E. Willard. Am Chem Soc J 69:2061 Ag '47
Chlorophyll-sensitized photooxidation of phenylhydrazine by methyl red. R. Livingston, D. Sickle and A. Uchiyama. bibliog J Phys & Colloid Chem 51:775-86 My '47
Construction and performance of a large grating monochromator with a high energy output for photochemical and biological investigations. C. S. French and others. bibliog il diag R Sci Instr 18:11-17 Ja '47
Direct and sensitized photochemically induced reaction of chlorine and oxalic acid; comparison with the chemically induced reaction. I. L. Hochhauser and H. Taube. Am Chem Soc J 69:1582-9 Jl '47
Gas-phase photochemical decomposition of the simple aliphatic ketones. W. Davis, jr. bibliog(77 ref) diags Chem R 40:201-50 Ap '47
Mechanism of photochemical reactions. W. A. Noyes, jr. Chem & Eng N 25:2812-13 S 29 '47
Mercury photo-sensitized reaction between hydrogen and oxygen. D. H. Volman. bibliog diag J Chem Phys 14:707-13 D '46
Phosphorescence of chlorophyll and some chlorin deviratives. M. Calvin and G. D. Dorough. Science 105:433-4 Ap 25 '47
Photochemical bromination of fluorene. J. R. Sampey and E. E. Reid. Am Chem Soc J 69:234-5 F '47
Photochemical dimerisation of acenaphthylene. E. J. Bowen and J. D. F. Marsh. Chem Soc J p 109-10 Ja '47
Photochemical instability of *cis-* and *trans-*4 : 4'-diamidinostilbene. A. J. Henry. Chem Soc J p 1156-64 D '46
Photochemical investigations; photolysis of solutions of ethylene iodide. R. J. Grabenstetter and E. O. Wiig. bibliog Am Chem Soc J 69:1027-31 My '47
Photochemical reactions in sunlight; reactions with phenanthraquinone, 9-arylxanthens, and diphenyl triketone. A. Schönberg and A. Mustafa. Chem Soc J p997-1000 Ag '47
Photochemical studies; further study of the photochemistry of methyl *n*-butyl ketone. W. Davis, jr. and W. A. Noyes, jr. bibliog diag Am Chem Soc J 69:2153-8 S '47
Photosensitization in chlorination. W. T. Anderson, jr. bibliog il Ind & Eng Chem 39:844-6 Jl '47
Radiation and photochemistry discussed; symposium at the University of Notre Dame, June 24-27. Chem & Eng N 25: 2005 Jl 14 '47
Rate constants of the steps in addition polymerization; use of the rotating-sector method on liquid vinyl acetate. C. G. Swain and P. D. Bartlett. bibliog Am Chem Soc J 68:2381-6 N '46
Reactions of non-enolizable ketones in sunlight. A. Schönberg and A. Mustafa. bibliog(53 ref) Chem R 40:181-200 Ap '47
Suitability of parasantonide for asymmetric photolysis. S. Mitchell and E. J. Y. Scott. Chem Soc J p686-90 My '47

See also
Adsorption
Bleaching
Catalysis
Cotton, Effect of light on
Ionization, Gaseous
Photographic chemistry
Photosynthesis
Polymerization
Ultraviolet rays
X rays

PHOTOCONDUCTIVITY. See Electric conductivity; Photoelectricity

PHOTOELASTICITY
Photoelastic stress patterns evaluate stress concentration. W. M. Murray. il Product Eng 17:134-6 D '46
Principal stress method of stress analysis. H. B. Maris. bibliog Franklin Inst J 244: 27-62 Jl '47
Separation of principal stresses in photoelastic analysis. E. K. Frankl. bibliog Roy Aeronautical Soc J 50:974-85 D '46
Stability of soil slopes; photoelastic study of gelatin model. E. Tan. diags Am Soc C E Proc 73:27-31 Ja '47
Stress analysis by polarised light; David Brown and sons polariscope. il diags Engineer 183:454-5 My 23 '47; Automobile Eng 37:231-2 Je '47; Steel 121:84+ S 8 '47

PHOTOELECTRIC cells
Fatigue of Ag-Cs_2O, Ag-Cs photoelectric surfaces. S. Pakswer. bibliog J Ap Phys 18: 203-6 F '47
High-sensitivity photoconductive cell. C. W. Hewlett. il diags Gen Elec R 50:22-5 Ap '47
Improvement of the characteristics of photovoltaic and photo-conductive cells by feedback circuits. E. S. Rittner. bibliog diags R Sci Instr 18:36-8 Ja '47
New bridge photo-cell employing a photoconductive effect in silicon; some properties of high purity silicon. G. K. Teal and others. bibliog diag J Ap Phys 17:879-86 N '46
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47

Control uses
Electronic computer for printing control; speed of a multicolor web printing press tripled by application of electronic-hydraulic system. J. W. Ludwig. il diags Electronics 20:108-11 N '47
Electronic fire and gas light effect. H. Nye. il diags Soc Motion Picture Eng J 48: 353-60 Ap '47
Electronic frequency meter and speed regulator. E. Levin. il diags Elec Eng 65:Trans 779-86 D '46
Electronic ignition system in experimental stage. A. J. Poole. diags Automotive & Aviation Ind 96:37+ F 1 '47
Electronic straighteners use two different systems. D. Eldred. il diags Textile World 97:123+ O '47
Electronically controlled tracing head applied to oxyacetylene machine cutting. il diags Product Eng 18:102-3 Je '47
Electrons guide the cutting torch. T. H. Ayling. il diags Sci Am 177:213-15 N '47
Improved 200-mil push-pull density modulator. J. G. Frayne and others. il diags Soc Motion Picture Eng J 47:494-518 bibliog(p513) D '46
Optical proximity fuze. F. A. Zupa. il Machine Design 19:108-11 Jl '47
Photocell improves sander-dust burning in veneer plant. diag Power 91:409 Je '47
Photo cells used in controller for catalyst regeneration unit; patent. diag Pet Processing 2:462 Je '47
Photoelectric dynamometer load control; abstracts. M. R. Clapp. diags Automotive & Aviation Ind 96:31-2 F 1 '47; S A E J 55: 66-7 Je '47
Photoelectric film cuing system. I. A. Moon. il diags Soc Motion Picture Eng J 49:364-71 O '47
Photoelectric glass level control. G. Rudinger. diag Glass Ind 28:405-6+ Ag '47
Radar techniques in an industrial control; register control in the printing and paper industries. W. D. Cockrell. il diags Elec Eng 66:365-8 Ap '47; Same. Power Pl Eng 51:116+ My '47
Snow melting by embedded pipe; photoelectric control for delivery of hot water to pipes. T. N. Adlam. il diags Heat & Ven 44:63-4 Ag '47
Wolsey photocell counting control. il Mech Handling 34:493 S '47

Industrial applications
Air-cleaning efficiency tested electronically. V. Zeluff. il diags Sci Am 176:57-9 F '47
Aptitude tester for garment workers; photoelectric device. E. C. Halliday and others. il diags Electronics 20:90-2 S '47
Electronic balancer. il Engineer 182:441 N 15 '46
Electronic engraving system; photoelectric method of producing half-tone screen printing plate made of plastic material. Electronics 20:156+ Ag '47
Forging production readings; Flame-eye photoelectric unit. il diag Steel 120:112 Je 23 '47
Lead-sulfide photoconductive cells for sound reproduction. R. J. Cashman. diags Soc Motion Picture Eng J 49:342-6; Discussion. 346-8 O '47
Optimum width of illumination of the sound track in sound-reproducing optics. J. C. Frommer. Soc Motion Picture Eng J 49: 361-3 O '47

PHOTOELECTRIC cells—Industrial applications—*Continued*
Photoelectric transmitting typewriter used in air traffic control. G. L. Bush. il diags Electronics 20:96-9 Ap '47
Preliminary report of Research council photocell subcommittee; cell to reproduce dye-image sound tracks associated with certain color motion pictures. L. T. Goldsmith. Soc Motion Picture Eng J 48:145-7 F '47
Smoke control includes use of electric eye to watch density; Ekco products co. il Steel 120:112 F 10 '47
Smoke-spotting eyes give plane-fire alert. J. H. Cantlin. il diags Aviation 46:44-5 Ap '47
Some of the newer jobs phototubes are doing. F. P. Dunigan. il Factory Management 104: 120-2 N '46

Measurement uses
Automatic determination of aniline point of petroleum products. C. W. Brown. bibliog il diag Ind & Eng Chem Anal ed 18: 739-41 D '46
Direct-reading spectrometer for ferrous analysis. R. O. Carpenter and others. diags Opt Soc Am J 37:707-13 S '47
Electronics in measurement. L. G. Gitzendanner. il diags Gen Elec R 50:24-9 Ag '47
Fluorescent lamp delay timer. diag Electronics 20:184+ Mr '47
New meters employing light-sensitive cells for the measurement of erythemal energy. G. P. Kerr. bibliog il R Sci Instr 18:472-3 Jl '47
Photo-cell counting control; measurement of fabric passing over rollers in calender machine. il Engineer 184:110 Ag 1 '47
Photoelectric dust meter. G. F. Barnett and A. L. Free. bibliog il diags Electronics 19: 116-19 D '46
Photoelectric instrument for comparing the concentrations of very dilute aerosols, and measuring low light intensities. F. T. Gucker, jr., H. B. Pickard and C. T. O'Konski. bibliog diags Am Chem Soc J 69:429-38 F '47
Photo-electric method for measuring the staple length of cotton. E. Lord. diag Textile Inst J 37:T237-59, pl 1-2 N '46
Photo-electric method of estimating wool damage. W. L. Semple. il diag Textile Inst J 37:T260-3 N '46
Photoelectric nephelometer. N. Underwood and A. H. Doermann. diag R Sci Instr 18: 665-9 S '47
Photo-electric pyrometer for a small high-frequency induction furnace. T. Land and H. Lund. il diags Iron & Steel Inst J 156: 75-7 My '47
Photo-electric roof pyrometer for open-hearth furnaces. T. Land. bibliog pl diags Iron & Steel Inst J 155:568-76 Ap '47
Recording sky-wave signals from broadcast stations; description of monitoring station set up by Canadian government to investigate sky-wave interference. W. B. Smith. il diags Electronics 20:112-16 N '47
Reid and Sigrist electronic balancing machine for gyroscope rotors. il diags Engineering 165:56-7 Ja 17 '47
Sensitive photoelectric method for determining the chromaticity of phosphorescent and fluorescent materials. W. S. Plymale, jr. diags Opt Soc Am J 37:399-402 My '47
Specular reflection from mercury vapor. J. M. Hansen and H. W. Webb. diags Phys R 72: 332-9 Ag 15 '47
Stable spectrophotometry of small density changes. B. Chance. il diags R Sci Instr 18:601-9 S '47
Three new photoelectric instruments for high-speed engine research. K. J. DeJuhasz. il diags Automotive Ind 97:36-9+ Jl 1 '47
Visibility measurements by transmissometer. C. A. Douglas. il diags Electronics 20:106-9 Ag '47

See also
Densitometers
Photometers, Photoelectric

Multiplier tubes
Apparatus for the observation of the Kerr effect with microsecond electrical pulses. W. Kaye and R. Devaney. bibliog il diags J Ap Phys 18:912-18 O '47
Filters for spectral corrections of multiplier photo-tubes used from scotopic to photopic brightness levels. W. S. Plymale, jr. il R Sci Instr 18:535-9 Ag '47
Fluctuations in gas discharges. H. Y. Loh and G. H. Dieke. bibliog diags Opt Soc Am J 37:837-48 O '47
High-speed alloy analyzer; Quantometer uses electronic eyes. il Bsns W p66-8+ O 18 '47
Logarithmic photo-multiplier tube photometer. M. H. Sweet. il diags Opt Soc Am J 37:432-3 Je '47
Measurement of the intensity ratios of spectral lines with electron multiplier phototubes. K. G. Kessler and R. A. Wolfe. bibliog diags Opt Soc Am J 37:133-44 Mr '47
Method for measuring the spectral energy distribution of low brightness light sources. F. J. Studer. il diag Opt Soc Am J 37:288-91 Ap '47
Multiplier photo-tube characteristics; application to low light levels. R. W. Engstrom. bibliog diag Opt Soc Am J 37:420-31 Je '47
Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47
Photoelectric lens bench. W. Herriott. il diag Opt Soc Am J 37:472-4 Je '47
Photomultiplier X-ray detector. F. Marshall and others. bibliog il diags R Sci Instr 18: 504-13 Jl '47
Refrigerator for a multiplier phototube. R. W. Engstrom. diag R Sci Instr 18:587-8 Ag '47
Stray light in optical systems. H. S. Coleman. il diags Opt Soc Am J 37:434-51 Je '47

Scientific applications
Myographs used in studying sequence of heart action of dog and turtle. W. E. Gilson and J. A. E. Eyster. il diag Electronics 20:200+ N '47

PHOTOELECTRIC effect
Fatigue of Ag-Cs_2O, Ag-Cs photoelectric surfaces. S. Pakswer. bibliog J Ap Phys 18: 203-6 F '47
New bridge photo-cell employing a photoconductive effect in silicon; some properties of high purity silicon. G. K. Teal and others. bibliog diag J Ap Phys 17:879-86 N '46
Photo-conductivity of incomplete phosphors. R. Frerichs. bibliog diags Phys R 72:594-601 O 1 '47
Photoelectric emission from a rough surface. H. Bradner. Phys R 71:269-70 F 15 '47
Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47

PHOTOELECTRIC photometers. See Photometers, Photoelectric

PHOTOELECTRIC spectrophotometers. See Spectrophotometers, Photoelectric

PHOTOELECTRICITY
Photo-conductivity in photographic systems. W. West and B. H. Carroll. bibliog il diags J Chem Phys 15:529-43 Ag '47

See also
Photoelectric cells

PHOTOENGRAVING
Electronic engraving system; photoelectric method of producing half-tone screen printing plate made of plastic material. il Electronics 20:156+ Ag '47
Halftone made direct from photograph by new method. il Inland Ptr 119:42-3 S '47
Hints on selecting, preparing engraving copy. A. P. Salisbury. Ind Marketing 32:138+ S '47
Lower costs on production through use of new method announced by William J. Higgins company. Inland Ptr 119:60 S '47
Measuring halftone depth. Inland Ptr 119:57 S '47
Must the photoengraving industry be chained to flat handicap? Inland Ptr 118:73-4 F '47
Newly-developed letterpress-to-lithographic plate conversion technique obtaining remarkable results; Mark process. G. C. Compton. il Inland Ptr 119:45-7 My '47
Photoengravers display progressive spirit. Inland Ptr 118:31-2 D '46

PHOTO-FLASH lamps. See Electric lamps, Photoflash

PHOTOGRAMMETRY. See Photographic surveying

PHOTOGRAPHERS association of America
Classified membership directory, 1946-1947. 268p Photographers' assn. of America, 520 Caxton bldg, Cleveland 15 '47

PHOTOGRAPHERS' studios. See Photography—Studios and darkrooms

PHOTOGRAPHIC chemistry
Rapid test for ferricyanide bleach exhaustion. L. E. Varden and E. G. Seary. Soc Motion Picture Eng J 47:450-2 D '46

See also
Photographic emulsions
Photography—Developing and developers

PHOTOGRAPHIC emulsions
Analysis of particle formation and growth by size-frequency determinations of the silver halide precipitations of photographic emulsions. R. P. Loveland and A. P. H. Trivelli bibliog J Phys & Colloid Chem 51:1004-27 Jl '47
Charge effect in relation to the kinetics of photographic development; dependence upon grain size and iodide content of the emulsion. T. H. James. Franklin Inst J 243:235-44 Mr '47
Dye sensitization of photographic emulsions and the triplet state. W. T. Simpson. J Chem Phys 15:414 Je '47
Fading of latent alpha-ray image in emulsions. H. Yagoda and N. Kaplan. il Phys R 71:910-11 Je 15 '47
Quantitative alpha-particle counting by the emulsion technique. H. Yagoda and N. Kaplan. il Phys R 72:356 Ag 15 '47
Spectral variations of the intermittency effect for some panchromatic plates. W. Hopwood and J. D. Craggs. bibliog diag Opt Soc Am J 37:560-5 Jl '47

PHOTOGRAPHIC films. See Moving picture films; Photography—Films

PHOTOGRAPHIC finishing
New one-step photographic process. E. H. Land. il diag Opt Soc Am J 37:61-77 F '47
Pictures in one minute; Land process. Consumers Res Bul 19:14 My '47
Pictures in 60 seconds; Land process. H. Manchester. il diag Sci Am 176:167-70 Ap '47

PHOTOGRAPHIC finishing, Commercial
Commercial mail-order photographic developing and printing; supplementary report. Consumer Res Bul 19:12 Je '47
Free-prints-by-mail policy cracks market for new baby camera. Sales Management 59: 138-9 O 1 '47

PHOTOGRAPHIC lenses. See Lenses, Photographic

PHOTOGRAPHIC measurements
Photographic granularity and graininess. L. A. Jones and G. C. Higgins. bibliog il diags Opt Soc Am J 35:435-57; 36:203-27; 37:217-63 Jl '45, Ap '46, Ap '47
Photographic measurements of atmospheric boil. L. A. Riggs and others. bibliog il Opt Soc Am J 37:415-20 Je '47

PHOTOGRAPHIC optics
Light distribution in the optical image. M. Herzberger. il diags Opt Soc Am J 37:485-93 Je '47
Optical problems of the image formation in high-speed motion picture cameras. J. Kudar. Soc Motion Picture Eng J 47:400-2 N '46
Photographic granularity and graininess. L. A. Jones and G. C. Higgins. bibliog il diags Opt Soc Am J 35:435-57; 36:203-27; 37:217-63 Jl '45, Ap '46, Ap '47

PHOTOGRAPHIC paper
Objective method of specification for sensitometric curves of photographic papers. C. A. Morrison. il Franklin Inst J 243:55-61 Ja '47

PHOTOGRAPHIC records
Machine age comes to paper work; applications of new and improved office machines. il Ry Age 122:1034-9 My 17 '47
Photographic records and measuring devices in engineering. P. Philip. Inst E E J 94 pt 1:95-8 F '47
Photography eliminates bottlenecks; Photo Copy cameras used by Chicago, Milwaukee, St Paul & Pacific. il plan Ry Age 122:180-1 Ja 18 '47
Quantitative treatment of a density distribution pattern on photographic paper as produced by the disturbance of a spotlight galvanometer. G. Beall. il Paper Tr J 124: 35-7 My 8 '47; Same cond. Paper Ind 28: 1801-2 Mr '47
Seaboard speeds trains with photographic copying. il Ry Age 123:275 Ag 16 '47

See also
Microfilm records

PHOTOGRAPHIC reproduction and projection

See also
Microfilms

PHOTOGRAPHIC surveying
How the camera transit is used in survey work. R. G. Sanders. bibliog il Pub Works 77:23-4+ D '46
Space resection problems in photogrammetry. P. H. Underwood. Am Soc C E Proc 72: 939-62 S '46; Discussion. 72:1435-6; 73:89-93, 718-20, 904-6 D '46-Ja, My-Je '47

PHOTOGRAPHS
How to originate and maintain a photo file; system developed by large construction equipment manufacturer, La Plant-Choate. C. E. Parks. il Ptr Ink 218:36-8 Ja 17 '47

PHOTOGRAPHY
Amateur photography booms. il Bsns W p24 Je 28 '47
New one-step photographic process. E. H. Land. il diag Opt Soc Am J 37:61-77 F '47
One-minute photography; camera and process developed by Polaroid corporation. il diag Tech R 49:330-2 Ap '47
Photography as a basic science. W. C. Oelke. J Chem Educ 23:593-4 D '46
Pictures in one minute; Land process. Consumers Res Bul 19:14 My '47
Pictures in 60 seconds; Land process. H. Manchester. il diag Sci Am 176:167-70 Ap '47

See also
Cameras
Color photography
Microfilms
Moving picture photography
Photographic surveying
Photomicrography
Photostat
Radiography
Slide films
Spectrography

Apparatus and supplies
Electronic photo-timer. L. A. Gallegos. il diags Radio N 38:50-1+ Jl '47
Kodak's new lab. il Mod Packaging 20:130-3 Ja '47
Manufacturers expand to meet $100,000,000 demand for commercial photo materials. N. Kelne. Ptr Ink 221:118 O 17 '47
New phenolic photographic tank. il Mod Plastics 24:166-7 Ag '47
Photographic companies in new era; with statistics on leading producers of cameras and photographic supplies. S. Devlin. il Mag of Wall St 79:741-2+ Mr 29 '47
Photographic tray. il Sci Am 177:84 Ag '47
Radar scope photography. R. C. Babish. il Soc Motion Picture Eng J 48:454-72 My '47
Revolutionary camera announced at Optical society of America meeting. Chem & Eng N 25:667 Mr 10 '47
Weston photographic analyzer consisting of a densitometer, illumination meter, and calculator. il R Sci Instr 18:380-1 My '47

See also
Cameras
Densitometers
Photography—Films

Developing and developers
Adapter for processing 70-mm. roll film in open tanks. A. J. Moen. pl Pub Health Rep 62:512-13 Ap 4 '47
Application of methyl ethyl ketone to the analysis of developers for Elon and hydroquinone. V. C. Shaner and M. R. Sparks. bibliog Soc Motion Picture Eng J 47:409-17 N '46

PHOTOGRAPHY—Developing and developers—*Continued*
Charge effect in relation to the kinetics of photographic development; dependence upon grain size and iodide content of the emulsion. T. H. James. Franklin Inst J 243:235-44 Mr '47
Determination of iodide in developers. G. I. P. Levenson. bibliog Soc Chem Ind J 66: 198-200 Je '47
Fast film-developer helps televize the news. il Bsns W p76 Ap 19 '47
Improved method for the determination of hydroquinone and metol in photographic developers. H. L. Baumbach. bibliog Soc Motion Picture Eng J 47:403-8 N '46
Kinetics of development by catechol. T. H. James. bibliog Am Chem Soc J 69:1217-19 My '47
Recent hypotheses concerning the mechanism of photographic development. T. H. James. bibliog il J Chem Educ 23:595-601 D '46

Exposure

American standard method for determining photographic speed and exposure index. 2d rev ed 14p pa 50c American standards assn, 70 E. 45th st, New York 17 '47

Films

Challenge in films. Bsns W p46+ F 15 '47
Film gets outlets; Kryptar goes on nationwide basis via magazine distributor. Bsns W p75 Mr 29 '47
Photo-conductivity in photographic systems. W. West and B. H. Carroll. bibliog il diags J Chem Phys 15:529-43 Ag '47
Selective design; step-by-step study of Kryptar photo film carton. il Mod Packaging 21: 138-40+ S '47

See also
Moving picture films
Slide films

Industrial applications

Camera clicks for industry; photographic techniques in manufacturing processes. il Bsns W p42+ F 22 '47
Camera future lies in industrial uses. Bsns W p 18 Ag 30 '47
Deep-well camera permits visual examination of bore holes. C. E. Barstow and C. M. Bryant. bibliog il diags Oil & Gas J 45: 74-5+ Mr 15 '47
GE develops camera for equipment tests; speed 1 millionth sec. Iron Age 159:124 Je 5 '47
High-speed photography for study of high speed mechanisms. G. A. Hawkins and C. E. Balleisen. bibliog il diags Machine Design 19:127-33 Ag; 121-6 S '47
How photography helps production. R. Le Grand. il Am Mach 91:101-16 Je 5 '47 [reprint 25c]
Instrument for measurement of forces operating between fibres during drafting. J. G. Martindale. il diags Textile Inst J 38:T151-66 Mr '47
Macro-etching and photomacrography of ferritic and austenitic welded joints in low-alloy steel. O. O. Miller and E. G. Houston. il diags Welding J 26:sup620-5 O '47
Photographic reproduction as an engineering tool; Ryan aeronautical co. D. E. Clark. il Iron Age 159:60-3+ F 6 '47; Same abr. Aero Digest 53:78-9+ Ag '46
Photographic studies contribute to better machining methods. N. Zlatin. bibliog il diags Steel 120:94-7+ Mr 17 '47
Photographing conduits with axial coordinates; to provide information as to locations in building floor slabs. F. L. Dennis. il Elec World 126:76 D 21 '46
Photographs of scale model layout simplify plant changes; Victor adding machine co. R. F. Bartlett. il Factory Management 104: 142-4 N '46
Photo-projection inspection and layout of castings. C. J. Kettler. il diag Iron Age 160: 45-9 Jl 31 '47
Visual study of cylinder lubrication. M. C. Shaw and T. J. Nussdorfer. il diags Automobile Eng 36:590-4 D '46; Same cond. S A E J 54:68-72 O '46
Why not take before and after photos of coal segregation and other power plant problems? C. T. Smith. il Power 91:335-6 My '47

Latent image

Fading of latent alpha-ray image in emulsions. H. Yagoda and N. Kaplan. il Phys R 71:910-11 Je 15 '47
Photo-conductivity in photographic systems. W. West and B. H. Carroll. bibliog il diags J Chem Phys 15:529-43 Ag '47

Lighting

Light control by polarization and the application of polarizers to the stereoscopic process. J. A. Norling. il diags Soc Motion Picture Eng J 48:129-44 F '47

See also
Photography, Spark

Negatives

Density measurements; some forms of photoelectric apparatus. T. T. Baker. il diags Elec R (Lond) 140:80-2 Ja 10 '47

Plates

Special photographic plates. R Sci Instr 18:588 Ag '47

Scientific applications

Method for controlling scattered radiation in obtaining X-ray absorption data by photographic means. H. E. Seemann and L. L. MacGillivray. diags R Sci Instr 17:539-42 D '46
Nuclear photography. Mech Eng 69:667-8 Ag '47
Nuclear track plates. il Sci Am 177:125 S '47
Photographic preparation of oscillograms. R. Stollberg. il R Sci Instr 18:133-4 F '47
Radar scope photography. R. C. Babish. il Soc Motion Picture Eng J 48:454-72 My '47

See also
Photography, Spark
Photography of sound

Sensitometry

Objective method of specification for sensitometric curves of photographic papers. C. A. Morrison. il Franklin Inst J 243:55-61 Ja '47
Processing control sensitometer. G. A. Johnson. il diags Soc Motion Picture Eng J 47:474-81 D '46
Sensitometric control of the duping process. J. P. Weiss. il Soc Motion Picture Eng J 47:443-9 D '46
Spectral variations of the intermittency effect for some panchromatic plates. W. Hopwood and J. D. Craggs. bibliog diag Opt Soc Am J 37:560-5 Jl '47

Studios and darkrooms

Hollywood photographic studio. il plan Arch Forum 85:127 N '46
Photographic and art studio; Kling studios building, Chicago. il plans diags Arch Forum 87:114-20 O '47

PHOTOGRAPHY, Aerial
Aerial photographs in structural mapping of sedimentary formations. L. E. Nugent, jr. bibliog diags Am Assn Pet Geologists Bul 31:478-94 Mr '47
Application of aerial strip photography to highway and airport engineering. J. E. Hittle. il Roads & Bridges 85:86-90+ My '47
Continuous-strip right-of-way photography. Oil & Gas J 46:227 S 20 '47
High-altitude photography in a V-2 rocket. il Mech Eng 69:496-7 Je '47
Hughes XF-11 to test photo plane worth. il Aviation W 47:23-4+ O 13 '47
Night aerial photography, with radio and radar direction-finding methods combined. H. E. Edgerton. il Tech R 47:273-8+ Mr '47
Photogeology aids naval petroleum exploration. N. C. Smith and S. A. Wengerd. 4pls maps Am Assn Pet Geologists Bul 31:824-8 My '47
Photographing things to come; future AAF requirements for motion picture equipment to meet extremes of altitude and speed. M. W. Warren. Soc Motion Picture Eng J 49:82-8 Jl '47
Planning of aerial photographic projects; with cost data. F. J. Sette. map Am Soc C E Proc 72:357-73 Mr '46; Discussion. 72: 1029-31, 1130-2; 73:375-7 S-O '46, Mr '47
Recent developments in lenses for aerial photography. R. Kingslake. diags Opt Soc Am J 37:1-9 Ja '47

PHOTOGRAPHY, Aerial—*Continued*
Stabilization system by rate measurement; system applied to aerial photography. A. Lockner. Soc Motion Picture Eng J 49:88-92 Jl '47

PHOTOGRAPHY, Astronomical. See Astronomical photography

PHOTOGRAPHY, Color. See Color photography

PHOTOGRAPHY, Flashlight
Build your own high-speed photo flash. L. M. Dezettel. il diag Radio N 36:52-3+ D '46

Night aerial photography, with radio and radar direction-finding methods combined. H. E. Edgerton. il Tech R 49:273-8+ Mr '47

Single flashlight source for ultracentrifuge research. L. L. Lipschultz and K. G. Stern. bibliog il diag Science 105:395-6 Ap 11 '47

PHOTOGRAPHY, Infrared
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47

PHOTOGRAPHY, Military
Heat absorbing properties of dyed materials; camouflage against infra-red photography. F. F. Jacobs. il Rayon 28:45-6 Ja '47

Night aerial photography, with radio and radar direction-finding methods combined. H. E. Edgerton. il Tech R 49:273-8+ Mr '47

PHOTOGRAPHY, Spark
Spark light source of short duration. J. W. Beams and others. il diags Opt Soc Am J 37:868-70 O '47

PHOTOGRAPHY, Stereoscopic
Pictures in three dimensions; Akravue, the second method developed. diag Bsns W p32+ Ag 30 '47

Shepherd grain size fracture standards; stereoscope photographs by G. K. Manning; data sheet. Metal Prog 50:1046 N '46

Trivision's bow; three-dimensional photographic process scheduled to be unveiled this summer. Bsns W p20 Je 21 '47

PHOTOGRAPHY, Submarine
Special cameras and flash lamps for high-speed underwater photography. R. T. Knapp. il diags Soc Motion Picture Eng J 49:64-82 Jl '47

PHOTOGRAPHY, Underground
Deep-well camera permits visual examination of bore holes. O. E. Barstow and C. M. Bryant. bibliog il diags Oil & Gas J 45:74-5+ Mr 15 '47

PHOTOGRAPHY in industry
They did it with pictures; Florida power and light company utilized photographs taken at accident scenes. H. L. Dutkin. il Safety Eng 93:18-19+ Mr '47

See also
Advertisements, Pictorial—Photographs
Moving pictures in industry
Photographic records
Photography—Industrial applications
Slide films

PHOTOGRAPHY of children
Never too young; Hospital picture service, Washington, D.C., gets candid shots in hospital nursery. il Bsns W p49 O 25 '47

PHOTOGRAPHY of documents
See also
Microfilms
Photographic records

PHOTOGRAPHY of sound
Optical study of acoustic fields near diffracting edges. J. C. Hubbard and others. bibliog il diags Opt Soc Am J 37:832-6 O '47

PHOTOGRAPHY on glass
New glass can receive prints with three dimensional effect. Cer Ind 49:40-1 Jl '47

Photosensitive glass developed by Corning. Chem & Eng N 25:1822 Je 23 '47; Am Cer Soc Bul 26:231 Ag 15 '47; Chem Ind 61: 80+ Jl '47; R Sci Instr 18:588-9 Ag '47; Bsns W p46-7 S 27 '47

PHOTOGRAPHY on plastics
Interior panels of plastic with photographic reproduction of leather, wood and fabric patterns. il Automotive & Aviation Ind 96: 32+ Ja 1 '47

PHOTOGRAPHY on textiles
Photographic printing process brings reality to print designs. il Textile Col 69:22-3 Jl '47

PHOTOMECHANICAL processes
Newly-developed letterpress-to-lithographic plate conversion technique obtaining remarkable results; Mark process. G. C. Compton. il Inland Ptr 119:45-7 My '47

Photogrid process applied to problems in machine design. G. A. Brewer. bibliog il Machine Design 19:120-2 F '47

Reproducing drawings on metal; Kodak Transfax process. S. H. Barmasel. il Iron Age 158:62-4 N 21 '46

See also
Photoengraving
Photostat

Advertising

Industrial advertising's man-of-the-year; E. J. Shelley, Ozalid division of General aniline and film corporation. il Ind Marketing 32:85-6+ Ja '47

PHOTOMETERS
Determines coal ash without burning; General Electric X-ray photometer. Heat & Ven 44:88 S '47

Flame photometer accessory, developed to take advantage of resolving power and photometric precision of the Beckman spectrophotometer, is now in production. R. H. Müller. il Anal Chem 19:21A-22A Ag '47

Fluorine determination in water, using an electrophotometer. A. R. Todd. Water & Sewage Works 94:369 O '47

Modified atomizer for the flame photometer. V. Toscani. diags Anal Chem 19:820 O '47

Planned lighting; measuring instruments. il Elec World 128:122 O 25 '47

Rapid chemical comparisons by X-ray photometer. il diag Chem Eng Prog 43:sup 16 Ag '47; Chem Age (Lond) 57:291+ Ag 30 '47

X-ray flicker photometer. C. D. Moriarty. bibliog il diags Gen Elec R 50:39-42 F '47

X-ray photometer. T. C. Michel and T. A. Rich. il diags Gen Elec R 50:45-8 F '47

X-ray photometer is a valuable instrument for chemical analyses. R. H. Munch. il Ind & Eng Chem 38:sup81-2 D '46

See also
Densitometers
Spectrophotometers

PHOTOMETERS, Photoelectric
Automatic-recording ultraviolet photometer for laboratory and field use. I. M. Klotz and M. Dole. bibliog il diag Ind & Eng Chem Anal ed 18:741-5 D '46; Abstract. Electronics 20:140+ F '47

Color filters in filter photometry. S. S. Cooper. bibliog Anal Chem 19:254-60 Ap '47

Density measurements; some forms of photoelectric apparatus. T. T. Baker. il diags Elec R (Lond) 140:80-2 Ja 10 '47

Instrument for photometric calibration of lens iris scales. M. G. Townsley. bibliog il diags Soc Motion Picture Eng J 49:111-22 Ag '47

Light meter checks street light controls. il Elec World News ed 126:19 D 28 '46

Logarithmic photo-multiplier tube photometer. M. H. Sweet. il diags Opt Soc Am J 37:432-3 Je '47

Photo-electric cells in commercial lumen photometry. R. Tucker. Light & Lighting 40:9-11 Ja '47

Sensitive photoelectric photometer for laboratory tests on smoke filters, used in respirators. F. T. Gucker, jr. il diags Electronics 20:106-10 Jl '47

Translucency meter for use in whiteware research. N. L. Haldy and others. il diags Am Cer Soc J 30:153-9 My 1 '47

See also
Spectrophotometers, Photoelectric

PHOTOMETRY
Colorimetry and photometry in water analysis. M. G. Mellon. bibliog Am Water Works Assn J 39:341-51 Ap '47

Measurement of fluorescent lamps and luminaires. W. F. Little and E. H. Salter. il diags Illum Eng 42:217-31; Discussion. 231-3 F '47

PHOTOMETRY—*Continued*
Photoelectric instrument for comparing the concentrations of very dilute aerosols, and measuring low light intensities. F. T. Gucker, jr., H. B. Pickard and C. T. O'Konski. bibliog diags Am Chem Soc J 69:429-38 F '47

Reds and the greens; or, coloured light the rebel against order in photometry; reprinted from Light and lighting, October, 1940. J. W. T. Walsh. Light & Lighting 40: 71-4 Ap '47

Simplified method of calculating absorbed intensity in photometric experiments. R. E. Hunt and T. L. Hill. J Chem Phys 15:111 F '47

Use of heterochromous lines in spectrographic photometry. S. Levy and O. W. Christine. Opt Soc Am J 36:503-6 S '46; Correction. 36:707 D '46

See also
Color
Color measurement
Colorimeters and colorimetry
Light—Standards
Optics
Photometers
Spectrophotometry

Nomenclature

Photometric nomenclature for the post-war world. P. Moon and D. E. Spencer. bibliog Illum Eng 42:611-24 Je '47

Study of photometric nomenclature. P. Moon and D. E. Spencer. bibliog Opt Soc Am J 36:666-75 N '46

PHOTOMICROGRAPHY
Baking under the microscope. S. H. Carleton. il Sci Am 177:216-18 N '47

Cinephotomicroscopy of normal blood circulation in the cheek pouch of the hamster. G. P. Fulton and others. Science 105:361-2 Ap 4 '47

Improvements in microscope illumination. J. R. Benford. il diags Opt Soc Am J 37:642-7 Ag '47

Isotope detection by tracer micrography. il diag Chem Age (Lond) 57:292-3 Ag 30 '47

Luminescent phenomena as aides in the localization of minerals in polished sections. H. Yagoda. bibliog il diags Econ Geol 41: 813-19 D '46

Metallurgical microscope; its range and use. D. E. Roda. il Iron Age 159:53-5 F 27 '47

Metals through the microscope. P. R. Lewis. il Sci Am 177:24-5 Jl '47

Microscope camera has reflex feature. il Textile World 97:150 Ag '47

Photographic studies contribute to better machining methods. N. Zlatin. bibliog il diags Steel 120:94-7+ Mr 17 '47

Simple device to increase background contrast in photomicrography. R. J. Pence. il Science 105:503-4 My 9 '47

Surface layers on steel in natural gas condensate wells. N. Hackerman and D. A. Shock. bibliog il diags Ind & Eng Chem 39:863-7 Jl '47

Use of coated lenses for metallography. E. Walden. il Metal Prog 50:1097-9 N '46

See also
Electron microscope
Microscope and microscopy
Photography—Scientific applications

PHOTO-NEUTRONS. See Neutrons

PHOTONS
Angular momentum of photons. J. A. Balseiro. Phys R 71:79-81 Ja 15 '47

Correspondence principle analysis of double-photon emission. J. A. Wheeler. Opt Soc Am J 37:813-17 O '47

Discharge mechanism of self-quenching Geiger-Mueller counters. S. H. Liebson. bibliog diags Phys R 72:602-8 O 1 '47

Scattering processes of higher order. O. Halpern and N. M. Kroll. Phys R 72:82-3 Jl 1 '47

PHOTO-SIDE projectors. See Projection apparatus

PHOTOSTAT
Speedy short cuts you can take with photostats. P. Glanzer. Inland Ptr 119:46 Jl '47

Use of photostats in advertising production. R. M. Hogan. il Ind Marketing 32:41-2 Ap '47

PHOTOSYNTHESIS
Bacterial fractionation of oxygen isotopes. M. Dole, R. C. Hawkings and H. A. Barker. bibliog Am Chem Soc J 69:226-8 F '47

Dark reductions of photosynthesis. A. Benson and M. Calvin. bibliog Science 105:648-9 Je 20 '47

Distribution of C^{14} in photosynthesizing barley seedlings. S. Aronoff and others. diag Science 105:664-5 Je 27 '47

Organic compounds of magnesium and phosphorus in relation to chlorophyll formation. J. H. C. Smith. Am Chem Soc J 69:1492-6 Je '47

Polarographic studies on extracted chlorophylls. P. Van Rysselberghe and others. bibliog Am Chem Soc J 69:809-14 Ap '47

Reconsideration of the photosynthetic mechanism in chlorella. J. Myers and M. L. Cramer. Science 105:552 My 23 '47

Redox potentials and photoreduction by chloroplast granules. S. Aronoff. bibliog Science 104:503-5 N 29 '46

PHOTOTELEGRAPHY
Radio and the royal cruise. il diag Electrician 138:346-7 Ja 31 '47

Radio communication equipment in H.M.S. Vanguard. il diag Engineer 183:144-5 F 7 '47

VHF link for press photos; station wagon with mobile radio and picture-transmitting equipment; New York daily mirror. il Electronics 20:100-2 Ag '47

See also
Radio facsimile

PHOTOTHERAPY
Sunlamps. il Consumers Res Bul 19:28-33 Mr '47

See also
Ultraviolet rays—Therapeutic use

PHOTOTYPESETTING machine
Fotosetter; Intertype's new machine composes on film. Bsns W p21 Jl 19 '47

Here it is! copy for offset reproduction machine-composed photographically without use of any metal type. G. C. Compton. Inland Ptr 119:59 Je '47

Public printer discusses Intertype's new phototypesetting machine; abstract. A. E. Giegengack. Inland Ptr 120:51 O '47

PHTHALANDIONE. See Phthalic anhydride

PHTHALATES

See also
Dibutyl phthalate
Dioctyl phthalate

PHTHALIC acid

Analysis

Determining phthalic acid in alkyds containing tall oil; abstract. F. Philipp and E. Scholz. Paint Oil & Chem R 109:50 D 12 '46

PHTHALIC anhydride
Esterification rate of dibasic acid anhydrides with primary alcohols at room temperature. E. F. Siegel and M. K. Moran. bibliog Am Chem Soc J 69:1457-9 Je '47

Freezing point of pure phthalic anhydride. D. E. Debeau. Am Chem Soc J 68:2725-6 D '46

Industrial catalysis. B. B. Corson. il diag J Chem Educ 24:150-5 Mr '47

Preparation of 3,3-dimethylphthalide and several of its derivatives. C. H. Wang and others. bibliog Am Chem Soc J 69:1909-11 Ag '47

Reaction of certain secondary amines with phthalic anhydride; new synthesis of β-alanine. S. Chodroff, R. Kapp and C. O. Beckmann. bibliog Am Chem Soc J 69:256-8 F '47

Second wind for phthalic; offerings of o-xylene by two major companies. il Chem Ind 60:763-4 My '47; Abstract. Pet Processing 2:490-1 Jl '47

Stable colorimetric reagent for chromium. J. F. Ege, jr. and L. Silverman. bibliog Anal Chem 19:693-4 S '47

Vapour pressure of phthalic anhydride. D. A. Crooks and F. M. Feetham. Chem Soc J p899-901 O '46

PHTHALIC anhydride—*Continued*

Manufacture

Phthalic anhydride from petroleum; E. B. Badger & sons company. flow diag Pet Refiner (Process Handbook sec) 26:222-3 Ap '47

Phthalic anhydride manufacture from orthoxylene. I. E. Levine. flow diags il Chem Eng Prog 43:168-71 Ap '47

PHYMATOTRICHUM sclerotia

Glycogen content of phymatotrichum sclerotia. D. R. Ergle. bibliog Am Chem Soc J 69:2061-2 Ag '47

PHYSICAL constants

Acoustic determination of the physical constants of rubber-like materials. A. W. Nolle. diag Acoustical Soc Am J 19:194-201 Ja '47

Fluorinated ethers. E. T. McBee and R. O. Bolt. bibliog Ind & Eng Chem 39:412-15 Mr '47

Infra-red spectrum and molecular constants of $C^{12}O^{16}$ and $C^{13}O^{16}$. R. T. Lagemann and others. bibliog Phys R 72:284-9 Ag 15 '47

Isolation and purification of two isomers of mesityl oxide. F. H. Stross, J. M. Monger and H. de V. Finch. bibliog Am Chem Soc J 69:1627-8 Jl '47

Physical and chemical properties of pure fluorocarbons. R. D. Fowler and others. Ind & Eng Chem 39:375-8 Mr '47

Physical constants of low-boiling hydrocarbons and miscellaneous compounds. W. S. Hanna and R. Matteson. bibliog(91 ref) Oil & Gas J 45:61-4+ Ja 11 '47

Physical properties of 2-acetylthiophene. G. C. Johnson. bibliog Am Chem Soc J 69: 150-2 Ja '47

Preparation and physical properties of several aliphatic hydrocarbons and intermediates. F. L. Howard and others. bibliog J Res Nat Bur Stand 38:365-95 Mr '47

Properties of fluorocarbons. A. V. Grosse and G. H. Cady. bibliog Ind & Eng Chem 39: 367-74 Mr '47

Purification, purity, and freezing points of 7 heptanes, 16 octanes, 6 pentenes, cyclopentene, and 7 C_9H_{12} alkylbenzenes of the API-standard and API-NBS series. A. J. Streiff and others. pl J Res Nat Bur Stand 37:331-78 bibliog(p337) D '46

Purification, purity, and freezing points of 8 nonanes, 11 alkylcyclopentanes, 6 alkycyclohexanes, and 4 butylbenzenes of the API-standard and API-NBS series; with graphs. A. J. Streiff and others. bibliog J Res Nat Bur Stand 38:53-94 Ja '47

Solubility and melting point as functions of particle size; induction period of crystallization. L. Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47

Synthesis and physical properties of tetraethylmethane. A. W. Horton. bibliog Am Chem Soc J 69:182-3 Ja '47

Synthetic lubricant fluids from branched-chain diesters; physical and chemical properties of pure diesters. E. M. Bried and others. bibliog Ind & Eng Chem 39:484-91 Ap '47

Thermal properties of materials; tabulation; engineering file facts. Materials & Methods 25:123 Mr '47

Vapor pressures and some other properties of di-*i*-butyl ketone and di-*i*-butylcarbinol. F. H. Stross, C. M. Gable and G. C. Rounds. bibliog Am Chem Soc J 69:1629-30 Jl '47

See also

Boiling points
Dielectric constants
Freezing points
Melting points
Osmotic pressure
Refractive index
Specific gravity
Specific heat
Specific volume
Units
Viscosity

PHYSICAL education and training

Body building; physical fitness is a young business with three million paying customers. il Fortune 35:94-101+ F '47

PHYSICAL examinations

Are periodic medical checks worth while? abstract. W. H. Lipman. Management R 35:520-2 D '46

Our experience with physical examinations; Naval air station at Pensacola. R. L. Shorkey. Nat Safety N 55:28-9+ Ja '47

Physical examinations. Nat Safety N 55:190 Mr '47

X-ray screens out chest cases in hiring and placing employees; Caterpillar tractor company. il Factory Management 105:140-2 Ja '47

See also

Aviators—Physical examinations
Chest
Eye—Examination
Medical service, Industrial

PHYSICAL geography

See also

Continents
Geology
Geophysics
Lakes
Rivers
Volcanoes
Water, Underground

Canada

Geography of Canada. G. Taylor. maps Ann Am Acad 253:1-9 S '47

Florida

Cypress domes. R. O. Vernon. bibliog il Science 105:97-9 Ja 24 '47

Louisiana

Equilibrium of form and forces in tidal basins of coast of Texas and Louisiana. W. A. Price. bibliog maps Am Assn Pet Geologists Bul 31:1619-63 S '47

Texas

Equilibrium of form and forces in tidal basins of coast of Texas and Louisiana. W. A. Price. bibliog maps Am Assn Pet Geologists Bul 31:1619-63 S '47

Landslide near Georgetown, Texas, and its relation to valley development. H. R. Blank. bibliog Am J Sci 245:380-7, pl 1-2 Je '47

PHYSICAL instruments

See also

Balances
Chemical apparatus
Electric apparatus and appliances
Electric instruments
Meteorological instruments
Optical instruments
Pressure gages
Radio instruments
Scientific apparatus and instruments
Sound—Apparatus

also names of instruments, e.g. Cyclotron, Manometers; Micrometers; Oscillographs; Spectrometers; Thermometers and thermometry

Exhibitions

Physical society's exhibition, South Kensington, April 9-12. il diags Engineer 183:309-10, 328-31, 352-3, 383-5 Ap 11-My 2 '47; Engineering 163:316-18, 341-3, 364-6 Ap 18-My 2 '47; Electrician 138:847-9, 937-9, 1014-16 Ap 4-18 '47; Elec R (Lond) 140:559-65 Ap 11 '47; Wireless Eng 24:150-4 My '47; Light & Lighting 40:91-3 My '47

PHYSICAL laboratories

See also Great Britain—National physical laboratory, Teddington

Equipment

Laboratory compressor for higher pressures. B. H. Sage and W. N. Lacey. diags R Sci Instr 18:650-4 S '47

PHYSICAL measurements

See also

Dimensional analysis
Electric measurements
Magnetic measurements
Physical constants
Pressure gages
Pressure measurement
Radio measurements
Temperature—Measurement
Vibration—Measurement
Viscosity—Measurement

PHYSICAL research

Electron in research. G. Thomson. Electrician 139:993-4 O 3 '47

Physical research methods increase knowledge of catalysts, hydrocarbons. G. M. Webb. il Oil & Gas J 45:203-4+ Mr 22 '47

Some applications of punched-card methods in research problems in chemical physics. G. W. King. J Chem Educ 24:61-4 F '47

See also

Atomic research
Radar research

also Great Britain—National physical laboratory, Teddington

PHYSICAL research—*Continued*

History

Historic researches (cont). Engineer 183:256-7, 278-9, 302-4, 324-6; 184:380-1, 404-5 Mr 28-Ap 18, O 24-31 '47 (to be cont)

PHYSICAL training. See Physical education and training

PHYSICIANS

General practitioner in tuberculosis control. H. E. Hilleboe. Pub Health Rep 61:1757-9 D 6 '46

See also
Medical service

PHYSICIANS, Railroad. See Railroads—Physicians

PHYSICIANS' offices

Doctors' clinic; the modern trend. il plan Am Bld 69:134 F '47

Medical-dental center, Oklahoma City. il plans diag Arch Rec 101:74-5 Ja '47

PHYSICISTS

Statistical survey of numbers of physicists in training. M. W. White. R Sci Instr 18: 219-22 Ap '47; Abstract. Chem Eng 54:272+ Ap '47

See also
Rutherford, Ernest

PHYSICS

Future of nuclear physics. E. Fermi. Franklin Inst J 244:1-3 Jl '47

Physics in 1946. P. Morrison. bibliog il diags J Ap Phys 18:133-52 F '47

Physics of electronic semiconductors. G. L. Pearson. diags Elec Eng 66:638-42 Jl '47

Physics today, engineering tomorrow. C. G. Suits. Elec Eng 66:241-3 Mr '47

Planck's contribution to physics. G. F. H. Harker. Engineering 164:388-9 O 24 '47

Proceedings of American physical society meeting at Stanford university, California, July 11-12, 1947; with abstracts of papers. Phys R 72:738-48 O 15 '47

Proceedings of the American physical society meeting at Minneapolis, Nov. 29-30, 1946; with abstracts of papers. Phys R 71: 136-44 Ja 15 '47

Proceedings of the American physical society meeting, Montreal, June 19-21; with abstracts of papers. Phys R 72:523-39 S 15 '47

Proceedings of the American physical society meeting at New York, Jan. 30-Feb. 1, 1947; with abstracts of papers. Phys R 71: 460-84 Ap 1 '47

Proceedings of the American physical society meeting of the New England section, New Haven, Oct. 26, 1946; with abstracts of papers. Phys R 71:133-5 Ja 15 '47

Proceedings of the American physical society; minutes of the meeting at Washington, May 1-3, 1947; with abstracts of papers. Phys R 72:151-87 Jl 15 '47

Proceedings of the Southeastern section of the American physical society meeting at Salisbury, N. C. April 4-5, 1947; abstracts of papers. Phys R 71:831-7 Je 1 '47

Theoretical physics in the metallurgical laboratory of Chicago. E. P. Wigner. bibliog J Ap Phys 17:857-63 N '46

See also
Astrophysics
Atoms
Biological physics
Chemistry, Physical and theoretical
Compressibility
Cosmic rays
Cyclotron
Diffusion
Dimensional analysis
Doppler effect
Dynamics
Elasticity
Electricity
Electrodynamics
Electrons
Evaporation
Expansion (heat)
Fluids
Fluorescence
Friction
Gases
Geophysics
Heat
Heat transmission
Hydraulics
Hydrodynamics
Ionization, Electrolytic
Ionization, Gaseous
Ions
Light
Liquids
Mathematical physics
Mechanics
Meteorology
Meteorology, Aeronautic
Molecules
Music—Acoustics and physics
Optics
Particles
Physical research
Plasticity
Pressure
Quantum theory
Radiation
Radioactivity
Reflection (optics)
Relativity (physics)
Sound
Statistical mechanics
Steam
Strains and stresses
Temperature
Thermodynamics
Thermometers and thermometry
Vibration
Viscosity
Wave mechanics
Weights and measures

Bibliography

Book reviews. Published in Review of scientific instruments April and October

Current literature of physics. Published in monthly numbers of Review of scientific instruments

Guide to the literature of mathematics and physics including related works on engineering science. N. G. Parke, 3d. 205p $5 McGraw-Hill book co, 330 W. 42d st, New York 18 '47

International aspects

Our contributions to international relations in physics. H. A. Barton. R Sci Instr 17: 529-32 D '46

Periodicals

Current periodicals in the physical sciences published in Germany. R Sci Instr 18:468 Je '47

Our contributions to international relations in physics. H. A. Barton. R Sci Instr 17: 529-32 D '46

Study and teaching

Cooperation between departments of physics and mechanics in engineering colleges. R. Z. Williams. J Eng Educ 37:720-6 My '47

Coordination of teaching in physics and engineering mechanics. W. H. Michener. J Eng Educ 37:618-21; Discussion. 621-7 Ap '47

Introductory, combined course in chemistry and physics. E. C. Fuller. J Chem Educ 24:380-1 Ag '47

Physics laboratory in an engineering school; one solution to problem of assigning grades to the student in the Sophomore physics laboratory. C. J. Pratt. J Eng Educ 37: 828-30 Je '47

PHYSIOLOGICAL apparatus

Concentration and preservation of urinary substances by lyophilization. H. B. Friedgood and others. diag Science 105:99-100 Ja 24 '47

Homogenization of sputum specimens with a paint-conditioning machine. C. E. Woodruff. il Science 105:294-5 Mr 14 '47

Moist chamber for nerve-muscle experiments. F. A. Waterman. diags Science 105:294 Mr 14 '47

Studies of thermal injury; automatic recording caloric applicator and skin-tissue and skin-surface thermocouples. F. C. Henriques, jr. bibliog diags R Sci Instr 18: 673-80 S '47

Variable capacitor for measurements of pressure and mechanical displacements; a theoretical analysis and its experimental evaluation. J. C. Lilly and others. bibliog il diags J Ap Phys 18:613-28 Jl '47

Versatile electronic stimulator for nerve and muscle. W. L. Nastuk and H. L. Borison. il diag R Sci Instr 18:669-72 S '47

Versatile square wave nerve stimulator. A. C. Guyton. diag R Sci Instr 17:553-6 D '46

See also
Ballistocardiograph
Biological apparatus
Electrocardiophone
Electroencephalograph
Electrophysiology—Apparatus
Kymograph
Myograph
Perfusion apparatus
Respiratory apparatus
Sphygmograph

PHYSIOLOGICAL chemistry

Biochemical individuality and its implications. R. J. Williams. bibliog Chem & Eng N 25:1112-13 Ap 21 '47

Chemical composition of seminal vesicle calculi. J. S. Hepburn and P. E. Yount. Franklin Inst J 243:487-8 Je '47

PHYSIOLOGICAL chemistry—*Continued*
Chemist's view of nutrition. L. A. Maynard. Science 105:399-403 Ap 18 '47

See also
Anesthetics
Anoxemia
Biological chemistry
Blood—Analysis
Carbohydrates
Cholesterol
Enzymes
Fat
Hemolysis
Hormones
Immunity
Lead in the body
Metabolism
Nutrition
Perspiration
Poisons
Poisons, Industrial
Proteins
Radioactive substances in the body
Sugar in the body
Toxins and antitoxins
Urine
Vitamins

PHYSIOLOGICAL noise. See Noise, Physiological

PHYSIOLOGY
Contributions of physiology to problems of industry; abstract. D. B. Dill. Science 106: 120-1 Ag 8 '47

See also
Blood
Cells
Diet
Electrophysiology
Fatigue
Longevity
Metabolism
Muscles
Nervous system
Nutrition
Old age
Radiation—Physiological effect
Respiration
Respiratory organs
Solvents—Physiological effect
Temperature—Physiological effect
Tissues

PHYSOSTIGMINE
Study of the hydrolysis of several physostigmine analogs. S. W. Chaikin. bibliog Am Chem Soc J 69:1266-8 Je '47

PIANO
Decay rates of piano tones. D. W. Martin. bibliog il Acoustical Soc Am J 19:535-41 Jl '47

Instruction and study

Plastic teaching aids invade piano field. il Mod Plastics 25:92-3 S '47

PICARD, Frank A. 1889-
Trial judge in Mt Clemens pottery co. portal-pay suit. por(cover) Bsns W p8 F 8 '47

PICKETING
Injunction tests; New Jersey mass picketing ban upheld. Bsns W p104+ D 14 '46
Norris-LaGuardia act not applicable to picketing of licensee; decision of a D.C. federal district court. Mo Labor R 65:465 O '47
Picketing; its economic and legal status. T. J. Anderson, jr. Comm & Fin Chr 164:2457+ N 14 '46
Picketing; its use and abuse. H. Feldman and H. P. Bell. Ann Am Acad 248:97-109 N '46
Union's right to peaceful picketing upheld by court; ruling by New York Court of appeals. Elec World 126:88 N 23 '46
Virginia law challenged. Bsns W p96 Ap 19 '47

PICKLES
Nutritive value of vinegar, pickles and condiments. H. Sarson. Chem & Ind p187-8 Ap 12 '47
Production of cured vegetables for pickle manufacture. J. G. Baumgartner. bibliog Chem & Ind p350-3 Je 21 '47

PICKLING (metals)
Analysis of waste pickle liquor. R. D. Hoak. il Iron Age 160:55-7 Jl 3 '47
Compound development prevents over-pickling. il Steel 119:77 D 23 '46
Consumption of waste pickle liquors; abstract. C. C. DeWitt. Chem Eng 54:260+ Je '47
Electro-tinplate; influence of pickling conditions on porosity and corrosion resistance. K. W. Caulfield, R. Kerr and R. M. Angles. il Soc Chem Ind J 66:7-11 Ja '47
Evaluating pickling acid inhibitors; colorimetric test method. E. L. Colichman and others. bibliog Iron Age 159:55-7 Ap 24 '47
How to clean metals. H. S. Wharen. diags Am Mach 91:119-23 N 6 '47
Improved hold-down roll for pickling. il Iron Age 160:72 Jl 3 '47
Lime treatment of waste pickle liquor. C. J. Lewis. il Iron Age 159:45-9 Je 26 '47
Lime treatment of waste pickle liquor. R. D. Hoak and others. bibliog Ind & Eng Chem 39:131-5 F '47
Nickel and high nickel alloys; cleaning and pickling. N. E. Woldman. Materials & Methods 24:1488 D '46
Oxide conditioning speeds pickling operations. C. B. Murton, jr. and M. F. Hawkes. Iron Age 160:46-8 O 30 '47
300 per cent increase in efficiency with a straight-line pickle plant; O'Keefe & Merritt co. M. B. Smith. il plan Cer Ind 48: 53-4+ My '47
Waste pickle conversion to new material. W. Bull. Chem Age (Lond) 57:465-6 O 4 '47
Waste pickle liquor. R. D. Hoak. bibliog il Ind & Eng Chem 39:614-18 My '47; Abstract. Steel 120:121 My 12 '47

PICKUP, Phonograph. See Phonograph—Pickup

PICKUP equipment. See Airplanes—Pickup equipment

PICOLINE
Diels-Alder syntheses with hexachlorocyclopentadiene. E. A. Prill. Am Chem Soc J 69:62-3 Ja '47
Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47
Electrolytic oxidation of quinoline and 3-picoline. M. Kulka. bibliog Am Chem Soc J 68:2472 D '46
Fluorinated heterocyclic compounds; methylpyridines. E. T. McBee, H. B. Hass and E. M. Hodnett. bibliog Ind & Eng Chem 39: 389-91 Mr '47

PICOLINIC acid
Inhibition of catalysed thermal decomposition of DDT. F. A. Gunther and L. R. Tow. bibliog Soc Chem Ind J 66:57-9 F '47
4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

PICRATES
Properties of electrolytic solutions; conductance of choline and related picrates in ethylene chloride at 25°. D. J. Mead and others. Am Chem Soc J 69:528-30 Mr '47
Properties of electrolytic solutions; the conductance of some onium type salts in ethylene chloride at 25°. E. R. Kline and C. A. Kraus. bibliog Am Chem Soc J 69:814-16 Ap '47

PICRIC acid
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47
Picric acid method for determination of aromatic content of aviation gasoline. C. M. Gambrill and J. B. Martin. Ind & Eng Chem Anal ed 18:689-92 N '46

PIECE work
Majority approve of piecework as basis for pay; Gallup poll. Iron Age 159:117 My 22 '47

PIERCE, Frank Reynolds, 1901-
Portrait. Bsns W p18 D '46

PIERS
First-class pier proposed for Hoboken. il Marine Eng 52:93-4 O '47
Illinois city constructs combination pier and sewer. R. L. Anderson. il plan diags Pub Works 78:27-8 Ja '47

Fires and fire protection

Hudson River pier fire destroys New York Central overseas outlet. Spectator (Property ed) 12:18+ Ja 23 '47; Nat Underw 51:10 Ja 16 '47
New fire-fighting weapons under piers. Weekly Underw 157:890 O 11 '47
Wrought-iron plates prevent fire spread; Norfolk and Western railway piers at Lambert Point, Va. il Civil Eng 17:475 Ag '47
Wrought iron used effectively in marine-pier fire walls. il diag Ry Age 123:15-16 Jl 5 '47; Abstract. Nat Safety N 56:38+ S '47

PIERS (foundations)

See also
Bridges—Foundations and piers

PIEZOELECTRIC crystals. See Crystals, Piezoelectric

PIEZOELECTRICITY

Approximate determination of piezoelectric properties by measurements on small crystals. E. Burstein. bibliog diags R Sci Instr 18:317-27 My '47

Dielectric and piezoelectric properties of barium titanate. S. Roberts. bibliog Phys R 71:890-5 Je 15 '47

PIG iron

Pig iron business in 1872. Min & Met 28:271-2 Je '47

See also
Cast iron
Iron founding

Prices

Composite pig iron price; monthly, 1927-1946; tabulation. Iron Age 159:231 Ja 2 '47

Foundry, charcoal and basic pig iron prices, 1929-1946; tabulations. Iron Age 159:232+ Ja 2 '47

Republic ties basic pig iron prices to scrap. Iron Age 160:115-16 Ag 21 '47

Statistics

Pig iron production; monthly, 1929, 1940-1946; tabulation. Steel 120:323 Ja 6 '47

United States pig iron production; monthly, 1901, 1910-1946; tabulation. Iron Age 159:177 Ja 2 '47

World production of pig iron and ferroalloys, by countries, 1937-1946; tabulation. Steel 120:315 Ja 6 '47

PIGMENTS

Alphabetical list of new products developed since November, 1945. il diag Am Dyestuff Rep 35:674-80 D 16 '46

Anti-corrosive pigments. Chem Age (Lond) 55: 636 N 23 '46

Antifouling paints; inactivation of highly pigmented antifouling films applied to steel. A. L. Alexander and R. L. Benemelis. il Ind & Eng Chem 39:1028-32 Ag '47

Calcium carbonate extender pigments; abstract. L. H. Cohan and H. W. Siesholtz. Chem Eng 54:288+ My '47

Coloring power of pigments. H. L. Beakes. Paint Oil & Chem R 110:15+ My 1 '47

Comparison of optical and electron microscopy of pigments. D. L. Tilleard and N. D. P. Smith. Soc Chem Ind J 65:261-4, pl 1-2 S '46

Dielectrics and rheology of non-aqueous dispersions. A. Voet. bibliog il diag J Phys & Colloid Chem 51:1037-63 S '47

Dyestuff pigments for paints; abstract. F. A. Walker. Paint Oil & Chem R 110:39-40 Jl 24 '47

Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. bibliog Soc Chem Ind J 65:305-8, pl 5-6 O '46

Experiments with writing inks. R. Neal and others. bibliog J Chem Educ 24:429-31 S '47

Lead products. F. E. Wormser. Paint Oil & Chem R 109:66-7 N 14 '46

Limiting colors due to ideal absorption and transmission bands. I. H. Godlove. bibliog Opt Soc Am J 37:778-91 O '47

Market outlook for zinc pigments. M. L. Havey. Paint Oil & Chem R 110:43 My 1 '47

New pigment will conserve lead supply; abstract. F. J. Williams and A. R. Pitrot. Paint Oil & Chem R 110:17 O 2 '47

Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37:826-32 O '47

Pigment printing comes of age. il Am Dyestuff Rep 35:sup132 D 2 '46

Pigments can improve solvent type waxes. C. S. Glickman. il Chem Ind 61:223+ Ag '47

Pigments manufacturing in Germany. Oil Paint & Drug Rep 151:78 F 3 '47

Possible method of using reflectometer to determine hiding power. Paint Oil & Chem R 109:42-4 N 14 '46

Preparing pigments for the electron microscope. A. M. Cravath. J Ap Phys 17:1125-6 D '46

Review of the literature on color lakes. W. B. Blumenthal. bibliog(555 ref) Am Dyestuff Rep 35:529-38+ N 18 '46

Silicon-containing finishes to have wide application; abstract. J. R. Patterson. Paint Oil & Chem R 110:16+ Je 12 '47

Study of pigment dispersion, report no. 1; measurement of fineness of grind. il Paint Oil & Chem R 109:76-81 N 14 '46

Titanium-bearing white enamels in shop practice. P. A. Huppert. Cer Ind 49:64-5 Ag '47

Titanium pigments. R. Mansell. Paint Oil & Chem R 110:18+ F 6 '47

Use of metallic pigments in the preparation of protective paints. J. E. O. Mayne. bibliog diags Soc Chem Ind J 66:93-5 Mr '47

Viscosity changes in storage of paints containing basic pigments. Paint Oil & Chem R 109:18+ N 14 '46

Water immersion testing of metal protective paints; role of electroendosmosis in water absorption and blistering. W. W. Kittelberger and A. C. Elm. il Ind & Eng Chem 39:876-81 Jl '47

X-ray diffraction studies of color variation of iron oxide pigments. H. Birnbaum and others. il J Ap Phys 18:27-9 Ja '47

See also
Barium potassium chromate
Carbon black
Carotene
Cyanines
Dyes and dyeing
Lead oxides
Melanine
Paint
Pterins
Titanium oxides

Analysis

Determination of metallic aluminum in aluminum pigments. A. K. Light and L. E. Russell. bibliog diag Anal Chem 19:337-8 My '47

Examination of pigments and extenders with the electron microscope. D. L. Tilleard and N. D. P. Smith. bibliog Soc Chem Ind J 65:305-8, pl 5-6 O '46

Statistics

Mineral earth pigments sales, 1946; tabulation. Oil Paint & Drug Rep 152:74 Jl 21 '47

PIGMENTS, Biological

Activity of the red pigment from leguminous root nodules. H. N. Little and R. H. Burris. bibliog Am Chem Soc J 69:838-41 Ap '47

Biochemistry of plant pigments. W. D. Bancroft. bibliog J Phys & Colloid Chem 51: 1078-87 S '47

Pigments of cottonseed; gossycaerulin, a blue quinonoid gossypol derivative occurring in cooked cottonseed. C. H. Boatner and others. bibliog Am Chem Soc J 69:668-72 Mr '47

Pigments of cottonseed; gossyfulvin, a native cottonseed pigment related to gossypol. C. H. Boatner and others. bibliog il Am Chem Soc J 69:1268-73 Je '47

Production of antibiotics by fungi; javanicin, an antibacterial pigment from fusarium javanicum. H. R. V. Arnstein and A. H. Cook. Chem Soc J p 1021-8 Ag '47

See also
Carotenoids

PIGS. See Swine

PILE drivers

Diesel pile hammers used by Germans. il diags Eng N 138:522-4 Ap 3 '47

Lagonda Diesel pile-driver. il diag Engineer 184:99-100 Ag 1 '47

PILE fabrics

Raising of textile fabrics. C. S. Whewell and others. Textile Inst J 37:P198-9 Jl '46

Screen printing machine for pile fabrics; patent. P. Wengraf. diag Am Dyestuff Rep 36:513 S 8 '47

Sizing rayon warps for pile fabrics. J. J. Sussmuth. diags Rayon 28:536-7 O '47

PILES and pile driving

Battered piles in bridge abutments. C. H. Wood. Eng N 138:1018-19 Je 26 '47

Concrete-filled steel piles support wharf at Long Beach, Calif. R. R. Shoemaker. il diag Eng N 139:328-31 S 4 '47

Driving 3,850 piles for 60-ton loads; concrete building for Lakeside press, Chicago. il Eng N 137:722-3 N 28 '46

PILES and pile driving—*Continued*
Dynamic pile-bearing formula with static supplement. W. H. Rabe. Eng N 137:868-71 D 26 '46
Encasing bridge piles in concrete. W. H. Johnson and C. J. Beer. il diags Concrete 55:3-5 Jl '47
Heavy piling used for 66-kv. crossing. L. A. Edinborough. il Elec World 126:116+ N 9 '46
High capacity piles on Chicago hardpan; General Motors building. H. Caudill. diags Eng N 139:315-17 S 4 '47
New piling formula. O. Faber. Engineering 163:156-7 F 14 '47
Tubular steel pile piers withstand rigid test; two piers of Garrison Dam construction bridge subjected to unusual ice load. E. E. Howard. il map diags Civil Eng 17:580-3+ O '47
Welded steel piles support 26-story skyscraper; Boston home of John Hancock life insurance co. il Civil Eng 17:113-16 Mr '47
See also
Cofferdams
Concrete piling
Sheet piling

PILOMETER
Pilometric measurements and the rheological properties of hair. A. L. Copley. bibliog diag Science 105:340-2 Mr 28 '47

PILOT lights. See Gas appliances—Pilot lights

PILOT plants. See Chemical plants—Experimental plants; Factories—Experimental plants; Foundries—Experimental foundries; Petroleum refineries—Experimental plants

PINACOL
Electrolytic reduction of acetone to pinacol. O. C. Slotterbeck. bibliog diag Electrochem Soc Trans 92 (preprint 10):123-35 '47
Vapor phase rearrangement of pinacols. W. S. Emerson. bibliog Am Chem Soc J 69: 1212 My '47

PINACYANOL chloride
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47

PINANE
Studies in the terpene series; destructive hydrogenation of bicyclic dihydroterpenic hydrocarbons. V. N. Ipatieff, H. Pines and M. Savoy. bibliog Am Chem Soc J 69:1948-52 Ag '47

PINCHIN, Johnson and company, limited
Statement by the chairman at annual general meeting. C. G. Heywood. Economist 152: 828-9 My 24 '47

PINE
Composition of gum turpentine of Torrey pine. A. J. Haagen-Smit, C. T. Redemann and N. T. Mirov. Am Chem Soc J 69: 2014-17 Ag '47
Elementary composition of lignin in northern pine and black spruce woods, and of the isolated Klason and periodate lignins. W. J. Wald. P. F. Ritchie and C. B. Purves. bibliog Am Chem Soc J 69:1371-7 Je '47
Hot alkaline purification of cellulose; cooking of pine wood by the sulphate process in one and two stages; hot alkaline purification of pine sulphate pulp. A. Meller. bibliog Paper Tr J 123:49-54 D 26 '46
Physical studies of paint primers in two-coat paint systems applied to southern yellow pine. L. Wilkins and P. Weber. bibliog Georgia School of Technology State Eng Exp Sta [Atlanta] Reprint no 21:88-121 '47
Pine gum processing labor and fuel costs. H. P. Poole and E. L. Patton. Chem Eng 54:102-3 Ag '47
Round table discussion on painting of southern yellow pine. Georgia School of Technology State Eng Exp Sta [Atlanta] Circ no 14:1-19 '47
Stimulation of oleoresin flow in pines by a fungus. G. H. Hepting. Science 105:209 F 21 '47

PINEAPPLE juice
Ion exchange plant recovers sugar from fruit waste; Hawaiian pilot plant demineralizes 3,000 gals. of juice from pineapple shells daily. flow diags il Food Ind 18:1846-8+ D '46

PINEAPPLES
Chemistry in Hawaii; pineapples and sugar, around which Hawaiian industry has grown up. R. C. Brasted. il Chem & Eng N 25: 495-8 F 24 '47
Cuba's pineapple industry. For Comm W 28: 24-5 Ag 30 '47

Transportation
Diesel tug for pineapple barge towing. il Marine Eng 52:93-4 Mr '47

PINENE
Acid catalyzed isomerization of α-pinene. W. A. Mosher. bibliog Am Chem Soc J 69:2139-41 S '47
Effect of uniform versus intermittent product withdrawal from distillation columns. D. M. Oldroyd and L. A. Goldblatt. bibliog diags Ind & Eng Chem Anal ed 18:761-3 D '46
Rate of the thermal isomerization of α-pinene in the liquid phase. R. E. Fuguitt and J. E. Hawkins. bibliog Am Chem Soc J 69: 319-22 F '47

PINIONS. See Gearing

PIPE bending
How to bend tubing or small-size pipe; illustrated instructions. Power 91:351 My '47

PIPE bends
Analysis of stresses in U-bend pipe frame. J. Yeakel. Pet Refiner 26:125 Mr '47
Diffraction of sound due to right-angled joints in rectangular tubes. J. W. Miles. diags Acoustical Soc Am J 19:572-9 Jl '47

PIPE coating
Coating and wrapping the 30-inch California gas line. P. Reed. il Oil & Gas J 46:239+ Jl 26 '47
Composition of Somastic pipe-coating for pipe housing the Oilostatic cable. Elec World 127:150+ My 24 '47
Pipe electroplated inside for corrosion resistance; Lectro-Clad; abstract. S. G. Bart. Materials & Methods 25:126-7 Mr '47
Report of A.G.A. subcommittee on pipe coatings and corrosion. Am Gas Assn Proc 1946:302-4

PIPE coils. See Coils, Pipe

PIPE coverings
Estimating magnesia insulation costs. F. C. Otto. Chem Eng 54:126-9+ S '47
How to estimate dollar savings by use of insulation to cut heat losses. Pet Processing 1:192 N '46
Mineral wool insulation of ducts cuts plant operating costs. il Sheet Metal Worker 38:100+ S '47
Modern boiler, tank and line insulation; Salisbury axle plant. il Power Pl Eng 51: 84-6 S '47
Process equipment cost estimation; estimating cold insulation costs. F. C. Otto. Chem Eng 54:118-20 My '47
See also
Steam pipe coverings

PIPE cutting
Guide makes pipe cutting easy. H. P. Martin. il Power 91:44 Ja '47
New Lone Star tool cuts pipe from inside. il Gas Age 99:24 F 20 '47
New pipe cutter designed and built. C. Thompson. il Pet Eng 18:184 Je '47

PIPE cutting machines
Tighter grip improves pivoted joints; torch pipe-cutting machine. G. L. Landry. diags Am Mach 91:102 Ja 2 '47

PIPE deposits (ores). See Ore deposits

PIPE elbows
Testing
Tests on elbows of a special design; carburetor air intake of airplane engines. J. J. Harper. il diags J Aeronautical Sci 13:587-92 N '46

PIPE fitting
Electric welding of pipe. O. Blodgett. il diags Welding J 26:684-9 Ag '47

PIPE fitting—*Continued*
How to solder stainless steel fittings; illustrated instructions. Power 91:57 Ja '47
How to weld pipe. il diags Dom Eng 169:106-7+ Mr; 112-13+ Ap; 120-3+ My; 170:118-19+ Jl; 118-19+ Ag; 114-16 S; 120-1+ O '47
Pipe layout simplified. B. H. Higgs. diags Heating-Piping 19:72-7 F '47
Simplified pipe layout. diags Dom Eng 169: 124-5 Ja; 118-19+ F '47
Utopia refinery pipefitters never injured on the job. F. J. Sluze. Pet Processing 2:180 Mr '47

See also
Gas fitting
Pipe joints
Plumbing

PIPE fittings
Equivalent resistance of fittings in terms of pipe-line length; chart. Oil & Gas J 46:133 Je 14 '47
Fluid flow friction factors for pipes, valves and fittings. V. L. Streeter. diag Product Eng 18:89-91 Jl '47
Hot-dip galvanizing practice. W. H. Spowers, jr. il Steel 119:112-14 N 18 '46
Loss of head in pipes and fittings. diags Water & Sewage Works 94:R45-54 Jl '47
Metallurgical progress in the valve, fitting and piping industry. J. J. Kanter. il Metal Prog 52:629-31 O '47
Parker flareless fitting. il Ry Mech Eng 121: 38-9 Ja '47
Pipe and fittings; new equipment. il Chem Ind 61:421-3 S '47
Standard specifications for gray iron castings for valves, flanges and pipe fittings; data sheet. diags Foundry 75:117-18 N '47

See also
Pipe joints
Pipe threads
Plumbing valves

Standards

Report of committee on the standardization of oil-country tubular goods. diags Am Pet Inst Proc 25(4):151-214 '45
Report of committee on the standardization of oil-country tubular goods. diag Am Pet Inst Proc 26(4):209-33 '46
Report of committee on the standardization of valves and fittings. diags Am Pet Inst Proc 26(4):253-75 '46
Starts standardization of stainless pipe and fittings. Heating-Piping 19:89-90 Mr '47
Tentative standard specifications for threads for underground service line fittings. diags Am Water Works Assn J 39:1059-66 O '47; Same. N E Water Works Assn J 61:sup 1-6 D '47

PIPE flanges
Calcul des contraintes dans les brides d'assemblage des tuyauteries. R. Nithart. diags Génie Civil 124:176-8 My 1 '47
Deflexion of a thick plain ring under a uniformly distributed couple. A. E. Johnson. Inst Mech Eng J & Proc 155 (War emergency issue no 16):101-11; Discussion. 111-15 '46
Design of flanged joints. S. Labrow. diags Inst Mech Eng J & Proc 156:Proc66-70; Discussion. 70-3 Je '47
Methods of joining pipe; flanged pipe joints. J. E. York. diags Heat & Ven 44:77-82 O '47
Standard specifications for gray iron castings for valves, flanges and pipe fittings; data sheet. diags Foundry 75:117-18 N '47

PIPE handling
Self-sufficient pipe trailer gives pick-up and delivery service. il Eng N 138:63 Ja 9 '47

Safety measures

Safe practices used in handling pipe. D. Attaway. il Pet Eng 18:158+ Mr '47

PIPE hangers
How to figure piping hanger loads. E. Howarth. diags Power 91:455-7 Jl '47
Importance of flexible pipe supports. E. W. Stothart. diags Pet Processing 2:529+ Jl '47; Same. Pet Refiner 26:118-20 Jl '47

PIPE joints
Amounts of jute and asphaltic jointing compound in pounds per joint A.S.T.M. vitrified salt glazed sewer pipe; table. Brick & Clay Rec 110:27 Je '47
Amounts of jute and sulphur-silica compound in pounds per joint A.S.T.M. vitrified salt glazed sewer pipe; table. Brick & Clay Rec 110:29 My '47
Bacterial deterioration of water in distribution systems; infection from jute jointing material; abstract. R. Ferramola. Am Water Works Assn J 39:391 Ap '47
Basic design of thermowells. G. R. Feeley. diags Machine Design 18:143-5 D '46
Cast bolts for pipe joints. C. K. Donoho. il diag Mech Eng 69:739-42 S '47
Chlorination of mains and the defects of yarn as a jointing material. E. W. Taylor and L. C. Whiskin. diags Water & Sewage 84:28-9+ Je; 25-6+ Ag; 41 N '46; Abstract. Am Water Works Assn J 38:890-1 Jl '46; Correction. 38:1218 O '46
Data on casing failures and joint tightness. R. J. Kettenburg and others. Am Pet Inst Proc 26(4):234-43 '46
Design of flanged joints. S. Labrow. diags Inst Mech Eng J & Proc 156:Proc66-70; Discussion. 70-3 Je '47
Disinfection of water mains; calking material as source of contamination. A. N. Heller. bibliog il Am Water Works Assn J 38: 1335-41 D '46
Expensive machining is avoided with new high pressure union; patent. diag Pet Processing 2:704 S '47
Failures in guided bend qualification test often due to high-tensile pipe. L. K. Stringham. il diag Welding J 26:784-5 S '47
Flexible pipe joint employs steam for packing to reduce failures; patent. diag Pet Processing 1:188+ N '46
Hydraulic swivel designs. B. J. McCabe. il diags Aero Digest 54:88+ My '47
Joining large concrete pipe with air gun. W. B. Lenhart. il Rock Prod 50:121+ Jl '47
Machine grouts joints in trunk sewer. C. S. Seabrook. il Eng N 138:50-2 Ja 9 '47
Main water supply connection made with minimum shutdown. il Eng N 139:186 Ag 7 '47
Methods of joining pipe. J. E. York. diags Heat & Ven 44:76-82 S; 77-82 O '47 (to be cont)
Pattern for intercepting pipe. diags Sheet Metal Worker 38:85-6 Mr '47
Pipe unions made from stampings. il Product Eng 18:102 Ja '47
Proposed method of reducing leakage on change-overs. L. J. Willien. Gas Age 99:31+ Ap 3 '47
Rustless coupling for asbestos-cement pipe. F. Squires. il diags Pet Eng 18:178+ Ag '47
Safety-weld coupling on pipe-line maintenance work. J. B. Smith. il diags Oil & Gas J 46:193-4+ S 20 '47
Three-million-dollar Tacoma sewer project employs machine-made joints. C. S. Seabrook. il Civil Eng 17:314-16 Je '47

See also
Pipe fittings
Pipe flanges
Pipe threads

Testing

Inspection of pipe-line welding by radiographic methods. W. W. Offner. il Oil & Gas J 46:180-1 S 20 '47
Metallurgical properties of high yield strength seamless line pipe. A. B. Wilder and J. D. Tyson. il diags Welding J 26: 872-80 O '47
Radiography as a control for welding joints in pipe lines. R. G. Rhoades. Welding J 26:497-8 Je '47
Reinforcement of branch pieces. J. S. Blair. il diags Engineering 162:1-4, 217-21, 228, 508-11, 529-33, 540, 577-81, 588, 605 Jl 5, S 6, N 29-D 27 '46; Discussion. 163:63 Ja 17 '47
Report of tests on 2-in. line-pipe joints. G. McConnell. il Am Pet Inst Proc 26(4):248-52 '46

PIPE laying
Australian practice favors water pipeline on the desert floor; conduit supplies water to Whyalla. il map Eng N 138:889-91 My 29 '47

PIPE laying—*Continued*

Biggest Inch employs advanced ideas laying large lines. R. Reed. il map Oil & Gas J 46:58-60 Je 7 '47

Butt-welded pipeline for natural gas. il Engineering 163:97-8, 108 Ja 31 '47

California section nears completion; Texas-California pipe line. R. Sneddon. il Pet Eng 18:76+ S '47

Construction methods followed in laying El Paso Natural's Texas-California line. P. Reed. il map Oil & Gas J 46:60-1+ Jl 12 '47

First pipe line to West coast; El Paso natural gas company's west Texas-California line. F. H. Love. il map Pet Eng 18:61+ S '47

Great Lakes pipe line extension. F. H. Love. il Pet Eng 18:82+ D '46

Installation of gas service piping. E. L. Henderson. map Am Gas J 166:19-21+ My '47; Same cond. Am Gas Assn Mo 29:455-7 O '47

Jeeps aid in laying pipe line. N. T. Regan. il Gas Age 98:25-6+ N 14 '46

More natural gas for western Pennsylvania. E. D. Clutter. il Gas Age 98:11-12+ D 26 '46

New 72-in. pipeline to bypass soft bottom of San Francisco bay. N. A. Eckart. maps Eng N 139:49-52 Jl 10 '47

Outline for an on-the-job training program for water department personnel; construction of pipe lines. Pub Works 78:38+ S '47

Pipe lines play big role in nation's economic reconversion; arc welding operations. R. H. Davies. il Pet Eng 18:182+ Mr '47

Pushing a pipeline across marsh-land. il Eng N 138:576-8 Ap 17 '47

Railroad tunnels, submarine sections, climate pose rugged pipe-line problems; India-Burma-China products line. P. Reed. il diags Oil & Gas J 45:60-1+ Mr 8 '47

South Texas pipe line extension. F. H. Love. il Pet Eng 18:35-8 Jl '47

Stabilization in sewer construction. M. W. Loving. il diags Water & Sewage Works 94:141-7 Ap '47

Westchester lighting co. constructs 24-in. transmission line. il Gas Age 100:29 O 16 '47

See also

Pipe lines
Sewerage
Trenching machinery
Water distribution

Cost

Cost of laying water pipe in Hartford and St Paul, 1945. Pub Works 78:39-40 F '47

Functional mechanization for gas distribution departments; use of trenching machinery; with cost data. J. E. C. Currens. il Gas Age 100:59-66+ O 2 '47

Today's costs of water main extensions. F. J. Reny. il Water & Sewage Works 94: 229-32 Jl '47

PIPE laying, Subaqueous

New aqueduct five miles long for Port Alberni paper mill. Paper Tr J 123:18 N 28 '46

Railroad tunnels, submarine sections, climate pose rugged pipe-line. P. Reed. il diags Oil & Gas J 45:60-1+ Mr 8 '47

PIPE lines

How two men store and distribute millions of gallons of liquids; centralized tank storage with underground pipe line distribution; Hoffmann-La Roche, inc. J. E. Meyer. il Factory Management 105:98-101 Ja '47

Metallurgical properties of high yield strength seamless line pipe. A. B. Wilder and J. D. Tyson. il diags Welding J 26: 872-80 O '47

Pilot pipe-line unit for determining viscosity-temperature relationships. R. B. Beckman, H. G. Corneil and R. J. Michael. flow diags Am Inst Chem Eng Trans 42:947-58 O-D '46; Same. Pet Eng (Ref annual) 18:263-4+ Jl 1 '47

Pipeline transportation of ores. C. E. Wuensch. flow sheet Min Cong J 33:77-80 Ap '47

Piping, industry's best transportation system; pipe line for carbon dioxide use in fire extinguishers; Walter Kidde & co. T. E. Kennedy. il Heating-Piping 18:87-8 D '46

Rights of way for pipelines. I. E. Flaa and W. C. Renshaw. Am Water Works Assn J 39:128-32 F '47

See also

Aqueducts
Electric conduits
Gas, Natural—Pipe lines
Gas distribution
Gasoline pipe lines
Petroleum pipe lines
Pipe joints
Pipe laying
Piping (power plants)
Sewer pipes
Sewerage
Underground structures
Water pipes

Cleaning

See Pipes—Cleaning

Communication systems

Short-wave radio facilitates pipe-line operation. J. M. Bradley. il map diags Oil & Gas J 46:81+ Jl 5 '47

Corrosion

Corrosion surveys; measuring soil resistivity. M. E. Parker, jr. diag Pet Eng (Ref annual) 18:270+ Jl 1 '47

Experience with the megger; ground resistivity meter used in locating corrosion leak in pipe line. W. H. Simpson. Oil & Gas J 46:192+ S 20 '47

Use of dehydration in combating internal corrosion in products pipe-line systems. H. K. Phipps. flow diag il Am Pet Inst Proc 26(5):37-40 '46; Same cond. Oil & Gas J 45: 67+ N 23 '46

See also

Pipe lines—Protection

Detection

Modern divining rod; metal locators, their design and limitations. A. B. Kaufman. il diags Radio N 37:41-3+ Ap '47

Maintenance and repair

Repairing pipe line in flood waters. C. Thompson. il Pet Eng 18:174+ Mr '47

Protection

Cathodic protection. C. H. McRaven. Pet Eng 18:148+ F '47

Cathodic protection of pipe lines; Bonita pipe line, featuring anode renewals. E. C. Rogness. il Water & Sewage Works 94:11-13 Ja '47

Cathodic protection of underground systems. J. Frink. Am Gas J 167:27-9 S '47

Challenge to the corrosion engineer. H. H. Anderson. diags Pet Eng 18:80+ My '47

Effect of anions on the performance of sacrificial anodes; study of cathodic protection. K. M. Wight and R. F. Hadley. bibliog diag Am Gas Assn Proc 1946:304-20

Electric system curbs pipe damage caused by electrolysis. il Comp Air Mag 52:47 F '47

Novel groundbed for cathodic protection. T. R. Statham. Pet Eng 18:53-4 Ap '47

Our billion-dollar side-show; pipe line corrosion and cathodic protection. H. H. Anderson. diags Am Gas J 166:27-9 Je '47

Some experiences with the protection of bare pipe lines using zinc; cathodic protection of gas line, with cost data. F. A. Brownie. Gas Age 98:19-21+ N 28 '46

See also

Water pipes—Protection

River crossing

Building 1.16 miles of pipe line bridges; El Paso natural gas co. G. R. Lunt. il Pet Eng 18:90+ S '47

Delaware River crossing laid in three-line sections. C. W. Shaeffer. il Oil & Gas J 46:182-3 S 20 '47

Improved equipment speeds Stanolind's 20-in. looping project. P. Reed. il Oil & Gas J 46:100-1 My 24 '47

Stanolind line crosses Arkansas river 12 ft. below stream bed. P. Reed. il diags Oil & Gas J 46:92-3 Ag 9 '47

PIPE lines—*Continued*

Tables, calculations, etc.

Economical alignment for pipe lines. C. S. Larkey. Pet Eng 18:57+ My '47
Economical alignments for pipe lines. P. Bryan. diags Pet Eng 18:212+ O '46; Discussion. A. J. Geiger. 18:161-2 Ag '47
Pipe-line flow formulas. B. Miller. Oil & Gas J 46:174-5+ S 20; 102-4+ S 27; 69-71+ O 4 '47
Simplified pipe line computations. P. Bryan. Pet Eng 18:166+ N; 152+ D '46; 178+ Ja '47
Special slide rule solves pipe-line engineering problems. R. M. Hutchinson. diag Oil & Gas J 46:249-51 S 20 '47

PIPE lines, Subaqueous

Le relevage des pipe-lines posés entre l'Angleterre et le Continent, pour la récupération du plomb. il Génie Civil 124: 376-7 O 1 '47
Submarine pipe lines at Ventura. F. E. Coyle and others. il diag Pet Eng 18:216+ Mr '47

See also
Pipe laying, Subaqueous

PIPE lines as common carriers

U.S. Supreme court rules Champlin products pipeline a common carrier. Nat Pet N 38:13 N 20 '46

PIPE lining

Coated drill pipe proves successful in Permian basin. G. Weber. il Oil & Gas J 45:40-1+ F 1 '47
Plastic coated drill pipe. il Steel 120:124 F 3 '47
Plastic coating inside surface of drill pipe to combat corrosion fatigue failures. L. E. Trishman. il Pet Eng 18:194+ N '46
Rubber linings protect steel against corrosion and abrasion. O. S. True. il diags Product Eng 18:142-8 Ja '47
Steel pipe for drilling oil wells, with thermosetting plastic coating. il Mod Plastics 24: 104 Mr '47

See also
Cement lined pipe
Water pipes—Lining

PIPE scrapers. See Scrapers, Pipe

PIPE threads

Methods of joining pipe. J. E. York. diags Heat & Ven 44:76-82 S '47
Threads made by stamping process. il diags Product Eng 18:97 F '47

Standards

International pipe-thread standards; is it a possibility? W. O. Clinedinst. diag Am Pet Inst Proc 25(4):112-15 '45
Pipe threads. E. G. Saunders and J. E. Sears. Inst Mech Eng J & Proc 155 (War emergency issue no 18):147-8 '46; Same. Engineering 160:17 Jl 6 '45

PIPECOLINIC acid

4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

PIPER aircraft corporation

Annual report. Comm & Fin Chr 165:1320 Mr 10 '47

PIPERAZINE

Derivatives of piperazine; synthesis of piperazine and C-substituted piperazines: L. J. Kitchen and C. B. Pollard. Am Chem Soc J 69:854-5 Ap '47

PIPERIDINE

Constitution of the dimeric permanganate-coloured diphenylketen. A. Schönberg and A. Sina. Chem Soc J p 175-6 F '47
Piperidine derivatives; local anesthetics derived from substituted piperidinoalcohols. S. M. McElvain and T. P. Carney. bibliog Am Chem Soc J 68:2592-600 D '46

PIPERIDINEMETHANOL

Potential antimalarials; additional (2-phenylquinolyl-4)-α-piperidylcarbinols. E. R. Buchman and D. R. Howton. bibliog Am Chem Soc J 68:2718-20 D '46
Potential antimalarials; (chloro-2-phenylquinolyl-4)-α-piperidylcarbinols. E. R. Buchman and others. bibliog Am Chem Soc J 68:2710-14 D '46
Potential antimalarials; (chloroquinolyl-4)-α-piperidylcarbinols. E. R. Buchman and others. bibliog Am Chem Soc J 68:2692-5 D '46
Potential antimalarials; (6-methoxyquinolyl-4)-α-piperidylcarbinols. H. Sargent. Am Chem Soc J 68:2688-92 D '46
(Quinolyl-8)-α-piperidylcarbinol. E. R. Buchman and H. Sargent. Am Chem Soc J 68: 2720-1 D '46

PIPERIDYL alcohols

Antispasmodics; diarylacetic acid esters of some pyridyl and piperidyl alkanols. R. R. Burtner and J. M. Brown. Am Chem Soc J 69:630-3 Mr '47

PIPERIDYLCARBINOL. See Piperidinemethanol

PIPERONYL butoxide

Piperonyl butoxide, super synergist. Chem Ind 61:631 O '47

PIPERONYL cyclohexenone

Toxicity data on piperonyl cyclohexenone. Soap & San Chem 23:163 Jl '47

PIPERYLENE

Cuprous chloride derivatives of C_5 diolefins. A. L. Ward and E. C. Makin, jr. bibliog Am Chem Soc J 69:657-9 Mr '47

PIPERYLENE sulfone

Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46

PIPES

Hard-surfacing rolling mill skid pipes. S. J. Borchers. diags Materials & Methods 24: 1503 D '46
Inflated postwar demand at root of pipe-supply difficulties. W. F. McConnor. Oil & Gas J 46:78-9 Je 28 '47; Same cond. Dom Eng 170:121+ Jl '47
Making pipe bushings from standard pipe. Water & Sewage Works 94:R69 Jl '47
Metallurgical progress in the valve, fitting and piping industry. J. J. Kanter. il Metal Prog 52:629-31 O '47
Non-ferrous pipe minimizes sludge plant corrosion. diag Pet Refiner 26:138 Mr '47
Pipe program; National tube co.'s new warehouse and mill. Bsns W p52+ Je 7 '47

See also

Air pipes	Pipe lines
Electric conduits	Piping
Gas pipes	Piping (power plants)
Heating pipes	Plumbing
Petroleum pipe lines	Steam pipes
Pipe fittings	Tubes
Pipe joints	Water pipes
Pipe laying	

Cleaning

Double-barreled program for cleaning and pressure testing gas pipe lines. D. K. Stephens. il Oil & Gas J 46:252+ S 20 '47
Internal cleaning of gas pipe lines. C. A. Serafino. diags Pet Eng 18:180 Mr '47
Plant-built scrapers effective in cleaning dirty pipe lines. W. F. Crutchley and W. S. Wright. il Oil & Gas J 46:235+ S 20 '47
Steel pig speeds pipeline cleansing. Am Gas Assn Mo 29:173+ Ap '47

See also
Air pipes—Cleaning

Embedding in concrete

See Concrete construction—Pipe embedding

Manufacture

Hot-dip galvanizing practice. W. H. Spowers, jr. il Steel 119:112-14 N 18 '46
Role of centrifugal casting in transforming pigs to pipe; National cast iron pipe co. G. E. Stedman. il Steel 121:90-2+ O 13 '47

Prices

Cast iron pipe at New York, monthly, 1929-1946; tabulation. Iron Age 159:246 Ja 2 '47

Standards

Report of committee on the standardization of oil-country tubular goods. diags Am Pet Inst Proc 25(4):151-214 '45
Report of committee on the standardization of oil-country tubular goods. diag Am Pet Inst Proc 26(4):209-33 '46

PIPES—Standards—*Continued*
Silicon iron pipes. Chem Age (Lond) 55:608 N 16 '46

Tables, calculations, etc.

AEC's of measuring flow with head meters. W. C. Bennett. diags Power 91:37-8 Ja '47
Basic equations for fluid motion and pressure drop in pipes. A. H. Korn. diags Product Eng 18:85-9 My '47
Chart for determination of equivalent pipes. J. R. Arbuthnot. Water & Sewage Works 94:R42-3 Jl '47
Chart for determining the section modulus of annular sections; reference book sheet. G. Larri. fold chart (p168a) Product Eng 18:167 Mr '47
Collapse resisting strength of pipe; chart. Can Min J 68:16 Ja '47
Equation of pipes; table. Water & Sewage Works 94:R82 Jl '47
Fluid flow friction factors for pipes, valves and fittings. V. L. Streeter. diag Product Eng 18:89-91 Jl '47
Friction in pipes. A. B. Stickney. Refrig Eng 53:129-31 F '47
Minimum wall thickness for oil piping inside refinery limits; chart. Oil & Gas J 46:133 Je 14 '47
Pipe and tubing sizes. W. L. Nelson. Oil & Gas J 46:87 N 1 '47
Pipe-line velocities; chart. Oil & Gas J 46: 151 Je 28 '47
Stanton diagram modification gives direct solution for pipe flows. H. J. Miles. Eng N 137:732-3 N 28 '46
Strength of standard pipes for columns or struts. Can Min J 68:28 Ja '47
Velocity and pipe size; chart. W. L. Nelson. Oil & Gas J 46:111 S 27 '47

PIPES, Aluminum
Aluminum for air ducts. G. W. Birdsall. il Sheet Metal Worker 38:51-3+ Ap; 49-52 My '47; Excerpt (pt 1). Heating-Piping 19: 77 My '47
Aluminum for duct work. H. F. Johnson. il Heat & Ven 44:95-6 Ap '47
Aluminum for ducts. Heating-Piping 19:83 Mr '47
Design in aluminum duct work. il Dom Eng 169:150-1+ My; 170:151-2+ Ag '47
Fabricating aluminum air ducts. il Steel 121:93+ Jl 7 '47

PIPES, Asbestos cement
New developments in the erection of transite pipe. J. W. Hemphill. diags Paper Tr J 125:22+ Jl 17 '47
Pipe with a future; asbestos-cement pipe. J. Campbell. il Sci Am 176:27-9 Ja '47
Rustless coupling for asbestos-cement pipe. F. Squires. il diags Pet Eng 18:178+ Ag '47
Transite pipes in tunnel form new feeder main for St Catharines. W. G. McLaughlin. il Water & Sewage 85:13-17+ F '47

PIPES, Concrete
Concrete pipe manholes used in large sewer construction program. J. E. Konkle. diags Pub Works 77:31+ N '46
Differences in characteristics of concrete in the wet and the dry state. F. L. Fitzpatrick. Am Concrete Inst J 18:339-42 N '46; Discussion. R. D. Terzaghi. 18:1147-51 Je '47

See also
Water pipes, Concrete
also American concrete pipe association

Manufacture

Grading materials for making pipe. C. M. Howard. Concrete 55:24 O '47
High-speed form vibrators improve concrete pipe manufacture. il Eng N 138:459-60 Mr 20 '47
Hydraulic operation simplifies pipe manufacture; Fresno concrete pipe co. il Rock Prod 50:122 S '47
Labor requirements for construction materials; concrete pipe. A. W. Collier and C. Stone. U S Bur Labor Statistics Bul 888-3: 1-8; pa 10c Supt. of doc. '47; Same abr. Mo Labor R 63:688-91 N '46; Same abr. Rock Prod 50:200-1 Ag '47
Make precast concrete strong, dense and impermeable. M. W. Loving. il Rock Prod 50: 150-3+ F '47
Making concrete elbows. H. W. Wilkison. diag Rock Prod 50:89 Ja '47
Manufacture both pipe and block; plant of Basalite division, Basalt rock co. W. B. Lenhart. il Rock Prod 50:130-2 S '47
Methods and machines which have cut large pipe costs; United concrete pipe corporation. W. B. Lenhart. il Rock Prod 50:194-7 Ag '47
Prestressing concrete pipe. F. L. Fitzpatrick. diag Concrete 55:38 S '47
Spun concrete pipe; Hunziker process for manufacture of flint-lime brick and Superbeton concrete pipe. M. W. Loving. il Rock Prod 49:141-3 D '46; Discussion (Design and test requirements for concrete pipe). 50:154-6+ Je '47

PIPES, Fiber
Fiber tubes imbedded in concrete slab increase effective span. E. R. Schofield. il diag Eng N 139:114 Jl 24 '47

PIPES, Flexible
Air ducts of nonmetallic materials, types and applications. W. G. Harding. il diags Product Eng 18:138-40 O '47

PIPES, Glass
Chemical engineering materials of construction; review of literature from start of World war II; glass. J. R. Blizard bibliog il diag Ind & Eng Chem 39:1215-17 O '47
Glass piping sealed by O-H high-frequency. B. W. Whitehurst. il Elec World 126:115 N 9 '46

Manufacture

Annealing glass piping electrically. B. W. Whitehurst. il Elec World 126:110+ N 23 '46

PIPES, Lead
How to weld lead pipe. L. S. Bowser. il diag Heating-Piping 19:91-2 S '47

PIPES, Plastic
Plastic piping for gas services. F. A. Herr. il Am Gas J 166:16-18+ Mr '47
San Diego company uses plastic tubing. il Gas Age 98:14 D 26 '46
Venturi fabricated faster by transfer molding. diags Am Mach 91:87 Jl 31 '47

PIPES, Steel
Carbon-molybdenum steel for steam pipes; abstract. L. Rotherham. Metal Prog 52: 646+ O '47
Current and future supply of oil-country tubular goods. A. E. Walker. Oil & Gas J 46:81+ O 25 '47
Expanding pipe beyond yield point to make it rounder and stronger; steel pipe for natural gas line from El Paso to Los Angeles. il Eng N 139:318-19 S 4 '47
Field heat treating of refinery piping. W. H. Fortney. diags Pet Refiner 25:122-4 D '46
First quarter pipe exports up 411 per cent. Nat Pet N 39:17 My 28 '47
Gas storage in pipes being tested to aid in low pressure areas. Iron Age 160:124-5 Ag 14 '47; Same abr. Heating-Piping 19:77 Ag '47; Same cond. Oil & Gas J 46:106-7 Ag 2 '47
Gas to be stored underground in pipes. Blast F & Steel Pl 35:717-18 Je '47
High temperature pipe cost reduced using both alloy and carbon steels; patent. diag Pet Processing 2:704 S '47
More pipe needed. il Bsns W p36+ O 18 '47
Natural gas stored in buried pipe at 2,240 lb. C. R. Claxton and others. il plan diag Oil & Gas J 45:60+ Mr 1 '47; Same. Am Gas J 166:13-15 Mr '47; Same. Gas Age 99:26-7+ Mr 6 '47; Same. Am Gas Assn Mo 29:171-3 Ap '47; Same. Pet Eng 18:115-16+ Ap '47; Same cond. Pub Util 39:692-6 My 22 '47
Physical characteristics of steel for tubular products; abstract. A. B. Wilder. Product Eng 18:137 O '47
Pipe demand exceeds supply. il Steel 121:49-51 Ag 11 '47
Stainless steel piping; why and where to use it. J. D. Mattimore. diags Heating-Piping 19:81-3 O; 84-7 N; 78-8 D '47
Welding alloy steel piping. E. R. Seabloom. il diags Heating-Piping 18:67-70 O; 81-4 N; 79-83 D '46

See also
Gas pipes, Steel
Tubes, Steel
Water pipes, Steel

PIPES, Steel—*Continued*

Graphitization

Carbide instability of carbon-molybdenum steel piping. R. W. Emerson. bibliog il Welding J 26:sup104-14 F '47

See also
Piping (power plants)—Graphitization

Manufacture

Continuous galvanizing; National tube co. A. D. Stout, jr. il diag Iron Age 160:79-80 Ag 28 '47
High pressure welded steel pipe for Southern California gas line. F. A. Herr. il Am Gas J 166:19-20+ Ap '47
Hot stretch-reducing of seamless pipe at National Tube plant. Iron Age 158:155-8 D 5 '46
Physical properties of steel for tubular products. A. B. Wilder. Steel 121:102+ S 29 '47
Progress in steel pipe manufacture with particular reference to seamless pipe. E. N. Sanders. Blast F & Steel Pl 35:691-4 Je '47; Excerpt. Mech Eng 69:602 Jl '47
Progress in the manufacture of steel pipe with particular reference to seamless pipe; abstract. E. N. Saunders. Iron Age 159:68-9 My 29 '47
30-inch pipeline fabricated by Consolidated steel corp. from manganese steel plates. il Steel 120:74-5+ Mr 24 '47
Ultra-modern fabrication for Biggest Inch. R. Sneddon. il map Pet Eng 18:134+ Mr '47

Protection

See also
Pipe coating

Standards

A.S.T.M. specifications for steel piping materials; prepared by A.S.T.M. committee A-1 on steel. 296p pls pa $3 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46
New standards for steel tubes and tubulars. Engineer 184:125 Ag 8 '47
Starts standardization of stainless pipe and fittings. Heating-Piping 19:89-90 Mr '47

Testing

Metallurgical properties of high yield strength seamless line pipe. A. B. Wilder and J. D. Tyson. il diags Welding J 26: 872-80 O '47

PIPES, Vitrified clay

Clay piping proves boon to companies facing new chemical problems. il Rubber Age 61: 590 Ag '47
Minimum supporting strength of clay pipe for various foundations. diags Brick & Clay Rec 110:32 F '47

PIPES, Wood

See also
Water pipes, Wood

PIPETS

Braking pipettes. C. L. Claff. diag Science 105:103-4 Ja 24 '47
Pipet combines speed and precision. diag Chem & Eng N 25:1002 Ap 7 '47
Sharp interfacial precipitin reactions in capillary pipettes. H. F. Swift. Science 105: 49-50 Ja 10 '47

PIPING

Failure to cooperate with the future. T. W. Reynolds. Heat & Ven 44:107-8 F '47
Ice rink piping fails during wartime shutdown. P. S. Park. Heating-Piping 19:97 Ap '47
Internally insulated piping and pressure vessels for high-temperature service. P. E. Darling. diags Pet Refiner 26:129-34 O '47
Methods of making piping flexibility analyses. C. Crocker and others. il diags Heating-Piping 18:69-73 bibliog(63 titles, p70-1) Je; 78-81 Jl; 83-8 S; 70-6 N '46; 19:91-5 Ja; 69-74 My; 73-7 Ag; 86-9 S '47
Pipe and fittings; new equipment. il Chem Ind 61:421-3 S '47
Pipeline tunnels for upkeep economy and continuous service; Liquid carbonic corp. A. L. Ramp. il diag Factory Management 105: 128-9 F '47
Piping for fluid-power systems; reference book sheet. Am Mach 91:179 Je 19 '47
Propane storage and piping systems frees plant from gas interruptions; standby installation for heat treating; Ingalls-Shepard div. of Wyman-Gordon co. il diag Heating-Piping 19:83-5 S '47

See also
Pipes
Plumbing
Ships—Piping

Cost

Estimating chemical piping costs. J. W Strohecker and R. J. Schrader. Chem Eng 54:109-10 Ja '47

Identification

Color code for piping identifications aids in training refinery operators. W. C. Uhl. Pet Processing 2:210-11+ Mr '47
Identifying piping systems; Marshall Field & co. il Heating-Piping 19:81-2 Jl '47

Models

Methods of making piping flexibility analyses; model test method. L. C. Andrews. diags Heating-Piping 19:73-7 Ag '47

PIPING (power plants)

By-pass valves. N. T. Pef. diags Power Pl Eng 51:99; Discussion. 99-100 Ag '47
Carbon-molybdenum steel for steam pipes; abstract. L. Rotherham. Metal Prog 52: 646+ O '47
How to figure piping hanger loads. E. Howarth. diags Power 91:455-7 Jl '47
Materials for high temperature piping; abstract. J. J. Kanter. Heating-Piping 19:90-1 Je '47
Methods of making piping flexibility analyses. S. Crocker and others. il diags Heating-Piping 18:69-73 bibliog(63 titles, p70-1) Je; 78-81 Jl; 83-8 S; 70-6 N '46; 19:91-5 Ja; 69-74 My; 73-7 Ag; 86-9 S '47
Review of power and mechanical equipment; piping, fittings and specialties. il Power 90:919-21 Mid-D '46
To become a capable engineer know your plant intimately. G. Feller. il Power 91:261-3 Ap '47

Graphitization

Fundamental investigation of graphitization of piping, conducted by joint EEI-AEIC subcommittee. Edison Elec Inst Bul 15: 171-2 My '47; Same. il diag Heating-Piping 19:72-5 Jl '47
Further observation of graphitization in aluminum - killed carbon - molybdenum - steel steam piping. R. W. Emerson and M. Morrow. bibliog il plan A S M E Trans 68:597-607 Ag '46; Same. Welding J 26:sup139-49 Mr '47
Graphitization of steels at elevated temperatures. A. E. White. il Metal Prog 52: 371-5 S '47
Stability of steel at elevated temperatures; extensive research program being conducted on high temperature piping materials. A. B. Wilder and J. D. Tyson. il diags Steel 121:86-9+ O 20 '47; Abstract. Blast F & Steel Pl 35:224-5 F '47
Studies of susceptibility of casting steels to graphitization. J. J. Kanter. il A S M E Trans 68:581-7 Ag '46; Same. Welding J 26:sup121-7 F '47

Models

Methods of making piping flexibility analyses; model test method. L. C. Andrews. diags Heating-Piping 19:73-7 Ag '47

Welding

Decoding the code requirements for welded branches of pressure piping. A. B. Donkersley. il diag Power 91:22-3 Ja '47
Welding of high-temperature, high-pressure steel valves. V. T. Malcolm and S. Low. il Welding J 26:101-10 F '47
Welding power piping with chromium-molybdenum electrodes. O. T. Barnett. il Steel 120:88-90+ My 26 '47

PIPING (refrigerating plants)

Don't overlook importance of proper size liquid lines. H. E. Ferrill. il Heating-Piping 19:84-6 O '47

PIPING, (refrigerating plants)—*Continued*
Fluid flow's relation to installation and operation. H. E. Ferrill. Heating-Piping 19:80-2 Mr; 86-8 My '47
Friction in pipes. A. B. Stickney. Refrig Eng 53:129-31 F '47
Line pressure drop, its effect on cooling costs. H. E. Ferrill. Refrig Eng 52:425-7+ N '46

PIQUIA
Configuration of naturally occurring mixed glycerides; the configuration of the major component glycerides of piqui-a fruit-coat fat. M. L. Meara. Chem Soc J p773-5 Je '47

PIRANI tubes. See Manometers

PISÉ
Houses built of earth. M. Kauten. bibliog il Comp Air Mag 52:117-20 My '47
Rammed earth house at Greeley, Colorado. il plan diags Arch Forum 85:147-9 D '46

PISTON pins
Piston pins centerless-lapped to tenths; Nylen products co. J. Nylen. il Am Mach 91:84-7 Jl 31 '47

PISTON rings
Analysis of the lubrication between the piston rings and cylinder wall of a running engine. J. S. Courtney-Pratt and G. K. Tudor. bibliog il diag Inst Mech Eng J & Proc 155 (War emergency issue no 21):293-9 '46; Same. Engineering 161:69-71 Ja 18 '46; Same cond. Engineer 180:469-71 D 7 '45; Discussion. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21): 306-20 '46; Engineer 180:459-60 D 7 '45
Chrome plating to reduce wear; survey of fleet operators' experience. H. O. Mathews. S A E J 55:33-5 O '47
Development of chrome plated piston rings for aircraft engines; abstract. J. B. Minnich. il S A E J 55:69-70 Ja '47; Automotive & Aviation Ind 96:35 Ja 1 '47
Elastic deformation of piston rings. H. W. Swift. Engineering 163:161-5 Mr 7 '47
Late trends in piston rings with special application to Diesel engines. H. G. Braendel. il diags Diesel Power 25:37-41 Je '47; Same cond. S A E J 55:61-2 My '47; Discussion. P. S. Lane. Diesel Power 25:51 S '47
Mechanical factors affecting ring gumming in petrol engines with particular reference to the rating of lubricating oils. B. Pugh. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):303-6 '46; Same. Engineer 180:491-3 D 14 '45; Same. Engineering 161:93-4 Ja 25 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 21):306-22 '46; Engineer 180:480-2 D 14 '45
More power to your engines; piston ring development. T. C. Jarrett and others. il diags Bus Transportation 26:67-70 Je '47
Some problems of cylinder-bore wear. W. A. Robotham. Engineering 163:394-5 My 9 '47
Study of piston ring reasoning and design. il diags Diesel Power 25:52-7 O; 75-9 N '47

Advertising

Muskegon promotes piston ring sales with famous sayings. il Ind Marketing 31:47+ D '46

Manufacture

Hot rolling iron-carbon alloys; German investigations to determine feasibility of producing piston rings from rolled cast iron. E. Piwowarsky and A. Wittmoser. bibliog il Iron Age 159:52-7 F 6; 63-5 F 13 '47
Special tools speed piston ring production. F. G. Forquer. diags Am Mach 91:154 Je 19 '47
Underground conveyor; Wellworthy piston rings ltd. il Mech Handling 34:143-4 Mr '47

Testing

Experiments on the reproducibility of engine conditions for ring-sticking tests in a single-cylinder petrol engine. G. S. Cantle. diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):323-9; Discussion. 330-2 '46
Improved method of measuring piston ring wall thrust. B. Pugh. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 21):299-302 '46; Same. Engineering 161: 94-5 Ja 25 '46; Same cond. Engineer 180: 471-2 D 7 '45; Discussion. Inst Mech Eng J & Proc (War emergency issue no 21):316-22 '46
NACA study of measurement of piston-ring radial pressure distribution; abstract. M. C. Shaw and others. diag Automotive & Aviation Ind 96:30-1 F 1 '47

PISTON rods
Specifying surface finish; hydraulic piston and rod assembly; abstract. J. A. Broadston. Machine Design 19:184 Mr '47

PISTONS
Hydraulic O-ring packing for sealing cylinders and pistons. R. E. Allen. diags Product Eng 18:163-6 Jl '47
Piston design; recent development in Germany. N. C. Brearley and B. McMahon. Automobile Eng 36:582 D '46

Manufacture

Multiple-spindle automatics speed up Dodge piston production. C. H. Wick. il plan Mach 53:154-60 My '47
Piston tooling innovations; Zollner machine works. il Automotive & Aviation Ind 96: 34-5+ Mr 1 '47
Specifying surface finish; hydraulic piston and rod assembly; abstract. J. A. Broadston. Machine Design 19:184 Mr '47

Testing

Instrument for piston temperature measurement. A. C. Scholp and others. il diag S A E J 55:37-8 My '47; Abstract. Automotive & Aviation Ind 96:34 F 1 '47
Micro-hardness testing; a study of the W.63 high duty piston alloy. A. J. Stokes and S. B. Dew. il Automobile Eng 37:181-6 My '47

PITCH
See also
Paper making—Pitch problem

PITCH as fuel
Operation of open-hearth furnaces with coke-oven gas and pitch-creosote. D. Kilby. pl diags Iron & Steel Inst J 155:3-20 Ja '47; Same. Blast F & Steel Pl 35:563-70, 707-13 My-Je '47; Discussion. Iron & Steel Inst J 156:501-4 Ag '47

PITCHBLENDE
Varied uses found for pitchblende ore. W. M. Fawcett. Barron's 27:30 Ag 18 '47

PITNEY-BOWES, inc.
Annual report. Comm & Fin Chr 165:3172-3 Je 16 '47
Preferred stock oversubscribed. Comm & Fin Chr 165:2420 My 5 '47

PITOT tubes
Air flow from pitot tube readings; nomograph; reference data. Heat & Ven 44:106b F '47
Pitometer ship's log. il diags Engineering 163:259-61 Ap 4 '47

PITTSBURGH
Pittsburgh's new powers; bent upon rebuilding the city. il Fortune 35:69-77+ F '47
Smoke law has smoggy debut. il Bsns W p21 O 11 '47; Discussion. J. Vogele. p 114 N 8 '47

Industries

Cities take inventory. il(p21) Bsns W p22 Ja 4 '47

PITTSBURGH award
Pittsburgh award presented to Yant. Chem & Eng N 25:98+ Ja 13 '47

PITTSBURG, Bessemer and Lake Erie railroad
Bonds offered. Comm & Fin Chr 164:3296 D 23 '46

PITTSBURGH consolidation coal company
Coal, the Pitt Consol adventure. il map Fortune 36:96-105+ Jl '47

PITTSBURGH railways company
Time-table for Pittsburgh Railways. Comm & Fin Chr 165:12, 40 Ja 2 '47
Trustee offers new plan. Comm & Fin Chr 166:914-15 S 4 '47

PITTSBURGH, Shawmut and northern railroad
Sale ends oldest receivership. map Ry Age 122:654-6 Mr 29 '47

PITTSBURGH steel company
Operating status strengthened; recapitalization remains as future problem. C. F. Horlacher. Barron's 27:41 S 15 '47

PITTSBURGH university
Petroleum engineering schools. il Oil & Gas J 46:95+ S 13 '47

PITTSBURGH university. Mellon institute of industrial research
Human relations in research institution management. W. A. Hamor. bibliog Advanced Management 11:132-41 D '46
Mellon Institute enters the postwar era. il Chem & Eng N 25:1265-70 My 5 '47; Excerpt. Can Chem & Process Ind 31:579-80+ Je '47

PITTSTON company
Expansion to increase Pittston co. net. Barron's 27:6 F 24 '47

PITUITARY body
Physiocochemical characterization of pituitary growth hormone. Choh Hao Li. bibliog J Phys & Colloid Chem 51:218-28 Ja '47

PITUITARY extracts
Crystalline pituitary protein with high growth activity. J. B. Fishman and others. Science 106:402 O 24 '47

PIVOTS
Eccentric pivot bars made in square-bored adapter chuck. S. Framurz. diags Am Mach 91:123 Ag 14 '47

PLACER mining. See Gold mines and mining—Placer mining; Mercury mines and mining—Placer mining

PLAGUE
Epidemic control with DDT, ANTU and 1080. H. Elishewitz. Soap & San Chem 23:127-9+ My; 153+ Je '47
Focus of sylvatic plague on the Peruvian-Ecuadorian frontier. A. Macchiavello. Science 104:522 D 6 '46
Plague; field surveys in western United States during ten years, 1936-1945. N. E. Wayson. Pub Health Rep 62:780-91 My 30 '47
Plague infection reported in the United States in 1945. Pub Health Rep 62:431-3 Mr 21 '47
Plague, the survival of the infection in fleas or hibernating ground squirrels. F. M. Prince and N. E. Wayson. Pub Health Rep 62:463-7, 1167-8 Mr 28, Ag 8 '47

PLANCK, Max, 1858-1947
Planck's contribution to physics. G. F. H. Harker. Engineering 164:388-9 O 24 '47
Sketch. Chem & Ind p628-9 O 11 '47; Engineering 164:352 O 10 '47

PLANCK equation. See Black body

PLANETARY gearing. See Gearing, Planetary

PLANETS
Magnetism and angular momentum. Elec Eng 66:906 S '47
See also
Orbits
Spectra
Spectroscopic laboratory at Yerkes observatory. G. Herzberg. Science 106:215-16 S 5 '47

PLANING machines
Carbide planer tools. il Sci Am 176:32 Ja '47
Cincinnati Hypo planer. il Mach 54:170-1 S '47
Gray openside planer. il diag Product Eng 18:101-3 S '47
Gray openside planer cub in 3 sizes drives at angle through hypoid gears. il diags Am Mach 91:129-30 F 27 '47; Mach 53:188 Mr '47
Heavy duty for high-pressure laminates. il diag Mod Plastics 24:97 Mr '47
Hydraulics modernizes an old planer. L. C. Beatty. il Am Mach 91:140-1 My 8 '47
Ideas that save planer time; R. Hoe & co. J. J. Madden. il diag Am Mach 91:104-5 N 6 '47
Machine tool show in print; planing and shaping. il Am Mach 91:221-6 S 11 '47
Planer cuts circular arcs. C. D. Mackinnon. diags Am Mach 91:110 S 25 '47
Reduced wear on the way; fabric-reinforced phenolic sheet provides low-friction planer ways. il diags Am Mach 91:96 My 22 '47
Rockford planer. diags Product Eng 18:104-5 S '47
Surface machining; planers and shapers as basic types of modern machine tools. G. Hubbard. il Steel 120:64-5+ Je 30 '47

PLANKTON
Effects of DDT mosquito larviciding on wildlife; the effects on the plankton population of routine larviciding with DDT. E. L. Bishop. Pub Health Rep 62:1263-8, pl 1 Ag 29 '47
Fertilisers and fish. bibliog il Chem Age (Lond) 57:531-3 O 18 '47
Lethal effect of X-rays on marine microplankton organisms. K. Bonham and others. Science 106:245-6 S 12 '47

PLANNING
Constructive planning in the mining industry. A. Nelson. Can Min J 68:575-80 Ag '47
Costs for planning purposes. W. A. Holt. N A C A Bul 28:1532-6 Ag 15 '47
Industry's planners better than government's. R. M. Bleiberg. Barron's 26:3+ N 18 '46
Is your company prepared for rough weather? J. C. Olson. Harvard Bsns R 25 no 4A: 595-608 [O] '47
Management's role in planning research; Chem. & Met. report. D. B. Hertz. bibliog Chem Eng 54:123-130 Ag '47
More preplanning, less methods changing; Bendix radio division. G. R. Faustman. il Factory Management 105:76-8 Je '47
Organization and finance; planning and budgeting are essential to success. J. F. Buehner. Credit & Fin Management 49:11-12+ My '47
Over-all management control of planning. S. Weil. Inland Ptr 119:33-5 My '47
Planning gets maintenance work done on time; Ford instrument company. G. S. Stringer. il Factory Management 104:110-12 O '46
Production planning. H. P. Dutton. il Factory Management 104:121-32 D '46
Production planning and control for quick customer service; Aircraft screw products company. E. M. Lang. il Factory Management 105:123-7 F '47
Time factor and production planning; mine development schemes and erection jobs. A. Nelson. Can Min J 68:316-20 My '47
See also
Advertising—Planning
Budget, Business
City planning
Economic planning
National planning association
Regional planning
Schedules

PLANNING, Economic. See Economic planning

PLANNING, Regional. See Regional planning

PLANT cells and tissues
Irreversible differentiation in certain plant cell lineages. R. Bloch. bibliog Science 106: 320-2 O 3 '47
See also
Chloroplasts

PLANT food council, American. See American plant food council

PLANT growth
Growth-regulating substances; their chemistry and development. T. Swarbrick. Chem Age (Lond) 55:559-61 N 9 '46
Man-made temperatures help plant growth. F. W. Went. il Refrig Eng 53:495-7 Je '47
New compounds as plant growth regulators. M. S. Newman, W. Fones and M. Renoll. bibliog Am Chem Soc J 69:718-23 Mr '47
Reaction of certain plant growth regulators with ion exchangers. R. J. Weaver. Science 106:268-70 S 19 '47
Relative growth rates of bean and oat plants containing known amounts of a labeled plant-growth regulator (2-iodo^{131}-3-nitrobenzoic acid. J. W. Mitchell and others. Science 106:395-7 O 24 '47
Translocation of a radioactive plant-growth regulator in bean and barley plants. J. W. Wood and others. bibliog diag Science 105: 337-9 Mr 28 '47
See also
Plants, Effect of light on
Trees

PLANT pigments. See Pigments, Biological

PLANT protection association
Plant-guard union blossoms. Bsns W p 19 S 20 '47

PLANT succession
See also
Forest succession

PLANTATIONS, Rubber. See Rubber plantations

PLANTS
See also
Botany
Desert plants
Dyes and dyeing—Natural dyes
Rubber plants and planting
Weeds

Chemical analysis

Determination and nature of leaf sterols. M. E. Wall and E. G. Kelley. bibliog Anal Chem 19:677-83 S '47

Flavanones and related compounds; reduction of some naturally-occurring flavones at the dropping mercury electrode. D. W. Engelkemeir and others. bibliog Am Chem Soc J 69:155-9 Ja '47

Histochemical method for the detection of phosphorylase in plant tissues. H. C. Yin and C. N. Sun. Science 105:650 Je 20 '47

Rapid turbidimetric determination of inorganic nitrogen in soil and plant extracts. B. Wolf. bibliog Anal Chem 19:334-5 My '47

Rubber determination in young guayule; studies on the Spence-Caldwell method. R. L. Holmes and H. W. Robbins. bibliog Anal Chem 19:313-17 My '47

See also
Carotene
Vegetables—Analysis

Collection and preservation

Formaldehyde in plant collecting. F. R. Fosberg. Science 106:250-1 S 12 '47

Copper content

Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47

Nutritional disease of oats apparently due to the lack of copper. H. C. Harris. Science 106:398 O 24 '47

Diseases and pests

Nature and importance of physiologic specialization in phytopathogenic fungi. E. C. Stakman. Science 105:627-32 Je 20 '47

Metabolism

See also
Amino acids

Mineral content

Minor element content of rubber and rubber plants. J. McGavack. bibliog il Rubber Age 60:565-6 F '47

Nutrition

Correcting deficiencies in fruit trees by inserting nutrient tablets. C. R. Thompson. Chem & Ind p426-7 N 30 '46

Methods for the direct nutrition of plants. R. H. Stoughton. bibliog Chem & Ind p427-9 N 30 '46

Respiration

Biological aspects of precooling fruits and vegetables; heat of respiration can spoil perishables. W. T. Pentzer. bibliog Refrig Eng 53:511-13+ Je '47

Chlorogenic acid and respiration of sweet potatoes. G. O. Rudkin and J. M. Nelson. bibliog Am Chem Soc J 69:1470-5 Je '47

Selenium content

New syntheses of the selenium analogs of *dl*-cystine and cysteine derivatives. E. P. Painter. bibliog Am Chem Soc J 69:229-32 F '47

Soilless culture

Effect of pure water on plants. W. G. Cass. Chem & Eng N 25:50 Ja 6 '47

Zinc content

Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47

PLANTS, Effect of gases on
Vegetation surveys; method of locating gas leaks. R. W. Stafford. Gas Age 98:52-3+ D 12 '46

PLANTS, Effect of light on
Plant irradiation. Electrician 137:1121-2 O 25 '46

PLANTS, Effect of temperature on
Effect of temperature on the growth and sterility of maize. D. F. Jones. Science 105:390-1 Ap 11 '47

Man-made temperatures help plant growth. F. W. Went. il Refrig Eng 53:495-7 Je '47

PLANTS, Fertilization of. See Fertilization of plants

PLANTS, Geographical distribution of
See also
Botany—Ecology

PLANTS, Ornamental
Vitamin C content of Mexican ornamental plants. F. Giral and L. M. de la Torre. Science 105:65-6 Ja 17 '47

PLASMA, Blood. See Blood

PLASMOCID
Methylene and *p*-phenylene analogs of plasmocid. C. C. Price, H. R. Snyder and E. M. Van Heyningen. bibliog Am Chem Soc J 68: 2589-92 D '46

PLASMODIUM
Preservation of plasmodium vivax by freezing. G. M. Saunders and V. Scott. bibliog Science 106:300-1 S 26 '47

PLASTER and plastering
Crack control in portland cement plaster panels. B. A. Hall. il diags Am Concrete Inst J 19:129-40 O '47

How to get plastered; interior decoration of Edward Krumpe. Sales Management 59:8+ O 1 '47

Investigations of plaster failure. E. S. Newman. il Am Cer Soc Bul 26:117-18 Ap 15 '47

Plaster and masonry fastenings. T. Trail. diags Power Pl Eng 51:90-1 My '47

Plasters and gypsum cements for the ceramic industry; alpha-gypsum. J. S. Offutt and C. M. Lambe. bibliog il Am Cer Soc Bul 26:29-36 F 15 '47

Standards

New plaster and stucco standards to prevent failures. J. W. McBurney. il Ind Stand 18: 79-80 Ap '47

PLASTER board. See Wall board

PLASTER molds. See Molds (for casting)—Plaster molds

PLASTIC bottles. See Bottles, Plastic

PLASTIC boxes. See Boxes, Plastic

PLASTIC buttons. See Buttons, Plastic

PLASTIC clothespins. See Clothespins, Plastic

PLASTIC coated fibers
Monofilament techniques may be applied to Plexon. il Textile World 97:143 Ja '47

1947 revision, Textile World's synthetic-fiber table. C. W. Bendigo, comp. Textile World 97:121-8 S '47

Thumbnail sketch of new materials. Rayon 28:116 Mr '47

PLASTIC coating
Coated drill pipe proves successful in Permian basin. G. Weber. il Oil & Gas J 45: 40-1+ F 1 '47

Plastic coated drill pipe. il Steel 120:124 F 3 '47

Plastic coating expedites stainless stamping operations. W. A. Phair. il Iron Age 159: 47-51 My 15 '47

Plastic film cuts spray booth stripping costs. il Iron Age 159:69 My 29 '47

Preservative coating that developed from cast fixtures; Plastiform, combination thermoplastic resin and ceramic material applied with brush to die portions of plaster casts. il Mod Plastics 24:112-13 Ap '47

PLASTIC coating—*Continued*
Protecting surface finish with strippable plastic coatings. H. R. Clauser. il Materials & Methods 26:70-4 Jl '47
See also Plastic materials—Spraying
PLASTIC combs. See Combs, Plastic
PLASTIC containers. See Containers, Plastic
PLASTIC faucets. See Faucets, Plastic
PLASTIC films
Film manufacture; outline of methods. W. H. Aiken. il diags Mod Packaging 20:147-52 D '46
Plastic film printing. R. A. Nelson. Am Dyestuff Rep 36:328-9 Je 16 '47
PLASTIC gas pipes. See Gas pipes, Plastic
PLASTIC houses
Berlin exhibits plastic prefabs designed for export. il Arch Forum 86:15 Ja '47
PLASTIC industries
Design for demonstrating plastics; quarters for industrial design staff, General electric plastics division. il Arch Rec 101:100-1 My '47
Expansion plans of materials suppliers. il Mod Plastics 24:98-100 Ja '47
Highlights in plastics in 1946. H. J. Billings and others. il Chem & Eng N 25:84-5 Ja 13 '47
Job prospects in plastics products industry. S. Swerdloff and C. R. Winegarden. Mo Labor R 65:293-301 S '47
Market economics of low pressure plastics. H. McCann. Mod Plastics 24:102-3 Je '47
Markets, present and future. map Mod Plastics 24:94-7 My '47
Merchandise buyers discuss plastics. Mod Plastics 24:202 My '47
One growth industry catches up to its market. S. B. Self. Barron's 27:9 Ap 21 '47
Plastics chosen for best growth prospects; new materials don't replace old, but add to market. J. V. Sherman. Barron's 27:23-4 Je 9 '47
Plastics for 1947, with review of plastics situation in 1946. il Mod Plastics 24:89-109 Ja '47
Plastics industry heads into heavy seas. Bsns W p 16 My 17 '47
Plastics industry, its material requirements. W. J. Worboys. Chem & Ind p621-4 O 11 '47
Plastics labeling needs coordination. il Mod Plastics 24:106-8 My '47
Plastics progress, 1939-1940; abstract. N. N. T. Samaras and R. J. Schatz. Chem Age (Lond) 57:287 Ag 30 '47
Problems in promoting proprietary items; market analysis, sales methods, functional design, economical molding combine to sell small, variously priced items. il Mod Plastics 24:124-5 D '46
Program for plastics. C. A. Breskin. J Retailing 23:43-7+ Ap '47
Reaching the market you want with your plastic products. Mod Plastics 24:100-1 My '47
Reviewing the S.P.I. annual meeting. Mod Plastics 24:91-104 Je '47
Trends in the plastics industry in 1947. W. S. Landes. Mod Plastics 24:110-11 Ja '47
What's happening with plastics prices and supplies. J. V. Sherman. Materials & Methods 25:79-83 Ap '47
Your selling plans must be keyed to your outlets. il Mod Plastics 24:102-5 My '47
See also
Society of the plastics industry

Advertising

Let's look at plastics advertising. Mod Plastics 25:73-7 S '47
Plastics makers will use educational ads to eliminate brand-name confusion. W. H. Davis. Ptr Ink 219:106 My 16 '47

Bibliography

Advances in plastics during 1946. Mod Plastics 24:157-8+ Ja '47

Exhibitions

Chicago plastics exposition attracts 30,000 spectators. il Ind Marketing 32:62+ Je '47

Safety measures

For safety in the plastics industry; new standard tells how to prevent dust explosions. H. R. Brown. il Ind Stand 17:52-5 Mr '46; Same cond. Safety Eng 94:14-15+ Jl '47
Safety in plastics. B. K. Heywood. il Safety Eng 94:15+ S '47

Statistics

Consumption of plastics materials in pounds for Jan.-July 1947. Mod Plastics 25:214-15 O '47
Consumption of plastics materials; Jan. through June, 1947. Mod Plastics 25:160-1 S '47
Plastic and production figures for 1946. Mod Plastics 24:119 Mr '47
Plastics and synthetic resin production, Jan. through Nov. 1946; from statistics compiled by Bureau of census, Industry division, chemical unit. Mod Plastics 24:133 F '47 [cont monthly]
Plastics and synthetic resins; U.S. production, 1941-1946. Chem Eng 54:118 F '47
Production of plastics. Mod Plastics 24:198-9 My '47 [cont monthly]
Raw materials situation. Mod Plastics 24:101-7 Ja '47
Review of plastic materials supply outlook. F. H. Carman. India Rubber World 115: 228-30 N '46; Same cond. Chem Eng 53: 158-9 N '46; Same cond. Mod Plastics 24: 124-6 N '46

Australia

Plastics in Australia; brisk expansion seen. For Comm W 26:5-6+ Ja 11 '47

Chile

Use of plastic-molding machines. For Comm W 27:24-5 My 10 '47

Florida

Practical plastics; a new Florida industry. F. L. Harvey. il Manuf Rec 115:39+ N '46

Germany

Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47
German plastics data offered by OTS. Oil Paint & Drug Rep 151:69 Ja 27 '47
German thermosetting resins. il diags Mod Plastics 24:154+ Ap; 153-5+ My '47
Methacrylate polymers in Germany. G. M. Kline and others.. il Mod Plastics 24:129-30+ Jl '47
Production of styrene in Germany. G. M. Kline and others. diags Mod Plastics 25: 151-3+ O '47

Norway

Norway to manufacture plastics. For Comm W 25:43 N 30 '46
PLASTIC jewelry. See Jewelry, Plastic
PLASTIC lenses. See Lenses, Plastic
PLASTIC materials
Acetic acid and chlorine vs. materials of chemical plant construction; protective coatings. Chem Eng 54:242+ My '47
Acrylonitrile moves into plastics. il Mod Plastics 25:91-6 O '47
Adult games make 3-way use of plastics. il Mod Plastics 24:99-101 D '46
Advances in plastics during 1946. G. M. Kline. bibliog(410 titles) il Mod Plastics 24:153-8+ Ja '47
Advances in plastics during 1946. H. M. Richardson. bibliog(116 titles). India Rubber World 115:534+ Ja '47; Same. Mech Eng 69:370-2+ My '47
Aluminum + plastics offers unusual design possibilities. J. D. Edwards. il Iron Age 160:46-8 O 23 '47
American chemical society meeting, New York, Sept. 15-19; abstracts of papers. India Rubber World 117:76-83 O '47
Annual engineering review. il Materials & Methods 25:96 Ja '47
Anti-corrosive materials; wide use of plastics of the Vinidur and Oppanol type. Chem Age (Lond) 55:605-6 N 16 '46
Applied plastic product design. R. L. Davis and R. D. Beck. 285p $6 Prentice-Hall, 70 5th av, New York 11 '46

PLASTIC materials—*Continued*
Blended plastics provide wide range of characteristics; phenolic resins and synthetic rubbers. K. Rose. il Materials & Methods 25:69-72 F '47
Cementing and assembly of plastics; abstract. Product Eng 18:128 Mr '47
Chemical engineering materials of construction; review of literature from start of World war II; plastics, G. M. Kline. bibliog(96 ref) Ind & Eng Chem 39:1234-8 O '47
Chemical research again surges upward; plastic materials and polymers. H. Mark. Chem Ind 61:388-9 S '47
Cold-pour plastic material; Palestic formed by adding gypsum plasters to resin forming chemicals. J. F. T. Berliner. il Mod Plastics 24:103-4 Mr '47
Compact portable using five plastics; RCA Solitaire. il Mod Plastics 25:152-3 S '47
Cross-linkage of linear polyesters by free radicals. W. O. Baker. bibliog Am Chem Soc J 69:1125-30 My '47
Developments in food packaging. J. V. Ziemba. il Food Ind 19:773-5+ Je '47
Directory of materials for the construction of chemical equipment. Chem Eng 53:118 N '46
Electrical and allied developments of 1946; plastics and silicones. G. Bartlett. il Gen Elec R 50:47-8 Ja '47
Fundamentals of plastics. H. M. Richardson and J. W. Wilson, eds. 483p $5 McGraw-Hill book co, New York '46
Importance of the retailer in the development of product design. P. Müller-Munk. J Retailing 23:8-13+ F '47
Intercommunication sets; phenolic and cellulose acetate used. il Mod Plastics 24:184-7 Ag '47
Introduction to engineering plastics. D. W. Brown and W. T. Harris. 274p $4 Murray Hill books, 232 Madison av, New York 16 '47
Introduction to plastics. G. K. Scribner. J Retailing 22:68-72+ O '46
Is plastics' future tied to coal? Mod Plastics 24:89-93+ Mr '47
Merchandising of vinyl sheeting; O'Sullivan rubber corporation. Mod Plastics 24:109 Ap '47
More plastics in cameras. il Mod Plastics 25:116-19 O '47
Mottled sheeting made from salvaged plastics; Mottletone. il Sci Am 176:115 Mr '47
Need for detailed knowledge of plastics stressed; ASTM symposium. Chem & Eng N 25:849 Mr 24 '47
New Australian plastic; local material used for production of black moulding powder; Phentor. C. Lynch. Chem Age (Lond) 56:675 My 24 '47
New beauty in clocks through plastics. il Mod Plastics 24:108-9 F '47
New complete sheeting unit. il diags Mod Plastics 25:142-5 O '47
New mottled acrylic sheeting; Mottletone made from reprocessed acrylic scrap. il Mod Plastics 24:121 D '46
New types of plastics being developed for postwar markets. S. M. Phillips. Dom Comm 35:55-60 S '47
Nine plastics improve new accordions. il Mod Plastics 24:98-100 Ag '47
1947 materials picture. F. H. Carman. India Rubber World 116:80-2 Ap '47
Offices styled in plastics; illustrations. Am Bsns 17:18-19 S '47
Picking the right plastic is essential; whether a radio is to be used indoors or out. il Mod Plastics 25:78-80 S '47
Plastic-and-synthetic-rubber compounds. Barron's 27:24 O 13 '47
Plastic lined furnace doors. J. N. Hornak Blast F & Steel Pl 34:900 Jl '46; Same. il Brick & Clay Rec 110:76+ Mr '47
Plastic teaching aids invade piano field. il Mod Plastics 25:92-3 S '47
Plasticarve, new tooling plastic. T. A. Dickinson. Mech Eng 69:313-14 Ap '47
Plastics and textiles. A. V. Pringle. Textile Inst J 38:P176-9 My '47
Plastics are at home in the kitchen. il Mod Plastics 24:192-4 Ap '47
Plastics are tested for train interiors; General Motors Train of tomorrow. il diag Mod Plastics 24:80-2 Jl '47
Plastics combine in a functional office. il Mod Plastics 24:133 N '46
Plastics conference at Lyons fair; papers summarized. India Rubber World 116:831-2 S '47
Plastics deglamorized in down-to-earth evaluation of virtues and drawbacks. N. J. Rakas. S A E J 54:82 D '46
Plastics engineering in 1946. il Mod Plastics 24:137-46 Ja '47
Plastics from the petroleum industry. Chem Age (Lond) 57:271-2 Ag 23 '47
Plastics in refrigeration. J. Delmonte. bibliog il Refrig Eng 53:498-502 Je '47
Plastics magic kit. Sci Am 175:270 D '46
Plastics molding materials, their physical properties; engineering data sheet. Machine Design 19:115-18 O '47
Plastics primer for engineers. K. Rose. il Materials & Methods 25:119-38 Ap '47
Plastics, theory and practice; the technology of high polymers. C. C. Winding and R. L. Hasche. 280p $3.50 McGraw-Hill book co, 330 W. 42d st, New York 18 '47
Polyurethanes. O. Bayer. Mod Plastics 24: 149-52+ Je '47; Abstract. India Rubber World 116:515-16 Jl '47
Progress in review. Product Eng 18:107-8 Ap; 107-8 My '47
Properties of cellulose as applied in plastic materials. W. E. Gloor. bibliog J Chem Educ 24:214-21 My '47
Raw materials situation. Mod Plastics 24:101-7 Ja '47
Recent advances in plastics. N. J. L. Megson. bibliog Chem & Ind p283-8 My 24 '47
Recent developments. il diags Product Eng 18:[113-44] insert 1-32 Ap '47
Review of plastic materials supply outlook. F. H. Carman. India Rubber World 115: 228-30 N '46; Same cond. Chem Eng 53: 158-9 N '46; Same cond. Mod Plastics 24: 124-6 N '46
Rubber and plastics division, A.S.M.E., December meeting; abstracts of papers. India Rubber World 115:529 Ja '47
Six uses for plastic in an electric brush; ethyl cellulose, butyrate, two types of phenolic, nylon and vinyl resin combine in hair brush. il Mod Plastics 24:105 D '46
Society of plastics engineers annual technical meeting reports; abstracts. Mod Plastics 24: 121-4 F '47
Stoppings sealed with plastic. il Coal Age 52:112+ O '47
Styling a prerequisite to selling. J. G. Balmer, jr. il Mod Plastics 25:94-6 S '47
TAPPI fall meeting on plastics, pulp and paper; Syracuse, Sept. 25-26. Paper Ind 29:1004+ O '47; Paper Tr J 125:35-6 O 2 '47
Trends in molded plastic housings; light weight, permanent finish, molded-in color. il Mod Plastics 24:126-9 Mr '47
Two shavers that use plastics. il Mod Plastics 25:178-80 S '47
Use of plastic chips in the control of chromic acid mist. J. E. Molos. Ind Med 16:404-5 Ag '47; Excerpts. Safety Eng 93:66 Je '47
Use of plastics in consolidating loose sands in wells. R. H. Smith and A. C. Polk, jr. bibliog il Pet Eng (Ref annual) 18:177-8+ Jl 1 '47
Vacuum cleaners for home and car. il Mod Plastics 24:106-7 F '47
Versatile plastic; Conolon, mixture of phenolic resin and butadiene rubber. il Bsns W p42-3 Ag 16 '47
Well completion and remedial work with plastics. A. A. Townsend and R. H. Smith. bibliog il diags Oil & Gas J 46:76-7+ My 10 '47
What's new in plastics. J. Delmonte. il diags Machine Design 19:101-5+ F '47
Where do plastics go from here? C. A. Breskin. il Sci Am 176:214-16 My '47

See also
Airplanes—Materials—Plastics
Automobiles—Materials—Plastics
Bakelite
Carboxymethyl cellulose
Casein
Catalin
Cellulose acetate
Cellulose acetate butyrate
Cellulose acetate propionate
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Plasticizers
Polythene
Printing on plastics
Resinous products
Rubber
Rubber, Artificial
Saran
Styrene
Teflon
Tools, Plastic

Bibliography

Advances in plastics during 1946. il Mod Plastics 24:157-8+ Ja '47
Lignin and lignocellulosic plastics. C. J. West, comp. (Bibliographic ser. no. 166) 95p pa $5 Institute of paper chemistry, Appleton, Wisconsin. '46
Plastics digest. Published in monthly numbers of Modern plastics

Blowing

Forming and blowing of acrylics. il Mod Plastics 24:108-9 N '46

Cutting

Automatic machining of plastics. K. Rose. il Materials & Methods 25:73-6 My '47
Cutting compacts from acrylic sheet. il Mod Plastics 24:131-2 F '47
Diamonds cut plastics with precision. diags Am Mach 90:101-3 D 19 '46
Die cutting heavy acrylic sheet. il Mod Plastics 24:120-1 Mr '47
Friction cutting of plastics. H. J. Chamberland. il Mod Plastics 24:135 Ag '47
How to saw vinylidene chloride. H. J. Chamberland. il Mod Plastics 24:148 Mr '47
New comb finisher; Carlson comb crowning and cutting machine. il Mod Plastics 25:196+ O '47
Small lathe for plastics. il Engineer 182:452 N 15 '46
Transparent plastic puts lathe on view. il Mod Plastics 25:135-7 O '47

Electric properties

Effect of weathering on insulation resistance of plastics; abstract. L. H. Campbell and others. Product Eng 18:132-3 F '47
Growing importance of plastics in the electrical industry. G. Haefely. Inst E E J 94 pt 2:301-8 Ag '47; Abstract. Engineering 163:6 Ja 3 '47; Discussion. Inst E E J 94 pt 2:308-12 Ag '47; Electrician 137:1760-2 D 20 '46
Kinetics of cure of resol resins. M. N. Fineman and I. E. Puddington. bibliog Ind & Eng Chem 39:1288-93 O '47
Low-loss plastic insulation materials. J. H. Parliman. Electronics 20:116-21 (Buyer's guide) Mid-Je '47
Measuring of surface and volume resistances. R. I. Witt and others. diags Mod Plastics 24:151-2+ Ap '47
Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47.

Embossing

Embossing acrylic. il Mod Plastics 24:198 Ag '47

Expansion and contraction

Thermal expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Same abr. Mod Plastics 24:153-7+ D '46

Fillers

Fillers from bark. il Mod Plastics 25:162+ S '47

Finishing

Abrasive finishing of plastics; tabulation; engineering file facts. R. S. Burpo, jr. comp. Materials & Methods 25:119 Mr '47
Finishes for plastics. H. W. Dell. il Iron Age 158:46-7 D 26 '46
Getting the right color by spray coating. il Mod Plastics 24:148-9 N '46
How to polish and buff plastics. il Am Mach 90:106-7 D 5 '46
Polishing of squares, flats and radii. E. S. Phillips. diags Mod Plastics 24:150+ N '46

Fire hazards

Flameproofing of cotton fillers in plastic laminates. S. Williams and others. Mod Plastics 24:151-3+ Mr '47
Plastic film for coating paper. W. O. Lincoln. Spectator (Property ed) 12:18 My 22 '47
Preventing fire in handling plastics. Safety Eng 94:42 Ag '47

Glass reinforcement

Fiberglas plastics; industrial medical aspects and experiences J. R. Erwin. bibliog Ind Med 16:439-41 S '47
Mechanizing glass plastics. il Bsns W p56+ D 21 '46

See also Plastic materials, Laminated—Glass reinforcement

Heating

Heat operations in the plastics industry. H. G. Rappolt. il Mod Plastics 24:135-9 N '46

See also Plastic materials—Preheating

Inspection

Metal detection for better plastic products. P. A. Greenmeyer. il diags Mod Plastics 24:137-42 Ap '47

Joining

Electronic sealing of thermoplastics; Thermatron. il Comp Air Mag 52:259 O '47
Heat sealing thermoplastics; abstract. W. D. Wenger. Product Eng 18:130 Mr '47

Joining to metal

Fast radio assembly. il Mod Plastics 24:180 Ag '47
Plastic bonded light alloys; abstract. Product Eng 18:128 Mr '47
Thermal-expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Same abr. Mod Plastics 24:153-7+ D '46; Abstracts. Steel 119:110 D 30 '46; Rubber Age 60:446 Ja '47; Product Eng 18:159 Ja '47

See also
Plastic materials—Plating

Manufacture

Compounding plastic materials by a new method; Hungerford process. J. Sandler. il Mod Plastics 24:137-40 F '47
Plastics compounded, while you wait; Hungerford Plastimaker. il Sci Am 176:162-3 Ap '47; Abstract. Rubber Age 61:704 S '47
Practical experiences with dangers and illnesses from plastics. C. S. McKinley. Ind Med 16:432-4 S '47
Scientifically controlled plastics production. il Chem Age (Lond) 57:510-11 O 11 '47

See also Plastic materials, Laminated—Manufacture

Medical use

Five reasons surgeons use plastics. il Mod Plastics 24:102-3 N '46
Medicine uses all types of plastics. il Mod Plastics 24:95-8 N '46
Plastics improve medical accessories. il Mod Plastics 24:99-101 N '46

Moisture content

Preheating plastics with live steam. S. K. Moxness and J. Formo. il diags Mod Plastics 24:141-7 F '47

Patents

U.S. plastics patents. Published in monthly numbers of Modern plastics

Plating

Electroplating non-conductors. T. A. Dickinson. diag Metal Finishing 45:95 Je '47
Metal coated plastics. il Mod Plastics 24:106-8 D '46
Plating on plastics. H. Narcus. Metal Prog 50:1067-8 N '46

PLASTIC materials—Plating—*Continued*
Practical copper reduction on non-conductors. H. Narcus. bibliog Metal Finishing 45:64-7+ S '47

Preforming

Studies in preforming. C. Frantz and R. Janson. Mod Plastics 24:93-4 Je '47

Preheating

Cost analysis of dielectric preheating. T. N. Willcox. Mod Plastics 24:131-5 Mr '47
Dielectric heating for plastics; abstract. C. Calvert. Chem Eng 53:256+ D '46
Preheating plastics and live steam. S. K. Moxness and J. Formo. il diags Mod Plastics 24:141-7 F '47

Reinforcement

Mesh reinforced plastic has many uses. F. C. Williams. il Mod Plastics 24:110-12 D '46
Thermal-expansion stresses in reinforced plastics; polystyrene and aluminum oxide; phenol-formaldehyde resin and glass fibers; plywood, etc. P. S. Turner. J Res Nat Bur Stand 37:239-50 O '46; Same abr. Mod Plastics 24:153-7+ D '46

See also Plastic materials—Glass reinforcement

Spraying

Cocooning; Army air forces' packaging technique protects whole B-29 bombers. il Mod Packaging 20:112-13 My '47
Flame spraying of powdered materials; abstract. W. D. Jones. Materials & Methods 25:123 My '47
Man-spun cocoon protects shipments. il Am Mach 91:88-9 Ja 30 '47
Spraying of plastics; abstract. D. W. Jones and V. E. Yarsley. Chem & Ind p116 F 22-Mr 8 '47

Standards

Molded plastics standards. J. Delmonte. il Machine Design 19:151-4 Ag '47

Strength

Improved mechanical test methods for better plastics design. H. M. Quackenbos, jr. il diags Product Eng 18:113-17 Ja '47

Surface

Amine dust-bane. Chem Ind 61:38-9 Jl '47

Testing

Creep, long-time tensile and flexural fatigue properties of melamine and phenolic-plastic materials. D. Telfair and others. bibliog A S M E Trans 69:789-93 O '47; Same. Mod Plastics 24:151-2+ My '47
Ethyl cellulose compositions; factors affecting outdoor durability. B. Berry and W. Koch. il Mod Plastics 25:154-8+ O '47
Improved mechanical test methods for better plastics design. H. M. Quackenbos, jr. il diags Product Eng 18:113-17 Ja '47
Low temperature impact strength of cellulosic plastics. W. E. Gloor. bibliog il Ind & Eng Chem 39:1125-9 S '47
Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46

Uses

Putting plastics in its place; right plastics for the right job. il Sci Am 177:207-9 N '47

PLASTIC materials, Cellular
Expanding fields for expanded plastics. C. A. Breskin. il Sci Am 177:119-21 S '47
Foamed cellulose acetate, a new plastic. R. A. Hoffer. il Materials & Methods 25:58-61 Ja '47

PLASTIC materials, Decorative
Decorating with phenolics and vinyls. il Mod Plastics 24:124-5 My '47
Fashionwise glasses. il Mod Plastics 25:202-3 O '47
Flowers that retain their beauty. il Mod Plastics 24:130 F '47
Forming and blowing of acrylics. il Mod Plastics 24:108-9 N '46
Merry Xmas with plastics. F. A. Abbiati. il Mod Plastics 24:90-3 D '46
Pictorial effects through plastic; Endicott corp. il Mod Plastics 24:106 N '46
Prismatic designing gives brilliance to acrylic jewelry. H. F. Pearson. il diags Mod Plastics 24:128-31 Ap '47

PLASTIC materials, Expanded. See Plastic materials, Cellular

PLASTIC materials, Laminated
Aluminium + plastics offers unusual design possibilities. J. D. Edwards. il Iron Age 160: 46-8 O 23 '47
Atom smasher uses low pressure laminate; synchrotron 10 plastic parts. il Mod Plastics 24:91 Jl '47
Automatic machining of plastics. K. Rose. il Materials & Methods 25:73-6 My '47
Better tools from molded laminates; glass fabric impregnated with unsaturated polyester resins and addition-type polymers. L. Wittman. il Mod Plastics 24:132-7 Je '47
Briggs introduces its new line of laminated plastics to the industry. W. G. Patton. Iron Age 158:86+ D 19 '46
Britain develops a new structural plastic; Holoplast, laminated board. il diag Mod Plastics 24:130 F '47
Contact pressure laminations. E. G. Williams. Chem & Ind p367-70 Je 28 '47; Abstract and discussion. p211-12 Ap 19 '47
Economics of low pressure plastics. il Mod Plastics 24:95-104 Ap '47
Engineering aspect of laminated plastics. J. H. Jarman. il Textile Inst J 37:P238-46; Discussion. P246-8 Jl '46
Flameproofing of cotton fillers in plastic laminates. S. Williams and others. Mod Plastics 24:151-3+ Mr '47
Heavy duty for high-pressure laminates. il diag Mod Plastics 24:97 Mr '47
High pressure plastics. C. A. Breskin. il Sci Am 175:249-51 D '46
Laminated vinyl tile flooring. il Mod Plastics 24:123-5 Ap '47
Laminates important to textile machines. il Mod Plastics 25:109 S '47
Laminates take over interior paneling in postwar automobile. il Mod Plastics 24:112-18 Ja '47
Laminating adhesives and their applications. A. Biddle. Paper Ind 28:1499-504 Ja '47
Laminators see volume outlets ahead. il Mod Plastics 24:95 Ja '47
Low-pressure laminates in competition; abstract. J. W. Greig. Mod Plastics 24:122 Mr '47
Making and using thermoplastic laminates.. il Mod Plastics 24:91-5 F '47
Methods for combining phenolic resins and paper. E. S. Bauer. Paper Tr J 125:50-2 Jl 17 '47
New form of lignin; developments of Howard Smith paper mills, ltd. N. B. Powter. il Paper Ind 28:1744-6 Mr '47; Same cond. Mod Plastics 24:106-8 Ap '47
New use for deep drawn laminates; model racing boat. il Mod Plastics 24:110-12 F '47
New uses for rayon in plastic fabrics. Rayon 28:222 Ap '47
Paper for plastic laminates. J. C. Pitzer. Paper Tr J 125:49-51 Jl 24 '47
Plastic laminates offer prime market for rayon thread waste. Rayon 28:470 S '47
Plastics improve textile machinery. il diags Mod Plastics 24:73-9 Jl '47
Plastics in electrical industry; Tyseley works of Bakelite, ltd. T. J. Fielding. il diag Electrician 137:1196-9, 1281-5, 1370-4 N 1-15 '46
Plastics in railways; urea-formaldehyde, phenolic laminates used in British coach. il Mod Plastics 25:206-7 O '47
Plastics in sheets. C. A. Breskin. il diag Sci Am 176:161-2 Ap '47
Plastics machine ways outwear metal. il diag Sci Am 176:78 F '47
Plastics on wheels. C. A. Breskin. il Sci Am 176:66-8 F '47
Radio case of veneer-kraft laminate. il Mod Plastics 24:170-2 Ag '47
Recent developments; honeycomb-sandwich structures. il diag Product Eng 18:[140-1] insert 28-9 Ap '47
Recent developments; thermoplastic laminates. il Product Eng 18:[136-7] insert 24-5 Ap '47
Sandwich materials; metal faces with honeycomb core. W. W. Troxell and H. C. Engel. diag Machine Design 19:142-4 Mr '47

PLASTIC materials, Laminated—*Continued*
Some things old and some things new in plastics. F. B. Stanley. il S A E J 55:48-9 Mr '47
Textile bags; plastic treatment and laminations. il Mod Packaging 20:140-2 My '47
Textile development and its application to laminated plastics. R. A. Bettridge. Textile Inst J 37:P226-37 Jl '46
Thermoplastic laminates; abstract. R. J. Metzler and L. T. Barnette. Product Eng 18:134-5 O '47
Thermosetting silicone resins. Mod Plastics 24:112 D '46
Thermosetting vinyl polymers. E. L. Kropa. bibliog il Electrochem Soc Trans 90 (preprint 29):351-65 '46
Uses of printed vinyl laminates. il Mod Plastics 24:125-6 F '47
See also
Plywood

Bibliography
Paper-base plastics. C. J. West. (Bibliographic series no 167) 102p pa $5 Inst. of paper chemistry, Appleton, Wis. '46

Glass reinforcement
Editorial citation to North American aviation, inc. for achievement in applying fiberglas-reinforced plastics. il Materials & Methods 24:1182-3 N '46
Glass aircraft wing; abstract. Aeronautical Eng R 5:61 D '46
Glass fiber-reinforced plastics; properties and applications. il Product Eng 18:160-5 Mr '47
Glass fibers as an engineering material. il Steel 120:96-9+ Mr 10 '47
Laminates for outdoor displays; polyester resin impregnated glass mat and cloth used in molding tire display figures and stands. il diags Mod Plastics 24:100-1 Mr '47
New fibreglas wing is tested by AAF; all-glass plane planned. il Aviation N 6:22 N 11 '46
Production and fabricating possibilities of glass fabric reinforced plastics. G. Slayter. il plan Mod Plastics 24:142-5 D '46; Abstract. Automotive & Aviation Ind 95:45 D 1 '46
Textile development and its application to laminated plastics. R. A. Bettridge. Textile Inst J 37:P235-7 Jl '46

Manufacture
Macrolyn manufactures laminates. Chem & Eng N 25:508 F 24 '47
Plastics factory poses some building problems; laminated plastics plant, built for the General electric co. il Eng N 139:564 O 23 '47
Plastics plant will make mill bearings; General electric company's new laminated plastics plant. il Blast F & Steel Pl 35:1279 O '47
Recent developments; low pressure molding and laminating. il Product Eng 18:[138-9] insert 26-7 Ap '47

Testing
Chemical resistance of phenolic laminates. W. R. Tyrie. A S M E Trans 69:795-7 O '47

PLASTIC materials, Translucent
Birth of an idea; edge lighting of acrylic sheet material. il Mod Plastics 25:176+ O '47
Measurements of the refractive index of films. F. W. Billmeyer, jr. J Ap Phys 18: 431-4 My '47
Street lamp globes molded of polystyrene. il Mod Plastics 24:144-5 My '47

PLASTIC materials, Transparent
Acrylic applicator. il Mod Plastics 24:194-5 Ag '47
Acrylic lid for dishwasher. il Mod Plastics 25:172+ S '47
Acrylics improve performance of industrial salter unit; calcium chloride dispenser. il Mod Plastics 24:114-15 My '47
Appliance corp. automatic washing machine enclosed in Plexiglas. il Mod Plastics 25: 108 S '47
Automotive glazing with plastics. G. B. Watkins and J. D. Ryan. il S A E J 54: 54-5 D '46
Calculating heat transmission through Plexiglas. chart Heat & Ven 44:97-8 Ap '47
Clear plastics, diallyl phenyl phosphonate. Sci Am 177:133-4 S '47
Fabricators must be versatile; Steiner mfg. co. acrylic items. il Mod Plastics 25:124-6 O '47
Fibrin film and other products from human plasma. J. D. Ferry and P. R. Morrison. bibliog il Ind & Eng Chem 38:1217-21 D '46
Full vision plastic top announced for convertibles. il Safety Eng 93:26 Ja '47
Heat resistance, clarity in new acrylic; Plexiglas V. il Mod Plastics 24:119-20 Ag '47
Large dome formed from transparent plastic sheets. il Mach 53:162-3 D '46; Product Eng 17:120 D '46
Navy develops novel airplane lighting; use of Plexiglas and Lucite illuminated by internal light. il Aviation W 47:32+ O 20 '47
New acrylic brushes. il Mod Plastics 25:186+ O '47
Obtaining brilliance with acrylic resins. H. F. Pearson. il diags Product Eng 18:147-51 My '47
Photodielectric analysis of materials. J. Delmonte. il diags Mod Plastics 24:163-4+ F '47
Piping light with acrylic materials. H. Pearson. il diags Mod Plastics 23:123-7 Ag '46; Same cond. Arch Forum 86:106+ Ja '47
Plastic car windows practical says SAE safety code proposal. il S A E J 54:80-1 N '46
Plastic drill cases. il Mod Packaging 20:115 Jl '47
Plastic eye protectors. C. A. Reichelderfer. il Nat Safety N 55:11 Mr '47
Plastic partitions and windows; advantages and limitations of transparent acrylic plastic. il diags Arch Forum 87:121-4 O '47
Plastic used for brine tanks; Plexiglas used by processor of olives. il Food Ind 119: 464 Ap '47
Plastic X-box. il Mod Packaging 20:170-2 Mr '47
Plastics as optical cements. H. W. Coles and others. bibliog il diags Mod Plastics 24:141-8+ Je '47
Plastics in public lighting. F. H. Pulvermacher. il Elec R (Lond) 140:991-2 Je 13 '47
Product is the wrap; bowl cover package. il Mod Packaging 20:107 Ag '47
Radiant murals. il Sci Am 175:268 D '46
Ridge-formed sheet eliminates polishing. W. W. Farr and R. Tomlinson. il Am Mach 91:118-19 Je 19 '47
Ridge forming acrylic sheet. W. W. Farr and R. Tomlinson. il Mod Plastics 24:114-16 Jl '47; Same. Aero Digest 55:76+ O '47
Specimens in acrylic. il Mod Plastics 24:178-9 Ag '47
Tips on designs in Plexiglas. il diags Aero Digest 54:74+ Mr '47
Transparent containers, mass produced. il Mod Packaging 20:126-8+ Mr '47
Transparent plastics puts lathe on view. il Mod Plastics 25:135-7 O '47
Transparent plastics; Victor Chemical V-Lite. il Chem Eng 54:159-60 Ag '47
Transparent thermoplastic unsaturated polyester resins; abstract. Materials & Methods 24:1246 N '46
Use of unsaturated polyester resins for embedding biological material. T. H. Romaniak. il Science 104:601-2 D 20 '46
Variations in acrylic. Mod Plastics 25:156+ S '47
What's new in display; transparent materials for display, protection, prevention of theft. il Ptr Ink 219:45 My 30 '47
See also
Lucite
Lumarith
Methyl methacrylate

Testing
Spectral transmission of transparent plastics. R. B. Rice and others. Mod Plastics 24:156-7 My '47

PLASTIC models. See Models, Plastic

PLASTIC phonograph records. See Phonograph records, Plastic

PLASTIC pipes. See Pipes, Plastic

PLASTIC printing plates. See Printing plates, Plastic

PLASTIC saltcellars. See Saltcellars, Plastic

PLASTIC tableware. See Tableware, Plastic

PLASTIC tanks. See Tanks, Plastic

PLASTIC tiles. See Tiles, Plastic

PLASTIC tools. See Tools, Plastic

PLASTICITY

Application to shaping processes of Hencky's laws of equilibrium. E. Siebel. bibliog diags Iron & Steel Inst J 155:526-34 Ap '47; Discussion. diags 156:511-22 Ag '47

Effect of oil on plastic properties of petroleum waxes and development of plasticity tests. W. L. Nelson and L. D. Stewart. Oil & Gas J 46:121 Je 28 '47

Introduction to the mathematical theory of plasticity. W. Prager. diag J Ap Phys 18: 375-83 Ap '47

Plastic flow, creep, and stress relaxation; plastic flow. C. Mack. bibliog diag J Ap Phys 17:1086-92 D '46

Plasticity in experiment and theory. M. G. Corson. il Metal Prog 50:1209-10 D '46

Relation between gel content plasticity, and dilute solution viscosity of elastomers. A. L. Back. bibliog(63 ref) Ind & Eng Chem 39:1339-43 O '47

Shrinkage and plastic flow of pre-stressed concrete H. R. Staley and D. Peabody, jr. Am Concrete Inst J 17:229-43 Ja '46; Discussion, 18:224¹-244⁴ pt 2 D '46

Simplified formula is based on effect of plastic flow in reinforced concrete. B. W. Boguslavsky. diag Civil Eng 17:87+ F '47

PLASTICIZERS

Betamorpholinoethyl acetate; diethyleneglycol monolaurate; dihydroabietyl alcohol. Oil Paint & Drug Rep 151:7+ Je 16 '47

Bulky plasticizers for rubber molding. Chem Ind 61:78 Jl '47

Cellulose ester melt-coating compositions. C. J. Malm, M. Salo and H. F. Vivian. bibliog(32 ref) Ind & Eng Chem 39:167-74 F '47

Comparison of recently developed plasticizers for nitrocellulose, by Chicago paint and varnish production club. bibliog Paint Oil & Chem R 108:124-9 N 1 '45; 109:28+ D 12 '46

Dielectric identity test for plasticizers; polyvinyl chloride plastics type. M. A. Elliott, A. R. Jones and L. B. Lockhart. bibliog il diags Anal Chem 19:10-15 Ja '47

Diffusion of plasticisers from polyvinyl chloride. P. A. Small. bibliog Soc Chem Ind J 66:17-19 Ja '47

Effect of humidity on properties of plasticized ethylcellulose. W. P. Moeller and N. Taylor. bibliog Ind & Eng Chem 39:1149-52 S '47

Effect of plasticizers on the second-order transition points of high polymers; abstract. R. F. Boyer and R. S. Spencer. Mod Plastics 25:160 O '47

Ether esters, plasticizers for vinyl coating. F. J. Tuttle and E. B. Kester. diag Mod Plastics 24:163-6 D '46

Ethyl cellulose compositions; factors affecting outdoor durability. B. Berry and W. Koch. il Mod Plastics 25:154-8+ O '47

Ethylsulpho-N-dodecyl oxyethylamide. Oil Paint & Drug Rep 152:7 O 6 '47

Industrial application of chemicals; (dihydroxymethyl) nitroethane dipropionate. Oil Paint & Drug Rep 151:7 Je 9 '47

Industrial application of chemicals; triethyl citrate. Oil Paint & Drug Rep 151:7 Je 30 '47

Low temperature impact strength of cellulosic plastics. W. E. Gloor. bibliog il Ind & Eng Chem 39:1125-9 S '47

Mesamoll plasticizers for polyvinyl chloride. Mod Plastics 24:154-6+ Mr '47

Octyl sulpho-N-cyclohexylamide. Oil Paint & Drug Rep 152:53 O 27 '47

Phthalic anhydride manufacture from orthoxylene. I. E. Levine. flow diags il Chem Eng Prog 43:168-71 Ap '47

Physical chemistry of plasticizer action; abstract. H. Jones and E. Chadwick. Paint Oil & Chem R 110:38-9 S 4 '47

Plasticiser action and chemical constitution; abstract. D. Faulkner. Chem Age (Lond) 57:288 Ag 30 '47

Plasticizer-filler mixtures and their dispersion in rubber. F. S. Rostler and H. I. Du Pont. bibliog Ind & Eng Chem 39:1311-22 O '47

Plasticizer shortage continues. Mod Plastics 24:108-9 Ja '47

Plasticizers for film formers; Monoplex. Chem Ind 61:252 Ag '47

Plasticizing GR-S and natural rubber. A. R. Davis. bibliog Ind & Eng Chem 39:94-100 Ja '47

Red oil, plasticizer for rubber. India Rubber World 116:832 S '47

Ricinoleate esters as low-temperature plasticizers for nitrile-type synthetics. T. C. Patton and M. K. Smith. India Rubber World 116:643-4 Ag '47

Softeners for GR-S tires; evaluation of combinations of carbon black and plasticizer as extending agents. F. M. McMillan and others. bibliog il Rubber Age 61:555-62 Ag '47

Sulfonamide plasticizers and resins. H. S. Bergen, jr. and J. K. Craver. bibliog Ind & Eng Chem 39:1082-7 S '47

Tetrafunctional graph for appraising plasticizer performance in vulcanized rubbers. T. C. Patton and M. K. Smith. India Rubber World 115:666-9 F '47

Vinyl plasticizer; Plastoflex #5. Chem Ind 61: 76+ Jl '47

Testing

Methods for evaluating plasticizers for polyvinyl chloride. D. L. Kent and P. J. Weaver. flow sheet India Rubber World 115: 813-17 Mr '47

PLASTICS engineers, Society of. See Society of plastics engineers

PLASTICS industry, Society of. See Society of the plastics industry

PLASTILOCK 500. See Adhesives

PLASTRON

Retail demonstrations teach women how to sew Plastron. il Sales Management 59:84+ O 1 '47

PLATE glass

Measurement of mean specific heat of plate glass at high temperatures. S. Anderson. diags Am Cer Soc J 29:368-70 D 1 '46

Manufacture

Plate glass manufacture; diagrams. W. Owens. Cer Ind 49:78-9 Jl '47

Testing

Mechanical treatment of hardened glass; abstract. N. O. Abelchuk. Glass Ind 28:245-6 My '47

PLATE glass insurance. See Insurance, Plate glass

PLATES

Bending of rectangular plates with large deflections. S. Levy. bibliog il U S Nat Advisory Com for Aeronautics 1942:139-57 '46

Critical compressive stress for flat rectangular plates supported along all edges and elastically restrained against rotation along the unloaded edges. E. E. Lundquist and E. Z. Stowell. bibliog diag U S Nat Advisory Com for Aeronautics 1942:99-109 '46

Normal-pressure tests of circular plates with clamped edges. A. E. McPherson and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:269-85 '46

Normal-pressure tests of rectangular plates. W. Ramberg and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:349-71 '46

Restraint provided a flat rectangular plate by a sturdy stiffener along an edge of the plate. E. E. Lundquist and E. Z. Stowell. bibliog diags U S Nat Advisory Com for Aeronautics 1942:123-7 '46

Square plate with clamped edges under normal pressure producing large deflections. S. Levy. diags U S Nat Advisory Com for Aeronautics 1942:209-22 bibliog(p216) '46

PLATING

Acrylics make good plating barrels. il Mod Plastics 24:128-9 D '46

Electroless plating of nickel, cobalt on metals by chemical reduction. il Sci Am 177:172-3 O '47; Chem & Eng N 25:2222 Ag 4 '47

Identification of plated coatings. G. Black and J. Sinner. Metal Finishing 44:529-30 D '46

PLATING—*Continued*
No electric current used in new method of plating nickel and cobalt on metal surface. A. Brenner and G. E. Riddell. il diag Steel 121:84+ Jl 28 '47; Same. Chem Age (Lond) 57:156-7 Ag 2 '47; Same, without il. Mech Eng 69:767-8 S '47; Same. Franklin Inst J 244:479-81 D '47; Same cond. Automotive Ind 97:90 O 15 '47; Same cond. Product Eng 18:150 O '47; Abstract. Comp Air Mag 52: 281 N '47; Abstract. Can Min J 68:908 D '47
Plating and finishing guidebook. N. Hall and G. B. Hogaboom, jr, eds. 15th ed 266p pa $1 Metal industry pub. co, 11 W. 42d st, New York 18 '46

See also
Chromium plating
Copper plating
Electroplating
Gold plating
Nickel plating
Platinum plating
Silver plating
Water supply for plating
Zinc plating

PLATING barrels
Acrylics make good plating barrels. il Mod Plastics 24:128-9 D '46
Barrel plated multiple coatings; toy railroad parts; Lionel corporation. M. Mazzone and F. McKnight. il Metal Finishing 45:81-5 Je '47
Improved barrel plating technique. H. E. Head. il plans Metal Finishing 45:55-7 Mr '47
Plating barrel features pumping equipment as an integral part. plan Materials & Methods 24:1294+ N '46

PLATING departments
Automatic electroplating line at Pontiac. A. H. Allen. il Steel 121:80-3+ Ag 25 '47
Cadillac reorganizes electroplating dept. for greater efficiency. J. Geschelin. il Automotive Ind 97:28-9+ O 15 '47
Hard chrome plating finds wise use at Ford. H. Chase. il Iron Age 159:51-3 Ja 30 '47

PLATING machinery
Automatic plating plant handles copper, chrome, nickel in continuous operation. il Sci Am 177:126-7 S '47

PLATING on plastics. See Plastic materials—Plating

PLATING shops
High production job shop plating. L. J. Donroe. il Metal Finishing 45:71-4 S '47
Los Angeles plating plant explosion; perchloric acid being used for electrolytic polishing of aluminum. F. A. Herr. il Metal Finishing 45:72-3+ Mr '47

Equipment
Automatic conveyers for electroplating. A. Bregman. il Iron Age 159:68-74 Je 19; 58-64 Je 26 '47
Automatic handling aids plating success; Daystrom corporation. M. E. Kilroy. flow chart il Am Mach 91:84-7 Mr 27 '47
Engineering a small job-plating shop. A. Lakos. il Metal Finishing 45:69-70+ Jl '47
Largest automatic plating plant in the world. il Metal Finishing 45:67-8 Jl '47

See also
Plating barrels

Layout
Improved barrel plating technique. H. E. Head. Metal Finishing 45:57 Mr '47

Safety measures
Plastic chips control mist in chromium plating tanks. J. E. Molos. Safety Eng 93:66 Je '47
Study-control plan for minimizing hazards of the plating industry. R. R. Kampe. il Safety Eng 93:12-13+ Je; 94:26+ Jl '47
Toxicity of chemicals in electroplating. P. M. Van Arsdell. bibliog(79 ref) il Metal Finishing 45:55-60+ Ag; 79-83 S; 75-81 O '47

Waste
Disposal of plating room wastes; abstract. B. F. Dodge and D. C. Reams. Metal Finishing 45:54+ Ag '47
Treating cyanide waste from metalworking plants; use of chlorine. J. G. Dobson. il plans Steel 121:92-3+ S 15 '47
Treatment works for plating wastes containing toxic metals and cyanides. G. E. Barnes. flow sheet il plan diag Water & Sewage Works 94:267-71 Ag '47

PLATINUM
Amperometric titration of styrene with potassium bromate using the rotating platinum electrode. I. M. Kolthoff and F. A. Bovey. bibliog Anal Chem 19:498-500 Jl '47
End of the platinum boom? Economist 152:40 Ja 4 '47
Fission of bismuth, lead, thallium, platinum, and tantalum with high energy particles. I. Perlman and others. Phys R 72:352 Ag 15 '47
Industrial application of chemicals. Oil Paint & Drug Rep 152:7 S 15 '47
Platinum increasing in popularity as hedge against inflation. I. J. Louis. Comm & Fin Chr 166:1248 S 25 '47
Recherches sur la catalyse d'oxydation. J. Ternisien and H. F. Mélot. il diag Chimie & Ind 57:11-21 Ja '47
Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens, jr. and others. Phys R 71:165-73 F 1 '47
Symposium on the contamination of platinum thermocouples; by the Liquid steel temperature sub-committee. T. Land and others. 4pls Iron & Steel Inst J 155:213-34 F '47; Discussion. 156:497-500 Ag '47

Industrial applications
Silver and platinum in chemical plant construction; abstract. J. M. Pirie. Chem & Ind p91-2 F 8 '47

PLATINUM alloys
Platinum-iridium alloys. O. E. Zvyagintsev and others. Materials & Methods 24:1516 D '46

PLATINUM compounds
Crystal structures of trimethylplatinum chloride and tetramethylplatinum. R. E. Rundle and J. H. Sturdivant. bibliog il Am Chem Soc J 69:1561-7 Jl '47

PLATINUM dust
Design of exhaust systems; elimination of such dusts as gold, silver and platinum. F. H. Stebbins. il plan diags Sheet Metal Worker 37:48-50+ D '46

PLATINUM metals
After the turn of the year. C. Engelhard. Comm & Fin Chr 165:434 Ja 23 '47
Platinum metals, 1946. H. W. Davis. Eng & Min J 148:82 F '47

See also
Iridium
Osmium
Palladium
Rhodium
Ruthenium

PLATINUM oxide
High pressure hydrogenations with Adams catalyst. R. H. Baker and R. D. Schuetz. bibliog Am Chem Soc J 69:1250-2 Je '47

PLATINUM plating
Plating with platinum, palladium and rhodium. H. M. Haberman. bibliog Metal Finishing 45:56-8 Ja '47

PLATINUM tetramethyl
Electron deficient compounds. R. E. Rundle. bibliog diags Am Chem Soc J 69:1327-31 Je '47

PLATT, Robert Swanton, 1891-
Sketch. Special Lib. 38:140 My-Je '47

PLATTSBURG, New York

Water supply
Break-point chlorination at Plattsburg. F. D. Behan. il Pub Works 78:27-8+ Jl '47

PLAYGROUNDS

Equipment
Playground equipment; time-saver standards. plans diags Arch Rec 101:117+ Mr '47

PLEOCHROIC haloes
Nuclei of pleochroic haloes. C. O. Hutton. bibliog Am J Sci 245:154-7 Mr '47

PLEXIGLAS. See Plastic materials, Transparent

PLEXON. See Plastic coated fibers

PLIOFILM
Box for pliofilm-cured cheese. J. V. Ziemba. il Food Ind 19:457 Ap '47
Long-lived chips; Dan Dee kodachromed carton for potato chips; pliofilm overwrap. il Mod Packaging 20:98-100 F '47
New non-fogging pliofilm. il Mod Packaging 20:202 My '47

PLIOFILM—*Continued*
Pliofilm overwrapper for medicine carton. il Mod Packaging 20:100 F '47
Second skin; Florida tests machine that will stretch-wrap and seal oranges in thin pliofilm. il Mod Packaging 20:96-8 Ap '47

PLIOLITE
Pliolite copolymer resins and their uses. H. R. Thies and W. H. Aiken. diags Rubber Age 61:51-8 Ap '47
Thermoplastic specialty resins. W. H. Aiken. il Mod Plastics 24:100-2 F '47

PLOMER, Henry Robert
Biographical notices of printers and publishers of Friends' books up to 1750; a supplement to Plomer's dictionary. R. S. Mortimer. J Doc 3:107-25 S '47

PLOUGH, inc.
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:331+ Je 21 '47

PLOWDEN, Sir Edwin Noel, 1907-
Britain's brain trust. por Bsns W p113-14 Ap 12 '47

PLOWS
Mounted plough for tractor farming. il Engineering 162:536 D 6 '46

PLUM gum
Constitution of egg-plum gum. E. L. Hirst and J. K. N. Jones. Chem Soc J p 1064-8 Ag '47

PLUMBERS
See also
Plumbing trade

PLUMBING
Commercial jobs pay off, says Cleveland contractor in telling of one installation; plumbing in Community hospital, Berea, Ohio. il Dom Eng 169:116-17+ Mr '47
How disease flows by back-siphonage in plumbing system. il Dom Eng 168:114-16+ D '46
How to weld pipe. il diags Dom Eng 169:106-7+ Mr; 112-13+ Ap; 120-3+ My; 170:118-19+ Jl; 118-19+ Ag; 114-16 S; 120-1+ O '47
Plumbing hazards; cross-connections, plan for control or elimination. F. F. Aldridge. il Dom Eng 170:102-5+ O '47
Plumbing prefab; mechanical core for homes. plans Dom Eng 168:103 N '46
Simplified pipe layout. diags Dom Eng 169: 124-5 Ja; 118-19+ F '47
See also
Drinking water systems
Gas fitting
Heating
Hot water supply
Lavatories
Pipes
Plumbing fixtures
Plumbing shops
Plumbing trade
Sanitary engineering
Sewerage
Solder and soldering

Drawing
Industrial job in isometric. il plans Dom Eng 169:108-9 F '47

Estimates
How to estimate water demands and pipe sizes for housing units. R. B. Hunter. diags Pub Works 78:22-4 Ap '47
Plumbing estimates and how to make them. W. W. Hughes. Dom Eng 169:116+ Ap; 170: 120+ Jl; 121-3 Ag; 125-6 S; 122-4 O; 122-4 N '47 (to be cont)

Ventilation
Vent identification for bath tubs. diags Dom Eng 170:128+ O '47

PLUMBING fixtures
Aluminum electropolishing plant; manufacture of plumbing fixtures. F. A. Herr. il Metal Finishing 45:63-4 Ag '47
Crane deal off; U.A. antitrusters object to acquisition of Alliance ware, inc. Bsns W p26+ Ap 5 '47
Crane moves in; will make and market light stamped-steel plumbing fixtures. Bsns W p18 F 1 '47
New brass foundry makes plumbing fixtures; Hays mfg. co. W. Rudolph. il Foundry 75: 128 Ja 20 '47
Plumbing hazards; cross-connections, plan for control or elimination. F. F. Aldridge. il Dom Eng 170:102-5+ O '47
Supply vs. requirements, 1946 data and 1947 estimates; graphs. Dom Comm 34:73 D '46
See also
Bathroom fixtures

PLUMBING laws and regulations
Reader replies to questionnaire will help write new uniform plumbing code. Dom Eng 168: 98-9 N; 110-11 D '46

PLUMBING shops
Corners sales on the corner; Lehigh plumbing and heating co. il plans Dom Eng 170:112-14 Ag '47
Design for selling; J. A. Albert's new, streamlined plumbing shop. il Dom Eng 168:106-9+ D '46
For each person in this town, 18½ sq. ft. of floor space; shop of Stewart and Neilson. il Dom Eng 169:100-4 Mr '47
He paints a merchandising picture; shop of H. H. Goodwin. il Dom Eng 169:118-19+ Ap '47
How would you do it? principles of product arrangements suitable for plumbing and heating stores. plan Dom Eng 170:100-1 O '47
It doesn't have to be big; shop of B. W. Christian. il Dom Eng 169:104-5+ F '47
Memorial to merchandiser; plumbing shop of H. H. Smart. il Dom Eng 169:112-16+ My '47
Rural market fed-up with handyman jobs says Oklahoma dealer, J. R. Bradley. il Dom Eng 169:117 Ap '47
Showroom and shop designed for sales; Sievert brothers. il plans Dom Eng 169:90-5 Ja '47
Two-way design for modern service; Erickson Plumbing and Lind Heating, Chicago. il plan Dom Eng 168:104-6+ N '46

Heating and ventilation
Split system heating for showroom and shop. il Dom Eng 168:122 N '46

Management
Friendly callbacks win appliance sales; shop of D. J. Dick. il Dom Eng 169:125+ Ap '47
How one dealer spots the profits in merchandising; Jeffcoat plumbing & heating co. il Dom Eng 170:114-15+ O '47
Know how of selling kitchens; Macnsons, San Mateo, Calif. il Dom Eng 168:100-1+ N '46
Some ideas for selling in-the-home; Crogan plumbing and heating company. Dom Eng 169:99+ Ja '47

Showrooms
Alabama showroom; Eskew plumbing and heating company. il Dom Eng 168:107 N '46
Modern showroom means more sales; Morrill brothers. il Dom Eng 169:118-20+ Mr '47
Showroom at both ends; James A. Donaghey's plumbing and heating firm. il Dom Eng 170:116-17+ Jl '47

PLUMBING supplies industry
Central supply association spring meeting, Chicago. May 15-16. Dom Eng 169:132+ Je '47
Co-op effort meets outside offensives; Plumbers merchandising corporation of the District of Columbia. il Dom Eng 169:100-3 Ja '47
Crane deal off; antitrusters object to acquisition of Alliance ware, inc. Bsns W p26+ Ap 5 '47
Crane moves in; will make and market light stamped-steel plumbing fixtures. Bsns W p18 F 1 '47
Plumbers acquitted. Bsns W p16 Ap 5 '47

Advertising
Here's one plan that's already working; cooperative advertising program; Plumbing appliance dealers' assn. il Dom Eng 169: 97-8 Ja '47

PLUMBING trade
Analysis of our industry at year's end. Dom Eng 168:98-101 D '46
Building a future with residential jobs; Debelak brothers. il plans diags Dom Eng 169:100-5+ Ap '47
Dress up your letterhead. il Dom Eng 169: 106-7 Ja; 105 Mr; 110-11, 122 Ap; 108-9 Je; 170:110-11, 122-3 Jl '47

PLUMBING trade—*Continued*
Four-star plan for bigger sales; Western-Beverly plumbing and heating company. il Dom Eng 170:114-15+ Jl '47
From now on we sell the whole thing; Bell plumbing and heating of Denver now going to sell new appliance lines. il Dom Eng 170:120-1+ S '47
Installation know-how is aid to commercial water heating equipment sales. il diags Dom Eng 169:110-11+ Mr '47
Judge Wilken terminates Cleveland case, all defendants acquitted; text of opinion. Dom Eng 169:1-4, 134 Ap '47
Legal decisions of interest to contractor-dealers. Dom Eng 169:128+ F; 126+ Ap; 170:116+ S; 109+ O '47 (to be cont)
One town tells the world, today's best buy is plumbing and heating; merchandizing by plumbing and heating contractor-dealers of San Diego. il Dom Eng 170:100-3 S '47
Opportunities in the commercial market. il Dom Eng 169:98-9+ Mr '47
Price program in action. il Dom Eng 169:96-103+ Je; 170:98-109+ Jl; 96-102+ Ag '47
Sell low per-day costs of plumbing and heating. il Dom Eng 170:97-9 O '47
Today's best buy is plumbing and heating; equipment prices compared with those of other products, wages, etc. il Dom Eng 169:97-111+ My '47

See also
Electric utilities and the plumbing trade
Plumbing laws and regulations
Plumbing shops
Plumbing supplies industry

Advertising
How to set-up your advertising program. Dom Eng 169:96-7+ Ja '47

Farm market
Big rural market; how it can be sold. il Dom Eng 169:98-101+ F '47
Rural market fed-up with handyman jobs says Oklahoma dealer. J. R. Bradley. il Dom Eng 169:117 Ap '47
Sales points for water systems. il Dom Eng 169:110-11+ Ja '47
Water conditioning and the big rural market. Dom Eng 169:108+ Ap '47
Water systems, key to multi-million market. Dom Eng 169:126-8+ Mr '47

Remodeling
Biggest remodeling job; Kaiser-Frazer plant at Willow Run. il Dom Eng 169:116-23 Je '47
Practical tips on kitchen layout. il plans Dom Eng 168:102-5+ D '46
Selling the conversion market. Dom Eng 169:106+ Ap '47
She'll buy this dream; new kitchen design will increase sales appeal of remodeling job. il Dom Eng 170:100-8+ O '47

Kansas City
Inquiring reporter visits Kansas City. il Dom Eng 170:122-4 S '47

Memphis
Inquiring reporter visits Memphis. il Dom Eng 170:108-9+ Ag '47

Oklahoma City
Inquiring reporter visits Oklahoma City. il Dom Eng 170:126-8+ Jl '47

Portland, Oregon
Reporter visits Portland. il Dom Eng 170:116-19 O '47

PLUMMER, Frederick Byron, 1886-1947
Sketch. E. DeGolyer. por Am Assn Pet Geologists Bul 31:1698-700 S '47

PLUTONIUM
Calorimetric determination of the energy produced by plutonium (239). J. W. Stout and W. M. Jones. bibliog diag Phys R 71:582-5 My 1 '47
Chemistry of plutonium. B. G. Harvey and others. diag Chem Soc J p 1010-21 Ag '47
Concentration of plutonium in pitchblende. M. I. Corvalen. Phys R 71:132 Ja 15 '47
Cyclotron in atomic energy developments. I. Perlman. Chem & Eng N 24:3032-5 N 25 '46
Delayed neutrons from Pu^{239}. F. de Hoffmann and B. T. Feld. bibliog diag Phys R 72:567-9 O 1 '47
Delayed neutrons from Pu^{239}. R. R. Wilson. Phys R 71:560 Ap 15 '47
Delayed neutrons in plutonium and uranium fission. W. C. Redman and D. Saxon. bibliog diag Phys R 72:570-5 O 1 '47
Long range alpha-particles emitted in connection with fission; preliminary report. G. Farwell and others. diag Phys R 71:327-30 Mr 15 '47; Correction. 71:639 My 1 '47
New high-energy pile uses plutonium fuel. Power 91:725+ O '47
Nuclei formed in fission; decay characteristics, fission yields, and chain relationships; issued by the Plutonium project. bibliog Am Chem Soc J 68:2411-42 N '46; Same. Rs Mod Phys 18:513-44 O '46
Petroleum vs. plutonium. C. Goodman. diags Am Pet Inst Proc 25(1):71-83 '45; Same. Pet Refiner 24:101-9 N '45; Same. Oil & Gas J 44:227-8+ N 17 '45; Same. Pet Eng 18:224+ S '47
Plutonium and other transuranium elements. G. T. Seaborg. il Chem & Eng N 25:358-60+ F 10 '47
Range measurements of alpha-particles from 94^{239} and 94^{238}. O. Chamberlain and others. Phys R 71:529-30 Ap 15 '47
Theoretical physics in the metallurgical laboratory of Chicago. E. P. Wigner. bibliog J Ap Phys 17:357-63 N '46

PLUTONIUM poisoning
Treatment of plutonium poisoning by metal displacement. J. Schubert. Science 105:389-90 Ap 11 '47; Abstract. Chem Eng 54:264+ Ap '47

PLYMETAL
Wood-metal laminates. Sci Am 176:136 Mr '47
Wood-to-metal adhesives. T. D. Perry. bibliog il diags Mech Eng 68:1035-40 D '46

PLYMOUTH rubber company
Growth in plastics boosts sales. Barron's 27:35 N 3 '47

PLYWOOD
Adhesives used in plywood. Mod Plastics 24:96 Ja '47
Advanced plywood techniques in new Weldwood building for United States plywood corporation in New York city. il Am Bld 68:136 D '46
Chemical consuming industries; Pacific progress references. Chem Eng 54:108 S '47
Coefficients of thermal expansion of wood and wood products. R. C. Weatherwax and A. J. Stamm. bibliog il diags A S M E Trans 69:421-32 My '47
Composite materials; metal-covered plywood. il diags Steel 120:76-9+ Je 9 '47
Control of marine borers in plywood. A. P. Richards and W. F. Clapp. il A S M E Trans 69:519-24 Jl '47
Design of plywood I-beams. H. J. Hansen. bibliog Am Soc C E Proc 72:749-58 Je '46; Discussion. 72:1300-2; 73:85-8, 703-4 N '46, Ja, My '47
Designed for smart dining; functional planning with plywood produces restaurant of distinction. il plan diags Am Bld 68:72-3 N '46
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. Kline and others. bibliog J Res Nat Bur Stand 37:281-310 N '46
Extending phenolic resin plywood glues with proteinaceous materials; corn gluten, soybean meal, linseed meal. G. E. Babcock and A. K. Smith. Ind & Eng Chem 39:85-8 Ja '47
Low-density rotor blades; densified, laminated hardwood spars and spruce plywood aft covers. G. P. Martin. il Aero Digest 53:91+ N '46
Molded furniture; phenolic resin-bonded birch or maple veneers are molded. il Mod Plastics 24:188-9 Ap '47
Molded plywood makes this desk. il Mod Plastics 24:103 F '47
Outlook for U.S. Plywood and Atlas Plywood. R. Carleson. il Mag of Wall St 80:99-101 Ap 26 '47
Plywood can give new interior effects. il Mod Plastics 24:122-3 D '46

PLYWOOD—*Continued*
Plywood in boat construction. F. W. Hagerty. bibliog il Mech Eng 69:213-17 Mr '47
Plywood makers have long-range plans. Concrete 55:42 Ag '47
Plywood makes remarkable progress in twenty years. A. D. McKellar. il Dom Comm 35:54-9 Ag '47
Portable welder that cures resin adhesives. il Mod Plastics 24:206-8+ My '47
Propellers from laminated wood billets; phenolic resin-coated wood veneers. il Mod Plastics 24:132-3 Ap '47
1200 plywood houses demonstrate to Chicago the advantages of site fabrication. il plans diags Arch Forum 86:120-3 Ap '47
War on gray market. Bsns W p18 Ap 19 '47
Welchboard available soon. il Am Bld 69: 148+ My '47
What does plywood owe to plastics? A. J. Norton. il Mod Plastics 24:89-94 N '46
What plastics mean to plywood. C. A. Breskin. il Sci Am 176:113-15 Mr '47

Manufacture

Labor requirements in softwood plywood production. R. V. Murray. Mo Labor R 64:67-73 Ja '47

Testing

Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. Kline and others. bibliog J Res Nat Bur Stand 37: 281-310 N '46; Same. Mod Plastics 24:123-8+ Jl '47
Fatigue of wood and glued wood constructions; abstract. W. C. Lewis. Product Eng 17:139 D '46
Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:671-85 My '47

PLYWOOD, inc.
Common stock offered. Comm & Fin Chr 166: 763 Ag 25 '47
Debentures offered. Comm & Fin Chr 166:858 S 1 '47

PNEUMATIC control
Air-hydraulic system utilized in press. diag Machine Design 19:92 Ja '47
Air pressure speeds automatic welding. il diags Steel 120:97+ F 3 '47
Air scanning simplifies irregular contour work. il diag Steel 120:114 My 19 '47
Automatic decking plant at Bold pit. il diag Engineer 184:320-2 O 3 '47
Colonial air operated eccentric fixture simplifies broaching. il Iron Age 159:52 Mr 27 '47
Design of instrument air supply system for the process industry. W. C. Ludi. flow diag diags Pet Processing 1:225-7 N '46
Designing for pneumatics. J. L. Dooley. il diags Machine Design 19:130-5 Jl '47
Dial feeds synchronized by air. J. F. Budnick. diags Am Mach 91:101-3 N 6 '47
Grinder-polisher centers belt pneumatically. il diag Machine Design 19:111-12 O '47
Improving glass feeder operation through electronic pneumatic control. J. R. Green and E. A. Murphy. il Glass Ind 28:81+ F '47
Keeping paper stock consistent; Brammer control equipment. il plan diag Comp Air Mag 52:174-5 Jl '47
Kent air operated automatic controller. il diag Engineer 184:171-3 Ag 22 '47
Loading industrial machinery pneumatically. il diag Comp Air Mag 52:124-5 My '47
Minneapolis-Honeywell Diesel engine temperature control. diags Ry Mech Eng 121: 267-8 My '47
Modern air operated devices for paper machines. F. R. Erbach. Paper Tr J 124:90+ My 29 '47
New jet bomber employs high-pressure pneumatics; XB-46. il Machine Design 19:133 Ag '47
Nine-speed drilling rig air-operated. J. P. Van Vorst. il Pet Eng 18:184+ N '46
Pneumatic control speeds hydraulic press response. P. T. Delmer. il diag Machine Design 19:107-8 O '47
Pneumatic system indexes machine; automatic drilling and countersinking machine. K. H. Pond. Machine Design 19:109-10 Ap '47
Pneumatic units for aircraft. W. L. Nye. il diags Aero Digest 54:78-80 My '47
Ratio flow and metered control in chemical processing. D. M. Considine and S. D. Ross. il diags Chem Eng Prog 43:497-504; Discussion. 504 S '47
Smooth load action for power shovels; air-operated disk-type clutch. diags Steel 120:83 Mr 31 '47
Uses of compressed air in TVA hydroelectric plants. H. J. Petersen. il diag Comp Air Mag 52:13-15 Ja '47

PNEUMATIC conveying
Floating pneumatic grain-handling plant. il diags Engineering 163:210-14, 216 Mr 21 '47
Pneumatic grain conveying on the farm. A. E. Canham. Mech Handling 34:480-2 S '47
Three systems for handling and storing metal chips; aluminum-chip handling system. S. Reibel. flow diag il A S M E Trans 69:413-16 My '47; Same. Mech Handling 34:528-34 O '47

PNEUMATIC gages. See Gages, Pneumatic

PNEUMATIC hammers
Ceco-Drop gravity drop hammer features pneumatic ram lift. il Iron Age 159:47 F 20 '47; Am Mach 91:169 Mr 13 '47; Mach 53:183 Mr '47; Ry Mech Eng 121:205-6 Ap '47
Erie foundry pneumatic hammers have guides twice stroke length. il Am Mach 91:140 Ja 30 '47

PNEUMATIC heat detectors. See Detectors

PNEUMATIC machinery
Air-bored holes obviate trenching; Hydrauger. il Comp Air Mag 52:156 Je '47
Air breaker supplements Mansfield strip facilities. H. Wilber. il Coal Age 52:109-11 Ap '47
Air cylinders; how to cushion their action and control their speed. A. F. Gagne, jr. diags Machine Design 19:118-20 Ja '47
Air-operated winches for motor vessels. diags Engineering 162:583-5 D 20 '46
Air presses lighten the job; Arrow, Hart & Hegeman mfg. co. T. W. Shenton. diags Am Mach 91:95 Ag 28 '47
Automatic pneumatic indexing drilling jig. il diags Engineering 162:440-1 N 8 '46
Don't strangle pneumatic devices. J. Mayo. diags Am Mach 91:106-7 Ja 30 '47
Drifters sink Hecla shaft from pneumatic jumbo. J. B. Huttl. il diags Eng & Min J 148:96-7 Ap '47
Easing the way for the shaft sinker. R. G. MacFarland. il diag Comp Air Mag 52:149-51 Je '47
Electro-pneumatic loom is developed in Brazil. H. E. Reed. il diags Textile World 96: 129+ My '46; Abstract. Comp Air Mag 51: 334-5 D '46
Fabricating by compressed air; shaping and joining stainless steel products; Solar aircraft co. il Sheet Metal Worker 38:49-50+ Ag '47
Handling concrete blocks in yard by air hoist. il Comp Air Mag 52:202 Ag '47
Office machine production simplified by compressed-air operated devices; Kirk brevitype corp. il Steel 121:110+ Jl 21 '47
Planning and installing an efficient compressed-air system. il Mach 53:148-52 Ag '47
Pneumatic balance and transmitter. il diags Engineer 184:273-5 S 19 '47
Pneumatic fatigue testing; machine for testing turbosupercharger and gas turbine buckets. F. B. Quinlan. il diags Automotive & Aviation Ind 96:30-1+ Ja 15 '47
Pressure die-casting machines for general use. il Comp Air Mag 52:18 Ja '47
Tuned air columns in pneumatic circuits simplify design of fatigue testing machines. diags Machine Design 18:106 N '46
Tuned air columns induce resonance for fatigue testing. il diags Product Eng 18: 98-9 F '47

See also
Air compressors
Compressed air

Manufacture

Air and hydraulic cylinder parts constructed of solid steel blocks. il Steel 121:129+ O 6 '47

PNEUMATIC tools
Air tools speed manufacture of automobile bodies. il Steel 121:89-90+ Ag 18 '47
Compressed air power provides close tolerances for reel production; Langley corp. il Steel 120:83 Je 30 '47
Compressed-air systems need close attention. diags Textile World 97:116-17+ O '47
Concrete surgery at Grand Coulee; cutting generator foundations with compressed air. S. E. Hutton. il Comp Air Mag 51:331-3 D '46
Consolidated pneumatic tool co.'s coal drilling equipment. il Electrician 138:1247-8 My 9 '47
Harnessed air. il Steel 121:94-8+ N 3 '47
How to cut the cost of air operated tools. R. C. Manning. il Iron Age 160:60-2 S 25 '47
Power-driven vibrating tools; health hazards. il Safety Eng 94:19+ S '47
Report of A.G.A. subcommittee on compressor tools. il diags Am Gas Assn Proc 1946: 348-79
Use of compressed air tools in clinker removal from water gas generators. K. H. Wolf. Am Gas J 166:25+ Mr '47

Advertising
Logotype goes to work; Independent Pneumatic employs a standard logotype in all company operations. J. F. Corkery. il Ind Marketing 31:53+ D '46

PNEUMATIC tools, Portable
Pneumatic tools, their selection and use. il Mach 53:129-35+ Jl '47

PNEUMATIC transmission
Designing for pneumatics. J. L. Dooley. il diags Machine Design 19:115-20 Ap; 117-22 My; 122-7 Je; 130-5 Jl '47
Designing pneumatic and electric servos. H. Ziebolz. il diags Machine Design 19:132-8 S '47
Harnessed air power; by-product of internal combustion engine control. E. C. Horton. Automotive & Aviation Ind 95:43 D 1 '46

PNEUMOCOCCI
Effects of whole-wheat and white bread diets on susceptibility of mice to pneumococcal infection. G. H. Hitchings and E. A. Falco. Science 104:568-9 D 13 '46

PNEUMOCONIOSIS. See Lungs—Dust diseases

PNEUMONIA
Effect of portland cement dust on the lungs with special reference to susceptibility to lobar pneumonia. A. M. Baetjer. bibliog J Ind Hygiene 29:250-8 Jl '47
Nitric acid fume pneumonia. P. Treiger and C. Przypyszny. il Ind Med 16:395-7 Ag '47
Study of pneumonia in shipyard workers, with special reference to welders. M. F. Collen. bibliog J Ind Hygiene 29:113-22 Mr '47

PODOLSKY, Boris, 1896-
Self-energy and interaction energy in Podolsky's generalized electrodynamics. A. E. S. Green. bibliog Phys R 72:628-31 O 1 '47

PODOPHYLLIN
Cytological effects of podophyllin. B. J. Sullivan and H. I. Wechsler. Science 105:433 Ap 25 '47

POINT-of-sale advertising. See Advertising, Point-of-sale

POISON ivy
Allergenic principles of poison ivy; note on the synthesis of 3-substituted catechols. H. S. Mason. bibliog Am Chem Soc J 69:2241-2 S '47
Ivy poisoning. G. A. Hill. J Chem Educ 24: 255-6 My '47
Sunburn, poison ivy, and seasickness. il Fortune 36:110-15+ Ag '47

POISONOUS plants
Larkspurs, delphiniums, and chemistry. R. C. Kuder. bibliog(48 ref) il J Chem Educ 24:418-22 S '47
Poisonous plants. L. K. Richey. il Am Gas Assn Mo 28:534 D '46

POISONS
Cautionary note regarding some chemicals used for transition indication in wind tunnels. R. C. Pankhurst. bibliog Roy Aeronautical Soc J 51:651-2 Jl '47
Economic poisons import rules being promulgated by USDA. Oil Paint & Drug Rep 152: 3+ O 13 '47
Investigations on the influence of chemical constitution upon toxicity; compounds related to doryl. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 176-82 F '47
Investigations on the influence of chemical constitution upon toxicity; compounds related to miotine. R. E. Davies and others. Chem Soc J p 191-6 F '47
Investigations on the influence of chemical constitution upon toxicity; compounds related to prostigmine. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 182-91 F '47
Packaging of poisons, Finland. For Comm W 28:27 S 6 '47
Phenol (carbolic acid); hazards and precautions; first aid; data sheet. Nat Safety N 56:40+ S '47
Toxic fluorophosphonates and related compounds; abstract. B. C. Saunders. Chem & Ind p117 F 22-Mr 8 '47
Toxicity of sodium chromate. Am Pet Inst Proc 26(5):36 '46
Toxicity study of thiamine hydrochloride. T. J. Haley and A. M. Flesher. bibliog Science 104:567-8 D 13 '46
Use of DDT insecticides; hazards and precautions. Nat Safety N 56:39-40+ Ag '47

See also
Arsenic
Carbon monoxide poisoning
DDT—Physiological effect
Dichlorophenoxyacetic acid—Physiological effect
Fish poisons
Food poisoning
Gases, Asphyxiating and poisonous
Hydrocyanic acid
Insecticides
Lead arsenates
Lead poisoning
Methanol poisoning
Plutonium poisoning
Poisonous plants
Radioactivity—Physiological effect
Snakes
Toxins and antitoxins

POISONS, Industrial
Alkali inspector sums up. W. A. Damon. Chem Age (Lond) 57:217-18, 257-8 Ag 16-23 '47
Case of fatal poisoning from 2-methoxyethanol. E. G. Young and L. B. Woolner. bibliog J Ind Hygiene 28:267-8 N '46
Handling corrosive and toxic materials; Dow chemical co. F. C. Amstutz. il Safety Eng 93:16-17+ My; 42-3+ Je '47
Health problems in laundry industry. H. F. Wilson. Safety Eng 94:80-1 O '47
Industrial toxicology; abstracts. Published in bi-monthly numbers of Journal of industrial hygiene and toxicology
Inhalation toxicity of ketene and of ketene dimer. H. A. Wooster and others. J Ind Hygiene 29:56-7 Ja '47
Methods used in determining the health hazards arising from the inhalation of various chemicals. F. F. Heyroth. Heating-Piping 19:109-12 Ja '47; Abstract. Heat & Ven 44:105 F '47; Discussion. Heating-Piping 19:113-16 Ap '47
Observations on the effects of diphenyl, *o*- and *p*-aminodiphenyl, *o*- and *p*-nitrodiphenyl and dihydroxyoctachlorodiphenyl upon experimental animals. W. B. Deichmann and others. bibliog il diag J Ind Hygiene 29:1-13 Ja '47
Protection against industrial poisons. H. C. Stephenson. Chem Age (Lond) 55:701-2 D 7 '46
Read all labels! Safety Eng 92:31 D '46
Relatively nontoxic termed misleading in classifying organic solvents. Safety Eng 93:64 F '47
Some chemical hazards in the electrical industry; abstract. C. P. Fagan. Engineer 184:111 Ag 1 '47
Toxicity of chemicals in electroplating. P. M. Van Arsdell. bibliog(79 ref) il Metal Finishing 45:55-60+ Ag; 79-83 S; 75-81 O '47
Toxicology of the newer metals; abstract. L. T. Fairhall. J Ind Hygiene 29:sup93 S '47
Treatment works for plating wastes containing toxic metals and cyanides. G. E. Barnes. flow sheet il plan diag Water & Sewage Works 94:267-71 Ag '47

POISONS, Industrial—*Continued*
Workers diet cited as industrial illness preventive. Safety Eng 93:62 F '47

See also
Benzene poisoning
Cadmium poisoning
Carbon tetrachloride poisoning
Copper—Physiological effect
Cyanide poisoning
Lead poisoning
Methyl chloride poisoning
Nitroparaffins—Physiological effect
Selenium poisoning
Tetrachloroethane
Uranium poisoning

POISSON distribution. See Frequency distribution

POISSON'S ratio
X-ray method of measuring Poisson's ratio. R. F. Hanstock and E. H. Lloyd. il diags Engineering 163:68-70 Ja 17 '47

POLAND
Poland's new territories. Economist 152:285-6 F 15 '47

See also
Colleges and universities—Poland

Boundaries
1157, and all that. Economist 152:662-3 My 3 '47

Commerce
Poland's foreign trade. Economist 152:944 Je 14 '47

Commercial policy
Agencies to be formed to implement trade agreement between Czechoslovakia and Poland. For Comm W 29:13 N 1 '47
Documentation of sea and air shipments. For Comm W 28:25 Jl 19 '47
Procedure governing imports and exports. For Comm W 28:20 S 27 '47

Economic conditions
Le bilan économique de la Pologne. C. de Kownacki. Chimie & Ind 57:497-8 My '47

Industries and resources
Poland marks progress of its three-year plan. Bsns W p100 Ja 11 '47

Politics and government
Polish elections. Economist 152:148-9 Ja 25 '47

POLANRET microscope. See Microscope and microscopy

POLARISCOPE
Fluid polariscope aids in hydraulic studies. J. H. Dawson. il Civil Eng 17:268-9 My '47; Discussion. F. B. Farquharson. 17: 401-2 Jl '47

Stress analysis by polarised light; David Brown and sons polariscope. il diags Engineer 183:454-5 My 23 '47; Automobile Eng 37:231-2 Je '47; Steel 121:84+ S 8 '47

POLARIZATION (light)
Brightness and polarization of the daylight sky at various altitudes above sea level. R. Tousey and E. O. Hulburt. Opt Soc Am J 37:78-92 F '47

Focal plane diffraction anomalies in telescopic systems. A. I. Mahan. bibliog il diag Opt Soc Am J 37:852-67 O '47

Improved infra-red polarizer. A. H. Pfund. bibliog diag Opt Soc Am J 37:558-9 Jl '47

Light control by polarization and the application of polarizers to the stereoscopic process. J. A. Norling. il diags Soc Motion Picture Eng J 48:129-44 F '47

Polanret microscope. H. Osterberg. bibliog diags Opt Soc Am J 37:726-30 S '47

Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašiček. Opt Soc Am J 37:145-53 Mr '47

Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37:798-803 O '47

Stiles and Crawford effect in polarized light. B. O'Brien. diag Opt Soc Am J 37:275-8 Ap '47

Tunable narrow-band optical filter. B. H. Billings. il diags Opt Soc Am J 37:738-46 O '47

See also
Photoelasticity
Polariscope

POLARIZATION, Electrolytic
Significance of polarization in electroplating. H. Bandes. bibliog diags Metal Finishing 44:516-21 D '46

POLARIZATION of Raman lines. See Raman effect

POLARIZATION of rays
Antennas for circularly polarized waves. il diag Electronics 19:214 D '46
Calculation of field strengths over a spherical earth. C. Domb and M. H. L. Pryce. diags Inst E E J 94 pt 3:325-36; Discussion. 337-9 S '47
Circularly-polarized omnidirectional antenna for airport-to-airplane communication. G. H. Brown and O. M. Woodward, jr. il diags RCA R 8:259-69 Je '47
Experimental spaced-loop direction-finder for very high frequencies. F. Horner. diags Inst E E J 94 pt 3:126-33; Discussion. 133-40 Mr '47
Some experiments on conducting screens for a U-type spaced-aerial radio direction-finder in the frequency range 600-1200mc/s. R. R. Pearce. diag Inst E E J 94 pt 3:115-17; Discussion. 133-40 Mr '47
Use of earth mats to reduce polarisation error of U-type Adcock direction-finders. R. L. Smith-Rose and W. Ross. diag Inst E E J 94 pt 3:91-8 Mr '47; Abstract. Electrician 137:1213 N 1 '46; Discussion. Inst E E J 94 pt 3:133-40 Mr '47

POLAROGRAPH
Improvement in polarographic instrumentation. G. E. Philbrook and H. M. Grubb. il diags Anal Chem 19:7-10 Ja '47
New polarograph. J. H. Schulman and others. il diags R Sci Instr 18:226-31 Ap '47
Operating characteristics of the Sargent model XX visible recording polarograph. J. J. Lingane. bibliog il Ind & Eng Chem Anal ed 18:734-8 D '46

POLAROGRAPHIC analysis
Amperometric determination of dissolved oxygen in orange juice. V. M. Lewis and H. A. McKenzie. bibliog Anal Chem 19: 643-6 S '47
Application of the cathode ray oscillograph to polarography; abstract. J. E. B. Randles. Chem & Ind p91 F 8 '47
Device for estimating the height of polarographic waves. J. K. Taylor. bibliog diag Anal Chem 19:478-80 Jl '47
Estimation of aloe-emodin and the aloins in Curaçao aloes. K. G. Stone and N. H. Furman. bibliog Anal Chem 19:105-7 F '47
Estimation of sulphur trioxide in its mixtures with sulphur dioxide by the method of amperometric titration. D. W. E. Axford and T. M. Sugden. diag Chem Soc J p901-3 O '46
Examination of absolute and comparative methods of polarographic analysis. J. K. Taylor. bibliog Anal Chem 19:368-72 Je '47
Flavanones and related compounds; reduction of some naturally-occurring flavones at the dropping mercury electrode. D. W. Engelkemeir and others. bibliog Am Chem Soc J 69:155-9 Ja '47
M-dinitrobenzene in blood; abstract. J. Roubal and others. J Ind Hygiene 29:sup98-9 S '47
Operating characteristics of the Sargent model XX visible recording polarograph. J. J. Lingane. bibliog il Ind & Eng Chem Anal ed 18:734-8 D '46
Polarographic analysis of mixtures of maleic and fumaric acids. B. Warshowsky, P. J. Elving and J. Mandel. bibliog Anal Chem 19: 161-4 Mr '47
Polarographic analysis of nitrite and of nitrite-nitrate mixtures. B. Keilin and J. W. Otvos. bibliog Am Chem Soc J 68: 2665-8 D '46
Polarographic characteristics of chloro complexes of +5 antimony. J. J. Lingane and F. Nishida. bibliog Am Chem Soc J 69:530-3 Mr '47

POLAROGRAPHIC analysis—*Continued*
Polarographic determination of cupric glycinate and cupric alaninate complex ions. R. M. Keefer. bibliog Am Chem Soc J 68: 2329-31 N '46
Polarographic determination of sodium and lithium in natural waters; abstract. A. A. Reznikov and A. S. S. Smagina. Am Water Works Assn J 39:595-6 Je '47
Polarographic determination of sodium or potassium in various materials. J. R. Weaver and L. Lykken. bibliog diag Anal Chem 19:372-6 Je '47
Polarographic determination of tin in foods and biological materials. E. M. Godar and O. R. Alexander. bibliog diag Ind & Eng Chem Anal ed 18:681-4 N '46
Polarographic determination of vanadium in steel and other ferroalloys. J. J. Lingane and L. Meites, jr. bibliog Anal Chem 19:159-61 Mr '47
Polarographic investigation of oxalate, citrate and tartrate complexes of ferric and ferrous iron. J. J. Lingane. bibliog Am Chem Soc J 68:2448-53 D '46
Polarography of uranium; polarography in very weakly acid, neutral or basic solution. W. E. Harris and I. M. Kolthoff. bibliog Am Chem Soc J 69:446-51 F '47
Rapid dissolved oxygen test for fresh citrus juices. J. R. Lindquist. bibliog il diag Food Ind 19:182-3+ F '47
Rapid polarographic; Polaro-Analyzer. il Chem & Eng N 25:3170 O 27 '47
Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47
Simple derivation of the limiting current with the dropping mercury electrode by dimensional analysis. O. Kanner. Electrochem Soc Trans 91 (preprint 10):157-9 '47
Simultaneous determination of lead and zinc in atmospheric samples; a polarographic method utilizing a double internal standard. A. S. Landry. bibliog J Ind Hygiene 29:168-74 My '47
Some experiences with polarographic methods in controlling a lead hazard in brass foundries. H. J. Weber. il J Ind Hygiene 29: 158-67 My '47
Unitized mercury cathode apparatus for electrolytic removal of metals. H. O. Johnson, J. R. Weaver and L. Lykken. bibliog il diags Anal Chem 19:481-3 Jl '47

POLAROGRAPHY
Polarographic behavior of some organic compounds. K. G. Stone. Am Chem Soc J 69: 1832-3 Jl '47
Polarographic characteristics of vanadium in oxalate solutions. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 69:1021-5 My '47
Polarographic oxidation of +4 vanadium. J. J. Lingane and L. Meites, jr. Am Chem Soc J 69:1882-6 Ag '47
Polarographic studies on extracted chlorophylls. P. Van Rysselberghe and others. bibliog Am Chem Soc J 69:809-14 Ap '47
Polarographic study of sodium polyphosphates. J. A. Campbell. bibliog Am Chem Soc J 69:109-10 Ja '47
Polarographic study of the restriction of the tautomerism of amidines by hydrogen bonding. M. E. Runner, M. L. Kilpatrick and E. C. Wagner. bibliog Am Chem Soc J 69: 1406-10 Je '47
Polarography in oxygen-free solutions; abstract. C. Hahn. diags Chem Eng 54:274 Je '47
Polarography of uranium; polarography in very weakly acid, neutral or basic solution. W. E. Harris and I. M. Kolthoff. bibliog Am Chem Soc J 69:446-51 F '47
Reduction of unsaturated hydrocarbons at the dropping mercury electrode; mechanism of the dimerizing addition of sodium to olefins. S. Wawzonek and J. W. Fan. bibliog Am Chem Soc J 68:2541-4 D '46

POLAROID corporation
Photographic companies in new era. S. Devlin. Mag of Wall St 79:758 Mr 29 '47

POLE setting
How to set an 80-ft. pole by aid of an ordinary truck derrick. il Elec World 127:134 My 24 '47

POLES
See also
Electric lines—Poles and towers

POLES, Concrete
Concrete poles. il Elec R (Lond) 139:753 N 8 '46
Making concrete poles; new method for reducing cost and weight. P. F. Clark. il Electrician 138:1683 Je 20 '47
Power-line poles of reinforced concrete. il diag Elec R (Lond) 141:340 Ag 29 '47
Reinforced concrete poles. N. F. Marsh. il Elec R (Lond) 141:559-60 O 10 '47

POLICE, Private
See also
Railroads—Police

POLIOMYELITIS. See Infantile paralysis

POLISHING
Buffability of nickel deposits; abstract. R. D. Miller and A. H. De Rose. il Iron Age 160:81-2 S 25 '47
Buffing and polishing. J. E. Hyler. il Steel 119:86-7+ D 9; 92-3+ D 16; 62-3+ D 23; 68-9+ D 30 '46; 120:84-5+ Ja 13; 84+ Ja 20 '47
Carbide-ball burnishing cuts bore-finishing cost 90%. J. Busch. il diag Am Mach 90:129 D 19 '46
Diamond grit for finishing operations. il Metal Finishing 45:85-6 My '47
Diamond powder increases polishing efficiency. il Iron Age 159:51 Mr 13 '47
Edge rounding avoided with cast iron grit. il Metal Prog 50:659 O '46
Fishtails, and old buffing problem. T. R. Treadwell. il Metal Finishing 45:68-70 S '47
Hints on grinding and polishing. il diags Sheet Metal Worker 38:135-6+ Ja '47
How to polish and buff plastics. il Am Mach 90:106-7 D 5 '46
New layout and under floor duct cut floor area in half; Tri-Clover machine company polishing machine layout. J. S. Kessler. il Factory Management 105:100-1 F '47
Polishing and buffing. H. L. Kellner. il Metal Prog 50:1070-2 N '46
Polishing and grinding goes modern. L. S. Sternal. il diag Metal Finishing 45:51-4 Mr '47
Polishing metallographic specimens with diamond dust. G. C. Woodside and H. H. Blackett. il Metal Prog 51:945-7 Je '47
Polishing of squares, flats and radii. E. S. Phillips. diags Mod Plastics 24:150+ N '46
Polishing technique for metallography. C. P. Kenyon and others. il diags Metal Prog 51:260-4 F '47
Selection and application of mechanical finishes for aluminum. R. E. Pettit. il Steel 120:98-100+ Mr 17 '47
Source of polishing scratches. D. J. Mack. il Metal Prog 52:105-6 Jl '47
See also
Abrasives
Glass—Polishing
Metal finishing
Sand blast

POLISHING, Electrolytic
Aluminum electropolishing plant; manufacture of plumbing fixtures. F. A. Herr. il Metal Finishing 45:63-4 Ag '47
Application of electrolytic polishing to ferrous metallography. H. J. Merchant. bibliog 3pls diags Iron & Steel Inst J 155:179-94 F '47; Discussion. il 156:524-6 Ag '47
Electrodeposition practice; International conference, London. Elec R (Lond) 141:471-2 S 26 '47
Electrolytic polishing; abstract. H. Evans and E. H. Lloyd. Materials & Methods 26:128 O '47
Electrolytic polishing and lapping for mirror finishes. J. Mazia. bibliog il diags Steel 120: 84-7+ My 19 '47
Electrolytic polishing of magnesium. G. Black. Metal Finishing 45:86-7+ Je; 84-6 Jl '47
Electrolytic polishing of metal samples; data sheet. G. E. Pelissier, jr. and others, comps. bibliog. Metal Prog 50:1084 N '46
Electropolishing in postwar finishing. C. L. Faust. il Metal Prog 50:1068-9 N '46

POLISHING, Electrolytic—*Continued*
Electropolishing process for silver. J Chem Educ 23:537 N '46
Electropolishing silver-plated parts in cyanide solutions. D. Gray and S. E. Eaton. il Materials & Methods 26:78-81 Ag '47
Electropolishing silver to reduce finishing costs. D. Gray and S. E. Eaton. il Metal Finishing 45:60-1+ My '47
Electropolishing with fluosulfonic acid. C. B. F. Young and K. R. Hesse. bibliog and patent list il Metal Finishing 45:63-7+ F; 64-7 Mr '47
Improved polishing circuit. J. Horowitz and J. Maltz. diags Metal Prog 51:263-4 F '47
Los Angeles plating plant explosion; perchloric acid being used for electrolytic polishing of aluminum. F. A. Herr. il Metal Finishing 45:72-3+ Mr '47
Metallographic electropolishing. J. L. Waisman. il diags Metal Prog 51:606-10 Ap '47
New method of electrolytic polishing of electron microscope samples. E. Der Mateosian. il diags Iron Age 159:51-3 Ja 16 '47
New process for electropolishing silver. D. Gray and S. E. Eaton. il Iron Age 159:64-5 Ap 10 '47
New silver polishing process. Mech Eng 68: 658 Jl '46; Same cond. Iron Age 157:65 Je 6 '46; Same cond. Chem Ind 59:304+ Ag '46; Same cond. il Sci Am 175:137 S '46; Same cond. Steel 119:110 D 16 '46
Rapid polish for silver plate. D. R. Turner. Metal Prog 51:970 Je '47
Stainless steel electropolishing process. Metal Finishing 45:95 S '47

POLISHING cloths
Cleaning and polishing cloths. M. A. Lesser. bibliog Soap & San Chem 23:129-31+ F '47

POLISHING machines
Grinder-polisher centers belt pneumatically. il diag Machine Design 19:111-12 O '47
Hill Acme units perform flat polishing. il Am Mach 91:149 Ag 14 '47; Mach 53:178 Ag '47
Hochman light duty polishing lathe. il Metal Finishing 45:107-8 Je '47
Porter-Cable abrasive belt utility grinder. il Metal Finishing 45:108-9 Je '47
Using abrasive belts for buffing and polishing. J. E. Hyler. il Steel 120:84-5+ Ja 13; 84+ Ja 20 '47

See also
Polishing wheels

POLISHING materials
Auto-body polishes. J. M. Vallance. Soap & San Chem 23:153 Mr '47
Cleaning and polishing cloths. M. A. Lesser. bibliog Soap & San Chem 23:129-31+ F '47
Electron microscope studies; bright-drying wax dispersions. D. Schoenholz and C. S. Kimball. il Soap & San Chem 23:131+ Ag '47
Metal polishes. M. A. Lesser. bibliog Soap & San Chem 22:147+ D '46
New specialties exploit chemical research; polishes. D. Schoenholz. Chem Ind 61:397-8 S '47
Pigments can improve solvent type waxes. C. S. Glickman. il Chem Ind 61:223+ Ag '47

See also
Furniture polish
Shoe polish
Stove polish

POLISHING wheels
Buffing and polishing. J. E. Hyler. il Steel 119:86-7+ D 9; 92-3+ D 16; 62-3+ D 23 '46
Design of exhaust systems; hood and stand for buffing wheels. F. H. Stebbins. diags Sheet Metal Worker 38:62+ Je '47
Polishing and grinding goes modern. L. S. Sternal. il diag Metal Finishing 45:51-4 Mr '47

Manufacture

Manufacturing abrasive buffing and polishing wheels. J. E. Hyler. il Steel 119:86-7+ D 9; 92-3+ D 16 '46

POLITICAL action committee (C.I.O.). See Congress of industrial organizations—Political action committee

POLITICAL parties

Canada

Parties of protest. G. V. Ferguson. Ann Am Acad 253:32-9 S '47

Danubian countries

Danubian peasant parties. Economist 152:54-5 Ja 11 '47

Great Britain

See also
Labor party (Great Britain)

United States

Analyzes Wallace's following on third party sentiment; Gallup poll. Iron Age 160:107 Jl 10 '47
Truman loses some support but still leads by wide margin; Democrats lead Republicans; Dewey and Stassen popular with Republicans; Gallup poll. Iron Age 160:109+ Jl 24 '47
Women in the political parties. M. J. Fisher. Ann Am Acad 251:87-93 My '47

See also
Communist party (United States)
Democratic party
Republican party

POLITICAL philosophy
Good, evil, and beyond. G. N. Shuster. Ann Am Acad 249:169-76 Ja '47

POLITICAL research
Directory of organizations and individuals professionally engaged in governmental research 1946-1947. 44p pa $1.50 Governmental research assn, 30 Rockefeller Plaza, New York 20 '46

POLITICAL science

See also
Administration, Public
Civil service
Commercial policy
Democracy
Economic policy
Government regulation of industry
Industry and state
Law
Railroads and state
Science and state
State governments
Taxation

Dictionaries

White's political dictionary. W. W. White. 378p $3.50 World publishing co, 2231 W. 110th st, Cleveland 2 '47

POLITZ, Alfred
Wins AMA study award. por Ptr Ink 219:87 Je 13 '47

POLLEN
Reduction in the vital capacity of asthmatic subjects following exposure to aerosolized pollen extracts. F. C. Lowell and I. W. Schiller. Science 105:317 Mr 21 '47

POLLEN, Fossil
Climate versus fire and soil as factors in postglacial forest succession in the Puget lowland of Washington. H. P. Hansen. bibliog map Am J Sci 245:265-86 My '47

POLLINATION. See Fertilization of plants

POLONIUM
Artificial radioactive isotopes of polonium, bismuth and lead. J. J. Howland and others. Phys R 71:552 Ap 15 '47
Excitation-function of the γ-radiation generated by Po-α bombardment of Na. M. Kovács. bibliog diags Phys R 70:895-6 D 1 '46
Formation of radium E and polonium by deuteron bombardment of bismuth. H. E. Tatel and J. M. Cork. Phys R 71:159-64 F 1 '47
Gamma-rays of Po^{210}. S. de Benedetti and E. H. Kerner. bibliog diag Phys R 71:122 Ja 15 '47

POLYAMIDES. See Amides

POLYENES
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S. L. Linden. Am Chem Soc J 69:2042-6 Ag '47
Studies in the polyene series; C_{17} acid and C_{18} ketone related to vitamin A. I. Heilbron, E. R. H. Jones and D. G. O'Sullivan. Chem Soc J p866-9 O '46

POLYESTER resins. See Resinous products

POLYETHYLENE. See Polythene

POLYFORM process. See Gasoline—Manufacture

POLYMERIZATION

Acenaphthylene and its polymerization products. R. G. Flowers and H. F. Miller. bibliog Am Chem Soc J 69:1388-9 Je '47

Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47

Alkylation and polymerization; effect on refinery earnings of the two processes. il Pet Eng 18:116+ N '46

American chemical society meeting, New York, Sept. 15-19; abstracts of papers. India Rubber World 117:76-83 O '47

Analysis and properties of German synthetic polyethylene oils. C. M. Murphy and C. E. Saunders. bibliog Pet Refiner 26:111-16 My '47

Catalytic polymerization process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:120-1 Ap '47

Continuous preparation of butadiene-styrene copolymer. J. J. Owen, C. T. Steele and P. T. Parker. Ind & Eng Chem 39:110-13 Ja '47

Contrast in the dimerization of polychloro- and polyfluoro-ethylene. A. L. Henne and R. P. Ruh. Am Chem Soc J 69:279-81 F '47

Copolymerization; mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce and E. C. Chapin. bibliog Am Chem Soc J 69:581-3 Mr '47

Copolymerization; mechanism of emulsion copolymerization of styrene and itaconic acid. R. G. Fordyce and G. E. Ham. Am Chem Soc J 69:695-6 Mr '47

Copolymerization of vinyl compounds with dienes. T. Alfrey, jr., A. I. Goldberg and W. P. Hohenstein. bibliog Am Chem Soc J 68:2464-7 D '46

Copolymerization; the mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce. Am Chem Soc J 69:1903-4 Ag '47

Copper sulphide-catalysed dimerisation of *iso*butylene. A. Wassermann and W. T. Weller. Chem Soc J p250 F '47

Decomposition of benzoyl peroxide. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-55 Jl '47

Detection of radioactive persulfate fragments in emulsion polymerized styrene. W. V. Smith and H. N. Campbell. J Chem Phys 15:338 My '47

Disproportionated rosin soap in GR-S polymerization. J. T. Hays, A. E. Drake and Y. T. Pratt. bibliog Ind & Eng Chem 39: 1129-32 S '47

Effects of impurities on copolymerization of butadiene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:893-5 Jl '47

Effects of impurities on copolymerization of isoprene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:887-93 Jl '47

Electron deficient molecules; aluminum alkyls. K. S. Pitzer and H. S. Gutowsky. bibliog Am Chem Soc J 68:2204-9 N '46

Electron microscope examination of the microphysical properties of the polymer cuprene. J. H. L. Watson and K. Kaufmann. bibliog il diag J Ap Phys 17:996-1005 D '46

Electron microscope observations of the morphology of several gases polymerized by charged-particle bombardment. J. H. L. Watson. il diag J Phys & Colloid Chem 51: 654-61 My '47

Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47

Examination of heat polymerized oils by ultraviolet light; abstract. M. Pestemer and J. Tschinkel. Paint Oil & Chem R 110:40 Mr 20 '47

Fluorination of perhalogen olefins. W. T. Miller, jr. and others. bibliog diags Ind & Eng Chem 39:401-4 Mr '47

General theory of the mechanism of emulsion polymerization. W. D. Harkins. bibliog diags Am Chem Soc J 69:1428-44, pl 1-2 Je '47

Hot-acid polymerization; Shell development company. flow diag Pet Refiner (Process Handbook sec) 26:164-5 Ap '47

Hydroform and catalytic polymerization. flow diag Oil & Gas J 45:156 Mr 22 '47

Idle isomerization unit converted to produce polymer gasoline. W. R. Newman. flow diags il Pet Refiner 25:91-3 O '46; Same. Pet Processing 1:257+ D '46; Same. Pet Eng 18:156+ F '47

Inhibition and retardation of the peroxide initiated polymerization of styrene. S. G. Cohen. bibliog Am Chem Soc J 69:1057-64 My '47

Inhibition of polymerization; laboratory and plant control of popcorn polymer growth. M. S. Kharasch and others. bibliog il diags Ind & Eng Chem 39:830-7 Jl '47

Large scale distillation of isoprene; emulsion copolymerization of isoprene with styrene. C. F. Fryling. bibliog Ind & Eng Chem 39:882-6 Jl '47

Low-temperature polymerisation of *iso*butene by Friedel-Crafts catalysts. P. H. Plesch, M. Polanyi and H. A. Skinner. diag Chem Soc J p257-63; Discussion. 263-6 F '47

Mechanism of emulsion polymerizations; effect of oxygen on the emulsion polymerization of styrene. I. M. Kolthoff and W. J. Dale. bibliog Am Chem Soc J 69:441-6 F '47

Mechanism of emulsion polymerizations; oxygen as a comonomer in the emulsion polymerization of styrene. F. A. Bovey and I. M. Kolthoff. bibliog diags Am Chem Soc J 69:2143-53 S '47

Molecular size distribution in three dimensional polymers; post-gelatin relationships. P. J. Flory. bibliog Am Chem Soc J 69:30-5 Ja '47

Monomers and polymers; fluorinated styrenes. G. B. Bachman and L. L. Lewis. bibliog Am Chem Soc J 69:2022-5 Ag '47

New process for acrylic resins; manufacture of methyl methacrylate monomer, molding powder and transparent sheet. R. W. Porter. flow sheets Chem Eng 54:102-6 Ap '47

Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis. E. A. H. Friedheim, H. J. Vogel and R. L. Berman. Am Chem Soc J 69:560-2 Mr '47

Oxidation and dimerisation of propenylphenols; abstract. N. J. Cartwright and R. D. Haworth. Chem & Ind p117-18 F 22-Mr 8 '47

Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46

Phenylpropiolic acids; the dimerisation of *o*-methoxyphenylpropiolic acid. F. G. Baddar. Chem Soc J p224-7 F '47

Phosphoric acid polymerization. flow diag Oil & Gas J 45:166 Mr 22 '47

Photochemical dimerisation of acenaphthylene. E. J. Bowen and J. D. F. Marsh. Chem Soc J p 109-10 Ja '47

Photochemical instability of *cis-* and *trans-*4 : 4′-diamidinostilbene. A. J. Henry. Chem Soc J p 1156-64 D '46

Photochemical polymerization of vinyl acetate vapour; radical sensitized polymerization of vinyl acetate vapour; abstract. H. W. Melville and R. F. Tuckett. Chem & Ind p132 Mr 15 '47

Polyethylene; new plastic makes rapid progress. il map diags Chem Ind 60:219-22 F '47

Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A. A. Morton and M. L. Brown. Am Chem Soc J 69:160-1 Ja '47

Polymerization; catalytic polymerization of butadiene by phenylsodium and amylpotassium. A. A. Morton and R. L. Letsinger. bibliog Am Chem Soc J 69:172-6 Ja '47

Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A. Morton, M. L. Brown and E. Magat. bibliog Am Chem Soc J 69:161-7 Ja '47

Polymerization of allyl esters. H. S. Lilley. bibliog Chem & Ind p133 Mr 15 '47

Polymerization of drying oils and the influence of SO_2 upon this process. D. Cannegieter. bibliog Paint Oil & Chem R 110:17-18+ F 20 '47

Polymerisation of *iso*butene by Friedel-Crafts catalysts. A. G. Evans and M. Polanyi. Chem Soc J p252-6; Discussion. 256-7 F '47

Polymerization of isobutylene; abstract. R. R. Halle and others. Chem Eng 54:266+ Ag '47

POLYMERIZATION—*Continued*
Polymerisation of monomers in aqueous solution. M. G. Evans. Chem Soc J p266-74 F '47
Polymerisation of olefinic substances by Friedel-Crafts catalysts. J. P. W. Houtman. bibliog Soc Chem Ind J 66:102-3 Mr '47
Polymerization of unsaturated hydrocarbons by ionizing radiations. W. M. Garrison. J Chem Phys 15:78 Ja '47
Polymerisation of vinyl compounds in the gas and in the liquid phase. H. W. Melville. Chem Soc J p274-9; Discussion. 279-80 F '47
Polymerization; reaction of organo-sodium reagents with styrene and 1,1-diphenylethylene. A. A. Morton and H. C. Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47
Polymerization; the alfin catalysts. A. A. Morton, E. E. Magat and R. L. Letsinger. Am Chem Soc J 69:950-61 Ap '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47
Polyurethanes. O. Bayer. Mod Plastics 24: 149-52+ Je '47
Possibility of a chemical synthesis of diamond. D. P. Mellor. bibliog J Chem Phys 15:525-6 Jl '47
Preparation and polymerization of *p*-N,N-dimethylsulfonamidostyrene. G. E. Inskeep and R. Deanin. Am Chem Soc J 69:2237-8 S '47
Preparation and polymerization of vinyl fluoride. A. E. Newkirk. bibliog diags Am Chem Soc J 68:2467-71 D '46
Production of polyperfluorovinyl chloride. E. A. Belmore, W. M. Ewatt and B. H. Wojcik. flow sheets diag Ind & Eng Chem 39:338-42 Mr '47
Properties of polymers as functions of conversion; intrinsic viscosities. F. T. Wall and others. bibliog Am Chem Soc J 69:904-7 Ap '47
Rate constants of the steps in addition polymerization; induction period in the polymerization of vinyl acetate. K. Nozaki and P. D. Bartlett. Am Chem Soc J 68: 2377-80 N '46
Rate constants of the steps in addition polymerization; use of the rotating-sector method on liquid vinyl acetate. C. G. Swain and P. D. Bartlett. bibliog Am Chem Soc J 68:2381-6 N '46
Reactions occurring during heat polymerization of unsaturated fatty acid esters. H. J. Lanson and P. E. Spoerri. bibliog diags Paint Oil & Chem R 110:13-16 Mr 20 '47
Reduction of unsaturated hydrocarbons at the dropping mercury electrode; mechanism of the dimerizing addition of sodium to olefins. S. Wawzonek and J. W. Fan. bibliog Am Chem Soc J 68:2541-4 D '46
Spray polymerization of vinyl ethers. H. Fikentscher and others. Mod Plastics 24:162 F '47
UOP catalytic polymerization process; Universal oil products company. flow diags Pet Refiner (Process Handbook sec) 26:284-5 Ap '47
Variation of composition of 40:60 isoprene-styrene copolymers with conversion. E. Dyer and D. L. Munroe. bibliog Am Chem Soc J 68:2726 D '46
Vinyl alkyl ethers. C. E. Schildknecht, A. O. Zoss and C. McKinley. bibliog(63 ref) Ind & Eng Chem 39:180-6 F '47

See also
Condensation, Chemical
Polymers

POLYMERIZATION, Heat of
Heats of combustion and solution of liquid styrene and solid polystyrene, and the heat of polymerization of styrene. D. E. Roberts and others. bibliog(40 ref) J Res Nat Bur Stand 38:627-35 Je '47
Heats of polymerization of some unsaturates. L. K. J. Tong and W. O. Kenyon. bibliog Am Chem Soc J 69:2245-6 S '47
Heats of polymerization; styrene and substituted styrenes. L. K. J. Tong and W. O. Kenyon. bibliog Am Chem Soc J 69:1402-5 Je '47

POLYMERS
Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47
American physical society programme of Division of high-polymer physics; abstracts of papers. Phys R 71:485-9 Ap 1 '47
Apparatus for the observation of the Kerr effect with microsecond electrical pulses. W. Kaye and R. Devaney. bibliog il diags J Ap Phys 18:912-18 O '47
Association of polymer molecules in dilute solution. P. Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51:32-57 Ja '47
Available GR-S polymers. J. L. Brady. il India Rubber World 115:509-14 Ja '47
Average molecular weights of high polymers. S. R. Palit. J Chem Educ 24:199-200 Ap '47
Basic concepts in polymer science; abstracts. P. J. Flory. Chem & Eng N 25:1502-3+ My 26 '47; Chem Eng 54:252+ Je '47; India Rubber World 116:368 Je '47
Chemical research again surges upward; plastic materials and polymers. H. Mark. Chem Ind 61:388-9 S '47
Cross-linkage of linear polyesters by free radicals. W. O. Baker. bibliog Am Chem Soc J 69:1125-30 My '47
Crystallisation of high polymers and its effect on their mechanical properties; abstract. G. Gee. Chem Age (Lond) 57:287-8 Ag 30 '47
Cyclo-diphenylsiloxanes. J. F. Hyde and others. bibliog il Am Chem Soc J 69:488-92 Mr '47
Degradation and aging of high polymers. Paint Oil & Chem R 109:41 D 26 '46
Depolymerization of butadiene dimer. T. F. Doumani, R. F. Deering and A. C. McKinnis. diag Ind & Eng Chem 39:89-92 Ja '47
Determination of polymeric molecular weights by light scattering in solvent-precipitant systems. R. H. Ewart and others. J Chem Phys 14:687-95 N '46
Discussion on some aspects of the chemistry of macromolecules, held at the Institution of mechanical engineers, London, on April 4th, 1946. diags Chem Soc J p252-306 F '47
Dissolving, swelling and plasticising of polymers; abstract. R. Houwink. Chem Age (Lond) 57:288 Ag 30 '47
Distribution of the molecular weight of nylon as determined by fractionation in a phenol-water system. G. B. Taylor. bibliog Am Chem Soc J 69:638-44 Mr '47
Division of high-polymer physics, American physical society, schedules three-day technical session; abstracts of papers. Rubber Age 60:453-5 Ja '47; India Rubber World 115:526-8 Ja '47
Effect of molecular association and charge distribution on the gelation of pectin. R. Speiser, M. J. Copley and G. C. Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47
Effect of plasticizers on the second-order transition points of high polymers; abstract. R. F. Boyer and R. S. Spencer. Mod Plastics 25:160 O '47
Elastic losses in some high polymers as a function of frequency and temperature. H. S. Sack and others. bibliog il diags J Ap Phys 18:450-6 My '47
Elasticity measurements on polychloroprenes. P. Kinell. bibliog diag J Phys & Colloid Chem 51:70-9 Ja '47
Electric strength of paraffins and some high polymers. A. E. W. Austen and H. Pelzer. bibliog diags Inst E E J 93 pt 1:525-32 N '46
Equilibria between linear and cyclic polymers in methylpolysiloxanes. D. W. Scott. bibliog il Am Chem Soc J 68:2294-8 N '46
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39:1037-42 Ag '47
Fractional precipitation of molecular-weight species from high-polymers; theories of the process and some experimental evidence. D. R. Morey and J. W. Tamblyn. bibliog diags J Phys & Colloid Chem 51:721-46 My '47

POLYMERS—*Continued*
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Gélatinisation des nitrocelluloses. T. Petitpas. bibliog il diags Chimie & Ind 58:17-23 Jl '47
High polymer forum features A.C.S. Atlantic City meeting; abstracts of papers. Rubber Age 61:69-73 Ap '47; India Rubber World 116:72-5 Ap '47
Inhibition of polymerization; laboratory and plant control of popcorn polymer growth. M. S. Kharasch and others. bibliog il diags Ind & Eng Chem 39:830-7 Jl '47
Initiation and growth of butadiene resinous polymers. L. M. Welch and others. bibliog il Ind & Eng Chem 39:826-9 Jl '47
Liquid methylpolysiloxane systems. D. F. Wilcock. bibliog Am Chem Soc J 69:477-86 Mr '47
Low polymers of chlorotrifluoroethylene; preparation and utilization in chlorofluorocarbon lubricants. W. T. Miller, jr. and others. bibliog Ind & Eng Chem 39:333-7 Mr '47
Methods for evaluating new diene-type polymers. A. E. Juve and C. H. Schroeder. il India Rubber World 115:515-17+ Ja '47
Molecular complexes with 2,4,7-trinitrofluorenone. M. Orchin, L. Reggel and E. O. Woolfolk. Am Chem Soc J 69:1225-7 My '47
Molecular size distribution in three dimensional polymers; post-gelation relationships. P. J. Flory. bibliog Am Chem Soc J 69:30-5 Ja '47
Organosilicon polymers; infrared spectra of the methylpolysiloxanes. N. Wright and M. J. Hunter. bibliog Am Chem Soc J 69:803-9 Ap '47
Organosilicon polymers; open chain dimethylsiloxanes with trimethylsiloxy end groups. M. J. Hunter and others. bibliog Am Chem Soc J 68:2284-90 N '46
Oxidation of GR-S and other elastomers. J. O. Cole and J. E. Field. bibliog Ind & Eng Chem 39:174-9 F '47
Physical chemistry of polymers; abstract. R. M. Fuoss. Chem Eng 54:260+ S '47
Polyethylenes. A. E. Maibauer and C. S. Myers. bibliog il diags Electrochem Soc Trans 90 (preprint 36):449-67 '46
Production of polyperfluorovinyl chloride. E. A. Belmore, W. M. Ewalt and B. H. Wojcik. flow sheets diag Ind & Eng Chem 39:338-42 Mr '47
Progress in understanding of polymers; abstract. H. Mark. Chem & Eng N 25:1429+ My 19 '47
Project 6 spotlights avgas progress. H. W. Field and D. W. Gould. Pet Refiner 25: 141-7 N '46; Same cond. Oil & Gas J 45: 215-16+ N 16 '46
Properties of polymers as functions of conversion; intrinsic viscosities. F. T. Wall and others. bibliog Am Chem Soc J 69:904-7 Ap '47
Properties of polymers as functions of conversion; molecular weights of bottle polymerized GR-S. F. T. Wall and L. F. Beste. bibliog Am Chem Soc J 69:1761-4 Jl '47
Recent advances in the physics and chemistry of rubber; structure of long chain polymers as revealed by X-rays. G. A. Jeffrey. bibliog il Rubber Age 61:329-31 Je '47
Relation of the viscosity of nylon solutions in formic acid to molecular weight as determined by end-group measurements. G. B. Taylor. bibliog Am Chem Soc J 69:635-8 Mr '47
Resinous products from petroleum polymer sulfurization. M. G. Mayberry, P. V. McKinney and H. E. Westlake, jr. bibliog Ind & Eng Chem 39:166-7 F '47
Rubberlike products from linear polyesters. B. S. Biggs, R. H. Erickson and C. S. Fuller. bibliog il diags Ind & Eng Chem 39:1090-7 S '47
Silicones; organo-polysiloxanes. M. J. Hunter. il Can Chem & Process Ind 30:39-44 D '46
Some principles of the structure of synthetic fibers. H. F. Mark. Am Dyestuff Rep 36:323-7 Je 16 '47
Sorption of water vapor by high polymers. S. E. Smith. bibliog Am Chem Soc J 69: 646-51 Mr '47
Sound-velocity determination of molecular weights. G. J. Dienes. J Ap Phys 18:848-9 S '47
Sound velocity method for determination of molecular weight of liquid polymers. A. Weissler and others. bibliog diags J Ap Phys 18:434-8 My '47
Stability of synthetic rubber dispersions; coagulation of neoprene latices by freezing. H. W. Walker. bibliog diag J Phys & Colloid Chem 51:451-60 Mr '47
Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47
Strasbourg conference on high polymers. Chem & Eng N 25:431 F 17 '47
Structure-optical studies; X-ray diffraction by addition compounds of halogens with hydrophilic organic polymers. C. D. West. J Chem Phys 15:689 S '47
Study of the structure of butadiene polymers by means of ozonolysis. N. Rabjohn and others. bibliog Am Chem Soc J 69:314-19 F '47
Sudden application of a constant shearing motion to anomalous fluids. E. K. Carver and J. R. Van Wazer. bibliog il diags J Phys & Colloid Chem 51:751-63 My '47
Thermodynamics of crystallization in high polymers; crystallization induced by stretching. P. J. Flory. bibliog J Chem Phys 15:397-408 Je '47
Thermodynamics of crystallization in high polymers; dependence of melting points of polyesters on molecular weight and composition. R. D. Evans and others. J Chem Phys 15:685 S '47
Thermodynamics of crystallization in high polymers; simplified derivation of melting-point relationships. P. J. Flory. J Chem Phys 15:684 S '47
Use of polymers to make wool unshrinkable. A. W. Baldwin and others. bibliog Soc Dyers & Col J 62:4-9, 338-45 Ja, N '46
Vinyl polymers; reaction of benzoyl peroxide and maleic ester. C. S. Marvel, E. J. Prill and D. F. DeTar. bibliog Am Chem Soc J 69:52-8 Ja '47
Viscometric investigation of dimethylsiloxane polymers. A. J. Barry. bibliog J Ap Phys 17:1020-4 D '46
Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51: 58-70 Ja '47

See also
Gasoline
Molded products
Nylon
Plastic materials
Polythene
Polysaccharides
Rayon
Resinous products
Rubber—Chemistry
Rubber, Artificial
Silicones
Trioxane
also International conference on high polymers

POLYMORPHISM
Polymorphism of triolein. R. H. Ferguson and E. S. Lutton. bibliog pl Am Chem Soc J 69:1445-8 Je '47
X-ray investigation of glycerides; diffraction analyses of synthetic triacid triglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 69:1451-3 Je '47

POLYNEURITIS. See Neuritis, Multiple

POLYSACCHARIDES
Cellulose molecule; physical-chemical studies. bibliog il diag J Phys & Colloid Chem 51: 1-18 Ja '47
Crystalline derivatives of 6-α-D-glucopyranosido-β-D-glucose from starch. E. M. Montgomery, F. B. Weakley and G. E. Hilbert. Am Chem Soc J 69:2249-50 S '47
Crystalline octaacetate of 6-α-D-glucopyranosido-β-D-glucose. L. W. Georges, I. L. Miller and M. L. Wolfrom. Am Chem Soc J 69:473 F '47

POLYSTYRENE. See Styrene

POLYTETRAFLUOROETHYLENE. See Teflon

POLYTHENE
Beauty from woven polyethylene. il Mod Plastics 24:107 N '46
Diffusion of vapors in films. P. E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47

POLYTHENE—*Continued*
Editorial citation to the Visking corp. for achievement in polythene plastics for packaging. il Materials & Methods 24:1188-9 N '46
Effect of combined carbon monoxide on the power factor of polythene. W. Jackson and J. S. A. Forsyth. bibliog Inst E E J 94 pt 3: 55-7 Ja '47
Electric strength of paraffins and some high polymers. A. E. W. Austen and H. Pelzer. bibliog diags Inst E E J 93 pt 1:525-32 N '46
Polyethylene extrusion; abstract. G. G. Himmler. Mod Plastics 24:96 Je '47
Polyethylene; new plastic makes rapid progress. il map diags Chem Ind 60:219-22 F '47
Polyethylene packages in use. il Mod Packaging 20:118-22 Ja '47
Polyethylenes. A. E. Maibauer and C. S. Myers. bibliog il diags Electrochem Soc Trans 90 (preprint 36):449-67 '46
Polythene; development, properties, uses, etc. F. A. Freeth. Engineering 162:388-9 O 25 '46; Same cond. Chem Age (Lond) 55:401-3 O 5 '46; Abstract. Engineer 182:277 S 27 '46
Recent developments; polyethylene. il diag Product Eng 18:[118] insert 6 Ap '47
Talc of the town; bottle of polyethylene; a dispensing talcumizer for bath powder. il Mod Packaging 20:87 Ag '47
Voltage characteristics of polythene cable. R. Davis and others. bibliog Inst E E J 94 pt 3:154-65; Discussion. il 165-70 My '47
Why of polyethylene watch straps. il Mod Plastics 24:129-30 My '47

POLYURONIDES
Investigation of the properties of cellulose oxidized by nitrogen dioxide; evolution of carbon dioxide from uronic acids and polyuronides. E. W. Taylor and others. bibliog Am Chem Soc J 69:342-7 F '47
Investigation of the properties of cellulose oxidized by nitrogen dioxide; reaction of the carboxyl groups of polyuronides with calcium acetate. P. A. McGee, W. F. Fowler, jr. and W. O. Kenyon. bibliog Am Chem Soc J 69:347-9 F '47

Analysis
Investigation of the properties of cellulose oxidized by nitrogen dioxide; potentiometric titration of polyuronides. C. C. Unruh and others. bibliog Am Chem Soc J 69:349-54 F '47

POLYVINYL chloride. See Vinyl chloride

POLYVINYLIDENE chloride. See Saran

POMACE, Grape. See Wine—Manufacture—By-products

POMPHOLYX. See Skin—Diseases

PONTOON bridges. See Bridges, Pontoon

PONTOONS
Pontons et remorqueurs de grande puissance pour le renflouement des navires. H. Faure. diags Génie Civil 124:71-3 F 15 '47

PONZIO reaction
Aromatic-aliphatic nitro compounds; Ponzio reaction; 2,4,6-trinitrobenzyl nitrate. L. F. Fieser and W. von E. Doering. Am Chem Soc J 68:2252-3 N '46

POOR
See also
Legal aid

POOR relief
See also
Unemployment—Relief measures
Workhouses

POPCORN
Hushed popcorn bags prove silence is golden. Bsns W p52 S 27 '47
More you eat. Fortune 35:144 Je '47

POPCORN polymers. See Polymers

POPE, Harry M. 1861-
Portrait. Fortune 36:131 O '47

POPLAR
Hardwoods for newsprint. G. E. Shipman. bibliog Pulp & Pa of Can 47:93-7 D '46

POPULATION
Impact of science on population growth. W. S. Thompson. Ann Am Acad 249:111-18 Ja '47
Suggested principles of social physics. J. Q. Stewart. Science 106:179-80 Ag 29 '47
See also
Birth rate
Immigration and emigration
Migration
Migration of workers
Refugees
also subdivision Population under names of cities, e.g.
London—Population

Statistics
Best unbiased estimate of population standard deviation based on group ranges. F. E. Grubbs and C. L. Weaver. Am Stat Assn J 42:224-41 Je '47
Estimating the resident alien population of the United States. E. P. Hutchinson and E. Rubin. Am Stat Assn J 42:385-400 S '47
How to forecast residential gas customers from population trends. F. B. Jones. Gas Age 99:51-4+ Ap 17 '47
1947 survey of buying power; estimates of population, total retail sales, sales by three major store groups, effective buying income (gross and net) gross farm income, wholesale sales, sales-advertising controls for the Nation, sections, states, counties, cities, plus special sections for Hawaii and the Dominion of Canada. il maps Sales Management 58:19-480 My 10 '47; Corrections and revisions. 59:124a-124d N 1 '47
Population sample for Greece. R. J. Jessen and others. Am Stat Assn J 42:357-84 S '47
Population trends, what they mean to industrial marketers. V. D. Reed. maps Ind Marketing 31:51-2+ D '46
See also
Birth rate
Mortality

Asia
Food and population in Asia. Economist 153: 548-9 O 4 '47

Australia
Estimated population, June 30, 1946. For Comm W 26:11 F 1 '47

Canada
Canadian population increases; 1946 estimates. For Comm W 27:14 My 10 '47
Demographic trends in Canada. W. B. Hurd. Ann Am Acad 253:10-15 S '47
Ethnic groups and their behavior. N. Keyfitz. Ann Am Acad 253:158-63 S '47
Population increases. For Comm W 29:12 N 1 '47

Egypt
Problems of Egypt's population. Economist 151:793-4 N 16 '46

France
Results of the census of French population, March 10, 1946. For Comm W 27:17 My 3 '47

Greece
Population sample for Greece. R. J. Jessen and others. Am Stat Assn J 42:357-84 S '47

Korea
Population of south Korea, 1944 and 1946 compared. For Comm W 28:22 Ag 30 '47

Pacific countries
Population problems in the Pacific. S. Lee. J Land & Pub Util Econ 22:381-5 N '46

Russia
L'accroissement de la population de l'Union Soviétique. Génie Civil 124:38 Ja 15 '47

Southern states
Labor supply in the South; population and labor-force characteristics. S. C. Mendelsohn and L. M. Pearlman. Mo Labor R 63: 490-4 O '46

Texas
Second national bank of Houston issues charts on Texas population growth. Comm & Fin Chr 165:2392 My 1 '47

United States
Aging population. Fortune 34:250+ D '46
Census bureau estimates show population shifts. Bsns W p62-3 Ag 16 '47

POPULATION—United States—*Continued*
Estimating the resident alien population of the United States. E. P. Hutchinson and E. Rubin. Am Stat Assn J 42:385-400 S '47
Some demographic aspects of the changing role of women. I. B. Taeuber and H. T. Eldridge. bibliog Ann Am Acad 251:24-34 My '47

PORCELAIN
All-crystalline porcelains for use in jet-propulsion and gas-turbine engines. il Mech Eng 69:234 Mr '47
Characteristics of zircon porcelain. R. Russell, jr. and W. C. Mohr. Am Cer Soc J 30:32-5 Ja 1 '47
Chemical porcelain. H. Seymour. Chem Age (Lond) 57:355-6+ S 13 '47
Development of ceramic compositions suitable for the production of porcelain type artware. B. W. Thorngate. bibliog il diag Florida Eng and Industrial Exp Sta [Gainesville] Bul 11:1-72 '46
Forming true porcelain dinnerware. R. Gould. diags Cer Ind 49:92+ S '47
New materials for porcelain from Russia. Cer Ind 49:92 Ag '47
New porcelains hope for turbojets: Bureau of standards' project. Aviation N 7:10 Mr 17 '47
Reducing atmosphere prevents over-firing of china. R. Gould. Cer Ind 49:79-80 Ag '47
Sagless porcelains possess unique heat-strength characteristics. Chem Ind 60:947 Je '47
Sodium chloride versus construction materials; chemical porcelain. J. S. Chowning. Chem Eng 54:214+ O '47
Wet and dry chlorine vs. materials of chemical plant construction; chemical porcelain. J. S. Chowning. Chem Eng 54:214 Ja '47

PORCELAIN, Insulating
Alkaline earth porcelains possessing low dielectric loss. M. D. Rigterink and R. O. Grisdale. Am Cer Soc J 30:78-81 Mr 1 '47
Alumina in whiteware; vitreous chinaware, semivitreous dinnerware, electrical porcelain, cooking ware and sanitary ware. C. R. Austin and others. il Am Cer Soc J 29: 341-54 D 1 '46
Bell Telephone improves ceramic insulators. M. D. Rigterink. il Cer Ind 48:81-3 My '47
High-temperature high-strength porcelains. Iron Age 159:57 Mr 13 '47; Same. Franklin Inst J 244:147-8 Ag '47; Same abr. Product Eng 18:157 Jl '47; Same abr. Mech Eng 69:234 Mr '47; Excerpts. Chem & Eng N 25: 452 F 17 '47; Materials & Methods 25:139 Mr '47; Abstract. Aviation W 47:20 S 1 '47
Strength of porcelain at high temperatures; abstract. R. F. Geller and M. D. Burdick. Cer Ind 47:84 N '46

Manufacture

Locke insulator efficiency permits great variety of products. il Cer Ind 49:85-7+ Jl '47
Locke insulator makes wide usage of industrial instruments. C. W. Bowden, jr. il Cer Ind 49:86+ S '47

PORCELAIN enamel institute
Annual meeting, French Lick Springs. Cer Ind 47:67-8+ D '46

PORK
Storage and microbial action upon vitamins of the B-complex in pork; abstract. E. E. Rice, J. E. Fried and W. R. Hess. Food Ind 19:261 F '47
Who is liable for trichinosis? study of court decisions. J. A. Tobey. bibliog il Food Ind 19:474-5+ Ap '47

Prices

Housewife speaks, pork comes down. Barron's 27:37 Mr 17 '47

PORK, Frozen
How to prevent rancidity in frozen pork sausage. C. K. Wiesman and J. V. Ziemba. il Food Ind 18:1863-4+ D '46

POROSITY
Gas porosity in aluminum alloys. H. Brown. il diags Foundry 75:88-9+ F '47
Gurley permeometer. il R Sci Instr 18:71-2 Ja '47
Pore size in protective films by electrographic printing. W. E. Shaw and E. T. Moore. bibliog diags Anal Chem 19:777-9 O '47
Porosity and ore deposition at Edwards and Balmat, New York. J. S. Brown. bibliog diags Geol Soc Bul 58:505-46, pl 1-10 Je '47
Rapid method of ore testing, the S.K. porosity test. H. L. Saunders and H. J. Tress. diag Iron & Steel Inst J 152:291-300; Discussion. 300-2 no 2 '45

POROUS concrete. See Concrete, Porous

POROUS materials
Air-permeability tester for porous sheet materials. il diag Machine Design 18:155 D '46
Flow of fluids through porous media. L. E. Brownell and D. L. Katz. bibliog Chem Eng Prog 43:537-44; Discussion. 544-8 O '47 (to be cont)
Flow-resistance characteristics of fibrous acoustical materials. R. H. Nichols, jr. bibliog diag Acoustical Soc Am J 19:866-71 S '47
Heat transfer between a fluid and a porous solid generating heat. S. R. Brinkley, jr. bibliog J Ap Phys 18:582-5 Je '47

See also
Concrete, Porous
Plastic materials, Cellular
Rubber, Sponge

PORPHYRINS
Further study of the porphine-like products of the reaction of benzaldehyde and pyrrole. R. H. Ball, G. D. Dorough and M. Calvin. diag Am Chem Soc J 68:2278-81 N '46
Synthetic ferroporphyrin complex that is passive to oxygen. A. H. Corwin and J. G. Erdman. bibliog diag Am Chem Soc J 68: 2473-8 D '46

PORT of New York authority
Authority leases Newark air, sea ports. Eng N 139:575 O 30 '47
N.Y. port body seeks Hoboken lease. il Eng N 139:423 S 25 '47

PORTABLE buildings. See Buildings, Portable

PORTABLE conveying machinery. See Conveying machinery, Portable

PORTABLE electric tools. See Electric tools, Portable

PORTABLE scaffolding. See Scaffolding, Portable

PORTAL-to-portal pay. See Wages—Law

PORTER, Henry Hobart, 1863-1947
Sketch. por Edison Elec Inst Bul 15:54 F '47

PORTER, Van R.
Cancer linked to enzymes. Can Chem & Process Ind 30:94 D '46

PORTLAND, Oregon
When figures lie; two West Coast cities show drop in industrial workers. Bsns W p32+ Ja 25 '47

Sewerage

Portland sewerage project; abstract and discussion. J. C. Stevens and H. L. Thompson. Water & Sewage Works 94:385 O '47
Sewage works at Portland; abstract. J. C. Stevens and H. Loren. Eng N 139:251-2 Ag 21 '47

PORTLAND electric power company
Guaranty trust co. opposed to SEC reorganization plan. Comm & Fin Chr 165:1595-6 Mr 24 '47
Plans for reorganization approved in new vote. Elec World 128:59 Ag 16 '47
Trustees' plan approved. Comm & Fin Chr 166:705 Ag 18 '47

PORTLAND (Oregon) transit company
Stocks offered. Comm & Fin Chr 164:2733 N 25 '46

PORTS
Army engineers reconstruct and expand war-damaged Philippine ports. C. L. Hall. il Civil Eng 17:328-31 Je '47
Le canal de contournement de la ville de Gand (Belgique). map Génie Civil 124:357 S 15 '47
Latin-American nations strive to ease harassing port congestion. S. G. Koushnareff. il For Comm W 29:3-4+ N 1 '47
Port of Chicago. M. W. Oettershagen. Western Soc E J 52:34-42 Mr '47
Rails bid for foreign trade. il Bsns W p97-8 N 30 '46

PORTS—*Continued*
Seaports enter boom era of building, modernization. P. Amundsen. Ind Marketing 32: 128+ O '47
See also
Free ports and zones
Harbors
Shipping
also names of ports, e.g.
Boston
Guayaquil, Ecuador
Hong Kong
Houston, Texas
Miami, Florida
Mobile, Alabama
New Orleans
Tientsin, China

PORTSMOUTH, England
Harbor
Historical review of Portsmouth dockyard. L. V. Morgan. il maps Engineer 184:300-2, 324-6 S 26-O 3 '47; Same cond. Engineering 164:414-16 O 31 '47

PORTUGAL
See also
Airlines—Portugal

PORTUGUESE language
Pronunciation
Brazilian-Portuguese pronunciation, including word list with indicated pronunciation. C. Stavrou. 152p $2.50 David McKay co, Washington square, Philadelphia '47

POSITION finding. See Direction finding apparatus

POSITRONIUM
Binding energy of the positronium molecule. E. A. Hylleraas and A. Ore. bibliog diag Phys R 71:493-6 Ap 15 '47
Electron affinity of positronium. E. A. Hylleraas. Phys R 71:491-3 Ap 15 '47

POSITRONS
Gamma-rays from Cu^{64}, annihilation of swift positrons, and experiments on orbital-electron capture. M. Deutsch. Phys R 72:729-30 O 15 '47
Positively charged particles accompanying the beta-rays of P^{32}. T. T. Pi and C. Y. Chao. Phys R 72:639-40 O 1 '47
Radioactivity of Cu^{60}. C. E. Leith and others. Phys R 72:732-3 O 15 '47
Structure of the quadrielectron. A. Ore. Phys R 71:913-14 Je 15 '47
See also
Positronium

POST exchanges
Army PX as a peacetime market. il Ptr Ink 218:35-6+ Mr 21 '47

POST offices, Traveling. See Postal service, Highway

POSTAGE stamps
Celebrate centenary of postage stamps at International show in New York. W. Hay. il Weekly Underw 156:1470-1 My 31 '47
Metal mines and postage stamps; designs honour metals and metal workers. il Chem Age (Lond) 57:52-3 Jl 12 '47
New designs selected for German stamps. For Comm W 25:19 D 28 '46

POSTAL buses. See Postal service, Highway

POSTAL laws and regulations
How to avoid making a lottery of your contest; postal laws. F. J. Woods. Ptr Ink 217: 138+ N 15 '46
How to get your full money's worth at the post office. E. N. Mayer, jr. il Ptr Ink 220: 36-8 Jl 25 '47

POSTAL rates
Bill (H.R. 2408). H. Ehrlich. Adv & Sell 40:70 My '47
Commerce and industry association protests increased mail rates. Comm & Fin Chr 165: 2390 My 1 '47
Congressional committees wrestle with problems of postal rates. S. E. Cohen. Ind Marketing 32:46+ Je '47
Direct-mail spokesman asks compromise on third-class postal boost. E. N. Mayer, jr. Ptr Ink 218:93 Mr 21 '47
Hearings open on $173,735,000 postage boosts; $33,200,000 second-class increase. Ptr Ink 218:93+ Mr 14 '47
Postage hike? Bsns W p22 F 8 '47
Postal rise seen forcing newspapers from mails. J. L. Horne. Ptr Ink 218:88 Mr 28 '47
Publishers' bogey. Bsns W p22+ Ap 5 '47

POSTAL savings banks
Postal savings system; assets and depositors' balances; yearly 1939-1944, monthly Nov. 1945-Nov. 1946. Fed Res Bul 33:53 Ja '47 [cont monthly]

POSTAL service
See also
Mail ships
Money orders
International postal money order service renewed to certain countries. For Comm W 25:20 D 14 '46
United States
Raps postoffice lack of efficiency. W. D. Fuller. Barron's 27:24 Ap 21 '47
See also
Air mail service
Railway mail service

POSTAL service, Highway
Post office on wheels. il Bus Transportation 25:58 D '46

POSTAL service workers
Legislation affecting postal workers; annual- and sick-leave provisions concerning rural mail carriers. Mo Labor R 65:344 S '47

POSTERS
Desk posters set supervisors to thinking; Stewart-Warner corporation, Chicago. G. F. Thomas. il Factory Management 105:75 Ag '47
How it's used posters boost morale; Tinnerman products, inc. il Am Mach 91:109-10 Jl 17 '47
How to design posters that will sell. J. E. Brennan. il Adv & Sell 40:37+ S; 43+ N '47; 41:43+ Ja '48
Outdoor posters promote package identification. il Ptr Ink 219:44-5 Je 13 '47
Packages, trade names stressed in outdoor advertising. C. D. McCormick. il Adv & Sell 40:60 F '47
Posters aim at greater productivity. il Factory Management 105:136-7 Ja '47
Posters promote worker welfare. il Factory Management 105:87 Mr '47
Posters reflect mood of post-war Germany. il Ptr Ink 220:35 S 5 '47
Start your outdoor copy with thumbnail sketch. J. Donnelly. il Adv & Sell 40:44+ Ap '47
Travel lure sells gas. il Sales Management 59:67 Jl 15 '47
Rating
How we test the probable success of outdoor posters. J. W. Baker. il Ptr Ink 218:48-50 Mr 7 '47

POSTERS, Safety. See Safety posters

POTASH
Manufacture
Potash concentration by froth flotation. J. A. Barr, jr. flow sheets il Rock Prod 50:112-15 Ag '47
Potash reclamation; recovery from ferrous and non-ferrous by-products. A. G. Arend. il diag Chem Age (Lond) 55:565-8 N 9 '46
France
La gisement de potasse de Came-Labastide (Basses-Pyrénées). map Génie Civil 124:279 Jl 15 '47
Germany
Potash mining in Germany, 1945. J. H. East, jr. 10pls U S Bur Mines Information Circ 7405:1-15 '47
New Mexico
Diamond drilling of potash reserves in Eddy county, N. Mex. W. R. Storms. bibliog 7pls U S Bur Mines Rep of Invest 4098: 1-108 '47
Mechanization of operations in potash mining. G. T. Harley. il Min Cong J 32:24-8+ N '46

POTASH—*Continued*

Saskatchewan

Report on Saskatchewan potash deposits. A. J. Williams. Can Chem & Process Ind 31:410-12 My '47

POTASH industry and trade

Potash, 1946. H. M. Albright. il Min Cong J 33:102-4 F '47

Statistics

Potash industry statistics, 1944-46. Oil Paint & Drug Rep 152:48 Ag 4 '47

Potash production. Chem & Eng N 25:51 Ja 6 '47

Potash production in 1946 will establish new highs. V. Kinnard. il Dom Comm 34:43-6 D '46

POTASH soap association

First meeting, Cleveland, Jan. 14. Soap & San Chem 23:45-7 F '47

Open forums. Soap & San Chem 23:44-5 Jl '47

Potash soap manufacturers form new association. Soap & San Chem 22:37+ N '46

POTASSIUM

Free fall of atoms and the measurement of the velocity distribution in a molecular beam of cesium atoms. I. Estermann and others. diags Phys R 71:238-49 F 15 '47

Analysis

Determination of potash in brines and cuttings. W. A. Cunningham. Oil & Gas J 46: 76 Ag 2 '47

Determination of sodium and potassium in silicates. S. Kallmann. bibliog Ind & Eng Chem Anal ed 18:678-80 N '46

Gamma-ray studies of potassium salts and associated geologic formations. H. C. Spicer. In U S Geol S Bul 950:143-61, pl 3-5 '46

Polarographic determination of sodium or potassium in various materials. J. R. Weaver and L. Lykken. bibliog diag Anal Chem 19:372-6 Je '47

Isotopes

β-Ray spectrum of K^{40} and theory of β-decay. R. E. Marshak. Phys R 70:980 D 1 '46

Concentration of isotopes of potassium by the countercurrent electromigration method. A. K. Brewer and others. bibliog charts diags J Res Nat Bur Stand 38:137-68 F '47

Concentration of potassium[39] by countercurrent electromigration; some theoretical aspects of the operation. J. W. Westhaver. bibliog charts J Res Nat Bur Stand 38:169-83 F '47

Gamma-rays of K^{40}. E. Gleditsch and T. Gráf. bibliog Phys R 72:640-1 O 1 '47

Isotope separation by counter-current methods. diags Chem Age (Lond) 57:263-6 Ag 23 '47

Natural isotopes separated by new methods. diags Chem & Eng N 25:1510 My 26 '47

Radiations from K^{38}. M. M. Ramsey and others. bibliog Phys R 72:639 O 1 '47

Significance of the radioactivity of potassium in geophysics. E. Gleditsch and T. Gráf. bibliog Phys R 72:641 O 1 '47

Upper energy limit of the K^{40} beta-ray spectrum. W. J. Henderson. bibliog Phys R 71:323-4 Mr 1 '47

POTASSIUM alum. See Alums

POTASSIUM amide

Removal of hydrogen bromide from certain β-phenylalkyl bromides by means of potassium amide in liquid ammonia. C. R. Hauser and others. bibliog Am Chem Soc J 69:589-93 Mr '47

POTASSIUM bromate

Amperometric titration of styrene with potassium bromate using the rotating platinum electrode. I. M. Kolthoff and F. A. Bovey. bibliog Anal Chem 19:498-500 Jl '47

Isotonic solutions: activity coefficients of potassium bromate at 25°. J. H. Jones. Am Chem Soc J 69:2066-7 Ag '47

POTASSIUM bromide

Infra-red filters and cells of unpolished salt crystals. J. J. McGovern and R. A. Friedel. bibliog Opt Soc Am J 37:660-3 Ag '47

Theory of dielectric breakdown in the alkali halides. G. Malmlöw and F. Seitz. bibliog Phys R 71:125 Ja 15 '47

Analysis

Estimation of bromide in presence of chloride. L. Farkas and M. Lewin. bibliog Anal Chem 19:665-6 S '47

POTASSIUM chlorate

Méthode de mesure des caractéristiques de combustion des pâtes d'allumettes. R. Kaslin. il diags Chimie & Ind 57:444-7 My '47

POTASSIUM chloride

Diffusion coefficient of potassium chloride in dilute aqueous solution. H. S. Harned and R. L. Nuttall. bibliog diags Am Chem Soc J 69:736-40 Ap '47

Equilibria in saturated salt solutions; ternary systems $CaCl_2$-$MgCl_2$-H_2O, $CaCl_2$-KCl-H_2O and $MgCl_2$-KCl-H_2O at 75°. W. J. Lightfoot and C. F. Prutton. Am Chem Soc J 69:2098-100 S '47

Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46

Some studies in the system $AlCl_3$-$FeCl_3$-KCl-NaCl-HCl-H_2O at 25, 30 and 35°. G. L. Miles. Am Chem Soc J 69:1716-19 Jl '47

POTASSIUM chromate

Filters for the isolation of the 3130 Å. spectral group of the mercury arc. R. E. Hunt and W. Davis, jr. bibliog Am Chem Soc J 69:1415-18 Je '47

POTASSIUM cobaltinitrite

Formation of explosive derivatives in determination of cobalt as potassium cobaltinitrite. J. E. de Paiva Netto and R. A. Catani. bibliog Anal Chem 19:818 O '47

POTASSIUM compounds

Equilibrium between gaseous carbon dioxide and hydrogen sulphide and solutions of alkali carbonates, bicarbonates and hydrosulphides; potassium salts. I. G. C. Dryden. bibliog Soc Chem Ind J 66:59-62 F '47

Interaction of hydrous alumina with salt solutions. R. P. Graham and A. E. Horning. Am Chem Soc 69:1214-15 My '47

Polymerization; catalytic polymerization of butadiene by phenylsodium and amylpotassium. A. A. Morton and R. L. Letsinger. bibliog Am Chem Soc J 69:172-6 Ja '47

POTASSIUM dichromate

Combination of wool proteins with heavy metal salts as a function of pH. K. S. LaFleur. bibliog Am Dyestuff Rep 36:616-18 O 20 '47

Dichromate may distort experimental results by causing stimulation. R. Pratt and J. Dufrenoy. Science 105:574 My 30 '47

Dyeing of wool with chrome dyes; the chroming of wool. P. W. Carlene, F. M. Rowe and J. B. Speakman. bibliog Soc Dyers & Col J 62:329-38 N '46

POTASSIUM ferricyanide

Rapid test for ferricyanide bleach exhaustion. L. E. Varden and E. G. Seary. Soc Motion Picture Eng J 47:450-2 D '46

POTASSIUM fluorides

Nature of the hydrogen bond in KHF_2. K. S. Pitzer and E. F. Westrum. bibliog J Chem Phys 15:526 Jl '47

POTASSIUM hydrogen tartrate

Saturated potassium hydrogen tartrate solution as a pH standard. J. J. Lingane. bibliog Anal Chem 19:810-11 O '47

POTASSIUM hydroxide

Removal of carbon dioxide from atmospheric air. N. A. Spector and B. F. Dodge. flow sheet flow diag Am Inst Chem Eng Trans 42:827-48 O-D '46

Solubility of $Ca(OH)_2$ and $CaSO_4.2H_2O$ in dilute alkali solutions; application to portland cement pastes. W. C. Hansen and E. E. Pressler. bibliog Ind & Eng Chem 39:1280-2 O '47

Unshrinkable wool produced by alcoholic alkali. M. Lipson. bibliog il Textile Inst J 38:P279-83; Discussion. P284-5 Ag '47

POTASSIUM iodates
Micro-Kjeldahl determination of nitrogen; use of potassium biiodate in iodometric titration of ammonia. R. Ballentine and J. R. Gregg. bibliog Anal Chem 19:281-3 Ap '47

See also
Potassium periodate

POTASSIUM iodide
See also
Nessler's reagent

Analysis
Determination of iodide in developers. G. I. P. Levenson. bibliog Soc Chem Ind J 66: 198-200 Je '47

POTASSIUM laurate
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47
Solubilization by solutions of long-chain colloidal electrolytes. R. S. Stearns and others. bibliog J Chem Phys 15:496-507 Jl '47
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47

POTASSIUM metaphosphate
Potassium and sodium metaphosphates as sources of phosphorus for animals. H. F. Fraser and others. bibliog Pub Health Rep 61:1810-16, pl 1 D 13 '46

POTASSIUM myristate
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47
Solubilization by solutions of long-chain colloidal electrolytes. R. S. Stearns and others. bibliog J Chem Phys 15:496-507 Jl '47

POTASSIUM nitrate
Circulating HTS as a pilot plant heat transfer medium. W. B. Johnson and W. M. Nagle. diags Ind & Eng Chem 39:971-4 Ag '47
Phase relations in heat transfer salt systems. J. Alexander, jr. and S. G. Hindin. diags Ind & Eng Chem 39:1044-9 Ag '47

POTASSIUM oleate
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47

POTASSIUM oxide
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2. J. F. Schairer and N. L. Bowen. bibliog diags Am J Sci 245: 193-204 Ap '47

POTASSIUM periodate
Activity coefficients and activity product of potassium metaperiodate. J. H. Jones and N. Heckman. bibliog Am Chem Soc J 69: 536-8 Mr '47

POTASSIUM permanganate
Oxidation of cotton cellulose by solutions of potassium permanganate in the presence of a reduced vat dye. D. N. Mehta and H. A. Turner. Soc Dyers & Col J 63:15-20 Ja '47
Permanganate test for alcohol quality studied by means of the spectrophotometer. O. S. Rask and F. M. Hildebrandt. bibliog Anal Chem 19:364-7 Je '47

POTASSIUM phenylacetylene
Action of sodium, lithium and potassium phenylacetylene on acid derivatives. D. Nightingale and F. T. Wadsworth. bibliog Am Chem Soc J 69:1181-3 My '47

POTASSIUM phthalate
Filters for the isolation of the 3130 A. spectral group of the mercury arc. R. E. Hunt and W. Davis, jr. bibliog Am Chem Soc J 69: 1415-18 Je '47

POTASSIUM sodium tartrate
Electromechanical properties of Rochelle salt at the lower Curie point. R. M. Lichtenstein. bibliog diags Phys R 72:492-501 S 15 '47
Ultrasonic measurements on single crystals. H. B. Huntington. bibliog diag Phys R 72: 321-31 Ag 15 '47

POTASSIUM sulfate
System potassium sulfate-sodium sulfate-magnesium sulfate-water at 35°. N. S. Bayliss and others. bibliog diag Am Chem Soc J 69:2033-6 Ag '47

Manufacture
Langbeinite, mining and processing. G. T. Harley and G. E. Atwood. flow diags il Ind & Eng Chem 39:43-7 Ja '47

POTASSIUM tartrate
New low-coefficient synthetic piezoelectric crystals for use in filters and oscillators. W. P. Mason. bibliog diags Inst Radio Eng Proc 35:1005-12 O '47
Properties of monoclinic crystals. W. P. Mason. diags Phys R 70:705-28 N 1 '46

POTASSIUM thiocyanate
Raman spectra of aqueous solutions of potassium thiocyanate. J. Chien. bibliog Am Chem Soc J 69:20-2 Ja '47

POTATO chips
Long-lived chips; Dan Dee kodachromed carton for potato chips; plioflm overwrap. il Mod Packaging 20:98-100 F '47

Transportation
Potato chips travel by truck. il Food Ind 19:336-7 Mr '47

POTATO flour
Potato bread sells. Bsns W p69-70 Ap 19 '47
See also
Sweet potato flour

POTATO harvesting machinery
Potato harvesting machine. il Engineer 184: 371 O 17 '47

POTATO tuber worm. See Potatoes—Diseases and pests

POTATOES
Material standards for the food industries. R. E. Worden. flow sheet Food Ind 19:163-5+ F '47
New potato-digging machine devised in Netherlands. For Comm W 25:45 N 9 '46
Partial characterization of a compound involved in the blackening of white potatoes. W. R. Lewis and D. M. Doty. bibliog Am Chem Soc J 69:521-3 Mr '47
See also
Sweet potatoes

Analysis
Vitamin C content of potatoes grown on reclaimed land. L. C. Baker, T. L. Parkinson and L. H. Lampitt. bibliog Soc Chem Ind J 65:428-30 D '46

Diseases and pests
Control of nosema disease of potato tuber worm, a host used in the mass production of macrocentrus ancylivorus. H. W. Allen and M. H. Brunson. Science 105:394-5 Ap 11 '47

Peeling
Potato peeling methods analyzed and appraised. L. C. Mazzola. il Food Ind 18:1708-9+, 1874-6+ N-D '46

Transportation
Must furnish refrigeration for potatoes from Southeast. Ry Age 123:67-8 Jl 12 '47

POTATOES, Dried
Browning of dehydrated vegetables during storage. R. R. Legault and others. bibliog Ind & Eng Chem 39:1294-9 O '47
Drying of vegetables; loss of ascorbic acid in drying cabbage and potato in large-scale factory plants. R. J. L. Allen and L. W. Mapson. Soc Chem Ind J 66:166-8 My '47
Effect of variety and source on the quality of dehydrated potatoes. H. R. Barnell and D. W. P. Greenham. bibliog Chem & Ind p315-18 Je 7 '47
Infrared drying method utilized in the processing of potatoes. Elec World 126:116 N 23 '46
Vacuum drying of compressed vegetable blocks. W. C. Dunlap, jr. diag Ind & Eng Chem 38:1250-3 D '46
See also
Potato flour

POTATOES, Frozen
Continuous frying under full automatic control; Baxter frozen French fried potatoes. flow diag il Food Ind 19:1342-6 O '47

POTENTIAL, Electric
Activity of orthophosphoric acid in aqueous solutions at 25° from e.m.f. measurements with the lead amalgam-lead phosphate electrode. C. M. Mason and W. M. Blum. bibliog il Am Chem Soc J 69:1246-50 Je '47
Attempt to verify the theory of the long spark of Loeb and Meek. L. H. Fisher. bibliog diags Phys R 72:423-8 S 1 '47
Capacitance of synchronous-machine armature windings determined for high-potential test. R. W. Wieseman. il Gen Elec R 50:26-30 Jl '47
Concerning estimates of the minimum sparking potential based upon the cathode work function. D. H. Hale and W. S. Huxford. bibliog J Ap Phys 18:586 Je '47
Contact potential difference in silicon crystal rectifiers. W. E. Meyerhof. bibliog il diags Phys R 71:727-35 My 15 '47
Density of surface states on silicon deduced from contact potential measurements. W. H. Brattain and W. Shockley. Phys R 72: 345 Ag 15 '47
Electric logging; study of the self-potential curve. S. J. Pirson. bibliog diags Oil & Gas J 46:72+ O 4 '47
Electrical well logging; study of self-potential curve. C. C. White. Oil & Gas J 45: 88-90 D 14 '46
Electrochemistry of permselective collodion membranes. K. Sollner and H. P. Gregor. bibliog J Phys Chem 50:470-6 N '46; [cont as] J Phys & Colloid Chem 51:299-311 Ja '47
Electrode potentials of carbon in acid electrolytes. N. M. Winslow. bibliog Electrochem Soc Trans 92 (preprint 3):33-48 '47
Electrokinetic potentials of precipitates. L. H. Reyerson, I. M. Kolthoff and K. Coad. bibliog diags J Phys & Colloid Chem 51:321-32 Ja '47
Evidence for surface states on semiconductors from change in contact potential on illumination. W. H. Brattain. Phys R 72:345 Ag 15 '47
Half cell for measuring corrosion potentials. J. M. Standring. diags Elec World 127:182+ Ja 18 '47
Industrial salt-bridge junction tube. G. A. Perley. bibliog il diag Electrochem Soc Trans 92 (preprint 15):179-86 '47
Kinetics of oxidizing-reducing potentials; abstract. A. L. Rotinyan, I. I. Appenin and V. G. Tkachenko. Chem Eng 54:256+ O '47
Lightning currents and potentials on overhead transmission lines. R. H. Golde. bibliog diags Inst E E J 93 pt 2:559-69 D '46
Measurement of potentials at the interface between vitreous silica and solutions of thorium chloride and lanthanum chloride. L. A. Wood and L. B. Robinson. Am Chem Soc J 69:1862-6 Ag '47
Measuring high potentials. M. R. Whitman. diag Electronics 20:172+ Ap '47
Minimum sparking potentials of barium, magnesium, and aluminum in argon. H. Jacobs and A. P. LaRocque. bibliog diags J Ap Phys 18:199-203 F '47
Minimum sparking potentials of barium, magnesium, and aluminum in helium. H. Jacobs and A. P. LaRocque. bibliog diags Electrochem Soc Trans 91 (preprint 20): 297-310 '47
Molal electrode potentials of the silver-silver chloride electrode in *i*-propyl alcohol-water mixtures from 0 to 40°. R. L. Moore and W. A. Felsing. bibliog Am Chem Soc J 69: 1076-9 My '47
Oxidation potentials of some compounds related to vanillin. D. M. Ritter. bibliog Am Chem Soc J 69:46-50 Ja '47
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene - tetrahydroxyquinone - rhodizonic acid. P. W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69:326-9 F '47
Oxidation-reduction potentials of thiol-dithio systems; thiourea-formamidine disulfide. P. W. Preisler and L. Berger. bibliog Am Chem Soc J 69:322-5 F '47
Progress in industrial measurement; some new scientific aids described. L. Sanderson. diag Chem Age (Lond) 57:493-4 O 11 '47
Proposed interpretation of the zeta-potential. L. B. Robinson. bibliog J Chem Phys 14: 721-4; 15:113 D '46, F '47
Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46
Rise of the wire-potential in counters. S. A. Korff. bibliog Phys R 72:477-81 S 15 '47
Some e.m.f. and conductance measurements in concentrated solutions of zinc and calcium chlorides. R. A. Robinson and R. O. Farrelly. bibliog J Phys & Colloid Chem 51:704-8 My '47
Some formal oxidation-reduction potentials. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:462-3 Jl '47
Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47
Studies on oxidation-reduction mechanism; potential humps and the equivalence change principle. A. E. Remick. bibliog Am Chem Soc J 69:94-5 Ja '47
Surface states and rectification at a metal semi-conductor contact. J. Bardeen. bibliog diags Phys R 71:717-27 My 15 '47

POTENTIAL, Theory of
Application of the theory of the complex variable to the mapping of some potential functions. E. L. Morgan. diags Franklin Inst J 243:309-22 Ap '47
Some integral equations of potential theory. H. Bateman. bibliog J Ap Phys 17:91-102 F '46; Correction. F. W. J. Olver. 17:1127 D '46

POTENTIOMETERS
Current developments in instrumentation in analysis. R. H. Müller. il diag Ind & Eng Chem Anal ed 18:sup23-4 D '46
Demonstration potentiometer. P. Bender. il J Chem Educ 24:195-6 Ap '47
Electronic recording instruments; new high-speed recording potentiometer. V. L. Parsegian. diag Elec Eng 66:41-2 Ja '47
Electronic recording instruments; sweep-balance recorders. G. Keinath and R. K. Hellmann. il diag Elec Eng 66:42-4 Ja '47
German potentiometer gives precise readings. Product Eng 18:169 Ag '47
Multiple point repeating switch for use with a recording potentiometer. A. M. Altschul. il diags R Sci Instr 18:195-7 Mr '47
Potentiometers and other resistance conversion elements are important components of instruments. R. H. Müller. Anal Chem 19: sup25A-6A F '47
Potentiometric secular equation computer. A. A. Frost and M. Tamres. bibliog il diag J Chem Phys 15:383-90 Je '47
Reducing potentiometer loading error. L. A. Nettleton and F. E. Dole. diags R Sci Instr 18:332-41 My '47
Self-balancing potentiometer. T. A. Rich and G. F. Gardner. il diags Gen Elec R 50:29-32 S '47

POTHEADS
How to ground, bond and insulate cables, potheads and joints; engineering reference sheet. diag Elec World 128:122 O 11 '47

POTOMAC electric power company
Distribution due soon in Potomac shares. Barron's 27:27 O 20 '47
Preferred stock offered. Comm & Fin Chr 166:763-4 Ag 25 '47
Public utility securities. Comm & Fin Chr 166:720 Ag 21 '47
Recapitalization plan approved. Comm & Fin. Chr 166:471 Ag 4 '47

POTOMAC river
Start new attack on Potomac pollution. Eng N 139:365 S 11 '47

POTTER, Van Rensselaer, 1911-
Paul-Lewis laboratories award to V. Potter. por Chem & Eng N 25:2811 S 29 '47

POTTER, Wilfrid C. 1861-1947
Sketch. por East Underw 48:33 Je 20 '47

POTTERIES
Hobby gives Louisiana its second commercial pottery; Angells' pottery. il Cer Ind 48:80+ F '47

Electric equipment

Potters' mills; changing over to electrical operation. il diag Elec R (Lond) 139:559-63; 140:103-8 O 11 '46, Ja 17 '47

Employees

Management's opportunity to advance occupational health. R. H. Pass. Ind Med 16: 82+ F '47
Silicosis in the whiteware industry. L. M. Merritt. Safety Eng 93:56 Je '47

Equipment

Handles applied to cups more accurately with automatic machine; patent. il diags Cer Ind 47:86+ D '46
Mechanization in the whiteware industries; abstract. W. Emerson. Cer Ind 48:90+ Je '47
Miller automatic jiggering machine; abstract. W. C. Miller. Cer Ind 48:88+ Je '47
Pottery makers go modern; industry mechanizes to cut costs, improve quality. Bsns W p20 S 13 '47
Vapofier accomplishes change-over from gas to oil in few minutes. il Brick & Clay Rec 111:51 Ag '47; Same. Cer Ind 49:59 Ag '47

POTTERS association, United States. See United States potters association

POTTERY
Alumina in whiteware; vitreous chinaware, semivitreous dinnerware, electrical porcelain, cooking ware and sanitary ware. C. R. Austin and others. il Am Cer Soc J 29: 341-54 D 1 '46
Onondaga Pottery's 75th anniversary shows America coming of age in the production of fine china. il Cer Ind 48:90-2+ Mr '47
Translucency meter for use in whiteware research. N. L. Haldy and others. il diags Am Cer Soc J 30:153-9 My 1 '47

See also

Ceramic materials	Glazes
Ceramics	Kilns
Clay	Potteries
Cooking ware	Stoneware
Cups	Tableware
Enamel and enameling	Tiles

also United States potters association

Decoration

Are you applying and firing decals properly? Cer Ind 48:92 My '47
Reactions occurring in decoration of vitrified chinaware using underglaze decalcomania method. A. M. Flannigan. Am Cer Soc J 30:125-9 Ap 1 '47

Manufacture

Floor and wall tile industry in Germany, Austria and Czechoslovakia. Cer Ind 48: 136+ Ap '47
Gas-fired infrared dryer used with automatic jigger; Sterling china co. O. O. Todd. il Cer Ind 48:70+ F '47
Haeger potteries, inc. celebrates a 75th anniversary. il Cer Ind 48:106-9 Ap '47
Pottery bodies; recipes. Cer Ind 48:140+ Ja '47
Pottery firing; popularity of electrical methods. il Elec R (Lond) 140:287-93 F 14 '47
Town gas in the ceramic industry. J. E. Stanier. Gas J (Lond) 248:1109+ D 18 '46

POTTERY, Chinese
Chinese ash glaze. M. Ling. diag Am Cer Soc Bul 26:7-8 Ja 15 '47
Some working methods of the Chinese potter; abstract. W. A. Weldon. Cer Ind 48:60 Je '47

POTTERY industry

California

Artware pottery gossip from southern California. J. E. Tufft. il Cer Ind 47:92 S; 98 O; 100 N '46

Georgia

Chinaware industry for Dixie; Design, inc. plant at Marietta. J. Mebane. il Manuf Rec 116:30-1+ Mr '47

Germany

Head of Lenox, inc. reports German, Austrian economic conditions. L. Brown. Cer Ind 49:86+ Ag '47

Great Britain

Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46
Wedgwoods touring U.S. and Canada; interview. Cer Ind 49:98+ Jl '47

POULTRY

Diseases and pests

Fowl spirochetosis transmitted by argas persicus (Oken), 1818 from Texas. A. L. Burroughs. bibliog Science 105:577 My 30 '47
Genetic control of lymphomatosis in the fowl. F. B. Hutt and R. K. Cole. bibliog Science 106:379-84 O 24 '47
Germicidal lamps prevent roup among chicks. il Elec World 127:78 Ap 26 '47
pH stability of viruses of Newcastle disease and fowl plague. H. E. Moses and others. bibliog Science 105:477-9 My 2 '47
Isolation of an unidentified spirochete from hen's eggs after inoculation with liver tissue from hens. E. A. Steinhaus and L. E. Hughes. Pub Health Rep 62:309-11 F 28 '47

POULTRY, Frozen
Colorful birds; Birds Eye's redesigned packages use four-color reproductions. il Mod Packaging 21:102-3 O '47

POULTRY feathers. See Feathers

POULTRY hatcheries
Diesels mother baby chicks; power plant for hatchery. il Diesel Power 24:1329+ N '46

POULTRY houses
Soil cable warms poultry house water. diag Elec World 127:90+ Mr 1 '47

Heating and ventilation

Data for proper design of poultry houses result from government research. H. G. Barott. il Heat & Ven 44:77-9 Ja '47
Radiant heated chickens; panel heating in chicken house; with cost data. il Dom Eng 168:164-5 O '46; Same. Heating-Piping 18: 91-2 D '46

POULTRY industry and trade
Chickens get an uplift. Fortune 35:156+ Mr '47
Dermatological hazards; the poultry industry. M. H. Samitz. Ind Med 16:489-90 O '47

Canada

Canada's foreign trade in baby chicks, 1940-1946; table. For Comm W 25:24 D 28 '46

Cuba

Cuba's poultry and eggs; trade shows sharp shifts. For Comm W 26:7+ Ja 11 '47

POULTRY scalders, Electric
Electric poultry scalder dresses birds for sale. il Elec World 127:94+ Je 21 '47

POULTRY science association
Annual meeting, 36th, Clemson, S.C. Aug. 25-28. Science 106:339 O 10 '47

POWDER, Bath
Talc of the town; bottle of polyethylene; a dispensing talcumizer for bath powder. il Mod Packaging 20:87 Ag '47

POWDER boxes
Powder boxes combine styrene and acetate. il Mod Plastics 24:132 N '46
Redesigning talcum container for plastic. il Mod Plastics 24:99 F '47

POWDER cutting. See Oxyacetylene cutting

POWDER metallurgy. See Metal powders

POWDERED aluminum. See Aluminum, Powdered

POWDERED brass. See Brass, Powdered

POWDERED bronze. See Bronze, Powdered

POWDERED copper. See Copper, Powdered

POWDERED glass. See Glass, Powdered

POWDERED iron. See Iron, Powdered

POWDERED metals. See Metal powders

POWDERED milk. See Milk, Dried

POWDERED nickel. See Nickel, Powdered

POWDERED soap. See Soap, Powdered

POWDERS

Air operated feeder for small flows of powders and granulated solids. A. H. McKinney. diag Chem Eng 54:124 Ap '47

Apparatus for dispersing finely divided dusts. L. S. Sonkin and others. diag J Ind Hygiene 28:273-5 N '46

Dust-free packaging of powdered products. il diag Comp Air Mag 52:203 Ag '47

Easily cleaned measure for powders used in spectrography. C. Feldman. diags In U S Geol S Bul 950:133-4 '46

Fluidized powder techniques; abstract. E. R. Gilliland. Chem Eng 54:270+ Ap '47

Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. N. Pfund. bibliog Opt Soc Am J 37: 826-32 O '47

Preparation of standard powders for reference in particle-size measurement. E. L. Gooden and R. L. Updike, jr. Ind & Eng Chem Anal ed 18:802 D '46

Quantitative analysis of mixed powders with the Geiger-counter X-ray spectrometer. Z. W. Wilchinsky. diag J Ap Phys 18:929 O '47

Random-absorption effect in diffraction of X-rays from coarse powders. Z. W. Wilchinsky. diag Phys R 72:511 S 15 '47

Specific surface of powders; a modification of the theory of the air-permeability method. P. J. Rigden. bibliog diags Soc Chem Ind J 66:130-6 Ap '47

Studies on the aging of precipitates and co-precipitation; compressibility of silver bromide powders. I. Shapiro and I. M. Kolthoff. bibliog diags J Phys & Colloid Chem 51:483-93 Mr '47

See also

Dust
Flour
Metal powders
Particles

POWER (mechanics)

Power and industry of the future. J. E. Clifford. il Mag of Wall St 79:351-2+ Ja 4 '47

Power consumption of agitators. J. J. Martin. bibliog Am Inst Chem Eng Trans 42:777-81 O-D '46

Power; where do we go from here? H. A. Winne. Mech Eng 68:1032-4 D '46; Same. Power 90:855+ D '46

Theory of automatic control systems. M. A. Melvin. diags J Ap Phys 18:704-22 Ag '47

See also

Airplanes—Auxiliary power
Atomic power
Chemical plants—Power
Coal mines and mining—Power
Compressed air
Dynamometers
Electric power
Hydroelectric power
Machinery
Muscular power
Petroleum engineering—Power
Power factor
Power plants
Power transmission
Servomechanisms
Ship propulsion
Steam
Steel works—Power
Television receiving apparatus—Power supply
Wind power

POWER cost

Coal mine power costs. G. B. Southward. il Min Cong J 33:25-8 Ja '47

Increased power resources of this country are available at lower cost. C. O. Brown. Ind & Eng Chem 39:sup79A-80A Mr '47

What is the most economical drive for an air compressor? W. W. Gaylord. il Power Pl Eng 51:81-2 Mr '47

POWER factor

Approximate voltage regulation at different power factors. K. M. Lovewell. diag Elec World 126:100 N 23; 120 D 7 '46

Capacitor rental encourages power factor correction. H. W. Meeks. Elec World 128:92+ S 27 '47

Capacitors for power factor correction. R. E. Marbury. il diags Power Pl Eng 51:108-13 Mr '47

Estimating three-phase power factor. G. W. Stubbings. diags Electrician 139:843-4 S 19 '47

Handy power factor pie; chart. Power Pl Eng 51:100 Je '47

Intelligent planning cuts fuel loss, raises power factor; Hessler laundry service, inc. W. Note. il diags Power 91:399-400 Je '47

Motor design and power factor. H. Sparke. Elec R (Lond) 141:129-30 Jl 25 '47

New analogy for power factor. Elec World 127:82+ Ap 26 '47

Power factor correction controlled by time clocks; Wallace & Tiernan company. il diags Factory Management 105:111-13 Jl '47

Servo-mechanism for control of power factor. G. C. Barnes, jr. diags (Eng. exp. sta. ser. 63) 30p pa 25c Virginia polytechnic institute, Blacksburg, Va. '46

Table for power factor and corrective capacity. G. F. Johnson. Elec World 126:80-1 D 21 '46

Vector chart for determining capacitor KVAR required to increase power factor to any desired value. Power Pl Eng 51:106 Ja '47

See also

Reactive power

POWER factor, Dielectric

Effect of combined carbon monoxide on the power factor of polythene. W. Jackson and J. S. A. Forsyth. bibliog Inst E E J 94 pt 3:55-7 Ja '47

High-voltage cable testing at Birmingham power station. il diag Elec R (Lond) 141: 363-4 S 5 '47; Electrician 139:684-5 S 5 '47

POWER of appointment

Beware of your rights under wills or trusts; if you have power to select beneficiaries, your estate may be taxed for what they get. J. P. Reeves. Barron's 27:27 My 19 '47

POWER plant auxiliaries. See Electric driving—Power plant auxiliaries

POWER plant engineering (periodical)

Power plant engineering 50 years ago. il Power Pl Eng 50:88-93 D '46

POWER plant insurance. See Insurance, Power plant

POWER plants

ASME semi-annual meeting, Chicago, June 15-19; abstracts of power plant papers. diags Power 91:546-8+ Ag '47; Power Pl Eng 51:124+ Ag '47

American society of mechanical engineers annual meeting; abstracts of power plant papers. il diags Power 90:931-8 Mid-D '46; Power Pl Eng 51:113-18+ F '47

American society of mechanical engineers spring meeting; abstracts of power plant papers. Power 91:234+ Ap '47

Ebasco packaged 5,000-kw power plant. il Elec World News ed 126:20 D 14 '46

Fuel and the future conference; abstracts. Elec R (Lond) 139:605-8 O 18 '46; Electrician 137:1067-9 O 18 '46

Midwest power conference, 10th, Chicago, March 31-April 2. diag Power 91:314-16+ My '47; Power Pl Eng 51:111+ My '47

Modern plant survey. Power 91:369-84 Je '47

Power; where do we go from here? H. A. Winne. Mech Eng 68:1032-4 D '46; Same. Power 90:855+ D '46

Trends and developments in the power industry. il diags Power Pl Eng 51:69-83 Ja '47

What is new in engineering? E. E. Johnson. Blast F & Steel Pl 35:1114+ S '47

See also

Boiler plants
Electric plants
Hydroelectric plants
Piping (power plants)
Steam plants
Water supply for power plants

Accounting

Is BTU accounting worth while in the power plant. J. E. A. Warner. Paper Ind 28:1360-1 D '46

Costs

Value of supercharged Diesels shown by performance and cost comparisons. V. M. Holmes. Power 91:752-4+ N '47

Diesel engine plants

ARD-33; largest floating drydock. il Diesel Power 25:56-8 Mr '47

Button, button; Diesel plant for button factory of Peter Emr & sons pearl button and novelty co. il Diesel Power 25:43+ Jl '47

Diesel and gas engine equipment. A. M. Boehm. il Water & Sewage Works 94:379-83 O '47

POWER plants—Diesel engine plants—*Cont.*
Diesel engines in municipal usage. R. H. Morse, jr. Water & Sewage Works 94:18 Ja '47
Diesel engines replacing coal burners in New York buildings. il Diesel Power 25:50-3+ F '47
Diesel joins the heat pump; power and air conditioning equipment for Wilton community center. il diag Diesel Power 25:54-9 Ag '47
Diesels mother baby chicks; power plant for hatchery. il Diesel Power 24:1329+ N '46
Father Knickerbocker looks ahead. il map diag Diesel Power 24:1070-4, 1330-3+, 1452-5+ S, N-D '46
Gage and instrument standardization. il Diesel Power 25:43 S '47
Heavy-oil engine working costs. W. A. Tookey. Engineering 163:124 F 7 '47
High speed oil; pumping station at McCrae, Pa. il map Diesel Power 25:75-7+ O '47
Hospital economics; Diesel power for Lenox Hill hospital. il diags Diesel Power 25:46-9 Ap '47
Mobile floating Diesel power plant; Electra. il Diesel Power 25:57 Jl '47
Standard practices for low and medium speed stationary Diesel engines; reprint of revised edition by Diesel engine manufacturers association. diags Diesel Power 24: 1347-50, 1462-5 N-D '46; 25:96-9 Ja; 86-9 F; 90-3 Mr; 102-5 Ap; 99-100+ Je; 58-61 Jl; 83-5 Ag; 77-9+ S; 82-5 O; 80+ N; 78-82 D '47; 26:83-7 Ja '48
Supercharged Diesel puts 500 kw in space originally provided for 300; new unit at No. 2 Park avenue, New York. il diags Power 91:461-3, 474-5 Jl '47
Supercharging gas-burning Diesel yields maximum performance; Lehigh portland cement co. il diags Power 91:396-8 Je '47
Texas Diesel ice plant. il Diesel Power 25: 71+ F '47
Value of supercharged Diesels shown by performance and cost comparisons. V. M. Holmes. Power 91:752-4+ N '47
Wind tunnel power; Diesel plant at Langley field, Va. il Diesel Power 25:42-3+ O '47

Directories

Engineers' power plant directory and classified products listing for Indiana, Illinois, Wisconsin. 311p pa $10 Rockwell F. Clancy co, 75 East Wacker drive, Chicago 1 '46

Efficiency

Power plant performance reports step up sales for Northern equipment company. D. Allshouse. il Ind Marketing 32:46-7+ Ap '47

Employees

What are duties of watch engineer, fireman, oiler? Power Pl Eng 51:98-9 Jl; 103 Ag; 98-9 S; 97 O '47
Work schedules. Power Pl Eng 51:100-2 Ja '47

Equipment

Allis-Chalmers reports on 1946 technical progress. Power Pl Eng 51:130 Je '47
Can you specify what you want? how to write specifications. R. H. Emerick. il Power 91:467-9+ Jl '47
Champion-International adds 70,000-lb-per-hr boiler. L. B. Rogers. flow diag il plan diags Power Pl Eng 51:68-73 S '47
Corrosion of plant equipment by steam and water. R. C. Ulmer. il Power Pl Eng 50:72-5+ O; 90-2 N '46; 51:108-9+ Ja '47
Dependable steam and power for Lee of Conshohocken. F. Leopold. flow diag il diags Power Pl Eng 50:70-4 N '46
Directory of manufacturers; buyers' guide of over 700 power products. Power 90:sup55-138D Mid-D '46
Electrical engineering in 1946. il Engineer 183:55-7, supp 3, 69-70 Ja 10-17 '47
Engineers' power plant directory and classified products listing for Indiana, Illinois, Wisconsin. 311p pa $10 Rockwell F. Clancy co, 75 East Wacker drive, Chicago 1 '46
Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69: 771-7; Discussion. 777-8 O '47
Flexible shafts and couplings protect high-speed gears. R. L. Benford. il diag Power 91:477-8 Jl '47
How long can yesterday's equipment take it in today's power plant? A. A. Potter. il Power 91:257+ Ap '47
Low-pressure ash-sluicing systems; with particular reference to power station practice; with cost data. T. H. Carr. plans diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):294-302; pl 1-2; Discussion. il 303-10 '45
Modern thermometry in the power plant. A. H. Lamb. il Power Pl Eng 51:90-2 Ag '47
New bulletins; 482 items covering equipment and supplies used by power engineers. Power 90:939-48+ Mid-D '46
New plant ties into old one without interruption; National lead co; Titanium pigment div. il diags Power 91:617-19 S '47
Power for Detroit sulphite pulp & paper co. flow diag il plan diags Power Pl Eng 51: 68-70 O '47
Power plant equipment and operation. il diags Power Pl Eng 51:72-5 Ja '47
Power plant equipment in big demand. V. Bell. il Steel 120:61-3 Mr 31 '47
Power show preview, 1946; with list of exhibitors. il Power Pl Eng 50:112-16+ N '46
Review of power and mechanical equipment. il diags Power 90:891-930 Mid-D '46
Typical industrials 200 psi and above installed or under construction since April, 1946; tabulation. J. C. McCabe, comp. Power 91: 374-7 Je '47
Typical industrials under 200 psi built or on order since April, 1946; tabulation. J. C. McCabe, comp. Power 91:378 Je '47
Weighing coal in the power plant. W. G. Hudson. diags Power Pl Eng 51:101-3 S '47
What the power engineer should know about electrostatic precipitators. diags Power Pl Eng 51:80-2 S '47
What voice recording can do in the power industry. G. W. Dyson. il Power Pl Eng 51:102-3 Jl '47

See also
Boilers
Coal handling
Condensers (steam)
Electric driving—Power plant auxiliaries
Steam plants—Equipment

Fuel

Boiler installations on the Continent, and future problems. J. H. Bock. il map diags Inst Mech Eng J & Proc 155 (War emergency issue no 22):387-99; Discussion. 399-400 '46
Clogging of bituminous coal in bunkers. R. F. Legget. bibliog il diags A S M E Trans 69: 525-31; Discussion. 531-3 Jl '47
Coal handling with earth-moving equipment; synthetic-rubber of Polymer corporation. R. L. Hearn and R. F. Legget. il plan diag Mech Eng 69:559-63 Jl '47
Coal silo increases boiler-room efficiency; Dixie mercerizing co. E. D. White. il diags Textile World 97:139+ S '47
Crushing coal for the power plant. W. G. Hudson. il diags Power Pl Eng 51:73-5+ Jl '47
How a steel mill prepares blast-furnace gas for fuel. W. M. Cline, jr. il Power 91:746-7 N '47
Know coal and its selection for smokefree combustion. L. N. Rowley and J. C. McCabe. il Power 91:758-61 N '47
New ideas in power plant coal handling. W. G. Hudson. il Power Pl Eng 51:118+ Je '47
Selling gas for firing large boilers; comparative fuel costs and efficiencies. L. S. Reagan. Am Gas Assn Proc 1946:248-52
Soda black liquor generates steam at new S. D. Warren co. plant. R. E. Gilman. il diag Power Pl Eng 51:114-18 Ja '47
Spiral plant converts silt into better boiler fuel. flow sheet il diags Coal Age 52:85-8 Je '47
Steam generation in steel mills. F. X. Gilg. diags Blast F & Steel Pl 35:106+ Ja '47
What coal fluidization may do for the power plant of tomorrow. A. D. Singh. diag Power Pl Eng 51:112-14+ O '47

POWER plants—Fuel—*Continued*
Why foresight in coal-bunker design pays off in trouble-free operation. E. Hahn. diags Power 91:320-1 My '47

Gas engine plants

Diesel and gas engine equipment. A. M. Boehm. il Water & Sewage Works 94:381-3 O '47
Gas engine maintenance and operation; with cost data. L. S. Kraus. il Water & Sewage Works 94:81-8 Mr '47

Gas turbine plants

Elimination of waste products of high moisture content in a gas-turbine system. J. H. Potter. bibliog flow diag diags Mech Eng 69:820-2 O '47
Gas turbine applications in iron and steel works; power applications. A. T. Bowden. plans diags Iron & Steel Inst J 156:98-103 My '47
Gas-turbine driven centrifugal compressors for natural gas pipe lines. E. T. P. Neubauer. il diags Pet Eng 19:166+ O '47
Gas-turbine possibilities in the stationary power plant field; with cost data. L. N. Rowley and B. G. A. Skrotzki. Power 91: 392-5, 452-4 Je-Jl '47
Gas turbine power plant. Power Pl Eng 51:75 Ja '47
Gas turbine power plant. J. I. Yellott. bibliog il plans diags Power Pl Eng 51:84-8+ Ja; 74-9 F; 104-7+ Ap; 106-10 My; 113-14+ Jl; 113-14+ S; 124+ N '47; [cont as] Power Generation 52:94-7 F '48
Modern gas turbine in the industrial power plant. J. R. Haskin, jr. bibliog Mech Eng 69:475-8 Je '47
Power generation trend upward. H. A. Winne. Elec World 127:100 Ap 12 '47
Regulation theory for thermal power plants employing a closed gas cycle. F. Salzmann. diag A S M E Trans 69:329-35 My '47
10,000-kw gas turbine. C. Seippel. diags Mech Eng 69:856-8 O '47
2000 horsepower gas turbine generator set. T. J. Putz. il Blast F & Steel Pl 34:1548-50+ D '46; Same cond. Power 91:34-6 Ja '47; Excerpts. Iron Age 158:137+ D 12 '46; Pet Eng 18:1806+ D '46; Oil & Gas J 45:27 Ja 4 '47; Abstract. Elec W 126:109-11 D 7 '46
Where gas turbines will fit in future power fields; development and application of units built in Switzerland. H. Pfenninger and S. A. Tucker. il diags Power 90:728-31; 91:24-7 N '46, Ja '47

Maintenance and repair

Adequate organization and supervision necessary for proper overhaul and repair of machinery. H. M. Marsden. Locomotive 46:196-9+ Jl '47
Repairing a corroded breeching. C. L. Shobe. diags Power Pl Eng 51:92-3 S '47
They made power, but how? difficulties in operating saw mill power plant. R. L. Brown. Power Pl Eng 50:96-8 D '46
To become a capable engineer know your plant intimately. G. Feller. il Power 91: 261-3 Ap '47

Piping

See also
Piping (power plants)

Records

Plant data book shows the way to improve operation. diags Power 91:470-2 Jl '47

See also
Electric motors—Records

Safety measures

Inspection for safety of power plant equipment. W. D. Halsey. Locomotive 46:163-6+ Ap '47
What you can do to prevent power plant casualties. R. H. Emerick. il Power Pl Eng 50:88-91 O '46; Discussion. 51:98-9 F '47

Tables, calculations, etc.

Save hours of calculation by using energy-load and load duration curves. G. C. Boyer. Power 91:385-8 Je '47

POWER plants, Floating
Anchorage, Alaska, power plant; SS Sacketts Harbor. il Elec Eng 66:1004 O '47
Les centrales électriques flottantes. diag Génie Civil 124:317 Ag 15 '47
Diesel grain elevating. il Diesel Power 25: 60-1 Mr '47
Floating pneumatic grain-handling plant. il diags Engineering 163:210-14, 216 Mr 21 '47
Mobile floating Diesel power plant; Electra. il Diesel Power 25:57 Jl '47
Tanker provides power on California coast; former Russian turbine-electric tanker, SS Donbass III provides additional electric power in Humbolt area. il Power 91:357 My '47

POWER plants, Outdoor
Do outdoor and semi-outdoor plants pay? power engineers give views at ASME meeting. diag Power 91:234 Ap '47
Operating and design engineers compare notes on outdoor plants; abstract of symposium at spring meeting of ASME. il diag Power 91:304-9+ My '47

POWER plants, Portable
New York Central equips car to furnish electric power. il Ry Age 123:20 Jl 5 '47; Same. Ry Mech Eng 121:320-1 Je '47
Packaged boilers. M. Frisch and H. H. Hemenway. bibliog il diags A S M E Trans 69:177-84; Discussion. 184-9 Ap '47
Tests of 1000-kw packaged steam power plant. il plan diag Power Pl Eng 50:116-17 D '46
Trailer-mounted power plant; part of gravel contractor's portable crusher set-up. il Roads & Sts 90:94 My '47

POWER pools. See Electric plants—Interconnection

POWER show. See National exposition of power and mechanical engineering

POWER transmission
Automatic stoker transmission. il diags Machine Design 18:147-8 N '46
Electrical slip-recorder. N. Haglov and R. C. Parker. il diags Engineering 164:365-6 O 17 '47
Hard steels improve cone type speed transmission. il diag Product Eng 18:95 Mr '47
How we motorized 95 power presses; General instrument corp. S. A. Karch. il diag Factory Management 105:60-1 Ap '47
Infinitely variable speed gear. il diag Engineer 183:167 F 14 '47
Mavor & Coulson gear transmits 200 h.p. to conveyor belt. il diag Mech Handling 34:314-16 Je '47
Modern power transmission results in lower power costs. il Rayon 28:345-8 Je '47
Modern rotary drilling; mechanical transmission. J. Zaba. Oil & Gas J 46:111 My 24 '47
Multiple belt drive with thrust equalizing arrangement. M. H. Ball. diags Mach 53:163-9 Ag '47
New approach to design; system for developing any type of power-transfer mechanism by combining basic catalogued elements; invention of H. Ziebolz. il diags Machine Design 19:146-8 Je; 123-6 Jl '47
New equipment. il Iron Age 159:67-72 Ja 30 '47
Planetary transmissions. L. A. Graham. diags Machine Design 18:115-19 N '46
Power-transmission belts; special section. F. A. Annett. il diags Power 91:93-108 F '47
Variable-speed drives. diags Factory Management 105:113-24 Ag '47
What is the most economical drive for an air compressor? W. W. Gaylord. il Power Pl Eng 51:81-2 Mr '47
Zero-backlash arrangements for gear trains and drives. K. E. Lofgren. diags Product Eng 18:150-2 Jl '47

See also
Automobiles—Transmission
Bearings
Belting
Chain gear
Clutches
Compressed air
Couplings
Electric distribution
Electric driving
Electric transmission
Gearing
Hydraulic transmission
Joints, Universal
Machinery
Power (mechanics)
Pulleys
Servomechanisms
Shafting
Speed variation

Tables, calculations, etc.

Belt speed chart. Power Pl Eng 50:112 D '46

POZZUOLANA
New York specifications covering puzzolan cement. Rock Prod 50:96 Jl '47

PRACTICAL jokes
Sounds familiar, doesn't it? eye lost through horseplay. F. J. Sluze. Safety Eng 92:52 D '46

PREACHING
Action from the pulpit. R. A. Burkhart. Ann Am Acad 250:76-81 Mr '47

PRECIPITATION
Acidic isolation of low-ester pectinic acids. R. M. McCready and others. bibliog Ind & Eng Chem 38:1254-6 D '46
Aging of precipitates and coprecipitation; low temperature conductivity of silver bromide. I. Shapiro and I. M. Kolthoff. bibliog diags J Chem Phys 15:41-6 Ja '47
Determination of sodium and potassium in silicates. S. Kallmann. bibliog Ind & Eng Chem Anal ed 18:678-80 N '46
Determination of sulfate as barium sulfate; in the presence of metals of the acid hydrogen sulfide group. W. H. Millett and W. M. McNabb. bibliog Franklin Inst J 243:205-17 Mr '47
Electrokinetic potentials of precipitates. L. H. Reyerson, I. M. Kolthoff and K. Coad. bibliog diags J Phys & Colloid Chem 51:321-32 Ja '47
Fractional precipitation of molecular-weight species from high polymers; theories of the process and some experimental evidence. D. R. Morey and J. W. Tamblyn. bibliog diags J Phys & Colloid Chem 51:721-46 My '47
Precipitation of mercuric chloride with dithiane. J. B. Schroyer and R. M. Jackman. J Chem Educ 24:146-8 Mr '47
Studies on the aging of precipitates and coprecipitation; compressibility of silver bromide powders. I. Shapiro and I. M. Kolthoff. bibliog diags J Phys & Colloid Chem 51:483-93 Mr '47

See also
Electric precipitation

PRECIPITATION, Electric. See Electric precipitation

PRECIPITATION hardening. See Hardening

PRECISION casting. See Lost wax process

PREDISSOCIATION
Theory of accidental predissociation. I. Kovács and A. Budó. bibliog J Chem Phys 15:166-73 Ap '47

PREFABRICATED bridges. See Bridges, Prefabricated

PREFABRICATED buildings. See Buildings, Prefabricated

PREFABRICATED home manufacturers' institute
Annual meeting, 4th, Chicago, March 25-26. Am Bld 69:152 My '47

PREFABRICATED houses. See Houses, Prefabricated

PREFERRED accident insurance company of New York
Now on reorganized basis. Weekly Underw 156:1356 My 17 '47; East Underw 48:30 My 16 '47
Strengthened by RFC loan of $3,000,000. East Underw 48:30 F 14 '47; Nat Underw 51: 19+ F 13 '47

PREFERRED numbers
Diaphragm control valves conform to preferred numbers. B. A. Irwin. il Product Eng 18:85-9 Ap '47
Filter design tables based on preferred numbers. H. Jefferson. diags Wireless Eng 24: 242-5 Ag '47
Preferred numbers advantageous in designing a line of standard units. R. O. Tjensvold. il Machine Design 19:133-6 Je '47

PREFERRED stocks. See Stocks, Preferred

PREGNANCY
Blood test for estimating the week of pregnancy. E. W. Page. Science 105:292-3 Mr 14 '47

PREHEATERS. See Air preheaters; Plastic materials—Preheating

PREHISTORIC man. See Man, Prehistoric

PREJUDICE, Religious. See Religious prejudice

PRE-MAKEREADY. See Printing, Practical—Presswork

PREMIUMS (merchandizing)
Baker's dozen lifts feed sales for Sunlight Mills; lagniappe contest. Sales Management 58:32-3 Mr 1 '47
How General Foods uses premiums to push sales; national advertising combined with premiums at point of sale. P. Lillard. il Adv & Sell 40:48+ Jl '47
Kitchen set makers offer decals as premiums; decorator kit given free with purchase. Sales Management 59:140 O 15 '47
Premium users and their offers Ptr Ink 219: 59+ My 2 '47
Premiums. D. Jones. Adv & Sell 40:56 Ap '47
Premiums; package is key medium for promotion. il Mod Packaging 20:89-94+ Ap '47
Premiums' rebirth. Bsns W p47 F 8 '47
Pre-tests insure pulling power of premiums for General Mills. E. W. Kurtz. il Sales Management 59:90+ Ag 15 '47
Using premiums as a means of developing markets. J. H. Rhoads. il Dom Comm 35: 19-25 Ap '47
We're strong for premiums after 96 years' experience. R. Brenner. Ptr Ink 219:34-5 Ap 18 '47
Which shall we choose, premium or contest? E. Rushmore. Sales Management 58:108-9 My 20 '47

See also
Advertising copy—Premium offers
Television advertising—Premium offers

PREPACKAGING (term)
Whither pre-packaging? views of a government marketing economist. F. L. Thomsen. Mod Packaging 20:132-4 N '46

PREPACKAGING of fruit. See Fruit—Prepackaging

PREPACKAGING of meat. See Meat—Prepackaging

PREPACKAGING of vegetables. See Vegetables—Prepackaging

PREPRINTS. See Advertisements—Preprints

PRESIDENTIAL candidates, 1948
Eisenhower boom. C. Bargeron. Comm & Fin Chr 166:1007 S 11 '47
Eisenhower-for-president talk rises in both parties. H. Davenport. Barron's 27:11 S 1 '47
Eisenhower leads Truman in presidential popularity poll; Gallup poll. Iron Age 160: 121 O 9 '47
Fortune survey; election, 1948. Fortune 35:5-6 Mr '47
Fortune survey; the political mood, summer 1947. Fortune 36:5-6+ S '47
Only slight majority in U.S. say they think Republicans will win the coming election; Gallup poll. Iron Age 159:109+ My 29 '47
Public believes Eisenhower and MacArthur will not run for presidency; Gallup poll. Iron Age 159:105 F 27 '47
Republicans. Fortune 35:77-85+ Ap '47
Strength and weaknesses of Stassen as candidate analyzed in nationwide poll. Iron Age 159:109+ Ja 9 '47
Swing of voters turns sharply back to Democratic party; Gallup poll. Iron Age 159: 107+ Mr 13 '47
Truman and Dewey continue as top choice of voters for 1948; Gallup poll. Iron Age 159:117 D 19 '46
Truman, Dewey, Wallace most popular candidates of union members; Gallup poll. Iron Age 160:127+ S 18 '47
Truman loses some support but still leads by wide margin; Democrats lead Republicans; Dewey and Stassen popular with Republicans; Gallup poll. Iron Age 160:109+ Jl 24 '47
Voters wonder about General Eisenhower for next election; Gallup poll. Iron Age 160: 119-20 S 4 '47
Wallace's popularity falling; Gallup poll. Iron Age 159:107 My 1 '47

PRESIDENTS (United States)
People divided on plan of succession to presidency; Gallup poll. Iron Age 159:107 Mr 27 '47

PRESIDENTS (United States)—*Continued*

Powers and duties

Public thinks President should be allowed to veto parts of any bill sent for approval; Gallup poll. Iron Age 159:117+ Je 19 '47
War powers plan. Bsns W p24+ F 15 '47

Term of office

Approval by number of states of proposed amendment limiting presidency to two terms. Comm & Fin Chr 165:2534 My 8 '47
Two-term limitation on the presidency; Gallup poll. Iron Age 159:107+ Ja 16; 105 My 15 '47
Voters favor placing limit on terms for presidents and senators; Gallup poll. Iron Age 159:123+ Mr 6 '47

PRESS

See also
Freedom of the press
Journalism
Newspapers
Periodicals

PRESSED steel car company

Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:286 Je 7 '47

PRESSES

Air presses lighten the job; Arrow, Hart & Hegeman mfg. co. T. W. Shenton. diags Am Mach 91:95 Ag 28 '47
Better stampings, bigger sales. il Bsns W p62+ Je 28 '47
Bliss single-crank toggle presses. il Mach 53: 205 F '47
Clearing non-flex gap-type press operated by rocker arm, eccentric. il diag Am Mach 91: 172 Jl 17 '47
Fundamentals of forging; presses and rolls. A. Ashburn. diags Am Mach 91:115-17 Ap 10 '47
How we motorized 95 power presses; General instrument corp. S. A. Karch. il diag Factory Management 105:60-1 Ap '47
Jones inclinable electrically-driven presses. il Engineering 164:359 O 10 '47
Loading-unloading fixture for presses. K. Rose. il Materials & Methods 25:132 Mr '47
Mechanism for automatically stopping press when stock fails to feed. F. H. Mayoh. diags Mach 53:201-2 Je '47
Metal stampings at phenomenal speeds; new type punch press. il Steel 121:98+ Jl 14 '47
New equipment; stamping and forming presses. il Iron Age 159:67-72 F 27 '47
New press tooling speeds hardware production; Yale & Towne plant. W. J. Donaghey. il diags Iron Age 160:58-60 Ag 28 '47
Press-shop operations in making silverware; Oneida limited; illustrations with text. Mach 52:152-3 Jl '47
Presses used for manufacturing powdered metal products; abstract. L. H. Bailey. Iron Age 159:140+ Je 26 '47
Slide rule for calculating press size. il Iron Age 158:69 N 28 '46
34th annual review number; forming, casting, molding. il Am Mach 91:166-73 Ja 16 '47
Transfer presses boost output at AC Spark Plug. H. L. Curtis. il Am Mach 91:100-1 My 22 '47
Vickers-Armstrongs 2,000-ton eccentric-operated press. il Engineering 164:320 O 3 '47
Vickers-Armstrongs large crankless press. il Engineer 183:548 Je 20 '47
Walters and Dobson automatic clutch for presses. diags Engineer 183:319 Ap 11 '47
Welded steel press. A. Clements. il Steel 120: 90-1+ F 17 '47

See also
Dies
Hydraulic presses
Printing presses

Safety devices

Punch presses can be safe. W. A. Vollmer. il Am Mach 91:99-103 Jl 3 '47

PRESSES, Hydraulic. See Hydraulic presses

PRESSURE

Chart for critical pressure of any substance. I. J. Hooks and F. Kerze, jr. Chem Eng 53:163 N '46
Composition, pressure, and temperature relationships in binary azeotropic systems. E. A. Coulson and E. F. G. Herington. Chem Soc J p597-607 My '47
Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47; Abstract. Engineer 184:506-7 N 28 '47; Discussion. S. Thompson. J Ap Phys 18:781-2; Reply. 782-3 Ag '47
Effect of pressure on nitration of methane. H. B. Hass and others. bibliog diags Ind & Eng Chem 39:919-24 Jl '47
Effect of pressure on surface tension. O. K. Rice. bibliog J Chem Phys 15:333-5 My '47
Effects of pressure cycling on physical properties of materials. T. C. Poulter. il diags Product Eng 18:81-5 Ag '47
Equation of state for gases at extremely high pressure. P. Caldirola. bibliog J Chem Phys 14:738-41 D '46
Guanidine nitrate from dicyandiamide and ammonium nitrate by pressure reaction. J. H. Paden, K. C. Martin and R. C. Swain. bibliog flow sheet diags Ind & Eng Chem 39:952-8 Ag '47
Heat transfer in a 3-1 hydrogen-nitrogen mixture at high pressure. A. P. Colburn, T. B. Drew and H. Worthington. bibliog diag Ind & Eng Chem 39:958-64 Ag '47
Internal pressure chart for round stainless steel tubing; reference book sheet. B. Ostlind. Product Eng 18:177 S '47
Pressure coefficient of surface tension and the expansion ratio of high pressure cloud chambers. T. H. Johnson. Phys R 72:86 Jl 1 '47
Pressure drop through packed tubes. M. Leva. Chem Eng Prog 43:549-54 O '47 (to be cont)
Pressure in bottles; breakage avoided by controlling filling height. H. J. Wing. diag Mod Packaging 20:146-7+ Ja '47
Recent advances in the use of high pressures. E. W. Comings. Ind & Eng Chem 39:948-52 bibliog(164 ref, p950-2) Ag '47
Thermal conductivity of gases at high pressures. E. W. Comings and M. F. Nathan. bibliog Ind & Eng Chem 39:964-70 Ag '47

See also
Atmospheric pressure
Compressibility
Strains and stresses
Vapor pressure
Wind pressure

PRESSURE cookers

It's in the news. E. J. Lynahan. Am Gas Assn Proc 1946:206-8
Pressure cookers causing claims under extended coverage endorsement. Nat Underw 51:6 Ja 23 '47

Rating

Pressure saucepans; Revere Ware, Time-Saver, Karen Dial-O-Matic. il Consumers Res Bul 20:5-7 Ag '47

PRESSURE gages

For dependable readings test your pressure gages often. W. E. Rossnagel. il diags Power 91:551-2 Ag '47
High speed compression tests on copper. M. Greenfield and E. T. Habib. il diags J Ap Phys 18:645-50 Jl '47
Measurement of transient hydraulic pressures. L. H. Montgomery and J. W. Ward. bibliog il diags R Sci Instr 18:289-93 My '47
Precise low-pressure measurements with a thermocouple gage. W. G. Smiley. Ind & Eng Chem Anal ed 18:800-1 D '46
Theory of corrugated diaphragms for pressure-measuring instruments. A. Pfeiffer. diags R Sci Instr 18:660-4 S '47
Variable capacitor for measurements of pressure and mechanical displacements; a theoretical analysis and its experimental evaluation. J. C. Lilly and others. bibliog il diags J Ap Phys 18:613-28 Jl '47

See also
Manometers
Vacuum gages

PRESSURE indicators. See Indicators (for internal combustion engines)

PRESSURE measurement

Burnet apparatus used for gas-deviation determinations. E. N. Armstrong. il diags Oil & Gas J 45:82-4+ D 7 '46
Conductometric method of vapor saturation measurement as applied to automatic gas-off control of a kraft digester; progress report. R. D. Cowherd. diags Paper Tr J 123:52-8 N 21 '46

PRESSURE measurement—*Continued*
Detection of leaks in gas-filled and evacuated equipment. R. H. Munch. il Ind & Eng Chem 39:sup85A-6A Mr '47
Electronics aids hydraulic circuit analysis. il diags Machine Design 19:121-2 Mr '47
Knock indicator based on the principle of pressure acceleration. F. Lichtenberger. Automotive Ind 97:30-1+ Ag 1 '47
Measuring pressures of industrial explosions. N. J. Thompson and E. W. Cousins. il diags Electronics 20:90-3 N '47
New pressure-duration indicator for routine testing of multi-cylindered engines. K. J. DeJuhasz. bibliog il diags Automotive & Aviation Ind 96:22-4+ Mr 1; 42-5 Ap 1 '47
Pressure and oil flow in oil-filled cables at load variations. H. L. Knudsen. bibliog diag J Ap Phys 18:545-62 Je '47
Pressure distribution over an NACA 23012 airfoil with a fixed slot and a slotted flap. T. A. Harris and J. G. Lowry. bibliog diags U S Nat Advisory Com for Aeronautics 1942:85-98 '46
Pressure losses in valves. E. B. Pool. il Heating-Piping 19:74-7 Je '47
Pressure of plastic concrete in forms. C. Macklin. Concrete 55:7-9 Mr '47
Theory of corrugated diaphragms for pressure-measuring instruments. A. Pfeiffer. diags R Sci Instr 18:660-4 S '47
Three new photoelectric instruments for high-speed engine research. K. J. DeJuhasz. il diags Automotive Ind 97:36-8 Jl 1 '47

See also
Manometers
Pressure gages

PRESSURE regulation
Condenser bypass improves tower pressure control. L. J. Governale. diag Chem Eng 54:126 Ap '47
Fractionator pressure control. D. M. Boyd, jr. diags Pet Refiner 26:113-15 F '47
How a series of fixed, accurate pressures can be maintained on a processing system; Dorrco deionization system for Hawaiian pineapple co. W. R. Swenson. diag Chem Eng 54:120-1 Ag '47
Keeping paper stock consistent; Brammer control equipment. il plan diag Comp Air Mag 52:174-5 Jl '47
Lockheed principle; manufacture of carburetted water gas. S. C. Herbert. Gas J (Lond) 248:775-6 N 6 '46
Maintaining the correct pressure in a compressed-air system. Mach 54:160-1 O '47
Remote pressure control in Dallas. L. A. Bickel. il Gas Age 99:24+ My 1 '47; Same. Am Gas Assn Mo 29:431-2+ O '47

PRESSURE regulators
And now automatic remote control; gas lines of Pacific gas and electric co. W. A. La Violette. il diag map Gas Age 99:34-7+ Ap 17 '47
Application of automatic controls to gasoline plant and refinery processing. E. H. Reynolds and others. diags Pet Refiner 26:134-6 Ap '47; Same abr. Oil & Gas J 45:71-2+ Ap 5 '47
Dual control system synchronizes compressor speed-intake gas pressure. J. M. Sappington. il diag Pet Refiner 26:88-90 Ap '47
Instrumentation of cycling plants. A. J. L. Hutchinson. flow sheet diags Pet Refiner 26:115-19 S '47
Let's take a look at new suction-line controls. F. M. MacDougall. diags Refrig Eng 53:191-4 Mr '47
Loading industrial machinery pneumatically. il diag Comp Air Mag 52:124-5 My '47
Negretti and Zambra pressure and suction regulator. il diag Engineer 183:249 Mr 21 '47
Simple manostat of constant sensitivity. R. D. Goodwin. diags J Chem Educ 24:511-12 O '47
Vacuum pressure regulator. F. W. Melpolder. diag Anal Chem 19:617 Ag '47

See also
Gas governors
Valves, Hydraulic

PRESSURE vessels
Comparison of low-pressure vessels constructed in compliance with different codes or regulations (with specific reference to liquefied petroleum gases). R. E. Cecil. Welding J 26:431-3 My '47; Discussion. R. K. Cadwell. 26:906+ O '47
Internally insulated piping and pressure vessels for high-temperature service. P. E. Darling. diags Pet Refiner 26:129-34 O '47

See also
Air compressors
Ammonia compressors
Autoclaves
Boilers
Caissons
Dust collectors
Evaporators
Gas, Natural—Storage
Gas holders

Design
Alternative form of pressure vessel of novel laminar construction. H. Birchall and G. F. Lake. diags Engineer 184:155-7 Ag 15 '47
Computing strength of vessels subjected to external pressure. R. G. Sturm and H. L. O'Brien. A S M E Trans 69:353-8 My '47
Design of compound cylinders for high-pressure service. W. R. D. Manning. bibliog Engineering 163:349-52 My 2 '47; Discussion. T. M. Jasper. 164:16 Jl 4 '47
Design of pressure vessels for high temperature-high pressure service; abstract. E. W. Jacobson and others. diag Pet Processing 1:168-9 N '46
Determination of thickness of unfired steel pressure vessels; nomograph. C. J. Major. Chem Ind 61:106+ Jl '47
Master charts for the design of vessels under external pressure. D. F. Windenburg. bibliog A S M E Trans 69:345-51 My '47
Pressure vessel design calculations. S. M. Jorgensen. Pet Refiner 24:109-13 O '45; Discussion. 26:120 Ja '47
Unfired cylindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman. A S M E Trans 69: 337-43; Discussion. 343-4 My '47

Failures
Field erected pressure vessels. F. L. Plummer. bibliog il diag Welding J 25:1081-9 N '46
Hydro-pneumatic tank explosion kills two men. diag Locomotive 46:182-4 Ap '47
What the newspapers are saying; accidents involving pressure vessels of various kinds. Locomotive 46:175-7+ Ap '47

Manufacture
Development of butt-welded joints in pressure vessels. E. J. Brown. il diags Welding J 26:867-71 O '47
Fabrication notes on corrosion-resistant alloys; abstract. J. C. Holmberg. Pet Processing 2:314-15 Ap '47
Integral bosses for pressure vessels. H. L. Anthony and H. P. Schane. il diags Welding J 26:849-59 O '47
Submerged melt welding in pressure vessel fabrication. N. G. Schreiner. il diags Welding J 26:400-7 My '47

Safety measures
Educated piece of metal; rupture disks for pressure vessels. J. F. Meyers. il Power Pl Eng 51:78-80 Ag '47
Inspection of unfired pressure vessels. J. J. Duggan. diags Power Pl Eng 51:122+ My '47

Testing
Atom smasher tank stresses as measured by SR-4 strain gages. T. F. Hengstenberg. il diags Welding J 26:sup363-6 Je '47
Biaxial stresses in rigid vessel simulated in notched tension coupon. G. Brewer. il diags Metal Prog 51:91-6 Ja '47
Stress investigations of flat welded-in heads. H. M. Spring, jr. il diags Mech Eng 69: 482-4 Je '47; Discussion. 69:948-9 N '47

PRESTRESSED concrete. See Concrete—Prestressing

PREVENTIVE medicine. See Medicine, Preventive

PREVENTOL GD. See Dihydroxydichlorodiphenyl methane

PRICE, Charles Coale, 1913-
Sketch. por Chem & Eng N 25:3061-2 O 20 '47

PRICE, Julian, 1867-1946
Establish professorship at University of North Carolina honoring Julian Price. Nat Underw (Life ed) 51:12 Je 6 '47

PRICE cutting
Bargain sale catches on; Newburyport, Mass. il Bsns W p17-18 My 3 '47
Fair-trade fight in Missouri; grocers campaign for minimum-resale-price law. Bsns W p72-4 Ap 26 '47
Price cuts alone not the answer. R. A. Porter. Adv & Sell 40:34 Jl '47

PRICE discrimination
See also
Department stores—Manufacturers' demonstrations

Patman law

American Can wins quantity discount case. Oil Paint & Drug Rep 151:5+ Ap 14 '47
Discounts upheld; Chicago court rules concessions based on quantity not forbidden by the Robinson-Patman act. Bsns W p68+ Jl 5 '47
Robinson-Patman act criticized by wholesalers. Oil Paint & Drug Rep 152:7+ O 13 '47
Sellers want protection in a buyers' market; Robinson-Patman act. Bsns W p74+ Ap 26 '47

PRICE fixing
Competition in asbestos products. Adv & Sell 40:98 O '47
Fishermen found guilty in antitrust cases. Bsns W p73 My 17 '47
N.A.R.D. fined in N. Y. trust suit. Oil Paint & Drug Rep 151:4 F 10 '47
Steel plans fight on FTC charge of price fixing and monopolistic practices. Steel 121: 46-7 S 1 '47
Tire industry suit. India Rubber World 116: 800+ S '47
Tire manufacturers accused of price-fixing practices. Rubber Age 61:715 S '47

PRICE fixing, Resale
Fair trade again; interest in contracts for price maintenance. Bsns W p66+ N 23 '46
Fair-trade fight in Missouri; grocers campaign for minimum-resale-price law. Bsns W p72-4 Ap 26 '47
FTC rules monopoly product cannot be fair-traded; Eastman decision. A. W. Gray. Sales Management 58:108+ Je 1 '47

PRICE policies
Are we pricing goods too low? improving depreciation methods under present tax laws. J. Turner. Am Bsns 17:8-9+ O '47
Are your pricing policies raising distribution costs? R. D. Crisp. Ptr Ink 219:45-7 Ap 4 '47
Basing points again under fire. Bsns W p 17 F 1 '47
Better look now! an old competitor eyes your markets. M. Adams. Sales Management 58: 88+ Ap 1 '47
Cement industry basing-point price case in high court. Oil Paint & Drug Rep 151:3+ Ja 27 '47
Committee on national policy of National planning association warns business on pricing. Comm & Fin Chr 165:2486+ My 8 '47
Costs for management decisions. E. M. Hicks. N A C A Bul 28:1471-83 Ag 1 '47
Escalator, down; business buyers demand refunds or voided contracts if prices drop. Bsns W p62-3 My 3 '47
General Electric pricing policy. C. E. Wilson. Elec World 126:162 D 7 '46
How Rolfs sells $100 Signature billfolds. il Sales Management 57:89-90 D 1 '46
Macy's head holds out private brand threat to get manufacturers' aid in price-cutting. Barron's 27:33 O 27 '47
Make your price changes count. Management R 36:309-10 Je '47
Must industry take the rap for high prices? il Factory Management 105:104-8 Je '47
Need for wholesaler-retailer cooperation in pricing. F. M. Bernfield. Dom Comm 35:3-7 Jl '47
New applications for market research; determination of effective selling price. W. Alderson. Sales Management 58:46 F 1 '47
Price and cost; restatement of fully amortized war facilities. J. L. Dohr. J Account 83:11-15 Ja '47
Pricing; abstract. C. Bowles. Ptr Ink 221:191 O 31 '47
Pricing castings for profit. J. B. Meier. Foundry 75:72-3+ F; 108-9+ Mr '47
Pricing industrial goods for sales and profits. J. Dean. Ind Marketing 32:33-4+ Ap '47
Pricing new products for maximum profit; break-even chart. R. Williams, jr. Chem Ind 61:622-4+ O '47
Pricing policies and social trends. H. G. Moulton. Mech Eng 69:109-11 F '47; Excerpts. Comm & Fin Chr 164:2895+ D 5 '46
Retailers propose price reductions. J. I. Straus; W. Morrow. Comm & Fin Chr 165: 1977 Ap 10 '47
Supreme court decision on multiple basing point price system may affect some oil industry areas. Nat Pet N 39:40 Mr 26 '47
To the boards of directors of American business; buy peace, cut prices, encourage loans, foster imports, send engineering missions abroad. Fortune 35:2-4 Je '47; Discussion. 36:28+ Ag '47
$20 million plum; Harvester's price cut. Bsns W p16-17 Mr 15 '47
U.S. asks Court review of cement basing point case; Federal trade commission anxious for ruling on legality of basing point systems. il Iron Age 159:101 Ja 30 '47
We traded up a Cinderella item to the luxury class; $100 wallet as bellwether for entire line. A. A. Weiss. il Ptr Ink 218:75-6+ F 7 '47
What's wrong with our pricing methods. E. R. Breech. Factory Management 105:234+ Ag '47
Why Appeals court reversed FTC's attack on price system; refused to declare basing point price system illegal. G. H. Montague. Ptr Ink 217:734+ D 6 '46

See also
Discount, Cash
Discount, Trade
Price discrimination
Price fixing, Resale
Sales estimates
Sales policies—Free goods

PRICE policies, Retail
Bargain sale catches on; Newburyport, Mass. il Bsns W p17-18 My 3 '47
Clothes by mail; McMahon & Cremins distress merchandize at low prices by mail order. Bsns W p34+ S 13 '47
Keystone of profits for small retailer is pricing. F. M. Bernfield. Dom Comm 35:9-14 My '47
Mark-ups in a baker's dozen of retail trades; pictograph. Sales Management 59:71 Jl 15 '47
Newburyport plan. Bsns W p 16 My 31 '47
Newburyport plan ineffective. T. J. Miley. Comm & Fin Chr 165:2486 My 8 '47
Time for businessmen to check pricing policies. F. M. Bernfield. il Dom Comm 35:17-20 Mr '47
What's the big idea? 20 per cent cut in Hammond, La. Bsns W p22 My 10 '47

PRICES
Blame for high prices not concentrated on any group; offer remedies for lower costs; Gallup poll. Iron Age 160:121+ O 2 '47
Buyers balk in face of high prices and shoddy quality; SM market survey. Sales Management 59:37-8 Ag 1 '47
Commodity prices and freight rates. Ry Age 123:309-10 Ag 23 '47
Cost of living. Nat City Bank p134-7 D '46
Cost reductions needed to bar additional price increases. Iron Age 160:100-1+ Jl 31 '47
Debt and prices. Bsns W p52-3 Ag 9 '47
Develop new approach to wage-profit-price relationship. G. H. Blackett and H. B. Dalby. Iron Age 159:106-10 F 13 '47
Elasticity of physical quantities and flexibility of unit prices in the dimension of time. F. C. Mills. Am Stat Assn J 41:439-67 D '46

PRICES—*Continued*
Majority not expecting price drops within next 6 months; Gallup poll. il Iron Age 159: 105+ Ja 30 '47
More of a price than production boom. G. L. Meyer, jr. Comm & Fin Chr 166:1645+ O 23 '47
Where must the price readjustments come? Management R 36:313-14 Je '47
Where will the rising spiral of wages and prices end? economics of pensions. F. Rising. Steel 121:75-6+ Ag 4 '47

See also
Advertising—Rates
Cost of living
Electric rates
Gas rates
Index numbers (economics)
Inflation (finance)
also subdivision subjects, e.g.
Chemicals
Farm produce
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Money
Price fixing
Railroads—Rates
Stocks—Price indexes and averages
Wages
Water rates
Prices under various

Stocks
World war, 1939-1945

Economic aspects

Blames industry for high prices. G. Sullivan. Comm & Fin Chr 165:2485 My 8 '47
Cause of the price rise. Nat City Bank p49-52 My '47; Same abr. Comm & Fin Chr 165:2485+ My 8 '47
Competition, price policy and high-level stability. E. S. Mason. Comm & Fin Chr 166: 1204+ S 25 '47
Distortions in price structure. A. P. Sloan, jr. Comm & Fin Chr 165:2861+ My 29 '47
Don't expect 1941 prices with 1947 dollar! J. D. Mooney. Comm & Fin Chr 165:2978+ Je 5 '47
Don't wrench the price structure. C. T. Murchison. Comm & Fin Chr 165:2057+ Ap 17 '47
Farm price supports and the general price level. H. I. Liebling. Survey of Cur Bsns 27:17-22 Jl '47
Government responsible for high prices; address before American marketing association. J. Backman. Comm & Fin Chr 165: 1781+ Ap 3 '47
High prices and business prospects. F. D. Newbury. Comm & Fin Chr 165:3225+ Je 19 '47
High prices; causes and remedies. J. P. Kem. Comm & Fin Chr 166:1542+ O 16 '47
High prices howl based on wrong premise; use of pre-World war I base reveals 1947 structure in equilibrium. F. A. Pearson. Barron's 27:7-8 Jl 14 '47
How to cut prices. A. M. Landon. Comm & Fin Chr 165:2202+ Ap 24 '47
Industrial price and production policies need revision. S. Barkin. Comm & Fin Chr 165: 1793+ Ap 3 '47
Lower prices necessary to bulwark our economy. W. Gates. Mag of Wall St 80:136-8+ My 10 '47
Mergers; a cause of high prices. R. E. Freer. Comm & Fin Chr 165:2906+ My 29 '47
Monetary factors in high prices. J. D. Mooney. Comm & Fin Chr 166:1310+ O 2 '47
Monetary policy has failed to keep prices down. J. T. Madden. Comm & Fin Chr 166: 1322 O 2 '47
Money and prices. T. I. Parkinson. Comm & Fin Chr 165:2202+ Ap 24 '47
Must industry take the rap for high prices? il Factory Management 105:104-8 Je '47
Price problem; Guaranty trust co. of New York. Comm & Fin Chr 165:2348 My 1 '47
Price rise checked; food price situation. Nat City Bank p37-8 Ap '47
Prices not yet high enough to force recession; concerted deferment of purchases unlikely unless consumers feel real squeeze. V. L. Bassie. Barron's 27:23-4 My 5 '47
Prices, wages and profits; a plea for labor-management understanding. F. D. Newbury. Comm & Fin Chr 166:810+ Ag 23 '47
Productivity, wages and prices; address before American management association. J. Backman. bibliog Comm & Fin Chr 165: 1247+ Mr 6 '47
Puzzle of prices; how retailer can assist in postwar price readjustments. L. C. Lockley. J Retailing 23:35-7 Ap '47
Review of wage-price policy. J. T. Dunlop. R Econ Stat 29:154-60 Ag '47
Unbalance within price level is real cancer in price structure; National industrial conference board. Comm & Fin Chr 165:2347+ My 1 '47
Wages and prices; a case study. H. H. Wein. R Econ Stat 29:108-23 My '47
Wages likely to keep prices steady. Barron's 27:9 Mr 24 '47
Wages, prices, and profits. N. H. Engle. J Bsns 20:121-30 Jl '47
Wages, profits, prices, and taxes. W. Leontief. il Dun's R 55:21-3+ Je '47
Weighing changing trends in commodity prices. J. D. C. Weldon. Mag of Wall St 79:719-21+ Mr 29 '47
What can business do about pricing? effects of excessive wage and price rises. R. E. Flanders. Comm & Fin Chr 166:1206+ S 25 '47
Who makes prices? A. M. Sakolski. Comm & Fin Chr 166:1631+ O 23 '47
Work and more production will reduce prices. E. Schram. Comm & Fin Chr 165:2062+ Ap 17 '47
World commodity price decline; what it portends for business. N. T. Carruthers. Mag of Wall St 79:180-2+ N 23 '46

Forecasting

Economists foresee end of price inflation in 1947. Arch Rec 100:96 N '46
National industrial conference board reports economists agree prices will go down. Comm & Fin Chr 165:791 F 6 '47
No general price decline probable. H. C. Kuthe. Comm & Fin Chr 165:863+ F 13 '47
Price drop probable, declares Commerce department official. L. J. Paradiso. Comm & Fin Chr 165:591+ Ja 30 '47
Prospects for 1947. Bsns W p30+ F 1 '47
Trend of prices. A. W. Zelomek. Comm & Fin Chr 165:1512+ Mr 20 '47

See also
Stocks—Price forecasting

Regulation

Decontrol of prices and wages. Mo Labor R 63:977-8 D '46
General maximum price regulation. D. P. Rothwell. bibliog U S Bur Labor Statistics Bul 879:1-57; pa 15c Supt. of doc. '46
President orders price decontrol. H. S. Truman. Comm & Fin Chr 164:2521+ N 14 '46
Price of prophecy. C. Bowles. Fortune 35:29 Ap '47
Small business and regulation of pricing practices. B. Bock. U S Dept of Commerce, Economic (Small Business) Ser 61:1-32; pa 15c Supt. of doc. '47
Why Appeals court reversed FTC's attack on price system; refused to declare basing point price system illegal. G. H. Montague. Ptr Ink 217:73-4+ D 6 '46

See also United States—Price administration, Office of

Canada

Additional items freed from price and rationing controls. For Comm W 27:15 Je 28 '47
Canadian price control since 1939. R. E. Moffat. Ann Am Acad 253:125-33 S '47
Decontrol slowup. Bsns W p108 N 9 '46
Price controls and subsidies cut. For Comm W 29:10 O 4 '47
Slow decontrol. Bsns W p116-17 Ap 12 '47

Egypt

Price decrees become effective. For Comm W 26:19 Mr 15 '47

Great Britain

Non-utility prices; is control desirable? maximum prices for men's non-utility made-to-measure outer wear. Economist 153:456 S 13 '47

Statistics

Current structure of prices. L. J. Paradiso and L. H. Rodriguez. charts Survey of Cur Bsns 27:4-10+ Mr '47; Excerpts. Barron's 27:27 Ap 28 '47

PRICES—Statistics—*Continued*
Developments in labor market and price statistics in 1945 and 1946. A. F. Hinrichs. Am Stat Assn J 42:31-7 Mr '47
Economy in reconversion; wholesale and retail prices in 1946; with figures for other years. Survey of Cur Bsns 27:11-13 F '47
Index of consumers' prices in large cities, November 1946. Mo Labor R 64:101-11 Ja '47 [cont monthly]
Inflation problems at home and abroad. I. B. Kravis. Mo Labor R 64:28-42 Ja '47
Price trends since January; estimating future course. H. M. Tremaine. Mag of Wall St 80:525-7+ Ag 16 '47
Prices and cost of living. Published in numbers of Monthly labor review
Prices in the third quarter of 1946. Mo Labor R 63:979-95 D '46
Prices in the fourth quarter and year 1946. Mo Labor R 64:378-96 Mr '47
Prices in the first quarter 1947. Mo Labor R 64:1074-90 Je '47
Prices in the second quarter of 1947. Mo Labor R 65:304-14 S '47
Prices undergoing realignment; with graphs showing trends for selected periods. Survey of Cur Bsns 26:2-6 D '46
Retail prices in certain countries in October 1945. Int Labour R 55:188-95 Ja-F '47

See also
Cost of living—Statistics
Stocks—Price indexes and averages
Prices, Wholesale—Statistics

Latin America

Latin American price indexes. For Comm W 26:33 Ja 4 '47 [cont monthly]

Russia

Soviet Union; trends in prices, rations, and wages. I. B. Kravis and J. Mintzes. Mo Labor R 65:28-35 Jl '47

United States

Acclaims price investigation. C. Revercomb. Comm & Fin Chr 166:633 Ag 14 '47
Blame for higher prices. C. Reece. Comm & Fin Chr 166:1418-19 O 9 '47
Current market quotations, chemicals and related materials. Published in weekly numbers of Oil, paint and drug reporter
Current structure of prices. L. J. Paradiso and L. H. Rodriguez. charts Survey of Cur Bsns 27:4-10+ Mr '47; Excerpts. Barron's 27:27 Ap 28 '47
Government blasts at prices, charging conspiracy. Bsns W p20 Ag 23 '47
Government predicts higher commodity prices; everything on way up but fats and oils. Barron's 27:42 S 15 '47
Government uses moral suasion to lower prices. Steel 120:57-8 Ap 14 '47
Government will continue commodity support in spite of talk about wanting lower prices. Barron's 27:28-9 My 26 '47
High prices howl based on wrong premise; use of pre-World war I base reveals 1947 structure in equilibrium. F. A. Pearson. Barron's 27:7-8 Jl 14 '47
High prices the result of administration's blunders. R. A. Taft. Comm & Fin Chr 166:1219+ S 25 '47
Income and goods. D. V. Eells. Bsns W p44+ Ap 5 '47
Other side of price complaints. il Am Bsns 17:10-11+ My '47
President's review of 1947 economic adjustments. Comm & Fin Chr 166:433+ Jl 31 '47
Price flurry worries retailers. Bsns W p17-18 D 28 '46
Price increase rate greatest from June to Dec. 1946. L. J. Paradiso. Comm & Fin Chr 165:1168 F 27 '47
Price level, war and postwar; with comparisons with period following World war I. R. L. Reirson. Comm & Fin Chr 166:10+ Jl 3 '47
Prices in the third quarter of 1946. Mo Labor R 63:979-95 D '46
Prices in the fourth quarter and year 1946. Mo Labor R 64:378-96 Mr '47
Prices in the first quarter 1947. Mo Labor R 64:1074-90 Je '47
Prices in the second quarter of 1947. Mo Labor R 65:304-14 S '47
Prices widely reduced already; members answer NAM questionnaire. Comm & Fin Chr 165:2346+ My 1 '47
Productivity, wages and prices. J. Backman. Blast F & Steel Pl 35:448-53 Ap '47
Public expects prices to drop within 6 months; Gallup poll. Iron Age 159:125 My 8 '47
Reconversion. J. B. Hubbard. R Econ Stat 29:31-8 F '47
Reduce prices, President urges; address before Associated press meeting in New York. H. S. Truman. Comm & Fin Chr 165:2193+ Ap 24 '47
Task is to reduce prices; letter to U.S. Chamber of commerce. H. S. Truman. Comm & Fin Chr 165:2346 My 1 '47
Truman's buttonholing tactic; White House for price cuts despite wage increases. Bsns W p15-16 Ap 26 '47
What can we do about prices? Am Bsns 17:8-9+ My '47

PRICES, Wholesale

Statistics

Current structure of prices. L. J. Paradiso and L. H. Rodriguez. charts Survey of Cur Bsns 27:4-10+ Mr '47; Excerpts. Barron's 27:27 Ap 28 '47
Daily wholesale price index of 30 basic commodities. Published in monthly numbers of Dun's statistical review; summary in Dun's review
Economy in reconversion; wholesale and retail prices in 1946; with figures for other years. Survey of Cur Bsns 27:11-13 F '47
Index numbers by commodity groups, 1926 to December 1946. Mo Labor R 64:294-5 F '47
Price movements in principal countries; all commodities, 1926, 1932-1945, and monthly, Dec. 1945-Nov. 1946. Fed Res Bul 33:110 Ja '47 [cont monthly]
Prices undergoing realignment; with graphs showing trends for selected periods. Survey of Cur Bsns 26:2-6 D '46
Ups and downs of wholesale prices, 1920-47. Bsns W p28 Mr 22 '47
Wholesale price index edges downward; with graphs showing movements to April 1947. Survey of Cur Bsns 27:1, 2 My '47
Wholesale prices and industrial stock prices during and immediately after the two world wars. L. H. Bean. R Econ Stat 29: 199-200 Ag '47
Wholesale prices, groups of commodities in United States, Canada, United Kingdom, Germany, 1926, 1932-1945 and monthly Dec. 1945-Nov. 1946. Fed Res Bul 33:110 Ja '47 [cont monthly]
Wholesale prices in November 1946. Mo Labor R 64:112-17 Ja '47 [cont monthly]
Wholesale prices, 1944. U S Bur Labor Statistics Bul 870:1-125; pa 20c Supt. of doc. '46
Wholesale prices, 1945. U S Bur Labor Statistics Bul 877:1-121; pa 25c Supt. of doc. '47

United States

Ups and downs of wholesale prices, 1920-47. Bsns W p28 Mr 22 '47
Wholesale prices by groups of commodities, yearly 1929-1945, by months and by weeks, 1946. Fed Res Bul 33:87 Ja '47 [cont monthly]

PRIESTLEY, Joseph, 1733-1804
Pennsylvania associations of J. Priestley. J. S. Hepburn. Franklin Inst J 244:63-72, 95-107 bibliog(67 titles, p105-7) Jl-Ag '47

PRIESTLEY medal
Warren K. Lewis receives medal. A. D. McFadyen. Chem & Eng N 25:2814+ S 29 '47

PRIME movers. See Diesel engines; Gas turbines; Internal combustion engines; Steam engines; Steam turbines

PRINCETON university
Chemical education at American institutions. H. S. Taylor. il J Chem Educ 24:470-5 O '47
Insurance in action for Princeton university; blanket cover aids replacement of burned gymnasium; liability cover for reunions. W. Hay. il Weekly Underw 156:1616-17 Je 14 '47

PRINCETON university—*Continued*
Planners' platform; Princeton's bicentennial conference; with portraits, biographical data and digest of informal discussions. Arch Forum 86:12-14, 132+ Ap '47
Planning man's physical environment; excerpts from statements at Princeton university's bicentennial conference. J. E. Burchard and others. Arch Rec 101:98-100 Ap '47
Scientific projects sponsored. Chem & Eng N 25:3099 O 20 '47

Industrial relations section
Research programme. H. Baker. J Doc 2: 242-4 Mr '47

Library
Full size mock-up for library planning. il plans Arch Rec 101:99-101 Ja '47
Princeton university's unique new library. C. H. Vivian. il Comp Air Mag 52:217-22 S '47

PRINCIPAL and agent. See Agency (law)

PRINCIPLE of least work. See Least work, Principle of

PRINS reaction
Preparation of chlorofluorocarbons; fluorination of Prins-type condensation products. M. Couper and others. bibliog Ind & Eng Chem 39:346-8 Mr '47

PRINTED electric circuits. See Electric circuits—Printed circuits

PRINTERS
Chicago printers and owners agree on pay. Inland Ptr 118:63 Ja '47
Employment outlook in printing occupations, flow sheet il U S Bur Labor Statistics Bul 902:1-34; pa 20c Supt. of doc. '47
Indianapolis printer enjoys interesting hobby; G. H. Petty. il Inland Ptr 119:50 Jl '47
Labor wins out on increase in wages as negotiations with unions close for 1947. il Inland Ptr 118:84-5 F '47
1947 club presidents; portraits. Inland Ptr 119:49-52 Ag '47
Overcoming existing shortage of labor in printing industry can be accomplished only in long-range program. G. C. Compton. Inland Ptr 118:38-9 Ja '47
Printer heroes. H. F. Unger. Inland Ptr 119: 49 My '47
Printers obtain 16 to 20 per cent wage increase in New York city. Comm & Fin Chr 165:2213 Ap 24 '47
Printing industry faces chaos if labor and apprentice problems aren't solved. F. McCaffrey. Inland Ptr 118:37-9 F '47
Printing problem; high labor cost. Bsns W p93 N 23 '46
Seventy years a master printer; J. Horace McFarland. G. C. Compton. il Inland Ptr 119:51-4 Jl '47
Tells about careers of wealthy printers. Inland Ptr 120:82 O '47
Union wages and hours in the printing, trucking, local transit, and baking industries, 1946. J. P. Corkery and H. M. Abowitz. Mo Labor R 64:444-53 Mr '47
Up from tourist printer to printing plant executive; idea and ambition have built a prosperous packaged printing business; Advertisers' press of Holyoke. S. McIntyre. il Inland Ptr 118:41-2 Mr '47
See also International typographical union

Great Britain
Biographical notices of printers and publishers of Friends' book up to 1750; a supplement to Plomer's dictionary. R. S. Mortimer. J Doc 3:107-25 S '47

PRINTERS' ink (periodical)
What a P.I. bibliography is. C. B. Larrabee. Ptr Ink 220:5 S 26 '47

PRINTERS' rollers. See Rollers, Printers'

PRINTING
See also
Advertising, Mail—Printing
Ben Day process
Book industry and trade
Calendars
Christmas printing
Color printing
Covers (printing)
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Ink
Newspapers—Printing
Newsprint paper
Paper
Periodicals—Printing
Photography
Photomechanical processes
Posters
Printers
Printing offices
Printing presses
Printing trade
Proofreading
Publishing
Silk screen printing
Textile printing

Design
Carroll Coleman's typography is conservative. il Inland Ptr 119:53 Ap '47
Grafika; modern design for advertising and printing. I. Reiner. 120p $8.50 Paul A. Struck, 415 Lexington av, New York 17 '47
Here's one bridge you ought to cross before you get to it; treating facing pages as a spread. G. J. Church. il Inland Ptr 119:61 S '47
Orchestration of type. A. R. Hopper. il Ind Marketing 32:34-8 Mr '47

Prize contests
Winners! and some runners-up; Inland printer's envelope-corner-card contest. il Inland Ptr 118:58-60 D '46

Purchasing
How to beat printing cost rises by careful pre-planning. J. D. Rittenhouse. diags Ind Marketing 32:47-8+ Je '47
How to save money when ordering printing; check list of 17 points. H. Bauer. Ptr Ink 218:37 Mr 21 '47
Nine little foxes that eat up the profits. A. R. Hopper. il Ind Marketing 32:64-5+ Jl '47
Salesman's corner; buyers. F. Rundell. Inland Ptr 119:68-9 Jl '47

Uganda
Boy's printing press that changed Uganda. A. Warren. Inland Ptr 119:32 Jl '47

PRINTING, Offset
Allowance for impression. Inland Ptr 118:54 F '47
Any type can be used for offset reproduction—but. G. J. Church. il Inland Ptr 120:42-3 O '47
Beginners' problems in lithography. C. F. King. il Inland Ptr 119:75-7 Ap '47
Cause of and remedy for curling troubles experienced with offset printing papers. Inland Ptr 119:48 S '47
Coating and exposing plates. C. F. King. Inland Ptr 119:85-7 Ag '47
Experimenting with methods. C. F. King. Inland Ptr 120:71-3 O '47
For picture newspapers in smaller communities is offset the answer? G. J. Church. il Inland Ptr 119:42-4 Ap '47
Here it is! copy for offset reproduction machine-composed photographically without use of any metal type. G. C. Compton. Inland Ptr 119:59 Je '47
Ink plays important part in lithography. C. F. King. Inland Ptr 118:49-52 F '47
Lack of knowledge of the fundamentals still hampers offset process. C. F. King. Inland Ptr 118:51-4 Ja '47
Newly-developed letterpress-to-lithographic plate conversion technique obtaining remarkable results; Mark process. G. C. Compton. il Inland Ptr 119:45-7 My '47
Offset press can't match speed and volume of the rotary letterpress. E. St John. Inland Ptr 119:37-8 Jl '47
Pressmen aren't ink chemists. C. F. King. diags Inland Ptr 118:51-3 Mr '47
Proportional spacing typewriter and right-hand margin justifier are highly-important advancements in typewriter composition for reproduction by the offset process. G. J. Church. il Inland Ptr 118:34-5 Mr '47
Simple but important operations; albumin platemaking. C. F. King. Inland Ptr 119:51-4 Je '47
Uniform supplies and techniques; producing satisfactory albumin plates. C. F. King. il Inland Ptr 119:49-53 S '47
What about air conditioning? C. F. King. Inland Ptr 119:39-41 Jl '47
Where should I use lithography? J. L. Frazier. Inland Ptr 119:36-7 Jl '47
Why can't you run albumin plates? C. F. King. Inland Ptr 119:59-61 My '47

PRINTING, Practical
Developments in the graphic arts, 1945. R. H. Simmons. bibliog Paper Tr J 123:27-34 D 12 '46
Gas makes possible special printing process; Relief printing corporation. il Am Gas J 166:16 Ap '47
Lower costs on production through use of new method announced by William J. Higgins company. Inland Ptr 119:60 S '47
Time- and money-saving method of attaching sample swatches to catalogs. il diags Inland Ptr 118:61 D '46
Where should I use lithography? J. L. Frazier. Inland Ptr 119:36-7 Jl '47

See also
Color printing
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Paper—Printing properties
Printing plates
Printing presses
Printing trade
Proofreading
Type and type founding
Typesetting

Embossing

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Presswork

Auto tire pump converted to air compressor for press spray gun. R. J. Cropley. il Inland Ptr 119:69 Jl '47
Big question is; shall we make ready? J. Kovec. Inland Ptr 118:59 Mr '47
Correcting workups on job cylinder press. Inland Ptr 119:66-7 Ap '47
Marking out for leveling off. J. Kovec. Inland Ptr 119:66 My '47
Measuring halftone depth. Inland Ptr 119:57 S '47
Minimizing costly makeready time. J. Kovec. Inland Ptr 118:42 F '47
Mottle. Inland Ptr 118:55-6 F '47
Pointers simplifying magazine production on flatbed press for Puerto Rican printer. Inland Ptr 119:65-6 Ap '47
Pressmen aren't ink chemists. C. F. King diags Inland Ptr 118:51-3 Mr '47
Pressroom. E. St John. Inland Ptr 118:47-50 Ja '47 [cont monthly]
Pressroom aids exhibited and discussed; New York club of printing house craftsmen. Inland Ptr 119:71-2 Ap '47
Those vignette cuts in large mixed form. J. Kovec. Inland Ptr 118:52 F '47
Tracing plate troubles to their source. C. F. King. Inland Ptr 118:51-4 D '46
Troubles which prevent achieving uniformity in production printing. E. St John. Inland Ptr 118:71-3 F; 38-9 Mr '47
Why blame it on the emery? J. Kovec. Inland Ptr 119:47 S '47

Study and teaching

British printers to train disabled men. Inland Ptr 119:89 Ag '47
Educators hold convention, Chicago, June 16-18. Inland Ptr 119:78-81 Ag '47
Proposed educational plan of PIA outlined. J. J. Rudisill. Inland Ptr 119:71-2 Ag '47
Reference material; what states and larger cities have to offer in apprentice training. Inland Ptr 118:39-40 F '47

PRINTING, Public
Eradicating competition that destroys; printing Seattle's building code. Inland Ptr 119:41 S '47

PRINTING for blind. See Blind, Printing for

PRINTING house craftsmen, International association of. See International association of printing house craftsmen

PRINTING industry of America

Committee on education

Proposed educational plan of PIA outlined. J. J. Rudisill. Inland Ptr 119:71-2 Ag '47

PRINTING ink. See Ink

PRINTING ink makers, National association of. See National association of printing ink makers

PRINTING machinery
Combined printing and wrapping machinery; abstract. J. A. Cuckson. diags Product Eng 17:140-1 D '46
Compact table-feeding mechanism; making wax impressions from type. R. Sachtleber. diag Mach 53:172 D '46
Foolproof registration; optical device preregisters multi-color plates. il Mod Packaging 20:162-3 Mr '47
New multi-color printing process may revolutionize production of color cards. il Inland Ptr 118:48 F '47
Pressroom aids exhibited and discussed; New York club of printing house craftsmen. Inland Ptr 119:71-2 Ap '47
Radar techniques in an industrial control; register control in the printing and paper industries. W. D. Cockrell. il diags Elec Eng 66:365-8 Ap '47; Same. Power Pl Eng 51:116+ My '47
What's new in equipment and supplies. il Inland Ptr 118:75-8 F; 119:33-5 Jl '47

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Printing presses

PRINTING machinery industry
Must the photoengraving industry be chained to flat plate handicap? Inland Ptr 118:73-4 F '47

See also
Challenge machinery company

PRINTING offices
Driving 3,850 piles for 60-ton loads; concrete building for Lakeside press, Chicago. il Eng N 137:722-3 N 28 '46
Let there be light. J. W. DeVine. il Inland Ptr 120:56 O '47
One of first ultra-modern post-war printing buildings; Newman-Rudolph lithographing company, Chicago. il Inland Ptr 120:44-5 O '47
These offices were an old garage; Monsen-Chicago typographers. il Am Bsns 17:12-14 Ap '47

Air conditioning

Consider carefully the part a modern air conditioning system can play in operating your printing plant profitably. G. C. Compton. il Inland Ptr 119:44-8 Je '47
What about air conditioning? C. F. King. Inland Ptr 119:39-41 Jl '47

Electric equipment

Kilowatts dry ink for fast printing. E. D. Tillson. il Elec World 128:63-4 Ag 2 '47

Employees

Practical problems of apprentice training; abstract. S. P. Hipsley. Inland Ptr 120:38-9 O '47
Printing firm's employes share in both responsibilities and profits of business. A. G. Fegert. Inland Ptr 119:37-8 S '47
Research-tested tests aid in selecting efficient printing industry apprentices. D. L. Ekberg. Inland Ptr 119:42-4 Jl '47

See also
Printers

Equipment

Balance labor-saving machines against rising costs and prices. J. E. Bullard. Inland Ptr 119:67-8 Je '47
Handling in the printing trade. il diag Mech Handling 34:245-50, 299-302, 353-6 My-Jl '47
Here's how to determine plant's value. A. C. Kiechlin. Inland Ptr 119:29-30 Jl '47
Pressroom aids exhibited and discussed; New York club of printing house craftsmen. Inland Ptr 119:71-2 Ap '47
Taxable income can be reduced by modernization and building. A. C. Kiechlin. Inland Ptr 119:39-41 S '47
What's new in equipment and supplies. il Inland Ptr 118:75-8 F; 119:33-5 Jl '47

See also
Printing machinery

Layout

Plant layout for efficient operation. H. B. Hillman. plan Inland Ptr 119:76 S '47
Your composing room layout should be tailor made to your needs. M. E. Powers. flow chart diags Inland Ptr 120:46-51 O; 40-3 N '47 (to be cont)

PRINTING offices—*Continued*

Libraries

Proofroom needs reference books. E. N. Teall. Inland Ptr 118:43-4 F '47

Lighting

Good lighting in graphic arts plants a good investment. il Inland Ptr 118:36 Ja '47

Maintenance and repair

Regular routine of proper maintenance will permit presses to age gracefully. E. St John. Inland Ptr 119:36-8 My '47

Management

Over-all management control of planning. S. Weil. Inland Ptr 119:33-5 My '47

Production control in a printing plant. C. Stanley. il Inland Ptr 119:29-31 My '47

Salesman's corner; smaller and medium sized printers do not check material on a job until it is time to run. F. Rundell. Inland Ptr 119:70-1 Ag '47

Simplified production control; Nebraska salesbook company. W. A. Dakan. Inland Ptr 119:57-8 Je '47

Rush jobs

Rush job of printing of peace treaties finished on schedule. G. C. Compton. Inland Ptr 118:48 Mr '47

PRINTING on glass

Decorating at Laurens. P. Nelson. il Glass Ind 28:511-12+ O '47

PRINTING on metal

Metal printing; decoration by offset lithography. C. W. Dickinson. Steel 120:112 F 17 '47

Offset machines produce wood grain on steel parts for automobiles in the Fisher body, Trenton, N.J. plant. H. Chase. il Iron Age 160:80-4 Ag 21 '47

Reproducing drawings on metal; Kodak Transfax process. S. H. Barmasel. il Iron Age 158:62-4 N 21 '46

PRINTING on plastics

Colors plastic sheets. Inland Ptr 118:53 Mr '47

Decorating of vinyl films. A. B. Sherry. India Rubber World 116:655 Ag '47

Laminated labels; rotogravure-printed on reverse side of acetate film surface. il Mod Packaging 20:168-9 Mr '47

Plastic film printing. R. A. Nelson. Am Dyestuff Rep 36:328-9 Je 16 '47

Printing on vinyl film. C. M. Robbins. il Rubber Age 60:203-5 N '46; Same. Textile Col 68:16-18+ N '46

Printing press for plastic parts. il Inland Ptr 119:77 Ap '47

Printing the new plastic films. il Mod Packaging 20:82-6+ Ag '47

Uses of printed vinyl laminates. il Mod Plastics 24:125-6 F '47

PRINTING plates

Coating and exposing plates. C. F. King. Inland Ptr 119:85-7 Ag '47

Electric-steam heating cuts spoilage; rubber printing plate press. il Elec World 128:92 S 27 '47

Experimenting with methods. C. F. King. Inland Ptr 120:71-3 O '47

Simple but important operations; albumin platemaking. C. F. King. Inland Ptr 119: 51-4 Je '47

Tracing plate troubles to their source. C. F. King. Inland Ptr 118:51-4 D '46

Uniform supplies and techniques; producing satisfactory albumin plates. C. F. King. il Inland Ptr 119:49-53 S '47

Valuation

Value of publishers' plates. J. D. Phillips. J Account 83:143-7 F '47

PRINTING plates, Plastic

Cast phenolic ruled printing plates. il Mod Plastics 24:174 Ag '47

Electronic engraving system; photoelectric method of producing half-tone screen printing plate made of plastic material. il Electronics 20:156+ Ag '47

Just how good are plastic plates? experience for newspaper reproduction shows that they have advantages over both electros and mats. J. M. Secrest. il Ptr Ink 218:61+ Ja 3 '47

PRINTING presses

Allowance for impression. Inland Ptr 118:54 F '47

Auxiliary feed guide idea effects considerable saving in press time. T. W. Cleaveland. diags Inland Ptr 119:76 Ag '47

Emery cloth under grippers. J. Kovec. Inland Ptr 119:49 Ap '47

How does your fountain behave? J. Kovec. Inland Ptr 119:44 Jl '47

Must the photoengraving industry be chained to flat plate handicap? Inland Ptr 118:73-4 F '47

Offset press can't match speed and volume of the rotary letterpress. E. St John. Inland Ptr 119:37-8 Jl '47

Printing press for plastic parts. il Inland Ptr 119:77 Ap '47

Rowell tells story of the multilith invention. E. St John. Inland Ptr 118:70-1 F '47

See also

Proof presses

Rollers, Printers'

Control

Electronic computer for printing controls; speed of a multicolor web printing press tripled by application of electronic-hydraulic system. J. W. Ludwig. il diags Electronics 20:108-11 N '47

Electronic drive for printing presses. Electronics 20:176 F '47

Error anticipation device corrects any misregister practically before it occurs. il Inland Ptr 119:59 S '47

Manufacture

Ideas that save planer time; R. Hoe & co. J. J. Madden. il diag Am Mach 91:104-5 N 6 '47

PRINTING supplies industry

Booming business in 1947 is forecast by leaders of printing equipment industry. Inland Ptr 118:47-50 D '46

See also

Printing machinery industry

Directories

Inland printer's 1947 directory of equipment and supplies. Inland Ptr 118:93-137 D '46

PRINTING trade

Avoid legal controversies by studying recent decisions by the higher courts. L. T. Parker. Inland Ptr 119:39-41 Je '47

Caterpillar Tractor's employe publication, and annual report, unfold possibilities for printers. il Inland Ptr 119:63 Je '47

Employe relations printed pieces; Ansco film corporation. Inland Ptr 119:52-3 My '47

ITCA announces changes in trade customs. Inland Ptr 120:80 O '47

Printers optimistic about prospects for maintaining the sellers' market in 1947. Inland Ptr 118:29-33 Ja '47

Printing industry faces chaos if labor and apprentice problems aren't solved. F. McCaffrey. Inland Ptr 118:37-9 F '47

Study labor relations, supply situation and business outlook at LNA convention. Inland Ptr 119:65-7 Jl '47

To operate a commercial printing plant, if you could have your choice of but three types, which three faces would you select? E. H. Stuart. Inland Ptr 118:43-4 Mr '47

See also

Printers

Printing supplies industry

Accounting

Carefully kept records will simplify routine for collection of those delinquent accounts. A. C. Kiechlin. Inland Ptr 119:67-9 Ap '47

How to keep in cash and out of red ink. J. L. Cooney. Inland Ptr 118:61-2 Ja '47

Taxable income can be reduced by modernization and building. A. C. Kiechlin. Inland Ptr 119:39-41 S '47

That sleeping giant in your cost system can do a big job for you. W. L. Liggett. Inland Ptr 119:46-7 S '47

PRINTING trade—*Continued*

Advertising

Clever printer's promotion piece is made up of epigrams selected from Devil's dictionary. il Inland Ptr 118:62 F '47

Lending library of promotion; Davis, Delaney, New York printer. Ptr Ink 220:76 Jl 11 '47

Salesman's corner: use of printing as a help to salesmen. F. Rundell. Inland Ptr 119:62-4 S; 120:54-6 O '47

So you're going to get a type book? G. J. Church. il Inland Ptr 120:60-2 O '47

This Cleveland printer uses own colorful promotion. il Inland Ptr 118:64-5 Mr '47

Advertising service

Play a leading role in your community. K. W. F. Cooper. Inland Ptr 119:44-5 S '47

Up from tourist printer to printing plant executive; idea and ambition have built a prosperous packaged printing; Advertisers' press of Holyoke. S. McIntyre. il Inland Ptr Ink 118:41-2 Mr '47

Costs

Expansion in graphic arts industry capacity may lower printing and production costs. W. H. Davis. il Ptr Ink 220:140 S 19 '47

Salesmen

Salesman's corner. F. Rundell. Inland Ptr 118:56-8 Ja '47 [cont monthly]

Toronto printer centers campaign on preparing for tomorrow's sales. R. M. Barbour. Inland Ptr 118:45-6 Ja '47

Statistics

Lithography continues to gain in percentage. Inland Ptr 118:74 D '46

California

California employing printers are urged to protest practices of University press; pirating skilled employes. L. A. Ireland. Inland Ptr 119:81-2 Ap '47

Chicago

Chicago printers and owners agree on pay. Inland Ptr 118:63 Ja '47

Germany

Acute shortages and rationing handicap recovery of the German printing industry. P. Glanzer. Inland Ptr 119:69-70 Ap '47

Great Britain

Future printing trends before British printers. M. McCorquodale. Inland Ptr 119:80 S '47

PRISMS

Comparison of LiF and CaF_2 prisms for infra-red use. R. C. Gore and others. Opt Soc Am J 37:23-8 Ja '47

Focal plane diffraction anomalies in telescopic systems. A. I. Mahan. bibliog il diag Opt Soc Am J 37:852-67 O '47

Infra-red prism spectrometer of high resolving power. J. R. Nielsen and others. il diag Opt Soc Am J 37:296-301 Ap '47

PRISON industries

Prison machine shop; Nebraska state penitentiary. W. L. Johnson. il Am Mach 91: 76-8 Ja 2 '47

Prisoners sue; Michigan convicts seeking back wages on warwork done in jail. il Bsns W p106-7 Ap 26 '47

PRISONERS

Symptoms of the psychopath. H. Cason. Pub Health Rep 61:1833-53 D 20 '46

PRISONERS of war

Employment

Experimental spinning in Siam by prisoners of war, 1945. G. H. Jolly. Textile Inst J 38:P223-4 Jl '47

German prisoners in Britain. Economist 153: 434 S 13 '47

PRIVATE brands

Buyers want national brands. il Bsns W p65-6 Jl 5 '47

Kroger labels; new force for a private brand. il Mod Packaging 20:99+ D '46

Macy's head holds out private brand threat to get manufacturers' aid in price-cutting. Barron's 27:33 O 27 '47

Private-brand departure; Kroger co. adopts one label. il Bsns W p48+ N 9 '46

Private brand toilet soaps. il Soap & San Chem 23:36-9 Ja '47

Private brands go national; Chester H. Roth co. Bsns W p59-61 Ja 18 '47

Survey shows drug chains now push national brands; study of Madison (Wis.) market. L. J. Houfek. Ptr Ink 217:40-2 N 22 '46

PRIVATE flying. See Airplanes—Private ownership

PRIVATE secretaries. See Secretaries, Private

PRIZE contests

Baker's dozen lifts feed sales for Sunlight Mills; lagniappe contest. Sales Management 58:82-3 Mr 1 '47

Philco accessories county fair; distributors' stage a Back to normal campaign. il Sales Management 59:42-3 N 1 '47

Prize-winning shipping packs; Industrial packaging engineers' contest. il Mod Packaging 20:142-3 Je '47

See also

Advertising—Prize contests
Printing—Prize contests
Sales contests

PRIZES. See Rewards, prizes, etc.

PROBABILITIES

Probability functions for the modulus and angle of the normal complex variate. R. S. Hoyt. Bell System Tech J 26:318-59 Ap '47

Probability theory applied to exhaust system design. J. D. Dalla Valle. Heat & Ven 44: 95-6 Jl '47

Simple way to figure machine downtime. D. Jones. il Factory Management 104:118-21 O '46

See also

Sampling (statistical methods)

PROBATE law

Probate and trust decisions; A.B.A. committee report. Trusts & Estates 85:346-59 O '47

Probate and trust decisions, 1945-1946; A.B.A. committee report. Trusts & Estates 83:508-15 N '46

Streamlining the settlement of small estates. G. T. Stephenson. Trusts & Estates 83: 478-84 N '46

See also

Executors and administrators
Inheritance tax
Wills

Bibliography

Trust and probate literature; A.B.A. committee report. Trusts & Estates 85:360-6 O '47

Trust and probate literature, 1945-1946. Trusts & Estates 83:519-23 N '46

PROCTER and Gamble company

Recession resistant stocks. Mag of Wall St 80:158-9 My 10 '47

PRODUCE terminals

New wholesale produce market to dissolve truck congestion. E. B. Isaak. il plan Civil Eng 16:524-6 D '46

Produce wastage; government survey of waste and spoilage of non-packaged produce at retail level. D. R. Stokes. Mod Packaging 21:120-4+ O '47

PRODUCER gas. See Gas, Producer

PRODUCERS, Gas. See Gas producers

PRODUCERS' council

Annual meeting, New York, Sept. 25-26. Concrete 54:16+ N '46; Arch Rec 100:18+ N '46

PRODUCTION

Accounting as an aid to increased industrial production. T. B. Dodds. J Account 84: 299-303 O '47

America must go to work; higher productivity is our need. E. Haynes. Advanced Management 12:2-6 Mr '47

American labor disputes threaten world recovery. E. Meyer. Comm & Fin Chr 164: 2459+ N 14 '46

Boom; a second look. il Fortune 34:113-19+ D '46

PRODUCTION—*Continued*

Danger in our surplus productive capacity; importance of exports to our economy. V. L. Horoth. il Mag of Wall St 80:192-4+ My 24 '47

Economic stability; high output. A. E. Taylor. Comm & Fin Chr 164:2608+ N 21 '46

Increased production through production methods. J. D. Sheahan. Edison Elec Inst Bul 15:135-6+ Ap '47

Increasing production through methods analysis. H. B. Maynard. Edison Elec Inst Bul 15:137-9 Ap '47

Industrial price and production policies need revision. S. Barkin. Comm & Fin Chr 165: 1793+ Ap 3 '47

Industrial productivity and economic equilibrium. J. D. Gill. Comm & Fin Chr 165: 1932+ Ap 10 '47

Labor's responsibility for full productivity. E. Herrick. Advanced Management 12:14-19 Mr '47

Production comes from people. B. Moreel. Ind Med 16:76+ F '47

Production outlook for 1947. J. D. Small. Comm & Fin Chr 164:2606+ N 21 '46

Production still heads upward. Steel 120:sup 4-9 Ja 6 '47

Productivity, key to a lasting prosperity. R. P. Soule. il Chem Ind 61:382-5 S '47

Requirements of productive capacity under full employment. W. D. Evans and others. il Dun's R 55:17-20+ S '47

Shortages keep the brakes on in nearly every industry. il Bsns W p 15-16 Ag 9 '47

Status of industrial groups as we enter the new year. G. W. Mathis. Mag of Wall St 79:303-5+ D 21 '46

Technological gains and their uses. F. C. Mills. Science 105:220-3 F 28 '47

What's happening to productivity. Factory Management 105:66-9 S '47

See also

Economics
Efficiency, Industrial
Factory management
Labor productivity
Manufactures
Orders, Unfilled
Quantities (in production)
Routing systems
Supply and demand
also United States—Civilian production administration

Statistics

Business indexes; industrial production, construction contracts, employment, etc; index totals, 1919-1945, monthly Sept. 1943-Nov. 1946. Fed Res Bul 33:71 Ja '47 [cont monthly]

Commerce department holds U.S. production rate at new high. Comm & Fin Chr 166:730 Ag 21 '47

Economy in reconversion; manufacturing output in 1946; with figures for other years. Survey of Cur Bsns 27:15-18 F '47

Economy in reconversion; national income and national product in 1946; with figures for other years. Survey of Cur Bsns 27: 5-10 F '47

Gross national product, national income, and income payments, annual totals, 1939-1946 and seasonally adjusted annual rates by quarters for 1945. Fed Res Bul 33:88 Ja '47 [cont monthly]

Industrial production by countries, monthly indexes, 1936-1947; graph. Fed Res Bul 33: 1231 O '47

Industrial production, by industries (adjusted and unadjusted indexes), Oct. 1945-Nov. 1946. Fed Res Bul 33:72-5 Ja '47 [cont monthly]

Ira Haupt & co. holds production index portends recession; with chart showing relation of durable to nondurable goods production compared with Federal reserve board index of industrial production. Comm & Fin Chr 165:2635 My 15 '47

National product and income in the first half of 1947. Survey of Cur Bsns 27:4-7 Ag '47

Output of consumers' durable and nondurable goods, 1945-Sept. 1946; graphs. Survey of Cur Bsns 26:4-6 N '46

Percentage change in output of selected products, first half of 1947 from second half of 1946; chart. Survey of Cur Bsns 27:5 Jl '47

Production vs. demand in 40 leading industries; graph and tabular summary. F. R. Walters. il Mag of Wall St 80:419-20 Jl 19 '47

Revised estimates of national income and products. Mo Labor R 65:325-8 S '47

Revision of national income and product statistics; with data for 1929-1946. Fed Res Bul 33:1105-14, 1167-8 S '47

What normal economy would be like after living on a roller coaster. C. V. Kinter. Ind Marketing 32:43-5+ S '47

PRODUCTION and sales, Coordination of

Gearing purchases with production; General electric X-ray corporation gears inventory, purchases, and production with current sales needs. P. Eastman. il Am Bsns 17: 20-1+ Ag '47

Matching inventory with sales; experience of Buda company. il Am Bsns 17:24+ S '47

Planning manufacturing. H. P. Dutton. Factory Management 104:127-9 D '46

Sales forecasts are four-way management tools at Dennison. H. C. Weeks. Sales Management 59:60+ S 1 '47

What close control of inventory means to management; Cutler-Hammer experience. J. C. Borden. Factory Management 105:105-8 F '47

PRODUCTION control

Bottleneck charts get first jobs done first; Kittinger company, Buffalo. J. Batson. Factory Management 105:138-9 Ja '47

Case study in production control; International harvester company. L. W. Perkins. N A C A Bul 28:475-88 D 15 '46

Coded stencils simplify production control. O. M. Lund. il Am Mach 91:126-9 Ap 10 '47

Controlling material supply and inventories. B. W. Kinderman. N A C A Bul 29:201-12 O 15 '47

Controlling parts flow. J. T. Lancaster. diag Steel 120:66-7+ Je 30 '47

Customer specifications teletyped to assembly; Kaiser-Frazer corporation, Willow Run, Mich. H. J. Bustetter. il Factory Management 105:86-8 Je '47

Decentralized production control at 25 per cent saving; Globe Wernicke company, Cincinnati. M. V. Haas. Factory Management 105:94-6 Jl '47

Ford using Willow Run production control methods at Highland Park truck plant. W. G. Patton. Iron Age 159:72+ F 20 '47

Gang process charts in work simplification; Armstrong Cork. J. V. Valenteen. Factory Management 104:125-7 N '46

How effective is your production control? Management R 36:378-80 Jl '47

Lead-time chart insures close scheduling; Minneapolis-Moline power implement co. D. Peddie. il Factory Management 105:122-3 S '47

New system cuts production control costs 35 per cent; Weatherhead company, Cleveland. R. J. Finnegan. Factory Management 105: 83-5 Je '47

Planning controls. H. P. Dutton. il Factory Management 104:124-6 D '46

Production control at Caterpillar. W. G. Thannert. il Iron Age 159:40-4 Je 26; 160: 52-7 Jl 10 '47

Production control in a kraft pulp, paper, and specialty mill. R. E. Driessen. il Paper Ind 29:529-30+ Jl '47

Production control in a printing plant. C. Stanley. il Inland Ptr 119:29-31 My '47

Production control spots shortages; Woodward governor co. W. A. Ring. il Am Mach 91:117-20 Mr 13 '47

Production control systems pare specialty costs. D. W. Thomas. il Chem Ind 60:964-6 Je '47

Production planning and control for quick customer service; Aircraft screw products company. E. M. Lang. il Factory Management 105:123-7 F '47

700 orders kept on the beam by visual schedules; Allegheny Ludlum Steel. J. T. Purtell. il Factory Management 104:118-19 N '46

Simplified production control; Nebraska salesbook company. W. A. Dakan. Inland Ptr 119:57-8 Je '47

PRODUCTION control—*Continued*
Speeding upkeep with job scoreboard; Signode steel strapping company. J. M. McGregor. il Factory Management 105:89 Ja '47
System for scheduling and controlling production. S. J. McDowell. Am Cer Soc Bul 25:468-71 D 15 '46
Three-point program for production control; Ozalid division of General aniline and film corporation. G. T. Mitchell. Factory Management 104:106-9 O '46
Three-way control for low-cost operation; Lenox incorporated. J. M. Tassie. il Factory Management 104:110-12 D '46
Welding production controls for shipyard operation. J. Saliba. il Marine Eng 52:74-8 Mr '47
See also
Control boards
Factory management—Quality control
Schedules

PRODUCTION standards
Effect of the war upon production standards and the outlook for the future. R. Kelly. Franklin Inst J 244:7-14 Jl '47
Time study and production standards in union contracts; abstract. Management R 36:417-19 Ag '47

PRODUCTIVITY. See Labor productivity; Production

PRODUCTS, Built in. See Products, Identification of

PRODUCTS, Certification of
How certification works; specifications, tests, labels used to market better lamps. il Ind Stand 18:248-51 O '47
NEMA formulates policy on testing and certification labeling. Ind Stand 18:63-6 Mr '47
New service in the public interest; a standard for certification procedures. B. L. Oser. il Ind Stand 18:160-3 Jl '47; Same cond. Am Gas Assn Mo 29:385+ S '47
Now is the time to upgrade gas heating installations; Public service electric & gas co. certification plan. H. P. Morehouse. il Gas Age 100:17-18+ Jl 24 '47

PRODUCTS, Diversified
See also
Diversification in industry
Family of products

PRODUCTS, Identification of
Add a new flavor to a commonplace item for attention; Sheppard Envelope flavor seal. H. Shershow. Ptr Ink 221:42-3 O 3 '47
Can the zipper sell the pants? G. N. Robinson. Ind Marketing 32:48+ My '47
How Durene achieves yarn identity in finished textile products; business papers and direct mail campaigns. il Sales Management 59:76+ S 15 '47

PRODUCTS, Improved
How Ellinwood dealers grub for tractor sales ideas; farmer-suggested changes in the Bearcat. J. Collins. il Sales Management 57:84+ D 1 '46
Is your product right? N. Lewis. Adv & Sell 40:62 My '47
Product improvement is cost reduction. L. W. Scott. Ind Marketing 32:48+ S '47
Promotion package helps retailers do a better job; Sel-Mor slips. B. Merrill. il Ptr Ink 219:42+ My 30 '47

PRODUCTS, Molded. See Molded products

PRODUCTS, New
Buda company uses filing cards, slides to introduce new equipment. A. Bernstein. il Ind Marketing 32:80 My '47
Check list to help you introduce your new industrial products. U S Bur For & Dom Com, Economic Ser 53:1-26; pa 10c Supt. of doc. '46; Same. Ind Marketing 32:50-2+ Ja; 51-4 F; 47-8+ Mr '47
Chemical miracles will soon move into practical realm. S. B. Self. Barron's 27:3+ Ja 6 '47
Finding new products to fill expanded plants; Warner & Swasey co. il Product Eng 18: 85-8 Jl '47
First steps in finding the market for a new industrial product; symposium. M. Hansen and others. Ind Marketing 31:56 D '46; 32: 44+ Ja '47
How does a new product get a whirlwind start? B. Isely. il Sales Management 58: 125-6+ Mr 15 '47
How General Mills develops its new food specialties. A. D. Hyde. il Food Ind 19: 1374-6+, 1509-12+ O-N '47
How Silex built acceptance for a new idea. C. J. Swan. il Ptr Ink 219:31-3 My 30 '47
How the depth interview reveals attitudes toward new products. W. A. Yoell. Ptr Ink 218:50-2 F 7 '47
How to check a proposed product or idea. J. G. Kasten. Ind Marketing 32:54+ Je '47
How to meet competition with industrial research. G. E. Ziegler. il Ind Marketing 32: 62+ O '47
How to raise a family of promising new products; Interchemical corp., Setfast canvas paint, Mil-Du-Rid, Dippo, and I. C. degreaser. W. Hansot. il Sales Management 58:46+ Mr 1 '47
Management practice in new product planning and development in the United States; abstract. E. A. Boyan and others. Mech Eng 69:840 O '47
Merchandising an innovation; integrated promotion won acceptance for square milk bottle. G. A. Mellor. Ptr Ink 219:54+ Je 20 '47
New applications for market research; determination of effective selling price. W. Alderson. Sales Management 58:46 F 1 '47
New applications for market research; measurement of a market without a sales history. W. Alderson. Sales Management 58: 124 F 15 '47
New household appliance carries old industrial trade-mark; Yale Tip Toe iron. A. B. Cassedy. il Ptr Ink 220:34-5 Jl 25 '47
New products through research; soluble coffee and special food for aged developed by Borden's New products research laboratory. F. L. Seymour-Jones. il Food Ind 19:299-301+ Mr '47
Organized commercial chemical development; market and product development; illustrated by Hercules powder co.'s vinsol, anethole and resin 731. J. H. Long. Chem & Eng N 24:3325-9 D 25 '46
Plan for promoting new chemicals; American cyanamid company. F. S. Swackhammer and J. M. Rogers. il Chem Ind 61:62-4 Jl '47
Pricing new products for maximum profit; break-even chart. R. Williams, jr. Chem Ind 61:622-4+ O '47
Promotion breathes new life into sleeping asset; Foneholders. il Sales Management 58:110-11 My 20 '47
Purpose and organization of a development department. R. D. Gartrell. il Product Eng 18:81-4 Ap '47
Red carpet for new lines; Abraham & Straus bidding for business. Bsns W p58+ D 14 '46
Sherwin-Williams stages a blitz; to get 98,000 new dealer outlets for nonpaint products. Bsns W p51-2 Mr 1 '47
Smooth send off for this new product; Devoe & Raynolds 87 Spar. il Sales Management 59:92 Ag 15 '47
Unique distributor setup, integrated promotion, aid Ingersol Steel's success; IM case study. H. Burnett. il Ind Marketing 32:34-6+ F '47
Wartime clothespins banish washday blues. il Sales Management 57:94-5 N 20 '46
What happened to the dreamworld? to that thermoplastic, aerodynamic, supersonic, electronic, gadgetonic world the admen promised. il Fortune 35:90-3+ F '47
What's new. Published in weekly numbers of Printers' ink
Why Admiral unveils Dual-Temp with region-by-region showings; 76 consecutive-distributor-dealer meetings. W. C. Johnson. il Sales Management 57:40-2 N 10 '46

Advertising

Dr Lyons, powder leader, now seeks paste market. il Sales Management 59:50+ O 1 '47

PRODUCTS, New—Advertising—*Continued*
Establishing a new product despite a falling market; Park Lane rings. L. S. Naurison. il Ptr Ink 220:41 S 26 '47
How advertising introduces an entirely new product; weed killer, 2,4-D. E. M. Housman. il Ptr Ink 218:40-1+ Mr 21 '47
How advertising is helping a new business to success; Hortense Hewitt garters. C. J. Swan. il Ptr Ink 218:67-8 Ja 24 '47
National distribution for new product achieved almost overnight; Sterling Drug introducing Lyons toothpaste. C. J. Swan. il Ptr Ink 221:35-7 O 17 '47
New product introduced despite small budget; cooperative newspaper and direct-mail advertising; Kleen Flush. D. Markstein. Ptr Ink 218:74 F 21 '47

Testing

How Rumford pre-tests new home cleaner; Noctil. il Sales Management 57:101 D 1 '46
Pre-test sets sales pattern for new chicken product. il Sales Management 59:70+ Ag 1 '47

PRODUCTS liability insurance. See Insurance, Products liability

PROFESSIONAL advertising
New anti-advertising rules. A. Crawford. Adv & Sell 40:70 S '47

PROFESSIONAL education
See also
Engineering education
Journalism schools
Mining schools and education
Public health—Study and teaching

PROFESSIONAL engineers, National society of. See National society of professional engineers

PROFESSIONAL ethics
Code of ethics for chemists. Chem & Eng N 25:2562-3 S 8 '47
Ethics of the research worker. L. E. Wise. Paper Ind 28:1299-1302 D '46
Mutual responsibilities of scientists and industry. L. I. Smith. bibliog Chem & Eng N 24:3342-6 D 25 '46
See also
Accounting ethics
Legal ethics
Medical ethics

PROFESSIONAL workers
Chemistry, a profession. F. D. Snell. Chem & Eng N 25:2358-9 Ag 18 '47
Current problems in professional and economic status. A. L. Elder. Chem & Eng N 25:2139 Jl 28 '47
Desirable attributes in professionally trained people. H. W. Rinehart. Chem & Eng N 25:2140-1 Jl 28 '47
Employer-employee relationships for professional men. J. J. Healy, jr. Chem & Eng N 25:2142-3 Jl 28 '47
Engineering profession affected by Labor management-relations act of 1947. Elec Eng 66:835-6 Ag '47
Engineers ask Congress for labor law amendments; requests professional men be freed from enforced unionism. Civil Eng 17:202+ Ap '47
Engineers freed from enforced unionism with overhauling of Wagner act. E. L. Chandler. Civil Eng 17:406-7 Jl '47
Engineers present views on changes in Wagner act; testimony before Senate committee. Eng N 138:405 Mr 13 '47
Freedom for professions; coercion of engineers and other professional men into labor unions. W. F. Ryan. Bsns W p28+ F 15 '47
Labor peace, professional independence seen if employers are accredited. F. H. McDonald. Civil Eng 17:13+ Ja '47
Methods of achieving professional recognition. W. F. Ryan. J Eng Educ 37:453-60 Ja '47
Qualifications for professional positions in applied mathematics and related scientific fields. R. S. Burington and D. C. May. J Eng Educ 37:641-52 Ap '47
Le reclassement et la rééducation professionnels. Génie Civil 124:276-7 Jl 15 '47
Strike with a difference; engineers and technicians on picket line. il Bsns W p98+ S 20 '47
Trade or profession; a realistic approach to the problem. C. W. Ransom. Chem & Eng N 25:2356-7 Ag 18 '47
See also
Accountants
Architects
Chemists
Engineers
Lawyers
Librarians
Librarians, Special
Nurses and nursing
Physicians
Research workers
Teachers
Technical workers

PROFESSIONS
Description of professions series, 7pts. National roster of scientific and specialized personnel, Dept. of labor, Washington 25 '47; For sale (10c-15c) Supt. of doc.
Extract from the annual report of the E.C.P.D. Committee on professional recognition for 1945. J Eng Educ 37:268 N '46
See also
Occupations

PROFIT
Are corporate profits exaggerated? A. M. Sakolski. Comm & Fin Chr 165:2+ Ja 2 '47
Before and after; profits of 189 large industrial corporations. Fortune 35:139 F '47
Beware of false profits. S. A. Tesoriere. Credit & Fin Management 49:16-17+ Ap '47
CIO on industrial profits; wages and ability to pay. Nat City Bank p138-42 D '46
Converting sales losses into profits; abstract. Management R 35:530-1 D '46
Corporate cost of living. A. Slater. Comm & Fin Chr 166:126-7 Jl 10 '47
Corporate earnings in 1946; with table giving net income of leading corporations by industrial groups for the years 1945 and 1946. Nat City Bank p45-7 Ap '47; Excerpt. Trusts & Estates 84:414 Ap '47
Corporate profits in 1946. J Account 83:155 F '47
Corporate profits in 1946; with figures for other years. Survey of Cur Bsns 27:9-10+ Je '47
Corporate profits in the first half of 1947. Survey of Cur Bsns 27:9+ O '47
Corporate profits, postwar pattern. Bsns W p37-44 N 30 '46; Discussion. p24 Ja 4 '47
Develop new approach to wage-profit-price relationship. G. H. Blackett and H. B. Dalby. Iron Age 159:106-10 F 13 '47
Dynamite in high profits; will industry set the public straight? Trusts & Estates 84: 271-2 Mr '47
Exploding the profit myth; make accounting jargon understandable. F. G. Clark. Trusts & Estates 85:10-11 Jl '47
Fallacies in public thinking regarding business, profits revealed in survey. F. Sturtevant. Nat Pet N 39:37-8 My 28 '47
Fear of high profits unwarranted; Guaranty trust company of New York. Comm & Fin Chr 165:2859+ My 29 '47
Financial position of manufacturing and trade in relation to size and profitability, 1946. A. R. Koch and C. H. Schmidt. Fed Res Bul 33:1091-102 S '47
First-quarter earnings of medium-size firms. Bsns W p 16 My 31 '47
Ghost in the profit statement; modern factor in investors' judgment of management. Trusts & Estates 83:553 D '46
High cost of living and corporation profits. Trusts & Estates 84:480 My '47
How first-quarter earnings compare with 1946; tabulation. Bsns W p16 My 3 '47
How much profit do you think American business makes on each dollar of sales? Comm & Fin Chr 164:2939 D 5 '46
Industrial corporation earnings; with table giving preliminary summary of manufacturing earnings in 1945 and 1946. Nat City Bank p31-4 Mr '47
Industrial profits; Economist quarterly figures. Economist 151:770-1, 1025-6 N 9, D 21 '46
Leaders and laggards in corporate profits. H. S. Coffin. Mag of Wall St 80:79-81+ Ap 26 '47
Many variables in profit picture. Steel 120: sup30-2 Ja 6 '47

PROFIT—*Continued*
Mathematics of profit making. J. D. Corrigan. Paper Ind 29:209-11+ My '47
1946; boom despite itself. Bsns W p15-16 F 1 '47
No upward trend in profits. J. Backman and M. R. Gainsbrugh. Comm & Fin Chr 165: 915 F 13 '47; Same abr. Iron Age 159:154+ Mr 6 '47
Phantom profits worry foresighted managements; stockholders must be taught to see red ink through the black. A. Cotter. Barron's 27:7-8 Ag 11 '47
Popular economic misconceptions regarding competitive private enterprise and nature of profits. F. M. Surface. Comm & Fin Chr 166:231+ Jl 17 '47
Prices, wages and profits; a plea for labor-management understanding. F. D. Newbury. Comm & Fin Chr 166:810+ Ag 28 '47
Problems in providing adequate statistics on business profits. S. S. Burr. Am Stat Assn J 42:432-8 S '47
Profit publicity; interim reports and interpretation to employees. Trusts & Estates 83:567-71 D '46
Profit-volume relationship. C. H. Gleason. N A C A Bul 28:1330-51 Jl 1 '47
Profits and wages in manufacturing, 1929-1945; graph. Factory Management 105:83 F '47
Profits aren't that high; compute profits on replacement rather than actual costs. M. J. Wasserman. Comm & Fin Chr 166:1105+ S 18 '47
Profits of industry are not large; record shows average percentage on turnover is small. P. A. Pflueger. Credit & Fin Management 49:4-5+ Ja '47
Profits policy? Economist 152:225-6 F 8 '47
Profits still ride high; second-quarter earnings. Bsns W p 15-16 Ag 2 '47
Restoration of prewar profit margins good for some firms, bad for others. Barron's 27:23 Ap 14 '47
Retail trade in 1946; sales and profit figures for leading retail firms; tabulation. E. R. Friedman. J Retailing 23:60-3 Ap '47
SEC survey of profits and operations of listed corporations, 1936 to 1945. Comm & Fin Chr 165:2654 My 15 '47
Shortages remove normal checks on profits but production rise will bring them back. Barron's 27:26 O 20 '47
Solicitor-general on profits. Economist 152: 684-5 My 3 '47
Varying new trends in corporate profit margins. S. Devlin. Mag of Wall St 81:67-9+ O 25 '47
Wages, prices, and profits. N. H. Engle. J Bsns 20:121-30 Jl '47
What does the apparent profit of a business operation mean? M. E. Peloubet. J Account 83:490-2 Je '47
Where profits went last year; SEC study. Nat City Bank p65-7 Je '47
Where will profits come from? A. J. Gallager. Sales Management 58:37-40+ F 15; 94-6+ My 20; 128+ Je 15 '47
Will break-even point break you? Management R 36:506-8 O '47

See also
Excess profits tax
Income
Interest
Investments
Profiteering
War profits

PROFIT sharing
Answers to pension and profit-sharing questions. M. M. Goldstein. Comm & Fin Chr 166:623+ Ag 14 '47
Appreciation in cash; Eastman Kodak's plan. Bsns W p19-21 N 23 '46
Bonus and profit sharing raise plant efficiency; Signode steel strapping company. J. M. McGregor. Factory Management 105: 102-3 F '47
Case for insured pension and profit-sharing plans. J. M. Hines. Management R 36:163-6 Mr '47
Combining pension, profit-sharing plans. D. B. Maduro. East Underw 47:17 N 15 '46
Income taxes of employes in profit sharing plans. East Underw 48:17 Ap 18 '47
Present status of profit sharing; abstract. B. M. Stewart and W. J. Couper. Management R 36:40-1 Ja '47
Printing firm's employes share in both responsibilities and profits of business. A. G. Fegert. Inland Ptr 119:37-8 S '47
Profit-sharing and general contingency reserves. J Account 83:497-8 Je '47
Profit sharing, it's wonderful; Willoughby's camera store. Fortune 35:144 My '47
Profit sharing plans in smaller banks. Burroughs Clearing House 31:6 Ja '47
Profit sharing plans today; current advantages in meeting retirement problem. N. McClave, jr. Trusts & Estates 84:607-10 Je '47
Pros and cons of profit sharing. B. T. Salisbury. Burroughs Clearing House 31:22-4+ My; 22-3+ Je '47
Retirement plans may be based on profit sharing. J. M. Zuber. Am Mach 91:104 Jl 3 '47
Sharing for peace. Bsns W p83-6 N 30 '46
Three-way dividend; Hartford Electric Light shares with consumers, employees, and stockholders. Bsns W p18 N 23 '46
Union-accepted wage incentive plan based on group effort; Bundy tubing co. L. Westrate. Automotive & Aviation Ind 95:17+ N 15 '46
Wages are tied to profits, both workers and company gain; Whiting corporation, Harvey, Ill. S. H. Hammond. Factory Management 105:105-6 Mr '47

PROFIT-sharing trusts. See Employees' trusts

PROFITEERING
Army remittance losses scandalize British; corresponding losses foisted on U.S. taxpayer. H. M. Bratter. Comm & Fin Chr 165:1978 Ap 10 '47
Black market trend in gold and dollars. Comm & Fin Chr 165:1245+ Mr 6 '47

PROGESTERONE
Substitution reactions of triphenylethylene and its derivatives; a contribution to the problem of synthetic analogues of progesterone; abstract and discussion. Buu-Hoi and R. Royer. Chem & Ind p373-4 Je 28 '47

PROGRESS
Diversity and progress. H. B. Phillips. Tech R 49:220+ F '47

PROJECTILES
Application of the sliding thermocouple method to the determination of temperatures at the interface of a moving bullet and a gun barrel. E. L. Armi and others. il diag J Ap Phys 18:88-94 Ja '47
Les projectiles anti-chars à charge creuse. E. Lemaire. il diags Génie Civil 123:337-9 D 15 '46
Radio proximity-fuze development. W. S. Hinman, jr. and C. Brunetti. il diags Inst Radio Eng Proc 34:976-86 D '46

See also
Ballistics
Bombs, Aerial
Shells (projectiles)
Torpedoes

PROJECTION, Axonometric
New method of axometric projection. D. Maksymiuk. diags J Eng Educ 37:871-8 Je '47

PROJECTION apparatus
Castings laid out and inspected with 3-dimensional projection equipment developed by G.E. engineers. il Am Mach 91:125 Mr 27 '47; Mech Eng 69:407-8 My '47; Blast F & Steel Pl 35:484 Ap '47; Gen Elec R 50:51 My '47; Product Eng 18:154 Ag '47
Faxfilm dual projection unit for comparing surface finish. il Mach 53:197 F '47
Photo-projection inspection and layout of castings. C. J. Kettler. il diag Iron Age 160:45-9 Jl 31 '47
Projection form grinding machine. il Machine Design 18:106 D '46
Projector for microscope images. A. R. Watson. Metal Prog 52:248 Ag '47
Sheffield projection form grinder. il Product Eng 18:129 S '47
Small profile shapes ground on Cincinnati Projecto-Form. il Am Mach 91:161 O 9 '47
Three-dimensional layout and inspection of castings. C. A. Falkenan. il Materials & Methods 25:133 My '47

See also
Epidiascope
Measuring instruments, Optical
Moving picture machines
Slide films—Projectors

PROJECTION of light. See Light projection

PROJECTIVE geometry. See Geometry, Projective

PROMISSORY notes

Agreement settling payment of note by bank's agent held valid and binding upon bank. Banking Law J 64:613-14+ Ag '47

Burden of proof on holder of note where question of defective title raised by maker of note; Coral Gables, inc. v. Schmieding, Court of appeals of Ohio. Banking Law J 63:924-32 D '46

Consideration passing to accommodated partly sufficient to sustain note against accommodation maker. Banking Law J 64:732-6 S '47

Contract rate of interest applicable after maturity of promissory note. Banking Law J 64:586-90 Jl '47

Default on installment note. C. R. Rosenberg, jr. Burroughs Clearing House 32:49-50 O '47

Discharge of promissory notes not established by oral release or renunciation. Banking Law J 64:419-24 My '47

Intent to cancel note by mutilation question of fact determined by evidence. Banking Law J 64:147-8 F '47

Interest payments credited on note by payee bank without maker's knowledge or consent. Banking Law J 64:303-8 Ap '47

Liability of indorser where extension of time for payment not definitely granted to maker. Banking Law J 64:723-6 S '47

Non-consenting endorser liable. C. R. Rosenberg, jr. Burroughs Clearing House 31:59-60 Ag '47

Note given to unlicensed broker for commission held valid as to holder in due course. Banking Law J 63:837-42 N '46

Note signed by accommodation maker paid from assets of his estate. Banking Law J 64:644-7 Ag '47

Purchaser of negotiable instrument for less than face value held holder in due course. Banking Law J 64:726-9 S '47

Renewal note waives defense of failure of consideration for original note. Banking Law J 64:427-32 My '47

Rights of accommodation party on promissory notes. Banking Law J 64:308-10 Ap '47

Rights of agent after paying note for principal. Banking Law J 64:718-23 S '47

Status of renewal note; Schwab v. Schlumberger, Supreme court of Texas. Banking Law J 64:409-13 My '47

Stipulation as to attorney's fees in note held valid. Banking Law J 63:937-40 D '46

Transfer of installment notes held sales and not pledges rendering transaction usurious loan. Banking Law J 63:861-9 N '46

Transferee of installment notes not holder in due course; Bliss et al. v. California co-op. producers et al., Supreme court of California. Banking Law J 64:214-29 Mr '47

See also

Commercial paper
Indorsement
Judgment notes

PROOF presses

New Vandercook four-color proof press. il Inland Ptr 118:87 D '46

PROOFREADERS

Three Tealls were scholar-proofreaders. J. Lasky. Inland Ptr 119:74 Ag '47

PROOFREADING

Proofreading sans pay envelopes. E. M. Teall. Inland Ptr 118:40 Mr '47

Proofroom. Inland Ptr 118:37 Ja '47 [cont monthly]

Proofroom holds housecleaning of great collection of odds and ends. E. N. Teall. Inland Ptr 118:69-70 F '47

Proofroom needs reference books. E. N. Teall. Inland Ptr 118:43-4 F '47

Question of copyholding. Inland Ptr 120:70 O '47

PROPAGANDA

Engineering of consent. E. L. Bernays. Ann Am Acad 250:113-20 Mr '47

Labor dept. promotes labor union philosophies in educational institutions. E. Bunting. Comm & Fin Chr 165:1702 Mr 27 '47

Propaganda for the gander; how government agencies utilize annual reports and appearances before congressional committees. L. Gates. Pub Util 39:282-9 F 27 '47

PROPANE

Bleeder constantly removes light gases from propane refrigerant. il Pet Refiner 26:144 My '47

Butane and propane as tractor fuels; abstract. E. A. Jamison and J. R. Strother. Automotive Ind 97:34-5 O 15 '47

Calculated theoretical increase in propane absorption by lowering lean oil molecular weight. R. M. Stewart and A. M. Hegwer. il Pet Refiner 26:104-6 Jl '47

Centrifugal compressor for propane tested. il Oil & Gas J 46:99 Ag 2 '47; Mech Eng 69:767 S '47

Charleston plant uses propane-air for peak shaving. C. J. Smith. il Gas Age 99:18 Je 26 '47

Cold enrichment with LP-gas; Boston consolidated gas co. experience with mixture of coke-oven gas, carburetted water gas and propane. J. Penney and W. Churchill. Gas Age 98:30-1+ N 28 '46

Control and operation of de-ethanizers in the production of propane. A. J. L. Hutchinson. flow diag diag Pet Processing 2: 792+ O '47

Expansion of peak-load propane-air gas plant; Brooklyn union gas company. il plan Am Gas J 167:31-3 Ag '47

Experience with a gas plant conversion; Claremont gas light company. V. Stark. il Am Gas J 166:11-13 Je '47

Fluorinated derivatives of propane. E. T. McBee and others. bibliog Am Chem Soc J 69: 944-7 Ap '47

General economics LP-gas. H. E. Thomas. Gas Age 100:32-4 Ag 7 '47

Heating value selection of propane-air gas. E. A. Jamison and T. J. Lambeck. Gas Age 100:21-4 S 4 '47

Increasing propane recovery in existing gasoline plants. D. P. Thornton, jr. il Pet Processing 2:583-4+ Ag '47

Liquefied petroleum gas manufacture and bottling operations. R. E. Chambers. flow sheets diags Pet Processing 2:664-8 S '47

Must utilize more propane to increase supply of liquefied petroleum gas. H. E. Felt. Nat Pet N 39:49+ Je 4 '47

New plant developments at Bay Shore; propane catalytic cracking plant. C. A. Gallagher. Am Gas J 167:15 Ag '47

Production of ethylene from ethane, propane. H. C. Schutt. bibliog flow diag il Chem Eng Prog 43:103-15; Discussion. 115-16 Mr '47

Production of high B.t.u. gas. E. L. Hall. Am Gas Assn Mo 29:434-6+ O '47

Propane and butane explosions cause heavy toll of life and property. Locomotive 46: 132+ Ja '47

Propane deasphalting process; E. B. Badger & sons company. flow diag Pet Refiner (Process Handbook sec) 26:226-7 Ap '47

Propane deasphalting process; M. W. Kellogg company. flow diag Oil & Gas J 45:175 Mr 22 '47

Propane deasphalting process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:228-9 Ap '47

Propane decarbonizing process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:230-1 Ap '47

Propane dewaxing process; M. W. Kellogg company. flow diag Oil & Gas J 45:176 Mr 22 '47

Propane dewaxing process; M. W. Kellogg company. flow diag Pet Refiner (Process Handbook sec) 26:232-3 Ap '47

Propane gas engines for caboose power supply for radio communication. il Ry Mech Eng 120:675 D '46

Propane recovery process; Jones & Laughlin supply company. flow diags Pet Refiner (Process Handbook sec) 26:234-5 Ap '47

Propane storage and piping system frees plant from gas interruptions; standby installation for heat treating; Ingalls-Shepard div. of Wyman-Gordon co. il diag Heating-Piping 19:83-5 S '47

PROPANE—*Continued*
Proposed method of reducing leakage on change-overs. L. J. Willien. Gas Age 99: 31+ Ap 3 '47
Reaction of propane with carbon monoxide in the presence of aluminum chloride. H. Pines and V. N. Ipatieff. bibliog Am Chem Soc J 69:1337-9 Je '47
Reforming of liquid petroleum gases in water gas machines. R. E. Schneiter. diag Gas Age 98:37-41+ D 12 '46
Rutland water gas plant disabled by flood and served by propane-air plant. Am Gas J 167:55 Jl '47; Same cond. Gas Age 100: 34+ Jl 24 '47; Excerpts. Am Gas Assn Mo 29:342 Jl-Ag '47
Safety precautions when installing propane-air mixtures. L. R. Wenzel. Am Gas J 166:19+ Mr '47
Thermodynamic properties of propane. W. V. Stearns and E. J. George. bibliog Ind & Eng Chem 35:602-7 My '43; Correction. 38: 1322 D '46; Same. Pet Eng (Ref annual) 14:262-3+ Jl 1 '43
Thermodynamic properties of saturated propylene, propane, isobutane, isobutylene and normal butane. G. H. Hanson. bibliog Am Inst Chem Eng Trans 42:959-73 O-D '46
Vapor pressure and other properties; filling cylinders; tabulations. W. L. Nelson. Oil & Gas J 46:113 Ag 16 '47
Vibrational frequencies of semirigid molecules; a general method and values for ethylbenzene. W. J. Taylor and K. S. Pitzer. bibliog J Res Nat Bur Stand 38: 1-17 Ja '47
Water content of propane. F. H. Poettmann and M. R. Dean. diag Pet Refiner 25:125-8 D '46

Storage

Propane storage tanks made of 26-inch pipe. il Pet Refiner 26:142+ Mr '47

Transportation

La distribution du propane par canalisations dans les agglomérations rurales. Le Goupils. Génie Civil 124:216-17 Je 1 '47
Warren completes first ocean-going propane tank ship. R. B. Tuttle. il Oil & Gas J 46:50-1+ O 11 '47

PROPANONE
Studies on lignin and related compounds; synthesis of 3-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-2-propanone. H. E. Fisher and H. Hibbert. bibliog Am Chem Soc J 69:1208-10 My '47

PROPELLANTS
Solid and liquid propellants. W. H. Wheeler, H. Whittaker and H. M. Pike. il Chem Age (Lond) 56:367-74 Mr 29 '47

PROPELLER club of the United States
Annual meeting, 20th, New York, Oct. 16-18; American merchant marine conference. Marine Eng 51:86-95 N '46
Year book; 1947-1948. 136p pa $1 Propeller club of the United States, 17 Battery pl, New York 4 '47

PROPELLERS
Alloys for marine propellers; abstract. R. Beeching. Engineer 183:470-1 My 30 '47
Cycloidal propeller installed on harbor tug. il Marine Eng 51:116+ D '46
Thrust of a marine screw propeller. G. S. Baker. diags Inst Mech Eng J & Proc 155 (War emergency issue no 19):201-7; Discussion. 208-10 '46
Torpedo propeller-blade surfacing. G. L. Brown. il diags Engineering 163:73-6 Ja 24 '47
Variable-pitch marine propeller. J. L. Taylor. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 19):211-18; Discussion. 218-31 '46

See also
Airplane propellers
Ship propulsion

Testing

Some model experiments on the effect of blade area on propeller cavitation; abstract. L. C. Bell. Engineering 164:331; Discussion. 331-2 O 3 '47; Engineer 184:312-13 O 3 '47

PROPELLERS, Airplane. See Airplane propellers

PROPENYLBENZENE
Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47

PROPENYLCHLOROBENZENE
Vinyl aromatic compounds; *i*-propenylchlorobenzenes. D. T. Mowry, W. F. Huber and E. L. Ringwald. bibliog Am Chem Soc J 69:851-2 Ap '47

PROPENYLPHENOL. See Anol

PROPER, Clyde H. jr.
Airline captain; interview with Clyde H. Proper, jr. pors Fortune 35:136-9+ Je '47

PROPERTY
See also
Community property — Income
Estates, Decedents' — Joint tenancy
Government property — Real property

PROPERTY, Enemy. See Enemy property

PROPERTY and liability underwriters, American institute for. See American institute for property and liability underwriters

PROPHECY
See also
Advertising copy—Prophecies

PROPIONYLATION
Crystalline 2,3,4,6-tetrapropionyl-β-D-glucose. W. A. Bonner, C. D. Hurd and S. M. Cantor. bibliog Am Chem Soc J 69:1816-19 Jl '47

PROPIOPHENONE
Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S. Johnson, J. W. Petersen and W. P. Schneider. bibliog Am Chem Soc J 69:74-9 Ja '47

PROPORTION (architecture). See Architecture—Composition, proportion, etc.

PROPORTIONING equipment
Peter Brotherhood metering and proportioning pump. il diags Engineering 162:417 N 1 '46
Problem of proportioning portland cement raw mixtures. L. A. Dahl. flow diags Rock Prod 50:92-4+ Mr '47
Proportional flow controller for liquids. W. R. Wilkinson and H. A. Beatty. diags Ind & Eng Chem Anal ed 18:725-6 N '46; Same. Pet Eng 18:90+ Ag '47
Proportioning pumps; construction, performance and application. R. McFarland, jr. il Chem Eng Prog 43:sup 12-16 F '47
Proportioning valves speed blending of gasoline, eliminates mixing tanks at pipe line terminal. diags Pet Processing 2:128+ F '47
Ratio flow and metered control in chemical processing. D. M. Considine and S. D. Ross. il diags Chem Eng Prog 43:497-504; Discussion. 504 S '47
Volumetric proportioning and continuous mixing asphalt plants in Ohio. F. W. Kimble. il Roads & Sts 90:101-2 My '47

PROPRIETARY association of America
Annual convention, 65th, Atlantic City, May 19-21. Oil Paint & Drug Rep 151:7+ My 26 '47
Meeting, New York. Oil Paint & Drug Rep 150:7+ D 16 '46
Midyear meeting of Scientific section, New York, Dec. 6. Chem & Eng N 24:3348 D 25 '46
Names committees. Oil Paint & Drug Rep 152:54 Jl 14 '47

PROPRIETARY libraries. See Libraries, Proprietary

PROPYL alcohol
Molal electrode potentials of the silver-silver chloride electrode in *i*-propyl alcohol-water mixtures from 0 to 40°. R. L. Moore and W. A. Felsing. bibliog Am Chem Soc J 69: 1076-9 My '47
Study of anhydrous conditions in the preparation of lyophobic organosols. H. A. Nelson. bibliog diags J Phys & Colloid Chem 51: 1103-11 S '47

PROPYL alcohol—*Continued*
Study of the reaction of alcohols with thionyl chloride. W. E. Bissinger and F. E. Kung. bibliog Am Chem Soc J 69:2158-63 S '47

PROPYL benzene
Rearrangement in the reaction between benzylmagnesium chloride and ethyl sulfate. J. G. Burtle and R. L. Shriner. Am Chem Soc J 69:2059-60 Ag '47

PROPYL chloride
Coördination compounds of boron trichloride; systems with the propyl chlorides. D. R. Martin and A. S. Humphrey. bibliog J Phys & Colloid Chem 51:425-30 Mr '47

PROPYLPICOLINIC acid
4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

PROPYLPIPECOLINIC acid
4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reactions with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

PROPYLTRICHLOROSILICANE
Fluorination of *n*-propyl trichlorosilane. H. S. Booth and H. S. Halbedel. bibliog diag Am Chem Soc J 68:2652-4 D '46

PROPYLENE
Addition of dinitrogen tetroxide to olefins; propylene. N. Levy and C. W. Scaife. Chem Soc J p 1100-4 D '46
Addition of hydrogen bromide to propylene. F. R. Mayo and M. G. Savoy. bibliog Am Chem Soc J 69:1348-51 Je '47
Aluminum chloride-catalyzed addition of *t*-butyl chloride to propylene. V. A. Miller. bibliog Am Chem Soc J 69:1764-8 Jl '47
Commercial scale manufacture of allyl chloride and allyl alcohol from propylene; Shell development company, Emeryville, Calif. A. W. Fairbairn, H. A. Cheney and A. J. Cherniavsky. bibliog flow diags il Chem Eng Prog 43:280-90 Je '47
Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene. R. S. Rasmussen and R. R. Brattain. bibliog J Chem Phys 15:120-30 Mr '47
Monoalkylbenzenes by vapor-phase alkylation with silica-alumina catalyst. A. A. O'Kelly, J. Kellett and J. Plucker. bibliog flow diag Ind & Eng Chem 39:154-8 F '47
Normal coordinate analysis of the vibrational frequencies of ethylene, propylene, *cis*-2-butene, *trans*-2-butene, and isobutene. J. E. Kilpatrick and K. S. Pitzer. bibliog J Res Nat Bur Stand 38:191-209 F '47
Photochemical studies; further study of the photochemistry of methyl *n*-butyl ketone. W. Davis, jr. and W. A. Noyes, jr. bibliog diag Am Chem Soc J 69:2153-8 S '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E. T. Holden. bibliog Am Chem Soc J 69:1675-81 Jl '47
Thermodynamic properties of saturated propylene, propane, isobutane, isobutylene and normal butane. G. H. Hanson. bibliog Am Inst Chem Eng Trans 42:959-73 O-D '46

PROPYLENE glycol
Air conditioning and sterilized air; use of triethylene glycol and propylene glycol. B. H. Jennings. bibliog il Western Soc E J 51:115-19 S '46
Epidermal application of diethylene glycol monoethyl ether (carbitol) and some other glycols; absorption, toxicity and visceral damage. P. J. Hanzlik and others. il J Ind Hygiene 29:325-41 S '47

PROSPECT lists
Appliance sales leads, now unneeded, safeguard against electric competition. D. W. Frye. Gas Age 99:19-20+ Ja 9 '47
Baker's dozen lifts feed sales for Sunlight Mills; lagniappe contest. Sales Management 58:82-3 Mr 1 '47
Cannon's man-hunt for 60,000 industrial prospects for connectors. Sales Management 59: 100 Jl 15 '47
How to unearth sales leads by direct mail; Detjen electric fly screens. il Sales Management 58:107 Je 1 '47
Organization membership as a source of prospects. F. Rundell. Inland Ptr 118:68 F '47

PROSPECTING
Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47
Drill-hole correlation as an aid in exploration of magnetite deposits of the Jersey Highlands, New York and New Jersey. H. E. Hawkes and P. E. Hotz. bibliog map diags U S Geol S Bul 955-A:1-17, pl 1-2; pa 25c Supt. of doc. '47
Drilling and sampling with a wagon drill. J. H. Soulé. 4pls U S Bur Mines Rep of Invest 3984:1-7 '47
Future mineral supply. Comp Air Mag 52:48 F '47
Geiger-Mueller counters applied to mining. A. W. Knoerr. il diags Eng & Min J 148: 92-5+ Jl '47
How the U.S.G.S. may serve the mining industry. R. N. Hunt. il Min Cong J 32:37-49 D '46
Mineral deposits located by analysis of clay. Sci Am 176:269 Je '47
Mining geology; review of 1946. C. D. Hulin. Min & Met 28:56-8 F '47
More work for the survey; improved data needed to aid prospecting. W. J. Bichan. Can Min J 68:242-4 Ap '47
Ore reserves and future exploration. R. H. Sales. il Min Cong J 32:30-4 O '46
Role of the Geological survey in mineral exploration. W. E. Wrather. Min Cong J 32: 79-80 O '46
Simple chemical tests to aid prospectors; testing water, soil and vegetation for zinc. P. Leach. il Eng & Min J 148:78-9 O '47
Some recent trends in prospecting; chemical, biogeochemical, and geobotanical methods. K. Rankama. Min & Met 28:282-4 Je '47
Uranium and thorium minerals; information for the use of prospectors. H. S. Spence. Can Min J 68:636-42 S '47

See also
Petroleum—Prospecting

Electric methods

Modern divining rod; metal locators, their design and limitations. A. B. Kaufman. il diags Radio N 37:41-3+ Ap '47
Prospecting for mineralization in steeply dipping beds covered by glacial till, talus, and weathered zones. F. W. Lee and others. diags U S Bur Mines Tech Pa 694: 1-19; pa 10c Supt. of doc. '46

Geophysical methods

Air-borne magnetometers for search and survey. E. P. Felch and others. il diags Elec Eng 66:680-5 Jl '47
Continuous recording sensitive magnetometer. R. F. Simons. diag Product Eng 18: 134-5 Ag '47
Current status and potentialities of geophysical prospecting for ores. L. B. Slichter. Min Cong J 32:82-3 O '46
Exploration of the Bourbon magnetic anomaly, Crawford county, Missouri. W. D. McMillan. 8pls U S Bur Mines Rep of Invest 3961:1-9 '46
Geophysical prospecting for ores. L. B. Slichter. maps Min Cong J 33:47-51 F '47
Helicopter prospecting anticipated; abstract. H. T. Lundberg. il Min Cong J 33:123 F '47
Mining geophysics; review of 1946. H. Lundberg. il diag Min & Met 28:91-5 F '47
Ore prospectors using helicopters. il Aviation N 7:20 F 3 '47
Uranium and thorium prospecting with the Geiger counter. J. De Ment. il diags Min Cong J 33:30-2+ Ag '47

See also
Petroleum—Prospecting—Geophysical methods

Bibliography

Geophysical abstracts 124, January-March 1946. V. L. Skitsky, comp. U S Bur Mines Information Circ 7384:1-60 '46
Geophysical abstracts 125; April-June 1946. V. L. Skitsky, comp. U S Bur Mines, Information Circ 7386:1-62 '46

PROSPECTING—Geophysical methods—Bibliography—*Continued*
Geophysical abstracts 126, July-September 1946. V. L. Skitsky, comp. U S Bur Mines Information Circ 7400:1-63 '47
Geophysical abstracts 127, Oct.-Dec. 1946; with an index to abstracts 124-127. V. L. Skitsky, comp. U S Bur Mines Information Circ 7414:1-86 '47
Geophysical abstracts 128, January-March 1947. V. L. Skitsky, comp. U S Geol S Bul 957-A:1-56; pa 15c Supt. of doc. '47
Geophysical abstracts 129, April-June 1947. V. L. Skitsky, comp. U S Geol S Bul 957-B:57-116; pa 15c Supt. of doc. '47

PROSPECTS for life insurance. See Insurance, Life—Prospects

PROSPECTUSES. See Securities—Advertising

PROSPERITY
Buying power, key to sustaining prosperity. K. Johnson. Comm & Fin Chr 165:872+ F 13 '47
Current prosperity is normal. W. W. Cumberland. Comm & Fin Chr 165:589+ Ja 30 '47
Formula for prosperity. W. K. Jackson. Comm & Fin Chr 165:391+ Ja 23 '47
How to maintain prosperity; statement before Joint congressional committee on the economic report. S. S. Colt. Comm & Fin Chr 165:3338+ Je 26 '47
Maintaining prosperity; roles of management and government. L. H. Keyserling. Comm & Fin Chr 165:1782+ Ap 3 '47
NAM's program for prosperity. Comm & Fin Chr 164:3023+ D 12 '46
Productivity, key to a lasting prosperity. R. P. Soule. il Chem Ind 61:382-5 S '47
Prosperity factors still with us. C. O. Hardy. Comm & Fin Chr 166:1319 O 2 '47
We can maintain prosperity. W. L. Batt. Comm & Fin Chr 165:2645+ My 15 '47
See also
Business cycles

PROSTHETICS
Testing prosthetic devices. Mech Eng 69:407 My '47

PROSTIGMINE
Investigations on the influence of chemical constitution upon toxicity; compounds related to prostigmine. R. D. Haworth, A. H. Lamberton and D. Woodcock. Chem Soc J p 182-91 F '47

PROTEASES
Nomenclature of parenteral proteases. J. H. Ferguson. bibliog Science 105:488-9 My 9 '47

PROTECTIVE clothing. See Clothing, Protective

PROTEINS
Activity of protein synthesis by the intestine. F. Friedberg. Science 105:314-15 Mr 21 '47
Binding of organic ions by proteins; charge and *p*H effects. I. M. Klotz and F. M. Walker. bibliog Am Chem Soc J 69:1609-12 Jl '47
Combination of wool protein with heavy metal salts as a function of pH. K. S. LaFleur. bibliog il Am Dyestuff Rep 35: 383-6+; 36:616-18 Ag 12 '46, O 20 '47
Composition and structure of proteins; abstract. A. C. Chibnall. Chem & Ind p193-4 Ap 12 '47
Contributions of virus research to chemistry and physics. M. A. Lauffer. bibliog il diags Chem & Eng N 24:2896-9 N 10 '46
Effect of electrolytes on the foaming capacity of alpha soybean protein dispersions. J. M. Perri, jr. and F. Hazel. bibliog J Phys & Colloid Chem 51:661-6 My '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Functions of the amino acids, the building blocks of proteins; abstract. C. F. Kade, jr. Chem & Eng N 24:3348 D 25 '46
Future of amino acid and protein therapy; abstract. R. J. Block. Oil Paint & Drug Rep 151:49 Je 16 '47
Higher fatty acid derivatives of proteins. W. G. Gordon, A. E. Brown and R. W. Jackson. bibliog Ind & Eng Chem 38:1239-42 D '46
Longitudinal dispersion of infrared rays in optically empty and turbid media, and molecular weights of substances. W. W. Lepeschkin. bibliog J Phys & Colloid Chem 51:875-84 My '47
Method of drying partial protein hydrolysates and other hygroscopic materials for nutritional studies. R. J. Westfall and others. Science 105:530 My 16 '47
Methods of determining the nutritive value of proteins. H. Chick. bibliog Chem & Ind p318-20 Je 7 '47
Multiple protein interactions as exhibited by the blood-clotting mechanism. W. H. Seegers. bibliog(47 ref) J Phys & Colloid Chem 51:198-206 Ja '47
Native protein. D. Wrinch. bibliog Science 106:73-6 Jl 25 '47
Physical-chemical characteristics of certain of the proteins of normal human plasma. J. L. Oncley, G. Scatchard and A. Brown. bibliog J Phys & Colloid Chem 51:184-98 Ja '47
Physical chemistry of protein solutions; derivation of the equations for the osmotic pressure. G. Scatchard. Am Chem Soc J 68: 2315-19 N '46
Physicochemical characterization of pituitary growth hormone. Choh Hao Li. bibliog J Phys & Colloid Chem 51:218-28 Ja '47
Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:388-400 F '47
Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47
Preparation and properties of serum and plasma proteins; human fibrin in the form of an elastic film. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69: 400-9 F '47
Preparation and properties of serum and plasma proteins; modification of the physical and chemical properties of fibrin film by heat treatment. J. D. Ferry and others. bibliog Am Chem Soc J 69:409-16 F '47
Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46
Preparation and properties of serum and plasma proteins; osmotic equilibria in solutions of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68:2320-9 N '46
Preparation and properties of serum and plasma proteins; quantitative interpretation of electrophoretic Schlieren diagrams of normal human plasma proteins. S. H. Armstrong, jr., M. J. E. Budka and K. C. Morrison. bibliog Am Chem Soc J 69:416-29 F '47
Preparation and properties of serum and plasma proteins; the refractive properties of the proteins of human plasma and certain purified fractions. S. H. Armstrong, jr. and others. bibliog Am Chem Soc J 69: 1747-53 Jl '47
Pressure and reactivity of proteins with particular reference to invertase. H. Eyring and others. bibliog J Phys Chem 50:453-64 N '46
Protein from molasses developed in Jamaica. Food Ind 19:80+ Ja '47
Protein from peanuts; patent. Food Ind 19: 117 Ja '47
Quantitative interpretation of the electrophoretic patterns of proteins. L. G. Longsworth. bibliog J Phys & Colloid Chem 51: 171-83 Ja '47
Reaction of mustard gas with proteins. S. B. Davis and W. F. Ross. bibliog Am Chem Soc J 69:1177-81 My '47
Specific group reagents for proteins. H. S. Olcott and H. Fraenkel-Conrat. bibliog(357 ref) Chem R 41:151-97 Ag '47
Spectral changes in some dye ions and their relation to the protein error in indicators. I. M. Klotz and F. M. Walker. bibliog J Phys & Colloid Chem 51:666-80 My '47

PROTEINS—*Continued*
Spectrophotometric investigations of the interactions of proteins with organic anions. I. M. Klotz. bibliog Am Chem Soc J 68: 2299-304 N '46
Spectroturbidimetric study of the proteins of milk. A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51:460-73 Mr '47
Synthesis of protein analogs. R. B. Woodward and C. H. Schramm. Am Chem Soc J 69:1551-2 Je '47
Synthetic proteins. R. B. Woodward. Mech Eng 69:764 S '47
Test-tube protein. il Chem Ind 61:35-6 Jl '47
Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47
Wrinch discusses proteins in Stieglitz lecture. Chem & Eng N 25:361 F 10 '47

See also
Albumin
Amino acids
Casein
Collagen
Gelatin
Globulins
Gluten
Nucleoproteins
Tryptophan
Zein

Analysis
Analytical determination of basic groups in amino acids and proteins. D. P. Grettie. Science 106:277 S 19 '47
Kjeldahl determination of protein for general chemistry. E. M. Collins and R. W. Shelton. diag J Chem Educ 23:549 N '46

Industrial applications
Effect of dry heat on proteins. D. K. Mecham and H. S. Olcott. bibliog Ind & Eng Chem 39:1023-7 Ag '47
Plastic properties of higher fatty acid derivatives of proteins. W. G. Gordon and others. bibliog Ind & Eng Chem 38:1243-5 D '46
Protein adhesives; growing industry based on plentiful raw materials. A. Frieden. il Chem Ind 59:835-7 N '46
Protein condensates as flameproofing agents; patent. Am Dyestuff Rep 36:338 Je 16 '47
Protein synthetic fibres. D. Traill. bibliog Textile Inst J 37:P295-300; Discussion. P300-1 Jl '46
Structure of protein fibers. F. R. Senti. bibliog il diags Am Dyestuff Rep 36:230-7 My 5 '47

PROTHROMBIN
Multiple protein interactions as exhibited by the blood-clotting mechanism. W. H. Seegers. bibliog(47 ref) J Phys & Colloid Chem 51:198-206 Ja '47
Plasma accelerator factor and purified prothrombin activation. A. G. Ware and others. Science 106:41-2 Jl 11 '47
Prothrombin and fibrinolysin. W. H. Seegers and E. C. Loomis. Science 104:461 N 15 '46

PROTOACTINIUM
Routine analysis of the alpha activity of protactinium samples. M. Blau and H. Sinason. Science 106:400-1 O 24 '47

PROTOANEMONIN
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68:2510-13 D '46

PROTOCATECHUIC acid
Reactions of vanillin and its derived compounds; caustic fusion of vanillin. I. A. Pearl. Am Chem Soc J 68:2180-1 N '46

PROTONS
Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W. G. Young. bibliog Am Chem Soc J 69:688-90 Mr '47
Compatibility of primary protons with the atom-annihilation hypothesis. H. Turner. Phys R 72:512-13 S 15 '47
Deflection of charged particles in a ferromagnetic medium. G. H. Wannier. diags Phys R 72:304-12 Ag 15 '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Division of nuclear charge in fission. R. D. Present. bibliog Phys R 72:7-15 Jl 1 '47
Effect of Pais' *f*-field on the symmetry of the meson field part of nuclear Hamiltonian. P. R. Zilsel and others. bibliog Phys R 72:225-8 Ag 1 '47
Energy levels in the nucleus Mn^{56}. A. B. Martin. Phys R 71:127-8 Ja 15 '47
Energy levels in the nucleus Mn^{56}. A. B. Martin. bibliog diags Phys R 72:378-83 S 1 '47
Gamma-ray yield curve of aluminum bombarded with protons. K. J. Broström and others. bibliog diags Phys R 71:661-6 My 15 '47
Hydrogen recoil proportional counter for neutron detection. J. H. Coon and R. A. Nobles. diags R Sci Instr 18:44-7 Ja '47
Mechanism of catalytic cracking. R. C. Hansford. bibliog diag Ind & Eng Chem 39:849-52 Jl '47
Neutron-proton exchange demonstrated; abstract. E. O. Lawrence. Chem & Eng N 25:3214 N 3 '47
Note on the proton hypothesis of the primary component of cosmic rays. N. Arley. bibliog Phys R 70:975-6 D 1 '46
Primary cosmic-ray protons and the atom-annihilation hypothesis. R. A. Millikan and others. Phys R 72:513 S 15 '47
Production of cosmic-ray mesotrons by primary protons. M. Schein and J. Steinberger. Phys R 72:734-5 O 15 '47
Production of nucleons by the cosmic radiation. S. A. Korff and B. Hamermesh. bibliog Phys R 71:842-5 Je 15 '47
Proton-deuteron exchange between ammonia and ammoniated diborane. A. B. Burg. bibliog diags Am Chem Soc J 69:747-50 Ap '47
Protons from the deuteron bombardment of separated neon isotopes. F. K. Elder, jr. and others. bibliog Phys R 71:917-18 Je 15 '47
Range-momentum measurements of particles emitted in nuclear disintegrations induced by 100-Mev X-rays. G. S. Klaiber and others. bibliog il diags Phys R 71:649-56 My 15 '47
Relativistic corrections to magnetic moments of nuclear particles. G. Breit. bibliog Phys R 71:400-2 Ap 1 '47
Resonances in the disintegration of fluorine by protons. W. E. Bennett and others. bibliog diags Phys R 70:882-90 D 1 '46
Scattering of fast neutrons by protons and deuterons. M. Ageno and others. bibliog diag Phys R 71:20-31 Ja 1 '47
Scattering of neutrons of energy between 12 Mev and 13 Mev by protons. J. S. Laughlin. and P. G. Kruger. Phys R 71:736 My 15 '47
Scattering of slow neutrons by bound protons; harmonic binding, neutrons of zero energy. G. Breit and P. R. Zilsel. Phys R 71:232-7 F 15 '47
Scattering of slow neutrons by bound protons; intermediate energies. P. R. Zilsel and others. Phys R 72:576-80 O 1 '47
Scattering of slow neutrons by bound protons; methods of calculations. G. Breit. Phys R 71:215-31 F 15 '47
Theoretical range-energy values for protons in air and aluminum. J. H. Smith. bibliog Phys R 71:32-3 Ja 1 '47
Width of 985-Kev Al (p, γ) resonance. R. S. Bender and others. Phys R 71:905 Je 15 '47

Scattering
Cloud-chamber study of multiple scattering of protons in air. E. A. Luebke and others. bibliog il Phys R 71:657-60 My 15 '47
High energy neutron-proton scattering. J. L. Lopes. bibliog Phys R 72:355-6 Ag 15 '47
Neutron-proton and neutron-carbon scattering cross sections for fast neutrons. C. L. Bailey and others. bibliog diag Phys R 70: 583-9 N 1 '46
Neutron-proton scattering cross section. D. Bohm and C. Richman. bibliog Phys R 71: 567-72 My 1 '47
Proton-proton scattering at 8 Mev. R. R. Wilson and E. C. Creutz. bibliog diags Phys R 71:339-48 Mr 15 '47
Proton-proton scattering at 10 Mev. L. L. Foldy. Phys R 72:731-2 O 15 '47
Proton-proton scattering at 10 Mev. R. E. Peierls and M. A. Preston. Phys R 72:250 Ag 1 '47

PROTONS—Scattering—*Continued*
Proton-proton scattering at 10 Mev. R. R. Wilson. Phys R 71:384-5 Mr 15 '47
Proton-proton scattering at 14.5 Mev. J. L. Lopes and J. Tiomno. Phys R 72:731 O 15 '47
Proton-proton scattering at 14.5 Mev. R. R. Wilson and others. Phys R 71:560-1 Ap 15 '47
Range, straggling, and multiple scattering of fast protons. R. R. Wilson. bibliog Phys R 71:385-6 Mr 15 '47
Scattering of protons by deuterons. R. Sherr and others. bibliog diags Phys R 72:662-72 O 15 '47

PROTOROSAURUS. See Reptiles, Fossil

PROTOZOA
Penicillin as an agent for sterilization of protozoan cultures. G. R. Seaman. Science 106:327 O 3 '47
Sex produced in the protozoa of cryptocercus by molting. L. R. Cleveland. Science 105:16-17 Ja 3 '47

See also
Folliculinids

PROUT, William, 1785-1850
Prout's work concerning atomic weights. S. Glasstone. por(sup21) J Chem Educ 24:478-81 O '47

PROVIDENCE public library
Home of its own; business branch, Providence public library, Providence, R.I. D. G. Bell. Special Lib 38:50 F '47

PROVIDENCE Washington insurance company
Capital stock offered. Comm & Fin Chr 166: 1688+ O 27 '47

PROVIDENT life and accident insurance company
60th anniversary. East Underw 48:4 S 19 '47; Nat Underw (Life ed) 51:22-4 S 19 '47; Spectator (Life ed) 155:30-1+ S '47

PROVISIONAL international civil aviation organization
PICAO at work. E. Warner. Air Transport 4:23-6+ D '46
PICAO transport split threatens multilateral pacts. Aviation N 7:32+ Ap 7 '47

PROVITAMINS

See also
Carotene
Cholestadienol

Vitamin A

Pro-vitamin-A activity of mutatochrome. N. T. Gridgeman, R. F. Hunter and N. E. Williams. Chem Soc J p 131-2 Ja '47

Vitamin D

Attempted preparation of a hydroxylated provitamin-D. V. A. Petrow and W. W. Starling. Chem Soc J p749-51 Ag '46

PROXIES
Revision of SEC proxy rules. H. A. McDonald. Comm & Fin Chr 165:2731+ My 22 '47
Urges revision of SEC proxy rules. B. A. Javits. Comm & Fin Chr 165:3120 Je 12 '47

PROXIMITY fuse. See Fuses

PRUDENTIAL assurance company
Statement by the chairman at annual general meeting. G. Barstow. Economist 152: 559 Ap 12 '47

PRUDENTIAL insurance company of America
Insurance offset; Prudential joins trend of big companies to invest in real estate. Bsns W p78-9 Jl 12 '47
Prudential to have western headquarters unit. Nat Underw (Life ed) 51:1 Mr 21 '47

Library

Special library for office employees; Prudential insurance company maintains management library; abstract. V. Kent. Management R 35:448-9 N '46

PRURITUS. See Itching

PSEUDACONITINE
α-Pseudaconitine and α-veratroylpseudaconine. L. Marion and O. E. Edwards. bibliog Am Chem Soc J 68:2565-8 D '46

PSEUDOPELLETIERINE
Synthesis of cyclo8ctatetraene from pseudopelletierine. A. C. Cope and C. G. Overberger. bibliog Am Chem Soc J 69:976 Ap '47

PSEUDOSANTONINE
Constitution of ψ-santonin; some synthetical experiments. W. Cocker and C. Lipman. Chem Soc J p533-9 Ap '47

PSYCHIATRIC hospitals. See Hospitals, Psychiatric

PSYCHIATRIC wards. See Hospitals—Psychiatric wards

PSYCHIATRY, Industrial
Neuropsychiatric conditions in railroad employees. F. G. Norbury. Ind Med 16:122-5 Mr '47

PSYCHOANALYSIS

See also
Subconsciousness

PSYCHOLOGICAL research
Psychological factors in the design of equipment. M. Haire. Mech Eng 69:399-400+ My '47

PSYCHOLOGY

See also
Ability tests
Advertising—Psychology
Color—Psychology
Individuality
Language and languages—Psychology
Learning, Psychology of
Moving pictures, Talking—Psychological aspects
Music—Psychology
Personality tests
Subconsciousness

PSYCHOLOGY, Applied
Contribution of psychological data to economic analysis. G. Katona. Am Stat Assn J 42:449-59 S '47
How to handle stubborn people. B. L. Wells. Elec West 98:45-7 Mr '47
Psychology in market research. E. Dichter. Harvard Bsns R 25 no 4:432-43 [Jl] '47

PSYCHOLOGY, Industrial
Custom made men; molding employee attitudes; National schools in Los Angeles. E. C. Stodel. il Diesel Power 25:44+ Je '47
Fortune survey; American factory worker. Fortune 35:5-6+ My '47
Hersey variability. J. D. Weinland. Personnel J 25:211-14 D '46
Psychological factors in the design of equipment. M. Haire. Mech Eng 69:399-400+ My '47
Psychologist looks at management problems. J. W. Wilson. Iron Age 159:47-9 Ap 17 '47
Selling mining to the miner. W. Williams. Eng & Min J 147:57-9 D '46
Should he be hired? Los Angeles transit lines applies psychological tests to prospective employees. il Bus Transportation 26:60-2 O '47
Study of relationship in industry. J. J. Gillespie and A. K. Rice. Engineer 183:544-6 Je 20 '47

See also
Ability tests
Advertising—Psychology
Employment management
Music in industry
Safety devices and measures—Psychological aspects

PSYCHOLOGY, Military
Military psychology in war and peace. W. V. Bingham. bibliog Science 106:155-60 Ag 22 '47

PSYCHOLOGY, Pathological
Symptoms of the psychopath. H. Cason. Pub Health Rep 61:1833-53 D 20 '46

See also
Neuroses

PSYCHOLOGY of color. See Color—Psychology

PSYCHOTHERAPY
American journal of psychotherapy. Published quarterly by the Assn. for the advancement of psychotherapy; for sale by Emil A. Gutheil, ed, 16 W. 77th st, New York 24

See also
Subconsciousness

PSYCHROMETRIC charts. See Humidity

PTERIDINE
Chemistry of the pteridines. M. Gates. Chem R 41:63-95 bibliog(115 ref, p93-5) Ag '47

PTERINS
Chemistry of the pteridines. M. Gates. Chem R 41:63-95 bibliog(115 ref, p93-5) Ag '47

PTERINS—*Continued*
Hydrogenation of vitamin Bc (pteroylglutamic acid) and related pterines. B. L. O'Dell and others. Am Chem Soc J 69:250-3 F '47

PTEROYLGLUTAMIC acid. See Folic acid; Vitamins—Vitamin Bc

PU. See Plutonium

PUBLIC accountants. See Accountants, Public

PUBLIC affairs abstracts (legislative reference service)
Public affairs abstracts. E. Galloway. Special Lib 37:322-4 D '46

PUBLIC buildings
See also
School buildings
State buildings
United States—War department—Buildings

PUBLIC contracts. See Contracts, Government

PUBLIC debts. See Debts, Public

PUBLIC health
Mental hygiene in public health. P. V. Lemkau. Pub Health Rep 62:1151-62 Ag 8 '47
Other states eye North Carolina's success in state-wide good health campaign. Pur Ink 219:90 My 9 '47
Political impact of modern science on public health. G. W. Anderson. Ann Am Acad 249: 126-34 Ja '47
See also
Air pollution
City planning
Dental surveys
Diseases—Statistics
Disinfection and disinfectants
Dust removal
Factory sanitation
Food supply
Hospitals
Hygiene, Industrial
Infectious diseases
Insurance, Health
Insurance, Life—Health conservation service
Medical service
Mortality
Mosquitoes—Extermination
Nurses and nursing, Industrial
Nurses and nursing, Public health
Nutrition
Physical examinations
Rabies
Refuse disposal
Safety devices and measures
Sanitation
Sewage disposal
Sickness
Tuberculosis
Ventilation
Water pollution
Water purification
Water supply
World health organization
also subdivision Sanitary affairs under names of countries, cities, etc.

Bibliography
Books on public health. Municipal Ref Lib Notes [N.Y. Pub. Lib] 30:53-60 D '46 (pa 20c)
Public health service publications issued during the period January-June 1946. Pub Health Rep 62:131-6 Ja 24 '47
Public health service publications; issued during the period July-December 1946. Pub Health Rep 62:1022-6 Jl 11 '47

Study and teaching
Fellowships leading to a master's degree in public health. Science 104:539 D 6 '46
Preventive medicine in engineering education. G. W. Reid. Ind Med 16:51-2 F '47; Same. J Eng Educ 37:538-40 Ap '47

Alabama
Study of murine typhus fever in Coffee county. E. L. Hill and S. C. Ingraham, 2d. Pub Health Rep 62:875-81 Je 13 '47

Canada
Health reference book, 1946. 80p Canada. Dominion bur. of statistics, Ottawa '47

Caracas
Daily nitrogen urinary excretion in people of the working class of Caracas. F. De Venanzi. bibliog Science 105:524-5 My 16 '47

Dominican Republic
Pharmaceuticals, drugs, foodstuffs, cosmetics; law of 1938 modified. For Comm W 26:19-20 F 22 '47

Ecuador
Focus of sylvatic plague on the Peruvian-Ecuadorian frontier. A. Macchiavello. Science 104:522 D 6 '46

India
India's health programme. Int Labour R 55: 566-8 Je '47

Peru
Focus of sylvatic plague on the Peruvian-Ecuadorian frontier. A. Macchiavello. Science 104:522 D 6 '46

Puerto Rico
Work with residual DDT spray in Puerto Rico. P. A. Stephens and H. D. Pratt. Science 105:32-3 Ja 10 '47

Russia
Programs for medicine and national health in the USSR. S. Mudd. Science 105:269-73, 306-9 Mr 14-21 '47

South Africa
Sewage treatment to destroy infantile paralysis virus and remove eggs of intestinal parasites; South Africa studies sand filtration. Pub Works 78:25 F '47

United States
Great gain in disease and accident prevention. L. I. Dublin. Nat Underw (Life ed) 51:9+ Ap 18 '47
Public health fellowships. Chem & Eng N 25: 115 Ja 13 '47

Uruguay
Typhoid fever, health problems in Uruguay; abstract. C. Fabini. Am Water Works Assn J 39:190-1 F '47

PUBLIC health administration
Evolution of official tuberculosis control in the United States. R. G. Paterson. bibliog Pub Health Rep 62:336-41 Mr 7 '47
Political impact of modern science on public health. G. W. Anderson. Ann Am Acad 249: 126-34 Ja '47
State responsibility in stream pollution abatement. A. Wolman. bibliog il Ind & Eng Chem 39:561-5 My '47
See also
Public health departments
Sanitary districts
Tuberculosis

PUBLIC health centers. See Health centers

PUBLIC health departments

Directories
Changes in state and territorial health authorities. Pub Health Rep 61:1386-7, 1544-7, 1701-3, 1883-5 S 20, O 25, N 22, D 27 '46

PUBLIC health laboratories
Designed for germ control; Memorial laboratory of infectious diseases, Bethesda, Md. il plan Arch Rec 102:149 O '47

PUBLIC health laws
Manual of recommended practice for sanitary control of the shellfish industry. (Pub. health bul. 295) 44p U.S. Public health service, Washington; pa 15c Supt. of doc. '46
Relation of the National mental health act to state health authorities. R. H. Felix. Pub Health Rep 62:41-9 Ja 10 '47
State planning for participation in the National mental health act. R. H. Felix. Pub Health Rep 62:1183-91 Ag 15 '47
Suggested plan for a preventive medical program in a Federal employees' health service. Pub Health Rep 61:1642-54 N 15 '46
See also
Hospitals—Law
Plumbing laws and regulations

PUBLIC health libraries
W.A.T.A. library. K. G. Mullen. Special Lib 37:327 D '46

PUBLIC health nurses and nursing. See Nurses and nursing, Public health

PUBLIC health officers

Directories
Changes in state and territorial health authorities. Pub Health Rep 61:1386-7, 1544-7, 1701-3, 1883-5 S 20, O 25, N 22, D 27 '46

PUBLIC health service. See United States—Public health service

PUBLIC health surveys
Plague; field surveys in western United States during ten years, 1936-1945. N. E. Wayson. Pub Health Rep 62:780-91 My 30 '47

PUBLIC lands
See also
Homesteads
Oil reserves (United States navy)

PUBLIC lockers. See Lockers, Public

PUBLIC officers
See also
Women as public officers

Directories
Government officials in charge of Canadian public water supply and sewerage undertakings. Water & Sewage 85:26+ Ag '47

PUBLIC officials bonds. See Insurance, Surety and fidelity—Public officials bonds

PUBLIC opinion
API's survey of public opinion about the oil industry. Nat Pet N 38:26-7+ N 13 '46
Fallacies in public thinking regarding business, profits revealed in survey. F. Sturtevant. Nat Pet N 39:37-8 My 28 '47
Fortune survey. Published in monthly numbers of Fortune
Fortune survey; self-portrait of the American people, 1947. Fortune 35:5-6+, 73-9+ Ja '47
Fortune survey; survey pitfalls. E. Roper. Fortune 35:6+ Ap '47
Measurement of public opinion. E. C. Wilson Ann Am Acad 250:121-9 Mr '47
Public looks to railroad management for better service; latest Opinion Research poll's results summarized. Ry Age 123:321-2 Ag 23 '47
Public's view of the electric power industry. J. C. Bevis. Edison Elec Inst Bul 14: 375-8 N '46; Same cond. Pub Util 39:313-18 F 27 '47
Reports doubted; only 41 per cent of public think corporations tell the truth about profits. Bsns W p44+ My 17 '47
What the public thinks. E. Roper. Am Gas Assn Proc 1946:10-14; Same. Am Gas Assn Mo 28:523-5+ D '46
Women's impact on public opinion. K. McLaughlin. Ann Am Acad 251:104-12 My '47

PUBLIC opinion research, American association for. See American association for public opinion research

PUBLIC relations
ABC's of public relations. F. Stafford. Inland Ptr 118:41-2 Ja '47
Association public relations. D. E. Gilman. Am Pet Inst Proc 26(1):123-7 '46
Battle of the smokestacks; telling story of enterprise over 150,000 back fences. C. E. Wilson. Trusts & Estates 84:12-13 Ja '47
Business has a story to tell; National conference of public relations executives. Banking 39:110-11 Mr '47
Business has a story to tell; program of General mills, inc. J. F. Bell. Trusts & Estates 84:155-7 F '47
Business must be dehorned. G. Gardiner. Trusts & Estates 83:562 D '46
Businessmen and the community forum. F. K. Ballaine. Harvard Bsns R 25 no 3:372-84 [Ap] '47; Excerpts. Trusts & Estates 85: 191 S '47
Coming problems demand that business be more articulate. J. W. Irwin. il Ptr Ink 221:82-3+ O 31 '47
Community relations are important; Caterpillar has a special division to develop and hold local confidence. L. J. Fletcher. il Am Mach 91:89-92 Ag 14 '47
Company policies and public relations; abstract. R. H. Taylor. Chem Eng 54:290+ My '47
Company's human assets; experience of Caterpillar tractor co. L. Fletcher and F. R. Jolly. Trusts & Estates 84:19-21 Ja '47
Contests help to improve public relations. V. J. Dallaire. il Ptr Ink 217:48-9 N 22 '46
Cotton-textile industry launches public-relations program. Textile World 97:149 My '47
Experts report on public relations. P. Eastman. Am Bsns 16:30+ N '46
Ghost in the profit statement; modern factor in investors' judgment of management. Trusts & Estates 83:553 D '46
Guide to public relations published by Research institute. Ptr Ink 220:60 S 19 '47; Trusts & Estates 85:278 O '47
How advertising agencies handle public relations. J. A. Murphy. Adv & Sell 40:116+ Mr '47
How Armstrong Cork keeps employees and community informed. T. G. Newton. il Trusts & Estates 84:384-7 Ap '47
How Corning glass works merchandises company facts; policy meetings. C. D. La Follette. il Adv & Sell 40:33-4+ O '47
How we built community support for the United nations; Calco division, American cyanamid co. G. B. Meynell. il Ptr Ink 220: 30-1+ S 26 '47
Human relations; the key to good public relations. E. J. Knopf. Ind Med 16:499 O '47
Industrialist sells higher wages for teachers; Lebanon steel foundry helps Lebanon schools. H. S. Bolan. il Sales Management 59:124+ Jl 15 '47
Industry courts plant towns. Bsns W p69-70+ Mr 1 '47
It's open house at Alcoa's sales office. R. A. Sweet. il Sales Management 59:130+ O 1 '47
Man with a nose. B. Inge. Ptr Ink 219:122 Je 27 '47
Open house can be effective public relations; U.S. Steel attracted more than 100,000 visitors. J. C. MacDonald. il Ptr Ink 221:36-7 O 24 '47
Pitney-Bowes meets its neighbors; company sells itself to employees and community. Trusts & Estates 85:7-8 Jl '47
Plan that boosts community and employee relations; R. G. LeTourneau. il Am Bsns 17:26 Mr '47
Public opinion is many private opinions; public relations policy of Flintkote company. L. R. Walter. Paper Ind 28:1312-15 D '46; Same cond. Am Bsns 17:20-1+ Mr '47
PR duties of ad manager call for executive rank. Ptr Ink 217:33-5 D 20 '46
Public relations in a falling market. P. Lesly. il Ptr Ink 219:33-5 Je 20 '47
Public relations is friendship in business. G. B. Perkins. Ptr Ink 219:41+ My 30 '47
Public relations program increases waste paper supply. Paper Ind 29:841-3 S '47
Reappraising our American opportunity. H. C. Link. Comm & Fin Chr 165:3348+ Je 26 '47
Rockford NIAA chapter helps launch local community relations campaign. il Ind Marketing 32:116 Ag '47
Selling the company to the community; Allegheny Ludlum's public relations program. Factory Management 105:78-80 Ap '47
Seven musts for public relations in advertising and selling; Ford motor co. H. E. Green. il Ptr Ink 220:27-9 Jl 25 '47
Share the progress; business' role in making good customers. C. R. Luckman. Trusts & Estates 84:149-50 F '47
16 manufacturers tell the story of industry; 52 employee and community relations page messages in Keokuk newspaper. R. A. Kling. il Ptr Ink 217:43-4 D 20 '46
Start being a good neighbor before your plant moves. F. Rudge. Adv & Sell 40:33-4+ F; 111+ Mr '47
Telling the world. Bsns W p22 F 15 '47
There is a job to be done. R. H. Taylor. Pet Eng 18:186+ F '47
Three-cent public relations. C. Rider. Ptr Ink 221:60+ O 3 '47
Tools of advertising service the machinery of industrial and public relations; three-way organization at Falk corporation. L. Fox. il Ind Marketing 32:43-4+ Mr '47
Town-meeting and local press; Stamford-Greenwich manufacturers tell the story of community business. Trusts & Estates 84: 486-8 My '47
U.S. rubber co. hits high note in public relations; sponsors spring tour of 24 cities by New York Philharmonic orchestra. il Sales Management 58:97-8 Ap 1 '47

PUBLIC relations—*Continued*
What your neighbors think; financial delusions at the root of business schism. L. R. Foster. Trusts & Estates 83:425-7 N '46

See also
Advertising, Institutional
Banks and banking—Public relations
Customer relations
Electric utilities—Public relations
Engineers—Public relations
Insurance companies—Public relations
Petroleum industry and trade—Public relations
Public utilities—Public relations
Publicity
Railroads—Public relations
Rapid transit—Public relations
Trade unions—Public relations
Trust companies—Public relations
Visitors

Bibliography
Public relations. 2 pts Cleveland Pub Lib Business Information Bur Bul v 18, no 2: 5-10 Jl '47

PUBLIC relations society of America
National assn. of public relations counsel and American council on public relations consolidated under new name. Ptr Ink 220: 98 Ag 15 '47

PUBLIC roads administration. See United States—Public roads administration

PUBLIC service
National security and the training of chemists. M. H. Trytten. Chem & Eng N 25: 499-502 F 24 '47
Public and private service. Economist 151: 572-3, 613-14, 703-4 O 12-19, N 2 '46

PUBLIC service company of Colorado
Long-term stock call in Colorado Public Service debentures. Barron's 27:27 Jl 7 '47
Preferred stock offered. Comm & Fin Chr 166:471 Ag 4 '47
Securities offered. Comm & Fin Chr 165:3288 Je 23 '47

PUBLIC service company of Indiana
Higher dividend. Barron's 26:6 D 16 '46

PUBLIC service company of New Hampshire
Bonds offered. Comm & Fin Chr 165:3398 Je 30 '47
SEC asked by New England public service co. to cancel plan of New Hampshire stock sale. Comm & Fin Chr 166:764 Ag 25 '47

PUBLIC service company of New Mexico
Public utility securities. Comm & Fin Chr 165:2336 My 1 '47

PUBLIC service corporation of New Jersey
Amends dissolution plan. Comm & Fin Chr 165:2007 Ap 14 '47
New offer gives more to senior shares. Barron's 27:25 Je 9 '47
One-stock capital in sight. Barron's 27:30-1 Mr 24 '47
To allocate more stock to preferred holders. Comm & Fin Chr 165:3058 Je 9 '47

PUBLIC speaking
Chemists are lousy speakers. C. J. Koenig. Chem & Eng N 25:2081-2 Jl 21 '47
Conferences and departmental meetings; how to make them most effective. E. Mottershead. Bankers Mo 64:165-8 Ap '47
Effectiveness of the public platform. W. N. Brigance. Ann Am Acad 250:70-5 Mr '47
14 tips on how to read a speech. E. J. Hegarty. Ptr Ink 217:35 D 27 '46
How to introduce a speaker. J. F. Bender. Sales Management 58:95-6 Je 1 '47
How to lick the jitters before you face an audience. J. F. Bender. il Sales Management 58:130+ F 15 '47
Production clinic. E. G. Thomssen. Soap & San Chem 23:71 Jl '47
So you're going to present a paper; reproduction of booklet prepared by the American society of civil engineers. Civil Eng 16:548-9 D '46
Speech training for the sales force; does it pay? Squibb salesmen want it. H. W. Wilkinson. Sales Management 59:46+ Ag 1 '47

See also
Chairmen

Study and teaching
Seminars can be fun! teaching public speaking and conducting of meetings; Civil engineering department of the Johns Hopkins university. J. T. Thompson. J Eng Educ 37:736-8 My '47

PUBLIC utilities
Laws passed by the 80th Congress, first session, of special interest to public utilities. F. X. Welch. Pub Util 40:292-7 Ag 28 '47
National association of railroad and utilities commissioners 58th annual meeting, Los Angeles, Nov. 12-15. Elec World 126:89 N 23 '46; Ry Age 121:872-4+ N 23 '46

See also
Airlines
Carriers
Corporation law
Corporations
Electric utilities
Gas, Natural—Pipe lines
Gas companies
Motor bus lines
Motor trucks in freight service
Petroleum pipe lines
Pipe lines as common carriers
Railroads
Railroads and state
Street railroads
Telegraph
Telegraph companies
Telephone companies
Waterworks

Accounting
Accounting implications of the New York telephone company decision. G. O. May. J Account 82:456-9 D '46
Can regulation make utility investment attractive? W. J. Herrman. Pub Util 39:536-42, 615-21 Ap 24-My 8 '47
Cost basis may speed action on utility rate increases. Pub Util 40:669-70 N 6 '47
Depreciation reserves in public utility balance sheets. H. A. Horne. Pub Util 40: 574-7 O 23 '47
Importance of accounting policies. O. Ely. Pub Util 39:569-71 Ap 24 '47
Live depreciation questions. C. O. Fisher. Pub Util 39:663-70 My 22 '47
Should customer contributions be charged against the utility? M. H. Diels. Pub Util 40:354-64 S 11 '47
Some notes on public utilities; Uniform system requirements; Interstate commerce commission and Federal power commission. J Account 84:145-6 Ag '47
Why is a rate base? H. T. Ferguson. Pub Util 39:811-17 Je 19 '47

See also
Electric utilities—Accounting
Gas companies—Accounting
Railroads—Accounting

Advertising
Employes sell voters; new 20-year franchise for the Public service company of Colorado approved. Sales Management 58:64 Ap 1 '47

Appliance selling

See also
Electric utilities—Appliance selling
Gas companies—Appliance selling

Buildings
Financing by lease; public utility can acquire new office building or garage, the easy way. F. J. McDiarmid. Pub Util 40:278-84 Ag 28 '47

Employees
Antidiscrimination trend in state legislatures; do public utility companies provide a proper testing ground for experiments? R. Ames. Pub Util 39:489-95 Ap 10 '47
Do the workers understand industrial peace? H. W. Steinkraus. Pub Util 39:342-51 Mr 13 '47
Labor disputes and public utilities. D. R. Richberg. Pub Util 38:714-21 N 21 '46
Law that failed; New Jersey's statute to curb walkouts in public utilities. Bsns W p58 Ja 4 '47
Limiting right of public service workers to strike favored; Gallup poll. Iron Age 159:107 Ap 17 '47
No strikes for utilities; comments on report of Twentieth century fund. R. Ames. Pub Util 39:687-91 My 22 '47

PUBLIC utilities—Employees—*Continued*
Public utility strikes can be averted; Chicago Motor Coach strike developed a suggested pattern. H. B. Dorau. il Bus Transportation 26:37-52 Mr; 45-56 Ap '47; Excerpt (pt2). Pub Util 39:578-80 Ap 24 '47
Rate regulation v. wage regulation. A. Haines. Pub Util 40:84-92 Jl 17 '47
Seven states require arbitration in utilities. Gas Age 100:26+ S 18 '47
Should state commissions regulate utility labor relations? R. Ames. Pub Util 39:352-6 Mr 13 '47
Special obligation of utility labor; A.B.A. report on public utility labor legislation. Pub Util 40:591-5 O 23 '47
State laws on utility strikes. B. Jones. Pub Util 39:34-7 Ja 2 '47
Strike laws tested; Indiana, Virginia phone workers comply; New Jersey law defied. Bsns W p101-3 Ap 19 '47
Utilities can with advantage use disabled veterans. M. Hammett. Pub Util 40:29-33 Jl 3 '47
Utility antistrike laws. R. Ames. Pub Util 40:163-8 Jl 31 '47
Utility labor bills in state capitals. J. J. Hassett. Pub Util 39:276-81 F 27 '47
Wages and employment in the public utility industries. E. Neuner, jr. bibliog J Land & Pub Util Econ 22:363-80 N '46
What about the oldsters? abilities of the older worker. E. W. Fair. Pub Util 38: 658-61 N 21 '46
Will the Taft-Hartley law stop utility strikes? I. Bowen. Pub Util 40:631-5 N 6 '47

See also
Gas companies—Employees
Public utilities—Salesmen

Equipment

Depreciation schedule, U.S. Bureau of internal revenue; length of life of buildings and equipment, construction equipment, bridges, waterworks, gas and electric plants. Eng N 138:635+ Ap 17 '47

Finance

Costs hit booming utilities. Bsns W p78+ S 20 '47
Distribution of gross revenues; combined earnings of 180 operating utility companies for year 1945; chart. Pub Util 38:670 N 21 '46
Earnings and dividends of public utility corporations, annual 1939-1945 and quarterly 1943-1946. Fed Res Bul 33:66 Ja '47 [cont monthly]
Mid-year reappraisals and forecasts of public utilities; 1946 key statistics and ratios on important utility companies and systems. J. M. Gordon. il Mag of Wall St 80:315-18+ Je 21 '47
Public utility financing in the third quarter of 1946. H. L. Miller. J Land & Pub Util Econ 22:392-5 N '46
Public utility financing in the fourth quarter and a summary of the year 1946. H. L. Miller. J Land & Pub Util Econ 23:90-7 F '47
Public utility financing in the first quarter of 1947. H. L. Miller. J Land & Pub Util Econ 23:230-3 My '47
Public utility financing in the second quarter of 1947. H. L. Miller. J Land & Pub Util Econ 23:341-3 Ag '47
Selected utility ratios; tabulation. J. S. Hartt. Pub Util 40:233 Ag 14 '47
Utility earnings, current and future; outlook for 1947. O. Ely. Pub Util 38:762-3 D 5 '46

See also
Electric utilities—Finance
Public utilities—Securities

Law

Utility lawyer asks for help. E. O. Tabor. Pub Util 39:210-15 F 13 '47

See also
Holding companies—Laws and regulations
Motor bus lines—Laws and regulations
Public utilities—Regulation
Railroad law

Public relations

Utility lawyer asks for help. E. O. Tabor. Pub Util 39:210-15 F 13 '47

See also
Electric utilities—Public relations
Gas companies—Public relations
Railroads—Public relations

Radio communication

Federal communications commission; rules governing stations in the utility radio service. Am Water Works Assn J 38:1398-407 D '46
Progress in utility radio co-ordination. H. J. Smith. map Gas Age 100:14-15 O 16 '47
Utilities having radio licenses or construction permits; list. Edison Elec Inst Bul 15:47-8 F '47

Rates

Can regulation make utility investment attractive? W. J. Herrman. Pub Util 39:536-42, 615-21 Ap 24-My 8 '47
Cost basis may speed action on utility rate increases. Pub Util 40:669-70 N 6 '47
Fair return set at 6-6½ per cent by most state commissions. O. Ely. Pub Util 38:667 N 21 '46
Present-day aspects of rate making. N. L. Smith. Pub Util 40:613-30 bibliog(p628-30) N 6 '47
Rate regulation v. wage regulation. A. Haines. Pub Util 40:84-92 Jl 17 '47
Why is a rate base? H. T. Ferguson. Pub Util 39:811-17 Je 19 '47

See also
Electric rates
Gas rates
Telephone—Rates
Water rates

Regulation

Another milestone in regulation; New York telephone company case. G. O. May. J Land & Pub Util Econ 23:22-8 F '47
Application of the antitrust laws to regulated industries. E. A. Smith. Pub Util 33:691-705 bibliog(p703-5) N 21 '46
Can regulation make utility investment attractive? W. J. Herrman. Pub Util 39:536-42, 615-21 Ap 24-My 8 '47
Present-day aspects of rate making. N. L. Smith. Pub Util 40:613-30 bibliog(p628-30) N 6 '47
Rise and fall of the public utility concept. H. R. Smith. J Land & Pub Util Econ 23: 117-31 My '47
Some notes on public utilities; Arkansas power and light company v. Federal power commission. J Account 84:15 Ag '47
Utility picture at the state capitals for 1947. R. S. Child. Pub Util 39:95-101 Ja 16 '47

See also
Gas, Natural—Laws and regulations
Public utilities—Rates
Public utilities—Taxation
Public utilities commissions

Reports

Individuality characterizes utility annual reports. Pub Util 39:852-7 Je 19 '47

Salesmen

Can we make engineers out of salesmen, and vice versa? J. H. Collins. il Sales Management 58:101-2+ F 15 '47

Securities

Breakdown of competitive bidding? O. Ely. Pub Util 40:230-3 Ag 14 '47
Capitalization outstanding; combined securities of 180 operating utility companies as of December 31, 1945; chart. Pub Util 38: 670 N 21 '46
Changed emphasis in valuing public utility securities. T. W. Locke. Comm & Fin Chr 164:2746+ N 28 '46
Convertible security offering; a revival. Pub Util 40:175-6 Jl 31 '47
Double stock-selling job for utilities puts heavy load on investment market. E. Etherington. Barron's 27:31 Je 30 '47
How new forces will affect public utilities; with financial statistics on selected companies. J. M. Gordon. Mag of Wall St 79: 193-5+ N 23 '46

PUBLIC utilities—Securities—*Continued*
Institutional holdings of utility securities. O. Ely. Pub Util 40:556-63 O 23 '47
IBA committee reports rise in utilities equity financing. Comm & Fin Chr 164:3052+ D 12 '46
Methods of appraising utility stocks. O. Ely. Pub Util 39:834-40 Je 19 '47
Public utility financing in the third quarter of 1946. H. L. Miller. J Land & Pub Util Econ 22:392-5 N '46
Public utility financing in the fourth quarter and a summary of the year 1946. H. L. Miller. J Land & Pub Util Econ 23:90-7 F '47
Public utility financing in the first quarter of 1947. H. L. Miller. J Land & Pub Util Econ 23:230-3 My '47
Public utility financing in the second quarter of 1947. H. L. Miller. J Land & Pub Util Econ 23:341-3 Ag '47
Public utility security offerings in fourth quarter of 1946. Pub Util 39:110 Ja 16 '47
Wall Street analyses of utility securities. O. Ely. Pub Util 38:667-9, 831-2; 39:44-6, 171-2, 310-11, 377, 439-40, 502-4, 706, 787; 40:42-3, 584-5 N 21 '46-Ja 2, 30, F 27-Ap 10, My 22-Je 5, Jl 3, O 23 '47; Correction. 38:764 D 5 '46

See also
Electric utilities—Securities
Gas companies—Securities
Holding companies—Securities
Railroads—Securities

Taxation
Foreign taxation of publicly owned utilities A. Haines. Pub Util 39:413-18 Mr 27 '47
New taxes for utilities; developments in state legislative sessions. B. Jones. Pub Util 39:555-62 Ap 24 '47
Public utility taxation. H. A. Freeman. bibliog J Land & Pub Util Econ 23:42-9 F '47

See also
Railroads—Taxation

Valuation
New ideas on utility valuation; fair value and fair return in the federal courts. O. Ely. Pub Util 39:848-9 Je 19 '47
Valuation of public utilities; is it possible to reconcile original-cost and reproduction-new theories? A. S. Langsdorf. J Eng Educ 37: 290-6 D '46
Value of service applied to utility property; compensation for seized facilities fixed by federal judge on new principle. Barron's 27:34 My 19 '47

Great Britain
Nationalization; its effect on public utilities; policy of the Conjoint conference. Gas J (Lond) 249:253-4 Ja 29 '47
Town and country planning; how the new bill affects statutory undertakers. L. F. Stemp. Elec R (Lond) 140:317-20 F 14 '47

Panama
Extension of Panama's public utilities approved. For Comm W 27:27 Ap 26 '47

United States
Utilities expect five million new customers. Barron's 27:6 Ja 13 '47
Washington utility outlook for 1947. F. X. Welch. Pub Util 39:12-23 Ja 2 '47
What's ahead for utilities? A. M. Sakolski. Comm & Fin Chr 166:14+ sec 2 Ag 28 '47

PUBLIC utilities advertising association
Annual meeting, 26th, Detroit, June 18-19. Elec World News ed 127:5-6 Je 28 '47; Gas Age 100:50+ Jl 10 '47

PUBLIC utilities commissions
Highest New York court rules utility can enjoin commission; Staten Island Edison corp. wins suit. Elec World News ed 127: 13 My 31 '47
New law suits involving authority of commissions. L. T. Parker. Am Gas J 166:31-3 Ap '47
New York challenges SEC authority on utilities; jurisdiction at stake in Kings County Lighting recap. controversy. E. R. Abrams. Barron's 27:19 My 12 '47
Rate regulation v. wage regulation. A. Haines. Pub Util 40:84-92 Jl 17 '47
Should state commissions regulate utility labor relations? R. Ames. Pub Util 39:352-6 Mr 13 '47
Utility protest on rates allowed by N.Y. court; Staten Island Edison case. E. R. Abrams. Barron's 27:30 Je 2 '47
Validity of public service commissions' regulations in 1946. L. T. Parker. Bus Transportation 26:56-8 F '47
Value of Public service commission control to municipal water works management; abstract. A. P. Kuranz. Water & Sewage Works 94:359-60 O '47
Wisconsin commission abandons fairness test; Two Rivers case. E. R. Abrams. Barron's 27:30 S 29 '47

PUBLIC utility districts
Rule against P.U.D.; court rejects sale of Puget Sound Power into public ownership. Bsns W p25-6 Je 28 '47

PUBLIC utility holding companies. See Holding companies

PUBLIC welfare
Public-mindedness through co-operation. O. Tead. Ann Am Acad 248:161-7 N '46

PUBLIC works
Inventory and stock control for city and county public works departments. W. F. Freeborn and A. A. Kirkbright. il Pub Works 77:31-2 D '46; 78:28+ F; 23+ Mr '47
Public works engineers' yearbook-directory, 1946. 252p $3 American public works assn, 1313 E. 60th st, Chicago '46

See also
Aqueducts
Bridges
Flood control
Highway departments
Hydroelectric plants
Irrigation
Municipal improvement
Pavements
Refuse disposal
Roads
Sewage disposal
Sewerage
Streets
Unemployment—Relief measures—Public works
Waterworks
also American public works association

Cost
Future costs and their effects on engineering budgets. L. R. Howson. Am Soc C E Proc 72:337-46 Mr '46; Discussion. 73:39-42, 525-7 Ja, Ap '47
Reclamation bureau plans $195 million of construction; list of projects. Eng N 139: 235+ Ag 21 '47

Economic aspects
Development works and full employment. D. C. Tait. Int Labour R 54:309-20 N '46
Public investment and full employment. 348p $2.25 International labor office, 734 Jackson place, NW, Washington 6, D.C. '46
Rural public works; needed improvements and useful jobs; building a positive program. V. W. Johnson and others. J Land & Pub Util Econ 23:12-21, 132-41 F-My '47
Studies determine economic effects on property removed from public works sites. J. S. Worley. il Civil Eng 17:29-31 Ja '47

Federal loans and grants
FWA reports progress on fully-planned state and local public works. Civil Eng 17:139+ Mr '47

Finance
Controls eased, Reclamation bureau awards contracts of $22 million. Eng N 137:689 N 21 '46
Local public works plans total over $5.6 billion. Eng N 138:235+ F 13 '47
Rural public works; building a positive program. V. W. Johnson and others. J Land & Pub Util Econ 23:132-41 My '47

See also
Sewerage—Finance

China
Prospects of conservancy works in China. B. Shen. bibliog Franklin Inst J 242:399-420 N '46

France
La responsabilité de l'État à la suite d'accidents causés par la défaillance d'ouvrages publics. A. Mestre. Génie Civil 124: 116-17 Mr 15 '47

PUBLIC works—*Continued*

Great Britain

Tabular summary of civil engineering contracts, 1946. Engineer 183:supp 1-11 F 7 '47

Mexico

Public construction under way in Federal District of Mexico. For Comm W 27:19 My 10 '47

United States

Civil works program of the Corps of engineers. R. A. Wheeler. Western Soc E J 51:190-6 D '46

Federal construction work gets large appropriations. Eng N 139:145-6 Jl 31 '47

Major projects; brief reports on status of construction operations. il Eng N 138:311-24 F 20 '47

Reclamation bureau plans $195 million of construction; list of projects. Eng N 139:235+ Ag 21 '47

PUBLIC works, Rural

Rural public works; needed improvements and useful jobs; building a positive program. V. W. Johnson and others. J Land & Pub Util Econ 23:12-21, 132-41 F-My '47

PUBLICITY

Engineering of consent. E. L. Bernays. Ann Am Acad 250:113-20 Mr '47

Five W's of news in your bank. J. De Jong. Banking 40:43-5+ S '47

How to get publicity for your company and products. D. O. Alber. Ptr Ink 220:34-5 Ag 1 '47

How to turn a plant dedication into a trade and community event; Benjamin Electric publicizes outstanding laboratory design in advertising, house organs, plant visits. B. F. Stevens. il Ind Marketing 32:30-3+ Ja '47

News releases do talk. W. E. Irish. Ind Marketing 32:52+ Je '47

Pepsi-Cola's Walter Mack. il Fortune 36:126-31+ N '47

Publicity junket of Great Northern's Empire Builder. Fortune 35:139 Ap '47

Technical publicity offers bright future for engineers; how to organize publicity activities for industrial plants. V. W. Palen. il Ind Marketing 31:41-2+ D '46

What's wrong with most news releases? M. G. Walther. Ind Marketing 31:47+ N '46

Working press of the Nation. T. Farrell and H. Muschel, eds. 646p $15 Farrell pub. corp, 420 Lexington av, N.Y. '47

See also
Advertising
Public relations

PUBLISHERS

Directories

Literary market place, 1947. 7th ed 207p $3 R. R. Bowker co, 62 W. 45th st, New York 19 '47

Great Britain

Biographical notices of printers and publishers of Friends' books up to 1750; a supplement to Plomer's dictionary. R. S. Mortimer. J Doc 3:107-25 S '47

PUBLISHING

Selling education: Grolier society, inc. Bsns W p65-7 Jl 19 '47

See also
Book industry and trade
Copyright
House organs
Newspapers
Periodicals
Printing
Reprints

Accounting

Value of publishers' plates. J. D. Phillips. J Account 83:143-7 F '47

Europe

Scientific publishing in continental Europe: notes on its war and postwar status. C. H. Brown. Science 106:54-8 Jl 18 '47

Technical book publishing in Europe, 1947; impressions from visits to eleven countries. J. S. Thompson. Science 106:47-53 Jl 18 '47; Excerpts. Mech Eng 69:849-51 O '47

Germany

Documentary resources of present-day Germany. K. Garside. Assn of Sp Lib & Inf Bur Proc 1946:91-8

See also
Periodicals—Germany

India

New publishing firms. Bsns W p116 N 23 '46

PUCKETT, B. Earl, 1897-

Puckett of Allied Stores. por Fortune 35:122-5+ Mr '47

PUERTO RICO

Puerto Rico's planning board in action. il map Eng N 138:197-200 F 6 '47

See also
Chemical industries—Puerto Rico
Electric utilities—Puerto Rico
Taxation—Puerto Rico

Industries and resources

Puerto Rico needlework trades served by air. J. C. Nelson. Dom Comm 35:34-41 S '47

Puerto Rico spreads bounty for industry; tax exemption legislation. Barron's 27:36 Je 30 '47

PUGET SOUND power and light company

Rule against P.U.D.; court rejects sale of Puget Sound Power into public ownership. Bsns W p25-6 Je 28 '47

PUGET SOUND pulp and timber company

Increased production raises Puget Sound earnings. Barron's 27:34 S 1 '47

PULLEYS

Why wrap is important. diags Can Min J 67:1038 N '46

PULLMAN companies

Commission approves pooling plan for railroads' purchase of Pullman company. Ry Age 122:1093 My 24 '47

Files sale agreement; proposed board of directors. Comm & Fin Chr 165:3288 Je 28 '47

New owners. Bsns W p8 Jl 12 '47

Pullman hearing; railroads want to acquire sleeping car business. Ry Age 121:894-6, 936, 976-7 N 23-D 7 '46

Pullman, inc, annual report for 1946. Comm & Fin Chr 165:2420+ My 5 '47

Pullman incorporated; report to railroad users of Pullman services and products. Ry Age 122:816-18 Ap 19 '47

Pullman under railroad ownership. Ry Age 123:57-8 Jl 12 '47

Pullman's working capital to match market price. Barron's 27:24 Ap 14 '47

Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:330 Je 21 '47

Turned over to railroad group. Comm & Fin Chr 166:58 Jl 7 '47

Would O.K. railroad plan to buy Pullman. Ry Age 122:330-2 F 8 '47

PULP. See Wood pulp

PULP and paper research institute of Canada

How the Pulp and paper research institute aided Canada's war effort. il Pulp & Pa of Can 48:55-60 Ap '47

How the Pulp and paper research institute is aiding the industry. il Pulp & Pa of Can 48:61-6 Ap '47

PULPSTONES

Study of Burr penetration. E. R. McMullen and C. T. Robinson. il charts Pulp & Pa of Can (Convention no) 48:209-15 [F] '47; Same cond. Paper Ind 29:730-1 Ag '47

PULPWOOD. See Wood pulp

PULSE analyser

Pulse analyser for nuclear research. H. F. Freundlich and others. bibliog il diags R Sci Instr 18:90-100 F '47

PULSE generators. See Oscillators

PULSE time modulation. See Radio pulse time modulation

PULVERIZED coal. See Coal, Pulverized

PULVERIZERS

British Jeffrey-Diamond Atomill pulveriser. il diag Engineer 184:supp4-5 S 5 '47; Engineering 164:219 S 5 '47

PULVERIZERS—*Continued*
Grinding; new equipment. S. B. Kanowitz. il Chem Ind 61:418-19 S '47
See also
Ball mills
Coal, Pulverized—Preparation

PUMICE
Chart for pumice-concrete beams. A. E. Niederhoff. Eng N 139:389-90 S 18 '47
Nomograph chart aids pumice-concrete slab design. A. E. Niederhoff. Civil Eng 17:613 O '47
Les ponces et roches similaires; leur existence dans la Métropole. V. Charrin. Chimie & Ind 57:284-5 Mr '47
Portland plant makes pumice block. il Concrete 55:20+ Ag '47
Problems in use of pumice for aggregate. Rock Prod 50:93 Je '47
Pumalite, a lightweight block; Western pumistone products co. W. B. Lenhart. il Rock Prod 50:145+ Je '47
Pumice for water treatment; used in filter beds of the plant, primarily to remove algae from water. Rock Prod 50:162 O '47

PUMPCRETE. See Concrete placing

PUMPING
How shall I handle hard water from a well? diags Power 91:196-8 Mr '47
Pumps dewater flooded oil zone. R. Sneddon. il diag Pet Eng 18:51-6 S '47
Terminology in pumping. Water & Sewage Works 94:R24 Jl '47
See also
Mine pumping
Petroleum—Pumping
Pumping stations
Pumps

Cost
Pumping costs; chart. W. L. Nelson. Oil & Gas J 46:103 Je 7 '47

Tables, calculations, etc.
Analysis of turbine pumps. W. E. Wilson. diags Product Eng 18:163-6 O '47
Centrifugal-pumping curves. W. L. Nelson. Oil & Gas J 46:115 Je 21; 149 Je 28 '47
Computations of plunger travel. E. A. Stephenson. Oil & Gas J 45:93-4 Mr 1; 97-8 Mr 8 '47
Reciprocating-pump calculations. W. L. Nelson. Oil & Gas J 46:113 My 17; 101 Je 7 '47
Reciprocating-pump data; tabulation. W. L. Nelson. Oil & Gas J 46:99 My 10 '47
Steam consumption for pumping; charts. W. L. Nelson. Oil & Gas J 46:273 My 31; 131 Je 14 '47
Suction lift of pumps. W. L. Nelson. Oil & Gas J 46:93 Ag 2 '47

PUMPING machinery
Heavy duty cementing equipment performs wide variety of operations. N. A. D'Arcy, jr. il Pet Eng 18:74+ Ag '47
Individual Diesel units reduce rice growing risk. C. Ames. il Diesel Power 25:78-9+ O '47
Oil field flood protection; pump equipped barge protects Oklahoma's second largest oil reserve. il Diesel Power 25:53+ Mr '47
Proposals on API rating form for rotary counterbalance. diags Am Pet Inst Proc 26(4):332-41 '46
Pumping unit design lowers rod acceleration. J. B. Wrigley. diags Pet Eng 18:92+ Ja '47
Report of special subcommittee on simplification of pumping machines. diags Am Pet Inst Proc 25(4):294-7 '45
See also
Gasoline pumps
Hydraulic rams
Petroleum—Pumping Pumps

PUMPING machinery, Electric
Borehole cable installed to cut power bills; Silver King coalition mines co. L. J. Battey. il diag Eng & Min J 148:91-2 Je '47
Capacitors start 800-hp. motor with 750-kw. generator. J. M. Evans. il diag Elec World 127:86-7 Ap 12 '47
Cincinnati's Mill Creek flood control project. H. B. McDermid. il map diags Power Pl Eng 50:82-5 D '46
Combined rotor-impeller makes simple pump. il diag Product Eng 18:91 Mr '47
Effect of the grid on water works pumping practice; abstract. H. R. Lupton. Am Water Works Assn J 39:393-5 Ap '47
Electric drive for water-flood recovery. W. G. Taylor. il Pet Eng 18:80+ Ag '47
Factors in selecting and purchasing deep well pumps. F. E. Harley. plan diags Pub Works 77:17-18+ D '46
Floating pumphouse in river channel supplies refinery with cooling water. il Pet Processing 2:657 S '47
Floating pump house maintains water supply for 25 years; Wood River refinery of Standard oil co. il Oil & Gas J 46:219 Jl 26 '47
General Electric induction motor for pump drives. Blast F & Steel Pl 35:382-3 Mr '47
Large-capacity high-pressure pumping plant for driving hydraulic forging presses. F. H. Roberts. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 24):453-62; Discussion, 463-4 '46
Megator marine pump. il diag Engineering 164:246-7 S 12 '47
Mercury switch smooths loading at Sinclair's new terminal in Detroit. W. C. Uhl. il diags Nat Pet N 39:24+ Mr 12 '47
New NEMA fractional-horsepower motor standards; their effect on refrigeration and pump applications. C. P. Potter. Elec Eng 66:337-9 Ap '47
Operation of small filtration plants; pumps and motors. A. E. Clark. Water & Sewage Works 94:345-6 S '47
Pump equipment; how to plan and provide for controls, electrical equipment, chlorinators and other items. F. E. Harley. il diag Pub Works 78:19-20+ Mr '47
Remote indication by a Wheatstone bridge system; signaling system for sewage pumping system. I. M. E. Aitken. diags Inst E E J 94 pt 2:194-205 Je '47
Sales points for water systems. il Dom Eng 169:110-11+ Ja '47
Water systems, key to multi-million market. Dom Eng 169:126-8+ Mr '47
What is best program of pump and motor repair? diags Power 91:787+ N '47
See also
Mine pumping, Electric
Petroleum pipe lines—Pumping stations, Electric

Control
Automatic pumping plant controls center in eight-panel switchboard; South San Francisco. A. V. Lynn. il Eng N 139:62-3 Jl 10 '47
Carrier controls lake water pumps over seven miles of cable circuit; U.S. sugar corp., Clewiston, Fla. W. A. Derr and others. il diag Elec World 128:66-9 Ag 2 '47
Pressure-operated switch simplifies remote control of loading rack pumps. il diag Pet Processing 2:259 Ap '47

PUMPING stations
Booster pumping on a large closed aqueduct. H. A. Knudsen. plan diags Am Water Works Assn J 39:133-8 F '47
Dutch Village Road station, Halifax. il Water & Sewage 85:23+ Ap '47
Modernizing a pumping station saves money; Alpena, Michigan. H. F. Fetters. plan Pub Works 78:19-20 Je '47
Pump houses for deep well water supplies. F. E. Harley. il diag Pub Works 78:23-4 F '47
See also
Petroleum pipe lines—Pumping stations

Equipment
Automatic pumping plant controls center in eight-panel switchboard; South San Francisco. A. V. Lynn. il Eng N 139:62-3 Jl 10 '47
Pump equipment; how to plan and provide for controls, electrical equipment, chlorinators and other items. F. E. Harley. il diag Pub Works 78:19-20+ Mr '47

Power
Impeller change brings lower electric costs. A. E. Hunter. diag Elec World 127:84-5 Je 21 '47
Water pumping offers attractive long-hour load. Elec World 127:94 Je 21 '47

PUMPS

Acetic acid vs. materials of chemical plant construction; Worthite. W. E. Pratt. Chem Eng 53:205+ D '46

Air-operated hydraulic pressure testing pump. il Engineer 182:552 D 13 '46

Beacham swashplate hydraulic pump. diag Automobile Eng 37:336 S '47; Chem & Ind p509 Ag 16 '47; il Chem Age (Lond) 57: 92 Jl 19 '47

Capacity-head relationship of pumps; chart. W. L. Nelson. Oil & Gas J 46:93 Jl 19 '47

Change in pumps expedites ash handling. H. Nagle. il diag Power 91:339-40 My '47

Design of jet pumps. A. E. Kroll. diag Chem Eng Prog 43:sup21-4 F '47

Developments in pumping practices. H. R. Cady. Am Water Works Assn J 39:139-42 F '47

Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69:771-7; Discussion. 777-8 O '47

Fifty years of pump building; the Warren steam pump company. il Marine Eng 52: 96-8 Je '47

Fittings for pumps. W. L. Nelson. Oil & Gas J 46:105 Jl 5 '47

Gresham and Craven air-operated Ejecto-pump. il diags Engineering 164:195-6 Ag 29 '47

High destiny pumping and pulping. T. Argonin. Paper Tr J 124:124+ My 29 '47

High-pressure gear pumps. T. E. Beacham. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 24):417-29 '46; Same. Engineering 161:284-5, 310-12, 334-5 Mr 22-Ap 5 '46; Same cond. Engineer 181:182-4 F 22 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 24):429-52 '46; Engineering 161:185-6 F 22 '46; Engineer 181:180-2 F 22 '46

Liquid piston pump simplifies handling of corrosive gases and liquids. G. E. Haddeland. diags Chem Eng 54:136-7 S '47

Materials handling. R. E. Wright. il Ind & Eng Chem 39:8-10 Ja '47

Mechanical fluorine compression. S. G. Osborne and M. M. Brandegge. il diag Ind & Eng Chem 39:273-4 Mr '47

Megator pump has sliding displacement chambers. il diags Product Eng 18:104-5 O '47

More floor space and simplified piping results from mounting pumps on posts. il Pet Processing 2:257 Ap '47

Mucking pump digs pole holes in 10 minutes. E. V. Stuart. il diags Elec World 127:64 F 1 '47

Novel pumps; improved Huber Squeegee pump. diags Chem Eng 54:152+ S '47

Outline for an on-the-job training program for water department personnel; pumps and pumping. Pub Works 78:42+ S '47

Packless water pump. L. Cernohlavek. diags Bus Transportation 26:69 S '47

Peter Brotherhood metering and proportioning pump. il diags Engineering 162:417 N 1 '46

Power slush pump. il Machine Design 18: 146-7 N '46

Proportioning pumps; construction, performance and application. R. McFarland, jr. il Chem Eng Prog 43:sup 12-16 F '47

Pump cavitation; abstract. B. R. Walsh. Pet Processing 1:172 N '46

Pump operation. W. L. Nelson. Oil & Gas J 46:315 S 20 '47

Pumps, compressors and expanders; new equipment. J. F. Skelly. il Chem Ind 61: 411-12 S '47

Radial piston pump for variable speed transmission; airport cargo trailers. il diag Product Eng 18:94-5 O '47

Reciprocating-pump calculations. W. L. Nelson. Oil & Gas J 46:113 My 17 '47

Reciprocating-pump data; tabulation. W. L. Nelson. Oil & Gas J 46:99 My 10 '47

Reciprocating pump; questions and answers for power engineers. E. F. Wright. il diags Power 90:628-30+, 704-6+, 782-4, 868-70; 91:52-4, 126-7+, 200-1+, 272-4+, 346-8, 418-19+, 492-4+, 566+ S '46-Ag '47

Refinery pump service. W. L. Nelson. Oil & Gas J 46:133 Ag 23 '47

Regenerative pump; questions and answers. V. de P. Gerbereux. il diags Power 91:643-5+ S '47

Review of power and mechanical equipment; pumps. il diag Power 90:921-2+ Mid-D '46

Rotary pump; questions and answers. A. M. Shaw. diags Power 91:714-15+, 788-90+ O-N '47

Selecting the right pump for the job. P. C. Ziemke. Power Pl Eng 51:87 O '47

Small hydraulic pump. il diags Engineer 184: 370 O 17 '47

Sticking vanes are eliminated in improved rotary pumps; patent. diags Pet Processing 2:704 S '47

Suction lift of pumps. W. L. Nelson. Oil & Gas J 46:93 Ag 2 '47

Suggestions on pump selection. W. L. Nelson. Oil & Gas J 46:287 Jl 26 '47

Swashplate hydraulic pump designed by T. E. Beacham. il diags Engineer 184:54-5 Jl 18 '47

Vacuum and close-clearance pumps. W. L. Nelson. diag Oil & Gas J 46:103 Ag 30 '47

See also

Gasoline pumps
Heat pump
Mine pumps
Oil pumps
Pumping stations
Pumps, Centrifugal
Vacuum pumps

Design

Compressibility of liquids as it affects design of high-pressure pumps and hydraulic equipment. R. L. Schmoyer. il diags Machine Design 19:134-7 Ag '47

Maintenance and repair

Reduce pump packing repairs by babbitt lining in glands. J. W. May. Pet Processing 2:580 Ag '47

Tips on repacking the stuffing box. Power Pl Eng 51:95 Ag '47

Standards

Report of committee on the standardization of pumping equipment and engines. diags Am Pet Inst Proc 26(4):305-31 '46

Report of subcommittees of the committee on the standardization of pumping equipment and engines. diags Am Pet Inst Proc 25 (4):272-93 '45

Testing

How to test the performance of a pump. diag Pub Works 78:29 F '47

Model tests of Granby pumps. B. L. Vanderboegh. il diag A S M E Trans 69:535-8; Discussion. 538-40 Jl '47

PUMPS, Centrifugal

Centrifugal-pumping curves. W. L. Nelson. Oil & Gas J 46:115 Je 21; 149 Je 28 '47

Controlling pipe line surges by means of air vessels. J. S. Blair. diags Inst Mech Eng J & Proc 153 (War emergency issue no 1): 1-8; Discussion. 8-14 '45

Estimating centrifugal-pump capacity. W. L. Nelson. Oil & Gas J 45:297 Mr 22 '47

Fifty years progress in pumping. H. Gartman. diags Water & Sewage Works 94: 73-7 F '47

Fundamental characteristics of the centrifugal pump. J. J. Woolfenden. Heating-Piping 18:74-6 S; 72-5 O '46; Discussion. 19:90 Ja '47

Homelite compact self-priming pump. il Product Eng 18:100-1 Jl '47

Improving centrifugal pump sealing. G. Mayurnik. diag Chem Eng 54:130 O '47

Loading platform efficiency increased with installation of centrifugal pumps. diags Pet Processing 2:20 Ja '47

Magnolia's electric centrifugal pump stations designed for 20-in. crude-oil line. plan diag Oil & Gas J 46:215-16 S 20 '47

Marine submersible centrifugal pump. il diags Engineer 183:283-5 Ap 4 '47

Method for testing and studying the cost of operation of centrifugal boiler and feed pumps; abstract. A. C. Pasini and others. Pet Processing 2:314 Ap '47

Priming centrifugal pumps. W. L. Nelson. diag Oil & Gas J 46:111 Ag 9 '47

Selecting chemical pumps. C. A. Richardson. bibliog il diags Chem Eng Prog 43:sup 17-20 F '47

PUMPS, Centrifugal—*Continued*
Shaft alignment of a centrifugal pump and its driver. W. L. Nelson. diags Oil & Gas J 46:105 S 6 '47
Special cooling arrangement for pump engine at Charlottetown. W. S. Lea. diag Water & Sewage 85:15+ Ja '47
Turbine-shaft centrifugal oil pump works with oil-driven booster pump. R. Sheppard and J. W. Barnett. il diags Power 91:78-81 F '47

Efficiency

Approximate performance of centrifugal pumps. W. L. Nelson. Oil & Gas J 45:107 My 3 '47
Centrifugal pumps; some notes on selection and simple method of checking efficiencies. H. E. Beckwith. Water & Sewage Works 94:R21-4 Jl '47
How specific speed affects centrifugal-pump performance. A. Brkich. il diags Power 91:157-9+ Mr '47
Influence of viscosity on centrifugal-pump performance. A. T. Ippen. il diags A S M E Trans 68:823-38 bibliog(p838); Discussion. 839-48 N '46
Internal efficiency of centrifugal pumps and compressors. G. G. McDonald. bibliog Engineer 184:121-2 Ag 8 '47
Viscosity and centrifugal pumps. W. L. Nelson. Oil & Gas J 46:129-30 O 25 '47

Maintenance and repair

Pump maintenance. H. Kingsbury. Paper Tr J 125:68-70 O 9 '47; Same cond. Paper Ind 29:590-1 Jl '47

PUMPS, Feed water
Causes of knocks in duplex feedwater pumps. G. Holman. diag Power Pl Eng 51:92-3 O '47
Correct materials make feed pumps immune to corrosion-erosion. H. L. Ross. il diag Power 91:464-6 Jl '47; Abstract. Heating-Piping 19:95 Je '47
Corrosion-erosion of boiler feed pumps and regulating valves. H. A. Wagner and others. il diags A S M E Trans 69:389-97; Discussion. 397-403 My '47
Feed-pump symposium. Mech Eng 68:1072-4 D '46
How to couple high-speed motors to boiler feed pumps. A. E. Beardmore. diag Power 90:861 D '46
Selective corrosion of phosphor bronze in hot-water service. W. D. Clark. il Engineering 164:214-16 Ag 29 '47
Use of fiber discs increase valve life 700%. C. Minium. diags Pet Processing 1:179 N '46
Why do duplex pumps slam when feedwater temperature drops? Power Pl Eng 51:97-8 S; 97-8 O '47

PUMPS, Fuel
Fuel systems for jet aircraft. W. H. Curtis and W. J. Lansing. diags S A E J 55: 50-3 Je '47
Servicing Diesel fuel pumps. H. G. Jarman. il Diesel Power 24:1466-8 D '46
Vapor lock and pump selection in aircraft fuel systems. R. S. Ames. bibliog Aeronautical Eng R 5:22-5+ N '46

Manufacture

Manufacture of fuel-injection equipment; C.A.V. limited, Acton. il Engineering 164: 9-10, 12 Jl 4 '47

PUMPS, Mine. See Mine pumps

PUMPS, Submergible
Marine submersible centrifugal pump. il diags Engineer 183:283-5 Ap 4 '47
Subsurface sucker-rod pumps. R. L. Chenault. diags Oil & Gas J 46:104+ O 18 '47

PUMPS, Turbine
Analysis of turbine pumps. W. E. Wilson. diags Product Eng 18:163-6 O '47
Corrosion in vertical turbine pumps. T. E. Larson. il Water & Sewage Works 94:117-21 Ap '47
Performance characteristics of turbine pumps at 3500 and 17500 rpm. E. L. Abramson. diags Power 91:300-1 My '47

PUMPS, Vacuum. See Vacuum pumps

PUNCHED card system
Agreement analysis card of the International association of machinists. A. Epstein. il Mo Labor R 65:75-7 Jl '47
Application of IBM machines to the solution of the flutter determinant. E. L. Leppert, jr. bibliog J Aeronautical Sci 14:171-4 Mr '47
Asymmetric rotor; analysis of 8.5μ band of D_2O by punched-card techniques. G. W. King. bibliog J Chem Phys 15:85-8 F '47
Asymmetric rotor; analysis of the 3.7-μ band of H_2S by punched-card techniques. R. M. Hainer and G. W. King. bibliog J Chem Phys 15:89-91 F '47
Coding and sorting chemical compounds by means of punched cards. J. A. Morgan and D. E. H. Frear. J Chem Educ 24:58-61 F '47
Graphic system to control costs; Cribben & Sexton company. J. Turner. il Am Bsns 17:8-9+ Ap '47
Hudson parts control method. D. G. Baird. il Am Bsns 17:12-13+ O '47
Keeping meter records with business machines. H. W. Bruce. Elec West 97:58-9 D '46
Library applications of punched card systems. K. M. Stokes. Special Lib 38:204-8 S '47
Machine computation of power network performance. L. A. Dunstan. diag Elec Eng 66:901-6 S '47
Mechanized accountancy and statistical work as applied to the North Middlesex gas company. J. D. Thomas. Gas J (Lond) 250: 336-8; Discussion. 338+ My 14 '47
Mechanizing payroll preparation; the Rich Run mine of the Elk River coal and lumber co. il Coal Age 52:79-81 S '47
Payroll accounting by punched card methods. S. Noah, jr. il N A C A Bul 28:1512-31 Ag 15 '47
Payroll, costs, and personnel figures from one system; Ferro machine & foundry company. J. Turner. il Am Bsns 16:16-17+ D '46
Pontiac using punch card system for distributing available cars. W. G. Patton. Iron Age 159:74 Mr 27 '47
Problems of multiple-punching with Hollerith machines. K. Benjamin. diags Am Stat Assn J 42:46-71 Mr '47
Property records and depreciation accounting on punched cards. J. G. Sidak. il N A C A Bul 28:1352-8 Jl 1 '47
Punched-card techniques and their applications to scientific problems. W. J. Eckert. J Chem Educ 24:54-7+ F '47
Recent developments in Keysort cards. G. J. Cox and others. J Chem Educ 24:65-70 F '47
Round table discussion; indexing and classifying results of chemical research in relation to punched-card investigations. J. W. Perry and others. J Chem Educ 24:71-4 F '47
Simple method for cross-indexing a reference file. J. G. Aldous. Science 106:109 Ag 1 '47
Some applications of punched-card methods in research problems in chemical physics. G. W. King. J Chem Educ 24:61-4 F '47
Stock control plan to insure profits; E. R. Godfrey and sons, Milwaukee wholesale grocer. J. Turner. Am Bsns 17:12-13+ Ja '47
Summary of applications of punched cards as they affect special libraries. C. D. Gull. bibliog Special Lib 38:208-12 S '47
Three-way control for low-cost operation; Lenox incorporated. J. M. Tassie. il Factory Management 104:110-12 D '46
Top management gets the figures; Formfit's accounting system. J. Turner. il Am Bsns 16:8-9+ N '46
Use of punched cards in molecular structure determinations. P. A. Shaffer, jr., V. Schomaker and L. Pauling. il J Chem Phys 14: 648-64 N '46
Use of the multiplying punch. G. J. Beswick and H. G. Littlewort. il Am Gas Assn Mo 29:401-4 S '47
What about microfilm and such? il diags Arch Rec 100:118-19 N '46

PUNCHES
Auxiliary stripper prevents punch breakage. F. Strasser. diags Am Mach 91:77 Jl 31 '47

PUNCHES—*Continued*
Cemented carbide used for high production dies and punches; Lynn River works of General electric co. il Iron Age 160:64-6 Ag 28 '47
Compound punch and die makes three washers. B. Menkin. diags Am Mach 91:119 O 23 '47
Inclined internal fly cutter mills elliptical punches. W. W. Brubaker. diag Am Mach 91:109 Jl 31 '47
Mechanism for operating dial feed and radially positioned multiple punches. C. F. Smith. diags Mach 53:164-5 Ag '47
Special tool designed for reaming punches. R. Mawson. diag Materials & Methods 25: 132-3 Mr '47
Whipsleeve punches and retainers. il diag Mach 53:212 F '47

PUNCHING
Clutch slots punched in; Eversharp repeater pencils. J. W. Dean, jr. il diags Am Mach 91:116-18 Jl 17 '47
Hole piercing and stamping in one operation. E. C. Morse. il Materials & Methods 26: 80-4 Jl '47
Universal punching setup cuts drilling costs. J. C. Brenner. diags Am Mach 91:112 S 25 '47

PUNCHING machinery
Fluid punch. il diags Machine Design 18: 106-7 D '46
Hole-punching units. il Sci Am 177:81-2 Ag '47
Lempco hypermatic punch press. il Am Mach 91:137 Jl 31 '47; Automotive Ind 97:46+ Jl 15 '47
New press operates at 1800 strokes per min. H. E. Linsley. il Iron Age 160:58-9+ Jl 10 '47
Punch press protector; faulty operation causes timer to shut off power. J. Isaacs. il diags Electronics 19:101-3 D '46
Punch presses can be safe. W. A. Vollmer. il Am Mach 91:99-103 Jl 3 '47
Variable-speed press jumps output. J. I. Karash. il diag Am Mach 91:112-15 Mr 13 '47
Vulcan hydraulic machine for piercing refrigerator-door flanges in one operation. il Mach 53:186-7 Jl '47

See also
Dies

Testing

Stress distribution in punch presses analyzed with electric strain gages. il Mach 54:167-8 O '47

PUNCTUATION
Simplifying your punctuation problem; satire. F. Flanagan and S. Merritt. Ptr Ink 218: 160 F 7 '47

See also
Quotation marks

PUNISHMENT
Punishment and reformation. Economist 152: 836-8 My 31 '47

See also
Capital punishment

PURCHASING
Business urged to follow realistic buying policies; abstract. G. A. Renard. Am Bsns 17:45 Ag '47
Buyer and seller both lose on small orders, NICB analysis shows. Iron Age 159:134+ Mr 20 '47
Card and quantity-chart system controls 32,000-item inventory. W. F. Lent. il Am Mach 91:121-4 Mr 13 '47
Do you need money for equipment? control of constantly recurring expenses saves money to purchase capital goods. J. Garth. Am Bsns 17:21+ Ja '47
Do's and don'ts for order-placers. L. Conrad. Factory Management 104:294+ O '46
Gearing purchases with production; General electric X-ray corporation. P. Eastman. il Am Bsns 17:20-1+ Ag '47
Hard to buy; Ford receives 450 bids in response to request for western suppliers. Bsns W p47+ Je 14 '47
Material standards for the food industries. R. E. Worden. flow sheet Food Ind 19:163-5+ F '47
More of a price than production boom; advises caution in forward buying. G. L. Meyer, jr. Comm & Fin Chr 166:1645+ O 23 '47
Protection against open pricing. Management R 36:161-3 Mr '47
Safety man and the P.A. N. Baruch. Nat Safety N 55:4+ Mr '47
Should the foreman help buy? R. J. Spence. Am Mach 91:109 Ap 24 '47
What close control of inventory means to management; Cutler-Hammer experience. J. C. Borden. Factory Management 105: 105-8 F '47

See also
Consumers
Consumption (economics)
Instalment plan
Insurance companies—Purchasing
Machinery, Replacement of
Merchandizing
Order blanks
Railroads—Purchasing
Retail trade—Stock
Trade unions—Purchasing service
Vendors and purchasers

Advertising aids

Bold headline, short copy in effective campaign for obtaining railroad ties from farmers. Ptr Ink 218:66 F 28 '47

PURCHASING, Government
Bulk purchasing system of the United Kingdom. For Comm W 26:11 F 8 '47
Buying reform? results of N.I.G.P. survey. Bsns W p55+ S 27 '47
How TVA buys with standards. H. B. Hendrix. il Ind Stand 18:109-11 My '47
Military procurement in peacetime. J. P. Miller. Harvard Bsns R 25 no 4:444-62 [Jl] '47
National public purchasing academy creation revealed. Oil Paint & Drug Rep 152:7+ S 15 '47
Nation's refineries get voluntary quotas for government supply. Oil & Gas J 46:54 S 27 '47
Standards in governmental buying. C. E. Mack. Ind Stand 17:303-7 D '46
10,000 government purchase specifications now being revised. G. Hardy. Iron Age 159:124-6 Mr 6 '47
Three armed services to procure needs independent of each other. Steel 121:61 Ag 11 '47
Who buys for foreign governments; directory. Bsns W p98 Ag 16 '47
You can do business with the government; abstract. T. A. Garner. Management R 35: 437-9 N '46

See also
Contracts, Government

PURCHASING, Household

See also
Budget, Household

PURCHASING, Municipal
Testing and inspection of materials and equipment; Chicago water works system. H. P. Hagedorn and W. W. DeBerard. il Am Water Works Assn J 39:722-8 Ag '47

PURCHASING agents
Continued caution of purchasing agents reflects skepticism as to record demand. Barron's 27:12 N 3 '47
Purchasing agent's eye view of business. Oil Paint & Drug Rep 151:5 Ja 27 '47 [cont monthly]
Reports more optimism among purchasing agents; Business survey committee of National association of purchasing agents. Comm & Fin Chr 164:2887+; 165:6+, 1784+, 2340; 166:118, 921 D 5 '46, Ja 2, Ap 3, My 1, Jl 10, S 4 '47
What makes the buyer act that way? J. N. Griffith. il Ind Marketing 32:31+ Mr '47
Who buys for foreign governments; directory. Bsns W p98 Ag 16 '47

See also
Purchasing departments

PURCHASING agents, National association of. See National association of purchasing agents

PURCHASING companies
Los Angeles now rates as major buying center. Sales Management 58:46+ Mr 15 '47
Where to look for big buyers in Chicago. il Sales Management 59:44-6 Jl 1 '47

PURCHASING departments
Ford purchasing department reorganization. A. H. Allen. Steel 121:59-60 S 22 '47
Revamped purchasing saves steel for Ford. Bsns W p38+ S 20 '47

PURCHASING power. See Consumption (economics)

PURDUE university
Packaged produce without refrigeration; Purdue experiment. F. C. Gaylord and K. I. Fawcett. il Mod Packaging 20:124-8+ D '46

Library
Manual of the William Freeman Myrick Goss library of the history of engineering and associated collections. W. M. Hepburn. 218p Purdue univ, Lafayette, Ind. '47

PURE oil company
Annual report. Comm & Fin Chr 165:1908 Ap 7 '47
High yield available in five per cent preferred. Barron's 27:33 S 22 '47

PURINES
5(4)-Amino-4(5)-imidazolecarboxamide; a precursor of purines. W. Shive and others. Am Chem Soc J 69:725-6 Mr '47
Experiments on the synthesis of purine nucleosides; configuration at the glycosidic centre in natural and synthetic pyrimidine and purine nucleosides. J. Davoll, B. Lythgoe and A. R. Todd. Chem Soc J p833-8 S '46
Experiments on the synthesis of purine nucleosides; configuration of some synthetic purine and pyrimidine glycosides. G. A. Howard and others. Chem Soc J p861-5 O '46
Experiments on the synthesis of purine nucleosides; improved method for the cyclisation of 4-glycosidamino-5-thioformamidopyrimidines. G. W. Kenner and A. R. Todd. Chem Soc J p852-5 O '46
Experiments on the synthesis of purine nucleosides; interpretation of some interconversion reactions of N-glycosides. G. A. Howard and others. Chem Soc J p855-61 O '46
Experiments on the synthesis of purine nucleosides; 9-β-*d*-mannopyranosidoadenine; a proof of the location of the sugar residue in adenosine. B. Lythgoe, H. Smith and A. R. Todd. Chem Soc J p355-7 Mr '47

PURKINJE effect
Reds and the greens; or, coloured light the rebel against order in photometry; reprinted from Light and lighting, October, 1940. J. W. T. Walsh. Light & Lighting 40:71-4 Ap '47

PURPURA
Idiopathic thrombocytopenic purpura in a woman with prolonged exposure to benzol. W. T. Vaughan, jr. and C. A. Finch. J Ind Hygiene 29:227-8 Jl '47

PUYALLUP, Washington
Sewerage
Imbedded coils heat sludge digestors. L. L. Sphar. diags Eng N 139:53-5 Jl 10 '47

PUZZOLANA. See Pozzuolana

PYCNOMETERS
Pycnometer for the rapid routine determination of the specific gravity of small volumes of liquids. J. G. Reynolds. diags Chem & Ind p176-7 Ap 5 '47

PYRACANTHA
Some poly-*cis*-lycopenes occurring in the fruit of pyracantha. L. Zechmeister and J. H. Pinckard. bibliog il Am Chem Soc J 69:1930-5 Ag '47

PYRAN
Experiments with Grignard solutions; action of Grignard solutions on thermochromic spiropyrans. A. Schönberg, A. Mustafa and W. Asker. Chem Soc J p847-8 Je '47
Studies in pyrane chemistry. G. F. Woods and H. Sanders. Am Chem Soc J 68:2483-5 D '46

PYRANOSIDES
Relations between rotatory power and structure in the sugar group; some 2'-naphthyl 1-thioglycopyranosides and their acetates. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1668-72 Jl '47

PYRAZINE
Amination of pyrazine with sodium amide. R. N. Shreve and L. Berg. bibliog Am Chem Soc J 69:2116-17 S '47
Pyrazine chemistry; derivatives of 3-hydroxypyrazinoic acid. F. G. McDonald and R. C. Ellingson. bibliog Am Chem Soc J 69:1034-7 My '47
Pyrazine derivatives; abstract. R. A. Baxter and others. Chem & Ind p422-3 N 23 '46
Pyrazine derivatives; 2-hydroxy-3 : 6-dimethylpyrazine. R. A. Baxter, G. T. Newbold and F. S. Spring. Chem Soc J p370-2 Mr '47
Pyrazine derivatives; synthesis of a racemic 2-hydroxy-3 : 6-di-*sec.*-butylpyrazine and its relationship to deoxyaspergillic acid. G. T. Newbold and F. S. Spring. Chem Soc J p373-8 Mr '47
Pyrazines. I. J. Krems and P. E. Spoerri. bibliog(249 ref) Chem R 40:279-58 Ap '47
Pyrimido[4,5-b]pyrazines; 2,4-diamino-pyrimido[4,5-b]pyrazine and derivatives. M. F. Mallette, E. C. Taylor, jr. and C. K. Cain. bibliog Am Chem Soc J 69:1814-16 Jl '47

PYRAZOLONE
Arsenicals of the 5-pyrazolone, 5-isoxazolone and α-acetoglyoxylic acid series. R. F. Coles and C. S. Hamilton. Am Chem Soc J 68:2588 D '46

PYRENE
Crystal structure of pyrene; a quantitative X-ray investigation. J. M. Robertson and J. G. White. pl diags Chem Soc J p358-68 Mr '47; Abstract. Chem & Ind p390-1 O 26 '46

PYRETHRINS
Experiments on the synthesis of the pyrethrins; structure of cinerone. S. H. Harper. Chem Soc J p892-5 O '46

Analysis
Determination of the pyrethrin content of dilute preparations of pyrethrum flowers in oil. G. T. Bray and K. A. Lord. Soc Chem Ind J 65:382-4 D '46
Determination of the pyrethrins in pyrethrum concentrates in mineral oil. J. T. Martin and S. T. P. Brightwell. bibliog Soc Chem Ind J 65:379-82 D '46
Estimation of pyrethrins. H. A. Seil. diag Soap & San Chem 23:131+ S '47

PYRETHROLONE
Experiments on the synthesis of the pyrethrins; structure of cinerone. S. H. Harper. Chem Soc J p892-5 O '46

PYRETHRUM
Pyrethrum refunds negotiated. Soap & San Chem 23:123+ Ja '47

Analysis
Determination of Freon-insolubles in pyrethrum extract. L. D. Goodhue. diag Soap & San Chem 23:133+ Ja '47
Determination of the pyrethrin content of dilute preparations of pyrethrum flowers in oil. G. T. Bray and K. A. Lord. Soc Chem Ind J 65:382-4 D '46
Determination of the pyrethrins in pyrethrum concentrates in mineral oil. J. T. Martin and S. T. P. Brightwell. bibliog Soc Chem Ind J 65:379-82 D '46

PYREX
Chemical engineering materials of construction; review of literature from start of World war II; glass. J. R. Blizard. bibliog il diag Ind & Eng Chem 39:1215-18 O '47
Effect of hydrostatic pressure on the fracture of brittle substances. P. W. Bridgman. diags J Ap Phys 18:246-58 F '47
Pyrex Dewars for liquid helium. C. T. Lane and H. A. Fairbank. R Sci Instr 18:522 Jl '47
Pyrex ware back in sets; it pays, says Corning. il Mod Packaging 20:120-1 N '46

PYRIDAZINE
Conversion of sucrose into pyridazine derivatives; 3-sulphanilamido-6-methylpyridazine. W. G. Overend and L. F. Wiggins. Chem Soc J p239-44 F '47

PYRIDAZONE
Conversion of sucrose into pyridazine derivatives; 4-amino-2-phenyl-6-methyl-3-pyridazone, 4-amino-2-(*p*-nitrophenyl)-6-methyl-3-pyridazone, and their sulphanilamido-derivatives. W. G. Overend and L. F. Wiggins. Chem Soc J p549-54 Ap '47

PYRIDINE
Contributions to the chemistry of pyridine; condensation of β-hydroxypyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 1104-5 D '46

Contributions to the chemistry of pyridine; 3- and 5-hydroxy-2-methylpyridine, and the condensation of 5-hydroxy-2-methylpyridine with formaldehyde in alkaline medium. T. Urbanski. Chem Soc J p 132-4 F '47

Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47

Ozonolysis of pyridine homologs, a method of structural elucidation. W. Shive, E. G. Ballweber and W. W. Ackermann. bibliog Am Chem Soc J 68:2144-8 N '46

4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

Search for chemotherapeutic amidines; pyridines. P. Z. Gregory, S. J. Holt and R. Slack. Chem Soc J p87-9 Ja '47

Some observations on decomposition voltages. J. O. Bockris and S. Ignatowicz. bibliog diag Electrochem Soc Trans 92 (preprint 9):115-22 '47

Some products formed in the reaction of *p*-acetamidobenzene-sulphonyl azide with pyridine. J. N. Ashley, G. L. Buchanan and A. P. T. Easson. Chem Soc J p60-7 Ja '47

Synthesis of some aryl pyridyl sulphones (arylsulphonylpyridines). H. Burton and W. A. Davy. Chem Soc J p52-5 Ja '47

War laboratory curiosities now commercially important; pyridine compounds. Barron's 27:26 My 19 '47

PYRIDOACRIDINE
Attempts to find new antimalarials; some derivatives of 3 : 4 : 2′ : 3′-pyridoacridine substituted in the 2-position. W. C. Hutchison and W. O. Kermack. Chem Soc J p678-81 My '47

PYRIDONE
N-aralkyl derivatives of 4-pyridone and chelidamic acid. S. K. Freeman, W. F. Ring'k and P. E. Spoerri. bibliog Am Chem Soc J 69:858-9 Ap '47

PYRIDONIUM perchlorate
Properties of electrolytic solutions; conductance of some substituted ammonium salts in ethylene chloride. L. M. Tucker and C. A. Kraus. Am Chem Soc J 69:454-6 F '47

PYRIDONIUM picrate
Properties of electrolytic solutions; conductance of some substituted ammonium salts in ethylene chloride. L. M. Tucker and C. A. Kraus. Am Chem Soc J 69:454-6 F '47

PYRIDOXAL
Vitamin B_6 group; extraction procedures for the microbiological determination of vitamin B_6. J. C. Rabinowitz and E. E. Snell. bibliog Anal Chem 19:277-80 Ap '47

PYRIDOXINE. See Vitamins—Vitamin B_6

PYRIDYLACETIC acid
Pyridylthioacetmorpholides and pyridylacetic acids. R. L. Malan and P. M. Dean. bibliog Am Chem Soc J 69:1797-8 Jl '47

PYRIDYL alcohols
Antispasmodics; diarylacetic acid esters of some pyridyl and piperidyl alkanols. R. R. Burtner and J. M. Brown. Am Chem Soc J 69:630-3 Mr '47

PYRIMIDINE
Analogs of pyridoxine; some hydroxymethylpyrimidine derivatives. G. E. McCasland and others. bibliog Am Chem Soc J 68: 2390-3 N '46

Analogs of pyridoxine; synthesis of a pyrimidine analog. G. E. McCasland and D. S. Tarbell. bibliog Am Chem Soc J 68:2393-5 N '46

Direct thiation of uracils. G. B. Elion and G. H. Hitchings. bibliog Am Chem Soc J 69:2138-9 S '47

Experiments on the synthesis of purine nucleosides; configuration at the glycosidic centre in natural and synthetic pyrimidine and purine nucleosides. J. Davoll, B. Lythgoe and A. R. Todd. Chem Soc J p833-8 S '46

Experiments on the synthesis of purine nucleosides; configuration of some synthetic purine and pyrimidine glycosides. G. A. Howard and others. Chem Soc J p861-5 O '46

Experiments on the synthesis of purine nucleosides; improved method for the cyclisation of 4-glycosidamino-5-thioformamidopyrimidines. G. W. Kenner and A. R. Todd. Chem Soc J p852-5 O '46

Experiments on the synthesis of purine nucleosides; interpretation of some interconversion reactions of N-glycosides. G. A. Howard and others. Chem Soc J p855-61 O '46

New potential chemotherapeutic agents; derivatives of 1 : 3-diaza-acridine. F. E. King and T. J. King. Chem Soc J p726-34 Je '47

Reaction between acetone and ammonia; formation of pyrimidine compounds analogous to the aldoxanes of Späth; abstract. R. P. Bradbury, N. C. Hancox and H. H. Hatt. Chem & Ind p196 Ap 12 '47

Synthetic antimalarials; 3-dialkylaminoalkylaminodiphenylamines. F. G. Mann and J. W. G. Porter. Chem Soc J p910-14 Jl '47

Synthetic antimalarials; dialkylaminoalkylaminodiphenylguanidines. F. G. Mann, F. T. Naylor and J. W. G. Porter. Chem Soc J p914-17 Jl '47

Synthetic antimalarials; effect of variation of substituents in derivatives of mono- and di-alkylpyrimidines. R. Hull and others. Chem Soc J p41-52 Ja '47

Synthetic antimalarials; pyrimidine derivatives. F. H. S. Curd, F. L. Rose and others. Chem Soc J p343-84, 713-37 My, Ag '46

Theory of reactions of cells to goitrogenic thiopyrimidines. L. Laufer and E. D. Stewart. bibliog Science 105:327-8 Mr 28 '47

Ultraviolet absorption spectra of thiouracils. G. B. Elion, W. S. Ide and G. H. Hitchings. bibliog Am Chem Soc J 68:2137-40 N '46

PYRIMIDOPYRAZINE
Pyrimido[4,5-b]pyrazines; 2,4-diamino-pyrimido[4,5-b]pyrazine and derivatives. M. F. Mallette, E. C. Taylor, jr. and C. K. Cain. bibliog Am Chem Soc J 69:1814-16 Jl '47

PYRITE
St Joe's Balmat mill; Edwards division of the St Joseph lead co. J. Casale. il diag Eng & Min J 147:56-62 N '46

PYRITES
Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46

Les gisements de pyrites en France. Génie Civil 124:139 Ap 1 '47

Pyrites, Mineral, Louisa county, Va. R. C. Hickman. 3pls U S Bur Mines Rep of Invest 4116:1-3 '47

PYROCATECHOL
Magnetic study of the type of bonding existing in some complexes of ferric iron with sulfonated pyrocatechol. A. L. Jones and L. B. Yeatts. bibliog Am Chem Soc J 69: 1277-80 Je '47

PYROGALLOL
Some derivatives of catechol and pyrogallol. R. D. Haworth, D. Woodcock and A. H. Lamberton. Chem Soc J p999-1005 N '46

PYROLYSIS
Depolymerization of butadiene dimer. T. F. Doumani, R. F. Deering and A. C. McKinnis. diag Ind & Eng Chem 39:89-92 Ja '47

PYROLYSIS—*Continued*
Methyl thioethers derived from 2 : 2′-dichlorodiethyl sulphide and its analogues; pyrolysis experiments. R. J. Charnock and R. C. G. Moggridge. Chem Soc J p815-16 S '46
Production of ethylene from ethane, propane. H. C. Schutt. bibliog flow diag il Chem Eng Prog 43:103-15; Discussion. 115-16 Mr '47

PYROMETERS and pyrometry
Design and performance of some commercial optical pyrometers of the disappearing-filament type. C. R. Barber. diags Iron & Steel Inst J 152:171-88 no 2 '45
Determination of molten metal temperatures; abstracts. G. Vennerholm and L. C. Tate. Iron Age 159:85-6 My 8 '47; Metal Prog 52:426+ S '47
Diesel combustion temperatures; the influence of operating variables; flame-temperature data obtained with the electro-optical pyrometer. O. A. Uyehara and others. bibliog il A S M E Trans 69:465-75; Discussion. 475-7 Jl '47
Dynalog recording pyrometer. il Chem Ind 60: 650 Ap '47
Fundamental improvement in temperature measurement and control. H. W. Bluethe. il Metal Prog 52:591-3 O '47
How to select and install pyrometer lead-wires. C. C. Roberts and C. A. Vogelsang. il diag Power 91:447-9+ Jl '47; Same. Steel 121:91+ Ag 18 '47; Same cond. Power Pl Eng 51:110-12+ S '47; Same cond. Iron Age 159:82-4 Mr 6 '47; Same. Glass Ind 28:354-5+ Jl '47
Improvement in design of immersion pyrometers for liquid steel. D. Manterfield and J. R. Thurston. diags Blast F & Steel Pl 34:1520-1+ D '46; Abstract. Metal Prog 50:504+ S '46
Industrial pyrometers by Nottingham thermometer co. il Chem Age (Lond) 56:516-17 Ap 26 '47
Instrument for measuring open hearth flame radiation. E. M. Yard. bibliog il diag Blast F & Steel Pl 35:46+ Ap '47
New gas turbine pyrometer ups accuracy and response. il diags Aviation W 47:20 S 1 '47
New pyrometer for gas turbines and jet engines. diags Product Eng 18:140 My '47; Same. Franklin Inst J 243:428 My '47
New pyrometer for measuring the temperatures of these high-temperature high-velocity gas streams. diag Mech Eng 69:239 Mr '47; Machine Design 19:106-7 Mr '47
New pyrometer uses silver shield. il diag Automotive & Aviation Ind 96:46 F 15 '47
Photo-electric pyrometer for a small high-frequency induction furnace. T. Land and H. Lund. il diags Iron & Steel Inst J 156: 75-7 My '47
Photo-electric roof pyrometer for openhearth furnaces. T. Land. bibliog pl diags Iron & Steel Inst J 155:568-76 Ap '47
Photographic investigation of the brightness temperatures of liquid steel streams. J. A. Hall. pl diag Iron & Steel Inst J 155:55-85 Ja '47; Discussion. 156:497-500; 157:197-200 Ag, O '47
Pyrometry for the glass industry and introduction to principles of automatic control; abstract. V. L. Parsegian. Cer Ind 48:76 Je '47
Recording surface heats with radiation pyrometer. il diag Steel 119:74 D 30 '46
Steel temperature measured in furnace by water-cooled pyrometer. il Sci Am 176:76 F '47
Taco West pyrometric controller. il Chem Ind 60:650 Ap '47
What we have learned about upkeep of pyrometric equipment; General Electric laboratory. P. L. Stapleton. il Factory Management 104:140-3 D '46

See also
Thermocouples

PYROPHOSPHORIC acid
Analysis
Estimation of triphosphoric and pyrophosphoric acids in the presence of ortho- and metaphosphoric acids. R. N. Bell. bibliog Anal Chem 19:97-100 F '47

PYROXYLIN coated fabrics
Pyroxylin-coated fabrics and paper for the third quarter of 1946. India Rubber World 115:679 F '47

PYRROCOLINE
Chemistry of the pyrrocolines. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1069-89 N '46
Chemistry of the pyrrocolines; the action of Grignard reagents and of iodine on 3-acetyl-2-phenylpyrrocoline. E. T. Borrows and D. O. Holland. Chem Soc J p670-2 My '47
Chemistry of the pyrrocolines; the synthesis of pyrrocoline-2-carboxylic acid; a new route to pyrrocoline. E. T. Borrows and D. O. Holland. Chem Soc J p672-4 My '47

PYRROLE
Condensation of aldehydes and amines with nitrogenous five-atom ring systems. G. B. Bachman and L. V. Heisey. bibliog Am Chem Soc J 68:2496-9 D '46
Further study of the porphine-like products of the reaction of benzaldehyde and pyrrole. R. H. Ball, G. D. Dorough and M. Calvin. diag Am Chem Soc J 68:2278-81 N '46
Preparation of some monosubstituted derivatives of pyrrole by the Mannich reaction. W. Herz, K. Dittmer and S. J. Cristol. bibliog Am Chem Soc J 69:1698-700 Jl '47
Pyrrole formation during attempted hydantoin synthesis. H. R. Henze and J. H. Shown, jr. bibliog Am Chem Soc J 69:1662-6 Jl '47

PYRROLIDONE
N-substituted 2-pyrrolidones. F. B. Zienty and G. W. Steahly. bibliog Am Chem Soc J 69:715-16 Mr '47

PYRROLIZIDINE
Synthesis of pyrrolizidines. N. J. Leonard, L. R. Hruda and F. W. Long. bibliog Am Chem Soc J 69:690-2 Mr '47

PYRUVATES
Determination of beta-dicarbonyl compounds. W. Seaman, J. T. Woods and E. A. Massad. bibliog Anal Chem 19:250-1 Ap '47

Q

Q fever
Q fever in the United States; outbreak among stock handlers and slaughter house workers; abstract. N. H. Topping and others. Nat Safety N 55:48 My '47

QUADRATIC equations. See Equations, Quadratic

QUADRUPOLE moment. See Electric moment

QUALITATIVE analysis. See Chemistry, Analytic—Qualitative

QUALITY control. See Factory management—Quality control; Food factories—Quality control

QUALITY of products
Buyers balk in face of high prices and shoddy quality; S M market survey. Sales Management 59:37-8 Ag 1 '47
How Rolfs sells $100 Signature billfolds. il Sales Management 57:89-90 D 1 '46
Manufacturers turn to improved goods as retailers eye current prices and quality. N. Kelne. Ptr Ink 217:108+ D 13 '46
Merchandising trends; knitwear manufacturer looks forward to revitalization of merchandise quality and design. N. E. Handler. J Retailing 22:105-8 D '46
Selling made effective with quality standards. F. W. Reynolds. Dom Comm 35:15-18 F '47
This success was built on quality competition, not price; a good product, good labor relations, good distribution, Arnold bakers, inc. C. J. Swan. il Ptr Ink 219:46-7 Ap 25 '47
When price cutting demoralizes market; point-of-sale folder and dollar bill help sell Flex-let watch bands. E. M. Housman. Ptr Ink 219:33 My 23 '47

See also
Factory management—Quality control
Labels
Products, Certification of
Standardization
Testing laboratories

QUANTITIES (in production)
Costs in relation to production runs. R. E. Staunton. N A C A Bul 28:1117-27 My 15 '47
Production; economic lot sizes in manufacturing. P. T. Norton, jr. Manuf Rec 116: 46-7+ O; 41-2 N; 41-2+ D '47
What close control of inventory means to management; Cutler-Hammer experience. J. C. Borden. Factory Management 105:105-8 F '47

QUANTOMETER
High-speed alloy analyzer; Quantometer uses electronic eyes. il Bsns W p66-8+ O 18 '47

QUANTUM theory
Atomic particles and light quanta. H. Greinacher. il diags Engineering 162:478-80, 502-3 N 15-22 '46
Correspondence principle analysis of double-photon emission. J. A. Wheeler. Opt Soc Am J 37:813-17 O '47
Effect of Pais' *f*-field on the symmetry of the meson field part of nuclear Hamiltonian. P. R. Zilsel and others. bibliog Phys R 72: 225-8 Ag 1 '47
Electromagnetic shift of energy levels. H. A. Bethe. Phys R 72:339-41 Ag 15 '47
Energy levels in the nucleus Mn^{56}. A. B. Martin. bibliog diags Phys R 72:378-83 S 1 '47
Expansibility of solutions in powers of the interaction constants. H. J. Bhabha. Phys R 70:759-60 N 1 '46
Interaction of electrons and an electromagnetic field. C. J. Eliezer. bibliog Rs Mod Phys 19:147-84 Jl '47
Notes on the Wheeler-Feyman theory. C. W. Berenda. bibliog Phys R 71:550 Ap 15 '47
Planck's contribution to physics. G. F. H. Harker. Engineering 164:388-9 O 24 '47
Quantum correction for thermodynamic equilibrium. J. E. Mayer and W. Band. J Chem Phys 15:141-9 Mr '47
Restricted rotator thermodyamic properties from the old quantum theory. J. O. Halford. bibliog J Chem Phys 15:645-51 S '47
Scattering processes of higher order. O. Halpern and N. H. Kroll. Phys R 72:82-3 Jl 1 '47
Semi-empirical theory of the nuclear energy surface. E. Feenberg. bibliog Rs Mod Phys 19:239-58 Jl '47
Statistical geometry and fundamental particles. N. Rosen. bibliog Phys R 72:298-303 Ag 15 '47
Table of logarithmic corrections to the Wien radiation law. E. Q. Adams. Opt Soc Am J 37:695-7 S '47

See also
Wave mechanics

QUARRIES and quarrying
Bessemer limestone and cement company. J. I. Horty. il Explosives Eng 25:103-6 Jl '47
County operated quarry and crusher save $30,000 yearly; Sebastian county, Ark. E. J. Roths. il Pub Works 78:15-16 My '47
Operating sessions draw crowds; National crushed stone association. Rock Prod 50: 82+ Mr '47
Quarrying gypsum in Nova Scotia. J. W. McFarland. il Explosives Eng 25:20-1+ Ja '47
Well-drill blasting in a granite quarry. O. M. Davis. il Explosives Eng 25:110-11 Jl '47

Accidents

Must cut accident severity rate; Cement and quarry section, National safety congress meeting. Rock Prod 49:76+ D '46
National safety competition of 1946, Bureau of mines; with list of winners, 1925-1946; honorable mention awards, 1946. F. T. Moyer. il Explosives Eng 25:71-9+ My '47

Equipment

Churn-drill performance. J. R. Thoenen and E. J. Lintner. 22pls U S Bur Mines Rep of Invest 4058:1-48 '47
From lime burning to modern stone plant; John W. Karch stone co. D. Mocine. il plan Rock Prod 50:92-4 O '47
Mechanizing quarry and plant to step up production; with cost data. G. R. Lacy. il Rock Prod 50:84-7 My '47
Ohio's treasure in limestone; National lime and stone company's plants. il plan Rock Prod 50:112-14 Ap '47
Open new plant at lower quarry level; Granite rock company's screening and crushing plant and quarry. R. E. Fowle. il plan Rock Prod 50:86-92+ Ap '47
Portable does a permanent job; Hi-Test stone co. il Rock Prod 50:111 Ap '47
Primary and secondary crushers in quarry; Linwood stone products co. H. E. Swanson. il Rock Prod 49:86-7 D '46
Processing aggregates for big dam; Cumberland quarries, inc. D. Mocine. flow sheet il Rock Prod 50:106-10 Ag '47
Produce numerous stone sizes with flexible plant layout; Auxvasse stone and gravel co. il Rock Prod 50:77+ Jl '47
Producing riprap mechanically; Bussen quarries, inc. H. E. Swanson. flow sheet il Rock Prod 49:68-9 N '46
Reducing large boulders to aggregate; Palmer crushing co. D. Mocine. il plan diag Rock Prod 50:78-80 S '47
Sales promotion builds up future markets; Richland lime co. increases production of agricultural limestone and concrete aggregates. il Rock Prod 50:76-7+ My '47
Surge pile balances plant flow; Rockydale quarries corporation utilizes gravity to reduce transportation cost. il Rock Prod 50: 72-3 Jl '47
Three-stage crushing and screening; West Lake quarry and material co. il Rock Prod 49:74-6 D '46
Triple production with improvements; Superior stone co. H. E. Swanson. il diag Rock Prod 50:103-5 Ja '47
Two men operate crushing plant; Radcliff & Berry, inc. flow sheet il Rock Prod 50:74-5 Mr '47
Where to buy repair parts? N. C. Rockwood. Rock Prod 50:106-8 Ja '47

Safety measures

Bethlehem Steel honors Bridgeport quarrymen for having won the Sentinels of safety trophy. il Explosives Eng 24:176+ N '46
Hazard checked; sled mounted drill for slope quarrying; material for Blue Mountain dam. W. C. Coe. il Nat Safety N 55:24-5+ My '47; Same cond. Comp Air Mag 52:126-7 My '47
Safe storage, handling, and use of commercial explosives in metal mines, nonmetallic mines, and quarries. D. Harrington and J. H. East, jr. bibliog 14pls U S Bur Mines Information Circ 7380:1-30 '46
Some safety practices for metal mines, nonmetal mines (other than coal), mills, metallurgical plants, and quarries. U S Bur Mines Information Circ 7387:1-56 '46

Southern states

South, leader in stone production. O. Bowles. and R. P. Willing. il Manuf Rec 116:40-1+ F '47

QUARTERMASTER corps. See United States—Quartermaster corps

QUARTZ
Artificial electrical twinning in quartz crystals. J. J. Vormer. il Inst Radio Eng Proc 35:789-90 Ag '47
Contamination of silicate samples crushed in steel mortars. E. B. Sandell. Anal Chem 19:652-3 S '47
Electrical characteristics of quartz-crystal units and their measurement. W. D. George and others. bibliog diags J Res Nat Bur Stand 38:309-28 Mr '47
Quartz crystal deposits in the state of Goiaz, Brazil. D. F. Campbell. il maps diags Econ Geol 41:773-99 D '46
Quartz in fireclay refractories. J. S. Smith and P. F. F. Clephane. il Gas J (Lond) 249:91-4, 156+ Ja 8-15 '47; Discussion. 249: 213+ Ja 22 '47

See also
Silica

QUARTZ, Fused. See Silica, Fused

QUATERNARY ammonium compounds. See Ammonium compounds

QUEBEC

See also
Gold mines and mining—Quebec
Hydroelectric plants—Quebec

QUENCHING of steel. See Steel, Quenching of

QUERCETIN
Effect of flavonols on the bacteriostatic action of dicoumarol. J. Naghski and others. bibliog Science 105:125 Ja 31 '47

QUERCITRIN
Effect of flavonols on the bacteriostatic action of dicoumarol. J. Naghski and others. bibliog Science 105:125 Ja 31 '47

QUESTIONNAIRES
Can an advertiser believe what mail surveys tell him? A. Politz and R. Brumbach. Ptr Ink 219:48+ Je 20 '47
Can you trust mail questionnaires? V. Brooks. Ptr Ink 220:86+ S 19 '47
Employee opinion survey aids Ford in policy making. Factory Management 105:132-3 Je '47
Employe questionnaires guide Victor's internal relations. G. H. Turner. Ind Marketing 31:50+ D '46
Fortune survey; survey pitfalls. E. Roper. Fortune 35:6+ Ap '47
Government modernizes questionnaires for complete census of manufactures. S. E. Cohen. Ind Marketing 32:51-2 S '47
Problem of non-response in sample surveys. M. H. Hansen and W. N. Hurwitz. Am Stat Assn J 41:517-29 D '46

QUILL, Michael Joseph, 1905-
Portrait. Bsns W p 104 S 20 '47

QUILLERS. See Winding machines

QUIMBY, Harriet, 1884-1912
Women enter aeronautics; some early aviators. J. Hettich. Aero Digest 53:28, 126+ N '46

QUINAZOLINE
6-(and 7-)-Chloro-4- (1-diethylamino-4-pentylamino)-2- (*p*-methoxyphenyl)- quinazoline dihydrochlorides. R. L. McKee, M. K. McKee and R. W. Bost. bibliog Am Chem Soc J 69:940-2 Ap '47
7-Chloro-4-(1-diethylamino-4-pentylamino)-quinazoline. M. K. McKee and R. W. Bost. Am Chem Soc J 69:184 Ja '47
Preparation of 3,3-dimethylphthalide and several of its derivatives. C. H. Wang and others. bibliog Am Chem Soc J 69:1909-11 Ag '47

QUINDOLINE
Carbazoles, carbolines, and related compounds; quindoline derivatives. S. J. Holt and V. Petrow. Chem Soc J p607-11 My '47

QUINHYDRONE
Effect of the hydrogen ion concentration upon the salt error of the quinhydrone electrode. J. L. Gabbard. bibliog diag Am Chem Soc J 69:533-6 Mr '47
pH of wines; examination of glass and quinhydrone electrode values. J. C. M. Fornachon. bibliog Ind & Eng Chem Anal ed 18:790-3 D '46

QUINIDINE
RFC blamed for short supply of quinidine. Oil Paint & Drug Rep 152:3 O 27 '47

QUININE
La fin du monopole hollandais de la quinine. Génie Civil 123:348-9 D 15 '46
Partial racemization of quinine. W. E. Doering, G. Cortes and L. H. Knox. bibliog Am Chem Soc J 69:1700-10 Jl '47
Quinine control policy established. Oil Paint & Drug Rep 152:4 Jl 14 '47
Quinine controls continuance opposed. I. Vandewater. Oil Paint & Drug Rep 151:4+ Je 9 '47
Quinine from East Indies offered for world sale. Oil Paint & Drug Rep 151:3 Ap 7 '47
Quinine prospects: output of Ceylon factory. S. N. Ganguly. Chem Age (Lond) 56:675 My 24 '47
Quinine use restrictions broadened by RFC. Oil Paint & Drug Rep 152:3 S 15 '47

QUINOL. See Hydroquinone

QUINOLINE
Electrolytic oxidation of quinoline and 3-picoline. M. Kulka. bibliog Am Chem Soc J 68:2472 D '46
New bases from coal-tar. G. D. Bieber. il Chem Ind 61:51 Jl '47
Preparation of quinoline derivatives from aromatic amines and ethyl ethoxymethylenemalonate. K. Schofield and J. C. E. Simpson. Chem Soc J p 1033-5 N '46
Quinoline derivatives from 3-nitro-4-hydroxyquinoline. G. B. Bachman and others. bibliog Am Chem Soc J 69:365-71 F '47
Reaction of aryllithium compounds with 2-arylquinolines. H. Gilman and G. C. Gainer. bibliog Am Chem Soc J 69:877-80 Ap '47
Reaction of 6-methoxy-8-amino-1,2,3,4-tetrahydroquinoline with ketones. R. C. Elderfield and others. Am Chem Soc J 69:186-7 Ja '47
Skraup reaction with *m*-substituted anilines. L. Bradford, T. J. Elliott and F. M. Rowe. Chem Soc J p437-45 Ap '47
Some derivatives of 6-methylquinoline. J. D. Capps. bibliog Am Chem Soc J 69:176-8 Ja '47
Studies in the quinoline series; 2-dihydroxystyrylquinolines. A. G. Renfrew. bibliog Am Chem Soc J 69:711-12 Mr '47
Studies in the quinoline series; some 6-β-hydroxyethoxy-4-aminoquinolines. V. G. Ramsey and L. H. Cretcher. bibliog Am Chem Soc J 69:1659-62 Jl '47
Studies in the quinoline series; synthesis of certain 4-substituted quinoline derivatives. V. G. Ramsey, W. E. Baldwin and R. S. Tipson. bibliog Am Chem Soc J 69:67-70 Ja '47
Synthesis of certain 8-(5-alkylamino-1-methylpentylamino)- derivatives of quinoline. R. C. Elderfield and others. bibliog Am Chem Soc J 69:1258-60 Je '47
Synthesis of 4-hydroxyquinolines; quinoline derivatives with sulfur-containing substituents. C. C. Price, N. J. Leonard and G. W. Stacy. Am Chem Soc J 69:855-8 Ap '47

QUINOLINEARSONIC acid
Some derivatives of 6-methylquinoline. J. D. Capps. bibliog Am Chem Soc J 69:176-8 Ja '47

QUINOLINEMETHANOL
Antimalarials; 6- and 7-chloro-α-(dialkylaminomethyl)-4-quinolinemethanols. R. E. Lutz, J. F. Codington and N. H. Leake. bibliog il Am Chem Soc J 69:1260-3 Je '47
α-(Dialkylaminomethyl)-8-amino(or hydroxy)-4-quinolinemethanols. R. B. Turner, J. Mills and A. C. Cope. Am Chem Soc J 68:2220-4 N '46
α-(Dialkylaminomethyl)-2-phenyl-4-quinolinemethanols with 8-amino or hydroxy substituents. R. B. Turner and A. C. Cope. bibliog Am Chem Soc J 68:2214-19 N '46
α-(2-Piperidyl)-2-aryl-4-quinolinemethanols. R. F. Brown and others. bibliog Am Chem Soc J 68:2705-8 D '46
α-Piperidyl-4-quinolinemethanols substituted in the 2-position. S. Winstein and others. Am Chem Soc J 68:2714-18 D '46
4-Quinolinemethanol. S. F. MacDonald. Am Chem Soc J 69:1219-20 My '47
Synthesis of potential antimalarials; 2-alkyl-α-(2-piperidyl)-4-quinolinemethanols. J. F. Mead, A. E. Senear and J. B. Koepfli. bibliog Am Chem Soc J 68:2708-10 D '46
Synthesis of potential antimalarials; 7-chloro-α-(2-piperidyl)-4-quinolinemethanol. A. E. Senear and others. bibliog Am Chem Soc J 68:2695-7 D '46
Synthesis of potential antimalarials; 2-phenyl-α-(2-piperidyl)-4-quinolinemethanols. M. M. Rapport and others. bibliog Am Chem Soc J 68:2697-703 D '46
Synthesis of potential antimalarials; reaction of organic lithium compounds with quinolinemethanols. J. F. Mead, M. M. Rapport and J. B. Koepfli. bibliog Am Chem Soc J 68:2704-5 D '46
Synthesis of some α-(2-piperidyl)-quinolinemethanols. R. A. Seibert and others. bibliog Am Chem Soc J 68:2721-3 D '46

QUINOLINOL
Absorption spectra of heterocyclic compounds; quinolinols and isoquinolinols. G. W. Ewing and E. A. Steck. bibliog Am Chem Soc J 68:2181-7 N '46
Preparation of 4-quinolinols by the ethyl ethoxalylacetate method. B. Riegel and others. bibliog Am Chem Soc J 68:2685 D '46

QUINOLS
Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47

QUINONE
Inhibition and retardation of the peroxide initiated polymerization of styrene. S. G. Cohen. bibliog Am Chem Soc J 69:1057-64 My '47
Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47
Oxidation processes; quinone catalysis in the autoxidation of hydroquinones. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1576-82 Jl '47
Reaction between gaseous *cyclo*pentadiene and benzoquinone. A. Wassermann. Chem Soc J p 1089-90 N '46

Analysis

Quinone vapors and their harmful effects; plant exposures associated with eye injuries. F. L. Oglesby and others. J Ind Hygiene 29:74-8 Mr '47

Physiological effect

Quinone vapors and their harmful effects; corneal and conjunctival injury. J. H. Sterner and others. flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73, 84) Mr '47

QUINONES
Interaction of thiols and quinones. M. Schubert. Am Chem Soc J 69:712-13 Mr '47
Mechanism of the antibiotic action of certain quinones. O. Hoffman-Ostenhof. bibliog Science 105:549-50 My 23 '47
Oxidation processes; a classification of reactions on the basis of the semiquinone theory. J. E. LuValle and A. Weissberger. bibliog Am Chem Soc J 69:1567-75 Jl '47
Preparation of 4-aminophenyl sulphones; reaction between aromatic sulphinic acids and quinones or quinoneimines. S. Pickholz. Chem Soc J p685-7 Ag '46
Synthesis of condensed ring compounds; the addition of quinones to a dienyne. L. W. Butz, A. M. Gaddis and E. W. J. Butz. bibliog Am Chem Soc J 69:924-5 Ap '47

QUINOXALINE
1-Alkyl-1,2,3,4-tetrahydroquinoxalines. J. C. Cavagnol and F. Y. Wiselogle. bibliog Am Chem Soc J 69:795-9 Ap '47

QUINOXALINECARBOXYLIC acid
3.4-Dihydro-3-keto-4,6,7-trimethyl-2-quinoxalinecarboxylic acid. J. W. Wellman and M. Tishler. Am Chem Soc J 69:714-15 Mr '47

QUOTATION marks
Use of quotation mark in science. J. E. Eaton. Am Assn Pet Geologists Bul 30: 1928-34 N '46

R

RABBIS

Pensions

Pension-insurance for orthodox rabbis; Continental Assurance plan. East Underw 48: 4 Ag 8 '47

RABIES
Control of rabies; report by Committee on public health relations of the New York academy of medicine. bibliog Pub Health Rep 62:1215-37 Ag 22 '47
Ultraviolet irradiation in the production of potent antirabies vaccines. K. Habel. bibliog Pub Health Rep 62:791-800 My 30 '47

RACE discrimination
Anti-discrimination bill objectionable; S. 984. D. R. Richberg. Comm & Fin Chr 166: 1629+ O 23 '47
Antidiscrimination legislation in 1947. Mo Labor R 65:198-9 Ag '47
Antidiscrimination trend in state legislatures; do public utility companies provide a proper testing ground for experiments? R. Ames. Pub Util 39:489-95 Ap 10 '47
Boycott threat; Actors equity demands lifting of theatre ban on Negro patrons. Bsns W p86-7 My 3 '47
First year under New York law against discrimination. Mo Labor R 64:24-7 Ja '47
Ives introduces job bias curb bill. Comm & Fin Chr 165:1849 Ap 3 '47
New job-bias bill introduced in Congress by Senator Ives. Bsns W p104-5 Ap 5 '47
Recent developments in New York non-discrimination law. J. J. Reiss. Comm & Fin Chr 165:2983+ Je 5 '47
Supreme court test; will race restrictive covenants be declared unconstitutional? Arch Forum 87:16 O '47
See also
Negroes—Employment
Negroes—Housing

RACE prejudice
Fortune survey; regardless of race, creed, or color. Fortune 36:6+ O '47

RACE problems
See also
South Africa—Race problems

RACE tracks
Gamblers' gamblers. Fortune 36:122+ S '47

Lighting

They're off; race track lighting; Portland Meadows track. il Elec West 97:72 N '46

RACEMIZATION
Calculation of the energy of activation for the racemization of 2,2'-dibromo-4,4'-dicarboxydiphenyl. F. H. Westheimer. bibliog J Chem Phys 15:252-60 My '47
Partial racemization of quinine. W. E. Doering, G. Cortes and L. H. Knox. bibliog Am Chem Soc J 69:1700-10 Jl '47
Rate of the thermal isomerization of α-pinene in the liquid phase. R. E. Fuguitt and J. E. Hawkins. bibliog Am Chem Soc J 69: 319-22 F '47
Theory of the racemization of optically active derivatives of diphenyl. F. H. Westheimer and J. E. Mayer. J Chem Phys 14:733-8 D '46

RACES
See also
Airplane races

RACK railroads
14,000 ft. up and going strong; Diesel-electric locomotive on the Pikes Peak cog railway. H. Walker. il Diesel Power 25:50-2 Ag '47
Railway to the sky with Diesel; Manitou & Pike's Peak railway. C. L. Brum. il Diesel Power 25:61-2+ F '47

RACKETEERING
Short change workers. H. Ziegler. Radio N 38:96+ S '47

RACKETS, Tennis. See Tennis rackets

RACKS
Low-cost rack simplifies work of emptying oil drums. il Eng N 137:741 N 28 '46
Racked tools reduce setup time. H. L. Flynn. il diags Am Mach 91:94-5 F 27 '47

RADAR
Bridge type electrical computers. W. K. Ergen. diags R Sci Instr 18:564-7 Ag '47
Calculation of field strengths over a spherical earth. C. Domb and M. H. L. Pryce. diags Inst E E J 94 pt 3:325-36; Discussion. 337-9 S '47
Coil pulsers for radar. E. Peterson. il diags Bell System Tech J 25:603-15 O '46
Design of mercury delay lines for radar, computers, and memory devices. T. K. Sharpless. il diags Electronics 20:134-6+ N '47
Development of radio valves for radar; abstract. J. H. E. Griffiths. Inst E E J 93 pt 1:475-7 O '46
Effect of direct current potential on initiation of radiofrequency discharge. A. A. Varela. Phys R 71:124-5 Ja 15 '47
Electronic speed cop developed from radar technique. il Electronics 20:148+ Jl '47
Elementary theory of velocity-modulation oscillators. N. C. Barford and M. Bowman-Manifold. bibliog Inst E E J 94 pt 3: 302-14 S '47
Frequency dependence of the properties of sea echo. H. Goldstein. bibliog diags Phys R 70:938-46 D 1 '46

RADAR—*Continued*

Grounded-grid amplifier valves for very short waves and Triodes for very short waves; oscillators for radar; discussion of papers by J. Foster; J. Bell and others. Inst E E J 94 pt 3:364-8 S '47

Harmonic-amplifier design. R. H. Brown. bibliog diags Inst Radio Eng Proc 35:771-7 Ag '47

Infinite-rejection filters. A. M. Stone and J. L. Lawson. il diags J Ap Phys 18:691-703 Ag '47

Introduction to circuit techniques for radiolocation; abstract. F. C. Williams. diags Inst E E J 93 pt 1:469-71 O '46

Jungle surveys for oil exploration in eastern Venezuela; use of radar. P. Charles. il Eng N 138:521 Ap 3 '47

Maximum range of a radar set. K. A. Norton and A. C. Omberg. bibliog diags Inst Radio Eng Proc 35:4-24 Ja '47; Discussion. 35:927-31 S '47

Medium-power triode for 600 megacycles. S. Frankel and others. il diags Inst Radio Eng Proc 34:986-91 D '46

Memory tube; pattern is produced, stored, and scanned on dielectric screen by electron beams. A. V. Haeff. il diags Electronics 20:80-3 S '47

Minimum detectable radar signal and its dependence upon parameters of radar systems. A. V. Haeff. diag Inst Radio Eng Proc 34:857-61 N '46

Multi-cavity magnetron; abstract. diags Product Eng 18:129-30 Mr '47

New radar transformer steel. G. H. Cole and R. S. Burns. il Materials & Methods 24: 1457-60 D '46

Nonlinear limiter in intensity modulation channel of cathode-ray tubes; radar device. diags Electronics 20:198+ My '47

Pneumatic heat detector. H. A. Zahl and M. J. E. Golay. il diags R Sci Instr 17:511-15 N '46

Polythene; development, properties, uses etc. F. A. Freeth. Engineering 162:388-9 O 25 '46; Same cond. Chem Age (Lond) 55: 401-3 O 5 '46

Properties of welded contact germanium rectifiers. H. Q. North. il diags J Ap Phys 17:912-23 N '46

Radar development in Canada. F. H. Sanders. il Inst Radio Eng Proc 35:195-200 F '47

Radar reflections from long conductors. F. Bloch and others. J Ap Phys 17:1015-20 D '46

Radar reflections from the lower atmosphere. H. T. Friis. il Inst Radio Eng Proc 35: 494-5 My '47; Discussion. W. B. Gould. 35: 1105 O '47

Radar scope photography. R. C. Babish. il Soc Motion Picture Eng J 48:454-72 My '47

Radar system engineering. L. N. Ridenour, ed. 748p $7.50 McGraw-Hill book co, 330 W. 42d st, New York 18 '47

Radar; what it is. J. F. Rider and G. C. B. Rowe. 72p pa $1 John F. Rider publisher, inc. 404 4th av, N.Y. 16 '46

R.f. power supplies. J. C. McGuire. il diags Radio N 37:51+ Je '47

Science reaches upward. D. Sarnoff. il Sci Am 177:6-9 Jl '47

Spark gap switches for radar. F. S. Goucher and others. il diags Bell System Tech J 25:563-602 O '46

Survey of cathode-ray-tube problems in service applications, with special reference to radar; abstract. diags Inst E E J 93 pt 1: 471-4 O '46

Theory and application of the radar beacon. R. D. Hultgren and L. B. Hallman, jr. il diags Inst Radio Eng Proc 35:716-30 Jl '47

Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47

Time demodulation. B. Chance. diags Inst Radio Eng Proc 35:1045-9 O '47

Time modulation. B. Chance. diags Inst Radio Eng Proc 35:1039-44 O '47

War, radar, and the radio industry; case study of impact of war on American industry. A. A. Bright, jr. and J. Exter. Harvard Bsns R 25 no2:255-72 [Ja] '47

War-time developments in cathode-ray tubes for radar; abstract. L. C. Jesty and others. Inst E E J 93 pt 1:474-5 O '46; Discussion. 94 pt 3:344-5 S '47

Wave guides for radar; abstract. M. H. L. Pryce. Inst E E J 93 pt 1:459-60 O '46

Wideband i-f amplifiers for radiolocation. Electronics 19:232+ D '46

See also

Radar aids to aviation

Radar aids to navigation

Antenna and scanning mechanism

Aerials for radar equipment; abstract. J. A. Ratcliffe. diags Inst E E J 93 pt 1:458-9 O '46

Further observations of the angle of arrival of microwaves. A. B. Crawford and W. M. Sharpless. il Inst Radio Eng Proc 34:845-8 N '46

High-speed waveguide switch. D. K. Bishop. il diags Wireless Eng 24:67-70 Mr '47

Measurement of the angle of arrival of microwaves. W. M. Sharpless. il map Inst Radio Eng Proc 34:837-45 N '46

Radar antennas. H. T. Friis and W. D. Lewis. il diags Bell System Tech J 26:219-317 Ap '47

Theory of radar reflection from wires or thin metallic strips. J. H. Van Vleck and others. bibliog J Ap Phys 18:274-94 Mr '47

Bibliography

Bibliography of radiolocation convention papers. Inst E E J 93 pt 1:478-80 O '46

Radio progress during 1946; navigation aids. Inst Radio Eng Proc 35:404-6 Ap '47

Countermeasures

Electrical noise generators. J. D. Cobine and J. R. Curry. bibliog il diags Inst Radio Eng Proc 35:875-9 S '47

Physics today, engineering tomorrow; radar jamming. Elec Eng 66:242-3 Mr '47

Special generator for the Flying Fortress; counter-radar apparatus. J. H. Walker and A. T. Stretton. il diags Engineering 182:413-14 N 8 '46

War in the ether; radio and radar countermeasures. E. B. Addison. Roy Aeronautical Soc J 51:425-36; Discussion. 436-9 My '47

Wide-tuning-range microwave oscillator tube. J. W. Clark and A. L. Samuel. il diags Inst Radio Eng Proc 35:81-3 Ja '47

Industrial applications

Radar techniques in an industrial control; register control in the printing and paper industries. W. D. Cockrell. il diags Elec Eng 66:365-8 Ap '47; Same. Power Pl Eng 51:116+ My '47

Meteorological use

Elements of radio meteorology; how weather and climate cause unorthodox radar vision beyond the geometrical horizon; abstract. H. G. Booker. diags Inst E E J 93 pt 1: 460-2 O '46

Meteorological radar provides forecasters with new weather-eye. Sci Am 176:175 Ap '47

Meteors detected by radar. il Electronics 20: 166 Ja '47

Radar detects approaching storms. Elec World 127:126 F 15 '47

Radar observations during meteor showers, 9 October 1946. R. Bateman and others. il Science 104:434-5 N 8 '46

Radar trips to the moon. A. C. Omberg. il Aero Digest 53:80-1+ D '46

Radio reflection from the moon. Z. Bay. Electronics 20:196+ F '47

Military use

Electronics in submarine warfare. C. A. Lockwood. Inst Radio Eng Proc 35:712-15 Jl '47

Night aerial photography, with radio and radar direction-finding methods combined. H. E. Edgerton. il Tech R 49:273-8+ Mr '47

Radar antennas; military radar antennas developed by the Bell laboratories. H. T. Friis and W. D. Lewis. il diags Bell System Tech J 26:284-317 Ap '47

Radar-guided bomb. il Electronics 19:186+ D '46

RADAR—Military use—*Continued*
Radar signals guide missiles in flight. Electronics 20:160+ Jl '47
Radio proximity fuse. H. M. Bonner. il diags Elec Eng 66:888-93 S '47
Radio proximity-fuze development. W. S. Hinman, jr. and C. Brunetti. il diags Inst Radio Eng Proc 34:976-86 D '46
Scientist in wartime. E. Appleton. diags Inst Mech Eng J & Proc 154:Proc 307-9 D '46
Simulation of radar presentations for briefing purposes. J. Westheimer. il Soc Motion Picture Eng J 48:586-90 Je '47
Survey of the development of radar. R. A. Smith. bibliog il diags Inst E E J 94 pt 1: 172-8 Ap '47
Test equipment and techniques for airborne-radar field maintenance. E. A. Blasi and G. C. Schutz. diags Inst Radio Eng Proc 35:310-20 Mr '47

Testing

High Q resonant cavities for microwave testing. I. G. Wilson and others. bibliog il diags Bell System Tech J 25:408-34 Jl '46 [omitted table inserted in Ja '47 number]
Test equipment and techniques for airborne-radar field maintenance. E. A. Blasi and G. C. Schutz. diags Inst Radio Eng Proc 35:310-20 Mr '47

RADAR aids to aviation
ATA presents its case on airborne radar. I. C. Nye. il Air Transport 5:45-6 Ag '47
Airborne radar specifications. Electronics 20: 132 F '47
Alaskan Airline tests airborne radar as aid in flying rugged coastal route. il CAA J 8:50 My 15 '47
All-weather flying center develops new operational aids. R. Hotz. il Aviation W 47:11-12 O 27 '47
Allison develops lightweight radar. Aviation N 7:7 Je 30 '47
American airlines' evaluation of airborne radar. F. C. White. il diags S A E J 55: 27-31 Ag '47
AAF develops GCA automatic system. Aviation N 7:12 F 24 '47
Army flies all weather; Army air forces' all-weather flying center at Wilmington, Ohio. R. B. Hotz. il Air Transport 5:31-3 Ap '47
Army lets CAA keep three GCA sets now in use. CAA J 8:85+ Ag 15 '47
Check and double check; why both ILS and GCA are a good bet. C. F. Banfe, jr. il Air Transport 5:34-5 Mr '47; Discussion. 5:33+ Jl '47
CAA and airlines versus GCA. W. Kroger. il diags Air Transport 5:30-3+ Mr '47
CAA approves GCA, ILS for airlines use. Aviation N 7:10-11 Ap 28 '47
CAA developing recording device for radar signal. CAA J 8:40 Ap 15 '47
Civil aircraft assigned frequencies for military GCA in emergencies. CAA J 8:40 Ap 15 '47
Civil aviation use of radar. T. P. Wright. CAA J 8:13+ F 15 '47
Collier trophy award to Alvarez spotlights GCA development; ground controlled approach radar landing system. W. Kroger. diag Aviation N 6:7-8 D 16 '46
Electronic avigation to date. L. LeKashman. il Aero Digest 55:54-5+ Ag '47
Electronics in the Antarctic; U.S. navy Antarctic expedition. H. C. Bailey. il Electronics 20:82-8 Ag '47
Flying radar for airlines. Bsns W p44 My 10 '47
Frequency muddle clouds GCA use. Aviation N 7:8 F 10 '47
Giant radar set maps New York sky. Aviation N 6:31 N 25 '46
Gilfillan eyes expanding market for GCA equipment. il Aviation N 7:39 My 5 '47
GCA for all-weather flying? L. LeKashman. il diags Aero Digest 54:42-3+ F '47
GCA in the control tower. il Aero Digest 55: 65+ S '47
GCA talkdown trainer. J. F. Gordon. il diags Aero Digest 54:52-4+ My '47
GPI; an automatic navigational computer. W. J. Tull and N. W. MacLean. diags Franklin Inst J 242:373-98 N '46
How Hughes radar system promotes anti-collision flying. Aviation W 47:37-8 O 6 '47
Hughes demonstrates new lightweight radar warning device. Aviation N 7:9 My 5 '47
Hughes producing terrain indicator. Aviation N 7:9 Je 23 '47
Improved GCA for navy. il Electronics 20: 182+ Ap '47
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46
International plan for air navigation. D. H. Pain. il diag Electronics 20:80-3 F '47
New Bendix GCA installed at Quonset. il Aviation W 47:12 S 8 '47
New instrument system proposed for flight and landing safety. H. L. Jackson. diags Aviation 46:86-8 Ja '47
Plan radar beacon airways as airlines seek use of GCA. R. B. Hotz. Aviation N 7:10 Mr 3 '47
Position-finding systems; abstract. C. E. Strong. Electrician 139:1221 O 24 '47
Precision GCA or ILS? H. K. Morgan. il Aero Digest 54:22-3 Je '47
Problems of blind landing. H. C. Pritchard. il plan diags Roy Aeronautical Soc J 50: 935-58; Discussion. 958-73 D '46
Radar put into operation as aid to civil aviation. CAA J 8:37+ Ap 15 '47
Radar traffic control system developed at all-weather center. R. B. Hotz. il Aviation N 7:26-7 F 3 '47
Simplifying airborne radar; anti-collision, terrain scanning unit weighing but 65 lb. which can be contained in housing under development by Allison radar & equipment co. il Aviation W 47:33-4 Ag 4 '47
Standard radar airways urged by House air group. Aviation W 47:13-14 Jl 21 '47
Theory and application of the radar beacon. R. D. Hultgren and L. B. Hallman, jr. il diags Inst Radio Eng Proc 35:716-30 Jl '47
Three big airports to be test sites for use of radar as control aid. diags CAA J 7:151 D 15 '46
TWA, Hughes Aircraft developing new airline radar safety devices. R. Hotz. il Aviation N 7:28-9 My 12 '47
TWA looks at radar. R. C. Ayres and R. M. Davidson. il Air Transport 5:35-7 F '47
U.S. demonstrates radio aids to air navigation. il plan diag Electronics 19:280+ D '46

Bibliography

Radio progress during 1946. Inst Radio Eng Proc 35:404-5 Ap '47

RADAR aids to navigation
Coast guard improves radar navigation; reflector will enable ships to spot buoys in heavy weather and fog. Marine Eng 52:112 Ag '47
Commercial radar on American owned and operated merchant vessel. Franklin Inst J 243:90 Ja '47
Electrical engineering in 1946. Engineer 183: 93-4 Ja 24 '47
Electronics in the Antarctic; U.S. navy Antarctic expedition. H. C. Bailey. il Electronics 20:82-8 Ag '47
Electronics on world's largest liner; radar, loran, depth sounding, and radio installations of the Queen Elizabeth. il Electronics 19:84-5 D '46
From a tiny acorn grew a mighty oak; radar aboard the Queen Elizabeth; account of the first radio-telephony ship to shore transmission in 1907. F. E. Butler. il Radio N 37:41-2 Je '47
Insurance interested in the use of radar as legal evidence in marine navigation; radar chart photography. Weekly Underw 157: 481+ Ag 30 '47
Interconnection of dead-reckoning and radar data for precision navigation and prediction. B. Chance. il diags Franklin Inst J 242:355-72 N '46
International recommendations for marine electronic aids. il Electronics 20:144+ Ag '47
Marine radar on the Great Lakes. il Iron Age 159:121 Mr 6 '47
Marine radar report. Electronics 20:144+ Jl '47

RADAR aids to navigation—*Continued*
Peacetime radar; towboat traffic on narrow inland waterways expedited. B. B. Talley. il maps Electronics 20:113-15 O '47
Radar allocations. Electronics 20:150 My '47
Radar beacon for lighthouse keepers. il Electronics 20:162+ Jl '47
Radar equipment to benefit lake vessel operation. il Steel 120:115+ Ap 7 '47
Radar for merchant marine service. F. E. Spaulding, jr. il map diags RCA R 8:312-30 Je '47
Radar for river towboat traffic. il Electronics 20:150 Ap '47
Radar on the Great Lakes. N. A. Schorr. il diag Radio N 37:35-8+ F '47
Radar proves successful in tests by Ashland Oil towboat. il Marine Eng 52:108 Mr '47
RCA radar installed aboard 81 vessels since January. Marine Eng 52:144+ O '47
River-mapping by radar. Electronics 20:166+ S '47
Shore-based radar for port of Liverpool. il Electronics 20:156+ Jl '47
Shore-based radar to aid harbor movements at Mersey docks. il Marine Eng 52:78 Ag '47

Bibliography
Radio progress during 1946; navigation aids. Inst Radio Eng Proc 35:404-6 Ap '47

RADAR receiving apparatus
Crystal valves for radar; discussion of paper by B. Bleaney and others. diags Inst E E J 94 pt 3:339-43 S '47
Design of centimeter-wave radar receivers. S. E. Miller. diags Inst Radio Eng Proc 35:340-51 Ap '47
Development of silicon crystal rectifiers for microwave radar receivers. J. H. Scaff and R. S. Ohl. il diags Bell System Tech J 26: 1-30 Ja '47
Radar receivers; abstract. W. B. Lewis. Inst E E J 93 pt 1:467-9 O '46

RADAR reflectors. See Radar—Antenna and scanning mechanism

RADAR research
Excess noise in cavity magnetrons. R. L. Sproull. bibliog diags J Ap Phys 18:314-20 Mr '47
Experimental studies of the propagation of very short radio waves; abstract. E. C. S. Megaw. Inst E E J 93 pt 1:462-3 O '46
Minimum detectable radar signal and its dependence upon parameters of radar systems. A. V. Haeff. diag Inst Radio Eng Proc 34:857-61 N '46
Radar reflections from long conductors. F. Bloch and others. J Ap Phys 17:1015-20 D '46
Theory of radar reflection from wires or thin metallic strips. J. H. Van Vleck and others. bibliog J Ap Phys 18:274-94 Mr '47
Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47

RADAR transmitters
Radar transmitters; a survey of developments; abstract. O. L. Ratsey. il diags Inst E E J 93 pt 1:464-7 O '46

RADIANT heating. See Heating—Panel system

RADIATION
Angular momentum of photons. J. A. Balseiro. Phys R 71:79-81 Ja 15 '47
Čerenkov radiation counter. R. H. Dicke. diag Phys R 71:737 My 15 '47
Cloud-chamber search for a low mass neutral particle. P. G. Kruger and L. W. Smith. Phys R 72:360-1 S 1 '47
Concentrated-arc lamp as a source of modulated radiation. W. D. Buckingham and C. R. Deibert. il diags Soc Motion Picture Eng J 48:324-40; Discussion. 340-2 Ap '47
Conference on nuclear chemistry, Hamilton, Ontario. Can Chem & Process Ind 31:530-4, 542+ Je '47
Effects of high-energy radiation on organic compounds. M. Burton. bibliog J Phys & Colloid Chem 51:786-97 My '47
Geiger-Mueller counter detection of light radiation from the paths of high energy particles. P. B. Weisz and B. L. Anderson. diags Phys R 72:431-2 S 1 '47
Heitler theory of radiation damping. J. M. Blatt. bibliog Phys R 72:466-77 S 15 '47
Ionization yield of radiation; fluctuations of the number of ions. U. Fano. Phys R 72:26-9 Jl 1 '47
Method for controlling scattered radiation in obtaining X-ray absorption data by photographic means. H. E. Seemann and L. L. MacGillivray. diags R Sci Instr 17:539-42 D '46
Milne's problem in transport theory. G. Placzek and W. Seidel. bibliog Phys R 72: 550-5 O 1 '47
Photographic measurement of radiation quality and quantity. J. Kieffer and R. M. Seideman. bibliog Science 104:596-600 D 20 '46
Proposed detector for high energy electrons and mesons. I. A. Getting. diags Phys R 71:123-4 Ja 15 '47
Quenching and depolarization of mercury resonance radiation by nitrogen and oxygen. L. O. Olsen and G. P. Kerr, jr. Phys R 72:115-17 Jl 15 '47
Radiation and photochemistry discussed; symposium at the University of Notre Dame, June 24-27. Chem & Eng N 25:2005 Jl 14 '47
Radiation chemistry. M. Burton. bibliog diags J Phys & Colloid Chem 51:611-25 Mr '47
Radiation problem at high frequencies. M. Lax and H. Feshbach. diags Acoustical Soc Am J 19:682-90 Jl '47
Radioisotopes; new tools for science. C. A. Thomas. Chem & Eng N 25:1572-4 Je 2 '47
Scattering of radiation in an inhomogeneous medium. C. L. Pekeris. Phys R 71:268-9 F 15 '47; Correction. 71:457 Ap 1 '47
Specular reflection from mercury vapor. J. M. Hansen and H. W. Webb. diags Phys R 72:332-9 Ag 15 '47
Suppression of radiations at high temperatures by means of ceramic coatings. D. G. Bennett. bibliog il diag Am Cer Soc J 30: 297-305 O 1 '47

See also
Absorption of rays
Alpha rays
Beta rays
Black body
Cosmic rays
Gamma rays
Heat radiation
Infrared rays
Light
Luminescence
Quantum theory
Radioactivity
Radiography
Solar radiation
Sound
Spectrum
Ultraviolet rays
X rays

Physiological effect
Progress of the Biochemical research foundation (1946). E. McDonald. bibliog diag Franklin Inst J 242:435-48 D '46
Radioactive emanations; their nature, mechanism of action, biological effects and tolerance limits. B. N. Craver. bibliog J Ind Hygiene 29:196-200 My '47
Safe and beneficial utilization of nuclear energy. A. H. Dowdy. Ind Med 16:456+ S '47

RADIATORS, Airplane. See Airplane engines—Radiators

RADIATORS, Automobile. See Automobile engines—Radiators

RADICALS (chemistry)
Cross-linkage of linear polyesters by free radicals. W. O. Baker. bibliog Am Chem Soc J 69:1125-30 My '47
Detection of free radicals in hydrogen atom reactions. G. M. Harris and A. W. Tickner. J Chem Phys 15:686-7 S '47
Equilibrium atom and free radical concentrations in carbon monoxide flames and correlation with burning velocities. C. Tanford and R. N. Pease. bibliog J Chem Phys 15:431-3 Jl '47
Polymerisation of monomers in aqueous solution. M. G. Evans. Chem Soc J p266-74 F '47
Study of reaction intermediates by means of a mass spectrometer. G. C. Eltenton. bibliog diags J Chem Phys 15:455-81 Jl '47

RADIO advertising
Advertising; success story of a products plant; Chase building products. G. W. Linn. il Concrete 55:10-11 F '47

RADIO advertising—*Continued*
Balanced sales effort peps up this merchandising program; broadcasts and revised sales plan bring bigger sales to Lee hats. Ptr Ink 219:45 Je 20 '47
Critical appraisal of media research. A. Politz. Adv & Sell 40:39-40+ Je '47
18 ways to use sound and musical effects in commercials. C. H. Wolfe. il Ptr Ink 220: 42+ Jl 25 '47
Fifty years of advertising. E. E. Calkins. il Ptr Ink 221:48-9 O 24 '47
FM radio; where is it, and where is it going? B. E. Tacks. Sales Management 59: 160+ S 1 '47
Grand opera sells ready mixed concrete; Albuquerque gravel products co. uses radio and newspaper promotion. W. B. Lenhart. il Rock Prod 50:202-4 Ag '47
Here's the answer to Eversharp's $64 question; three network radio shows and lots of newspaper, magazine and point-of-sale promotion cost $6,500,000 per year. V. J. Dallaire. il Ptr Ink 217:46-7 D 20 '46
How radio stations can help in product merchandising. T. R. Cox, jr. Adv & Sell 40:133 Ja '47
How to apply successful copy techniques to radio commercials; comparison of printed advertisements and radio commercials. C. H. Wolfe. Ptr Ink 221:44+ O 3 '47
How to create dramatized, dialogue and comedy commercials. C. H. Wolfe. Ptr Ink 220:44+ S 5 '47
How to evaluate the 31 basic types of radio commercials. C. H. Wolfe. Ptr Ink 221:57+ O 17 '47
How to get an idea. R. J. McAndrews. Sales Management 58:48+ Ap 15 '47
Is your announcer human, your copy conversational? R. L. Foreman. Adv & Sell 40:39-40 F '47
Lewis credits agency's $3,500,000 coup to long-range planning. Ptr Ink 219:113 My 23 '47
Listening in. B. Foreman. Adv & Sell 40:96+ Mr '47
Merchandising helps for radio advertisers; second Deutsch & Shea study. Ptr Ink 220:47 Jl 11 '47
Most Iowa listeners don't mind commercials. Ptr Ink 218:58 Ja 31 '47
Music helps select your radio audience. V. J. Dallaire. il Ptr Ink 217:32-3 D 27 '46
Networks building more shows to sell, offsetting talk of widespread cancellations. D. Bruner. Ptr Ink 218:96 Mr 14 '47
New broadcasting standards; NAB code. D. Bruner. Ptr Ink 220:139+ S 19 '47
New high; program called Juvenile jury. Aesop Glim. Ptr Ink 217:77 D 20 '46
New radio code; N.A.B. preparing rules to cut lengthy commercials. Bsns W p20 S 27 '47
Non-commercial network program builds good-will, sales; Greatest story ever told, sponsored by Goodyear. V. J. Dallaire. Ptr Ink 220:36-7 Ag 22 '47
Plain words about radio advertising. W. L. Dennis. J Retailing 23:3-7 F '47
Qualities to look for in radio announcers. V. J. Dallaire. il Ptr Ink 219:34-5 My 23 '47
Radio at the crossroads. Bsns W p62-4+ Mr 22 '47
Radio scripts that sell; Hartford-Connecticut trust company's programs. Banking 40:48+ O '47
Radio serviceman is pivot of IRC replacement sales promotion. il Sales Management 59:95+ O 1 '47
Radio swap column sells home furnishings. D. Markstein. Ptr Ink 218:64 Ja 10 '47
Radio's honeymoon is about over. A. M. Crossley. Adv & Sell 40:35+ Ja '47
Renewals and new clients give networks bright outlook for fall business. D. Bruner. Ptr Ink 220:78 Jl 4 '47
Salisbury dealers hitch spot radio to net program. Sales Management 59:74+ O 1 '47
Service is keystone of G-E's farm radio success. G. E. Markham. Ptr Ink 218:52+ Mr 14 '47
Sponsor identification not necessary to ad effectiveness. M. N. Chappell. Ptr Ink 219: 48-9 My 16 '47
Suds in your ears; some of the soap plugs that travel our well-lathered air-lanes. H. Whitmore. il Adv & Sell 40:48+ S '47
Symphony broadcast builds market for fine music products; Reichhold's Musical Digest magazine and Vox phonograph records. V. J. Dallaire. il Ptr Ink 220:35 Jl 11 '47
Ten tested ways to create radio commercials for retailers. C. H. Wolfe. il Ptr Ink 219:44-6 My 2 '47
Trade journal and radio advertising. K. H. Mathus. il Spectator (Life ed) 154:8-11+ Ap '47
12 steps in creating radio commercials. C. H. Wolfe. il Ptr Ink 220:35-7 Ag 15 '47
Unidentified man is star salesman for Signal Oil; the Whistler, murder mystery. Sales Management 58:59 Ja 15 '47
Vandercook broadcasts for the airlines. Air Transport 5:47 Je '47
What to tell your salesmen about your radio advertising. S. Levitan. Sales Management 58:77-8 My 1 '47
Who you hollering at? J. Katz. Adv & Sell 40:36 O '47

See also
Television advertising

Awards
Annual advertising awards, 1946. il Adv & Sell 40:29-32 Mr '47
CCNY to make radio awards at New York meeting April 22-23. Sales Management 58: 82 Ap 15 '47
N. W. Ayer lists winners of radio and television awards. Ptr Ink 218:110 Ja 24 '47

Copy writers
Background for creating radio commercials. C. H. Wolfe. Ptr Ink 220:108+ S 19 '47
Move over, Fred Allen! manhandling by censors suffered by writer of radio commercials. P. Artzt. Adv & Sell 40:41+ Je '47
Style makes radio copy more effective. M. E. Milliken. Ptr Ink 219:35 My 9 '47
Write commercials that the audience will want to hear. D. W. Bentley. Ptr Ink 220: 42+ Jl 4 '47

Cost
Does it pay to buy expensive radio talent? E. L. Deckinger. Adv & Sell 40:52+ My '47

Coverage
See Radio advertising—Measurement

Fiction, drama, etc.
Reviewers' reaction to Hucksters (film) is varied. Ptr Ink 220:92 Jl 25 '47

Gift programs
Radio handouts; give-away show. Fortune 36:140+ N '47

Measurement
Can an advertiser believe what mail surveys tell him? A. Politz and R. Brumbach. Ptr Ink 219:48+ Je 20 '47
Hooper defends ratings, lists ABC deficiencies. Ptr Ink 218:101 F 28 '47
Measuring the size of spot commercial audiences; St Louis research using double-survey method. A. Politz. Ptr Ink 219:54+ Ap 11 '47
Network radio and newspaper circulation distribution. Sales Management 57:95-6+ D 1 '46
Radio families, USA, 1946; with Canadian supplement. pa $5 Broadcast measurement bur, 270 Park av, New York 17 '46
Ratingitis; radio's chronic disease. A. M. Crossley. Adv & Sell 39:43+ D '46
What is an audience? L. Warner. il Adv & Sell 40:39-40+ S '47
Why we should bring radio research up to date. A. M. Crossley. Adv & Sell 39:41-2+ N '46

Phonograph programs
ABC defends transcribed shows in face of Crosby rating drop; cites advantages. D. Bruner. Ptr Ink 217:94 N 22 '46
Radio transcriptions, now grossing $10,000,000, attract national advertisers and top talent. J. L. Sinn. Ptr Ink 219:87+ Je 13 '47

RADIO advertising—*Continued*

Program advertising

How to merchandise the spot radio campaign. S. M. Finkel. il Ptr Ink 220:32-3 Ag 29 '47

Promotion-of-the-month expands audiences for Coast radio features. Sales Management 58:48+ F 1 '47

Research

Gallup to measure radio advertising impact in new research service; test town provided. Ptr Ink 220:118 S 26 '47

Independent station to survey all disc jockey shows. Ptr Ink 217:116 D 13 '46

Measuring the size of spot commercial audiences; St Louis research using double-survey method. A. Politz. Ptr Ink 219:54+ Ap 11 '47

24 ways to apply research in creating radio commercials. C. H. Wolfe. Ptr Ink 221:48+ O 10 '47

Why we should bring radio research up to date. A. M. Crossley. Adv & Sell 39:41-2+ N '46

Songs

Commercials that really sing keep sponsor and listener happy. V. J. Dallaire. Ptr Ink 220:39 Ag 8 '47

12 steps in creating a hit radio jingle. C. H. Wolfe. Ptr Ink 218:36-7+ Mr 28 '47

Spot radio

Ad program integrates spot, magazines and point-of-sale; Durham-Enders razor corp. il Ptr Ink 219:42-3 My 9 '47

Agency handling of time clearances for LS/MFT spots irks radio reps. D. Bruner. Ptr Ink 219:98 My 16 '47

How radio spots led to newspaper spots; small-space advertiser calls repetition key to success; Monarch foods. Ptr Ink 218:42 F 21 '47

How to merchandise the spot radio campaign. S. M. Finkel. il Ptr Ink 220:32-3 Ag 29 '47

Measuring the size of spot commercial audiences; St Louis research using double-survey method. A. Politz. Ptr Ink 219:54+ Ap 11 '47

Nine techniques for creating effective spot announcements. C. H. Wolfe. il Ptr Ink 219:32-4 Je 27 '47

Primer on creating radio spot announcements. D. Bascom. il Ptr Ink 220:40+ Ag 1 '47

Sales-tested radio advertising. C. C. Hoge. Ptr Ink 219:42 My 16 '47

Seven things to consider when buying spot time. V. J. Dallaire. il Ptr Ink 219:42-3 Je 20 '47

16 ways to back sales with spot radio in selected markets. T. R. Cox, jr. Sales Management 57:57-8+ D 15 '46

Song and laugh; magic recipe for spot radio commercials; Gaston, Chateau Martin's radio voice. il Ptr Ink 219:38-9 Ap 18 '47

Spot broadcasts sell; servicemen-dealers should not overlook possibilities. W. C. Roux. il Radio N 37:60+ Ap '47

Spot radio; what it means, how it's used. il Ptr Ink 219:50-1 Ap 4 '47

Station rep is key man in spot dealings. Ptr Ink 219:36-7 Je 6 '47

Statistics

CBS, ABC and Mutual networks report 1946 billings. Ptr Ink 218:76+ Ja 17 '47

Top agencies placed 18.9 per cent of billings on networks. Ptr Ink 219:97 Je 20 '47

Testing

How to pre-test radio commercials. C. H. Wolfe. Ptr Ink 219:33-5+ Je 13 '47

Sales-tested radio advertising. C. C. Hoge. Ptr Ink 219:42 My 16 '47

RADIO advertising, Cooperative

City sells itself to its trading area; Mason City, Ia. radio program. Sales Management 59:100 Ag 1 '47

CBS woos national advertisers to back coop shows in network race. Ptr Ink 219:86+ My 2 '47

Connecticut manufacturers co-sponsor series as they put plant-city advertising on the air. D. Bruner. Ptr Ink 220:93 Jl 25 '47

RADIO aids to aviation

Aids to air navigation. T. P. Wright. Aeronautical Eng R 5:25-9 D '46

Air navigation facilities. W. A. M. Burden. S A E J 55:17-19 Ap '47

Airline traffic. W. Price. Mech Eng 69:36-7 Ja '47

Application of microwaves to instrument landing of airplanes. J. Lyman. diag Aeronautical Eng R 6:26-7+ Ap '47

Army flies all weather; Army air forces' all-weather flying center at Wilmington, Ohio. R. B. Hotz. il Air Transport 5:31-3 Ap '47

Assistance by radio to lost civil pilots is widely available. CAA J 8:72 Je 15 '47

British planning expansion of ILS. F. A. Brewster. Aviation N 7:12 Ap 21 '47

Cabins, crashes, and communications; notes on program and discussions of the I.A.S. National air transport meeting. J. P. Van Zandt. Aeronautical Eng R 5:24-5 D '46

Check and double check; why both ILS and GCA are a good bet. C. F. Banfe, jr. il Air Transport 5:34-5 Mr '47; Discussion. 5:33+ Jl '47

Circularly-polarized omnidirectional antenna for airport-to-airplane communication. G. H. Brown and O. M. Woodward, jr. il diags RCA R 8:259-69 Je '47

CAA and airlines versus GCA. W. Kroger. il diags Air Transport 5:30-3+ Mr '47

CAA approves GCA, ILS for airlines use. Aviation N 7:10-11 Ap 28 '47

CAA control towers equipped to guard vhf radio channel for private pilot use. CAA J 8:43 Ap 15 '47

CAA instrument landing system brings new flying techniques. CAA J 8:30-1 Mr 15 '47

CAA omni-range program will force private pilots off federal airways. J. B. Hartranft. Aviation N 7:24 Ap 21 '47

CAA radio station helped Dreamboat's nonstop flight. CAA J 7:150 D 15 '46

CAA to continue fight for ILS omni-range airways. Aviation W 47:47 Ag 18 '47

Efforts to aid planes in bad-weather landings focus attention on CAA equipment in operation. diags CAA J 8:31+ Mr 15 '47

For safer blind flying; international conference proposes worldwide agreement on navigation and landing aids. Bsns W p38+ Ja 4 '47

Four-band automatic radio direction finder for transport planes. R. H. Bailey. il diag Radio N 37:68-9+ Je '47

Global avigation system projected by PICAO. il Aviation 46:79-80+ F '47

ILS use assures more regularity in air schedules. CAA J 8:109+ O 15 '47

International plan for air navigation. D. H. Pain. il diag Electronics 20:80-3 F '47

Lower minimums set for airplanes landing on ILS. CAA J 8:37+ Ap 15 '47

Photoelectric transmitting typewriter used in air traffic control. G. L. Bush. il diags Electronics 20:96-9 Ap '47

Precision GCA or ILS? H. K. Morgan. il Aero Digest 54:22-3 Je '47

Problems of blind landing. H. C. Pritchard. il plan diags Roy Aeronautical Soc J 50: 935-58; Discussion. 958-73 D '46

PICAO council to approve air navigation program. M. Mickel. Aviation N 7:27-8 Ja 6 '47

PICAO technicians select ILS and omni-ranges for world use. CAA J 7:150 D 15 '46

Radio controlled flight. il diags Radio N 37: 25-7+ Ja '47

Safe, easy instrument flying CAA objective. T. P. Wright. CAA J 7:137+ N 15 '46

Seven airlines approved to use ILS at 21 fields. R. Hotz. Aviation W 47:11 S 1 '47

Sperry pushing microwave air traffic control system. R. B. Hotz. il Aviation N 7: 10-11 Mr 17 '47

Status of vhf facilities for aviation. P. Caporale. il diags Electronics 20:90-5 O '47

Two-way teletype in air. diag Electronics 20:168+ Ap '47

U.S. demonstrates radio aids to air navigation. il plan diag Electronics 19:280+ D '46

RADIO aids to aviation—*Continued*
Vhf will be wonderful for private flying. W. P. Lear. Aero Digest 53:26-7 N '46

See also
Airlines—Radio communication
Airways—Traffic control
Decca navigation system
Direction finding apparatus
Loran system
Radar
Radar aids to aviation
Radio apparatus on aircraft
Radio beacons
Radio meteorographs

RADIO aids to explorers
Electronics in the Antarctic; U.S. navy Antarctic expedition. H. C. Bailey. il Electronics 20:82-8 Ag '47

RADIO aids to navigation
International recommendations for marine electronic aids. il Electronics 20:144+ Ag '47
Shipping communications system faces complete renovation. Marine Eng 52:61 Ap '47

See also
Direction finding apparatus
Loran system
Radar
Radar aids to navigation
Radio apparatus on ships
Radio communication—Ship-to-shore service
Radio telephone on ships

RADIO amplifiers. See Amplifiers, Vacuum tube

RADIO announcers. See Radio broadcasting—Announcing

RADIO antennas
Aircraft antenna pattern plotter. O. H. Schmitt and W. P. Peyser. bibliog il diags Electronics 20:88-91 My '47
Antenna focal devices for parabolic mirrors; used in experiments on cosmic static. G. Reber. il Inst Radio Eng Proc 35:731-4 Jl '47
Antenna loading problems and solutions. J. T. Goode. diags Radio N 38:44+ Ag '47
Antennas for circularly polarized waves. il diags Electronics 19:214 D '46
Cavity aircraft antenna. H. Kees and F. Gehres. il diags Electronics 20:78-9 Ja '47
Circular loop antennas with non-uniform current distribution. G. Glinski. bibliog J Ap Phys 18:638-44 Jl '47
Circularly-polarized omnidirectional antenna for airport-to-airplane communication. G. H. Brown and O. M. Woodward, jr. il diags RCA R 8:259-69 Je '47
Concerning Hallén's integral equation for cylindrical antennas. S. A. Schelkunoff. bibliog diags Inst Radio Eng Proc 33:872-8 D '45; Discussion. 34:265-9; 35:282-3 My '46, Mr '47
Coupling transformers for loop antennas. M. J. Kobilsky. diags Inst Radio Eng Proc 35:969-73 S '47
Dipole reflector insulation. J. A. Saxton and L. H. Ford. diags Wireless Eng 23:325-7 D '46
Directional couplers. W. W. Mumford. il diags Inst Radio Eng Proc 35:160-5 F '47
Dressing up the antenna connection. il Radio N 37:92 My '47
Effect of feed on pattern of wire antennas. D. C. Cleckner. diags Electronics 20:103-5 Ag '47
Exponential transmission line employing straight conductors. W. N. Christiansen. il diag Inst Radio Eng Proc 35:576-81 Je '47
Field of a microwave dipole antenna in the vicinity of the horizon. C. L. Pekeris. bibliog J Ap Phys 18:667-80, 1025-7 Jl, N '47
500-ft. radiator mast for Brookman's Park transmitting station. il Engineering 163:495, 500 Je 13 '47
Folded dipole fm and television antenna. il diags Radio N 37:84+ Ap '47
F-m reception problems and their solution. N. W. Aram. il diags Electronics 20:108-10 S '47
Further observations of the angle of arrival of microwaves. A. B. Crawford and W. M. Sharpless. il Inst Radio Eng Proc 34:845-8 N '46
Input impedance of a folded dipole. W. van B. Roberts. diags RCA R 8:289-300 Je '47
Low-impedance loops. H. R. Hyder. diag Radio N 38:172 S '47
Maintenance masts for B.B.C. il Engineer 184:110 Ag 1 '47
Measurement of the angle of arrival of microwaves. W. M. Sharpless. il map Inst Radio Eng Proc 34:837-45 N '46
Metal-lens antennas. W. E. Kock. il diags Inst Radio Eng Proc 34:828-36 N '46
Microwave omnidirectional antennas. H. J. Riblet. il diags Inst Radio Eng Proc 35:474-8 My '47
New B.B.C. mast. il Elec R (Lond) 139:643 O 25 '46; Electrician 137:1078 O 18 '46
Partially-screened open aerials. R. E. Burgess. diags Wireless Eng 24:145-9 My '47
Performance of short antennas. C. E. Smith and E. M. Johnson. il diags Inst Radio Eng Proc 35:1026-38 O '47
Phase-front plotter for centimeter waves. H. Iams. il diags RCA R 8:270-5 Je '47
Radiation angle variations from ionosphere measurements. H. E. Hallborg and S. Goldman. RCA R 8:342-51 Je '47
Radio progress during 1946. bibliog Inst Radio Eng Proc 35:410-11 Ap '47
Reflector antenna solves skip problem. W. L. Campbell. il Elec World 128:88+ Ag 2 '47
Shunt-fed wing antenna. Electronics 20:154+ Jl '47
Simple antenna system; twin-lead ribbon makes folded dipole low in cost, yet highly efficient. C. V. Hays. diag Radio N 38:59+ N '47
Square loop f-m antenna. il Electronics 20:166+ Mr '47
Transmission line systems for fm and television home receivers. C. Spear. il diags Radio N 37:44-6+ F '47
Triplex antenna for television and f-m. L. J. Wolf. il diags Electronics 20:88-91 Jl '47
2,500-foot vertical antenna supported by electrically driven captive helicopter; German transmitter. Electronics 20:188+ My '47

See also
Television antennas

Directional antennas
Current distribution for broadside arrays which optimizes the relationship between beam width and side-lobe level. C. L. Dolph. Inst Radio Eng Proc 34:335-48 Je '46; Discussion. 35:489-92 My '47
Design of directive broad-band antennas. R. Baum. diags Inst Radio Eng Proc 34:956-9 D '46
Design values for loop-antenna input circuits. J. E. Browder and V. J. Young. diags Inst Radio Eng Proc 35:519-25 My '47
Development and study of a practical spaced-loop radio direction-finder for high frequencies. W. Ross. diags Inst E E J 94 pt 3:99-107 bibliog(p105) Mr '47; Abstract. Electrician 137:1213-14 N 1 '46; Discussion. Inst E E J 94 pt 3:133-40 Mr '47
Dipole with unbalanced feeder. D. A. Bell. diags Wireless Eng 24:3-5 Ja '47
Directional patterns with a 54A array. H. R. Whaley. il diags Radio N 37:53+ Ap '47
Experimental spaced-loop direction-finder for very high frequencies. F. Horner. diags Inst E E J 94 pt 3:126-33; Discussion. 133-40 Mr '47
Helical beam antenna. J. D. Kraus. il diags Electronics 20:109-11 Ap '47
Inexpensive 4-element array. V. C. Hale. diag Radio N 37:47+ F '47
Iron-cored loop receiving aerial. R. E. Burgess. bibliog Wireless Eng 23:172-8 Je '46; Discussion. 23:313-15 N '46
Microwave antenna analysis. S. Seely. Inst Radio Eng Proc 35:1092-5 O '47
Microwave antenna beam evaluator. H. LeCaine and M. Katchky. il diags Electronics 20:116-20 Ag '47
New parasitic beam design. R. G. Rowe. il diags Radio N 37:40-1+ Ja '47
Practical calculator for directional antenna systems. H. A. Ray, jr. il diags Inst Radio Eng Proc 34:898-902 N '46
RCA antennalyzer; an instrument useful in the design of directional antenna systems. G. H. Brown and W. C. Morrison. il diags Inst Radio Eng Proc 34:992-9 D '46

RADIO antennas—Directional antennas—*Cont.*
Radio direction finding at 1.67-meter wavelengths. L. C. Yuan. il diags Inst Radio Eng Proc 34:752-6 O '46
Slotted-cylinder antenna. E. C. Jordan and W. E. Miller. il diags Electronics 20:90-3 F '47
Three-element rotary beam. H. E. Schwartz, jr. il diags Radio N 38:62-3+ Ag '47
Ultra-high-frequency radiosonde direction finding. L. C. Yuan. diags Inst Radio Eng Proc 34:852-7 N '46
Use of earth mats to reduce polarisation error of U-type Adcock direction-finders. R. L. Smith-Rose and W. Ross. diag Inst E E J 94 pt 3:91-8 Mr '47; Abstract. Electrician 137:1213 N 1 '46; Discussion. Inst E E J 94 pt 3:133-40 Mr '47

Testing

Balloon is sky-hook for test antenna. S. C. Bartlett. il Elec World 127:114+ Je 7 '47

RADIO apparatus
Crystal diode applications. J. C. Hoadley. il diags Radio N 37:43+ Ja '47
Design of heavy-current contact, particularly for radio-frequency use. A. J. Maddock. il diag Inst E E J 94 pt 3:52-4 Ja '47
Electrical and allied developments of 1946; electronics. G. Bartlett. il Gen Elec R 50: 38-41 Ja '47
German industrial techniques. Electronics 19:216+ D '46
Ionosphere equipment for field use during a solar eclipse. G. H. Musselman. il diag Electronics 20:112-16 My '47
Mica windows as elements in microwave systems. L. Malter and others. diags RCA R 7:622-33 D '46
Modern divining rod; metal locators, their design and limitations. A. B. Kaufman. il diags Radio N 37:41-3+ Ap '47
Putting the new small meter to work; pocket test instruments, sub-miniature radio transmitters. R. P. Turner. il diags Radio N 37:52-3 Ja '47
Radio progress during 1946. bibliog(755 titles) Inst Radio Eng Proc 35:399-425 Ap '47
Recent developments in dielectric materials. W. Jackson. bibliog diags Inst E E J 94 pt 1:29-34 Ja '47; Same. Inst E E J 94 pt 3: 5-10 Ja '47; Abstract. Engineering 162:427-8 N 1 '46
Reducing number of capacitors or resistors in decade boxes. diags Radio N 37:100 Ja '47
Rocket radio for moon to earth broadcasts foreseen. J. A. Hutcheson. Franklin Inst J 242:278 O '46
Telecommunication purposes. W. Jackson. Engineering 162:427-8 N 1 '46

See also
Amplifiers, Vacuum tube
Direction finding apparatus
Microphones
Oscillators
Oscillators, Crystal
Radar
Radio antennas
Radio apparatus industry
Radio circuits
Radio coils
Radio communication
Radio condensers
Radio control
Radio facsimile
Radio generators
Radio instruments
Radio loud speakers
Radio meteorographs
Radio receiving apparatus
Radio transformers
Radio transmitters
Vacuum tubes
Wavemeters

Bibliography

Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Inst Radio Eng Proc beginning with June '46 issue [abstract 1144]

Exhibitions

National radio exhibition, 15th, Olympia, Oct. 1-11. il Elec R (Lond) 141:543-6 O 10 '47; Electrician 139:988-91 O 3 '47; Engineering 164:355 O 10 '47
1947 radio parts and electronic equipment conference and show. Radio N 37:54-5+ My '47

Manufacture

More preplanning, less methods changing; Bendix radio division. G. R. Faustman. il Factory Management 105:76-8 Je '47
Stamped wiring for economical production. il Product Eng 18:168 S '47

Military use

Electron tubes in World war II. J. E. Gorham. il Inst Radio Eng Proc 35:295-301 Mr '47
Full-scale free-flight ballistic measurements of guided missiles. L. A. Delsasso, L. G. de Bey and D. Reuyl. plan Aviation W 47: 28+ S 15 '47
Night aerial photography, with radio and radar direction-finding methods combined. H. E. Edgerton. il Tech R 49:273-8+ Mr '47
Radio control systems for guided missiles. S. L. Ackerman and G. Rappaport. il diags Electronics 19:86-91 D '46
United States naval reserve. D. S. Wicks. Inst Radio Eng Proc 34:973-4 D '46
War in the ether; radio and radar countermeasures. E. B. Addison. Roy Aeronautical Soc J 51:425-36; Discussion. 436-9 My '47

See also
Radio communication, Military

Patents

Wireless patents; summary of recently accepted specifications. Published in monthly numbers of Wireless engineer

Power supply

Acceptance and service testing for vibrator power supplies. W. E. Price and E. M. Hassell. il diags Aviation W 47:31+ Ag 11 '47
Compact power supply for high current. L. Fleming. il diag Electronics 20:162+ S '47
High voltage r.f. power supply; particularly applicable to cathode-ray tubes. J. F. Price. diags Radio N 38:54+ Jl '47
Microwave power measurement. T. Moreno and O. C. Lundstrom. il diags Inst Radio Eng Proc 35:514-18 My '47
Power supply for microwave equipment. O. Hoag. bibliog il diags Electronics 20:110-13 F '47
R.f. power supplies. J. C. McGuire. il diags Radio N 37:51+ Je '47
Stabilizing direct-voltage supplies; graphical method of assessing performance of gas-discharge tube stabilizer circuit. J. W. Hughes. bibliog diags Wireless Eng 24: 224-30 Ag '47; Discussion. W. H. P. Leslie. 24:309 O '47
Versatile power supply. il diag Radio N 37: 67+ Ap '47
Voltage amplifier gain. diags Radio N 38:82 Ag '47
Voltage-regulated power supplies. P. Koontz and E. Dilatush. diags Electronics 20:119-23 Jl '47

Protection

Hermetic sealing of transformers and chokes used in communication equipment. C. F. Bays and D. Slater. il diags Inst E E J 94 pt 3:347-57 S '47

Repair

Functional schematic diagrams. S. H. Larick. diags Inst Radio Eng Proc 34:1005-7 D '46

Testing

Design of a universal automatic circuit tester, and its application to mass-production testing. R. C. G. Williams and others. il diags Inst E E J 94 pt 3:20-6 Ja '47
Pulse-testing of wide-band networks; discussion of paper by D. C. Espley and others. Inst E E J 94 pt 3:141-5 Mr '47
Sensitive probe uses crystal diode. R. P. Turner. il diags Radio N 37:68 My '47

RADIO apparatus, Portable
Midget electronic equipment. il diags Electronics 20:84-9 F '47

RADIO apparatus industry
Be sure of quality before you sell. M. K. Brody. il Radio N 37:51+ Ja '47
Business that was born in a pile of junk in the attic; radio set for ham operators. W. J. Halligan. il Sales Management 58:59-60+ Mr 15 '47

RADIO apparatus industry—*Continued*
Distribution without frills at Philco. W. A. McGarry. il Am Bsns 17:22-4+ Mr '47
Philco accessories county fair; distributors stage a Back to normal campaign. il Sales Management 59:42-3 N 1 '47
Radio deals; Philco takes over its supplier of refrigerators. Bsns W p26+ Ag 30 '47
Radio industry; prospects for 1947. K. Davis. Dom Comm 35:43-4 Ja '47
Radio price slip? Bsns W p77 Mr 8 '47
Sales control system. F. Merish. Radio N 37:64-5+ My '47
United States radio exports to exceed $60,000,000 in 1947. G. R. Donnelly. il For Comm W 28:6-8+ Jl 5 '47
War, radar, and the radio industry; case study of impact of war on American industry. A. A. Bright, jr. and J. Exter. Harvard Bsns R 25 no2:255-72 [Ja] '47
Why buyers wait for name brand radios when others are plentiful. Sales Management 57:48+ N 20 '46
Why go national when there's a rich market in your back yard? Hoffman radio corp, Los Angeles, staking out claims in 11 western states and Hawaii. Sales Management 58:128+ Ap 15 '47

See also
Radio stores

Advertising

Demand for brand names and quality hits radio market; manufacturers rush ads. W. H. Davis. Ptr Ink 218:69 Ja 3 '47
How our business-paper ads serve customers and prospects; Bendix radio communications campaign. J. M. Sitton. il Ptr Ink 220:30-1 Ag 29 '47
Radio serviceman is pivot of IRC replacement sales promotion. il Sales Management 59:95+ O 1 '47
Spot broadcasts sell; servicemen-dealers should not overlook possibilities. W. C. Roux. il Radio N 37:60+ Ap '47

Directories

Elecronics buyers' guide. Electronics 20:D1-144 Mid-Je '47

Exhibitions

RCA exhibition hall. il plans diags Arch Forum 87:57-60 Ag '47
Radio corporation of America opens exhibition hall. il Marine Eng 52:134 Je '47

Statistics

Radio families, USA, 1946; with Canadian supplement. pa $5 Broadcast measurement bur, 270 Park av, New York 17 '46

Austria

Radio situation in Austria, Hungary, and the Balkans. For Comm W 25:30 N 9 '46

Belgium

Radio-tube production and trade. For Comm W 29:27 O 25 '47

China

Market for radios in Dairen (China). For Comm W 25:30 N 23 '46
Measures governing issuance of import permits (huchao) for radio equipment. For Comm W 27:15-16 Ap 19 '47

Great Britain

Britain's radio-set business leaps ahead again. For Comm W 26:19 Ja 11 '47
Competition in radio. Economist 153:297-8 Ag 16 '47
Radio industry's task. Economist 153:538-9 S 27 '47
United Kingdom's exports and imports of radio equipment; three-quarters of 1938 total and nine months ended September 30, 1945-1946; table. For Comm W 26:27 Ja 18 '47

India

Radios for India. Bsns W p98 Ja 11 '47

Japan

Japanese output of radios and parts. For Comm W 25:27 D 28 '46

Sweden

Industry and trade in Sweden. For Comm W 26:28 Mr 22 '47

RADIO apparatus on aircraft
Acceptance and service testing for vibrator power supplies. W. E. Price and E. M. Hassell. il diags Aviation W 47:31+ Ag 11 '47
Aircraft antenna pattern plotter. O. H. Schmitt and W. P. Peyser. bibliog il diags Electronics 20:88-91 My '47
Aircraft radio static; effects eliminated by war-developed devices. il Sci Am 177:28 Jl '47
Cavity aircraft antenna. H. Kees and F. Gehres. il diags Electronics 20:78-9 Ja '47
Electrostatic dischargers for aircraft. W. C. Hall. bibliog il diags J Ap Phys 18:759-65 Ag '47
Electrostatic ills and cures of aircraft. R. Beach. bibliog il diags Elec Eng 66:325-34, 453-62 Ap-My '47; Discussion. 66:1044-6 O '47
How's and why's of aircraft electronic tubes. F. Rockett. il diags Aviation 46:85-6+ Ap '47
Maintenance testing of automatic direction finders. W. E. Price and E. M. Hassell. il diag Aviation 45:78-81 N '46
Shunt-fed wing antenna. Electronics 20:154+ Jl '47
Why earphones? veteran pilot recommends speakers to replace them. C. A. Macatee. il Air Transport 5:27 O '47

See also
Television apparatus on aircraft

RADIO apparatus on ships
Design of communication receivers for the naval service with particular consideration to the very-high-frequency and ultra-high-frequency ranges. T. M. Davis and E. Toth. il diags Inst Radio Eng Proc 35: 201-7 F '47
Spindle Eye; ship used to send press dispatches, radiophotos and broadcasts at operation crossroads. M. J. Luichinger. il Radio N 36:32-4+ D '46
Telemetering fathometer to secure continuous depth indications beneath remote-controlled pilotless ship. E. F. Kiernan. il diags Electronics 20:96-8 O '47
24-hour radio coverage with new ship's call system. il Marine Eng 52:146 Jl '47

See also
Radio telegraph on ships
Radio telephone on ships

RADIO attenuators
Attenuator of S-band energy. H. R. Meahl. il diag Inst Radio Eng Proc 35:211-13 F '47
Field of a coil between two parallel metal sheets. E. B. Moullin. diags Inst E E J 94 pt 3:78-84 Ja '47
Impedance measurements. diag Electronics 20:194+ F '47
Level and differential attenuator. R. H. Lefkovich. diag R Sci Instr 18:65 Ja '47
Method of calibrating standard-signal generators and radio-frequency attenuators. G. F. Gainsborough. bibliog diags Inst E E J 94 pt 3:203-10 My '47
Microwave measurements and test equipments. F. J. Gaffney. il diags Inst Radio Eng Proc 34:782-4 O '46

RADIO authorship
12 steps in creating a hit radio jingle. C. H. Wolfe. Ptr Ink 218:36-7+ Mr 28 '47

RADIO beacons
Stabilized magnetron for beacon service. J. S. Donal and others. il diags RCA R 8: 352-72 Je '47
Status of vhf facilities for aviation. P. Caporale. il diags Electronics 20:90-5 O '47

RADIO broadcasting
Tonal-range and sound-intensity preferences of broadcast listeners. H. A. Chinn and P. Eisenberg. Inst Radio Eng Proc 33:571-81 S '45; Discussion. 34:757-61; 35:378, 495 O '46, Ap-My '47

See also
National association of broadcasters
Radio advertising
Radio broadcasting stations
Radio communication—Interference elimination
Radio receiving apparatus
Television broadcasting

RADIO broadcasting—*Continued*

Announcing

Is your announcer human, your copy conversational? R. L. Foreman. Adv & Sell 40: 39-40 F '47

Qualities to look for in radio announcers. V. J. Dallaire. il Ptr Ink 219:34-5 My 23 '47

Bibliography

Radio broadcasting and television; an annotated bibliography. O. Rose, ed. 120p $1.50 H. W. Wilson co, New York '47

Dramas

How to create dramatized, dialogue and comedy commercials. C. H. Wolfe. Ptr Ink 220:44+ S 5 '47

Educational application

See Radio in education

Frequency modulation system

See Radio frequency modulation

Frequency standards

Calibrating laboratory standards against WWV. G. P. Wilson. Electronics 20:190+ F '47

WWV schedules. Electronics 20:87 My '47

Government programs

House group approves U.S. broadcasts. Comm & Fin Chr 165:2908 My 29 '47

International aspects

Radio's contribution to international understanding. D. Sarnoff. Inst Radio Eng Proc 35:107 F '47

Multiplex system

Multiplex broadcasting; pulse time modulation and its application to radiobroadcasting. F. Altman and J. H. Dyer. il diags Elec Eng 66:372-80 Ap '47

Music

Experiments in listening; audience reaction to reproduced music tested with high-quality audio system. N. D. Webster and F. C. McPeak. il diags Electronics 20:90-5 Ap '47

Music helps select your radio audience. V. J. Dallaire. il Ptr Ink 217:32-3 D 27 '46

Radio's commercial jingles go long-haired; five to be heard in symphony next year. N. Kelne. Ptr Ink 217:126 D 6 '46

News

Around the clock with short-wave English newscasts; tabulation. Radio N 37:56+ Mr '47

Emergency broadcast pickup techniques; equipment and methods used in remote broadcasts and news coverage. G. Riley. il Electronics 20:108-11 My '47

Spindle Eye; ship used to send press dispatches, radiophotos and broadcasts at operation crossroads. M. J. Luichinger. il Radio N 36:32-4+ D '46

Union on air; C.I.O.'s United Electrical workers signs Leland Stowe for series of 52 weekly broadcasts on Mutual. Bsns W p95 Ap 19 '47

Performers

Does it pay to buy expensive radio talent? E. L. Deckinger. Adv & Sell 40:52+ My '47

Glamor for safety; campaign by Motion picture and radio committee of the National safety council. Nat Safety N 56:24-5+ Jl '47

Phonograph programs

ABC defends transcribed shows in face of Crosby rating drop; cites advantages. D. Bruner. Ptr Ink 217:94 N 22 '46

Disks catch on; CBS eases ban on broadcast transcriptions for summer. Bsns W p68-9 Je 21 '47

Great throat; Bing Crosby. il Fortune 35: 129-32 Ja '47

Record and transcription men check backlogs in assaying Petrillo ban on recordings. D. Bruner. Ptr Ink 221:103 O 24 '47

See also Radio advertising—Phonograph programs

Program recording

Magnetic tape recorder for movies and radio. R. H. Ranger. il diags Electronics 20:99-103 O '47

Recording studio 3A; acoustical design problems. G. M. Nixon. il RCA R 7:634-40 D '46

Program writing

See Radio authorship

Programs

New high; program called Juvenile jury. Aesop Glim. Ptr Ink 217:77 D 20 '46

Radio at the crossroads. Bsns W p62-4+ Mr 22 '47

Revolt against radio. il Fortune 35:100-3+ Mr '47; Discussion. H. L. Mencken. 35:29 Ap '47

Pulse time modulation

See Radio pulse time modulation

Regulation

See Radio laws and regulations

Religious programs

Non-commercial network program builds good-will, sales; Greatest story ever told, sponsored by Goodyear. V. J. Dallaire. il Ptr Ink 220:36-7 Ag 22 '47

Scientific programs

Publicity of science by radio; abstract. W. E. van Heyningen. Chem & Ind p405 N 9 '46

Social aspects

Social impact of the radio. K. G. Bartlett. Ann Am Acad 250:89-97 Mr '47

Songs

12 steps in creating a hit radio jingle. C. H. Wolfe. Ptr Ink 218:36-7+ Mr 28 '47

Sound effects

18 ways to use sound and musical effects in commercials. C. H. Wolfe. il Ptr Ink 220: 42+ Jl 25 '47

Sports

America's largest sports sponsor on the air; Gillette safety razor co. Bsns W p8 S 20 '47

Standard frequency

See Radio broadcasting—Frequency standards

Standards

New broadcasting standards; NAB code. D. Bruner. Ptr Ink 220:139+ S 19 '47

Telephone transmission

Truck horse goes up a mountain; telephone company builds coaxial highway up Mount Wilson. J. H. Collins. Pub Util 39:607-14 My 8 '47

Time signals

See Time signals, Radio

Trade union programs

Union on air; C.I.O.'s United Electrical workers signs Leland Stowe for series of 52 weekly broadcasts on Mutual. Bsns W p95 Ap 19 '47

Wired radio

Broadcast carrier system. F. R. Brewster. diag Electronics 20:174+ Ap '47

Carrier-frequency wire broadcasting. il Engineer 182:501 N 29 '46

Wire broadcasting; first licensed carrier-frequency service in Britain. Elec R (Lond) 139:883 N 29 '46; Electrician 137:1503-4 N 29 '46

See also

Radio communication—Wire connections

Austria

Radio Wien, Vienna. K. R. Boord, comp. il Radio N 38:67+ N '47

Bulgaria

Expansion of broadcasting facilities; 2-year plan. For Comm W 28:28 S 6 '47

RADIO broadcasting—*Continued*

Canada

Radio broadcasting in Canada. R. J. Kaller. il Ptr Ink 220:48-9 S 19 '47; Discussion. 221: 66 D 26 '47

Ceylon

Radio SEAC (South East Asia command), Colombo. K. R. Boord, comp. il Radio N 38:68+ S '47

Colombia

Short wave poses problems to Colombian broadcasters. For Comm W 27:35 Ap 12 '47

Czechoslovakia

Czechoslovak radio in war and revolution. K. R. Boord, comp. il Radio N 37:70+ My '47

Great Britain

War-time activities of the B.B.C. H. Bishop. Electrician 138:851-2 Ap 4 '47

Honduras

New radio broadcasting station in Honduras. For Comm W 29:29 O 11 '47

India

Eight-year plan for development of broadcasting in India approved by government. For Comm W 27:29 Je 28 '47

Luxemburg

Radio Luxembourg. K. R. Boord, comp. il Radio N 38:66+ Ag '47

Netherlands

Story of PCJ. K. R. Boord. Radio N 37:57+ Mr '47

Panama

First all-English radio station opens in Panama. For Comm W 26:32 Mr 22 '47

New radio station in Panama. For Comm W 25:42 D 7 '46

Radio station HP5J/HP6J, La voz de Panama. K. R. Boord, comp. il Radio N 38:68+ O '47

Turkey

Two powerful radio stations will be erected in Turkey. For Comm W 27:28-9 Ap 19 '47

United States

Revolt against radio. il Fortune 35:100-3+ Mr '47; Discussion. H. L. Mencken. 35:29 Ap '47

Strangled by competition? Bsns W p20 N 30 '46

RADIO broadcasting stations

Brickbuilt radio station, WHBC; views. Brick & Clay Rec 109:25 N '46

Fm chain sponsor; Stromberg-Carlson takes first commercial program on Continental. Bsns W p21 S 13 '47

Radio Luxembourg. K. R. Boord, comp. il Radio N 38:66+ Ag '47

Radio SEAC (South East Asia command), Colombo. K. R. Boord, comp. il Radio N 38:68+ S '47

Radio station HP5J/HP6J, La voz de Panama. K. R. Boord, comp. il Radio N 38:68+ O '47

Radio Wien, Vienna. K. R. Boord, comp. il Radio N 38:67+ N '47

Story of PCJ. K. R. Boord. Radio N 37:57+ Mr '47

Wow at WNEW. Fortune 35:132+ Ap '47

Advertising

Promotion-of-the-month expands audiences for Coast radio features. Sales Management 58:48+ F 1 '47

What WEAF and WABC did to promote the change to WNBC and WCBS. Ptr Ink 217: 53 D 6 '46

Equipment

Carrier failure alarm. R. E. Thornton. diag Electronics 20:142+ Ja '47

500-ft. radiator mast for Brookman's Park transmitting station. il Engineering 163:495, 500 Je 13 '47

See also

Radio antennas

Newspaper cooperation

Competing media cooperate in communities; WNBC city salutes win newspaper support. D. Bruner. il Ptr Ink 218:102+ Mr 7 '47

Power

WIND; Gary broadcasting station, Diesel generating set for standby power. J. E. Hubel. il Diesel Power 24:1435+ D '46

See also

Radio transmitters—Power supply

Service

How radio stations can help in product merchandising. T. R. Cox, jr. Adv & Sell 40:133 Ja '47

Merchandising helps for radio advertisers; second Deutsch & Shea study. Ptr Ink 220: 47 Jl 11 '47

Vatican City

Vatican radio, Vatican City State, Station HVJ. K. R. Boord, comp. il Radio N 37: 70+ Je '47

RADIO broadcasting stations, College

WMIT, the Beaver network. P. Ely, jr. Tech R 49:166 Ja '47

RADIO broadcasting stations, Newspaper

Stern bows out. Bsns W p16 F 8 '47

RADIO broadcasting studios

Copenhagen broadcasting center; Denmark's public radio gets a new home. il plans diag Arch Forum 86:69-73 Je '47

Covex wood splays for broadcast and motion picture studios. M. Rettinger. il diags Acoustical Soc Am J 19:343-5 Mr '47

Recording studio 3A; acoustical design problems. G. M. Nixon. il RCA R 7:634-40 D '46

Review of criteria for broadcast studio design. H. M. Gurin and G. M. Nixon. bibliog il diag Acoustical Soc Am J 19:404-11 My '47

RADIO broadcasting studios, School

Planning for central sound systems in schools. il plans Arch Rec 101:90-2 Ja '47

RADIO cabinets

Fabricated acrylic radio cabinet. il Mod Plastics 24:130 My '47

Front is back in this radio housing. il Mod Plastics 24:128-9 F '47

Getting the right color by spray coating. il Mod Plastics 24:148-9 N '46

Picking the right plastic is essential; whether a radio is to be used indoors or out. il Mod Plastics 25:78-80 S '47

Radio case of veneer-kraft laminate. il Mod Plastics 24:170-2 Ag '47

Utility locker makes deluxe cabinet. C. H. Welch. il Radio N 38:69+ O '47

RADIO circuits

Adjustable-bandwidth f-m discriminator. W. G. Tuller and T. P. Cheatham, jr. diags Electronics 20:117-19 S '47

Analysis of lengthening of modulated repetitive pulses. S. C. Kleene. diag Inst Radio Eng Proc 35:1049-53 O '47

Approximate equivalent circuit for a resonator transducer. W. R. MacLean. diag Inst Radio Eng Proc 35:1095-6 O '47

Bandswitching v.f.o. exciter. C. Hays. il diag Radio N 38:49-51+ S '47

Broad-band noncontacting short circuits for coaxial lines. W. H. Huggins. diags Inst Radio Eng Proc 35:906-13, 1085-91 S-O '47

Cascade phase shift modulator. M. Marks. bibliog il diags Electronics 19:104-9 D '46

Cathode follower driven by a rectangular voltage wave. M. S. McIlroy. diags Inst Radio Eng Proc 34:848-51 N '46; Discussion. H. L. Krauss. 35:694 Jl '47

Center-frequency-stabilized frequency-modulation system. E. M. Ostlund and others. il diags Inst Radio Eng Proc 35:1144-9 O '47

Circuit page; diagrams and parts lists (cont). Radio N 36:64-5, 70 D '46; 37:62-3, 68 Ja; 70-1, 76 F; 72-3, 86 Mr; 78-9, 92, 94 Ap; 82-3, 94, 96 My; 38:70-1, 86, 88 Jl; 72-3, 86, 88 Ag; 76-7, 84 S; 80-1, 98, 100 O; 78-9, 98, 100 N '47 (to be cont)

Class B audio-frequency amplifiers. F. Butler. diags Wireless Eng 24:14-19 Ja '47

RADIO circuits—*Continued*
Clipping and clamping circuits. N. W. Mather. diags Electronics 20:111-13 Jl '47
Combined limiter and squelch circuit; patent. diag Electronics 19:222+ D '46
Copper-oxide rectifier and the thermionic tube in the voltage-doubling circuit. R. R. Gilmour. diags Inst Radio Eng Proc 35: 213-16 F '47
Design of a universal automatic circuit tester, and its application to mass-production testing. R. C. G. Williams and others. il diags Inst E E J 94 pt 3:20-6 Ja '47
Design of constant impedance equalizers. A. W. J. Edwards. diags Wireless Eng 24:8-14 Ja '47
Design of transmission line tank circuits. W. C. Hollis. bibliog diags Electronics 20: 130-4 My '47
Design values for loop-antenna input circuits. J. E. Browder and V. J. Young. diags Inst Radio Eng Proc 35:519-25 My '47
Diode contact potential for negative bias. H. T. Sterling. diags Electronics 20:164+ O '47
Directional couplers. W. W. Mumford. il diags Inst Radio Eng Proc 35:160-5 F '47
829-B and 832-A at audio frequencies. J. A. Fred. il diag Radio N 38:60+ S '47
Electronic switch for the production of pulses. C. R. Smitley and R. E. Graber. il diags Electronics 20:128-30 Ap '47
Equivalent circuit for a plane discontinuity in a cylindrical wave guide. J. W. Miles. bibliog diags Inst Radio Eng Proc 34:728-42 O '46; Discussion. 35:792 Ag '47
Exact design and analysis of double-and triple-tuned band-pass amplifiers. M. Dishal. bibliog charts diags Inst Radio Eng Proc 35:606-26 Je '47; Discussion. 35:1507-10 D '47
F-m reception problems and their solution. N. W. Aram; L. M. Hershey; M. Hobbs. il diags Electronics 20:108-13 S '47
Functional schematic diagrams. S. H. Larick. diags Inst Radio Eng Proc 34:1005-7 D '46
Graphical solutions for cathode followers. H. L. Krauss. bibliog diags Electronics 20: 116-21 Ja '47
High voltage r.f. power supply; particularly applicable to cathode-ray tubes. J. F. Price. diags Radio N 38:54+ Jl '47
Highly - selective transmission - measuring equipment for communication circuits. D. G. Tucker. bibliog diags Inst E E J 94 pt 3:211-16 My '47; Same. Inst E E J 94 pt 2:247-52 Je '47
Hum-reducing circuit. A. H. Smith. diag Electronics 20:130+ Ja '47
Inductance-capacitance oscillator as a frequency divider. E. Norrman. il diags Inst Radio Eng Proc 34:799-803 O '46
Magnetic-deflection circuits for cathode-ray tubes. O. H. Schade. diags RCA R 8:506-38 S '47
Materials and techniques for printed electrical circuits. K. Rose. il Materials & Methods 25:73-6 Mr '47
Microwave electronics; four-terminal network and the transmission line. J. C. Slater. diags Rs Mod Phys 18:443-59 O '46
Negative resistance circuit element; dynatron at high radio frequencies. G. A. Hay. bibliog diags Wireless Eng 23:299-305 N '46
Nonlinear limiter in intensity modulation channel of cathode-ray tubes; radar device. diags Electronics 20:198+ My '47
Non-linear regenerative circuits; frequency and amplitude discrimination. D. G. Tucker. diag Wireless Eng 24:178-84 Je '47
Novel input circuit; transformerless matching from a low impedance microphone to input tube of amplifier. Z. Hof. diags Radio N 37:90+ My '47
Overmodulation without sideband splatter. O. G. Villard, jr. il diags Electronics 20:90-5 Ja '47
Permeability tuning of broadcast receivers. L. O. Vladimir. bibliog il diags Electronics 20:94-9 Ag '47
Q circles; a means of analysis of resonant microwave systems. W. Altar. diags Inst Radio Eng Proc 35:355-61, 478-84 Ap-My '47
R-c bandpass filter design. J. L. Bowers. il diags Electronics 20:131-3 Ap '47
Radio progress during 1946. bibliog Inst Radio Eng Proc 35:424-5 Ap '47
Ratio detector; new circuit for f-m detection known as ratio detector. S. W. Seeley and J. Avins. il diags RCA R 8:201-36 Je '47
Resonant circuit modulator for broad band acoustic measurements. G. F. Hull, jr. bibliog diags J Ap Phys 17:1066-75 D '46
Ring oscillators for u.h.f. transmission. T. Gootée. diags Radio N 37:48-50+ Ja '47
Self balancing phase inverter; patent. diag Electronics 20:212+ Mr '47
Simplified analysis of the parallel-T null network M. P. Givens and J. S. Saby. diags R Sci Instr 18:342-6 My '47
Stabilizing direct-voltage supplies; graphical method of assessing performance of gas-discharge tube stabilizer circuit. J. W. Hughes. bibliog diags Wireless Eng 24:224-30 Ag '47
Stable selective audio amplifier. J. M. Sturtevant. diag R Sci Instr 18:124-7 F '47
Steepness of pulse fronts. M. D. Rubin. diags Electronics 20:136+ S '47
Surge protection of pilot and heater circuits. R. P. Glover. diags Electronics 20:134+ Ag '47
Temperature-dependent resistors, use as electric circuit elements. W. H. B. Cooper and R. A. Seymour. il diags Wireless Eng 24: 298-306 O '47
Time demodulation. B. Chance. diags Inst Radio Eng Proc 35:1045-9 O '47
Time modulation. B. Chance. diags Inst Radio Eng Proc 35:1039-44 O '47
Transmission of a frequency-modulated wave through a network. W. J. Frantz. bibliog il diag Inst Radio Eng Proc 34:114P-25P Mr '46; Discussion. L. J. Giacoletto. 35: 1105-6 O '47
Valve equivalent circuit. B. Salzberg. diags Wireless Eng 24:124-5; Editorial. G. W. O. Howe. 97-9 Ap '47; Discussion. A. W. Keen. 24:217-18; Reply. 218 Jl '47
Wide-angle phase modulator; techniques for phase modulating a crystal-controlled carrier. H. K. Bradford. diags Electronics 20:100-3 F '47
Wide-band directional coupler for wave guide. H. C. Early. diags Inst Radio Eng Proc 34:883-6 N '46
Wideband phase shift networks. R. B. Dome. diag Electronics 19:112-15 D '46
Wide-range ultra-high-frequency signal generators. A. V. Haeff and others. il diags Inst Radio Eng Proc 35:1137-43 O '47
Wiring by stamping press. il Bsns W p50+ My 31 '47
Zero tracking error in superheterodynes. A. Bloch. diags Wireless Eng 23:328-9 D '46

See also
Radio lines
Radio receiving apparatus
Radio telephone
Radio waves
Vacuum tubes

RADIO coils
Fields of a coil between two parallel metal sheet. E. B. Moullin. diags Inst E E J 94 pt 3:78-84 Ja '47
High-frequency excitation of iron cores. J. D. Cobine and others. il diags Inst Radio Eng Proc 35:1060-7 O '47
H.f. resistance and self-capacitance of single-layer solenoids. R. G. Medhurst. diags Wireless Eng 24:35-43, 80-92 bibliog(p92) F-Mr '47
Nomogram for Rosa inductance correction. S. Sabaroff. Inst Radio Eng Proc 35:793 Ag '47
Permeability of dust cores. P. R. Bardell. Wireless Eng 24:63 F '47; Discussion. H. W. Lamson. 24:267-70 S '47
Permeability tuning of broadcast receivers; coil-winding data for obtaining proper pitch for oscillator tracking. L. O. Vladimir. bibliog il diags Electronics 20:94-9 Ag '47
Soldering litz ends. E. Toth. Electronics 25: 158+ Mr '47

Testing
R-f inductance meter. H. A. Wheeler. il diags Electronics 20:105-7 S '47

RADIO communication
Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S. Mitchell. diag Acoustical Soc Am J 19: 120-5 Ja '47

RADIO communication—*Continued*

Instructions for the use of basic radio propagation predictions. maps charts U S Nat Bur Stand Circ 465:1-8; pa. 25c Supt. of doc. '47

Practical radio course (cont). A. A. Ghirardi. il diags Radio N 36:40-1+ D '46; 37:44-5+ Ja; 58-9+ Mr; 66-7+ My; 38:62-3+ Jl; 70-2+ O; 68-70+ N '47 (to be cont)

Radar trips to the moon. A. C. Omberg. il Aero Digest 53:80-1+ D '46

Radio versus line for communication systems. A. H. Mumford. Inst E E J 94 pt 3: 357-8 S '47; Same abr. Engineering 163: 321 Ap 18 '47; Discussion. Inst E E J 94 pt 3:358 S '47

Radiocommunication convention of the I.E.E. Electrician 138:777-8, 850-2+ Mr 28-Ap 4 '47

Radiocommunications and the future. C. C. Paterson. Engineer 183:293-4 Ap 4 '47; Abstracts. Electrician 138:853-4 Ap 4 '47; Engineering 163:379 My 9 '47

Spindle Eye; ship used to send press dispatches, radiophotos and broadcasts at operation crossroads. M. J. Luichinger. il Radio N 36:32-4+ D '46

Theory of communication. D. Gabor. bibliog diags Inst E E J 93 pt 3:429-57 N '46

Vingt-cinq ans de radioélectricité et un siècle de télégraphie électrique. map diag Génie Civil 124:93-5 Mr 1 '47

See also

Airlines—Radio communication
Electric communication
Electric utilities—Radio communication
Gas companies—Radio communication
Lumber camps—Radio communication
Petroleum engineering—Radio communication
Public utilities—Radio communication
Radio aids to navigation and other headings beginning Radio
Railroads—Radio communication
Waterworks—Radio communication

Bibliography

Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Inst Radio Eng Proc beginning with June '46 issue [abstract 1144]

Index to abstracts and references published month by month in Wireless engineer during 1946. Wireless Eng 23:sup1-40 [D] '46

RCA technical papers index, v 1 (1919-1945) v (2a) (1946) 143p; 21p RCA Review, Radio corporation of America, Princeton, New Jersey '47

History

Marconi company's jubilee. il Engineer 183: 386-7 My 2 '47

Interference

Antenna focal devices for parabolic mirrors; used in experiments on cosmic static. G. Reber. il Inst Radio Eng Proc 35:731-4 Jl '47

Comparison of amplitude and frequency modulation. M. G. Nicholson. bibliog il diags Wireless Eng 24:197-208 Jl '47

Effects of impulsive interference upon a-m voice communication. J. C. R. Licklider and S. J. Goffard. bibliog diag Acoustical Soc Am J 19:653-63 Jl '47

Electrostatic ills and cures of aircraft. R. Beach. bibliog il diags Elec Eng 66:325-34, 453-62 Ap-My '47; Discussion. 66:1044-6 O '47

Frequency modulation distortion caused by common- and adjacent- channel interference. M. S. Corrington. bibliog diags RCA R 7:522-60 D '46

Investigation of frequency-modulation signal interference. I. Plusc. Inst Radio Eng Proc 35:1054-9 O '47

Method for calculating electric field strength in the interference region; abstract. H. E. Newell, jr. Inst Radio Eng Proc 35:777 Ag '47

Preliminary study of radio interference as caused by fluorescent lamps in the home. L. F. Shorey and S. M. Gray. diag Illum Eng 42:365-76 Mr '47

Recording sky-wave signals from broadcast stations; description of monitoring station set up by Canadian government to investigate sky-wave interference. W. B. Smith. il diags Electronics 20:112-16 N '47

Very-high-frequency and ultra-high-frequency signal ranges as limited by noise and co-channel interference. E. W. Allen, jr. bibliog maps diags Inst Radio Eng Proc 35:128-36; Discussion. 136-52 F '47

Interference elimination

Aircraft radio static; effects eliminated by war-developed devices. il Sci Am 177:28 Jl '47

Check motor vehicle interference with video and radio reception. il S A E J 55:93-4 Mr '47

Electrostatic dischargers for aircraft. W. C. Hall. bibliog il diags J Ap Phys 18:759-65 Ag '47

High frequency heating in the radio spectrum. W. C. Rudd. il diag Elec Eng 66:570-6 Je '47

Interference problems arising from industrial electronic and electromedical apparatus; discussion meeting. Inst E E J 94 pt 3:57-8 Ja '47; Same cond. Electrician 136:1172 My 3 '46

Noise and output limiters. E. Toth. diags Electronics 19:114-19 N; 120-5 D '46

Noise-free code reception. D. L. Hings. il diags Electronics 20:125-7 Je '47

Pulse detector as noise limiter; method of c-w reception. Electronics 20:150 Ja '47

Radio-noise influence of 230-kv lines. H. L. Rorden. il map Elec Eng 66:884-7 S '47

Radio signal confusion; Northwestern electric co. W. L. Campbell. Elec West 98:70-1 My '47

Reflector antenna solves skip problem. W. L. Campbell. il Elec World 128:88+ Ag 2 '47

Simple noise limiter. R. J. Hagerty. diag Radio N 37:104 F '47

International aspects

Technical co-ordination on an international basis in communication and allied fields. M. Deloraine. Inst Radio Eng Proc 34:872-3 N '46

Ship-to-shore service

Ship-to-shore vhf radio. L. G. Sands and L. F. Mathison. il diags Marine Eng 51:120+ D '46

Short wave

CAA control towers equipped to guard vhf radio channel for private pilot use. CAA J 8:43 Ap 15 '47

Early centimetre-wave communication systems. J. C. Dix. il diags Engineering 163: 489-91 Je 13 '47

Experience in the 70 megacycle band; Portland general electric co. W. A. Leidigh, jr. il Elec West 99:55-7 Jl '47

Experimental uhf equipment; experimental radio-telephone link between two plants of N. V. Phillips in Holland. il diags Electronics 20:204+ Mr '47

Field intensities beyond line of sight at 45.5 and 91 megacycles. C. W. Carnahan and others. il diags Inst Radio Eng Proc 35: 152-9 F '47

Measurement of the angle of arrival of microwaves. W. M. Sharpless. il map Inst Radio Eng Proc 34:837-45 N '46

Metal-lens antennas. W. E. Kock. il diags Inst Radio Eng Proc 34:828-36 N '46

Microwave antenna analysis. S. Seely. Inst Radio Eng Proc 35:1092-5 O '47

Microwave omnidirectional antennas. H. J. Riblet. il diags Inst Radio Eng Proc 35: 474-8 My '47

Microwave relay communication system. G. G. Gerlach. bibliog il maps diags RCA R 7:576-600 D '46

Microwave relay system. L. E. Thompson. bibliog il map diags Inst Radio Eng Proc 34: 936-42 D '46

Multichannel microwave radio relay system. H. S. Black and others. il diags Elec Eng 65:Trans 798-805 D '46

RADIO communication—Short wave—*Cont.*
Practical microwave communications. S. Freedman. il Radio N 38:35-7+ Jl '47
Propagation studies on 45.1, 474, and 2800 megacycles within and beyond the horizon. G. S. Wickizer and A. M. Braaten. bibliog map diags Inst Radio Eng Proc 35:670-80 Jl '47; Discussion. A. H. Waynick. 35:1334 N '47
Radio propagation at frequencies above 30 megacycles. K. Bullington. diags Inst Radio Eng Proc 35:1122-36 O '47
Raytheon microwave communications system. diags Electronics 20:138+ Mr '47
Ship-to-shore vhf radio. L. G. Sands and L. F. Mathison. il diags Marine Eng 51:120+ D '46
Short-wave radio facilitates pipe-line operation. J. M. Bradley. il map diags Oil & Gas J 46:81+ Jl 5 '47
Sponsors Citizens radio project; program of research, underwritten by publishers of Electronics, to develop equipment and test potentialities. il Electronics 20:80-3 N '47
Tests confirm efficacy of 72 mc. for mobile radio in mountainous area; Central Hudson gas & electric corp. G. H. Underhill. maps Elec World 127:48-51 F 1 '47
Very-high-frequency and ultra-high-frequency sighal ranges as limited by noise and co-channel interference. E. W. Allen, jr. bibliog maps diags Inst Radio Eng Proc 35:128-36; Discussion. 136-52 F '47

See also
Radio frequency modulation
Radio receiving apparatus—Short wave
Radio transmitters—Short wave

Wire line connections
Rural radiotelephone experiment at Cheyenne Wells, Colo. J. H. Moore and others. il map diag Elec Eng 66:346-8 Ap '47

RADIO communication, Marine. See Radio aids to navigation

RADIO communication, Military
Design of communication receivers for the naval service with particular consideration to the very-high-frequency and ultra-high-frequency ranges. T. M. Davis and E. Toth. il diags Inst Radio Eng Proc 35:201-7 F '47
Electron tubes in World war II. J. E. Gorham. il Inst Radio Eng Proc 35:295-301 Mr '47
Military communication equipment observed at winter tests. il Elec Eng 66:781-3 Ag '47
Telecommunication in war. A. S. Angwin. Engineering 163:367-8 My 2 '47; Abstracts. Electrician 138:777-8 Mr 28 '47; Inst E E J 94 pt 1:463-4 O '47
Two multichannel microwave relay equipments for the United States army communication network. R. E. Lacy. il Inst Radio Eng Proc 35:65-70 Ja '47

See also
Radio apparatus—Military use

RADIO compass
Four-band automatic radio direction finder for transport planes. R. H. Bailey. il diag Radio N 37:68-9+ Je '47
Lear automatic radio compass. il Automotive & Aviation Ind 96:43+ Ja 15 '47
Radio fix device enables pinpoint avigation. F. C. Byrnes. il diags Aviation 46:52-3+ Ap '47

RADIO condensers
Bypassing. Radio N 38:110+ S '47
Effect of field strength on dielectric properties of barium strontium titanate. H. L. Donley. bibliog diag RCA R 8:539-53 S '47
High dielectric ceramics for limited space capacitors; research at the National bureau of standards. il Product Eng 18:147-8 Je '47
Metallized capacitor data. J. Cornell. Electronics 20:174+ Mr '47
Metallized capacitor tests. P. Godley and J. C. Balsbaugh. il diag Electronics 20:112-15 Ap '47
Miniature capacitors. il Electronics 20:194+ My '47
Raytheon vacuum condensers. il R Sci Instr 18:140-1 F '47

Testing
Overvoltage testing of capacitors. R. J. Hopkins. il diags Electronics 20:105-7 Je '47

RADIO conductors
Carrier and radio frequency resistance for annealed bare copper wire; table. Elec World 127:116 Ap 12 '47
Radar reflections from long conductors. F. Bloch and others. J Ap Phys 17:1015-20 D '46
Transverse electric modes in coaxial cavities. R. A. Kirkman and M. Kline. diags Inst Radio Eng Proc 34:14P-17P Ja '46; Discussion. 35:931-5 S '47

See also
Wave guides

RADIO control
Device uses radio to light airport. Aviation W 47:48 Jl 14 '47
Electronic commutation for telemetering; for transmission over an f-m radio link during flight tests of new aircraft or on pilotless runs. L. L. Rauch. il diags Electronics 20:114-20 F '47
Fairey guided missile. il Engineer 183:332-3 Ap 18 '47
Pilotless airplane and missile control. bibliog il Electronics 20:152+ Ap '47
Radio control circuit. diag Electronics 20:144 Je '47
Radio control for model battleship. G. C. Fitzgerrell. il diags Electronics 20:106-11 Ja '47
Radio control of model flying boats. V. Welge. il diags Inst Radio Eng Proc 35:526-30 My '47
Radio control systems for guided missiles. S. L. Ackerman and G. Rappaport. il diags Electronics 19:86-91 D '46
Radio controlled buoys; lights controlled for harbor blackouts. A. F. Hopkins, jr. and F. A. B. Smith. il diag Electronics 20:84-6 Ja '47
Radio controlled flight. il diags Radio N 37:25-7+ Ja '47
R-f operated remote control relay. D. G. Fink. il diags Electronics 20:114-16 S '47
Telemetering fathometer to secure continuous depth indications beneath remote-controlled pilotless ship. E. F. Kiernan. il diags Electronics 20:96-8 O '47

See also
Carrier current control

RADIO corporation of America
Annual report. Comm & Fin Chr 165:1321 Mr 10 '47
First series of awards. Science 106:263 S 19 '47

RADIO detectors
Applying the 1N34 as discriminator for fm; germanium crystal. N. L. Chalfin. il diags Radio N 37:55+ Mr '47
Crystal diode applications. J. C. Hoadley. il diags Radio N 37:43+ Ja '47
Graphical solutions for cathode followers. H. L. Krauss. diags Electronics 20:119-20 Ja '47
Noise spectrum of crystal rectifiers. P. H. Miller, jr. diags Inst Radio Eng Proc 35:252-6 Mr '47
Phase detectors; some theoretical and practical aspects. L. I. Farren. diags Wireless Eng 23:330-40 D '46
Pulse detector. il R Sci Instr 18:69-70 Ja '47
Ratio detector; new circuit for f-m detection known as ratio detector. S. W. Seeley and J. Avins. il diags RCA R 8:201-36 Je '47
Selective demodulation. D. B. Harris. diag Inst Radio Eng Proc 35:565-72 Je '47
Some considerations governing noise measurements on crystal mixers. S. Roberts. diags Inst Radio Eng Proc 35:257-65 Mr '47
Superconductive radio-frequency detectors. il Electronics 20:142+ F '47
Theory of noise in radio receivers with square law detectors. M. Kac and A. J. F. Siegert. bibliog diag J Ap Phys 18:383-97 Ap '47

RADIO engineering
Institute of radio engineers annual meeting, New York. Electronics 20:80-6 My '47

RADIO engineering—*Continued*
Radio progress during 1946. bibliog(755 titles) Inst Radio Eng Proc 35:399-425 Ap '47
Summaries of technical papers, I.R.E. annual meeting, New York, March 3-6. Inst Radio Eng Proc 35:173-82 F '47
Vingt-cinq ans de radioélectricité et un siècle de télégraphie électrique. map diag Génie Civil 124:93-5 Mr 1 '47

See also
Direction finding apparatus
Loud speaking apparatus
Microphones
Radar
Radio apparatus and other headings beginning Radio
Sound—Recording and reproducing
Television
Vacuum tubes

Bibliography
Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Inst Radio Eng Proc beginning with June '46 issue [abstract 1144]
Index to abstracts and references published month by month in Wireless engineer during 1946. Wireless Eng 23:sup1-40 [D] '46
RCA technical papers, third quarter, 1946. RCA R 7:653-5 D '46
RCA technical papers, fourth quarter, 1946. RCA R 8:192-3 Mr '47
RCA technical papers, first quarter, 1947. RCA R 8:379-81 Je '47
RCA technical papers index. v 1 (1919-1945) v (2a) (1946) 143p; 21p RCA Review, Radio corporation of America, Princeton, New Jersey '47

Study and teaching
Should I become a radio engineer? R. B. Jacques. Inst Radio Eng Proc 34:975 D '46

See also
Radio schools and training

Tables, calculations, etc.
Calculation of field strengths over a spherical earth. C. Domb and M. H. L. Pryce. diags Inst E E J 94 pt 3:325-36; Discussion. 337-9 S '47
Coupling transformers for loop antennas. M. J. Kobilsky. diags Inst Radio Eng Proc 35:969-73 S '47
Current distribution for broadside arrays which optimizes the relationship between beam width and side-lobe level. C. L. Dolph. Inst Radio Eng Proc 34:335-48 Je '46; Discussion. 35:489-92 My '47
Effective impedance of a sphere in a magnetic field. T. S. E. Thomas. Wireless Eng 23: 322-4 D '46
Elements of wave propagation using the impedance concept. H. G. Booker. bibliog diags Inst E E J 94 pt 3:171-98; Discussion. 199-202 My '47
Exact design and analysis of double- and triple-tuned band-pass amplifiers. M. Dishal. bibliog charts diags Inst Radio Eng Proc 35:606-26 Je '47
Filter design tables based on preferred numbers. H. Jefferson. diags Wireless Eng 24: 242-5 Ag '47
Some results on cylindrical cavity resonators. J. P. Kinzer and I. G. Wilson. pl diags Bell System Tech J 26:410-45 bibliog(89 titles, p442-5) Jl '47
Transient response of v.f. couplings; compensated networks for wide-band amplifiers. W. E. Thomson. bibliog diags Wireless Eng 24:20-7 Ja '47

See also
Radio measurements

RADIO engineers
Report on professional standing to the Canadian council of the Institute of radio engineers. Inst Radio Eng Proc 35:61-4 Ja '47
Reports of the committee on professional recognition on collective bargaining for engineers. bibliog Inst Radio Eng Proc 35: 58-60 Ja '47
Should I become a radio engineer? R. B. Jacques. Inst Radio Eng Proc 34:975 D '46

RADIO facsimile
Color facsimile. il diags Electronics 20:104-5 O '47
Electrolytic recorder paper. J. E. Currah and others. bibliog Ind & Eng Chem 39: 1286-8 O '47
Print colors by radio; Colorfax. Inland Ptr 119:83 S '47
Radio facsimile gets color; new Colorfax process in pilot stage. il Bsns W p40-1 Ag 16; 50+ S 13 '47
Radio facsimile in the clear. il Bsns W p42-4 My 10 '47
Radio progress during 1946. bibliog Inst Radio Eng Proc 35:425 Ap '47

RADIO filters
Analysis of full-wave rectifier and capacitive-input filter. D. L. Waidelich. diags Electronics 20:120-3 S '47
Compact electromechanical filter. R. Adler. il diags Electronics 20:100-5 Ap '47
Double-derived terminations; extension to filter theory. R. O. Rowlands. diags Wireless Eng 23:292-5 N '46
Filter design tables based on preferred numbers. H. Jefferson. diags Wireless Eng 24: 242-5 Ag '47
Infinite-rejection filters. A. M. Stone and J. L. Lawson. il diags J Ap Phys 18:691-703 Ag '47
Narrow band-pass filter using modulation. N. F. Barber. Wireless Eng 24:132-4 My '47; Discussion. G. B. Madella. 24:310-11 O '47
New low-coefficient synthetic piezoelectric crystals for use in filters and oscillators. W. P. Mason. bibliog diags Inst Radio Eng Proc 35:1005-12 O '47
Optimum resistive terminations for single-section constant-K ladder-type filters. L. J. Giacoletto. diags RCA R 8:460-79 S '47
R-c bandpass filter design. J. L. Bowers. il diags Electronics 20:131-3 Ap '47
Shielding filters for insertion loss measurement. G. J. Wheeler. il diag Electronics 20: 198+ Mr '47
Ten kc. suppressor. J. E. Kauke. il diags Radio N 37:46+ Mr '47
Transient response of filters. C. C. Eaglesfield. diag Wireless Eng 23:306-7 N '46
Transient response of filters. D. G. Tucker. bibliog il diags Wireless Eng 23:36-42, 84-90 F-Mr '46; Discussion. 24:27-8, 93-4, 126-7 Ja, Mr-Ap '47
Transition time and pass band. C. C. Eaglesfield. Inst Radio Eng Proc 35:166-7 F '47

RADIO frequency
Behavior of magnetic electron multipliers as a function of frequency. L. Malter. diag Inst Radio Eng Proc 35:1074-6 O '47
Direct frequency measurement. L. M. Berman. diags Electronics 20:202+ My '47
FCC frequency measurement techniques. A. K. Robinson. il diag Electronics 20:114-16 Je '47
Instrument for short-period frequency comparisons of great accuracy. H. B. Law. bibliog diags Inst E E J 94 pt 3:38-41 Ja '47
Spectrum analysis of pulse modulated waves; finding frequency spectrum produced by simultaneous application of a number of frequencies to various forms of amplitude limiters or switches. J. C. Lozier. Bell System Tech J 26:360-87 Ap '47

See also
Radio resonators
Radio stations, Standard frequency

Allocation
CAA control towers equipped to guard vhf radio channel for private pilot use. CAA J 8:43 Ap 15 '47
FCC schedules mobile radiotelephone hearing. map Electronics 20:144 Jl '47
Frequency muddle clouds GCA use. Aviation N 7:8 F 10 '47
Job ahead. C. R. Denny. Inst Radio Eng Proc 35:598-9 Je '47
Recent F.C.C. actions on mobile radio and the problems facing electric utilities. G. H. Underhill. Edison Elec Inst Bul 15:45-6 F '47
Statement of Society of motion picture engineers on revised frequency allocations for theater television. Soc Motion Picture Eng J 48:183-202 Mr '47

See also
Citizens radio service

RADIO frequency—*Continued*

Control

Automatic frequency control of microwave oscillators. V. C. Rideout. diags Inst Radio Eng Proc 35:767-71 Ag '47

Electronic frequency stabilization of microwave oscillators. R. V. Pound. diags R Sci Instr 17:490-505 N '46

Frequency control for low-impedance oscillator tanks. V. M. Albers. diags Electronics 20:174+ Je '47

Frequency modulation and control by electron beams. L. P. Smith and C. I. Shulman. diags Inst Radio Eng Proc 35:644-57 Jl '47

Improving stability of uhf oscillators. C. A. Helber. il diags Electronics 20:103-5 My '47

Simplified microwave afc; combinations of motor and electronic action for microwave oscillators; radio-relay system. F. A. Jenks. il diags Electronics 20:120-5 N; 132-6 D '47

Crystal control

Stability of crystal oscillators. A. J. Zink, jr. bibliog diags Electronics 20:127-9 My '47

Standard of frequency and its applications. C. F. Booth and F. J. M. Laver. diags Inst E E J 93 pt 3:223-36 bibliog(p235-6) Jl '46; Discussion. 93 pt 3:236-41, 427-8 Jl, N '46

RADIO frequency modulation

Agency on FM. R. W. Williams. Adv & Sell 40:78 Jl '47

All-wave television FM antenna. il Radio N 38:49+ O '47

Center-frequency-stabilized frequency-modulation system. E. M. Ostlund and others. il diags Inst Radio Eng Proc 35:1144-9 O '47

Comparison of amplitude and frequency modulation. M. G. Nicholson. bibliog il diags Wireless Eng 24:197-208 Jl '47

Computation of the solutions of $(1+2\varepsilon\cos 2z)$ $y''+\vartheta y=0$; frequency modulation functions. N. W. McLachlan. diags J Ap Phys 18:723-31 Ag '47

Directional patterns with a 54A array. H. R. Whaley. il diags Radio N 37:53+ Ap '47

Emergency fm radio communication. J. P. Woodward and W. R. McMillan. Am Gas Assn Proc 1946:333-5

Expanding Continental network sparking national interest in frequency modulation. D. Bruner. map Ptr Ink 220:86 Ag 22 '47

Field intensities beyond line of sight at 45.5 and 91 megacycles. C. W. Carnahan and others. il diags Inst Radio Eng Proc 35: 152-9 F '47

Frequency-modulated magnetron for superhigh frequencies. G. R. Kilgore and others. il diags Inst Radio Eng Proc 35: 657-64 Jl '47

Frequency modulation. K. R. Sturley. bibliog (62 titles) patent list (31 ref) diags Inst E E J 92 pt 3:197-213 S '45; Discussion. 92 pt 3:213-18; 94 pt 3:84-8 S '45, Ja '47

Frequency modulation and control by electron beams. L. P. Smith and C. I. Shulman. diags Inst Radio E~g Proc 35:644-57 Jl '47

Fm broadcasting gets green light; big new market opening up in field retarded commercially by war. B. Ravits. Barron's 27: 36 Mr 17 '47

F-m chain broadcasting. il maps Electronics 20:94-8 N '47

Fm chain sponsor; Stromberg-Carlson takes first commercial program on Continental. Bsns W~p21 S 13 '47

F-M cyclotron to be used in atomic energy research. il Electronics 20:119 Mr '47

Frequency modulation distortion caused by common- and adjacent- channel interference. M. S. Corrington. bibliog diags RCA R 7:522-60 D '46

FM radio communication aids operation of rigs. K. M. Fagin. il diags Pet Eng 18:174+ D '46

FM radio; where is it, and where is it going? B. E. Tacks. Sales Management 59:160+ S 1 '47

Frequency modulator. G. G. Bruck. diags Electronics 20:166+ Ja '47

Generalized theory of multitone amplitude and frequency modulation. L. J. Giacoletto. bibliog diags Inst Radio Eng Proc 35:680-93 Jl '47

Impedance measurements at vhf. E. G. Hills. diags Electronics 20:124-8 Jl '47

Investigation of frequency-modulation signal interference. I. Plusc. Inst Radio Eng Proc 35:1054-9 O '47

Microwave relay communication system. G. G. Gerlach. bibliog il maps diags RCA R 7:576-600 D '46

Microwave relay system. L. E. Thompson. bibliog il map diags Inst Radio Eng Proc 34:936-42 D '46

Narrow-band F-M authorized for radiotelephony by class A amateur radio operators. Electronics 20:146+ O '47

New methods for locating cable faults, particularly on high-frequency cables; applying pulse and frequency-modulation methods on wide-band coaxial telephone cables. F. F. Roberts. il diags Inst E E J 93 pt 3: 385-95, bibliog(p393); Discussion. 395-404 N '46

New system of frequency modulation; phasitron tube. R. Adler. il diags Inst Radio Eng Proc 35:25-31 Ja '47

One-kilowatt frequency-modulated magnetron for 900 megacycles. J. S. Donal and others. il diag Inst Radio Eng Proc 35:664-9 Jl '47

Radio dispatching for taxicabs. il map Electronics 20:97-9 Mr '47

Radio progress during 1946; radio transmitters and modulation systems. bibliog Inst Radio Eng Proc 35:403 Ap '47

Resistance-tuned frequency-modulated oscillator for audio-frequency applications. H. S. McGaughan and C. B. Leslie. diags Inst Radio Eng Proc 35:974-8 S '47

Special applications of ultra-high-frequency wide-band sweep generators. J. A. Bauer. il diags RCA R 8:564-75 S '47

Transmission of a frequency-modulated wave through a network. W. J. Frantz. bibliog il diag Inst Radio Eng Proc 34:114P-25P Mr '46; Discussion. L. J. Giacoletto. 35: 1105-6 O '47

UHF television relay system; wideband frequency-modulation equipment. W. Boothroyd. il diags Electronics 20:86-91 Mr '47

Variation of bandwidth with modulation index in frequency modulation. M. S. Corrington. bibliog diags Inst Radio Eng Proc 35:1013-20 O '47

Very-high-frequency and ultra-high-frequency signal ranges as limited by noise and co-channel interference. E. W. Allen, jr. bibliog maps diags Inst Radio Eng Proc 35:128-36; Discussion. 136-52 F '47

See also
Radio receiving apparatus—Frequency modulation receivers
Radio transmitters—Frequency modulation transmitters

RADIO generators

Central signal generator for production testing. F. Miller. il diags Electronics 20:100-5 Jl '47

Method of calibrating standard-signal generators and radio-frequency attenuators. G. F. Gainsborough. bibliog diags Inst E E J 94 pt 3:203-10 My '47

Millimeter wavelengths. bibliog Electronics 20: 182+ Jl '47

Modulated r.f. signal generator. H. Hayman. il diag Radio N 37:56+ Je '47

Pocket signal generator. J. R. Blundin. il diag Radio N 38:61+ Jl '47

R.f. generator load; use of water-dielectric transmission line. F. M. Leslie. diags Wireless Eng 24:105-8 Ap '47

Simplified signal generator. H. G. Pratt. il diags Radio N 38:42-3+ O '47

Special applications of ultra-high-frequency wide-band sweep generators. J. A. Bauer. il diags RCA R 8:564-75 S '47

Tone burst generator; multivibrators serve as electronic switch for cathode-ray oscilloscopes, generation of square waves, investigation of code intelligibility and general audio research. R. G. Roush. il diags Electronics 20:92-6 Jl '47

RADIO generators—*Continued*
Wide-range ultra-high-frequency signal generators. A. V. Haeff and others. il diags Inst Radio Eng Proc 35:1137-43 O '47
See also
Oscillators
Vacuum tubes—
Generating action

RADIO heating. See Electric heating, Industrial—High frequency heating

RADIO in education
Planning for central sound systems in schools. il plans Arch Rec 101:90-2 Ja '47
See also
Radio broadcasting stations, College

RADIO instruments
Build this radioman's resistance-capacitance bridge. R. P. Turner. il diags Radio N 37: 61-3+ Ap '47
Capacitance test bridge. J. M. Heinrich. il diags Radio N 38:42-3+ Ag '47
Circuit analyzer for the blind. C. M. Witcher. il diags Electronics 20:132+ S '47
Continuity and condenser tester. il diag Radio N 37:82+ Je '47
Data radioed back by V-2 rocket. Franklin Inst J 244:208 S '47
Design of a universal automatic circuit tester, and its application to mass-production testing. R. C. G. Williams and others. il diags Inst E E J 94 pt 3:20-6 Ja '47
Easy-to-build modulation monitor. C. M. Dibrell. il diag Radio N 38:50+ O '47
Electronic indicator for low audio frequencies. A. E. Hastings. il diags Inst Radio Eng Proc 35:821-7 Ag '47
External S-meter for Hallicrafter S20R and S40 receivers. G. Dexter. diag Radio N 37: 80+ Mr '47
Micrometer tuning signal generator. S. Miller. il diag Radio N 37:57-9+ My '47
Microwave measurements and test equipments. F. J. Gaffney. il diags Inst Radio Eng Proc 34:775-93 O '46
New all-purpose signal tracer. S. Litt. il diag Radio N 37:36-7+ Ja '47
Pocket stethoscope; signal tracer type test instrument. R. L. Farnsworth. il diag Radio N 38:62-3 N '47
Practical vibrator tester. J. Bowles. il diags Radio N 38:48+ S '47
Putting the new small meter to work; pocket test instruments, sub-miniature radio transmitters. R. P. Turner. il diags Radio N 37:52-3 Ja '47
RCA antennalyzer; an instrument useful in the design of directional antenna systems. G. H. Brown and W. C. Morrison. il diags Inst Radio Eng Proc 34:992-9 D '46
R-f inductance meter. H. A. Wheeler. il diags Electronics 20:105-7 S '47
Serviceman's tube tester. F. J. Lingel. il diags Radio N 38:57-9+ O '47
Simple modulation and field strength meter; uses crystal diode. R. Frank. il diag Radio N 37:46+ Ap '47
Simple troubleshooting aid. S. J. Mondello. il diags Radio N 38:88+ S '47
Sweep-frequency signal generator. R. Endall. il diags Radio N 37:47-50+ Je '47
Wide-range double-heterodyne spectrum analyzers. L. Apker and others. il diags Inst Radio Eng Proc 35:1068-73 O '47
See also
Oscillators
Radar
Radio meteorographs

RADIO laboratories
Federal telecommunication laboratory, Nutley, N.J. il plans diags Arch Rec 101:58-65 Ja '47

RADIO laws and regulations
Federal communications commission; rules governing stations in the utility radio service. Am Water Works Assn J 38:1398-407 D '46
Freedom of speech; abstract. A. D. Willard, jr. Adv & Sell 40:66 S '47
Government control of sources of information. K. E. Mundt. Ann Am Acad 250:26-31 Mr '47
New radio rules? Sen. White introduces new bill. Bsns W p21 Jl 5 '47
See also
Federal communications commission

RADIO lines
Broad-band noncontacting short circuits for coaxial lines. W. H. Huggins. diags Inst Radio Eng Proc 35:906-13, 1085-91 S-O '47
Characteristics of r.f. cables; determination of impedance and propagation constants. N. C. Stamford and R. B. Quarmby. diags Wireless Eng 23:295-8 N '46
Coaxial load for ultra-high-frequency calorimeter wattmeters. W. R. Rambo. diag Inst Radio Eng Proc 35:827-9 Ag '47
Comparator for coaxial line adjustments. O. M. Woodward, jr. il diags Electronics 20: 116-20 Ap '47
Concentric line; critical wavelength of the higher modes. H. Bondi and S. Kuhn. Wireless Eng 24:222-3 Ag '47
Design of constant impedance equalizers. A. W. J. Edwards. diags Wireless Eng 24:8-14 Ja '47
Design of simple broad-band wave-guide-to-coaxial-line junctions. S. B. Cohn. diags Inst Radio Eng Proc 35:920-6 S '47
Design of transmission line tank circuits. W. C. Hollis. bibliog diags Electronics 20: 130-4 My '47
Directional couplers. W. W. Mumford. il diags Inst Radio Eng Proc 35:160-5 F '47
Elements of wave propagation using the impedance concept. H. G. Booker. bibliog diags Inst E E J 94 pt 3:171-98 My '47; Abstract. Engineering 162:547 D 6 '46; Discussion. Inst E E J 94 pt 3:199-202 My '47
Exponential transmission line employing straight conductors. W. N. Christiansen. il diag Inst Radio Eng Proc 35:576-81 Je '47
High-impedance cable. H. E. Kallmann. diags Inst Radio Eng Proc 34:348-51 Je '46; Discussion. 35:1097-100 O '47
Impedance measurement on transmission lines. D. D. King. bibliog diag Inst Radio Eng Proc 35:509-14 My '47
Impedance measurements at vhf. E. G. Hills. diags Electronics 20:124-8 Jl '47
Microwave electronics; four-terminal network and the transmission line. J. C. Slater. diags Rs Mod Phys 18:443-59 O '46
Microwave impedance-plotting device. W. Altar and J. W. Coltman. il diags Inst Radio Eng Proc 35:734-7 Jl '47
Non-uniform transmission lines and reflection coefficients. L. R. Walker and N. Wax. J Ap Phys 17:1043-5 D '46
R.f. generator load; use of water-dielectric transmission line. F. M. Leslie. diags Wireless Eng 24:105-8 Ap '47
Transmission line systems for fm and television home receivers. C. Spear. il diags Radio N 37:44-6+ F '47
Transverse electric modes in coaxial cavities. R. A. Kirkman and M. Kline. diags Inst Radio Eng Proc 34:14P-17P Ja '46; Discussion. 35:931-5 S '47
Voltage characteristics of polythene cable. R. Davis and others. bibliog Inst E E J 94 pt 3: 154-65; Discussion. il 165-70 My '47
Wide-band transformer from an unbalanced to a balanced line. E. G. Fubini and P. J. Sutro. diags Inst Radio Eng Proc 35:1153-5 O '47
See also
Radio conductors
Wave guides

Bibliography
Radio progress during 1946; transmission lines. Inst Radio Eng Proc 35:417 Ap '47

RADIO listeners
Experiments in listening; audience reaction to reproduced music tested with high-quality audio system. N. D. Webster and F. C. McPeak. il diags Electronics 20:90-5 Ap '47
Frequency range preference for speech and music. H. F. Olson. il plan diags Electronics 20:80-1 Ag '47
Most Iowa listeners don't mind commercials. Ptr Ink 218:58 Ja 31 '47

RADIO listeners—*Continued*
Tonal-range and sound-intensity preferences of broadcast listeners. H. A. Chinn and P. Eisenberg. Inst Radio Eng Proc 33:571-81 S '45; Discussion. 34:757-61; 35:378, 495 O '46, My-Ap '47

See also
Radio advertising—Measurements

RADIO loud speakers
Why earphones? veteran pilot recommends speakers to replace them. C. A. Macatee. il Air Transport 5:27 O '47

See also
Loud speaking apparatus

Testing
Experiments in listening; audience reaction to reproduced music tested with high-quality audio system. N. D. Webster and F. C. McPeak. il diags Electronics 20:90-5 Ap '47

RADIO measurements
Aircraft antenna pattern plotter. O. H. Schmitt and W. P. Peyser. bibliog il diags Electronics 20:88-91 My '47
Antenna focal devices for parabolic mirrors; used in experiments on cosmic static. G. Reber. il Inst Radio Eng Proc 35:731-4 Jl '47
Attenuation of 1.25-centimeter radiation through rain. L. J. Anderson and others. diags Inst Radio Eng Proc 35:351-4 Ap '47
Automatic-slideback peak voltmeter for measuring pulses. C. J. Creveling and L. Mautner. diags Inst Radio Eng Proc 35:208-11 F '47
Bolometers for v.h.f. power measurement. E. M. Hickin. il diags Wireless Eng 23:308-13 N '46
Cavity resonators and electron beams. J. H. O. Harries. diags Wireless Eng 24:71-80, 109-18, 135-42 bibliog(p 142) Mr-My '47
Characteristics of r.f. cables; determination of impedance and propagation constants. N. C. Stamford and R. B. Quarmby. diags Wireless Eng 23:295-8 N '46
Charts for resonant frequencies of cavities. R. N. Bracewell. Inst Radio Eng Proc 35:830-41 Ag '47
Coaxial load for ultra-high-frequency calorimeter wattmeters. W. R. Rambo. diag Inst Radio Eng Proc 35:827-9 Ag '47
Coaxial-type water load and associated power-measuring apparatus. R. C. Shaw and R. J. Kircher. il diags Inst Radio Eng Proc 35:84-7 Ja '47
Comparator for coaxial line adjustments. O. M. Woodward, jr. il diags Electronics 20:116-20 Ap '47
Computational method applicable to microwave networks. R. H. Dicke. diag J Ap Phys 18:873-8 O '47
Detection of meteors by radio. L. A. Manning and others. Phys R 70:767 N 1 '46
Determination of current and dissipation values for high-vacuum rectifier tubes. A. P. Kauzmann. diags RCA R 8:82-97 Mr '47
Direct frequency measurement. L. M. Berman. diags Electronics 20:202+ My '47
Directional couplers. W. W. Mumford. il diags Inst Radio Eng Proc 35:160-5 F '47
Effect of feed on pattern of wire antennas. D. C. Cleckner. diags Electronics 20:103-5 Ag '47
Experiments on the electric strength of air at centimetre wavelengths. R. Cooper. bibliog diags Inst E E J 94 pt 3:315-24 S '47
Field intensities beyond line of sight at 45.5 and 91 megacycles. C. W. Carnahan and others. il diags Inst Radio Eng Proc 35:152-9 F '47
Field of a coil between two parallel metal sheets. E. B. Moullin. diags Inst E E J 94 pt 3:78-84 Ja '47
Frequency dependence of the properties of sea echo. H. Goldstein. bibliog diags Phys R 70:938-46 D 1 '46
Further observations of the angle of arrival of microwaves. A. B. Crawford and W. M. Sharpless. il Inst Radio Eng Proc 34:845-8 N '46
High-frequency excitation of iron cores. J. D. Cobine and others. il diags Inst Radio Eng Proc 35:1060-7 O '47
H.f. resistance and self-capacitance of single-layer solenoids. R. G. Medhurst. diags Wireless Eng 24:35-43, 80-92 bibliog(p92) F-Mr '47
Highly - selective transmission - measuring equipment for communication circuits. D. G. Tucker. bibliog diags Inst E E J 94 pt 3:211-16 My '47; Same. Inst E E J 94 pt 2:247-52 Je '47
Impedance measurement on transmission lines. D. D. King. bibliog diag Inst Radio Eng Proc 35:509-14 My '47
Impedance measurements at vhf. E. G. Hills. diags Electronics 20:124-8 Jl '47
Instrument for short period frequency comparisons of great accuracy. H. B. Law. bibliog diags Inst E E J 94 pt 3:38-41 Ja '47
Measurement of high intensities with the Geiger-Mueller counter. C. O. Muehlhause and H. Friedman. il diags R Sci Instr 17:506-10 N '46
Measurement of the angle of arrival of microwaves. W. M. Sharpless. il map Inst Radio Eng Proc 34:837-45 N '46
Metallized capacitor tests. P. Godley and J. C. Balsbaugh. il diag Electronics 20:112-15 Ap '47
Method for calculating electric field strength in the interference region; abstract. H. E. Newell, jr. Inst Radio Eng Proc 35:777 Ag '47
Method for calibrating microwave wavemeter. L. E. Hunt. diags Inst Radio Eng Proc 35:979-81 S '47
Method of calibrating standard-signal generators and radio-frequency attenuators. G. F. Gainsborough. bibliog diags Inst E E J 94 pt 3:203-10 My '47
Method of graphically analyzing cathode-degenerated amplifier stages. E. M. Lonsdale and W. F. Main. diags Inst Radio Eng Proc 35:981-4 S '47
Microwave antenna analysis. S. Seely. Inst Radio Eng Proc 35:1092-5 O '47
Microwave dielectric measurements. T. W. Dakin and C. N. Works. bibliog diags J Ap Phys 18:789-96 S '47
Microwave impedance-plotting device. W. Altar and J. W. Coltman. il diags Inst Radio Eng Proc 35:734-7 Jl '47
Microwave measurements and test equipments. F. J. Gaffney. il diags Inst Radio Eng Proc 34:775-93 O '46
Microwave power measurement. T. Moreno and O. C. Lundstrom. il diags Inst Radio Proc 35:514-18 My '47
Negative resistance circuit element; dynatron at high radio frequencies. G. A. Hay. bibliog diags Wireless Eng 23:299-305 N '46
Noise and conversion-gain measurements. W. M. Breazeale. bibliog Inst Radio Eng Proc 35:31-4 Ja '47
Noise-figure reduction in mixer stages. J. O. Strutt. bibliog diags Inst Radio Eng Proc 34:942-50 D '46; Correction. 35:496 My '47
Performance of short antennas. C. E. Smith and E. M. Johnson. il diags Inst Radio Eng Proc 35:1026-38 O '47
Phase detectors; some theoretical and practical aspects. L. I. Farren. diags Wireless Eng 23:330-40 D '46
Phase-front plotter for centimeter waves. H. Iams. il diags RCA R 8:270-5 Je '47
Power measurement of class B audio amplifier tubes. D. P. Heacock. diags RCA R 8:147-57 Mr '47
Practical calculator for directional antenna systems. H. A. Ray, jr. il diags Inst Radio Eng Proc 34:898-902 N '46
Precision device for measurement of pulse width and pulse slope. H. L. Morrison. il diags RCA R 8:276-88 Je '47
Precision measurement of impedance mismatches in waveguide. A. F. Pomeroy. bibliog il diags Bell System Tech J 26:446-59 Jl '47
Properties of ridge wave guide. S. B. Cohn. diags Inst Radio Eng Proc 35:783-8 Ag '47
Pulse rise and decay time measurement. A. Easton. diags Electronics 20:180+ S '47
Pulse-testing of wide-band networks; discussion of paper by D. C. Espley and others. Inst E E J 94 pt 3:141-5 Mr '47

RADIO measurements—*Continued*

Q circles; a means of analysis of resonant microwave systems. W. Altar. diags Inst Radio Eng Proc 35:355-61, 478-84 Ap-My '47

R.f. generator load; use of water-dielectric transmission line. F. M. Leslie. diags Wireless Eng 24:105-8 Ap '47

Radio propagation at frequencies above 30 megacycles. K. Bullington. diags Inst Radio Eng Proc 35:1122-36 O '47

Relative amplitude of side frequencies in on-off and frequency-shift telegraph keying. G. S. Wickizer. diags RCA R 8:158-68 Mr '47

Resonant cavities for dielectric measurements. C. N. Works. bibliog il diags J Ap Phys 18:605-12 Jl '47

Space-current division in the power tetrode. C. M. Wallis. bibliog diags Inst Radio Eng Proc 35:369-77 Ap '47

Special applications of ultra-high-frequency wide-band sweep generators. J. A. Bauer. il diags RCA R 8:564-75 S '47

Specification and measurement of receiver sensitivity at the higher frequencies. J. M. Pettit. bibliog diags Inst Radio Eng Proc 35:302-6 Mr '47

Standing wave meter; measures power reflections caused by mismatch at junction of waveguide components. H. E. Kallmann. il diags Electronics 20:96-9 Ja '47

Theory of mode separation in a coaxial oscillator. P. J. Sutro. Inst Radio Eng Proc 34:960-2 D '46

Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47

Transmission of a frequency-modulated wave through a network. W. J. Frantz. bibliog il diag Inst Radio Eng Proc 34:114P-25P Mr '46; Discussion. L. J. Giacoletto. 35: 1105-6 O '47

Variation of bandwidth with modulation index in frequency modulation. M. S. Corrington. bibliog diags Inst Radio Eng Proc 35: 1013-20 O '47

Very-wide band radio-frequency transformers. D. Maurice and R. H. Minns. diags Wireless Eng 24:168-77, 209-16 Je-Jl '47

Visual measurement of receiver noise. D. Williams. diags Wireless Eng 24:100-4 Ap '47

Visual null indicator for impedance bridge measurements at radiofrequencies. P. J. Brine and J. W. Whitehead. diags R Sci Instr 17:537-9 D '46

Wide-band wattmeter for wave guide. H. C. Early. diags Inst Radio Eng Proc 34:803-7 O '46

See also

Decibel (transmission unit)
Radio instruments
Radio standards
Voltmeters, Vacuum tube

RADIO meteorographs

Ultra-high-frequency radiosonde direction finding. L. C. Yuan. diags Inst Radio Eng Proc 34:852-7 N '46

Use of radio-sonde, India. For Comm W 28: 25-6 S 13 '47

RADIO modulation

Automatic audio phase reverser. A. H. Smith. diag Electronics 20:156+ N '47

Comparison of amplitude and frequency modulation. M. G. Nicholson. bibliog il diags Wireless Eng 24:197-208 Jl '47

Easy-to-build modulation monitor. C. M. Dibrell. il diag Radio N 38:50+ O '47

807 makes low cost power packaged modulator. R. P. Turner. diag Radio N 38:46+ Jl '47

50-watt modulator with peak limiting. R. Lewis. il diag Radio N 38:42-3+ N '47

Generalized theory of multitone amplitude and frequency modulation. L. J. Giacoletto. bibliog diags Inst Radio Eng Proc 35:680-93 Jl '47

Handy 20-watt modulator. R. P. Turner. il diag Radio N 37:50-1+ Mr '47

Modulation in communication. F. A. Cowan. il diags Elec Eng 66:919-24 S '47

Modulation, types and characteristics. F. Rockett. diags Electronics 20:124-5 (Buyers' guide) Mid-Je '47

Narrow band-pass filter using modulation. N. F. Barber. Wireless Eng 24:132-4 My '47; Discussion. G. B. Madella. 24:310-11 O '47

Narrow band phase modulation exciter. S. Sterman. il diag Radio N 37:69+ My '47

Overmodulation without sideband splatter. O. G. Villard, jr. il diags Electronics 20:90-5 Ja '47

Premodulation clipping in AM voice communication. K. D. Kryter and others. il diags Acoustical Soc Am J 19:125-31 Ja '47

Resonant circuit modulator for broad band acoustic measurements. G. F. Hull, jr. bibliog diags J Ap Phys 17:1066-75 D '46

Selective demodulation. D. B. Harris. diag Inst Radio Eng Proc 35:565-72 Je '47

Stabilized modulated oscillator. A. E. Hayes, jr. il diags Radio N 37:28-9 Ja '47

Temperature-dependent resistors, use as electric circuit elements. W. H. B. Cooper and R. A. Seymour. il diags Wireless Eng 24: 298-306 O '47

Unusual phone transmitter; new modulation system. il diag Radio N 36:35+ D '46

Wide-angle phase modulator; technique for phase modulating a crystal-controlled carrier. H. K. Bradford. diags Electronics 20: 100-3 F '47

See also

Radio frequency modulation

RADIO networks. See Radio circuits; Radio lines

RADIO noise. See Radio communication—Interference; Radio receiving apparatus—Noise

RADIO operators, Amateur

Business that was born in a pile of junk in the attic; radio set for ham operators. W. J. Halligan. il Sales Management 58:59-60+ Mr 15 '47

Good old days. D. M. Wherry. il Radio N 37: 57+ Je '47

Ham ticket in 30 days; method of preparing for exams. J. T. Frye. Radio N 37:56+ My '47

RADIO oscillators. See Oscillators

RADIO performers. See Radio broadcasting—Performers

RADIO phonograph. See Radio receiving apparatus—Phonograph combination

RADIO proximity fuse. See Fuses

RADIO pulse time modulation

Analysis of lengthening of modulated repetitive pulses. S. C. Kleene. diag Inst Radio Eng Proc 35:1049-53 O '47

Multichannel microwave radio relay system. H. S. Black and others. il diags Elec Eng 65:Trans 798-805 D '46

Multiplex broadcasting; pulse time modulation and its application to radiobroadcasting. F. Altman and J. H. Dyer. il diags Elec Eng 66:372-80 Ap '47

Pulse code modulation. diag Electronics 20: 136+ Ag '47

Pulse communication; abstract. D. Cooke and others. Electrician 138:850-1 Ap 4 '47

Pulse modulated oscillator. A. Easton. bibliog diags Electronics 20:124-9 Mr '47

Pulse time division radio relay. B. Trevor and others. bibliog il diags RCA R 7:561-75 D '46

Spectrum analysis of pulse modulated waves; finding frequency spectrum produced by simultaneous application of a number of frequencies to various forms of amplitude limiters or switches. J. C. Lozier. Bell System Tech J 26:360-87 Ap '47

Steepness of pulse fronts. M. D. Rubin. diags Electronics 20:136+ S '47

Telemetering from V-2 rockets; time-modulated pulse system in nose samples instruments and transmits readings to ground station. V. L. Heeren and others. il diags Electronics 20:100-5 Mr; 124-7 Ap '47

Telephony by pulse code modulation. W. M. Goodall. diags Bell System Tech J 26:395-409 Jl '47

Time demodulation. B. Chance. diags Inst Radio Eng Proc 35:1045-9 O '47

Time modulation. B. Chance. diags Inst Radio Eng Proc 35:1039-44 O '47

RADIO pulse time modulation—*Continued*
Two multichannel microwave relay equipments for the United States army communication network. R. E. Lacy. il Inst Radio Eng Proc 35:65-70 Ja '47

RADIO receiving apparatus
Circuit page; diagrams and parts lists (cont). Radio N 36:64-5, 70 D '46; 37:62-3, 68 Ja; 70-1, 76 F; 72-3, 86 Mr; 78-9, 92, 94 Ap; 82-3, 94, 96 My; 38:70-1, 86, 88 Jl; 72-3, 86, 88 Ag; 76-7, 84 S; 80-1, 98, 100 O; 78-9, 98, 100 N '47 (to be cont)
Code reception with automatic volume control and signal-strength meter. diag Electronics 20:132+ Jl '47
Concealed radio receivers used in German-occupied countries. il Electronics 20:142 Je '47
Contemporary receiving tubes; tabulated. J. D. Askew. Electronics 20:126-9 (Buyers' guide) Mid-Je '47
Crystal receiver. il diag Radio N 37:82 Je '47
Diode contact potential for negative bias. H. T. Sterling. diags Electronics 20:164+ O '47
High-quality from standard five-tube receiver by making minor changes. G. Eannarino. il diag Radio N 38:47+ N '47
Home built TRF receiver. J. W. Hoskins. il diag Radio N 37:70+ Ja '47
New radio receiver for the deafened; multipurpose Emerson, model 1002. il Consumers Res Bul 19:26 Ja '47
Practical radio course (cont). A. A. Ghirardi. il diags Radio N 36:40-1+ D '46; 37:44-5+ Ja; 58-9+ Mr; 66-7+ My; 38:62-3+ Jl; 70-2+ O; 68-70+ N '47 (to be cont)
Radio progress during 1946; radio receivers. bibliog Inst Radio Eng Proc 35:407-10 Ap '47
Simple one tube receiver. il diag Radio N 37:66 Ap '47
Surge protection of pilot and heater circuits. R. P. Glover. diags Electronics 20:134+ Ag '47
Very-wide band radio-frequency transformers. D. Maurice and R. H. Minns. diags Wireless Eng 24:168-77, 209-16 Je-Jl '47

See also
Amplifiers, Vacuum tube
Radio antennas
Radio apparatus industry
Radio cabinets
Television receiving apparatus

Coin operation
You pay before you play. A. E. Yohalem. il Radio N 38:56+ Ag '47

Design
Criteria for diversity receiver design. W. Lyons. RCA R 8:373-8 Je '47
New approach to f-m/a-m receiver design. il diags Electronics 20:80-5 Jl '47

Fidelity
Experiments in listening; audience reaction to reproduced music tested with high-quality audio system. N. D. Webster and F. C. McPeak. il diags Electronics 20:90-5 Ap '47
High fidelity miniature tube receiver. J. C. Hoadley. il diags Radio N 37:47-9+ Ap '47
High-fidelity reproduction of music. E. Toth. diags Electronics 20:108-13 Je '47

Frequency modulation receivers
Adjustable-bandwidth f-m discriminator. W. G. Tuller and T. P. Cheatham, jr. diags Electronics 20:117-19 S '47
Applying the 1N34 as discriminator for fm; germanium crystal. N. L. Chalfin. il diags Radio N 37:55+ Mr '47
Electron-ray tuning indicator for frequency modulation. F. M. Bailey. il diags Inst Radio Eng Proc 35:1158-60 O '47
Fm modulator for amateur use. J. C. Davis. il diags Radio N 37:56-7+ Ap '47
FM receiver alignment. I. Abend. diags Radio N 38:66-7+ O '47
F-m reception problems and their solution. N. W. Aram; L. M. Hershey; M. Hobbs. il diags Electronics 20:108-13 S '47
Fm tuner conversion with 1c circuits. N. L. Chalfin. il diags Radio N 37:51-3+ My '47
Guillotine tuner for f-m. il Electronics 20:136 F '47
Intermediate-frequency amplifiers for frequency-modulation receivers. J. J. Adams. diags Inst Radio Eng Proc 35:960-4 S '47
Low-cost fm tuner. J. Najork. il diags Radio N 38:54-5+ N '47
Narrow-band fm adapter. B. DuHart. il diag Radio N 38:46+ N '47
New 88-108 mc. fm tuner. J. V. Urban. il diags Radio N 38:41-3+ Jl '47
Practical radio course; fm receivers. A. A. Ghirardi. il diags Radio N 38:70-2+ O; 68-70+ N '47
Ratio detector; new circuit for f-m detection known as ratio detector. S. W. Seeley and J. Avins. il diags RCA R 8:201-36 Je '47
Simple fm converter. S. N. Finley. il diags Radio N 37:50+ My '47
Simple way to tell a technical story; Bendix Radio FactoMeter. il Sales Management 59: 112 O 1 '47
Theory of impulse noise in ideal frequency-modulation receivers. D. B. Smith and W. E. Bradley. Inst Radio Eng Proc 34:743-51 O '46
Transmission line systems for fm and television home receivers. C. Spear. il diags Radio N 37:44-6+ F '47
Twelve-channel f-m converter. J. E. Young and W. A. Harris. il diag Electronics 19: 110-11 D '46

Installation
Entertainment in every room with built-in home radio and sound system; Reeves Soundcraft. diags Am Bld 69:135 F '47; il Arch Forum 86:176 Ap '47

Installation on automobiles
Practical vibrator tester. J. Bowles. il diags Radio N 38:48+ S '47

See also Radio telephone on automobiles

Installation on trains
Musical entertainment on trains; Santa Fe installation of sound equipment. il Ry Age 123:575-7 O 4 '47
Railway entertainment system. K. L. Klippel and E. A. Dahl. il diags Electronics 20: 118-21 My '47

Manufacture
Bright zinc plating cuts costs at Philco plant. C. W. Smith. il Iron Age 160:46-50 Jl 10 '47
British metal-spray circuits. F. R. Brewster. il Electronics 20:158+ Jl '47
Non-stop production via conveyors; Zenith radio corporation, Chicago. il Factory Management 105:97-9 Je '47
Sprayed metal for wiring. il Electronics 20: 132 S '47
Stamped wiring; new technique permits 90 percent of wiring to be stamped out by dies. il diags Electronics 20:82-5 Je '47
Wiring by stamping press. il Bsns W p50+ My 31 '47

Noise
Approximate theory of eddy-current loss in transformer cores excited by sine wave or by random noise. D. Middleton. il diags Inst Radio Eng Proc 35:270-81 Mr '47
Audio filter suppresses static and needle scratch. Sci Am 176:121 Mr '47
Coaxial-line diode noise source for u-h-f. H. Johnson. il diags RCA R 8:169-85 Mr '47
Design values for loop-antenna input circuits. J. E. Browder and V. J. Young. diags Inst Radio Eng Proc 35:519-25 My '47
Factors affecting the accuracy of radio noise meters. H. E. Dinger and H. G. Paine. bibliog diags Inst Radio Eng Proc 35:75-81 Ja '47; Discussion. 35:1505-7 D '47
Influence of amplitude limiting and frequency selectivity upon the performance of radio receivers in noise. W. J. Cunningham and others. diags Inst Radio Eng Proc 35:1021-5 O '47
Music without noise; dynamic noise suppressor. Fortune 35:148+ Je '47
Noise and conversion-gain measurements. W. M. Breazeale. bibliog Inst Radio Eng Proc 35:31-4 Ja '47
Noise and output limiters. E. Toth. diags Electronics 19:114-19 N; 120-5 D '46

RADIO receiving apparatus—Noise—*Continued*
Noise-figure reduction in mixer stages. J. O. Strutt. bibliog diags Inst Radio Eng Proc 34:942-50 D '46; Correction. 35:496 My '47
Noise spectrum of crystal rectifiers. P. H. Miller, jr. diags Inst Radio Eng Proc 35: 252-6 Mr '47
Pulse detector. il R Sci Instr 18:69-70 Ja '47
Pulse detector as noise limiter; method of c-w reception. Electronics 20:150 Ja '47
Some considerations governing noise measurements on crystal mixers. S. Roberts. diags Inst Radio Eng Proc 35:257-65 Mr '47
Ten kc. suppressor. J. E. Kauke. il diags Radio N 37:46+ Mr '47
Theory of impulse noise in ideal frequency-modulation receivers. D. B. Smith and W. E. Bradley. Inst Radio Eng Proc 34:743-51 O '46
Theory of noise in radio receivers with square law detectors. M. Kac and A. J. F. Siegert. bibliog diag J Ap Phys 18:383-97 Ap '47
Visual measurement of receiver noise. D. Williams. diags Wireless Eng 24:100-4 Ap '47

Phonograph combination
Combination radio has disappearing automatic phonograph; Zenith. il diag Machine Design 19:153-4 Je '47
Five-point sales platform pulls Magnavox from red ink to riches; direct to dealer sales, highly selective distribution, firm price policies, quality production. L. B. Colby. il Sales Management 59:75-6+ Ag 1 '47
Home sound system built into walls. il diag Sci Am 176:267-8 Je '47
New synchronous motor for radio-phonograph combination. H. H. Everett. il Radio N 37: 84+ F '47
Radio-phonograph combinations. Consumers Res Bul 18:18 D '46; 19:25 Ja '47
Super radio set; RCA radio-phono-video combination. Bsns W p21 Jl 26 '47
Two am-fm phonograph combinations. Consumers Res Bul 20:11-12 O '47
Two radio phonographs; Scott, model 800-B, and Magnavox. il Consumers Res Bul 19: 8-10 My; 20:12 O '47
Unique radio-phonograph mechanism; Philco 1201. il diag Machine Design 19:138-9 My '47
Wire recorder; Sears, Roebuck home recorder built into radio-phonograph. Bsns W p24 Mr 15 '47

Power supply
Experimental audio output tetrode. W. S. Brian. il diag Electronics 20:121-3 Ag '47

Rating
Five new radio receivers, two radio phonographs. Consumers Res Bul 18:22-4 N '46
Six additional table-model radio receivers, a portable receiver, and two radio-phonographs. Consumers Res Bul 18:17-18 D '46
Westinghouse table-model radio and a Westinghouse radio-phonograph combination. Consumers Res Bul 19:13 Mr '47

Repair
Micrometer tuning signal generator. S. Miller. il diag Radio N 37:57-9+ My '47
Packaged radio service; supplying data on postwar receivers. Howard W. Sams & co. R. M. Ellis. il Radio N 37:60-1+ Mr '47
Servicing of radio and television receivers. R. C. G. Williams. Inst E E J 94 pt 3:11-19 Ja '47
See also
Radio service shops

Selectivity
Influence of amplitude limiting and frequency selectivity upon the performance of radio receivers in noise. W. J. Cunningham and others. diags Inst Radio Eng Proc 35:1021-5 O '47

Sensitivity
Specification and measurement of receiver sensitivity at the higher frequencies. J. M. Pettit. bibliog diags Inst Radio Eng Proc 35:302-6 Mr '47

Short wave
Adapting the TBY-7 for amateur use. W. B. Ford. il diags Radio N 38:39-41+ O '47
Coaxial-line diode noise source for u-h-f. H. Johnson. il diags RCA R 8:169-85 Mr '47
Design of communication receivers for the naval service with particular consideration to the very-high-frequency and ultra-high-frequency ranges. T. M. Davis and E. Toth. il diags Inst Radio Eng Proc 35:201-7 F '47
Designing a two meter communication receiver. R. B. Tomer. il diags Radio N 38: 57-9+ S '47
Five-tube ham super. C. V. Hays. il diag Radio N 37:62-3+ F '47
425 mc. super from navy's ASB-7. L. W. May, jr. il diags Radio N 38:47-9+ Jl '47
High frequency local oscillators; special type tubes. S. Fishman. il diags Radio N 37:54-5+ Ap '47
Inexpensive 18-db. preselector. T. J. Dodge. il diag Radio N 38:61+ Ag '47
New 6-10-11 meter converter. F. Lester. il diag Radio N 38:51-3+ Ag '47
Noise and conversion-gain measurements. W. M. Breazeale. bibliog Inst Radio Eng Proc 35:31-4 Ja '47
Practical radio course; diodes and crystal rectifiers for use as mixers in u.h.f. and s.h.f. radio receivers. A. A. Ghirardi. il diags Radio N 37:44-5+ Ja '47
Simple 10-meter converter. C. W. Roeschke. il diag Radio N 37:56+ F '47
Simple two-tube ham super. R. Frank. il diag Radio N 37:48-9+ My '47
Superregenerative frequency converter. P. V. Trice and M. Barat, jr. il diag Radio N 37:39+ F '47
Three-tube short-wave receiver. H. L. Davidson. il diags Radio N 37:58-9+ Ap '47
Transmitter-receiver from surplus tuner. C. E. Clark. il diag Radio N 38:60-1+ N '47
Wide-tuning-range microwave oscillator tube. J. W. Clark and A. L. Samuel. il diags Inst Radio Eng Proc 35:81-3 Ja '47

Superheterodyne
Method of plotting tracking error. E. B. Menzies. diags Electronics 20:128+ Ja '47
Practical radio course; choosing i.f. frequency. A. A. Ghirardi. il diags Radio N 37:66-7+ My '47
Practical radio course; electron-coupled, double electrode input; mixers and converters. A. A. Ghirardi. il diags Radio N 36:46-8+ Ag; 46-7+ S; 52-4+ O; 40-1+ D '46
Practical radio course; i.f. amplifier in superheterodyne receivers. A. A. Ghirardi. il diags Radio N 37:58-9+ Mr; 38:62-3+ Jl '47
Wideband i-f amplifiers above 100 mc. M. T. Lebenbaum. il diags Electronics 20:138-41 Ap '47
Zero tracking error in superheterodynes. A. Bloch. diags Wireless Eng 23:328-9 D '46

Superregenerative
Superregenerative frequency converter. P. V. Trice and M. Barat, jr. il diag Radio N 37: 39+ F '47

Testing
Advanced Voltohmyst. il R Sci Instr 17:521 N '46
Build this radioman's resistance-capacitance bridge. R. P. Turner. il diags Radio N 37:61-3+ Ap '47
Central signal generator for production testing. F. Miller. il diags Electronics 20:100-5 Jl '47
Crystal diode reduces probe size; signal tracing of small receivers. A. Bein. il diags Radio N 37:52+ F '47
Easily constructed dummy antenna for receiver measurements. G. Dexter. diag Radio N 37:128 Ja '47
External S-meter for Hallicrafter S20R and S40 receivers. G. Dexter. diag Radio N 37: 80+ Mr '47
New all-purpose signal tracer. S. Litt. il diag Radio N 37:36-7+ Ja '47
Pocket signal generator. J. R. Blundin. il diag Radio N 38:61+ Jl '47

RADIO receiving apparatus—Testing—*Cont.*
Pocket stethoscope; signal tracer type test instrument. R. L. Farnsworth. il diag Radio N 38:62-3 N '47
Simple troubleshooting aid. S. J. Mondello. il diags Radio N 38:38+ S '47
Static for radio receiver tests. J. C. R. Licklider and E. B. Newman. il diags Electronics 20:98-101 Je '47
Wide-range sweeping oscillator. il diags Electronics 20:112-15 Ag '47

Tuning

Electron-ray tuning indicator for frequency modulation. F. M. Bailey. il diags Inst Radio Eng Proc 35:1158-60 O '47
Guillotine tuner for f-m. il Electronics 20:136 F '47
Hi-fi broadcast band tuner. L. M. Dezettel. il diags Radio N 38:44-5+ N '47
Permeability tuning of broadcast receivers. L. O. Vladimir. bibliog il diags Electronics 20:94-9 Ag '47
Tracking permeability-tuned circuits. A. W. Simon. diags Electronics 19:138 S '46; 20: 142+ N '47
Tuning devices for broadcast radio receivers. R. C. G. Williams. il diags Inst E E J 93 pt 3:405-23 bibliog(p420); Discussion. 423-7 N '46

RADIO receiving apparatus, Portable
Compact portable using five plastics; RCA Solitaire. il Mod Plastics 25:152-3 S '47
Miniature all-wave 3-tube receiver. W. E. Miller. il diag Radio N 37:44-5+ Mr '47
Pocket ear; pocket type radio with tube for conducting sound into ear; used by television stage directors in studio operation. J. L. Hathaway and W. Hotine. il diags RCA R 8:139-46 Mr '47
Portable 80-40 meter rig. B. Lindsey, jr. il diag Radio N 37:44-5 Ap '47
Styrene radio case. il Mod Plastics 24:160-1 Jl '47
Subminiature printed transmitters and receivers. il diags Electronics 20:160+ Je '47

Rating

Ac-dc-battery portable. Consumers Res Bul 18:18 D '46
Small crystal radio receiver, no bargain; Pakette. Consumers Res Bul 19:13-14 My '47

RADIO reception
Diversity reception; statistical evaluation of possible gain. Z. Jelonek and others. diags Wireless Eng 24:54-62 F '47
Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton. bibliog J Ap Phys 17: 940-71 N '46

RADIO recorders
Recording sky-wave signals from broadcast stations; description of monitoring station set up by Canadian government to investigate sky-wave interference. W. B. Smith. il diags Electronics 20:112-16 N '47

RADIO rectifiers
A.c.-d.c. audio amplifier, using the new selenium rectifiers. G. Eannarino. il diags Radio N 37:40-1 F '47
Analysis of full-wave rectifier and capacitive-input filter. D. L. Waidelich. diags Electronics 20:120-3 S '47
Biased ideal rectifier. W. R. Bennett. bibliog diags Bell System Tech J 26:139-69 Ja '47
Copper-oxide rectifier and the thermionic tube in the voltage-doubling circuit. R. R. Gilmour. diags Inst Radio Eng Proc 35:213-16 F '47
Crystal diode applications. J. C. Hoadley. il diags Radio N 37:43+ Ja '47
Determination of current and dissipation values for high-vacuum rectifier tubes. A. P. Kauzmann. diags RCA R 8:82-97 Mr '47
Development of silicon crystal rectifiers for microwave radar receivers. J. H. Scaff and R. S. Ohl. il diags Bell System Tech J 26: 1-30 Ja '47
Practical radio course; diodes and crystal rectifiers for use as mixers in u.h.f. and s.h.f. radio receivers. A. A. Ghirardi. il diags Radio N 37:44-5+ Ja '47
Properties of welded contact germanium rectifiers. H. Q. North. il diags J Ap Phys 17:912-23 N '46
Pulsed rectifiers for television receivers. I. G. Maloff. il diags Electronics 20:110-11 Ag '47
Rating of small- and medium-power thermionic rectifiers. H. T. Ramsay. bibliog il diags Inst E E J 94 pt 3:260-74 Jl '47
Silicon and germanium rectifiers; tabulations. Electronics 20:146-7 (Buyers' guide) Mid-Je '47
Stabilizing direct-voltage supplies; graphical method of assessing performance of gas-discharge tube stabilizer circuit. J. W. Hughes. bibliog diags Wireless Eng 24. 224-30 Ag '47; Discussion. W. H. P. Leslie. 24:309 O '47

RADIO relay stations
F-m chain broadcasting. il maps Electronics 20:94-8 N '47
Microwave relay communication system. G. G. Gerlach. bibliog il maps diags RCA R 7:576-600 D '46
Microwave relay system. L. E. Thompson. bibliog il map diags Inst Radio Eng Proc 34:936-42 D '46
Multichannel microwave radio relay system. H. S. Black and others. il diags Elec Eng 65:Trans 798-805 D '46
Pulse time division radio relay. B. Trevor and others. bibliog il diags RCA R 7:561-75 D '46
Simplified microwave afc; combinations of motor and electronic action for microwave oscillators; radio-relay system. F. A. Jenks. il diags Electronics 20:120-5 N; 132-6 D '47
Telegraphy; pony express to beam radio. G. C. Hillis. il diag Western Soc E J 51:140-7 S '46
Two multichannel microwave relay equipments for the United States army communication network. R. E. Lacy. il Inst Radio Eng Proc 35:65-70 Ja '47

RADIO research
Attenuation of 1.25-centimeter radiation through rain. L. J. Anderson and others. diag Inst Radio Eng Proc 35:351-4 Ap '47
Browder J. Thompson memorial. Inst Radio Eng Proc 34:934-5 D '46
Early centimetre-wave communication systems. J. C. Dix. il diags Engineering 163: 489-91 Je 13 '47
Electrodeless discharges and some allied problems. G. I. Babat. bibliog il diags Inst E E J 94 pt 3:27-37 Ja '47
Electronic research sponsored by the Office of naval research. E. R. Piore. bibliog Inst Radio Eng Proc 35:1119-21 O '47
Experiments on the electric strength of air at centimetre wavelengths. R. Cooper. bibliog diags Inst E E J 94 pt 3:315-24 S '47
Job ahead. C. R. Denny. Inst Radio Eng Proc 35:598-9 Je '47
Noise and oscillations in hot cathode arcs. J. D. Cobine and C. J. Gallagher. bibliog Franklin Inst J 243:41-54 Ja '47
Propagation studies on 45.1, 474, and 2800 megacycles within and beyond the horizon. G. S. Wickizer and A. M. Braaten. bibliog map diags Inst Radio Eng Proc 35:670-80 Jl '47
Site and path errors in short-wave direction-finding. W. Ross. Inst E E J 94 pt 3:108-14; Discussion. 133-40 Mr '47
Sponsors Citizens radio project; program of research, underwritten by publishers of Electronics, to develop equipment and test potentialities. il Electronics 20:80-3 N '47
Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47
Wave theoretical interpretation of propagation of 10-centimeter and 3-centimeter waves in low-level ocean ducts. C. L. Pekeris. bibliog Inst Radio Eng Proc 35: 453-62 My '47

Bibliography

Radio progress during 1946; radio wave propagation. Inst Radio Eng Proc 35:415-18 Ap '47

RADIO resonators
Apertures in cavities. J. H. O. Harries. il diags Electronics 19:132-5 D '46
Approximate equivalent circuit for a resonator transducer. W. R. MacLean. diag Inst Radio Eng Proc 35:1095-6 O '47

RADIO resonators—*Continued*
Broad-band noncontacting short circuits for coaxial lines. W. H. Huggins. diags Inst Radio Eng Proc 35:1085-91 O '47
Cavity resonators and electron beams. J. H. O. Harries. diags Wireless Eng 24:71-80, 109-18, 135-42 bibliog(p 142) Mr-My '47
Charts for resonant frequencies of cavities. R. N. Bracewell. Inst Radio Eng Proc 35: 830-41 Ag '47
Conductivity of metallic surfaces at microwave frequencies. E. Maxwell. diags J Ap Phys 18:629-38 Jl '47; Correction. 18:928 O '47
Electrodeless discharges and some allied problems. G. I. Babat. bibliog il diags Inst E E J 94 pt 3:27-37 Ja '47
Elementary theory of velocity-modulation oscillators. N. C. Barford and M. Bowman-Manifold. bibliog Inst E E J 94 pt 3:302-14 S '47
End plate and side wall currents in circular cylinder cavity resonator. J. P. Kinzer and I. G. Wilson. il pl Bell System Tech J 26: 31-79 Ja '47
External cavity klystron. P. G. Bohlke and F. G. Breeden. il diags Electronics 20:114-18 Jl '47
High Q resonant cavities for microwave testing. I. G. Wilson and others. bibliog il diags Bell System Tech J 25:408-34 Jl '46 [omitted table inserted in Ja '47 number]
Microwave electronics; resonant cavities. J. C. Slater. Rs Mod Phys 18:467-83 O '46
Q circles; a means of analysis of resonant microwave systems. W. Altar. diags Inst Radio Eng Proc 35:355-61, 478-84 Ap-My '47
Reflex oscillators. J. R. Pierce and W. G. Shepherd. il diags Bell System Tech J 26: 460-681 Jl '47
Resonant cavities for dielectric measurements. C. N. Works. bibliog il diags J Ap Phys 18:605-12 Jl '47
Resonant frequencies of the nosed-in cavity. E. Mayer. bibliog diags J Ap Phys 17: 1046-55 D '46
Simplified microwave afc; combinations of motor and electronic action for microwave oscillators; radio-relay system. F. A. Jenks. il diags Electronics 20:120-5 N; 132-6 D '47
Some results on cylindrical cavity resonators. J. P. Kinzer and I. G. Wilson. pl diags Bell System Tech J 26:410-45 bibliog(89 titles, p442-5) Jl '47
Stabilized magnetron for beacon service. J. S. Donal and others. il diags RCA R 8:352-72 Je '47
Study of a certain type of resonant cavity and its application to a charged particle accelerator. E. S. Akeley. J Ap Phys 17: 1056-60 D '46

Bibliography
Radio progress during 1946; cavity resonators. Inst Radio Eng Proc 35:417-18 Ap '47

RADIO schools and training
Technical educational requirements of the modern radio industry. P. L. Gerhart. RCA R 8:186-91 Mr '47
War-time education and training of radio personnel. W. Jackson. bibliog Inst E E J 94 pt 1:26-9 Ja '47; Same. Inst E E J 94 pt 3:2-5 Ja '47; Abstracts. Electrician 137: 1065 O 18 '46; Elec R (Lond) 139:609 O 18 '46

RADIO service shops
At your service madame; your business success is in the hands of your housewife-customers. J. T. Frye. Radio N 37:46+ Je '47
Radio serviceman is pivot of IRC replacement sales promotion. il Sales Management 59:95+ O 1 '47
Service associations can be successful. D. Krantz. il Radio N 37:48-9+ F '47
Striking displays can sell radio service. P. H. Wendel. il Radio N 36:30-1+ D '46

Location
Your shop location. S. C. Milbourne. il Radio N 37:30-1+ Ja '47

RADIO servicemen's associations
Directories
Servicemen's organizations; United States, Canada and Scotland. Radio N 38:164 N '47

RADIO signals
Clipping and clamping circuits. N. W. Mather. diags Electronics 20:111-13 Jl '47
Detection of meteors by radio. L. A. Manning and others. Phys R 70:767 N 1 '46
Electronic commutation for telemetering; for transmission over an F-M link during flight tests of new aircraft or on pilotless runs. L. L. Rauch. il diags Electronics 20:114-20 F '47
FCC frequency measurement techniques. A. K. Robinson. il diag Electronics 20:114-16 Je '47
Measuring distance precisely; relative phase relationship between continuous-wave radio signals used. il diag Electronics 20:186+ N '47
Measuring speed with WWV; harmonics of station's signal obtained for calibrating oscillator used in measurement of shaft speed. J. C. Coe. il diags Electronics 20: 90-3 Ag '47
New methods for locating cable faults, particularly on high-frequency cables; applying pulse and frequency-modulation methods on wide-band coaxial telephone cables. F. F. Roberts. il diags Inst E E J 93 pt 3:385-95, bibliog(p393) N '46; Abstract. Engineer 181:222-3 Mr 8 '46; Discussion. Inst E E J 93 pt 3:395-404 N '46
Telemetering from V-2 rockets; time-modulated pulse system in nose samples instruments and transmits readings to ground station. V. L. Heeren and others. il diags Electronics 20:100-5 Mr; 124-7 Ap '47
Very-high-frequency and ultra-high-frequency signal ranges as limited by noise and cochannel interference. E. W. Allen, jr. bibliog maps diags Inst Radio Eng Proc 35: 128-36; Discussion. 136-52 F '47
Wide-range double-heterodyne spectrum analyzers. L. Apker and others. il diags Inst Radio Eng Proc 35:1068-73 O '47

RADIO standards
FCC frequency measurement techniques. A. K. Robinson. il diag Electronics 20:114-16 Je '47
Microwave frequency standard. R. G. Talpey and H. Goldberg. diags Inst Radio Eng Proc 35:965-9 S '47
Proposed frequency band designations. Elec Eng 66:471 My '47
Stability of crystal oscillators. A. J. Zink, jr. bibliog diags Electronics 20:127-9 My '47
Standard of frequency and its applications. C. F. Booth and F. J. M. Laver. diags Inst E E J 93 pt 3:223-36 bibliog(p235-6) Jl '46; Discussion. 93 pt3:236-41, 427-8 Jl, N '46
See also
Radio broadcasting —Frequency standards
Radio stations, Standard frequency

RADIO stations
See also
Radio broadcasting stations
Radio relay stations

RADIO stations, Amateur
Narrow-band F-M authorized for radiotelephony by class A amateur radio operators. Electronics 20:146+ O '47
Radio reunion; marine warrant officer, C. D. Pierce, W6YB, provides radio reunions for marine pals. H. Conner. il Radio N 38:92 S '47

RADIO stations, Government
Recording sky-wave signals from broadcast stations; description of monitoring station set up by Canadian government to investigate sky-wave interference. W. B. Smith. il diags Electronics 20:112-16 N '47
WWV schedules. Electronics 20:87 My '47
WWV-technical broadcast services. Radio N 38:118 O '47

RADIO stations, Standard frequency
WWV-technical broadcast services. Radio N 38:118 O '47

RADIO stores
Consumers are sore. G. E. DeNike. il Radio N 37:53+ F '47
Locating your new store. W. L. Morris. il Radio N 37:64-5+ Ap '47
New radio outlet succeeds by being different; Smith & Applegate. H. L. Spooner. il Radio N 38:47+ S '47
Opportunity for success in radio and appliance stores. I. Carey. il Dom Comm 34: 43-6 N '46
Preliminary steps in establishing a radio and appliance store. R. Schuessler. plan Radio N 37:58-9+ Je '47
Retailing basics that pay off. L. Bader. il Radio N 37:42-3+ F '47
Showmanship sells merchandise. Z. Kaufman. Radio N 38:80+ Jl '47
Successful retail operation features personalized service. H. Gunnis. il Radio N 38:104 O '47
What does your customer buy? F. J. Nelson. Radio N 38:40+ Jl '47
Where will you find them? radio and appliance dealer faced with problem of finding good prospects. il Radio N 37:60 My '47

Lighting
Modern lighting for radio and appliance stores. H. L. Logan. il Radio N 38:44-5+ Jl '47

RADIO symbols
See also
Electronics—Symbols

RADIO telegraph
Code reception with automatic volume control and signal-strength meter. diag Electronics 20:132+ Jl '47
Electroplex, new automatic key. J. T. Dixon. il diag Radio N 37:38-9+ Ja '47
Ham ticket in 30 days; method of preparing for exams. J. T. Frye. Radio N 37:56+ My '47
Local contact rig. R. L. Parmenter. il diags Radio N 38:52-3+ Jl '47
Microwave relay communication system. G. G. Gerlach. bibliog il maps diags RCA R 7:576-600 D '46
Microwave relay system. L. E. Thompson. bibliog il map diags Inst Radio Eng Proc 34:936-42 D '46
Noise-free code reception. D. L. Hings. il diags Electronics 20:125-7 Je '47
Relative amplitude of side frequencies in on-off and frequency-shift telegraph keying. G. S. Wickizer. diags RCA R 8:158-68 Mr '47
Simple code practice oscillator. R. P. Turner. il diag Radio N 37:88 F '47
Tape relay system for radiotelegraph operation. S. Sparks and R. G. Kreer. il map RCA R 8:393-426 S '47
Tone burst generator; multivibrators serve as electronic switch for cathode-ray oscilloscopes, generation of square waves, investigation of code intelligibility and general audio research. R. G. Roush. il diags Electronics 20:92-6 Jl '47

RADIO telegraph on ships
Radio and the royal cruise. il diag Electrician 138:346-7 Ja 31 '47
Radio communication equipment in H.M.S. Vanguard. il diag Engineer 183:144-5 F 7 '47

RADIO telephone
China, U.S. radiotelephone service open to public. For Comm W 28:28 Ag 2 '47
Design of speech communication systems for use in presence of noise. L. L. Beranek. bibliog diags Inst Radio Eng Proc 35:880-90 S '47
FCC schedules mobile radiotelephone hearing. map Electronics 20:144 Jl '47
French microwave telephone circuit. il Electronics 20:188+ Ja '47
General Electric lightweight mobile transmitter-receiver. il Engineer 184:349 O 10 '47
Highly - selective transmission - measuring equipment for communication circuits. D. G. Tucker. bibliog diags Inst E E J 94 pt 3:211-16 My '47; Same. Inst E E J 94 pt 2:247-52 Je '47
Microwave relay system. L. E. Thompson. bibliog il map diags Inst Radio Eng Proc 34:936-42 D '46
Mobile radio-telephone service links nation. F. E. Butler. il diags Radio N 37:45-7+ My '47
Overmodulation without sideband splatter. O. G. Villard, jr. il diags Electronics 20:90-5 Ja '47
Premodulation clipping in AM voice communication. K. D. Kryter and others. il diags Acoustical Soc Am J 19:125-31 Ja '47
Radiophone gains; mobile communication units build a postwar industry. Bsns W p18 D 21 '46
Rural radiotelephone experiment at Cheyenne Wells, Colo. J. H. Moore and others. il map diag Elec Eng 66:346-8 Ap '47
Selective dial calling of radio cars. R. L. Brinton. il Elec World 126:93 N 9 '46
Telephony by pulse code modulation. W. M. Goodall. diags Bell System Tech J 26:395-409 Jl '47
Two-way radio-telephone suitable for automotive fleets. W. C. Baylis. il diags S A E J 55:43-7 Mr '47
Utilities try mobile phone channel. H. P. Lawther. il map Elec World 128:64-5 Ag 2 '47
See also
Amplifiers, Vacuum tube
Motor bus lines—Radio telephone
Telephone, Carrier current

Highway department use
California's 2-way radio. il Roads & Sts 90: 69-71 F '47
Two-way radio now available. Roads & Sts 90:86 Jl '47
Two-way radio phone in traffic signal repair work. L. C. Smith. il Roads & Sts 90:86+ Ja '47
Washington state highway maintenance speeded by two-way fm radiotelephone. F. E. Ebel. il Pub Works 78:28-30 S; 31-2 O '47

Multiplex system
Multichannel microwave radio relay system. H. S. Black and others. il diags Elec Eng 65:Trans 798-805 D '46
Pulse time division radio relay. B. Trevor and others. bibliog il diags RCA R 7:561-75 D '46

Police uses
Police radio equipment. il Engineer 184:134 Ag 8 '47; Engineering 164:138 Ag 8 '47; Elec R (Lond) 141:174 Ag 1 '47

Rates
Mobile radio rates set by Bell system. Pub Util 38:761 D 5 '46

Taxicab dispatching
Radio dispatching for taxicabs. il map Electronics 20:97-9 Mr '47
Two-way taxicab radio circuits. il Electronics 20:146+ Ap '47

RADIO telephone, Portable
Adapting the TBY-7 for amateur use. W. B. Ford. il diags Radio N 38:39-41+ O '47
Carryphone in service on Pennsylvania; portable inductive telephone. W. R. Triem. il Ry Age 121:764-6 N 9 '46; Same. Ry Mech Eng 120:676+ D '46
Manufacturers differ on market potential of two-way sets for new Citizens radio band. Ptr Ink 220:124 S 26 '47
Mobile radiotelephone industry looks for prosperous future. T. Healy. il Ind Marketing 32:44-5+ Je '47
Mobile v.h.f. radio telephone. diag Electrician 139:117 Jl 11 '47
144 mc. handie talkie. C. T. Haist, jr. il plans diags Radio N 37:54-5+ F '47
Train radio pack-set. il Ry Age 123:290 Ag 16 '47
Two-way railroad pack set. il Electronics 20: 190+ My '47; Ry Mech Eng 121:268 My '47

RADIO telephone in factories
Experimental uhf equipment; experimental radio-telephone link between two plants of N. V. Phillips in Holland. il diags Electronics 20:204+ Mr '47

RADIO telephone in factories—*Continued*
First factory F-M radiophone; Haskell and Barker freight car plant. il Electronics 20: 188+ Mr '47
Pullman-Standard uses two way radio to aid in plant efficiency; Haskell & Barker freight car plant. Iron Age 158:138+ N 21 '46

RADIO telephone in mines
Radio-telephone for strip-pit tipple foreman. il Coal Age 52:108 S '47
Two-way radio offers efficient communication at Pando. il Coal Age 51:98-9 N '46

RADIO telephone on automobiles
Insurance agent has mobile phone; Sidney Weil of Cincinnati. Weekly Underw 156: 240 Ja 18 '47
Mobile radio; abstract. C. F. Meyer. S A E J 55:58 O '47
Mobile radiotelephone industry looks for prosperous future. T. Healy. il Ind Marketing 32:44-5+ Je '47
National Liberty manager using auto radiotelephone; Harold J. Samsel. il East Underw 48:27 Mr 28 '47
Radio telephone in cars; Employers' group convinced that new facility will speed up claim settlements. East Underw 48:42 Mr 14 '47

RADIO telephone on motor trucks
Two-way radio may cut delivery costs; radio telephones on fuel oil trucks. F. C. Sturtevant. il Nat Pet N 39:34+ O 22 '47

RADIO telephone on railroads
See also
Railroads—Radio communication

RADIO telephone on ships
Electronics on world's largest liner; radar, loran, depth sounding, and radio installations of the Queen Elizabeth. il Electronics 19:84-5 D '46
First railroad tug radio installed at Baltimore by B & O. il Manuf Rec 116:78+ Ja '47
From a tiny acorn grew a mighty oak; radar aboard the Queen Elizabeth; account of the first radio-telephony ship to shore transmission in 1907. F. E. Butler. il Radio N 37:41-3+ Je '47
Queen Elizabeth has latest in communications systems. For Comm W 25:21 N 9 '46
Radio communication equipment in H.M.S. Vanguard. il diag Engineer 183:144-5 F 7 '47
See also
Radio communication—Ship-to-shore service

RADIO time signals. See Time signals, Radio

RADIO towers
500-ft. radiator mast for Brookman's Park transmitting station. il Engineering 163:495, 500 Je 13 '47

RADIO transformers
Approximate theory of eddy-current loss in transformer cores excited by sine wave or by random noise. D. Middleton. il diags Inst Radio Eng Proc 35:270-81 Mr '47
Coupling transformers for loop antennas. M. J. Kobilsky. diags Inst Radio Eng Proc 35:969-73 S '47
Hermetic sealing of transformers and chokes used in communication equipment. C. F. Bays and D. Slater. il diags Inst E E J 94 pt 3:347-57 S '47
High-frequency excitation of iron cores. J. D. Cobine and others. il diags Inst Radio Eng Proc 35:1060-7 O '47
New radar transformer steel. G. H. Cole and R. S. Burns. il Materials & Methods 24: 1457-60 D '46
Output transformer impedance matching; simplified chart. R. B. Tomer. Radio N 38: 60 Jl '47
Permeability of dust cores. P. R. Bardell. Wireless Eng 24:63 F '47; Discussion. H. W. Lamson. 24:267-70 S '47
Practical radio course; fm receiver type i.f. transformers. A. A. Ghirardi. il diags Radio N 38:68-70+ N '47
Practical transformer design and construction. C. Roeschke. diags Radio N 37:60-1+ Je; 38:58-9+ Jl; 60+ Ag '47
Very-wide band radio-frequency transformers. D. Maurice and R. H. Minns. diags Wireless Eng 24:168-77, 209-16 Je-Jl '47
Wide-band transformer from an unbalanced to a balanced line. E. G. Fubini and P. J. Sutro. diags Inst Radio Eng Proc 35:1153-5 O '47

RADIO transmission
Asymptotic solutions for the normal modes in the theory of microwave propagation. C. L. Pekeris. bibliog J Ap Phys 17:1108-24 D '46
Attenuation of 1.25-centimeter radiation through rain. L. J. Anderson and others. diags Inst Radio Eng Proc 35:351-4 Ap '47
Calculation of field strengths over a spherical earth. C. Domb and M. H. L. Pryce. diags Inst E E J 94 pt 3:325-36; Discussion. 337-9 S '47
Comparison of am, fm and single sideband systems on an equal peak-power basis; table. R. C. Cheek. Elec World 127:114 Ap 12 '47
Doppler effect in propagation. H. V. Griffiths. Wireless Eng 24:162-7 Je '47; Discussion. 24:248-9 Ag '47
Elements of wave propagation using the impedance concept. H. G. Booker. bibliog diags Inst E E J 94 pt 3:171-98; Discussion. 199-202 My '47
Field intensities beyond line of sight at 45.5 and 91 megacycles. C. W. Carnahan and others. il diags Inst Radio Eng Proc 35: 152-9 F '47
Field of a microwave dipole antenna in the vicinity of the horizon. C. L. Pekeris. bibliog J Ap Phys 18:667-80, 1025-7 Jl, N '47
Highly - selective transmission - measuring equipment for communication circuits. D. G. Tucker. bibliog diags Inst E E J 94 pt 3: 211-16 My '47; Same. Inst E E J 94 pt 2: 247-52 Je '47
Instructions for the use of basic radio propagation predictions. maps charts U S Nat Bur Stand Circ 465:1-8; pa 25c Supt. of doc. '47
Non-uniform transmission lines and reflection coefficients. L. R. Walker and N. Wax. J Ap Phys 17:1043-5 D '46
Preliminary analysis of microwave transmission data obtained on the San Diego coast under conditions of a surface duct. C. L. Pekeris and M. E. Davis. J Ap Phys 18: 838-42 S '47
Propagation studies on 45.1, 474, and 2800 megacycles within and beyond the horizon. G. S. Wickizer and A. M. Braaten. bibliog map diags Inst Radio Eng Proc 35:670-80 Jl '47; Discussion. A. H. Waynick. 35:1334 N '47
Radiation angle variations from ionosphere measurements. H. E. Hallborg and S. Goldman. RCA R 8:342-51 Je '47
Radio propagation at frequencies above 30 megacycles. K. Bullington. diags Inst Radio Eng Proc 35:1122-36 O '47
Sporadic *E*-region ionization at Watheroo magnetic observatory, 1938-1944. H. W. Wells. bibliog il Inst Radio Eng Proc 34: 950-5 D '46; Discussion. O. P. Ferrell. 35: 493-4 My '47
Three- and nine-centimeter propagation in low ocean ducts. M. Katzin and others. bibliog il Inst Radio Eng Proc 35:891-905 S '47
Transmission in waveguides; cross-section partly of solid dielectric. A. M. Woodward. bibliog diags Wireless Eng 24:192-6 Jl '47
Transmission of a frequency-modulated wave through a network. W. J. Frantz. bibliog il diag Inst Radio Eng Proc 34:114P-25P Mr '46; Discussion. L. J. Giacoletto. 35:1105-6 O '47
Wave theoretical interpretation of propagation of 10-centimeter and 3-centimeter waves in low-level ocean ducts. C. L. Pekeris. bibliog Inst Radio Eng Proc 35:453-62 My '47

See also
Radio antennas
Radio broadcasting
Radio communication—Interference
Radio lines
Radio pulse time modulation
Radio relay stations
Radio telephone
Radio transmitters
Radio waves

RADIO transmission—*Continued*

Bibliography

Radio progress during 1946; radio wave propagation. Inst Radio Eng Proc 35:415-18 Ap '47

Fading

Diversity reception; statistical evaluation of possible gain. Z. Jelonek and others. diags Wireless Eng 24:54-62 F '47

Effect of aircraft on fading. J. W. Whitehead. Wireless Eng 24:29 Ja '47

RADIO transmitters

Antenna loading problems and solutions. J. T. Goode. diags Radio N 38:44+ Ag '47

Automatic audio phase reverser. A. H. Smith. diag Electronics 20:156+ N '47

807 makes low cost power packaged modulator. R. P. Turner. diag Radio N 38:46+ Jl '47

Hum-reducing circuit. A. H. Smith. diag Electronics 20:130+ Ja '47

Overmodulation without sideband splatter. O. G. Villard, jr. il diags Electronics 20:90-5 Ja '47

Radio progress during 1946; radio transmitters and modulation systems. bibliog Inst Radio Eng Proc 35:399-404 Ap '47

Relative amplitude of side frequencies in on-off and frequency-shift telegraph keying. G. S. Wickizer. diags RCA R 8:158-68 Mr '47

Wideband phase shift networks. R. B. Dome. diag Electronics 19:112-15 D '46

Frequency modulation transmitters

Cascade phase shift modulator. M. Marks. bibliog il diags Electronics 19:104-9 D '46

Four-tetrode F-M power amplifier. il diag Electronics 20:132+ Ag '47

Fm modulator for amateur use. J. C. Davis. il diags Radio N 37:56-7+ Ap '47

KSBR's 50-kw high-band F-M transmitter. R. L. Norton and others. il diag Electronics 20:80-4 O '47

Ten-meter mobile FM transmitter. R. Frank. il diag Radio N 38:44-5+ O '47

Transmitter for the Citizens radio service. W. C. Hollis. il diags Electronics 20:84-9 N '47

Triplex antenna for television and f-m. L. J. Wolf. il diags Electronics 20:88-91 Jl '47

Power supply

Coaxial-type water load and associated power-measuring apparatus. R. C. Shaw and R. J. Kircher. il diags Inst Radio Eng Proc 35: 84-7 Ja '47

Combination voltmeter and safety bleeder for transmitter power supply. G. E. Dexter. diag Radio N 38:124 Ag '47

Effect of *Q* on power-amplifier efficiency. F. F. Offner. diags Inst Radio Eng Proc 34: 896-7 N '46

High-voltage steel-tank mercury-arc rectifier equipments for radio transmitters. J. C. Read. il diags Inst E E J 92 pt 2:453-68 O '45; Discussion. 92 pt 2:490-3; 94 pt 2: 299-300 O '45, Ag '47

Vhf transmitter power measurements. L. R. Malling. diags Electronics 20:158+ F '47

Short wave

Adapting the TBY-7 for amateur use. W. B. Ford. il diags Radio N 38:39-41+ O '47

Automatic frequency control of microwave oscillators. V. C. Rideout. diags Inst Radio Eng Proc 35:767-71 Ag '47

Autotune transmitter; conversion details. G. Lichterman. il diags Radio N 36:50-1+ D '46

Bandswitching v.f.o. exciter. C. Hays. il diag Radio N 38:49-51+ S '47

Beginner's transmitter. R. Frank. il diag Radio N 37:62-3 Je '47

Breadboard 2 meter kilowatt transmitter. G. H. Floyd and H. D. Wells. il diag Radio N 37:32-4 Ja '47

Compact 150 watt transmitter. J. B. Ledbetter. il diags Radio N 38:38-9+ Jl '47

Compact 60-watt transmitter. R. R. Freeland. il diags Radio N 37:41-3+ Mr '47

Deluxe amateur transmitter. J. N. Whitaker. il diags Radio N 37:69-72+ Ap; 71-4+ My '47

FCC preliminary proposal regarding the Citizens' band. Radio N 37:122 Mr '47

50-watt modulator with peak limiting. R. Lewis. il diag Radio N 38:42-3+ N '47

Gang-tuned transmitter. J. F. Clemens. il diag Radio N 38:51-3+ N '47

Generating microwaves. S. Freedman. il Radio N 37:35-7+ Mr '47

Handy 20-watt modulator. R. P. Turner. il diag Radio N 37:50-1+ Mr '47

Local contact rig. R. L. Parmenter. il diags Radio N 38:52-3+ Jl '47

Mobile on ten meters; rugged, reliable transmitter and converter. W. B. Ford. il diags Radio N 36:25-8 D '46

Narrow band phase modulation exciter. S. Sterman. il diag Radio N 37:69+ My '47

Radio Mike; miniature radio transmitters. J. L. Hathaway and R. Kennedy. il diag RCA R 8:251-8 Je '47

Ring oscillators for u.h.f. transmission. T. Gootée. diags Radio N 37:48-50+ Ja '47

75 watts in one cubic foot. W. T. Kawai. il diags Radio N 36:36-8+ D '46

600-watt phone transmitter. R. P. Turner. il diags Radio N 38:61-3+ O '47

Transit-time effects in ultra-high-frequency class-C operation. W. G. Dow. bibliog diags Inst Radio Eng Proc 35:35-42 Ja '47

Transmitter-receiver from surplus tuner. C. E. Clark. il diag Radio N 38:60-1+ N '47

Transmitter with efficient band switching. R. P. Turner. il diags Radio N 37:53-5+ Je '47

Unusual phone transmitter; new modulation system. il diag Radio N 36:35+ D '46

Variable frequency oscillator. R. W. Field. il diag Radio N 38:65+ S '47

Variable frequency transmitter-exciter. J. F. Clemens. il diag Radio N 37:38-9+ Mr '47

Testing

Coaxial-type water load and associated power-measuring apparatus. R. C. Shaw and R. J. Kircher. il diags Inst Radio Eng Proc 35: 84-7 Ja '47

Metering multi-stage transmitters. diag Radio N 38:102 Ag '47

Tuning

Mono-sequence tuning. J. N. Whitaker. il diag Radio N 37:44-5+ Je '47

RADIO transmitters, Portable

Portable 80-40 meter rig. B. Lindsey, jr. il diag Radio N 37:44-5 Ap '47

Radio Mike; miniature radio transmitters. J. L. Hathaway and R. Kennedy. il diag RCA R 8:251-8 Je '47

Subminiature printed transmitters and receivers. il diags Electronics 20:160+ Je '47

RADIO tubes. See Radio apparatus; Vacuum tubes

RADIO waves

Absorption of microwaves by oxygen. J. H. Van Vleck. Phys R 71:413-24 Ap 1 '47

Absorption of microwaves by uncondensed water vapor. J. H. Van Vleck. bibliog Phys R 71:425-33 Ap 1 '47

Analysis of the hyperfine structure in the microwave spectrum of the symmetric top molecule CH_3I. W. Gordy and others. Phys R 72:249-50 Ag 1 '47

Asymptotic solutions for the normal modes in the theory of microwave propagation. C. L. Pekeris. bibliog J Ap Phys 17:1108-24 D '46

Circular loop antennas with non-uniform current distribution. G. Glinski. bibliog J Ap Phys 18:638-44 Jl '47

Computational method applicable to microwave networks. R. H. Dicke. diag J Ap Phys 18:873-8 O '47

Concentric line; critical wavelength of the higher modes. H. Bondi and S. Kuhn. Wireless Eng 24:222-3 Ag '47

Doppler effect in propagation. H. V. Griffiths. Wireless Eng 24:162-7 Je '47; Discussion. 24:248-9 Ag '47

Electromagnetic radiation. J. Greig. diags Wireless Eng 24:143-4 My '47

Electronic collisional frequency in the upper atmosphere. E. F. George. bibliog Inst Radio Eng Proc 35:249-52 Mr '47

RADIO waves—*Continued*
Elements of wave propagation using the impedance concept. H. G. Booker. bibliog diags Inst E E J 94 pt 3:171-98 My '47; Abstract. Engineering 162:547 D 6 '46; Discussion. Inst E E J 94 pt 3:199-202 My '47
Expected microwave absorption coefficients of water and related molecules. G. W. King and others. bibliog Phys R 71:433-43 Ap 1 '47
Experimental studies of the propagation of very short radio waves; abstract. E. C. S. Megaw. Inst E E J 93 pt 1:462-3 O '46
Field of a microwave dipole antenna in the vicinity of the horizon. C. L. Pekeris. bibliog J Ap Phys 18:667-80, 1025-7 Jl, N '47
Fine structure of the hydrogen atom by a microwave method. W. E. Lamb, jr. and R. C. Retherford. bibliog Phys R 72:241-3 Ag 1 '47
Further observations of the angle of arrival of microwaves. A. B. Crawford and W. M. Sharpless. il Inst Radio Eng Proc 34:845-8 N '46
Generation of centimeter waves. H. D. Hagstrum. bibliog il diags Inst Radio Eng Proc 35:548-64 Je '47
Measurement of the angle of arrival of microwaves. W. M. Sharpless. il map Inst Radio Eng Proc 34:837-45 N '46
Microwave electronics. J. C. Slater. diags Rs Mod Phys 18:441-512 O '46
Microwave spectrograph. R. H. Hughes and E. B. Wilson, jr. Phys R 71:562-3 Ap 15 '47
Millimeter wavelengths. bibliog Electronics 20:182+ Jl '47
Non-uniform transmission lines and reflection coefficients. L. R. Walker and N. Wax. J Ap Phys 17:1043-5 D '46
Phase-front plotter for centimeter waves. H. Iams. il diags RCA R 8:270-5 Je '47
Preliminary analysis of microwave transmission data obtained on the San Diego coast under conditions of a surface duct. C. L. Pekeris and M. E. Davis. J Ap Phys 18: 838-42 S '47
Radio frequency vs utility; chart. E. A. Laport. Electronics 20:106-7 (Buyers' guide) Mid-Je '47
Radio propagation at frequencies above 30 megacycles. K. Bullington. diags Inst Radio Eng Proc 35:1122-36 O '47
Recording sky-wave signals from broadcast stations; description of monitoring station set up by Canadian government to investigate sky-wave interference. W. B. Smith. il diags Electronics 20:112-16 N '47
Simple demonstration of the carrier and side frequency components in an amplitude modulated wave. A. D. Bailey. diag J Eng Educ 37:383-5 Ja '47
Spectrum analysis of pulse modulated waves; finding frequency spectrum produced by simultaneous application of a number of frequencies to various forms of amplitude limiters or switches. J. C. Lozier. Bell System Tech J 26:360-87 Ap '47
Standing wave meter; measures power reflections caused by mismatch at junction of waveguide components. H. E. Kallmann. il diags Electronics 20:96-9 Ja '47
Steepness of pulse fronts. M. D. Rubin. diags Electronics 20:136+ S '47
Theory of the beam-type traveling-wave tube. J. R. Pierce. Inst Radio Eng Proc 35:111-23 F '47
Traveling-wave tube as amplifier at microwaves. R. Kompfner. diags Inst Radio Eng Proc 35:124-7 F '47
Traveling-wave tubes. J. R. Pierce and L. M. Field. il diags Inst Radio Eng Proc 35:108-11 F '47
Use of the broadcast band in geologic mapping. L. Kerwin. bibliog il map diags J Ap Phys 18:407-13 Ap '47

Bibliography
Radio progress during 1946; radio wave propagation. Inst Radio Eng Proc 35:415-18 Ap '47

RADIO workers
Are you qualified? C. H. Parker. Radio N 36:60+ D '46
Lea act constitutional. Mo Labor R 65:206 Ag '47
Technical educational requirements of the modern radio industry. P. L. Gerhart. RCA R 8:186-91 Mr '47
Wages in radio manufacture, Jan. 1947. Mo Labor R 65:320 S '47

RADIO writing. See Radio authorship

RADIOACTIVE indicators. See Radioactive tracers

RADIOACTIVE series. See Radioactive substances

RADIOACTIVE substances
Discovery of fourth radioactive series announced by American and Canadian scientists. Chem & Eng N 25:2288 Ag 11 '47
Fourth radioactive series. Chem Age (Lond) 57:401 S 20 '47
Nuclei of pleochroic haloes. C. O. Hutton. bibliog Am J Sci 245:154-7 Mr '47
$(4n+1)$ Radioactive series. A. C. English and others. bibliog Phys R 72:253-4 Ag 1 '47
$(4n+1)$ Radioactive series; the decay products of U^{233}. F. Hagemann and others. bibliog Phys R 72:252 Ag 1 '47
Radioactivity of the rocks of the batholith of southern California. E. S. Larsen and N. B. Keevil. map Geol Soc Bul 58:483-93 Je '47

See also
Radioactivity
Radium
Thorium
Uranium

RADIOACTIVE substances *in the body*
Tolerance concentrations of radioactive substances. K. Z. Morgan. J Phys & Colloid Chem 51:984-1003 Jl '47

RADIOACTIVE tracers
Application of radioactive indicators to industrial problems; abstract. R. D. Evans. Chem & Eng N 25:2980 O 13 '47
Artificial radioactive tracers; applications to chemistry and medicine. G. T. Seaborg. Science 105:349-54 Ap 4 '47
Atomic energy commission shipped 1000 radioisotopes. Iron Age 160:124-5 Ag 7 '47
Correcting for the absorption of weak beta-particles in thick samples. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47
Detection of isotopes by tracer micrography. il diag Iron Age 160:76 S 18 '47
Industrial applications of atomic energy; radioactivity in biology and medicine. H. E. Stanton. Western Soc E J 51:176-80 D '46
Investigation of oxidation of copper by use of radioactive Cu tracer. J. Bardeen and others. bibliog J Chem Phys 14:714-21 D '46
Isotope eye; tagged atoms to study chemical and physical processes. Bsns W p20-1 My 3 '47
Metalworking industry gets real benefit from atomic pile; Oak Ridge lab sells isotopes for iron, steel testing. G. Hardy. Iron Age 160:108-10 Jl 10 '47
Radioactive blood cells; determining post-transfusion survival of blood cells by means of radioactive iron. J. G. Gibson, 2d and R. D. Evans. bibliog il Tech R 49:91-4+ D '46
Radioactive isotopes as tracers. A. W. Kramer. il diags Power Pl Eng 51:102-7+ O '47 (to be cont)
Radioactive isotopes in medicine; abstract. F. D. Moore. Chem Eng 54:268+ Ap '47
Radioactive tracers in metallurgical research. E. S. Kopecki. il Iron Age 160:60-4 S 4 '47
Radioisotopes in biology reviewed at Madison. Chem & Eng N 25:3072-4 O 20 '47
Radioisotopes; new tools for science. C. A. Thomas. Chem & Eng N 25:1572-4 Je 2 '47
Tracer experiments with radioactive indium. K. L. Knox and J. W. T. Spinks. Can Chem & Process Ind 30:85-8 N '46
Tracer micrography. L. Marton and P. H. Abelson. il Science 106:69-70 Jl 18 '47
Use of isotopes as tracers; abstract. A. H. W. Aten, jr. and F. A. Heyn. Metal Prog 51: 640+ Ap '47
Use of radioactive tracer in measuring condenser water flow. S. Karrer and others. il diag Power Pl Eng 50:118-20 D '46

RADIOACTIVITY

API research project 43C; studies of the effect of radioactivity on the transformation of marine organic materials into petroleum hydrocarbons. W. J. Mead. Am Pet Inst Proc 25(4):102-4 '45

Angular correlation of gamma-rays. G. Goertzel. bibliog Phys R 70:897-909 D 1 '46

Artificial radioactive isotopes of polonium, bismuth and lead. J. J. Howland and others. Phys R 71:552 Ap 15 '47

Artificial radioactive tracers; applications to chemistry and medicine. G. T. Seaborg. Science 105:349-54 Ap 4 '47

Artificial radioactivity produced in a high-school laboratory. R. A. Goundry. diag J Chem Educ 24:456 S '47

Canadian chemists briefed on nuclear developments. Chem & Eng N 25:1584-5 Je 2 '47

Cobalt 61 radioactivity. T. J. Parmley and B. J. Moyer. Phys R 72:82 Jl 1 '47

Conservation of momentum in the disintegration of Li^8. R. F. Christy and others. bibliog il diags Phys R 72:698-711 O 15 '47

Correcting for the absorption of weak beta-particles in thick samples; general method for use in tracer work; data presented for samples of $BaC^{14}O_3$. P. E. Yankwich, T. H. Norris and J. Huston. bibliog Anal Chem 19:439-41 Jl '47

Cosmic radiocarbon and natural radioactivity of living matter. A. V. Grosse and W. F. Libby. Science 106:88-9 Jl 25 '47

Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46

Disintegration scheme of Na^{24}. C. S. Cook and others. bibliog Phys R 70:985-6 D 1 '46

Electron-neutrino angular correlation in beta-decay. D. R. Hamilton. Phys R 71:456-7 Ap 1 '47

Energy and half-life of the Be^{10} radioactivity. E. M. McMillan. Phys R 72:591-3 O 1 '47

Exchange of carbon dioxide between barium carbonate and the atmosphere. W. D. Armstrong and J. Schubert. Science 106:403-4 O 24 '47

55-hour element 61 formed in fission. M. G. Inghram and others. Phys R 71:743 My 15 '47

Fifty years of atomic research. S. C. Lind. Chem & Eng N 25:2495-9 S 1 '47

Formation and properties of radioactive lithium. D. J. Hughes and others. bibliog Phys R 72:646-7 O 1 '47

Gamma-radiation from tantalum, iridium, and gold. J. M. Cork. il diag Phys R 72: 581-5 O 1 '47

Gamma-rays from Cu^{64}, annihilation of swift positrons, and experiments on orbital-electron capture. M. Deutsch. Phys R 72:729-30 O 15 '47

Gamma-rays of K^{40}. E. Gleditsch and T. Gráf. bibliog Phys R 72:640-1 O 1 '47

Geological interpretation of radioactivity well logs. J. E. Kilkenny. Pet Eng 18:137-8 Ag '47

Half-life determination of carbon (14) with a mass spectrometer and low absorption counter. L. D. Norris and M. G. Inghram. Phys R 70:772-3 N 1 '46

Instruments and techniques used in radiochemistry. L. Yaffe. bibliog diags Can Chem & Process Ind 31:812-16+ S '47

L-converted isomeric transition. M. Goldhaber and others. Phys R 71:372 Mr 15 '47

Long-life radio-iodine. A. F. Reid and A. S. Keston. Phys R 70:987 D 1 '46

Method of measuring half-lives. A. C. Graves and R. L. Walker. bibliog Phys R 71:1-3 Ja 1 '47

Monitoring probe for radiochemistry laboratories. C. R. Schwob and R. Nether. il Science 106:327-8 O 3 '47

Nuclei formed in fission; decay characteristics, fission yields, and chain relationships; issued by the Plutonium project. bibliog Am Chem Soc J 68:2411-42 N '46; Same. Rs Mod Phys 18:513-44 O '46

Nucleonics; chronology, tabulated information. Electronics 20:130-1 (Buyers' guide) Mid-Je '47

Photo-neutron sources and the energy of the photo-neutrons. A. Wattenberg. bibliog diags Phys R 71:497-507 Ap 15 '47

Positively charged particles accompanying the beta-rays of P^{32}. T. H. Pi and C. Y. Chao. Phys R 72:639-40 O 1 '47

Radiation chemistry offers intriguing prospects. Pet Processing 2:332 My '47

Radiations from K^{38}. M. M. Ramsey and others. bibliog Phys R 72:639 O 1 '47

Radioactive emanations; their nature, mechanism of action, biological effects and tolerance limits. B. N. Craver. bibliog J Ind Hygiene 29:196-200 My '47

Radioactive isotopes of Re, Os, and Ir. L. J. Goodman and M. L. Pool. bibliog Phys R 71: 288-93 Mr 1 '47

Radioactive isotopes; widespread uses, transport difficulties; Clinton laboratories. Chem Age (Lond) 57:261-3 Ag 23 '47

Radioactive testosterone. R. B. Turner. Science 106:248 S 12 '47

Radioactivity of Be^{10}. J. Levinger and E. Meiners. bibliog Phys R 71:586-8 My 1 '47

Radioactivity of Cu^{60}. C. E. Leith and others. Phys R 72:732-3 O 15 '47

Radioisotopes in biology reviewed at Madison. Chem & Eng N 25:3072-4 O 20 '47

Radioisotopes; new tools for science. C. A. Thomas. Chem & Eng N 25:1572-4 Je 2 '47

Recoil of silver nuclei due to *K*-capture in cadmium. B. T. Wright. bibliog diag Phys R 71:839-41 Je 15 '47

Significance of atomic energy to petroleum problems. J. D. Haseman. Pet Eng 18:70+ Ap '47

Significance of the radioactivity of potassium in geophysics. E. Gleditsch and T. Gráf. bibliog Phys R 72:641 O 1 '47

Some aspects of the design of radiochemical laboratories. H. A. Levy. il diags Chem & Eng N 24:3168-73 D 10 '46

Some properties of the radiation from radiomanganese 54 and the adsorption of manganous manganese on hydrous ferric oxide. D. H. Anderson. J Phys & Colloid Chem 51: 956-62 Jl '47

Standardization of radioactive phosphorus. T. Enns. Franklin Inst J 244:315-16 O '47

Technique of bombarding organic compounds with deuterons. R. E. Honig. bibliog il diags R Sci Instr 18:389-94 Je '47

Theory of alpha-radioactivity. M. A. Preston. bibliog Phys R 71:865-77 Je 15 '47

Translocation of a radioactive plant-growth regulator in bean and barley plants. J. W. Wood and others. bibliog diag Science 105: 337-9 Mr 28 '47

Types of radioactive decay. C. D. Coryell. diags Chem & Eng N 25:3073 O 20 '47

Unimolecular reactions and radioactive transformations. G. Antonoff. bibliog J Phys & Colloid Chem 51:513-16 Mr '47

See also

Alpha rays
Atoms—Disintegration
Beta rays
Electrons
Gamma rays
Ionization, Gaseous
Neutrons
Radioactive substances
Radioactive tracers
Radiography
Radium
X rays

Physiological effect

Control of radioactivity hazards. W. H. Sullivan. Chem & Eng N 25:1862-5 Je 30 '47

Genetic effects of the atomic bombs in Hiroshima and Nagasaki; genetics conference, committee on atomic casualties, National research council. Science 106:331-3 O 10 '47; Excerpts. Mech Eng 69:1038 D '47

Investigations on radioactivity poisoning. Chem & Eng N 25:981 Ap 7 '47

Ray-tracer of atomic fission. S. Burger. il diag Sci Am 176:53-6+ F '47

Tolerance concentrations of radioactive substances. K. Z. Morgan. J Phys & Colloid Chem 51:984-1003 Jl '47

See also

Plutonium poisoning

RADIOCARBON. See Carbon—Isotopes

RADIOGONIOMETERS. See Direction finding apparatus

RADIOGRAPHY

Adapter for processing 70-mm. roll film in open tanks. A. J. Moen. pl Pub Health Rep 62:512-13 Ap 4 '47

Cataloging X-ray experiences. F. J. Hodges. Pub Health Rep 62:1129-40 Ag 1 '47

RADIOGRAPHY—*Continued*
Classification and recording of spot-weld defects revealed by radiography. R. C. McMaster and others. bibliog il Welding J 26: 121-8 F '47
Common-sense of engineering radiography. V. E. Pullin. Engineer 182:536-7 D 13 '46
Community-wide chest X-ray surveys. F. J. Weber. Pub Health Rep 62:652-8 My 2 '47
Composition and diffraction effects in X-ray microradiographs. R. Smoluchowski and others. bibliog il diags J Ap Phys 17:864-70 N '46
Constructing a multiple exposure chart for X-rays. Steel 120:103-4+ Ap 28 '47
Exposure chart for radium radiography; data sheet. H. R. Isenburger. Metal Prog 52:640 O '47
High-speed photography for study of high speed mechanisms. G. A. Hawkins and C. E. Balleisen. il Machine Design 19:121-2 S '47
How to get good detail in X-ray negatives. il diags Am Mach 91:81-4 F 27 '47
Improved film-monitoring technic for the evaluation of X-ray exposure; abstract. R. M. Seideman. Ind Med 16:469+ S '47
Inspection of pipe-line welding by radiographic methods. W. W. Offner. il Oil & Gas J 46:180-1 S 20 '47
Mass radiography in general hospitals. H. E. Hilleboe. Pub Health Rep 62:629-31 My 2 '47
Means for eliminating paper grain from X-ray diffraction films. K. E. Beu. R Sci Instr 18: 453 Je '47
Micro-radiography of gray cast iron; abstract. E. I. Salkovitz and others. Iron Age 159:86 My 8 '47
Million-volt X-ray solves crankshaft and other casting problems. E. H. Grimm. il Automotive & Aviation Ind 96:36-8+ My 15 '47
One-millionth-second radiography and its applications. C. M. Slack and D. C. Dickson, jr. bibliog il diags Inst Radio Eng Proc 35: 600-6 Je '47
Persistence of fluoroscopic screens. W. W. Van Allen. diag Pub Health Rep 61:1583-8, pl 1 N 1 '46
Photographic measurement of radiation quality and quantity. J. Kieffer and R. M. Seideman. bibliog Science 104:596-600 D 20 '46
Radiographs made with twenty-million volt X-rays. il Machine Design 19:109 F '47
Radiographs with C^{14}. A. V. Grosse and J. C. Snyder. il Science 105:240-1 F 28 '47
Radiography and the fatigue strength of spot welds in aluminum alloys. R. C. McMaster and H. J. Grover. bibliog il Welding J 26: 223-32 Mr '47
Radiography has role in developing foundry practice. R. G. Waite. Foundry 75:134 S '47
Radiography of spot welds in various sheet gages and dissimilar gage combinations. R. C. McMaster and others. bibliog il Welding J 26:19-29 Ja '47
Radiography reveals internal quality of die castings. R. W. Dively. il Steel 121:88-9+ N 3 '47
Survey of engineering radiography. V. E. Pullin. Engineer 183:40-2 Ja 10 '47
Swollen, impregnated, and compressed wood samples; X-ray diffraction studies. G. L. Clark and J. A. Howsman. bibliog il Ind & Eng Chem 38:1257-62 D '46
20-million volt betatron for industrial radiography. il Iron Age 158:60-1 N 21 '46
Vacuum exposure holder for microradiography. H. F. Sherwood. bibliog il diags R Sci Instr 18:80-3 F '47
X-ray storage properties of the infra-red storage phosphor and application to radiography. O. E. Berg and H. F. Kaiser. bibliog il diags J Ap Phys 18:343-7 Ap '47

See also
Diagnosis, Radioscopic
Metallography
Metals—X ray inspection
Welding—X ray inspection
X rays in dentistry

RADIOGRAPHY, Stereoscopic
Improved sensitivity in double-exposure radiography. J. Rigbey. bibliog il Am Soc for Metals Trans 35:536-48 '45; Abstract. Metals & Alloys 22:208+ Jl '45; Discussion. Am Soc for Metals Trans 35:549-50 '45

RADIOLOCATOR. See Radar

RADIOMETERS

See also
Bolometers

RADIOMETRY

Nomenclature

Study of photometric nomenclature. P. Moon and D. E. Spencer. bibliog Opt Soc Am J 36:666-75 N '46

RADIOSCOPIC diagnosis. See Diagnosis, Radioscopic

RADIOSONDE. See Radio meteorographs

RADIOTHERAPY
Protective action of desoxycorticosterone acetate against X-ray-induced liver changes. F. Ellinger. bibliog Science 104:502-3 N 29 '46

See also
Capacitron
Phototherapy
Ultraviolet rays—Therapeutic use

RADIUM
Evaluation of the beta and gamma radiation due to extended linear sources of radium. R. D. Evans. bibliog J Ind Hygiene 28:243-56 N '46
Low energy alpha-particles from radium. W. Y. Chang. bibliog Phys R 70:632-9 N 1 '46
Preparation of pressed Ra+Be neutron sources. H. L. Anderson and B. T. Feld. R Sci Instr 18:186-8 Mr '47

See also
Gamma rays
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Radiography

Analysis

Improved Geiger-counter arrangement for determination of radium content. F. J. Davis. il diags J Res Nat Bur Stand 38:513-18 My '47

RADIUM E
Formation of radium E and polonium by deuteron bombardment of bismuth. H. E. Tatel and J. M. Cork. Phys R 71:159-64 F 1 '47

RADIUM poisoning
Radioactive luminous paint; need for control measures in aircraft instrument overhaul as well as in dial painting. R. L. Shorkey. Nat Safety N 56:28-9 S '47

RAGS
Dobrow and Overton tell facts before Cotton rag council. Paper Tr J 124:7+ Mr 20 '47
Fibrous waste materials. Paper Tr J 124: 165 F 27 '47
Flax and rags make fine papers at Beauharnois. D. W. Emmerson. il Pulp & Pa of Can 47:77-80 N '46
High cost of cotton rags hits specialty paper makers. Barron's 27:33 My 19 '47

RAIL chairs
Rail chairs will prevent tie damage. T. Mundt. diags Ry Age 122:234-5 Ja 25 '47

RAIL fastenings
Sharp decline in 1946 output of rails and fastenings. il Ry Age 123:737 N 1 '47

RAIL joints
Expansion rail joint for London transport lines. il Engineer 183:205 Mr 7 '47; Engineering 163:201 Mr 14 '47

Testing

Fourth progress report of the rolling-load tests of joint bars. N. J. Alleman. il In Ill U Eng Exp Sta Reprint Ser 35:17-29 '46

Welding

New method for the welding of rail joints. F. Wörtmann. il diags Iron & Steel Inst J 156:261-70 Je '47

RAIL motor cars. See Motor cars (railroad)

RAIL removal. See Street railroads—Track reclamation

RAILINGS, Bridge. See Bridge railings

RAILROAD accidents. See Railroads—Accidents

RAILROAD and utilities commissioners, National association of. See National association of railroad and utilities commissioners

RAILROAD associations

See also
Association of American railroads
Car department officers' association

RAILROAD board of mediation. See National mediation board

RAILROAD bridges. See Bridges, Railroad

RAILROAD engineering
American railway developments. E. E. R. Tratman. diags Engineer 184:128-30, 142-3 Ag 8-15 '47
American railway engineering association 46th annual meeting, Chicago, March 18-20. Ry Age 122:602-19 Mr 22 '47; Eng N 138:471+ Mr 27 '47
Presidential address to the Institution of mechanical engineers. O. V. S. Bulleid. il diags Engineering 162:413-15, 420, 444, 454-5 N 1-8 '46; Same. Inst Mech Eng J & Proc 156:Proc 1-5, pl 1-10 Je '47; Same cond. Engineer 182:375, 398-400 O 25-N 1 '46
Progress in railway mechanical engineering, 1945-1946. il diags Mech Eng 69:199-212 Mr '47

See also
Bridges, Railroad
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International railway congress
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Railroad research
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Railroads—Earthwork
Railroads—Maintenance and repair
Railroads—Track

RAILROAD engineers
Railways can get cream of the crop for future officers. Ry Age 122:699-702 Ap 5 '47

See also
Locomotive engineers

RAILROAD labor. See Railroads—Employees

RAILROAD land grants
Rules on land-grant rates under 1940 act. Ry Age 122:503-4 Mr 8 '47

RAILROAD law
Anti-trust-relief bill goes to Senate. Ry Age 122:512-13 Mr 8 '47
Federal legislation on labor-management disputes. Mo Labor R 64:839-44 My '47
Haste on Reed bill protested; hearing on S.110. Ry Age 122:243-5 Ja 25 '47
House group would end sickness benefits; provisions of Crosser act. Ry Age 123:25-6 Jl 5 '47
Issue in the anti-trust cases. E. A. Smith. Ry Age 123:354-8 Ag 30 '47
Keeping the peace in railroad transportation. R. L. Glenn and G. L. Wilson. Ann Am Acad 248:110-19 N '46
Lemke bill rapped by Faricy, Kendall; measure would regulate car service. Ry Age 122:1322+ Je 28 '47
Needed, a new transportation act. S. L. Miller. Ry Age 123:655-7+ O 18 '47
Railroads and unions heard on Crosser changes; Senate, House groups launch hearings. Ry Age 122:1322-3 Je 28 '47
Recent legislation alleviates railways' economic burden; waterway clearance requirements. J. B. Akers. il Civil Eng 17:71-2 F '47
Representative Reed introduces new railroad reorganization bill. Comm & Fin Chr 165:2388 My 1 '47
Senate passes anti-trust-relief bill. Ry Age 122:1252-5 Je 21 '47
Terminal line can be agent of proprietors; I.C.C., reversing its Division 3, finds tariffs not required. Ry Age 122:286+ F 1 '47
Tobey files minority report on Reed bill to stay the operation of anti-trust laws. Ry Age 122:568+ Mr 15 '47
Unemployment tax cut plan opposed; Howell bill to amend Crosser law. Ry Age 123:113+ Jl 19 '47
West Coast employees fight Crosser act. Ry Age 121:1091-2 D 28 '46

See also
National mediation board

RAILROAD motor cars. See Motor cars (railroad)

RAILROAD rates. See Railroads—Rates

RAILROAD research
Research to improve crossties urged. C. A. Rishell. il Ry Age 123:701-3 O 25 '47
World's oldest railway. C. E. Lee. Engineering 162:595 D 20 '46

RAILROAD shops. See Locomotive shops; Railroads—Shops

RAILROAD stations. See Railroads—Stations

RAILROAD strikes
Background of the T. P. & W. strike. Ry Age 122:596-7+ Mr 22 '47
Strike tactics net Southern Pacific engineers small gain over mediation. Ry Age 123:204 Ag 2 '47
Strike was open violation of law; report on disputes between the Southern Pacific (Pacific lines), Northwestern Pacific, the San Diego & Arizona Eastern and the Brotherhood of locomotive engineers. Ry Age 123:291 Ag 16 '47
T.P.&W.-unions sign accord, end strike. Ry Age 122:860 Ap 26 '47

RAILROAD superintendents, American association of. See American association of railroad superintendents

RAILROAD supplies industry
Boom; a second look. il Fortune 34:113-19+ D '46
From war to peace; civilian production achievements in transition. J. D. Small. Ry Age 122:114+ Ja 4 '47
Maintenance supply men hold second joint exhibit. Ry Age 123:541-3 S 27 '47
Rail equipment makers hope five-year boom is at hand. S. Shane. Barron's 27:12 Ja 13 '47
Railroad equipment industry prospects are promising. V. Bell. il Steel 120:43-5 F 24 '47

Finance

Diversified stake in dynamic rail equipment. H. F. Travis. il Mag of Wall St 80:434-6+ Jl 19 '47

Securities

Rail equipments; which companies will benefit most from higher rail income? with statistics on leading manufacturers. S. Devlin. il Mag of Wall St 79:365-6+ Ja 4 '47

Europe

Europe's railroad-equipment industries attempting recovery. T. J. Murphy. il For Comm W 28:4-6 S 6 '47

RAILROAD ties
Can crosstie service life be doubled? problem of mechanical wear. H. F. Jefferson and others. il Ry Age 122:1159-61 Je 7 '47
Rail chairs will prevent tie damage. T. Mundt. diags Ry Age 122:234-5 Ja 25 '47
Railway sleepers; reports before International railway congress. Engineering 164:17-18, 29, 66 Jl 4-18 '47
Railway tie association 29th annual meeting, Hot Springs, Ark. Sept. 23-25. Ry Age 123:573-4 O 4 '47
Research to improve crossties urged. C. A. Rishell. il Ry Age 123:701-3 O 25 '47

Statistics

Crosstie requirements for next year. C. M. Burpee. Ry Age 123:528-9 S 27 '47
Tie renewals slump 14:4 per cent. il Ry Age 123:283-5 Ag 16 '47

Testing

Constant-length bar for outdoor use; temperature maintained by electrically heated sulfur dioxide. H. I. Andrews. il diags Engineering 163:25-6 Ja 10 '47

RAILROAD tracks. See Mine tracks; Railroads—Track

RAILROAD yards. See Railroads—Yards

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Air brakes
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Freight car service
Freight cars
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Mountain railroads
Rack railroads
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Railway mail service
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also subdivision Railroads under names of cities, e.g. Boston—Railroads

Abandonment

Line abandonments up slightly in 1946. G. E. Boyd. il Ry Age 122:100-1 Ja 4 '47

Accidents

Circumstances of three derailments reviewed. Ry Age 122:568-9 Mr 15 '47
Defective coupler and brakes cause of car runaway near Gallitzin, Pa. Ry Mech Eng 121:271-2 My '47
Derailment caused by excessive speed on curve, near Oro Grande, Calif. Ry Age 121: 975 D 7 '46
Equipment defects let car break loose; safety appliance law violated in Sunshine Special operation. Ry Age 122:809-11 Ap 19 '47
Inadequately secured lading fouled American's track; accident on the Pennsylvania near Warrior Ridge, Pa. Ry Age 122:1278-9 Je 21 '47
I.C.C. finds high-speed caused Red Arrow smash. Ry Age 122:763-5 Ap 12 '47
I.C.C. recommends adequate protection for track cars. Ry Age 122:572-3 Mr 15 '47
I.C.C. summarizes 1945 accident data. Ry Age 121:1094+ D 28 '46
Railway accidents in 1946. Engineering 164: 182 Ag 22 '47
Rash of train wrecks, why? il Bsns W p19 Ap 19 '47
Steam railroad section of the National safety council meeting, Chicago, Oct. 7-9. Ry Age 123:662+ O 18 '47
Tractor falling in Zephyr's path not properly secured; accident on the Chicago, Burlington & Quincy at Downers Grove, Ill. Ry Age 122:1182-4 Je 7 '47
Wreck-proof trains. R. M. Hyatt. Pub Util 39:24-7 Ja 2 '47
Wreck report cites fireman's absence from Diesel cab; Aug. 6 collision near Litchfield, Ill. Ry Age 123:668 O 18 '47

See also

Grade crossing accidents
Locomotives—Failures

Accounting

ABC of depreciation accounting. J. F. Blair. Ry Age 122:311-15 F 8 '47
Modern accounting on the New Haven. G. T. Carmichael. il Ry Age 122:690-3, 751-3 Ap 5-12 '47

See also Association of American railroads—Accounting division

Advertising

Bold headline, short copy in effective campaign for obtaining railroad ties from farmers. Ptr Ink 218:66 F 28 '47
British railways point for future tourist trade. H. F. Meyer. il Ptr Ink 217:42-4 D 13 '46
Hog crossing America vs. the kid in upper 4. C. E. Parks. Ptr Ink 218:100 Ja 24 '47
Modern time table gives you much more than train time today. G. J. Church. il Inland Ptr 119:66 S '47
Railroad advertising increased 35 per cent in 1946. F. Snow. Adv & Sell 40:52+ Jl '47
Slogan used 10 years is still effective; Southern Pacific billboards. F. Q. Tredway. il Ptr Ink 218:47 F 7 '47
Why doesn't public relations copy stop talking to itself? C. & O. copy and other exceptions. J. F. Egan. Adv & Sell 40:41+ Ja '47

Air conditioning

See Car cooling

Airline competition

Air short hauls can compete with surface. R. H. Rush. il Air Transport 5:45-9 F '47
Boston & Maine replies to advertising criticisms. R. M. Edgar. Aviation N 7:30 Ap 14 '47
For air transport, the taxpayer pays; report issued by Railroad committee for study of transportation. Ry Age 123:571-2+ O 4 '47
Planes gained top-rate travel as railway net dived. Ry Age 122:410-11 F 22 '47
Railroads in strong competitive position. A. Jansen. Barron's 27:7-8 Ag 18 '47
Survey shows slight decline in enthusiasm for air travel; study made for Association of American railroads. Aviation W 47:59-60 S 8 '47
War no windfall to railroad's progress. L. J. Kiernan. Ry Age 121:1015-16 D 14 '46

Airplane auxiliaries

Gurley takes air-freight plea to Truman's air commission. Ry Age 123:710 O 25 '47
Would lift ban on rail-owned air lines; hearings before the Air policy commission. Ry Age 123:753+ N 1 '47

Automatic stop and train control

Automatic train control developments on the G.W.R.; audible cab signalling. il diags Engineer 184:360-1 O 17 '47
Automatic train control on the Great western railway. Engineering 164:380 O 17 '47
I.C.C. orders more signaling on high-speed lines. Ry Age 122:1264+ Je 21 '47

Automobile rental service

Rail-auto revival. Bsns W p52-3 Ap 19 '47
Southern Pacific offers rail-and-auto service; tie-up with Hertz drivurself system in 250 cities. il Sales Management 59:136+ O 15 '47

Biography

Who's who in railroading in North America. 11th ed 780p $8.50 Simmons-Boardman pub. co, 30 Church st, New York '46

Boys' tours

Boys' tours prove successful on the Chesapeake & Ohio. il Ry Age 122:1263 Je 21 '47

Braking

Continuous braking of freight trains. H. Waghorne. Inst Mech Eng J & Proc 156:Proc 76-7 Je '47
Handling long, heavy freight trains; report of Railway fuel and traveling engineers' assn. Ry Mech Eng 121:543-5 O '47
L.M.S. mobile testing plant. il Engineer 184: 144-6 Ag 15 '47; Same abr. Electrician 139: 473-4 Ag 15 '47; Same cond. Elec R (Lond) 141:290-2 Ag 22 '47
Recent developments in speed controls. C. D. Stewart. il Ry Age 121:604-7 O 12 '46; Same. Ry Mech Eng 121:60-4 F '47
Testing locomotives on the track; L.M.S. railway. il Engineering 164:321-2, 324 O 3 '47

Branch lines

See Railroads, Short line

Bridge crossing

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Buildings and structures

American railway bridge and building association annual meeting, Chicago, Sept. 16-18. Ry Age 123:560-5 O 4 '47
1946 construction covered wide range; U.S., Canada and Mexico. G. E. Boyd. il Ry Age 122:79-82 Ja 4 '47
Property-betterment programs aim at super railroads. il Ry Age 122:1029-33 My 17 '47
What type communication towers? il diags Ry Age 122:937-8+ My 10 '47
Wrought iron used effectively in marine-pier fire walls. il diag Ry Age 123:15-16 Jl 5 '47

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Car departments

Car department question; prize winning papers. Ry Mech Eng 121:297-305 Je '47
Car officers' obstacles and opportunities. K. F. Nystrom. Ry Mech Eng 121:556-7 O '47
Car-repair automotive equipment. il Ry Mech Eng 120:624-6 N '46
High spots of the car department problem. J. T. Ford. Ry Mech Eng 121:343-4 Jl '47
Responsibility of the car department. L. L. White. Ry Mech Eng 121:554-5 O '47

See also Car department officers' association

Cars

See Cars; Dining cars; Freight cars; Motor cars (railroad); Refrigerator cars; Sleeping cars

Centralized traffic control

See Railroads—Signals

Claims

C.N.R. fights freight loss with new weapons. il Ry Age 123:109-10 Jl 19 '47
Industry's stake in the freight classification revision; abstract. W. B. Lincoln, jr. Mod Packaging 20:145-6 Ap '47
Railway claims. G. Saville. Elec R (Lond) 139:1077-9 D 27 '46
Working for the railroad; Union Pacific package engineer to investigate and eliminate failures. il Mod Packaging 20:124-5 My '47

See also Association of American railroads—Freight claim division

Clearance

Checking clearances on Canadian Pacific cars. il Ry Mech Eng 121:21-2 Ja '47

Clinic trains

French national railroads fight disease with clinics on wheels. il Ry Age 123:398-9 S 6 '47

Communication

See Railroads—Radio communication; Railroads—Telegraph; Railroads—Telephone

Commuter service

Some suggestions for new commuter equipment. B. L. Webster. il diags Ry Age 122: 644-6 Mr 29 '47

Competitive transportation

Study group assays passenger outlook; report by Railroad committee for study of transportation. Ry Age 121:841-5 N 16 '46

Congresses

See also
International railway congress

Consolidation

Another rail merger? Gulf, Mobile & Ohio and just-reorganized Frisco talk over possibilities. map Bsns W p62+ Ag 30 '47
C.&O.-P.M. merger approved. Ry Age 122: 704-5 Ap 5 '47
Eastern railroad consolidation plan. C. C. Henkel. Comm & Fin Chr 165:2990+ Je 5 '47
Gulf, Mobile & Ohio absorbs Alton. M. Halpern. Barron's 27:23 Je 23 '47
I.C.C. approves Coast Line control of Florida East Coast. Ry Age 122:1072+ My 24 '47
Mr Young and his C.&O. il maps Fortune 35:96-103+ My '47
Wheeling acquisition would transform Nickel Plate. Barron's 27:33 Je 30 '47

Construction

Maintenance and construction forces plan large budgets for 1947. il Ry Age 122:538-42 Mr 15 '47
New tunnel for C.&O. R. S. Siegrist. il diag Explosives Eng 25:11-14 Ja '47
1946 construction covered wide range; U.S., Canada and Mexico. G. E. Boyd. il Ry Age 122:79-82 Ja 4 '47
1946 railroad construction indices. Ry Age 123: 276 Ag 16 '47

See also
Railroads—Earthwork
Railroads—Track

Cooperative ownership

Farmer-owned railroad a successful venture. Bsns W p20 N 9 '46

Cost of construction

Railroad construction cost indexes, 1921-1945. Eng N 138:605 Ap 17 '47

Costs

Maintenance expenditures in down trend. M. H. Dick. il Ry Age 122:16-20 Ja 4 '47
Mexican railways had unsettled year. il Ry Age 122:49-51 Ja 4 '47
Reducing upkeep costs with heavy rail; experience of the Bessemer & Lake Erie. F. R. Layng. il Ry Age 121:1080-1 D 28 '46
Reviews estimates of postwar expenditures; I.C.C. Bureau of transport economics and statistics. Ry Age 122:857-8 Ap 26 '47

Curves and turnouts

Speed on curves. Engineer 184:41 Jl 11 '47

Damage from floods, storms, etc.

Floods disrupt train service between Chicago-West coast. il Ry Age 122:1317 Je 28 '47
Hurricane destroys main line trestles. Ry Age 123:538 S 27 '47
London & North Eastern vs. winter 1947. il Ry Age 122:1315 Je 28 '47

Derailments

See Railroads—Accidents

Development work

Baltimore & Ohio taps new coal field; converts light traffic lines into stabilizers of coal traffic. il map Ry Age 121:1075-9 D 28 '46
How Seaboard air line promotes its area's timber. R. N. Hoskins. il Ry Age 123:390-1 S 6 '47
Selling service has many angles; promotion of traffic includes agricultural and industrial development. il Ry Age 123:10-14 Jl 5 '47

Earthwork

Modern earthmoving equipment makes the dirt fly in North Dakota; Northern Pacific, Salem-Kurtz cutoff. il plan Ry Age 123: 142-5 Jl 26 '47
Progress report of the joint investigation of methods of roadbed stabilization. R. B. Peck. il diags Ill U Eng Exp Sta Reprint Ser 34:1-32 '46
Roadway and ballast; A.R.E.A. committee report. Ry Age 122:616-17 Mr 22 '47

Electric equipment

Electric sections, A.A.R., meeting, Chicago. Ry Age 121:756-60 N 9 '46; Ry Mech Eng 120:591-605 N '46
Electrical applications increase rapidly. A. G. Oehler. il Ry Age 122:37-8 Ja 4 '47
Electrical repair shop of Missouri Pacific at Sedalia, Mo il Ry Mech Eng 121:198-200 Ap '47
Long Island adding four rectifier substations. il Ry Mech Eng 121:597-8 O '47
Maintaining Waukesha equipment; Southern Pacific repair shops. il diag Ry Mech Eng 121:29-31+ Ja '47
Power cables on brackets; methods of installation in railway work. P. E. Williams. Elec R (Lond) 140:1063-4 Je 27 '47
Railway points; long-distance electrical operation. H. C. Towers. il Elec R (Lond) 139:737-40 N 8 '46
16,000 tubes work for one railroad. Electronics 20:186+ Ap '47

See also
Railroads—Signals

Bibliography

Applications of electricity to railways, 1942-1945; bibliography of periodical articles appearing in a select list of periodicals. E. A. Freeman and D. R. Stephenson, comps. 87p Assn. of American railroads, Bur. of railway economics lib, Washington, D.C. '47

RAILROADS—*Continued*

Electrification

Bibliography

Applications of electricity to railways, 1942-1945; bibliography of periodical articles appearing in a select list of periodicals. E. A. Freeman and D. R. Stephenson, comps. 87p Assn. of American railroads, Bur. of railway economics lib, Washington, D.C. '47

Argentina

Suburban electrification on the Central Argentine railway. il Engineer 183:423-4 My 16 '47

Great Britain

Extension of electrification on the Southern Railway. map Engineer 182:417 N 8 '46; Elec R (Lond) 139:733-4 N 8 '46; Electrician 137:1275-6 N 8 '46

Main-line electrification; resumption of Manchester-Sheffield scheme. map Elec R (Lond) 141:326 Ag 29 '47

Railway electrification in Great Britain. Engineering 168:421-2 N 1 '46

Some aspects of railway electrification in Great Britain. R. Varley. Inst E E J 94 pt 1:83-6 F '47; Same cond. Engineer 182: 340-1 O 18 '46; Abstract. Electrician 137: 999 O 11 '46 .

Italy

Electrification of the Milan-Domodossola railway. il Engineering 164:189 Ag 22 '47

Spain

Electrification of the Spanish state railways. map Engineer 182:467 N 22 '46

Spain to expand power output for rail electrification. For Comm W 25:41 D 21 '46

Spanish railways; over 2,800 miles to be electrified. C. J. Webb. Elec R (Lond) 139: 626 O 18 '46

Employees

Building tomorrow's supervisory staff for railroad mechanical departments; prize winning papers. il Ry Mech Eng 121:285-95 Je '47

Cash sickness benefits for railroad workers. Ind Med 16:290 Je '47

Comments on car supply, Department of justice and working rules. F. G. Gurley. Ry Age 122:1168 Je 7 '47

Cooperation with universities; A.R.E.A. committee report. Ry Age 122:612-13 Mr 22 '47

Date to remember; end of moratorium on rail labor negotiations. Bsns W p84+ F 15 '47

Dividends from friendliness; Southern Pacific public relations campaign. J. J. O'Rourke. il Am Bsns 16:18-20+ D '46

Employees' timetable tells how to treat passengers; Chicago & Eastern Illinois. Ry Age 123:9 Jl 5 '47

Enlightened labor-management relations. D. B. Robertson. Comm & Fin Chr 164:3348+ D 26 '46

Federal legislation on labor-management disputes. Mo Labor R 64:844-5 My '47

French national railroads fight disease with clinics on wheels. il Ry Age 123:398-9 S 6 '47

Guaranteed employment plan of Seaboard railroad. J. L. Afros. Mo Labor R 65:167-71 Ag '47

House group would end sickness benefits; provisions of Crosser act. Ry Age 123:25-6 Jl 5 '47

Milwaukee's safety shoe car begins tour to supply on-the-job sales service for all employees. il Ry Age 121:1050-1 D 21 '46

Neuropsychiatric conditions in railroad employees. F. G. Norbury. Ind Med 16:122-5 Mr '47

Rail labor announces post-war program; report of committee. Ry Age 121:922-4+ N 30 '46

Rail wages open; nonoperating brotherhoods, carriers in arbitration; operating unions getting together on demands. Bsns W p84 Ag 16 '47

Railroad work rules puzzle; carriers and brotherhoods talk over revisions. il Bsns W p84+ O 4 '47

Sickness and maternity benefits for railroad workers. Mo Labor R 65:194-5 Ag '47

Sickness benefits begin July 1 under the Railroad unemployment insurance act. Ry Age 122:1207 Je 14 '47

Southern starts magazine. il Ry Age 122:453 Mr 1 '47

Surgical management of peptic ulcers in railway employees. J. D. Bisgard. Ind Med 16: 168-9 Ap '47

Techniques of negotiation. L. W. Horning. Ry Age 121:955-6; Discussion. 956-7 D 7 '46

Unemployment tax cut plan opposed; Howell bill to amend Crosser law. Ry Age 123:113+ Jl 19 '47

What the operating unions demand. Ry Age 123:190-4 Ag 2 '47

Why I'm working on the railroad; New York Central discusses the economic side of its business with employees. Trusts & Estates 84:158-60 F '47

Winners in railroad employee safety contest. Nat Safety N 56:32 Jl '47

Year of labor turmoil and wage boosts. W. H. Schmidt, jr. and C. Robinson. il Ry Age 122:8-11+ Ja 4 '47

See also

Locomotive engineers
Railroad strikes
Railroads—Pensions
Railroads—Physicians
Railroads—Wages
also Young men's Christian association—Railroad department

Training

Chicago & North Western instruction car. il Ry Mech Eng 121:401 Ag '47

Everybody works for the customer; New York Central's 130,000 employees. J. A. Murphy. il Am Bsns 17:8-9+ Ag '47

How the B. & O.'s freight traffic men get acquainted with the road. Ry Age 123:693+ O 25 '47

Man-to-man conferences on the Espee; Southern Pacific's training program on human relations. il Ry Age 123:44-7 Jl 12 '47

Postwar mechanical problems. F. K. Mitchell. Ry Age 122:886-9 My 3 '47

Rolling school for locomotive engineers; instruction car for Chicago and north western railway system. il Diesel Power 25: 66-7 Ag '47

Supreme court rules on railway trainees; Jackson assails Court on wage-hour law. Comm & Fin Chr 165:1166 F 27 '47

Thoughts on human relations; fundamentals of selecting and training new men. J. D. Loftis. Ry Age 123:520-1 S 27 '47; Same. Ry Mech Eng 121:542-3 O '47

Trailer brings safety films to railroad workers. il Nat Safety N 54:56 D '46

Train and encourage your supervisors. G. H. Raner. Ry Mech Eng 121:342-3 Jl '47

Training apprentices and supervisors. W. H. Sagstetter. Ry Mech Eng 121:176-7+ Ap '47

Training employees in friendly service. Ry Age 121:821-5+ N 16 '46

Training the Diesel locomotive crew; report of Locomotive maintenance officers association. Ry Mech Eng 121:525-6 O '47

Training understudies and promoting supervisors; report of Locomotive maintenance officers association. Ry Mech Eng 121:522-5 O '47

University training for the staff man. S. Berge. Ry Age 123:400-4 S 6 '47

Equipment and supplies

L.M.S. steam breakdown cranes. il Mech Handling 33:705 N '46

Materials handling developments on the Great western railway. il Mech Handling 34:414-16 Ag '47

National railway appliances assn. 32d annual products exhibit, Chicago. Ry Age 122:620-3 Mr 22 '47

New and improved products of the manufacturers. il diags Ry Age 122:543-60 Mr 15 '47

New devices cut rail costs. il Bsns W p48+ Jl 12 '47

RAILROADS—Equipment and supplies—*Cont.*
Planning avoids unnecessary handling; palletized loading of railway material and commercial freight. G. A. Goerner. il Ry Age 122:316-18 F 8 '47
Power-driven wagon-shunting trolley. il Engineering 164:93 Jl 25 '47
Railroad X-ray checks metal in cars, locomotives, rails, for internal flaws. il Sci Am 177:220-1 N '47
Railway materials; how much and when? F. W. Smith. il Ry Age 122:52-7+ Ja 4 '47
Work equipment purchases down in 1946 but need for mechanization grows. N. D. Howard. il Ry Age 122:12-15 Ja 4 '47

See also
Air brakes
Car couplings
Cars
Freight cars
Locomotives
Railroad supplies industry
Railroad ties
Railroads—Electric equipment
Railroads—Maintenance and repair
Railroads—Purchasing
Railroads—Rolling stock
Railroads—Scrap material
Railroads—Shops—Equipment
Railroads—Signals
Railroads—Water supply
Rails

Equipment trust certificates

Representative equipment trust issues sold in 1946; tabulation. Ry Age 122:69 Ja 4 '47

Fares

Clear way for Pullman rate-increase tariffs. Ry Age 123:455 S 13 '47
Eastern passenger fare increase authorized. Ry Age 122:1091 My 24 '47
Eastern roads would lift passenger fares. Ry Age 122:504-5 Mr 8 '47
Fares, tickets and commissions for volume rail travel. S. Berge. Ry Age 122:357-9 F 15 '47
I.C.C. holds hearing on eastern fare hike. Ry Age 122:713+, 862-3 Ap 5, 26 '47
New Haven fare boost will yield $5 ¼ million. Ry Age 122:809 Ap 19 '47
Rail fare plea. Bsns W p20 Mr 8 '47
Rate rise proposed by Pullman company for sleeping-car service. Ry Age 123:375-6 Ag 30 '47

Federal loans

Tobey's case against B. & O. loan extension. Ry Age 122:803-6, 908-10, 954-6, 1085-6, 1138+ Ap 19, My 3-10, 24-31 '47

Finance

A.A.R. study group reports on railroad finance. Ry Age 122:939+ My 10 '47
Blue ribbon railroads; C.&O., N.&W., and Virginian make big money by hauling soft coal. il Bsns W p70-2+ My 24 '47
Capital expenditures by class I railroads highest since 1931, with exception of 1945. Comm & Fin Chr 165:2206 Ap 24 '47
Class I roads had 1946 net income of $287,000,000. Ry Age 122:362 F 15 '47
Drastic shift found in net income distribution, first quarter of 1947. Ry Age 122: 1129-30 My 31 '47
Elbow room for the railroads; present financial difficulties. T. I. Parkinson. Comm & Fin Chr 166:713+ Ap 21 '47
Freight rate boost to aid October revenues. R. M. Bleiberg. Barron's 27:29 O 13 '47
Gross and net earnings of U.S. railroads for the calendar year 1946. Comm & Fin Chr 165:3100 Je 9 '47
Heavy volume now vital to railroads' net. J. C. Clendenin and J. T. Schneider. Barron's 27:29-30 Ag 11 '47
High costs, not debt burden, hits rails. H. G. Hockstader, jr. Comm & Fin Chr 165 1924+ Ap 10 '47
Insured solvency the best armor against nationalization. P. H. Middleton. Ry Age 123: 53 Jl 12 '47; Excerpt. Comm & Fin Chr 166: 649 Ag 14 '47
IBA committee reports railroad credit losing ground. Comm & Fin Chr 164:3051+ D 12 '46
Meeting operating costs not enough. R. B. White. Ry Age 122:278+ F 1 '47
Mr Young and his C.&O. il maps Fortune 35: 96-103+ My '47
News and views of investments; freight rate increases; with railroads' forecasts of 1947 earnings. A. Jansen. Barron's 26:1, 6 D 16 '46
1946 capital outlays totaled $565.5 million. Ry Age 122:201+ Ja 18 '47
1947-48 prospects for the railroads; with statistical position of leading companies. F. R. Walters. Mag of Wall St 80:595-7+ Ag 30 '47
No rubber dollars in railroads' tills. E. E. Norris. Ry Age 121:884+ N 23 '46
Outlook for railway earning power; with tabulation giving estimated earnings for principal roads. V. C. Smith. Comm & Fin Chr 166:434 Jl 31 '47
Post-mortem on poorest earning year since 1940. Ry Age 122:533-4 Mr 15 '47
Rail cooperative planned; new setup for Rutland line. map Bsns W p19 N 9 '46; Discussion. p41 D 7 '46; 24+ Ja 4 '47
Rail income surprisingly good. il Bsns W p62+ Ag 9 '47
Rail outlook for 1947 is reassuring. A. Jansen. Barron's 26:3+ D 30 '46
Railroad earnings analyzed in latest Monthly comment by the Bureau of transport economics and statistics. Ry Age 123:289-90 Ag 16 '47
Railroad equities are still depressed. J. G. Lyne. Ry Age 122:68-73+ Ja 4 '47
Railroad recession ahead. C. Shipman. Comm & Fin Chr 165:594+ Ja 30 '47
Railroad security outlook. W. F. Hahn. Comm & Fin Chr 166:1744+ O 30 '47; Same cond. Ry Age 123:729-30+ N 1 '47
Railroads' contribution to total national income dwindles. Ry Age 123:104+ Jl 19 '47
Railroads must have a 6 per cent return. R. V. Fletcher Ry Age 122:408-9 F 22 '47
Railroads must see real danger and attack it if they are to keep or deserve solvency. Barron's 27:12 My 19 '47
Railroads take it on the chin. Bsns W p61-2+ F 15 '47
Rails; no. 1 market paradox of 1947. Bsns W p87 My 31 '47
Railway earnings and railway needs. Ry Age 122:971-2 My 17 '47
Rate increase won't offset post-June-30 cost rise. Ry Age 123:661+ O 18 '47
Rate of return by class I railroads in 1946 on property investment averaged 2.74%. Comm & Fin Chr 165:926 F 13 '47
Revenues, expenses, and income of class I railroads, annual, 1939-1945, seasonally adjusted and unadjusted, monthly Aug. 1945-Oct. 1946. Fed Res Bul 33:80 Ja '47 [cont monthly]
Shippers can determine the quantity and quality of railroad service; larger capital investment required. Ry Age 122:973-5 My 17 '47
Six months' net income totaled $204,000,000. Ry Age 123:249-50 Ag 9 '47
Stage set for large-scale improvements. J. G. Lyne. il Ry Age 122:4-7 Ja 4 '47
Traffic large, earnings down in Canada. il Ry Age 122:45-8 Ja 4 '47
Wage boosts will hit rail earnings hard. Bsns W p 115 S 20 '47
What is the railroads' future? C. Hungerford. Ry Age 122:366 F 15 '47

See also
Railroads—Costs
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Railroads—Rates
Railroads—Receiverships
Railroads—Securities
Railroads—Taxation

also names of railroads, e.g.
Baltimore and Ohio railroad
Central railroad of New Jersey
Denver and Rio Grande western railroad
Great northern railway
Missouri-Kansas-Texas railroad
New York central railroad
Pennsylvania railroad
Reading company
St Louis-San Francisco railway
Seaboard air line railroad
Southern Pacific railroad
Texas and Pacific railway
Union Pacific railroad
Western Maryland railway

RAILROADS—*Continued*

Fires and fire protection

Association of American railroads. Fire protection and insurance section, annual meeting, Chicago, Oct. 23-24. Ry Age 123:738-9 N 1 '47

Diesel fire protection. P. W. Eberhardt. il Diesel Power 24:1351+ N '46

Food service

What electronics may do on diners; New York railroad club symposium. E. D. Campbell and others. il plans Ry Age 122:784-91 Ap 19 '47

Freight

Agents talk over l.c.l. and damages; meeting of Freight station section, A.A.R. Chicago, June 11-13. Ry Age 122:1267-9 Je 21 '47

Blue ribbon railroads; C.&O., N.&W., and Virginian make big money by hauling soft coal. il Bsns W p70-2+ My 24 '47

Col. Johnson answers Rip Van Winkle ads. Ry Age 123:454+, 491+ S 13-20 '47

Diesel freight operations expanding. il Ry Age 122:1117-20 My 31 '47

Diesels average 12,000 miles a month; Southern fast freight service. il map Ry Age 122:1312-14 Je 28 '47

Erie cuts tops off hills with Diesels; six road freight Diesels round out 30 months of service. il map Ry Age 123:286-8 Ag 16 '47

Factors behind loss and damage increase during 1940-1946. C. H. Dietrich. Ry Age 122: 756 Ap 12 '47

Freight carloadings, by classes. Published in monthly numbers of Federal reserve bulletin

Freight progress annual. il Ry Age 122:971-1048 My 17 '47

Freight traffic in 1944 war 89.1 per cent of potential. Ry Age 122:191 Ja 18 '47

Freight traffic sets peace-time high. C. Robinson. il Ry Age 122:33-6 Ja 4 '47

Heavy-duty transfer Diesel follows path of most resistance; increases maximum train tonnages on Chicago Outer Belt. il map Ry Age 123:740-1+ N 1 '47

Industrial migration; rail traffic volume measure of decentralization. M. Halpern. map Trusts & Estates 84:65-6+, 427-30, 515-16+; 85:52-4 Ja, Ap-My, Jl '47

International timetable session at Prague proves successful. For Comm W 26:35 F 1 '47

ICC predicts 1948 rail traffic pattern. map Bsns W p18 N 9 '46

Painful shifts ahead among coal producers; effects on railroads will vary. A. L. Jackson. Barron's 27:11 F 10 '47

Plight of the iron horse; better forage is found where rail traffic grows. G. Garbutt. Trusts & Estates 85:227-8+ S '47

Rail traffic trends diverging widely; indexes of ton-mileage carried by individual roads reveal great changes. M. Halpern. Barron's 27:15 Ap 21 '47

Rio Grande installs radio to improve through freight service. il map Ry Age 122:146-7 Ja 11 '47

Rip Van Winkle ad leads to Faricy-Young debate; discussion of the freight-train schedules. Ry Age 123:335-6 Ag 23 '47

Roll-call shows railroads out for hole-in-one performance. il Ry Age 122:996-1003 My 17 '47

Sentinel freight service on the B.&O. il Ry Age 122:1156-8 Je 7 '47

U.P. container engineering a boon to customer relations. il Ry Age 122:500-1 Mr 8 '47

See also

Freight car service
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Railroads—Loading rules
Railroads—Motor vehicle auxiliaries
Railroads—Rates
Railroads—Terminals
Refrigerator cars

also Association of American railroads—Freight claim division

Freight cars

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Fuel

How much is Diesel fuel ousting coal? il Ry Age 122:488-9+ Mr 8 '47

Plea to get rid of complacency; reasons why good coal is scarce. R. L. Ireland. Ry Age 123:532-3 S 27 '47

Stores and reclaims coal at low cost; Atlantic Coast Line stock-piles standby supplies with electrically-operated drag-scraper equipment. il Ry Age 122:230-1 Ja 25 '47

See also

Coaling stations
Locomotives—Fuel

Government ownership

See Railroads and state

History

Getting history right on railroads. R. C. Overton. Ry Age 123:200-3 Ag 2 '47

National railway museum. E. W. Swan. Engineering 164:295 S 26 '47

Information service

Speeding customers' calls; installation of Remington-Rand Kardex visible file cabinets at Pennsylvania information and reservation bureau. il Ry Age 122:1084 My 24 '47

Inspection

See also

Car inspection

Insurance requirements

See also

Locomotives, Diesel—Insurance requirements

Law

See Railroad law

Lighting

Railway lighting; abstract. A. Cunnington and G. Golds. Light & Lighting 39:211-12 D '46

See also

Car lighting
Railroads—Shops—Lighting

Loading rules

Report on A.A.R. loading rules; report of Car department officers' assn. il Ry Mech Eng 121:563-4 O '47

Location

See also

Railroads—Relocation

Maintenance and repair

Arc welding used in renovation of railroad equipment. A. L. Champigny. il Welding J 26:776 S '47

Maintenance and construction forces plan large budgets for 1947. il Ry Age 122:538-42 Mr 15 '47

Maintenance expenditures in down trend. M. H. Dick. il Ry Age 122:16-20 Ja 4 '47

Side pits at L.P.T.B. rolling stock depots. il Engineer 184:372 O 17 '47

See also

Car cleaning
Cars—Repair
Locomotive shops
Locomotives—Repair
Locomotives, Diesel-electric—Repair
Railroads—Shops
Railroads—Track

Management

Aspirin for a Hoosier headache; Monon showing signs of new life. il Bsns W p18 Mr 29 '47

Barriger of the Monon. J. Garth. Am Bsns 17:82+ Ag '47

Fares, tickets and commissions for volume rail travel. S. Berge. Ry Age 122:357-9 F 15 '47

Have railroad managers done a good job? il Ry Age 122:1004-11 My 17 '47

RAILROADS—Management—*Continued*
Railroad changes with its territory; Central of Georgia makes improvements to supply transportation to increasingly industrialized area. il map Ry Age 122:800-1 Ap 19 '47

See also
Car inspection
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Railroads—Finance
Railroads—Maintenance and repair
Railroads—Office management
Railroads—Public relations
Railroads—Purchasing
Railroads—Rates
Railroads—Trains

Mechanical departments

Building tomorrow's supervisory staff for railroad mechanical department; prize winning papers. il Ry Mech Eng 121:285-95 Je '47
Postwar mechanical problems. F. K. Mitchell. Ry Age 122:886-9 My 3 '47
Train and encourage your supervisors. G. H. Raner. Ry Mech Eng 121:342-3 Jl '47

Mileage

See also
Railroads—Abandonment

Military use

Clark implies railroads were war profiteers; Department of justice seeks reparations for alleged overcharges. Ry Age 123:454+ S 13 '47
Railroads file reply in reparation cases. Ry Age 123:708-10 O 25 '47
Wharfage case again lost by army. Ry Age 123:375+ Ag 30 '47

Models

Barrel plated multiple coatings; toy railroad parts; Lionel corporation. M. Mazzone and F. McKnight. il Metal Finishing 45:81-5 Je '47
Electronic toy-train controls. J. L. Bonanno. il diags Electronics 20:94-6 F '47

Motor vehicle auxiliaries

Railway business association wants removal of legal restrictions on rail-highway coordination. Comm & Fin Chr 165:51 Ja 2 '47
Santa Fe authorized to buy 1,500 miles of truck routes. Ry Age 121:974 D 7 '46

See also
Railroads—Automobile rental service

Motor vehicle competition

Best source book on motor transport; A.A.R. report. Ry Age 123:365-6 Ag 30 '47
Railroads in strong competitive position; trucks and water carriers seriously weakened by rising costs. A. Jansen. Barron's 27:7-8 Ag 18 '47
Travel test should omit no essentials. J. W. Barriger. Ry Age 121:1038-41+ D 21 '46

Negro passengers

Southern's new diner rules found non-prejudicial. Ry Age 122:868 Ap 26 '47

Office management

Machine age comes to paper work; applications of new and improved office machines. il Ry Age 122:1034-9 My 17 '47

Passenger credit service

Establish installment plans for ticket purchases. Ry Age 123:164-5 Jl 26 '47
Success, but mild with passenger credit cards. Bsns W p79 Je 21 '47

Passenger service

Battle is brewing for the passenger's travel dollar; planes, trains and busses equipped with luxury trappings. il Sales Management 58:43-5 Mr 1 '47
Getting passengers on the trains. il Ry Age 121:826-7 N 16 '46
Let's give the travel market a real test. J. W. Barriger. Ry Age 121:804-5 N 16 '46
Musical entertainment on trains; Santa Fe installation of sound equipment. il Ry Age 123:575-7 O 4 '47
Packin' 'em in, but with a flourish. W. H. Schmidt, jr. il Ry Age 122:28-32 Ja 4 '47
Passenger progress begins again. il Ry Age 121:789-93 N 16 '46
Phone service on trains. Electronics 20:246+ O '47
Travel test should omit no essentials. J. W. Barriger. Ry Age 121:1038-41+ D 21 '46

See also
Radio receiving apparatus—Installation on trains
Railroads—Commuter service

Passenger traffic

Railroad passenger prospects. G. A. Kelly. Comm & Fin Chr 165:876+ F 13 '47
Study group assays passenger outlook; report by Railroad committee for study of transportation. Ry Age 121:841-5 N 16 '46

See also American association of passenger traffic officers

Pensions

Casualty industry unites to urge reversal of Crosser amendment; argue at Washington hearing. East Underw 48:31+ Je 20 '47
Crosser repeal testimony; actuary shows 85 per cent of railroad men voluntarily covered. E. D. Brown, jr. Nat Underw 51:20+ Je 5 '47; Same abr. Nat Underw (Life ed) 51:4+ Je 6 '47
Death benefit increases under 1946 retirement act. Ry Age 123:22-3 Jl 5 '47
Inroads of Crosser benefits on private cover negligible. Nat Underw 51:30 S 18 '47; Same. Nat Underw (Life ed) 51:2+ S 19 '47
Railroads and unions heard on Crosser changes; Senate, House groups launch hearings. Ry Age 122:1322-3 Je 28 '47
Repeal of Crosser amendment urged. G. T. Warfield, jr. Weekly Underw 156:1424 My 24 '47
Senate group has hearings on Crosser issue. Nat Underw (Life ed) 51:1+ Je 27 '47; Same abr. Nat Underw 51:17 Je 26 '47
Union punishes Crosser repeal leader; petitions reach Congress protesting procedure by which law was enacted. Ry Age 122: 795-6 Ap 19 '47
Views on Railroad retirement act. E. H. O'Connor. East Underw 48:28 Jl 4 '47
Washington hearing on railroad benefits abruptly ended by Crosser. East Underw 48:28 My 23 '47; Nat Underw 51:21+ My 22 '47; Nat Underw (Life ed) 51:1 My 23 '47
West Coast employees fight Crosser act. Ry Age 121:1091-2 D 28 '46

Physicians

Working on the railroad; railway surgeon, and what the field offers. D. Deal. Ind Med 16:252+ My '47

Police

Protective section meeting spurs railway police to curb crime. Ry Age 122:1306 Je 28 '47

Power

Design of indoor and outdoor substations; committee report, A.A.R. Electrical section. Ry Mech Eng 120:597 N '46
Generation and use of power for passenger cars. H. H. Hanft. diag Ry Mech Eng 121: 317-19+ Je '47
New York Central equips car to furnish electric power. il Ry Age 123:20 Jl 5 '47; Same. Ry Mech Eng 121:320-1 Je '47
Power car for isolated loads; New York Central develops mobile power source for supplying exhibit trains, parked Pullmans, battery charging, etc. il Ry Mech Eng 121: 320-1 Je '47
Signal power transmission. H. C. Towers. il diags Electrician 137:1287-9 N 8 '46

See also
Locomotives

Public relations

Dividends from friendliness; Southern Pacific public relations campaign. J. J. O'Rourke. il Am Bsns 16:18-20+ D '46
Employees' timetable tells how to treat passengers; Chicago & Eastern Illinois. Ry Age 123:9 Jl 5 '47

RAILROADS—Public relations—*Continued*
Everybody works for the customer; New York Central's 130,000 employees. J. A. Murphy. il Am Bsns 17:8-9+ Ag '47
Getting history right on railroads. R. C. Overton. Ry Age 123:200-3 Ag 2 '47
Getting passengers on the trains. il Ry Age 121:826-7 N 16 '46
Man-to-man conferences on the Espee; Southern Pacific's training program on human relations. il Ry Age 123:44-7 Jl 12 '47
Public is just waiting to be asked. L. F. Whittemore. Ry Age 122:451-3 Mr 1 '47
Public looks to railroad management for better service; latest Opinion Research poll's results summarized. Ry Age 123:321-2 Ag 23 '47
Rails should foster youth travel. R. R. Young. Ry Age 122:238 Ja 25 '47
Training employees in friendly service. Ry Age 121:821-5+ N 16 '46

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Railroads—Boys' tours

Purchasing

High-volume buying continues. Ry Age 122: 891-3; 123:59-60, 328-9, 446-8, 620-2, 781-3 My 3, Jl 12, Ag 23, S 13, O 11, N 8 '47
January buying tops $218 million. il Ry Age 122:696-8 Ap 5 '47
Nine months' purchases near peak. il Ry Age 121:1011-13 D 14 '46
1946 buying well above prewar levels. Ry Age 122:742-6 Ap 12 '47
1946 railway buying near 1923 peak. F. W. Smith. il Ry Age 122:74-7 Ja 4 '47
Pursuing a successful buying policy. J. S. Fair, jr. il Ry Age 122:454-5 Mr 1 '47
Railway material buying continues high. il Ry Age 121:882-3 N 23 '46
Three months' buying tops $651 million. il Ry Age 122:1173-5 Je 7 '47
Work equipment purchases down in 1946 but need for mechanization grows. N. D. Howard. il Ry Age 122:12-15 Ja 4 '47

Radio communication

Application of radio and communication systems to rolling stock; report of Electrical section, Mechanical division, A.A.R. il Ry Mech Eng 120:681-4 D '46
Association of American railroads, Communications section, annual meeting, Miami Beach, Oct. 21-23. Ry Age 123:742-3 N 1 '47
Caboose power supply; train communication equipment. G. R. Merz. il Ry Mech Eng 121:138-9 Mr '47; Same. Ry Age 122:898-9 My 3 '47
Carryphone in service on Pennsylvania; portable inductive telephone. W. R. Triem. il Ry Age 121:764-6 N 9 '46; Same. Ry Mech Eng 120:676+ D '46
Communications section, A.A.R., meets in Detroit. Ry Age 121:919-21 N 30 '46
Fast changes in communications. J. H. Dunn. il Ry Age 122:87-91+ Ja 4 '47
Indiana Harbor Belt installs yard radio. Ry Age 122:1177-8 Je 7 '47
Modern signaling and communications save passenger train time. il Ry Age 121:838-40 N 16 '46
New communications facilities help to keep freight moving. il Ry Age 122:1040-3 My 17 '47
New Haven tests Sperry radio. il Ry Mech Eng 121:84-6 F '47
Phone service on trains. Electronics 20:246+ O '47
Radio communication in a French marshalling yard. il Engineer 183:157 F 7 '47
Radio facilitates terminal operations at Baltimore, Md. J. A. Abbott. il Ry Age 123:395-7 S 6 '47
Radio used on Burlington switchers in Chicago terminal area. il diag Ry Age 122: 1170-2 Je 7 '47
Rio Grande installs radio to improve through freight service. il map Ry Age 122:146-7 Ja 11 '47
Shock-proof caboose axle drive; generator for train communication service. il plans Ry Mech Eng 121:144-5 Mr '47
Train communication in road service on Duluth, Missabe & Iron Range. il map Ry Age 123:236-9+ Ag 9 '47; Excerpts. Ry Mech Eng 121:595-7 O '47
Train communication on 191 miles on the Missouri Pacific. il Ry Age 122:1070-1 My 24 '47
Train communication on Pennsylvania. il map Ry Age 123:516-20 S 27 '47
Train communications. il Elec Eng 65:547-53 D '46
Train radio pack-set. il Ry Age 123:290 Ag 16 '47
Train radio speeds Rio Grande produce to eastern markets. il Manuf Rec 116:35 Jl '47
Two roads install new radio-telephone service. il Ry Age 123:330-1 Ag 23 '47
Two-way railroad pack set. il Electronics 20: 190+ My '47; Ry Mech Eng 121:268 My '47
Wide-angle phase modulator; technique for phase modulating a crystal-controlled carrier. H. K. Bradford. diags Electronics 20: 100-3 F '47
Wreck-proof trains. R. M. Hyatt. Pub Util 39:24-7 Ja 2 '47
Yard radio on the Union Pacific. il map Ry Age 123:17-19 Jl 5 '47

See also
Radio receiving apparatus—Installation on trains

Bibliography

Radio progress during 1946; railroad and vehicular communication. Inst Radio Eng Proc 35:423-4 Ap '47

Rails

See Rails

Rates

Adequate earnings await higher rates. C. H. Buford. Ry Age 123:407-8 S 6 '47
Application of the antitrust laws to regulated industries. E. A. Smith. Pub Util 38:691-705 bibliog(p703-5) N 21 '46
Asks I.C.C. to order rail-water rate parley. Ry Age 122:512+ Mr 8 '47
Authorized increase in railway freight rates. Survey of Cur Bsns 27:5-8+ Ja '47
Canadian roads press plea for 30% rate increase. Ry Age 122:473-4 Mr 1 '47
Case for agreed rates; a summary. G. L. Wilson. Ry Age 123:6-9 Jl 5 '47
Clark implies railroads were war profiteers; Department of justice seeks reparations for alleged overcharges. Ry Age 123:454+ S 13 '47
Commodity prices and freight rates. Ry Age 123:309-10 Ag 23 '47
Express Agency seeks further rate increase. Ry Age 122:563-4 Mr 15 '47
Finish argument in rail-water rate case. Ry Age 122:1270-2 Je 21 '47
Freight rate boost to aid October revenues. R. M. Bleiberg. Barron's 27:29 O 13 '47
Freight rate shifts approved. Bsns W p 17-18 My 17 '47
Freight rates raised 17.6 per cent. Steel 119: 60 D 16 '46
Haste on Reed bill protested; hearing on S.110. Ry Age 122:243-5 Ja 25 '47
How new rail rates affect shippers. Barron's 26:1+ D 16 '46
How 17.6% rate boost benefits individual railroads. R. Carleson. il Mag of Wall St 79:316-17+ D 21 '46
Interim rate case in final stage. Ry Age 123: 488-90 S 20 '47
I.C.C. action awaited on freight rate case. Ry Age 123:547-8 S 27 '47
I.C.C. gets railroad freight-rate plea. Ry Age 123:61-2 Jl 12 '47
I.C.C. gets rate-increase pleas. Ry Age 123: 367-9 Ag 30 '47
I.C.C. grants interim rate increase. Ry Age 123:618-19+ O 11 '47
I.C.C. opens hearings on rail-water rates. Ry Age 122:864+, 907+ Ap 26-My 3 '47
Is today's rate structure adequate? G. L. Wilson. Ry Age 122:1012-15 My 17 '47
Issue in the anti-trust cases. E. A. Smith. Ry Age 123:354-8 Ag 30 '47
New scheme removes ban on car spotting; investigation of switching services at North Baton Rouge, La., plant of Standard oil company of New Jersey. Ry Age 121:848-9 N 16 '46
News and views of investments; freight rate increases. A. Jansen. Barron's 26:1, 6 D 16 '46

RAILROADS—Rates—*Continued*
Opposes rail-rate rule of anti-monopoly bill; I.C.C. suggests uniformity requirement be eliminated. Ry Age 122:421+ F 22 '47
Past policy no bar to novel rates. G. L. Wilson. bibliog Ry Age 122:848-52 Ap 26 '47
Proposes new split of east-west rates. Ry Age 121:971-2 D 7 '46
Rail rates in South assailed. W. Berge. Ry Age 121:936-7 N 30 '46
Railroad regulation must be pulled together. L. W. Britton. Barron's 26:3 N 25 '46
Railroads awarded 17.6% freight rate rise; passenger fare boost of 10% made permanent. Comm & Fin Chr 164:3123 D 12 '46
Railroads deny they maintain anti-Georgia rates. Ry Age 122:1141-2 My 31 '47
Railroads file reply in reparation cases. Ry Age 123:708-10 O 25 '47
Railroads will seek higher freight rates. Ry Age 123:21-2 Jl 5 '47
Rails welcome rate boost. Bsns W p19 D 14 '46
Railway freight rates and passenger fares being upped throughout the world. S. T. R. Abt. For Comm W 28:31 Ag 23 '47
Rates on war freight assailed in complaint. Ry Age 122:908+ My 3 '47
Roads ask quick freight-rate increase. Ry Age 123:441-2+ S 13 '47
Rules on land-grant rates under 1940 act. Ry Age 122:503-4 Mr 8 '47
Senate passes anti-trust-relief bill. Ry Age 122:1252-5 Je 21 '47
17.6 per cent rate increase authorized. Ry Age 121:992-4+ D 14 '46
Ship group assails rail rate policies. Ry Age 121:1054-5 D 21 '46
Ship group's charge against roads; certain facts about the rate situation. R. V. Fletcher. Ry Age 122:115 Ja 4 '47
Southern freight rates. Manuf Rec 116:29+ Je '47
Supreme court orders freight cut for South. Comm & Fin Chr 165:2646 My 15 '47
Supreme court upholds freight rate equalization. Steel 120:61 My 19 '47
Terminal line can be agent of proprietors; I.C.C., reversing its Division 3, finds tariffs not required. Ry Age 122:286+ F 1 '47
Transportation system will be influenced by traffic men. A. H. Schwietert. Iron Age 159:135-6+ F 6 '47
U.S. Supreme court upholds I.C.C.'s decision in class-rate case. Ry Age 122:1077-80 My 24 '47
Water-competitive rate probe ordered. Ry Age 121:1058-9 D 21 '46
Wharfage case again lost by army. Ry Age 123:375+ Ag 30 '47
What shippers think of agreed rates; views of Canadian traffic managers. G. L. Wilson. Ry Age 122:647-9+ Mr 29 '47
Why the I.C.C. vetoes volume rates. G. L. Wilson. Ry Age 121:1009-10 D 14 '46
Would hike allowance for N.Y. pier service. Ry Age 123:753-4 N 1 '47
Young follows up. Bsns W p22+ N 30 '46

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Railroads—Fares

Chemicals
Chemicals, drugs freight rates reclassification plan fought. Oil Paint & Drug Rep 151:3+ Ap 7 '47
Chemicals freight rates to be raised. Oil Paint & Drug Rep 150:5 D 16 '46

Grain
Differential rate on ex-barge grain condemned by court. Ry Age 122:706-7 Ap 5 '47

Petroleum and petroleum products
Freight rates on oil, products slated for stiff increase. Oil & Gas J 45:56 D 14 '46
Ten per cent increase in rail freight rates brings quick rise in oil product prices in Midwest. J. P. Mosher, jr. Nat Pet N 39: 15 O 15 '47
Texas intrastate freight rate experiment on 20-car minimum watched by other shippers. D. P. Thornton, jr. Nat Pet N 39:38 Ja 29 '47

Steel
Arguments against freight rate cut from Geneva to Pacific coast. Steel 120:72-3 Mr 17 '47
Freight rate reductions on steel shipments from Geneva approved. Steel 120:61 Ja 20 '47
Lowered Geneva freight rate acclaimed. Steel 120:56 Mr 31 '47
New freight rates, and how they affect steel shipments. B. K. Price. Steel 120:93-5 Mr 3 '47
Percentage freight increases shorten radius of steel sales. T. E. Lloyd. Iron Age 159: 101-3 Ja 9 '47
Protestants to lower Geneva rate get little support from users. R. T. Reinhardt. Iron Age 159:82+ F 27 '47
Rail freight rate increases called blow to Pittsburgh mills. G. F. Sullivan. Iron Age 160:95-6 O 30 '47
See fight for West Coast steel market; independent steelmakers protest freight rate cut. il Steel 120:46-7 F 24 '47

Receiverships
Approves revamp plan for Wisconsin Central. Ry Age 122:1230 Je 14 '47
I.C.C. asks return of M.P. revamp plan. Ry Age 123:407 S 6 '47
Missouri Pacific holders offered new Young plan. A. Jansen. Barron's 27:8-9 S 1 '47; Correction. 27:35 S 8 '47
Pittsburg, Shawmut and Northern sale ends oldest receivership. map Ry Age 122:654-6 Mr 29 '47
Railroad equities are still depressed. J. G. Lyne. Ry Age 122:70-2 Ja 4 '46
Reed attacks I.C.C.'s Section 77 practices. Ry Age 123:249+ Ag 9 '47
Reed gains I.C.C. policy reversal; Rock Island case may alter future course of rail reorganizations. M. M. Diefenderfer. Barron's 27:25 O 20 '47
Reed revives drive to take I.C.C. for ride; feels ICC's been too tough in reorganization proceedings. M. M. Diefenderfer. Barron's 27:9 S 22 '47
Representative Reed introduces new railroad reorganization bill. Comm & Fin Chr 165: 2388 My 1 '47
Revised railroad reorganizations called for; with detailed figures on Rock Island and Missouri Pacific capitalization. W. W. Reuss. Comm & Fin Chr 165:2990+ Je 5 '47
Rock Island bondholders ask appeals court to oust judge and one trustee. Ry Age 122: 1215-16+ Je 14 '47
Rutland revamp plan approved by I.C.C. Ry Age 121:1093+ D 28 '46
Senator Reed defers I.C.C. investigation. Ry Age 123:666-7 O 18 '47
Solvency problem; Cotton belt railroad asks dismissal of bankruptcy. Bsns W p76-8 My 10 '47
Suggests I.C.C. rolls dice to decide reorganization cases; dissenting opinion in the reorganization of the New York, New Haven & Hartford. J. Frank. Ry Age 122: 561 Mr 15 '47
Supreme court o.k.'s Rock Island revamp. Ry Age 123:707+ O 25 '47
Supreme court rejects appeal of Rio Grande. Ry Age 122:323+ F 8 '47
Time runs out for bankrupt rail equities; hope given to small roads' stockholders forecloses relief on major carriers. Barron's 27:12 Mr 24 '47

Records
Machine age comes to paper work; applications of new and improved office machines. il Ry Age 122:1034-9 My 17 '47
One road microfilms 25 million records; Denver & Rio Grande Western. D. K. Taylor. il Ry Age 122:598-600 Mr 22 '47
Photography eliminates bottlenecks; Photo Copy cameras used by Chicago, Milwaukee, St Paul & Pacific. il plan Ry Age 122:180-1 Ja 18 '47
Seaboard speeds trains with photographic copying. il Ry Age 123:275 Ag 16 '47

Relocation
Highway and railway diversion along the Ottawa river; provide for backing-up of river behind dam of hydro-electric development at Des Joachims Rapids. il map Roads & Bridges 85:33-5+ Ja '47

RAILROADS—Relocation—*Continued*
Railroad relocated above Conemaugh dam. il map diags Eng N 139:176-80 Ag 7 '47
Studies determine economic effects on property removed from public works sites. J. S. Worley. il Civil Eng 17:29-31 Ja '47

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Reports

Stockholders uninterested in detailed rail reports. Barron's 27:6 Jl 14 '47

Roadmasters

See also Roadmasters' and maintenance of way association

Rolling stock

Railroad equipment industry prospects are promising. V. Bell. il Steel 120:43-5 F 24 '47
Santa Fe makes stress tests on track and rolling stock; electrical strain gage recording equipment. il Ry Age 122:1165-6 Je 7 '47; Same. Ry Mech Eng 121:256-7 My '47

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Safety measures

Calls for fast, safe, efficient roads. W. J. Patterson. Ry Age 123:160-1 Jl 26 '47
Canadian safety car visits Chicago. il Nat Safety N 55:34 Ja '47
Milwaukee's safety shoe car begins tour to supply on-the-job sales service for all employees. il Ry Age 121:1050-1 D 21 '46
Progressive die produces safety runway for freight cars. J. A. King. il diags Am Mach 91:128-32 N 6 '47

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Harriman memorial medals for safety
Railroads—Automatic stop and train control
Railroads—Fires and fire protection
Railroads—Signals
also Interstate commerce commission—Bureau of safety

Sanitation

Lack of evidence sewage disposal from cars menaces health. K. F. Maxcy. Ry Age 122: 1305 Je 28 '47
Sewage treatment plants on trains will be given trial by railroads; Wolman device. Eng N 138:977 Je 19 '47; Bsns W p24+ Jl 5 '47

Schedules

International timetable session at Prague proves successful. For Comm W 26:35 F 1 '47
Wiping out lost time to improve service; station and servicing delays. il Ry Age 121:828-32 N 16 '46

Scrap material

Air hose reclamation. il Ry Mech Eng 121: 420-2 Ag '47
Reclaiming car materials. G. A. Goerner. il Ry Mech Eng 121:251-3 My '47; Same abr. Ry Age 122:657-9 Mr 29 '47
Salvaging and reclaiming scrap; Erie railroad. il Steel 119:90+ D 16 '46
Waste material conveyor. il Ry Mech Eng 121:126 Mr '47

Securities

Cuban rail bonds a speculative annuity. C. F. Horlacher. Barron's 26:12 N 18 '46
Earnings may strengthen income bonds' position; with details on leading roads. R. E. Bedingfield. Barron's 27:12-13 Je 16 '47
Legal list changes in New York state reflect low rail earnings. Trusts & Estates 84:73 Ja '47
New study of the rails; with financial statistics on leading railroads. Mag of Wall St 80:152-4+ My 10 '47
1947-48 prospects for the railroads; with statistical position of leading companies. F. R. Walters. Mag of Wall St 80:595-7+ Ag 30 '47
Outlook for railroad equities. H. F. Messner. Comm & Fin Chr 165:1124+ F 27 '47
Outlook for railroads. A. C. Knies. Comm & Fin Chr 165:862+ F 13 '47
Railroad equities are still depressed. J. G. Lyne. Ry Age 122:68-73+ Ja 4 '47
Railroad security outlook. W. F. Hahn. Comm & Fin Chr 166:1744+ O 30 '47; Same cond. Ry Age 123:729-30+ N 1 '47
See-saw in Argentine rails. Economist 153: 376 Ag 30 '47

See also
Railroads—Equipment trust certificates

Service

Sentinel freight service on the B.&O. il Ry Age 122:1156-8 Je 7 '47

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Freight car service
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Shops

Car-wheel maintenance mechanized; Pittsburgh Glenwood wheel shop of the Baltimore & Ohio. L. W. Sagle. il layout plan Am Mach 90:104-6 N 21; 114-16 D 5 '46
Color improves working conditions in a railroad shop; Diesel repair shop of the Burlington lines. Mach 53:167 D '46
Maintaining Waukesha equipment; Southern Pacific repair shops. il diag Ry Mech Eng 121:29-31+ Ja '47

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B. & O.'s semi-automatic Cumberland flue shop; illustrations with text. plan Ry Mech Eng 121:458-61 S '47
Economical heat for railroad shop operations. F. C. Hasse. il Ry Mech Eng 121: 425-6 Ag '47
Electrical repair shop of Missouri Pacific at Sedalia, Mo. il Ry Mech Eng 121:198-200 Ap '47
Improvements at the D.&R.G.W. wheel shop. C. Eisele. il Ry Mech Eng 121:254-5 My '47
Machine tools for railroads. V. P. Schmidt. il Ry Mech Eng 121:453-5+ S '47
Milwaukee passenger truck shop. il Ry Mech Eng 121:357-60 Jl '47
Shop tool programs going ahead. H. C. Wilcox. il Ry Age 122:43-4 Ja 4 '47
Spraying priming coat on new lumber; Canadian Pacific, Angus shops. il Ry Mech Eng 121:77 F '47
Wheel shop handling devices. il diags Ry Mech Eng 121:78, 137, 186, 361 F-Ap, Jl '47

Layout

Engineering a railroad shop. K. L. Urich. il plans Ry Mech Eng 121:470-4+ S '47

Lighting

Illumination; committee report, A.A.R. Electrical section. il diags Ry Mech Eng 120: 593-6 N '46

Signals

Association of American railroads, Signal section, 49th annual meeting, Chicago, Sept. 11-13. Ry Age 123:484-7 S 20 '47
Automatic boom; ICC orders roads to improve signal systems. Bsns W p 16 Jl 5 '47
Automatic train control developments on the G.W.R.; audible cab signalling. il diags Engineer 184:360-1 O 17 '47
Automatic train control on the Great western railway. Engineering 164:380 O 17 '47
Burlington extends single-track C.T.C. W. F. Zane. il map Ry Age 123:312-14 Ag 23 '47
C.T.C. saves train time on Santa Fe. il plans Ry Age 123:157-60 Jl 26 '47

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I.C.C. orders more signaling on high-speed lines. Ry Age 122:1264+ Je 21 '47
I.C.C. signal hearing. Ry Age 123:625+ O 11 '47
L.&N. installs C.T.C. on 107 miles. il map diags Ry Age 121:958-60 D 7 '46
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Modern signaling and communications save passenger train time. il Ry Age 121:838-40 N 16 '46
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New signal-box at Aberdeen. Engineer 184: 134 Ag 8 '47
Pennsylvania saves time with centralized traffic control. il plans Ry Age 122:845-7 Ap 26 '47
Radio and carrier controls for C.T.C. on Pennsylvania; use in emergencies. diags Ry Age 121:600-2 O 12 '46; Abstract. il Electronics 20:136+ F '47
Signal power transmission. H. C. Towers. il diags Electrician 137:1287-9 N 8 '46
Simple signaling a boon to safety for high-speed, medium traffic. il diags Ry Age 122: 1302-4 Je 28 '47
Spain plans to improve railroad signal devices. For Comm W 28:29-30 Jl 5 '47
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Railroads—Radio communication

Snow protection and removal

Keeping rail lines open; gas-fired switch heaters for removing snow and ice. il diags Am Gas Assn Mo 29:445+ O '47
Now is the time to think about snow; gas-fired switch heaters. F. L. Kay. il diags Gas Age 100:23-4 O 16 '47

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L.N.E.R. West Highland stations. il Engineer 183:495 Je 6 '47
New Erie passenger station exhibits modern motif at its best; structure at Akron, Ohio. il plans Ry Age 123:644-8 O 18 '47
La nouvelle gare de Bruges, Belgique. plan Génie Civil 123:331 D 1 '46
Small passenger stations, yesterday and today; pictorial comparison of new or remodeled structures with those replaced. Ry Age 122:792-4 Ap 19 '47
What about our railroad stations? J. C. Sherrick. il Ry Age 121:952-4 D 7 '46
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Radiant heating and its application to a passenger station. P. S. Park. il plan Ry Age 123:392-4 S 6 '47

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Annual statistical number. Ry Age 122:1-61 Ja 4 '47
Figures revenue yield from rate increases; report of Bureau of transport economics and statistics. Ry Age 121:1019-20 D 14 '46
I.C.C. bureau says wage boost will cost $454 million; other statistics. Ry Age 123: 482-3 S 20 '47
1947 capital expenditures 78.9 per cent above 1946: estimates submitted to Bureau of transport economics and statistics. Ry Age 122:755+ Ap 12 '47
1946 railroad construction indices. Ry Age 123:276 Ag 16 '47
Railroading in 1946. R. V. Fletcher. Ry Age 121:1095+ D 28 '46
Railway statistics for 1946. Engineering 164: 134 Ag 8 '47
Review of railway operations in 1946. J. H. Parmelee. Ry Age 122:58-67 Ja 4 '47
Wages per revenue dollar up; traffic units per wage dollar down; comparisons with 1941 presented by I.C.C. bureau, also reports on Diesels, analyzes preferred stock issues, operating ratios and taxes. Ry Age 122: 1301+ Je 28 '47
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Materials handling on the railways; Illinois Central. E. T. Adams. il Mech Handling 34: 190-4 Ap '47; Same cond. Ry Age 122:360-2 F 15 '47
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Proposed report on Pullman's new refund rules. Ry Age 121:1063-4 D 21 '46

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Time tables

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Track

American railway developments. E. E. R. Tratman. diags Engineer 184:128-30, 142-3 Ag 8-15 '47
Atlantic Coast Line improves, rehabilitates rail routes. il Manuf Rec 116:80-1+ Ja '47
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Sleeper tamping machine on the L.N.E.R. il Engineer 184:195 Ag 29 '47

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C.T.C. saves train time on Santa Fe. il plans Ry Age 123:157-60 Jl 26 '47
L.&N. installs C.T.C. on 107 miles. il map diags Ry Age 121:958-60 D 7 '46
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Railway traffic control; L.N.E.R. installation in the Edinburgh district. il Electrician 138: 1515-17 Je 6 '47

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Train speed

Average speeds in freight-train service; Diesel, steam and electric locomotives compared. Ry Age 122:486 Mr 8 '47
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Development of locomotive power at speed. E. L. Diamond. Engineer 183:202-3, 216-18 Mr 7-14 '47; Discussion. 200-1, 211-12 Mr 7-14 '47
Simple signaling a boon to safety for high-speed, medium traffic. il diags Ry Age 122: 1302-4 Je 28 '47
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Great Northern gets first postwar transcontinental streamliners. il Ry Age 122: 734-41 Ap 12 '47; Same cond. Ry Mech Eng 121:225-8 My '47
Handling long, heavy freight trains; report of Railway fuel and traveling engineers' assn. Ry Mech Eng 121:543-5 O '47
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RAILROADS—Trains—*Continued*
Plastics are tested for train interiors; General Motors Train of tomorrow. il diag Mod Plastics 24:80-2 Jl '47
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Train of tomorrow; General Motors experimental project. il Diesel Power 25:85 Mr '47
Train of tomorrow; use of Diesel engines. il Diesel Power 25:92-6 Je '47
Train promotion; General Motors Train of tomorrow. Bsns W p32+ O 11 '47
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Wages
Conclude testimony in non-op wage case. Ry Age 123:370+ Ag 30 '47
Non-op increase adds $438 million to railroads' wage bill. Ry Age 123:404 S 6 '47
Rail wages open; nonoperating brotherhoods, carriers in arbitration; operating unions getting together on demands. Bsns W p84 Ag 16 '47
Trend of rail wages analyzed by Monroe. Ry Age 123:492+ S 20 '47
Year of labor turmoil and wage boosts. W. H. Schmidt, jr. and C. Robinson. il Ry Age 122:8-11+ Ja 4 '47

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Water supply
Coach-yard hydrant. il Ry Age 123:56 Jl 12 '47
Diesels present new watering problems. E. M. Grime. il Ry Age 123:54-6 Jl 12 '47
Water service; A.R.E.A. committee report. Ry Age 122:607-8 Mr 22 '47
Zurn coach hydrant. diag Ry Age 123:736 N 1 '47

Waterways competition
Asks I.C.C. to order rail-water rate parley. Ry Age 122:512+ Mr 8 '47
A.A.R. pamphlet raps Mississippi subsidies. Ry Age 122:372+ F 15 '47
Evolving policy on waterway subsidies. C. S. Duncan. Ry Age 122:494-7 Mr 8 '47
Finish argument in rail-water rate case. Ry Age 122:1270-2 Je 21 '47
I.C.C. acts in rail-water rate cases. Ry Age 123:25+ Jl 5 '47
I.C.C. opens hearings on rail-water rates. Ry Age 122:864+, 907+ Ap 26-My 3 '47
Railroads air objections to St Lawrence seaway proposal. Ry Age 122:1224+ Je 14 '47
Railroads in strong competitive position; trucks and water carriers seriously weakened by rising costs. A. Jansen. Barron's 27:7-8 Ag 18 '47
Railroads urge prompt sale of Federal barge lines; hearings before committee on small business of the House of representatives. Ry Age 122:1050-1 My 17 '47
Senate group hears seaway proponents. Ry Age 122:1181-2 Je 7 '47
Ship companies seek coastwise rate hikes; campaign to raise transcontinental railroad rates to level that will keep shipping tariffs competitive. Barron's 27:6 Ap 14 '47
Ship group assails rail rate policies. Ry Age 121:1054-5 D 21 '46
Ship group's charge against roads; certain facts about the rate situation. R. V. Fletcher. Ry Age 122:115 Ja 4 '47
Water-competitive rate probe ordered. Ry Age 121:1058-9 D 21 '46

Yards
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Argentina
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Argentine rail compromise. Economist 152: 897-9 Je 7 '47
Argentine railway agreement. Economist 152:293 F 15 '47
See-saw in Argentine rails. Economist 153: 376 Ag 30 '47
Terms for Argentina's purchase of British Argentine railroads. For Comm W 26:29 Mr 15 '47

Bermuda
House of assembly votes to abandon Bermuda railway. For Comm W 28:33 Jl 19 '47

Bolivia
Bolivian government acts to finish railroad project. For Comm W 26:30 Ja 18 '47
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Brazil
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Rail rate crisis; Dominion roads foresee deficits. Bsns W p68-9 Ja 4 '47
Railway plight. Bsns W p92 Mr 1 '47
Traffic large, earnings down in Canada. il Ry Age 122:45-8 Ja 4 '47
Transportation problem. A. W. Currie. Ann Am Acad 253:81-3 S '47
What shippers think of agreed rates; views of Canadian traffic managers. G. L. Wilson. Ry Age 122:647-9+ Mr 29 '47
See also
Canadian national railways
Canadian Pacific railway

Chile
Chilean railways expanding; need for equipment is seen. map For Comm W 26:4-5+ Ja 25 '47
Engineer looks at Chile. R. Hammond. il Engineer 184:266-7 S 19 '47
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China
Shanghai-Nanking-Hangchow railway tariffs increased. For Comm W 28:30 Ag 2 '47

Cuba
Cuban rail bonds a speculative annuity. C. F. Horlacher. Barron's 26:12 N 18 '46

Eastern states
Eastern roads would lift passenger fares. Ry Age 122:504-5 Mr 8 '47

RAILROADS—Eastern states—*Continued*
I.C.C. holds hearing on eastern fare hike. Ry Age 122:713+, 862-3 Ap 5, 26 '47

Egypt

Revenues of Egyptian state railways decline. For Comm W 28:27 Jl 12 '47

Europe

European railway services to be improved in 1947-48. For Comm W 25:32 D 28 '46
International timetable session at Prague proves successful. For Comm W 26:35 F 1 '47

France

Radio communication in a French marshalling yard. il Engineer 183:157 F 7 '47

Germany

Report made on railroads in British zone. For Comm W 26:34 F 22 '47

Great Britain

Britain's railways. il Fortune 35:86-93+ Ap '47
British railways point for future tourist trade. H. F. Meyer. il Ptr Ink 217:42-4 D 13 '46
Diesel-electric locomotives in Britain. M. Taylor. il Diesel Power 25:72-4 S '47
European railway and general conditions badly scrambled. F. A. Poor. Ry Age 123: 282 Ag 16 '47
Flat-bottom rails on the L.M.S. railway. diag Engineering 164:188-9 Ag 22 '47
London and North eastern railway company, Southern railway company; annual meetings. Economist 152:394-5 Mr 15 '47
London & North Eastern vs. winter 1947. il Ry Age 122:1315 Je 28 '47
London Midland and Scottish railway company, Great western railway company annual general meetings. Economist 152:352-3 Mr 8 '47
L.M.S. secondary service locomotives. il Engineer 182:596 D 27 '46
Merchant navy class of locomotives of the Southern Railway. O. V. S. Bulleid. diags Inst Mech Eng J & Proc 154:Proc 316-33, pl 1-4 D '46; Same cond. il Engineer 180: 512-14, 530-2 D 21-28 '45; Discussion. Inst Mech Eng J & Proc 154:Proc 333-43 D '46; Engineering 160:542-3 D 28 '45; Engineer 180: 510-11 D 21 '45
Politics of railway compensation; Rail stocks and the law. Economist 151:864, 879-80 N 30 '46
Present-day locomotive working in Great Britain. O. S. Nock. il diags Engineer 182: 314-16, 532-4, 558 O 11, D 13-20 '46
Railway accidents in 1946. Engineering 164: 182 Ag 22 '47
Railway earnings deficit. Economist 152:209-10 F 1 '47
Railway goods charges; methods of minimizing costs. G. Saville. Elec R (Lond) 141: 469-70 S 26 '47
Railway position in 1847. Engineering 163: 480-1 Je 6 '47
Railway statistics for 1946. Engineering 164: 134 Ag 8 '47
World's oldest railway. C. E. Lee. Engineering 162:595 D 20 '46

See also
Railroads—Electrification—Great Britain
Railroads and state—Great Britain

Hawaiian Islands

Automotive triumph. Bsns W p42 Ja 18 '47

Italy

Reconstruction of the Italian state railways. Engineer 183:569-70 Je 27 '47

Latin America

U.S. technical assistance welcomed in Latin America. T. J. Murphy. For Comm W 27:8 Je 14 '47

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Lebanon opens rail line linking Nakoura and Tripoli. For Comm W 27:28 Je 28 '47

Mexico

Mexican railways had unsettled year. il Ry Age 122:49-51 Ja 4 '47
Mexico approves resolutions for railway improvement. For Comm W 27:29 My 24 '47
Mexico opens new 157-mile section of railway. For Comm W 25:32 D 28 '46
Mexico's National railways announces 32-point program. For Comm W 26:30 Mr 1 '47
New rail line to open up Mexican farm-timber zones. For Comm W 26:31-2 Mr 22 '47
Tehuantepec route rehabilitation undertaken by Mexico. C. S. Hill. il maps plans Eng N 137:734-7 N 28 '46

Near East

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Indonesian railways striving to resume service. For Comm W 29:28-9 N 1 '47

New Zealand

New Zealand government railways. Engineering 163:101 Ja 31 '47

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Soviet railways; from the present until 1950. S. T. R. Abt. il map For Comm W 25:3-5+ D 28 '46; Abstract. Ry Age 122:241 Ja 25 '47

Scotland

L.N.E.R. West Highland stations. il Engineer 183:495 Je 6 '47
Railway work at Lock Sloy. Engineering 163: 484 Je 6 '47

South Africa

Shortage of rolling stock, Union of South Africa. For Comm W 27:25 Je 7 '47

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See also
Railroads—Electrification—Spain

Switzerland

Centenary of the Swiss railways. Engineering 164:138 Ag 8 '47
Centenary of the Swiss railways. G. H. Phillips. il Engineering 164:160-2 Ag 15 '47

Syria

Inadequacy of Syrian railroads hampers economic development. F. A. M. Alfsen. For Comm W 28:28 S 20 '47

Texas

Texas intrastate freight rate experiment on 20-car minimum watched by other shippers. D. P. Thornton, jr. Nat Pet N 39:38 Ja 29 '47

United States

Comments on car supply, Department of justice and working rules. F. G. Gurley. Ry Age 122:1167-8 Je 7 '47
Federation for railway progress head renews attacks on bankers. R. R. Young. Ry Age 122:1316+ Je 28 '47
Keeping the peace in railroad transportation. R. L. Glenn and G. L. Wilson. Ann Am Acad 248:110-19 N '46
Paramount railroad problems. R. B. White. Comm & Fin Chr 165:741+ F 6 '47
Plight of the iron horse; better forage is found where rail traffic grows. G. Garbutt. Trusts & Estates 85:227-8+ S '47
Program for 1947. R. R. Young. Ry Age 122: 192+ Ja 18 '47
Public interest in sound railroads. R. B. White. Comm & Fin Chr 165:2482+ My 8 '47
Railroad outlook; address before Chamber of commerce of U.S. R. V. Fletcher. Comm & Fin Chr 165:2482+ My 8 '47
Railroads in 1946. D. I. Brown. il diags Iron Age 159:140-7 Ja 2 '47
Railroads in 1946 handled record volume of peacetime traffic; net near depression years. R. V. Fletcher. Comm & Fin Chr 165:53 Ja 2 '47
Review of railway operations in 1946. J. H. Parmelee. Ry Age 122:58-67 Ja 4 '47
60th annual report of the I.C.C. Ry Age 122: 227-9 Ja 25 '47
Study board reports its achievements. Ry Age 123:435-7+ S 13 '47

RAILROADS—United States—*Continued*
Young launches new organization; Federation for railway progress aims to implement national transportation policy. W. J. Taft. Ry Age 122:445-7 Mr 1 '47
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Pennsylvania railroad

West Virginia

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RAILROADS, Industrial
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Old Backus logging railroad removed. Pulp & Pa of Can 48:136-7 S '47

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RAILROADS, Short line
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Progressive shore line rejuvenated; Atlanta & Saint Andrews Bay. il map Ry Age 123:205-6 Ag 2 '47

RAILROADS and state
Defend private enterprise in transport. C. S. Duncan. Ry Age 123:614-16 O 11 '47
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Great Britain

Britain's railways. il Fortune 35:86-93+ Ap '47
British transport commission takes on task of nationalization. Ry Age 123:403 S 6 '47
Debate control of British railroads. Ry Age 121:1058+ D 21 '46
Fate of railroads in Britain and the United States. E. H. Smith. Ry Age 122:797-8 Ap 19 '47
Nationalisation on the cheap; basis of compensation for stockholders; with table showing compensation terms and yield comparisons. Economist 151:836-7+ N 23 '46
2½ per cent for transport stock? Economist 153:578 O 4 '47

United States

Banker-lawyerism harming railroads. R. R. Young. Ry Age 122:1049+ My 17 '47
Fate of railroads in Britain and the United States. E. H. Smith. Ry Age 122:797-8 Ap 19 '47
How to avoid public ownership. W. G. Vollmer and D. V. Fraser. Ry Age 123:522 S 27 '47
Insured solvency the best armor against nationalization. P. H. Middleton. Ry Age 123:53 Jl 12 '47; Excerpt. Comm & Fin Chr 166:649 Ag 14 '47
Left wingers plot to seize railroads. C. E. Johnston. Ry Age 123:538 S 27 '47
Railroad regulation must be pulled together. L. W. Britton. Barron's 26:3 N 25 '46
See also
Railroad land grants — Railroads—Federal loans
Railroad law

RAILROADS in war
Presidential address to the Institution of mechanical engineers. O. V. S. Bulleid. il diags Engineering 162:413-15, 420, 444, 454-5 N 1-8 '46; Same. Inst Mech Eng J & Proc 156:Proc 1-5, pl 1-10 Je '47; Same cond. Engineer 182:375, 398-400 O 25-N 1 '46
Railroads in the war. M. W. Clement. Franklin Inst J 242:345-54 N '46
War no windfall to railroad's progress. L. J. Kiernan. Ry Age 121:1015-16 D 14 '46

RAILS
American railway developments. E. E. R. Tratman. diags Engineer 184:142-3 Ag 15 '47
Continuous rail increases life of rolling stock. Sci Am 176:29 Ja '47
Flat-bottom rails of the L.M.S. railway. diag Engineering 164:188-9 Ag 22 '47
Heavy-duty steel rail developed by the Pennsylvania railroad. Mech Eng 69:768-9 S '47
Preliminary investigation of corrugated rails. R. E. Cramer. il In Ill U Eng Exp Sta Reprint Ser 35:38-40 '46
Production drilling of rail sections; American brake shoe co. il Steel 119:67+ N 25 '46
Rail; A.R.E.A. committee report. Ry Age 122:617-19 Mr 22 '47
Railroad rails serve as reinforcing steel in secondary-road bridge construction. S. W. La Lance. il Civil Eng 17:544-5 S '47
Reducing upkeep costs with heavy rail; experience of the Bessemer & Lake Erie. F. R. Layng. il Ry Age 121:1080-1 D 28 '46
Sharp decline in 1946 output of rails and fastenings. il Ry Age 123:737 N 1 '47
See also
Rail joints
Railroads—Track

Failure

Fatigue tests of rail webs. R. S. Jensen. il diag In Ill U Eng Exp Sta Reprint Ser 35:35-7 '46
Temper brittleness in boiler steels and rail steels. W. J. Holtman and W. C. Keil. il 9pls Colorado School of Mines [Golden] Quarterly 42 no 2:1-56 bibliog(p55-6) Ap '47 (pa $1)
Twelfth progress report of the joint investigation of failures in railroad rails in service and their prevention. R. E. Cramer and R. S. Jensen. il In Ill U Eng Exp Sta Reprint Ser 35:3-16 '46

Statistics

Rail exports set a 24-year high mark. Ry Age 122:662 Mr 29 '47

Testing

Better rail-testing technique. T. B. Thompson. il Ry Age 122:1126-8 My 31 '47
Fatigue tests of rail webs. R. S. Jensen. il diag In Ill U Eng Exp Sta Reprint Ser 35:35-7 '46
Fourth progress report of the rolling-load tests of joint bars. N. J. Alleman. il In Ill U Eng Exp Sta Reprint Ser 35:17-29 '46
Fourth progress report of the Shelly rail studies at the University of Illinois. R. E. Cramer. il In Ill U Eng Exp Sta Reprint Ser 35:30-4 '46

RAILWAY engineering association, American. See American railway engineering association

RAILWAY express agency
CAB counsel hits REA freight plan. Aviation N 7:25 Mr 24 '47
Express rate increase; hearings before Interstate commerce commission. Ry Age 122:1233-4 Je 14 '47
Express rate rise approved by I.C.C. Ry Age 123:547 S 27 '47
Marine claims group hears talk on principal, agent; is bellboy an agent of owner? Nat Underw 51:4 F 27 '47
Mother, insured, can't sue for loss of son's property; Railway express agency vs. Huntress. Nat Underw 51:38-9 Ap 10 '47
Railway Express makes freight plea. Aviation N 7:30 Mr 3 '47
Recommends express rate rise to I.C.C. Ry Age 123:291-2 Ag 16 '47
Seeks further rate increase. Ry Age 122:563-4 Mr 15 '47

RAILWAY fuel and traveling engineers' association
Annual meeting, Chicago, Sept. 15-18. Ry Mech Eng 121:538-50 O '47

RAILWAY law. See Railroad law

RAILWAY mail service
Mail pay proceeding held up two months. Ry Age 123:119+ Jl 19 '47
Railroads seek 45% increase in mail pay. Ry Age 122:464 Mr 1 '47

RAILWAY progress, Federation for. See Federation for railway progress

RAILWAY tie association
Annual meeting, 29th, Hot Springs, Ark. Sept. 23-25. Ry Age 123:573-4 O 4 '47

RAIN and rainfall
Attenuation of 1.25-centimeter radiation through rain. L. J. Anderson and others. diags Inst Radio Eng Proc 35:351-4 Ap '47
Disposal of petroleum refinery waste; disposal needs based on graph method for finding run-off to rainfall ratio. W. B. Hart. bibliog diag Pet Processing 2:131+ F '47
Drainage of airport surfaces; some basic design considerations. S. W. Jens. diags Am Soc C E Proc 73:983-1007 S '47
Electrical charge on precipitation at various altitudes and its relation to thunderstorms. R. Gunn. Phys R 71:181-6 F 1 '47
Loss of sanitary sewage through storm water overflows. J. E. McKee. bibliog Boston Soc C E J 34:55-80; Discussion. 81-92 Ap '47
Physics of precipitation in the atmosphere. R. J. Boucher. bibliog J Chem Educ 24: 204-6 Ap '47
Provocation de la pluie par de la neige carbonique lancée par avion sur les nuages. Génie Civil 124:357-8 S 15 '47
Rainfall and water power; abstract. E. S. Ritter. Electrician 139:1148 O 17 '47

Utah

Cloudburst floods in Utah, 1850-1938. R. R. Woolley. maps plans U S Geol S Water-supply Pa 994:1-128, pl 1-23; pa $1.50 Supt. of doc. '46

Western states

Sequence in variation of annual precipitation in the western United States. M. Clawson. map J Land & Pub Util Econ 23:271-87 Ag '47

RAIN coats. See Raincoats

RAIN gages
Sulfur collection in precipitation by means of an all-weather noncorrosive rain and snow gauge. M. I. Fried and M. L. Jackson. il diag Science 106:19-20 Jl 4 '47

RAIN insurance. See Insurance, Rain

RAINBOW
Remarkable set of rainbows was seen July 20, 1947, at Urbana, Illinois. T. T. Quirke. Science 106:225-6 S 5 '47

RAINCOATS
Correlation of water-repellent garment performance and laboratory penetration tests on fabrics. G. A. Slowinske and A. G. Pope. bibliog il diags Am Dyestuff Rep 36:108-21 Mr 10 '47
1947 rainwear show. Textile Col 69:24+ Jl '47
Properties of water-repellent fabrics. J. W. Rowen and D. Gagliardi. J Res Nat Bur Stand 38:103-17 bibliog(p 116-17) Ja '47
Research necessary to rainwear fabrics. G. A. Slowinske. il Textile Col 69:31+ S '47
Waterproofing. D. H. Powers. il Textile Col 69:33 S '47

Advertising

Cinderella product scores; cooperation with suppliers and retailers helps establish new rainwear line, Aquatogs. E. M. Housman. il Ptr Ink 218:43 Ja 24 '47

RAISINS
Raisin production, consumption, and prices, Iran. For Comm W 29:20-1 N 1 '47

RALEIGH, North Carolina

Sewerage

Sanitary sewers, how big should they be? A. B. Uzzle, jr. il plan Water & Sewage Works 94:40-1 Ja '47

RALSTON, Anderson Wheeler, 1899-
Midwest award. por Chem & Eng N 25:414 F 17 '47
Ralston receives Midwest award. por Chem & Eng N 25:834-6 Mr 24 '47
Sketch. por(cover) Chem & Eng N 25:591 Mr 3 '47

RAMALINA reticulata
Antibiotic compound isolated from the lichen ramalina reticulata. A. Marshak and others. bibliog Science 106:394-5 O 24 '47
Crystalline antibacterial substance from the lichen ramalina reticulata. A. Marshak. bibliog Pub Health Rep 62:3-19 Ja 3 '47

RAMAN effect
Correlation of intensity measurements in Raman spectra obtained with different instruments. D. H. Rank. Anal Chem 19:766-7 O '47
Origin of low frequency Raman lines in organic crystals. A. Kastler and A. Rousset. bibliog Phys R 71:455-6 Ap 1 '47
Photoelectric intensity measurements of Raman spectra. J. Chien and P. Bender. bibliog diags J Chem Phys 15:376-82 Je '47
Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H. Rank. bibliog il Opt Soc Am J 37:798-803 O '47
Polarization of Raman lines. G. Glockler and J. Tung. diags J Chem Phys 15:112 F '47
Quantitative analysis of hydrocarbon mixtures by means of Raman spectra. E. J. Rosenbaum, C. C. Martin and J. L. Lauer. bibliog Ind & Eng Chem Anal ed 18:731-3 D '46
Raman apparatus for quantitative polarization measurements. B. L. Crawford, jr. and W. Horwitz. bibliog diags J Chem Phys 15: 268-74 My '47
Raman spectra of aqueous solutions of potassium thiocyanate. J. Chien. bibliog Am Chem Soc J 69:20-2 Ja '47
Raman spectra of hydrocarbons. M. R. Fenske and others. bibliog diags Anal Chem 19:700-65 graphs(p723-65) O '47
Raman spectrum of hexafluoroethane. D. H. Rank and E. L. Pace. il diags J Chem Phys 15:39-40 Ja '47
Spatial configuration of perfluorocyclobutane. W. F. Edgell. Am Chem Soc J 69:660-1 Mr '47
Structure of dimeric keten; infra-red measurements. D. H. Whiffen and H. W. Thompson. Chem Soc J p 1005-9 N '46
Theory of condensing lenses for Raman tubes of small volume. J. R. Nielsen. diag Opt Soc Am J 37:494-9 Je '47
Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide. H. M. Spencer. bibliog J Chem Phys 14:729-32 D '46

RAMIE
Density and refractivity of cellulose fibres in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47
Ramie again. Fortune 36:116 Ag '47
Recrystallization of amorphous cellulose. P. H. Hermans and A. Weidinger. bibliog il Am Chem Soc J 68:2547-52 D '46

RAMIE products corporation
Stock offered. Comm & Fin Chr 165:2675 My 19 '47

RAMMED earth. See Pisé

RAMPS

Safety measures

Stairs and ramps; safety measures. il Nat Safety N 55:96-9 Mr '47

RANCH houses
Six ranch houses for modern living. il plans Arch Rec 101:82-7 Ap '47

RANCIDITY
Extending keeping quality of frozen pork sausage. I. Atkinson and others. il Food Ind 19:1198-201, 1366-9 S-O '47
How to prevent rancidity in frozen pork sausage. C. K. Wiesman and J. V. Ziemba. il Food Ind 18:1863-4+ D '46

RAND, James Henry, 1886-
General Aniline & Film is largest seized alien property. por Fortune 36:68-73+ Ag '47

RAND plan. See Trade agreements

RANEY, Murray, 1885-
Discoverer of Raney nickel. R. B. Seymour. bibliog por Chem & Eng N 25:2628 S 15 '47

RANEY nickel. See Nickel—Raney nickel

RANGE boilers. See Boilers, Range

RANGE finders
Compensation of flexure in range finders and sighting instruments. G. W. Moffitt. diags Opt Soc Am J 37:582-5 Jl '47

RANGE finding
Control of naval gunfire. Engineering 163: 409-10 My 16 '47

RANNEY, Leo, 1884-
Horizontal drilling; new strategy for working underground. por Fortune 36:96-101 S '47

RANNEY water collectors
Horizontal drilling; new strategy for working underground. il diags Fortune 36:96-101 S '47
Induced infiltration supplies most productive well field; use of Ranney water collectors; Wabash River ordnance works. R. C. Kazmann. il diag Civil Eng 16:544-5 D '46
Installation of a radial water collector. D. E. Chase. Am Water Works Assn J 39: 747-9 Ag '47
Ranney method produces more cool pure water for mills. Paper Tr J 123:34 D 26 '46

RANSFORD, C. O.
Portrait. Fortune 35:169 Mr '47

RAPESEED oil
Mixed unsaturated glycerides of liquid fats; low-temperature crystallisation of rape oil. T. P. Hilditch, P. A. Laurent and M. L. Meara. Soc Chem Ind J 66:19-22 Ja '47
Rapeseed oil; source of edible fat in wartime Germany, may become significant factor in Canada's economy. N. H. Grace and A. Zuckerman. Can Chem & Process Ind 31:571-2 Je '47

RAPID construction. See Building—Rapid construction

RAPID transit
Bird's eye view of ossification of the average city's transit life. R. N. Graham. Mass Transportation 43:280-1 Jl '47
Economic cycle studied; to predict transit's future. C. A. Stephenson. Mass Transportation 43:4-5 Ja '47
Moving the masses in the city of tomorrow. H. N. Oliphant. Pub Util 39:399-405, 473-9 Mr 27-Ap 10 '47
Transportation situation in cities of North American continent. E. Dana. Mass Transportation 43:194-7 My '47
We must produce low cost transportation. J. Lucas. Mass Transportation 42:442-3+ O '46
What actually happened at Chicago; report of A.T.A. convention; with papers. Mass Transportation 42:429-49+ O '46

See also
Electric railroads
Motor bus lines
Railroads
Street railroads
Subways
Trolley buses
also subdivision names of cities, e.g. Chicago—Rapid transit under

Advertising

Gaining public acceptance for needed fare increase; Capital transit company, Washington, D.C. E. C. Giddings. il Pub Util 40:425-30 S 25 '47
Getting the tripe out of one's soul! using advertising as a tool of economic education. A. L. Scaife. Mass Transportation 43:182-5 My '47
Public relations, cafeteria style; weekly folder placed in vehicles of Los Angeles transit line. G. Gifford. il Mass Transportation 42:537-9 D '46
Where were you on March 15, 1927? Mass Transportation 43:137-40 Ap '47

Employees

Ability to pay; wage disputes and financial position of Kansas City transit. C. M. Updegraff. Mass Transportation 43:358-62 S '47
Arbitration doesn't settle anything. J. E. McCarthy. Mass Transportation 43:465-6 O '47
Are the Reds in transit? J. B. Poston. Mass Transportation 42:507-8 N '46
Christmas card to ATA labor group. Mass Transportation 42:521-3+ D '46
Closing statement to Board of arbitration by John L. Wilson, president, St Louis public service company, April 19, 1947. Mass Transportation 43:176-80 My '47
Complex art of getting along with people; or public relations, mister! S. C. Robinson. Mass Transportation 43:324-6 Ag '47
Horse trading isn't collective bargaining; with text of decision in injunction petition by Akron transportation company. B. Muldoon and R. Jeter. Mass Transportation 43:26+ Ja '47
Is three-man arbitration too much like packed jury? W. E. Stephens. Mass Transportation 43:91-4 Mr '47; Discussion (Should the third arbitrator have legal training?) L. B. Jack. 43:242 Je '47
Major General Charles P. Gross; maybe he is the man they need in New York to fight Michael Quill. Mass Transportation 43:217-19+ Je '47
Oklahoma City arbitration. Mass Transportation 43:32+ Ja '47
$1.60 an hour; transit wage demand and its effect on fares. Mass Transportation 43: 478-81 O '47
$100,000 St Louis arbitration. Mass Transportation 43:147-9 Ap '47
Pattern of American urban transit today is much in power of one man; how Zimring attacks his job. Mass Transportation 43: 310-13 Ag '47
St Louis booby trap in New York. Mass Transportation 43:314-16 Ag '47
Selling merchandising to St Louis platform men. C. Robinson. il Mass Transportation 42:490-1 N '46
Shotgun negotiation; arbitration board decision in St Louis transit dispute. Mass Transportation 43:363-6 S '47
Some effects of the Taft-Hartley act on the bus and transit industry. P. B. Willauer. Bus Transportation 26:56-9 O '47
Taft-Hartley act's bearing on transit operation. P. B. Willauer. bibliog Pub Util 40: 399-412 S 25 '47
Transit industry labor-management policy. E. Dana; P. C. Groner; E. C. Houghton. Mass Transportation 42:435-41 O '46
Transit labor story of the month; opinion of impartial umpire in dispute involving Cleveland transit system. R. Schram. Mass Transportation 43:355-7 S '47
Transit's most vital issue; arbitration. C. M. Updegraff. Mass Transportation 43:467-72 O '47
Union wages and hours of local transit operating employees, July 1, 1946. U S Bur Labor Statistics Bul 903:1-17; pa 10c Supt. of doc. '47
What price Yoricks? inadequacy of salaries of transit executives. E. A. Roberts. Mass Transportation 43:3 Ja '47; Same. Comm & Fin Chr 165:608 Ja 30 '47
What went on at St Louis? arbitration proceedings. Mass Transportation 43:267-70 Jl '47
Zimring's commercialized arbitration. W. H. Sawyer. Mass Transportation 43:463-4 O '47

Fare collection

Making change slows schedule speeds, increases driver hours, ups labor cost; advantages of use of token. F. Burt. il Mass Transportation 42:530-1+ D '46; Discussion (Standing time is money time). W. Jackson. 43:69-70 F '47

Fares

Chicago needs 10c fare to sell bonds. Mass Transportation 43:188-9 My '47
Chicago rapid transit company; effect of fare increase. Mass Transportation 43:10 Ja '47
Fare tinkering is not for amateurs or politicians! W. Jackson. Mass Transportation 43:105 Mr '47
Gaining public acceptance for needed fare increase; Capital transit company, Washington, D.C. E. C. Giddings. il Pub Util 40:425-30 S 25 '47
Memorandum: to all transit executives; New York transit fare issue. il Mass Transportation 43:100-4+ Mr '47
$1.60 an hour; transit wage demand and its effect on fares. Mass Transportation 43:478-81 O '47
One way to get money from those vacant off-peak seats. W. Jackson. Mass Transportation 43:284 Jl '47
Plea for an adequate fare structure. J. E. Heberle. Mass Transportation 43:444-5 O '47

RAPID transit—Fares—*Continued*
So you're a transit manager! San Francisco municipal railway. A. F. Smith. il Mass Transportation 43:95-9 Mr '47
Ten cent fare lost riders; comparison of Detroit statistics. W. Jackson. Mass Transportation 42:524-7 D '46
Transit's best statement of finances; fare increase publicity, Capital transit company. il Mass Transportation 43:317-21 Ag '47
Transit's dilemma. C. E. Ebert. Bus Transportation 26:54-5 O '47
What the 10c fare has done in Detroit. Mass Transportation 42:479 N '46

Finance
Ability to pay; wage disputes and financial position of Kansas City transit. C. M. Updegraff. Mass Transportation 43:358-62 S '47
As-if-and-when transit and civic opera in Chicago. R. Schram. Mass Transportation 43:286+ Jl '47
Best transit report of the year; Harrisburg railways company. Mass Transportation 43: 142-6 Ap '47
Boston tries to get financial plight understood. L. J. Mathieu. Mass Transportation 43:56-7 F '47
Chicago needs 10c fare to sell bonds. Mass Transportation 43:188-9 My '47
Civic notions breaking Boston transit's back. Mass Transportation 43:187 My '47
Cleveland; four years, four months, and four days of municipal ownership. Mass Transportation 42:483-5 N '46
Detroit; audited report of the Department of street railways for the fiscal year ended June 30, 1946. Mass Transportation 42: 486-9+ N '46
Financial results of Seattle operation, 1946 versus 1945. E. A. Roberts. Mass Transportation 43:202-3 My '47
Frontier days again at Buffalo; public ownership advocated. Mass Transportation 43:106-9+ Mr '47
Grand jury condemns San Francisco transit system; advocates sale of Municipal street railway system to private enterprise. Bus Transportation 26:54 F '47
Higher fares not merely a palliative. C. E. Ebert. Mass Transportation 43:446-9 O '47
Let's try to make some money. C. M. Gray. Mass Transportation 43:460-2 O '47
National city lines, inc. annual report, 1946. Mass Transportation 43:244-5 Je '47
New transit try. Bsns W p71-2+ Ag 16 '47
Nine years of transit fortunes; transit trends in relation to costs and revenues. G. C. Hecker. Mass Transportation 43:259-61 Jl '47
Pinch hitter goes for four bags; transit's financial problems. M. Edwards. Mass Transportation 43:455-9 O '47
San Francisco's transit alternatives. Mass Transportation 43:291 Jl '47
So you're a transit manager! San Francisco municipal railway. A. F. Smith. il Mass Transportation 43:95-9 Mr '47
Traction bonds oversold! Chicago transit authority. R. Schram. Mass Transportation 43:372-4 S '47
Transit's best statement of finances; fare increase publicity, Capital transit company. il Mass Transportation 43:317-21 Ag '47
Where is vaunted economy of public operation; Philadelphia transportation company annual report. Mass Transportation 43:198-201 My '47
Working days instead of dollars; Harrisburg Railways issues a new kind of operating report. Mass Transportation 43:337 Ag '47

Government ownership
Frontier days again at Buffalo; public ownership advocated. Mass Transportation 43: 106-9+ Mr '47

Management
How B. Larrick reorganized the Los Angeles railways. R. Schram. il Mass Transportation 43:367-9 S '47
Is there a yardstick to test transit managers? E. A. Roberts. Mass Transportation 43:370-1 S '47
Put overalls on your dollars. B. Larrick. il Mass Transportation 43:451-4 O '47

Municipal ownership
Grand jury condemns San Francisco transit system; advocates sale of Municipal street railway system to private enterprise. Bus Transportation 26:54 F '47
Key to good public transit operation; enabling legislation approved in 1920, which permitted Toronto to operate its city transit. Mass Transportation 43:489-90 O '47
Traction bonds oversold! Chicago transit authority. R. Schram. Mass Transportation 43:372-4 S '47
Transit body takes over Chicago lines. Eng N 139:497 O 9 '47

Public relations
Buses, beef and beefs; Cincinnati street railway public relations advertising. Mass Transportation 42:505+ N '46
Case of the missing passenger. W. B. Spencer. Mass Transportation 43:11-13 Ja '47
Getting the tripe out of one's soul! using advertising as a tool of economic education. A. L. Scaife. Mass Transportation 43:182-5 My '47
Intensive sustained merchandising essential to development of maximum revenue. R. S. Tompkins. Mass Transportation 42:446-9 O '46
Public relations, cafeteria style; weekly folder placed in vehicles of Los Angeles transit line. G. Gifford. il Mass Transportation 42:537-9 D '46
Strength for transit. R. H. Amberg. Bus Transportation 26:74-6 Ja '47

Schedules
Horseback opinion from days of crinoline is not for 1946. C. A. Stephenson. Mass Transportation 42:492-3+ N '46
Schedule making is an art. C. A. Stephenson. Mass Transportation 42:444-5+; Discussion. J. R. Ong. 458+ O '46

Statistics
Transit fact book, 1947. Mass Transportation 43:262-6 Jl '47

Canada
U.S. and Canadian transit systems compared. G. C. Hecker. Bus Transportation 26:64-5 Ag '47

Germany
Kriegsstrabenbahnwagen; German transit. G. Stetza. il Mass Transportation 43:236-9 Je '47

Great Britain
Transportation observations in Great Britain and Europe. H. C. Patten. Mass Transportation 43:275-6 Jl '47

United States
U. S. and Canadian transit systems compared. G. C. Hecker. Bus Transportation 26:64-5 Ag '47

RARE earth metals
Electron configurations of rare-earth elements. W. F. Meggers. bibliog Science 105: 514-16 My 16 '47
Measurement of neutron cross sections with a crystal spectrometer. W. J. Sturm. bibliog diags Phys R 71:757-76 Je 1 '47
Relation of yttrium to the lanthanons; a study of molecular volumes. J. K. Marsh. Chem Soc J p 1084-6 Ag '47

See also
Dysprosium
Holmium
Lanthanum
Samarium
Yttrium

Analysis
Rare earths separation developed on Manhattan project. W. C. Johnson and others. bibliog Chem & Eng N 25:2494 S 1 '47
Separation of the rare earth elements by chloride volatilisation. R. C. Vickery. bibliog diag Soc Chem Ind J 65:388-90 D '46

RARE earths
Infrared absorption spectra of some experimental glasses containing rare earth and other oxides. R. Stair and C. A. Faick. bibliog diags J Res Nat Bur Stand 38:95-101 Ja '47

RARE gases. See Gases, Rare

RARE minerals processing and chemical company
Stock offered. Comm & Fin Chr 166:1258 S 29 '47

RAT fleas. See Fleas as carriers of infection

RATCHET mechanism
Ball type friction ratchet meters feed; doughnut making device. il diag Product Eng 18: 98 Mr '47

RATHJE, Frank C. 1882-
Receives degree. Banking 39:81 D '46

RATIONING
War powers plan. Bsns W p24+ F 15 '47

Russia
Soviet Union; trends in prices, rations, and wages. I. B. Kravis and J. Mintzes. Mo Labor R 65:28-35 Jl '47

RATIONS, Army. See United States—Army—Commissariat

RATIOS, Financial. See Financial ratios

RATS

Extermination
ANTU. J. C. Munch. Soap & San Chem 23: 147+ Ap '47
Epidemic control with DDT, ANTU and 1080. H. Elishewitz. Soap & San Chem 23:128-9+ My; 153+ Je '47
How ANTU and 1080 promise better rodent control. il Chem Ind 59:828-9 N '46
Old and new rodenticides and herbicides have their places. L. G. Arrington. Dom Comm 35:37-41 Je '47
Rodent control features NPCA meeting. Chem & Eng N 24:3052+ N 25 '46
Studies in deratization of surface vessels by means of 1080 (sodium fluoroacetate). J. H. Hughes. Pub Health Rep 62:933-40 Je 27 '47

RATS as carriers of infection
Control of rat ectoparasites with DDT. R. G. Ludwig. diags Pub Health Rep 62:77-84, pl 1-3 Ja 17 '47
Study of murine typhus fever in Coffee county, Alabama. E. L. Hill and S. C. Ingraham, 2d. Pub Health Rep 62:875-81 Je 13 '47

RAW materials
Conservation of raw material reserves is national problem. C. G. Davidson. Iron Age 158:168+ D 19 '46
How management can help in conserving industrial raw materials; abstract. H. F. Merrill. Management R 36:31-3 Ja '47
Material standards for the food industries. R. E. Worden. flow sheet Food Ind 19:163-5+ F '47
Raw materials also need research. R. B. Ladoo. il Chem Ind 60:780-1 My '47
Some social implications of natural resources. H. A. Meyerhoff. Ann Am Acad 249:20-31 Ja '47
Today's efficiencies, tomorrow's wastes; much for chemistry and technology to do. C. M. A. Stine. il Chem Ind 59:824-6 N '46; Same. Chem & Eng N 25:307-8 F 3 '47

See also
Cellulose
Ceramic materials
Chemicals
Clay
Coal
Cotton
Farm produce
Metals
Minerals
Mines and mineral resources
Oils and fats
Petroleum
Rubber
Textile fibers
Wood

RAYLEIGH refractometers. See Refractometers

RAYMOND, Fred Ingalls
So big; hard to stay small and survive. por Fortune 36:144+ O '47

RAYON
Action of acrylonitrile on viscose; effect on the normal aging process. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:222-4 F '47
Cellulose synthetics. H. W. Rose. Textile World 96:212+ N '46
Developments in rayon and spun rayon fabrics. R. S. Greenwood. Textile Inst J 37: P181-9 Jl '46
Fine structure of viscose rayon. H. G. Ingersoll. bibliog J Ap Phys 17:924-39 N '46
List of new brandnames for rayon or rayon mixture fabrics, rayon yarns, and other fibers listed during 1946. Rayon 27:701 D '46
New rayons and old fibres; a suggested line of development in the production of fine yarns. A. Johnson. Textile Inst J 37:P403-11 Jl '46
Production of items made from rayon; tabulation. Textile World 97:114 S '47
Rayon regarded as basic material by foreign mills. H. Von Kohorn. il Rayon 28:406-7 Ag '47

See also
Textile fibers, Synthetic
Viscose

Bibliography
Review of periodicals. Published in monthly numbers of Rayon textile monthly

Dyeing
See Dyes and dyeing—Rayon

Knit goods
Modern tricot plant begins operation; Hornwood warp knitting co. il Textile World 97: 124-5+ Ja '47
Progress in tricot knitting. R. N. Lee. Rayon 28:437-8 Ag '47

Patents
Continuous production of viscose yarn using a unity or plurality of thread moving reels; patent situation. A. Mothwurf. Rayon 28: 288 My '47

RAYON, Insulating
Yarns for special purposes; effect of filament size. D. Finlayson. Textile Inst J 37:P168-80 Jl '46

RAYON carding
Production rates in the carding of short staple fibro on the revolving flat card. W. E. Morton and I. A. H. Shahin. Textile Inst J 38:P310-16; Discussion. P316-18 Ag '47

RAYON cords
Equitable use of fibers in tire construction. Rayon 28:533 O '47
High tenacity rayon yarn earns passenger car tire adoption. H. B. Kline. Rayon 28:4 Ja '47
Moisture transfer to and from tire cords encased in GR-S. W. J. Lyons and others. il India Rubber World 116:199-204+ My '47

Manufacture
Progress in treating rayon fabrics for tire cord. C. H. Beaver. il Rayon 28:471 S '47

RAYON fabrics
Application of modern textile fibers. R. S. Greenwood. Rayon 28:17-18 Ja '47
Consumers select rayon fabric colors. Rayon 28:438 Ag '47
Converting on two continents. E. Dallo. Textile Col 69:28-9+ Ap '47
Development in blended fabrics; abstract. F. A. Adams; F. Bonnet. Rayon 28:115 Mr '47
Developments in rayon and spun rayon fabrics. R. S. Greenwood. Textile Inst J 37: P181-9 Jl '46
Dyeing, printing and finishing in relation to fabric construction. R. S. Greenwood and C. P. Atkinson. Soc Dyers & Col J 63: 208-13 Jl '47
Fine crepes, satins, nylons and brocades in Canadian housecoats. E. F. Mann. il Rayon 28:431 Ag '47
Mechanical degradation of rayon fabrics in domestic laundry procedures. M. H. Graydon and others. bibliog Am Dyestuff Rep 36:397-9 Jl 14 '47
New standard of permanent rayon stability. J. C. Turrell. il Rayon 28:268-9 My '47
New uses for rayon in plastic fabrics. Rayon 28:222 Ap '47
Spinning imparts linen characteristic to spun staple. S. A. G. Caldwell. il diag Textile World 96:143+ N '46
Textile machinery and fabric trends in Europe. R. Bouvet. Rayon 28:417-18 Ag '47

See also
Rayon weaving

RAYON fabrics—*Continued*

Cotton mixtures

Dimensionally stable cellulosic fabrics. G. Landells. il Textile Inst J 37:P317-29; Discussion. P330-6 Jl '46

Defects

Poteye defect in acetate goods. Rayon 28:272 My '47

Shrinkage

Commercial glyoxal clears new research paths. J. A. Field. bibliog il Chem Ind 60: 960-3 Je '47

Control of shrinkage and crease resistance of viscose rayon fabrics. H. F. Creegan. Am Dyestuff Rep 35:514-18 N 4 '46; Same cond. Rayon 27:588-9 N '46; Same cond. Textile World 96:139+ N '46

Dimensional stabilization of rayon fabrics. L. Shapiro. Rayon 27:655-8 D '46

Dimensionally stable cellulosic fabrics. G. Landells. il Textile Inst J 37:P317-29; Discussion. P330-6 Jl '46

Shrinkages of spun rayons in hand and machine laundering. J. F. Tear. bibliog Rayon 28:483-6 S '47

Shrinkproofing (stabilizing) rayon fabrics; patent. diag Am Dyestuff Rep 36:281+ My 19 '47

Wool mixtures

Study of manipulated blends. A. Morrison. Am Dyestuff Rep 36:330-1+ Je 16 '47

Unshrinkable non-felting wool in all-wool and rayon mixture materials. J. Hall. diag Rayon 28:559-60 O '47 (to be cont)

RAYON fibers

Acetate staple, its function and use in blended yarns. H. Wild. Textile Inst J 37: P190-6; Discussion. 196-7 Jl '46

Application of modern textile fibers. R. S. Greenwood. Rayon 27:647-50; 28:17-18, 75-6 D '46-F '47

Density and refractivity of cellulose fibers in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47

Fibers in cross section are index to spinnability. Textile World 97:218+ S '47

Influence of rayon staple on preparing and spinning machinery developments. H. Ashton. il diags Textile Inst J 38:P340-52 Ag '47

Lubricating acetate staple fibers; patents. Am Dyestuff Rep 36:99 F 24 '47

Manufacture of modern textile fibers. C. Diamond. bibliog il diags Rayon 28:123-6, 190-2, 329-31, 369-70 Mr-Ap, Je-Jl '47

Microbalance for weighing textile fibres. E. Lord. il Textile Inst J 38:T84-92; Discussion. T92-3 F '47

1947 revision, Textile World's synthetic-fiber table. C. W. Bendigo, comp. Textile World 97:121-8 S '47

1947 table of commercial synthetic yarns and fibers. Textile World 97:117-20 S '47

Rayon in the spinning of asbestos. H. E. Shearer. Rayon 27:599 N '46

Special uses for rayon staple. Rayon 28:126 Mr '47

Testing

Axial swelling of rayons. J. M. Preston and S. Das Gupta. diag Textile Inst J 38:T60-4 F '47

Mechanical device for producing angular glass hooks for fibre testing. A. Johnson. il diags Textile Inst J 38:P27-9 Ja '47

RAYON finishing

Definized process at Lincoln Bleachery. C. H. Carlson and L. Shapiro. il Rayon 28:19 Ja '47

Electronic straighteners use two different systems. D. Eldred. il diags Textile World 97:123+ O '47

Fabric stabilization equipment and processing methods. L. Shapiro and A. N. Henschel. il diag Rayon 28:73-4, 145-7 F-Mr '47

Moire fabric finishing. H. A. Holterhoff. Rayon 28:38 Ja '47

New system speeds and improves rayon-fabric singeing. J. C. Moore. il diag Textile World 97:112-13+ Je '47

Preparation, dyeing and finishing of the new fibres. C. C. Wilcock. Soc Dyers & Col J 63:41-5 F '47

Quarter century of progress in synthetic processing. W. F. Brosnan. il Am Dyestuff Rep 35:646-9+ D 2 '46

Some aspects of the dyeing and finishing of fibro, with special reference to spun-dyed fibro. H. A. Thomas. Soc Dyers & Col J 62:309-13 O '46

Some trends in the continuous processing of cellulosic textiles. R. G. Fargher. Textile Inst J 38:P219-22 Jl '47

See also

Dyes and dyeing—Rayon
Rayon printing
Rayon sizing

RAYON flock

Behr-Manning reports progress with flock. R. E. Ellsworth. il Rayon 28:463-4 S '47

RAYON industry

Contract stabilization. J. Spears. Textile Col 69:32+ S '47

Export must be expert. H. Bernstein. Textile Col 69:24-5+ Mr '47

Industrial Rayon versus Celanese. G. L. Merton. il Mag of Wall St 80:705-7+ S 27 '47

Integrated firms worry rayon converters. Bsns W p50+ S 20 '47

Rayon production seen over billion pounds in 1948. Comm & Fin Chr 165:497 Ja 23 '47

Rayon textile industry. W. Ross. Textile Col 69:25+ F '47

Reviews of 1946 by yarn producers tell of complete conversion to consumer demands. Rayon 28:2-4 Ja '47

Staple versus style; rayon converters' group ads. Textile Col 69:18+ O '47

Synthetics pace textile industry expansion. J. V. Sherman. Barron's 27:31 Ag 18 '47

Textron. il Fortune 35:133-7+ My '47

World rayon outlook. Economist 153:372-3 Ag 30 '47

See also

American viscose corporation
Celanese corporation of America

Advertising

Wide importance of advertising defined. C. W. Rice, jr. Rayon 27:632 D '46

Securities

Public sale of rayon shares out of alien property sought; loans to Algemeene kunstzijde unie of Arnhem. Barron's 27:34 N 3 '47

Statistics

Rayon and synthetic fibers, 1923-1946. Chem Eng 54:119 F '47

Statistics on progress of American rayon industry. Rayon 28:319-20 Je '47

U.S.A. rayon production 1935-1946; chart. Rayon 28:5 Ja '47

Brazil

Rayon manufacturing and development in Brazil. P. W. Frisk. il Rayon 28:129-31 Mr '47

Canada

Rayon and silk industry in Canada. Rayon 27:634 D '46

Chile

Plant operations in Chile. For Comm W 27:24 My 31 '47

Great Britain

Higher rayon prices and output. Economist 153:419 S 6 '47

New outlook in rayon. Economist 151:1050-2 D 28 '46

Rayon production and exports, United Kingdom, first six months of 1947. For Comm W 29:27 O 11 '47

Recovery in rayon. Economist 152:953 Je 14 '47

India

Report on the Indian rayon industry. D. A. S. Chari. Rayon 28:365-6 Jl '47

Italy

Notes on the Italian rayon industry. A. Giordano. Rayon 27:635 D '46

RAYON industry—Italy—*Continued*
Report on the Italian rayon and other textiles industries. A. Giordano. Rayon 27:605 N '46

RAYON machinery
Early apparatuses for the continuous rayon process. F. L. Durr. diags Rayon 28:468-9, 534-5 S-O '47
German Dureta process for rayon yarn; abstract. Rayon 28:457 S '47
Improved modern textile machinery. il Rayon 28:149-52 Mr '47
Modern rayon warping methods. H. E. Wenrich. il diags Rayon 27:643-6 D '46
Plastics improve textile machinery. il diags Mod Plastics 24:73-9 Jl '47
Rayon machinery exceeding $20,000,000 exported by Oscar Kohorn & co., ltd. Rayon 28:6 Ja '47
Sizing methods determine good warps; Johnson sizer. H. E. Wenrich. il diag Rayon 28:219-21 Ap '47

RAYON manufacture
Caustic soda as used in the rayon industry. P. W. Frisk. diag Rayon 27:596-8 N '46
Early apparatuses for the continuous rayon process. F. L. Durr. diags Rayon 28:468-9, 534-5 S-O '47
Importance of adequate steeping of alkali cellulose. P. W. Frisk. il Rayon 27:641-2 D '46
Manufacture of modern textile fibers. C. Diamond. bibliog il diags Rayon 28:123-6, 190-2, 329-31, 369 Mr-Ap, Je-Jl '47
Process water treatment for rayon manufacture. L. B. Miller. bibliog il diags Rayon 28:153-7, 236-9 Mr-Ap '47
Rayon manufacturing and development in Brazil. P. W. Frisk. il Rayon 28:129-31 Mr '47
Reports from Germany; textile developments. Mech Eng 69:679-80 Ag '47
Some aspects of the saponification of acetate rayon; presented by South central section. il Am Dyestuff Rep 36:64-9 F 10 '47; Abstract. Textile World 97:192+ Ja '47
Study of the rate of saponification of cellulose acetates. F. Howlett and E. Martin. pl Textile Inst J 38:T212-25 Ap '47

See also
Rayon finishing
Rayon mills

RAYON mills
American Enka corporation expansion under way at Morristown, Tenn. Rayon 28:7 Ja '47
New features in modern textile mill construction; U.S. rubber co.'s rayon twisting and spinning plant at Scottsville, Va. il Rayon 27:671-3 D '46
New trends develop in southern textile mill design. il Eng N 138:805-9 My 15 '47
Peruvian textile mills build own rayon plant. il Textile World 97:240 My '47

See also
Hosiery mills

Air conditioning

Air conditioning pays off in four southern mills. il Textile World 97:111-13 Ag '47

Electric equipment

Electrical installation in a viscose rayon factory. C. F. Freeman and H. V. Mather. Engineering 163:470 Je 6 '47; Abstract and discussion. Electrician 138:1319-20 My 16 '47
Electronic warper drive gives constant yarn speed. R. J. Demartini. il diag Textile World 97:121+ Ap '47

Employees

Wage structure of the rayon and silk industry, June-July 1946. M. S. Caffee. Mo Labor R 64:816-23 My '47

Equipment

Automatic controls increase quality and production. Rayon 28:225-7 Ap '47
Rayon cake treater. il Chem Eng 54:147-8 O '47

See also
Rayon machinery

Heating and ventilation

Adjustable air diffuser can meet changing conditions. H. A. Baker. il diag Textile World 97:141+ My '47

RAYON printing
Discharge printing on acetate cellulose; patent. Am Dyestuff Rep 36:283 My 19 '47
Exhibition of print styles. N. Hamer and others. Soc Dyers & Col J 63:97-101 Ap '47
Printing acetate of cellulose with acid dyes; British patent. Am Dyestuff Rep 36:281 My 19 '47
Printing of mixed fabrics. G. A. Northup. Am Dyestuff Rep 36:6-7+ Ja 13 '47
Screen printing of rayon and silk with acid and direct dyes. Rayon 28:341-3, 392-4 Je-Jl '47
Washing rayon prints. Am Dyestuff Rep 36: 365 Je 30 '47

RAYON research
Axial swelling of rayons. J. M. Preston and S. Das Gupta. diag Textile Inst J 38:T60-4 F '47
Density and refractivity of cellulose fibres in relation to their structure. P. H. Hermans. il diags Textile Inst J 38:P63-74 F '47
Textile industry tribute to rayon research during 1946. B. M. May. Rayon 28:3 Ja '47

RAYON sizing
Acetate slashing often wasteful of materials. I. G. Sanford. diags Textile World 96:133+ N '46
Essential requirements of good textile size for rayon and synthetic yarn warps. C. Schlatter. Am Dyestuff Rep 36:484 Ag 25 '47
Lubricating cellulosic yarns for preparing knitted goods. P. Wengraf. Am Dyestuff Rep 36:512 S 8 '47
Modern slasher room features automatic controls; Seminole mills. P. M. Thomas. il Textile World 97:135+ S '47
Monofilizing main aim of rayon slashing. il Textile World 97:115+ O '47
Short-cuts in sizing methods. H. E. Wenrich. il Rayon 28:270-2 My '47
Sizing methods determine good warps; Johnson sizer. H. E. Wenrich. il diag Rayon 28:219-21 Ap '47
Sizing rayon warps for pile fabrics. J. J. Sussmuth. diags Rayon 28:536-7 O '47
Sizing yarn packages; low melting emulsions; patent. Am Dyestuff Rep 36:546-7 S 22 '47

RAYON spinning
Current developments in rayon staple spinning; abstract. H. Ashton. Textile Inst J 38:P201-2 Je '47
Effects of accessory influences on ring spinning of cotton and spun rayon. E. Honegger and A. Fehr. bibliog il diags Textile Inst J 38:P353-79; Discussion. P379-80 Ag '47
Fibers in cross section are index to spinnability. Textile World 97:218+ S '47
Influence of rayon staple on preparing and spinning machinery developments. H. Ashton. il diags Textile Inst J 38:P340-52 Ag '47
Nelson continuous rayon spinning process. Rayon 28:409 Ag '47
New simple type of thread storage and self-advancing reel. R. A. O'Connell and H. P. Lundgren. il diags Rayon 27:653-4 D '46
Rayon staple spins well on worsted system. il Textile World 97:129+ O '47
Spinning imparts linen characteristic to spun staple. S. A. G. Caldwell. il diag Textile World 96:143+ N '46

RAYON staple fiber. See Rayon fibers

RAYON waste
Plastic laminates offer prime market for rayon thread waste. Rayon 28:470 S '47

RAYON weaving
How to speed up warp entering. H. E. Wenrich. diag Rayon 28:479-80 S '47
Monofilizing main aim of rayon slashing. il Textile World 97:115+ O '47
Odd reeding. P. G. Alexander. Rayon 27:646 D '46
Rayon-loom take-up requires careful adjustment. H. E. Wenrich. diag Textile World 96:218+ D '46
Sizing rayon warps for pile fabrics. J. J. Sussmuth. diags Rayon 28:536-7 O '47
Two beam fancy rayon fabric. P. G. Alexander. Rayon 28:148 Mr '47
Yarn breakage in warping. H. E. Wenrich. Rayon 27:601-2 N '46
Yarn control in direct beaming. H. E. Wenrich. il diag Rayon 28:161-2 Mr '47

RAYON yarn
Action of acrylonitrile on viscose; carboxylated rayons. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:929-30 Jl '47
Alphabetical list of current brandnames of American rayon yarns. Rayon 27:661 D '46
Cellulosic yarns; pre-treatment; patent. Am Dyestuff Rep 36:248 My 5 '47
Continuous production of viscose yarn using a unity or plurality of thread moving reels; patent situation. A. Mothwurf. Rayon 28: 288 My '47
German Dureta process for rayon yarn; abstract. Rayon 28:457 S '47
Lubricating cellulosic yarns for preparing knitted goods. P. Wengraf. Am Dyestuff Rep 36:512 S 8 '47
Postwar progress report on Fortisan. W. Whitehead. Rayon 28:71-2, 127 F-Mr '47
Problem in manufacture of rayon combination yarn. Rayon 27:542-3 O '46; Discussion. H. R. Mauersberger. 28:14-16 Ja '47
Reviews of 1946 by yarn producers tell of complete conversion to consumer demands. Rayon 28:2-4 Ja '47
Synthetic yarns reach annual billion-pound rate. W. B. Dall. Textile World 97:115-16 S '47
Yarn breakage in warping. H. E. Wenrich. Rayon 27:601-2 N '46
Yarn control in direct beaming. H. E. Wenrich. il diag Rayon 28:161-2 Mr '47
Yarns for special purposes; effect of filament size. D. Finlayson. Textile Inst J 37:P168-80 Jl '46

Mixtures

Acetate staple, its function and use in blended yarns. H. Wild. Textile Inst J 37: P190-6; Discussion. P196-7 Jl '46

See also
Rayon fabrics—Cotton mixtures

Tables, calculations, etc.

Many changes in rayon yarn deniers and filament numbers; revised tables as of March, 1947. H. R. Mauersberger. Rayon 28:132-4 Mr '47
Postwar changes in rayon yarn deniers and filament numbers; revised tables as of Sept. 1947. H. R. Mauersberger. Rayon 28:472-3 S '47

Testing

Stress-strain properties of certain yarns and knitted fabrics made of rayon, nylon and natural fibers. H. M. Fletcher and P. A. Gilmore. bibliog Rayon 28:476-8, 542-5 S-O '47

Wool mixtures

Acetate staple, its function and use in blended yarns. H. Wild. Textile Inst J 37:P190-6; Discussion. P196-7 Jl '46
Rayon staple spins well on worsted system. il Textile World 97:129+ O '47

RAYONIER, inc.
Net up with higher operations. Barron's 26:6 D 30 '46

RAYS

See also
Absorption of rays
Cosmic rays
Gamma rays
Infrared rays
Radiation
Ultraviolet rays
X rays

RAYTHEON manufacturing company
Raytheon sees years of work to rebuild earnings. Barron's 27:34 N 3 '47

RAYTON, Wilbur B. 1884-1946
Tribute. I. L. Nixon. por Soc Motion Picture Eng J 48:217-19 Mr '47

RAZOR blades
Durex; a new razor blade of good quality. Consumers Res Bul 19:18 Ap '47
Razor blade edges; with pictures. Consumers Res Bul 19:17-18 Je '47

Rating

Test of razor blades. il Consumers Res Bul 18:10-12 D '46

RAZORS
Polystyrene razor box; protective re-use case. il Mod Packaging 20:129 F '47
Razor edge; Gem injection-molded plastic packages and displays. il Mod Packaging 20:122-3 Je '47
Two shavers that use plastics. il Mod Plastics 25:178-80 S '47

Advertising

Ad program integrates spot, magazines and point-of-sale; Durham-Enders razor corp. il Ptr Ink 219:42-3 My 9 '47

REACTION time
Prediction of speed of performance by muscle action potentials. J. L. Kennedy and R. C. Travis. Science 105:410-11 Ap 18 '47

REACTIVE power
Reactive metering; analyses of meter connections. V. B. Shah. diags Elec R (Lond) 140:979-83 Je 13 '47
Sign of reactive power; AIEE committee report on proposed change. diags Elec Eng 65:512-16 N '46; Discussion. 65:598; 66:107-10, 206-8, 321-3, 514-17 D '46-Mr, My '47

REACTORS
Applications of magnetic amplifiers. W. E. Greene. bibliog il diags Electronics 20: 124-8 S '47
Hermetic sealing of transformers and chokes used in communication equipment. C. F. Bays and D. Slater. il diags Inst E E J 94 pt 3:347-57 S '47
Magnetic amplifier circuits, neutral type. A. S. FitzGerald. diags Franklin Inst J 244: 249-65 O '47
Saturable reactors for load control. P. A. Vance. il diags Gen Elec R 50:17-21 Ag; 42-4 S '47

See also
Petersen earth coil

Testing

Impedance network for production-testing current-limiting reactors. S. C. Leonard. il diags Gen Elec R 50:31-5 O '47

READ, Gladys Petrie (Mrs John A. McNulty)
Marking twenty five years' service with the Eastern underwriter. por East Underw 48: 24a-24c My 30 '47

READ, Richard Sebastian, 1874-
Dean of electric furnace steel melters. H. J. Stagg. por Metal Prog 50:670-2 O '46

READ, Thomas Thornton, 1880-1947
Appreciation. H. F. Bain. por Min & Met 28:357 Jl '47

READ, William Thornton, 1886-
Portrait. Oil Paint & Drug Rep 150:3 N 18 '46

READABILITY. See English language

READING company
Condensed annual report for year ended Dec. 31, 1946. Ry Age 122:517 Mr 8 '47; Comm & Fin Chr 165:1321 Mr 10 '47
Reading recovers from 1946 depression. Barron's 27:12 F 24 '47

READING glasses. See Magnifiers

READY-mixed concrete. See Concrete mixing—Ready-mixed concrete

REAL estate bonds. See Bonds, Real estate

REAL estate business
Biggest buy; world's largest apartment development goes to Texas realty tycoon; Fairlington near Washington, D.C. il Arch Forum 86:16 F '47
Bloom off housing prices; other realty still scarce. R. M. Bleiberg. Barron's 26:11 D 23 '46
Business and real estate outlook. A. M. Weimer. Comm & Fin Chr 165:3029+ Je 5 '47
Business recession and real estate values. R. Rodgers. Comm & Fin Chr 165:3115+ Je 12 '47
Comparative operating statements prove hotel to be better real estate investment than office building. Arch Forum 85:102 D '46
Construction and real estate markets in 1947. Fed Res Bul 33:635-46 Je '47
Dangers of present day real estate lending. R. Rodgers. Comm & Fin Chr 165:1922+ Ap 10 '47

REAL estate business—*Continued*
Future real estate prices. G. Goldstein. Comm & Fin Chr 165:2337+ My 1 '47
Home rush ends; prices of existing houses to fall this year. Bsns W p20 Mr 15 '47
New realty peak? Bsns W p20 D 21 '46
New rent control law stimulant to real estate industry. A. Summer. Comm & Fin Chr 166:111 Jl 10 '47
Political and monetary aspects of real estate situation. T. I. Parkinson. Comm & Fin Chr 165:735+ F 6 '47
Problem of real estate forecasting. R. H. Armstrong. Comm & Fin Chr 165:2733+ My 22 '47
Real estate prices not excessive. M. L. Fitch. Comm & Fin Chr 165:2733 My 22 '47
Risks in a building recession. M. L. Colean. Banking 40:40-1 Jl '47
Sees slight slump in used house values. H. Carpenter, jr. Comm & Fin Chr 164:3360+ D 26 '46
Today's shaky real estate market. E. V. Bell. Comm & Fin Chr 165:1794+ Ap 3 '47
Where urban real estate is heading. M. L. Colean. Banking 39:54-5+ F '47

See also
Building
Housing projects
Land—Subdivision
Mortgages
Rent
Suburban development

Bibliography

Real estate market today. (Business literature v. 20, no. 2) p69-70 Business library, Newark public lib, Newark, N.J. O '47

Statistics

Nonfarm real estate finance. D. S. Thompson. J Land & Pub Util Econ 23:105-16 My '47

Cleveland

Van's real estate reorganized; main assets are downtown buildings. il Bsns W p80+ O 18 '47

New York (city)

New York a good place to build. M. L. Matthews. Comm & Fin Chr 166:1313 O 2 '47
Real estate dynamo. Bsns W p28+ Ag 16 '47

REAL estate developments. See Housing projects; Suburban development

REAL property
Tax court in error in holding all rental property is used in trade or business. E. T. Roehner. J Account 83:477-82 Je '47

See also
Farms
Land tenure
Land values
Mortgages
Real estate business
Rent

Valuation

Appraising for real estate loans. H. C. Lindquist. Comm & Fin Chr 165:1002+ F 20 '47
Many economic factors fix market value of engineering specialties. D. M. Baker. il Civil Eng 17:126-9+ Mr '47
Pitfalls in present real estate appraisals. R. H. Armstrong. Comm & Fin Chr 164:2748+ N 28 '46

See also
Insurance, Fire—Valuation of property

REAMERS
Combination reamer saves two turret steps. R. Isetts. diag Am Mach 91:116 Mr 27 '47
Cutting action of reamers. T. F. Githens. bibliog diags A S M E Trans 68:867-76 N '46
Special tool designed for reaming punches. R. Mawson. diag Materials & Methods 25: 132-3 Mr '47

REAMING
Double-eccentric circular cutters improve reaming. J. Copeland and R. Holsing. diags Am Mach 90:140 D 19 '46
Self-centering reaming fixture for spinning caps. R. Mawson. diags Mach 53:203-4 Je '47

RECEIVERS
Distinction between liquidating agent and receiver of bank; Dobler v. Bowden, Supreme court of Iowa. Banking Law J 64:393-401 My '47

See also
Insurance companies—Receiverships
Railroads—Receiverships

RECEPTION rooms. See Office management—Reception rooms

RECEPTIONISTS
Better reception for bank customers; with instruction manual for receptionists. J. Kinnemann, jr. il Burroughs Clearing House 32:22-3+ O '47
How 20 companies welcome visitors. J. A. Murphy. il Am Bsns 17:17-20+ S; 24+ O '47

RECESSING tools
Recessing tools for turret lathes; reference book sheet. F. W. Miller and C. A. Namur. diags Am Mach 91:123, 125 Ja 2; 131 Ja 30 '47

RECIPROCAL insurance. See Insurance, Reciprocal

RECIPROCAL trade agreements. See Commercial treaties and agreements

RECIPROCITY
Reciprocal trade agreements. W. B. Bullock. Paper Ind 28:1303 D '46

RECIPROCITY theorem
Coordinates and the reciprocity theorem in electromechanical systems. J. W. Miles. bibliog diags Acoustical Soc Am J 19:910-13 S '47
Practical application of the reciprocity theorem in the calibration of underwater sound transducers. P. Ebaugh and R. E. Mueser. bibliog Acoustical Soc Am J 19:695-700 Jl '47
Violation of the reciprocity theorem in linear passive electromechanical systems. E. M. McMillan. diags Acoustical Soc Am J 18: 344-7 O '46; Discussion. 19:502-3, 922 My, S '47

RECLAMATION, Bureau of. See United States—Reclamation, Bureau of

RECLAMATION of land
Congress must reclaim reclamation. H. Butler. Pub Util 39:465-72 Ap 10 '47
Past and prospective drainage reclamations in the coastal marshlands of the Mississippi River delta. R. W. Harrison and W. M. Kollmorgen. bibliog map J Land & Pub Util Econ 23:297-320 Ag '47
Unleveled spoil brings good return as farming project. J. H. Edwards. il Coal Age 52:92-7 F '47

See also
Drainage
Filling
Irrigation

RECONSTRUCTION (World war, 1939-1945)
Ancient Rhone valley begins a new cycle. W. G. Bowman. il map Eng N 139:148-52 Jl 31 '47
Army engineers reconstruct and expand war-damaged Philippine ports. C. L. Hall. il Civil Eng 17:328-31 Je '47
Austria gambles on the future. W. G. Bowman. il Eng N 138:975-6 Je 19 '47
Burma's reconstruction and trends of post-war trade. D. J. Steinberg. il For Comm W 28:5-7+ S 27 '47
Civil engineering in 1946. il map Engineer 183: 27-9, supp7 Ja 3 '47
European economic cooperation; within or without the UN? purposes of Economic commission for Europe. F. Haussmann. Comm & Fin Chr 166:1203+ S 25 '47
France and Italy; patterns of reconstruction. Fed Res Bul 33:353-66 Ap '47
French industry and reconstruction. A. A. Luebs. Mech Eng 69:300-1+ Ap '47
Germany; its prewar economic importance and plans for reconstruction. Index 27 no 3: 47-60 [S] '47
Hope resides in coal and reconstruction in Europe. W. G. Bowman. il map Eng N 139:220-3 Ag 14 '47
Interim report on status of European reconstruction. V. L. Horoth. il Mag of Wall St 79:543-5+ F 15 '47

RECONSTRUCTION (World war, 1939-1945)—*Continued*
Occupation army engineering. W. G. Bowman. il Eng N 139:25-6 Jl 10 '47
Our foreign aid policy; letter to Senator Bridges. H. Hoover. Comm & Fin Chr 165: 3230+ Je 19 '47
Reconversion and reconstruction in the U.S.S.R. A. Yugow. bibliog Int Labour R 55:62-76 Ja-F '47
Reconversion period; reflections of a forecaster. E. E. Hagen. R Econ Stat 29:95-101 My '47
Steel most critical problem in European reconstruction program. flow diag Steel 121: 52-3 O 27 '47
United States and the world crisis. J. P. Warburg. Comm & Fin Chr 166:1753+ O 30 '47
U.S. financial assistance in world reconstruction. N. Weyl. For Comm W 26:3-6+ F 1 '47
United States in Europe; need of sound money, free prices and open markets. Fortune 36:2-4 Jl '47
U.S. opportunity. il Fortune 35:83-5+ Je '47; Discussion. 36:26+ S '47
United States responsibilities in foreign reconstruction. D. Acheson. Comm & Fin Chr 165:2730+ My 22 '47
View on world reconstruction. Nat City Bank p34-5 Mr '47
World planning in the frying pan. M. Palyi. Comm & Fin Chr 166:1201+ S 25 '47

See also
Finance, International
also Commission for international educational reconstruction; United nations relief and rehabilitation administration

Marshall plan

American interest in European reconstruction; address before American bankers association. W. W. Aldrich. Comm & Fin Chr 166:1422-3+ O 9 '47
America's responsibilities for world leadership. H. A. Bullis. Comm & Fin Chr 166: 422+ Jl 31 '47
Back to WPB? Marshall plan may strain economy. Bsns W p23 O 11 '47
Britain plans for future outside Marshall plan. E. Blair. Barron's 27:10 O 6 '47
British reactions to Marshall offer. P. Einzig. Comm & Fin Chr 165:3349; 166:427 Je 26, Jl 31 '47
Canada and the Marshall offer. Economist 153:408-9 S 6 '47
Causes and remedies of European economic distress. L. Dolivet. Comm & Fin Chr 166: 1014-15 S 11 '47
Chemicals requirements for Marshall plan set. Oil Paint & Drug Rep 152:4 O 20 '47
Crisis of leadership; Paris report. Economist 153:585-6 O 11 '47
Curb inflation and provide foreign aid; reasons for special session of Congress; radio address. H. S. Truman. Comm & Fin Chr 166:1739+ O 30 '47
Debt, the budget and taxes, phases of Marshall plan. B. Ruml. Comm & Fin Chr 166: 1430+ O 9 '47
Doing business in two worlds. map Bsns W p 15-16 Jl 26 '47
Domestic credit problems and international financial policy. M. S. Szymczak. Comm & Fin Chr 166:1734+ O 30 '47
Economic reconstruction and Marshall plan. T. H. McKittrick. Comm & Fin Chr 166: 1634+ O 23 '47
Europe girds for self-help; Paris planners' four-year recovery program. Bsns W p 105-6 S 27 '47
Europe presents the bill. il Bsns W p 19-21 O 4 '47
European aid and Marshall plan. J. M. Dodge. Comm & Fin Chr 166:1741+ O 30 '47
European recovery. W. L. Thorp. Comm & Fin Chr 166:1747+ O 30 '47
European recovery vital: Rio conference address. G. C. Marshall. Comm & Fin Chr 166:718+ Ag 21 '47
Europe's aid program compared with basic needs. J. Hirsch. Barron's 27:5-6 O 20 '47
Europe's oil expectations under Marshall plan are revealed. H. D. Ralph. Oil & Gas J 46:37 O 4 '47
First points for Paris; Marshall plan for Europe. Economist 152:1009-11 Je 28 '47
French face showdown on franc, Marshall aid. E. Blair. Barron's 27:10 S 29 '47
Future of the Bank for international settlements and the Marshall plan. E. H. Weinwurm. bibliog Comm & Fin Chr 166:906+ S 4 '47
Holds Marshall plan essential curb to Russia; National planning association. Comm & Fin Chr 166:1023 S 11 '47
Implications of the Marshall plan. M. Palyi. Comm & Fin Chr 166:518+ Ag 7 '47
Industry's new tasks; the Paris report. Economist 153:571-2 O 4 '47
Inflationary spirals and the Paris report. M. Palyi. Comm & Fin Chr 166:1629+ O 23 '47
Marshall and Molotov; two plans for Europe. Bsns W p18 Jl 19 '47
Marshall plan calls for two million tons of raw steel. J. R. Hight. Iron Age 160:181-3 O 16 '47
Marshall plan finds wide support among U.S. voters; Gallup poll. Iron Age 160:97+ Jl 31 '47
Marshall plan has popular support in France; public opinion poll. Iron Age 160:235 S 11 '47
Marshall plan problems. P. Einzig. Comm & Fin Chr 166:105+ Jl 10 '47
Marshall program; lend-lease for peace and prosperity; radio address. J. P. Warburg. Comm & Fin Chr 166:120+ Jl 10 '47
Mr Marshall's challenge. Economist 152:921-3 Je 14 '47; Same cond. Iron Age 159:82+ Je 26 '47
Needed; a new program for Europe's rehabilitation; address at Harvard university. G. C. Marshall. Comm & Fin Chr 165:3124+ Je 12 '47
No Marshall plan at Bogota. Economist 153: 448-9 S 13 '47
Our role in European recovery; Cleveland address. W. A. Harriman. Comm & Fin Chr 166:1209+ S 25 '47; Same. For Comm W 28:3-4+ S 27 '47
Paris view of U.S. relief: we don't realize need. E. Blair. Barron's 27:7 O 20 '47
Plan to aid Europe takes on realism. Barron's 27:1+ O 27 '47
Politics overlooked in 16-nation report on Marshall plan. Barron's 27:1+ S 29 '47
Priorities for western Europe. Economist 153: 427-8 S 13 '47
Revived Germany essential to Marshall plan. L. H. Brown. Comm & Fin Chr 166:714+ Ag 21 '47
Selling Marshall plan to U.S. public presents problems; Gallup poll. Iron Age 160:185 O 16 '47
16-nation aid program; report of the Paris conference. Nat City Bank p 113-16 O '47
Soviet power threat to Marshall program. Barron's 27:1+ Je 30 '47
Summary of the general report of the Committee of European economic co-operation Economist 153:524-6 S 27 '47
U.S. economy can support foreign relief; abstract. J. A. Krug. Comm & Fin Chr 166: 1649 O 23 '47
U.S. public approves Secretary Marshall's methods; Gallup poll. Iron Age 160:99 O 23 '47
Upholds Marshall plan; Chicago address. E. A. Johnston. Comm & Fin Chr 166:426 Jl 31 '47
Want reins on Marshall plan. Bsns W p26+ O 11 '47
We must help Europe, but keep U.S. economy strong. H. A. Bullis. Comm & Fin Chr 166:814+ Ag 28 '47
Working our passage. Economist 153:89-90 Jl 19 '47
World RFC may guide Marshall plan spending. E. Blair. Barron's 27:10 O 13 '47

Relief work

Outlines European relief needs. H. Hoover. Comm & Fin Chr 165:1570 Mr 20 '47
Urges relief in occupied areas. H. Hoover. Comm & Fin Chr 165:3033 Je 5 '47

RECONSTRUCTION finance corporation
Discusses RFC and work of War damage corporation. J. D. Goodloe. East Underw 48:20-1 Jl 4 '47

RECONSTRUCTION finance corporation—*Cont.*
F.I.A. cancels RFC business; puts end to 10 per cent discount. Nat Underw 51:3+ Je 12 '47
Proposes RFC reforms. H. Hoover. Comm & Fin Chr 165:3044 Je 5 '47
RFC loan to Philippines. Comm & Fin Chr 165:1570 Mr 20 '47
RFC rescinds exclusive deal with Marsh & McLennan; lessees may get own cover to replace that canceled by F.I.A. Nat Underw 51:1+ Je 19 '47

Rubber reserve, Office of
Government laboratories of the Office of rubber reserve. il Chem & Eng N 24:3024-6 N 25 '46

RECONVERSION. See Industrial demobilization

RECORD changers. See Phonograph—Record changers

RECORDING instruments
Foxboro shows its dew point recorders. il Paper Tr J 125:26 O 30 '47
Installation and use of instruments on open-hearth melting furnaces. R. C. Baker. il diags Iron & Steel Inst J 157:81-8 S '47
Photographic recording extensometer. J. Sikorski and others. diags Textile Inst J 38:T20-36; Discussion. T37 F '47

See also
Aeronautic instruments
Anemometers
Barometers
Carbon dioxide recorders
Cyclotron
Gages
Geiger-Müller counters
Manometers
Oscillographs
Spectrograph
Tachometers
Telephone recorders
Thermometers and thermometry

RECORDING instruments, Electric
Aircraft antenna pattern plotter. O. H. Schmitt and W. P. Peyser. bibliog il diags Electronics 20:88-91 My '47
Analyzer charts performance of hydraulic governors. B. F. Gastin. il Elec World 127: 64-5 Mr 1 '47
Automatic recording infra-red spectrophotometer. W. S. Baird and others. il diags Opt Soc Am J 37:754-61 O '47
Automatic spark recorder for stress-strain testing. R. Shearer. il diag India Rubber World 116:498+ Jl '47
Demand control through supervision. E. G. Schlup. il diags Elec World 127:56-7 F 1 '47
Electrical slip-recorder. N. Haglov and R. C. Parker. il diags Engineering 164:365-6 O 17 '47
Electronic recording instruments; symposium. W. R. Clark and others. il diags Elec Eng 66:36-44 Ja '47
Electronics in measurement. L. G. Gitzendanner. il diags Gen Elec R 50:24-9 Ag '47
Extending frequency range of pen-type recorders. H. S. Hemstreet and R. G. Hill. diag Electronics 20:164+ Ag '47
Instrument to measure servomechanism performance. H. I. Tarpley. bibliog il diags R Sci Instr 18:39-43 Ja '47
Method for recording the strength of scouring solution in continuous cloth scouring. R. E. Hale. Am Dyestuff Rep 36:362-4 Je 30 '47
Microwave antenna beam evaluator. H. LeCaine and M. Katchky. il diags Electronics 20:116-20 Ag '47
Mobile strain gauge recording. il Engineer 184:244-5 S 12 '47
Multiple point repeating switch for use with a recording potentiometer. A. M. Altschul. il diags R Sci Instr 18:195-7 Mr '47
New method for the direct recording of prolonged time-dependent processes. W. von Wittern. il diag Science 105:342-4 Mr 28 '47
Phase-front plotter for centimeter waves. H. Iams. il diags RCA R 8:270-5 Je '47
Portable echo-sounding recorder speeds hydrographic surveys. il Eng N 139:132-3 Jl 24 '47
Positive weight control; electronic device flashes signals to govern adjustment of filling machine; Lipton tea co. il Mod Packaging 20:130-4 Mr '47
Recorder and timer for short intervals; designed to meet the needs of nucleonic research. W. H. Bliss. il diags Electronics 20:126-7 N '47
Recording magnetic detector locates flaws in ferrous metals. C. H. Hastings. il diags Product Eng 18:110-12 Ap '47
Sensitive recording magnetometer. A. Butterworth. diags Inst E E J 94 pt 2:325-30; Discussion. 330-2 Ag '47

RECORDING paper. See Paper, Recording

RECORDING studios. See Sound recording studios

RECORDS

See also
Accounting
Advertising departments—Records
Banks and banking—Records
Card system in business
Electric motors—Records
Employment departments—Records
Factories—Records
Files and filing (documents, etc.)
Forms and blanks, Business
Inventories
Libraries—Ephemeral and source materials
Lubrication and lubricants—Records
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Microfilm records
Photographic records
Punched card system
Railroads—Records
Sales records
Stores systems

RECORDS, Disposal of. See Files and filing (documents, etc.)

RECORDS, Microfilm. See Microfilm records

RECORDS, Preservation of
Preservation of business records; abstract. I. P. Schiller. Management R 36:408-10 Ag '47

See also
Microfilm records

RECORDS, Visible
Increasing production efficiency through visual control. K. Kern. il Rubber Age 61: 195-6 My '47
Sales figures to the field; American Home Foods uses microfilm copies of sales analysis figures, kept on visible cards in home office. G. L. Harris. il Am Bsns 16: 12-13 D '46
Speeding customers' calls; installation of Remington-Rand Kardex visible file cabinets at Pennsylvania information and reservation bureau. il Ry Age 122:1084 My 24 '47
Sylvania's sales control system. E. J. Lynch. il Am Bsns 16:14-15+ N '46

RECREATION
Group activities for bank morale; California bank, Los Angeles. K. Monroe. il Burroughs Clearing House 31:18-19+ N '46
More play, better work; organized industrial recreation. F. R. Eastwood. il Nat Safety N 55:22-3+ F '47
Movies for employees during lunch periods. Burroughs Clearing House 31:4 Ja '47
Plan that boosts community and employee relations; R. G. LeTourneau. il Am Bsns 17:26 Mr '47
Recreation program with something for everybody; Bell & Howell company, Chicago. W. L. Johnson. il Factory Management 105:77-9 My '47
Recreation programs can pay their own way. Nat Safety N 56:69 S '47

See also
Playgrounds

RECREATION buildings
Field house, Boys Town, Nebraska. il plan Arch Rec 101:71 Ja '47

See also
Skating rinks

RECRUITING campaigns
Nurse recruitment. Sales Management 58:86+ Ap 15 '47

RECRYSTALLIZATION. See Crystallization

RECTIFICATION
Calculation of theoretical plates in rectification. A. M. Eshaya. bibliog Chem Eng Prog 43:555-60 O '47

RECTIFICATION—*Continued*
Comparison of rectification and desorption in packed columns; desorption tests on carbon dioxide-water and oxygen-water, and rectification tests on isopropanol-water. D. W. Deed, P. W. Schutz and T. B. Drew. bibliog diags Ind & Eng Chem 39:766-74 Je '47
Rectification of benzene-toluene; effect of operating variables on plate efficiency. J. Griswold and P. S. Stewart. bibliog il diags Ind & Eng Chem 39:752-62 Je '47
Rectification of liquid air in a packed column. J. A. Weedman and B. F. Dodge. bibliog il diag Ind & Eng Chem 39:732-44 Je '47
Rectification of neutral salt baths; Neutra-Gas process. P. H. Kramer. il Iron Age 160:52-4 O 23 '47
Theory of the performance of packed rectifying columns. J. R. Bowman and R. C. Briant. bibliog diags Ind & Eng Chem 39: 745-51 Je '47
See also
Distillation

RECTIFIERS, Electric. See Electric rectifiers

RECTIFIERS, Radio. See Radio rectifiers

RED
Activity of the red pigment from leguminous root nodules. H. N. Little and R. H. Burris. bibliog Am Chem Soc J 69:838-41 Ap '47
Optimum spectral sensitivities for a reversible color film process. R. H. Bingham and H. Hoerlin. bibliog Opt Soc Am J 37:199-210 Mr '47
See also
Methyl red

RED lead. See Lead oxides

REDMAN, Lawrence V. 1880-1946
Sketch. por Oil Paint & Drug Rep 150:39 D 2 '46

REDTENBACHER, Joseph, 1810-1870
Joseph Redtenbacher. M. Kohn. bibliog pors J Chem Educ 24:front, 366-8 Ag '47

REDUCTION, Chemical
Action of sodium hydride on certain carbonyl compounds; condensations and reductions. F. W. Swamer and C. R. Hauser. bibliog Am Chem Soc J 68:2647-9 D '46
Balancing equations for organic oxidation-reduction reactions. L. N. Ferguson. bibliog J Chem Educ 23:550-4 N '46
Behavior of uranyl solutions in a mercury reductor. E. R. Caley and L. B. Rogers. bibliog Am Chem Soc J 68:2202-4 N '46
Catalytic reduction of sodium sulfate. C. J. Nyman and T. D. O'Brien. bibliog diag Ind & Eng Chem 39:1019-21 Ag '47
Chemistry of the pyrrocolines; reduction of acyl derivatives. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1083-9 N '46
Controlled sodium amalgam reduction of aldonolactones and their esters to aldoses and an improved synthesis of D-arabinose. N. Sperber, H. E. Zaugg and W. M. Sandstrom. bibliog Am Chem Soc J 69:915-20 Ap '47
Deposition of nickel and cobalt by chemical reduction; abstract. A. Brenner and G. Riddell. Metal Finishing 45:49 Ag '47
Derivatives of diphenylamine as oxidation-reduction indicators in alkaline solution. H. H. Willard and G. D. Manalo. bibliog Anal Chem 19:167-70 Mr '47
Determination of mercury in organic and inorganic compounds; stannous chloride reduction method. J. N. Bartlett and W. M. McNabb. bibliog diags Anal Chem 19:484-7 Jl '47
Lithium aluminum hydride, aluminum hydride and lithium gallium hydride, and some of their applications in organic and inorganic chemistry. A. E. Finholt, A. C. Bond, jr. and H. I. Schlesinger. bibliog Am Chem Soc J 69:1199-203 My '47
Practical copper reduction on non-conductors. H. Narcus. bibliog Metal Finishing 45:64-7+ S '47
Preparation of hydrobromic acid by the reduction of bromine with sulphur. R. Bloch and others. bibliog diags Soc Chem Ind J 66:115-17 Ap '47
Preparation of β-tetralone by the catalytic reduction of β-naphthol. G. Stork and E. L. Foreman. bibliog Am Chem Soc J 68: 2172-4 N '46
Reactions of carbinols in the presence of alkali; reduction of ketones by primary alcohols. G. H. Hargreaves and L. N. Owen. Chem Soc J p750-2 Je '47
Reduction by dissolving metals. A. J. Birch. Chem Soc J p 102-5 Ja '47
Reduction of 2-amino-4-methyl-5-β-hydroxyethylthiazole in the synthesis of thiamin. J. B. Hatcher. Am Chem Soc J 69:465 F '47
Reduction of certain organic compounds in liquid ammonia. G. W. Watt, C. M. Knowles and L. O. Morgan. bibliog Am Chem Soc J 69:1657-9 Jl '47
Reduction of magnesium chloride by calcium carbide. L. R. Michels and others. U S Bur Mines Rep of Invest 4059:1-8 '47
Reduction of *p*-nitrobenzoic acid to hydrazo- and azo-benzene-4 : 4'-dicarboxylic acids by means of glucose. M. L. Tomlinson. Chem Soc J p756 Ag '46
Reduction of organic compounds by lithium aluminum hydride; aldehydes, ketones, esters, acid chlorides and acid anhydrides. R. F. Nystrom and W. G. Brown. Am Chem Soc J 69:1197-9 My '47
Reduction of oxides by hydrogen and carbon monoxide; abstract. W. E. Garner. Chem & Ind p132 Mr 15 '47
Reduction of +5 vanadium in the silver reductor. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 69:277-8 F '47
Simple modification of the Wolff-Kishner reduction. Huang-Minlon. bibliog Am Chem Soc J 68:2487-8 D '46
Sodium reduction of fatty acid esters. V. L. Hansley. bibliog(68 ref) diags Ind & Eng Chem 39:55-62 Ja '47
Some methylene acetals of D-talitol. R. M. Hann, W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:624-9 Mr '47
Streptomycin; reduction and oxidation products of streptomycin and of streptobiosamine. J. Fried and O. Wintersteiner. bibliog Am Chem Soc J 69:79-86 Ja '47
Strychnine. G. R. Clemo and R. Raper. Chem Soc J p891-2 O '46
Studies on the reduction of aromatic ketones by the Clemmensen method. H. L. Bradlow and C. A. VanderWerf. bibliog Am Chem Soc J 69:1254-6 Je '47
Synthesis of polygalitol tetraacetate (tetra-acetyl-1,5-anhydro-D-sorbitol). H. G. Fletcher, jr. bibliog Am Chem Soc J 69: 706-7 Mr '47
See also
Reductors

REDUCTION, Electrolytic
Electrolytic reduction of acetone to pinacol. O. C. Slotterbeck. bibliog diag Electrochem Soc Trans 92 (preprint 10):123-35 '47
Electrolytic reduction of cinnamic acid; structure of the products. C. L. Wilson. Electrochem Soc Trans 92 (preprint 11): 137-43 '47
Electro-organic chemical preparations. S. Swann, jr. bibliog tables Electrochem Soc Trans 88 (preprint 23):237-54 '45; Same. Ill U Eng Exp Sta Reprint Ser 36:103-20 '47 (pa 25c)
Flavanones and related compounds; reduction of some naturally-occurring flavones at the dropping mercury electrode. D. W. Engelkemeir and others. bibliog Am Chem Soc J 69:155-9 Ja '47
Polarographic behavior of some organic compounds. K. G. Stone. Am Chem Soc J 69: 1832-3 Jl '47
Polarographic characteristics of chloro complexes of +5 antimony. J. J. Lingane and F. Nishida. bibliog Am Chem Soc J 69: 530-3 Mr '47
Preparation of some *o*-substituted cyclohexylbenzenes. T. H. McGuine and M. F. Dull. bibliog Am Chem Soc J 69:1469 Je '47
Reduction of unsaturated hydrocarbons at the dropping mercury electrode; mechanism of the dimerizing addition of sodium to olefins. S. Wawzonek and J. W. Fan. bibliog Am Chem Soc J 68:2541-4 D '46

REDUCTION, Electrolytic—*Continued*
Sugar interconversion under reducing conditions; D,L-glucitol. M. L. Wolfrom and others. bibliog Am Chem Soc J 68:2342-3 N '46

REDUCTORS
Reduction of +5 vanadium in the silver reductor. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 69:277-9 F '47

REDWOOD
Drying redwood bark; infrared installation to useful commercial by-products; Sequoia products co. il Elec West 98:88-9 Ap '47

REED, Stanley, 1884-
Supreme court: 1947. A. M. Schlesinger, jr por Fortune 35:73-9+ Ja '47

REED bill. See Railroad law

REELS
Constant-tension reel drives. E. S. Murrah. il diags Blast F & Steel Pl 35:205-14 F '47
New simple type of thread storage and self-advancing reel. R. A. O'Connell and H. P. Lundgren. il diags Rayon 27:653-4 D '46

REEMPLOYMENT of veterans. See Veterans—Reemployment

REFERENCE books
Proofroom needs reference books. E. N. Teall. Inland Ptr 118:43-4 F '47

Bibliography
Business reference publications; catalogs, directories, buyers' guides, etc. Ind Marketing 31:129-30 O 25 '46
Classified list of reference books and periodicals for college libraries. W. S. Hoole, ed. rev ed 111p $2 Southern assn. of colleges and secondary schools, Commission on institutions of higher education, 2041 21st av, South, Birmingham, Alabama '47

REFINERIES, Oil. See Oil refineries

REFINERIES, Petroleum. See Petroleum refineries

REFLECTION (optics)
Analysis of low-reflection coatings as applied to glass. W. P. Strickland. diag Soc Motion Picture Eng J 49:27-36 Jl '47
Cellulose-dyestuff complex; effect of orientation on the reflection of polarised light. J. M. Preston and P. C. Tsien. bibliog il Soc Dyers & Col J 62:368-72 D '46
Intensity of the light reflected from or transmitted through a pile of plates. L. B. Tuckerman. bibliog Opt Soc Am J 37:818-25 O '47
Piping light with acrylic materials. H. Pearson. il diags Mod Plastics 23:123-7 Ag '46; Same cond. Arch Forum 86:106+ Ja '47
Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47
Reflection of light from glass with double and multiple films. A. Vašiček. Opt Soc Am J 37:623-34 Ag '47
Reflectivity and transmissivity of multiple thin coatings. W. Weinstein. Opt Soc Am J 37:576-81 Jl '47
Specular reflection from mercury vapor. J. M. Hansen and H. W. Webb. diags Phys R 72: 332-9 Ag 15 '47
Theoretical development of exact solution of reflectance of multiple layer optical coatings. D. L. Caballero. bibliog Opt Soc Am J 37:176-80 Mr '47
Three-layered reflection-reducing coatings. L. B. Lockhart, jr. and P. King. Opt Soc Am J 37:689-94 S '47

See also
Reflectors

REFLECTOMETERS
Application of reflectance spectrophotometry to quantitative microanalysis. J. Sendroy, jr. and W. C. Granville. bibliog Anal Chem 19:500-1 Jl '47
Diffuse spectral reflectance of paints in the near infra-red. J. A. Sanderson. bibliog diag Opt Soc Am J 37:771-7 O '47
Mesure du pouvoir réflecteur des métaux au moyen du réflectomètre Ulbricht modifié. R. Fichter. diag Génie Civil 124:157 Ap 15 '47
Possible method of using reflectometer to determine hiding power. Paint Oil & Chem R 109:42-4 N 14 '46

REFLECTOR beads. See Reflectors, Road

REFLECTORS
Apparatus for determining spherical aberration of convex surface of paraboloid of revolution; production of anti-aircraft searchlight reflectors. B. Goldberg and N. C. Benson. il diags Opt Soc Am J 37:186-91 Mr '47
Infra-red lamp with internal reflector. il Engineer 184:254 S 12 '47
Lighting reflectors. il Factory Management 105:118-22 Je '47
Planned lighting; light control equipment. diags Elec World 128:104-5 O 25 '47
Why not develop lighting equipment which requires less maintenance? J. M. Smith and N. B. Burroughs. il Illum Eng 41:781-2 N '46

Manufacture
Manufacture of paraboloid reflectors in Russia. Z. I. Bronstein and R. P. Fialkovskaya. diag Glass Ind 28:131+ Mr '47
Reflector finishing process; Alzak process. R. Pettit. Steel 120:114+ Je 23 '47

REFLECTORS, Road
Reflector beads widely used in Michigan's pavement marking program. C. M. Ziegler. il Roads & Sts 90:71-4 Ja '47
Texas reflectorizing road signs with glass beads. il Roads & Sts 90:95-6+ Mr '47

REFLECTOSCOPE
Determining plate quality before welding; Sperry supersonic reflectoscope. O. R. Carpenter. Marine Eng 51:80 N '46
Editorial citation to Aluminum co. of America for achievement in supersonic inspection of aluminum alloy. il Materials & Methods 24:1172-3 N '46
Locating internal defects; Supersonic reflectoscope. B. Carlin. il diags Am Gas Assn Mo 29:391-3 S '47
Supersonic inspection for internal fissures in cast rolls. J. Dugan. il Steel 121:80-1+ Jl 28 '47
Supersonic waves locate die-block flaws. R. W. Snowdon. il Steel 120:95+ Ap 7 '47

REFORMATSKY reaction
Isomeric citrylideneacetic acids. E. E. Royals. bibliog Am Chem Soc J 69:841-4 Ap '47
Isomeric esters produced by the dehydration of ethyl 3-hydroxy-2,3-dimethyl butanoate. R. C. Huston and G. L. Goerner. bibliog Am Chem Soc J 68:2504-6 D '46
Studies in the polyene series; C_{17} acid and C_{18} ketone related to vitamin A. I. Heilbron, E. R. H. Jones and D. G. O'Sullivan. Chem Soc J p866-9 O '46
Synthesis of 1-keto-$\Delta^{4a,10a}$-dodecahydrophenanthrene, *cis*-9-methyl-1-decalone, and other cyclic ketones. W. E. Bachmann and N. L. Wendler. bibliog Am Chem Soc J 68:2580-4 D '46
Synthesis of some 5-substituted-5-hydroxy-2-pentenoic acids. J. English, jr. and J. D. Gregory. bibliog Am Chem Soc J 69:2123-4 S '47

REFORMED gas. See Gas mixing

REFRACTION
Changes caused in the refractivity and density of glass by annealing. A. Q. Tool and others. bibliog J Res Nat Bur Stand 38:519-26 My '47
Image interference in the presence of refraction. R. W. Young. diag Acoustical Soc Am J 19:1-7 Ja '47

REFRACTION, Double
Investigation of flow in liquids by use of birefringent colloidal solutions of vanadium pentoxide. P. Ullyott. bibliog il A S M E Trans 69:245-9; Discussion. 249-51 Ap '47

REFRACTION, Molecular
Application of bond refractions to organosilicon chemistry. E. L. Warrick. bibliog Am Chem Soc J 68:2455-9 D '46
Molal refractions of mononuclear aromatic hydrocarbons. N. Corbin, M. Alexander and G. Egloff. bibliog Ind & Eng Chem 39:1147-9 S '47
Molar refraction of sulfonyl chlorides. E. F. Landau. Am Chem Soc J 69:1219 My '47

REFRACTIVE index
Anomalous densities of 1-*n*-alkyl-cyclohexanols. H. B. Williams and W. R. Edwards, jr. Am Chem Soc J 69:336-8 F '47

REFRACTIVE index—*Continued*
Calculation of refractive index of a glass as a direct function of its composition. K. Sun. bibliog Am Cer Soc J 30:282-7 S 1 '47
Contribution to refractive index and Abbe value of oxide components in glass. K. Sun. bibliog Am Cer Soc J 30:287-9 S 1 '47
Determination of aromatics and naphthenes in complex hydrocarbon mixtures containing olefins. R. M. Love and others. bibliog Anal Chem 19:37-42 Ja '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H. Billings and M. Hyman, jr. Opt Soc Am J 37:119-21 F '47; Correction. 37:395 My '47
Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mμ to 1000 mμ. J. L. Lauer and P. H. Miller, jr. bibliog diags Opt Soc Am J 37:664-8 Ag '47
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E. S. Perry and R. E. Fuguitt. bibliog diags Ind & Eng Chem 39:782-7 Je '47
Measurement of the refractive indices of fibres. J. M. Preston. bibliog Textile Inst J 38:T78-83 F '47
Measurements of the refractive index of films. F. W. Billmeyer, jr. J Ap Phys 18:431-4 My '47
Polarimetric methods for the determination of the refractive index and the thickness of thin films on glass. A. Vašiček. Opt Soc Am J 37:145-53 Mr '47
Reflectivity and transmissivity of multiple thin coatings. W. Weinstein. Opt Soc Am J 37:576-81 Jl '47
Spectroturbidimetric study of the proteins of milk. A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51:460-73 Mr '47
Viscosities, densities and refractive indices of solutions of dodecylammonium chloride in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:1867-9 Ag '47

See also
Refractometers

REFRACTOMETERS
Calibration of Rayleigh refractometers without recourse to gas chambers. R. F. Stamm and J. J. Whalen. bibliog diags J Ind Hygiene 29:203-17 Jl '47
Hydrogen discharge tube. G. B. Arnold and L. Donn. bibliog il diags Anal Chem 19:666-7 S '47
Instrument for the measurement of the index of refraction of liquids in the wave-length range 200 mμ to 1000 mμ. J. L. Lauer and P. H. Miller, jr. bibliog diags Opt Soc Am J 37:664-8 Ag '47
New optical method for observing sedimentation equilibrium. G. Kegeles. bibliog diags Am Chem Soc J 69:1302-5 Je '47

REFRACTORY concrete. See Concrete, Refractory

REFRACTORY industry
Cheap oxygen; will it change clay products and refractories industry? Brick & Clay Rec 111:62 O '47
Men and imagination make Electro a key supplier to our industry. il Am Cer Soc Bul 26:275-7 S 15 '47

See also
General refractories company

Germany
Comments on the German refractories industry as investigated in 1945. S. M. Phelps. diags Brick & Clay Rec 110:66-8+ Ja '47

Italy
Refractories industry of Italy. L. Pompei. il Am Cer Soc Bul 26:88-93 Mr 15 '47

Missouri
Missouri refractories plant under construction at Fulton for Harbison-Walker. L. L. Houck. il Manuf Rec 116:46 S '47

REFRACTORY materials
Abstracts of papers at American ceramic society 49th annual meeting, Atlantic City. Brick & Clay Rec 110:62+ My; 64+ Je '47
Ceramics and nucleonics; role of ceramics in the Manhattan project; abstract. A. L. Johnson. Brick & Clay Rec 110:62 My '47
Chemical engineering materials of construction; review of literature from start of World war II; refractories. R. E. Birch. bibliog(42 ref) diag Ind & Eng Chem 39:1238-42 O '47
Cupola refractories. R. A. Witschey. Foundry 75:120-3+ Ap; 94-5+ My '47
Development of zirconia resistant to thermal shock. C. E. Curtis. bibliog diag Am Cer Soc J 30:180-96 Je 1 '47
Developments in high alumina fused refractories; abstract. J. C. McMullen and A. P. Thompson. Glass Ind 28:515+ O '47
Dolomite linings for basic electric arc furnaces. E. C. Brampton and others. bibliog diags Iron & Steel Inst J 152:341-72, pl 36-9; Discussion. 372-83 no 2 '45
Effects of variations in raw materials on basic open hearth operations and production. C. R. FonDersmith. il Blast F & Steel Pl 34:1393-5 N '46
Examination of polished specimens of refractories by reflected light. J. R. Hensler and S. Zerfoss. bibliog il Am Cer Soc J 30:105-8 Ap 1 '47
Finding a sillimanite substitute for use in wet patching. F. H. Norton. Brick & Clay Rec 110:70+ My '47
Kyanite substitute production; artificial sillimanite. Oil Paint & Drug Rep 150:74 D 23 '46
Modern refractory practice. T. Firkin. Blast F & Steel Pl 34:1444, 1447 N '46
New refractory gun speeds furnace repairs. Iron Age 159:79 My 8 '47
Notes on reaction between MgO and various types of refractories. C. L. Norton, jr. and B. Hooper. il Am Cer Soc J 29:364-7 D 1 '46
Pure beryllium oxide as a refractory. F. H. Norton. il diag Am Cer Soc J 30:242-5 Ag 1 '47
Rammed refractories in electric furnaces. R. H. Zoller. diags Brick & Clay Rec 110:72+ Mr '47
Refractories in 1946. L. A. Smith. il Blast F & Steel Pl 35:97-9 Ja '47
Refractories industry of Italy. L. Pompei. il Am Cer Soc Bul 26:88-93 Mr 15 '47
Refractory applications for acid open-hearth furnaces. R. R. Fayles. diags Blast F & Steel Pl 35:217-19 F '47
Refractory coatings for permanent molds. H. E. Bourassa. il Iron Age 159:58-9 F 6 '47
Refractory developments keep pace with industrial progress. il map diag Brick & Clay Rec 110:56+ Ja '47
Relation of refractory economy to combustion in steel mill furnaces; abstracts. E. N. Hower. Blast F & Steel Pl 35:260 F '47; Iron Age 158:64 N 21 '46
Research on special refractories for use in aircraft power systems; abstract. L. R. McCreight. Brick & Clay Rec 110:62+ My '47
Special refractories for metal melting. W. H. Henson. il Brick & Clay Rec 111:74+ Jl '47
Substitution of domestic minerals for India kyanite; refractory properties of Georgia massive kyanite. T. N. McVay and H. Wilson. il Am Cer Soc J 30:159-64 My 1 '47
Workability index of fireclay refractories. Franklin Inst J 244:311-12 O '47

See also
Bricks, Insulating
Concrete, Refractory
Fire brick
Fire clay
Silica brick
Silicon carbide

Manufacture
German refractories manufacture; new synthetic material, artificial sillimanite, replaces Indian kyanite. Oil Paint & Drug Rep 150:50 D 2 '46
How Germans make high temperature refractories and ceramics. Brick & Clay Rec 110:64+ Ap '47
Reaction of clays with organic cations in producing refractory insulation. R. E. Grim and others. Am Cer Soc J 30:142-5 My 1 '47
Unusual design of kiln employed in manufacture of refractories in Germany. Blast F & Steel Pl 35:748 Je '47

REFRACTORY materials—*Continued*

Patents

Corhart cast refractory. Glass Ind 28:204 Ap '47

Plastic refractory; patent. Glass Ind 28:469+ S '47

Testing

First report of the converter refractories subcommittee. 3pls diags Iron & Steel Inst J 155:235-69 F '47; Discussion. 157:100-3 S '47

Method for determining tensile properties of refractory materials at elevated temperatures. J. R. Bressman. bibliog il diags Am Cer Soc J 30:145-52 My 1 '47

To test basic refractories and oxygen in open hearth at higher heat; Carnegie-Illinois steel corp. il diags Brick & Clay Rec 111: 55-7+ O '47

REFRIGERANTS

Comparative engineering data on refrigerants given in new tables. Heating-Piping 16:337-8, 409, 478-80, 593-4; 17:256-8, 616-18 Je-Ag, O '44, My, D '45; 18:91-3 Mr; 83-5 My; 91-3 Ag; 99-101 N '46

Heat exchange equipment for refrigeration; type of refrigerant. L. N. Fox. Refrig Eng 53:18+ Ja '47

Refrigerant hydrates. H. E. Chinworth and D. L. Katz. bibliog diag Refrig Eng 54: 359-63 O '47

See also

Brine
Carbon dioxide, Solid
Chlorofluoromethanes
Dichlorodifluoromethane
Propane
Sulfur dioxide

Analysis

Water in refrigerant detected by new infrared test; abstract. A. F. Benning and others. Heat & Ven 44:104 My '47

REFRIGERATING engineering

How to write and present an engineering paper. R. C. Jordan. il diags Refrig Eng 53:1-8 sec 2 F '47

See also

Cold storage

Symbols

Refrigeration graphical symbols; recommendations. Refrig Eng 54:345-9 O '47

Tables, calculations, etc.

Comparative engineering data on refrigerants given in new tables. Heating-Piping 16: 337-8, 409, 478-80, 593-4; 17:256-8, 616-18 Je-Ag, O '44, My, D '45; 18:91-3 Mr; 83-5 My; 91-3 Ag; 99-101 N '46

Correlation of C_p and k for dry air. L. Adams. bibliog Refrig Eng 54:140-1 Ag '47

Rh of air in equilibrium with refrigerated brine. A. B. Stickney. Refrig Eng 54:232-4 S '47

REFRIGERATING plants

Eastman Kodak co. builds huge new refrigeration units. Chem & Eng N 25:1948 Jl 7 '47

See also

Cold storage
Cold storage warehouses
Piping (refrigerating plants)
Refrigeration and refrigerating machinery

REFRIGERATION, Reversed. See Heat pump

REFRIGERATION and refrigerating machinery

Analyzing refrigeration cycles. F. W. Hutchinson. il diags Heating-Piping 19:79-81 My '47

Bleeder constantly removes light gases from propane refrigerant. il Pet Refiner 26:144 My '47

Centrifugal refrigerating machine manufactured by Carrier corp. il diag Machine Design 19:142-3 My '47

Centrifugal refrigerating machine in use at Onondaga pottery company; first centrifugal refrigerating machine ever built. Am Cer Soc Bul 26:57 F 15 '47

85-below-zero refrigeration system being installed at Kodak park. Heating-Piping 19: 80 Jl '47

Ethyl chloride bottling problem solved by refrigeration. Refrig Eng 52:524 D '46

Evaporative condenser scale control. R. M. Westcott. bibliog il Refrig Eng 54:15-17+; Discussion. 66+ Jl '47

Fully automatic test laboratory holds -70 F. W. H. Cook and others. bibliog il plan diag Refrig Eng 54:29-31+ Jl '47

Heat exchange equipment for refrigeration. C. Boling. diags Refrig Eng 52:513-15+ D '46; Discussion. 52:578+; 53:18+ D '46-Ja '47

Helium cryostat. S. C. Collins. il diags R Sci Instr 18:157-67 Mr '47

How to determine the proper charge for a blind refrigeration system. G. Holman. diag Power Pl Eng 51:98-9 Ja '47

Low pressure liquefaction of air. J. H. Rushton. bibliog flow sheet il diags Refrig Eng 53:24-9+ Ja '47

Millions are lost from spoiled fruits and vegetables in self-service stores when refrigeration is not used. D. R. Stokes. Refrig Eng 54:355-8 O '47

Movie labs need refrigeration. A. J. Hess. diags Refrig Eng 53:507-9 Je '47

Natural gasoline refrigeration process; Signal oil and gas company. flow diag Pet Refiner (Process Handbook sec) 26:200-1 Ap '47

Plastics in refrigeration. J. Delmonte. bibliog il Refrig Eng 53:498-502 Je '47

Plate evaporators for refrigeration. il Engineer 182:468 N 22 '46

Refrigerant purger. il diag Chem Eng 54:142 Ap '47

Refrigeration for textile mill air conditioning. P. L. Davidson. il Heat & Ven 44:57-62 My '47

Refrigeration of oranges in California. H. M. Hendrickson and J. R. MacRill. plans Refrig Eng 54:1-10 sec 2 S '47

Refrigeration of prepackaged fruits and vegetables. C. O. Bratley. il Refrig Eng 52:516-20+ D '46

Refrigeration removes liquid hydrocarbons from gas in transit. J. T. Simon. flow diag il Pet Refiner 26:117-19 Ap '47

Refrigerator for a multiplier photo-tube. R. W. Engstrom. diag R Sci Instr 18:587-8 Ag '47

Reverse cycle refrigeration for heating in the South. S. P. Goethe. map diags Florida Eng and Industrial Exp Sta [Gainesville] Bul 14:1-48 bibliog(p48) '47

Ultraviolet + refrigeration = health; use of Sterilamp. A. J. Dusault. il Refrig Eng 54: 125-6 Ag '47

United States Department of agriculture activities in which refrigeration plays part. Refrig Eng 52:420+ N '46

Why do solenoid valves stick shut in ice and cold-storage plant? diags Power 91:638-9 S '47

See also

Air conditioning
Ammonia compressors
Carbon dioxide, Solid
Cold storage
Compressors
Cooling
Cooling equipment
Cooling of water
Electricity in refrigeration
Freezing
Heat pump
Insulation (heat)
Piping (refrigerating plants)
Refrigerants
Refrigerating engineering
Refrigeration on cars, trucks, etc.
Refrigeration on ships
Refrigerator cars
Refrigerators
Show cases, Refrigerated
Skating rinks
Temperature, Low

Control

Let's take a look at new suction-line controls. F. M. MacDougall. diags Refrig Eng 53:191-4 Mr '47

Cost

Process equipment cost estimation; estimating cold insulation costs; cork insulation for pipe lines and equipment. F. C. Otto. Chem Eng 54:118-20 My '47

Process equipment cost estimation; refrigeration costs. Chem Eng 54:125+ My '47

Defrosting

Easy way to defrost cooling coils. diags Power 91:50-1+ Ja '47

Hot gas from condenser unit defrosts evaporator coils; truck refrigeration unit. il diag Product Eng 18:98-9 Ja '47

REFRIGERATION and refrigerating machinery —*Continued*

Failure

Four refrigerating system accidents cause damage exceeding $20,000. Locomotive 46: 206-7 Jl '47

Refrigeration failure said to have caused Los Angeles explosion. Heat & Ven 44:102 Mr '47

Refrigeration system emergencies; causes, prevention, cure. G. Holman. il diags Power Pl Eng 51:88-91 Ap '47

History

Mechanical refrigeration, its American birthright. W. R. Woolrich. bibliog(41 titles) diags Refrig Eng 53:196-9+, 305-8+ Mr-Ap '47

Lubrication

Lubricants for refrigerator compressors. F. L. Johnston. il Heat & Ven 44:74-6 Ag '47

Refrigerating oil carryover at high temperatures. J. M. Lebeaux and L. H. Bartlett. bibliog diag Refrig Eng 53:203-7 Mr '47

Maintenance and repair

How to grind seals on a compressor shaft; illustrated instructions. Power 91:421-2 Je '47

Trouble shooting in a refrigerating plant. G. Holman. il diag Power 90:857-9 D '46

Noise

Noise, its character and measurement. C. R. Freberg. Refrig Eng 53:119-23+ F '47

Safety measures

Safety in the use and handling of ammonia. Power Pl Eng 51:88-9 Mr '47

Underwriters' laboratories, inc. and the refrigeration industry. E. F. Tabisz. il Refrig Eng 54:18-21 Jl '47

Specifications

Specifications and their preparation. J. M. Todd. Refrig Eng 52:415-16 N '46

Tables, calculations, etc.

Coefficient of performance of the heat pump. W. Parkerson. diags Heat & Ven 44:63-7 My '47

Condensation of Freon-12 with finned tubes. D. L. Katz and others. flow diags il diags Refrig Eng 53:211-17, 315-19+ Mr-Ap '47

Line pressure drop, its effect on cooling costs. H. E. Ferrill. Refrig Eng 52:425-7+ N '46

Thermodynamic properties; saturated liquid and vapor of ammonia-water mixtures. G. Scatchard and others. bibliog Refrig Eng 53:413-19+ My '47

Testing

Compressor capacity determination by split discharge system and thin plate orifice. A. D. Sullivan. diags Refrig Eng 54:243-5+ S '47

REFRIGERATION on airplanes

Dry ice refrigeration for air-borne perishables. D. E. Cox and H. W. Rahn. bibliog il Refrig Eng 53:404-7 My '47

REFRIGERATION on cars, trucks, etc.

Bigger trucks cut meat delivery costs. il map Food Ind 18:1877-8 D '46

Disposable icebox; shipping container using dry ice. il Bsns W p34-5 Ja 11 '47

Food trucks keep loads at below zero temperatures. il Food Ind 19:1372-3 O '47

Freezer trucks hold foods at zero; Pacific intermountain express. il map diags Food Ind 19:628-9 My '47

Hot gas from condenser unit defrosts evaporator coils; truck refrigeration unit. il diag Product Eng 18:98-9 Ja '47

Motor transport refrigeration. H. O. Kirkpatrick. il diags Refrig Eng 52:521-4 D '46

Precooling practices in California. J. C. Rear. il diag Refrig Eng 53:503-6 Je '47

Refrigerated transportation. D. F. Fisher. Refrig Eng 53:116-17 F '47

Truck freezers come ready for installation. il diags Food Ind 19:1048-9 Ag '47

Truck refrigeration. H. O. Kirkpatrick. Refrig Eng 52:444 N '46

See also

Food, Frozen—Transportation
Ice crusher-slinger
Refrigerator cars

REFRIGERATION on ships

European refrigerated ships. il Marine Eng 52:83-5 O '47

Marine transport of perishables. L. L. Westling. il Refrig Eng 52:525-9 D '46

Matson places largest order for marine refrigeration. Marine Eng 52:98 Je '47

Refrigerated factory ship processes and packages seafood. il diag Refrig Eng 54: 127+ Ag '47

Refrigeration of ships' stores; other marine applications. C. B. Albright and others. bibliog diags Refrig Eng 54:1-5 sec 2 Jl '47

Refrigeration on U.S. naval ships. C. V. Hawk. il Refrig Eng 53:200-2+ Mr '47

Tuna clipper, a marine refrigerator. A. R. MacPherson. il Refrig Eng 53:194 Mr '47

United Fruit refrigerated cargo ships. M. L. Sellers. il plans diags Marine Eng 52:54-67 Ag '47

REFRIGERATION research

Progress of research in refrigeration. S. C. Prescott. il Refrig Eng 53:15-17+ Ja '47

REFRIGERATOR cars

F.G.E.X. experimental refrigerator car. il Ry Age 122:183-6 Ja 18 '47

Iceless refrigerator car. Heat & Ven 44:116 Jl '47; Refrig Eng 54:44 Jl '47

Illinois Central builds aluminum refrigerator. il diags Ry Age 121:875-9 N 23 '46; Same. Ry Mech Eng 120:645-8+ D '46

Lightweight convertible refrigerator cars. il diags Product Eng 18:90-2 Ap '47

Mass-production icing on Union Pacific; double deck platform permits 248 cars to be serviced simultaneously; new-type ice slingers. il Ry Age 122:1250-1 Je 21 '47

Must furnish refrigeration for potatoes from Southeast. Ry Age 123:67-8 Jl 12 '47

New reefer car solves frozen food shipment problem. M. Burton. il diags Food Ind 19: 906-8+ Jl '47

Pacific fruit express co. receives refrigerator cars. il Ry Age 122:1208-9 Je 14 '47

Postwar redesign of the refrigerator car. J. N. Kelley. il Refrig Eng 53:112-16 F '47

Refrigerator test train run completed. il Refrig Eng 52:438 N '46

St Louis refrigerator car company gets fifty new 40-ton cars. il Ry Age 123:388-9+ S 6 '47

Santa Fe stainless steel refrigerator car is placed in test service. il Ry Age 122:273-5 F 1 '47; Same. Ry Mech Eng 121:53-5+ F '47

REFRIGERATORS

Prospects bright for air conditioning and refrigeration. H. E. Way. il Dom Comm 35:55-8 My '47

REFRIGERATORS, Electric

Frigidaire ouija board shows dealers how to pay salesmen. E. Gilbert. il Sales Management 58:37-9 Je 1 '47

Future trends in home refrigerators. W. E. Watson. il Refrig Eng 53:296-9 Ap '47

Hermetic electric motors. B. O. Haun, jr. il diag Refrig Eng 54:135-8 Ag '47

Interstate differences in the saturation of wired homes, mechanical refrigerators and electric ranges, and their causes. H. G. Knaf. J Land & Pub Util Econ 22:386-92 N '46

New MEMA fractional-horsepower motor standards; their effect on refrigeration and pump applications. C. P. Potter. Elec Eng 66:337-9 Ap '47

Smaller compressor increases refrigerator capacity; redesigned 1947 General Electric refrigerator. il Product Eng 18:90-1 O '47

12 uses for styrene in the new refrigerator. A. C. Martinelli. il Mod Plastics 24:122-3 N '46

What! refrigerators on a bank floor? il Ptr Ink 220:31 Jl 18 '47

Why Admiral unveils Dual-Temp with region-by-region showings. W. C. Johnson. il Sales Management 57:40-2 N 10 '46

REFRIGERATORS, Electric—*Continued*

Equipment

Polystyrene makes good in refrigerators; defrosting receptacles and meat storage trays. il Mod Plastics 24:106-8 Je '47
Valves in windows; one acetate-and-paperboard package serves for six Thermotron valves; sold only to repairmen. il Mod Packaging 20:111 Ap '47

Manufacture

Forming sheet-metal cabinets. C. J. Bath. il Mach 53:184-7 Ap '47
Handling in the manufacture of refrigerators. il plan Mech Handling 34:116-24, 204-5 Mr-Ap '47
Hands off handling for high productivity; Norge division, Borg-Warner corporation. G. P. Kennedy. il diag Factory Management 105:125-8 Ja '47
Heat control, metering molds permit long polystyrene parts; trim for Kelvinator refrigerators. W. F. Poupard. il diags Am Mach 91:117-20 Ag 14 '47
Making refrigerators; Pressed steel co. il Elec R (Lond) 141:537-40 O 10 '47
Philco practices true engineering art in refrigerator manufacture. H. Chase. il Refrig Eng 54:239-42+ S '47
Refrigerator door tool design simplified; mold drawings simplified. G. M. Bleakley. diags Am Mach 91:88 Jl 31 '47

Rating

Test of six refrigerators. il Consumers Res Bul 20:16-21 S '47

Testing

Outer-case testing of refrigeration equipment. F. H. Catlin. il diag Gen Elec R 50: 41-2 O '47

REFRIGERATORS, Gas

Extruded aluminum freezer compartment; Servel gas refrigerator. il Product Eng 18: 104 Ag '47
Features of 1947 gas refrigerator. R. S. Taylor. il Am Gas Assn Mo 29:9+ Ja '47
German absorption-type refrigerator. Product Eng 18:146 O '47
Servicing gas refrigerators. W. W. Marshall. il Am Gas Assn Mo 29:68-70 F '47

Manufacture

Automatic forming and assembling of condenser fins. C. H. Wick. il diags Mach 53: 165-71 Mr '47

REFUGEES

Britain and the refugees. Economist 151:1034-6 D 28 '46
Deadline for the refugees. Economist 152:878-9 Je 7 '47
Displaced persons and refugees; recent statements in British House of commons. Int Labour R 55:434-6 My '47
Jewish camps in Cyprus. Economist 152:500-1 Ap 5 '47
Maine wants Baltic DP's. Bsns W p20 My 3 '47

REFUSE, Utilization of

Why you should avoid housing construction on refuse landfills. R. Eliassen. il Eng N 138:756-60 My 1 '47

See also
Refuse as fertilizer

REFUSE as fertilizer

Cannery waste; an example of complete treatment and disposal. L. B. Miller. flow sheet il Pub Works 78:19-20+ F '47

REFUSE collection

Dallas builds own garbage trucks. il Eng N 138:45-6 Ja 9 '47
Municipal garbage collection insures better sanitation. Pub Works 77:42 N '46

REFUSE disposal

Army outlaws garbage dumps. R. R. Durham. il Pub Works 77:33 N '46
Brantford's troubles with garbage and refuse disposal. G. H. Richards. Water & Sewage 85:71-2+ O '47
Father Knickerbocker looks ahead; Diesel engines used by Sanitation department. il Diesel Power 24:1455+ D '46
Handling of town refuse. il Mech Handling 34:145-50 Mr '47
Refuse disposal in Canada. il Water & Sewage 85:22+ Ag '47
Why the army favors sanitary fills for refuse disposal. R. R. Durham. il diag Pub Works 78:21-2 Je '47

See also
Refuse, Utilization of
Refuse collection
Refuse incinerators
Trade waste
Water pollution

REFUSE incinerators

Brantford's troubles with garbage and refuse disposal. G. H. Richards. Water & Sewage 85:71-2+ O '47
Elimination of waste products of high moisture content in a gas-turbine system. J. H. Potter. bibliog flow diag diags Mech Eng 69:820-2 O '47
Fifteen-year experience proves efficiency of garbage incinerator, Spokane, Wash. il Eng N 137:666-8 N 14 '46
Handling of town refuse. il Mech Handling 34:148-50 Mr '47
How to build brick incinerators for easy waste disposal. diags Brick & Clay Rec 111: 29 Jl '47
Kiln furnace for rubbish incineration. plan diags Eng N 137:793-5 D 12 '46
Mechanics of municipal refuse destructors and incinerators. R. R. Knight. il diags Water & Sewage 84:32-5+ S; 16-19+ N '46
New refuse incinerators for Honolulu. il Water & Sewage Works 94:121 Ap '47
Proposed Southampton street refuse incinerator, Boston, Mass. G. W. Coffin. il 3pls maps plan Boston Soc C E J 33:209-35 O '46

REFUSE incinerators, Domestic

Analyzing the small incinerator; with time-saver standards for apartment incinerators. D. F. Metzler. plans diags Arch Rec 101: 130+ Ap '47

REGINA, Saskatchewan

Regina and Stratford have 30-year program of civic development. E. G. Faludi. il plans Roads & Bridges 84:66-9+ N '46

REGIONAL government. See Local government

REGIONAL planning

Development area policy. Economist 152:810-11 My 24 '47
Greater London is planned. map Eng N 139: 34-5 Jl 10 '47
Highway improvements included in Etobicoke's 30-year plan. E. G. Faludi. il maps Roads & Bridges 85:76-9+ Ap '47
Planners' opportunity; Town and country planning bill. Economist 152:701-2 My 10 '47
Planning bill; Town and country planning bill. Economist 152:51-2, 179-80 Ja 11, F 1 '47; Discussion. 152:101, 141 Ja 18-25 '47
Planning for progress; a community challenge. A. Schindler. Comm & Fin Chr 164: 2937+ D 5 '46
Puerto Rico's planning board in action. il map Eng N 138:197-200 F 6 '47
Revolution in land; Britain's Town and country planning bill. il map plan Arch Forum 86:14-16 F '47

See also
City planning

REGISTER checks. See Checks—Register checks

REGISTERED mail insurance. See Insurance, Registered mail

REGISTRATION of securities. See Securities—Registration

REGULATORS, Pressure. See Pressure regulators

REGULATORS, Temperature. See Temperature regulators

REGULATORS, Voltage. See Voltage regulators

REHABILITATION. See Disabled—Rehabilitation

REICH, Edward J. d 1946
Sketch. por Am Bld 68:120 N '46

REICHEL, Frank Hartranft, 1897-
Elected president American viscose corp. por Rayon 27:576-8 N '46

REID, E. Emmet, 1872-
Receives Herty medal. pors Chem & Eng N 25:1433 My 19 '47

REILLY, Gerard Denis, 1906-
Portrait. Bsns W p 18 Je 28 '47

REINFORCED concrete. See Concrete, Reinforced

REINFORCING steel. See Steel, Reinforcing

REINSURANCE. See Insurance—Reinsurance; Insurance, Casualty—Reinsurance; Insurance, Fire—Reinsurance; Insurance, Life—Reinsurance

RELATIVITY (physics)
Electromagnetic field in quantized space-time. H. S. Snyder. Phys R 72:68-71 Jl 1 '47
Historical note on the rate of a moving atomic clock. H. E. Ives. bibliog diags Opt Soc Am J 37:810-13 O '47
Kinematics of uniformly accelerated motions and classical electromagnetic theory. E. L. Hill. bibliog Phys R 72:143-9 Jl 15 '47
Long range tensor forces and the magnetic moment of the deuteron. H. Primakoff. bibliog Phys R 72:118-19 Jl 15 '47
Magnetic moment of the deuteron. R. G. Sachs. bibliog Phys R 72:91-8 Jl 15 '47
Motion of a particle in an electro-magnetic and gravitational field. H. C. Corben and M. Corben Phys R 72:434 S 1 '47
Non-linear invariants and the problem of motion. C. Gregory. Phys R 72:72-5 Jl 1 '47
Notes on the Wheeler-Feynman theory. C. W. Berenda. bibliog Phys R 71:550 Ap 15 '47
Physical significance of Birkhoff's gravitational equations. H. E. Ives. bibliog Phys R 72:229-32 Ag 1 '47
Quantized space-time. H. S. Snyder. Phys R 71:38-41 Ja 1 '47
Relativistic clock problem. E. L. Hill. bibliog Phys R 72:236-40 Ag 1 '47
Relativistic correction to the magnetic moment of the deuteron. G. Breit and I. Bloch. bibliog Phys R 72:135-40 Jl 15 '47
Rotation and rigid bodies in relativity theory. N. Rosen. Phys R 71:54-8 Ja 1 '47
Rotational motion in relativity theory. E. L. Hill. Phys R 71:318-19 Mr 1 '47
Special relativistic field theories in five dimensions. H. C. Corben. bibliog Phys R 70:947-53 D 1 '46
Vector meson field and projective relativity. B. Hoffmann. bibliog Phys R 72:458-65 S 15 '47

See also
Quantum theory
Wave mechanics

RELAYS
Capacity operated relay. il diags Radio N 38:152-3 Jl '47
Capacity operated relays. R. G. Rowe. bibliog il diags Radio N 37:50-1+ F '47
Cone pivot voltage relay. il Engineer 183: 226 Mr 14 '47
Desirable features of protective relays. F. H. Birch and C. Ryder. Engineering 163:33 Ja 10 '47
D-c relays for motor control and how to apply them. R. N. Eck. diags Machine Design 19:117-21+ Je '47
Experience with relays in heater circuits. O. S. Gibbs. Science 105:574-5 My 30 '47
Maintenance of industrial electronic equipment. il diags Power Pl Eng 50:100-1 D '46
Master unit substation relay and control arrangements. E. M. Hunter and J. W. Yetter. il diags Gen Elec R 50:24-8 S '47
Neutral-displacement protection; new type of relay. E. A. Burton. il diags Elec R (Lond) 139:1012-15 D 20 '46
Over-current relays. A. Salzmann. diag Elec R (Lond) 141:505-8 O 3 '47
Plugging relays minimize motor reversing time. R. B. Immel. il diags Steel 120:106+ Ap 7 '47
Primary network operating problems. A. M. MacDonald and A. W. Funkhouser. diags Elec World 128:52-4 Ag 30 '47
Progress in engineering knowledge during 1946. P. L. Alger and others. diags Gen Elec R 50:33-4 Mr '47
Protection of powerhouse auxiliaries. diags Elec Eng 65:Trans 746-51 N '46; Same abr. Power Pl Eng 51:118+ Mr '47
R-f operated remote control relay. D. G. Fink. il diags Electronics 20:114-16 S '47
Relay cuts cost of installing siren. E. A. Roberts. diag Power 91:341 My '47
Relay oscillator and related devices. R. L. Ives. il diags Franklin Inst J 242:243-77 O '46
Relay protection of transformers. Elec Eng 66:964-8 O '47
Relay solves problem of reactive register. H. A. Hartwig. il diag Elec World 128:58-9 Ag 30 '47
Relaying delta-wye transformers. S. L. Scheffer. diags Elec World 128:51-2 Ag 30 '47
Resonant relay rejects unwanted frequencies. Elec World News ed 126:19 N 16 '46
Simplicity in transformer protection; gas-actuated relays. E. T. B. Gross. bibliog il diags Elec Eng 66:564-9 Je '47
Single-pole relaying and reclosing on a high-voltage system. J. J. Trainor and C. E. Parks. il map Elec Eng 66:467-70 My '47
Special-purpose relays; production at a new Slough factory. il Elec R (Lond) 140:135-6 Ja 17 '47
Temperature control for octane tests; vacuum-tube relay circuit. P. J. Malraison. il diags Electronics 20:99-101 N '47
Three-position relay. il R Sci Instr 18:685 S '47
Ultra-high-speed relays in the fields of protection and measurement; abstract and discussion. W. Casson and F. H. Last. Electrician 138:1165-6 My 2 '47

See also
Radio relay stations

Testing
Power pack for testing relays. il diag Ry Mech Eng 121:598-9 O '47
Testing relays. T. A. Ledward. diags Elec R (Lond) 140:619-21 Ap 18 '47

RELAYS, Time limit
Automatic sectionalizing applied to 4-kv; electronic timer control. H. C. Denison. diag Elec World 128:55 Ag 30 '47
Circuit recloser has inverse time characteristics. diag Elec World News ed 127:28 F 22 '47
New overcurrent tripping device for low-voltage circuit breakers. H. L. Rawlins and J. Sandin. il diags Power Pl Eng 51: 71-3+ O '47
Recycling time-delay device. A. H. Taylor. diag R Sci Instr 17:557 D '46
Slow-acting relays. A. B. Smith and others. il diags Elec Eng 65:557-63 D '46

RELEASE (law)
Consent of indorser to release principal debtor; Howard national bank & trust co. v. Newman, Supreme court of Vermont. Banking Law J 64:631-9 Ag '47
Release and mistake; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12: 38-40 Ja 9 '47

RELIEF work
See also Reconstruction (World war, 1939-1945)—Relief work

RELIEF work in industry
Human relations come first, Monsanto's rehabilitation program for employee victims of Texas City blast. Bsns W p76+ My 3 '47

RELIGION and science
Stocktaking. R. T. Colgate. Chem & Ind p503-4 Ag 16 '47

RELIGIOUS prejudice
Fortune survey; regardless of race, creed, or color. Fortune 36:6+ O '47

REMITTANCE checks. See Checks—Register checks

REMODELED buildings. See Buildings, Remodeled

REMODELED houses. See Houses, Remodeled

REMODELING (architecture)
Art studio squeezes maximum of use from minimum office area. il plan Arch Forum 85:128 N '46
G-E's lamp department performs architectural surgery at Nela Park, bringing lighting center up-to-date. il plans diags Arch Forum 86:101-5 Ja '47
Modernization for merchants. il Bsns W p60+ Jl 19 '47

See also
Buildings, Remodeled
Hotels—Remodeling
Houses, Remodeled

RENIN
Mechanism of renin tachyphylaxis; restoration of responsiveness by tetraethyl ammonium ion. I. H. Page and R. D. Taylor. bibliog Science 105:622 Je 13 '47

RENNET
Production and exports of rennet and rennet powder, Denmark. For Comm W 28:23 S 27 '47

RENT
Housing and fuel expenditures of city families. D. I. South. Mo Labor R 64:868-77 My '47
How much for rent? ability to pay; study of 60,000 veterans in a large metropolitan community. Am Bld 69:121 Je '47

Laws and regulations

Canada; easing of rent controls. For Comm W 26:17-18 Mr 15 '47
New rent control law stimulant to real estate industry. A. Summer. Comm & Fin Chr 166:111 Jl 10 '47
New rent control legislation. Survey of Cur Bsns 27:3 Jl '47
OPA should abolish ceilings on hotel apartment rooms. L. Toth. Comm & Fin Chr 165:1123+ F 27 '47
Rent control and the housing shortage; commentary on "Roofs or ceilings?" by Friedman and Stigler. L. N. Bloomberg. J Land & Pub Util Econ 23:214-18 My '47
Rent control to taper off. Bsns W p 19-20 Je 14 '47
Rents and the real estate lobby; wartime controls survive. Fortune 35:96-7+ Je '47
State does not have power to maintain control over hotel transient room rentals. D. M. Stephens. Comm & Fin Chr 165:280 Ja 16 '47
Truman signs rent bill; 15 per cent increase permitted. Comm & Fin Chr 166:18 Jl 3 '47
Union of property owners; attacks rent controls. A. W. Binns. Comm & Fin Chr 164:2886+ D 5 '46
Wartime experiment in federal rent control. D. D. Gage. J Land & Pub Util Econ 23: 50-9 F '47

RENT-ALL company
New business: offering scarce goods for rent; A. J. Minozzi of New Orleans. Bsns W p64 My 24 '47

RENT insurance. See Insurance, Rent

RENTAL housing. See Housing; Housing projects

REPAIR parts
Where to buy repair parts? N. C. Rockwood. Rock Prod 50:106-8 Ja '47

REPAIR ships
Depot and repair ships; abstract and discussion. H. E. Skinner. Engineering 163:414 My 16 '47
See also
Dry docks, Floating

REPAIR shops
Policy behind DoAll's packaged shop program; model repair and service shops for GI's and others. il Sales Management 57: 90+ N 20 '46
See also
Airplane repair stations
Car shops
Locomotive shops
Mine shops
Motor bus lines—Shops
Railroads—Shops

REPAIRING
Concrete protection afforded by capping with wrought-iron channels. il Sci Am 176:127 Mr '47

REPARATIONS (World war, 1939-1945). See Germany—Reparations; Japan—Reparations

REPLACEMENT of machinery. See Machinery, Replacement of

REPLICA technique
Investigation of the figure of small concave metal-replica mirrors. J. N. Shive. Opt Soc Am J 37:849-51 O '47

REPORTERS
New York writers of insurance news for daily press. East Underw 47:53 D 13 '46

REPORTING
How to help reporters; press relations at a conference or meeting. R. S. Hutchings and C. C. Nash. East Underw 47:14+ D 13 '46
Meeting the press. D. T. Lynch. East Underw 48:14 Ja 3 '47
See also
Airplanes in newspaper service

REPORTS
See also
Accountants' reports
Banks and banking—Reports
Corporations—Reports and yearbooks
Market research—Reports
Research reports
Salesmen's reports

REPORTS, Engineering. See Engineering reports

REPORTS, Municipal. See Municipal reports

REPORTS to employees. See Employees, Reports to

REPPE, J. Walter, 1892-
Reppe's acetylene chemistry. M. H. Bigelow. por Chem & Eng N 25:1038-42 Ap 14 '47

REPPLIER, Ted, 1900-
Gallery; the unhappy worrier. S. Jones. Adv & Sell 39:122+ D '46

REPRESSURING. See Petroleum—Production methods

REPRINTS
Bantam books sells ads, tries out higher price. Bsns W p59 F 22 '47
Reprint collection as an easily accessible source of reference material. A. H. Longenbach. Franklin Inst J 242:335-6 O '46
Reprint filing; perennial problem. R. H. K. Foster. Science 104:470-1 N 15 '46
Simple system for reprint filing. L. R. Richardson. Science 104:181-2 Ag 23 '46; Discussion. L. Whitcomb. 104:577 D 13 '46

Bibliography

Catalog of reprints in series; compiled to September 1947. R. M. Orton, ed. 8th ed 192p with semi-annual supplement $3.50 H. W. Wilson co, 950 University av, New York 52 '47

REPRODUCTION
See also
Sterility

REPRODUCTION rates. See Birth rate

REPTILES, Fossil
Relationships of the Permian reptile protorosaurus. A. S. Romer. bibliog diags Am J Sci 245:19-30 Ja '47
Reptilian fauna of the North Horn formation of central Utah. C. W. Gilmore. map diags U S Geol S Professional Pa 210-C:29-53, pl 3-14; pa 30c Supt. of doc. '46

REPUBLIC aviation corporation
Experiment at Republic. il Fortune 35:122-7+ F '47
Republic ends seabee production after making 1,060 amphibians. Aviation W 47:18 O 13 '47

REPUBLIC service corporation
Plan filed with SEC. Comm & Fin Chr 166: 571 Ag 11 '47

REPUBLIC steel corporation
Changes in district personnel. Blast F & Steel Pl 35:1123-4 S '47
Operating at high rate; annual report. Blast F & Steel Pl 35:86+ Ap '47

REPUBLICAN party
Appraising the G.O.P. record. Bsns W p15-16 Mr 29 '47
G.O.P. the first seven months. Bsns W p 16-17 Jl 26 '47
Promise of the Republican return. Fortune 35:2-4 Ja '47
Republican party program; radio address. R. A. Taft. Comm & Fin Chr 165:127+ Ja 9 '47
Republican party program; address before West Virginia Republicans. R. A. Taft. Comm & Fin Chr 165:998+ F 20 '47
Republicans. Fortune 35:77-85+ Ap '47

RESACETOPHENONE. See Acetophenone

RESEARCH
Coordinated research. H. F. Willkie. Chem Eng Prog 43:sup 12-14 Je '47
Determining role of research in the future of the motion picture. B. Price. Soc Motion Picture Eng J 48:70-2 Ja '47
Raw materials also need research. R. B. Ladoo. il Chem Ind 60:780-1 My '47
Requirements for fruitful research. J Chem Educ 24:165 Ap '47
Scandinavian research organizations. E. C. Jahn. bibliog il diag Paper Tr J 124:41-6 My 22 '47
Soviet Union doubles expenditure for research. For Comm W 25:38 D 21 '46
Summary of applications of punched cards as they affect special libraries. C. D. Gull. bibliog Special Lib 38:208-12 S '47

See also
Advertising research
Aeronautic research
Agricultural research
Cement research
Ceramic research
Chemical research
Coal research
Colleges and universities—Research
Corrosion research
Cotton research
Economic research
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Lighting research
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Paint research
Paper research
Petroleum research
Pharmaceutical research
Railroad research
Rubber research
Scientific research
Social research
Steel research
Textile research
Wood research
Wool research
also Great Britain—Scientific and industrial research, Department of; Midwest research institute, Kansas City, Missouri; Southern research institute, Birmingham, Alabama; Texas state research foundation; United States—Army—Research; United States—Navy department—Naval research, Office of

RESEARCH, Government. See Government research

RESEARCH, Industrial. See Industrial research

RESEARCH council on problems of alcohol
Research project at the New York hospital-Cornell medical center. Science 105:206 F 21 '47

RESEARCH departments
Choosing a research director. T. M. Rector. Food Ind 19:938 Jl '47
Industrial research organization; abstract. R. P. Russell. Chem Eng 54:252+ O '47
Managing a research department. A. G. Olsen. Food Ind 19:935-8 Jl '47

RESEARCH foundation of Nova Scotia
Nova Scotia research foundation. S. J. Cook. Chem & Eng N 25:3244 N 3 '47

RESEARCH institutions
See also Texas state research foundation

Management
Human relations in research institution management. W. A. Hamor. bibliog Advanced Management 11:132-41 D '46

RESEARCH reports
Problem of research reports. D. A. Brown. Special Lib 38:44-6 F '47
Specifications for a good research report. J. Bjorksten. Chem Ind 60:407 Mr '47

RESEARCH workers
Ethics of the research worker. L. E. Wise. Paper Ind 28:1299-1302 D '46
Human relations in research institution management. W. A. Hamor. bibliog Advanced Management 11:132-41 D '46
Managing a research department. A. G. Olsen. Food Ind 19:935-8 Jl '47
Mutual responsibilities of scientists and industry. L. I. Smith. bibliog Chem & Eng N 24:3342-6 D 25 '46
Research, opportunity and challenge. C. B. Veal. bibliog Mech Eng 69:757-62 S '47
What qualifies an industrial market researcher? J. R. Sargent. Ind Marketing 32: 44+ F '47

RESERVES
Accounting for contingency reserves. C. O. Wellington. J Account 84:102-5 Ag '47
Accounting treatment of general purpose contingency reserves; Accounting research bulletin no. 28. J Account 84:113-15 Ag '47
Building small business reserves by the Bond-a-month plan. R. M. Hanes. Banking 40:36+ Ag '47
Contingency reserve practices revealed in study of 50 annual statements. J Account 83:422 My '47
Depreciation reserves in public utility balance sheets. H. A. Horne. Pub Util 40: 574-7 O 23 '47
Industry guards future earnings against inventory loss by rainy day reserves. Barron's 27:31 O 13 '47
Inventory reserves. J Account 84:223-6 S '47
Plea for realistic use of inventory reserves. H. E. Nichols. J Account 84:150-1 Ag '47
Postwar reserves; text of Wall Street journal editorial and a letter from Director of research of the American institute of accountants. J Account 83:81-3 Ja '47
Profit-sharing and general contingency reserves. J Account 83:497-8 Je '47
Reserve accounting. J Account 84:147 Ag '47
Reserve problem. T. H. Sanders. J Account 83:291-5 Ap '47
Use of reserves to equalize corporate income. E. A. Carlson. N A C A Bul 29:3-12 S 1 '47
Why business needs adequate reserves. J. M. Chapman. Comm & Fin Chr 165:2978+ Je 5 '47

See also
Bank reserves

RESERVOIRS
Character of Quabbin reservoir water during reservoir filling. C. H. Reed. N E Water Works Assn J 61:181-201 Je '47
Earthquakes from water storage. Eng N 138: 778 My 8 '47
Economics of reservoirs. N. G. McDonald. il Water & Sewage 85:80-2+ My '47; Abstract. Water & Sewage Works 94:210-11 Je '47
Effect of density currents upon raw water quality; Watts Bar reservoir. M. A. Churchill. map Am Water Works Assn J 39:357-60 Ap '47
L'épuration de l'eau des lacs par la circulation forcée. diag Génie Civil 124:257-8 Jl 1 '47
Extension of Metropolitan district works; what's accomplished and what's ahead. K. R. Kennison. flow diag il Boston Soc C E J 34:151-214 bibliog(p152-4) Jl '47
Four earthfill dams create 1,873-acre Horsetooth reservoir in Colorado. F. C. Walker. il map diags Civil Eng 17:310-13+ Je '47
Hydraulics for the practical water works man; design of discharge openings in tanks and reservoirs. R. W. Angus. diags Water & Sewage Works 94:69-72 F '47
Ladybower reservoir; electrical features in construction and operation of the dam. il Elec R (Lond) 139:815-20 N 22 '46
Multiple banding of sediments deposited during a single season. A. E. Wood. Am J Sci 245:304-12 My '47
Multi-purpose storage reservoirs; abstracts of papers, ASCE annual meeting. Eng N 138:95-6 Ja 23 '47
Reforestation on the Quabbin Reservoir project. R. Snow. fold maps N E Water Works Assn J 61:34-47; Discussion. W. R. LaDue. 47-9 Mr '47
Sanitary maintenance of reservoirs; discussion at Canadian section, A.W.W.A. Water & Sewage Works 94:211 Je '47
Tanks and reservoirs; storage facilities in Canadian systems. il Water & Sewage 85: 14+ Ag '47
Use of activated carbon in treating open reservoirs. H. E. Bailey and J. Studley. il plan diags N E Water Works Assn J 61:135-44 Je '47; Same. Water & Sewage Works 94:219-22 Je '47
Varying reservoir levels and discharges forecast by new method. N. S. Haines. Eng N 138:1003-5 Je 26 '47
Water quality in service reservoirs; discussion. Water & Sewage 85:124-9 My '47

RESERVOIRS—*Continued*
Will your reservoir refill during minimum demand periods? R. L. Brown. Eng N 138: 1012-13 Je 26 '47

See also
Dams
Flood control
Water supply
Water supply engineering
Water tanks
Waterworks

Cleaning

Water works reservoir cleaned by bulldozer. G. Duncan. Pub Works 77:37 N '46

Cost

Big Dry Creek reservoir, California; unit prices. Eng N 139:140 Jl 24 '47
Many economic factors fix market value of engineering specialties. D. M. Baker. il Civil Eng 17:126-9+ Mr '47

Repair

Leakage correction at the Great Falls reservoir. G. E. Tomlinson. il map diags Engineering 163:181-3, 192 Mr 14 '47

RESERVOIRS, Concrete
Precast concrete forms walls and roof of New Orleans clear water reservoir. A. E. Marks. il Concrete 54:12-13+ N '46
Reconstruction of the Halifax high service reservoir. R. M. Doull and J. D. Kline. il diag Am Water Works Assn J 39:503-14 Je '47; Same. Water & Sewage 85:32-7 S '47; Same cond. Eng N 139:187-91 Ag 7 '47
Waterproofing concrete structures. N. J. Kendall. Am Water Works Assn J 39:253-6 Mr '47

RESERVOIRS, Steel
Largest steel plate reservoir is built in ten weeks for Washington suburban sanitary commission. il Eng N 139:585-7 O 30 '47

RESIN acids
Resin acids; abstract. R. Lombard and M. Chêne. Paper Ind 28:1656 F '47
Studies on resin acids; carbinols. H. H. Zeiss. Am Chem Soc J 69:302-3 F '47

RESINAT
Plastics for ulcers; resinous pills for stomach ulcers. Mod Plastics 25:182 S '47

RESINOUS products
Acrylate polymers in Germany. G. M. Kline and others. diags Mod Plastics 24:147-8+ Ag; 25:128-9+ S '47
Alkyd resins to-day; papers read before plastics group. Chem & Ind p276-7 My 17 '47
Cast plastics and casting processes. P. E. Erbe and J. T. Grey. Mod Plastics 24:153-6+ N '46
Consolidation of sands in oil and gas wells; use of liquid resin. G. G. Wrightsman and H. H. Spain. Oil & Gas J 46:73+ Jl 19 '47
Contact pressure laminations. E. G. Williams. Chem & Ind p367-70 Je 28 '47
Effect of urea resins on starch clay coating compositions. P. S. Hewett and others. il Paper Tr J 124:45-50 Je 12 '47
L'emploi d'une résine synthétique pour éviter le desserrage des filetages et assurer l'étanchéité des joints. diag Génie Civil 124:337-8 S 1 '47
Flameless plastic; Victor's new resin, diallyl phenyl phosphonate. Chem Ind 61:40 Jl '47
German resin formulas available. Oil Paint & Drug Rep 151:77 My 12 '47
German thermosetting resins. il diags Mod Plastics 24:154+ Ap; 153-5+ My '47
Goodrich develops new type resin; Good-rite 50. Oil Paint & Drug Rep 152:73 Jl 28 '47
Hydromite, a new cement-resin combination for casting. Rubber Age 60:320 D '46
Low-pressure resins; their chemistry and properties; abstracts. C. E. Bacon. Mod Plastics 24:122 Mr '47; Product Eng 18: 125-6 Je '47
Manufacture of Wofatit; base-exchange resins; uses and properties. N. E. Topp. Chem Age (Lond) 55:809 D 28 '46
Methods for combining phenolic resins and paper. E. S. Bauer. Paper Tr J 125:50-2 Jl 17 '47
New types of plastics being developed for postwar markets. S. M. Phillips. il Dom Comm 35:55-60 S '47
Obtaining brillance with acrylic resins. H. F. Pearson. il diags Product Eng 18:147-51 My '47
Patterns made from cast plastics. C. R. Simmons. il Materials & Methods 24:1466-8 D '46
Phenol alcohols and their reaction with oils; abstract. W. Charlton and L. E. Perkins. Paint Oil & Chem R 110:36+ S 4 '47
Plastic patterns. R. H. Herrmann. il Foundry 75:89+ Jl '47
Plastic resin seals porous castings. diag Am Mach 91:100 Mr 27 '47
Plastics primer for engineers. K. Rose. il Materials & Methods 25:119-38 Ap '47
Pliolite copolymer resins and their uses. H. R. Thies and W. H. Aiken. diags Rubber Age 61:51-8 Ap '47
Polyethylenes. A. E. Maibauer and C. S. Myers. bibliog il diags Electrochem Soc Trans 90 (preprint 36):449-67 '46
Preparation of polyvinylamine, polyvinylamine salts, and related nitrogenous resins. D. D. Reynolds and W. O. Kenyon. Am Chem Soc J 69:911-15 Ap '47
Properties of flexible impregnated sheets; addition of synthetic resins. A. W. Oliner and F. W. O'Neil. bibliog Paper Tr J 125: 55-62 Ag 14 '47
Rates of anion exchange in ion-exchange resins. R. Kunin and R. J. Myers. bibliog J Phys & Colloid Chem 51:1111-30 S '47
Reaction of 1-nitropropane with formaldehyde and ammonia. E. L. Hirst and others. Chem Soc J p924-8 Jl '47
Resin couturier; Pittsburgh plate glass co. series of new resins. il Chem Ind 61:608-9 O '47
Resin fibers; abstract. H. H. Atlas and R. S. Aries. Materials & Methods 25:127 Ja '47
Resin speeds drying of printing inks. Chem & Eng N 25:626 Mr 3 '47
Resinous products from petroleum polymer sulfurization. M. G. Mayberry, P. V. McKinney and H. E. Westlake, jr. bibliog Ind & Eng Chem 39:166-7 F '47
Rock-like plastic preserves valuable aircraft molds; material made by Calresin corp. il Aviation 46:60-1 My '47
Room temperature casting resin for metallographic mounts. G. L. Kehl and J. S. Church. Metal Prog 50:1089-90 N '46
Study of resinous sealants for porous metal castings. V. C. F. Holm. bibliog pl J Res Nat Bur Stand 37:177-82 S '46; Same. il Foundry 75:86-7+ Ja '47; Abstract. Iron Age 158:90-1 N 14 '46
Sulfonamide plasticizers and resins. H. S. Bergen, jr. and J. K. Craver. bibliog Ind & Eng Chem 39:1082-7 S '47
Synthetic-resin bearings. F. W. Jones. Iron & Steel Inst J 155:602-6; Discussion. 608-20 Ap '47
Tailor-made polyester resin; Selectron 5000 series. il Mod Plastics 25:111-15 O '47
Thermoplastic specialty resins. W. H. Aiken. il Mod Plastics 24:100-2 F '47
Thermo-setting plastics effective in well repair. O. O. Dale. il diags Pet Eng 18:90+ My '47
Thermosetting resin has high refractive index; V-Lite. il Chem & Eng N 25:2030 Jl 14 '47; Mod Plastics 24:226+ Ag '47
Three plastics make new compass possible. il Mod Plastics 25:113-15 S '47
Urea and melamine resin products; properties and applications. M. H. Bigelow and J. A. Murray. il diags Product Eng 18:140-5 Ag '47
Use of phenol formaldehyde and vinyl resins in sealing liquid mounting media on microscope slides. E. S. Barghoorn. Science 106: 299-300 S 26 '47
Use of the Amberols in synthetic rubber stocks. Rubber Age 60:449 Ja '47
Use of unsaturated polyester resins for embedding biological material. T. H. Romaniak. il Science 104:601-2 D 20 '46
Vibrin resins. R. E. Nelson. il India Rubber World 117:88-90 O '47
Wood treatment with resin-forming systems; study of size and species limitations. M. A. Millett and A. J. Stamm. Mod Plastics 25:125-7 S '47

RESINOUS products—*Continued*
Wood treatment with urea resin-forming systems (comparison with phenolic resins for making compreg). M. A. Millett and A. J. Stamm. Mod Plastics 24:159-60+ F '47
X-ray uses allyl resin. il Mod Plastics 24: 200-1 Je '47

See also
Bakelite
Durez
Haveg
Melamine resins
Methyl methacrylate
Molded products
Plastic materials
Polythene
Rubber, Artificial—Mixing with resins
Saran
Teflon
Vinyl chloride
Vinyl compounds
Vinylite

Adhesives
Aminoplastic adhesives. J. Hofton. bibliog (22 patents) Chem & Ind p410-12 N 16 '46
Barrel head and staves are bonded with phenolic resin. il Mod Plastics 24:98-9 Mr '47
Control of marine borers in plywood. A. P. Richards and W. F. Clapp. il A S M E Trans69:519-24 Jl '47
Edge glued by machine; thousand feet of lumber edge-glued in an hour, making use of urea resins. il Mod Plastics 25:138-9 O '47
Effect of catalysts and pH on strength of resin-bonded plywood. G. M. Kline and others. bibliog J Res Nat Bur Stand 37: 281-310 N '46; Same. Mod Plastics 24:123-8+ Jl '47
Effect of pH on the reactivity of resorcinol resins. P. H. Rhodes. bibliog Mod Plastics 24:145-6+ Ag '47
Extending phenolic resin plywood glues with proteinaceous materials; corn gluten, soybean meal, linseed meal. G. E. Babcock and A. K. Smith. Ind & Eng Chem 39:85-8 Ja '47
Extending resorcinol resin glue with corn gluten. G. E. Babcock and A. K. Smith. Mod Plastics 24:153+ Ap '47
Flexible organic adhesives as structural elements; Plastilock 500. D. L. Loughborough and F. D. Snyder. bibliog India Rubber World 115:84-7 O '46; Same. Mech Eng 68: 1053-5 D '46
Heat-stable resin provides waterproof binding for inorganic materials. Sci Am 176: 130 Mr '47
Loxite industrial adhesive compounds. Rubber Age 61:62 Ap '47
Metal-to-metal adhesives. Chem Age (Lond) 57:331-2 S 6 '47
Phenolics, not rivets, bond brake linings; Permafuse corp. uses Durez. il Mod Plastics 25:100 O '47
Plastic adhesive, used to cement two pieces of duraluminum together. il Steel 119:90 D 30 '46
Plastic film locks threaded parts. Iron Age 160:66 Ag 28 '47
Plastics as optical cements. H. W. Coles and others. bibliog il diags Mod Plastics 24:141-8+ Je '47
Polyamides; resins of the Norelac type for hot-melt and heat-seal coatings. A. G. Hovey. il Mod Packaging 21:143-8+ O '47
Portable welder that cures resin adhesives. il Mod Plastics 24:206-8+ My '47
Resin adhesives for r-f heating. Electronics 19:202+ D '46
Resin adhesives in car bodies. il Mod Plastics 24:174-6+ Je '47
Synthetic resin adhesives do many jobs better and cheaper. A. Frieden. il Chem Ind 59:1002-4 D '46
Synthetic resins from polyhydroxy phenols; abstract and discussion. E. G. Hancock. Chem & Ind p27-8 Ja 11 '47
What plastics mean to plywood. C. A. Breskin. il Sci Am 176:113-15 Mr '47

See also
Plywood

Advertising
How we cracked a specialized industrial market; Resinous products & chemical co. R. P. Goodale. Ptr Ink 220:56+ Jl 25 '47

Analysis
Identification of urea resins in wrinkle-proof fabrics. J. C. Pfeiffer. Rayon 27:651-2 D '46

Binding materials
Electronic core baking; use of synthetic resin binder. R. W. Crannell. il diag Foundry 75: 66-9+ Jl '47
New binders improve core performance. H. L. Gebhardt. il Iron Age 158:66-8 D 26 '46
New condensation products of formaldehyde with amides and amines. H. Scheuermann. Paper Ind 28:1495-6 Ja '47; Same. Mod Plastics 24:161-2+ F '47
Study of wet-strength mechanism; the effect of melamine resin on the bonding of paper fibers. D. J. Salley and A. F. Blockman. bibliog Paper Tr J 125:35-40 Jl 3 '47
Thermosetting silicone resins. Mod Plastics 24:112 D '46

Finishing materials
Alkoxyl content of urea formaldehyde resin films. B. M. Shaw. diags Soc Chem Ind J 66:147-9 My '47; Abstract. Paint Oil & Chem R 110:60+ O 16 '47
Applying plastic coating to oil tanks; Resoweld. W. J. Davis. il Pet Eng 18:182+ Ja '47
Coats make the product. C. A. Breskin. il Sci Am 176:256-8 Je '47
Flame spraying by the powder pistol; Schori process. W. D. Jones. il Engineering 163: 297-9 Ap 11 '47
German thermosetting resins; Luphen and Plastopal lacquers. Mod Plastics 24:154+ Ap '47
Imide-modified alkyd resins. H. J. Wright and R. N. DuPuis. bibliog Ind & Eng Chem 38:1303-8 D '46
Investigation of aqueous acrysol, Geon and saran dispersions. Paint Oil & Chem R 109:50-6 N 14 '46
New York paint technicians discuss resins. Oil Paint & Drug Rep 151:79 Ja 6 '47
Plastics in paints. C. A. Breskin. il Sci Am 177:13-14 Jl '47
Polyvinyl resin finishes; dispersions in rosin mixtures; patent. Am Dyestuff Rep 36:547 S 22 '47
Research may discover better coating resins. il Chem Ind 61:56-7 Jl '47
Resin from petroleum. Chem Eng 54:172 F '47
Silicon-containing finishes to have wide application; abstract. J. R. Patterson. Paint Oil & Chem R 110:16+ Je 12 '47
Styrene copolymer solvent reacting varnishes; Fosterite resins; abstract. N. C. Foster. Chem Eng 54:242+ Ja '47
Synthetic resins for use in the formulation of nitrocellulose paper lacquers. J. G. Little and C. D. Ender. Paper Tr J 124: 43-7 Mr 6 '47
Vinyl dip-coat; Tygoflex. il Mod Plastics 24: 156-8 Jl '47
Vinylidene chloride film and latex; packaging and coatings. il Mod Plastics 25:128-31 O '47
Water paint vehicle. Chem Eng 54:167 O '47

See also
Polythene

Heat resistance
Putting insulating properties of plastics to work; frankfurter cooker, baby bottle warmer and percolator handle. il Mod Plastics 24:134-5 F '47

Insulating materials
Cashew resins; their use in manufacture of insulating varnishes. A. E. Williams. Elec R (Lond) 141:244-5 Ag 15 '47
Low-loss plastic insulation materials. J. H. Parliman. Electronics 20:116-21 (Buyers' guide) Mid-Je '47
More about silicones; their characteristics and possible applications. Electrician 137: 1666-8 D 13 '46
N.B.S. cast resin for high-impedance circuits. P. J. Franklin and M. Weinberg. il Mod Plastics 24:99-100 Jl '47; Abstract. Elec World 128:121+ S 13 '47
N.B.S. casting resin. R Sci Instr 18:589 Ag '47

RESINOUS products — Insulating materials — *Continued*
N.B.S. casting resin used in electronic applications. il Product Eng 18:159-60 Ag '47
New casting resin developed at National bureau of standards. il Dom Comm 35:42-5 S '47
New plant to manufacture alkyd resins for General electric company. il Pet Eng 18: 86+ Je '47
Plastics in electrical industry; Tyseley works of Bakelite, ltd. T. J. Fielding. il diag Electrician 137:1196-9, 1281-5, 1370-4 N 1-15 '46
Polyvinyl carbazole in Germany; Luvican. G. M. Kline. diags Mod Plastics 24:157-8+ N '46
Polyvinyl carbazole resin. W. M. Shine. il diags Mod Plastics 25:130-2+ S '47
Stabilizing electrical and mechanical characteristics of circuits; embedding parts in N.B.S. resin. il Electronics 20:136+ Jl '47
Voltage characteristics of polythene cables. R. Davis and others. bibliog Inst E E J 94 pt 3:154-65; Discussion. il 165-70 My '47

Manufacture

Acetylene to vinyl resins; abstract. F. K. Schoenfield. Chem Eng 54:244+ O '47
Alkyd resin mathematics. H. Burrell. Paint Oil & Chem R 110:22-3 S 18 '47
Corrosion resistant cement production; automatic controls to produce formaldehyde resins for anti-corrosion cements. il Chem Eng 54:110-11 Je '47
German manufacture of polyvinyl ethers. G. M. Kline. flow diags Chem Ind 59:1018-20 D '46; Same. Mod Plastics 24:159-60+ Ja '47
Imide-modified alkyd resins. H. J. Wright and R. N. DuPuis. bibliog Ind & Eng Chem 38:1303-8 D '46
Kinetics of cure of resol resins. M. N. Fineman and I. E. Puddington. bibliog Ind & Eng Chem 39:1288-93 O '47
Modern alkyd resin processing equipment. R. E. Nelson. il Can Chem & Process Ind 31:210-13 Mr '47
New plant to manufacture alkyd resins for General electric company. il Pet Eng 18:86+ Je '47
New process for acrylic resins; manufacture of methyl methacrylate monomer, molding powder and transparent sheet. R. W. Porter. flow sheets Chem Eng 54:102-6 Ap '47
Phenol alcohols as substitutes for the thermoreactive phenol-aldehyde resins in the plastics industry; abstract. A. A. Vanscheidt and A. A. Vassiliev. Chem Eng 54:274+ F '47
Plastic makers look to petroleum chemicals for raw materials. B. H. Weil. bibliog il diags Pet Processing 2:215+ Mr '47
Polyurethane resins; abstract. Paint Oil & Chem R 110:49 Ag 21 '47
Vinyl acetate; process and equipment at Hoechst, Germany. L. W. Greene. flow sheet il Chem Eng 54:98-9 Jl '47
Vinyl resins as consumers of C_2H_2 and C_2H_4. H. H. Atlas and R. S. Aries. flowsheet Chem Eng 54:101-3+ Mr '47; Abstract. Pet Processing 2:333 My '47

Statistics

Plastics and synthetic resins; U.S. production, 1941-1946. Chem Eng 54:118 F '47

Testing

Chemical resistance of phenolic laminates. W. R. Tyrie. A S M E Trans 69:795-7 O '47

Textile uses

Background material on vinyl butyral in textile applications. Rayon 27:603-4 N '46
Beauty from woven polyethylene. il Mod Plastics 24:107 N '46
Creaseproofing with methylolmelamine; quaternary ammonium condensates; patent. Am Dyestuff Rep 36:578 O 6 '47
Delustering; urea-formaldehyde condensates; patent. Am Dyestuff Rep 36:366 Je 30 '47
Dimensionally stable cellulosic fabrics. G. Landells. il Textile Inst J 37:P317-29; Discussion. P330-6 Jl '46
Drying is important in shrink-proofing wool; Lanaset process. K. H. Barnard. il diags Textile World 97:102-3+ Ap '47
Identification of urea resins in wrinkle-proof fabrics. J. C. Pfeiffer. Rayon 27:651-2 D '46
Laminated fabrics; thermosetting and thermoplastic resins used; patent. Am Dyestuff Rep 36:467 Ag 25 '47
Making and applying cast film; polyvinyl resin is the base of this textured cast sheeting. il Mod Plastics 24:128-30 N '46
Monsanto opens new textile chemical plant for manufacture of Resloom. Rayon 28:252 My '47
New fiber bonded machine. il diag Rayon 27: 658 D '46
Resin treatment of fabric for shrink prevention and permanent starching; Koloc and Kandar. G. R. Vila. il Mod Plastics 24:118-20 Ap '47
Sheerset featured at Copacabana. il Textile Col 69:35 S '47
Textile chemistry advanced by AATCC jubilee; starch replacement. Textile World 97:141+ Ja '47
Textile dressings, Koloc and Kandar, prevent shrinkage, provide permanent starch. il Sci Am 176:160 Ap '47
Textile resins; including melamine treatment of wool. W. H. Jaeger. Am Dyestuff Rep 36:352-4 Je 30 '47
Textile treating resins. il Mod Plastics 24:97 Ja '47
Twenty-five years of textile resin finishing. J. E. Lynn. bibliog Am Dyestuff Rep 35: 653-4 D 2 '46
Use of plastics to strengthen textiles. H. Y. Jennings. Rayon 28:85-6 F '47

See also
Saran
Vinyon

Water treatment

Demineralized water; abstract. L. B. Porter. Heating-Piping 19:91 Je '47

RESINS. See Gums and resins

RESINS, Synthetic. See Resinous products

RESISTORS, Electric. See Electric resistors

RESLOOM. See Melamine resins

RESONANCE
Second sound in liquid helium II. C. T. Lane and others. diag Phys R 71:600-5 My 1 '47

RESONANCE (chemistry)
Calculation of angular distributions in resonance reactions. G. Breit and B. T. Darling. bibliog Phys R 71:402-5 Ap 1 '47
Dipole moments and resonance of some benzein indicators and related compounds. A. A. Maryott and S. F. Acree. bibliog il J Res Nat Bur Stand 38:505-12 My '47
Discussion of the fluorine-proton resonances. L. I. Schiff. bibliog Phys R 70:891-3 D 1 '46
Electric resonance method of radiofrequency spectroscopy; moment of inertia and electric dipole moment of CsF. H. K. Hughes. bibliog diag Phys R 72:614-23 O 1 '47
Higher angular momenta and long range interaction in resonance reactions. E. P. Wigner and L. Eisenbud. bibliog Phys R 72:29-41 Jl 1 '47
Light absorption and resonance energies of some heterocyclic molecules. A. Maccoll. Chem Soc J p670-2 Ag '46
Measurements of nuclear quadrupole moment interactions. W. A. Nierenberg and others. bibliog Phys R 70:773-5 N 1 '46
No-bond resonance; competitive bromination of toluene and *t*-butylbenzene. E. Berliner and F. J. Bondhus. bibliog Am Chem Soc J 68:2355-8 N '46
Nuclear magnetic resonances at low temperatures. F. Bitter and others. Phys R 71:738 My 15 '47
Recent advances in the physics and chemistory of rubber; molecular resonance and its bearing on the chemistry of rubber and related compounds. L. Bateman. Rubber Age 60:567-71 F '47
Resonance energies from thermal data. T. L. Cottrell and L. E. Sutton. bibliog J Chem Phys 15:685-6 S '47

RESONANCE (chemistry)—*Continued*
Resonance fluorescence of nuclei. L. I. Schiff. Phys R 70:761-2 N 1 '46
Resonance reactions. E. P. Wigner. Phys R 70:606-18 N 1 '46
Resonances in the disintegration of fluorine by protons. W. E. Bennett and others. bibliog diags Phys R 70:882-90 D 1 '46
Slow neutron absorption resonances in iodine. W. B. Jones, jr. bibliog plan diags Phys R 72:362-77 S 1 '47
Slow neutron resonances in indium. B. D. McDaniel. bibliog diags Phys R 70:832-41 D 1 '46
Steric inhibition of resonance; basic strengths of some dimethyl-substituted aromatic primary and tertiary amines. G. Thomson. Chem Soc J p 1113-16 D '46

RESONATORS
Investigations on acoustic resonators. H. Samulon. il diags Acoustical Soc Am J 19: 191-3 Ja '47

RESONATORS, Radio. See Radio resonators

RESOR, Stanley Burnet, 1879-1940
J. Walter Thompson company. por Fortune 36:94-101+ N '47

RESORCINOL
Effect of pH on the reactivity of resorcinol resins. P. H. Rhodes. bibliog Mod Plastics 24:145-6+ Ag '47
Extending resorcinol resin glue with corn gluten. G. E. Babcock and A. K. Smith. Mod Plastics 24:153+ Ap '47
Manufacture of synthetic phenols, resorcinol, pure anthracene and pure carbazole. Chem Age (Lond) 56:676-7 My 24 '47

RESPIRATION
Application of basic physiologic data in the design of respiratory equipment. L. D. Carlson and V. J. Wulff. bibliog diags J Aeronautical Sci 14:229-36 Ap '47
Combined influence of temperature and urethan on the respiration of rhizobium. H. Koffler, F. H. Johnson and P. W. Wilson. bibliog Am Chem Soc J 69:1113-17 My '47
Multiple factor theory of the control of respiratory ventilation. J. S. Gray. bibliog Science 103:739-44 Je 28 '46; Discussion. bibliog H. Krueger and J. Hunter. 105:463-6 My 2 '47; Reply. bibliog 105:466-8 My 2 '47
Penetration of air-borne particulates through the human nose. H. D. Landahl and S. Black. bibliog flow diag J Ind Hygiene 29: 269-77 Jl '47
Prevention of respiratory embarrassment in therapeutic curarized convulsions. M. Brody. bibliog Science 105:285-6 Mr 14 '47
Respiratory stimulants; fully-substituted ureas derived from αω-alkylenediamines. W. R. Boon. Chem Soc J p307-18 Mr '47
Separate localization in the medulla oblongata of the vagal inspiratory and expiratory reflex centers. O. A. M. Wyss. bibliog Science 106:322-3 O 3 '47
Treatment of respiratory depression and asphyxia. Ind Med 15:640-1 N '46

RESPIRATION, Artificial
Mechanism for converting rotary to constant-velocity reciprocating motion; artificial respiration machine. J. V. Neville. diags Mach 54:273-4 S '47
Quick thinking and acting saves lives; EEI resuscitation awards prove. M. B. Woods. Edison Elec Inst Bul 15:87-93 Mr '47

RESPIRATION, Plant. See Plants—Respiration

RESPIRATORY apparatus
Air-line answers; unusual adaptations of air line respirators and masks in production of fissionable materials. J. M. Brown and R. T. Bartnett. il Safety Eng 92:60+ O '46
Approval of newly developed self-contained breathing apparatus, instructions in its care and use, and training procedure. G. W. Grove and E. E. Quenon. U S Bur Mines Information Circ 7413:1-18 '47
Inhalation of penicillin dust. L. Krasno and others. il Science 106:249-50 S 12 '47
Lung savers; respiratory protective devices. il Nat Safety N 54:28-9 N '46
Motor control for polio patients. il Electronics 20:188+ Ap '47
Respiratory protection. il Nat Safety N 55: 27-8+ Mr '47
Significance of Bureau of mines approval in selection of respiratory devices. S. J. Pearce and H. H. Schrenk. il diag Safety Eng 93:54-9 Ja '47
Some laboratory applications of the low friction properties of the dry hypodermic syringe. H. F. Brubach. diags R Sci Instr 18:363-6 My '47

See also
Oxygen apparatus

Testing
Sensitive photoelectric photometer for laboratory tests on smoke filters, used in respirators. F. T. Gucker, jr. il diags Electronics 20:106-10 Jl '47

RESPIRATORY organs

Diseases
Respiratory ills and their control in industry; with special reference to influenza immunization. A. M. Baetjer. Ind Med 16: 85-6 F '47; Abstract. Safety Eng 94:56 Jl '47

See also
Influenza
Lungs—Diseases
Pneumonia
Silicosis

RESPIROMETERS
Microrespirometer. J. R. Gregg. bibliog diag R Sci Instr 18:514-16 Jl '47

REST periods
Time out for refreshment. D. Ross. Ptr Ink 217:108 D 27 '46

RESTAURANT kitchens. See Kitchens

RESTAURANTS
Designed for smart dining; functional planning with plywood produces restaurant of distinction, Teagle's dinner house, Seattle. il plan diags Am Bld 68:72-3 N '46
Expertly designed to attract motorists; drive-in coffee shop near Portland, Ore. il plans diags Am Bld 69:137-9 Ap '47
Florida builder erects modern restaurant in St Petersburg. il plan Am Bld 69:116-17 Jl '47
Renaissance at Rikers; Broadway and 104th St, New York. D. Laitin. il Arch Rec 102: 116 Jl '47
Restaurant blues; rising costs squeeze profits. Bsns W p30+ Ap 5 '47
Restaurant rebuilds in modern manner; Thompson restaurant, Chicago. il Am Bld 69:146-7 My '47
Restaurants and bars; Architectural record's building types study. H. H. Siegel. il plans diags Arch Rec 102:96-116 Jl '47
Tilford's restaurant in Los Angeles, combines quick counter service and leisurely dining. il plan Arch Forum 86:82-3 Je '47

See also
Department stores—Restaurants
Hotels
Lunch wagons
Lunchrooms and cafeterias
Lyons, J. and company
Waldorf system, inc.

Air conditioning
Air conditioning restaurants; Longchamps restaurants. F. Steixner. il diags Heat & Ven 43:59-62 N '46

Electric equipment
Restaurant modernizes with electric cooking. R. H. Knox. il Elec World 127:68-9 Je 21 '47
St Louis shows restaurant equipment. R. A. Latimer. il Elec World 127:124+ My 10 '47

Employees
Association highlights; American hotel association and National restaurant association sponsor training programs in universities and vocational schools. T. K. Pasma. il Dom Comm 35:80-5 Jl '47

Equipment
Gas prominent at restaurant exposition. il Am Gas Assn Mo 29:212+ My '47
Now, sell hot water to this big commercial market. il diags Dom Eng 169:120-1+ F '47

RESTAURANTS—*Continued*

Lighting

Restaurant lighting with sleight-of-hand. T. S. Kelly. il plan diags Arch Rec 102:117-18 Jl '47

Sanitation

Restaurant sanitation program of the United States Public health service. A. W. Fuchs. bibliog Pub Health Rep 62:261-72 F 21 '47

RESTRAINT of trade

Credit to irresponsibles; are agreements to refuse credit lawful? W. R. Montgomery. Credit & Fin Management 49:10-13 Je '47

Exclusive-dealer contracts target of California antitrust suit. H. D. Ralph. Oil & Gas J 45:39-40 Ja 11 '47

Judge Wilken terminates Cleveland case, all defendants acquitted; text of opinion. Dom Eng 169:1-4, 134 Ap '47

Social antitrust suit seen forerunner of other actions; with text of the exclusive dealing complaint. Nat Pet N 39:11, 41-3 Ja 8 '47

Why Uncle Sam often cracks down on exclusive sales contracts. A. W. Gray. Sales Management 58:90+ F 1 '47

See also

Glass container industry
Trade associations—Law
Trusts, Industrial

RESUSCITATION

See also

Respiration, Artificial

RETAIL associations

Retail associations spokesmen for $100 billion industry. J. Judkins. Dom Comm 35:8-10 Ag '47

RETAIL clerks international protective association

Victory plus; A.F.L.'s rejuvenated union wins on West coast. Bsns W p97-100+ Je 14 '47

RETAIL stores. See Retail trade; Store buildings; Stores (retail trade)

RETAIL trade

Attaining maximum purchasing power. E. G. Nourse. Comm & Fin Chr 165:1122+ F 27 '47

Blueprint for action of Florida state retailers association. Dom Comm 34:80-2 D '46

Distress buying in doldrums. Bsns W p62+ Jl 12 '47

Economic outlook and its effect on retail distribution. J. Backman. Comm & Fin Chr 165:266+ Ja 16 '47

Importance of the retailer in the development of product design. P. Müller-Munk. J Retailing 23:8-13+ F '47

No bust, but a balanced economy. S. J. Flink. Comm & Fin Chr 165:1841+ Ap 3 '47

Nonfood lines increasing in modern super markets; drugs, cosmetics, hardware, house furnishings, auto supplies, etc. V. J. Dallaire. Ptr Ink 221:51-2 O 17 '47

Problems of distribution in 1947. R. E. Wood. Comm & Fin Chr 165:867+ F 13 '47

Program of stabilized abundance; statement before Joint congressional committee on the economic report, with comments on situation in retailing. J. M. Ney. Comm & Fin Chr 166:323+ Jl 24 '47

Responsibilities of retailing in free economy. B. H. Namm. Comm & Fin Chr 165:649+ Ja 30 '47

Retail associations spokesmen for $100 billion industry. J. Judkins. Dom Comm 35:8-10 Ag '47

Retail trade starts to slip. Bsns W p15-16 F 15 '47

Retailers gain confidence. Bsns W p 19-20 O 11 '47

Retailers propose price reductions. J. I. Straus; W. Morrow. Comm & Fin Chr 165: 1977 Ap 10 '47

Sharp reduction in prices and production in sight. E. W. Zelomek. Comm & Fin Chr 164:2750+ N 28 '46

Warning signs in retail trade. Bsns W p15-17 N 9 '46

What's ahead for retailing? J. Backman. Comm & Fin Chr 166:1408+ O 9 '47

See also

Advertising—Dealers, Appeal to
Chain stores
Christmas business
Company stores
Cooperative associations
Dealer helps
Dealer relations
Department stores
Display of merchandize
Electric utilities—Appliance selling
Gasoline service stations
Grocery trade
Instalment plan
Mail order business
Market stores
Marketing
Merchandizing
Moving picture theaters—Lobby selling
Post exchanges
Price fixing, Resale
Price policies, Retail
Purchasing
Retail workers
Salesmanship, Retail
Salesmen, Retail
Self service
Shopping centers
Show windows
Special sales
Specialty stores
Store buildings

Accounting

How the retail inventory method works in a fluctuating market. J Account 83:501-2 Je '47

Advertising

Advertising methods useful in the neighborhood store. J. H. Rhoads. il Dom Comm 35: 24-9 S '47

Advertising production; what hopes for a happier future? N. C. Baron. J Retailing 22:73-7 O '46

City sells itself to its trading area; Mason City, Ia. radio program. Sales Management 59:100 Ag 1 '47

Copy-testing technique for a small rural store. H. G. Bierer. J Retailing 23:38-42 Ap '47

Plain words about radio advertising. W. L. Dennis. J Retailing 23:3-7 F '47

Radio swap column sells home furnishings. D. Markstein. Ptr Ink 218:64 Ja 10 '47

Retailing; abstract. L. Hahn. Adv & Sell 40: 70 O '47

Springfield measures effect on sales of newspaper blackout in its fifth month. Ptr Ink 218:96 F 14 '47

Ten tested ways to create radio commercials for retailers. C. H. Wolfe. il Ptr Ink 219: 44-6 My 2 '47

12 fundamentals for preparing retail ad mats. M. Sutton. il Ptr Ink 218:50-1 F 14 '47

The two copy techniques have been married for years; Miss Juicy Starch Readership became the bride of Mr Best Seller in a simple ceremony at Grass Roots junction. R. York. Ptr Ink 220:42-3 Ag 8 '47

Urge local buying, Seneca Falls shop-at-home campaign. il Bsns W p68 Jl 19 '47

Bibliography

Services available to retailers from the United States Department of commerce. B. H. Gordon. J Retailing 23:14-15 F '47

Charge accounts

See Charge accounts (retail trade)

Finance

Average operating expense data for retail distributors compiled by U.S. Chamber. Ptr Ink 220:66 Ag 29 '47

Behind the scenes in twelve retail trades; with tabulations showing fourteen important ratios. il Dun's R 55:20-1 O '47

Big retailers can do well in buyers' market. W. S. Morris. Barron's 27:3+ Ja 27 '47

What will happen to future retail expense ratios? R. H. Johnson. Dom Comm 35:34-8 F '47

Hours of business

Store hours for shopping goods retailers. D. J. Luck. (Bur. of economic and business research, business studies no. 5) 22p Univ. of Illinois, College of commerce and business administration, Urbana '47

Insurance requirements

Burglary insurance for store owners. Spectator (Property ed) 12:30-1 Ja 23 '47

Buying insurance for retail stores. J. C. L. Ryan. Management R 36:493-5 S '47

RETAIL trade—Insurance requirements—*Cont.*
Fire insurance for merchants. J. D. Phelan and others. Rough Notes 90:19-24+ Ap '47
How English merchants are insured with one package policy. Rough Notes 90:15-16 Ap '47
Storekeepers' burglary, theft and robbery policy. H. A. Houston and others. il Rough Notes 90:19-24 Ja '47
Writedowns hit retailers but insurance steady. Nat Underw 51:10 Mr 6 '47

Laboratories

Advantages of a testing laboratory to a retail store. A. W. Kattermann, jr. J Retailing 22:78-82 O '46

Purchasing

Dress buyers take what they get and really like it: Annie Laurie ships quotas every two weeks. L. Fitzmaurice. il Sales Management 57:74+ D 15 '46

Records

Want slips are found sales. C. S. Baron. J Retailing 23:85-8 O '47

Securities

Divergent trends in merchandising and chain store shares; with statistics on leading stocks. P. Dobbs. Mag of Wall St 80:490-2+ Ag 2 '47
Diverse outlook for merchandise shares; with statistics on leading stocks. G. S. Kent. Mag of Wall St 79:489-92+ F 1 '47

Small town stores

Small-town store studies its market; Tick's department store, Walden, N.Y. M. Tick. J Retailing 23:69-76 O '47

Statistics

Economy in reconversion; retail sales in 1946; with figures for other years. Survey of Cur Bsns 27:24-7 F '47
Factors determining retail shopping preferences; with data on Clinton, Hoopeston and Taylorville, Illinois. P. D. Converse. il Dun's R 55:21-3+ Ag '47
Inventories and sales of retail stores, 1933-March 1947; graphs. Survey of Cur Bsns 27:13 My '47
Location of retail outlets in the United States. R. Berger. map Dun's R 55:24-5+ Je '47
National trends in retail sales, 1935-1944; summary of survey made by Marketing and research division, Dun & Bradstreet. il Dun's R 55:21-3 Mr '47
1946 a year of record-breaking retail sales. L. J. Paradiso. Dom Comm 35:16-19 Ja '47
94 billions in retail sales in 1946. W. P. Burn. map Ptr Ink 219:41-4 Ap 4 '47
Pattern of chain store sales in retail distribution. C. Winston and R. L. Osborne. Survey of Cur Bsns 27:11-16+ Je '47
Retail credit survey, 1946. Fed Res Bul 33: 820-6 Jl '47
Retail sales and consumer income. Survey of Cur Bsns 27:9-11 Jl '47
Retail sales in 1946, Sales Management estimates. Sales Management 58:74, 76, 80, 98, 104 My 10 '47
Retail sales pattern emerges; durables vs. nondurables, 1941-46; chains vs. independents, 1945, 1946. Bsns W p55-6+ F 22 '47
Retail store sales at $97 billion in 1946. Comm & Fin Chr 165:1297 Mr 6 '47
Retail trade in 1946; sales and profit figures for leading retail firms; tabulation. E. R. Friedman. J Retailing 23:60-3 Ap '47
Retailers' earnings drop sharply. Bsns W p78 S 27 '47
Sales of retail stores, 1946 and first quarter of 1947; tabulation. Survey of Cur Bsns 27:7 My '47
Store facts, 1946. Bsns W p66+ My 24 '47
Trends in retail sales, 1945-1946 and Jan.-Feb. 1947; graphs. Survey of Cur Bsns 27:1 Ap '47

See also
Department stores—Statistics

Stock

How to help retailers avoid overstocking. Ptr Ink 219:44-5 Ap 11 '47
Inventories and sales of retail stores, 1933-March 1947; graphs. Survey of Cur Bsns 27:13 My '47
Inventory control; Montgomery Ward automatic sales tabulation in retail outlets. Bsns W p73-4 Je 7 '47
Service for busy retailers; company in Los Angeles takes and prices food-store inventories. il Bsns W p30+ My 31 '47
Small-town store studies its market; Tick's department store, Walden, N.Y. M. Tick. J Retailing 23:69-76 O '47
Sorry! we're out of stock on that item; Gartner & Bender, greeting card manufacturers, stock control plan. R. J. Bender. il Sales Management 59:60+ Jl 15 '47
Want slips are found sales. C. S. Baron. J Retailing 23:85-8 O '47

Store layout

Chicago store's plan; Boston store back among leaders. Bsns W p52 F 1 '47
Cluett, Peabody helps dealers modernize dated stores. E. M. Kelly. il Sales Management 59:42-4 O 1 '47
Cluett, Peabody pre-tests store design. il Sales Management 58:94 Ap 1 '47
Keith's home store, Kansas City; where simplicity is the key for variety. il plan Arch Rec 102:112-17 O '47

See also
Department stores—Layout
Self service stores

Store location

Department stores hurrying to suburbs. il Bsns W p24-6 O 4 '47
Locating your new store. W. L. Morris. il Radio N 37:64-5+ Ap '47
Metropolitan decentralization and the retailer. G. J. Eberle. J Retailing 22:91-4 D '46
Your shop location. S. C. Milbourne. il Radio N 37:30-1+ Ja '47

Store management

Better retail executives. I. Goldenthal. J Retailing 23:1-2+ F '47
Developing advantages in a retail furniture store. C. W. Piehler. il Dom Comm 34: 26-9 D '46
Gamble-Skogmo's sales methods. E. Whitmore. il Am Bsns 17:22-4+ Ag '47
Keep step or fail; Chicago's Kranz candy store is closed. il Am Bsns 16:21 D '46
Profit sharing, it's wonderful; Willoughby's camera store. Fortune 35:144 My '47
Report of Store modernization show urges retail modernization. Am Bsns 17:36 Mr '47
Selects 100 perfect gifts to simplify shopping. Ptr Ink 217:134+ N 15 '46
Small-town store studies its market; Tick's department store, Walden, N.Y. M. Tick. J Retailing 23:69-76 O '47

See also
Retail trade—Laboratories
Self service

Study and teaching

How associations provide retail sales training; Carpet institute, toy, gas, bedding associations as examples. H. Evans. il Ptr Ink 218:50+ Mr 21 '47
Reviewing the objectives of a co-operative training program. H. E. Krusa. J Retailing 22:100-4 D '46
Trains teachers for distributive education; New York state college. Sales Management 58:113 My 20 '47

California

Retail survey. Bsns W p62+ N 9 '46

Dallas, Texas

Neiman-Marcus formula. il Bsns W p41-2+ D 21 '46

Great Britain

British retail association again takes up standards. R. Diplock. Ind Stand 18:181-2 Jl '47
Retail sales in 1946. Economist 152:602-3 Ap 19 '47

RETAIL trade—*Continued*

Illinois

Factors determining retail shopping preferences; with data on Clinton, Hoopeston and Taylorville. P. D. Converse. il Dun's R 55: 21-3+ Ag '47

Mathematical law predicts the flow of consumers; study of retail trade areas in Illinois. P. D. Converse. map Ptr Ink 217: 120+ N 15 '46

Nampa, Idaho

How to keep business in town; Nampa's program. R. O'Neill. Banking 39:45+ D '46

Southern states

South as a retail market. C. R. Walker. Manuf Rec 116:44 S '47

RETAIL workers

Better retail executives. I. Goldenthal. J Retailing 23:1-2+ F '47

Grocery strike, Los Angeles. Bsns W p83 Ja 11 '47

Health plan works; employer-financed medical service for St Louis members of retail union. Bsns W p88+ Ja 18 '47

Our girl, Martha; upstate New York's typical retail-trade worker. H. Black. J Retailing 23:77-80 O '47

See also
Salesmen, Retail

Training

Use of visual aids in department-store training. J. J. Gress. J Retailing 23:91-8+ O '47

RETAINING walls

Standards for low walls insure safe design. diag Eng N 138:392-3 Mr 6 '47

RETAINING walls, Brick

How to build brick retaining walls. diags Brick & Clay Rec 110:28 F '47

RETENEQUINONEIMINE

Formation of phenanthroxazole by the action of diazomethane on phenanthraquinoneimine. A. Schönberg and W. I. Awad. Chem Soc J p651-3 My '47

RETIREMENT plans. See Age and employment; Pensions, Industrial

RETORTS

Method of assaying oil shale by a modified Fischer retort. K. E. Stanfield and I. C. Frost. 5pls U S Bur Mines Rep of Invest 3977:1-11 '46

Some unusual features encountered in investigating cracked welds in 35/15 magnesium retorts. H. J. Nichols. il Welding J 26: 881-4 O '47

RETORTS, Gas. See Gas retorts

RETTING

Recent developments in retting of flax and disposal of the waste waters. T. W. Brandon and C. B. Taylor. bibliog diag Soc Chem Ind J 65:390-6 D '46

Recent developments in the microbiology of retting; microbial flora in different systems of retting. L. A. Allen. bibliog Soc Chem Ind J 65:365-70 N '46

Recent developments in the microbiology of retting; part played by bacteria in retting the flax and in purifying the liquor. L. A. Allen. bibliog Soc Chem Ind J 65:373-6 D '46

RETURNED goods

Bell & Howell defines returned goods policy. Sales Management 59:64 O 1 '47

How you can prevent returned goods abuses. Ptr Ink 218:46-7 Mr 14 '47

Returned goods. C. A. Southwick, jr. Mod Packaging 21:149-51+ S '47

Returned goods; how to combat unjust practices. Ptr Ink 218:46-7 Mr 7 '47

Returned goods menace; what can we do about it; creative selling. W. C. Dorr. il Sales Management 58:86+ Je 1 '47

REUTHER, Walter Philip, 1907-

Portrait. Bsns W p94 O 11 '47

REVENUE bonds. See Bonds, Revenue

REVERBERATION. See Echo

REVERE copper and brass, inc.

Selected stocks. Mag of Wall St 80:540 Ag 16 '47

REVERSE cycle refrigeration. See Heat pump

REVERSING mechanism

Commercial washer employs novel V-belt reversing mechanism. il diag Machine Design 19:151-2 Je '47

Reversible-motor controller. J. G. Stephenson. diag Electronics 20:93 S '47

REVERSIONS

Estate planning under Hallock case; effect of Treasury decision 5512. H. C. Smith. Trusts & Estates 84:337-43, 448-52 Mr-Ap '47

REVOCABLE trusts. See Trusts and trustees —Revocable trusts

REWARDS, prizes, etc.

Award and prizes as income. J Account 83: 60-1 Ja '47

Award citations by ACS President Noyes. il Chem & Eng N 25:2811+ S 29 '47

Browder J. Thompson memorial. Inst Radio Eng Proc 34:934-5 D '46

Celanese establishes annual chemical engineering award. Oil Paint & Drug Rep 152: 7+ S 29 '47

Flory receives Baekeland award. India Rubber World 116:368 Je '47

Goodell prize in waterworks field is awarded to its 20th recipient. Eng N 139:55 Jl 10 '47

Grants and awards. Published in weekly numbers of Science

Impatieff prize. Chem & Eng N 25:829 Mr 24 '47

I.A.S. awards for 1946. Aeronautical Eng R 6:8-9 F '47

Institute's prize awards. Edison Elec Inst Bul 15:27-8 Ja '47

Lasker awards. Science 104:507 N 29 '46

Moles award for 1947; Harry W. Morrison and Thomas L. Crimins win bronze plaques and citations for outstanding construction achievement. Explosives Eng 25:19 Ja '47

New A.G.A. Home service award, sponsored annually by McCall's magazine. Am Gas Assn Mo 29:236 My '47

New York state electric & gas corp. receives Coffin award. il Edison Elec Inst Bul 15:220 Je '47

1946 Materials and Methods achievement award winners. il diags Materials & Methods 24:1153-90 N '46

1946 Resistance welder manufacturers' association prize contest. Welding J 25:1214+ D '46

1947 Materials & Methods achievement award. Materials & Methods 25:56-7 Ja '47

Nominations are solicited for the 1947 $1,000 award, established by Mead Johnson and company. Science 104:540 D 6 '46

Prize awarded by AAAS. Science 105:37 Ja 10 '47

Prizes and medals to be awarded by ASCE. Civil Eng 17:40 Ja '47

Prizes totaling $40,000 established by the Sugar research foundation. Science 105: 62 Ja 17 '47

Twelve Public service company of Colorado employees received Matthews valor award; prevented destruction of transmission line during blizzard. il Edison Elec Inst Bul 15:244-5 Je '47

You too may win an Oscar; program provides for annual awards for leadership in the gas industry. Am Gas Assn Mo 29:270 Je '47

See also

Advertising awards
Coffin foundation
Medals
Nobel prizes
Pittsburgh award
Safety contests and awards
Westinghouse, George, science writing award

REXALL drug company

Drug store headquarters; illustrations with text. Arch Forum 87:15 O '47

Rexall Drug headquarters in Los Angeles. il Arch Rec 102:142-5 O '47

REYNOLDS, James J. 1907-

Portrait. Bsns W p22 Je 28 '47

REYNOLDS, R. J., tobacco company

Annual report. Comm & Fin Chr 165:578 Ja 27 '47

Recession resistant stocks. Mag of Wall St 80:159 My 10 '47

REYNOLDS, Wiley Richard, 1879-
Bank with a personality; First National of Palm Beach. por Bsns W p42+ Ap 19 '47

RHAMNAZIN
Synthesis of rhamnazin. K. V. Rao and T. R. Seshadri. Chem Soc J p771-2 S '46

RHAMNOCITRIN
Synthesis of the monomethyl ethers of kaempferol, and the constitution of rhamnocitrin. K. V. Rao and T. R. Seshadri. Chem Soc J p 122-4 Ja '47

RHAMNOSE
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47

Analysis
Quantitative determination of galactose, mannose, arabinose, and rhamnose. E. L. Hirst, J. K. N. Jones and E. A. Woods Chem Soc J p 1048-51 Ag '47

RHEEM manufacturing company
Sales to run far above prewar. Barron's 27:6 Ja 27 '47

RHENIUM
Isotopes
Mass spectrographic assignment of activities in Re^{186} and Re^{188}. D. C. Hess, jr. and others. Phys R 72:730 O 15 '47
Metastable state of half-life about 10^{-6} second in Re^{187}. S. De Benedetti and F. K. McGowan. diag Phys R 71:380-1 Mr 15 '47
Radioactive isotopes of Re, Os, and Ir. L. J. Goodman and M. L. Pool. bibliog Phys R 71:288-93 Mr 1 '47

RHEOLOGY
Dielectrics and rheology of non-aqueous dispersions. A. Voet. bibliog il diag J Phys & Colloid Chem 51:1037-63 S '47
How to determine the desirable rheological properties of coatings. H. Green. bibliog diag Paper Tr J 125:49-53 S 11 '47
Plastic flow, creep, and stress relaxation. C. Mack. bibliog diags J Ap Phys 17:1086-107 D '46
Rheology and its application to road and building materials. G. W. Scott Blair. bibliog Chem & Ind p363-5 Je 28 '47
Rheology of solid liquid dispersions. W. J. Dunning. Chem Age (Lond) 55:811 D 28 '46
Sudden application of a constant shearing motion to anomalous fluids. E. K. Carver and J. R. Van Wazer. bibliog il diags J Phys & Colloid Chem 51:751-63 My '47
Variable speed rotational viscosimeter. R. Buchdahl and others. il diags R Sci Instr 18:168-72 Mr '47

RHEOSTATS
How to maintain motor-driven rheostats. H. F. Littlejohn, jr. il diags Factory Management 105:118-21 S '47

RHEUMATIC fever
Albumin-bacterioplasma conjugates with special reference to the etiology of rheumatic fever. M. P. Schultz and E. J. Rose. bibliog Pub Health Rep 62:1009-22 Jl 11 '47

RHEUMATISM
Rheumatism as a social and industrial problem; abstract. W. S. C. Copeman. Nat Safety N 54:109-10 N '46

RHINE river
Rhine, world's greatest waterway. G. R. Clemens and others. il maps diags Eng N 139:514-21, 588-601 O 16, 30 '47

RHIZOBIUM trifolii
Combined influence of temperature and urethan on the respiration of rhizobium. H. Koffler, F. H. Johnson and P. W. Wilson. bibliog Am Chem Soc J 69:1113-17 My '47

RHODAMINE B
Colorimetric microdetermination of antimony with rhodamine B. T. H. Maren. bibliog Anal Chem 19:487-91 Jl '47
Rhodamine B method for microdetermination of antimony. L. D. Freedman. Anal Chem 19:502 Jl '47

RHODE ISLAND
See also
Roads—Rhode Island
Unemployment—Rhode Island

RHODES grass
Occurrence of two fertile florets in the spikelets of chloris. M. P. Mauldin. Science 105: 336-7 Mr 28 '47

RHODESIA
Commercial policy
Southern Rhodesia; tightened import controls. For Comm W 29:17 O 18 '47

Economic policy
Ten year plan for Northern Rhodesia. Economist 152:630 Ap 26 '47

RHODIUM
Measurement of neutron cross sections with a crystal spectrometer. W. J. Sturm. bibliog diags Phys R 71:757-76 Je 1 '47
Symposium on the contamination of platinum thermocouples; by the Liquid steel temperature sub-committee. T. Land and others. 4pls Iron & Steel Inst J 155:213-34 F '47
Use of rhodium surface mirrors in commercial ultraviolet spectrophotometers. E. B. Claiborne. diag R Sci Instr 18:368-9 My '47

RHODIUM plating
Plating with platinum, palladium and rhodium. H. M. Haberman. bibliog Metal Finishing 45:56-8 Ja '47

RHODIZONIC acid
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene-tetrahydroxyquinone - rhodizonic acid. P. W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69:326-9 F '47

RIBBON
Some developments in machinery for woven smallwares. W. Holt. il Textile Inst J 38: P381-9 Ag '47

RIBOFLAVIN. See Vitamins—Vitamin B_2

RIBONUCLEIC acid
Constitution of yeast ribonucleic acid; further studies on the nature of the carbohydrate radicals. G. R. Barker, K. R. Farrar and J. M. Gulland. Chem Soc J p21-4 Ja '47
Constitution of yeast ribonucleic acid; synthesis of uridine-2′ phosphate. J. M. Gulland and H. Smith. Chem Soc J p338-42 Mr '47

RIBONUCLEINASE
Ribonucleinase and non-specific phosphodiesterase in rat and rabbit blood and tissues. C. A. Zittle and E. H. Reading. bibliog Franklin Inst J 242:424-8 N '46

RIBOSE
Constitution of yeast ribonucleic acid; further studies on the nature of the carbohydrate radicals. G. R. Barker, K. R. Farrar and J. M. Gulland. Chem Soc J p21-4 Ja '47

RICE, Arthur Louis, 1870-1946
Sketch. por Power Pl Eng 50:74-5 D '46

RICE
Age-old process modernized; mill of the Rice growers association of California at Sacramento. C. R. Havighorst. flow diag il diag Food Ind 19:1192-5 S '47
Conversion process retains rice vitamins. W. W. O'Donnell. flow diags il Food Ind 19: 763-8+ Je '47
Effect of parboiling on thiamine in rice; abstract. M. C. Kik. Food Ind 19:412+ Mr '47
Far East seeking West's science data; rice enrichment programs; abstract. R. R. Williams. Oil Paint & Drug Rep 150:57 D 23 '46
G.I. rice in mufti; specially treated to retain vitamin and mineral content. il Bsns W p70+ Mr 15 '47
Individual Diesel units reduce rice growing risk. C. Ames. il Diesel Power 25:78-9+ O '47
Instant rice; from an idea to the perfected product. il Food Ind 19:1056-61 Ag '47
Recovery in rice? Economist 153:120+ Jl 19 '47
Rice control essential to vital imports. Barron's 27:5 F 17 '47
Rice market vulnerable. Barron's 27:36-7 Jl 21 '47
Rice short another year. Barron's 27:37 O 27 '47

RICE—*Continued*
Rice shortage felt world over. Barron's 26:5 D 2 '46
Rice shortage in prospect. Barron's 27:29 Je 23 '47
Rice situation, British Guiana. For Comm W 27:26 My 17 '47
Rice situation in Iran; situation in Syria and the Lebanon. For Comm W 27:22-3 Ap 5 '47
Rice vitamins. il Food Ind 19:640 My '47

RICHARDS medal
Pauling gets Richards medal. Chem & Eng N 25:1504-5 My 26 '47

RICHARDSON, Kenneth, 1891-
Portrait. Fortune 34:168 D '46

RICHMOND, Virginia

Water supply
Experiences with standards for water services. M. C. Smith. diags Am Water Works Assn J 39:23-31 Ja '47

RICINIC acid. See Ricinoleic acid

RICINOLEIC acid
Reactions of carbinols in the presence of alkali; scission of ricinoleic acid. G. H. Hargreaves and L. N. Owen. Chem Soc J p753-6 Je '47
Ricinoleate esters as low-temperature plasticizers for nitrile-type synthetics. T. C. Patton and M. K. Smith. India Rubber World 116:643-4 Ag '47

RICKETS
Evaluation of the minimal prophylactic dose of antirachitic radiation for rats with observations on antirachitic wavelength absorption by smoky atmospheres. K. K. Kay and H. M. Barrett. bibliog J Ind Hygiene 29:41-6 Ja '47

RICKETTSIA
Relationship of the agent of heart-water fever-rickettsia ruminantium. G. Rake and others. bibliog Science 102:424-5 O 26 '45; Discussion. D. Moshkovski. 106:62 Jl 18 '47
Rickettsialpox; a newly recognized rickettsial disease. R. J. Huebner and others. Pub Health Rep 61:1605-14, 1677-82; 62:777-80 bibliog(p780) N 8, 22 '46, My 30 '47

RIDGEWOOD, New Jersey

Sewerage
Solving sewage treatment problems at Ridgewood. il Pub Works 78:25-6 Je '47

RIDSDALE, James Sheard, d. 1946
Sketch. E. Clayton. por Soc Dyers & Col J 63:53-5 F '47

RIESZ method
Equivalence of the Riesz method and the λ-limiting process for the classical electromagnetic field of a point source. S. T. Ma. bibliog Phys R 71:787-92 Je 1 '47

RIFLE shooting
Setting sights on a new market; Crosman arms co. packaged rifle ranges. il Bsns W p72 O 11 '47

RIFLES
Lock, stock and barrel; portfolio of fine modern shooting irons, with some notes on the ancient fever of the gunbugs. il Fortune 36:130-5+ O '47

RIGHT of way
Keeping rural right-of-way acquisition costs down. Elec World 127:167-8 Ja 18 '47
Mass house-moving cuts cost of urban right-of-way; problems solved by Indiana state highway department. il Eng N 139:38-9 Jl 10 '47
Rights of way for pipelines. I. E. Flaa and W. C. Renshaw. Am Water Works Assn J 39:128-32 F '47

RIGHT to labor
Legislative restrictions on the closed shop; state laws. A. Acee. Mo Labor R 64:1056-9 Je '47

RIGIDIZED sheet metal. See Sheet metal

RIGIDOMETERS
New device for grading pectins; rigidometer for determining jelly grades. H. S. Owens and others. bibliog il diag Food Ind 19:606-8+ My '47

RIMMED steel. See Steel—Rimmed steel

RINGLING family
Ringling wrangling; three sets of heirs squabble for control of the circus. Fortune 36:114-15+ Jl '47

RINGS (jewelry)
Ring injuries continue despite warnings. Safety Eng 94:44 Ag '47
Ring twice; wedding rings for men. Fortune 36:147-8 N '47

Advertising
See Jewelry trade—Advertising

RINGS, Steel
Pressure-welding stainless steel rings. C. J. Burch and others. il diags Steel 120:88-90+ Ja 13 '47
Pressure-welding stainless steel rings. A. L. Rustay and others. il diags Welding J 26: 129-37 F '47
Quenching of steel balls and rings; temperature-time-space relationships investigated on Heat and mass flow analyzer at Columbia university. V. Paschkis. bibliog diag Am Soc for Metals Trans 37:216-44 '46
Roll bending and flash welding stainless steel turbosupercharger rings. P. B. Scharf. il diags Iron Age 159:52-6 Ja 23 '47

Advertising
Industrial advertising puts over war-developed product; engineers and purchasing agent had to be convinced that cost increases were valid; Truarc retaining rings. il Ptr Ink 219:43 My 30 '47

RINGWORM
Control of ringworm of the scalp among school children in Hagerstown, Maryland, 1944-45. L. Schwartz and others. (Pub. health bul. 294) 27p U.S. Public health service, Washington; pa 10c Supt. of doc. '46

RIO DE JANEIRO

Architecture
Combining research and production; building in Rio de Janeiro for Productos Roche. il plans Arch Rec 101:74-7 Mr '47

RIO GRANDE
International treaty authorizes flood control structures on lower Rio Grande. L. M. Lawson and R. F. MacGregor. il map Civil Eng 17:117-20 Mr '47

RIPPLE marks
Les rides de sable. C. Simon. Génie Civil 124:336-7 S 1 '47

RISK
Capital formation; life line of progress. D. G. Mitchell. Comm & Fin Chr 166:1734+ O 30 '47; Discussion. 166:1842+ N 6 '47
Handicaps to venture capital. J. F. Burns, jr. Comm & Fin Chr 166:1416 O 9 '47
Venture capital is the spark. H. E. Humphreys, jr. Pub Util 40:114-17 Jl 17 '47
Venture capital pooled to finance business growth. Am Bsns 16:26+ N '46

RIVANOL
Quaternary 3-ethoxy-7,9-diaminoacridinium salts. A. Weizmann. bibliog Am Chem Soc J 69:1224-5 My '47

RIVER fronts. See Water fronts

RIVER pollution. See Water pollution

RIVER traffic
Peacetime radar; towboat traffic on narrow inland waterways expedited. B. B. Talley. il maps Electronics 20:113-15 O '47
Radar for river towboat traffic. il Electronics 20:150 Ap '47
Waterborne trucks o.k.'d; Trailerships, inc. Bsns W p21 S 20 '47
See also
Waterways

RIVERS
Processing industrial sands from river deposits. E. C. Hoeman and R. C. Redfield. flow sheet Rock Prod 50:105+ Je '47
River infiltration as a source of ground water supply. R. G. Kazmann. il map diag Am Soc C E Proc 73:837-53 Je '47
River-mapping by radar. Electronics 20:166+ S '47

RIVERS—*Continued*
River reaeration; diffusing compressed air beneath surface of river which has been polluted. A. J. Wiley and others. plan Paper Tr J 124:59-64 Mr 20 '47
Standards of stream sanitation. H. W. Streeter. il Water & Sewage 84:61+ O '46

See also
Dams
Flood control
Hydraulic engineering
Hydraulics
Ice on rivers, lakes, etc.
River traffic
Stream flow
Water pollution
Water supply
Waterways

also names of rivers, e.g.
Mississippi river
Missouri river
Rhine river

Bank protection

Bank protection along Red river, Shreveport, La.; unit prices. Eng N 138:901 My 29 '47
Development of concrete revetments on the lower Mississippi. R. H. Haas. il plan diags Concrete 55:3-8+ Ap; 16-18+ My '47

Regulation

Army engineers complete dredged cutoff to control meander of Arkansas river. A. B. Smith. il Eng N 138:508-10 Ap 3 '47
Colorado river; the Southwest's greatest natural resource. S. B. Morris. bibliog il maps Am Water Works Assn J 39:945-67 O '47.
Correction of tailwater erosion at Prairie du Sac dam. C. N. Ward and H. J. Hunt. il Am Soc C E Proc 72:1077-89 O '46; Discussion. 73:709-17 My '47
Davis dam completes storage regulation of Colorado river below Boulder. L. R. Douglass. il Civil Eng 17:14-17 Ja '47
Kansas plan for Neosho River basin development. R. V. Smrha. map Am Water Works Assn J 39:673-9 Jl '47
Mississippi River cutoffs. G. H. Matthes. il maps Am Soc C E Proc 73:3-17 Ja '47; Discussion. 73:404-10, 949-52, 1089-92 Mr, Je, S '47
Prospects of conservancy works in China. B. Shen. bibliog Franklin Inst J 242:399-420 N '46

See also
Dams
Flood control
Levees
Mississippi river—Flood control projects

Ohio

Ohio stream flow; summary of stream-flow records in Ohio, 1898-1944. C. V. Youngquist. bibliog il maps Ohio State U Eng Exp Sta Bul 127:1-189 '47 (pa $1)

RIVERSIDE, California

Sewerage

Sewage plant sells sludge and effluent for irrigation purposes and fertilizer. L. W. Jackson. il Eng N 139:56-8 Jl 10 '47

RIVETED joints
Arc welding is being handicapped. J. F. Lincoln. il Sci Am 177:101-5 S '47
Hidden danger in lap joints. H. M. Spring. diags Power 91:331 My '47
How calculate joint efficiency? diag Power Pl Eng 51:97-8 Jl '47
Plates in tension joints under repeated loading. H. W. Foster. Product Eng 17:108-11 D '46

Testing

Investigations of 24S-T riveted tension joints. R. L. Fefferman and H. L. Langhaar. bibliog il diags J Aeronautical Sci 14:133-47 Mr '47

RIVETING
Blind rivets cut out-of-service time; Los Angeles transit lines. J. T. Watts. il Bus Transportation 25:64-5 D '46
Cherry jr. riveter. diag Consumers Res Bul 19:10 Je '47
Development in riveting equipment. il Sheet Metal Worker 38:96-8 Ja '47
Floating punch holder aligns itself in high-speed riveting. H. Weitz. diags Am Mach 90:135 N 21 '46
Molybdenum steel riveting. Engineering 162:561 D 13 '46
Molybdenum steel riveting. diag Iron Age 159:49 F 13 '47
Practical applications of blind riveting. M. Ketchum. il Iron Age 159:60-2 F 27 '47
Riveting and spotwelding magnesium alloys. A. G. Gray. il diags Steel 120:114-15+ Mr 3 '47
Survey of wrought magnesium alloy fabrication. J. V. Winkler. il Am Soc for Metals Trans 35:265-70 '45
Use of blind rivets in ship work. G. Reno. il Marine Eng 52:104+ Mr '47

See also
Riveted joints

RIVETS
Moment of inertia of rivets easily calculated. R. H. Chambers. Eng N 138:393 Mr 6 '47
New upsetting technique; latest development in blind riveting; Cherry monel metal rivet. il diags Steel 120:118+ Je 23 '47

Testing

Strength of rivets. H. M. Henderson. diags Engineer 182:416 N 8 '46

RIZLEY bill. See Gas, Natural—Laws and regulations

ROACHES. See Cockroaches

ROAD accidents

See also
Automobile accidents

ROAD contractors
How contractors vary in job quality; challenge California contractors and engineers; California data. Roads & Sts 90:79 S '47

See also
Roads—Contracts

Directories

Contractors, Canada; roadbuilding, earthmoving, engineering construction. Roads & Bridges 85:126+ Je '47

ROAD graders. See Road making machinery

ROAD making machinery
Caterpillar starts production of new engine, tractor and grader. il Automotive Ind 97:30-1 O 15 '47
Crawler tracks, their lubrication and maintenance. K. L. Hollister and E. V. Albert. il diags Roads & Sts 90:94-8 Jl '47
Mobile hot asphalt plant. il diag Engineer 182:562-4 D 20 '46
Modern stabilization methods; soil-cement placement on Texas airfield. il Roads & Sts 89:64-7+ D '46
One-pass machine used in building soil-cement roads. il Concrete 54:24-5+ N '46
Road laying and finishing machine. il Engineer 184:350 O 10 '47
Roadbuilding machinery builders optimistic. V. Bell. il Steel 120:76-8 My 12 '47
Service and maintenance of the new La Plant-Choate hydraulic power control system. il Roads & Sts 90:104-5 Ap '47
These machines saved labor in forming integral street curb. il Roads & Sts 89:89-90+ O '46
Tomorrow's construction machines. V. B. Smith. il Eng N 138:305-10 F 20 '47
Vibratory and impact methods for compaction of soils. G. P. Tschebotarioff. bibliog il Roads & Bridges 84:65-6+ D '46

See also
Excavating machinery
Road rollers
Roads—Construction equipment
Roads, Concrete—Construction equipment

Cleaning

Steam clean before overhauls cuts lay-up time by one-third; with cost data. A. E. Moore. il Roads & Sts 90:88+ Je '47

Exhibitions

Public works, roads and transport exhibition, London, July 21-26. il diags Engineer 184:74-6, 99-102 Jl 25-Ag 1 '47; Engineering 164:108, 114, 125-6 Ag 1-8 '47

ROAD making machinery—*Continued*

Manufacture

Containers are controlling factor in production increase; Euclid road machinery company, Cleveland. H. T. Monson. il diags Factory Management 105:89-92 Jl '47

ROAD materials

Adhesion between binders and individual rock-forming minerals. J. F. Douglas. bibliog Soc Chem Ind J 65:377-9 D '46

Rheology and its application to road and building materials. G. W. Scott Blair. bibliog Chem & Ind p363-5 Je 28 '47

Studies of stone vs. gravel in traffic-bound roads; abstract. A. T. Goldbeck. Rock Prod 50:80 Mr '47

Use of industrial products for granular bases in highway construction; abstract. H. D. Jumper. Rock Prod 50:148 Ap '47

See also

Aggregates
Asphalt
Bituminous materials
Cement
Clay
Concrete
Gravel
Pavements
Road tar
Stone, Crushed

Testing

Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47

Work of Public Roads research laboratory. il Eng N 138:998-1002 Je 26 '47

ROAD reflectors. See Reflectors, Road

ROAD research. See Highway research

ROAD rollers

Compacting of soil by rolling and vibration. il Engineering 164:1-6 Jl 4 '47

Egg roller cuts cost of asphalt paved ditch. R. L. Winton. il Roads & Sts 90:69+ S '47

15 good hints for good rolling. Pub Works 78: 36 Ja '47

Little business and how it grew; Acme steel and wire works. R. McDaniel. il Am Bsns 16:23-4+ N '46

ROAD signs

Brightness and legibility at night of road traffic signs. J. S. Smyth. Light & Lighting 40:26-7 F '47

Device for activating road signs; Winko-Matic. il Roads & Sts 89:92 D '46

Improved signs for N.J.; neon-lighted signs over route 25. R. L. Fisher. il diag Roads & Sts 90:90-2 My '47

Molded acrylic signs show up at night. il Mod Plastics 24:131 N '46

Texas reflectorizing road signs with glass beads. il Roads & Sts 90:95-6+ Mr '47

ROAD tar

British road tar association 21st anniversary luncheon, Feb. 19. Gas J (Lond) 249:511 Mr 12 '47

Eastern district tar board; annual meeting, Norwich, Sept. 24. Gas J (Lond) 252:151-2 O 15 '47

Tar surface dressing for wood block pavement. Pub Works 78:36 S '47

Testing

Adhesion between binders and indvidual rock-forming minerals. J. F. Douglas. bibliog Soc Chem Ind J 65:377-9 D '46

ROAD traffic

Broad aspects of highway planning affect Nation's economic, cultural and social life. C. M. Noble. il Civil Eng 17:593-7+ O '47

Capacity of a traffic lane. W. Jacobsohn. Engineering 162:433-4 N 8 '46

Meteorological engineering aids highway transportation. C. C. Bates and A. H. Glenn. il diag Civil Eng 17:606-9+ O '47

Statistical survey of highway development in Canada. J. O. Martineau. Roads & Bridges 85:83-6+ O '47

Traffic studies as an aid to design of road intersections. W. B. Wilson, jr. il diags Roads & Bridges 85:84-9+ Je '47

Traffic trends on rural roads in 1945. T. B. Dimmick. map Pub Roads 24:268-74 O '46

Trends in motor-vehicle travel, 1936 to 1945. G. P. St Clair. Pub Roads 24:261-7 O '46

See also

Highway transportation
Motor trucks and roads
Street traffic

ROAD workers

Easy to use on-the-job training program for your highway personnel. il diags Pub Works 78:17, 29-32, 62 Ja; 30-1+ F '47

ROADABLE airplanes. See Airplanes, Light—Automobile combinations

ROADMASTERS' and maintenance of way association

Annual meeting, Chicago, Sept. 16-18. Ry Age 123:523-8 S 27 '47

ROADS

Association of highway officials of the North Atlantic states meeting, Atlantic City. Eng N 138:351-2, 437-8 Mr 6, 20 '47

Better highways for less money is aim of contractors and engineers; abstract. D. W. Winkelman. Civil Eng 17:283 My '47

Highway transportation congress, Washington, D.C. Sept. 26-27. Roads & Sts 89:100+ N '46

Proceedings of the thirty-second annual Road school held at Purdue university, January 21-24, 1946. B. H. Petty, comp. il Purdue Univ, Eng Ext Dept, Ext Ser 61:1-199 '46

See also

Alaska, highway
Automobiles and roads
Causeways
Forest roads
Highway administration
Highway engineering
Highway research
Highway transportation
Motor trucks and roads
Pan American highway
Parkways
Pavements
Road making machinery
Road materials
Snow removal
Streets

Construction

Contractors at work; US 85, New Mexico; illustrations with text. Roads & Sts 89: 80-3 N '46

Major projects; brief reports on status of construction operations. il Eng N 138:320-1 F 20 '47

Place of research in the construction and maintenance of highways. J. Walter. il Roads & Bridges 85:106+ Mr '47

Work begins on the Maine turnpike. E. R. Needles. il map diags Eng N 138:147-50 Ja 23 '47

Construction equipment

Equipment distributors, Canada; addresses of head and branch offices; list of principals they represent. Roads & Bridges 85:208+ Je '47

Heard at ARBA's New England equipment conference. Roads & Sts 90:104+ S '47

Manufacturers and agents; highway construction equipment; products index. Roads & Bridges 85:192+, 228+ Je '47

Modern trends in the development of road-building equipment. H. F. Clemmer and G. Woods. bibliog il Roads & Bridges 85:94-9+ S '47

Service rigs; illustrations with text. Roads & Sts 90:110-11 My '47

See also

Road making machinery
Roads, Concrete—Construction equipment

Contracts

Catskill thruway gets going. H. K. Glidden. il Roads & Sts 90:55-8 Ja '47

Examine the horse before buying; plea for careful analysis of the site before bidding. E. T. Nettleton. Roads & Sts 89:78-9 D '46

Is it a fair bid? Arkansas highway department system of unit cost analysis. A. E. Johnson. Roads & Sts 90:51-4+ Je '47

Liability insurance as related to California highway contracts. K. A. Keyes. Pub Works 77:28 N '46

See also

Road contractors

ROADS—*Continued*

Cost

Have highway costs reached their peak? il Eng N 138:134-46 Ja 23 '47
Highway building ahead of 1946 totals. Eng N 139:14 Jl 3 '47
Index to projects covered. Eng N 138:665+ Ap 17 '47
Missouri analyzes typical highway job to determine actual construction costs. C. C. Tevis. il Eng N 138:373-7 Mr 6 '47
Partial bid details on 3.87-mile million dollar expressway section, U.S. 40, Ohio; unit prices. Roads & Sts 90:64 Ja '47
Price trends in highway construction. Pub Works 78:31 Ap '47
Roadbuilding costs, 1922-1946. Eng N 138:632 Ap 17 '47
Significant trends in Missouri state highway construction. il Eng N 137:651-2 N 14 '46
State highway construction, 1946-'47; reports from officials. Roads & Sts 90:86-8+ F '47
States consider huge highway plans. Eng N 139:15 Jl 3 '47
States find highway work expensive. Eng N 139:170 Ag 7 '47
Structural steel contract prices increased 49 percent over 1945. T. H. MacDonald. Eng N 138:146 Ja 23 '47

Curves

General principles of highway transition curve design. J. J. Leeming. Am Soc C E Proc 73:1257-69 O '47
Median deflector for sharp curves; protection for trucks on Ridge route, between Los Angeles and San Joaquin valley. il plan diags Eng N 139:36-7 Jl 10 '47
Simplified equations give sight distance on horizontal curves. D. Thompson. Civil Eng 17:204-5 Ap '47
Surveyor's parabolic vertical curve simplified. J. A. Oakey. Civil Eng 16:459-60 O '46; Discussion. diag 17:88, 207-8, 266-7, 336, 404 F, Ap-Jl '47

Drainage

Check dams successful in Connecticut; controlling erosion caused by flow of water from culverts. il Roads & Sts 89:82 D '46
Curing slides with drainage tunnels. il map Roads & Sts 90:72+ Ap '47
Full-scale tests checked design of expressway gutter inlets. E. C. Woodward. il diags Roads & Sts 89:69-73 D '46; Discussion. C. F. Izzard. 90:90+ Ap '47
Highway drainage research expanded. Eng N 139:40 Jl 10 '47
Methods of stabilizing embankments at Terminal island. Pub Works 77:37 N '46
Plan use of vertical sand drains under New Jersey superhighway. diag Eng N 139:561 O 23 '47
Roadbuilding in Waterloo county as affected by soil studies. D. J. Emrey. il Roads & Bridges 85:83+ Je '47
Vertical sand drains speed consolidation of soft water-bearing subsoil; Terminal Island access freeway. il diags Eng N 138:386-9 Mr 6 '47

Economic aspects

Future price structure and conditions in the highway industry. C. H. Sells. Roads & Bridges 85:128+ S '47
Road costs must be justified by savings to drivers. J. E. Williams. il Civil Eng 16: 540-1 D '46

Federal aid

Federal-aid highway act of 1944 holds great promise of aid to cities. T. H. MacDonald and H. S. Fairbank. Civil Eng 17:605+ O '47
Mixed economy in transportation. C. S. Duncan. Ry Age 123:100-2 Jl 19 '47
President okays road fund extension. Eng N 139:14 Jl 3 '47

Finance

All eyes on California! features of the Collier-Burns act of 1947. Roads & Sts 90:78+ Ag '47
Big road backlog in 11 western states as 1947 budgets are prepared. Eng N 137:829 D 19 '46
California's highway needs examined in relation to funds. C. H. Purcell. Eng N 138: 47 Ja 9 '47
Expenditures for road, bridge and airport construction in Canada, 1945. Roads & Bridges 85:46-7 Ja '47
Financing and administration of Ontario's highways. T. J. Mahony. Roads & Bridges 85:142+ Mr '47
Financing and administration of provincial highways. T. J. Mahony. Roads & Bridges 85:112+ S '47
Greater road building totals for 1947 seen as states report big programs. Eng N 138: 85 Ja 16 '47
Highway accomplishments and plans. Eng N 138:118-19 Ja 23 '47
Midwest states outline highway plans. Eng N 138:488 Ap 3 '47
New highway; Connecticut's engineers show the way; Ansonia-Derby-Shelton expressway. il Fortune 36:94-7+ Ag '47
New Jersey adopts new road fund policy. Eng N 138:722 My 1 '47
1947 provincial programs for roads and bridges total $163,000,000. Roads & Bridges 85:81-3+ Mr '47
States disclose road building plans. Eng N 138:713 Ap 24 '47
Statistics of the road and bridge building industry, Canada. Roads & Bridges 85:76-8+ Je '47
Voided bonds not to delay freeways in Cook county, Illinois. Eng N 138:176 Ja 30 '47

See also
Roads—Cost
Roads—Federal aid
Roads—Tolls

Foundations

Calcium chloride as a compaction aid in gravel base construction. J. A. Knight. Roads & Bridges 85:90-3+ O '47
Foundation design for four-level $1,500,000 interchange at Los Angeles. il plans diags Roads & Sts 90:100-3 S '47
Frost action in subgrades and bases. A. W. Johnson. bibliog diags Roads & Bridges 85:104-10+ S '47
Lime stabilization and low cost road construction. W. D. Dockery; D. E. H. Manigault. il Roads & Sts 90:91-5 Ag '47
Recommended construction practice for soil-bituminous roads. il Roads & Bridges 85: 40-3+ Ja '47

See also
Roads—Subgrades

Soil cement

Experimental soil-cement base course in South Carolina. E. A. Willis. il diags Pub Roads 25:9-19 S '47
Mississippi soil cement stabilization job. Pub Works 78:40 F '47
Secondary roads paved with soil-cement. il Eng N 138:498-501 Ap 3 '47

See also
Roads, Soil-cement

Frost damage

Frost action in subgrades and bases. A. W. Johnson. bibliog diags Roads & Bridges 85: 104-10+ S '47
Frost damage to sealed surfaces; abstract. H. W. Smith. Roads & Bridges 85:110+ Ag '47

Grade separation

Foundation design for four-level $1,500,000 interchange at Los Angeles. il plans diags Roads & Sts 90:100-3 S '47
Speed transition ramps on a bridged rotary; to provide the speed transition between expressways and local streets. R. O. Swain. il diags Pub Roads 24:307-11 Ap '47; Same. Roads & Bridges 85:95-6+ Je '47
Virginia's first three-level underpass-overpass. il Pub Works 78:32 Ag '47

Grading

Truck speed and time loss on grades. J. W. Stevens. Am Soc C E Proc 72:919-38 S '46; Discussion. diag 72:1411-12; 73:385-6 D '46, Mr '47

Ice control

Ice control; problem and remedy in Michigan. B. R. Downey. il Roads & Sts 90:72-3+ S '47
Ohio planned for winter in August; rock salt storage. il Roads & Sts 89:70 O '46

ROADS—Ice control—*Continued*
Oregon installs radiant-heated road. Eng N 139:577 O 30 '47
Winter-maintenance practice on Ontario highways. il Roads & Bridges 84:70-2+ N '46

Intersections

Building safety into low cost road junctions and crossings. il plans Pub Works 78:29-30 Jl '47
Traffic studies as an aid to design of road intersections. W. B. Wilson, jr. il diags Roads & Bridges 85:84-9+ Je '47

Lighting

Brightness and legibility at night of road traffic signs. J. S. Smyth. Light & Lighting 40:26-7 F '47
Lighting of highways. L. T. Minchin. Light & Lighting 40:83-4 My '47
Lighting road roundabouts, and an interesting experiment; illuminated glass wall. A. G. Brown. il Light & Lighting 39:215-18 D '46
Vital importance of fixed lighting of public ways. W. L. Cross, jr. and others. Illum Eng 41:609-25 S '46
What is visibility? court case involving night accident. L. T. Minchin. diag Light & Lighting 40:67-8 Ap '47

See also
Street lighting

Location

Aerial mapping for highway studies; abstracts of ASCE papers. Eng N 138:99 Ja 23 '47
Aerial surveying on the Alaska highway, 1942. W. T. Pryor. il maps Pub Roads 24:275-90 Ja '47
Aerial surveys aid highway location; symposium. il maps Civil Eng 17:80-6 F '47
Arizona relocates a mountain highway. il diags Eng N 139:134-6 Jl 24 '47
Colorado highway follows gold-rush rail route. L. A. Luther. il map Comp Air Mag 52:191-5 Ag '47
Highway and railway diversion along the Ottawa river; provide for backing-up of river behind dam of hydro-electric development at Des Joachims Rapids. il map Roads & Bridges 85:33-5+ Ja '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway. H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47

Magnetic sweeping

Traveling magnet clears Missouri roads. il Eng N 138:463-4 Mr 20 '47

Maintenance and repair

Highway maintenance needs and costs. il Pub Works 78:56+ Jl '47
Importance of maintenance in our highway program; with cost data. C. L. Motl. il Roads & Sts 90:58-60+ My '47
Place of research in the construction and maintenance of highways. J. Walter. il Roads & Bridges 85:106+ Mr '47
Responsibilities of a highway maintenance organization. C. L. Motl. il Roads & Bridges 85:50-2+ Jl '47
Road repairs in the clouds; Pike's Peak auto road. il Roads & Sts 89:76-7+ D '46
Springtime shoulder maintenance in Iowa. il Roads & Sts 90:88-9 Mr '47

See also
Roads—Winter maintenance
Roads, Concrete—Maintenance and repair

Protection

Curing slides with drainage tunnels. il map Roads & Sts 90:72+ Ap '47

Relocation

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Resurfacing

Mesh-reinforced hot-mix tried on Texas overlay project. il diag Roads & Sts 89:57-9 D '46
Resurfacing US 40 Maryland. H. K. Glidden. il diag Roads & Sts 90:49-52+ My '47
Resurfacing with hot plant-mix bituminous concrete. F. C. Coates. il Pub Works 78:26-8+ Mr '47
State maintenance crew gangs up on urban arterial oil-mix resurface. il Roads & Sts 89:76-8 O '46

Safety measures

Building safety into low cost road junctions and crossings. il plans Pub Works 78:29-30 Jl '47
Engineering action steps recommended by Engineering advisory group at President's 2nd safety traffic conference. Roads & Sts 90:91-3 Jl '47
How modern highway design reduces accidents. H. C. Coons. il Pub Works 78:21-3+ S '47
Improving highway safety. R. A. Stapells. Roads & Bridges 85:130+ S '47
Median deflector for sharp curves; protection for trucks on Ridge route, between Los Angeles and San Joaquin valley. il plan diags Eng N 139:36-7 Jl 10 '47
Skid-proofing Kentucky highways. H. H. Palmer. il Eng N 139:522-3 O 16 '47
Standards for adequate California highway system stress safety of operation. G. D. Kennedy. il Civil Eng 17:180-4+ Ap '47
Three-lane highway is death-trap. P. B. Fleming. il Roads & Bridges 85:80+ Ap '47

See also
Roads—Ice control
Roads—Lighting

Shoulders

Cost data on maintenance of turf shoulders for highways. Pub Works 78:32 Ag '47
Notes on shoulder maintenance. W. K. Myers. il Roads & Sts 90:60+ Ap '47
Shoulder problems aired at research board meeting. Roads & Sts 90:89+ Mr '47
Springtime shoulder maintenance in Iowa. il Roads & Sts 90:88-9 Mr '47
Turf on mechanically stabilized shoulders. H. H. Iurka. il Roads & Sts 90:68+ My '47

Standards

Standards for adequate California highway system stress safety of operation. G. D. Kennedy. il Civil Eng 17:180-4+ Ap '47

Subgrades

Compacting of soil by rolling and vibration. il Engineering 164:1-6 Jl 4 '47
Compaction; how states specify it today; Highway research board committee's summary, tabulated. Roads & Sts 90:55-9+ Ap '47
Development and use of strength tests for subgrade soils and flexible base materials; abstract. C. McDowell. Concrete 55:22-3 Ja '47
Effect of subgrade treatments on pavement faulting and pumping. E. A. Henderson and W. T. Spencer. bibliog il diag Roads & Bridges 85:81-7+ Ap '47
Experimental sand-clay base course in North Carolina. J. A. Kelley. il diags Pub Roads 24:299-306 Ap '47
Frost action in subgrades and bases. A. W. Johnson. bibliog diags Roads & Bridges 85:104-10+ S '47
Houston's expressways; design of earth and pavement structures. W. J. Van London and others. diags Roads & Sts 90:69+ Jl '47
Lime treatment permits use of substandard flexible base materials. B. B. Freeborough. il Pub Works 78:17-18+ Je '47
Modern electrical equipment to speed soils investigation; New York state to aid subsurface investigations with seismograph and resistivity apparatus. Roads & Sts 90:76 Ja '47
Roadbuilding in Waterloo county as affected by soil studies. D. J. Emrey. il Roads & Bridges 85:83+ Je '47
Soil compaction essential to good paving results. A. O. Williamson. il Roads & Bridges 85:93-4+ Ap '47; Same. Roads & Sts 90:84+ My '47
Soil compaction experiments point way toward stronger, more economical subgrades. W. D. Curtis. il Civil Eng 17:390-3+ Jl '47
Subgrade moisture conditions beneath highway and airfield pavements. M. S. Kersten. Roads & Sts 89:94+ O '46
Undersealing pavements with asphalt; with cost data. H. A. Wallace. il Pub Works 78:23-4 Je '47

ROADS—Subgrades—*Continued*

Vertical sand drains speed consolidation of soft water-bearing subsoil; Terminal Island access freeway. il diags Eng N 138:386-9 Mr 6 '47

Superhighways

New highway; Connecticut's engineers show the way; Ansonia-Derby-Shelton expressway. il Fortune 36:94-7+ Ag '47

Privately financed superhighway in Maine incorporates latest design features. R. N. Bergendoff. il diag Civil Eng 17:454-8+ Ag '47

Superhighway to by-pass Pittsburgh. J. R. Dietz. maps diag Eng N 139:450-2 O 2 '47

Surface treatment

Behavior of bituminous surface treatments. W. H. Goetz. il Roads & Bridges 85:77-81+ My '47

Virginia selects broom drag treatment for repair of primary road. il Eng N 138:38-9 Ja 9 '47

Surveying

Aerial surveying on the Alaska highway, 1942. W. T. Pryor. il maps Pub Roads 24:275-90 Ja '47

Coordinate control methods applied to design and construction of city expressways. G. M. Leatherwood. il maps plans Roads & Sts 90:78+ Ja '47

Tolls

Controversy over toll roads. Eng N 138:712 Ap 24 '47

Few locations are OK for toll projects. J. Barnett. Roads & Sts 90:94+ S '47

Nine states enact toll road legislation. Eng N 139:459 O 2 '47

Why toll roads aren't the answer. T. H. MacDonald. Roads & Sts 90:91-2+ S '47

Traffic lines

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Widening

Bituminous widening in Ohio. F. W. Kimble. il Roads & Sts 90:67-8 Jl '47

New Jersey starts rebuilding its heavy-duty traffic arteries. il plan diag Concrete 54: 7-10 N '46

Winter maintenance

Winter maintenance methods in Michigan counties. il Roads & Sts 90:80+ F '47

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Roads—Ice control
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Alabama

Alabama has a 10-year program for county road construction. Eng N 138:196 F 6 '47

Alberta

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Arizona

Arizona relocates a mountain highway. il diags Eng N 139:134-6 Jl 24 '47

Economic justification of highway improvements confronts Arizona. E. V. Miller. il Civil Eng 17:523-7+ S '47

Arkansas

Is it a fair bid? Arkansas highway department system of unit cost analysis. A. E. Johnson. Roads & Sts 90:51-4+ Je '47

British Columbia

Gravel-spreading cost reduced by use of tractor-scrapers; highway in British Columbia. il Roads & Bridges 85:76-7+ O '47

Burma

See also
Ledo road

California

All eyes on California! features of the Collier-Burns act of 1947. Roads & Sts 90:78+ Ag '47

California's highway needs examined in relation to funds. C. H. Purcell. Eng N 138:47 Ja 9 '47

Freeways are costly in California. G. T. McCoy. Eng N 138:141-3 Ja 23 '47

How contractors vary in job quality; challenge California contractors and engineers; California data. Roads & Sts 90:79 S '47

Propose $2 billion, ten-year highway plan for California. Eng N 137:609+ N 7 '46

Standards for adequate California highway system stress safety of operation. G. D. Kennedy. il Civil Eng 17:180+ Ap '47

Vertical sand drains speed consolidation of soft water-bearing subsoil; Terminal Island access freeway. il diags Eng N 138:386-9 Mr 6 '47

Canada

Canadian good roads association, 28th annual meeting, St Andrews, Sept. 8-10. Roads & Bridges 85:82-93+ S '47

Directory of provincial highway officials; organization charts, provincial highways departments. Roads & Bridges 85:108+ Je '47

Financing and administration of provincial highways. T. J. Mahoney. Roads & Bridges 85:112+ S '47

1947 provincial programs for roads and bridges total $163,000,000. Roads & Bridges 85:81-3+ Mr '47

Plan revived to build Evergreen highway to West coast. map Roads & Bridges 85:73 Ap '47

Road mileages in Canada, according to type of surface, by provinces. Roads & Bridges 85:106 Je '47

Statistical survey of highway development in Canada. J. O. Marlineau. Roads & Bridges 85:83-6+ O '47

Statistics of the road and bridge building industry. Roads & Bridges 85:76-8+ Je '47

See also
Alaska highway

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See also
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Colorado

Colorado highway follows gold-rush rail route. L. A. Luther. il map Comp Air Mag 52:191-5 Ag '47

Connecticut

Connecticut applies aerial mapping to urban highway planning. W. J. Cox. map Civil Eng 17:82-5 F '47

New highway; Connecticut's engineers show the way; Ansonia-Derby-Shelton expressway. il Fortune 36:94-7+ Ag '47

Route planning in Connecticut cities. L. T. Scott-Smith. map plan Roads & Sts 89: 86-8 O '46

Urban highways and the interstate system. R. E. Jorgensen. map Roads & Sts 89:84-6 O '46

Cuba

Cuba's highway repairs no deterrent to traffic. For Comm W 29:29 N 1 '47

England

London roads. map Economist 153:356 Ag 30 '47

Georgia

Inefficient labor caused high construction cost in Georgia. G. T. McDonald. Eng N 138: 138-40 Ja 23 '47

Honduras

Honduras road budget for fiscal 1946-47 is announced. For Comm W 25:31 D 28 '46

Illinois

Illinois rejected 30 percent of low bids during 1946. W. W. Polk. Eng N 138:135-6 Ja 23 '47

Voided bonds not to delay freeways in Cook county, Illinois. Eng N 138:176 Ja 30 '47

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India plans huge highway program. map Eng N 139:288-9 Ag 28 '47

Roads for India. Bsns W p106 N 9 '46

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Mass house-moving cuts cost of urban right-of-way; problems solved by Indiana state highway department. il Eng N 139:38-9 Jl 10 '47

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Motor-transport facilities of Italy. For Comm W 28:34 Jl 19 '47

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Bituminous concrete surfaces. H. D. Metcalf. il Roads & Bridges 85:91-2+ Ag '47
Kentucky attains record road program despite unfavorable conditions. il Eng N 137:659-61 N 14 '46
Skid-proofing Kentucky highways. H. H. Palmer. il Eng N 139:522-3 O 16 '47

Louisiana

Material shortages in Louisiana may increase highway costs. N. E. Lant. Eng N 138:143 Ja 23 '47

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Maine turnpike, Nation's largest single post-war road job; design features and construction methods. H. J. McKeever. il diags Roads & Sts 90:59-61+ S '47
Privately financed superhighway in Maine incorporates latest design features. R. N. Bergendoff. il diag Civil Eng 17:454-8+ Ag '47
Work begins on the Maine turnpike. E. R. Needles. il map diags Eng N 138:147-50 Ja 23 '47
Work progresses on one of New England's most important highways; Maine turnpike between Portland and Kittery. il map diag Concrete 54:10+ D '46

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Curbs built of asphaltic concrete to cut highway maintenance costs; U.S. route 1 in Maryland; with cost data. il Eng N 138: 810-11 My 15 '47

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Massachusetts adapts aerial photography to highway location. E. C. Houdlette. map Civil Eng 17:85-6 F '47

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Michigan's 1946 highway program was slow getting underway. Eng N 138:144-5 Ja 23 '47
Reflector beads widely used in Michigan's pavement marking program. C. M. Ziegler. il Roads & Sts 90:71-4 Ja '47
Winter maintenance methods in Michigan counties. il Roads & Sts 90:80+ F '47

Minnesota

Highway specifications. H. E. Swanson and N. C. Rockwood. Rock Prod 49:77 N '46
Right to extinguish highway access upheld by Minnesota courts. plan Eng N 138:61-3 Ja 9 '47

Missouri

Missouri analyzes typical highway job to determine actual construction costs. C. C. Tevis. il Eng N 138:373-7 Mr 6 '47
Missouri paints with narrow rig; painting stripes on pavements. R. P. Cummins. il Eng N 138:211 F 6 '47.
Preventive maintenance extends life of Missouri highway equipment. il Eng N 137: 717-19 N 28 '46
Significant trends in Missouri state highway construction. il Eng N 137:648-53 N 14 '46

Mozambique

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New Jersey

Improved signs for N.J.; neon-lighted signs over route 25. R. L. Fisher. il diag Roads & Sts 90:90-2 My '47
New Jersey adopts new road fund policy. Eng N 138:722 My 1 '47
New Jersey starts dual-dual highway to end serious traffic congestion. C. M. Noble. il maps diags Eng N 138:120-4 Ja 23 '47
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Mathematical rating for priority of road construction established by New Mexico state highway department. H. S. Wiley. il Pub Works 77:21-4 N '46

New York (state)

Aerial mapping cuts cost of highway location in New York. E. T. Gawkins. il Civil Eng 17:80-2 F '47
Catskill thruway gets going. H. K. Glidden. il Roads & Sts 90:55-8 Ja '47
Dash line road striping made easy; Pushmobile developed in New York. C. R. Waters. il Eng N 138:208-10 F 6 '47
New York state builds its thruway. T. F. Farrell. il map diags Eng N 138:129-33 Ja 23 '47
Welded girder bridge of composite design carries deck area of two acres; bridge for Erie thruway over Cattaraugus creek, southwest of Buffalo. E. W. Wendell. diags Eng N 137:856-8 D 26 '46

New Zealand

Frost damage to sealed surfaces; abstract. H. W. Smith. Roads & Bridges 85:110+ Ag '47

Newfoundland

Newfoundland aims to improve its highways. For Comm W 26:37 F 1 '47

North Carolina

Contractors at work; U S 1 North Carolina; illustrations with text. Roads & Sts 90:59+ Jl '47
Experimental sand-clay base course. J. A. Kelley. il diags Pub Roads 24:299-306 Ap '47
Highway specifications. H. E. Swanson and N. C. Rockwood. Rock Prod 50:130+ Ja '47
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North Dakota

North Dakota rejected all bids on cement-concrete paving. M. P. Wynkoop. Eng N 138:145 Ja 23 '47

Ontario

Air entrainment in concrete; practice of the Ontario Department of highways. D. C. Robinson. Roads & Bridges 85:111+ S '47
Building a road through rock, sand and muskeg; Red Lake highway in northwestern Ontario. il Roads & Bridges 85:69+ F '47
Current practice in concrete pavement design in Ontario. D. O. Robinson. il Roads & Bridges 85:70-1+ F '47
Financing and administration of Ontario's highways. T. J. Mahony. Roads & Bridges 85:142+ Mr '47
Highway situation in Ontario. J. D. Millar. il Roads & Bridges 85:105+ Mr '47
Improving highway safety. R. A. Stapells. Roads & Bridges 85:130+ S '47
Increased expenditure in 1947 for municipal roads; county and township roads in Ontario. J. A. P. Marshall. il Roads & Bridges 85:76-7+ F '47
Municipal road development in northern Ontario. J. Sinton. Roads & Bridges 85:166+ Mr '47
Municipal roads to receive greater consideration. G. H. Doucett. Roads & Bridges 85:104+ Mr '47
Ontario good roads association 45th annual meeting, Toronto, Feb. 25-26. il Roads & Bridges 85:89-99+ Mr '47
Paving methods on the Toronto-Oshawa dual highway. il diag Roads & Bridges 84:62-5+ N '46
Red Lake highway gives access to rich mining area. il Roads & Bridges 84:49-53+ D '46
Roadbuilding in northern Ontario. W. B. Hutcheson. Roads & Bridges 85:130+ Ap '47
Should roads be classified according to loads? J. G. Cameron. il Roads & Bridges 85: 107+ Mr '47
Snow drifts 20-ft deep isolate Ontario towns for week. il maps Roads & Bridges 85:84-8+ Mr '47
Snow-plowing an art, not a science, in the Ottawa district. J. L. Shearer. il Roads & Bridges 85:68+ F '47

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Contractor profits on highway work found to be normal in Oregon. R. H. Baldock. Eng N 138:140-1 Ja 23 '47
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Seventeen arches in this pipe culvert on the Sunset highway. il diags Roads & Sts 90: 80+ Je '47

Pennsylvania

Pennsylvania highway costs have doubled since 1940. Eng N 138:137-8 Ja 23 '47
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Quebec

Importance of secondary roads. E. H. Gohier. Roads & Bridges 85:120+ S '47

Rhode Island

Distributed reinforcement in pavements found advantageous in Rhode Island. L. V. Spencer. Eng N 137:806-7 D 12 '46

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See also
Pan American highway

South Carolina

Experimental soil-cement base course in South Carolina. E. A. Willis. il diags Pub Roads 25:9-19 S '47

Switzerland

Switzerland's road system enriched by new highway; Sustenstrasse. For Comm W 26: 22 Ja 11 '47

Texas

Lime stabilization and low cost road construction. W. D. Dockery; D. E. H. Manigault. il Roads & Sts 90:91-5 Ag '47
Sand-shell hot-mix job, Texas route 146 near Galveston. il Roads & Sts 90:82-3 My '47
Texas awards highway contracts at an even and rigorous tempo. Eng N 138:136-7 Ja 23 '47
Texas 1946 secondary road program establishes new construction record. il Eng N 138:125-8 Ja 23 '47
Texas reflectorizing road signs with glass beads. il Roads & Sts 90:95-6+ Mr '47

United States

American association of state highway officials annual meeting, New York, Sept. 22-26. Eng N 139:437+ O 2 '47
Broad aspects of highway planning affect Nation's economic, cultural and social life. C. M. Noble. il Civil Eng 17:593-7+ O '47
Distribution of highway and bridge construction; charts, 1925-1946. Eng N 138:sup 47 F 6 '47
Greater responsibility for engineers seen in expanded highway programs; annual meeting of Mississippi Valley conference of state highway officials. Eng N 138:476-7 Mr 27 '47
Greater road building totals for 1947 seen as states report big programs. Eng N 138:85 Ja 16 '47
Highway accomplishments and plans. Eng N 138:118-19 Ja 23 '47
National highway network; map. Bsns W p 18 Ag 9 '47
Nationwide highway network begins to take shape. il Bsns W p21 D 7 '46
Road blocks; high costs, lack of labor retard highway construction in most states. map Bsns W p36-8 My 3 '47
State highway construction, 1946-'47; reports from officials. Roads & Sts 90:86-8+ F '47
States begin planning future road jobs. Eng N 139:573 O 30 '47
States disclose road building plans. Eng N 138:713 Ap 24 '47

Interregional highway plan

Interstate highway system seen affecting oil marketing and distribution along the routes. map Nat Pet N 39:13-14 Ag 6 '47
National system of interstate highways; map. Pub Roads 25:20 S '47
PRA approves 40,000-mile national highway system. map Eng N 139:165-6 Ag 7 '47; Ry Age 123:251 Ag 9 '47
Urban highways and the interstate system. R. E. Jorgensen. map Roads & Sts 89:84-6 O '46

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Roads to riches in Venezuela; new roads being built by oil companies. E. J. Cleary. il map diag Eng N 138:432-6 Mr 20 '47

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Standard truck serves Virginia; marking the center-line of highway pavements. C. B. Leech, jr. il Eng N 138:210 F 6 '47
Virginia's highway costs up 15 percent since January 1946. C. S. Mullen. Eng N 138:144 Ja 23 '47

Washington (state)

Peter Kiewit sons company grading and paving contracts, US 99, Washington. il Roads & Sts 90:74-7 Mr '47
Washington state highway maintenance speeded by two-way fm radiotelephone. F. E. Ebel. il Pub Works 78:28-30 S; 31-2 O '47

Western states

Big road backlog in 11 western states as 1947 budgets are prepared. Eng N 137:829 D 19 '46
Western association of state highway officials conference, Missoula, Aug. 6-8. Roads & Sts 90:83-5 S '47

ROADS, Automobile. See Expressways

ROADS, Bituminous
Behavior of bituminous surface treatments. W. H. Goetz. il Roads & Bridges 85:77-81+ My '47
Bituminous widening in Ohio. F. W. Kimble. il Roads & Sts 90:67-8 Jl '47
Cotton fabric in bituminous construction. P. F. Critz. il Pub Roads 24:251-60 O '46; Same cond. Roads & Bridges 84:59-64+ D '46
Experimental sand-clay base course in North Carolina. J. A. Kelley. il diags Pub Roads 24:299-306 Ap '47
Experimental soil-cement base course in South Carolina. E. A. Willis. il diags Pub Roads 25:9-19 S '47
Lime stabilization and low cost road construction. W. D. Dockery; D. E. H. Manigault. il Roads & Sts 90:91-5 Ag '47
Pennsylvania goes to denser topping mix. Roads & Sts 90:56 Je '47
Place of bituminous construction in road modernization. B. E. Gray. il Roads & Bridges 85:100-3+ S '47
Recommended construction practice for soil-bituminous roads. il Roads & Bridges 85: 40-3+ Ja '47
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Sand-shell hot-mix job, Texas route 146 near Galveston. il Roads & Sts 90:82-3 My '47
Secondary roads paved with soil-cement. il Eng N 138:498-501 Ap 3 '47
Significant trends in Missouri state highway construction. il Eng N 137:648-50 N 14 '46
Skid-proofing Kentucky highways. H. H. Palmer. il Eng N 139:522-3 O 16 '47
State maintenance crew gangs up on urban arterial oil-mix resurface. il Roads & Sts 89:76-8 O '46
Texas 1946 secondary road program establishes new construction record. il Eng N 138:125-8 Ja 23 '47

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Highway construction, Huntingdon county, Pa.; unit prices. Eng N 138:156 Ja 23 '47

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How much diluent to change cutback grade in emergencies? Roads & Sts 90:96 Ag '47

ROADS, Bituminous—Maintenance and repair—*Continued*
N.Y. state experience with anti-stripping compounds. Roads & Sts 90:52 Ap '47

ROADS, Bituminous concrete
Bituminous concrete surfaces. H. D. Metcalf. il Roads & Bridges 85:91-2+ Ag '47
Helping a small city burst its seams; Klamath Falls, Oregon, suburban arterial highway reconstructed to aid growth of fringe developed community. R. Webber. il plan Roads & Sts 90:65-7 Mr '47
Maine turnpike, Nation's largest single postwar road job; design features and construction methods. H. J. McKeever. il diags Roads & Sts 90:59-61+ S '47
Place of bituminous construction in road modernization. B. E. Gray. il Roads & Bridges 85:100-3+ S '47
Privately financed superhighway in Maine incorporates latest design features. R. N. Bergendoff. il diag Civil Eng 17:454-8+ Ag '47
Resurfacing with hot plant-mix bituminous concrete. F. C. Coates. il Pub Works 78: 26-8+ Mr '47
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Bay Shore freeway, San Mateo co., California; unit prices. Eng N 137:891-2 D 26 '46
Maine turnpike, Nation's largest single postwar road job; design features and construction methods. H. J. McKeever. il Roads & Sts 90:65+ S '47

ROADS, Concrete
Air entrainment in concrete; practice of the Ontario Department of highways. D. O. Robinson. Roads & Bridges 85:111+ S '47
Concrete highway research yields better guidance for contractors; laboratory of the Public roads administration. il Concrete 55: 8-9+ My '47
Current practice in concrete pavement design in Ontario. D. O. Robinson. il Roads & Bridges 85:70-1+ F '47
Highway specifications; Minnesota. H. E. Swanson and N. C. Rockwood. Rock Prod 49:77 N '46
Highway specifications; North Carolina. H. E. Swanson and N. C. Rockwood. Rock Prod 50:130+ Ja '47
Kanawha boulevard extended at Charleston. il map Eng N 139:181-3 Ag 7 '47
Modern road construction in concrete. W. P. Andrews. Chem & Ind p331-4 Je 14 '47
New Jersey starts rebuilding its heavy-duty traffic arteries. il plan diag Concrete 54: 7-10 N '46
New York state builds its thruway. T. F. Farrell. il map diags Eng N 138:129-33 Ja 23 '47
Peter Kiewit sons company grading and paving contracts, US 99, Washington. il Roads & Sts 90:74-7 Mr '47
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Construction equipment
Contractors at work; D. R. Smalley & sons; U.S. 40, Indiana-Ohio. il Roads & Sts 90: 87-90 Ag '47
Contractors at work; U.S. 40, Ohio; illustrations with text. Roads & Sts 90:62-4 Ja '47
Contractors at work; U S 1 North Carolina; illustrations with text. Roads & Sts 90: 59+ Jl '47
Equipment used in highway construction. Pub Works 78:24 Je '47
Expressway US 40; Sacramento-Oakland; contractor's equipment and methods; illustrations with text. Roads & Sts 89:61-2 D '46
Paving methods on the Toronto-Oshawa dual highway. il diag Roads & Bridges 84:62-5+ N '46
What one paving contractor does in winter; Denton construction co. il Roads & Sts 90: 103-5+ Ja '47

Cost
Concrete pavement and bridge over Angelico creek, Virginia; unit prices. Eng N 139: 346+ S 4 '47
Highway and culvert, Adams co., Ohio; unit prices. Eng N 138:326 F 20 '47
Highway, Worthington, Minnesota; unit prices. Eng N 139:143 Jl 24 '47
How they bid on the California U.S. 40 project; unit prices. Roads & Sts 89:63 D '46

Expansion joints
Asphaltic oil-latex joint-sealing compound. B. W. Pocock. bibliog il Am Concrete Inst J 17:565-80 Je '46; Discussion. 18:580¹-580⁶ pt 2 D '46
Highway research board panel discussion on concrete paving joints. Roads & Sts 89:84+ N '46

Joints
Joint sealing costs cut 42 per cent; methods developed by California highway staff. H. L. Cooper. il Roads & Sts 90:51-3 Jl '47
See also
Roads, Concrete—Expansion joints

Maintenance and repair
Results of experiments to improve asphalt subsealing methods. H. L. Cooper and W. R. Lovering. Pub Works 78:25-6 Ja '47
Resurfacing US 40 Maryland. H. K. Glidden. il diag Roads & Sts 90:49-52+ My '47
Undersealing pavements with asphalt; with cost data. H. A. Wallace. il Pub Works 78: 23-4 Je '47

Testing
Air entrainment proves its value. il Concrete 55:3-5 My '47
Effect of subgrade treatments on pavement faulting and pumping. E. A. Henderson and W. T. Spencer. bibliog il diag Roads & Bridges 85:81-7+ Ap '47

ROADS, County
Alabama has a 10-year program for county road construction. Eng N 138:196 F 6 '47
Cost accounting plan for county roads. Roads & Sts 90:97-9 Ag '47
Increased expenditure in 1947 for municipal roads; county and township roads in Ontario. J. A. P. Marshall. il Roads & Bridges 85:76-7+ F '47
Municipal roads to receive greater consideration. G. H. Doucett. Roads & Bridges 85:104+ Mr '47
Winter maintenance methods in Michigan counties. il Roads & Sts 90:80+ F '47

ROADS, Earth
Designing two-soil mixtures. G. W. Shults. Roads & Sts 90:58+ Je '47
See also
Roads, Macadam
Roads, Soil-cement

Cost
Earth road, Salt Lake co., Utah; unit prices. Eng N 138:329 F 20 '47

ROADS, Elevated
Roof-top roadways; abstracts and discussion. T. R. Cave-Brown-Cave; D. H. McPherson. Engineer 184:234-4 S 12 '47; Engineering 164:294 S 26 '47

Cost
Elevated highway, Washington, D.C.; unit prices. Eng N 138:900-1 My 29 '47

ROADS, Experimental
Cotton fabric in bituminous construction. P. F. Critz. il Pub Roads 24:251-60 O '46; Same cond. Roads & Bridges 84:59-64+ D '46
Experimental sand-clay base course in North Carolina. J. A. Kelley. il diags Pub Roads 24:299-306 Ap '47
Experimental soil-cement base course in South Carolina. E. A. Willis. il diags Pub Roads 25:9-19 S '47

ROADS, Forest. See Forest roads

ROADS, Gravel
Gravel-spreading cost reduced by use of tractor-scrapers; highway in British Columbia. il Roads & Bridges 85:76-7+ O '47

Cost
Gravel base road, west Memphis, Ark.; unit prices. Eng N 139:349 S 4 '47
Highway improvement, New Hampshire; unit prices. Eng N 139:140 Jl 24 '47

ROADS, Gravel—*Continued*

Stabilization

La construction des chaussées en béton d'argile. H. Kemler. il Génie Civil 124:105-6 Mr 15 '47

Granular stabilization; American road builders association, report by Soils calcium chloride granular stabilization committee. il Roads & Bridges 85:53+ Jl '47

Waterproofed mechanical stabilization in road construction; soil-bituminous roads. il Roads & Bridges 85:72-5+ F '47

ROADS, Industrial

80-wagon fleet moves million yards per month; private haul road feature of airport job at San Francisco. H. J. McKeever. il map Roads & Sts 90:62-8 F '47

ROADS, Macadam

Cost

Macadam surfaced road, Wayne county, Pa.; unit prices. Eng N 138:1035 Je 26 '47

ROADS, Military

L'avenir commercial des routes stratégiques construites pendant la guerre. maps Génie Civil 124:252-4 Jl 1 '47

ROADS, Soil-cement

One-pass machine used in building soil-cement roads. il Concrete 54:24-5+ N '46

ROADS, Township

Highway improvements included in Etobicoke's 30-year plan. E. G. Faludi. il maps Roads & Bridges 85:76-9+ Ap '47

Increased expenditure in 1947 for municipal roads; county and township roads in Ontario. J. A. P. Marshall. il Roads & Bridges 85:76-7+ F '47

Municipal road development in northern Ontrio. J. Sinton. Roads & Bridges 85:166+ Mr '47

Municipal roads to receive greater consideration. G. H. Doucett. Roads & Bridges 85:104+ Mr '47

ROADSIDE planting

Grass sowing under film of bitumen emulsion. H. W. Jarvis. Pub Works 78:31 Ag '47

Roadside weed spraying. C. W. Magee. il Roads & Bridges 85:128+ Ag '47

ROADSIDES

How to reduce fire hazards along highways. E. S. Whitaker and H. N. Bosworth. il Pub Works 77:25-6 D '46

ROAN antelope copper mines

Higher costs, coal lack limit Roan Antelope net. Barron's 27:16 Ap 21 '47

ROASTERS, Electric. See Electric roasters

ROBBERIES, Bank. See Bank robberies

ROBERS, Gene P.

Personalities in industrial advertising. por Ind Marketing 32:74+ F '47

ROBERTS, Richard, b 1789-

Richard Roberts, his life and inventions. H. W. Dickinson. Engineer 183:176-8, 189-90 F 14, Mr 7 '47

ROBERTS, W. H. 1878-1946

Sketch. F. R. Dodd. Chem & Ind p453-4 D 21 '46

ROBERTSHAW-FULTON controls company

Stock offered. Comm & Fin Chr 166:1792+ N 3 '47

ROBERTSON, Howard Percy, 1903-

Portrait. Fortune 35:124 Ja '47

ROBINSON, Gilbert C.

Ceramic engineering department established at Clemson college. por Am Cer Soc Bul 25:481 D 15 '46

ROBINSON, Reid

Portrait. Bsns W p94 Mr 22 '47

ROBINSON, Sir Robert, 1886-

Franklin institute honors Robinson and Fermi. por Chem & Eng N 25:1264 My 5 '47

ROBINSON airlines

Robinson to argue regional airline concept before CAB. Aviation W 47:61 Jl 7 '47

ROCCAL

Improved method of producing smallpox vaccine of low bacterial content; comparison of a quaternary ammonium compound (Roccal) with brilliant green in the preparation of smallpox vaccine. D. H. Ducor. Pub Health Rep 62:572-81 Ap 18 '47

ROCHELLE salt. See Potassium sodium tartrate

ROCHOW, Eugene G.

Portrait. Fortune 35:106 My '47

ROCK bursts

Aspects of ground movement. Z. S. Beyl. Can Min J 68:113-15 F '47

Rock burst; study of factors and conditions. R. G. K. Morrison. il diags Eng & Min J 148:62-7 S '47

Unsolved problem of rock bursts. R. G. K. Morrison. il Eng & Min J 148:80-2 Ap '47

ROCK drills

Churn-drill performance. J. R. Thoenen and E. J. Lintner. 22pls U S Bur Mines Rep of Invest 4058:1-48 '47

Coeur d'Alene one-man jumbo. J. W. Feiss. il diags Min Cong J 33:48-50 O '47

Coniaurum makes own bit for less than 14 cents. diags Eng & Min J 148:96 Ag '47

Drill jumbo features air-operated columns. il Comp Air Mag 52:22 Ja '47

Experiment with tungsten carbide bits. C. W. Nicolson. il diag Min Cong J 33:36-7+ Jl '47

Hard alloys go underground; tungsten carbide insert bits in rock drilling. S. P. Wimpfen. il Min & Met 28:148-9 Mr '47

Keeping rock drills fit at Homestake. diags Eng & Min J 148:108-9 Jl '47

Rock-bit design and experimental data. W. B. Noble. diags Oil & Gas J 46:118+ O 18 '47; Same. Pet Eng 19:141-2+ N '47

Sampling mineral deposits with a wagon drill. diag Comp Air Mag 52:256 O '47

Survey of mining progress. A. H. Hubbell. Eng & Min J 148:92-7 F '47

Tire-mounted drills for trackless mining; abstract. C. M. Shott. Min Cong J 33:73 Je '47

Tungsten carbide promises faster, cheaper drilling. R. G. Sullivan. il Eng & Min J 148:57-60 Mr '47

Use and care of diamond drill bits and shells. il Eng & Min J 148:78-81 Ag '47

Lubrication

Rock drill oil may help or hinder your flotation. E. C. Herkenhoff. il Eng & Min J 148:88-90 Je '47

Standards

Standards, Canadian diamond drilling association. C. H. Hitchcock. diag Can Min J 68:644-7 S '47

Testing

Diamond drilling and diamond bit investigation. L. Obert and others. bibliog 7 pls U S Bur Mines Rep of Invest 4041:1-18 '47

ROCK dusting. See Coal mines and mining—Rock dusting

ROCK products

See also

Aggregates	Phosphate rock
Gravel	Sand
Gypsum	Stone, Crushed

ROCK products industry

Big construction volume in 1947. B. Nordberg. il Rock Prod 50:98-102+ Ja '47

Directories

Sand, gravel, stone, ready-mixed concrete; commercial producers, Canada. Roads & Bridges 85:146+ Je '47

Minnesota

Minnesota's wide range of minerals. H. E. Swanson and N. C. Rockwood. flow sheet il maps Rock Prod 49:70-81+ N '46

North Carolina

North Carolina's vast untapped mineral resources. H. E. Swanson and N. C. Rockwood. bibliog il maps Rock Prod 50:124-30+ Ja '47

Northwestern states

Pacific Northwest building plants. Rock Prod 50:105+ F '47

Pacific coast

Business booming in the West. W. B. Lenhart il Rock Prod 50:88-93+ F '47

ROCK products industry—*Continued*

Southern states

South, leader in stone production. O. Bowles and R. P. Willing. il Manuf Rec 116:40-1+ F '47

ROCK products plants

Electric equipment

Automatic sequence control for stone plant; Granite rock co. il diag Rock Prod 50:81-2 Jl '47

Equipment

Directory of machinery and equipment for the rock products industry. Rock Prod 50: 203-71 Ja '47

Fit the belt to the job. W. E. Johnson. diags Rock Prod 50:95+ My '47

Recovering asbestos floats with dust collectors. L. J. Wieschhaus. il Rock Prod 50: 104-5+ Ag '47

Trade names of manufacturers' equipment for the rock products industry. Rock Prod 50:272-86 Ja '47

Where to buy repair parts? N. C. Rockwood. Rock Prod 50:106-8 Ja '47

ROCK salt. See Salt

ROCK wool. See Mineral wool

ROCKEFELLER, Laurance Spelman

Keeping to the pattern; director of Chase National. por Bsns W p76 F 8 '47

ROCKEFELLER, Nelson Aldrich, 1908-

Good neighbor, good business; corporation to aid economies of Latin American nations. por(cover) Bsns W p17-18 Mr 1 '47

Plan for Brazil; three-point scheme to stimulate agriculture, raise living standards. Bsns W p65 Ja 4 '47

ROCKET propulsion

AAF begins tests with Bell XS-1. Aviation W 47:12 Ag 18 '47

Bell XS-1, A.A.F. supersonic research plane. Aeronautical Eng R 6:38 Ja '47

Bell XS-1 readied for supersonic trials; illustrations with text. Aviation 46:64 Ja '47

Bell's supersonic research plane. il Aero Digest 54:135 Ja '47

British rocket station; role of hydrogen peroxide. Chem Age (Lond) 57:259 Ag 23 '47

Development of the XS-1 supersonic research airplane. R. M. Stanley and R. J. Sandstrom. il Aeronautical Eng R 6:22-6+ Ag '47

First supersonic airplane built for research. il Product Eng 17:150 D '46

First XS-1 powered flight opens drive to supersonic speeds. il Aviation N 6:9 D 16 '46

Flying jets, rockets create new concepts. L. Lawrence, jr.; J. F. Manildi. il diags S A E J 54:75-6 N '46

Gaging rocket-engine forces and flows. G. P. Sutton. il diags Aviation 46:46-8 Ap '47

German rocket aircraft and their powerplants. R. A. Cole. il S A E J 54:74 N '46

Giant rocket test center planned for California desert. Aviation N 7:13 Je 9 '47

Interplanetary travel; abstract. L. Spitzer, jr. Mech Eng 69:670-1 Ag '47

Liquid-propellant rocket motor. J. H. Wyld. il diags Mech Eng 69:457-64 Je '47; Discussion. 69:784-5 S '47

New AAF jet-rocket fighters designed for supersonic speeds. Aviation W 47:11-12 Jl 21 '47

Les propergols, fluides moteurs des engins autopropulsés. R. Lévy. Chimie & Ind 57: 221-7 Mr '47

RMI'S rocket engine which powers supersonic XS-1. J. Shesta. flow diag il diag Aviation 46:44-6 Ja '47

Regenerative rocket cooling; abstract. T. F. Reinhardt. Aeronautical Eng R 6:22-3 My '47

Research aircraft. P. B. Klein. il diag Mech Eng 69:813-19 O '47

Rocket-motor test station. il Gen Elec R 50:48 Je '47

Rocket research; Army air forces' Muroc flight test base, Calif. Mech Eng 69:677 Ag '47

Superaerodynamics, mechanics of rarefied gases. H. Tsien. bibliog J Aeronautical Sci 13:653-64 D '46

Transonic test craft readied by British. Aviation N 7:9-10 Je 2 '47

Unique features built into XS-1; Bell rocket-powered flying supersonic laboratory. il Aviation N 6:12 D 2 '46

U.S. rocket engine flight test points way to new developments. il Aviation N 6:8-9 D 23 '46

ROCKETS

Additional cosmic ray measurements with the V-2 rocket. S. E. Golian and others. Phys R 70:776-7 N 1 '46

Ascent by rocket, envisioned from passenger's viewpoint. E. L. Cady. Sci Am 176:203 My '47

Bombproofs for rocket-motor tests. il Power 91:626 S '47

Data radioed back by V-2 rocket. Franklin Inst J 244:208 S '47

Flight control of rockets. G. White. il diag Aero Digest 54:50-1+ My '47

Gaging rocket-engine forces and flows. G. P. Sutton. il diags Aviation 46:46-8 Ap '47

German guided and rocket missiles. E. Burgess. il diags Engineer 184:308-10, 332-3, 356-8, 381-3, 407-9 O 3-31 '47

Gravity-free rockets. E. M. Rogers. Mech Eng 69:29-30 Ja '47

High-altitude photography in a V-2 rocket. il Mech Eng 69:496-7 Je '47

High-altitude research with V-2 rockets; abstract. E. H. Krause. Science 106:122 Ag 8 '47

Lightplane JATO seen in rocket design. diags Aviation W 47:21-2 S 22 '47

Lightplane takeoff with JATO demonstrated at Miami show. A. McSurely. il Aviation N 7:19 Ja 20 '47

Non-primary cosmic ray electrons above the earth's atmosphere. G. J. Perlow and J. D. Shipman, jr. Phys R 71:325-6 Mr 1 '47

Problem of escape from the earth by rocket. F. J. Malina and M. Summerfield. bibliog J Aeronautical Sci 14:471-80 Ag '47

Riding on a gas jet. J. K. Rouleau. il J Chem Educ 24:307-10 Je '47

Rocket assisted take-offs. Z. Krzywoblocki. bibliog Aero Digest 53:75-7+ D '46

Rocket radio for moon to earth broadcasts foreseen. J. A. Hutcheson. Franklin Inst J 242:278 O '46

Rockets in battle. W. Ley. il diags Tech R 49:95-100+ D '46

Super altitude-research rocket revealed by navy. C. H. Smith, jr. and others. il Aviation 46:40-3 Je '47

Superspeed rocket. il Mech Eng 69:678-9 Ag '47

Upper atmosphere of the earth. E. O. Hulburt. bibliog il Opt Soc Am J 37:405-15 Je '47

Testing

New methods developed for evaluating rocket motors. il diags Aviation W 47:20-1 S 29 '47

ROCKFORD, Illinois

Rockford NIAA chapter sparks employee information campaign. Ptr Ink 221:38-9 O 3 '47

ROCKS

Black Warrior basin, Alabama and Mississippi. F. F. Mellen. maps diags Am Assn Pet Geologists Bul 31:1801-16 O '47

Cambrian and Ordovician rocks in recent wells in southeastern Michigan. G. V. Cohee. bibliog diags map Am Assn Pet Geologists Bul 31:293-307 F '47

Devonian rocks of central Texas. V. E. Barnes and others. bibliog maps diag Geol Soc Bul 58:125-40, pl 1 F '47

Dunite-mylonites of St Paul's rocks (Atlantic). C. E. Tilley. bibliog Am J Sci 245: 483-91, pl 1-2 Ag '47

Electrical resistivity an aid in core-analysis interpretation. G. E. Archie. diag pl Am Assn Pet Geologists Bul 31:350-66 F '47

Geology of the Red Rose tungsten mine, Hazelton, British Columbia. J. S. Stevenson. bibliog il map diags Econ Geol 42:433-64 Ag '47

Heavy rock work on British Columbia power development; Bridge River hydro-electric development. il Roads & Bridges 85:46-9 Jl '47

ROCKS—*Continued*
Minnesota's wide range of minerals; commercial rock deposits. H. E. Swanson and N. C. Rockwood. flow sheet map Rock Prod 49:73-4 N '46
Monterey formation of California and the origin of its siliceous rocks. M. N. Bramlette. bibliog U S Geol S Professional Pa 212:1-57, pl 1-19; pa 60c Supt. of doc. '46
Onlap and strike-overlap. F. A. Melton. diags Am Assn Pet Geologists Bul 31:1868-78 O '47
Oölite deformation in the South Mountain fold, Maryland. E. Cloos. map diags Geol Soc Bul 58:843-917, pl 1-13 bibliog(p915-17) S '47
Ordovician and Silurian rocks in Yukon territory, northwestern Canada. C. E. Decker and others. bibliog il map Am Assn Pet Geologists Bul 31:149-56 Ja '47
Polished rocks of Cornudas mountain, New Mexico. W. B. Lang. Science 105:65 Ja 17 '47
Silurian of eastern Newfoundland with some data relating to physiography and Wisconsin glaciation of Newfoundland. W. H. Twenhofel. bibliog 3pls fold map Am J Sci 245:65-122 F '47
Some physical characteristics of certain favorable and unfavorable ore horizons. O. N. Rove. bibliog(39 titles) il Econ Geol 42: 161-93 Mr '47
Zion national monument, Utah. H. E. Gregory and N. C. Williams. bibliog il map fold map(pl 1) Geol Soc Bul 58:211-44, pl 1-9 Mr '47

See also
Continental shelf
Dolomite
Drilling and boring (earth and rocks)
Folds (geology)
Geology
Geophysics
Granite
Gypsum
Limestone
Metamorphism
Metasomatism
Minerals
Pebbles
Phosphate rock
Quarries and quarrying
Sedimentation and deposition
Shale
Stone, Crushed

Analysis

Chemical analyses and calculated modes of the Oliverian magma series, Mt Washington quadrangle, New Hampshire. M. P. Billings and J. C. Rabbitt. bibliog Geol Soc Bul 58:573-96 Jl '47
Determination of gallium in silicate rocks. E. B. Sandell. bibliog Anal Chem 19:63-5 Ja '47
Radioactivity of the rocks of the batholith of southern California. E. S. Larsen and N. B. Keevil. map Geol Soc Bul 58:483-93 Je '47
Spectrochemical analysis of rocks and minerals. E. W. Claffy. bibliog Am J Sci 245: 35-48, pl 1-2 Ja '47
Spectrochemical determination of the major constituents of minerals and rocks. A. Kvalheim. bibliog Opt Soc Am J 37:585-92 Jl '47
Spectrochemical sample logging of limestones. L. L. Sloss and S. R. B. Cooke. bibliog diag Am Assn Pet Geologists Bul 30:1888-98 N '46; Same. Pet Eng 18:145+ Ag '47

Classification and nomenclature

Grain size in carbonate rock. R. K. DeFord. Am Assn Pet Geologists Bul 30:1921-8 N '46

Testing

Critical stresses in a circular ring. R. H. Philippe and others. il diag Am Soc C E Proc 72:1185-7, 1291-4 O-N '46

ROCKS, Igneous
Chemical analyses and calculated modes of the Oliverian magma series, Mt Washington quadrangle, New Hampshire. M. P. Billings and J. C. Rabbitt. bibliog Geol Soc Bul 58:573-96 Jl '47
Control of ore by primary igneous structures, Porcher Island, British Columbia. A. Smith. bibliog map Geol Soc Bul 58:245-61, pl 1-2 Mr '47
Further experiments on the surplus gamma-radiation from granite. V. F. Hess. bibliog Phys R 72:609-14 O 1 '47
Honolulu series, Oahu, Hawaii. H. Winchell. bibliog il maps Geol Soc Bul 58:1-48, fold map(pl 1) pl 2 Ja '47
Koolau basalt series, Oahu, Hawaii. C. K. Wentworth and H. Winchell. bibliog maps Geol Soc Bul 58:49-77, pl 1-4 Ja '47
Magmas. N. L. Bowen. bibliog Geol Soc Bul 58:263-79 Ap '47
Modal analyses of well cores from basement complex in west Texas. L. T. Patton. Am Assn Pet Geologists Bul 31:308-17 F '47
Origin of a scapolite metagabbro in Bucks county, Pennsylvania. J. Weiss. bibliog diag Geol Soc Bul 58:821-32 S '47
Principal theses of the genetic systematics of intrusive bodies. A. A. Polkanov. Am J Sci 244:849-53 D '46
Radioactivity of the rocks of the batholith of southern California. E. S. Larsen and N. B. Keevil. map Geol Soc Bul 58:483-93 Je '47
Relation between chemical composition and paragenesis in the biotite micas of igneous rocks. S. R. Nockolds. bibliog Am J Sci 245: 401-20 Jl '47
Significance of the radioactivity of potassium in geophysics. E. Gleditsch and T. Gráf. bibliog Phys R 72:641 O 1 '47
Statistical relation between TiO_2, Fe_2O_3, and FeO in rocks and ores during differentiation of a titaniferous magma. P. Evrard. bibliog Geol Soc Bul 58:197-210 Mr '47

See also
Granite
Lava
Ore deposits

ROCKWELL hardness test. See Hardness—Testing

ROCKY Mountain fuel company
Union angel will lose. Bsns W p 16 My 24 '47

ROCKY mountains
Cenozoic physiographic history of the Front range, Colorado. E. E. Wahlstrom. bibliog map plan diags Geol Soc Bul 58:551-72 Jl '47

ROD mills. See Rolling mills

ROD mills (for crushing). See Tube mills

RODENTICIDES. See Rats—Extermination

RODGERS, William Starling Sullivan, 1886-
Portrait. Fortune 35:143 My '47

ROEBLING, John Augustus, 1806-1869
Palace, the Bridge, and the Tower; 19th century's golden leap in structural design. J. M. Fitch. Arch Forum 87:88-95 O '47

ROEMER, Henry A. Jr.
Sharon consolidation. por Bsns W p30 Ap 12 '47

ROGERS, Arthur William, 1872-1946
Memorial. A. L. Du Toit. por(pl 11) Geol Soc Proc 1946:209-15 bibliog(p213-15) Jl '47

ROLLER bearings. See Bearings, Roller

ROLLER chain drive. See Chain gear

ROLLER drying. See Drying apparatus

ROLLER skates
Redesign for projection welding speeds stamping assembly. il Product Eng 18:95 Jl '47

ROLLERS, Printers'
Do your press rollers lose their tackiness in a very short time? D. Burgess. Inland Ptr 119:56-8 Jl '47
Roller-making family celebrates its centennial; Samuel Bingham's son manufacturing company. Inland Ptr 119:88-9 Ag '47

ROLLERS, Road. See Road rollers

ROLLING (metal work)
Aluminum foil rolling; illustrations with text. Iron Age 159:123 Ap 10 '47
Annealing studies on cold-rolled iron and iron binary alloys. C. R. Austin and others. il Am Soc for Metals Trans 35:446-80 bibliog(p480); Discussion. 481-4 '45
Centrifugal casting of brass ingots for cold rolling; abstract. T. B. Cros. Materials & Methods 25:123 My '47
Composition, control and selection of coolants for working metals. E. L. H. Bastian. il Steel 120:103+ My 26 '47
Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel. N. P. Goss. bibliog il Steel 121:74-5+ S 29; 98-100+ O 6 '47

ROLLING (metal work)—*Continued*
Effect of speed of rolling in the cold-rolling process. H. Ford. bibliog diags Iron & Steel Inst J 156:380-98 Jl '47; Same cond. Blast F & Steel Pl 35:1219-23, 1368-71 O-N '47
Employs stretch principle in steel tube production. Steel 119:96 N 25 '46; Same. Blast F & Steel Pl 34:1531 D '46
Fluctuations of the distribution of torque between rolling-mill spindles. E. A. W. Hoff. diags Iron & Steel Inst J 155:51-4 Ja '47; Discussion. diags 156:511-22 Ag '47
Graphite in cold-rolled subcritically annealed hypoeutectoid steels. M. A. Hughes and J. G. Cutton. bibliog il Am Soc for Metals Trans 37:110-29; Discussion. 129-35 '46
Hot roll forming of various aluminum alloys. G. Sachs and others. il Am Soc for Metals Trans 37:449-67 '46
Hot rolling iron-carbon alloys; German investigations to determine feasibility of producing piston rings from rolled cast iron. E. Piwowarsky and A. Wittmoser. bibliog il Iron Age 159:52-7 F 6; 63-5 F 13 '47
Production processes; their influence on design; thread and form rolling. R. W. Bolz. il diag Machine Design 19:145-50 Ag '47
Progress in steel pipe manufacture with particular reference to seamless pipe. E. N. Sanders. Blast F & Steel Pl 35:691-4 Je '47; Excerpt. Mech Eng 69:602 Jl '47
Rolling magnesium on continuous strip mill. Sci Am 176:107 Mr '47
Shaping and forming. W. Trinks. diags Blast F & Steel Pl 35:964-70+ Ag '47
Small sections contoured by preform rolling; forming of extrusions and sheet metal stock. C. R. Wulffsohn. il Iron Age 159:54-7 Je 26 '47

See also
Rolling mills
Thread rolling

ROLLING mills
Cold strip reduced in one pass at 4000 feet per minute. il Steel 120:80 Ja 20 '47
Cold strip Y-mill. il diag Iron Age 160:62-3 O 30 '47
Continuous and the 2-high mill; abstract. J. H. Mart. Blast F & Steel Pl 35:1006 Ag '47
Hot and cold strip mills in the Chicago area. E. D. Martin. il Metal Prog 52:560-4 O '47
Miniature mill rolls tissue-thin metal at Westinghouse research laboratories. Blast F & Steel Pl 35:80 Ap '47
Republic puts 48 in. strip mill into operation. il Blast F & Steel Pl 35:870+ Jl '47; Same. Iron Age 160:135-6 Jl 3 '47
Research on rolling mills. Engineering 163: 439-40 My 23 '47
Rolling mill practice; abstracts of papers at spring meeting of Association of iron and steel engineers. Steel 120:90+ Je 9 '47
Rolling mills recently completed or under construction; tabulation. Steel 121:49 O 27 '47
Rolling mills recently installed or scheduled for early completion; tabulation. Steel 120: 61 Ap 14 '47
Small diameter work rolls feature Montgomery cold strip mill. il diag Steel 121: 88+ O 27 '47
Small precision cold strip mill; Sendzimir mills. il Iron Age 159:49-50 Ja 16 '47
Small Sendzimir mill rolls magnetic alloy; Hiperco. Iron Age 159:86 Je 5 '47
Trends in steel industry; abstracts of papers at meeting of American iron and steel institute. Steel 120:114-16+ My 26 '47
Washington steel corporation now in operation. il Blast F & Steel Pl 35:714 Je '47
Washington Steel starts Sendzimir mill. il Iron Age 159:63-4 Ap 24 '47
Weirton, West Virginia, steel mill rolls mile-a-minute strip. il Manuf Rec 116:41, 69 Je '47

Bearings
Oil-film-type bearings. G. R. Walshaw. diag Iron & Steel Inst J 155:606-8; Discussion. 609-20 Ap '47
Roller bearings. L. R. Pearson. diags Iron & Steel Inst J 155:597-602; Discussion. 611-20 Ap '47
Synthetic-resin bearings. F. W. Jones. Iron & Steel Inst J 155:602-6; Discussion. 608-20 Ap '47
White-metal bearings applied to hot-steel rolling mills. J. M. Borland. diags Iron & Steel Inst J 155:593-7 Ap '47

Electric equipment
Bright-annealing plant for steel strip. B. Jones and I. Jenkins. il diag Engineering 163:92-6 Ja 24 '47
British company installs cold reversing mill. Blast F & Steel Pl 35:262+ F '47; il Engineer 182:493 N 29 '46
La commande électrique par redresseurs d'un train de laminoirs non réversibles aux aciéries de Pompey. diags Génie Civil 124: 351-3 S 15 '47
Constant-tension reel drives. E. S. Murrah. il diags Blast F & Steel Pl 35:205-14 F '47
Electric positioning systems of high accuracy for industrial use. D. E. Garr. il diags Gen Elec R 50:17-24 Jl '47
Electrical highlights in the rolling mill and auxiliary expansion during 1946. H. W. Poole. il Blast F & Steel Pl 35:35-8 Ja '47
Modernized control system increases blooming mill output. E. Frisch. il diags Steel 121:120+ S 15 '47
New tandem cold mill rolls strip at mile-a-minute. J. C. Sullivan. il Steel 120:118+ Je 2 '47
Variable voltage drives for blooming mill tables and feed rolls. Z. W. Whitehouse and A. F. Kenyon. il diags Steel 119:92-4+ D 30 '46
Weirton Steel starts mile-a-minute cold-reduction strip mill. il Iron Age 159:119 My 22 '47

Employees

See also
Steel workers

Equipment
Design of a mill for rolling semi-finished products. J. J. Curtin. diags Blast F & Steel Pl 35:702-6 Je '47
80-in. cold-reduction reversing strip mill at Messrs John Summers and sons, ltd., Shotton, Chester. diags Iron & Steel Inst J 155: 442-4, pl 1-2 Mr '47
Finishing facilities in heavy demand. A. L. Thurman. il Blast F & Steel Pl 35:117-20 Ja '47
Flat car conveyor system serves 66-inch hot strip mill; Weirton steel co. il Steel 120:98 Je 16 '47
Joliet coarse rod mill. R. R. Snow. plan Blast F & Steel Pl 35:687-90 Je '47
New company makes stainless steel sheets and strip; Washington steel corp. il Steel 120:118-20+ Ap 28 '47
New 80-inch cold mill installed by English steelmaker; John Summers & sons. il Steel 120:110+ F 3 '47
Power trucks simplify strip mill operations; Jones & Laughlin steel corp. Mech Handling 34:305 Je '47
Precision powder spreader and other highlights of bearing strip process; Federal-Mogul corp. il Automotive Ind 97:46+ O 1 '47
Some design and operating features of a new blooming mill. G. A. V. Russell and G. W. Fox. diags Iron & Steel Inst J 152:319-30, pl 34-5 no 2 '45; Same. Blast F & Steel Pl 33:1373-9 N '45; Abstract. Engineering 160: 454 N 30 '45; Discussion. Iron & Steel Inst J 152:331-2 no 2 '45

See also
Furnaces, Heating
Rolls (rolling mills)

Gearing
Giant Dominion gear generator cuts rolling mill pinions. il Iron Age 159:71 Mr 6 '47

Lubrication
Lubricating hot strip mills. A. F. Brewer and W. H. Mandy. il diags Steel 119:90-3+ D 9; 94-6+ D 16 '46

Safety measures
Life-saving switch tags; American rolling mill co. il Steel 120:98 F 3 '47

ROLLS (paper machinery)
Characteristics of the jacketed steel dryer roll. G. L. Snyder. Paper Ind 29:430-2 Je '47
Dandy roll drive for fine paper manufacture. H. D. Johnston. il diags Paper Tr J 125: 53-6 Ag 7 '47; Same cond. Paper Ind 29: 116+ Ap '47
Development of jacketed-type steel drier rolls. W. H. Funk. il diags Paper Tr J 123: 26+ D 26 '46; Same. Welding J 26:314-19 Ap '47; Same cond. Paper Ind 28:1496-9 Ja '47
Loading industrial machinery pneumatically. il diag Comp Air Mag 52:124-5 My '47
Overlubricated bearings are likely to injure rubber rolls. Paper Ind 29:251-2 My '47; Same. Pulp & Pa of Can 48:85 Ag '47
Possibilities of the new dandy roll drive. P. S. Sinclair. Paper Ind 28:1651 F '47
Rubber rolls in the paper industry. H. Hulmes. Paper Ind 28:1646-8 F '47
Study of dryer operation to determine cause of failures. H. M. Spring. il Paper Tr J 124:104+ My 29 '47; Same. Paper Ind 29: 1042-5 O '47
Tips on grinding rubber covered rolls. Paper Ind 28:1637-8 F '47

ROLLS (rolling mills)
Floats 63-ton backup roll on oil film. il Steel 119:107 N 18 '46
Improved hold-down roll for pickling. il Iron Age 160:72 Jl 3 '47
Reconditioning hot mill rolls. R. S. Trimble. il Iron Age 160:71-3 S 18; 77-80 S 25 '47
Tungsten carbide rolls for wire flattening. E. C. Slick and R. E. White. il Iron Age 160: 74-7 O 9 '47
Worn mill rolls rebuilt by welding 6½ tons on work face. il Iron Age 159:80 My 22 '47

Manufacture

Bottom pouring steel mill rolls; illustrations with text. Iron Age 160:123 Ag 7 '47
Casting steel mill rolls. il Steel 121:80-2+ S 22 '47
Making of a roll: illustrations. Blast F & Steel Pl 35:1096-7 S '47

Testing

Supersonic inspection for internal fissures in cast rolls. J. Dugan. il Steel 121:80-1+ Jl 28 '47

ROLLS (rubber machinery)
Resurfacing freeze rolls by metal spraying method. il Rubber Age 61:68 Ap '47

ROLLS (textile machinery)
Ball-bearing top rolls reduce costs. il Textile World 97:169 S '47

ROOFING
Roofer, once a lone wolf with a single skill, is now a merchant. C. N. Nichols. il Sales Management 59:83-4+ S 15 '47
Sheet metal workers' catechism (cont). W. Neubecker. diags Sheet Metal Worker 37: 54+ D '46; 38:94 F; 62 Ap; 74+ Je; 70 S '47

See also
Shingles, Asphalt

ROOFING, Copper
Unusual copper roofing work; Orthodox Catholic edifice in Bridgeport, Conn. il diags Sheet Metal Worker 38:39-41+ My '47

ROOFING paper. See Paper, Roofing

ROOFS
New roof completed for Westchester county center. Eng N 138:11 Ja 2 '47
Overhang roof and cornice studies. diags Brick & Clay Rec 110:28 My '47
Roof cooling. R. Pepper. Mech Eng 68:1081 D '46
Roof-top roadways; abstracts and discussion. T. R. Cave-Brown-Cave; D. H. McPherson. Engineer 184:243-4 S 12 '47; Engineering 164:294 S 26 '47
Timber trusses of cathedral roof supported by outside cantilever beams; St Patrick's, New York. il diags Eng N 137:720-1 N 28 '46

See also
Beams and girders
Building
Cornices
Factories—Roofs
Flashing

ROOFS, Aluminum
Aluminum in rural construction. F. B. Hastings. il Sheet Metal Worker 38:48-9 Je '47
Mormon Tabernacle reroofed with aluminum. il Sheet Metal Worker 38:57-8+ Ag '47
Recommended application methods for aluminum roofing and siding. J. S. Pollack. il diags Sheet Metal Worker 37:36-9 N '46; Same cond. Mech Eng 68:1080-1 D '46; Excerpt. Steel 119:107+ D 9 '46

ROOFS, Concrete
Hipped plate construction. G. Winter and Minglung Pei. bibliog il diags Am Concrete Inst J 18:505-31 Ja '47
Reconstruction of the Halifax high service reservoir. R. M. Doull and J. D. Kline. il diag Am Water Works Assn J 39:503-14 Je '47; Same. Water & Sewage 85:32-7 S '47; Same cond. Eng N 139:187-91 Ag 7 '47
Stadium roof hung from hollow girder; Seattle's high school memorial stadium. il Concrete 55:7 O '47

ROOFS, Tank. See Oil tanks—Roofs

ROOMS
See also
Bathrooms
Kitchens
Laundries (rooms)

ROOSEVELT, Franklin Delano, 1882-1945
Fortune survey; the Roosevelt legend. Fortune 35:10+ Mr '47

ROOSEVELT and son
Roosevelt & son is 150 years old. Comm & Fin Chr 165:749 F 6 '47

ROPE
Fiber rope; types, care. il Nat Safety N 55: 115-16 Mr '47
Saran rope. Chem Eng 54:167-8 O '47

See also
Wire rope

Advertising

Rope manufacturer coordinates sales promotion with advertising; Plymouth cordage company. A. Bernstein. il Ind Marketing 32:116+ O '47

ROPE, Nylon. See Nylon rope

ROPES, Ernest Chapin, 1877-
Retires from OIT. For Comm W 29:15 O 11 '47

ROPEWAYS. See Cableways

ROSCOELITE
Composition of roscoelite. R. C. Wells and W. W. Brannock. In U S Geol S Bul 950: 121-7 '46

ROSENBLATT, Sol Ariah, 1900-
Garment umpire. pors Bsns W p99 Je 14 '47

ROSIN
Composition of rosin size precipitate; occurrence of alumina. D. Price. bibliog Ind & Eng Chem 39:1143-7 S '47
Continuous still, developed for producing rosin, turpentine. il diag Manuf Rec 116: 74-5+ Ja '47
Disproportionated rosin soap in GR-S polymerization. J. T. Hays, A. E. Drake and Y. T. Pratt. bibliog Ind & Eng Chem 39: 1129-32 S '47
Distillation of pine gum to produce turpentine and rosin. il Chem & Eng N 25:440 F 17 '47
Factors that influence rosin sizing. P. Goldsmid. Paper Ind 29:456-7 Je '47
Gum naval stores industry dependent on nation's whims. C. F. Guignon. Paint Oil & Chem R 109:74-5 N 14 '46
Rosin; review of production, exports, stocks and future outlook for prices. M. Gaffney and R. Cargill. Soap & San Chem 22:33-6+ N '46
Special purpose rosin soap GR-S polymers having increased tack. Rubber Age 61:716 S '47
Studies of rosin sizing; use of sulfuric acid. D. Price and D. D. Cameron. bibliog Pulp & Pa of Can (Convention no) 47:142-8 [F] '46; Same. Paper Tr J 123:35-41 D 19 '46; Excerpts. Paper Ind 27:1890-3 Mr '46
Treated natural resins; abstract. H. W. Chatfield. Paint Oil & Chem R 110:29 Ja 9 '47

ROSIN—*Continued*
Will American demand for rosin be maintained? E. E. Holdman. Paint Oil & Chem R 109:74 N 14 '46
See also
Naval stores
Statistics
Naval stores; supply and distribution of turpentine and rosin. Chem Eng 54:121 F '47
ROSSINI, Frederick D.
Portrait. Chem Ind 59:893 N '46
ROTAMETERS
Rotameter and petroleum refinery flow rate management. K. Fischer. il diags Pet Refiner 26:106-12 Ja '47
ROTATING disks. See Disks, Rotating
ROTATION
Analytic definition of a retractable landing gear axis of rotation. R. A. Liming. diags J Aeronautical Sci 14:19-23 Ja '47
Rotation and rigid bodies in relativity theory. N. Rosen. Phys R 71:54-8 Ja 1 '47
Rotational motion in relativity theory. E. L. Hill. Phys R 71:318-19 Mr 1 '47
ROTATION of molecules. See Molecules—Rotation
ROTENONE
Diluents for rotenone; abstract. H. F. Wilson and M. L. Jackson. Soap & San Chem 23: 155 F '47
ROTH, Almon E. 1886-
Portrait. Bsns W p 107 O 18 '47
ROTHAMSTED experimental station
Survey of the work of Rothamsted experimental station; abstract. W. G. Ogg. Chem & Ind p194-5 Ap 12 '47
ROTONOID
Solenoid motor produces constant torque instead of thrust. il Sci Am 177:32 Jl '47
ROTORS
Bending of rotor blade in the plane of rotation. Shao Wen Yuan. J Aeronautical Sci 14:285-93 My '47
Bending of rotor blades. A. H. Flax. bibliog J Aeronautical Sci 14:42-50 Ja '47; Discussion. D. O. Dommasch. 14:251-2 Ap '47
Centrifugal fields. J. W. Beams and J. L. Young, 3d. Phys R 71:131 Ja 15 '47
Investigation of the airflow underneath helicopter rotors. R. S. Ross. il diags J Aeronautical Sci 13:665-77 D '46
Jet propulsion applied to helicopter rotors. R. H. Miller. J Aeronautical Sci 13:639-45 D '46
Production of high centrifugal fields. J. W. Beams, J. L. Young, 3d and J. W. Moore. bibliog diags J Ap Phys 17:886-90 N '46
Stress analysis of rotor blades. G. Horvay. bibliog diags J Aeronautical Sci 14:315-33 Je '47; Correction. 14:544 S '47
Testing
Testing dynamic balance; checking rapidly rotating bodies. diag Electrician 139:846 S 19 '47
ROTORS (electric machinery)
Centrifugal casting copper-spun rotors. G. A. Anderson. il Steel 120:96-7+ Ap 28 '47
Continuous soldering of small motor rotors using high-frequency heat. W. L. Tesch and P. A. Greenmeyer. il Materials & Methods 25:94-6 Je '47
Copperspun squirrel-cage rotor, cast of copper by a centrifugal process. G. R. Anderson. il diags Elec Eng 66:980-2 O '47
National broach & machine company Roto Shaver. il diags Product Eng 18:120-1 S '47
Oblique-section rotor for lightweight synchro motor; Synchrotrol unit. il diag Product Eng 18:102-3 Ag '47
Operation of large turbo-alternators to reduce rotor winding deformation. R. H. Coates and B. C. Pyle. il diags Inst E E J 93 pt 2:192-204 bibliog(p204) Ap '46; Discussion. 93 pt 2:204-12; 94 pt 2:92-8, 155-7 Ap '46, F, Ap '47
Red Ring shaving machine for finishing rotors. il Mach 53:187 Mr '47
Squirrel-cage rotor; patent. diag Electrician 137:1831 D 27 '46
Temperature indicator for alternator rotors. il diags Engineering 164:391-2 O 24 '47
ROTOTILLER. See Agricultural machinery
ROTOTROL
Automatic operation of the electric arc furnace; Rototrol regulator. H. G. Frostick. il diag Steel 121:104+ Ag 4 '47
Bigger digger, an electronic Hercules; walking dragline operated by International minerals and chemical corporation. J. A. Barr, jr. il Rock Prod 49:66-7+ N '46
Modernized control system increases blooming mill output. E. Frisch. il diags Steel 121:120+ S 15 '47
ROTTERDAM, Netherlands
Le bombardement de Rotterdam, ses effets sur les constructions en béton armé; la reconstruction du port et du théâtre municipal. A. Bijls. il plans diags Génie Civil 124: 325-8 S 1 '47
Postscript on Rotterdam. il Arch Rec 100: 22 D '46
ROUGH notes (periodical)
Who reads Rough Notes? Rough Notes 90: 32+ Ja '47
ROUGHNESS measurement. See Surfaces—Smoothness testing
ROUNDHOUSES
Aluminum roof trusses for an enginehouse. il Eng N 138:820-1 My 15 '47
Enginehouse maintenance procedures on New York Central Niagaras. il Ry Mech Eng 121:364-7, 413-15 Jl-Ag '47
Locomotive shed at Avignon. il diag Engineer 184:299 S 26 '47
New York Central rebuilds enginehouse at busy Englewood terminal. il plan Ry Age 123:195-7 Ag 2 '47
Timber roundhouse defies earthquakes; structure recently built on Northern Pacific. il diags Ry Age 122:1298-300 Je 28 '47
See also
Locomotive terminals
ROUTING systems
Building high output Diesel engines; GMC Cleveland engine division. J. Geschelin. il Automotive & Aviation Ind 95:18-24+ D 1 '46
Non-stop production via conveyors; Zenith radio corporation, Chicago. il Factory Management 105:97-9 Je '47
Plant layout with us is a cost-cutting tool; R. G. Le Tourneau, inc. O. W. Nelson. il Factory Management 105:57-9 Ap '47
ROWE, Frederick Maurice, 1891-1946
Sketch. Chem & Ind p46-7 Ja 18 '47
ROWE, Leo Stanton, 1871-1946
Sketch. Comm & Fin Chr 164:3279 D 19 '46
Sketch. E. M. Patterson. por Ann Am Acad 249:frontispiece Ja '47
ROWE, William H.
Machine as salesman; the Rowe corp. automatic cigarette dispensing. por Fortune 35:116-21 Mr '47
ROWELL, George P.
Old-timer stages come-back; Ripans, originated by G. P. Rowell, still sells. Ptr Ink 218:46-7 F 28 '47
ROWELL, George S.
Rowell tells story of the multilith invention. E. St John. Inland Ptr 118:70-1 F '47
ROWNTREE and company, limited
Statement by the chairman at annual meeting. G. J. Harris. Economist 152:562 Ap 12 '47
ROYAL aeronautical society
Annual report of the council, 82d, 1946-1947. Roy Aeronautical Soc J 51:451-70 My '47
Joint conference with Institute of aeronautical sciences, London, Sept. 3-5. Aero Digest 55:25+ O '47
Joint meeting with the Institute of the aeronautical sciences, London, Sept. 3-5; with abstracts of papers. Aeronautical Eng R 6:5 S; 12-25 O '47
ROYAL Dutch-Shell group
Shell group plans huge expansion program in spite of high costs. F. Godber. Oil & Gas J 46:60-1 Ag 23 '47
Shell's world-wide crude production at record high in 1946. Oil & Gas J 46:81 Je 28 '47

ROYAL institution of Great Britain
Work of the Royal institution in physical chemistry. E. K. Rideal. Engineering 164: 211-12 Ag 29 '47; Abstract. Chem Age (Lond) 57:267-8 Ag 23 '47

ROYAL-LIVERPOOL insurance companies
Group premiums totaled $73,631,786 last year. East Underw 48:20 F 28 '47

ROYAL observatory, Greenwich. See Greenwich royal observatory

ROYAL society of London
Royal society conversazione, May 29. Engineering 163:481-2 Je 6 '47; Engineer 183: 492-3 Je 6 '47

ROYAL typewriter company
Earnings rises brings bigger dividends. Barron's 27:29 Je 16 '47

ROYALTIES
See also
Oil lands—Royalties

Taxation

How to assign income from invention royalties with minimum tax to donor. S. A. Gutkin and D. Beck. J Account 84:304-9 O '47

RUBBER
Difficulties encountered when used in tension. diags Automobile Eng 37:168 My '47
Effect of rubber tubing upon the stability of penicillin and streptomycin solutions. J. B. Huelsebusch and others. Science 104: 479-80 N 22 '46
Elastic losses in some high polymers as a function of frequency and temperature. H. S. Sack and others. bibliog il diags J Ap Phys 18:450-6 My '47
Elasticity explained. E. A. Hauser and D. S. le Beau. il diag Sci Am 177:204-6 N '47
Mangabeira latex and rubber. N. Bekkedahl and W. Saffioti. bibliog il Rubber Age 60: 553-61 F '47; Same. J Res Nat Bur Stand 38:427-38 Ap '47
Morphology of lyogels. E. A. Hauser and D. S. le Beau. bibliog il J Phys & Colloid Chem 51:278-85 Ja '47
Natural rubbers; general summary of their composition, properties and uses. N. Bekkedahl. India Rubber World 116:57-61+ Ap '47
Recent advances in the physics and chemistry of rubber. L. R. G. Treloar and others. bibliog diags Rubber Age 59:694-6; 60:71-3+, 443-6, 567-71, 693-5; 61:329-31 S-O '46, Ja-Mr, Je '47
Rubber-asphalt joint fillers. R. H. Lewis. Pub Roads 24:291-8 Ja '47
Rubber, natural and synthetic; symposium abstracts. G. Martin and others. Chem & Ind p210-11 Ap 19 '47
Rubber research and technology at the National bureau of standards. L. A. Wood. bibliog(174 titles) U S Nat Bur Stand Misc Pub M185:1-22 pa 10c Supt. of doc. '47; Same. India Rubber World 115:789-97 Mr '47
Saving paving; rubber-base compounds for sealing pavement joints. R. B. Jennings. diags Pub Works 78:25-6 Ap '47
Sealing joints with rubberized asphalt; Packard test track. B. Gould. il Roads & Sts 90:91-2+ F '47
Statistical properties of networks of flexible chains. H. M. James. J Chem Phys 15:651-68 S '47
Tetrafunctional graph for appraising plasticizer performance in vulcanized rubbers. T. C. Patton and M. K. Smith. India Rubber World 115:666-9 F '47
Theory of the increase in rigidity of rubber during cure. H. M. James and E. Guth. bibliog J Chem Phys 15:669-83 S '47

See also
Electrodeposition of rubber
Guayule
Rubber industry and trade
Rubber plants and planting
Tires, Automobile
Tires, Rubber
Vulcanization

Aging

Absorption of oxygen by rubbers. A. S. Carpenter. bibliog diag Ind & Eng Chem 39: 187-94 F '47
Aging and preservation of vulcanized rubber. G. Reinsmith. bibliog il India Rubber World 117:65-8+ O '47 (to be cont)
Oxidation of GR-S and other elastomers. J. O. Cole and J. E. Field. bibliog Ind & Eng Chem 39:174-9 F '47

See also
Rubber, Artificial—Aging

Analysis

Carbon and hydrogen in rubber hydrocarbon. H. J. Wing. Science 105:363-4 Ap 4 '47
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Minor element content of rubber and rubber plants. J. McGavack. bibliog il Rubber Age 60:565-6 F '47
Rubber determination in young guayule; studies on the Spence-Caldwell method. R. L. Holmes and H. W. Robbins. bibliog Anal Chem 19:313-17 My '47

Bibliography

Advances in rubber during 1946. E. F. Riesing and J. O. Callouette. bibliog(172 titles) Rubber Age 60:311-18 D '46; Same. India Rubber World 115:519-24 Ja '47; Same. Mech Eng 69:373-9 My '47
Hard rubber; summary of literature from start of World war II [270 references]. F. S. Malm. Ind & Eng Chem 39:1243-8 O '47
List of technical reports available from Commerce department. Rubber Age 59:460, 719; 60:462, 589; 61:599, 727; 62:80, 202 Jl, S '46, Ja-F, Ag-N '47
OPB bibliography reports on rubber products. India Rubber World 114:373+, 522+, 812-13; 115:75-6, 410, 710; 116:659+, 854+; 117:116+, 274 Je-Jl, S-O, D '46, F, Ag-N '47
Recent Russian literature on natural and synthetic rubber (cont). M. Hoseh. India Rubber World 113:390-1, 508; 114:63-6, 374-5, 521+; 115:73-4, 216, 518+; 116:62+ D '45-Ja, Ap, Je-Jl, O-N '46, Ja, Ap '47
Reports on rubber problems; Technical advisory service of the Smaller war plants corporation. Rubber Age 61:86 Ap '47
Rubber bibliography. Published in monthly numbers of India rubber world

Chemistry

Addition of thio-compounds to olefins; reactions of thioglycollic acid, thiophenol, and *iso*pentanethiol. J. I. Cunneen. Chem Soc J p36-40 Ja '47
Addition of thio-compounds to olefins; reactions of thiolacetic and mono-, di-, and trichlorothiolacetic acids. J. I. Cunneen. Chem Soc J p 134-41 F '47
A.C.S. Division of rubber chemistry fall meeting, New York; abstracts of papers. India Rubber World 116:646-51 Ag '47; Same. Rubber Age 61:574-80 Ag '47
Division of rubber chemistry, A.C.S. meeting, Cleveland, May 26-28; abstracts of papers. Rubber Age 61:197-204 My '47; India Rubber World 116:212-17 My '47
Oil-resisting rubber; swelling of rubber and interaction with liquids. Chem Age (Lond) 57:429-30 S 27 '47
Physico-chemical aspects of reinforcement. G. Antonoff. bibliog diags Rubber Age 60: 187-92 N '46
Recent advances in the chemistry and physics of rubber; abstract. J. Wilson. Chem & Ind p26 Ja 11 '47
Recent advances in the physics and chemistry of rubber; molecular resonance and its bearing on the chemistry of rubber and related compounds. L. Bateman. Rubber Age 60:567-71 F '47
Rubber division meets in Cleveland. Chem & Eng N 25:1732-3 Je 16 '47
Sulfur linkage in vulcanized rubber; reaction of sulfur with 2-methyl-2-butene. M. L. Selker and A. R. Kemp. bibliog diag Ind & Eng Chem 39:895-900 Jl '47

See also
Rubber chemicals
Vulcanization

Curing

See Vulcanization

Cutting

See Rubber cutting

RUBBER—*Continued*

Drying

Drying sheet rubber. il Elec R (Lond) 141: 350 S 5 '47
Infra-red drying of sheet rubber. il Engineer 184:253 S 12 '47

Electric properties

Conductive rubber ceilings used in radiant heating of Tennessee test residence. il Heat & Ven 44:100 My '47
Electrical conductivity of GR-S and natural rubber stocks loaded with Shawinigan and R-40 blacks. P. E. Wack and others. bibliog il J Ap Phys 18:456-69 My '47
Electrically conducting rubber. Elec Eng 66: 778 Ag '47
Electrified ceilings for house heating; heating element of conductive rubber. il Sheet Metal Worker 38:57+ Je '47

Freezing

Freezing permits precision machining of rubber. H. O. McMahon. Chem Ind 60:106 Ja '47

Joining to metal

Bonding rubber to metal with Ty-Ply. R. Shattuck. il Rubber Age 61:451-4 Jl '47
Le collage du caoutchouc aux métaux. J. G. Duval and J. Gossot. bibliog Chimie & Ind 57:540-4 Je '47
Practical design of rubber parts. E. E. Blaurock. diags Machine Design 19:115-20 Mr '47; Same. Mech Eng 69:394-8 My '47

Latex

See Rubber, Artificial—Latex; Rubber latex

Manufacture

Crude rubber preparation; sheet production by continuous coagulation of hevea latex. E. B. Newton, W. D. Stewart and E. A. Willson. bibliog il Ind & Eng Chem 39:978-84 Ag '47
Elastic constants of materials loaded with non-rigid fillers. J. M. Dewey. bibliog J Ap Phys 18:578-81 Je '47
Evaluation of guayule rubber; development of testing formulae. W. F. L. Place and F. E. Clark. bibliog India Rubber World 115:370-3 D '46
Modern rubber mixing; Dunlop rubber factory at Speke. il diag Elec R (Lond) 141: 47-51 Jl 11 '47
Panel discussion on processing of natural and synthetic rubber. Rubber Age 60:326-37 D '46
Plasticizer-filler mixtures and their dispersion in rubber. F. S. Rostler and H. I. du Pont. bibliog Ind & Eng Chem 39:1311-22 O '47
Plasticizing GR-S and natural rubber. A. R. Davis. bibliog Ind & Eng Chem 39:94-100 Ja '47
Present position and future possibilities of rubber accessory substances; abstract. W. J. S. Naunton. Chem & Ind p210 Ap 19 '47
Silicone oil improves rubber; abstract. H. J. Collyer and E. M. Dannenberg. Chem Eng 54:248+ Ag '47
Use of high temperature fluid in rubber manufacturing processes; Hydrotherm system. P. L. Geiringer. il diags Rubber Age 60:447-9 Ja '47

See also

Carbon black
Rubber, Artificial—Manufacture
Rubber chemicals
Rubber factories
Rubber goods—Manufacture
Rubber machinery
Vulcanization

Oil resistance

Oil-resisting rubber; swelling of rubber and interaction with liquids. Chem Age (Lond) 57:429-30 S 27 '47

Patents

Patents and trade marks. Published in monthly numbers of India rubber world

Permeability

Permeability of different rubbers to gases and its relation to diffusivity and solubility. G. J. van Amerongen. bibliog diags J Ap Phys 17:972-85 N '46

Prices

Price battle in rubber. Barron's 27:29 Je 9 '47
Rubber plunges to new low. Barron's 27:35 Je 30 '47
Rubber turnabout; prices of natural climb past synthetic's. Bsns W p25 O 25 '47

Protection

Aging and preservation of vulcanized rubber. G. Reinsmith. bibliog il India Rubber World 117:65-8+ O '47 (to be cont)

Reinforcement

Heats of adsorption on carbon black. R. A. Beebe and others. bibliog diag Am Chem Soc J 69:95-101 Ja '47
Pliolite copolymer resins and their uses. H. R. Thies and W. H. Aiken. diags Rubber Age 61:51-8 Ap '47
Rubber reinforced with lignin; abstracts. J. J. Keilen and A. Pollak. Chem Eng 53:298+ N '46; Rubber Age 60:698 Mr '47
Wood cellulose in rubber compounding. P. M. Goodloe and others. il Rubber Age 61:697-703 S '47

Strength

Influence of molecular structure on the elasticity and tensile strength of rubber; abstract and discussion. G. Gee. Chem & Ind p 130 Mr 15 '47

Swelling

Oil-resisting rubber; swelling of rubber and interaction with liquids. Chem Age (Lond) 57:429-30 S 27 '47
Solubilities of unvulcanized rubbers. D. V. Sarbach and B. S. Garvey, jr. India Rubber World 115:798-801 Mr '47
Swelling of rubber; comparative swelling of vulcanized natural rubber and synthetic rubbers in organic liquids. F. S. Rostler and R. M. White. bibliog Rubber Age 61: 313-21 Je '47
Swelling of rubber; effect of carbon blacks on the swelling of vulcanized GR-S. F. S. Rostler and R. E. Morrison. bibliog Rubber Age 61:59-62 Ap '47

Temperature effect

Method of measuring heat embrittlement of GR-S and hevea rubber compounds. A. W. Scholl and J. W. Liska. il diag India Rubber World 115:663-5+ F '47
New rubber-testing cold room. il Aero Digest 54:78 Ap '47

Testing

Accelerated ozone weathering test for rubber. J. Crabtree and A. R. Kemp. bibliog il diags Ind & Eng Chem Anal ed 18:769-74 D '46
A.S.T.M. committee D-11 Atlantic City meeting. India Rubber World 116:651-3 Ag '47
A.S.T.M. meeting; symposium on rubber testing. India Rubber World 116:509-10 Jl '47; Rubber Age 61:458 Jl '47
Automatic spark recorder for stress-strain testing. R. Shearer. il diag India Rubber World 116:498+ Jl '47
Brabender plastograph in the rubber laboratory. A. E. Juve and D. C. Hay. bibliog il India Rubber World 117:62-4+ O '47
Correlation of laboratory and service abrasion tests. A. E. Juve and others. India Rubber World 116:208-10 My '47
Development and standardization of tests for evaluating the processibility of rubber. R. H. Taylor and others. bibliog il diags Rubber Age 61:567-73, 705-10+ Ag-S '47
Evaluation of guayule rubber; development of testing formulae. W. F. L. Place and F. E. Clark. bibliog India Rubber World 115:370-3 D '46
Exposure cracking of rubber; effect of ozone. J. H. Fielding. il India Rubber World 115: 802-5 Mr '47
Low temperature characteristics of elastomers. S. D. Gehman, D. E. Woodford and C. S. Wilkinson, jr. bibliog il diag Ind & Eng Chem 39:1108-15 S '47
Method of measuring heat embrittlement of GR-S and hevea rubber compounds. A. W. Scholl and J. W. Liska. il diag India Rubber World 115:663-5+ F '47
Precision of tests for tear resistance. R. E. Morris and R. U. Bonnar. bibliog il diags Anal Chem 19:436-8 Jl '47

RUBBER—Testing—*Continued*
Tear resistance of vulcanized rubber. G. Reinsmith. bibliog diags India Rubber World 116:499-503+ Jl '47
Torsion of a rubber cylinder. R. S. Rivlin. il J Ap Phys 18:444-9 My '47; Correction. 18:837 S '47; Same. J Res Nat Bur Stand 38:637-42 Je '47

Uses
Future of the rubber manufacturing industry. A. Healey. Rubber Age 61:445-50 Jl '47

Vulcanization
See Vulcanization

RUBBER, Artificial
Acrylic rubber available; Lactoprene EV. Chem & Eng N 25:3238-9 N 3 '47
Address before American petroleum institute. T. G. Graham. Am Pet Inst Proc 26(1):58-60 '46
American rubber in 1946. J. T. Cox, jr. Chem & Eng N 25:82-3 Ja 13 '47
Chemical engineering materials of construction; review of literature from start of World war II; elastomers. H. L. Fisher. bibliog(60 ref) Ind & Eng Chem 39:1210-12 O '47
Continued development of synthetic rubber urged. J. E. Hale. Nat Pet N 39:47 Ja 15 '47
Continuous preparation of butadiene-styrene copolymer. J. J. Owen, C. T. Steele and P. T. Parker. Ind & Eng Chem 39:110-13 Ja '47
Division of high-polymer physics, American physical society, schedules three-day technical session; abstracts of papers. Rubber Age 60:453-5 Ja '47; India Rubber World 115:526-8 Ja '47
Elastic losses in some high polymers as a function of frequency and temperature. H. S. Sack and others. bibliog il diags J Ap Phys 18:450-6 My '47
Elasticity of rubber-like materials. L. R. G. Treloar. bibliog Rubber Age 60:193-6+ N '46; Same. Can Chem & Process Ind 30: 33-6+ N '46
Evaluation of synthetic rubbers in organic protective coatings. Paint Oil & Chem R 109:35-6 N 14 '46
Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47
Frictional properties of oil-seal materials. P. G. Forrester. il diags Engineering 164:121-4 Ag 8 '47
Governmental activities in the production of synthetic rubber. W. R. Hucks. India Rubber World 116:347-50 Je '47
High polymer forum features A.C.S. Atlantic City meeting; abstracts of papers. Rubber Age 61:69-73 Ap '47; India Rubber World 116:72-5 Ap '47
Minutes of rubber consulting technical committee meetings. Rubber Age 60:585-7, 707-8; 61:212-13, 345-7 F-Mr, My-Je '47
Molecular weight of GR-S fractions; simple glass osmometer for use in hydrocarbon solvents. D. M. French and R. H. Ewart. bibliog diag Anal Chem 19:165-7 Mr '47
Natural vs. synthetic battle begins early. India Rubber World 115:232-3 N '46
New polymers authorized by Office of rubber reserve, Reconstruction finance corporation (cont). Rubber Age 60:219, 469 N '46, Ja '47
New rubber for high, low temperatures; silicone rubber. il Refrig Eng 53:42 Ja '47
New synthetic rubber; chlorinated styrene. Bsns W p56-7 Jl 19 '47
Permeability of different rubbers to gases and its relation to diffusivity and solubility. G. J. van Amerongen. bibliog diags J Ap Phys 17:972-85 N '46
Personal observations on the development of the synthetic rubber program; abstract. B. S. Garvey, jr. India Rubber World 116:511 Jl '47
Prospects for the synthetic rubber industry. R. P. Dinsmore. India Rubber World 115: 359-61 D '46; Excerpts. Chem Eng 53:244+ D '46
Recent developments. il diags Product Eng 18:[123-9] insert 11-17 Ap '47
Rubber companies' outlook, present and future. H. Murphy; C. R. Sutton. Barron's 27:11+ Ja 20 '47
Rubber in review. Economist 152:989-91 Je 21 '47
Rubberlike products from linear polyesters. B. S. Biggs, R. H. Erickson and C. S. Fuller. bibliog il diags Ind & Eng Chem 39:1090-7 S '47
Silicone rubber finds increasing applications. il Mach 53:182-3 Ap '47
Silicone rubber for industrial products. il Mech Eng 68:1079-80 D '46
Silicone rubber; properties and applications. E. M. Irish and J. R. Stirrat. il diags Product Eng 18:146-50 F '47
Silicone rubber used for high temperature gaskets. Elec World 128:68+ Ag 30 '47
Simplex favors synthetic compounds over natural rubber in wire and cable. H. A. Morss, jr. Elec World News ed 126:16 D 14 '46
Special purpose rosin soap GR-S polymers having increased tack. Rubber Age 61:716 S '47
Synthetic rubber; a protected or a free industry. R. F. Wolf. India Rubber World 116:641-2 Ag '47
Tables of standard, special-purpose, and experimental, GR-S polymers and latices, Office of rubber reserve, RFC, February 1, 1947. India Rubber World 115:808-10 Mr '47; Same cond. Rubber Age 61:81 Ap '47
Tetrafunctional graph for appraising plasticizer performance in vulcanized rubbers. T. C. Patton and M. K. Smith. India Rubber World 115:666-9 F '47
Thermoplastic specialty resins. W. H. Aiken. il Mod Plastics 24:100-2 F '47
Trouble in synthetic rubber. il Fortune 35: 114-19+ Je '47
Truman supports maintenance of synthetic rubber; hearings on rubber legislation begin. India Rubber World 115:818-23 Mr '47
Uses and processing of silicone rubber. il Mod Plastics 24:102-4 D '46
Uses of silicone rubber in high-temperature field. il Steel 119:80 D 30 '46
Vinyl elastomers for extrusion and molding. G. W. Jargstorff. il India Rubber World 116:797-8 S '47
Vulcanization of GR-S with halogen compounds. B. M. Sturgis, A. A. Baum and J. H. Trepagnier. bibliog Ind & Eng Chem 39:64-8 Ja '47
World economic trends and the future of synthetic rubber. W. F. Zimmerli. India Rubber World 116:197-8+ My '47

See also
Neoprene
Thiokol

Aging
Effect of oxidation on the plasticity and solubility of GR-S. R. D. Juve. bibliog India Rubber World 115:657-8 F '47
Oven and bomb aging of GR-S at corresponding temperatures. J. R. Shelton and H. Winn. Ind & Eng Chem 39:1133-6 S '47

Analysis
Development of methods of chemical analysis of synthetic rubber. W. P. Tyler and T. Higuchi. bibliog India Rubber World 116: 635-8+ Ag '47

Bibliography
Advances in rubber during 1946. E. F. Riesing and J. O. Callouette. bibliog(172 titles) Rubber Age 60:311-18 D '46; Same. India Rubber World 115:519-24 Ja '47; Same. Mech Eng 69:373-9 My '47
Hard rubber; summary of literature from start of World war II [270 references]. F. S. Malm. Ind & Eng Chem 39:1243-8 O '47
List of technical reports available from Commerce department. Rubber Age 59:460, 719; 60:462, 589; 61:599, 727; 62:80, 202 Jl, S '46, Ja-F, Ag-N '47
OPB bibliography reports on rubber products. India Rubber World 114:373+, 522+, 812-13; 115:75-6, 410, 710; 116:659+, 854+; 117:116+, 274 Je-Jl, S-O, D '46, F, Ag-N '47
Recent Russian literature on natural and synthetic rubber (cont). M. Hoseh. India Rubber World 113:390-1, 508; 114:63-6, 374-5, 521+; 115:73-4, 216, 518+; 116:62+ D '45-Ja, Ap, Je-Jl, O-N '46, Ja, Ap '47

RUBBER, Artificial—*Continued*

Chemistry

A.C.S. Division of rubber chemistry fall meeting, New York; abstracts of papers. India Rubber World 116:646-51 Ag '47; Same. Rubber Age 61:574-80 Ag '47

American chemical society meeting, New York, Sept. 15-19; abstracts of papers. India Rubber World 117:76-83 O '47

Available GR-S polymers. J. L. Brady. il India Rubber World 115:509-14 Ja '47

Basic petroleum chemistry for refinery employes; petrochemicals. J. J. Stadtherr. bibliog Pet Refiner 26:115-17 Ja '47

Chemical institute of Canada, Rubber division meeting, Banff, June 10; abstracts of papers. Rubber Age 61:205 My '47

Division of rubber chemistry, A.C.S. meeting, Cleveland, May 26-28; abstracts of papers. Rubber Age 61:197-204 My '47; India Rubber World 116:212-17 My '47

Effects of impurities on copolymerization of butadiene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:893-5 Jl '47

Effects of impurities on copolymerization of isoprene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:887-93 Jl '47

Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47

Equilibrium constants of some reactions involved in the production of 1,3-butadiene. F. G. Brickwedde, M. Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37:263-79 N '46

Large scale distillation of isoprene; emulsion copolymerization of isoprene with styrene. C. F. Fryling. bibliog Ind & Eng Chem 39: 882-6 Jl '47

Oxidation of GR-S and other elastomers. J. O. Cole and J. E. Field. bibliog Ind & Eng Chem 39:174-9 F '47

Properties of polymers as functions of conversion; molecular weights of bottle polymerized GR-S. F. T. Wall and L. F. Beste. bibliog Am Chem Soc J 69:1761-4 Jl '47

Research leading to commercial butadiene synthetic rubber; Charles Goodyear memorial lecture. W. L. Semon. bibliog(59 ref) il Chem & Eng N 24:2900-5 N 10 '46; Same. bibliog(36 ref) India Rubber World 115: 364-9+ D '46

Study of the structure of butadiene polymers by means of ozonolysis. N. Rabjohn and others. bibliog Am Chem Soc J 69:314-19 F '47

See also
Rubber, Artificial—Research

Electric properties

Electrical conductivity of GR-S and natural rubber stocks loaded with Shawinigan and R-40 blacks. P. E. Wack and others. bibliog il J Ap Phys 18:456-69 My '47

Latex

Applications for neoprene latex. R. H. Walsh. il Rubber Age 61:187-93 My '47; Abstract. India Rubber World 116:75 Ap '47

Chilled latex converted into synthetic rubber film. Sci Am 177:76 Ag '47

Control of pH of neoprene latex. H. K. Livingston and R. H. Walsh. bibliog Ind & Eng Chem 38:1262-5 D '46

Creaming neoprene latex. H. K. Livingston. bibliog Ind & Eng Chem 39:550-4 Ap '47

Flow properties of pseudoplastic fluids. C. C. Winding, G. P. Baumann and W. L. Kranich. bibliog diags Chem Eng Prog 43: 527-36 O '47 (to be cont)

GR-S latex processing equipment. W. H. Pahl. diags Chem Eng Prog 43:515-22 O '47

Instrument for measuring particle diameters and constructing histograms from electron micrographs. E. E. Hanson and J. H. Daniel. il diags J Ap Phys 18:439-43 My '47

Mechanical applications of latex-dip coatings. F. W. Woerner. Mech Eng 68:1049-52 D '46

New outlets for rubber through latex. C. J. Mighton. India Rubber World 115:659-60 F '47

Some studies on the concentration of German buna and GR-S latices. S. H. Maron and C. Moore. India Rubber World 116:789-91 S '47

Stability of synthetic rubber dispersions; coagulation of neoprene latices by freezing. H. W. Walker. bibliog diag J Phys & Colloid Chem 51:451-60 Mr '47

Stability of synthetic rubber dispersions; low-temperature thickening of neoprene latex. H. K. Livingston. bibliog J Phys & Colloid Chem 51:443-50 Mr '47

Synthetic latices. L. A. Wohler. India Rubber World 116:66-8+ Ap '47

Manufacture

Adsorption of butadiene on activated charcoal. H. N. Taylor and C. F. Bonilla. bibliog diag Ind & Eng Chem 39:871-6 Jl '47

CPA consulting technical committee meetings. India Rubber World 115:671-2, 807-8; 116:218-20, 365-6 F-Mr, My-Je '47

Cold rubber; new catalyst, cumene hydroperoxide. Chem Ind 61:607 O '47

Continuous isolation of GR-M from latex. M. A. Youker. bibliog flow sheet il Chem Eng Prog 43:391-7; Discussion. 397-8 Ag '47

Development of a better processing GR-S. D. L. Schoene and others. bibliog il Ind & Eng Chem 38:1246-9 D '46

Disproportionated rosin soap in GR-S polymerization. J. T. Hays, A. E. Drake and Y. T. Pratt. bibliog Ind & Eng Chem 39: 1129-32 S '47

Effect of quantity of black and softener on GR-S; Philback A-1.75 sulfur system cured at 280° F. L. R. Sperberg, L. A. Bliss and J. F. Svetlik. Ind & Eng Chem 39:511-14 Ap '47

Fire protection for volatile gases. il Safety Eng 93:21+ Ap '47

Fire underwriting; synthetic rubber manufacturing. W. O. Lincoln. Spectator (Property ed) 13:12 Ag 21; 12 S 11 '47

Fluoro-rubber. il Chem Ind 60:770-1 My '47

Impact of synthesis on the rubber industry; abstract. P. Schidrowitz. India Rubber World 116:833-4 S '47

Industrial catalysis. B. B. Corson. il diag J Chem Educ 24:150-5 Mr '47

Industrial wastes; rubber industry. G. M. Hebbard, S. T. Powell and R. E. Rostenbach. bibliog flow diags il Ind & Eng Chem 39:589-95 My '47

Investigations disclose successful disposal methods for synthetic rubber waste. C. C. Ruchhoft and others. Civil Eng 17:59-60 F '47

Lactoprene EV elastomer curing recipes and properties. W. C. Mast and others. bibliog India Rubber World 116:355-60 Je '47

Lignin for reinforcing rubber. J. J. Keilen and A. Pollak. flow sheets Ind & Eng Chem 39:480-3 Ap '47

Los Angeles styrene plant. H. H. Smith. flow diags il Chem Eng Prog 43:152-4 Ap '47

Manufacturers' experience of the use of synthetic rubbers and their economic possibilities; abstract. S. A. Brazier. Chem & Ind p210-11 Ap 19 '47

Panel discussion on processing of natural and synthetic rubber. Rubber Age 60:326-37 D '46

Plasticizing GR-S and natural rubber. A. R. Davis. bibliog Ind & Eng Chem 39:94-100 Ja '47

Processing of channel blacks in a GR-S tread stock. G. L. Brown. il India Rubber World 116:787-8 S '47

Rubber plant pays off; Canada's war-born synthetic plant at Sarnia. il Bsns W p113-14 Mr 15 '47

Safety + secrecy; Kobuta synthetic rubber plant. W. W. Allison. il Nat Safety N 55: 18+ My '47

Use of fatty acids and their soaps in the manufacture of butadiene synthetic rubber. W. L. Semon. bibliog India Rubber World 116:63-5+ Ap '47

Use of peat in synthetic rubber compounds. C. W. Davis. Rubber Age 60:573 F '47

Use of the Amberols in synthetic rubber stocks. Rubber Age 60:449 Ja '47

See also
Butadiene—Manufacture
Neoprene—Manufacture

RUBBER, Artificial—*Continued*

Mixing with resins

Acrylonitrile moves into plastics. il Mod Plastics 25:91-6 O '47

Blended plastics provide wide range of characteristics; phenolic resins and synthetic rubbers. K. Rose. il Materials & Methods 25:69-72 F '47

Characteristics, properties and applications of Geon polyblend. J. E. Pittenger and G. F. Cohan. il Rubber Age 61:563-6 Ag '47; Same. Mod Plastics 25:81-6 S '47

Geon-Hycar polyblends. M. S. Moulton. India Rubber World 116:371-3 Je '47

Geon polyblend for extruding and calendering. il Chem & Eng N 25:2390-1 Ag 18 '47

Phenolic resins improve synthetic rubber goods. C. R. Simmons. il India Rubber World 116:224 My '47

Plastic-and-synthetic-rubber compounds. Barron's 27:24 O 13 '47

Pliolite copolymer resins and their uses. H. R. Thies and W. H. Aiken. diags Rubber Age 61:51-8 Ap '47

Recent developments; plastics-synthetic rubber combinations. il Product Eng 18:[123-9] insert 11-17 Ap '47

Moisture content

Low moisture absorptive GR-S. W. T. L. Ten Broeck and R. D. Juve. India Rubber World 116:781-2 S '47

Moisture transfer to and from tire cords encased in GR-S. W. J. Lyons and others. il India Rubber World 116:199-204+ My '47

Patents

Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47

Research

Action of safety fuel hydrocarbons on Perbunan compounds. R. M. Howlett and E. N. Cunningham. bibliog Rubber Age 60: 562-4 F '47

Bonding Buna rubbers with diisocyanates; abstract. O. Bayer. Rubber Age 61:204 My '47

Development of a better processing GR-S. D. L. Schoene and others. bibliog il Ind & Eng Chem 38:1246-9 D '46

Effect of fungicides on natural and synthetic rubber. J. L. Stief, jr. and J. J. Boyle. Ind & Eng Chem 39:1136-8 S '47

Effect of oxidation on the plasticity and solubility of GR-S. R. D. Juve. bibliog India Rubber World 115:657-8 F '47

Elasticity measurements on polychloroprenes. P. Kinell. bibliog diag J Phys & Colloid Chem 51:70-9 Ja '47

Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46

Preparation and polymerization of *p*-N,N-dimethylsulfonamidostyrene. G. E. Inskeep and R. Deanin. Am Chem Soc J 69:2237-8 S '47

Relation between gel content, plasticity, and dilute solution viscosity of elastomers. A. L. Back. bibliog(63 ref) Ind & Eng Chem 39:1339-43 O '47

Research leading to commercial butadiene synthetic rubber; Charles Goodyear memorial lecture. W. L. Semon. bibliog(59 ref) il Chem & Eng N 24:2900-5 N 10 '46; Same. bibliog(36 ref) India Rubber World 115: 364-9+ D '46

Rubber laboratory at University of Illinois. Sci Am 176:33 Ja '47

Study of thioplasts. India Rubber World 115: 575-6 Ja '47

Swelling of rubber; comparative swelling of vulcanized natural rubber and synthetic rubbers in organic liquids. F. S. Rostler and R. M. White. bibliog Rubber Age 61:313-21 Je '47

Swelling of rubber; effect of carbon blacks on the swelling of vulcanized GR-S. F. S. Rostler and R. E. Morrison. bibliog Rubber Age 61:59-62 Ap '47

Statistics

Natural, synthetic, and reclaimed rubber; new or revised data; consumption, imports, stocks, monthly figures, 1941-1945. Survey of Cur Bsns 26:23 D '46

Reduced synthetic rubber consumption. Economist 153:420-1 S 6 '47

Strength

Developments and improvements in methods of stress-strain testing of rubber. J. W. Schade and F. L. Roth. il India Rubber World 116:777-80+ S '47

Temperature effect

Method of measuring heat embrittlement of GR-S and hevea rubber compounds. A. W. Scholl and J. W. Liska. il diag India Rubber World 115:663-5+ F '47

New rubber-testing cold room. il Aero Digest 54:78 Ap '47

Simple cold test for vulcanized polymers. H. M. Leeper. il India Rubber World 115: 215+ N '46

See also
Rubber, Artificial—
Aging

Testing

A.S.T.M. committee D-11 Atlantic City meeting. India Rubber World 116:651-3 Ag '47

Brabender plastograph in the rubber laboratory. A. E. Juve and D. C. Hay. bibliog il India Rubber World 117:62-4+ O '47

Development and standardization of tests for evaluating the processibility of rubber. R. H. Taylor and others. bibliog il diags Rubber Age 61:567-73, 705-10+ Ag-S '47

Developments and improvements in methods of stress-strain testing of rubber. J. W. Schade and F. L. Roth. il India Rubber World 116:777-80+ S '47

Device for evaluating surface cracking of GR-S. M. C. Throdahl. bibliog il diags Ind & Eng Chem 39:514-16 Ap '47

Effect of quantity of black and softener on GR-S; Philblack A-1.75 sulfur system cured at 280° F. L. R. Sperberg, L. A. Bliss and J. F. Svetlik. Ind & Eng Chem 39:511-14 Ap '47

Laboratory testing of rubber for cut-growth. W. L. Holt and E. O. Knox. diags Rubber Age 60:689-92 Mr '47

Low temperature characteristics of elastomers. S. D. Gehman, D. E. Woodford and C. S. Wilkinson, jr. bibliog il diag Ind & Eng Chem 39:1108-15 S '47

Method of measuring heat embrittlement of GR-S and hevea rubber compounds. A. W. Scholl and J. W. Liska. il diag India Rubber World 115:663-5+ F '47

Methods for evaluating new diene-type polymers. A. E. Juve and C. H. Schroeder. il India Rubber World 115:515-17+ Ja '47

Precision of tests for tear resistance. R. E. Morris and R. U. Bonnar. bibliog il diags Anal Chem 19:436-8 Jl '47

Ricinoleate esters as low-temperature plasticizers for nitrile-type synthetics. T. C. Patton and M. K. Smith. India Rubber World 116:643-4 Ag '47

Simple cold test for vulcanized polymers. H. M. Leeper. il India Rubber World 115: 215+ N '46

Solubilities of unvulcanized rubbers. D. V. Sarbach and B. S. Garvey, jr. India Rubber World 115:798-801 Mr '47

Standardization of testing and inspection in government synthetic rubber plants. L. Meuser and others. India Rubber World 117:57-61 O '47

Variations of physical tests of elastomers between different laboratories. H. B. Morris and C. H. Gerwels. Rubber Age 61:323-7 Je '47

Vibration fatigue of GR-S in the Goodrich flexometer. M. C. Throdahl. India Rubber World 116:69-70 Ap '47

Tire use

Moisture transfer to and from tire cords encased in GR-S. W. J. Lyons and others. il India Rubber World 116:199-204+ My '47

Neoprene in passenger car tires. M. F. Torrence. il Rubber Age 61:63-5 Ap '47

Performance of butyl inner tubes; influence on tire life. I. E. Lightbown, L. S. Verde and J. R. Brown, jr. il diag Ind & Eng Chem 39:141-6 F '47

Rubber tire and inner tube materials from 1944 to 1946. E. G. Holt. il Dom Comm 35: 42-7 Je '47

RUBBER, Artificial—Tire use—*Continued*
Rubber, will we make it or take a chance? J. E. Hale. S A E J 55:40-2 Mr '47; Abstract. India Rubber World 115:673 F '47
Softeners for GR-S tires. V. V. Wheeler and others. bibliog il Rubber Age 61:437-42, 555-62 Jl-Ag '47
Trouble in synthetic rubber. il Fortune 35: 114-19+ Je '47

RUBBER, Effect of fungicides on
Effect of fungicides on natural and synthetic rubber. J. L. Stief, jr. and J. J. Boyle. Ind & Eng Chem 39:1136-8 S '47

RUBBER, Effect of temperature on. See Rubber—Temperature effect

RUBBER, Electrodeposition of. See Electrodeposition of rubber

RUBBER, Sponge
Foam rubber for everyone. il Bsns W p21 Je 14 '47; Discussion. p43-4 Jl 12 '47
Improving the adhesion property of molded sponge rubber parts by grit blasting. L. J. Wieschhaus. il Rubber Age 61:443-4 Jl '47
New blowing agent announced by du Pont. India Rubber World 116:369 Je '47

RUBBER cement

Testing

Evaluation of synthetic rubbers for fabric-to-fabric adhesion; abstract. G. L. Hammond. Rubber Age 61:194 My '47

RUBBER chemicals
Colorimetric method for evaluating dispersing agents. G. C. Tesoro and others. Rubber Age 60:319-20 D '46
Crude rubber preparation; sheet production by continuous coagulation of hevea latex. E. B. Newton, W. D. Stewart and E. A. Willson. bibliog il Ind & Eng Chem 39: 978-84 Ag '47
High styrene rubber resin; Darex copolymer X-34. Chem Ind 60:986+ Je '47
New specialties exploit chemical research. H. L. Fisher. Chem Ind 61:404-5 S '47
Plasticizing GR-S and natural rubber. A. R. Davis. bibliog Ind & Eng Chem 39:94-100 Ja '47
Red oil, plasticizer for rubber. India Rubber World 116:832 S '47

See also
Plasticizers
Vulcanization—Accelerators

RUBBER coating
Mechanical applications of latex-dip coatings. F. W. Woerner. Mech Eng 68:1049-52 D '46
Underseal protects under body parts; sprayed rubberized coating. il Bus Transportation 26:168-9 Ag '47

RUBBER cutting
Freezing permits precision machining of rubber. H. O. McMahon. Chem Ind 60:106 Ja '47
Use of the Multipress in cutting test specimens. E. E. McSweeney and L. E. Cheyney. il Rubber Age 60:450 Ja '47

RUBBER dies. See Dies, Rubber

RUBBER factories
United States rubber company; new plant at Detroit. il Factory Management 105:B54-7 pt 2 Ap '47

See also
Rubber—Manufacture
Rubber, Artificial—Manufacture
Rubber goods—Manufacture
Tire factories

Accidents

American rubber met the challenge. J. T. Howell. il Nat Safety N 55:18-19+ Ja '47

Electric equipment

Factory distribution; Dunlop rubber factory at Speke. il diag Elec R (Lond) 140:835-40 My 23 '47
Individual motors replace lineshafts to speed production; Davidson rubber co. il diag Power 91:41-3 Ja '47
Material handling survey of rubber goods industry. il India Rubber World 116:351-4 Je '47
Modern rubber mixing; Dunlop rubber factory at Speke. il diag Elec R (Lond) 141: 47-51 Jl 11 '47

Employees

Toxicity and toxicology of several accelerators used in the rubber industry; abstract. H. Brieger. Ind Med 16:473-4 S '47
Vestibule sessions set the stage for quicker on-the-job training; B. F. Goodrich company. M. R. Collins. il Factory Management 105:133-5 Ja '47
Why industrial hygiene in a rubber company? W. E. McCormick. il Rubber Age 61:322+ Je '47

Equipment

Clay piping proves boon to companies facing new chemical problems. il Rubber Age 61: 590 Ag '47
GR-S latex processing equipment. W. H. Pahl. diags Chem Eng Prog 43:515-22 O '47
Modern method of rubber processing; Speke factory of the Dunlop rubber co. il Mech Handling 33:682-4 N '46
Use of high temperature fluid in rubber manufacturing processes; Hydrotherm system. P. L. Geiringer. il diags Rubber Age 60: 447-9 Ja '47

See also
Rubber machinery

Power

Dependable steam and power for Lee of Conshohocken. F. Leopold. flow diag il diags Power Pl Eng 50:70-4 N '46
Raw-water softening experience in Canada's largest steam plant; Polymer corp. J. E. Lewis. il diags Power 91:150-3, 230-3 Mr-Ap '47

Safety measures

Humidifiers an aid in eliminating explosions. R. J. Branham. Safety Eng 93:52 F '47
Medical protection in solvent operations. L. Gordon. Rubber Age 60:451-2 Ja '47
New record for the rubber industry; Dominion rubber company, St Jerome, Quebec. il Nat Safety N 55:32-3+ F '47
Rubber reserve safety conference. India Rubber World 115:375-6 D '46
Safety + secrecy; Kobuta synthetic rubber plant. W. W. Allison. il Nat Safety N 55: 18+ My '47

Waste

Investigations disclose successful disposal methods for synthetic rubber waste. C. C. Ruchhoft and others. Civil Eng 17:59-60 F '47
Rubber industry. G. M. Hebbard, S. T. Powell and R. E. Rostenbach. bibliog flow diags il Ind & Eng Chem 39:589-95 My '47

RUBBER gloves. See Gloves, Rubber

RUBBER goods
Applications for neoprene latex. R. H. Walsh. il Rubber Age 61:187-93 My '47
Directory of materials for the construction of chemical equipment. Chem Eng 53:118-19 N '46
Family reunion; Seamless rubber co. reclassification for its 2,200 products, using package theme to tie all together. il Mod Packaging 20:118-21 Je '47
Minutes of rubber consulting technical committee meetings. Rubber Age 60:585-7, 707-8 F-Mr '47
New outlets for rubber through latex. C. J. Mighton. India Rubber World 115:659-60 F '47

See also
Gloves, Rubber
Rubber toys
Tires, Automobile

Manufacture

Application of colloid chemistry to the manufacture of inflated articles. L. W. Isom. il J Chem Educ 23:620-3 D '46
Backrinding of molded products. E. L. Stangor. il diags Rubber Age 60:439-42 Ja '47
Electronic developments in the rubber industry. W. G. Routh. il Radio N 36:44-5+ D '46
Making rubber cables. il Elec R (Lond) 141: 278-83 Ag 22 '47
Material handling survey of rubber goods industry. il India Rubber World 116:351-4 Je '47

RUBBER goods—Manufacture—*Continued*
Moulages d'articles en caoutchouc à partir du latex. A. Jarrijon. bibliog Chimie & Ind 57: 549-50 Je '47
New Voit rubber production set-up utilizes radiant drying apparatus; manufacture of footballs, basket balls, and other balls which require rubber bladders. R. D. Holman. il Rubber Age 60:696-8 Mr '47
Phenolic resins improve synthetic rubber goods. C. R. Simmons. il India Rubber World 116:224 My '47

See also
Molding machines
(for rubber)

Patents

Some interesting patents available for licensing or sale. Rubber Age 61:78 Ap '47

RUBBER goods, Mechanical
Independent four-wheel suspension using rubber torsion springs. A. S. Krotz and others. diags S A E J 54:34-41 N '46
Metalastik, anti-vibration machine mounting. il Engineer 184:386 O 24 '47
Neoprene applications in product design. S. W. McCune, 3d. il diags Mach 53:167-71 Ja; 169-72 F '47
No domination of rubber products by natural rubber. W. C. Winings. Iron Age 159:142+ F 6 '47
Practical design of rubber parts. E. E. Blaurock. diags Machine Design 19:115-20 Mr '47; Same. Mech Eng 69:394-8 My '47
Rubber and its application to suspensions. A. S. Krotz. diags S A E J 55:40-2 Jl '47
Rubber and plastics division, A.S.M.E., December meeting; abstracts of papers. India Rubber World 115:529 Ja '47
Rubber mountings minimize impact from jolt molding machines. H. J. Knell. il diags Iron Age 159:54-6 F 20 '47
Rubber rolls in the paper industry. H. Hulmes. Paper Ind 28:1646-8 F '47
Rubber springs. J. E. Hale. il diags Automotive & Aviation Ind 95:18-23+ O 15 '46; Same cond. S A E J 54:28-33 N '46
Rubber torsilastic suspension system. F. R. Fageol. il S A E J 55:56-8 Je '47; Same. Automobile Eng 37:347-9 S '47
Silicone rubber; properties and applications. E. M. Irish and J. R. Stirrat. il diags Product Eng 18:146-50 F '47
Some practical applications of rubber dampers for the suppression of torsional vibrations in engine systems. R. W. Zdanowich and J. E. Moyal. bibliog il diags Inst Mech Eng J & Proc 153 (War emergency issue no 3):61-76; Discussion. 76-82 '45
West coast mechanical rubber goods industry. T. Cameron. il India Rubber World 115:655-6+ F '47

Testing

Laboratory testing of rubber torsion springs. D. H. Cornell and J. R. Beatty. bibliog il diags Rubber Age 60:679-88 Mr '47; Same abr. A S M E Trans 69:799-804 O '47

RUBBER industry and trade
Another record year for 1947 forecast; statements by various industry leaders. India Rubber World 115:539-44 Ja '47
Future of the rubber manufacturing industry. A. Healey. Rubber Age 61:445-50 Jl '47
Outlook for rubber latex supplies and products. E. G. Holt. il Dom Comm 35:35-9 My '47
Rubber in review. Economist 152:989-91 Je 21 '47
Rubber industry wary as free market returns. Bsns W p20 Ap 12 '47
Rubber policy issue of paramount interest; 1947 production rate to remain high. India Rubber World 115:680-4+ F '47
Rubber rift widens over research policy. Bsns W p17 Mr 22 '47
Rubber study group foresees synthetic as factor for at least next two years. Rubber Age 60:339-40 D '46
Study group urges natural rubber price support; ANMB proposed legislation objected to by industry; 4th meeting of the International rubber study group, Paris. India Rubber World 116:660-1 Ag '47
Trouble in synthetic rubber. il Fortune 35: 114-19+ Je '47
U.S. world trade in rubber is resuming prewar pattern. W. N. Small. il For Comm W 26:3-4 Mr 15 '47
World economic trends and the future of synthetic rubber. W. F. Zimmerli. India Rubber World 116:197-8+ My '47

See also
Rubber—Prices

History

Historical survey of the rubber industry in Chicago. H. A. Winkelmann. India Rubber World 115:649-54+ F '47

Regulation

Legislation providing for continuation of synthetic rubber program for year. Chem & Eng N 25:896 Mr 31 '47
Malayan rubber policies. P. T. Bauer. India Rubber World 116:629-34+ Ag '47
Public hearings on rubber legislation highlite differences of trade opinion. Rubber Age 60: 700-1 Mr '47
Resume rubber trading on commodity exchange. Comm & Fin Chr 165:2128 Ap 17 '47
Truman supports maintenance of synthetic rubber; hearings on rubber legislation begin. India Rubber World 115:818-23 Mr '47
Working of rubber regulation. P. T. Bauer. India Rubber World 115:501-8 Ja '47

Securities

Big four in rubber. R. Colston. Mag of Wall St 80:325-7+ Je 21 '47
What's ahead for tires and rubbers; with statistics on leading companies. R. Colston. Mag of Wall St 79:613-15 Mr 1 '47

Statistics

Canada ranks among leading producers of rubber goods. Can Chem & Process Ind 31: 429+ My '47
Natural, synthetic, and reclaimed rubber; new or revised data; consumption, imports, stocks, monthly figures, 1941-1945. Survey of Cur Bsns 26:23 D '46
1947 showdown year. J. V. Hightower. Chem Eng 54:125 F '47

Chicago

Historical survey of the rubber industry in Chicago. H. A. Winkelmann. India Rubber World 115:649-54+ F '47

Costa Rica

Rubber exports, 1937-1946. For Comm W 29: 28 O 25 '47

Great Britain

United Sua Betong rubber estates, limited; 38th annual general meeting, London. Economist 152:1004-5 Je 21 '47

See also
Dunlop rubber company

Malayan Union

Malayan rubber policies. P. T. Bauer. India Rubber World 116:629-34+, 783-6+ Ag-S '47
Malayan rubber trade at record levels in first half of 1947. W. N. Small. For Comm W 28:9+ Ag 23 '47
Monthly production of crude rubber, 1946; table. For Comm W 27:26 Ap 5 '47
Rubber production and trade. For Comm W 29:27-8 O 25 '47
Situation in Malayan Union. For Comm W 26: 27 Ja 4 '47

Netherlands Indies

Condition of rubber estates, Java. For Comm W 29:25 N 1 '47

Nigeria

Nigerian rubber exports, 1940-1947. For Comm W 29:25-6 N 1 '47

Pacific coast

Growth of the West Coast rubber industry. W. R. Hucks. il Chem & Eng N 25:2710-11 S 22 '47
West Coast mechanical rubber goods industry. T. Cameron. il India Rubber World 115:655-6+ F '47

Russia

Russia plans to supply her own rubber needs. Chem Eng 54:214 F '47

RUBBER industry and trade—*Continued*

South Africa

South Africa spurs expansion of rubber industry and trade. A. R. Griffith. For Comm W 27:7+ My 24 '47

United States

Address before American petroleum institute. T. G. Graham. Am Pet Inst Proc 26(1):58-60 '46

After the turn of the year. J. L. Collyer. Comm & Fin Chr 165:428 Ja 23 '47

American rubber problem. R. P. Dinsmore. Chem & Eng N 25:1738-9 Je 16 '47

Continued government rubber buying urged by Rubber manufacturers association. Comm & Fin Chr 165:1166 F 27 '47

Natural vs. synthetic battle begins early. India Rubber World 115:232-3 N '46

Plan of study for the long-range rubber program. W. J. Sears. India Rubber World 116:504-7 Jl '47

Private importation of natural rubber now possible; industry outlook for 1947 improves. India Rubber World 116:85-6+ Ap '47

Rubber and national security. J. L. Collyer. Aero Digest 54:28-9 My '47

Rubber battle; should government continue as sole importer of natural rubber. Bsns W p19 F 22 '47

Rubber companies' outlook, present and future. H. Murphy; C. R. Sutton. Barron's 27:11+ Ja 20 '47

Rubber; prospects for 1947. Dom Comm 35: 56-7 Ja '47

Truman asks Congress to act on rubber. Comm & Fin Chr 165:1046 F 20 '47

RUBBER laboratories

Brabender plastograph in the rubber laboratory. A. E. Juve and D. C. Hay. bibliog il India Rubber World 117:62-4+ O '47

DuPont's new Akron rubber laboratory. il Rubber Age 60:321-5 D '46; India Rubber World 115:392-3 D '46; Chem & Eng N 24:3177 D 10 '46; Product Eng 17:149 D '46

Government laboratories of the Office of rubber reserve. il Chem & Eng N 24:3024-6 N 25 '46

RUBBER latex

Application of colloid chemistry to the manufacture of inflated articles. L. W. Isom. il J Chem Educ 23:620-3 D '46

Asphaltic oil-latex joint-sealing compound. B. W. Pocock. bibliog il Am Concrete Inst J 17:565-80 Je '46; Discussion. 18:580¹-580⁶ pt 2 D '46

Centrifuging of latex. G. J. Van Der Bie. India Rubber World 115:209-14 N '46

Conference on latex, Manchester, England; abstracts of papers. Rubber Age 61:468-9 Jl '47; India Rubber World 116:696+ Ag '47

Crude rubber preparation; sheet production by continuous coagulation of hevea latex. E. B. Newton, W. D. Stewart and E. A. Willson. bibliog il Ind & Eng Chem 39: 978-84 Ag '47

Latex/hydraulic cement flooring mixtures. L. H. Griffiths. Chem & Ind p578-80 S 20 '47

Mangabeira latex and rubber. N. Bekkedahl and W. Saffioti. bibliog il Rubber Age 60:553-61 F '47; Same. J Res Nat Bur Stand 38:427-38 Ap '47

Mechanical applications of latex-dip coatings. F. W. Woerner. Mech Eng 68:1049-52 D '46

Moulages d'articles en caoutchouc à partir du latex. A. Jarrijon. bibliog Chimie & Ind 57:549-50 Je '47

New outlets for rubber through latex. C. J. Mighton. India Rubber World 115:659-60 F '47

Outlook for hevea latex. A. Nolan. India Rubber World 115:661-2+ F '47

Outlook for rubber latex supplies and products. E. G. Holt. il Dom Comm 35:35-9 My '47

Positex, natural-rubber latex has reversed charge. Textile World 97:150 Mr '47

Waterproofing textiles; latex modified with pectin solutions; patent. Am Dyestuff Rep 36:614 O 20 '47

See also

Rubber, Artificial—Latex

Storage

Proper preservation and storage of latex. J. McGavack. India Rubber World 115: 362-3+ D '46

RUBBER lining

Rubber linings protect steel against corrosion and abrasion. O. S. True. il diags Product Eng 18:142-8 Ja '47

Rubber plated metal; abstract. W. S. Long. Materials & Methods 25:151 Ap '47

Sulphur dioxide vs. materials of chemical plant construction; rubber lining. O. S. True. Chem Eng 54:209 Ag '47

Wet and dry chlorine vs. materials of chemical plant construction. O. S. True. il Chem Eng 54:222+ F '47

RUBBER machinery

Cooling Banbury mixers and rubber mills. J. Partington, jr. il diag Heat & Ven 44: 91-4 O '47

Farrel-Birmingham 3100-ton belt press. il Rubber Age 60:479 Ja '47

Use of the Multipress in cutting test specimens. E. E. McSweeney and L. E. Cheyney. il Rubber Age 60:450 Ja '47

See also

Molding machines (for rubber)
Rolls (rubber machinery)

RUBBER plantations

Goodyear Pathfinder plantation reaches production capacity. il Rubber Age 61:349 Je '47

RUBBER plants and planting

Mangabeira latex and rubber. N. Bekkedahl and W. Saffioti. bibliog il Rubber Age 60: 553-61 F '47; Same. J Res Nat Bur Stand 38:427-38 Ap '47

Minor element content of rubber and rubber plants. J. McGavack. bibliog il Rubber Age 60:565-6 F '47

Navy's research program on rubber-bearing plants. India Rubber World 116:366-7 Je '47

Les plantes à caoutchouc autres que l'hévéa cultivées en U.R.S.S. Génie Civil 124:137-8 Ap 1 '47

Progress toward an assured natural rubber supply. E. W. Brandes. bibliog il India Rubber World 116:491-7+ Jl '47

See also

Guayule

RUBBER research

Acetylene to vinyl resins; abstract. F. K. Schoenfeld. Chem Eng 54:244+ O '47

Centrifuging of latex. G. J. Van Der Bie. India Rubber World 115:209-14 N '46

Certain fundamental concepts relating to non-polar mechanisms in olefinic systems. E. H. Farmer. bibliog Soc Chem Ind J 66:86-93 Mr '47

Effect of benzoyl peroxide on rubber solutions; abstract. P. Compagnon and A. Delalande. India Rubber World 116:408 Je '47

Effect of fungicides on natural and synthetic rubber. J. L. Stief, jr. and J. J. Boyle. Ind & Eng Chem 39:1136-8 S '47

National rubber research at Stanford university. Science 104:622 D 27 '46

Navy's research program on rubber-bearing plants. India Rubber World 116:366-7 Je '47

Plasticizer-filler mixtures and their dispersion in rubber. F. S. Rostler and H. I. du Pont. bibliog Ind & Eng Chem 39:1311-22 O '47

Pliolite copolymer resins and their uses. H. R. Thies and W. H. Aiken. diags Rubber Age 61:51-8 Ap '47

Progress toward an assured natural rubber supply. E. W. Brandes. bibliog il India Rubber World 116:491-7+ Jl '47

Recent advances in the physics and chemistry of rubber. L. R. G. Treloar and others. bibliog diags Rubber Age 59:694-6; 60:71-3+, 443-6, 567-71, 693-5; 61:329-31 S-O '46, Ja-Mr, Je '47

Report on research work; Rubber research scheme (Ceylon) 1945. India Rubber World 116:122+ Ap '47

Rubber research and technology at the National bureau of standards. L. A. Wood. bibliog(174 titles) U S Nat Bur Stand Misc Pub M185:1-22 pa 10c Supt. of doc. '47; Same. India Rubber World 115:789-97 Mr '47

RUBBER research—*Continued*
Studies of the solid state by means of nuclear magnetism. N. L. Alpert. Phys R 72: 637-8 O 1 '47
Swelling of rubber; comparative swelling of vulcanized natural rubber and synthetic rubbers in organic liquids. F. S. Rostler and R. M. White. bibliog Rubber Age 61:313-21 Je '47
Syntheses in the thiopyran series; tetrahydroderivatives. R. F. Naylor. Chem Soc J p 1106-8 Ag '47
See also
Rubber, Artificial—Research

RUBBER seed oil
Linseed substitute neglected. Chem Age (Lond) 57:472 O 4 '47

RUBBER stamps
Allis-Chalmers develops a quicker way to make graphic flow sheets; use of rubber stamps, flow sheet. Paper Tr J 124:32 Ap 17 '47; Same. Chem Eng 54:158 My '47

RUBBER tires. See Tires, Rubber

RUBBER toys
Old and new rubber toys in abundance at 44th American toy fair. Rubber Age 61:210 My '47

RUBBER yarn
Positex natural-rubber latex has reversed charge. Textile World 97:150 Mr '47

RUBEN cell. See Electric batteries

RUBICAM, Raymond, 1892-
Portrait. Bsns W p24 Ja 18 '47

RUBIDIUM hydroxide
Laboratory preparation of alkali metal hydroxides by electrolysis. A. F. Winslow, H. A. Liebhafsky and H. M. Smith. diags J Phys & Colloid Chem 51:967-72 Jl '47

RUBIDIUM iodide
Dynamics of the RbI crystal. T. A. Hoffmann. Phys R 70:981-2 D 1 '46

RUBIES, Artificial
Manufacture in synthetic gems in Britain. Can Chem & Process Ind 31:576 Je '47
Manufactured star. il Bsns W p62 O 4 '47
Synthetic rubies for industrial use produced in U.S.S.R. For Comm W 25:39 N 16 '46
Synthetic star gems produced. il Chem & Eng N 25:3238 N 3 '47

RUBRENE
Solvent quenching of fluorescence. E. J. Bowen and E. Coates. Chem Soc J p 105-9 Ja '47

RUDGE, Frederick G. 1911-
Portrait. Adv & Sell 40:33 F '47

RUGS
Rug drying with warm air heaters. il diags Sheet Metal Worker 38:94+ S '47
Wholesale rug and yarn showrooms; James Lees & sons co, Chicago. il plan Arch Rec 101:104-7 My '47

Cleaning
Case studies in small business; rug-cleaning industry. Dom Comm 35:63-4 Je '47

RUHR valley
Ruhr. il maps Fortune 34:128-39+ D '46
Shadow of the Ruhr. Economist 153:51-2 Jl 12 '47
What to do with the Ruhr? il Bsns W p85-6 Ag 2 '47

RUMANIA
See also
Petroleum industry and trade—Rumania

Economic relations
Russia
Rumania's part in the Molotov plan. Economist 153:486+ S 20 '47

Politics and government
Another purge in Rumania. Economist 153: 203 Ag 2 '47

RUN-OFF
Disposal of petroleum refinery waste; disposal needs based on graph method for finding run-off to rainfall ratio. W. B. Hart. bibliog diag Pet Processing 2:131+ F '47
Drainage of airport surfaces; some basic design considerations. S. W. Jens. diags Am Soc C E Proc 73:983-1007 S '47
Loss of sanitary sewage through storm water overflows. J. E. McKee. bibliog Boston Soc C E J 34:55-80; Discussion. 81-92 Ap '47

RUNWAYS. See Airports—Runways

RUPE, Dallas Gordon
Money to Mexico; Dallas Rupe & son is lending $2 million to Mexican company to finance U.S. autos. Bsns W p 100-1 Je 21 '47

RUPPERT, Jacob
Further gains in profits more difficult. Barron's 27:34 Jl 28 '47

RURAL electric cooperative association, National. See National rural electric cooperative association

RURAL electrification. See Electric service, Rural

RURAL electrification administration
Contractors and REA give own stories on construction. Elec World News ed 127:11 Mr 22 '47
Data on REA loans for fiscal 1947; tabulation. Elec World 128:34 Ag 30 '47
89 loans sought from REA for power generating plants. Elec World 128:55 Ag 2 '47
Over half of Nation's farms use electricity, REA reports; fiscal 1946 statement. Elec World News ed 127:11 F 8 '47
Power costs for REA co-ops in fiscal 1946 rose slightly. Elec World News ed 127:11 Ap 5 '47
REA and A.T.&T. agreement fixes joint use of facilities. Elec World News ed 127:13 Je 28 '47
REA generating loan applications; tabulation. Elec World News ed 128:16-17 Ag 23 '47
REA, 1946; with tabulated data, 1944-1946. Elec World 127:166 Ja 18 '47
REA statement reveals standing of loan funds. Elec World 127:33 Ja 4 '47
Status of western REA-financed systems; tabulation. Elec West 98:70-1 F '47

RURAL fire protection. See Fire protection, Rural

RURAL public works. See Public works, Rural

RURAL rehabilitation. See Social work, Rural

RURAL telephone service. See Telephone service, Rural

RURAL water supply. See Water supply, Rural

RUSSEL brothers limited
Complete 40 years. pors Pulp & Pa of Can 48:88 Mr '47

RUSSELL, John Newton
Life insurance Hall of fame; announcement of John Newton Russell memorial award for outstanding service to life insurance. East Underw 48:3 Jl 11 '47

RUSSELL, Robert Price, 1898-
Cadman memorial lecturer and medallist, 1947; portrait. Inst Pet J 33:398A Jl '47
Gets Cadman memorial award. por Pet Refiner 26:150 F '47

RUSSIA
Behind the iron curtain. G. Moorad. Comm & Fin Chr 164:2887+ D 5 '46
In Russia's Europe. il map Fortune 35:78-83+ F '47
Russia in 1947. Economist 152:380-1, 420-1, 461 Mr 15-29 '47
See also
Airlines—Russia
Biology—Russia
Chemical industries—Russia
Cooperation—Russia
Food supply—Russia
Mines and mineral resources—Russia
Petroleum industry and trade—Russia
Rubber industry and trade—Russia
Textile industry—Russia

Commerce
Commerce dept. issues report on exports to Russia during 1946. Iron Age 160:130+ Jl 24 '47
Credit and trade agreements between Sweden and the Soviet Union. G. Olson. il For Comm W 25:9-11 D 21 '46
Opportunities for Russian-American trade expansion. E. C. Ropes. il Dun's R 55:11-14+ My '47

RUSSIA—Commerce—*Continued*
Trade prospects with Russia. E. C. Ropes. Comm & Fin Chr 164:3355+ D 26 '46
U.S. trade with the Soviet Union January-June 1946; with tabulations. For Comm W 25:6-8 D 21 '46

Commercial policy

Russia's economic pincer attack. V. L. Horoth. map Mag of Wall St 79:298-9+ D 21 '46

Economic conditions

Birthday mood in Russia; bright economic prospect. Economist 153:110-11 Jl 19 '47
Russia so poor, and so plentiful. Economist 152:380-1 Mr 15 '47; Same abr. Iron Age 159:111+ Mr 27 '47
Troubles behind the curtain; graft. Fortune 34:4 D '46
View of postwar Russia by a Finnish visitor. Comm & Fin Chr 166:823 Ag 28 '47

Economic policy

Decree on cooperatives stresses competition. For Comm W 27:20-1 Je 28 '47
Reconversion and reconstruction in the U.S.S.R. A. Yugow. bibliog Int Labour R 55:62-76 Ja-F '47
Soviet Union; trends in prices, rations, and wages. I. B. Kravis and J. Mintzes. Mo Labor R 65:28-35 Jl '47

Economic relations

Russia's changing relation to satellite countries. V. L. Horoth. Mag of Wall St 80: 322-4+ Je 21 '47

Foreign relations

Growing number believe Russia is out to dominate the world; Gallup poll. Iron Age 159:109 Ap 3; 160:147 Ag 14 '47
Indictment of Soviet policies. L. Budenz. Comm & Fin Chr 165:1796+ Ap 3 '47
Iron curtain or open door? Russian domination of the east European states. Economist 153:91-3 Jl 19 '47
Molotov on Marshall. Economist 153:21 Jl 5 '47
Reason and Russia. Iron Age 158:119+ D 12 '46
Reparations and the Russian people. Economist 152:542-3 Ap 12 '47; Same. Iron Age 159:107, 134, 136 Ap 24 '47
Russian point of view. M. Palyi. Comm & Fin Chr 164:2746+ N 28 '46
Russia's strength. Economist 152:745-7 My 17 '47
Soviet sabotage of United nations. E. Johnston. Comm & Fin Chr 165:1933+ Ap 10 '47
U.S. should remain in UN despite Soviet obstinacy; Gallup poll. Iron Age 160:101 O 30 '47
Why Russia continues to snub world trade and monetary bodies. C. Prince. Comm & Fin Chr 165:2193+ Ap 24 '47

United States

Does the Bear walk like a man? H. B. Smith. Comm & Fin Chr 166:209+ Jl 17 '47
Favor separate peace with Japan if Russia can't agree; Gallup poll. Iron Age 160:119 Ag 7 '47
Foreign policy. K. Collins. Adv & Sell 40:70 My '47
Fortune survey; Russia and U.S. communism. Fortune 36:5-6 O '47
Majority among public feel that U.S. should continue to try to get along with Russia; Gallup poll. Iron Age 159:123+ Je 5 '47
Russia and peace. H. G. King. Comm & Fin Chr 165:2984+ Je 5 '47
Russian plan for atomic control. Metal Prog 51:444 Mr '47
Soviet Eurasia would be too strong for us. Barron's 27:1+ S 15 '47
Soviet policies color economic moves here. Barron's 27:1+ O 20 '47
Soviet power threat to Marshall program. Barron's 27:1+ Je 30 '47
Transcript of talk with Stalin. H. E. Stassen. Comm & Fin Chr 165:2479+ My 8 '47
U.S. attitude toward Russia friendlier; Gallup poll. Iron Age 159:107 Ja 16 '47
U.S.-Soviet relations. A. H. Vandenberg. Comm & Fin Chr 165:995+ F 20 '47

Industries and resources

Drive for efficiency. Economist 152:420-1 Mr 22 '47
Fourth five-year plan of the U.S.S.R. Int Labour R 54:45-58 Jl '46
More capital goods goal of rebuilt Soviet factories. il Bsns W p54 Jl 26 '47
Postwar Russia and her mineral deposits. W. H. Voskuil. map J Land & Pub Util Econ 23:199-213 My '47
Russian industrial development in the Urals. G. Vorobyov. Mech Eng 68:1077 D '46
Russian power moves east. map Economist 152:676-7 My 3 '47
Russian precious and semi precious stones; factory in Leningrad. I. Borodkin. Can Min J 68:19 Ja '47
Soviet production. Bsns W p102 F 8 '47
Stalin's Eldorado. B. Nikolaevsky. bibliog il map Fortune 36:98-101+ Ag '47

Politics and government

Shadow of Lenin. Economist 152:106 Ja 18 '47; Same. Iron Age 159:111+ Ja 30 '47
Stalin's Utopia; excerpts from I chose freedom, by V. Kravchenko. Manuf Rec 115:37+ D '46

Statistics

Use of Soviet statistics. H. Schwartz. Am Stat Assn J 42:401-6 S '47

RUSSIAN language

Chemical Russian

Chemical Russian self-taught. J. W. Perry. bibliog J Chem Educ 21:393-8; 23:22-7, 116-22; 24:28-45, 79-83 Ag '44, Ja, Mr '46, Ja-F '47
Evaluation of scientific Russian for chemists. R. L. Harris. J Chem Educ 24:392 Ag '47

Dictionaries

Russian-English technical and chemical dictionary. L. I. Callaham. 794p $10 John Wiley & sons, 440 4th av, New York '47

RUST. See Corrosion and anti-corrosives

RUTGERS university

Graduate school of banking

Backstage in the Graduate school. W. Powers. il Banking 39:44-5+ Je '47
Origin of the Graduate school of banking. W. A. Irwin. Banking 39:32-3 Je '47
Tribute to the first faculty of the Graduate school. H. Stonier. pors Banking 39:28+ Je '47

RUTHENIUM

Isotopes

Discovery, identification, and characterization of 2.8*d* Ru^{97}. W. H. Sullivan and others. Phys R 70:778 N 1 '46

RUTHERFORD, Ernest, 1871-1937
Rutherford memorial lecture. H. Tizard. por Chem Soc J p980-6 O '46

RUTILE
Exploration of the Magnet Cove rutile co. property, Magnet Cove area, Hot Spring county, Ark. R. V. Spencer. 7pls U S Bur Mines Rep of Invest 3900:1-23 '46

See also
Titanium oxides

RUTIN
Effect of flavonols on the bacteriostatic action of dicoumarol. J. Naghski and others. bibliog Science 105:125 Ja 31 '47
Effect of rutin on anaphylactic and histamine shock. R. J. Raiman and others. Science 106:368 O 17 '47
Isolation of rutin from two varieties of forsythia. J. Naghski, W. L. Porter and J. F. Couch. bibliog Am Chem Soc J 69:572-3 Mr '47

Analysis

Fluorophotometric determination of rutin and other flavones. A. J. Glazko and others. bibliog Science 105:48 Ja 10 '47

RUTLAND railroad
Rail cooperative planned. map Bsns W p19 N 9 '46; Discussion. p41 D 7 '46; 24+ Ja 4 '47
Reorganization plan approved by ICC. Comm & Fin Chr 164:3420 D 30 '46
Rutland revamp plan approved by I.C.C. Ry Age 121:1093+ D 28 '46

RUTLEDGE, Wiley Blount, 1894-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

RUTTEN, Louis Martin Robert, 1884-1946
Memorial. H. E. Thalmann. por(pl 12) Geol Soc Proc 1946:217-29 bibliog(p223-9) Jl '47

RYAN, Tubal Claude, 1898-
Ryan rounds out 25 years. por Aero Digest 55:59+ S '47

RYE, New York
Rye, New York, plans, remodels its business district. il diags Am Bld 68:68-71 N '46
Withering grass; Rye's plan to make park out of Main st. meets defeat. Arch Forum 85:12+ D '46

RYE
Agricultural department report on winter wheat and rye acreage sown for 1947 crop. Comm & Fin Chr 165:55 Ja 2 '47

RYUKYU ISLANDS
See also
Textile industry—Ryukyu Islands

S

SAAR valley
Voting in the Saar. Economist 153:594 O 11 '47

SACCHAROMYCES. See Yeasts

SACKETT, Robert Lemuel, 1867-1946
Sketch. J Eng Educ 37:269-72 N '46

SADACCA, Henry
Portrait. Bsns W p58 D 28 '46

SADTLER, Samuel P. 1847-1923
First president of American institute of chemical engineers. por Chem Eng Prog 43: 333-4 Jl '47

SAFE deposit box insurance. See Insurance, Safe deposit box

SAFE deposits
Bank as agent or trustee for true owner of bond found in safe deposit department. Banking Law J 64:321-5 Ap '47
Profit in safety. Bsns W p84+ Je 14 '47
Safe deposit prospects and hazards. F. O. Brand. il Banking 40:32-3+ Jl '47

Law

Co-lessee of safety deposit box held joint tenant with right of survivorship of contents therein. Banking Law J 63:915-24 D '46
Model safe deposit code. T. B. Paton. Banking 39:72 D '46

SAFETY associations
See also
National safety council

SAFETY at sea
Death in the engine room; engineer killed by feed pump. diag Marine Eng 52:96 Ap '47
Preventing accidents on tankers. C. L. Boyle. Marine Eng 52:63-5 O '47
Safety features of large liners, American and foreign. J. L. Bates and I. J. Wanless. East Underw 47:29 D 20; 30 D 27 '46; 48:27 Ja 3 '47
See also
Fog signals
Lighthouses
Lightships
Ships—Fires and fire protection

SAFETY awards. See Safety contests and awards

SAFETY belts
Safety belts and harnesses. Nat Safety N 55:82 Mr '47

SAFETY campaigns
Glamor for safety; campaign by Motion picture and radio committee of the National safety council. Nat Safety N 56:24-5+ Jl '47
Safety needs glamourizing; abstract. P. Blaisdell. Roads & Sts 89:80 O '46
State launches drives in special industries, North Carolina. F. H. Shuford. Nat Safety N 56:52 Ag '47
Workable plan for off-the-job safety. T. M. Webb. Safety Eng 93:15+ Ap '47

SAFETY cartoons
Cartoons for effective safety promotion. J. G. Barstow. Safety Eng 93:21+ Mr '47
Dumb Dora cartoons enliven safety program. il Factory Management 105:130-1 F '47
Tell it with cartoons. J. D. Barstow. il Nat Safety N 54:32-3+ D '46

SAFETY clothing. See Clothing, Protective

SAFETY codes
National fire codes; v. 2, Prevention of dust explosions, 1946. 224p $2; pa $1.50 National fire protection assn, 60 Batterymarch st, Boston 10 '46
Safety codes will work if responsibility is fixed. D. A. Pifer. Eng & Min J 148:83-4 Ag '47
Safety color code for drilling rigs. W. B. Cox. Oil & Gas J 46:94+ Ag 9 '47
See also
Electric codes

SAFETY committees
Five safety committees stimulate better maintenance. J. Penberthy. il Factory Management 104:153-5 O '46
Hazard spotter plan. L. H. Bunker. il Safety Eng 94:17+ S '47
Results, or consequences; safety work at Tyrone mill of West Virginia pulp and paper company. C. E. Barr. Nat Safety N 55: 28-9+ My '47
Safety program with a forceful follow up; Chapman valve mfg. co. R. H. Cochran. il Steel 120:100-2+ Ap 7 '47
Solvent control committees. R. Reider. Safety Eng 94:17+ Jl '47
When the safety committee goes into action, they get the facts; Coos Bay lumber company. E. H. Card. il Nat Safety N 56: 24-5+ S '47
Who saves the safety man? former safety-committee member gives two reasons for foreswearing the job. J. Homewood. Am Mach 91:138 My 8 '47

SAFETY conferences
Fleet operator's safety record boosts sales and employee morale; Mistletoe express co. H. H. Goff. il Safety Eng 93:22-3+ My '47

SAFETY congresses
Greater New York safety council 17th annual convention, New York, March 25-28. East Underw 48:44 Mr 28 '47
Greater N. Y. safety show breaks all records. Safety Eng 93:38-9+ Ap; 56-8 My '47
Insurance representatives pace National safety congress at Chicago. Nat Underw 51:27 O 9 '47
See also
National safety council

SAFETY contests and awards
Bankhead mine wins Sentinels of safety trophy. Explosives Eng 25:107+ Jl '47
Benham mines win safety award. R. L. Talbert. il Explosives Eng 25:112-15+ Jl '47
Bethlehem Steel honors Bridgeport quarrymen for having won the Sentinels of safety trophy. il Explosives Eng 24:176+ N '46
Chance taking worked for safety; safety prizes awarded by Union Pacific coal company. il Nat Safety N 54:36-7+ D '46
Check on safety performance. L. E. Bowery. Nat Safety N 55:9 Mr '47
National safety competition of 1946, Bureau of mines; with list of winners, 1925-1946; honorable mention awards, 1946. F. T. Moyer. il Explosives Eng 25:71-9+ My '47
Rules governing the annual awards in the National safety competition. Explosives Eng 25:87-9 My '47
Successful safety contest; Beech aircraft corporation. Safety Eng 94:51 Ag '47
Winners in 1946 traffic safety contest. Nat Safety N 55:105-6 My '47
Winners in railroad employee safety contest. Nat Safety N 56:32 Jl '47
See also
Fire protection—Contests and awards
Harriman memorial medals for safety

SAFETY councils
Greater New York safety council holds annual meeting. East Underw 47:32 D 20 '46

SAFETY devices and measures
Accident control in ship scrapping; dismantling the Normandie. M. E. Lipsett. il Marine Eng 52:81-2 O '47
Accident prevention through metallizing. W. C. Reid. il diag Safety Eng 92:16-17+ D '46
Cleaning and repairing flammable liquid tanks. il Safety Eng 93:18-19+ Ja '47
Color prevents accidents. H. G. Lamb. il Safety Eng 92:44-8 O '46
Control of radioactivity hazards. W. H. Sullivan. Chem & Eng N 25:1862-5 Je 30 '47
Foreman's job; maintaining safety program. C. F. Burris. Safety Eng 94:28+ S '47
Hazard spotter plan. L. H. Bunker. il Safety Eng 94:17+ S '47
High interest bulletin board designed for safety publicity. il Safety Eng 93:30 Mr '47
Housekeeping plus housecleaning needed to maintain safe and efficient plant. il Nat Safety N 54:46+ D '46
How to work with caustic soda. Safety Eng 94:92-3 O '47
Jobs analyzed for work hazards; Camden plant, RCA Victor division. G. H. Metz. Factory Management 105:126-7 Ag '47
Medical aspects of industrial safety. R. R. Bresler. Ind Med 16:397-400 Ag '47; Same. Nat Safety N 56:22-3+ S '47
National safety news; annual safety equipment issue; buyers' guide. Nat Safety N 55:2-226 Mr '47
No squeaking wheels; centralized lubrication. il Nat Safety N 56:28-9 Ag '47
Potential hazards in molten salt baths for heat treatment. Metal Prog 51:251-3 F '47
Precautions in handling cyanide, with notes on first aid; data sheet. Metal Prog 50:1010 N '46
Progress in industrial accident control. Management R 36:294-5 My '47
Safe-ending impact tools. il diags Nat Safety N 55:40+ Je '47
Safe handling of hammers. il Paper Ind 29: 711 Ag '47
Safety and industrial relations. J. L. Roy. il Safety Eng 92:22+ N '46
Safety-minded management inspires safe-working employees. T. R. Self. il Safety Eng 93:17+ F '47
Security measures in German factories. J. Creevey. Chem Age (Lond) 56:475-6 Ap 19 '47
Static hazard in industry. G. Morris. diags Engineering 164:49-51, 73-5 Jl 18-25 '47
Take the dry tag off safety. J. E. Moore. il Safety Eng 92:24+ D '46
Ten ways to make tanks safe for workmen. W. E. Rossnagel. il diags Power 91:322-3+ My '47
Use of DDT insecticides; hazards and precautions. Nat Safety N 56:39-40+ Ag '47

See also
Automobile driving
Clothing, Protective
Eye—Protection
Factories—Lighting
Federal interdepartmental safety council
Fire protection
First aid in illness and injury
Floors—Anti-slip surfaces
Goggles
Guard rails
Inflammable liquids
Lightning protection
Mine rescue work
National safety council
Poisons, Industrial
Railroads—Signals
Safety at sea and other headings beginning Safety
Watchmen

also subdivision Safety measures under special subjects, e.g.
Airplanes
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Cranes, derricks, etc.
Electric conduits
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Electricity in mining
Forests and forestry
Gas companies
Hoisting
Metallurgical plants
Mining engineering
Motor trucks, Industrial
Munition factories
Petroleum industry and trade
Quarries and quarrying
Refrigeration and refrigerating machinery
Roads
Rubber factories
Scaffolding
Shipyards
Textile mills
United States—Forest service

Bibliography
Industrial safety and health. 69p pa 35c National safety council, 20 North Wacker drive, Chicago 6 '47

Psychological aspects
Accidents are symptoms. L. G. Giberson. Nat Safety N 56:20-1+ S '47
Human factors in accident liability; with special reference to accident repeaters in industry. P. J. Moorad. Ind Med 16:494-8 O '47
Keep it alive; industry's vital stake in causing individual to accept safety as his personal problem. B. Burns. il Safety Eng 92:28-30+ N; 38-41 D '46
Psychology in overalls. F. J. Sluze. Nat Safety N 55:30-1+ F '47
What about attitude? B. F. Butler. Safety Eng 94:32-3 Ag '47
Who are your accident-prones, and why. W. F. Hubbard. il Safety Eng 93:14-15+ F '47
Workers are human. L. J. Dunman. il Safety Eng 93:10-11+ Ja '47

SAFETY education
Educator's opportunities in the field of accident prevention; abstract. W. A. Cutter. Mech Eng 69:316 Ap '47
What can the automotive engineer do to promote safety in the schools? abstract. J. F. Creamer. S A E J 55:68 My '47

See also Moving pictures in safety education; Safety engineering—Study and teaching; Safety instructions and training

SAFETY engineering
Competitive era rules out the fallacy of safety as management's step-child. R. K. Anderson. il Safety Eng 93:20+ My '47
Goals for the safety profession. W. A. Cutter. Safety Eng 94:20+ Jl '47
How the medical department helps a safety program. J. A. Hubata. il Safety Eng 94: 54-5+ Ag '47
Introduction of safety engineering. C. S. Ziolkowski. Western Soc E J 52:89-92 Je '47
Is safety part of production? E. Meuser. il Safety Eng 93:24-5+ Mr; 32-3 Ap '47
Is safety your business? W. A. Cutter. Paper Ind 28:1210-12 N '46
Is there a plane in your future? new problems for safety engineers. J. M. Chase. Nat Safety N 56:18-19+ Jl '47
Is your safety program a good buy? A. Turnbull. Safety Eng 94:34-5 Jl '47
Keep it alive; industry's vital stake in causing individual to accept safety as his personal problem. B. Burns. il Safety Eng 92: 28-30+ N; 38-41 D '46
Keeping the employer sold. R. W. Morse. il Safety Eng 93:48-9 Je '47
Matter of size; comparison of safety work in small and large plants. C. S. Craigmile. Safety Eng 94:15+ O '47
Methods of accident control for engineers. H. W. Heinrich. Mech Eng 69:227-8 Mr '47
Nurse in safety, from the safety engineer's viewpoint. D. F. Hayes. il Safety Eng 92: 92-4 O '46
Plant layout; many hazards can be avoided. il Nat Safety N 55:15-16+ Mr '47
Responsibilities are opportunities. J. Tanham. Nat Safety N 55:18-19 Ap '47
Safe future, or no future. C. Luckman. il Nat Safety N 56:80-1+ O '47
Safety effort and labor turnover; construction industry presents a special challenge. C. W. Kinnison. il Safety Eng 94:10-11+ Jl '47
Safety in Japan; accident prevention in program of industrial development. J. S. Felton. il Nat Safety N 56:86-7 O '47
Safety needs more than swivel-chair experts; abstract. W. H. Hollis. Nat Safety N 56: 93-4 Jl '47
Safety program with a forceful follow up; Chapman valve mfg. co. R. H. Cochran. il Steel 120:100-2+ Ap 7 '47
Safety survived! organized safety work is aiding France's industries in reconstruction. J. Troyon. il Nat Safety N 54:20-1+ N '46
Safety's stepchild; the small plant. C. R. Zeskey, jr. Nat Safety N 55:38-9 My '47
Spotlight on the supervisor; responsibilities in safety. J. L. Ridinger. il Safety Eng 92: 10-11+ N '46

SAFETY engineering—*Continued*
What is wrong? P. G. Hunter. Nat Safety N 56:32+ S '47

See also
Factory sanitation
Metallurgical plants —Safety measures
Mining engineering —Safety measures

Study and teaching
Engineering college program. W. G. Johnson. Nat Safety N 54:40+ N '46
Engineering college training for management accident control; abstract. A. W. Luce. Mech Eng 69:316-17 Ap '47
Engineers need more safety training. G. H. Dunstan. Nat Safety N 55:36 Ap '47
Importance of teaching accident prevention fundamentals. J. V. Grimaldi. Mech Eng 69: 317-18 Ap '47; Same cond. Weekly Underw 155:1558+ D 28 '46; Same. Safety Eng 93: 36-7 F '47
Industrial safety education; program at New Haven YMCA junior college. R. E. Morgan and E. W. Martin. il Nat Safety N 54:24-5+ D '46
Integrating safety into engineering training. W. S. Paine. Nat Safety N 55:26-7 Ja '47
Safety courses in colleges. Safety Eng 93:47 F '47
Safety engineer at Oxford. A. R. Taylor. il Nat Safety N 56:85+ O '47
Safety engineering in engineering colleges. W. N. Cox, jr. il Nat Safety N 56:22-3+ Ag '47

SAFETY engineers
Know your safety man! W. G. Legge. Nat Safety N 55:18-19+ F '47
More safety, less engineering. E. W. Martin. il Safety Eng 92:33+ O '46
More than a pencil-pusher; safety engineer's job. H. H. McCorkle. Safety Eng 94:66 O '47
Safety man and the P.A. N. Burch. Nat Safety N 55:4+ Mr '47
Safety man's authority. N. Feigenblatt, jr. Nat Safety N 55:97-9 My '47
Should the safety engineer be a line or staff officer? discussion. B. Andrews. Nat Safety N 55:24-5+ Je '47
Should the safety engineer be given authority to shut down a machine which he believes to be unsafe? use of authority; discussion. Nat Safety N 55:20-1+ My '47
What are the most important qualifications for a safety director or safety engineer in industry; panel discussion. Nat Safety N 56:22-3+ Jl '47
What's wrong with safety engineers? W. F. Lund. Safety Eng 94:11+ Ag '47

See also
Women as safety engineers

SAFETY equipment
It takes an expert to buy surplus safety equipment. Safety Eng 94:34 Ag '47
Labor-relations viewpoint on personal protection for the worker. W. J. Niederaur. il Safety Eng 93:18-19+ Je '47
National safety news; annual safety equipment issue; buyers' guide. Nat Safety N 55:2-226 Mr '47
Personal protective equipment. E. E. White. il Safety Eng 92:38-41 O '46
Safety; new equipment. J. J. Hoffman. il Chem Ind 61:416 S '47

See also
Clothing, Protective
Fire extinguishers
Gloves, Safety
Respiratory apparatus

SAFETY exhibits
Demonstration unit shows principles of industrial exhaust ventilation; to prevent exposure of workers to toxic air contaminants. K. J. Caplan and R. S. McClintock. il Safety Eng 92:58-60 D '46
How to use visual aids. H. B. Duffus. il Nat Safety N 54:18-19+ D '46; Same. Safety Eng 94:18-19+ Ag '47
Safety display board aids new employee training. il Safety Eng 92:26 N '46
Stanley open house features safety and first aid exhibits. il Safety Eng 93:22 Ja '47

See also
Safety museums

SAFETY factor. See Factor of safety
SAFETY glass. See Glass, Safety
SAFETY gloves. See Gloves, Safety
SAFETY hats. See Hats, Safety

SAFETY in the home
Bomb in your basement; hot water system can build up tremendous pressure. E. R. Granniss. il Nat Safety N 56:32-3+ Ag '47
Public relations value of safety; skit on home safety presented by Brooklyn (N.Y.) Union gas co. W. B. Hewson. Gas Age 99:31+ Ja 9 '47; Abstract. Pub Util 39:115-17 Ja 16 '47
Three-point home safety program of Greater New York safety council progresses under Marjorie May. East Underw 47:108 D 13 '46

SAFETY inspection
Inspection for safety of power plant equipment. W. D. Halsey. Locomotive 46:163-6+ Ap '47
Regular inspection keeps hoists and ladders safe. C. Y. Wilgus. il Factory Management 105:121-2 F '47
Safety captain program; National tube co. R. M. Massenburg. il Steel 120:106+ Ap 21 '47

SAFETY instructions and training
Accident prevention in the training of apprentices. R. N. Le Fevre. Gas J (Lond) 249:512+ Mr 12 '47
Accident process. P. Pigors. Nat Safety N 55:34-5+ Ap '47
Educating workers in safety reduces lost-time accidents; Ryan aeronautical co. M. M. Clancy. il Factory Management 105: 103-5 S '47
Foreman, the key man in safety training; Procter & Gamble company. il Factory Management 105:100-3 Ag '47
Get 'em early. J. M. Roche. Nat Safety N 55:32+ Je '47
How to use visual aids. H. B. Duffus. il Nat Safety N 54:18-19+ D '46; Same. Safety Eng 94:18-19+ Ag '47
Instilling safety habits in maintenance workers. H. M. Bradley. il Factory Management 105:90-2 My '47
Instruction guide for safe crane operation. il Safety Eng 93:18-19+ Ap '47
Power of the printed word; safety rule books. J. V. Grimaldi. Safety Eng 94:16+ S '47
Safety is our business. W. H. Spears. Bus Transportation 26:90-1 My '47
Safety talks to new workers lower accident rates; Westinghouse Electric. W. D. Renner. il Factory Management 104:106-7 D '46
Slidefilms are sound. C. F. Scheer. il Nat Safety N 55:26-7+ F '47
Trailer brings safety films to railroad workers. il Nat Safety N 54:56 D '46
Trained in hand brake operation; Chicago, Milwaukee, St Paul and Pacific railroad company's hand brake instruction car. il Nat Safety N 56:60 S '47
Training aids. il Nat Safety N 55:191+ Mr '47
Training new employes in safety. D. Attaway. il Pet Eng 19:238+ O '47
Visual education goes to the job; Standard register company. il Nat Safety N 56:37 S '47; Same. Safety Eng 94:64 O '47
What is wrong? P. G. Hunter. Nat Safety N 56:32+ S '47

SAFETY islands
Chicago begins installation of model safety islands. il Eng N 138:200 F 6 '47

SAFETY lamps, Electric
Coal-mine lighting. Elec R (Lond) 141:289 Ag 22 '47

SAFETY laws and regulations

See also
Fire protection—Laws and regulations

SAFETY literature
Power of the printed word; safety rule books. J. V. Grimaldi. Safety Eng 94:16+ S '47
R for pale programs; use of publicity. P. Jones. Nat Safety N 5:30-1+ Je '47

SAFETY movement
But not good enough! N. H. Dearborn. Nat Safety N 54:19+ N '46
Nation's progress in industrial accident control. Safety Eng 94:48 Ag '47

SAFETY movement—*Continued*
Safety in Belgium through World war II; Antwerp safety museum. C. Laurens. Nat Safety N 55:44 Je '47
Safety's new emblem; green cross for safety. Nat Safety N 55:20 Ap '47
To hell with safety; too-common use of the word. F. T. Grosser. Safety Eng 94:26+ O '47; Discussion. 94:24 D '47
See also
Advertising copy—Safety appeal
National safety council

France
Safety survived! organized safety work is aiding France's industries in reconstruction. J. Troyon. il Nat Safety N 54:20-1+ N '46

Mexico
Good neighbor safety; Mexican government creates safety institute. P. H. Ryan. Safety Eng 92:26-8 O '46

New York (state)
Ryan safety director for New York state; first head of State division of safety. East Underw 48:27 Ag 8 '47

SAFETY museums
Safety in Belgium through World war II; Antwerp safety museum. C. Laurens. Nat Safety N 55:44 Je '47

SAFETY on the farm
Make safety your no. 1 crop. C. F. Kettering. Nat Safety N 56:28-9+ Jl '47
Oil company farm safety film proves a smash hit; Sinclair refining co. F. C. Sturtevant. Nat Pet N 39:34 O 29 '47

SAFETY organization
Departmental integration brings top efficiency in safety and medical units. S. D. Steiner. il Safety Eng 93:62-5 Ap '47
General Motors recommends six operating principles in getting worker cooperation in safety. D. Mould. il Safety Eng 93:18-19+ My '47
Good organization assures safety plan's success; Illinois watch case company. D. D. Davis. il Factory Management 104:132-3 O '46
Helping the foreman carry the ball. J. E. Trainer. Safety Eng 93:20+ Ap '47
It's management's responsibility. C. S. Craigmile. Nat Safety N 54:33-4 N '46
Mine safety program and organization. il Safety Eng 93:22-3+ Mr '47
Safety dividends in morale and good will; Virginia smelting co. A. B. Butt, jr. il Safety Eng 93:20+ Mr '47
Safety in scattered operations. H. E. Dato. Nat Safety N 55:28-9 Ap; 27 My; 34+ Je; 56:30 Jl '47
Take the dry tag off safety. J. E. Moore. il Safety Eng 92:24+ D '46
What do you expect from your safety organization? panel discussion. Nat Safety N 56:88-9+ O '47
See also
Safety committees

SAFETY paper. See Paper, Safety

SAFETY posters
AAF guards the Nation and its own. il Nat Safety N 56:27 Jl '47
How to use visual aids. H. B. Duffus. il Nat Safety N 54:18-19+ D '46; Same. Safety Eng 94:18-19+ Ag '47
Newspaper on the wall. Nat Safety N 56:44 Jl '47
Safety is a mousetrap; creating safety posters. L. Kane. il Nat Safety N 55:30-1 My '47

SAFETY shoes. See Shoes, Safety

SAFETY signs
Do's, don'ts and directions. Nat Safety N 55:192 Mr '47
Folding stands hold safety signs. il Elec World 128:132-3 O 11 '47
Insuring full coverage by danger signs. Elec World 128:88+ S 27 '47
Reflectorized signs for mines. E. J. Eisenach. il Can Min J 68:727-9 O '47

SAFETY standards
Committee asks comments on safety color definitions. Ind Stand 18:92-3 Ap '47
For safety in the plastic industry; new standard tells how to prevent dust explosions. H. R. Brown. il Ind Stand 17:52-5 Mr '46; Same cond. Safety Eng 94:14-15+ Jl '47
How California has modernized its accident prevention program. P. Scharrenberg. Ind Stand 18:246-7 O '47
ILO record shows 27 years of international cooperation. Ind Stand 18:197-8 Ag '47
Limit on trichloroethylene defined to protect workers. il Ind Stand 17:302 D '46; Same. Safety Eng 92:56 N '46
Safety and interchangeability for compressed gas cylinders; standardization of valve outlets. M. E. Steczynski. il Ind Stand 18:105-7 My '47
Safety for bakery workers; first national safety code. A. Hecht and P. Pirrie. il Ind Stand 18:220-3 S '47
See also
Hats, Safety—Standards
Shoes, Safety—Standards
Safety codes

SAFETY tags
Life-saving switch tags; American rolling mill co. il Steel 120:98 F 3 '47

SAFETY valves
Closed vent system increases plant operating safety factor. R. G. Murray, jr. flow diag il Pet Refiner 26:94-8 O '47
Hydrostatic safety valve and pulsing meter for gases. R. S. Preston and J. B. L. Worthington. diags Chem & Ind p612 O 4 '47
Maintenance stops explosions. Safety Eng 93: 26 Mr '47
Protect your low-pressure equipment. H. M. Spring. il diag Power 91:481-3 Jl '47

Testing
Portable test bench to service safety valves. W. E. Rossnagel. diags Power 91:193 Mr '47

SAFEWAY stores, inc.
Safeway's union shop. Bsns W p 102 S 20 '47

SAFFRON
Red saffron stocks in Greece estimated. Oil Paint & Drug Rep 151:53 My 5 '47

SAFRANINE
Warm safranine for plant tissues. S. Shapiro. Science 105:50 Ja 10 '47

SAILING vessels
Ugliest craft in the world; Marco Polo, built in 1851. C. C. Hanks. Marine Eng 51:74-5 D '46

SAILORS. See Seamen

SAILPLANES. See Gliders

ST CATHARINES, Ontario

Water supply
More water. W. G. McLaughlin. il Comp Air Mag 52:196-9 Ag '47
Transite pipes in tunnel form new feeder main for St Catharines. W. G. McLaughlin. il Water & Sewage 85:13-17+ F '47

ST HYACINTHE, Quebec

Water supply
Addition to St Hyacinthe water filtration plant. L. Crepeau. il Water & Sewage 85: 20-2+ Ap '47

ST JOSEPH lead company
St Joseph lead enterprise. I. H. Cornell and others. flow sheets il maps plans diags Min & Met 28:362-411 Ag '47

ST LAWRENCE corporation
St Lawrence shareholders set up permanent cooperative group. Paper Tr J 124:7+ Mr 13 '47

ST LAWRENCE waterway and power project
Construction features of the St Lawrence waterway and power development. T. H. Hogg. map plan Roads & Bridges 85:79-82 Je '47
Railroads air objections to St Lawrence seaway proposal. Ry Age 122:1224+ Je 14 '47
St Lawrence cost estimates revised. map diag Eng N 139:126-8 Jl 24 '47
Senate group hears seaway proponents. Ry Age 122:1181-2 Je 7 '47
Truman, Harriman hail seaway project. Ry Age 122:1270+ Je 21 '47

ST LOUIS

See also
Trade unions—St Louis

Bridges

Steel and concrete deck replaces timber roadway on Eads bridge. N. J. Law, jr. il Civil Eng 17:394-6 Jl '47

Commerce

St Louis typifies vigor of our cities' world-trade drive. S. Abbott. il For Comm W 27:9-11+ My 17 '47

Industries

American institute of chemical engineers spring regional meeting, St Louis, May 11-14. Chem Eng Prog 43:sup18+ Ap; sup14-16 My '47

Railroads

Four lines oppose Santa Fe's plans; see losses if rival enters St Louis. Ry Age 121:966-7 D 7 '46

Rapid transit

Closing statement to Board of arbitration by John L. Wilson, president, St Louis public service company, April 19, 1947. Mass Transportation 43:176-80 My '47

What went on at St Louis? arbitration proceedings. Mass Transportation 43:267-70 Jl '47

See also
Motor bus lines—St Louis

ST LOUIS-San Francisco railway

Frisco's new officers named. Ry Age 121:1087-8 D 28 '46

Market has trouble absorbing new 'Frisco issues. F. M. Stern. Barron's 27:9+ F 3 '47

Reorganization approved. Comm & Fin Chr 164:3335 D 23 '46

Restored to private ownership; bankruptcy ended Jan. 1. Comm & Fin Chr 165:254 Ja 13 '47

ST LOUIS southwestern railway

Court approves plan. Comm & Fin Chr 165:2930 Je 2 '47

Court refuses to review 1941 plan of reorganization. Comm & Fin Chr 165:1460 Mr 17 '47

Creditors' equities preserved as Cotton Belt bankruptcy ends. Ry Age 123:203-4 Ag 2 '47

ICC approves plan. Comm & Fin Chr 166:163 Jl 14 '47

Payment of bonds and interest. Comm & Fin Chr 166:472 Ag 4 '47

Solvency problem; Cotton belt railroad asks dismissal of bankruptcy. Bsns W p76-8 My 10 '47

Trustee discharged by court. Comm & Fin Chr 166:1258 S 29 '47

ST PATRICK'S cathedral, New York

Timber trusses of cathedral roof supported by outside cantilever beams. il diags Eng N 137:720-1 N 28 '46

ST PAUL'S rocks

Dunite-mylonites of St Paul's rocks (Atlantic). C. E. Tilley. bibliog Am J Sci 245:483-91, pl 1-2 Ag '47

ST REGIS paper company

Debentures placed privately. Comm & Fin Chr 166:308 Jl 21 '47

Earnings, plant, now fit big capital. Barron's 27:30 Mr 17 '47

Preferred stock offered. Comm & Fin Chr 164:3150 D 16 '46

St Regis starts new machine at Deferiet on 45th anniversary. il Paper Ind 28:1251-2+ D '46

St Regis takes over Time mills. Paper Tr J 123:7-8 D 26 '46

Sales hit new high in 1946. R. K. Ferguson. Paper Tr J 124:14+ Mr 13 '47

SALAD dressing

Changes in fats and oils during freezing and thawing. Food Ind 19:632-3 My '47

Mayonnaise and salad dressing industry reaches $100 million. S. M. Sackrin. Dom Comm 35:49-53 Ag '47

SALAMANDERS (heaters)

Build these salamanders for your winter masonry jobs. C. W. Hubertz. diags Brick & Clay Rec 109:25 D '46

SALARIES

Bargains in brains; job market at meetings of learned societies. Bsns W p24+ F 1 '47

Gearing salaries of nation-wide chains to the geographical structure of wages. S. L. Palmer and J. Dean. J Bsns 20:96-115 Ap '47

National industrial conference board survey shows management eager to maintain equity in wages and salaries. Barron's 27:12 Ag 11 '47

Office salaries in ten cities. V. Fry. Am Bsns 17:27-8+ Jl '47

Salaries of technical persons. Can Chem & Process Ind 30:90+ D '46

Story of your salary; International resistance co. H. T. Stephens. Personnel J 25:330-4 Ap '47

See also
Chemists—Salaries
College professors and instructors—Salaries
Corporations—Directors—Salaries
Engineers—Salaries
Executives—Salaries
Municipal engineers—Salaries
Salesmen—Salaries and commissions
Teachers—Salaries
Wages

SALARY savings insurance. See Insurance, Life—Salary savings plan

SALCOMINE

Regenerative unit for generating oxygen, cobalt disalicylal ethylene diamine. B. B. Fogler. bibliog il diags Ind & Eng Chem 39:1353-60 O '47

SALEM, Massachusetts

Sewerage

Grit and grease chamber reduces sewer cleaning and pollution problems; sewage from Salem and Peabody, Mass. carries wastes from leather-making industries, high in grease and silt content. F. L. Flood. il plans diags Eng N 139:391-3 S 18 '47

SALES

Contract stabilization. J. Spears. Textile Col 69:32+ S '47

Manufacturer's liability on sales contracts; recent law suits involving contracts for sale of machinery through distributors. L. T. Parker. Mach 53:182-4 Ja '47

Prepare to win lawsuits involving correspondence. L. T. Parker. Ind Marketing 32:37-8+ F '47

Purchase of pledged property by pledgee bank with implied consent of pledgor at public auction sale. Banking Law J 64:689-95 S '47

Why Uncle Sam often cracks down on exclusive sales contracts. A. W. Gray. Sales Management 58:90+ F 1 '47

See also
Auctions
Instalment plan
Warranty

SALES, Special. See Special sales

SALES areas. See Market areas

SALES campaigns

Advertise it, show it, sell it; how to crash a market; Jewelite brushes. F. E. Camp. il Sales Management 58:90+ My 20 '47

How blitz crews seek 98,000 outlets for Sherwin-Williams non-paint chemical specialties. E. W. Windsor. il Sales Management 58:42-3 My 1 '47

How does a new product get a whirlwind start? B. Isely. il Sales Management 58:125-6+ Mr 15 '47

New uses expand markets for stay put socket. il Sales Management 59:108+ O 1 '47

Place your bets; can Rolnick win mousy males to giddier headgear? I. Pierce. il Sales Management 58:80+ Je 1 '47

Portland dealers hit 937 percent sales increase on water heaters. Dom Eng 170:116-17 Ag '47

Sherwin-Williams stages a blitz; to get 98,000 new dealer outlets for nonpaint products. Bsns W p51-2 Mr 1 '47

Tests among foot-weary workers open markets for Cushion Foot Sox; free trial plans. G. P. Hall. il Sales Management 58:70+ Ja 1 '47

SALES campaigns—*Continued*
That new product may need a separate sales staff; Swift & co. promotes meats for babies and juniors. H. E. Green. il Ptr Ink 219:30-1 Je 27 '47
Tomato sauce breaks trail for line as Hunt opens New York market. J. H. Collins. il Sales Management 58:41-3 Ja 1 '47

SALES conferences
Chevrolet sets up trading posts for management ideas; dealers' sales managers have once-a-month forum. D. G. Baird. Sales Management 57:63+ D 15 '46
Distributors solve own problems at Brown-Forman's idea center. J. G. Baquie. il Sales Management 58:37-9 Ap 1 '47
How you can produce successful sales meetings. D. Ross. Adv & Sell 39:83 N '46
Phone conferences grease sales wheels for Pierce. S. Zanditon. Sales Management 58:78+ Ja 1 '47
Pre-planning puts pace and punch in Pennsalt's sales pow-wow. T. Armstrong. il Sales Management 58:56+ Je 1 '47
Students in marketing show how they would stage a sales meeting; the class in sales management at University of California moves in on the paraffine companies. il Sales Management 58:41-3 F 15 '47
Triple-threat conference room. il Sales Management 58:101 My 20 '47

SALES contests
B & T build a promotion center to sell sales promotion. il Sales Management 58:83-4 Ja 1 '47
Brown & Bigelow shoot the works on $100,000 prize contest. L. Fitzmaurice. il Sales Management 59:42-4 Ag 15 '47
Increase your sales with contests! Z. Kaufman. Radio N 38:92+ O '47
Management emphasizing sales effectiveness backed by prize-incentive contests. W. H. Davis. Ptr Ink 221:122 O 17 '47
This salesmen's contest is paying its own way; trip to convention in Los Angeles offered by Farmers automobile inter-insurance exchange. L. Nordgren. il Ptr Ink 219:46+ Je 6 '47

SALES contests, Dealers'
Bendix seeks washer sell-out with million dollar contest; free-for-all among 9,000 dealers and 25,000 retail salespeople. il Sales Management 59:54+ S 1 '47

SALES contests, Dealers' employees
Million for promotion spent in two months; Chevrolet sales contest and service promotion. D. G. Baird. il Sales Management 59:60+ O 15 '47

SALES contests, Employees'
See also
Bank employees—Contests

SALES contracts. See Sales

SALES conventions
Planning and executing a national sales meeting; Quaker rubber corporation. W. E. Cox. Ptr Ink 219:44-5 Ap 25 '47
Proctor sales parley proves good theater pays off. T. Armstrong. il Sales Management 59:90-2+ S 1 '47
Reporter looks in on the fourth Ohio sales conference, Columbus, Oct. 14. Sales Management 59:138+ N 1 '47
Successful sales meetings are not one-man shows. Ptr Ink 220:41 Jl 25 '47
Theater starts to sell itself for sales meetings; San Francisco's Vogue. il Sales Management 59:62+ Ag 1 '47
Time out for refreshment. D. Ross. Ptr Ink 217:108 D 27 '46
Use glamour, humor, showmanship to sell salesmen on value of ads; Philco storage battery division. J. A. Gilruth. il Ptr Ink 220:36-7+ Jl 11 '47

SALES costs
How advertising can reduce unit sales costs. C. S. Wilkinson. Ind Marketing 32:35+ Ap '47
Keeping sales costs in line. R. D. Crisp. Ind Marketing 32:29-30+ Mr '47
Territorial sales control cuts distribution costs; this check list for removing the rust from sales-control machinery applies to both industrial and consumer product selling. R. D. Crisp. Ptr Ink 218:42-3+ Mr 14 '47
See also
Sales policies—Selective selling

Accounting
Distribution methods and costs. W. E. Perry. N A C A Bul 28:731-46 F 15 '47

SALES departments
Decentralizing sales management; Sylvania electric products. F. W. Mansfield. Ind Marketing 32:32-3+ Mr '47
Industrial finds profit pay-off in men of three-way-skills; Lebanon salesman is engineer and trouble-shooter. W. H. Worrilow. il Sales Management 59:124+ O 1 '47
Labor-management harmony; can selling catalyze it? P. Heyneman. Sales Management 58:37-9 Je 15 '47
Organized commercial chemical development; sales departments. J. Oostermeyer. Chem & Eng N 24:3323-5 D 25 '46
Sales manager and the industrial accountant. M. W. Cresap, jr. N A C A Bul 28:1128-37 My 15 '47
See also
Sales promotion departments

Records
How to get the facts for efficient sales analysis; S. C. Johnson & son salesmen report daily. R. D. Crisp. il Sales Management 58:100+ Ap 1 '47
See also
Sales records

SALES estimates
How to forecast mail-order sales; McDonnell's epicure club of America. W. A. McGarry. Ptr Ink 219:100+ Ap 18 '47
New applications for market research; management research on market position. W. Alderson. Sales Management 58:87 Mr 15 '47
New applications for market research; measurement of a market without a sales history. W. Alderson. Sales Management 58:124 F 15 '47
Sales forecasts are four-way management tool at Dennison. H. C. Weeks. Sales Management 59:60+ S 1 '47
Synthetic customer analysis; estimating monthly gas sales. A. B. Roberts. Gas Age 99:27-8+ Ja 9 '47

SALES executives, National federation of. See National federation of sales executives

SALES letters
Add a personal touch to swell direct-mail results. E. N. Mayer, jr. Ptr Ink 219:38-9 Ap 25 '47
Direct mail works for the Flying Tigers. Ptr Ink 217:108 N 15 '46
Eight elements in good sales letters. E. M. Housman. Ptr Ink 218:40 F 28 '47
Eight rules to help personalize industrial catalog mailings; form letters slanted to buyers' individual needs. J. K. Rector. il Ptr Ink 218:35-7 Ja 10 '47
How national advertisers use sales letters for follow-up; examples of answers to inquiries in response to advertisements. C. J. Swan. Ptr Ink 220:32-4 Jl 11 '47
How your host got his name on the cocktail napkins; Monogram company of California. il Sales Management 58:72-4+ Ap 1 '47
My favorite letters; personal, money raising, sales letters. C. B. Mills. Ptr Ink 218:62-4+ Mr 7 '47
100 sales letters a week keep the customers coming; California vegetable concentrates, inc. J. B. Pardieck. il Sales Management 58:70-1+ Mr 1 '47
Stunt-a-month letters pay off for 20 years; Fulton-Wassell paper company's direct mail promotion. Sales Management 58:76+ Je 1 '47
Tells customers facts about prices; Porter-Cable machine company's letter to distributors. Am Bsns 17:34+ Je '47
Ten rules for good letters. E. N. Mayer, jr. Ptr Ink 220:66+ S 26 '47

SALES letters—*Continued*
Why some sales letters fail. E. M. Housman. Ptr Ink 218:45 Mr 7 '47

See also
Advertising, Mail
Letterheads

SALES management
Backing up distribution of industrial goods. J. A. Proven. Ind Marketing 31:51-2+ N '46
Best incentives for salesmen in a competitive market; do not over emphasize the importance of financial incentive. B. R. Canfield. Adv & Sell 39:53-4+ O; 53-4+ N '46
Creative selling; it is the kind that inspires new wants rather than merely filling needs. A. H. Motley. il Ptr Ink 221:50-1+ O 31 '47
Decentralized sales management; how it's working out at Sylvania. F. W. Mansfield. Sales Management 58:76+ F 15 '47
Decentralizing sales management; Sylvania electric products. F. W. Mansfield. Ind Marketing 32:32-3+ Mr '47
Five power points for sales chiefs today. W. B. Given, jr. Sales Management 59:83 O 1 '47
Ford shakeup forecasts pitched battle for auto sales supremacy. Sales Management 58:75-6+ Mr 1 '47
Ford tractor sales setup; the who, the why and the how. F. R. Pierce. il Sales Management 59:48+ Ag 15 '47
14 point economic target for salesmen; nutmeats of National federation of sales executives Rochester convention. G. Flack. Sales Management 58:69 My 20 '47
How Panther gets sales reports minus alibis. Sales Management 59:64 S 1 '47
How statistics can guide your salesmen's efforts. W. D. Molitor. Ptr Ink 219:38-9 My 9; 52-4+ My 16 '47
How to increase profits from your research. R. D. Crisp. Adv & Sell 40:52+ Ap '47
How to use research as a management tool; six important ways. D. R. G. Cowan. Adv & Sell 40:44+ F '47
Keeping sales costs in line. R. D. Crisp. Ind Marketing 32:29-30+ Mr '47
Low-pressure selling. E. C. Bursk. Harvard Bsns R 25 no2:227-42 [Ja] '47; Same cond. Sales Management 58:37-9 Ap 15; 48+ My 1 '47; Discussion. M. A. Reilly. 58:87-8 My 20; 142+ Je 15 '47
Making mud packs into millions; the story of Helene Curtis. W. Gidwitz. il Sales Management 58:93+ Ap 15 '47
New England sales chiefs look buyers' market in the face. Sales Management 58:103-4 F 1 '47
New scope for sales management. L. Nejelski. Sales Management 59:sup3+ Jl 1 '47
Organization that builds more productive salesmen. W. Rados. Sales Management 59: 40-1 Jl 15 '47
Policy changes that zoomed the sale of Cory coffee makers; improved product, expanded line; new dealer and distributor policies. L. B. Colby. il Sales Management 58:37-40 Ja 1 '47
Sales control system. F. Merish. Radio N 37:64-5+ My '47
Sales ideas? Fram gets them right out of the field. H. E. Robinson. Sales Management 57:113-14+ D 1 '46
Sales leadership. B. L. Wells. Sales Management 58:96c+ Je 1 '47
Sales managers needn't fear a buyers' market. H. Simmons. Ptr Ink 218:38+ Mr 14 '47
Salesmen hit the road again. Bsns W p15-16 Ap 19 '47
Salesmen work best when they get recognition. R. W. Lake. Ptr Ink 220:36-7 Jl 4 '47
Selling; abstract. D. G. Mitchell. Adv & Sell 40:64 Jl '47
Selling aids; vital parts in the marketing machine. J. J. Nance. il Ptr Ink 221:52-3+ O 31 '47
So long, Easy street! here comes old-time pick and shovel selling! Hotpoint tells salesmen and dealers about buyers' market. L. C. Truesdell. il Sales Management 59: 58+ Jl 1 '47
Survey of salesmen's working conditions. P. Heyneman. Management R 36:541-2 O '47
Territorial sales control cuts distribution costs; this check list for removing the rust from sales-control machinery applies to both industrial and consumer product selling. R. D. Crisp. Ptr Ink 218:42-3+ Mr 14 '47
Try a two-man team when the selling gets tough; when to use it, what to do, and how to do it. B. Bigelow. Sales Management 58:58+ Ap 1 '47
Wanted; factual sales management to buck the buyer's market; 31-point check list. B. Bigelow. il Sales Management 58:35-8 My 20 '47
What General Foods is doing to build blue ribbon salesmen. W. R. Parker. Sales Management 59:37-40 Jl 15 '47
Why Carborundum places more power in hands of district sales managers. F. J. Tone, jr. Sales Management 57:48 N 10 '46
Why decentralization takes root in sales management. J. A. Murphy. il Sales Management 57:80+ N 10 '46

See also
Advertising
Advertising and salesmen
Dealer helps
Display of merchandize
Marketing
Printing trade—Salesmen
Prospect lists
Sales contests and other headings beginning Sales
Salesmanship
Salesmen
Salesmen's reports

Bibliography
Current reading list for sales executives and salesmen. Sales Management 58:108+ Ap 1 '47

Letters to salesmen
Pep up your salesmen's mail to get extra sales effort. F. L. McKibbin, jr. Ptr Ink 217:29-31 D 27 '46

Study and teaching
Students in marketing show how they would stage a sales meeting; the class in sales management at University of California moves in on the Paraffine companies. il Sales Management 58:41-3 F 15 '47

SALES managers
Are sales executives doing their full job about their own company advertising? Sales Management 59:164 S 1 '47
Can tests help to pick capable sales managers? D. C. Humm. Sales Management 59: 94+ Ag 15 '47
Chevrolet sets up trading posts for management ideas; dealers' sales managers have once-a-month forum. D. G. Baird. Sales Management 57:63+ D 15 '46
Club extension; Jack Lacy's committee is responsible for the rapid growth of NFSE; with portraits of some regional directors. Sales Management 59:sup3-5 N 1 '47
Highlights of Western sales executives conference in San Francisco; photographs. Sales Management 57:40-3 N 20 '46
Pitfalls are listed for sales managers; abstract. W. R. Parker. Adv & Sell 40:90 Je '47
What's a good sales manager worth? pictograph. Sales Management 58:65 Mr 15 '47

Training
Training future sales executives in analytical approach to marketing; G-E's seven affiliates. R. W. Johnson. Ptr Ink 221:32-3+ O 3 '47

SALES manuals
Manuals arm Deepfreeze men for tooth-and-nail selling; Motor products corporation. F. F. Duggan. Sales Management 59:124+ S 15 '47
Sales manual deals with all parts of a diverse market; Gaines dog food. J. A. Shellenberger. il Ptr Ink 219:43+ My 16 '47

SALES meetings. See Sales conferences; Sales conventions

SALES policies
Aviation sales policies need drastic revision, survey shows. A. McSurely. Aviation N 7:19 Mr 31 '47
Best-selling Bendix. il Fortune 36:132-7+ N '47

SALES policies—*Continued*
Better look now! an old competitor eyes your markets. M. Adams. Sales Management 58:88+ Ap 1 '47
Consider these 6 points to control distribution costs. R. D. Crisp. Ptr Ink 219:40-1+ My 9 '47
Converting sales losses into profits; abstract. Management R 35:530-1 D '46
Dress buyers take what they get and really like it; Annie Laurie ships quotas every two weeks. L. Fitzmaurice. il Sales Management 57:74+ D 15 '46
Five-point sales platform pulls Magnavox from red ink to riches; direct to dealer sales, highly selective distribution, firm price policies, quality production. L. B. Colby. il Sales Management 59:75-6+ Ag 1 '47
Franchised beer; Brewers' Best Associates licenses local brewers to use its name, formula. Bsns W p68 O 25 '47
Free-prints-by-mail policy cracks market for new baby camera. Sales Management 59: 138-9 O 1 '47
How management can meet current sales resistance; eight steps that can and should be taken immediately. H. Bund. Ptr Ink 219:37-9+ My 16 '47
New applications for market research; measuring acceptance of merchandising plan. W. Alderson. Sales Management 58:46 Ap 1 '47
Policies that sent Eversharp ahead. E. Whitmore. il Am Bsns 17:8-9+ Ja '47
Policy changes that zoomed the sale of Cory coffee makers; improved product, expanded line; new dealer and distributor policies. L. B. Colby. il Sales Management 58:37-40 Ja 1 '47
Service under the sales department; Proctor electric company. Am Bsns 17:34+ Ja '47
Six ways the independent salesman can help sell your product. B. Kingston. il Ptr Ink 221:44-5 O 17 '47
Why Admiral unveils Dual-Temp with region-by-region showings; 76 consecutive distributor-dealer meetings. W. C. Johnson. il Sales Management 57:40-2 N 10 '46
Your selling plans must be keyed to your outlets. il Mod Plastics 24:102-5 My '47

See also
Credit
Customer relations
Dealer helps
Dealer relations
Discount, Cash
Discount, Trade
Exhibits
Gas industry—Merchandizing
Instalment plan
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Marketing
Premiums (merchandizing)
Price fixing, Resale
Price policies
Products, Improved
Returned goods
Sales units
Trade-in policies

Free goods

Don't fool yourself about free deals. Ptr Ink 217:72+ N. 15 '46
Free goods offers, old device but still popular. Ptr Ink 217:50-1+ N 22 '46
Tests among foot-weary workers open markets for Cushion Foot Sox; free trial plans. G. P. Hall. Sales Management 58:70+ Ja 1 '47

Selective selling

Attacking high sales costs; Bigelow-Sanford and Glidden co. Bsns W p58-60 My 3 '47
Botany hand picks its markets with selective selling plan. A. B. Ecke. il Sales Management 57:37-9 N 10 '46
Dealers resent franchising of new outlets selling scarce merchandise. B. Tolk. Ptr Ink 217:69+ N 29 '46
Getting in step; Jamison co. finds selective distribution, national brands, multiple-unit selling, boost its sales. Bsns W p58-60 Je 28 '47
Introduces product through limited store distribution; Everfast drapery. E. M. Housman. il Ptr Ink 219:40 Ap 18 '47

SALES promotion
Buda company uses filing cards, slides to introduce new equipment. A. Bernstein. il Ind Marketing 32:80 My '47
Check list to help you introduce your new industrial products. Ind Marketing 32:47-8+ Mr '47
Courting the women's clubs; industry recognizes potentialities of vast market. il Bsns W p51-2+ Je 28 '47
Crack shots prove product precision for Winchester. W. S. Allen. il Sales Management 58:42-4 Je 15 '47
Customers furnish ideas to sell 400 items; help Burgess battery co. discover uses for variety of merchandise. C. L. Anson. il Adv & Sell 40:64 O '47
Detailing: what is it, and how can it activate sales? first developed in drug field in work with doctors and dentists. E. McSweeney. Sales Management 58:108+ F 15 '47
Fashion show is more than a frill. A. Kimball. il Sales Management 59:44-6+ N 1 '47
Fire brick company issues folders to file and preserve its literature. A. Bernstein. il Ind Marketing 32:100+ Jl '47
Fire more shots at more targets to beat greater competition; profitable marketing, merchandising and advertising strategy calls for recognition of three vital multiples. H. L. Roth. Ptr Ink 219:35-7+ Ap 4 '47
How the Jantzen Mills grew from a small knitting shop. G. Hogan. il Adv & Sell 40: 39-40+ Ja '47
How to eliminate the seasonal slump. Ptr Ink 219:44-5 My 9 '47
How to get an idea. R. J. McAndrews. Sales Management 58:48+ Ap 15 '47
How W. T. Grant uses sales promotion. J. R. Rowen. il Adv & Sell 40:46+ O '47
Industrial sales promotion for export markets. L. R. Beck. Ind Marketing 31:57-8+ D '46
Kodachrome fashion show jumps gun on market trips. il Sales Management 58:95-6 My 1 '47
Men's ties swipe design and promotion ideas from women's wear. N. S. Goldsmith. il Sales Management 58:60+ Je 15 '47
Million for promotion spent in two months; Chevrolet sales contest and service promotion. D. G. Baird. il Sales Management 59: 60+ O 15 '47
Philco accessories county fair; distributors stage a Back to normal campaign. il Sales Management 59:42-3 N 1 '47
Planned lighting for profit load is theme of Institute sales program. Edison Elec Inst Bul 15:81-2 Mr '47
Planned lighting means planned lighting; profitable load results from planned lighting. Elec World 127:62-3 Mr 29 '47
Policy behind DoAll's packaged shop program; model repair and service shops for GI's and others. il Sales Management 57: 90+ N 20 '46
Promotion breathes new life into sleeping asset; Foneholders. il Sales Management 58:110-11 My 20 '47
Proving ground pre-tests farm feeds for Consolidated; provides sales training and steady source of news. F. A. South. il Sales Management 59:48+ O 15 '47
Radio serviceman is pivot of IRC replacement sales promotion. il Sales Management 59:95+ O 1 '47
Rags to riches with Eversharp; a story of selling courage. T. Armstrong. Sales Management 58:48+ Ja 15 '47
Retail demonstrations teach women how to sew Plastron. il Sales Management 59:84+ O 1 '47
Sales promotion; ace coordinator of sales and advertising. W. B. Montague. il Ind Marketing 32:45-7+ My '47
Sales promotion; what it is and what it does when properly used. G. P. Robers. Ind Marketing 32:41-2+ Jl '47
Story of Prince Matchabelli. J. A. Murphy. il Adv & Sell 40:33-4+ S '47
Trans-World promotion wins splashy retail support for Dorothy Gray; new fabric color, new lipstick color, tie in with dress designs. B. Carpenter. il Sales Management 58:42-4 Mr 15 '47
U.S. rubber co. hits high note in public relations; sponsors spring tour of 24 cities by New York Philharmonic orchestra. il Sales Management 58:97-8 Ap 1 '47

SALES promotion—*Continued*
Wine industry draws publicity dividend from wine color promotions. E. Gidlow. il Sales Management 58:75-6+ F 1 '47

See also
Cooking schools
Dealer helps
Department stores—Manufacturers' demonstrations
Exhibits
Exhibits, Traveling
Gift certificates
Industrial tours
Premiums (merchandizing)
Publicity

SALES promotion departments
Check list of functions of modern sales promotion departments. H. Simmons. Ptr Ink 220:40-1+ Jl 11 '47

SALES records
Central records for department stores. Bsns W p69+ Mr 22 '47
How a consumer purchase panel supplements company sales records. R. H. Ganly and R. D. Crisp. Ptr Ink 220:41-2+ Ag 15 '47
How to sell to dealers. W. C. Dorr. Sales Management 59:118+ N 1 '47
Industrial sales control? here's a plan that works; Worthington pump & machinery corp. W. A. Meiter. il Sales Management 59:91+ Ag 1 '47
Keeping track of 18,000 customers; Duquesne light company. il Am Bsns 17:12-13+ Je '47
Measuring markets by trade analysis; chemical markets. L. D. Reed. flow chart il Chem Ind 60:614-17 Ap '47
Sales control system. F. Merish. Radio N 37:64-5+ My '47
Sales figures to the field; American Home Foods uses microfilm copies of sales analysis figures, kept on visible cards in home office. G. L. Harris. il Am Bsns 16:12-13 D '46
Sylvania's sales control system. E. J. Lynch. il Am Bsns 16:14-15+ N '46

SALES research
Factory salesmen double as research workers; National cylinder gas co. Steel 121: 166+ O 6 '47
New applications for market research; estimating responsiveness to sales efforts. W. Alderson. Sales Management 58:85 Ap 15 '47

SALES rooms. See Showrooms

SALES statistics
How statistics can guide your salesmen's efforts. W. D. Molitor. Ptr Ink 219:38-9 My 9; 52-4+ My 16 '47
Three-way control for low-cost operation; Lenox incorporated. J. M. Tassie. il Factory Management 104:110-12 D '46
When to use percentages for comparisons. H. Zeisel. Ptr Ink 220:40+ Ag 15 '47
Where will profits come from? A. J. Gallager. Sales Management 58:37-40+ F 15; 94-6+ My 20; 128+ Je 15 '47

See also
Department stores—Statistics
Retail trade—Statistics

SALES tax
Cuba's gross sales tax amended. For Comm W 29:14 O 18 '47
Czechoslovakia; turn-over tax and license fees revised. For Comm W 26:18-19 Mr 15 '47
Sales taxation and the Mints plan. M. Bronfenbrenner. R Econ Stat 29:39-42 F '47

SALES territories
Climate; the mysterious X in your regional sales potentials? J. M. White. map Sales Management 59:122-4+ O 15 '47
Cost of entering new markets. U S Bur For & Dom Com, Economic Ser 51:1-26 '45
How to sell to dealers. W. C. Dorr. il Sales Management 59:37-9 O 1; 81+ O 15; 118+ N 1 '47
Territorial sales control cuts distribution costs; this check list for removing the rust from sales-control machinery applies to both industrial and consumer product selling. R. D. Crisp. Ptr Ink 218:42-3+ Mr 14 '47

SALES units
Elgin compacts climb on the fashion ensemble bandwagon. W. D. Evans. il Sales Management 59:130+ O 15 '47
How to increase the unit of sale; new packaging device, larger package, wider assortment, price inducement, etc. Ptr Ink 219: 40-1 My 23 '47
Pyrex ware back in sets; it pays, says Corning. il Mod Packaging 20:120-1 N '46

SALESMANSHIP
Are collegians warming up in their attitudes toward selling? poll of Commerce freshmen at Ohio State. H. H. Maynard. Sales Management 59:90+ O 15 '47
Booklet promotes sales work as a career; Opportunities in selling; review. Am Bsns 17:30 O '47
Creative selling; it is the kind that inspires new wants rather than merely filling needs. A. H. Motley. il Ptr Ink 221:50-1+ O 31 '47
First sell 'em, then keep 'em sold! D. Ross. Ptr Ink 219:84+ Ap 11 '47
Good selling is plain selling. M. Rapp. Ind Marketing 32:76 My '47
Honeymoon is over for salesmen. D. F. Wilber. Ind Marketing 32:58 Ag '47
How to get a welcome on the next call; divide selling material into parts of continued story. P. Bradstreet. Adv & Sell 40:48+ My '47
How to sell to dealers. W. C. Dorr. il Sales Management 59:37-9 O 1; 81+ O 15; 118+ N 1 '47
Incentive will make a salesman sell. C. B. Roth. Ptr Ink 220:40-1 Ag 8 '47
Let the seller beware? G. C. Denebrink. Adv & Sell 40:46 F '47
Low-pressure selling. E. C. Bursk. Harvard Bsns R 25 no2:227-42 [Ja] '47; Same cond. Sales Management 58:37-9 Ap 15; 48+ My 1 '47; Discussion. M. A. Reilly. 58:87-8 My 20; 142+ Je 15 '47
Man who sells. R. Carney. Paint Oil & Chem R 109:16+ D 26 '46
Nine points for your salesmen to talk about. W. M. Borton. Ptr Ink 220:32-3 Jl 18 '47
Nuts to Ford; Tinnerman spring-lock nuts. Fortune 36:144 N '47
"Opportunities in selling" ready for distribution; booklet sponsored by U.S. Department of commerce, Office of small business. Sales Management 59:56 O 1 '47
Organization membership as a source of prospects. F. Rundell. Inland Ptr 118:68 F '47
Salesman's corner; art of compromise. F. Rundell. Inland Ptr 118:70-1 D '46
Salesman's corner; failing to meet a specified delivery date. F. Rundell. Inland Ptr 119:60-1 Je '47
Salesmanship as a profession. R. S. Wilson. Sales Management 58:81-8 Je 15 '47
Salesmen should learn to listen. W. D. Molitor. Adv & Sell 40:40 S '47
Selling industrial products with the accent on selling. E. C. Bursk. Ind Marketing 32: 39+ S '47
Should all salesmen try for an order on first call? M. A. Reilly. Sales Management 58: 87-8 My 20 '47
Showmanship sells merchandise. Z. Kaufman. Radio N 38:80+ Jl '47
Signposts on the road to successful selling. W. D. Molitor. Sales Management 58:42-4 F 1 '47
Speech training for the sales force; does it pay? Squibb salesmen want it. H. W. Wilkinson. Sales Management 59:46+ Ag 1 '47
Strip your bushes clean! R. Eastman. il Sales Management 59:38-9 O 15 '47
Today's selling and tomorrow's profit. J. Garth. Am Bsns 17:23-4 Ap '47
Try a two-man team when the selling gets tough. B. Bigelow. Sales Management 58: 58+ Ap 1 '47
What makes the buyer act that way? J. N. Griffith. il Ind Marketing 32:31+ Mr '47
Why I lost that order. Sales Management 59:107 S 1 '47

See also
Advertising
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Approach

Low-pressure selling. E. C. Bursk. Harvard Bsns R 25 no2:227-42 [Ja] '47; Same cond. Sales Management 58:37-9 Ap 15; 48+ My 1 '47; Discussion. M. A. Reilly. 58:87-8 My 20; 142+ Je 15 '47

Practical approach for opening new accounts. J. C. Cumming. Sales Management 58:124+ Ja 15 '47

Demonstrations

Bendix uses 7,300 women to post-sell every customer; give home demonstrations. il Sales Management 57:53-4+ D 1 '46

Chicago heavy machinery distributor uses working displays to step up sales; Bryant machinery & engineering company, Chicago. D. Easterberg. il Ind Marketing 32:54+ Jl '47

Crack shots prove product precision for Winchester. W. S. Allen. il Sales Management 58:42-4 Je 15 '47

Demonstration kit is dealer promotion aid. M. E. Huck. il Am Gas Assn Mo 29:126+ Mr '47

Demonstrations that backfired. J. Ecclesine. Ptr Ink 219:144 Je 20 '47

Equipment and design; office on wheels as demonstration showroom, pilot plant, or small production unit. C. O. Brown. Ind & Eng Chem 39:sup73A-4A Jl '47

Memo for buyers' market; demonstrate to sell! Westinghouse Electric brings prospect to dealer's Laundromat demonstration room. il Sales Management 59:37-9 Jl 1 '47

New household appliance carries old industrial trade-mark; Yale Tip Toe iron. A. B. Cassedy. il Ptr Ink 220:34-5 Jl 25 '47

Nu-Enamel strikes sales bonanza in facelifting for shabby cars. L. Boyd. il Sales Management 58:37-9 My 1 '47

Showmanship vs. show-off-ship. J. McNamara. Ptr Ink 219:138 My 9 '47

Why Atlas Paper gives shirt sleeve demonstration before each sale. H. A. Finn. il Sales Management 57:78-80 N 20 '46

See also
Department stores—Manufacturers' demonstrations

Group selling

Is a style show a good promotion investment? yes, when you can do a group selling job. G. N. Elliott. Sales Management 59:48 N 1 '47

Nice, friendly time; Hostess party plan. Fortune 36:144+ N '47

Product-promotion luncheons go national; Luncheon is served, inc. M. E. Reiners. Ptr Ink 219:108 Ap 11 '47

Price problem

Salesman's corner; your price is high. F. Rundell. Inland Ptr 118:66-7 Mr '47

Service

Good salesmen serve a function for the customer. G. A. Florez. Ptr Ink 220:38-9 S 5 '47

Returned goods menace, what can we do about it; creative selling. W. C. Dorr. il Sales Management 58:86+ Je 1 '47

Study and teaching

City college of New York graduates first class in practical salesmanship. Sales Management 58:117-18+ F 15 '47

G.E.'s improved method for mass sales training. J. DeJen. il Ptr Ink 218:38-9+ Mr 28 '47

How British set standards, qualify men for sales profession. il Sales Management 58:112+ Mr 15 '47

Non-selling employes get a chance to sell; free federal training. Sales Management 59:143 O 15 '47

Offers 2-year course in overseas selling; International House, New Orleans. Sales Management 58:104 Ja 15 '47

Students prove rich lode of sales talent. Sales Management 59:82 Ag 1 '47

SALESMANSHIP, Retail

It's sell, sell, sell in groceries. W. F. Wolf. J Retailing 23:33-4+ Ap '47

Teach dealers how to set up a department for your line; display of related merchandise in one place increases sales and profits. Ptr Ink 219:52+ Je 27 '47

What ever happened to suggestion selling? L. M. Thome. J Retailing 22:97-9 D '46

Will planned cold canvass pay out in selling Deepfreeze units? G. H. Smith. il Sales Management 58:37-9 Ja 15 '47

See also
Salesmen, Retail

SALESMEN

Conditions affecting an employer's right of discharge; discharge of salesman challenged by union. M. M. Shipman. Oil Paint & Drug Rep 150:7+ D 30 '46

Current reading list for sales executives and salesmen. Sales Management 58:104-9 Mr 1; 150+ Mr 15; 108+ Ap 1 '47

Factory salesmen double as research workers; National cylinder gas co. Steel 121: 166+ O 6 '47

How do today's salesmen compare with 1939's? Ptr Ink 221:43 O 24 '47

Incentive or talent? T. D. Endicott. Ptr Ink 221:164 O 17 '47

Industrial finds profit pay-off in men of three-way-skills; Lebanon salesman is engineer and trouble-shooter. W. H. Worrilow. Sales Management 59:124+ O 1 '47

Public relations director of Davis, Delaney, incorporated; Paul Meyer. F. Rundell. Inland Ptr 119:62-3 Ap '47

Salesman's job is the most important one of all. H. Metz. Ptr Ink 221:54-5+ O 31 '47

When you're the host; sales representative at a trade show. R. L. Fegley. il Ind Marketing 32:44-5+ O '47

See also
Advertising and salesmen
Canvassing
Gas companies—Salesmen
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Insurance agents
Printing trade—Salesmen
Public utilities—Salesmen
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Expenses

Auto vs. plane cost. Bsns W p20 Jl 19 '47

Expense accounts cut by salesmen's suggestions. P. Bradstreet. Adv & Sell 40:74+ O '47

How Socony's flying sales force functions. E. Kinney. il Sales Management 58:85-6 Ap 1 '47

Salesmen's expense allowances in metropolitan areas. Management R 36:386-7 Jl '47

Salesmen's expenses not too high, but revisions will be downward. C. J. Swan. il Ptr Ink 220:27-9 Ag 22 '47

What to pay salesmen for auto expenses; National wholesale druggists association study. Sales Management 58:44-6 My 1 '47

See also
Automobiles, Salesmen's

Law

Colombia; commercial travelers license required. For Comm W 29:16 O 25 '47

Pensions

General Mills sets up pension plan covering 1,000 salesmen. Sales Management 59:101-2+ O 1 '47

Pension plan is applied to commission salesmen; Alexander film company. Sales Management 59:48+ Jl 15 '47

Pension plans for salesmen. Management R 36:476-8 S '47

Why salesmen's pensions are gaining popularity. Sales Management 58:97+ Je 1 '47

Rating

Five yardsticks for measuring a salesman's efficiency. R. D. Crisp. Sales Management 58:37-9 Mr 1 '47

How statistics can guide your salesmen's efforts. W. D. Molitor. Ptr Ink 219:38-9 My 9; 52-4+ My 16 '47

SALESMEN—Rating—*Continued*

How to get the facts for efficient sales analysis; S. C. Johnson & son salesmen report daily. R. D. Crisp. il Sales Management 58:100+ Ap 1 '47

Removal of boloney. Fortune 36:124 S '47

Salaries and commissions

Bigelow-Sanford pay plan teams salary with two-way incentive. G. C. Denebrink. Sales Management 59:98+ S 1 '47

Bus salesmen threaten to make more money than the company presidents. Mass Transportation 43:226-7 Je '47

Compensating salesmen in the coming competitive era. D. G. Mitchell. Ind Marketing 31:35-7+ D '46

Current compensation plans for salesmen. Management R 36:211-13 Ap '47

How shall I pay my salesmen? analysis of various methods. R. L. Wilkinson. Elec West 99:107-10 S '47

Jackpot puts challenge and reward in York's new pay plan; salary, commission, and a commission pool. M. S. Lebair. Sales Management 58:90-1+ F 15 '47

Our compensation plan gives salesmen their own business; Sylvania Electric's prospector's plan. D. Mitchell. Ptr Ink 217:35-7 D 13 '46

Revising your sales compensation plan; abstract. J. C. Olson. Management R 36:38-9 Ja '47

Salary-point system of salesmen's compensation. E. E. Troxell. Management R 36:278-9 My '47

Sales compensation, a vital sales management tool. J. C. Olson. Ind Marketing 32:50-1+ Ap '47; Same. Sales Management 58:100e+ Mr 1 '47

Selection

Aptitude tests are management's tool in scientific sales selection. M. Rafal. Ind Marketing 32:38+ Ap '47

Can we make engineers out of salesmen, and vice versa? J. H. Collins. il Sales Management 58:101-2+ F 15 '47

How British set standards, qualify men for sales profession. il Sales Management 58:112+ Mr 15 '47

How we sell ourselves to prospective salesmen; slide film technique. J. N. Griffith. Ptr Ink 219:48+ My 2 '47

Interviewing methods used in the selection of salesmen. R. D. Henderson and D. W. Hoover. Personnel J 26:9-18 My '47

Programs for recruiting salesmen. Management R 36:275-7 My '47

Study in failure; why some star sales rookies flop. E. G. Flemming. Sales Management 59:85+ Jl 1 '47

See also

Insurance, Life—Agents—Selection
Insurance agents—Selection
Salesmen—Rating

Service to dealer

See Salesmanship—Service

Training

Are your salesmen armed with bean shooters? H. Conover. Adv & Sell 39:48 D '46

Association highlights; association-sponsored salesmanship programs. G. E. Larson. il Dom Comm 35:82-7 Ap '47

Certificate in gas salesmanship and consumer service; regulations for training and examination. Gas J (Lond) 251:507-9 S 3 '47

15 sales training tools for small business. H. Simmons. il Ind Marketing 32:41-3+ O '47

Five principles behind effective sales training. W. Rados. Sales Management 58:116+ Ap 15 '47

Glass salesmen train in plant; Thatcher glass manufacturing co. Cer Ind 48:102 Ap '47

Graphics pierce fog of medical jargon in Lederle training clinics; Hile-Damroth method for Ledinac. il Sales Management 58:42-3 Ap 15 '47

How to train your men for creative selling in a returning buyer's market. R. C. Borden. Edison Elec Inst Bul 15:123-6 Ap '47

How we tied advertising in with our new sales program; Chamberlin co. of America, Detroit. R. H. Breitenbach. Ptr Ink 219:46 Ap 18 '47

Know sales or no sale; a dramatic presentation in skit form, with narration of the A.G.A. course in residential gas salesmanship. R. E. Williams. Am Gas Assn Proc 1946:159-61

Memo to sales trainers; don't neglect product. F. E. Camp. il Sales Management 58:84+ My 1 '47

Model farm is training school for Ralston Purina salesmen. K. Jones. il Sales Management 59:40-1 Ag 15 '47

Promotion package helps retailers do a better job; Sel-Mor slips. B. Merrill. il Ptr Ink 219:42+ My 30 '47

Proving ground pre-tests farm feeds for Consolidated; provides sales training and steady source of news. F. A. South. il Sales Management 59:48+ O 15 '47

Sales kit makes a universal hit. Ptr Ink 218:88+ F 7 '47

Salesmen start as factory-tour guides; Oneida, ltd. R. W. Drummond. il Ptr Ink 219:50-1 Ap 11 '47

Shell Oil develops a basic market training school. il Sales Management 59:124+ Ag 15 '47

Sour notes in our selling English; grammatical lapses from speech of salesmen in sales training classes. J. F. Bender. Sales Management 58:56+ Ja 1 '47

Speech training for the sales force; does it pay? Squibb salesmen want it. H. W. Wilkinson. Sales Management 59:46+ Ag 1 '47

Too many cooks, don't spoil broth; Equitable gas co. program of training for dealer range salesmen. W. E. Davis. il Gas Age 100:41+ Ag 7 '47

Train machine salesmen to know what they're talking about; Marshall & Huschart machinery company. G. Habicht, jr. Am Mach 91:138-9 F 13 '47

Training methods; how to decide which ones to use to get results; United States rubber co. W. F. Wrightnour. Sales Management 59:112-14+ N 1 '47

Training on the service side; work of Institution of gas engineers. J. H. Dyde. Gas J (Lond) 248:1043 D 11 '46

Twelve ideas for sales managers' club programs on training problems. Sales Management 58:65 F 1 '47

Two-year interneship in field and factory makes a Belden salesman. H. W. Clough. il Sales Management 58:95+ Mr 15 '47

Underpinnings for practical sales training; Standard register co. J. N. Griffith. Sales Management 58:85-7 Mr 1 '47

See also

Insurance, Life—Agents—Training
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Salesmen, Jobbers'—Training
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SALESMEN, Jobbers'

How we spot and analyze markets for mill supply salesmen; Raybestos-Manhattan. J. J. De Mario. il Sales Management 59:60+ Ag 15 '47

See also

Advertising—Jobber helps

Training

How much nuts and bolts training for salesmen? Delta schools for distributors' salesmen. W. E. Schutz. il Sales Management 58:50+ Je 15 '47

How to train a jobber's salesman in 45 minutes; Stewart-Warner film slides with sound. L. B. Colby. il Sales Management 58:66+ Je 1 '47

Jobbers' school; candy makers establish training course for salesmen. Bsns W p74+ Mr 15 '47

SALESMEN, Retail

Bottleneck of careless sales clerks. R. W. Babson. Comm & Fin Chr 166:529 Ag 7 '47

See also

Sales contests, Dealers' employees

SALESMEN, Retail—*Continued*

Salaries and commissions

Frigidaire ouija board shows dealers how to pay salesmen. E. Gilbert. il Sales Management 58:37-9 Je 1 '47

Training

Business publication trains retail sales personnel; Beauty Fashion magazine establishes a cosmetic school. E. M. Housman. Ptr Ink 217:46-7 N 22 '46

Color films teach new skills to retail furniture salesmen. R. R. Rau. il Sales Management 59:103-4+ S 1 '47

Combines consumer education and retail sales training; Sherwin-Williams Pestroy and Weed-no-more film; paint display. E. M. Housman. il Ptr Ink 219:36-7 Je 13 '47

G.E.'s improved method for mass sales training. J. DeJen. il Ptr Ink 218:38-9+ Mr 28 '47

Glidden focuses training at the retail sales level. L. S. Fulton. il Sales Management 58:50+ F 15 '47

Group lesson plans for textiles. I. B. Wingate. J Retailing 23:53-5+ Ap '47

How associations provide retail sales training; Carpet institute, toy, gas, bedding associations as examples. H. Evans. il Ptr Ink 218:50+ Mr 21 '47

New films that speed sales training; National retail furniture association releases 15 color sound-slidefilms. il Am Bsns 17:26+ Ag '47

Salespeople must be trained to serve in a buyers' market. S. C. Saunders. Dom Comm 35:19-22 F '47

Scientific plan builds retail salesmen; Kelvinator decides it's an all-company job. H. E. Green. il Ptr Ink 217:44-5 N 15 '46

SALESMEN, Specialty

Six ways the independent salesman can help sell your product. B. Kingston. il Ptr Ink 221:44-5 O 17 '47

SALESMEN and advertising. See Advertising and salesmen

SALESMEN and credit

Credit coordinated with sales. R. M. Johnson. Credit & Fin Management 49:12-14+ Ja '47

What must management, sales and credit do to help each other? addresses delivered at forum of Chicago association of credit men. W. Jacobs; W. A. Linfield; O. O. Lewis. Credit & Fin Management 49:4-8+ Ap '47

SALESMEN'S airplanes. See Airplanes, Salesmen's

SALESMEN'S automobiles. See Automobiles, Salesmen's

SALESMEN'S equipment

Complete sales kit size of wallet; Auto-Lite battery corp. il Ptr Ink 219:109 Ap 18 '47

Gadget gets customer up on his roof. il Sales Management 59:116 Ag 15 '47

Selling aids; vital parts in the marketing machine. J. J. Nance. il Ptr Ink 221:52-3+ O 31 '47

Simple way to tell a technical story; Bendix Radio FactoMeter. il Sales Management 59:112 O 1 '47

SALESMEN'S letters. See Sales management —Letters to salesmen

SALESMEN'S magazines

How to edit a sales house organ; just ask for ideas. C. Rondomanski. Sales Management 58:61 Ja 15 '47

How Yale and Towne pipelines sales aids to the field force. J. S. McCullough. il Sales Management 58:108+ Je 15 '47

Pep up your salesmen's mail to get extra sales effort. F. L. McKibbin, jr. Ptr Ink 217: 29-31 D 27 '46

What salesmen want in company magazines; study of more than 100 magazines. W. R. Gerler. il Ptr Ink 217:36-7 D 20 '46

What the house organ can do for the sales manager. I. Jewell. il Ptr Ink 220:30-1 S 12 '47

SALESMEN'S portfolios

16 ideas for your 1948 sales and advertising presentation; Sterling Tool Products utilizes inserts to put punch in program portfolio. H. E. Green. il Ptr Ink 221:38-9 O 10 '47

Why our salesmen use their sales presentations; Standard register co. J. N. Griffith. Ptr Ink 218:51 Mr 7 '47

See also

Advertising portfolios

SALESMEN'S reports

How Panther gets sales reports minus alibis. Sales Management 59:64 S 1 '47

How to get the facts for efficient sales analysis; S. C. Johnson & son salesmen report daily. R. D. Crisp. il Sales Management 58: 100+ Ap 1 '47

Measuring markets by trade analysis; chemical markets. L. D. Reed. flow chart il Chem Ind 60:614-17 Ap '47

SALESMEN'S territories. See Sales territories

SALESMEN'S wives

See also

Insurance agents—Agents' wives

SALESROOMS. See Showrooms

SALICYLAL aminoguanidine

Inhibition of catalysed thermal decomposition of DDT. F. A. Gunther and L. R. Tow. bibliog Soc Chem Ind J 66:57-9 F '47

SALICYLALDEHYDE

Action of substituted salicylaldehydes on bacteria and fungi. L. C. Felton and J. H. Brewer. Science 105:409-10 Ap 18 '47

SALICYLONITRILES

Electric moments of ortho-substituted phenols and anisoles; nitriles and anils. C. Curran and E. P. Chaput. bibliog Am Chem Soc J 69:1134-7 My '47

SALISBURY, Bert Eugene, d. 1946

Sketch. por Am Cer Soc Bul 26:54 F 15 '47

SALISBURY, Philip, 1891-

Philip Salisbury made editor on SM's birthday. por Sales Management 59:69 N 1 '47

SALIVA

Citric acid in saliva. I. Zipkin. bibliog Science 106:343 O 10 '47

Lactobacillus acidophilus counts in the saliva of children drinking artificially fluorinated and fluorine-free communal waters. S. B. Finn and D. B. Ast. bibliog Science 106: 292-3 S 26 '47

Role of glucose in promoting growth of lactobacilli in saliva. D. Weisberger. Science 105:290 Mr 14 '47

See also

Sputum

Analysis

Detection of drugs in horse saliva; comparison of sensitivities of a chemical and a biological method. C. E. Morgan and A. Gellhorn. bibliog Anal Chem 19:806-8 O '47

SALMON

Are lake salmon hereditarily distinct? A. G. Huntsman. Science 105:289-90 Mr 14 '47

Vanishing chinook. Economist 152:625-6 Ap 26 '47

SALMONELLA

New salmonella type isolated from man: salmonella texas. J. Watt and others. Pub Health Rep 62:808-9 My 30 '47

SALSICH, LeRoy, 1879-

Sketch. por Explosives Eng 25:36-7 Mr '47

SALT

Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 146-7 N '46

Comparison of LiF and CaF_2 prisms for infra-red use. R. C. Gore and others. Opt Soc Am J 37:23-8 Ja '47

Does common salt cleanse? Soap & San Chem 23:71+ Jl '47

Infra-red filters and cells of unpolished salt crystals. J. J. McGovern and R. A. Friedel. bibliog Opt Soc Am J 37:660-3 Ag '47

Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46

SALT—*Continued*
Preparation and properties of serum and plasma proteins; osmotic equilibria in solutions of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68:2320-9 N '46
Preventing ice ruts in Passaic; use of rock salt. A. Martini. il Pub Works 78:33-4 Ap '47
Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46
Salt in war and peace; lesser known industrial uses. Chem Age (Lond) 56:773-5 Je 14 '47
Salt; its influence on trade and industrial growth. E. B. Tustin. il Dun's R 55:20-1+ F '47
Salvaging commercial minerals from oil field brines. R. H. Dott. flow sheet Pet Processing 2:512 Jl '47
Sodium chloride versus construction materials; symposium. il Chem Eng 54:211-12+ O '47 (to be cont)
Some studies in the system $AlCl_3$-$FeCl_3$-KCl-NaCl-HCl-H_2O at 25, 30 and 35°. G. L. Miles. Am Chem Soc J 69:1716-19 Jl '47

See also
Brine
Petroleum—Salt content
Petroleum refining—Salt removal

Analysis
Water analyses by selective specific conductance. J. W. Polsky. Anal Chem 19: 657-60 S '47

Manufacture
Marine chemicals in India. Chem Age (Lond) 56:405-6, 431-3 Ap 5-12 '47

Therapeutic use
Fair and warmer; drinking water and salt requirements for hot weather work. Nat Safety N 55:26+ My '47
Heat sickness and that tired feeling. W. W. Allison. Safety Eng 94:56 Ag '47
Hot weather hygiene. Nat Safety N 55:186+ Mr '47
Slow dissolving, non-irritating salt tablet for use in hot environments. W. V. Consolazio and others. bibliog il J Ind Hygiene 29:347-50 S '47

SALT, Iodized
Compulsory iodization proposed for table salt. Bsns W p37-8 Je 21 '47
Iodized table salt bill gets hearing. Oil Paint & Drug Rep 151:3+ Je 16 '47

SALT, Substitutes for
Salt substitute; Neocurtasal. Bsns W p48 My 10 '47

SALT bath heat treatment. See Heat treatment; Steel, Heat treatment of

SALT cake. See Sodium sulfates

SALT dispensers. See Dispensing apparatus

SALT domes
Miniature models aid mapping of salt-dome areas. il Oil & Gas J 45:85 N 9 '46
Relations between kinds of well data and apparent faulting. H. H. Suter. diags Am Assn Pet Geologists Bul 30:1910-17 N '46
Salt-dome structure. R. Balk. il Am Assn Pet Geologists Bul 31:1295-9 Jl '47

SALT industry and trade
Salt; its influence on trade and industrial growth. E. B. Tustin. il Dun's R 55:20-1+ F '47

See also Pennsylvania salt manufacturing company

Cuba
Salt production. For Comm W 28:28-9 Jl 26 '47

Denmark
Salt resources in Denmark. For Comm W 26: 40 F 22 '47

SALT LAKE CITY
Salt Lake City solves smoke problem. M. Thomas. il Power Pl Eng 51:74-7 Mr '47

SALT mines and mining

See also
Salt domes

SALT water. See Sea water; Water supply—Salt water intrusion

SALTCELLARS, Plastic
Urea saltcellars. il Mod Plastics 25:150 S '47

SALTING of mines. See Mine salting

SALTS
Metal salts of 2-mercapto-4-phenyl-Δ^2-1,3,4-thiadiazoline-5-thione. G. W. Watt and M. E. Boyd. Am Chem Soc J 69:185 Ja '47
Toxicity of chemicals in electroplating. P. M. Van Arsdell. bibliog(79 ref) il Metal Finishing 45:55-60+ Ag; 79-83 S; 75-81 O '47

See also
Salt

SALTS, Complex
Ferric thiocyanate complex in ethyl-alcoholic solution. N. Uri. Chem Soc J p336-7 Mr '47

SALTS, Fused
Circulating HTS as a pilot plant heat transfer medium. W. B. Johnson and W. M. Nagle. diags Ind & Eng Chem 39:971-4 Ag '47
Phase relations in heat transfer salt systems. J. Alexander, jr. and S. G. Hindin. diags Ind & Eng Chem 39:1044-9 Ag '47

SALTS, Molten
Potential hazards in molten salt baths for heat treatment. Metal Prog 51:251-3 F '47

SALTS in sea water. See Sea water—Desalting

SALVADOR

Commercial policy
Regulation governing importation of articles bearing trade-marks amended. For Comm W 26:21 F 22 '47

Economic conditions
News by countries. For Comm W 26:17 F 1; 18 Mr 1; 27:13 My 31; 28:15-16 Ag 2; 14-15 S 13; 29:13-14 O 4 '47

SALVAGE
Abandonment of Lyman Abbott by master held not shown by crew's salvage suit. East Underw 47:30 N 22 '46
Pontons et remorqueurs de grande puissance pour le renflouement des navires. H. Faure. diags Génie Civil 124:71-3 F 15 '47
Salvage, insurance claims present problem in SS American Farmer case. Spectator (Property ed) 12:16+ N 28 '46
Submersible bolt-driving and punching gun; for making temporary ship repairs during salvage operations. diag Engineering 162: 597 D 20 '46

SALVAGE (waste, etc.)
Effective salvage program reclaims 500,000 pieces of hardware per year; Westinghouse steam turbine division. il Steel 120:110 F 10 '47
Ford reorganizes salvage department. L. Westrate. il Automotive & Aviation Ind 96:30-1+ Ja 1 '47
High efficiency in stack dust recovery; Universal atlas cement company. B. Nordberg. il Rock Prod 50:134-7 Ag '47
Reclaiming car materials. G. A. Goerner. il Ry Mech Eng 121:251-3 My '47; Same abr. Ry Age 122:657-9 Mr 29 '47
Regeneration of spent catalyst in fluid catalytic cracking. J. F. Snuggs. il diag A S M E Trans 69:785-8 O '47; Same. Oil & Gas J 45:88-91 Mr 15 '47; Same. Pet Eng 18:230+ Mr '47; Same. Pet Refiner 26:107-10 Mr '47; Abstract. Pet Processing 2:311-12 Ap '47
Salvaging and reclaiming scrap; Erie railroad. il Steel 119:90+ D 16 '46
Salvaging bags by air cleaning. il diags Sheet Metal Worker 38:49-52 O '47
Salvaging commercial minerals from oil field brines. R. H. Dott. flow sheet Pet Processing 2:512 Jl '47
Salvaging iron castings with machinable arc welds. D. W. DeArmand and S. Epstein. il Materials & Methods 25:68-72 My '47
Salvaging over-sized parts by an acid etch. D. A. Baker. Mach 53:166 My '47

SALVAGE (waste, etc)—*Continued*
Scrap salvaging. il Steel 120:118 F 3 '47
Six-point program for waste control; Thompson Products. W. J. Collier. il Factory Management 104:150-2 D '46
See also
Electroplating—Stripping
Oil reclamation
Scrap metal
Sulfite liquor
SALYRGAN
Effect of some sulfhydryl-containing substances on the toxicity of an organic mercurial compound. W. K. Long and A. Farah. bibliog Science 104:220-1 S 6 '46
SAMARIUM
Isotopes
Activities induced by pile neutron bombardment of samarium. M. G. Inghram and others. Phys R 71:643 My 1 '47
Neutron absorbing isotopes in gadolinium and samarium. R. E. Lapp and others. Phys R 71:745-7 Je 1 '47
SAMPLES (merchandizing)
Tests among foot-weary workers open markets for Cushion Foot Sox; free trial plans. G. P. Hall. il Sales Management 58:70+ Ja 1 '47
See also
Advertising copy—Sample offers
SAMPLES, Textile. See Textile samples
SAMPLING
Displacement method for sampling the solution phase of mixed fertilizers. L. F. Rader, jr. bibliog Anal Chem 19:229-35 Ap '47
Gravity and pH sampler for closed vessels. F. L. Culler, jr. diag Chem Eng 54:140 F '47
Sampling problem in single fibre testing. R. C. Palmer and H. E. Daniels. bibliog Textile Inst J 38:T94-100; Discussion. T101 F '47
Simple automatic composite sampling. J. W. Bertetti. il Pet Refiner 26:135 Mr '47
See also
Air sampling
Dust sampling
Gas, Natural—Sampling
Ore sampling
Sewage sampling
Water sampling
SAMPLING (statistical methods)
Application of sequential sampling to testing students. D. J. Cowden. Am Stat Assn J 41:547-56 D '46
Best unbiased estimate of population standard deviation based on group ranges. F. E. Grubbs and C. L. Weaver. Am Stat Assn J 42:224-41 Je '47
Can an advertiser believe what mail surveys tell him? A. Politz and R. Brumbach. Ptr Ink 219:48+ Je 20 '47
Explanation of the sampling method used in Survey of consumer finances. E. E. Maccoby and R. Goodman. Fed Res Bul 33:658-63 Je '47
Inspection efficiency and sampling inspection plans. M. Lavin. Am Stat Assn J 41:432-8 D '46
Population sample for Greece. R. J. Jessen and others. Am Stat Assn J 42:357-84 S '47
Problem of non-response in sample surveys. M. H. Hansen and W. N. Hurwitz. Am Stat Assn J 41:517-29 D '46
Problem of plot size in large-scale yield surveys. P. V. Sukhatme. bibliog Am Stat Assn J 42:297-310 Je '47; Correction. 42:460 S '47
Quality control goes versatile; sampling technique now expanding in use. il Bsns W p46+ Je 21 '47
Quality control handbook. E. Goddess. Steel 120:70-3 Ja 20 '47
Sampling a lot, and life tests. A. P. Bellinghausen. Metal Prog 50:1205-6 D '46
Sampling for the 1947 survey of consumer finances. R. Goodman. Am Stat Assn J 42:439-48 S '47
Sampling techniques applied to quality control. E. Goddess. bibliog Iron Age 158:70-5+ D 12 '46
Store samples for retail food prices. J. W. Lethco and J. S. Middaugh. Mo Labor R 64:90-100 Ja '47
Tests of increased severity. C. W. Churchman and B. Epstein. Am Stat Assn J 41: 567-90 D '46
What is a sample? J Account 83:525 Je '47
SAMPSON, William J. jr.
Portrait. Bsns W p58 Mr 15 '47
SAMURAI swords. See Swords
SAND
Consolidation of sands in oil and gas wells; use of liquid resin. G. G. Wrightsman and H. H. Spain. Oil & Gas J 46:73+ Jl 19 '47
Effect of sieve loading on the results of sieve analysis of natural sands. F. A. Shergold. il Soc Chem Ind J 65:245-9 S '46
Experimental observations on grouting sands and gravels; preventing salt water intrusion in wells. A. Machis. il diags Am Soc C E Proc 72:1203-27 N '46; Discussion. 73:251-2, 387-8, 936-40 F-Mr, Je '47
Ottawa test sand; evaluation of gas permeability of sealed flexible packages. L. C. Cartwright. bibliog il diag Mod Packaging 20:145-7+ My '47; Same. Paper Tr J 124: 51-3 Je 19 '47
Practices of western states in using sand and gravel in bituminous mixtures; abstract. E. C. Knowlton. Rock Prod 50:148-9 Ap '47
Preliminary measurements relative to the onset of thermal convection currents in unconsolidated sands. H. L. Morrison. J Ap Phys 18:849-50 S '47
Processing industrial sands from river deposits. E. C. Hoeman and R. C. Redfield. flow sheet Rock Prod 50:105+ Je '47
Use of industrial products for granular bases in highway construction; abstract. H. D. Jumper. Rock Prod 50:148 Ap '47
Washing and screening for grade glass sand; Oklahoma silica sand co. H. E. Swanson. il plan diag Rock Prod 49:78-80+ D '46
See also
Bituminous sand
Oil sand
Sand blast and other headings beginning Sand
Silica
Analysis
Gravimetric analysis of sand. L. J. Ehly. diag Eng N 138:458 Mr 20 '47
Stone sand
Processing aggregates for big dam; Cumberland quarries, inc. D. Mocine. flow sheet il Rock Prod 50:106-10 Ag '47
Reducing pea gravel to sand with rod mills. W. B. Lenhart. il Rock Prod 50:103-5 O '47
Rod mill grinding experience. D. A. Gildersleeve. il Rock Prod 50:105 O '47
Silica sand for glass; abstract. E. C. Sawyer. Rock Prod 49:71+ D '46
Testing
Absorption, soundness tests of Maine sands correlated. Rock Prod 50:107 O '47
France
Les sables aurifères des Gardons dans les Cévennes. map Génie Civil 124:217 Je 1 '47
Minnesota
Minnesota's wide range of minerals; sands and gravels. H. E. Swanson and N. C. Rockwood. Rock Prod 49:75-7 N '46
North Carolina
Water formed deposits of sand and gravel. H. E. Swanson and N. C. Rockwood. il Rock Prod 50:128-30 Ja '47
Oregon
Chromiferous sand deposits in the Coos Bay area, Coos county. R. J. Hundhausen. bibliog 6pls U S Bur Mines Rep of Invest 4001: 1-13 '47
Chromite-bearing sands of the southern part of the coast of Oregon. A. B. Griggs. bibliog map diags U S Geol S Bul 945-E:113-50, fold maps (pl 41-51); pa 55c Supt. of doc. '45
Columbia River magnetite sands, Clatsop county, Oregon and Pacific county, Washington, Hammond and McGowan deposits. J. V. Kelly. 3pls U S Bur Mines Rep of Invest 4011:1-7 '47

SAND—*Continued*

Washington (state)

Columbia River magnetite sands, Clatsop county, Oregon and Pacific county, Washington, Hammond and McGowan deposits. J. V. Kelly. 3pls U S Bur Mines Rep of Invest 4011:1-7 '47

SAND, Bituminous. See Bituminous sand

SAND, Foundry

Adopts chemically coated molding sand; Lynchburg foundry co. W. G. Gude. il Foundry 75:66-71 My '47

British bonding clays. W. Davies and W. J. Rees. Iron & Steel Inst J 152:117-25 no 2 '45

British resources of steel moulding sands. W. Davies and W. J. Rees. maps diags Iron & Steel Inst J 148:11-111, pl 1-9 no 2 '43; 152:71-116, pl 7-10 no 2 '45

Converting low-bond to a high-bond sand; Keener sand and clay co. installs mulling equipment. il plan diag Rock Prod 50:74-5 Jl '47

Cores, sands and binders. O. J. Myers. il Foundry 75:74-5+ Je '47

Effect of mold material on gas absorption by 85-5-5-5 alloy. L. W. Eastwood and J. G. Kura. Foundry 75:86-91+ O '47

Engineer looks at sand problems. E. E. Woodliff. il diag Foundry 75:66-7+ F '47

How much venting power must green sand molds possess? E. C. Troy. il diags Foundry 74:82-5+ D '46

Mechanized sand plant; foundry at Richmond gas stove co. il plans Mech Handling 34:58-65 F '47

1947 inventory of foundry equipment; sand preparation and molding. Foundry 75:[96-8] insert S16-18 Mr '47

Pneulec sand mixer. il Mech Handling 33:773-4 D '46

Sand control. G. W. Anselman. Foundry 75:97+ O '47

Sand reclamation and distribution; conveying equipment in a modern steel foundry. il Mech Handling 33:601-6 O '46

Sands for heavy steel castings. D. J. Taylor. Foundry 75:106-7+ Mr '47

Synthetic sand in the nonferrous foundry; Norfolk naval shipyard. S. W. Brinson. il Foundry 75:80-5+ Ja '47

Various sand problems considered in shop course; abstracts of A.F.A. papers. Foundry 75:134+ Jl '47

Ventilating screens, breakers, mullers. diags Foundry 75:76-7+ Mr '47

See also
Molds (for casting)

Testing

Behavior of molding sand when in contact with liquid steel. J. B. Caine. il Foundry 75:72-7+ Jl '47

Controlling casting quality with a dilatometer. C. M. King. il Iron Age 160:73-4 Jl 3 '47

Determining sand moisture by electrical instrument. C. Locke and F. De Hudy. il diags Foundry 75:180+ Ag '47

Heat absorption of molding sand. H. W. Dietert and others. Foundry 75:84-5+ S '47

Hot-strength characteristics of moulding sands. W. Davies and W. J. Rees. diags Iron & Steel Inst J 152:61-70 no 2 '45; Same abr. Engineering 161:190-2 F 22 '46

Sand control. G. A. Zabel. il Foundry 75:110-13+ Ap '47

Sand testing methods; abstracts of A.F.A. papers. Foundry 75:136+ Je '47

Visual analysis of sand grain distribution. C. A. Sanders. bibliog Foundry 75:82-4+ N '47

SAND and gravel plants

Business booming in the West. W. B. Lenhart. il Rock Prod 50:88-93+ F '47

Combine three plants into one; Terry Carpenter, ltd., operates sand and gravel, ready mixed concrete, and concrete products plants. W. B. Lenhart. il Rock Prod 50:88-91 O '47

Determining depth of sand and gravel. R. F. Mirick. il Rock Prod 50:88 Ja '47

Unusual concrete walls divide stockpiles; Pioneer sand and gravel co. il Rock Prod 50:84 F '47

Directories

Sand, gravel, stone, ready-mixed concrete; commercial producers, Canada. Roads & Bridges 85:146+ Je '47

Equipment

Build gravel plant to meet requirements for ready mixed concrete; Diamond washed gravel co. il Rock Prod 50:78-80 Jl '47

Compact plant with bucket elevators; Azusa rock and sand co. W. B. Lenhart. flow sheet il Rock Prod 50:94-7+ F '47

Converting low-bond to a high-bond sand; Keener sand and clay co. installs mulling equipment. il plan diag Rock Prod 50:74-5 Jl '47

Crushing boulders up to 20-in; Ohio gravel co. E. R. Cushing. il diags Rock Prod 49:82-4 D '46

Diesels move the earth; Warner company, producers of sand and gravel. il Diesel Power 25:69-70, 96 Mr '47

Duplicate conveyor system promotes efficiency; Triangle rock and gravel co. il Rock Prod 50:102-3+ F '47

Fifteen precast concrete silos for aggregates; Service rock co. il Rock Prod 50:104-5 F '47

Laundering sand and gravel material to produce a clean product; W. R. Bonsal co. flow sheet il Rock Prod 50:78-80 My '47

Long concrete tunnel under stockpile serves both trucks and conveyor; Arizona sand and rock co. W. B. Lenhart. il Rock Prod 50:92-3 Je '47

Minnesota's wide range of minerals; plant practices. H. E. Swanson and N. C. Rockwood. il Rock Prod 49:78-81+ N '46

Movable hopper-conveyor reduces haulage; Bellevue sand and gravel co. H. E. Swanson. il Rock Prod 49:85-6 N '46

One man controls all operations; Kern rock co. flow sheet il Rock Prod 50:98-101 F '47

Plant practices, North Carolina. H. E. Swanson and N. C. Rockwood. il Rock Prod 50:134+ Ja '47

Portable pays big dividends; taking excess load to main plant; Grove stone and sand co. H. E. Swanson. il Rock Prod 50:114-16 Ja '47

Recover three grades of sand in one operation; Griffith co. W. B. Lenhart. flow sheet il Rock Prod 50:96-9+ O '47

Reducing pea gravel to sand with rod mills. W. B. Lenhart. il Rock Prod 50:103-5 O '47

Sand drags save fines. W. B. Lenhart. flow sheet il Rock Prod 50:82-5 S '47

Shipping million yards by barge-rail; Pioneer sand and gravel co, Seattle. W. B. Lenhart. il plan Rock Prod 50:74-5+ My '47

Spend half million for aggregates plant; Pacific coast aggregates co. W. B. Lenhart. flow sheet il Rock Prod 50:70-3 S '47

Step up glass sand production; Nevada silica sands, inc. W. B. Lenhart. il Rock Prod 50:110-11+ O '47

Supplying ready mix and concrete block market; Fontana gravel co. W. B. Lenhart. il Rock Prod 50:111 Ag '47

Washing and screening for high grade glass sand; Oklahoma silica sand co. H. E. Swanson. il plan diag Rock Prod 49:78-80+ D '46

SAND and gravel plants, Portable

Portable pays big dividends; taking excess load to main plant; Grove stone and sand co. H. E. Swanson. il Rock Prod 50:114-16 Ja '47

SAND blast

Wet-sandblasting operations; safety measures. Safety Eng 93:70 Mr '47

SAND drying

Sand drying modernized at Hudson's Loree colliery. il Coal Age 51:92-4 N '46

SAND handling

Erie sand plant now serves both steam and Diesel power. il plan diags Ry Age 122:1306-7 Je 28 '47

Fourteen classifiers on sand dredge. il diags Rock Prod 49:64-5+ N '46

Mechanized sand plant; foundry at Richmond gas stove co. il plans Mech Handling 34:58-65 F '47

SAND handling—*Continued*
Recent progress in sand classification. N. C. Rockwood. il diags Rock Prod 50:100-4+ Je '47

Sand reclamation and distribution; conveying equipment in a modern steel foundry. il Mech Handling 33:604-6 O '46

Sand separation; unique method of adjusting weir length increases capacity. N. C. Rockwood. diags Rock Prod 50:90-1 S '47

Silica sand for glass; abstract. E. C. Sawyer. Rock Prod 49:71+ D '46

Washing and screening for high grade glass sand; Oklahoma silica sand co. H. E. Swanson. il plan diag Rock Prod 49:78-80+ D '46

SAND machine (for crystal projection)
Machine for the application of sand in making Fourier projections of crystal structures. D. McLachlan, jr. and E. F. Champaygne. bibliog il diags J Ap Phys 17:1006-14 D '46

SANDERS aviation, inc.
Acquires exclusive Ercoupe sales rights. A. McSurely. Aviation W 47:13 O 13 '47

SAN DIEGO, California
Readable reports; San Diego city manager's annual accounting. Bsns W p52 Ja 4 '47

When figures lie; two West Coast cities show drop in industrial workers. Bsns W p32+ Ja 25 '47

Water supply

Navy-built aqueduct for San Diego. il map diag Eng N 138:362-6 Mr 6 '47

Navy-constructed aqueduct supplies Colorado River water to city of San Diego. R. D. Thorson. il Civil Eng 17:372-7+ Jl '47

San Diego aqueduct. M. Wharton. il maps diags Explosives Eng 24:169-72+ N '46

SAN DIEGO gas and electric company
Common stock offered. Comm & Fin Chr 166: 1154-5 S 22 '47

Public utility securities. Comm & Fin Chr 166: 1208 S 25 '47

SANDING machines
Automatically burring grooved and drilled cylindrical parts. M. W. Purser. diags Mach 53:181 My '47

Guard for disc sanders. il diags Safety Eng 93:26 Mr '47

SANDMEYER reaction
Interpretation of the Sandmeyer reaction; decomposition of diazonium salts by cupric chloride in neutral and acid solution. H. H. Hodgson. Chem Soc J p745-6 Ag '46

Interpretation of the Sandmeyer reaction; the behaviour of diazotised 2 : 4 : 6-trichloro- and 2 : 4 : 6-tribromoaniline towards the Sandmeyer reagent. H. H. Hodgson and A. P. Mahadevan. Chem Soc J p 173-4 F '47

Sandmeyer reaction. H. H. Hodgson. bibliog(72 ref) Chem R 40:251-77 Ap '47

SANDSTONE
Black Hand sandstone and conglomerate in Ohio. K. Ver Steeg. bibliog maps Geol Soc Bul 58:703-27, pl 1 Ag '47

Solution features on cretaceous sandstone in central Kansas. J. C. Frye and A. Swineford. bibliog Am J Sci 245:366-79, pl 1-4 Je '47

SAN FRANCISCO
Disaster councils prepare to cope with emergencies. Eng N 138:203 F 6 '47

Earthquake and fire, 1906

San Francisco fire adjustments. il Nat Underw 50th anniv no:146+ 1947

Golden Gate international exposition

Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:571-685 My '47; Discussion. 73: 1323-8, 1444-7 O-N '47

Rapid transit

Grand jury condemns San Francisco transit system; advocates sale of Municipal street railway system to private enterprise. Bus Transportation 26:54 F '47

San Francisco's transit alternatives. Mass Transportation 43:291 Jl '47

So you're a transit manager! San Francisco municipal railway. A. F. Smith. il Mass Transportation 43:95-9 Mr '47

Transit mountain goats on San Francisco hills; inauguration of trolley coach service. S. B. Cooper. il Mass Transportation 43: 482-4 O '47

Sewerage

Developments in sewage disposal; abstract and discussion. C. C. Kennedy. Water & Sewage Works 94:384-5 O '47

San Francisco examines sewer in place. R. G. Wadsworth. il Eng N 139:536-8 O 16 '47

San Francisco sewage disposal; abstract. C. C. Kennedy. Eng N 139:252 Ag 21 '47

Water supply

New 72-in. pipeline to bypass soft bottom of San Francisco bay. N. A. Eckart. maps Eng N 139:49-52 Jl 10 '47

SAN FRANCISCO Bay bridges
California agency reveals own plan for new San Francisco-Oakland bridge. Eng N 138: 345 F 27 '47

Favor $261 million low-level crossing to aid San Francisco-Oakland traffic. map Eng N 138:237 F 13 '47

Report recommends second San Francisco Bay bridge at estimated cost of $99,300,000. il Civil Eng 17:224-5 My '47

SAN FRANCISCO Bay region

Industries and resources

Bay area pushes promotion to sell packaged market; nine counties combine resources to speed region's industrial development. Sales Management 59:60 O 1 '47

SAN FRANCISCO employers' council
Power for peace. Bsns W p 106-8 O 18 '47

SANITARY chemicals
West Disinfecting. Soap & San Chem 23:35-7+ S '47

SANITARY chemistry
See also
Cleaning compositions
Food—Analysis
Water—Analysis
Water purification

SANITARY districts
Allegheny county sanitary authority progress and plans. J. F. Laboon. map Pub Works 78:33 Ja '47

Financing public sanitation projects; creation of Hampton Roads sanitary district commission. R. W. Digges. Comm & Fin Chr 166:13+ sec 2 Ag 28 '47

Operating data for Winnipeg sewage-treatment works. il Water & Sewage 84:21-3+ D '46

Operating data from the Minneapolis-St Paul sanitary district. il Pub Works 78:38 Mr '47

Organization, financing and administration of sanitary districts; final report of the committee of the Sanitary engineering division. Am Soc C E Proc 73:343-7 Mr '47

Program for a community attack on stream pollution in Allegheny county, Pa. Eng N 138:90-1 Ja 16 '47

Stream pollution abatement program proposes single plant for 100 municipalities; Allegheny County sanitary authority. J. F. Laboon. map Civil Eng 17:121+ Mr '47

Ten years' operation of the Greater Winnipeg sewage-treatment plant. W. M. Scott and J. A. MacGillivray. flow diag il plan Water & Sewage 85:60-3+ O '47

Washington suburban sanitary district. H. R. Hall and H. B. Shaw. maps plans diags Am Water Works Assn J 39:869-904 S '47; Abstract. Water & Sewage Works 94:360 O '47

SANITARY engineering
Housing and the sanitary engineer. M. A. Pond. il Eng N 138:516-18 Ap 3 '47

Sanitary engineer looks forward. A. Wolman. Am Water Works Assn J 38:1219-25 N '46; Same. Water & Sewage Works 93: 409-12 N '46; Abstract. Eng N 137:307-8 S 5 '46

SANITARY engineering—*Continued*
Sanitary engineering division, ASCE, meeting, New York. Water & Sewage Works 94:58-61 F '47

See also
Air conditioning
Drainage
Dust removal
Factory sanitation
Filters and filtration
Heating
Mosquitoes—Extermination
Plumbing
Refuse disposal
Sanitation
Sewage disposal
Sewerage
Snow removal
Trade waste
Ventilation
Water pollution
Water purification
Water supply engineering

Laboratories

N.Y. university sanitary engineering laboratory and experimental station named the Lewis Van Carpenter laboratory. Water & Sewage Works 94:227 Je '47

Study and teaching

Preventive medicine in engineering education. G. W. Reid. Ind Med 16:51-2 F '47; Same. J Eng Educ 37:638-40 Ap '47

SANITARY engineers
Sanitary engineer looks forward. A. Wolman. Am Water Werks Assn J 38:1219-25 N '46; Same. Water & Sewage Works 93: 409-12 N '46; Abstract. Eng N 137:307-8 S 5 '46

SANITARY laws. See Public health laws

SANITARY products
Checkerboard family; Purina sanitation products. il Mod Packaging 21:130-2 O '47

SANITARY supply association, National. See National sanitary supply association

SANITARY ware
Alumina in whiteware; vitreous chinaware, semivitreous dinnerware, electrical porcelain, cooking ware and sanitary ware. C. R. Austin and others. il Am Cer Soc J 29: 341-54 D 1 '46

Manufacture

Drying 80,000 pounds of sanitaryware in 24 hours. il Cer Ind 49:81-2+ Ag '47

SANITATION
Critical study of machine dishwashing; abstract. W. L. Mallmann and others. Nat Safety N 56:50 Ag '47
Modern bakery sanitation. P. W. Hodler. il Food Ind 18:1865-7+ D '46
New problem for cities; launderette sanitation. Bsns W p28 F 22 '47
Ok 24 sanitation research projects; National institute of health of the U.S. Public health service. Eng N 139:430 S 25 '47
Problem of sanitation. W. F. Snyder. il Safety Eng 93:62-3+ Mr '47; Abstract. Soap & San Chem 22:133 D '46
Public-health undertakings, as viewed by the general public. J. T. Phair. Water & Sewage 84:53+ O '46
Sanitation in food establishments. A. G. Macnab. Soap & San Chem 23:121-3+ Ja '47
Sanitation needs, how much and where; information from inventory by U.S. Public health service. Eng N 139:42-3 Jl 10 '47
Shelter and sanitation facilities for a tropical oil camp. E. J. Cleary. il map Eng N 138: 814-19 My 15 '47
Standards of stream sanitation. H. W. Streeter. il Water & Sewage 84:61+ O '46

See also
Air conditioning
Air purification
Camp sanitation
Dairies—Sanitation
Dishwashing
Disinfection and disinfectants
Dust removal
Factory sanitation
Food factories—Sanitation
Hygiene, Industrial
Mine sanitation
Packing houses—Sanitation
Plumbing
Public health
Railroads—Sanitation
Refuse disposal
School sanitation
Sewage disposal
Sewerage
Ships—Sanitation
Smoke prevention
Trade waste
Ventilation
Water purification
Water supply
also United States—Army—Medical and sanitary affairs

SANITATION equipment association, Canadian. See Canadian sanitation equipment association

SAN JOSE water works
Stock offered. Comm & Fin Chr 165:1322 Mr 10 '47

SANTO, John, 1907-
Portrait. Bsns W p 104 S 20 '47

SANTONIN

See also
Parasantonide
Pseudosantonine

SAPOGENINS
New source for sapogenins. R. E. Marker and others. Am Chem Soc J 69:2242 S '47
Steroidal sapogenins. R. E. Marker and others. bibliog Am Chem Soc J 69:2167-230 S '47

SAPONIFICATION
Determination of saponification value of natural waxes. B. H. Knight. Anal Chem 19: 359 My '47
Some aspects of the saponification of acetate rayon; presented by South central section. il Am Dyestuff Rep 36:64-9 F 10 '47; Abstracts. Rayon 28:20 Ja '47; Textile World 97:192+ Ja '47
Study of the rate of saponification of cellulose acetates. F. Howlett and E. Martin. pl Textile Inst J 38:T212-25 Ap '47

SAPPHIRES, Artificial
Honorable mention to Sapphire products div., Elgin national watch co. for achievement in sapphire tools, gages and parts. il Materials & Methods 24:1166-7 N '46
Synthetic star gems produced. il Chem & Eng N 25:3238 N 3 '47
Wanted; new industrial markets for warborn synthetic sapphires; Elgin national watch co. R. F. Waindle. il Sales Management 57:50+ N 10 '46

Joining to metals

Bonding sapphire to metal. T. C. Du Mond. il Materials & Methods 26:84-6 O '47
Sapphire-to-metal bonding; new technique called fusion bonding. Bsns W p64+ S 20 '47

SARAN
Determination of gas permeability of saran films. T. W. Sarge. bibliog il diags Anal Chem 19:396-400 Je '47
How to saw vinylidene chloride. H. J. Chamberland. il Mod Plastics 24:148 Mr '47
Investigation of aqueous acrysol, Geon and saran dispersion. Paint Oil & Chem R 109: 50-6 N 14 '46
Modern mill building features control of air; manufacture of Lumite fabrics; Chicopee mfg. corp.'s new plant at Cornelia, Ga. il Textile World 97:120-1 F '47
1947 table of commercial synthetic yarns and fibers. Textile World 97:117-20 S '47
Plastic fabrics. E. C. Fetter. il Chem Eng 54:129 F '47
Plastic monofilaments are on their way. il Mod Plastics 24:89-97 Ag '47
Processing polyvinylidene chloride. il Mod Plastics 25:97-101 S '47
Saran film 517; first report on physical properties. H. L. Schaefer and F. C. Dulmage, jr. il diags Mod Packaging 20:149-53 Jl '47
Saran film for foods. il Mod Packaging 20:218 My '47
Saran for short. C. A. Breskin. il Sci Am 177:165-7 O '47
Saran rope. Chem Eng 54:167-8 O '47
Vinylidene chloride and its polymers; abstract. H. P. Staudinger. Chem & Ind p103 F 15 '47
Vinylidene chloride film and latex; packaging and coatings. il Mod Plastics 25:128-31 O '47

SARDINE oil
Comparative oxidation of linseed and sardine oils. G. A. O'Hare and W. J. Withrow. bibliog Ind & Eng Chem 39:101-4 Ja '47

SASKATCHEWAN

See also
Potash—Saskatchewan

SASKATCHEWAN—*Continued*

Industries and resources

Spotlight on the prairies. A. W. J. Dyck. il Can Chem & Process Ind 31:407-9+ My '47

SASKATCHEWAN university

Chemistry department

Department of chemistry. S. Basterfield. il Can Chem & Process Ind 30:46-8 N '46

SASSER, Nancy

Nancy Sasser's column. por Ptr Ink 220:102 S 12 '47

SATTERFIELD, Dave Edward, jr, 1894-1946

Sketch. Comm & Fin Chr 165:194 Ja 9 '47

Sketch. por East Underw 48:3 Ja 3 '47; Nat Underw (Life ed) 51:1+ Ja 3 '47

SAUERKRAUT

Controlling the quality of kraut during manufacture. C. S. Pederson. il Food Ind 19:778-80+ Je '47

SAUSAGE

Work simplification cuts cost of skinning frankfurters. V. C. Stephens, jr. il Food Ind 19:604-5+ My '47

SAUSAGE, Frozen

Controlling rancidity in frozen sausage meat; preheating, use of Avenex, lecithin, adequate packaging. I. Atkinson and others. il Food Ind 19:1366-9 O '47

Extending keeping quality of frozen pork sausage by smoking before freezing and by using sage, black pepper or low fat-content trimmings. I. Atkinson and others. il Food Ind 19:1198-201 S '47

How to prevent rancidity in frozen pork sausage. C. K. Wiesman and J. V. Ziemba. il Food Ind 18:1863-4+ D '46

SAUSAGE cooker

Dogmaster, frankfurter cooker. il Consumers Res Bul 19:11-12 Je '47; Correction. 21:13 Ja '48

SAVING

Abandon savings bond issue; they compete unfairly with private investment institutions. R. B. Westerfield. Comm & Fin Chr 166:1405+ O 9 '47

Consumer-spendable income, spending, savings, credit. R. S. Tucker. Comm & Fin Chr 164:3214+ D 19 '46

Facts about savings. Economist 151:717-18 N 2 '46

Ford drops savings plan. Bsns W p69 Ja 11 '47

Lag in small savings. Economist 153:576 O 4 '47

Let's talk about savings. C. W. Bailey. Banking 39:38 Mr '47

Packaged savings make attractive offer for bank; Bowery savings bank. H. L. Stephen. Ptr Ink 220:60+ Jl 25 '47

Relationship between consumers' expenditures, savings, and disposable income; discussion (Five views on the consumption function), by G. Katona and R. Likert, L. H. Bean, I. Friend, D. S. Brady, E. G. Bennion, W. S. Woytinsky. R Econ Stat 28:197-224 N '46

Saving and dis-saving. Economist 152:430 Mr 22 '47

Stimulating savings; program of Wells Fargo bank & union trust co., San Francisco; interview with G. W. Wickland. il Burroughs Clearing House 32:24-6+ O '47

Survey of consumer finances; consumer saving in 1946 and ownership of selected nonliquid assets. D. M. Holthausen. Fed Res Bul 33:951-62 Ag '47; Abstract. Mo Labor R 65:558-9 N '47

Thrift exhibit at Geflè, Sweden. Banking 39: 111 Ap '47

Values and limitations of consumer financial surveys for economic research. R. A. Young and D. M. Holthausen. Fed Res Bul 33:244-52 Mr '47

Where public invests savings; Federal reserve board survey. Bsns W p34 Ag 23 '47

See also

Building and loan associations
Christmas clubs
Investments
Savings banks
Savings deposits
School savings

Statistics

Better saving figures? Economist 152:163 Ja 25 '47

Bigger dis-savings. Economist 153:80 Jl 12 '47

Commerce department reports sharp decline in individual savings. Comm & Fin Chr 165:2209 Ap 24 '47

Estimated liquid asset holdings of individuals and businesses; with half-yearly figures by type of holder, Dec. 1939-Dec. 1946. Fed Res Bul 33:1103-4 S '47

Individual savings decline in third quarter. Comm & Fin Chr 164:3360 D 26 '46

Life insurance leads as way of saving, University of Michigan poll shows. Nat Underw (Life ed) 51:19 S 5 '47

NYSE trading and savings deposits for 1910-46; graph. Comm & Fin Chr 166:828 Ag 28 '47

Savings of individuals, 1946 and comparisons for other years. graphs Survey of Cur Bsns 27:7-9+ Ap '47

SEC reports on individuals' saving in 1946. Comm & Fin Chr 165:2252 Ap 24 '47

Slackened growth in liquid assets. Fed Res Bul 32:1221-9 N '46

Trend of individual savings, 1909-1947; graph. Nat Underw (Life ed) 51:25 My 23 '47

Trend of individual savings, 1910-1946; A.B.A. study; with graphs and tabulation. Banking 39:32-3 Ap '47

War bonds and life insurance main savings of American urban families. East Underw 47:23 N 15 '46

SAVINGS and loan associations, Federal. See Federal savings and loan associations

SAVINGS and loan league, National. See National savings and loan league

SAVINGS banks

Administrative classification discriminating against national banks held improper and invalid; Hamilton national bank v. District of Columbia. Banking Law J 64:44-50 Ja '47

Appraisal of some banking problems. F. S. Blackall, jr. Comm & Fin Chr 166:1752+ O 30 '47

Depositors willingly help to audit our savings department. M. E. Diffenbaugh. Bankers Mo 64:74+ F '47

Training and responsibility in banking. M. Harrison. Comm & Fin Chr 164:3393+ D 26 '46

See also

Banks and banking —Savings departments
Savings deposits
School savings banks

Advertising

See Bank advertising

Insurance selling

Bank insurance committee headed by F. D. Russell. East Underw 48:7 Ja 24 '47

Bank life insurance change in Connecticut. Weekly Underw 156:379 F 8 '47

Dineen champions cause of the savings banks; Gettings represents opposition at Albany hearing. Nat Underw (Life ed) 51:1 Mr 7 '47

Drama at New York state capital; savings bank insurance higher limit bill defeated. C. Axman. East Underw 48:3-4 Mr 28 '47

Hits SBLI as fraud by statute. A. Hirst. Nat Underw (Life ed) 51:4 My 23 '47

Life companies attitude toward New York savings bank life insurance. C. G. Taylor, jr. and others. East Underw 47:3 D 27 '46

New York savings banks show new rates. Nat Underw (Life ed) 51:26 O 3 '47

N.Y. state life underwriters association hits bank moves to seek $7,500 top. Nat Underw (Life ed) 50:1+ N 22 '46

Put banks on same basis as life companies. C. D. Connell. Nat Underw (Life ed) 51:1 Ap 18 '47

Rhode Island S.B.L.I. plan; editorial. Nat Underw (Life ed) 51:14 Mr 21 '47

Savings bank defeat in New York is blow to Dewey. Nat Underw (Life ed) 51:1 Mr 28 '47; Discussion. H. L. Feay. 51:9 Ap 11 '47

Savings bank life bill in Pennsylvania broad. Weekly Underw 156:1001 Ap 12 '47

Savings bank life insurance bills as seen by legal insurance. East Underw 48:17 F 21 '47

SAVINGS banks—Insurance selling—*Cont.*
Savings bank versus legal reserve life insurance. F. D. Russell. Spectator (Life ed) 154:31+ F '47
Savings banks life insurance fund; new officers. Weekly Underw 156:1431 My 24 '47
Unlimited bank policies opposed in Connecticut. W. H. Dallas; W. E. Rapp. Nat Underw (Life ed) 51:2 My 2 '47

Investments

Legal list changes in New York state reflect low rail earnings. Trusts & Estates 84:73 Ja '47
National debt and savings banks. H. Bruere. Comm & Fin Chr 165:2475+ My 8 '47
New York issues 1947 legal list. Trusts & Estates 85:55-6 Jl '47
Savings banks count on cuts in home costs. R. B. Cole. Barron's 27:25 My 19 '47
Savings banks' investment problems. R. M. Catharine. Comm & Fin Chr 166:1536+ O 16 '47

Sweden

Thrift exhibit at Gefle, Sweden. il Banking 39:111 Ap '47

SAVINGS banks trust company, New York
Savings Banks Trust reports earnings. Comm & Fin Chr 165:790 F 6 '47

SAVINGS deposits
Bank liable for breach of implied agreement to pay money to depositors. Banking Law J 64:626-30 Ag '47
Delivery of savings bank book with intent to make gift. Banking Law J 64:736-8 S '47
Gain in deposits of N.Y. state savings banks over $875 million. Comm & Fin Chr 165:793 F 6 '47
More emphasis on savings dollars. F. F. Spellissy. Burroughs Clearing House 31:22-4+ Mr '47
Right of beneficiary to recover funds in savings bank trust account. Banking 39:66 D '46
Savings account in trust; New York savings bank. C. R. Rosenberg, jr. Burroughs Clearing House 31:61 F '47
Savings deposits in trust; right of surviving beneficiary limited to one-half of funds; Abruzzese v. Oestrich, Court of chancery of New Jersey. Banking Law J 64:52-60 Ja '47
Stimulating savings; program of Wells Fargo bank & union trust co., San Francisco; interview with G. W. Wickland. il Burroughs Clearing House 32:24-6+ O '47

See also
Banks and banking— Savings deposits
Christmas clubs
Savings banks

Accounting

This savings ledger card saves work and storage space. H. R. Fischer. Bankers Mo 64:234-5 My '47
Time and storage space eliminated; customer's signature acknowledges receipt of each withdrawal and verifies new balance. Bankers Mo 64:93 F '47

Interest

Favorite ways of computing interest; A.B.A. Savings division survey; with tabulations. J. R. Dunkerley. Banking 40:31-3 Ag '47
Interest boost; Buffalo's savings banks to 2 per cent. Bsns W p 101-2 O 4 '47
Investment yields and savings banks' dividend rates. E. V. Bell. Comm & Fin Chr 166:1549+ O 16 '47
Savings interest rates show firmer tone. R. M. Bleiberg. Barron's 27:7-8 Ag 25 '47
Thrift incentive? higher interest rates on savings unlikely. Bsns W p74+ D 21 '46

SAW palmetto
Saw palmetto, a new raw material. G. Anderson. il Manuf Rec 115:40-1+ D '46

SAWDUST
Continuous structural board from sawdust. il Mod Plastics 25:89-91 S '47
Fuel bin agitator keeps men out of danger. W. D. Jenkins. diags Nat Safety N 55:58 Je '47
Sawdust-cement and other sawdust building products. T. W. Parker. Chem & Ind p593-6 S 27 '47
Sulphite pulps and papers from sawdust and chip mixtures. E. L. Keller and J. N. McGovern. Pulp & Pa of Can 48:72-5 Je '47

SAWMILLS
L'organisation rationnelle des scieries. P. Razous and J. Razous. il plans diags Génie Civil 124:365-70 O 1 '47

Employees

Wages in sawmills in the South, September-October 1946. J. F. Laciskey. Mo Labor R 64:1029-33 Je '47

Equipment

Lubrication of logging and sawmill machinery. A. F. Brewer. Paper Tr J 123:96+ D 5 '46

Power

They made power, but how? difficulties in operating saw mill power plant. R. L. Brown. Power Pl Eng 50:96-8 D '46

Safety measures

Fuel bin agitator keeps men out of danger. W. D. Jenkins. diags Nat Safety N 55:58 Je '47

SAWS
How Phoenix builder uses radial saw. il Am Bld 69:133 Je '47
Logging without axes; use of power saws in British Columbia. C. R. Kopas. il Pulp & Pa of Can 47:106+ D '46
Making intricate cuts with a masonry saw. diags Brick & Clay Rec 110:40 Mr '47
Les perfectionnements récents des scies à bois. P. Razous. diags Génie Civil 124:310-14 Ag 15 '47
Power logging; sawmills on wheels. Bsns W p42+ Ja 11 '47

SAWS, Electric
Radial saws are versatile power tools with many applications. il Am Bld 69:80-1 My '47

SAWS, Metal working
Automatic tension nut improves hacksawing. D. E. McDonald. il diag Am Mach 91:151 Je 19 '47
Cochrane-Bly automatic metal sawing machine. il diags Product Eng 18:124-6 S '47
Cutting off machines have had Cinderella-like promotion into the aristocracy of modern machine tools. G. Hubbard. il Steel 121: 92-4+ Ag 4 '47
Electrolytic saw; abstract. K. Y. Skornfakov. Mech Eng 69:30 Ja '47; Same. Iron Age 158: 61 D 26 '46
Friction-cutting techniques. H. J. Chamberland. il diags Aero Digest 55:46-7+ Jl '47
Friction sawing. Sci Am 176:111 Mr '47
Friction sawing. H. J. Chamberland. Mech Eng 68:1076 D '46; Same. Automobile Eng 37:52 F '47
Handy sawing method. R. Mawson. diag Materials & Methods 24:1229 N '46
Modern band sawing practice. H. J. Chamberland. il Iron Age 159:64-6 Ap 17 '47
Recommendations for the band-sawing of steel molding. H. J. Chamberland. diags Mach 54:190 O '47
Use the bandsaw and save material. H. J. Chamberland. Am Mach 91:147 Mr 13 '47
Wells metal saw with automatic cutting. il Ry Mech Eng 121:381 Jl '47

Safety measures

Safety at the power saws. B. Melnitsky. Am Mach 90:112-13 D 5 '46

SAWYER, Elmer W. 1892-
Elizur Wright memorial award. Nat Underw 51:1+ Ja 30 '47; Same. Nat Underw (Life ed) 51:1+ Ja 31 '47

SAXOPHONE
From music to plastics; saxophone and clarinet parts, other products made by Arnold Brilhart, ltd. A. S. Park. il Comp Air Mag 52:167-73 Jl '47

SAYRE, Judson S. 1899-
Best-selling Bendix. por Fortune 36:132-7+ N '47

SCAFFOLDING
Masonry details for modern brickbuilders. L. Maffett. diags Brick & Clay Rec 110:33-4 Je '47

SCAFFOLDING—*Continued*
Sliding scaffold speeds repair of dam; Tugalo dam in Georgia. il diag Eng N 138:1010-11 Je 26 '47
Small crews use simple scaffolding for repair of big hangars. E. S. Pashley. il Eng N 139: 262-3 Ag 21 '47
Traveling scaffold 145 ft. high used in repairing timber airship hangars. il diags Eng N 138:204-7 F 6 '47

Safety measures

Do it the safe way; new industrial safety charts from Division of labor standards. diags Sheet Metal Worker 38:94-5 Ja '47
Scaffolding for construction and maintenance work. il Nat Safety N 55:101+ Mr '47
Suggestions on swinging scaffolds. il diag Paper Ind 29:98-9 Ap '47

SCAFFOLDING, Portable
Portable scaffolds speed up maintenance, inspection, insulation of overhead equipment. il Pet Processing 2:741 O '47
Scaffold makes faster moves on third and fourth blimp docks. il Eng N 139:470-1 O 2 '47

SCALE glass. See Glass

SCALE prevention. See Feed water purification; Water purification—Corrosion control

SCALES
Drum prescribes ruling pattern for automatic dividing machine. il diags Product Eng 18: 90-3 Je '47

See also
Balances

Rating

Report on nine weighing scales. il Consumers Res Bul 20:26-9 O '47

SCALING of metals. See Metals—Scaling

SCALP ringworm. See Ringworm

SCANDINAVIA
Scandinavian bloc? Economist 151:792 N 16 '46

See also
Chemical industries—Scandinavia
Dairying—Scandinavia
Denmark
Sweden

Commerce

Trade policy for Scandinavia? Economist 153: 201-3 Ag 2 '47

SCANDINAVIAN airlines system. See Airlines—Scandinavia

SCANDIUM

Isotopes

Disintegration of scandium[46]. I. Feister and L. F. Curtiss. bibliog diags J Res Nat Bur Stand 38:411-14 Ap '47
Disintegration scheme of Sc^{46}. C. Peacock and R. G. Wilkinson. Phys R 72:251-2 Ag 1 '47

SCATTERING of electrons. See Electrons—Reflection, scattering, etc.

SCATTERING of neutrons. See Neutrons—Scattering

SCATTERING of particles
Angular distribution of the $Li^7(p,\alpha)\alpha$ reaction. S. Rubin and others. bibliog diag Phys R 71:212-14 F 1 '47
Deflection of charged particles in a ferromagnetic medium. G. H. Wannier. diags Phys R 72:304-12 Ag 15 '47
Higher angular momenta and long range interaction in resonance reactions. E. P. Wigner and L. Eisenbud. bibliog Phys R 72:29-41 Jl 1 '47
Mass and the disintegration products of the mesotron. C. D. Anderson and others. bibliog il Phys R 72:724-7 O 15 '47
Mean free paths of cesium atoms in helium, nitrogen, and cesium vapor. I. Estermann and others. diags Phys R 71:250-7 F 15 '47
Multiple scattering and the mass of the meson. H. A. Bethe. bibliog diags Phys R 70:821-31 D 1 '46
Resonance reactions. E. P. Wigner. Phys R 70:606-18 N 1 '46
Scattering and absorption of particles by atomic nuclei. H. Feshbach and others. bibliog Phys R 71:145-58 F 1 '47; Correction. 71:564 Ap 15 '47
Upper limit for the cross section for scattering of neutrinos by hydrogen. E. O. Wollan. Phys R 72:445-6 S 15 '47

See also
Electrons—Reflection, scattering, etc.
Neutrons—Scattering
Protons—Scattering

SCHEDULED property floater. See Insurance, Inland marine—Policies—Scheduled property floater

SCHEDULES
Analyzing and determining the workload. H. L. Wylie. Management R 36:518-20 O '47
Controlling material supply and inventories. B. W. Kinderman. N A C A Bul 29:201-12 O 15 '47
Customer specifications teletyped to assembly; Kaiser-Frazer corporation, Willow Run, Mich. H. J. Bustetter. il Factory Management 105:86-8 Je '47
Decentralized production control at 25 per cent saving; Globe Wernicke company, Cincinnati. M. V. Haas. Factory Management 105:94-6 Jl '47
Lead-time chart insures close scheduling; Minneapolis-Moline power implement co. D. Peddie. il Factory Management 105:122-3 S '47
Production control at Caterpillar. W. G. Thannert. il Iron Age 159:40-4 Je 26 '47
Production planning and control for quick customer service; Aircraft screw products company. E. M. Lang. il Factory Management 105:123-7 F '47
Scheduling work in the office. J. S. Wiltse. Management R 36:140-1 Mr '47
Setting up a molding plant production schedule. D. A. Dearle. Mod Plastics 24: 150-2 F '47
Simplified production scheduling; Auto-Soler co. G. E. Stedman. il Steel 121:91+ S 29 '47
Steel mill production scheduling. D. I. Brown. Iron Age 159:60-1 Ja 30 '47
System for scheduling and controlling production. S. J. McDowell. Am Cer Soc Bul 25:468-71 D 15 '46
Tailor-made cars by teletype; production scheduling at Dodge plant of equipment and combinations of body types, colors, accessories and other options. J. Geschelin. il Automotive Ind 97:32-3+ Jl 15 '47
Visual scheduling system steps up shipment of steel orders. J. S. Freese. il Steel 121: 78-9+ Ag 25 '47

See also
Control boards
Production control

SCHEELITE
Scheelite deposits in the northern part of the Sierra de Juarez, northern territory, Lower California, Mexico. C. Fries, jr. and E. Schmitter. map U S Geol S Bul 946-C:75-101, fold maps(pl 25-38); pa 25c Supt. of doc. '45
Scheelite in the Boulder district, Colorado. O. Tweto. bibliog diags Econ Geol 42:47-56 Ja '47

SCHENLEY distillers corporation
Annual report. Comm & Fin Chr 165:254 Ja 13 '47
Cumulative growth stocks for long-term capital gains. H. S. Coffin. Mag of Wall St 79:258 D 7 '46
Inventory reserves hide Schenley's current earnings. J. P. Lynch. Barron's 27:30 Je 16 '47
Schenley Distillers; after three splits. P. Dobbs. Mag of Wall St 79:433-5+ Ja 18 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:211 My 24 '47

SCHERMAN, Harry
Pioneering proves profitable; Book of the month club. por Bsns W p76-8+ Ap 5 '47

SCHIFF bases
Analgesics; the Grignard reaction with Schiff bases. R. B. Moffett and W. M. Hoehn. Am Chem Soc J 69:1792-4 Jl '47
Schiff-bases, for rendering fabrics water repellent; patent. Am Dyestuff Rep 36:338 Je 16 '47
Some Schiff bases of free amino acids. F. C. McIntire. bibliog Am Chem Soc J 69:1377-80 Je '47

SCHISTOSOMIASIS
Egyptian seeks schistosomiasis cure. Chem & Eng N 25:228 Ja 27 '47
Operative approach to the treatment of schistosomiasis mansoni infections. J. L. Brandt. Science 105:239-40 F 28 '47

SCHISTS
Concentration and determination of grade in tests on sillimanite in Idaho schist. K. G. Skinner and H. J. Kelly. il Am Cer Soc J 30:197-202 Jl 1 '47

SCHIZOPHRENIA. See Mental diseases

SCHIZOPHYLLUM commune
Studies on biological methylation; the fission of the mono- and di-sulphide links by moulds. F. Challenger and P. T. Charlton. Chem Soc J p424-9 Mr '47

SCHLESINGER, Ted
Portrait. Fortune 35:169 Mr '47

SCHMERLING, Louis, 1912-
Ipatieff prize in chemistry. por(cover) Chem & Eng N 25:2428 Ag 25 '47
Ipatieff prize to L. Schmerling. por Chem & Eng N 25:2813 S 29 '47

SCHMIDT, Lewis A. jr
Sketch. por(p41) Civil Eng 17:42 Ja '47

SCHMIDT, Walter August, 1883-
Honored by ACS. W. Hirschkind. por(cover) Chem & Eng N 25:3071 O 20 '47

SCHMIDT reaction
Strychnine and brucine; synthetical experiments. H. T. Openshaw and R. Robinson. Chem Soc J p912-18 O '46

SCHMITT, Francis Otto, 1903-
Schmitt receives Alsop award. pors Chem & Eng N 25:1937 Jl 7 '47

SCHOCH, Eugene Paul, 1871-
Sketch. por Chem & Eng N 25:3059 O 20 '47

SCHOELLKOPF, Paul, 1884-1947
Sketch. por Edison Elec Inst Bul 15:382 O '47

SCHOELLKOPF medal
L. I. Dana receives the Schoellkopf medal. Chem & Eng N 25:1575-6 Je 2 '47

SCHOENEMAN, George J.
New commissioner of Internal revenue. por Bsns W p78 My 24 '47

SCHOENITE
System potassium sulfate-sodium sulfate-magnesium sulfate-water at 35°. N. S. Bayliss and others. bibliog diag Am Chem Soc J 69:2033-6 Ag '47

SCHOLARSHIPS and fellowships
Carnation sets up scholarship fund for sons and daughters of company employes. Sales Management 57:78 D 15 '46
Committee on fellowships and awards of the American college of physicians. Science 105: 428 Ap 25 '47
Committee on scientific research of the American medical association; grants. Science 105:62 Ja 17 '47
Du Pont announces fellowship program for this year. Chem Eng 54:184 Mr '47
Fellowships. Science 105:228-9, 279-80; 106:81 F 28, Mr 14, Jl 25 '47
Fellowships and senior fellowships in cancer research. Science 106:9-10 Jl 4 '47
Fellowships for research training. Science 105:571-3 My 30 '47
Fellowships in the medical sciences. Science 104:509 N 29 '46
Fellowships leading to a master's degree in public health. Science 104:539 D 6 '46
General Electric fellowships. Chem & Eng N 25:925 Mr 31 '47
GE fellowships. Chem & Eng N 25:3166 O 27 '47
Graduate and advanced research fellowships offered by Massachusetts institute of technology for study and research in field of electronics. R Sci Instr 18:205 Mr '47
Guggenheim fellowship recipients announced. Chem & Eng N 25:1209 Ap 28 '47
Humble oil co. fellowships. Chem & Eng N 25:1137 Ap 21 '47
International Minerals establishes scholarships. Chem & Eng N 25:115 Ja 13 '47
Kodak fellowships. Chem & Eng N 25:2029 Jl 14 '47; Oil Paint & Drug Rep 152:7 Jl 14 '47; R Sci Instr 18:598-9 Ag '47
Marine biological laboratory postdoctoral fellowships in biochemistry, biophysics, and physiological chemistry. Science 104:594 D 20 '46
Merck and company to support new series of fellowships. Science 104:508 N 29 '46; Oil Paint & Drug Rep 150:63 D 9 '46
Microwave laboratory, Stanford university fellowships, etc., 1947-1948. R Sci Instr 18: 532 Jl '47
Opportunities at Battelle. Chem & Eng N 25:625 Mr 3 '47
Petroleum industry scholarship report. Oil & Gas J 45:68 F 1 '47
Pharmaceutical grants. Chem & Eng N 25: 3099 O 20 '47
Public Health Service fellowships. Chem & Eng N 25:115 Ja 13 '47
Research opportunities offered by U.S. colleges; many scholarships, assistantships, and fellowships in mineral technology available. S. P. Wimpfen. il Min & Met 28:504-7 O '47
Rutgers university fellowship for research work in the field of nuclear moments and low temperature physics. R Sci Instr 18: 266 Ap '47
Senator Pepper introduces legislation to provide federal scholarships and loans to students. Chem & Eng N 25:1237 My 5 '47
Sir Walter Preston scholarships and research fellowships. Textile Inst J 38:P163 Ap '47
Socony-Vacuum fellowships. Chem & Eng N 25:996 Ap 7 '47
Standard Brands fellowships. Chem & Eng N 25:324 F 3 '47
Ten fellowships set up by U.S. rubber co. Chem Eng 54:186 Mr '47
University of Michigan fellowships in the social sciences. Science 105:172 F 14 '47
Whitworth scholarships. Engineering 163:385-6 My 9 '47

See also
Science talent search

SCHOLARSHIPS and fellowships, International
American bridge to world science. Science 106:78 Jl 25 '47

SCHOLES, Samuel Ray, 1884-
Named dean of New York state college of ceramics. bibliog(79 titles) por Am Cer Soc Bul 25:484-6 D 15 '46

SCHOOL architecture. See School buildings—Designs and plans

SCHOOL auditoriums
Audio-visual departments. il plans diags Arch Rec 100:76-7 N '46
Auditorium, Boys Town, Nebraska. il plan Arch Rec 101:70 Ja '47

SCHOOL buildings
Architectural Record's building types study; with time-saver standards. il plans diags Arch Rec 101:79-98, 107+ Ja '47

See also
Classrooms
School auditoriums

Communication systems
Planning for central sound systems in schools. il plans Arch Rec 101:90-2 Ja '47

Designs and plans
Clean design stands up in constant use; Edison technical high school, Fresno, Calif. il plans Arch Rec 101:81-5 Ja '47
High school; Boys Town, Nebraska. il Arch Rec 101:69 Ja '47
Small high school in Grayslake, Ill. doubles as farm community center. il plans diags Arch Forum 86:90-1 Ap '47
Three schools in Wayne county, Michigan; George Washington Carver school, Douglas school and Heintzen school. il plans diags Arch Forum 85:75-81 D '46

Equipment
Schools in eight Texas towns go exclusively CP. il Gas Age 100:43-4 S 18 '47

Fires and fire protection
Montclair shows foresight in care of school property; fire prevention effort. Weekly Underw 156:456-7 F 15 '47

SCHOOL buildings—*Continued*

Heating and ventilation

Balanced heating system; high school near Detroit. plan diag Arch Rec 101:98 Ja '47
Minor adjustment changes end school room complaints. J. Cassie. diags Heat & Ven 44:87-8 My '47
Performance code for new heating; New York state recommendations. Arch Rec 101: 97 Ja '47
Radiant heating for schools simplified by use of copper tubes. il Eng N 138:1020 Je 26 '47
Zoned panel heating, fully automatic ventilation; Laurel Greek school, Calif. il Arch Rec 101:95-6 Ja '47

Insurance requirements

Montclair shows foresight in care of school property; fire prevention effort. Weekly Underw 156:456-7 F 15 '47

Lighting

Brightness engineering calculations for school and office lighting. W. Allphin. bibliog il Illum Eng 42:741-57 S '47
City-wide school lighting promotion gets results in Birmingham, Ala. R. H. Knox. il Elec World 127:66-7 Mr 1 '47
Classroom fields of vision. A. S. Turner and A. A. Brainerd. bibliog il plans Illum Eng 42:488-99; Discussion. 499-502 Ap '47
Conditioning schoolrooms for visual comfort and efficiency. C. D. Gibson. il Illum Eng 42:758-72; Discussion. 772-3 S '47
First things first in school lighting. F. W. Ogden. il Elec World 127:92 Mr 29 '47
Integrated lighting for classrooms. R. L. Biesele, jr. bibliog il plans diags Illum Eng 41:805-25; Discussion. 825-7 D '46
Modernization plan for rural and small-town schools. R. G. Cass. il Elec World 128:147 O 25 '47
Program to relight schools. J. S. Walsh. il Elec West 98:110-12 Je '47
Quality lighting in schools. R. C. Putnam. il Illum Eng 42:471-83 bibliog(p482-3); Discussion. 483-7 Ap '47
School lighting appraisal and recommendation procedure developed from survey. il Illum Eng 42:793-802 S '47
School lighting; IES conference papers; abstracts and discussions. Elec West 97:62-3 D '46
Systematizing school lighting surveys. Elec World 126:140+ D 7 '46
Tri-lateral lighting; Laurel Creek school, Calif. il diags Arch Rec 101:93-5 Ja '47
Unilateral lighting, two-story school; James Vernor school, Detroit; new bilateral lighting, open plan; Meiners Oaks school, Ojai, Calif. il plans diags Arch Rec 101:86-9 Ja '47

SCHOOL children

Control of ringworm of the scalp among school children in Hagerstown, Maryland, 1944-45. L. Schwartz and others. (Pub. health bul. 294) 27p U.S. Public health service, Washington; pa 10c Supt. of doc. '46
Simplified appraisal of dental-health programs. J. W. Knutson and others. bibliog Pub Health Rep 62:413-22 Mr 21 '47

SCHOOL kitchens. See Kitchens

SCHOOL libraries

Audio-visual departments. il plans diags Arch Rec 100:78-9 N '46
Library in the school. L. F. Fargo. 4th ed rev & rewritten 405p $4 American library assn, 520 N. Michigan av, Chicago '47

SCHOOL lunchrooms and cafeterias. See Lunchrooms and cafeterias, School

SCHOOL radio broadcasting studios. See Radio broadcasting studios, School

SCHOOL sanitation

How to design Imhoff tanks and trickling filters for schools, camps and hotels. diags Pub Works 78:33-4 S '47

SCHOOL savings

Passbook to better living; color sound movie presents story of Society for savings in Cleveland. il Banking 39:36-7+ Ja '47
School-savings show increase, ABA reports. Comm & Fin Chr 165:1986 Ap 10 '47

SCHOOL savings banks

High school savings bankers; Poughkeepsie, N.Y., students do accounting and record-keeping for city's school banking system. il Banking 40:133 S '47
One bank's three decades of school savings; Rochester, N.Y., savings bank. R. R. McGuire. Banking 40:113+ Ag '47
School savings banking comes back. Banking 39:104+ My '47

SCHOOLS

See also
Aeronautic schools
Colleges and universities
Community schools
Dealer schools
Engineering colleges
Mining schools and education
Radio schools and training
Trade schools

SCHORI process

Flame spraying by the powder pistol. W. D. Jones. il Engineering 163:297-9 Ap 11 '47

SCHRAGE motor. See Electric motors, Induction

SCHRAM, Emil, 1893-

Sketch. por(cover) Bsns W p8 Ap 19 '47

SCHULMERICH electronics, inc.

Tolling electrons. Fortune 36:118+ Ag '47

SCHULTZ, Theodore William, 1902-

American agriculture; Schultz' analysis and policy proposals. J. S. Davis. R Econ Stat 29:80-91 My '47

SCHUMACHER, Kurt

Portrait. Bsns W p92 O 4 '47

SCHUSTER, Ludwig, 1875-

Portrait. Bsns W p22 Ag 9 '47

SCHUTZ, Philip William, 1908-1947

Sketch. K. S. Pitzer. Science 105:541 My 23 '47

SCHUTZ, Walter E.

Personalities in industrial advertising. por Ind Marketing 31:82 D '46

SCHWARTZ, A. Charles

Contacts for sale; arranging introductions is a profitable sideline for finders. Fortune 35: 134+ Ap '47

SCHWARZENBACH HUBER company

Five centuries of silk tradition. Rayon 28:357 Jl '47

SCHWULST, Earl Bryan, 1896-

Savings bankers' choice. por Bsns W p68 My 17 '47

SCIENCE

New age of science. L. W. Chubb. Elec Eng 66:263-4 Mr '47
Proceedings of the Pacific science conference of the National research council. Nat Res Council Bul 114:1-79 '46
Science and industry; two-way traffic. D. T. A. Townend. Chem & Ind p139-40, 142-4 Mr 22 '47
Science and the practical arts. J. B. Conant. Harvard Bsns R 25 no 4A:545-53 [O] '47
Science digest reader; a selection of outstanding articles published in Science digest during the past ten years. 310p $3 Popular mechanics magazine, 200 E. Ontario st, Chicago 11 '47
Survey of the sciences. R. C. Tolman. Science 106:135-40 Ag 15 '47

See also
Bacteriology
Biological chemistry
Biology
Botany
Chemistry
Crystallography
Geology
Mathematics
Metallography
Meteorology
Meteorology, Aeronautic
Microscope and microscopy
Optics
Paleobotany
Paleontology
Physics
Scientific research
Technology
War and science
World war, 1939-1945—Science and the war

Bibliography

Bibliography of scientific and industrial reports; U.S. Commerce department publication. L. S. Thompson. J Doc 3:3-8 Je '47
Bibliography of scientific and industrial reports. Published weekly by U.S. Dept. of commerce, Office of technical services. Free to government agencies and scientific societies; for sale by Supt. of doc. $10

SCIENCE—Bibliography—*Continued*
Book reviews. Published in Review of scientific instruments April and October
Book reviews. Science 105:25-6 Ja 3 '47 [cont weekly]
Index to bibliography of scientific and industrial reports. 3v v 1, 169p pa 50c; v 2, 89p pa 35c; v 3, 103p pa 35c Supt. of doc. '46
Reports on enemy science and technology. Can Chem & Process Ind 30:92+ N '46
Science and technology; a record of literature recently added to the Carnegie library of Pittsburgh. Published quarterly $1 a year. Carnegie lib. of Pittsburgh, 4400 Forbes st, Pittsburgh 13 '46

See also
Science—Periodicals
Scientific literature

Classification

Research or available knowledge; a matter of classification. N. T. Ball. Science 105:34-6 Ja 10 '47

Dictionaries and encyclopedias

Van Nostrand's scientific encyclopedia. 2d ed 1600p $12 Van Nostrand pub. co, 250 4th av, New York 3 '47

Economic aspects

Some economic consequences of science. S. H. Slichter. Ann Am Acad 249:99-110 Ja '47

Exhibitions

Science exhibition, American association for the advancement of science. Science 104: 544-54, 589 D 6, 20 '46

International aspects

American bridge to world science. W. Vogt. Science 105:483-5 My 9 '47; Discussion. 106: 78 Jl 25 '47
ACS activities in promoting scientific relations with other countries. Chem & Eng N 24:2887-8 N 10 '46
Chemists' responsibilities; abstract. A. D. Lindsay. Chem Age (Lond) 57:184 Ag 9 '47
Foreign scientific and engineering relations. Franklin Inst J 243:67-9 Ja '47
International congress of experimental cytology meeting in Stockholm not open to German and Japanese scientists. T. Dobzhansky and others. Science 105:599 Je 6 '47
Place of science in the program of UNESCO; abstract. A. H. Compton. Science 106:119-20 Ag 8 '47
Science and agriculture in inter-American affairs. R. H. Allee. Chem & Eng N 25: 1184-6 Ap 28 '47

See also
Physics—International aspects

Methodology

Theory and prediction in science. R. Carnap. bibliog Science 104:520-1 D 6 '46

Periodicals

ASLIB microfilm service; the story of its wartime activities; with list of films available in the A.M.S. library. L. Moholy. J Doc 2:147-73 D '46
German scientific publications. Chem & Eng N 24:2846; 25:393 O 25 '46, F 10 '47
Scientific publishing in continental Europe: notes on its war and postwar status. C. H. Brown. Science 106:54-8 Jl 18 '47

Popularization

Science and the public. R. W. Gerard. Science 106:23-5 Jl 11 '47

See also
Newspapers—Scientific news
Radio broadcasting—Scientific programs

Social aspects

Life and the scientific method. C. A. U. Craven. Can Chem & Process Ind 30:47-9 D '46
New horizons in science; introducing dusts, germs, molecules, and atoms. W. J. Wiswesser. bibliog il J Chem Educ 24:21-7 Ja '47
Peace, freedom, and science. K. C. D. Hickman. Chem Eng Prog 43:supl2-14 My '47
Salts of the earth; address at Chemistry industry medal award. W. H. Dow. Chem & Ind p19-21 Ja 11 '47
Science and the business of living. J. G. Vail. Chem & Eng N 25:2486-9 S 1 '47
Science and the social order. J. S. Thomson. Can Chem & Process Ind 31:819-21 S '47
Science, government, and industry. E. V. Appleton. Chem & Eng N 25:2422-6 Ag 25 '47
Scope of science. R. M. Yerkes. Science 105: 461-3 My 2 '47
Social implications of modern science. H. M. Dorr, ed. Ann Am Acad 249:1-214 Ja '47
Stocktaking. R. T. Colgate. Chem & Ind p499-505 Ag 16 '47
Values. F. J. Curtis. Chem & Eng N 25: 2901-3+ O 6 '47; Same. Chem & Ind p651-4 O 25 '47

Study and teaching

Cooperative committee on the teaching of science and mathematics; its organization and program. Science 106:28-30 Jl 11 '47
Pre-science schools. Mech Eng 69:845 O '47
Science and the humanities at Yale university. Mech Eng 69:845-6 O '47
Shortage of scientific personnel. H. A. Moe. Science 105:195-8 F 21 '47

See also
Science teachers
Scientific education

Australia

Scientific research in Australia. Engineering 163:5-6, 42-3, 53-4, 89-90 Ja 3-24 '47

Germany

FIAT review of German science. R. L. Kenyon. il Chem & Eng N 25:962-3 Ap 7 '47
German chemical industry, past and present. R. L. Kenyon. Chem & Eng N 25:1437-9 My 19 '47
Unmasks German atom bomb project. S. A. Goudsmit. Chem & Eng N 25:3216-17 N 3 '47

Great Britain

See also British association for the advancement of science

Netherlands Indies

Status of scientific institutions on Java and Sumatra. F. W. Went. Science 106:145 Ag 15 '47

Poland

Poland in the world of science. I. Zlotowski. Science 106:308-9 O 3 '47

Russia

See also
Biology—Russia

SCIENCE (periodical)
Thomas A. Edison and the founding of Science: 1880. Science 105:142-8 F 7 '47

SCIENCE, Applied. See Technology

SCIENCE and state
Federal support for scientific research. W. R. Maclaurin. Harvard Bsns R 25 no 3:385-96 [Ap] '47
Law and atomic energy. E. B. Stason. Ann Am Acad 249:89-98 Ja '47
Legislation affecting scientists in the armed forces. H. S. Wigodsky. Science 105:404-6 Ap 18 '47
Presentation of 1946 AAAS-George Westinghouse science writers' award. J. B. Conant. Science 105:6 Ja 3 '47
Recommendations for national science program. J. R. Steelman. Steel 121:52 S 8 '47
Science and public policy; Scientific research board report, Program for the Nation. J. R. Steelman. Chem & Eng N 25:2563-4 S 8 '47
Science and statecraft. M. H. Stone. Science 105:507-10 My 16 '47
Science, politics, and the national welfare. F. L. Hovde. Elec Eng 65:554-6 D '46

See also
Government research
National science foundation (proposed)
Scientific research—Legislation, Proposed

Great Britain

Science, government, and industry. E. V. Appleton. Chem & Eng N 25:2422-6 Ag 25 '47; Same cond. il Tech R 49:211-16+ F '47

SCIENCE and war. See War and science

SCIENCE talent search
Westinghouse scholarship winners announced. Chem & Eng N 25:870 Mr 24 '47

SCIENCE teachers
Professional vices of teachers of science and engineering. B. B. Bennett. J Eng Educ 37: 825-7 Je '47

SCIENCE training group
Science training group in the Washington area. P. N. Powers. Science 104:477-8 N 22 '46

SCIENCE writing award. See Westinghouse, George, science writing award

SCIENTIFIC and industrial research, Department of. See Great Britain—Scientific and industrial research, Department of

SCIENTIFIC apparatus and instruments
At the B.I.F. il Chem Age (Lond) 56:559 My 3 '47
Basic characteristics of useful industrial laboratory instruments; tabulation. J. S. Buhler. diags Iron Age 159:58-61 My 1 '47
Europe's need of scientific instruments. Engineer 183:131 Ja 31 '47
Instrumentation. R. H. Müller. Anal Chem 19:sup23A-4A Ja '47
Scientific and professional equipment; market in Colombia. For Comm W 28:24 Jl 12 '47
Scientific instruments; shortages limit British industry's expansion. J. E. C. Bailey. Chem Age (Lond) 57:256 Ag 23 '47

See also
Aeronautic instruments
Cathode ray tubes
Chemical apparatus
Electric apparatus and appliances
Electric instruments
Electron microscope
Medical instruments and apparatus
Meteorological instruments
Optical instruments
Physical instruments
Physiological apparatus
Radio instruments
Surgical instruments and apparatus

Exhibitions
Royal society's conversazione, May 29. Engineer 183:492-3 Je 6 '47; Engineering 163: 481-2 Je 6 '47

SCIENTIFIC education
National security and the training of chemists. M. H. Trytten. Chem & Eng N 25: 499-502 F 24 '47

See also
Science—Study and teaching

SCIENTIFIC expeditions
Research in the University of Hawaii Pacific expeditions. T. Nickerson. Science 104:542-3 D 6 '46

SCIENTIFIC films. See Moving pictures in science

SCIENTIFIC libraries
Wisconsin to buy Thordarson library. Chem & Eng N 25:115 Ja 13 '47

See also Franklin institute—Biochemical research foundation—Library

SCIENTIFIC literature
Editing of scientific papers. R. W. Gerard. Science 106:289-90 S 26 '47
Effect of atomic energy on scientific and technical publications. R. E. Peierls. Engineering 164:305, 318 S 26-O 3 '47
FIAT review of German science. R. L. Kenyon. il Chem & Eng N 25:962-3 Ap 7 '47
International exchanges. R. B. Downs. Science 105:417-21 Ap 25 '47
Present-day problems in obtaining foreign scientific publications. V. W. Clapp. J Chem Educ 24:75-8 F '47
Progress in science in Germany, 1939-1946; Field information agency, technical (FIAT) reviews. R Sci Instr 17:564-7 D '46
Recent developments in Keysort cards. G. J. Cox and others. J Chem Educ 24:65-70 F '47
Reprint collection as an easily accessible source of reference material. A. H. Longenbach. Franklin Inst J 242:335-6 O '46
Scientific publications in the British zone of Germany. B. K. Blount. Assn of Sp Lib & Inf Bur Proc 1946:99-100; Discussion. 100-2
Some aspects of the demand for British scientific and technical books for Europe. J. Lancaster-Jones. Assn of Sp Lib & Inf Bur Proc 1946:69-71
Technical book publishing in Europe, 1947; impressions from visits to eleven countries. J. S. Thompson. Science 106:47-53 Jl 18 '47
Undiminishing record. H. C. Bauer. Special Lib 38:48-50 F '47
Wreck of matter and the crush of worlds; philosophic basis for Charles Hayden memorial library. J. E. Burchard. il Tech R 49:25-8+ N '46

See also
Science—Periodicals

SCIENTIFIC management. See Industrial management

SCIENTIFIC method
Life and the scientific method. C. A. U. Craven. Can Chem & Process Ind 30:47-9 D '46
Of men and machines; applying scientific method to automobile traffic systems. P. M. Morse. il Tech R 49:29-31+ N '46
Scope of science. R. M. Yerkes. Science 105: 461-3 My 2 '47

See also
Science—Methodology

SCIENTIFIC personnel, Advisory committee on. See Civil service commission—Advisory committee on scientific personnel

SCIENTIFIC research
Address at general engineering meeting. V. Bush. Science 105:89-91 Ja 24 '47
American bridge to world science. W. Vogt. Science 105:483-5 My 9 '47
Coordinated research. H. F. Willkie. Chem Eng Prog 43:sup 12-14 Je '47
Department of scientific and industrial research, its organization and duties. O. F. Brown. J Doc 2:195-209 Mr '47
Design of facilities for research. P. C. Smith. plans Ind & Eng Chem 39:444-7 Ap '47
Does patent consciousness interfere with cooperation between industrial and university research laboratories? L. A. Hawkins. Science 105:326-7 Mr 28 '47
Federal government and the shortage of scientific personnel. C. V. Kidd. Science 105:84-8 Ja 24 '47
Future of science. C. F. Kettering. Science 104:609-14 D 27 '46
Human relations in research institution management. W. A. Hamor. bibliog Advanced Management 11:132-41 D '46
National research council reconverts to peace. Can Chem & Process Ind 31:26-32 Ja '47
Operational analysis in relation to administration of government-sponsored research. J. R. Loofbourow. bibliog Science 106:113-17 Ag 8 '47
Patent policies in educational institutions and nonprofit research organizations. A. M. Palmer. Science 105:154-5 F 7 '47
Patents stabilize research. J. A. Dienner. Chem & Eng N 25:302-4 F 3 '47
President's scientific research board recommends changes in administration of federal research program; Administration for research and Manpower for research. Chem & Eng N 25:3055+ O 20 '47
Quartermaster corps research and development. A. Leggin. il Chem & Eng N 24:3044-5+ N 25 '46
Research and medical practice. E. W. Goodpasture. Science 104:473-6 N 22 '46
Research for national defense. G. C. Kenney. Tech R 49:523-4+ Jl '47
Research techniques strengthening asked by Scientific research board. Oil Paint & Drug Rep 152:7 O 13 '47
Retreat for progress. C. A. Thomas. Chem & Eng N 25:2559-61 S 8 '47
Science and public policy; Scientific research board report, Program for the Nation. J. R. Steelman. Chem & Eng N 25:2563-4 S 8 '47
Science, government, and industry. E. V. Appleton. Chem & Eng N 25:2422-6 Ag 25 '47; Same cond. il Tech R 49:211-16+ F '47
Science reaches upward. D. Sarnoff. il Sci Am 177:6-9 Jl '47

SCIENTIFIC research—*Continued*
Scientific research in Australia. Engineering 163:5-6, 42-3, 53-4, 89-90 Ja 3-24 '47
Scientific way. V. Bush. il Tech R 49:463-4+ Je '47
U.S. need; more research. il Bsns W p 15-16 Je 7 '47

See also
Aeronautic research
Agricultural research
Atomic research
Biological research
Chemical research
Electric research
Electron microscope
Engineering research
Government research
Industrial research
Laboratories
Medical research
Metallurgical research
Microscope and microscopy
Naval research
Petroleum research
Physical research
Scholarships and fellowships
Textile research

also Great Britain—National physical laboratory, Teddington; Johns Hopkins university institute for cooperative research; Midwest research institute, Kansas City, Missouri; Southern research institute, Birmingham, Alabama; Tata institute of fundamental research; Texas state research foundation

Finance

Basic research demands U.S. support; expenditures in the U.S. J. V. Sherman. Barron's 27:3 F 10 '47
Federal support for scientific research. W. R. Maclaurin. Harvard Bsns R 25 no 3:385-96 [Ap] '47
Science policy; Presidential board wants research spending doubled; expanded training program. Bsns W p20 S 6 '47
Scientific research expenditures increase urged by Truman board. Oil Paint & Drug Rep 152:7+ S 1 '47
Tax credit plan for re-establishing private support of pure science. R. W. King. Science 105:593-4 Je 6 '47

Legislation, Proposed

Federal support for scientific research. W. R. Maclaurin. Harvard Bsns R 25 no 3:385-96 [Ap] '47; Excerpts. Mech Eng 69:19-20+ Ja '47
Scientific research data centralization approved; Fulbright-Aiken bill, S-493. Oil Paint & Drug Rep 152:3 Jl 7 '47

See also
National science foundation (proposed)

Mechanical aids

Punched-card techniques and their applications to scientific problems. W. J. Eckert. J Chem Educ 24:54-7+ F '47

SCIENTIFIC societies
Manchester federation of scientific societies. Chem & Ind p391-2 O 26 '46
Trade or profession; a realistic approach to the problem. C. W. Ransom. Chem & Eng N 25:2356-7 Ag 18 '47

See also American association for the advancement of science; American philosophical society

SCIENTIFIC workers. See Research workers; Scientists

SCIENTIFIC writing
Use of quotation mark in science. J. E. Eaton. Am Assn Pet Geologists Bul 30: 1928-34 N '46

SCIENTISTS
Economic and professional status of engineers and scientists. A. E. MacRae. Can Chem & Process Ind 31:817-18+ S '47
Federal government and the shortage of scientific personnel. C. V. Kidd. Science 105:84-8 Ja 24 '47
Mutual responsibilities of scientists and industry. L. I. Smith. bibliog Chem & Eng N 24:3342-6 D 25 '46
President's research board reports on scientific manpower; charts. Chem & Eng N 25:3146-7 O 27 '47
Qualifications for professional positions in applied mathematics and related scientific fields. R. S. Burington and D. C. May. J Eng Educ 37:641-52 Ap '47
Shift of employment among younger scientists. M. H. Trytten. Science 106:3-5 Jl 4 '47
Shortage of scientific and technical personnel; what industry is doing about it. K. A. Meade. Science 105:457-61 My 2 '47
Shortage of scientific personnel. H. A. Moe. Science 105:195-8 F 21 '47

See also American men of science; Civil service commission—Advisory committee on scientific personnel
also names of scientists, e.g.
Condon, Edward
Uhler

Germany

Re German scientists; list of addresses. R Sci Instr 18:466-8 Je '47

SCIENTISTS, German
Army reveals research activities of German scientists in America. il Iron Age 158:116B-17 D 12 '46; Same cond. Mech Eng 69:154-5 F '47
Letter to President Truman about German military scientists imported by the army. Science 105:329 Mr 28 '47
Scientists and technicians from Germany. Chem Age (Lond) 57:296 Ag 30 '47; Same. Chem & Ind p545 S 6 '47
V-2's to Diesels; former enemy scientists at work here. Bsns W p36+ D 14 '46

See also
Scientists—Germany

SCOPULARIOPSIS brevicaulis
Studies on biological methylation; the fission of the mono- and di-sulphide links by moulds. F. Challenger and P. T. Charlton. Chem Soc J p424-9 Mr '47

SCOTLAND

See also
Banks and banking—
—Scotland

Economic conditions

Post-war Scotland. Economist 151:916-17 D 7 '46

Industries and resources

Peat industry for Scotland; abstract. A. Tomter. Chem Age (Lond) 56:293 Mr 8 '47
Scotland's plan encourages small industries; Scottish industrial estates, ltd. A. Borthwick. il Am Bsns 17:19+ Jl '47

SCOTT, Alexander, 1853-1947
Sketch. por Chem Age (Lond) 56:354 Mr 22 '47

SCOURING of textiles
Conveyor steamer developed by Mathieson alkali works. R. L. Carr. Manuf Rec 116:46 Mr '47
New dyeing assistant and scouring agent; Oridex D. M. Mytelka. Rayon 27:607-9 N '46

SCOVILL manufacturing company
Thumbnail stock appraisal. Mag of Wall St 79:260 D 7 '46

SCRANTON, Pennsylvania

Bridges

Repairs to Spruce Street bridge, Scranton. A. B. Cohen. il plans diags Am Concrete Inst J 18:241-8 N '46

SCRANTON electric company
Newcomers on the N.Y. stock exchange. W. A. Howell. Mag of Wall St 80:214-15 My 24 '47

SCRAP-carbon process. See Open hearth furnaces—Charging

SCRAP material

See also
Railroads—Scrap material
Salvage (waste, etc.)
Scrap metal

SCRAP metal
New credo for shipyards; demolition pays. il Bsns W p28 My 10 '47
Quick guide to solutions for stripping metal overlays. J. B. Mohler. Iron Age 159:66-7 My 8 '47
Scrap handling system paid for itself in two months; Shakeproof division, Illinois tool works. E. F. Sharpe. il Factory Management 105:84-5 F '47

SCRAP metal—*Continued*
Scrap salvaging. il Steel 120:118 F 3 '47
Smelting and refining of reclaimed non-ferrous metals. A. E. St John. il Metal Prog 52:609-12 O '47
Weather; key to steel scrap. Bsns W p19 Mr 15 '47

See also
Aluminum waste
Metal waste
Railroads—Scrap material
Salvage (waste, etc.)
Steel waste

Prices

Average monthly quotations in 1946. Steel 120:322 Ja 6 '47
Heavy melting and other scrap; monthly, 1929-1946; tabulations. Iron Age 159:238+ Ja 2 '47
Scrap composite price; monthly, 1929-1946; tabulation. Iron Age 159:234 Ja 2 '47

SCRAP metal industry
Scrap metals, 1946. C. W. Merrill and others. il Min Cong J 33:98-101 F '47
Scrap supplies in 1946; prospects for 1947. T. E. Lloyd. Iron Age 159:134-9 Ja 2 '47
Supply of scrap for 1947 largely dependent upon uninterrupted production in generating industries. E. C. Barringer. il Blast F & Steel Pl 35:57-9 Ja '47

SCRAPERS
All-welded hydraulic scraper. il Iron Age 159: 57 Ap 24 '47
Blade replacement. C. Richards. diags Roads & Sts 89:89 D '46; Same. Brick & Clay Rec 110:56+ F '47
Get loaded, get going; economic operation of scrapers. D. K. Heiple. il Roads & Sts 89: 103-4 N '46
Gravel-spreading cost reduced by use of tractor-scrapers; highway in British Columbia. il Roads & Bridges 85:76-7+ O '47
Mining shale by wheeled scraper; abstract. W. W. Kriegel. Brick & Clay Rec 110:56 Je '47
New ways to apply scraper hoists to mining. R. Pierce. il plans Eng & Min J 148:60-3 My '47
Scraper equipment stockpiles coal for utility. il Power 91:184 Mr '47
Scraper stripping at Big Horn. il Coal Age 52:102-6 O '47
Scraper stripping provides flexibility with high tonnage. il plan diag Coal Age 52:69-72 Mr '47
Use of scrapers and other light earth-moving equipment in bituminous coal strip mining. L. A. Turnbull and others. 15pls U S Bur Mines Rep of Invest 4033:1-37 '47

Manufacture

Improved products by mechanized welding and cutting; manufacture of Terra Cobra scraper. E. Griffeth. il diags Welding J 26: 670-4 Ag '47; Steel 121:80-4+ O 27 '47

SCRAPERS, Pipe
Experience with wax in the Stanpac line. il map diags Pet Eng 18:98+ My '47
Internal cleaning of gas pipe lines. C. A. Serafino. diags Pet Eng 18:180 Mr '47
Plant-built scrapers effective in cleaning dirty pipe lines. W. F. Crutchley and W. S. Wright. il Oil & Gas J 46:235+ S 20 '47

SCREEN printing. See Silk screen printing

SCREENING

See also
Coal screening

Cost

Process equipment cost; vibrating screen estimation. H. L. Bullock. Chem Eng 54: 97-9 Je '47

SCREENS
Enameled screen gives best results in screening coke breeze and damp materials. F. J. Geyer. il Blast F & Steel Pl 34:1529-30 D '46
Entrainment screens. W. L. Nelson. il Oil & Gas J 46:103 Ag 16 '47
High pressure oscillating shower pipes and stainless steel plates with rotary screens. F. F. Frothingham. il Paper Tr J 124:118+ My 29 '47
Identification of nickel or monel wire in a woven wire screen. R. L. Hackney. Metal Prog 51:87 Ja '47
New vibratory aggregate screen. il Concrete 55:52 F '47
Operation of the Cowan screen. M. A. Macdonald. Pulp & Pa of Can 48:75-6 Ag '47

See also
Coal screening
Sieves
Wire cloth

SCREENS, Door and window
How to unearth sales leads by direct mail; Detjen electric fly screens. il Sales Management 58:107 Je 1 '47
Tests of screening effectiveness against insects. S. S. Block. Science 104:447 N 8 '46

SCREENS, Moving picture. See Moving picture screens

SCREENS, Plastic
Plastic monofilaments are on their way. il Mod Plastics 24:93-4 Ag '47

SCREW machines
Acme-Gridley RB screw machine. il diag Am Mach 91:212 S 11 '47
Brown & Sharpe automatic screw machines. il Mach 54:231 S '47; Am Mach 91:153-4 Ag 28 '47
Magazine loading speeds second-operation work. W. L. Woodcock. diags Am Mach 91:108-10 My 8 '47
Monarch manufacturing lathe, screw machine, and electronic sizing control. il Mach 54:165-6 S '47
National Acme exhibits new bar automatics and other tools. il Mach 54:190 S '47
New Britain automatic screw machines and turret lathes. il Mach 54:173-4 S '47
Oil mist can be eliminated; Precipitron electrostatic air cleaner. W. F. Herst and H. B. Heyl. il diag Am Mach 91:93 Ag 14 '47
Screw machine products. T. C. Du Mond. il Materials & Methods 26:103-10 Ag '47
Single spindle automatic. il Engineer 182:598 D 27 '46
Threading; highlights on development of screws and screw making. G. Hubbard. il Steel 121:76-8+ Jl 28 '47

SCREW threads
Editorial citation to Landis tool co. for achievement in centerless grinding of threads. il Materials & Methods 24:1180-1 N '46
Le moulage par centrifugation des hélices en bronze. diags Génie Civil 124:199 My 15 '47
Plastic film locks threaded parts. Iron Age 160:66 Ag 28 '47
Research on fatigue strength of screw threads of different form. D. G. Sopwith and T. Settle. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 18): 156-8 '46; Same cond. Engineering 160:58-9 Jl 20 '45
Scale diagram for relations of thread dimensions; reference book sheet. J. L. Skeehan. diag Product Eng 18:175 Jl '47
Thread rolling, theory and practice. J. W. Batchelder. bibliog il diags Iron Age 158: 58-64 D 19; 55-61 D 26 '46; 159:52-7 Ja 9 '47
Threads for thin tubing. W. C. Mills. diags Am Mach 91:128 Ag 28 '47

See also
Pipe threads
Thread cutting

Standards

Acme screw threads and buttress threads. L. W. Nickols and J. E. Baty. diags Inst Mech Eng J & Proc 155 (War emergency issue no 18):148-52 '46; Same. Engineering 160:38-9 Jl 13 '45
Conference on unification of screw threads; discussion. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 18):161-92 '46
Instrument threads. G. A. Whipple and others. diag Inst Mech Eng J & Proc 155 (War emergency issue no 18):152-4 '46; Same abr. Engineering 160:39-40 Jl 13 '45
Interchangeability of B.S.W. and American national nuts and bolts. Engineer 183:104 Ja 24 '47

SCREW threads—Standards—*Continued*
International conference on unification of engineering standards under the auspices of the combined WPB Production resources board. J. J. Dunn. Am Pet Inst Proc 25(4): 115-17 '45
Proposed ABC standard screw-thread symbols. Am Pet Inst Proc 25(4):124-5 '45
Rationalization of screw thread series. J. E. Sears and W. C. Swift. Inst Mech Eng J & Proc 155 (War emergency issue no 18): 159-61 '46; Same. Engineer 179:514-15 Je 29 '45; Same. Engineering 160:97-8 Ag 3 '45
Unification of British and American screw threads. F. H. Rolt and J. E. Sears. Inst Mech Eng J & Proc 155 (War emergency issue no 18):155-6 '46; Same. Engineer 179: 513 Je 29 '45; Same. Engineering 160:58 Jl 20 '45
Unification of screw thread practice. Inst Mech Eng J & Proc 155 (War emergency issue no 18):193-200 '46

Testing
Bryant gage for checking face squareness of threaded parts. il Mach 53:205 Ap '47
Small thread and gear measuring pin technique. L. R. Fitzsimmons. diags Am Mach 91:136 Ap 10 '47
V-block simplifies thread pitch measurements. D. E. McDonald. il diags Am Mach 91:106 F 27 '47

SCREWDRIVERS
Expanding screwdriver. O. K. Perkins. diag Am Mach 91:115 Ja 30 '47
Maintenance of screwdrivers. diags Paper Ind 29:709 Ag '47
Screwdrivers; correct use. il Paper Ind 28: 1789-90 Mr '47

SCREWDRIVING machines
Power screwdrivers paid when used 30 minutes a day. A Kahn. Factory Management 105:137-8 Jl '47

SCREWS
Fasteners for aircraft. il diags Aviation 46: 35-50 My '47
Plaster and masonry fastenings. T. Trail. diags Power Pl Eng 51:90-1 My '47
Screw holes for broach inserts and holders; reference book sheet. diags Am Mach 91: 139 Ap 24 '47

See also
Screw machines
Screw threads

Advertising
Under which shell? Parker-Kalon socket screw advertising. Sales Management 58: 64+ Ap 1 '47

Manufacture
Double-acting fixture speeds screw slotting. S. Framurz. diag Am Mach 91:107 F 27 '47
Induction heat tempers case-hardened screws; Screw machine products co. W. A. Gish. il Elec World 126:140+ N 9 '46
Lathe fixture slots screws. G. Burnley. diags Am Mach 91:120 O 23 '47
Tailstock setup chases small screws. L. A. H. Casper. diag Am Mach 91:129 Je 5 '47

SCROTUM
Scrotal swellings in industrial medical practice. J. H. Kiefer. Ind Med 16:65-8 F '47

SCRUB palmetto. See Saw palmetto

SCRUB typhus. See Tsutsugamushi disease

SCRUGGS-VANDERVOORT-BARNEY, Inc.
Preferred stock offered. Comm & Fin Chr 165:816 F 10 '47

SCULPTURE
See also
Bronzes
Wood carving

SCULPTURE, Ceramic. See Ceramic sculpture

SEA echo. See Radar

SEA food
Refrigerated factory ship processes and packages seafood. il diag Refrig Eng 54: 127+ Ag '47

See also
Fish as food

SEA level
Sea level plan for Panama canal. J. G. Claybourn. maps diags Am Soc C E Proc 73: 175-96 F '47

SEA water
Companies unite against ravages of salt water in research at Kure Beach ocean laboratory. W. W. Burns. il Oil & Gas J 46:107-8+ Je 28 '47
Corrosion testing facilities expanded at Kure Beach. R. K. Lotz. il diags Steel 121: 88-90+ Jl 14 '47
Expanding corrosion testing facilities at Kure Beach. il Marine Eng 52:89-94 Jl '47
Magnesium chemicals; pictured flow sheet. Chem Eng 54:132-5 Ag '47
Marine chemicals in India. Chem Age (Lond) 56:405-6, 431-3 Ap 5-12 '47
Marine lab aids corrosion research; Kure Beach project. E. W. Feller. il Power 91: 544-5 Ag '47
Measurement of sea-water velocities by electromagnetic induction. R. W. Guelke and C. A. Schoute-Vanneck. bibliog diags Inst E E J 94 pt 2:71-4 F '47
Outdoor laboratory provides information on effects of marine corrosion; Kure Beach, N.C., sea water corrosion testing station. il Civil Eng 17:598-600+ O '47
Sea water corrosion tests yield valuable data for industry; marine exposure test station at Kure Beach. il Iron Age 159:101-2 Je 26 '47
SO_2 control problem solved in sea water bromine plants; abstract. P. Hart. Chem Eng 54:102 O '47
World's greatest mine. S. J. Lloyd. il J Chem Educ 24:273-7 Je '47

See also
Dead sea

Analysis
Rapid electrometric determination of the alkalinity of sea water using a glass electrode. D. H. Anderson and R. J. Robinson. bibliog Ind & Eng Chem Anal ed 18:767-9 D '46

Desalting
Rendering marine waters potable. L. Grunberg and A. H. Nissan. Soc Chem Ind J 65:348-50 N '46

Sound transmission
See Sound—Transmission thru sea water

SEABOARD air line railroad
Equipment trusts offered. Comm & Fin Chr 165:724, 1110 F 3, 24 '47
Preliminary report. Comm & Fin Chr 165:1235 Mr 3 '47
Seaboard Air Line has come from rust to riches. T. G. Campbell. Barron's 27:27-8 Mr 31 '47
Sees South advancing; Road's plans for aiding development of its territory. L. R. Powell, jr. Comm & Fin Chr 166:912 S 4 '47

SEABOARD container corporation
Stocks offered. Comm & Fin Chr 166:308-9 Jl 21 '47

SEABOARD finance company
Annual report. Comm & Fin Chr 165:1235 Mr 3 '47
Common stock offered. Comm & Fin Chr 164:2963 D 9 '46
Notes placed privately. Comm & Fin Chr 165:113 Ja 6 '47
Preferred stock offered. Comm & Fin Chr 166:1056 S 15 '47

SEABORG, Glenn Theodore, 1912-
ACS award in pure chemistry. por Chem & Eng N 25:2819 S 29 '47
Sketch. por(cover) Chem & Eng N 24:3161 D 10 '46

SEALING
Changing to heat seals for coffee bags. Mod Packaging 21:154 O '47
Developments in high frequency sealing of plastic films; abstract. P. D. Zottu. Mod Plastics 24:98 Je '47
Heat sealing acetate. W. F. Cullom. il diags Mod Packaging 21:152-3+ S '47
Hermetic sealing of transformers and chokes used in communication equipment. C. F. Bays and D. Slater. il diags Inst E E J 94 pt 3:347-57 S '47
Hermetically sealing aircraft instruments and control components. W. A. Reichel. diags S A E J 55:35-7 Ag '47

SEALING—*Continued*
High temperature seal for rotating shafts. F. B. Eastman and H. O. McMahon. diags Chem Eng 54:157-8 My '47
Hydraulic seal on sliding door of Baker Perkins dough mixing machine. il Machine Design 19:108 Ag '47
Joint sealing costs cut 42 per cent; methods developed by California highway staff. H. L. Cooper. il Roads & Sts 90:51-3 Jl '47
Joints in concrete pavement sealed by truck mounted rig. il Eng N 139:204 Ag 7 '47
Mechanical seals. D. R. Lewis. il diag Machine Design 18:125-8 S; 78-82 O; 138-42+ N; 146-50+ D '46
Metal-ceramic vacuum seals. N. T. Williams. il diags R Sci Instr 18:394-7 Je '47
O-ring seals; application in hydraulic mechanisms. D. R. Pearl. diags Machine Design 19:97-102 My '47
Pressure compensating seal solves shaft problems under severe operating conditions. J. W. Postler. diags Chem Eng 54:118-19 Je '47
Sealing a rotating shaft. diag Chem & Ind p21 Ja 11 '47
Sealing plastics boxes. il Sci Am 177:172 O '47

See also
Bottle caps and seals

SEALING compositions
Asphaltic oil-latex joint-sealing compound. B. W. Pocock. bibliog il Am Concrete Inst J 17:565-80 Je '46; Discussion. 18:580[1]-580[6] pt 2 D '46
Castings made leakproof for pressure service. Comp Air Mag 52:49 F '47
Curing concrete with sealing compounds. R. F. Blanks and others. Am Concrete Inst J 17:493-512 Ap '46; Discussion. 18:512[1]-512[7] pt 2 D '46
L'emploi d'une résine synthétique pour éviter le desserrage des filetages et assurer l'étanchéité des joints. diag Génie Civil 124:337-8 S 1 '47
Polyamides; resins of the Norelac type for hot-melt and heat-seal coatings. A. G. Hovey. il Mod Packaging 21:143-8+ O '47
Reclamation laboratories develop new joint-sealing compound. M. R. Spindler. il Concrete 55:25-6 F '47
Rubber-asphalt joint fillers. R. H. Lewis. Pub Roads 24:291-8 Ja '47
Saving paving; rubber-base compounds for sealing pavement joints. R. B. Jennings. diags Pub Works 78:25-6 Ap '47
Sealing joints with rubberized asphalt; Packard test track. B. Gould. il Roads & Sts 90:91-2+ F '47
Sealing of porous castings; Polyplastex MC. P. C. Fuller. il Aero Digest 53:96+ N '46
Study of resinous sealants for porous metal castings. V. C. F. Holm. bibliog pl J Res Nat Bur Stand 37:177-82 S '46; Same. il Foundry 75:86-7+ Ja '47; Abstract. Iron Age 158:90-1 N 14 '46
Use of phenol formaldehyde and vinyl resins in sealing liquid mounting media on microscope slides. E. S. Barghoorn. Science 106: 299-300 S 26 '47

SEALING machines
Automatic sealing machine. G. E. Tcimpidis. il diags Machine Design 19:87-93 My '47
Automatic taping machines. il Mech Handling 34:157-8 Mr '47
Eisler bulb sealing machine; patents. il diag Glass Ind 28:249+, 380 My, Jl '47
Honzl and Eisler patents. diags Glass Ind 28:84 F '47
Method of sealing exhaust tabulations to electronic discharge tube envelopes; patent. diags(p82) Glass Ind 28:83 F '47
Selecting heat-sealing equipment. Mod Packaging 20:156+ My '47
What to look for in high frequency heat sealing equipment. P. Weiss. Mod Plastics 24:138-40 Ag '47

SEALING of oil. See Oil seals

SEAMEN
Jobs covered by collective bargaining, U.S. offshore merchant marine, February 1946. H. M. Sturm. Mo Labor R 64:257-61 F '47
Menace to steel; A.F.L. and C.I.O. organizing drives on Great Lakes. Bsns W p90 Mr 22 '47
New collective agreement for Swedish seamen. Int Labour R 55:427-9 My '47
Twenty-eighth maritime session of the International labour conference, Seattle, June 1946. Int Labour R 54:1-28 Jl '46
Unemployment among Greek seafarers. Int Labour R 55:575 Je '47
U.S. maritime commission halts writing cover; liability under seamen's policies. Weekly Underw 155:1549 D 28 '46
Workmen's compensation and the protection of seamen. U S Bur Labor Statistics Bul 869:1-93; pa 20c Supt. of doc. '46

Law
Argue British ship carries British jurisdiction although in port of another country; injury to seaman. Weekly Underw 157:380 Ag 16 '47

Training
Top management does training. W. G. Torpey. Personnel J 25:208-10 D '46

SEAPLANE bases
CAA proposes 250 seaplane bases to further water flying in U.S. CAA J 8:88 Ag 15 '47
Embry-Riddle network uses diversified base operations; ground and flight schools, seaplane base, maintenance depot, surplus agency and hotel. A. McSurely. il Aviation N 7:11-12 F 10 '47
New marine turntable ramp boosts seaplane base utility. il Aviation 45:82-3 D '46
Potomac seaplane base is approved. Aviation N 6:16 N 11 '46
Use new seaplane in float base survey; Luscombe model 8E. Aviation W 47:47 Ag 11 '47

Lighting
Lighting of seadromes. A. L. Lewis. il diags Aero Digest 53:50-2+ S '46; 54:66-7+ Ap '47

SEAPLANES
Dairying industry in Venezuela using seaplanes. For Comm W 25:40 D 7 '46
Normal-pressure tests of rectangular plates. W. Ramberg and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:349-71 '46
Static stability analysis for flying boats and seaplanes. E. G. Stout. diags Aviation 45: 70-1 D '46; 46:58-60 Ja; 55-7 F; 59-61 Ap '47

See also
Flying boats

Floats
Diversified output knits Edo's production capacity. E. J. Bulban. il Aviation N 7:21 Je 2 '47
Edo develops new metal float. Aviation N 7:22 Ap 14 '47
Float structure redesign simplifies output and maintenance; Edo Aircraft's methods; illustrations with text. Aviation 45:74-5 D '46

Testing
Rough water operational tests conducted by navy; latest version of SC-2. il Aviation W 47:25 S 8 '47

SEARCHLIGHTS
Apparatus for determining spherical aberration of convex surface of paraboloid of revolution; production of anti-aircraft searchlight reflectors. B. Goldberg and N. C. Benson. il diags Opt Soc Am J 37:186-91 Mr '47
Searchlights; symposium. E. W. Chivers and others. Light & Lighting 40:63-6 Ap '47

SEARS, Roebuck and company
High prices reduce value of Sears' working capital. Barron's 27:27 My 5 '47
Ward's earnings, assets priced lower than Sears'. Barron's 27:34 S 22 '47

SEASICKNESS
Sunburn, poison ivy, and seasickness. il Fortune 36:110-15+ Ag '47

SEASIDE houses. See Beach houses

SEASIDE resorts
Florida resort development near Miami Beach. il plans Arch Forum 86:110-11 Ap '47

SEASONAL industries
How to eliminate the seasonal slump. Ptr Ink 219:44-5 My 9 '47
See also
Winter construction
also names of seasonal industries and products, e.g. Coal trade; Hats

Advertising
How to create year-round markets for seasonal items; advertise all year, educate dealers, offer special inducements. Ptr Ink 219:48+ Ap 25 '47
Product sold seasonally, advertising follows seasons; McGregor sportswear (David D. Doniger & co.). map Ptr Ink 217:52 D 13 '46
See also
Bathing suits—Advertising

SEASONAL variation (statistics)
Presenting seasonal variation to the business executive. A. S. Donnahoe. Am Stat Assn J 41:468-71 D '46

SEATRAIN lines, inc.
I.C.C. can't change Seatrain certificate. Ry Age 122:154+ Ja 11 '47

SEATS
See also
Car seats

SEATTLE

Hospitals
How life insurance aids a community; endowment fund created through life insurance. W. E. Schneider. Nat Underw 50th anniv no:90+ 1947

Rapid transit
Financial results of Seattle operation, 1946 versus 1945. E. A. Roberts. Mass Transportation 43:202-3 My '47
Is Seattle different? E. A. Roberts. Mass Transportation 43:150-1 Ap '47

Water supply
Seattle water system survey; cross-connections discovered. Eng N 139:68 Jl 10 '47

SEATTLE gas company
Plan approved by SEC. Comm & Fin Chr 165:342 Ja 20 '47

SEAWEED. See Algae

SEAWORTHINESS (term)
Question of seaworthiness presents interesting points; owner's responsibility. I. D. Eby. Weekly Underw 156:1218-19+ My 3 '47; Excerpts. Marine Eng 52:84-5 Ag '47
Responsibility for seaworthiness. B. E. Meurk. Marine Eng 52:88-90 Ag '47

SEBACATES
Rubberlike products from linear polyesters. B. S. Biggs, R. H. Erickson and C. S. Fuller. bibliog il diags Ind & Eng Chem 39:1090-7 S '47

SEBACIC acid
High molecular weight hydrocarbons; five new hydrocarbons derived from sebacic acid. M. D. Soffer and others. bibliog Am Chem Soc J 69:1684-8 Jl '47

SECOND sound. See Helium, Liquid; Temperature, Low

SECRETARIES, Private
Secretary's job shown in Underwood film. il Am Bsns 17:42 Je '47
What kind of direct mail gets past the private secretary? il Sales Management 58:44-6 Ap 15 '47

SECRETIONS
See also
Hormones
Perspiration
Saliva
Smegma
Urine

SECTIONALISM
Place of Central valley in the social prospect of southern California. P. S. Taylor. Ann Am Acad 248:214-19 N '46
Sectionalism in state politics. G. W. Bemis. Ann Am Acad 248:232-5 N '46

SECULAR equations
Electrical network for the solution of secular equations. R. H. Hughes and E. B. Wilson, jr. diags R Sci Instr 18:103-8 F '47
Potentiometric secular equation computer. A. A. Frost and M. Tamres. bibliog il diag J Chem Phys 15:383-90 Je '47

SECURITIES
Answers to inquiries. Published in bi-weekly numbers of Magazine of Wall Street
Dangers of the depressed securities industry. N. L. Jarvis. Comm & Fin Chr 166:1308+ O 2 '47
Foreign held securities overhanging our markets. F. R. Walters. Mag of Wall St 80: 694-5+ S 27 '47
Investing for a widow; seven years later. W. J. Galligan. Barron's 26:11+ N 18 '46
New capital issues; with table giving 1945 total, monthly average and monthly figures, Jan.-Sept. 1946. Survey of Cur Bsns 26:5-6 N '46
New issues; a mixed picture. Bsns W p62+ F 1 '47
1947 special re-appraisals of values, earnings and dividend forecasts. Mag of Wall St 79: 488-501+, 548-61+, 608-21+, 668-79+; 80: 489-97+, 541-51+, 645-59+ F 1-Mr 15, Ag 2-16, S 13 '47
Securities now in registration; prospective security offerings. Published in weekly Thursday numbers of Commercial and financial chronicle
Todays market; summary of the fortnight. A. T. Miller. Mag of Wall St 79:178-9 N 23 '46 [cont biweekly]
See also
Banks and banking—Investments
Banks and banking—Stock
Bonds
Investments, Foreign
Loans, Foreign
Mortgages
Municipal bonds
Speculation
Stockholders
Stocks
Trusts and trustees
—Investments
also subdivision Securities under names of industries, e.g.
Airlines
Airplane industry and trade
Agricultural machinery industry
Automobile accessories industry
Building trades
Chain stores
Cotton trade
Department stores
Distilling industries
Electric apparatus industry
Food industry and trade
Gas companies
Glass trade
Gold mines and mining
Holding companies
Insurance companies
Investment trusts
Leather industry and trade
Machinery industry
Metal trade
Metal working industries
Mining industry and finance
Moving picture industry
Office equipment industry
Packing industry
Paper industry and trade
Petroleum industry and trade
Public utilities
Railroad supplies industry
Railroads
Retail trade
Rubber industry and trade
Shoe industry and trade
Specialty industries
Steamboat lines
Steel industry and trade
Sugar industry and trade
Sulfur industry and trade
Tire industry and trade
Tobacco industry and trade

Advertising
Improving the prospectus. O. Ely. Pub Util 39:437-8 Mr 27 '47
Obligations of dealers and brokers in interpreting prospectuses. E. M. Hanrahan. Comm & Fin Chr 165:597+ Ja 30 '47
SEC issues new rule on red herring prospectus. Comm & Fin Chr 164:3021+ D 12 '46
Underwriters pushing for early congressional revision of rules on use of prospectus. Comm & Fin Chr 165:2475+ My 8 '47
Use of red herring prospectus in Ohio. J. F. Merkel. Comm & Fin Chr 165:1254 Mr 6 '47

Competitive bidding
See Securities—Marketing

Exemption from taxation
See Taxation, Exemption from

Law
Basic difficulties in operation of Securities act. R. K. McConnaughey. Comm & Fin Chr 165:1925+ Ap 10 '47

SECURITIES—Law—*Continued*
Bill in N.Y. legislature would set up State securities board; text of original and amended Clancy bills. Comm & Fin Chr 165: 1255, 1378+ Mr 6, 13 '47
Blue Sky law developments. J. F. Merkel. Comm & Fin Chr 166:1320+ O 2 '47
Caffrey to push for extension of disclosure and proxy requirements to unlisted corporations. Comm & Fin Chr 165:1786+ Ap 3 '47
Calls for revision and amendment of state securities laws; IBA State legislation committee report. Comm & Fin Chr 164:3057, 3068 D 12 '46
Concern grows over unwholesome effects of '34 Securities act. E. Germain. Comm & Fin Chr 165:2979+ Je 5 '47
Margin requirements; borrowing of securities. Fed Res Bul 33:981 Ag '47
Needed; more uniformity in Blue Sky laws. M. Hanson. Comm & Fin Chr 166:1420 O 9 '47
N.Y. Chamber of commerce urges changes in SEC acts to ease flow of capital for industry. Comm & Fin Chr 165:3119 Je 12 '47
Pending New York state baby SEC law; editorial. Comm & Fin Chr 165:1647+ Mr 27 '47
Problems of stock brokers and transfer agents arising from questioned securities. S. W. Donovan. Weekly Underw 155:1564-6; 156:284-6, 552-3 D 28 '46, Ja 25, F 22 '47
Prospects for revision of Security act. M. Hanson. Comm & Fin Chr 165:1513+ Mr 27 '47
Recommends revision of Securities act; Committee on security regulation of Commerce and industry association of New York. Comm & Fin Chr 165:1786+ Ap 3 '47
Representative revives Boren bill; with text. Comm & Fin Chr 165:1379 Mr 13 '47
SEC asks for comments on proposed amendment of the Securities and exchange acts. Comm & Fin Chr 165:3118+ Je 12 '47
SEC disclosure rule again to fore. H. M. Bratter. Comm & Fin Chr 165:1375+ Mr 13 '47
SEC lifts curb on sale of state banned issues; revises Regulation A of Securities act of 1933. Comm & Fin Chr 165:3271 Je 19 '47
SEC requirements on reporting sales of securities by officers, directors and 10 per cent holders. I. J. Galpeer. Comm & Fin Chr 165:2854+ My 29 '47
Securities business and securities acts. F. A. Truslow. Comm & Fin Chr 166:811+ Ag 28 '47; Editorial comment (Ineffective apologist). 166:907+ S 4 '47
Senator McCarran's bill would end costly, elaborate registration requirements on new issues; text. Comm & Fin Chr 165:2196 Ap 24 '47
State securities regulation. A. D. Chilgren. Comm & Fin Chr 165:1516+ Mr 20 '47

See also
Securities—Regulation

Listing and delisting

Domestic and foreign listing on N.Y. stock exchange. J. Haskell. Comm & Fin Chr 166:1114+ S 18 '47

Marketing

Breakdown of competitive bidding? O. Ely. Pub Util 40:230-3 Ag 14 '47
Characteristics of today's security markets. F. K. Dodge. il Mag of Wall St 79:652-3+ Mr 15 '47
Cudahy Packing to try competitive bids. Comm & Fin Chr 165:2066 Ap 17 '47
Investor confidence in the securities market; address before National security traders association, Boston. E. M. Hanrahan. Comm & Fin Chr 166:6+ sec 2 Ag 28 '47
Lending variety; more borrowers are making private deals. Bsns W p74+ N 9 '46
Many loans placed privately. Bsns W p80+ D 14 '46
Sale of small firm issues again possible; record of 37 issues sold by Gearhart & co. F. D. Gearhart, jr. Comm & Fin Chr 166: 1313 O 2 '47
SEC and a free securities market. R. B. McEntire. Comm & Fin Chr 165:269+ Ja 16 '47
SEC reverses NASD ruling in Herrick, Waddell case. Comm & Fin Chr 165:1785+ Ap 3 '47
Securities salesman's corner. J. Dutton. Published in weekly Thursday numbers of Commercial and financial chronicle
Security exchanges in world finance. R. A. Foulke. Dun's R 54:11-12+ N; 11-14+ D '46
Wants standby periods shortened; IBA Committee on stock exchange relations. Comm & Fin Chr 164:3055+ D 12 '46

See also National association of securities dealers

Over-the-counter marketing

Few facts about the over-the-counter securities market. P. Escher. Comm & Fin Chr 165:2603+ My 15 '47
Over-the-counter market is a misnomer. R. V. Mosley. Comm & Fin Chr 165:1793 Ap 3 '47
SEC abandons idea of promulgating bid-and-asked disclosure rule; editorial. Comm & Fin Chr 165:1783+, 2059+ Ap 3, 17 '47
Strength and vitality of unlisted market. C. E. Unterberg. Comm & Fin Chr 165:1380+ Mr 13 '47
Unregistered securities; curtailment of SEC powers urged. J. Cortney. Comm & Fin Chr 165:2727+ My 22 '47

Prices

Security prices, United States, United Kingdom, France, Germany, Netherlands, 1939-1945 and monthly, Dec. 1945-Nov. 1946. Fed Res Bul 33:111 Ja '47 [cont monthly]

Registration

New York stock exchange wants Securities acts simplified to aid listing of foreign issues. Comm & Fin Chr 164:2664 N 21 '46
SEC announces registration simplification proposals. Comm & Fin Chr 164:2805 N 28 '46
Senator McCarran's bill would end costly, elaborate registration requirements on new issues; text. Comm & Fin Chr 165:2196 Ap 24 '47
Treasury amends import controls on securities. Comm & Fin Chr 166:437 Jl 31 '47

Regulation

Adjusting SEC requirements to business. J. J. Caffrey. Comm & Fin Chr 165:736+ F 6 '47
For those who don't read; securities commissioners to pass even on the merit of securities. Fortune 34:176+ D '46
Foreign issuers cannot by-pass SEC. E. M. Hanrahan. Comm & Fin Chr 166:1214+ S 25 '47
Iron hand over securities business oppresses our economy. E. Schram. Comm & Fin Chr 166:1406+ O 9 '47
Recent violent stock market swings; are they induced by government curbs on free marketing? A. M. Sakolski. Comm & Fin Chr 165:2851+ My 29 '47
Securities acts will be eased. J. J. Caffrey. Comm & Fin Chr 165:993+ F 20 '47
Securities regulation in New York. J. P. Powers. Comm & Fin Chr 166:1317+ O 2 '47
Securities regulation will be relaxed. J. J. Caffrey. Comm & Fin Chr 164:2601+ N 21 '46
Tightens sale of Canadian securities in U.S. Comm & Fin Chr 165:612 Ja 30 '47

See also National association of securities dealers; Securities and exchange commission

Statistics

New corporate security issues; proposed uses of proceeds, yearly 1934-1945, monthly Aug. 1945-Nov. 1946. Fed Res Bul 33:65 Ja '47 [cont monthly]
New securities offered for cash in the United States, all offerings, by type of issuer, 1934-July 1947; charts. Pub Util 40:655 N 6 '47
New security issues for new capital and for refunding, domestic, totals, 1936-1945, by months, Nov. 1945-Nov. 1946. Fed Res Bul 33:64 Ja '47 [cont monthly]

SECURITIES—*Continued*

Unlisted securities

Caffrey to push for extension of disclosure and proxy requirements to unlisted corporations. Comm & Fin Chr 165:1786+ Ap 3 '47

Double standard in the securities business; deplores exemption from registration requirements of unlisted securities. H. W. Besse. Comm & Fin Chr 166:1218 S 25 '47

See also
Securities—Over-the counter marketing

France

Security prices and inflation; with charts showing indices of common stock prices in France, 1919-1930. I. Wright and M. Henn. Comm & Fin Chr 166:8-9+ sec 2 Ag 28 '47

Great Britain

Bear market develops in London. B. Ravits. Barron's 27:29-30 S 1 '47

Capital issues in 1946. Economist 152:40 Ja 4 '47

Depositing securities; an unfortunate confusion. Economist 153:457 S 13 '47

De profundis; price movements of the constituent shares in the Financial Times index. Economist 153:414 S 6 '47

Gilt-edged yield disparities; Equities revalued. Economist 153:208 Ag 2 '47

New capital issues in Great Britain, 1936 to date. Comm & Fin Chr 165:384 Ja 20 '47

Netherlands

Dutch bid high for stock in firm with American share. Barron's 27:30 O 13 '47

New York (state)

Bill in N.Y. legislature would set up State securities board; text of original and amended Clancy bills. Comm & Fin Chr 165: 1255, 1378+ Mr 6, 13 '47

Securities regulation in New York. J. P. Powers. Comm & Fin Chr 166:1317+ O 2 '47

SECURITIES and exchange commission

Foreign issuers cannot by-pass SEC. E. M. Hanrahan. Comm & Fin Chr 166:1214+ S 25 '47

Form 10-K amended; Form S-1 simplified. J Account 83:267-9 Mr '47

New York challenges SEC authority on utilities; jurisdiction at stake in Kings County Lighting recap controversy. E. R. Abrams. Barron's 27:19 My 12 '47

SEC and the stockholder. E. H. Cashion. Comm & Fin Chr 165:2857+ My 29 '47

SEC asks for comments on proposed amendment of the Securities and exchange acts. Comm & Fin Chr 165:3118+ Je 12 '47

SEC collaboration with security dealers. R. K. McConnaughey. Comm & Fin Chr 165: 2475+ My 8 '47

SEC is undermining the securities business. J. Dutton. Comm & Fin Chr 166:715+ Ag 21 '47

SEC issues rules on accountants opinion on summary earnings statements. J Account 84:167-9 Ag '47

SEC lifts curb on sale of state banned issues; revises Regulation A of Securities act of 1933. Comm & Fin Chr 165:3271 Je 19 '47

SEC reports its varied and complex activities. J. J. Caffrey. Comm & Fin Chr 165:1130+ F 27 '47

Suspension of accountant from practice before SEC. O. L. DuBois. J Account 83:269-71 Mr '47

Twelfth annual report; text of section entitled Activities of the Commission in accounting and auditing. J Account 83:348-53 Ap '47

Will he love us in May as he does in December? new chairman of SEC. J. Dutton. Comm & Fin Chr 164:3011+ D 12 '46

World bank files SEC registration statement; with text of SEC rules. Comm & Fin Chr 166:6+ Jl 3 '47

SECURITIES dealers, National association of. See National association of securities dealers

SECURITIES investment company of St Louis

Preferred stock offered. Comm & Fin Chr 166: 309 Jl 21 '47

SECURITY traders association, National. See National security traders association

SECURITY traders association of New York

Annual dinner, April 25; portraits. Comm & Fin Chr 165:2357-60 My 1 '47

Annual dinner and election meeting; portraits. Comm & Fin Chr 164:insert A-D D 19 '46

SEDIMENTATION

Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15:341-8 Je '47

Disposal of petroleum refinery wastes; basic natural law should apply in sedimentation methods. W. B. Hart. bibliog diags Pet Processing 2:193-4+, 282+ Mr-Ap '47

New optical method for observing sedimentation equilibrium. G. Kegeles. bibliog diags Am Chem Soc J 69:1302-5 Je '47

Sedimentation constants of purified preparations of strains of influenza virus. W. M. Stanley and M. A. Lauffer. il J Phys & Colloid Chem 51:148-56 Ja '47

Ultracentrifugal and electrophoretic studies on fetuin. K. O. Pedersen. bibliog J Phys & Colloid Chem 51:164-71 Ja '47

Ultracentrifugal and viscometric studies of amylose acetates; further evidence for the helical structure of amylose. B. A. Dombrow and C. O. Beckmann. bibliog J Phys & Colloid Chem 51:107-17 Ja '47

SEDIMENTATION and deposition

Analysis of sedimentation and diagenesis. W. C. Krumbein. Am Assn Pet Geologists Bul 31:168-74 Ja '47

Cenozoic deposits of Central Gulf Coastal plain. G. E. Murray. bibliog maps diags Am Assn Pet Geologists Bul 31:1825-50 O '47

Coarse sediments on the edge of the continental shelf. R. W. Fairbridge. bibliog diag Am J Sci 245:146-53 Mr '47

Fundamental research in sedimentology. S. W. Lowman. Am Assn Pet Geologists Bul 31:501-12 Mr '47

Geomorphology of depositional surfaces. W. A. Price. maps Am Assn Pet Geologists Bul 31:1784-800 O '47

Marine sedimentary cycles of tertiary in Mississippi embayment and central Gulf Coast area. M. Bornhauser. bibliog maps Am Assn Pet Geologists Bul 31:698-712 Ap '47

Sedimentation in Permian Castile sea. R. H. King. bibliog Am Assn Pet Geologists Bul 31:470-7 Mr '47

See also
Rocks
Silt

SEDIMENTS

Multiple banding of sediments deposited during a single season. A. E. Wood. Am J Sci 245:304-12 My '47

Progress of studies relating to microbiology of sediments. C. E. ZoBell. Am Assn Pet Geologists Bul 31:180-1 Ja '47

SEDOHEPTITOL

L-Gulo-D-*talo*-heptitol (β-sedoheptitol) and its enantiomorph. A. T. Merrill and others. bibliog Am Chem Soc J 69:70-3 Ja '47

SEED disinfection

Hazards in the use of mercury compounds in treating seeds. H. F. Schulte. Ind Med 16:443-4 S '47

SEEDS

Relative sensitivity of dormant and germinating seeds to 2,4-D. J. W. Mitchell and J. W. Brown. bibliog Science 106:266-7 S 19 '47

Advertising

Advertiser celebrates 100th anniversary; Peter Henderson & co., New York. il Ptr Ink 218:86+ F 7 '47

New high; Associated Seed Growers ad. Aesop Glim. Ptr Ink 218:44 Ja 17 '47

Storage

Inhibition of heating and lipolysis in seeds. M. Z. Condon and others. bibliog Science 105:525-7 My 16 '47

SEEDS—*Continued*

Testing

Triphenyltetrazolium chloride as a dye for vital tissues. A. M. Mattson and others. bibliog Science 106:294-5 S 26 '47

SEEPAGE

Landslide investigation and correction; seepage forces in an earth dam. D. P. Barnes. diags Am Soc C E Proc 72:1387-90 D '46

Relief wells for dams and levees. T. A. Middlebrooks and W. H. Jervis. diags Am Soc C E Proc 72:781-98 Je '46; Discussion. 72:1165-72, 1407-10; 73:59-78, 231-5, 735-55, 907-14 O, D '46-F, My-Je '47

SEISMOGRAPHS

Electronic seismograph. R. L. Arringdale. diags Electronics 20:150+ Ap '47

Modern electrical equipment to speed soils investigation; New York state to aid subsurface investigations with seismograph and resistivity apparatus. Roads & Sts 90: 76 Ja '47

SELACHYL alcohol

South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions of natural fats. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 65:425-8 D '46

SELECTIVE selling. See Sales policies—Selective selling

SELENIUM

Functions of minor constituents in commercial selenium ruby batch. R. R. Shively, jr. and W. A. Weyl. bibliog Am Cer Soc J 30:311-14 O 1 '47

Improved infra-red polarizer. A. H. Pfund. bibliog diag Opt Soc Am J 37:558-9 Jl '47

Patent on a selenium-containing glass; silicon addition was assigned to Battelle memorial institute by A. E. Pavlish and C. R. Austin. Glass Ind 28:82 F '47

Selenium-ruby and other glasses colored by selenium. A. E. Pavlish and C. R. Austin. Am Cer Soc J 30:1-11 Ja 1 '47; Abstract. Glass Ind 28:187+ Ap '47

Analysis

Routine method for determining selenium in horticultural materials. J. S. McNulty. bibliog diags Anal Chem 19:809-10 O '47

Test for selenium based on a catalytic effect. F. Feigl and P. W. West. Anal Chem 19: 351-3 My '47

Isotopes

Evidence for, and cross section of 115 day Se^{75}. H. N. Friedlander and others. il Phys R 72:23-5 Jl 1 '47

SELENIUM cells

A.c.-d.c. audio amplifier, using the new selenium rectifiers. G. Eannarino. il diags Radio N 37:40-1 F '47

Rectifiers; selenium and copper-oxide. W. H. Falls. il diags Gen Elec R 50:34-8 F '47

Selenium rectifiers; improved characteristics broaden field of application to machines. J. Lobenstein. il diags Machine Design 19: 112-14 Mr '47

SELENIUM compounds

Electric moments of some aromatic selenium compounds. M. T. Rogers and T. W. Campbell. Am Chem Soc J 69:2039-41 Ag '47

Improved synthesis of the selenium analogs of methionine and homocystine. H. J. Klosterman and E. P. Painter. Am Chem Soc J 69:2009-10 Ag '47

New syntheses of the selenium analogs of *dl*-cystine and cysteine derivatives. E. P. Painter. bibliog Am Chem Soc J 69:229-32 F '47

Preparation, properties, and chlorination products of carbon diselenide. D. J. G. Ives, R. W. Pittman and W. Wardlaw. diag Chem Soc J p 1080-3 Ag '47

Selenenyl sulfur compounds. O. Foss. Am Chem Soc J 69:2236-7 S '47

Synthesis of selenium analogs of *dl*-methionine and *dl*-homocystine. E. P. Painter. bibliog Am Chem Soc J 69:232-4 F '47

SELENIUM dioxide. See Selenium oxides

SELENIUM fluoride

Alkyl- and aryl-substituted fluorides of sulphur, selenium, tellurium, and iodine. H. J. Emeléus and H. G. Heal. Chem Soc J p 1126-31 D '46

SELENIUM oxides

Configuration of organic selenoxides; mixed crystals of selenoxides with sulfoxides. H. Rheinboldt and E. Giesbrecht. bibliog Am Chem Soc J 68:2671-3 D '46

Contribution to the study of electronic spectra of bent triatomic molecules. J. Duchesne and B. Rosen. bibliog J Chem Phys 15:631-44 S '47

1-Methyl-4-carbostyrilcarboxaldehyde and certain condensation products. D. J. Cook and M. Stamper. bibliog Am Chem Soc J 69:1467-8 Je '47

Mixed crystals of sulfoxides, sulfones, selenoxides and selenones. H. Rheinboldt and E. Giesbrecht. Am Chem Soc J 69:644-6 Mr '47

Oxidations and dehydrogenations with selenium dioxide. G. M. Badger. Chem Soc J p764-6 Je '47

SELENIUM poisoning

Selenium fume exposure. M. Clinton, jr. bibliog J Ind Hygiene 29:225-6 Jl '47

SELENONES

Mixed crystals of sulfoxides, sulfones, selenoxides and selenones. H. Rheinboldt and E. Giesbrecht. Am Chem Soc J 69:644-6 Mr '47

SELENOXIDES. See Selenium oxides

SELF inductance. See Inductance

SELF service

Automatic store; will it change your package; Grand union co. Food-O-Mat. il Mod Packaging 20:134-6 D '46

Carded merchandise. il Mod Packaging 20:93-8 Je '47

Cards act as salesmen in self-service outlets. C. J. Swan. il Ptr Ink 218:39-41 Ja 10 '47

Colorful hams; Millar launches red cellophane wrap with campaign aimed at self-service merchandising. il Mod Packaging 20:112-14 Jl '47

Gravity grocer; Food-O-Mat. il Bsns W p66-7 Je 21 '47

Impulse buying re-surveyed. H. D. Chickering. il Mod Packaging 20:126-9+ Ja '47

Meat prepackaging soars; self-service grocery stores break bottleneck at meat counters. il Bsns W p62-6 O 25 '47

New dispensing unit for packaged foods; Grand Union's Food-O-Mat. il Food Ind 18:1861-2 D '46

Self-service meats. il Mod Packaging 20:95-100+ Jl '47

Ten selling musts in modern food merchandising; prepackaging, preparing, precooking, precleaning, preselling by the manufacturer to stimulate self-service and impulse purchasing. F. L. McKibbin, jr. il Ptr Ink 220:31-3+ Ag 8 '47

Transition; effect of self service on package goods. il Mod Packaging 20:98-102 Ja '47

See also

Market stores

SELF service laundries. See Laundries, Self service

SELF service stores

Checking-counter bottleneck. plans Dom Comm 35:78-80 Ja '47

SELSYN apparatus

Crankshaft positioning alleviates compressor vibration. G. Spillane. diag Elec World 127: 55-6 Mr 1 '47

Electronic positioning systems of high accuracy for industrial use. D. E. Garr. il diags Gen Elec R 50:17-24 Jl '47

Modern synchros; application to remote control, remote indication and automatic computation. J. L. Everett. il diags Machine Design 19:135-40 Ap '47

New Selsyn interlock selection system; for synchronizing of sound, camera, and projection motor operation. D. J. Bloomberg and W. O. Watson. il diags Soc Motion Picture Eng J 47:469-73 D '46

SEMICARBAZONES
Reactions of semicarbazones. R. A. Turner. bibliog Am Chem Soc J 69:875-7 Ap '47.
Synthesis of condensed ring compounds; dimethylsteradienones. A. M. Gaddis and L. W. Butz. Am Chem Soc J 69:1203-4 My '47

SEMI-CONDUCTORS. See Electric conductors —Semi-conductors

SEMIMICROANALYSIS. See Microanalysis

SEMINOLE oil and gas corportion
Preferred stock offered. Comm & Fin Chr 166:1395 O 6 '47

SEMIQUINONES. See Quinones

SENATORS
Voters favor placing limit on terms for presidents and senators; Gallup poll. Iron Age 159:123+ Mr 6 '47

SENDZIMIR mill
Miniature mill rolls tissue-thin metal at Westinghouse research laboratories. Blast F & Steel Pl 35:80 Ap '47
Small precision cold strip mill. il Iron Age 159:49-50 Ja 16 '47
Washington Steel starts Sendzimir mill. il Iron Age 159:63-4 Ap 24 '47

SENIORITY. See Employees—Length of service

SENIORITY rights of veterans. See Veterans —Reemployment

SENNETT, Richard, 1847-1891
Richard Sennett, F.R.S.N.A. E. C. Smith. por Engineering 164:400-1 O 24 '47

SENSES and sensation
See also
Color sense
Hearing
Sight
Taste

SENSITOMETRY. See Photography—Sensitometry

SEPARATION
Commercial separation of isotopes. F. Rumford. bibliog diags Chem Age (Lond) 57: 231-4+ Ag 16 '47
Continuous separation of fatty acids; Emersol process; flow sheet. il Chem Eng 53: 168-71 N '46
Hypersorption process; Union oil company of California. flow diag Pet Refiner (Process Handbook sec) 26:182-3 Ap '47
Multistage separation processes. M. Benedict. bibliog diags Chem Eng Prog 43:41-60 F '47
Separation plant reclaims oil from Athabaska sands. W. E. Adkins. flow diag il Oil & Gas J 45:187+ Mr 22 '47
See also
Adsorption
Crystallization
Distillation
Dust removal
Electric precipitation
Filters and filtration
Flotation process
Hydrocarbons—Separation processes
Ore treatment
Sedimentation
Sink and float process

SEPARATORS
Automatic separator for immiscible liquids avoids possibility of siphoning. G. V. O'Connor. diag Chem Eng 54:139 F '47
Liquid separator for use under vacuum. H. J. Wing. diags Anal Chem 19:216 Mr '47
Remove troublesome sulfides and water from unstabilized natural gasolines. il Pet Processing 2:97 F '47
Separators and tanks on secondary recovery projects. W. L. McCloy, jr. diags Am Pet Inst Proc 26(4):40-4 '46; Same cond. Oil & Gas J 45:281-2 N 16 '46
See also
Centrifuges
Classifiers
Concentrators
Cyclone spray towers
Dust collectors
Evaporators
Filters and filtration (technical chemistry)
Magnetic separators
Oil separators
Screens
Steam separators

SEPTIC tanks
Individual sewage disposal; small septic tanks for the housing program. diags Pub Works 78:28-30 Ag '47

SEQUENTIAL method of sampling. See Sampling (statistical methods)

SEQUOIA. See Redwood

SERMONS
See also
Preaching

SERPENTINE
Epigenesis of the minerals and rocks of the serpentine belt, Eastern Townships, Quebec. C. Faessler and M. S. Badollet. bibliog Can Min J 68:157-67 Mr '47

SERUM
Adenosinetriphosphatase activity of human serum. A. Meister. bibliog Science 106:167-8 Ag 22 '47
Albumin fraction isolated from human plasma as a crystalline mercuric salt. W. L. Hughes, jr. Am Chem Soc J 69:1836-7 Jl '47
Experimental production of anti-Rh sera by the use of human erythrocyte stromata. F. W. Gallagher and G. P. Pillischer. bibliog Science 105:344-5 Mr 28 '47
Mandelate as a stabilizer of serum albumin. J. M. Luck. bibliog J Phys & Colloid Chem 51:229-39 Ja '47
Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:388-400 F '47
Preparation and properties of serum and plasma proteins; crystallization of serum albumins from ethanol-water mixtures. E. J. Cohn, W. L. Hughes, jr. and J. H. Weare. bibliog pl Am Chem Soc J 69:1753-61 Jl '47
Preparation and properties of serum and plasma proteins; human fibrin in the form of an elastic film. J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69:400-9 F '47
Preparation and properties of serum and plasma proteins; modification of the physical and chemical properties of fibrin film by heat treatment. J. D. Ferry and others. bibliog Am Chem Soc J 69:409-16 F '47
Preparation and properties of serum and plasma proteins; osmotic equilibria in concentrated solutions of serum albumin. G. Scatchard and others. Am Chem Soc J 68: 2610-12 D '46
Preparation and properties of serum and plasma proteins; osmotic equilibria in solutions of serum albumin and sodium chloride. G. Scatchard, A. C. Batchelder and A. Brown. bibliog diags Am Chem Soc J 68:2320-9 N '46
Preparation and properties of serum and plasma proteins; quantitative interpretation of electrophoretic Schlieren diagrams of normal human plasma proteins. S. H. Armstrong, jr., M. J. E. Budka and K. C. Morrison. bibliog Am Chem Soc J 69:416-29 F '47
Preparation and properties of serum and plasma proteins; the refractive properties of the proteins of human plasma and certain purified fractions. S. H. Armstrong, jr. and others. bibliog Am Chem Soc J 69:1747-53 Jl '47
See also
Antigens and antibodies
Fetuin

SERUM diagnosis
Sharp interfacial precipitin reactions in capillary pipettes. H. F. Swift. Science 105: 49-50 Ja 10 '47
See also
Agglutination
Complement fixation

SERUMTHERAPY
See also
Antigens and antibodies
Toxins and antitoxins

SERVANTS
Compensation coverage for domestic workers; report to Compensation insurance rating board. H. D. Sayer. Weekly Underw 156: 346 F 1 '47
Household help liability law in New York sells coverage. Nat Underw 51:14 F 27 '47
To write compensation for domestic workers in New York. H. D. Sayer. East Underw 47:39 N 15 '46; Same abr. Weekly Underw 155:1189 N 16 '46

SERVICE (in industry)
Doing it the American way; U.S. technical knowledge goes abroad with U.S.-built machines and equipment. il Bsns W p89-90+ Je 28 '47
Factory rebuilding can be good-will building. D. Ross. Ptr Ink 220:76 Jl 25 '47
Nash keep 'em sold plan. R. G. French. il Am Bsns 16:12-13+ N '46
Sunkist man: adviser, idea man and diplomat. il Sales Management 58:109-10 F 1 '47

See also
Banks and banking—Service
Dealer helps
Oil fuel industry—Service
Electric apparatus industry—Service
Gas companies—Service

SERVICE industries

See also
Banks and banking
Beauty shops
Cleaning industries
Gasoline service stations
Hotels
Laundries
Railroads
Telegraph
Telephone
Trust companies

Advertising

I learned that single-theme copy sells personal service. M. Hessman. Ptr Ink 218:60+ F 14 '47

SERVICE men, Discharged. See Veterans

SERVICE stations. See Airplane service stations; Automobile service stations; Gasoline service stations; Motor truck service stations

SERVOMECHANISMS
Actuator employs friction drive; aircraft controlled by the C-2 automatic pilot. N. Eklund. diags Machine Design 19:160 Ap '47
Analysis and design of servomechanisms. H. Harris, jr. bibliog diags A S M E Trans 69:267-79; Discussion. 280 Ap '47
Application of circuit theory to the design of servomechanisms. A. C. Hall. diags Franklin Inst J 242:279-307 O '46
Automatic frequency control of microwave oscillators. V. C. Rideout. diags Inst Radio Eng Proc 35:767-71 Ag '47
Automatic recording infra-red spectrophotometer. W. S. Baird and others. il diags Opt Soc Am J 37:754-61 O '47
Automatic regulators and servo mechanisms; symposium. Engineering 163:494, 542-3 Je 13, 27 '47
Designing hydraulic servos by combining basic cataloged elements. H. Ziebolz. il diags Machine Design 19:123-6 Jl '47
Designing pneumatic and electric servos. H. Ziebolz. il diags Machine Design 19:132-8 S '47
Hydraulic variable-speed transmissions as servomotors. G. C. Newton, jr. bibliog il diags Franklin Inst J 243:439-69 Je '47
Impedance bridge for flow-rate metering. F. J. Curran. il diags Electronics 20:106-8 Ap '47
I.E.E. servo convention. Electrician 138:1373-6 My 23 '47
Instrument to measure servomechanism performance. H. I. Tarpley. bibliog il diags R Sci Instr 18:39-43 Ja '47
Linear servo theory. R. E. Graham. diags Bell System Tech J 25:616-51 O '46
Lockheed brakes; hydraulic servo accumulator system. diags Automobile Eng 37: 339-42 S '47
Machine hydraulics; sensitive servos and tracers. A. H. Dall. il diags Machine Design 18:119-23 D '46
New Lear friction drive; electrical power package used in C-2 autopilot. diag Aero Digest 53:170 N '46
New simplicity in servos improves automatic control. J. Andresen. il diags Aviation 46: 70-1 Je '47
Proceedings at the convention on automatic regulators and servo mechanisms. Inst E E J 94 pt 1:299-302 Jl '47
Remote control and automatic focusing of lenses. H. C. Silent. diags Soc Motion Picture Eng J 49:130-8; Discussion. 138-9 Ag '47
Robot for register; mechanical brain holds high-speed multicolor printing within 0.001-in. limits. J. W. Ludwig. diags Mod Packaging 20:150-2 Je '47
Servo-mechanism for control of power factor. G. C. Barnes, jr. diags (Eng. exp. sta. ser. 63) 30p pa 25c Virginia polytechnic institute, Blacksburg, Va. '46
Stabilizing servomechanisms for optimum overall performance. S. W. Herwald. bibliog il diags Product Eng 18:132-7 Je '47
Vertical position indicator. diag Electronics 20:190+ N '47

SETTINGS for gems. See Jewelry

SETTLING basins
Baffled basins improve sedimentation; Baltimore's Montebello filtration plant. E. S. Hopkins. il diags Eng N 138:514-15 Ap 3 '47
Water settling and emulsion breaking system; Oleum refinery, Union oil company of California. il Pet Refiner 26:114-15 Ag '47
Yuma and the Colorado river. C. G. Ekstrom. il Am Water Works Assn J 39:245-52 Mr '47

SETTLING tanks
Density currents in final settling tanks; studies at activated sludge plant. S. R. Kin. diags Water & Sewage Works 93:441-5 N '46
Rebuilding a water settling basin for a company processing corn. H. B. McDermid. diag Power Pl Eng 51:90-1 Je '47
Separators and tanks on secondary recovery projects. W. L. McCloy, jr. diags Am Pet Inst Proc 26(4):40-4 '46; Same cond. Oil & Gas J 45:281-2 N 16 '46
Triple sedimentation employed to condition culm laden water at Norristown, Pa. S. I. Zack. il plans Eng N 139:115-17 Jl 24 '47

See also
Sewage tanks

SEWAGE

See also
Sewage flow
Sewage sludge
Trade waste

Analysis

Determination of B.O.D. values by chemical oxidation. G. A. Rhame. Water & Sewage Works 94:192-4 My '47

Bacteriology

Up-sewer Cloroben treatment of Los Angeles sewage. R. F. Brown. il Water & Sewage Works 94:181-6 My '47

Gas recovery

See Sewage sludge—Gas production

Testing

Oxidation-reduction potential in sewage treatment control; abstract and discussion. J. W. Hood and G. A. Rohlich. Water & Sewage Works 94:375-6 O '47
Symposium on biochemical oxygen demand. Water & Sewage Works 94:388-9 O '47

See also
Sewage sampling

SEWAGE, Utilization of
Sewage effluents for industrial use; abstracts. N. T. Veatch. Eng N 139:147 Jl 31 '47; Water & Sewage Works 94:322 S '47
Use of reclaimed sewage effluents in Baltimore; abstract. A. Wolman. Water & Sewage Works 94:323 S '47

See also
Sewage irrigation
Sewage sludge—Gas production
Sewage sludge as fertilizer

SEWAGE disposal
Arizona sewage and water works meeting, Douglas, April 11-12. Water & Sewage Works 94:166-7 My '47
Biggest polio program. il Dom Eng 169:104-7 Je '47
British developments in sewage purification practice. J. Hurley. il Water & Sewage 84: 52+ O '46
Characteristics and methods for treatment of de-inking wastes. W. W. Hodge and P. F. Morgan. Water & Sewage 84:46-8+ O '46
Developments of 1946 in sewage and industrial waste treatment. F. S. Friel. flow diag il diag Water & Sewage Works 94: 43-54 F '47

SEWAGE disposal—*Continued*
Effect of variable flow on sedimentation of sewage. diags Pub Works 77:21-2 D '46
Effects of industrial wastes; abstract. R. Hazen. Water & Sewage Works 94:285-6 Ag '47
Fertilization of lakes by agricultural and urban drainage. C. N. Sawyer. bibliog pl N E Water Works Assn J 61:109-27 Je '47
How Miami Beach meets its special sewerage problems. D. Frank. il Pub Works 77:26-7 N '46
Industrial wastes; pharmaceutical and biological plants. E. L. Knoedler and S. H. Babcock, jr. il Ind & Eng Chem 39:578-82 My '47
Lack of evidence sewage disposal from cars menaces health. K. F. Maxcy. Ry Age 122: 1305 Je 28 '47
Maryland-Delaware water and sewerage association 20th annual meeting, Washington, May 15-16. Water & Sewage Works 94:223-6 Je '47
Milk losses and milk waste disposal. P. S. Davy and M. J. Noth. flow diag il plan Pub Works 78:22-3+ Jl '47
Mine sewage-disposal study. R. T. Artz. bibliog 2pls U S Bur Mines Information Circ 7392:1-8 '46
New Jersey sewage works association 32d meeting, Trenton, March 19-21. Water & Sewage Works 94:149-54 Ap '47
N.Y. and N.E. sewage works associations' joint spring meeting. Water & Sewage Works 94:279-86 Ag '47
New York-New England sewage works associations meeting, Albany, May 26-27. Eng N 138:913 Je 5 '47
Operating data for Winnipeg sewage-treatment works. il Water & Sewage 84:21-3+ D '46
Operators' forum; convention of Canadian institute on sewage and sanitation. Water & Sewage 84:105-6+ O; 28+ N '46
Pennsylvania sewage works association changes name to Pennsylvania sewage and industrial waste association at 21st annual meeting, State College. Water & Sewage Works 94:371-8 O '47
Problems of overloaded sewage plant considered at sanitary group meeting; Maryland-Delaware water and sewerage association. Eng N 138:857 My 22 '47
Sanitation needs, how much and where; information from inventory by U.S. Public health service. Eng N 139:42-3, 340 Jl 10, S 4 '47
School tests sewerage for Florida towns. D. L. Emerson, jr. il Eng N 139:292-3 Ag 28 '47
Scum problem from the operators' standpoint. J. Doman. il Water & Sewage Works 93: 451-3 N '46
Sewage treatment in New York city. R. H. Gould. Boston Soc C E J 34:18-22 Ja '47
Sewer systems of Canadian municipalities. il Water & Sewage 85:18+ Ag '47
Solving sewage treatment problems at Ridgewood. il Pub Works 78:25-6 Je '47
Texas sewerage practices. Pub Works 78:19-20 My '47
Textile industry; textile wastes combined with municipal sewage. J. C. Geyer. diags Ind & Eng Chem 39:653-6 My '47

See also
Imhoff tanks
Septic tanks
Sewage incinerators
Sewage sludge
Sewage tanks
Sewerage
Trade waste
Water pollution

Activated sludge method

Activated sludge sewage treatment plant for city of Oshawa. F. Williams. flow diags il diags Water & Sewage 84:13-17+ D '46
Advances in sewage treatment and present status of the art; third progress report of the Committee of sanitary engineering division, 1944 and 1945. Am Soc C E Proc 72:810-20 Je '46; Same cond. il Water & Sewage 84:26+ D '46
Biggest sewage works in the West; Los Angeles sewage disposal program. il plan diag Eng N 138:874-7 My 29 '47
Density currents in final settling tanks; studies at activated sludge plant. S. R. Kin. diags Water & Sewage Works 93:441-5 N '46
Gary completes cycle on the Grand Calumet; a review of five years of operating results and accomplishments. W. W. Mathews. bibliog il Water & Sewage Works 93:455-60 D '46
Investigations disclose successful disposal methods for synthetic rubber waste. C. C. Ruchhoft and others. Civil Eng 17:59-60 F '47
Maintenance and operation of a small activated sludge plant; abstract. L. Hillis. Water & Sewage Works 94:263-4 Jl '47
Modified activated-sludge plant replaces Imhoff tank installation in Philadelphia. E. R. Schofield. il diags Eng N 139:192-5 Ag 7 '47
Operation of activated sludge plants. G. P. Edwards. flow sheet il Water & Sewage Works 94:R191-5 Jl '47
Studies of sewage purification; the utilization of organic substrates by activated sludge. A. R. Placak and C. C. Ruchhoft. bibliog Pub Health Rep 62:697-716 My 16 '47

Aeration

Foam phase and conventional biological oxidation of waste sulfite liquor; abstract. R. P. Logan and H. Heukelekian. Water & Sewage Works 94:57-8 F '47

Chemical treatment

Experiments on precipitation of trade-waste sewage; use of chlorinated copperas. C. Lumb and others. Water & Sewage 85:28-9+ Jl '47

Chlorination

Chlorination of sewage; abstract and discussion. N. S. Chamberlin. Water & Sewage Works 94:373-4 O '47
Cloroben sewage treatment preferred to chlorine. Chem Eng 53:204+ N '46
Up-sewer Cloroben treatment of Los Angeles sewage. R. F. Brown. il Water & Sewage Works 94:181-6 My '47

Coagulation

Economic flocculation of sewage colloids. J. Finch and L. S. Wright. plan Pub Works 78:13-14 My '47
Effect of reducing agents on ferric coagulation of digested sludge. G. C. Laidlaw. il Water & Sewage 85:16-17+ Ja '47

Filtration

Backwashing for a trickling filter installation to treat packing house waste. il Pub Works 78:21 Ag '47
Biofiltration experiences at Columbia (S.C.) army air base. J. M. Brown. flow diag il Water & Sewage Works 94:301-3 Ag '47
Dual clarifier and filter structures simplify high-rate treatment process. A. J. Fischer. flow sheet il Eng N 139:64-6 Jl 10 '47
High rate filter performance; abstract and discussion. F. W. Mohlman. Water & Sewage Works 94:372-3 O '47
Nomograph for determination of sludge filtration data. C. M. Gard. Water & Sewage Works 93:446-7 N '46
Operating results at the Liberty biofilter plant, Liberty, N.Y. Pub Works 78:34+ Ja '47
Sand filtration of some organic wastes. W. Rudolfs and V. Del Guercio. Water & Sewage Works 94:349-51 S '47
Sewage treatment to destroy infantile paralysis virus and remove eggs of intestinal parasites; South Africa studies sand filtration. Pub Works 78:25 F '47
Treatment of strong wastes. A. W. Banister and R. J. Ellison. Pub Works 78:26-7+ S '47
Trickling filters. R. S. Rankin and others. bibliog il plans diags Pub Works 78:32-8 F; 30-2+ Mr; 37-8+ Ap; 30-2+ My; 29-34 Je; 31-2 Jl; 39-43 Ag '47
Trickling filters, an evaluation. D. E. Dreier. Water & Sewage Works 94:33-6 Ja '47
Ultimate solids in sludges and their filter cakes. A. L. Genter. il diags Water & Sewage 85:19-22+ F '47

Gas recovery

See Sewage sludge—Gas production

SEWAGE disposal—*Continued*

Grease and oil removal

Grit and grease chamber reduces sewer cleaning and pollution problems; sewage from Salem and Peabody, Mass. carries wastes from leather-making industries, high in grease and silt content. F. L. Flood. il plans diags Eng N 139:391-3 S 18 '47

Grit chambers

Design of control flumes for grit chambers. W. E. Howland. Water & Sewage Works 94:R182-3 Jl '47

Grit and grease chamber reduces sewer cleaning and pollution problems; sewage from Salem and Peabody, Mass. carries wastes from leather-making industries, high in grease and silt content. F. L. Flood. il plans diags Eng N 139:391-3 S 18 '47

Odor removal

Investigations disclose successful disposal methods for synthetic rubber waste. C. C. Ruchhoft and others. Civil Eng 17:59-60 F '47

Patents

Water and sewage patents (cont). Water & Sewage Works 93:450; 94:26, 148, 218, 304, 432 N '46, Ja, Ap, Je, Ag, N '47

Sludge and refuse mixing

Operating and experimental observations on digestion of garbage with sewage solids. D. P. Backmeyer. il diags Water & Sewage Works 94:R217-21 Jl '47

SEWAGE disposal, Rural

See also
Septic tanks

SEWAGE disposal plants

Elkhart planning adequate sewage works. E. C. Brady. Water & Sewage Works 94:196 My '47

Greenfield, Mass. sewage works. F. L. Flood; E. L. Bond. il plans Water & Sewage Works 94:197-202 Je '47

Inventory and stock control for city and county public works departments. W. F. Freeborn and A. A. Kirkbright. il Pub Works 77:31-2 D '46; 78:23+ Mr '47

Inventory of sewage disposal facilities; data from official records of state sanitary engineers. pl Eng N 137:654-5 N 14 '46

Major projects; brief reports on status of construction operations. il Eng N 138:314-15 F 20 '47

San Francisco sewage disposal; abstract. C. C. Kennedy. Eng N 139:252 Ag 21 '47

Sewage treatment in Canada. il Water & Sewage 85:20+ Ag '47

Sewage works at Portland; abstract. J. C. Stevens and H. Loren. Eng N 139:251-2 Ag 21 '47

Springdale's new sewage treatment plant. W. Wilson. il Water & Sewage Works 94:214 Je '47

Stream pollution abatement program proposes single plant for 100 municipalities; Allegheny County sanitary authority. J. F. Laboon. map Civil Eng 17:121+ Mr '47

See also
Sewage incinerators

Costs

Experience with sewage-sludge incineration. G. J. Schroepfer. il diag Water & Sewage 84:58-9+ O '46

Lamberts Point sewage treatment plant, Virginia; unit prices. Eng N 139:281 Ag 21 '47

Water and sewage works needs of the United States; with cost tables. Water & Sewage Works 94:294-7 Ag '47; Same, without tables. il Civil Eng 17:479-80+ Ag '47

Water and sewage works projects; federal loans made between Oct. 15, 1946 and March 17, 1947 for construction plans; cost estimates; tabulation. Water & Sewage Works 94:135-6 Ap '47

Water and sewage works projects; federal loans made between March 17 and July 1 for construction plans; cost estimates; tabulation. Water & Sewage Works 94:299-300 Ag '47

Electric equipment

Protection of motors and controls against moisture. H. V. Crawford. il Water & Sewage Works 94:R215 Jl '47

Employees

Operators' salaries; abstract. T. R. Camp. Water & Sewage Works 94:286 Ag '47

Equipment

Activated sludge sewage treatment plant for city of Oshawa. F. Williams. flow diags il diags Water & Sewage 84:13-17+ D '46

Biggest sewage works in the West; Los Angeles sewage disposal program. il plan diag Eng N 138:874-7 My 29 '47

Classified index of products used in waterworks and sewerage field. Water & Sewage Works 94:R2-12 Jl '47

Dual clarifier and filter structures simplify high-rate treatment process. A. J. Fischer. flow sheet il Eng N 139:64-6 Jl 10 '47

English experimental sewage treatment installation. diag Pub Works 78:21 Ap '47

Exhibits by manufacturers. il Water & Sewage 84:65-8+ O '46

Flow metering and controlling. C. G. Richardson. il diags Water & Sewage 85:32-6+ Ap '47

Imbedded coils heat sludge digesters; sewage plant for Puyallup, Wash. diags Eng N 139: 53-5 Jl 10 '47

Inexpensive hypo-chlorinator; adaptable also to feeding other chemicals. J. R. Snell. diags Water & Sewage Works 94:R246 Jl '47

Manufacturers and agents of sewerage and waterworks equipment; addresses; products index. Water & Sewage 85:144+ Ag '47

Many special features in Oshawa's new sewage-treatment plant. il Water & Sewage 84:13+ N '46

Maple Lodge sewage-disposal works, Rickmansworth. il diag Engineering 164:403 O 24 '47

Modified activated-sludge plant replaces Imhoff tank installation in Philadelphia. E. R. Schofield. il diags Eng N 139:192-5 Ag 7 '47

Operating data for Winnipeg sewage treatment works. il Water & Sewage 84:21-3+ D '46

Operating data from the Minneapolis-St Paul sanitary district. il Pub Works 78:38 Mr '47

Progress in automatic control. W. S. Mills. il diags Water & Sewage 85:21-6+ Jl '47

Pumping can be simplified for small sewage disposal plants. W. J. Wenzel. diag Eng N 139:341-2 S 4 '47

Reducing cost of sludge removal; experiences with saddle-bag tractor. W. A. Sperry. il Water & Sewage Works 94:R227-8 Jl '47

Scum accumulation responsible for ruptured digester. J. G. Albertson. il Water & Sewage Works 94:155 Ap '47

Sewage plant sells sludge and effluent for irrigation purposes and fertilizer. L. W. Jackson. il Eng N 139:56-8 Jl 10 '47

Sewage treatment in Toronto. W. Storrie. plans diags Water & Sewage 84:49-51+ O '46

Ten years' operation of the Greater Winnipeg sewage-treatment plant. W. M. Scott and J. A. MacGillivray. flow diag il plan Water & Sewage 85:60-3+ O '47

See also
Sewage tanks

Power

Diesel and gas engine equipment. A. M. Boehm. il Water & Sewage Works 94:381-3 O '47

Dual-fuel engines for sewage-treatment plants. A. M. Boehm. il Water & Sewage 84:22+ N '46

Father Knickerbocker looks ahead; fourteen dual-fuel engines scheduled for sewage plants. il map diag Diesel Power 24:1070-4, 1330-3+ S, N '46

Gas engine maintenance and operation; with cost data. L. S. Kraus. il Water & Sewage Works 94:81-8 Mr '47

Sludge gas utilization; experience at New York city's sewage-treatment plants. R. H. Gould. il Water & Sewage 84:57+ O '46

SEWAGE disposal plants—*Continued*

Public relations

Public relations in water and sewage treatment plants. W. A. Sperry. il Water & Sewage Works 94:29-32 Ja '47

Records

Records, their value in water and sewage works. A. E. Clark. Water & Sewage Works 94:25-6 Ja '47

Sewage plant records and operating reports. L. S. Morgan. Water & Sewage Works 94: R247-8 Jl '47

Use of charts in the analysis of sewage operation. W. V. Barry. Water & Sewage Works 94:R249-51 Jl '47

Canada

Directory of sewage-treatment plants in Canada. Water & Sewage 85:130+ Ag '47

SEWAGE flow

Effect of variable flow on sedimentation of sewage. diags Pub Works 77:21-2 D '46

Loss of sanitary sewage through storm water overflows. J. E. McKee. bibliog Boston Soc C E J 34:55-80; Discussion. 81-92 Ap '47

SEWAGE incinerators

Experience with sewage-sludge incineration. G. J. Schroepfer. il diag Water & Sewage 84:58-9+ O '46; Abstract. Water & Sewage Works 93:437-8 N '46; Discussion (Operating an incinerator for sewage sludge). M. B. Owen. Water & Sewage 84:25+ N '46

SEWAGE irrigation

Sewage plant sells sludge and effluent for irrigation purposes and fertilizer. L. W. Jackson. il Eng N 139:56-8 Jl 10 '47

SEWAGE pumping

Pumping can be simplified for small sewage disposal plants. W. J. Wenzel. diag Eng N 139:341-2 S 4 '47

Remote indication by a Wheatstone bridge system; signaling system for sewage pumping system. I. M. E. Aitken. diags Inst E E J 94 pt 2:194-205 Je '47

SEWAGE sampling

Sampling at sewage plants. il Pub Works 77:19-20 N '46

SEWAGE sludge

Experience with sewage-sludge incineration. G. J. Schroepfer. il diag Water & Sewage 84:58-9+ O '46; Discussion (Operating an incinerator for sewage sludge). M. B. Owen. 84:25+ N '46

Four scum-control procedures for sewage digesters. H. E. Schlenz. diags Water & Sewage 84:20-1+ N '46; Same cond. Civil Eng 17:35-6 Ja '47

How scum breakers aid in sludge digestion. J. J. Gilbert. il plan diags Pub Works 78: 18-19+ Ja '47

How to control scum in digesters. F. L. Flood. diag Eng N 138:1008-9 Je 26 '47; Discussion. L. L. Sphar. 139:343 S 4 '47

Operation and control of sludge digestion facilities; discussion. Water & Sewage Works 94:261-2 Jl '47

Reducing cost of sludge removal; experiences with saddle-bag tractor. W. A. Sperry. il Water & Sewage Works 94: R227-8 Jl '47

Scum control in digesters. R. S. Rankin. diag Water & Sewage 84:56+ O '46; Abstract and discussion. Water & Sewage Works 93:436-7 N '46

Scum problem from the operators' standpoint. J. Doman. il Water & Sewage Works 93:451-3 N '46

Sludge depth indicator. J. H. Blodgett. diag Eng N 139:342 S 4 '47

Sludge digestion and scum disposal; abstract and discussion. R. S. Rankin. Water & Sewage Works 94:372 O '47

South African chemical plants developing new processes in soap production from sludge. Chem Eng 54:202, 204 F '47

Theory and operation of separate sludge digestion units. L. L. Langford. Water & Sewage Works 94:R213-14 Jl '47

Ultimate solids in sludges and their filter cakes. A. L. Genter. il diags Water & Sewage 85:19-22+ F '47

See also

Sewage disposal

Sewage disposal—Activated sludge method

Drying

Experiences in the thickening and drying of sludge; abstract. T. R. Komline. Water & Sewage Works 94:281-2 Ag '47

Heat treatment of sewage sludge; Porteous process. S. C. Evans and F. W. Roberts. flow diags Water & Sewage 85:25-6+ F; 23-4+ Mr '47

Sludge drying with Roto-Louvre dryers; abstract. M. Goldstein. Water & Sewage Works 94:281 Ag '47

Gas production

Sludge gas utilization; experience at New York City's sewage-treatment plants. R. H. Gould. il Water & Sewage 84:57+ O '46; Abstract. Water & Sewage Works 93:439-40 N '46

SEWAGE sludge as fertilizer

Advantages of sludge as fertilizer. A. Howard. Pub Works 78:26 Ap '47

Sewage disposal in Japan. J. J. Hinman, jr. Pub Works 78:34-5 Ag '47

Sewage plant sells sludge and effluent for irrigation purposes and fertilizer. L. W. Jackson. il Eng N 139:56-8 Jl 10 '47

SEWAGE tanks

Four scum-control procedures for sewage digesters. H. E. Schlenz. diags Water & Sewage 84:20-1+ N '46; Same cond. Civil Eng 17:35-6 Ja '47

How scum breakers aid in sludge digestion. J. J. Gilbert. il plan diags Pub Works 78: 18-19+ Ja '47

How to control scum in digesters. F. L. Flood. diag Eng N 138:1008-9 Je 26 '47; Discussion. L. L. Sphar. 139:343 S 4 '47

Modified activated-sludge plant replaces Imhoff tank installation in Philadelphia. E. R. Schofield. il diags Eng N 139:192-5 Ag 7 '47

Scum control in digesters. R. S. Rankin. diag Water & Sewage 84:56+ O '46

Sludge depth indicator. J. H. Blodgett. diag Eng N 139:342 S 4 '47

Theory and operation of separate sludge digestion units. L. L. Langford. Water & Sewage Works 94:R213-14 Jl '47

See also

Imhoff tanks

Septic tanks

Settling tanks

Heating

Evaluation of sludge-heating methods. H. J. Miles. il diag Water & Sewage 84:54-5+ O '46; Abstract. Water & Sewage Works 93:439 N '46; Discussion (Heat distribution in sludge-digestion tanks). W. Rudolfs. Water & Sewage 84:23 N '46

Graphic heat loss computation for sludge digesters. J. G. Montgomery. Water & Sewage Works 94:287-91 Ag '47

Heat treatment of sewage sludge; Porteous process. S. C. Evans and F. W. Roberts. flow diags Water & Sewage 85:25-6+ F; 23-4+ Mr '47

Imbedded coils heat sludge digesters; sewage plant for Puyallup, Wash. diags Eng N 139: 53-5 Jl 10 '47

Sludge heating with live steam. A. M. Rawn and others. Water & Sewage 84:24+ N '46

Tables for computing heat losses from digesters. H. B. Candee. diags Water & Sewage Works 94:292-3 Ag '47

SEWAGE works associations, Federation of. See Federation of sewage works associations

SEWARD, Ralph T.

Arbitrator Seward to the no. 1 spot. por Bsns W p68+ Ag 23 '47

SEWER cleaning

Copper sulphate clears tree roots from sewers. Consumers Res Bul 19:24 Je '47

Mechanical sewer cleaners simplify sewer maintenance; Los Angeles experiences. R. F. Brown. il Water & Sewage Works 94: 249-51 Jl '47

SEWER cleaning—*Continued*
Sewer scooter. M. W. Loving. il Water & Sewage Works 94:347-8 S '47

SEWER design
Chicago's sewer construction program. T. S. Ford and A. L. Tholin. plan diags Western Soc E J 51:161-75 D '46
Loss of sanitary sewage through storm water overflows. J. E. McKee. bibliog Boston Soc C E J 34:55-80; Discussion. 81-92 Ap '47
Sanitary sewers, how big should they be? A. B. Uzzle, jr. il plan Water & Sewage Works 94:40-1 Ja '47

SEWER pipes
Stabilization in sewer construction. M. W. Loving. il diags Water & Sewage Works 94:141-7 Ap '47

SEWER pipes, Concrete
Grading materials for making pipe. C. M. Howard. Concrete 55:24 O '47
Joining large concrete pipe with air gun. W. B. Lenhart. il Rock Prod 50:121+ Jl '47
$1.5 million sewer project utilizes precast concrete pipe manholes. il. Concrete 54:30-1 D '46
Three-million-dollar Tacoma sewer project employs machine-made joints. C. S. Seabrook. il Civil Eng 17:314-16 Je '47

SEWER pipes, Vitrified clay
Amounts of jute and asphaltic jointing compound in pounds per joint A.S.T.M. vitrified salt glazed sewer pipe; table. Brick & Clay Rec 110:27 Je '47
Amounts of jute and sulphur-silica compound in pounds per joint A.S.T.M. vitrified salt glazed sewer pipe; table. Brick & Clay Rec 110:29 My '47
Clay sewer pipe; production, shipments, stocks, 1939-1945; new series. Survey of Cur Bsns 26:23 D '46
Colombia sewer pipe plant has electrically controlled presses. il Brick & Clay Rec 111:40 S '47
Engineer discusses merits of ceramic glazed clay pipe. H. W. Jewell. il Brick & Clay Rec 110:59-60+ Mr '47

Manufacture

Lift trucks and crane handle all pipe sizes at Cannelton plant. il Brick & Clay Rec 110:52+ Ja '47

SEWERAGE
American water works association and the Federation of sewage works associations joint meeting, San Francisco, July 21-25. Eng N 139:147+, 251-4 Jl 31, Ag 21 '47
Concrete pipe manholes used in large sewer construction program. J. E. Konkle. diags Pub Works 77:31+ N '46
Constructing a big sewer by tunneling. il Eng N 139:408-10 S 18 '47
Disposal of petroleum refinery waste; improper control of storm run-off water. W. B. Hart. bibliog diags Pet Processing 1: 248-50+; 2:31-4 D '46-Ja '47
Faulted rock passed by grouting on Copenhagen sewer tunnel. K. Pilgaard. il plan diags Eng N 138:40-2 Ja 9 '47
Federation of sewage works associations and Canadian institute on sewage and sanitation, annual meetings, Toronto, Oct. 6-9. Water & Sewage 84:41-8+ O '46
How to inpect sewers and drains during construction. Pub Works 78:44 S '47
Is joint administration of water and sewage works desirable? L. G. McNeice; W. M. Veitch and others. Water & Sewage 85: 64-5+ O; 27-8+ N '47
Lost and found, or experiences of a sewer maintenance crew. A. B. Uzzle, jr. Pub Works 77:38 N '46
Michigan sewage association, 22d annual meeting, Jackson, May 14-16. Water & Sewage Works 94:259-66 Jl '47
Useful technic in ground water infiltration studies; infiltration into sewer system. C. A. McLoughlin. plan diag Water & Sewage Works 94:R169-70 Jl '47
Virginia organizes industrial waste and sewage works association. Water & Sewage Works 94:137-40 Ap '47
Water and sewage works reference and data section. bibliog il diags Water & Sewage Works 94:R1-276 Jl '47
Waterworks and sewerage construction; special section. flow sheet il maps diags Eng N 139:41-68 Jl 10 '47

See also
Plumbing
Sanitary districts
Sewage disposal
Sewage sludge
Sewer design
Sewer pipes
Sewers, Concrete
Trade waste
Water pollution
also subdivision Sewerage under names of cities, e.g. New York (city)—Sewerage; Toronto—Sewerage
also Federation of sewage works associations

Bibliography

Sewerage digest. Published in monthly numbers of Public works

Cost

Index to projects covered. Eng N 138:657+ Ap 17 '47
Intercepting sewer, Chicago, Illinois; unit prices. Eng N 137:749 N 28 '46
Interceptor sewer, Dallas, Texas; unit prices. Eng N 138:1032 Je 26 '47
Outfall sewer line extensions, Sacramento county, California; unit prices. Eng N 138: 469 Mr 20 '47
Relaying combined sewers, Milwaukee, Wisconsin; unit prices. Eng N 139:346 S 4 '47
Storm sewer improvements, Oklahoma City, Okla.; unit prices. Eng N 138:159 Ja 23 '47
Water and sewer extensions, Roanoke Rapids, N.C.; unit prices. Eng N 137:749 N 28 '46

Finance

Extensive program of water and sewage works for Ontario municipalities. A. E. Berry. il Water & Sewage 85:11-14+ Ja '47
Financial practices in administration of Canadian municipal sanitary works. Water & Sewage 85:4+ Ag '47
Financing sewage systems and sewage treatment facilities. F. S. Friel. Water & Sewage 84:60+ O '46; Discussion (Service rendered as a basis of sewer cost). F. M. Veatch. 84:44 N '46; Abstract. Water & Sewage Works 93:463-4 D '46
Joint administration and collection of water and sewer accounts; discussion. L. N. Thompson and others. bibliog Am Water Works Assn J 38:1347-55 D '46
Recent revenue bond legislation. L. N. Thompson. Am Water Works Assn J 39: 1032-7 O '47
Recent water and sewage works projects; federal loans made since July 1 for construction plans; tabulated by states. Water & Sewage Works 93:448-9 N '46
Sewer rental data; information received from 578 cities. Pub Works 78:19-20+ S '47
Sewer-rental method of financing sewage works. A. E. Berry. Water & Sewage 85: 69-70+ O '47
Sewerage service charges; abstract. S. R. Wright. Am Water Works Assn J 39:802-3 Ag '47
Special charges for industrial wastes in municipal sewage. Water & Sewage Works 94:37-8 Ja '47

Maintenance and repair

San Francisco examines sewer in place. R. G. Wadsworth. il Eng N 139:536-8 O 16 '47

Canada

Directory of sewage-treatment plants in Canada. Water & Sewage 85:130+ Ag '47
Financial practices in administration of Canadian municipal sanitary works. Water & Sewage 85:4+ Ag '47
Government officials in charge of Canadian public water supply and sewerage undertakings. Water & Sewage 85:26+ Ag '47
Sewage treatment in Canada. il Water & Sewage 85:20+ Ag '47
Sewer systems of Canadian municipalities. il Water & Sewage 85:18+ Ag '47

Florida

School tests sewerage for Florida towns. D. L. Emerson, jr. il Eng N 139:292-3 Ag 28 '47

SEWERAGE—*Continued*

Great Britain

British developments in sewage purification practice. J. Hurley. il Water & Sewage 84: 52+ O '46

Japan

Sewage disposal in Japan. J. J. Hinman, jr. Pub Works 78:34-5 Ag '47

Ontario

Extensive program of water and sewage works for Ontario municipalities. A. E. Berry. il Water & Sewage 85:11-14+ Ja '47

Sewer-rental method of financing sewage works. A. E. Berry. Water & Sewage 85: 69-70+ O '47

South Africa

Sewage treatment to destroy infantile paralysis virus and remove eggs of intestinal parasites; South Africa studies and filtration. Pub Works 78:25 F '47

Texas

Texas sewerage practices. Pub Works 78:10-20 My '47

United States

Inventory of sewage disposal facilities; data from official records of state sanitary engineers. pl Eng N 137:654-5 N 14 '46

Water and sewage works needs of the United States; with cost tables. Water & Sewage Works 94:294-7 Ag '47; Same, without tables. il Civil Eng 17:479-80+ Ag '47

SEWERS, Concrete

Illinois city constructs combination pier and sewer. R. L. Anderson. il plan diags Pub Works 78:27-8 Ja '47

Machine grouts joints in trunk sewer. C. S. Seabrook. il Eng N 138:50-2 Ja 9 '47

SEWING

Retail demonstrations teach women how to sew Plastron. il Sales Management 59:84+ O 1 '47

SEWING machines

Centralized maintenance reduces mill's repair costs; E-Z mills, inc. E. D. White. il Textile World 97:145+ Je '47

Frequent inspection aids sewing-machine upkeep; Spalding knitting mills. E. D. White il Textile World 97:131+ Mr '47

Household sewing machine passes century mark. il diag Machine Design 19:136-7 F '47

Modified sewing machine becomes handy thin-space cutting device. W. B. Morawski. il Inland Ptr 119:74 Jl '47

Sewing-machine production in Japan. For Comm W 29:22 N 1 '47

Successful sewing with nylon thread. R. E. Ellsworth. il Rayon 28:266-8 My '47

SEX

Mechanism of sex determination. L. Walker. bibliog Science 105:262 Mr 7 '47; Discussion. A. S. Wiener. 105:432 Ap 25 '47

SGRAFFITO decoration. See Graffito decoration

SHAFT sinking

Blocking shaft timber. K. O'Donnell. diags Can Min J 68:651-3 S '47

Drifters sink Hecla shaft from pneumatic jumbo. J. B. Huttl. il diags Eng & Min J 148:96-7 Ap '47

Easing the way for the shaft sinker. R. G. MacFarland. il diag Comp Air Mag 52:149-51 Je '47

Mechanical mucking in vertical shaft sinking. G. M. Grismer. diag Min Cong J 32: 32-3 N '46

Mucking pans speed up shaft sinking; with cost data; San Mauricio mining co., Mambulao, Camerines Norte, Philippine Islands. F. N. Carpentier. il diags Eng & Min J 147:73-5 D '46

Shaft sinking hazards. H. B. Hicks. Can Min J 68:29-33 Ja '47

Shaft sinking in Idaho; Polaris mining company. H. R. Wellman. il plan diag Explosives Eng 25:80-1+ My '47

Sinking a mine shaft in South Africa. il diags Comp Air Mag 52:8-12 Ja '47

SHAFTING

Comparison of shafting key, and keyway dimensions, as given in ASA B17.1; 1943, ASA war standard B4.1/6, API STD. 4, and API STD. 7. A. R. Zelt. Am Pet Inst Proc 25(4):257-63 '45

Flexible shafts and couplings protect high-speed gears. R. L. Benford. il diag Power 91:477-8 Jl '47

Limits of torsional vibration stress in marine oil-engine shafting. S. F. Dorey. Engineering 163:509-11 Je 13 '47

Maintenance of line shafting. H. J. Vander Eb. il diags Power Pl Eng 50:96-7 N '46

Shaft alignment of a centrifugal pump and its driver. W. L. Nelson. diags Oil & Gas J 46:105 S 6 '47

SHAFTS

High temperature seal for rotating shafts. F. B. Eastman and H. O. McMahon. diags Chem Eng 54:157-8 My '47

How to check a shaft's coupling joints; illustrated instructions. Power 91:276 Ap '47

Mechanical seals. D. R. Lewis. il diag Machine Design 18:125-8 S; 78-82 O; 138-42+ N; 146-50+ D '46

Method for simplifying the calculations of the natural frequencies for a system consisting of *n* rigid rotating discs mounted on an elastic shaft. J. L. Bogdanoff. bibliog diags J Aeronautical Sci 14:5-18 Ja '47

New serrated shaft standards developed. Automotive & Aviation Ind 96:234+ Mr 15 '47

Nomograph aids determination of torsional stresses in shafts; engineering data sheet. C. P. Nachod. Machine Design 18:157-8 D '46

Numerical solution of axisymmetrical problems, with applications to electrostatics and torsion. G. Shortley, P. Darby and E. H. Gamble. J Ap Phys 18:116-29 Ja '47

Oil seals; Gaco M.I. component for rotating shafts. E. T. Jagger. il Automobile Eng 37:383-5 O '47

Permanent faceplate dog simplifies shaft turning. J. H. Quatkemeyer. diag Am Mach 91: 142 F 13 '47

Plant freezer for fitting huge eccentric shafts. il Steel 120:98-9+ F 10 '47

Sealing a rotating shaft. diag Chem & Ind p21 Ja 11 '47

Torsional deflection of hollow shafts; charts; reference book sheet. Product Eng 18:171, 173 Ap '47

Typical methods of coupling rotating shafts. diags Product Eng 17:124-5 N; 112-13 D '46

Welding repairs water turbine shaft. A. R. Callender. il Factory Management 105:88 Ap '47

See also

Crankshafts

Shafting

SHAFTS, Mine. See Mine shafts

SHALE

Mining shale by wheeled scraper; abstract. W. W. Kriegel. Brick & Clay Rec 110:56 Je '47

Production of alumina by the lime soda process; extraction of alumina from shale. W. E. Prytherch and others. Chem Age (Lond) 56:607-13 My 10 '47

Production of alumina by the lime-soda process; sources in the British Isles. W. E. Prytherch and others. Chem Age (Lond) 56:219-23 F 8 '47

See also

Oil shales

SHALE oil. See Oil shales

SHALLCROSS, Cecil F. 1872-1947

Sketch. por Nat Underw 51:12 Ap 10 '47

SHAMPOOS

Shampoos using synthetics. H. C. Harris. Soap & San Chem 23:91 F '47

SHANGHAI

Commerce

Import control in Shanghai. Economist 152:23-4 Ja 4 '47

SHAPERS

Bench shapers are versatile tools for broaching and knurling; Telechron, inc. il diag Am Mach 91:106-7 Ag 14 '47

Cincinnati shapers with rapid traverse. il Ry Mech Eng 121:492 S '47

SHAPERS—*Continued*
Machine tool show in print; planing and shaping. il Am Mach 91:223-5 S 11 '47
Morton draw-cut shaper. il Mach 53:186 Jl '47
Slotted-link mechanisms. A. T. J. Kersey. diags Engineering 163:277-9, 301-2 Ap 11-18 '47
Smith & Mills shaper. il diags Product Eng 18:148-9 S '47
Surface machining; planers and shapers as basic types of modern machine tools. G. Hubbard. il Steel 120:64-5+ Je 30 '47

SHAPIRO, Bernice MacLean, 1903-1946
Sketch. A. H. Morgan. Science 104:585-6 D 20 '46

SHAPLEY, Harlow, 1885-
Director of Harvard college observatory. Science 104:590 D 20 '46
Harlow Shapley; president of AAAS, 1947. O. Struve. Science 105:163 F 14 '47

SHAREHOLDERS. See Stockholders

SHARK liver oil
Cuba's shark industry. For Comm W 27:27 Je 21 '47
Liver oils of elasmobranch fish of south Indian waters. U. S. Kini and K. Chidambaram. bibliog Soc Chem Ind J 66:233-8 Jl '47
Neovitamin A. C. D. Robeson and J. G. Baxter. bibliog pl Am Chem Soc J 69:136-41 Ja '47

SHARON steel corporation
Sharon consolidation. Bsns W p30 Ap 12 '47
Statement before the steel subcommittee of the Senate. H. A. Roemer. Blast F & Steel Pl 35:1229 O '47

SHARPE and Dohme, inc.
Companies forging ahead. Mag of Wall St 80: 379 Jl 5 '47

SHARPENING
Barber-Colman's automatic no. 6-5 hob sharpening machine. il diags Product Eng 18:136-8 S '47; Mach 54:174 S '47
Cincinnati contour cutter sharpening machine. il Product Eng 18:142-3 S '47
How to sharpen cutting tools; illustrations with text. H. S. Wharen. Am Mach 91:101-20 Ag 28 '47
Wickman carbide tool sharpening machine. il Engineer 184:157-8 Ag 15 '47
See also
Milling cutters—Sharpening

SHASTA dam. See Dams, Concrete

SHAVERS, Electric. See Electric shavers

SHAVING products
Big business being developed in shaving preparations sales. M. D. Hall. Dom Comm 35:52-4 S '47

SHAW, Leon Irwin, 1886-
Sketch. por bibliog Am Cer Soc J Bul 25:435-7 N 15 '46

SHAWINIGAN FALLS, Quebec
Water supply
Variation in water-consumption rates. E. A. Delisle. Water & Sewage 85:28-31+ Ap '47

SHAWINIGAN water and power company
Annual report. Comm & Fin Chr 165:1773 Mr 31 '47

SHEAR. See Strains and stresses

SHEARS
Hardening shear blades. il Electronics 20: 164+ S '47

SHEARS (machines)
Buffalo forge welded steel shear. il Product Eng 18:118-19 S '47
Metal squaring shears; hazards and precautions. Nat Safety N 55:40+ F '47
Safe operation of shears; safety charts from Division of labor standards. il Sheet Metal Worker 38:53-4+ F '47

SHEAVES
Sheave relined with round-rod bands. W. Baskin. il diag Coal Age 52:120 Ap '47

SHEEP
Lamzee divey? decline of sheep raising and wool growing in this country. S. J. Pauly. Textile Col 69:54+ Ap '47
Diseases
See also
Heartwater

SHEEPSKIN
See also
Lambskin

SHEET metal
Magnesium sheet. P. T. Stroup and others. il Am Soc for Metals Trans 35:195-219 bibliog(p218-19); Discussion. 219-24 '45
Painting sheet metal. Paper Ind 28:1638 F '47
Rigidized metal, a modern material. D. E. Olshevsky. il Materials & Methods 25:93-8 F '47
Rigidized metal offers new design possibilities. il Iron Age 159:63 Ap 3 '47
See also
Sheet steel
Standards
Use of standard thicknesses for sheet metal helps reduce inventories. F. W. Hottenroth. Ind Stand 18:77-8 Ap '47
Testing
Determination and presentation of compressive stress-strain data for thin sheet metal. W. Ramberg and J. A. Miller. bibliog il diags J Aeronautical Sci 13:569-80 N '46
Sound waves inspect metal; German technicians develop supersonic method. Comp Air Mag 52:230 S '47

SHEET metal, Corrugated
Continuous lining of corrugated steel waterproofs reconstructed tunnel. J. F. Laboon. il Civil Eng 17:536-8 S '47

SHEET metal, Enameled
Approach to proper method of preparing steel sheets for vitreous enameling. D. J. Benoliel and W. J. Haring. bibliog Am Cer Soc Bul 26:213-14 Jl 15 '47
Begin building all-steel, porcelain finish prefabs. il Eng N 137:849 D 26 '46
C. V. Hill plant redesigned for quantity post-war output. Cer Ind 49:73 Jl '47
New method for fastening porcelain enameled airmarkers. diag Cer Ind 49:64 Jl '47
Porcelain coats on metal bases. E. Mackasek. il Sci Am 177:106-9 S '47
Porcelain enamel in the home building field. Cer Ind 47:78 D '46
Porcelain enameling characteristics of some common ferrous metals; diffusibility of atomic hydrogen. W. A. Deringer. il diag Am Cer Soc J 29:332-40 N 1 '46
Preparing steel for porcelain enameling. G. H. McIntyre. il Steel 121:102-3+ Jl 21 '47
Problems in porcelain enameling non-enameling sheets. W. A. Deringer. bibliog il Cer Ind 47:73+ D '46; 48:51-2 F '47
U type furnace, conveyor system, close control, assist high production at Norris; illustrations with text. Cer Ind 48:90-3 Ap '47

SHEET metal buildings
All-welded prefabricated sandwich shops shipped completely assembled anywhere in the United States. R. H. Davies. il Welding J 26:788-9 S '47; Same. Sheet Metal Worker 38:62-3 N '47
Package welds; stainless steel and aluminum shops. il Steel 120:116 Je 2 '47
Quonset factory buildings expand plant capacity; York-Shipley, inc. il Eng N 138: 428 Mr 20 '47
Sheet metal buildings on farms. W. Alwyn-Schmidt. il Sheet Metal Worker 38:64-6 S '47
See also
Sheet metal houses

SHEET metal contractors national association
Annual meeting, Chicago, April 28-30. Sheet Metal Worker 38:84+ My '47

SHEET metal handling
Modern materials handling; a way to reduce costs. il Sheet Metal Worker 38:43-5 My '47
Quarter-turn mechanism for transferring sheets from press to oven. P. E. Veraa. diag Mach 53:173 D '46

SHEET metal houses
Heat and moisture transfer in all-metal houses. F. G. Hechler and others. il Heat & Ven 44:69-74 Ap '47

SHEET metal houses—*Continued*
Making of Quonset huts. il Sheet Metal Worker 37:55-6 D '46
Porcelain enamel in the home building field. Cer Ind 47:78 D '46
See also
Steel houses

SHEET metal shops
Building a suburban air conditioning business; Comfortair co. il plans diags Sheet Metal Worker 37:70+ N '46
Concentrating on warm air necessitated new shop; Turner-Harrison co. il plan Sheet Metal Worker 38:69-70+ Ap '47
Cronstrom's says it with aluminum. il Sheet Metal Worker 38:42-3 Jl '47
Dealer keeps step with changes; Sayville furnace & stove co. il Sheet Metal Worker 38:92+ Ap '47
Features noted in a New Haven shop; George Howard co. il Sheet Metal Worker 38:61-3 Ag '47
Narowetz, one of the largest sheet metal shops of the country. Sheet Metal Worker 38:72+ Je '47
New plant and offices of Nassau roofing & sheet metal co. il plan diag Sheet Metal Worker 38:134 Ja '47
Specialty work in shop of A. L. Freedman co. il Sheet Metal Worker 37:58+ D '46

Employees

See Sheet metal workers

Equipment

Details of a pattern cutter's bench. H. R. Dampman. diags Sheet Metal Worker 38:56+ Ag '47
Development in riveting equipment. il Sheet Metal Worker 38:96-8 Ja '47
Modern materials handling; a way to reduce costs. il Sheet Metal Worker 38:43-5 My '47
Piping the shop for air. il diag Sheet Metal Worker 38:55-6 F '47
Reducing welding cost with jigs. il diags Sheet Metal Worker 37:33-5 N '46
Shop equipped for industrial work; Farber co. il Sheet Metal Worker 38:47-8 Jl; 90+ Ag '47
Work flow speeds job-shop welding; American welding & manufacturing co. il plan Am Mach 91:147-9 Je 19 '47
See also
Sheet metal working machinery

Management

Progressive sheet metal management. L. L. Narowetz. Sheet Metal Worker 38:53-4+ O '47
Streamline your duct production; use of printed forms. diags Sheet Metal Worker 38:88+ Ag '47

Safety measures

Metal squaring shears; hazards and precautions. Nat Safety N 55:40+ F '47
Safe operation of shears; safety charts from Division of labor standards. il Sheet Metal Worker 38:53-4+ F '47

SHEET metal trade
Looking at the market; topical notes for management (cont). W. Alwyn-Schmidt. Sheet Metal Worker 37:51+ N '46; 38:120+ Ja; 59-60, 103 F; 74+ Mr; 80 Ap '47
New York state association of sheet metal, roofing and air conditioning contractors 24th annual meeting, Albany, April 8-9. Sheet Metal Worker 38:80+ My '47
New York state group report on insurance. Sheet Metal Worker 38:124+ Ja '47
1947 prospects; views of representatives of the industry. P. S. Varden and others. Sheet Metal Worker 38:89-91+ Ja; 45-6+ F '47
Progress report on branded metal stampings. il Sales Management 59:104+ N 1 '47

Directories

Directory section; names and addresses of manufacturers of equipment and products used in warm-air heating, air conditioning, ventilation and sheet metal work. Sheet Metal Worker 38:166-82 Ja '47

SHEET metal work
Aluminum for air ducts. G. W. Birdsall. il Sheet Metal Worker 38:51-3+ Ap; 49-52 My '47
Annual engineering review; stamping, drawing and pressworking. Materials & Methods 25:102 Ja '47
Auto brake disks produced with progressive dies. H. Chase. il diags Iron Age 160:80-2 S 4 '47
Certain aspects of seam welds in aluminum alloy sheets. G. H. Boss. il Metal Prog 51:599-602 Ap '47
Designing forming dies along natural flow lines; Sol-A-Die process. C. O. Herb. il diags Mach 53:131-6 Ag '47
Designs for sheet metal boxes with square and round corners. W. C. Mills. diags Product Eng 18:122-3 F; 122-3 Mr; 148-9 Ap '47
Details of a cooling room. F. H. Stebbins. plan diags Sheet Metal Worker 38:80+ F '47
Expansion and contraction; general theory and basic control procedures. R. B. Aitchison. il diags Welding J 25:1195-202 D '46
Fabricating aluminum air ducts. il Steel 121:93+ Jl 7 '47
Fabricating sheet metal parts of jet engines. H. A. Knight. il Materials & Methods 24:1461-5 D '46
Fabrication and welding of oil-fired water heaters. W. R. Persons. il Mach 53:138-9 Ag '47
Forming aluminum sheets into high-strength structures; Glenn L. Martin co. B. Rogge. il diags Mach 53:174-9 Je '47
Hand punch and die for light sheet metal work. M. H. Ball. diag Am Mach 90:143 D 5 '46
Hints on grinding and polishing. il diags Sheet Metal Worker 38:135-6+ Ja '47
Hot dimpling and joggling 75S-T for the DC-6's; Douglas aircraft co. F. E. Bryan and D. E. Bailey. il Mach 53:146-51+ Je '47
Improved crimping tool. il Product Eng 18:101 Ja '47
Integral stiffening saves time, parts, and tools; radio access door as integral part of Glenn L. Martin design. il diag Aviation 45:98-9 D '46
Investigations of 24S-T riveted tension joints. R. L. Fefferman and H. L. Langhaar. bibliog il diags J Aeronautical Sci 14:133-47 Mr '47
Lighter making involves many metalworking procedures. il Steel 121:77-8 O 27 '47
Magnesium alloys; methods of joining. A. G. Gray. il Steel 120:114-15+ Mr 3; 90-1+ Mr 10 '47
Modern box fabrication; Pelham electric mfg. corp. W. Rudolph. il Sheet Metal Worker 38:45-6 O '47
New freezing tunnel speeds frozen food output; Consumers packing co. of Lancaster, Pa. il Sheet Metal Worker 37:58+ N '46
New lock joint for sheet metal structures. diag Iron Age 160:80 Ag 14 '47
New mechanical joining method; Cookson lock joint; abstract. W. Cookson. Materials & Methods 26:116 S '47
New short time aging practice for 75S aluminum alloy sheet. J. A. Nock, jr. and A. C. Wooll. Iron Age 159:57-9 Ja 30 '47
Observations of electrode tip pickup and tip life in the spot welding of magnesium alloy sheet. W. F. Hess and others. il diag Welding J 26:sup433-42+ Ag '47
Optimum welding conditions and general characteristics of spot welds in magnesium alloy sheet. W. F. Hess and others. bibliog il Welding J 26:sup268-82 My '47
Oxyacetylene cutting in sheet metal work. R. F. Helmkamp. il diags Sheet Metal Worker 38:46-9 Mr; 57-60+ Ap '47
Paint brush boxes. H. R. Dampman. diags Sheet Metal Worker 38:47-8 O '47
Plastic coating expedites stainless stamping operations. W. A. Phair. il Iron Age 159:47-51 My 15 '47
Practical applications of blind riveting. M. Ketchum. il Iron Age 159:60-2 F 27 '47
Practical design of thin-metal stampings. W. C. Mills. diags Am Mach 91:85-7 O 9; 94-7 O 23 '47
Press-fit tolerances maintained in turning out millions of oil seals; National motor bearing corp. il Steel 121:86-7+ O 13 '47

SHEET metal work—*Continued*
Press-shaping bath tubs. il Steel 121:90-1 O 20 '47
Progressive die produces safety runway for freight cars. J. A. King. il diags Am Mach 91:128-32 N 6 '47
Radiography of spot welds in various sheet gages and dissimilar gage combinations. R. C. McMaster and others. bibliog il Welding J 26:19-29 Ja '47
Refrigeration cabinet produced in air conditioning shop. il diag Sheet Metal Worker 38:45-7 Je '47
Shop using Heliarc welding with four other processes; Phillips, Doup & co. il diags Sheet Metal Worker 38:55-7 S '47
Small sections contoured by preform rolling; forming of extrusions and sheet metal stock. C. R. Wulffsohn. il Iron Age 159: 54-7 Je 26 '47
Specialties for active merchandising; Spatz sheet metal works. il Sheet Metal Worker 38:59 O '47
Survey of wrought magnesium alloy fabrication. J. V. Winkler. il diags Am Soc for Metals Trans 35:225-83 '45
Thread forming in thin metal. W. C. Mills. diags Am Mach 91:101-4 Mr 13 '47
Unconventional dies facilitate difficult forming operations; Knapp-Monarch co. G. E. Stedman. il Steel 121:78-9+ S 8 '47
Variable-speed press jumps output. J. I. Karash. il diag Am Mach 91:112-15 Mr 13 '47
Washer bases fabricated from sheet; Nineteen hundred corporation. K. F. Brooks. il Am Mach 91:110-12 My 22 '47
Zinc alloy tools for blanking, piercing and forming sheet metal; abstract. J. W. Sladden and H. S. Walker. Materials & Methods 26:126 Jl '47

See also
Air conditioning equipment
Air pipes
Dies
Dust collectors
Exhaust systems
Metal drawing
Pipes
Presses
Rolling (metal work)
Rolling mills
Sheet metal, Enameled
Shells (metal work)
Stamping
Tin cans
Tin plate
Tubes
Ventilators

Pattern making

Details of a pattern cutter's bench. H. R. Dampman. diags Sheet Metal Worker 38: 56+ Ag '47
Pattern for a cone to cone intersection. O. W. Kothe. diags Sheet Metal Worker 38: 86+ Ap '47
Pattern for a tapering tee. O. W. Kothe. diags Sheet Metal Worker 38:49-50 Jl '47
Pattern for an expanding tee. O. W. Kothe. diags Sheet Metal Worker 38:84+ F '47
Pattern for diagonal grain chute. O. W. Kothe. diags Sheet Metal Worker 37:42+ N '46
Pattern for intercepting pipe. diags Sheet Metal Worker 38:85-6 Mr '47
Pattern for transforming tee connection. O. W. Kothe. diags Sheet Metal Worker 38: 65-6 Ag '47
Pattern of square to oblong tee intersecting oblong duct. O. W. Kothe. diags Sheet Metal Worker 38:62-3 S '47

Tables, calculations, etc.

Allowances for 90° bends in sheet steel; reference book sheet. A. J. Abrahamsen. diags Am Mach 91:167, 169 My 8; 155, 157 My 22 '47
Graphical method of determining size of round blanks. G. A. Larri. Mach 53:147-8 Ap '47
Useful tables for sheet metal men (cont). E. Steiner. Sheet Metal Worker 37:76-7 N '46; 38:96-7 Ap '47

SHEET metal work, Architectural
Camera brevities; illustrations with text. Sheet Metal Worker 38:50-1 F '47
Mormon Tabernacle reroofed with aluminum. il Sheet Metal Worker 38:57-8+ Ag '47
Recommended application methods for aluminum roofing and siding. J. S. Pollack. il diags Sheet Metal Worker 37:36-9 N '46; Same cond. Mech Eng 68:1080-1 D '46; Excerpt. Steel 119:107+ D 9 '46
Sheet metal + insulation = low-cost construction. il Sheet Metal Worker 38:68+ Jl '47
Sheet metal workers' catechism (cont). W. Neubecker. diags Sheet Metal Worker 37: 54+ D '46; 38:94 F; 62 Ap; 74+ Je; 70 S '47 (to be cont)
Unusual in sheet metal as seen by a reporter's camera; illustrations with text. Sheet Metal Worker 38:92-3 Ja '47

See also
Flashing
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SHEET metal work, Decorative
Artistic copper work; hand-hammered plaques and trim; Armstrong's Gay 90's cafe. il Sheet Metal Worker 38:41+ Jl '47

SHEET metal workers
Apprenticeship gaining momentum. Sheet Metal Worker 38:57-8+ F '47
Exam for sheet metal workers; aid for those contemplating entering competitive civil service examinations. C. McGraw. Sheet Metal Worker 38:59-60+ Ag '47
Helping industry through labor relations. L. L. Narowetz. Sheet Metal Worker 37:57+ D '46
Training program for small towns. J. Steinke. Sheet Metal Worker 37:62+ N '46
Two-way incentive; contract between Air conditioning institute and the A.F.L. sheet metal workers. Bsns W p78+ Ag 16 '47
Wages in the metal furniture industry, Jan. 1947. D. L. Helm. Mo Labor R 65:446-9 O '47

SHEET metal working machinery
Automatic forming and assembling of condenser fins. C. H. Wick. il diags Mach 53: 165-71 Mr '47
Columbia power press brake and squaring shears. il Mach 53:174-5 Ag '47
Combined stamping operation. E. V. Crane. Steel 121:102+ Ag 25 '47
Fabricating aluminum radiators; three novel machines developed by Germans. il Steel 119:102 D 16 '46
Fabricating by compressed air; shaping and joining stainless steel products; Solar aircraft co. il Sheet Metal Worker 38:49-50+ Ag '47
Forming sheet-metal cabinets. C. J. Bath. il Mach 53:184-7 Ap '47
Guide to machinery selection (cont). il Sheet Metal Worker 37:66+ N '46
Helical forming of strip stock without tearing the edge. P. B. Edwards. diags Mach 53:193-4 Ja '47
Mechanized oxy-acetylene soft soldering; air-conditioning units. il Sheet Metal Worker 38:51-2 Jl '47; Same. Steel 120:98+ Ap 14 '47
Suggestions on shop equipment. W. M. Ward. Sheet Metal Worker 38:50-1 Je '47
Wings for grooving bars. il Sheet Metal Worker 38:63 S '47

See also
Shears (machines)

SHEET piling
Navy uses surplus steel in preserving inactive naval ships; berthing area at Green Cove Springs, Fla. B. K. Price. il Steel 120: 76-7 F 10 '47
Sheet pile corrosion at port Copenhagen. M. Blach and A. Rogberg. diags Engineer 183: 348-50 Ap 25 '47

SHEET steel
Allowances for 90° bends in sheet steel; reference book sheet. A. J. Abrahamsen. diags Am Mach 91:167, 169 My 8; 155, 157 My 22 '47
Aluminum coated steel. il Steel 120:80-1+ Mr 31 '47
Beta-ray thickness gage for sheet steel; G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O. J. M. Smith. il diags Electronics 20:106-12 O '47
Coming, more steel in housing. il diags Sheet Metal Worker 38:130-3 Ja '47
Dephosphorized Bessemer steel. G. M. Yocom. il Metal Prog 51:243-7 F '47
Effect of speed of rolling in the cold-rolling process. H. Ford. bibliog diags Iron & Steel Inst J 156:380-98 Jl '47; Same cond. Blast F & Steel Pl 35:1219-23, 1368-71 O-N '47

SHEET steel—*Continued*
Flat rolled steel prospects. R. M. Nelson. Sheet Metal Worker 37:66-7+ D '46

Magnetic sheet steel; new American steels. D. Edmundson. diag Inst E E J 94 pt 1:180-2 Ap '47

Medium-frequency magnetization of sheet steel. R. Pohl. Inst E E J 94 pt 2:118-23 Ap '47

Navy will use 20,000 tons of sheet steel to can surplus aircraft. il Iron Age 159: 115 My 1 '47

New company makes stainless steel sheets and strip; Washington steel corp. il Steel 120:118-20+ Ap 28 '47

Plastic coating expedites stainless stamping operations. W. A. Phair. il Iron Age 159: 47-51 My 15 '47

Pole figures of the effect of some cold rolling mill variables on low carbon steel; abstract. J. K. Wood, jr. Steel 119:39 N 25 '46

Proper selection of steel simplifies deep-drawing. G. B. Nisbet. il Materials & Methods 25:108-12 Ap '47

Substitution of blackplate for tinplate in cans for fruit and vegetables. W. B. Adam and D. Dickinson. bibliog Iron & Steel Inst J 152:195-205 no 2 '45

Vertical sheet construction featured in new St Petersburg gas holder. G. C. Pfaff. il Gas Age 98:25 N 28 '46

Testing

Relationship between the deep drawing properties of autobody sheet, its austenitic grain size and McQuaid-Ehn carburizing characteristics. K. J. B. Wolfe. bibliog il diags Am Soc for Metals Trans 37:1-17; Discussion. 18-26 '46; Discussion. Steel 118: 122+ Ap 29 '46

Strength of thin steel compression flanges. G. Winter. bibliog il diags Am Soc C E Proc 72:199-226 F '46; Discussion. 72:909-12, 1188-90, 1381-6; 73:39-42, 360-6 Je, O, D '46-Ja, Mr '47

Weldability test for sheet metal in oxyacetylene welding. R. Woirin. Welding J 26:790 S '47

SHEETS
Cannon shots of color; new packages for sheets and pillow cases. il Mod Packaging 20:152-4 Mr '47

New package to increase sales; Cannon sheets. il Ptr Ink 218:70 Mr 14 '47

Pepperell studies the sheet market. Sales Management 57:93 N 20 '46

Sheet labels now furnish much useful information. il Ind Stand 18:176-7 Jl '47

Advertising

Kit offers sales tips for retailers; Pepperell's kit. il Sales Management 58:106 My 20 '47

SHELDON, John Lewis, 1865-1947
Sketch. E. L. Core. Science 105:541 My 23 '47

SHELL chemical corporation
Glycerin venture; Shell's decision to make synthetic product. Bsns W p21 D 21 '46

SHELL petroleum company, ltd.
Ambitious Shell program; chemicals from petroleum bases. G. Abrahamson. Chem & Eng N 25:1218 Ap 28 '47

SHELL transport and trading company
Shell transport and trading. Chem Age (Lond) 57:90 Jl 19 '47

SHELL union oil corporation
Selected stocks. Mag of Wall St 80:430 Jl 19 '47

Thumbnail stock appraisal. Mag of Wall St 79:416 Ja 18 '47

SHELLAC
Shellac buying pays off. Bsns W p40+ O 4 '47

SHELLFISH
Manual of recommended practice for sanitary control of the shellfish industry. (Pub. health bul. 295) 44p U.S. Public health service, Washington; pa 15c Supt. of doc. '46

SHELLS
Deposits of shells transported by birds. C. Teichert and D. L. Serventy. bibliog pl Am J Sci 245:322-8 My '47

SHELLS (metal work)
Graphical method of determining size of round blanks. G. A. Larri. Mach 53:147-8 Ap '47

Rules for drawing round shells; reference book sheet. Am Mach 91:135, 137 Mr 27 '47

SHELLS (projectiles)
Escapement mechanism; mechanical time fuse for shells. F. G. Kelly and J. L. Zar. il diags Machine Design 19:110-14 F '47

See also
Projectiles

Fuses

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SHELLS, Elastic
Vibrations of shallow spherical shells. E. Reissner. diags J Ap Phys 17:1038-42 D '46

SHELVING (for books)
Library bookstack data. plan diags Arch Rec 100:125+ N '46

SHERRILL, Mary Lura, 1888-
Recipient of the Garvan medal. por(cover) Chem & Eng N 25:1119 Ap 21 '47

Women's award in chemistry to M. L. Sherrill. por Chem & Eng N 25:2811 S 29 '47

SHERWIN-WILLIAMS company
Sherwin-Williams stages a blitz; to get 98,000 new dealer outlets for nonpaint products. Bsns W p51-2 Mr 1 '47

SHIELDING, Electromagnetic. See Electromagnetic shielding

SHIFT schedules. See House of labor—Shift schedules

SHINGLES, Asbestos
Better detail plate; resurfacing with asbestos shingles. R. J. Alexander. diags Am Bld 69:142-3 O '47

SHINGLES, Asphalt
Breaking production records to meet demand. il Am Bld 69:140+ O '47

SHIP decoration
Imaginative use of glass in the giant Queen Elizabeth. il Glass Ind 28:45 Ja '47

Interior designs of new Alcoa ships. il Marine Eng 52:62-9 My '47

Passenger and cargo liner Del Norte. il diag Marine Eng 52:70-3 Ja '47

SHIP model tanks
American towing tank conference. Marine Eng 51:99-100 D '46

Hydrodynamic research; Experimental towing tank laboratory of Stevens institute of technology. Mech Eng 69:157 F '47

Method for obtaining quantitative information in towing basins. D. H. Jacobs. il diags R Sci Instr 18:523-4 Jl '47

Stevens builds fourth tank for use in damage control research program. Marine Eng 52:106+ Je '47

Stevens towing tank tests model of flying boat hull. Marine Eng 52:62 F '47

SHIP models
See also
Ships—Model testing
Warships—Models

SHIP plates
Maritime commission loses 2 million tons of ship plates; demands refund from firms which overshipped. G. Hardy. Iron Age 160:111-12 S 4 '47

Steel plates for welded ships tested. il Marine Eng 52:110+ Mr '47; Same. Franklin Inst J 243:153-4 F '47

Testing

Commerce reports on tests made on steel ship plates and tubes. Iron Age 160:126 Jl 31 '47

Influence of geometrical restraint and temperature on the toughness and mode of rupture of structural steel. A. R. Anderson and A. G. Waggoner. il diags Welding J 25:sup789-801 N '46

SHIP plates—Testing—*Continued*
Investigation of the effect of welding on the transition temperature of navy high-tensile, low-alloy steels. G. G. Luther and others. bibliog il diags Welding J 25:sup634-45 O '46; Discussion. 25:sup847-8+ D '46
Test design and welding technique in study of welded ship plates. il Steel 119:104 D 9 '46; Same. Welding J 25:sup788 N '46
Weldability of ship steels; effects of travel speed, preheat temperature and arc power level. E. F. Nippes and W. F. Savage. il diags Welding J 25:sup776-87 N '46

SHIP propellers. See Propellers

SHIP propulsion
Gas turbine propelled M.G.B. 2009. il diags Engineer 184:218-20, 248-9, 260-2 S 5-19 '47
Gas-turbine propelling machinery for British gunboat. il diag Engineering 164:271-4, 276 S 19 '47
Heavy-duty chain drives for marine propulsion service. N. C. Bremer. il diags A S M E Trans 69:441-7 Jl '47; Same cond. Machine Design 18:150-2+ S '46; Discussion. A S M E Trans 69:447-52 Jl '47
Propellers and propulsion. K. E. Schoenherr. Marine Eng 52:95-6 O '47
Propulsion machinery for Alcoa ships. il plans Marine Eng 52:70-9 My '47
Propulsion machinery on the Del Norte. il plans Marine Eng 52:80-91 Ja '47
Types of propulsion machinery used in prewar and postwar ships. H. M. Wick. Marine Eng 52:88-95 S '47

See also
Boilers, Marine
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Gas turbines, Marine
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SHIP propulsion, Electric
America's highest powered motorships; Proteus, one of group of submarine tenders. il Marine Eng 52:69-70 S '47
Canadian car ferry Abegweit. il Marine Eng 52:86+ Ag '47
Diesel-electric ferry, Chinook. il plan Marine Eng 52:66-71 O '47
Diesel-electric power propells ore carrier. il Steel 119:100+ D 16 '46
Lake freighter, E. J. Block, converted to Diesel-electric propulsion. B. C. Dennison, jr. il plans diag Marine Eng 51:100-9 N '46
Recent developments in alternating-current turbo-electric ship propulsion. G. O. Watson. il diag Inst Mech Eng J & Proc 154:Proc 380-5, pl 1-4 Mr '47; Same. Engineering 161:142-4, 166-7 F 8-15 '46; Excerpts. Engineer 181:110-11 F 1 '46; Abstract. Electrician 136:463 F 22 '46
Sun-built T2-SE-A1 tankers. il plans diags Marine Eng 52:62-75+ Jl '47
Turbo-electric propulsion; features of the Beaver liners' equipment; abstract. A. W. Davis. Elec R (Lond) 139:830 N 22 '46
Turbo-electric S.S. Hinemoa for New Zealand. il Engineering 163:8 Ja 3 '47

SHIP refrigeration. See Refrigeration on ships

SHIP resistance
Calculated and observed wave resistances for a series of forms of fuller mid-section; abstracts and discussion. W. C. S. Wigley and J. K. Lunde. Engineer 184:313-14 O 3 '47; Engineering 164:376-7 O 17 '47
Examination of the records of the Greyhound experiments. A. M. Robb. bibliog Engineering 162:453-4 N 8 '46

SHIP-to-shore service. See Radio communication—Ship-to-shore service

SHIP yards. See Shipyards

SHIPBUILDING
All's shipshape; Bath Iron Works emerges from postwar letdown. Bsns W p 21 Ja 11 '47
Economic relationship between foreign trade and the shipbuilding industry. R. E. Anderson. Marine Eng 51:90-1 N '46
Foreign shipbuilding booms as U.S. yards lie idle. il Bsns W p20-1 S 20 '47
How high may unit heaters be mounted? New York shipbuilding corporation plant. il diag Dom Eng 168:145 D '46
Use of blind rivets in ship work. G. Reno. il Marine Eng 52:104+ Mr '47

See also
Barges
Dry docks
Freight ships
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Naval architecture
Navy yards and naval stations
Propellers
Ships
Shipyards
Steamboats
Tank ships
Towboats
Warships
also Ingalls shipbuilding corporation

Materials
Aluminum fairwater on submarine. H. J. Andrews. il Marine Eng 52:83-4 Ag '47
Report on the fracture of metals; report submitted to the Bureau of ships of the U.S. navy. M. Gensamer and others. Welding J 26:sup443-84 bibliog(293 titles, sup469-72, 483-4) Ag '47

See also
Ships, Aluminum

Safety measures
See Shipyards—Safety measures

Standards
Classification standards and longitudinal strength; discussion of paper by J. L. Adam. Engineering 163:343-4 Ap 25 '47; Engineer 183:305-6 Ap 11 '47

Statistics
American bureau of shipping reports on current shipbuilding. Marine Eng 52:95-6 Ag '47
Lloyd's annual report on world's shipbuilding. Marine Eng 52:112 F '47
Lloyd's quarterly returns on the world's shipbuilding, period ending March 31. Marine Eng 52:83-4 My '47
Lloyd's register reports world shipbuilding for April-June quarter. Marine Eng 52:81-2 Ag '47
Lloyd's Register shipbuilding returns. Engineer 184:106 Ag 1 '47
Monthly shipbuilding report. Marine Eng 52: 62-3 Ja '47 [cont monthly]
Shipbuilding production in 1946 sets peacetime record. Marine Eng 52:52-61 Ja '47

Welding operations
Announcement of final report of Board to investigate design and methods of construction of welded steel merchant vessels. H. F. Johnson. Welding J 26:36-7 Ja '47
Control of welding stresses by welding sequence. P. Ffield. bibliog il diags Welding J 25:1109-22 N '46
Design and methods of construction of welded steel merchant vessels; final report of Board of investigation. il plans diags Welding J 26:569-619 bibliog(53 titles, p618-19) Jl '47; Abstract. Marine Eng 52:67-8 S '47
Effect of welding on ductility and notch sensitivity of some ship steels. R. D. Stout and others. il diags Welding J 26:sup335-57 Je '47
Investigation of the effect of welding on the transition temperature of navy high-tensile, low-alloy steels. G. G. Luther and others. bibliog il diags Welding J 25:sup634-45 O '46; Discussion. 25:sup847-8+ D '46
Investigation of welded ships. Mech Eng 69: 599-600 Jl '47
Multiple bus for easy welding. G. Nicholson. plan diag Factory Management 104:128-9 N '46
Section modulus calculation in the design of welded ships. diag Marine Eng 52:95 S '47
Ship welding research. il Engineer 184:277-8 S 19 '47
Shipbuilding and marine engineering in 1946. il Engineer 183:22-3, 51-3, supp 4, 71, 94-5 Ja 3-24 '47
Some tests of large welded structures. E. P. DeGarmo and others. il plans diags Welding J 26:sup257-67 My '47
Steel plates for welded ships tested. il Marine Eng 52:110+ Mr '47
Structural investigation in still water of the welded tanker Neverita. F. B. Bull and others. bibliog il plans diags Welding J 25:sup809-43 D '46; Abstract. Engineer 181: 385; Discussion. 385-6 Ap 26 '46; Engineering 161:425-6 My 3 '46

SHIPBUILDING—Welding operations—Cont.
Test design and welding technique in study of welded ship plates. il Steel 119:104 D 9 '46; Same. Welding J 25:sup788 N '46
Weldability of ship steels; effects of travel speed, preheat temperature and arc power level. E. F. Nippes and W. F. Savage. il diags Welding J 25:sup776-87 N '46
Welded ship fractures; investigation vindicates all-welded construction. E. C. Kreutzberg. Steel 120:120+ Je 16 '47
Welding data on new river craft. Marine Eng 52:75 Ag '47
Welding production controls for shipyard operation. J. Saliba. il Marine Eng 52:74-8 Mr '47

Canada

Shipyards survive. Bsns W p109 D 7 '46

Great Britain

Delays in the shipyards. Economist 153:169-70 Jl 26 '47
Economic problems in shipping and shipbuilding. H. B. R. Rowell. Engineering 162: 412 N 1 '46
Engineering outlook. Engineering 163:174-6 Mr 7 '47
Mercantile shipbuilding for the year 1946; statistics compiled by Lloyd's register of shipping. Engineer 183:270 Mr 28 '47
Progress in shipbuilding. Economist 153:533-4 S 27 '47
Shipbuilding and marine engineering in 1946. il Engineer 183:22-3, 51-3, supp 4, 71, 94-5 Ja 3-24 '47
Shipyards achievements in 1946. A. E. M. Chatfield. Engineer 183:268-9 Mr 28 '47; Engineering 163:259 Ap 4 '47

Italy

Shipbuilding industry makes great strides. For Comm W 27:32 Je 21 '47

Maine

Shipbuilding in Maine. W. S. Newell. Marine Eng 52:97-8 O '47

Norway

Replacement in the shipping industry; Norwegian mercantile marine, 1932-39. J. Einarsen. R Econ Stat 28:225-30 N '46

Sweden

Progress at Swedish shipyards. For Comm W 27:26 My 3 '47

United States

How can the shipbuilding industry be preserved? A. B. Homer. Marine Eng 52:60-1 Jl '47
Maritime commission proposes long-range shipbuilding program. Marine Eng 52:52-4 Jl '47
More ships, how? Bsns W p31 Mr 22 '47
Need for long-range program of naval and merchant shipbuilding. L. H. Korndorff. Marine Eng 51:91-2 N '46
Shipbuilders union launches information campaign on shipbuilding. J. Green. Marine Eng 52:108+ Jl '47
Shipbuilding in postwar doldrums. W. J. Campbell. il Steel 120:57-9 F 17 '47
Shipbuilding, wartime giant, now on prewar basis. R. M. Bleiberg. Barron's 27:10 Ap 21 '47
Uncertain weather ahead for shipbuilders and shipping lines; with pertinent statistics of leading shipbuilders and shippers. H. L. Blackburn. Mag of Wall St 79:733-5 Mr 29 '47

SHIPMENT of goods
Beating the boxcar shortage. il Factory Management 105:65 Ap '47
Cutting transportation damage; reprint of article by Research institute of America. il Chem Ind 61:674+ O '47
Damaged in transit; who's to blame; problem of damage to refrigerators, ranges, radios, and washers en route from eastern plants to Pacific coast. il Elec West 99:99-102 S '47
Do fiber box shipping practices need modification? T. P. Callahan. il Chem Ind 60: 100+ Ja '47
Eliminating damage claims through proper carloading. A. P. Kivlin. Chem Ind 60: 832+ My '47
How to save on shipping. Management R 36:153-5 Mr '47
How Westinghouse cuts enamel losses; titanium enamels reduce shipping damage; better crating methods; special steels. R. F. Bisbee. Cer Ind 48:63-4 My '47
Improved machines save labor on the packaging line. F. H. Mayoh. il diags Food Ind 19: 1354-7 O '47
Light weight pallets for easy handling of materials. T. O. Palmer. Mech Handling 34:100-2 F '47
Modernized shipping docks, reduced unit handling cost; Container corporation. W. Hasselo. il Factory Management 104:158-9 D '46
Oranges by pallet. il Bsns W p52 Mr 8 '47
Packaging economies through the unit load; abstract. W. G. Bennett. Mod Packaging 20:154 Ap '47
Saving in freight pays for expendable paper pallets; General electric co. E. H. Ashley. il Factory Management 105:108-9 Mr '47
Solving shipping problems with wire. Factory Management 105:229 Ag '47
Transportation insurance, why? J. Adams, jr. Management R 36:295-6 My '47

See also
Airlines—Freight service
Chemicals—Transportation
Containers (for shipping)
Freight car service
Freight handling
Loading and unloading—Cars
Packing for shipment
Railroads—Claims
Railroads—Loading rules
Railroads—Rates
Shipping departments
Transportation

SHIPPING
Emphasis on export trade; need for reducing shipping costs. J. C. Hancock. Elec R (Lond) 140:541-2 Ap 4 '47
Shipping shortage is here. Bsns W p101-2 F 1 '47
Water carriers reach low mark in traffic. Ry Age 121:848 N 16 '46

See also
Barges
Freight handling
Insurance, Marine
Maritime law
Merchant marine
Ports
Salvage
Shipbuilding
Shipment of goods
Ships
Steamboat lines
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Transportation
Waterways

Claims

Cargo fire loss not proved to be caused by repair men's negligence. East Underw 48: 29 F 14 '47
Carrier relieved of liability for damage after discharge of cargo from ship. East Underw 48:29 F 14 '47
Federal court rules on how loss to cargo on deck should be fixed. East Underw 48:26 Jl 18 '47
Liability limitation denied as due diligence by owner not proved. East Underw 47:30 N 22 '46
Ship owner liable for damage to paprika cargo on voyage from Spain. East Underw 48:23 Ag 15 '47
Shipowner sues in district court to limit cargo damage liability; Great Atlantic & Pacific tea co. v. Brasiliero. East Underw 48:23+ Ag 8 '47

See also
Insurance, Marine—Adjustment of claims

Rates

Ship companies seek coastwise rate hikes. Barron's 27:6 Ap 14 '47

Statistics

Army engineers to collect waterborne commerce statistics. Marine Eng 52:108+ F '47

Canada

Shipping report, year ended Dec. 31, 1946. 115p pa 25c Canada. Dominion bur. of statistics, Ottawa '47

China

Chinese relief vessels to be operated by recently organized company. For Comm W 26:15 Mr 8 '47

SHIPPING—*Continued*

Great Lakes

Design and power of the Great Lakes bulk cargo carrier. L. A. Baier. Marine Eng 52: 79-81 Ag '47
Lake tonnage off. Bsns W p22 D 21 '46
Marine radar on the Great Lakes. il Iron Age 159:121 Mr 6 '47
Menace to steel; A.F.L. and C.I.O. organizing drives on Great Lakes. Bsns W p90 Mr 22 '47
Modern Great Lakes freighter. R. C. Stanbrook. Marine Eng 52:73-5 Ap '47
New Lake cargo. Bsns W p32+ Ja 4 '47
Predict record Great Lakes iron ore shipments this year. W. A. Lloyd. Iron Age 159:115-16 Mr 13 '47
Race to build ore stocks nip-and-tuck. il Steel 121:53-5 O 13 '47
Radar equipment to benefit lake vessel operation. il Steel 120:115+ Ap 7 '47
Radar on the Great Lakes. N. A. Schorr. il diag Radio N 37:35-8+ F '47

See also Detroit and Cleveland navigation company

Latin America

Latin-American nations strive to ease harassing port congestion. S. G. Koushnareff. il For Comm W 29:3-4+ N 1 '47

United States

American shipping faces rising tide of foreign competition. E. P. Farley. Marine Eng 52:59-61 Ap '47
Banker's view of the shipping industry. M. Moore. Marine Eng 51:88-90 N '46
Dilemma in ships; coastwise and intercoastal ships. Bsns W p22 N 30 '46
Essential foreign trade routes. Marine Eng 51:70-4 D '46
Future of the American shipping industry; foreign commerce and foreign travel. S. P. Simpson. Marine Eng 52:110+ F '47
Outlook for coastwise and intercoastal shipping. G. Cush. il Dom Comm 34:22-8 N '46
Shiplines face stormy seas. Bsns W p78+ Je 28 '47
U.S. water-borne foreign commerce by trade area and flag of vessel during first 10 months of 1946. N. Habib. For Comm W 27: 39-41 Ap 12 '47

See also

Merchant marine—United States
Miami, Florida—Commerce
United States—Maritime commission

SHIPPING containers. See Containers (for shipping)

SHIPPING departments

Consolidated layout quadruples handling capacity; Parker appliance company combines inspection, packaging and shipping departments in one work area. C. J. Giblin. il plan Factory Management 105:96-9 F '47
Modernized shipping docks, reduced unit handling cost; Container Corporation. W. Haselo. il Factory Management 104:158-9 D '46
New layout returned first cost in three months. W. D. Weidner. il plan Factory Management 105:72-4 Ag '47
Revamped shipping layout cuts costs ten to thirty per cent; Lincoln electric co. C. M. Erickson. plans Factory Management 105: 70-1 S '47

SHIPS

Big ships. Fortune 36:116 Jl '47
Magnetic field of a ship and its neutralization by coil degaussing. W. C. Potts. diags Inst E E J 93 pt 1:488-95; Discussion. 522-4 N '46
Processes applied to a ship to alter its state of magnetization. S. H. Ayliffe. diags Inst E E J 93 pt 1:508-17; Discussion. 522-4 N '46
Shipbuilding and marine engineering in 1946. il Engineer 183:22-3, 51-3, supp 4, 71, 94-5 Ja 3-24 '47

See also

Barges
Dredges
Fishing boats
Freight ships
Ice breaking vessels
Landing craft
Lightships
Loading and unloading—Ships
Mail ships
Maritime law
Merchant marine
Motor ships
Naval architecture
Power plants, Floating
Propellers
Radio telephone on ships
Refrigeration on ships
Sailing vessels
Salvage
Seamen
Ship decoration
Ship propulsion
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Shipping
Shipyards
Steamboats
Submarine boats
Tank ships
Towboats
Train ferries
Warships
Whaling vessels

Air conditioning

Air conditioning on new U.S. ships in trans-Pacific trade. diags Heat & Ven 43:96-7 D '46
Air conditioning ships. il Heat & Ven 44: 98 Ja '47·
Better cargo conditions are attracting shippers to American ships. O. D. Colvin. Weekly Underw 156:753+ Mr 15 '47
Biggest maritime installation; the Queen Elizabeth. il Dom Eng 169:136 Ja '47
Colvin announces new Cargocaire unit. il Marine Eng 52:92 Je '47
Marine air-conditioning applications. H. E. Parker. Marine Eng 52:63-7 Mr '47
Minimal replenishment air required for living spaces, under conditions of mechanical cooling and removal of odors; ship's berthing space. W. V. Consolazio and L. J. Pecora. bibliog plan diag Heating-Piping 19:103-14 Mr '47; Abstract. Heat & Ven 44: 103 F '47
Navy plans to air condition all its major combatant ships. il Heating-Piping 18:85-6 N '46; Same cond. Heat & Ven 44:101-2 My '47
Underwriters study Cargocaire system. O. D. Colvin. Weekly Underw 156:52+ Ja 4 '47

Cargo

Control of humidity in cargo spaces. O. D. Colvin and S. J. Duly. plans diags Marine Eng 52:80-3 My '47
Underwriters study Cargocaire system; losses from excessive moisture and inadequate ventilation serious problem. O. D. Colvin. Weekly Underw 156:52+ Ja 4 '47

Crew accommodations

See Ships—Forecastles

Decoration

See Ship decoration

Demagnetization

See Demagnetization

Demolition

Accident control in ship scrapping; dismantling the Normandie. M. E. Lipsett. il Marine Eng 52:81-2 O '47
Breaking up the Normandie proves to be big engineering job. G. F. Sullivan. il Iron Age 159:102-3 Ap 17 '47
Lead and zinc fume hazards in ship-scrapping. Safety Eng 93:62 My '47
New credo for shipyards; demolition pays. il Bsns W p28 My 10 '47

Electric equipment

Alternating current for auxiliary plants of merchant vessels; abstract. B. Fox and H. C. Coleman. Marine Eng 52:92-3; Discussion. 93-5 Ja '47
Cargo ships; standard vessels built during the war. W. T. Butterwick and W. M. Morison. Elec R (Lond) 139:771 N 15 '46
Design of ship's service system and auxiliary power supply system. F. M. Starr. il diags Marine Eng 52:68-75 Ag '47
Electrical and allied developments of 1946; marine. G. Bartlett. il Gen Elec R 50:43-4 Ja '47
Electrical engineering aspect of degaussing. I. S. Fraser and others. il diags Inst E E J 93 pt 1:496-507 N '46; Same cond. Engineer 181:563-5 Je 21 '46; Discussion. Inst E E J 93 pt 1:522-4 N '46
Electrical steering of ships; AEG Ward Leonard system. R. Beach. il diags Elec Eng 66:244-8 Mr '47
General Electric 1946 marine activity. R. S. Neblett. il Marine Eng 52:94-5 F '47

SHIPS—Electric equipment—*Continued*
Growth of electrical applications in ships and shipyards. J. A. P. Farrant. Inst E E J 94 pt 1:103-5 F '47
Maxspeed cargo-winch drive on the freighter, Angèle Higgins. M. A. Whiting. il diags Marine Eng 52:69-72 Ap '47
1946 Westinghouse marine activity. C. H. Weaver. il Marine Eng 52:96-8+ F '47
Queen Elizabeth; electrical services. il Electrician 137:1052 O 18 '46
Silicone insulation as applied to naval power equipment. H. P. Walker. Elec Eng 66:647-9 Jl '47

See also
Electric driving—Ships' auxiliaries
Radio telegraph on ships
Radio telephone on ships
Ship propulsion, Electric

Equipment

Cargo handling with crane gear. A. C. Rohn and others. il Marine Eng 52:72-4+ O '47
C1-M-AV1 design. il plans Marine Eng 52: 62-4 Je '47
Comparison of the carrying capacities of rough and smooth bore oil suction and discharge hose under simulative service conditions; fueling of ships. T. A. Werkenthin and others. bibliog il Rubber Age 61:685-96 S '47
Cunard White Star liner Media. il Engineer 184:227-30 S 5 '47
Cunard White Star liner Queen Elizabeth. il plan diags Engineer 182:386-8, 411-12 N 1-8 '46
Death lurks in an empty tank; accident on board ship. Marine Eng 52:87 S '47
Design of sump tanks on certain turbine vessels. diags Marine Eng 52:70-1 S '47
Fifty years of pump building; the Warren steam pump company. il Marine Eng 52:96-8 Je '47
Launch of the Nova Scotia. il Engineer 182: 443 N 15 '46
Passenger and cargo liner Del Norte. il plans diags Marine Eng 52:65-91 Ja '47
Passenger-cargo vessel Alcoa Cavalier. il plans diags Marine Eng 52:52-60 My '47
Port and river steamer Portland. il Marine Eng 52:77-9 O '47
Propulsion machinery for Alcoa ships. il plans Marine Eng 52:70-9 My '47
Regenerative unit for generating oxygen, cobalt disalicylal ethylene diamine. B. B. Fogler. bibliog il diags Ind & Eng Chem 39: 1353-60 O '47
Southern Railway Channel steamer Falaise. il Engineering 164:393-4 O 24 '47
Sun-built T2-SE-A1 tankers. il plans diags Marine Eng 52:62-75+ Jl '47
T3 tanker Stanvac Calcutta. il plans diags Marine Eng 52:63-9 F '47
Turbo-electric S.S. Hinemoa for New Zealand. il Engineering 163:8 Ja 3 '47
United fruit company adds nine Yaque class reefers to its fleet. il plans diag Marine Eng 52:54-64 S '47
United Fruit refrigerated cargo ships. M. L. Sellers. il plans diags Marine Eng 52:54-67 Ag '47

See also
Logs (ships)
Nautical instruments
Refrigeration on ships
Winches, Electric

Failures

Design and methods of construction of welded steel merchant vessels; final report of Board of investigation. il plans diags Welding J 26:569-619 bibliog(53 titles, p618-19) Jl '47; Abstract. Marine Eng 52:67-8 S '47
Welded ship fractures; investigation vindicates all-welded construction. E. C. Kreutzberg. Steel 120:120+ Je 16 '47

Fires and fire protection

Famous Kungsholm swept by fire in New York. Weekly Underw 156:754-5 Mr 15 '47
Fire-protection system on Alcoa ships. M. A. Laswell. il diag Marine Eng 52:82-4 Je '47
Galley fire damages river boat. Marine Eng 52:94 Ag '47
Safety features of large liners, American and foreign. J. L. Bates and I. J. Wanless. East Underw 47:30 D 27 '46; 48:27 Ja 3 '47
Uninsured $500,000 ship fire may mean scrapping by government; liner John Ericsson. Nat Underw 51:4 Mr 13 '47

Forecastles

Improved arrangement of accommodations for modern cargo vessels; discussion of paper by J. E. Church. Engineering 163:271 Ap 4 '47

Fueling

Comparison of the carrying capacities of rough and smooth bore oil suction and discharge hose under simulative service conditions; fueling of ships. T. A. Werkenthin and others. bibliog il Rubber Age 61:685-96 S '47

Heating and ventilation

Axial fans for marine ventilation. R. J. Purcell. il Marine Eng 52:88-92 Je '47
Control of humidity in cargo spaces. O. D. Colvin and S. J. Duly. plans diags Marine Eng 52:80-3 My '47
Design engineer reports on operating experience. J. H. Clarke. plans Heating-Piping 19:83-6 Ag '47

See also
Ships—Air conditioning

Launching

See Launching

Length of service

Replacement in the shipping industry; Norwegian mercantile marine 1932-39. J. Einarsen. R Econ Stat 28:225-30 N '46

Lighting

Decorative lighting afloat; Queen Elizabeth. il Electrician 137:1217-18 N 1 '46; Abstract. Light & Lighting 39:221 D '46

Model testing

Model and full-scale experiments on side launching. F. H. Todd and E. Laws. il diags Engineering 164:70-2, 94-5 Jl 18-25 '47
Use of ship models magnetically to scale in degaussing research. R. J. Gossage. il Inst E E J 93 pt 1:447-52; Discussion. 452-5 O '46

See also
Ship model tanks

Painting

Battelle institute develops antifouling paint. Marine Eng 51:122+ N '46
Formulation of anti-corrosive compositions for ships' bottoms and under-water service on steels; abstracts. F. Fancutt and J. C. Hudson. Engineering 162:569 D 13 '46; Paint Oil & Chem R 110:56+ O 16 '47; Discussion. Engineering 162:569-70 D 13 '46
Hot plastic paint. H. L. Aldrich. il Paint Oil & Chem R 110:8+ Ja 23 '47
Interim descriptive statement on the leaching-rate test for ships' anti-fouling compositions; abstracts and discussion. Engineering 162:569 D 13 '46; Engineeer 182:535-6 D 13 '46
Leaching rate tests on anti-fouling compositions; testing method for inland stations. N. W. Hanson and R. F. Jervis. diag Soc Chem Ind J 65:329-33 N '46
Report on anti-fouling research, 1942-44; abstracts and discussion. J. E. Harris. Engineering 162:569 D 13 '46; Engineeer 182:535 D 13 '46

Piping

Electric welding of pipe. O. Blodgett. il diags Welding J 26:684-9 Ag '47
Practical piping problems; design engineer reports on operating experience. J. H. Clarke. il map plans diags Heating-Piping 19:76-9 Ja; 82-5 F; 84-6 Mr; 89-93 Ap; 92-4 My; 79-82 Je; 83-6 Ag; 100-2 S; 91-4 O; 97-100 N '47 (to be cont)

Radio apparatus

See Radio apparatus on ships

Rat infestation

Studies of deratization of surface vessels by means of 1080 (sodium fluoroacetate). J. H. Hughes. Pub Health Rep 62:933-40 Je 27 '47

SHIPS—*Continued*

Reconstruction

Conversion of Hawaiian Refiner by Bethlehem steel company. Marine Eng 52:64 Je '47
Converted corvette Camco. J. A. McAleer. il Marine Eng 52:95-6 Mr '47
Converting the LST to a coastwise cargo carrier. R. N. Herbert. plans diags Marine Eng 52:70-5 F; 88-91 Mr '47
Lake freighter, E. J. Block, converted to Diesel-electric propulsion. B. C. Dennison, jr. il plans diag Marine Eng 51:100-9 N '46
Reconditioning of the America. J. P. Comstock. il Marine Eng 51:70-80 N '46
Reconversion of the Santa Rosa. J. P. Comstock. il Marine Eng 52:56-62 Mr '47
Reconversion of the steamship Quirigua. il Marine Eng 52:62-6 Ap '47
Todd shipyards reconverts United Fruit liner Antigua. il Marine Eng 52:88 Ap '47

Refrigeration

See Refrigeration on ships

Repair

British ship-repairing, 1939-1945. L. Edwards. Engineering 163:282, 306-7 Ap 11-18 '47
General Electric performs rare shipboard repair by machining journals of the Mormacwave's main-propulsion gear. il Marine Eng 52:66 S '47
Northam ship-repair yard. il Engineering 164:343-5 O 10 '47
Problems facing the ship repairing industry. G. H. French. Marine Eng 51:93-5 N '46
Service shop saves by machining on shipboard. il Gen Elec R 50:53 Ag '47
Submersible bolt-driving and punching gun; for making temporary ship repairs during salvage operations. diag Engineering 162:597 D 20 '46

See also
Dry docks

Safety measures

See Safety at sea

Sanitation

Gastroenteritis aboard ship; common types encountered, and the prevention and control of outbreaks. W. A. Meyers. Pub Health Rep 61:1853-8 D 20 '46

See also
Barges—Sanitation

Speed

See also
Logs (ships)

Stability

Experiments with activated tanks. N. Minorsky. bibliog diags A S M E Trans 69:735-47 O '47

Staterooms

New stateroom; to provide for daytime living as well as sleeping. il plans Marine Eng 52:86-8 Jl '47

Storage

Air drying for preservation. il Sci Am 176:171-2 Ap '47

Strains and stresses

Structural investigation in still water of the welded tanker Neverita. F. B. Bull and others. bibliog il plans diags Welding J 25:sup809-43 D '46

Strength

Classification standards and longitudinal strength; discussion of paper by J. L. Adam. Engineering 163:343 Ap 25 '47; Engineer 183:305-6 Ap 11 '47

Surplus ships

China to have U.S. surplus ships. Comm & Fin Chr 165:2538 My 3 '47
Foreign interests buying prewar American flag ships. Marine Eng 52:81-4 Mr '47
Progress in selling the government fleet. P. M. Zeis. il Dom Comm 35:34-40 Mr '47
Vessels sold under provisions of Merchant ship sales act of 1946. Marine Eng 52:58-62 F '47

Testing

Examination of the records of the Greyhound experiments. A. M. Robb. bibliog Engineering 162:453-4 N 8 '46

See also
Ship model tanks
Ships—Model testing

Vibration

Torsional vibration amplitudes at non-resonant speeds with special reference to the interpretation of torsiograph records. W. K. Wilson. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 3): 83-98; Discussion. il 99-108 '45

SHIPS, Aluminum

All-aluminum merchant ships proposed by Alcoa. il Marine Eng 52:102 Ja '47
All-aluminum ships. Mech Eng 69:498-9 Je '47

SHIPS, Diesel-electric. See Motor ships; Ship propulsion, Electric

SHIPYARDS

Ingalls shipyards hum. il Bsns W p75-6+ O 11 '47

See also
Navy yards and naval stations
Shipbuilding

Accidents

Cost of shipyard accidents. W. H. Collins. Weekly Underw 156:958-9+ Ap 5 '47
Lifeboat accidents in shipyards. Marine Eng 52:98 O '47

Electric equipment

Growth of electrical applications in ships and shipyards. J. A. P. Farrant. Inst E E J 94 pt 1:105-6 F '47
Scottish shipbuilding; diverse uses of electricity in the Scotstoun yard. il Elec R (Lond) 141:499-502 O 3 '47

Employees

Health and safety in contract shipyards during the war. P. Drinker. Ind Med 16:449+ S '47
Health survey of shipyard welders; abstracts. Ind Med 16:465-6+ S '47; Safety Eng 94:48-9 S '47
Reconversion experiences of Northwest shipyard workers. J. A. Wells and E. S. La Perle. Mo Labor R 64:627-35 Ap '47
Study of pneumonia in shipyard workers, with special reference to welders. M. F. Collen. bibliog J Ind Hygiene 29:113-22 Mr '47

See also Industrial union of marine and shipbuilding workers of America

Equipment

Northam ship-repair yard. il Engineering 164:343-5 O 10 '47; Engineer 184:336 O 10 '47
Shipyard hydraulic gantry; moving to new site. D. Rebbeck. il Mech Handling 33:733-7 D '46
Synthetic sand in the nonferrous foundry; Norfolk naval shipyard. S. W. Brinson. il Foundry 75:80-5+ Ja '47

See also
Launching

Management

Welding production controls for shipyard operation. J. Saliba. il Marine Eng 52:74-8 Mr '47

Safety measures

Controlling accidents in shipyards. W. H. Collins. Marine Eng 52:92-4 Ap '47
Eye injuries hurt more! experience at New York navy yard. L. Bauer. il Safety Eng 92:18-20+ O '46

SHIRER, William Lawrence, 1904-

Shirer and CBS share Peabody radio award. Ptr Ink 219:128 Ap 18 '47

SHIRTING

Printing of shirtings. H. S. Pogson. Soc Dyers & Col J 63:99-100 Ap '47
What news of printed cotton shirtings? D Langenzen. Textile Col 67:18-19 F '47

SHOCK
Effect of rutin on anaphylactic and histamine shock. R. J. Raiman and others. Science 106:368 O 17 '47
Shock treatment. Safety Eng 93:69 Ap '47

SHOCK absorbers
Handling mechanization boosts Monroe shock absorber and sway bar output. J. Geschelin. il Automotive & Aviation Ind 96:24-9+ Ja 15 '47
One in 10 an inspector; quality control system, Monroe auto equipment co. il Steel 119:70-2 D 30 '46

SHOCK waves
Interaction between boundary layer and shock waves in transonic flow. H. W. Liepmann. bibliog il diags J Aeronautical Sci 13:623-37 D '46
Microbarometric pressures from large high explosive blasts. E. F. Cox. bibliog map diag Acoustical Soc Am J 19:832-46 S '47
Nature of shock waves. M. M. Munk. il Aero Digest 54:66-7+ F '47
Normal reflection of shock waves. R. Finkelstein. diags Phys R 71:42-8 Ja 1 '47
Propagation of spherical shock waves in water. R. H. Cole and J. S. Coles. Phys R 71:128-9 Ja 15 '47
Refraction of plane shock waves. A. H. Taub. Phys R 72:51-60 Jl 1 '47
Shock produced by a collapsing cavity in water. M. F. M. Osborne. il diag A S M E Trans 69:253-62; Discussion. 262-6 Ap '47
Shock-wave oscillations in wind tunnels. H. W. Liepmann and H. Ashkenas. il diags J Aeronautical Sci 14:295-302 My '47
Shockwave tube new research aid. Aviation W 47:23 Jl 21 '47
Theory of the propagation of shock waves. S. R. Brinkley, jr. and J. G. Kirkwood. bibliog Phys R 71:606-11 My 1 '47
Transient analysis of linear systems, using underwater explosion waves. M. F. M. Osborne and J. L. Carter. il J Ap Phys 17: 871-3 N '46
Velocity of dilatation and Rayleigh waves in metal bars. J. H. McMillen. il diags Acoustical Soc Am J 18:190-9 Jl '46; Discussion. T. D. Northwood. 19:505 My '47
Water channel technique simulates supersonic waves. il Product Eng 18:125 O '47

SHOE dressings
Formulation of white shoe cleaners. P. Macaluso. il Chem Ind 60:234-5 F '47
See also
Shoe polish

SHOE fabrics
Behr-Manning reports progress with flock. R. E. Ellsworth. il Rayon 28:463-4 S '47

SHOE factories

Accounting
Accounting in the shoe manufacturing industry. L. E. Zraick. J Account 82:482-9 D '46

Employees
Medical service in the shoe industry in New Hampshire. D. W. Parker. il plan Ind Med 16:427-32 S '47

SHOE industry and trade
Hide and shoe prices trend in opposite directions. Barron's 26:5 D 23 '46
How a small shoe company grew big; General shoe corporation. E. Whitmore. il Am Bsns 17:10-11+ Ap; 24-6+ My '47
Shoes going up; output rises despite labor shortage. Bsns W p56+ S 20 '47
Slump in shoes. Bsns W p 19 My 10 '47
See also
Bata shoe company
Shoe stores

Advertising
Adler's tall story; Adler elevator shoe. R. G. Whalen. il Adv & Sell 40:36-7+ Ag '47
Brand-name footwear advertising expected to continue upward trend. Ptr Ink 220:94 Ag 22 '47
Our co-op advertising is no dark-of-the-moon deal; J. P. Smith shoe co., Chicago. M. B. Cutler. Ptr Ink 217:101-2+ N 15 '46
Shoe advertising budgets rise this year to increase per capita purchases. N. Kelne. Ptr Ink 219:89+ My 9 '47

Securities
New trends in the shoe industry; with financial survey of shoe and leather companies. S. Devlin. il Mag of Wall St 80:384-5+ Jl '47
Problems and prospects for the shoe industry; with statistics on leather and shoe companies. W. Beecher. il Mag of Wall St 79:196-8+ N 23 '46

Statistics
Indexes of clothing and footwear output for civilians, 1939-47; with charts and tabulations. L. Bridge. Survey of Cur Bsns 27: 17-23 Je '47
Production of civilian clothing and footwear, 1939-1947; graph. Dom Comm 35:68 Jl '47
Trends in production of footwear in the first quarter of 1947. Survey of Cur Bsns 27:7-8 My '47

Great Britain
Collaboration of employers and workers with government departments in Great Britain. Int Labour R 54:321-30 N '46
Lotus, limited 44th annual general meeting, Stafford. Economist 152:350-1 Mr 8 '47

Norway
Norway has 50 percent more 3-year-olds to shoe. For Comm W 25:22 D 28 '46
Norway's shoe manufacture 90 percent of prewar. For Comm W 25:33 N 9 '46

South Africa
South Africa's production of footwear. For Comm W 29:21 O 18 '47

Southern states
Finished products story of the month; many shoes made in the South. il Manuf Rec 116: 37+ My '47
New Brown shoe plant in operation at Pocahontas, Ark. il Manuf Rec 116:82+ Ja '47

SHOE machinery
Compo shoe machinery adds new outlets in men's field. Barron's 27:32 Je 30 '47

SHOE polish
Colored shoe polishes. M. A. Lesser. bibliog Soap & San Chem 23:116-17+ S '47
Shoe polish; abstract. J. M. Vallance. Soap & San Chem 23:153+ S '47

SHOE stores
Ansonia shoes in a Florida setting; store in Miami. il plan Arch Rec 101:108-9 My '47
Shoe salon; quick change remodeling for Andrew Geller, New York. il plan Arch Forum 87:90-1 Ag '47
Well styled store builds sales; Sax shoe store, Gary, Ind. il plans Am Bld 69:140-1 F '47

SHOE whiting. See Shoe dressings

SHOES

Manufacture
Merchandising of vinyl sheeting; O'Sullivan rubber corporation. Mod Plastics 24:109 Ap '47
See also
Shoe factories

Prices
Shoe resistance. Bsns W p19 Ja 11 '47

SHOES, Safety
Foot protection. il Nat Safety N 55:44+ Mr '47
Let's keep the employee on his feet! abstracts. J. M. Valenza. Safety Eng 94:38-9 Jl '47; Nat Safety N 56:30-1+ S '47
Milwaukee's safety shoe car begins tour to supply on-the-job sales service for all employees. il Ry Age 121:1050-1 D 21 '46
Selling workers on safety shoes. A. B. Masters. il Safety Eng 93:15+ Mr '47

Standards
Head and foot protection standards. H. G. Lamb. Safety Eng 94:50-1 O '47

SHOOTING
Crack shots prove product precision for Winchester. W. S. Allen. il Sales Management 58:42-4 Je 15 '47

SHOOTING—*Continued*
Lock, stock and barrel; portfolio of fine modern shooting irons, with some notes on the ancient fever of the gunbugs. il Fortune 36: 130-5+ O '47
See also
Rifle shooting
SHOP fronts. See Store buildings—Fronts
SHOP stewards
Job relations for union stewards; abstract. Management R 35:459-60 N '46
SHOPPING areas
City sells itself to its trading area; Mason City, Ia. radio program. Sales Management 59:100 Ag 1 '47
Factors determining retail shopping preferences; with data on Clinton, Hoopeston and Taylorville, Illinois. P. D. Converse. il Dun's R 55:21-3+ Ag '47
Mathematical law predicts the flow of consumers; study of retail trade areas in Illinois. P. D. Converse. map Ptr Ink 217: 120+ N 15 '46
Metropolitan decentralization and the retailer. G. J. Eberle. J Retailing 22:91-4 D '46
Small-town store studies its market; Tick's department store, Walden, N.Y. M. Tick. J Retailing 23:69-76 O '47
SHOPPING centers
Bellevue shopping square; community center development for Seattle. il plans diag Am Bld 68:74-7 N '46
Diesel joins the heat pump; power and air conditioning equipment for Wilton community center. il diag plan Diesel Power 25: 54-9 Ag '47
Flushing $50,000,000 retail center. il maps plans Arch Forum 85:100-5 N '46
For easy shopping; centralized retail area will be built in Beverly, Mass. map Bsns W p24+ N 9 '46
Individual gas fired air conditioners are featured in new St Louis shopping center. J. Kearns. il Am Gas J 166:43 Ap '47
Rye, New York, plans, remodels its business district. il diags Am Bld 68:68-71 N '46
Shopping center for suburban Boston, near Beverly, Mass. il maps plans Arch Forum 86:84-93 Je '47
Shopping center in Bellevue, Wash. il map plans Arch Forum 86:76-8 Ap '47
Shopping centers in Kaiser community homes developments. Arch Forum 86:154+ Mr '47
See also
Business districts
SHOPS
See also
Airlines—Shops
Car shops
Locomotive shops
Machine shops
Mine shops
Motor bus lines—Shops
Plumbing shops
Railroads—Shops
Repair shops
Sheet metal shops
SHOPS, Machine. See Machine shops
SHOPS, Mine. See Mine shops
SHORAN. See Radar
SHORE protection
See also
Levees
Rivers—Bank protection
SHORING and underpinning
Deep building excavation in Cincinnati required a bold design of cross-bracing. A. D. Quinn. il diags Eng N 139:30-3 Jl 10 '47
Underpinning features commercial building construction; installation of heating plant. J. C. Weaver. il plan Civil Eng 16:542-3 D '46
SHORT circuits
Broad-band noncontacting short circuits for coaxial lines. W. H. Huggins. diags Inst Radio Eng Proc 35:906-13, 1085-91 S-O '47
Short-circuit characteristics and load performance of inductor-type alternators. A. Mandl. il diags Inst E E J 94 pt 2:102-17 Ap '47
Short-circuit requirements for transformers. A. N. Garin. Elec Eng 66:771-3 Ag '47
SHORT line railroads. See Railroads, Short line
SHORT selling. See Stocks—Short selling
SHORTAGES. See Production
SHORTENING
Changes in fats and oils during freezing and thawing. Food Ind 19:632-3 My '47
Shortening eliminates bakers' stale returns. Food Ind 19:1255-7 S '47
SHOT blasting. See Shot peening
SHOT peening
Award to J. O. Almen, or achievement in pre-stressing of metals and metal parts. il Materials & Methods 24:1156-9 N '46
Influence of shot peening on fatigue strength of 14ST alloy. C. B. Gleason. Iron Age 159: 62-4 Ja 9 '47
Shot for metal peening. O. E. Harder and J. T. Gow. il Am Soc for Metals Trans 35:390-7; Discussion. 397-401 '45
Shotpeening; abstract. Materials & Methods 24:1258+ N '46
Shot-peening of springs. A. Oreffice. Metal Prog 50:676 O '46; Discussion. 52:103 Jl '47
Strengthening metal parts by shot peening. H. F. Moore. bibliog il diags Iron Age 158:70-6 N 28; 81-6 D 5 '46
Test shot blasting for sealing sprayed lead coatings. il Iron Age 160:60 Jl 31 '47
Uses of shot peening other than for fatigue durability. L. J. Wieschhaus. il Product Eng 18:122-7 Ag '47
SHOVELING machines
Armor plate steels used in huge coal stripping dipper. il Steel 119:84-6 N 18 '46
Diesels help make power shovel history. il Diesel Power 25:68-70 F '47
Lessmann integrated tractor shovel-loader combination. il Roads & Bridges 85:143 S '47
Smooth load action for power shovels; air-operated disk-type clutch. diags Steel 120: 83 Mr 31 '47
Tandem shovels increase stripping depth at Clearco. il diags Coal Age 52:87-9 My '47
Why we use Diesels in Link-Belt-Speeder shovel-cranes. G. H. Olson. il Diesel Power 25:48-50+ S '47
With planned stripping, 12 men get 900 tons on first day. il Coal Age 52:93-6 Je '47
SHOW cases, Refrigerated
Good loans available on refrigerated showcases. L. Plummer. il Bankers Mo 64:271-2 Je '47
SHOW rooms. See Showrooms
SHOW windows
Good window displays are saved and used again; survey in New England. il Ptr Ink 220:40-1 S 12 '47
Hardware window display. Dom Comm 35:61-2 Je '47
New arrangement for bringing the inside outside; Wiss jewelry store, East Orange, N.J. il plan Arch Rec 101:101 F '47
Striking displays can sell radio service. P. H. Wendel. il Radio N 36:30-1+ D '46
Frost and condensation
How to stop condensation on confectionery window. diags Heating-Piping 19:98-9 Ap '47
Heating and ventilation
Preventing condensation on store windows. diags Heating-Piping 19:96-8 My '47
Unit heaters meet architectural requirements of modern store. il Heating-Piping 19:85 My '47
SHOWROOMS
Built for selling; Reliance manufacturing company's new Chicago salesrooms. il Am Bsns 17:16-17 Mr '47
Carpet showplace for buggy trade; Carpet mart, Hempstead, N.Y. il plan Arch Rec 101:110-12 My '47
Chicago heavy machinery distributor uses working displays to step up sales; Bryant machinery & engineering company, Chicago. D. Easterberg. il Ind Marketing 32: 54+ Jl '47
Display rooms for paper containers. il plan diags Arch Forum 87:102-3 O '47
Dramatic presentation of sound; display rooms for RCA Victor division, Camden, N.J. il plan Arch Rec 101:86-94 My '47

SHOWROOMS—*Continued*
Fabric showroom for Goodall. il plans diags Arch Forum 85:124-6 N '46
Furniture showroom functions as sales office for Rucker-Fuller. il plans diags Arch Forum 87:92-4 Ag '47
Lightolier unveils new showrooms. il Sales Management 58:45 F 1 '47
Showroom for children's dresses. il plan diags Arch Forum 87:96-7 O '47
Washington's electrical shopping center where nothing is for sale. il Sales Management 57:55 D 15 '46
Wholesale rug and yarn showrooms; James Lees & sons co, Chicago. il plan Arch Rec 101:104-7 My '47

See also
Gas companies—Showrooms
Plumbing shops—Showrooms

Heating and ventilation
Showroom is radiant heated, Inland heating company. il plan diag Dom Eng 169:116-17 F '47

Lighting
Light tells a magic carpet story; Bigelow-Sanford showroom, Merchandise mart, Chicago il plans diags Arch Rec 101:88-93 Ap '47

SHREVE, Earl Owen, 1881-
New president of U.S Chamber of commerce. por(cover) Bsns W p8 My 3 '47
Portrait. Bsns W p 17 Je 28 '47

SHREVE, Randolph Norris, 1885-
Sketch. por Chem & Eng N 25:3059 O 20 '47

SHREWS, Fossil
New shrew from the Niobrara river upper miocene of Nebraska. J. R. Macdonald diags Am J Sci 245:123-6 F '47

SHRIMPS, Frozen
Freezing marine products in Texas W. R. Woolrich, jr. il map Refrig Eng 54:222-5 S '47

SHRINKAGE of ceramic materials
Shrinkage rates in firing fire-clay refractories. D. K. Stevens and R E Birch. Am Cer Soc J 30:109-13 Ap 1 '47

SHRINKAGE of metals
Contribution to the study of expansion and contraction P. Berthet. diags Welding J 26:sup370-1 Jl '47
Gas and shrinkage in tin bronzes E F. Tibbetts il Foundry 75:74-7+ S '47
Shrinkage and distortion of welded joints G. E. Claussen. diags Welding J 26:sup519-29 S '47
Transverse shrinkage of welds; statistical study. F. Campus. diags Welding J 26:sup485-8 Ag '47

SHRINKAGE of textiles

See also
Cotton fabrics—Shrinkage
Rayon fabrics—Shrinkage
Woolen and worsted fabrics—Shrinkage

SHRINKAGE of wood. See Wood—Shrinking and swelling

SHROYER, Thomas E.
Portrait. Bsns W p 18 Je 28 '47

SIAM (Thailand)
Siamese prospects. map Economist 152:803 My 24 '47

See also
Tin mines and mining—Siam

Commercial policy
Export controls lifted from all but essential commodities. For Comm W 26:17 F 8 '47
Foreign-exchange board issues regulations for application for foreign exchange and revises import priority list. For Comm W 28:18-19 S 20 '47
Trade and exchange control procedure simplified For Comm W 26:19 Mr 29 '47

Economic conditions
News by countries. For Comm W 26:25-6 F 22 '47
Siam takes stock; recording some gains despite obstacles D. V. Knibb. il For Comm W 28:3-5+ Jl 19 '47

SIBERIA

See also
Gold mines and mining—Siberia

SICILY

Economic conditions
News by countries. For Comm W 25:16-17 N 23 '46

SICK leave
Collective bargaining in health; question of sick leave with pay, and health and hospital coverage. A. Fletcher Min & Met 27. 552-3 N '46; Same cond. il Min Cong J 32: 44-5 D '46
Paid vacations and sick leave in industry, 1945-46. E. M. Bunn. Mo Labor R 65:331-4 S '47

SICKNESS
Sickness absenteeism among industrial workers, first quarter of 1946. W. M. Gafafer. Pub Health Rep 61:1664-6 N 15 '46
Sickness absenteeism among industrial workers, second and third quarters of 1946. W. M. Gafafer. Pub Health Rep 62:272-6 F 21 '47
Sickness absenteeism among industrial workers, fourth quarter of 1946. W. M. Gafafer Pub Health Rep 62:1095-7 Jl 25 '47
Sickness absenteeism among male and female industrial workers during 1945, with a note on the respiratory epidemic of 1945-46. W. M. Gafafer. bibliog Pub Health Rep 61: 1620-30 N 8 '46

See also
Diseases
Infectious diseases
Insurance, Health
Medical service
Mortality
Public health

SICKNESS benefits
Cash sickness benefits for railroad workers. Ind Med 16:290 Je '47
Compulsory sickness compensation for New York state; proposals, alternatives, costs. 184p National industrial conference board, 247 Park av, New York 17 '47
House group would end sickness benefits; provisions of Crosser act. Ry Age 123:25-6 Jl 5 '47
National industrial conference board surveys voluntary cash sickness benefit plans in New York state. East Underw 48.48-9 Ap 25 '47
Plant hospitalization plan with unusual coverage, Hoffmann-La Roche, inc. Factory Management 105.117 S '47
Sickness and maternity benefits for railroad workers Mo Labor R 65:194-5 Ag '47
Sickness benefits begin July 1 under the Railroad unemployment insurance act. Ry Age 122 1207 Je 14 '47
Sickness benefits trends; Massachusetts bill for accident and sickness benefits; Washington Governor wants cash sickness benefits. East Underw 48.45 F 21 '47
Social security board advises state temporary disability insurance coordinated with unemployment compensation. East Underw 48:34+ F 28 '47, Abstract. Nat Underw 51:14 F 27 '47; Same. Nat Underw (Life ed) 51:6 F 28 '47
Voluntary cash sickness benefits protect half of N Y. state workers; survey by National industrial conference board. E. Muntz and others. Iron Age 159:142-4 My 1 '47

SIDE lines

See also
Diversification in industry
Gasoline service stations—Side line selling
Oil companies—Side line selling
Products, New

SIDEWALK advertising. See Advertising, Outdoor

SIDEWALKS, Concrete
Cantilevered I-beams support the forms for concrete bridge walk replacement. il diags Roads & Sts 89:71-3 O '46

See also
Walks, Concrete

SIDING (building)
Aluminum in rural construction F. B. Hastings. il Sheet Metal Worker 38.48-9 Je '47

SIERRA NEVADA
Structure plan of the southern Sierra Nevada, California. E. B. Mayo. bibliog Geol Soc Bul 58:495-504, pl 1 Je '47

SIERRALITE. See Cordierite

SIEVES
Effect of sieve loading on the results of sieve analysis of natural sands. F. A. Shergold. il Soc Chem Ind J 65:245-9 S '46

SIGHT
Better vision boosts production A. C. Holland. il Sci Am 176 245-8 Je '47
Better vision for greater efficiency. E. F. Richardson. il Factory Management 105. 109-16 S '47
Blink-rate and ease of seeing. M. Luckiesh and others. bibliog Illum Eng 42 584-8 My '47
Contrast thresholds of the human eye. H. R. Blackwell. il plans diag Opt Soc Am J 36:624-43 N '46
Development of visual perception in man and chimpanzee. A. H. Riesen. Science 106:107-8 Ag 1 '47
Effect of a constant current on vision. S. V. Kravkov and L. P. Galochkina. bibliog diags Opt Soc Am J 37.181-6 Mr '47
Eyesight and lighting; report of a discussion by the Ophthalmological section of the Royal society of medicine. Light & Lighting 40:123-5 Jl '47
How much can we see. B. O'Brien. Illum Eng 42:268-71 F '47
Importance of visual aptitude testing. K. Kern. il Paper Ind 28:1740+ Mr '47
Light for living H. L. Logan. bibliog il map diags Illum Eng 42.291-319 Mr '47; Abstract. Elec West 98.50-2 Ja '47; Discussion. Illum Eng 42:320-4 Mr '47
Lighting and vision. H. C Weston. Light & Lighting 40:35-6 F '47
Sensitivity of the human eye to infra-red radiation D. R. Griffin and others. bibliog diag Opt Soc Am J 37:546-54 Jl '47
Size, shape, and contrast in detection of targets by daylight vision, data and analytical description. E S. Lamar and others bibliog diag Opt Soc Am J 37:531-45 Jl '47
Visibility of lines and squares at high brightnesses. S. Hecht and others bibliog diag Opt Soc Am J 37.500-7 Je '47
Vision fact finding discloses relationship of visual capacity and job performance. C. P. Brownell. il Safety Eng 93:24+ Ap '47
Visual aptitude tests prove of value to industry. J. A Howland. il Foundry 75:130+ Ag '47
Visual skills versus employee efficiency. N. C Kephart il Iron Age 160:60-3 Jl 10 '47

See also
Color blindness
Color sense
Eye
Lighting
Optics, Physiological
Visibility

SIGNALS, Railroad. See Railroads—Signals

SIGNALS and signaling
High-sensitivity photoconductive cell. C. W. Hewlett. il diags Gen Elec R 50:22-5 Ap '47

See also
Fog signals
Light signals
Mine signals
Radio signals
Railroads—Signals
Telegraph
Traffic signals

SIGNATURE cards. See Banks and banking—Signature cards

SIGNATURES

See also
Advertisements—Signatures

SIGNIFICANT difference (statistics)
Statistical sign test. W. J. Dixon and A. M. Mood. Am Stat Assn J 41:557-66 D '46

SIGNS
American bazaar; gallery of art of American salesmanship. il Fortune 36:108-21 N '47
Resistance welding improves appearance of sheet metal signs il Steel 120:122 Je 23 '47

SIGNS, Dealers'
Striking displays can sell radio service. P. H. Wendel. il Radio N 36 30-1+ D '46

SILAGE
Chemical aspects of silage-making. A. I. Virtanen Chem Age (Lond) 55:776 D 21 '46

SILANE. See Silicane

SILANOLS. See Silicols

SILEX company
Buyers' market is still big; Silex co.'s market saturation test in Peoria area. il Bsns W p54+ Je 14 '47
How Silex built acceptance for a new idea. C. J. Swan. il Ptr Ink 219·31-3 My 30 '47
Peoria; yardstick for sales; Silex co. test. Bsns W p50-2 D 7 '46

SILICA
Alumina-silica relationship in glass H. W. Safford and A. Silverman bibliog Am Cer Soc J 30.203-11 Jl 1 '47
Appraising exposures to silica dust. F. R. Holden and others. bibliog J Ind Hygiene 29·265-8 Jl '47
Decenes formed from *t*-amyl alcohol and from 2-methyl-2-butene; composition of the hydrogenated products. G. C. Johnson. bibliog Am Chem Soc J 69·146-9 Ja '47
Effect of freezing on the stability of colloidal dispersions, silica sols; preliminary report. F. Hazel. bibliog diag J Phys & Colloid Chem 51·415-25 Mr '47
Five ways to remove dissolved silica from boiler feedwater. M. E. Gilwood. diags Power 91:540-3 Ag '47
Influence of calcium carbonate on settling characteristics of silica dust. M. W. First and L. Silverman. bibliog J Ind Hygiene 29 259-64 Jl '47
Lung retention of quartz dust smaller than one-half micron T. F. Hatch and V. H. Kindsvatter. bibliog il diag J Ind Hygiene 29:342-6 S '47
Measurement of potentials at the interface between vitreous silica and solutions of thorium chloride and lanthanum chloride. L. A. Wood and L B. Robinson Am Chem Soc J 69:1862-6 Ag '47
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2. J. F. Schairer and N. L. Bowen. bibliog diags Am J Sci 245.193-204 Ap '47
Production of alumina by the lime soda process; removal of silica from alumina and solutions. W. E. Prytherch and others. bibliog Chem Age (Lond) 56:717-20 My 31 '47
Surface tension of the PbO-B_2O_3 and PbO-SiO_2 systems; abstract. L. Shartsis and others Glass Ind 28.292+ Je '47
System CaO-SiO_2-H_2O and the hydration of the calcium silicates H. H. Steinour. Chem R 40 391-460 bibliog(191 ref, p455-60) Je '47
Thermal reaction of hexafluoroethane with quartz. L. White, jr. and O K. Rice. bibliog Am Chem Soc J 69·267-70 F '47
X-ray diffraction data for compounds in systems Li_2O-SiO_2 and BaO-SiO_2. A. E Austin Am Cer Soc J 30:218-20 Jl 1 '47

See also
Chert
Diatomaceous earth
Ludox
Quartz
Sand
Tripoli

Analysis

Analysis of anhydrous hydrogen fluoride C D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47
Analysis of silica-alumina cracking catalysts; spectrographic determination of contaminants R A. Burdett and L. C. Jones, jr. bibliog Anal Chem 19:238-41 Ap '47
Conversion of silica during ignition, possible source of error in analysis of powdered samples. D. A. Bailey. bibliog il J Ind Hygiene 29:242-9 Jl '47
Determination of residual silica on cotton in peroxide bleaching. B. DuBose and V B Holland Am Dyestuff Rep 36:227-8 My 5 '47
Photometer measures dissolved silica. N. I. Sax. il Power 91:762-3+ N '47

SILICA, Colloidal. See Silica gel

SILICA, Fused
Clear fused quartz; Nieder process. R. B. Ladoo. il Min & Met 28:501-3 O '47
Fused quartz production of optical quality; developed by W. C. Heraeus. Cer Ind 47: 66 N '46
Heraeus processes for quartz glasses. Cer Ind 48 124+ Ap '47

SILICA aerogel. See Silica gel

SILICA brick
Examination of polished specimens of refractories by reflected light J. R Hensler and S. Zerfoss. bibliog il Am Cer Soc J 30.105-8 Ap 1 '47
Silica vs. basic brick; rammed doors highlight steel refractory panel. il Brick & Clay Rec 111:68+ Jl '47

Testing

Elastic behavior and creep of refractory bricks under tensile and compressive loads. L. E Mong. bibliog diags J Res Nat Bur Stand 38:229-40 F '47; Same. Am Cer Soc J 30·69-78 Mr 1 '47
First report of the converter refractories subcommittee 3pls diags Iron & Steel Inst J 155:235-69 F '47; Discussion 157:100-3 S '47

SILICA gel
Activated silica; new chemical engineering tool. R. C Merrill and H. L. Bolton. bibliog flow diags il Chem Eng Prog 43.sup27-32 Ja '47
Les applications actuelles des gels de silice. J. Caillaud. Génie Civil 124·155-6 Ap 15 '47
Assembly and testing of 52-foot laboratory adsorption column, separation of hydrocarbons by adsorption B. J. Mair, A. L Gaboriault and F. D Rossini bibliog plans diags Ind & Eng Chem 39:1072-81 S '47
Banding of basic mercuric chloride in silica gel. R I. Rush and others. il J Chem Educ 24:238-9 My '47
Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W M Quattlebaum, W J Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47
Effect of heat-treatment on the sorption-desorption hysteresis characteristics of silica gel. W O. Milligan and H. H. Rachford, jr bibliog J Phys & Colloid Chem 51·333-59 Ja '47
Improving water plant operation with activated silica. H. R Hay bibliog Water & Sewage Works 93.353-8, 389-92, 479-82 S-O, D '46
Rapid determination of small amounts of carbon monoxide; preliminary report on the NBS colorimetric indicating gel. M. Shepherd Anal Chem 19·77-81 F '47
Significance of internal structure in gelatinizing silicate minerals K J. Murata. bibliog In U S Geol S Bul 950:25-33 '46
Symmetrical arrangement of atoms in aluminosilicates and random arrangement of two kinds of objects in a regular array. W. G. Schlecht bibliog In U S Geol S Bul 950·35-82, pl 1 '46
Use of silica aerogel as a thermal insulation. F. F. Ogden and J F. White. bibliog il Refrig Eng 52·411-14 N '46

SILICA replicas. See Electron microscope—Replica technique

SILICANE
Chemistry of the higher silanes; tetrasilane. H. J. Emeléus and A. G. Maddock. Chem Soc J p 1131-4 D '46
Hydrogen-halogen exchange reactions of triethylsilane; new rearrangement of neopentyl chloride F C. Whitmore, E W. Pietrusza and L. H. Sommer. bibliog Am Chem Soc J 69·2108-10 S '47
Intramolecular rearrangement of chloromethyltrimethylsilane. F. C. Whitmore, L. H. Sommer and J. Gold bibliog Am Chem Soc J 69 1976-7 Ag '47
Preparation of substituted acetoxy silanes H A Schuyten, J. W Weaver and J. D. Reid. bibliog Am Chem Soc J 69:2110-12 S '47
Use of sodium in the preparation of methylene-linked silanes. J. T Goodwin, jr., W. E Baldwin and R. R McGregor. Am Chem Soc J 69:2247 S '47
Water-repellent coatings from silicon. Chem Ind 60 978+ Je '47

See also
Ethyl trichlorosilicane

SILICATES
Fluorescence of silicate phosphors K H Butler. bibliog diag Opt Soc Am J 37:566-71 Jl '47
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2 J F Schairer and N. L. Bowen bibliog diags Am J Sci 245·193-204 Ap '47
Significance of internal structure in gelatinizing silicate minerals. K. J Murata. bibliog In U S Geol S Bul 950:25-33 '46
Silicate phosphors for cathode-ray tubes P. N. Campbell. Soc Chem Ind J 66:191-4 Je '47
Silicates in water processing and fibre retention Pulp & Pa of Can 48:96-7 S '47

See also
Alkali metal silicates
Attapulgite
Beryl
Cordierite
Glass
Mica
Pumice
Rocks
Serpentine
Sillimanite
Sodium silicates
Talc
Vermiculite
Zeolites

Analysis

Contamination of silicate samples crushed in steel mortars. E B Sandell Anal Chem 19:652-3 S '47
Determination of sodium and potassium in silicates. S. Kallmann. bibliog Ind & Eng Chem Anal ed 18.678-80 N '46

SILICIC acid
C-18 alcohol esters of orthosilicic acid L B. Falkenburg, H. M. Teeter and J. C. Cowan. Am Chem Soc J 69:486-7 Mr '47

SILICOLS
Properties of the silicon-hydroxyl bond in trialkylsilanols. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore. bibliog Am Chem Soc J 68:2282-4 N '46

SILICOMOLYBDIC acid
Adaptation of the silicomolybdic acid method for the estimation of morphine to the photoelectric colorimeter. F. D Shideman and A R Kelly. Science 106·298-9 S 26 '47

SILICON
Abnormal creep in carbon steels; effect of manganese, silicon and molybdenum. J. Glen il Iron & Steel Inst J 155:501-12 Ap '47
Contact potential difference in silicon crystal rectifiers. W. E. Meyerhof. bibliog il diags Phys R 71.727-35 My 15 '47
Density of surface states on silicon deduced from contact potential measurements. W. H. Brattain and W. Shockley. Phys R 72: 345 Ag 15 '47
Development of silicon crystal rectifiers for microwave radar receivers. J. H. Scaff and R. S. Ohl. il diags Bell System Tech J 26: 1-30 Ja '47
Effect of iron and silicon impurities on the tensile properties and heat-treatment characteristics of sand-cast aluminum-10 per cent magnesium alloy test bars. R. T. Parker and others. il Engineering 163:273-6 Ap 4 '47
German silicon chemistry; silicon tetrachloride development Chem Age (Lond) 56: 711 My 31 '47
K X-ray absorption edge of silicon. V. P. Barton and G A. Lindsay. il Phys R 71:406-8 Ap 1 '47
New bridge photo-cell employing a photoconductive effect in silicon; some properties of high purity silicon. G. K. Teal and others. bibliog diag J Ap Phys 17:879-86 N '46
Silicon and germanium rectifiers; tabulations. Electronics 20:146-7 (Buyers' guide) Mid-Je '47

Analysis

Determination of silicon in relatively nonvolatile organosilicon compounds. H Gilman and others. bibliog Am Chem Soc J 68:2728 D '46
Rapid gravimetric determination of silicon in aluminum alloys. P Lisan and H. L. Katz. bibliog Anal Chem 19:252-3 Ap '47

Isotopes

Isotopic constitution of tungsten, silicon, and boron M. G Inghram. bibliog diag Phys R 70:653-60 N 1 '46

SILICON alloys
Aluminum-silicon alloys by electrothermal reduction of clay with coke M. M. Striplin, jr. and W M. Kelly bibliog il diags Chem Eng Prog 43 569-78 O '47
Wrought copper alloys with high silicon. A. G. H. Andersen. il Metal Prog 50:839-43 N '46

SILICON carbide
Output increased, maintenance reduced in new high temperature furnace; silicon carbide heating tubes and hearth roller. J. D. Knox. il diag Steel 120:99+ F 3 '47
Silicon carbide addition in gray iron automotive castings E. A Loria and others. il Metal Prog 51:587-92 Ap '47
Silicon carbide radiant tubes for annealing furnaces M H. Luttropp il Iron Age 160: 58-61 Ag 14 '47
Specially processed silicon carbide as a deoxidizing agent in the reducing slag of basic electric steelmaking E A Loria and others. bibliog Electrochem Soc Trans 91 (preprint 18) 273-83 '47; Abstract. Steel 121 105+ Jl 7 '47
Use of silicon carbide kiln furniture C. F Geiger and O. R. Stach. Am Cer Soc Bul 26:232-4 Ag 15 '47

SILICON compounds
Application of bond refractions to organosilicon chemistry. E L. Warrick. bibliog Am Chem Soc J 68:2455-9 D '46
Equilibria between linear and cyclic polymers in methylpolysiloxanes. D. W. Scott bibliog il Am Chem Soc J 68:2294-8 N '46
Ethyl β-triethylsiloxycrotonate and tetra-*n*-butylsilane H Gilman and R. N. Clark. bibliog Am Chem Soc J 69:967-8 Ap '47
Hydrogen-halogen exchange reactions of triethylsilane; new rearrangement of neopentyl chloride F. C. Whitmore, E. W. Pietrusza and L H Sommer. bibliog Am Chem Soc J 69.2108-10 S '47
Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott bibliog Am Chem Soc J 68:2291-4 N '46
Infrared absorption spectra of tetramethyl compounds. C. W. Young, J. S. Koehler and D. S. McKinney. bibliog Am Chem Soc J 69: 1410-15 Je '47
Intramolecular rearrangement of chloromethyltrimethylsilane. F C. Whitmore, L. H. Sommer and J Gold bibliog Am Chem Soc J 69:1976-7 Ag '47
K X-ray absorption edge of silicon. V. P. Barton and G A Lindsay. il Phys R 71:406-8 Ap 1 '47
Method of calculating the boiling points of silicon compounds R. N. Lewis and A. E. Newkirk. bibliog Am Chem Soc J 69:701-3 Mr '47
New compounds with a skeleton of alternate silicon and carbon atoms. L H Sommer and others. Am Chem Soc J 69:980 Ap '47
Organosilicon polymers; infrared spectra of the methylpolysiloxanes N. Wright and M. J Hunter. bibliog Am Chem Soc J 69: 803-9 Ap '47
Organosilicon polymers; open chain dimethylsiloxanes with trimethylsiloxy end groups. M. J Hunter and others. bibliog Am Chem Soc J 68:2284-90 N '46
Preparation and properties of 2-chloroalkyl esters of boric, silicic, and phosphoric acids. W. J. Jones and others. Chem Soc J p824-7 S '46
Present state of organosilicon chemistry. C. A Burkhard and others. bibliog(467 ref) Chem R 41:97-149 Ag '47
Properties of the silicon-hydroxyl bond in trialkylsilanols. L. H. Sommer, E. W. Pietrusza and F. C. Whitmore bibliog Am Chem Soc J 68:2282-4 N '46
Recent developments in dielectric materials. W Jackson. diag Inst E E J 94 pt 1.31-2 Ja '47; Same. Inst E E J 94 pt 3:7-8 Ja '47
Silicon esters H. G. Emblem. bibliog Chem & Ind p435-7 Jl 19 '47
Silicon organic compounds. H G. Emblem and F. L. Sos. bibliog Chem & Ind p450-2 D 21 '46
Silicon organic compounds A. E. L Jervis and K. Mochlinski. il Chem Age (Lond) 57: 187-91, 219-20 Ag 9-16 '47
Some steric effects of the isopropyl group in organosilicon compounds H. Gilman and R N Clark. bibliog Am Chem Soc J 69: 1499-500 Je '47
Use of sodium in the preparation of methylene-linked silanes J. T Goodwin, jr., W. E Baldwin and R R. McGregor Am Chem Soc J 69 2247 S '47
Water-repellent films R Sci Instr 18.372-3 My '47

See also
Silica
Silicates
Silicones
Siloxanes

SILICON fluoroisocyanate
Fluoroisocyanates of silicon. G. S. Forbes and H. H Anderson. bibliog Am Chem Soc J 69:1241-2 Je '47

SILICON oxide. See Silica

SILICON steel
New radar transformer steel. G. H. Cole and R. S. Burns. il Materials & Methods 24: 1457-60 D '46

SILICON tetraacetate
Preparation of substituted acetoxy silanes. H A Schuyten, J. W Weaver and J D. Reid. bibliog Am Chem Soc J 69:2110-12 S '47

SILICON tetrachloride
German silicon chemistry; silicon tetrachloride development. Chem Age (Lond) 56: 711 My 31 '47
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole H. H. Sisler and J C. Cory. Am Chem Soc J 69:1515-19 Je '47
Molecular dissociation by electron bombardment; a study of $SiCl_4$ R. H. Vought. Phys R 71.93-101 Ja 15 '47
Partial hydrolysis of silicon tetrachloride. W. C Schumb and A J. Stevens. Am Chem Soc J 69.726 Mr '47

SILICONES
Bake oven permits the use of silicones; St Paul shops of the Great northern railway. il Ry Mech Eng 121:200 Ap '47
Beater sizing with the silicones. C. J. Bergendahl and C. E. Libby. bibliog Paper Tr J 125 40-8 S 4 '47
Electrical and allied developments of 1946, plastics and silicones. G Bartlett. il Gen Elec R 50.48 Ja '47
Materials for wire-wound resistors, some recent developments. E. E Marbaker. il Materials & Methods 25:85-8 My '47
Melting point bath liquids useful up to 440° C. L M White. bibliog il Anal Chem 19 432-3 Je '47
More about silicones; their characteristics and possible applications. Electrician 137: 1666-8 D 13 '46
New family of chemical polymers. W. T. Eleveth. Paper Tr J 124:122+ My 29 '47; Same abr. Paper Ind 29:1046-7 O '47
New rubber for high, low temperatures, silicone rubber. il Refrig Eng 53.42 Ja '47
Newest synthetic family. il Bsns W p47-8+ Mr 29 '47
Paradoxical paints. J. R. Patterson. il Sci Am 177:157-9 O '47
Possibility of free rotation in the silicones. W. L. Roth. Am Chem Soc J 69:474-5 F '47
Progress in engineering knowledge during 1946; silicones. P. L. Alger and others. il diag Gen Elec R 50.16-18 Mr '47
Recent developments; silicones. il Product Eng 18:[132-3] insert 19-20 Ap '47
Silicon-containing finishes to have wide application, abstract. J. R. Patterson. Paint Oil & Chem R 110:16+ Je 12 '47
Silicon organic compounds. H. G. Emblem and F L. Sos. bibliog Chem & Ind p450-2 D 21 '46
Silicon organic compounds; resins, varnishes, silicone liquids; greases and lubricants. A. E. L Jervis and K. Mochlinski. Chem Age (Lond) 57:219-20 Ag 16 '47
Silicon organic compounds; wide adaptability of silicones and silicon esters. A. E. L Jervis and K Mochlinski. il Chem Age (Lond) 57:187-91 Ag 9 '47
Silicone insulation as applied to naval power equipment H P. Walker. Elec Eng 66: 647-9 Jl '47

SILICONES—*Continued*
Silicone oil improves rubber; abstract. H. J Collyer and E M Dannenberg Chem Eng 54 248+ Ag '47
Silicone oils. D F. Wilcock. bibliog Gen Elec R 49 14-18 N, 28-33 D '46
Silicone rubber finds increasing applications. il Mach 53:182-3 Ap '47
Silicone rubber for industrial products. il Mech Eng 68:1079-80 D '46
Silicone rubber; properties and applications. E. M Irish and J R. Stirrat. il diags Product Eng 18:146-50 F '47
Silicone rubber used for high temperature gaskets Elec World 128.68+ Ag 30 '47
Silicones. G. L. Moses. Materials & Methods 24 1520 D '46
Silicones as electrical insulating materials. S. L. Bass and others. bibliog il Electrochem Soc Trans 90 (preprint 19):255-72 '46
Les silicones, composés organo-métalloïdiques à base de silicium. E Lemaire. il Génie Civil 124.345-9 S 15 '47
Silicones; new class of synthetics. il Fortune 35:104-11+ My '47
Silicones; new continent in the world of chemistry S L Bass. bibliog il Elec Eng 66 381-5 Ap '47
Silicones; new engineering materials S. L Bass bibliog il Chem & Ind p171-6, 189-92 Ap 5-12 '47
Silicones; new engineering materials; abstract H. L Boulton Chem Eng 54.274+ Ap '47
Silicones; organo-polysiloxanes M. J. Hunter il Can Chem & Process Ind 30.39-44 D '46
Sodium chloride versus construction materials. J. A. McHard. Chem Eng 54:216+ O '47
Solvents for silicone grease Chem & Eng N 25:1888+ Je 30 '47
Sulphur dioxide vs materials of chemical plant construction, silicones. J A. McHard Chem Eng 54 224 Jl '47
Surface studies of glass, contact angles L. A. Spitze and D O. Richards bibliog il J Ap Phys 18:904-11 O '47
Thermosetting silicone resins. Mod Plastics 24:112 D '46
Torsional vibration damper; utilizing silicone fluid. B. E O'Connor. il Machine Design 19.155-9 Ap '47
Uses and processing of silicone rubber. il Mod Plastics 24:102-4 D '46
Uses of silicone rubber in high-temperature field il Steel 119:80 D 30 '46
Viscometric investigation of dimethylsiloxane polymers. A J Barry. bibliog J Ap Phys 17:1020-4 D '46
Westinghouse high-temperature motor, silicone-insulated. il Mach 54:246C-246D S '47
Wet and dry chlorine vs. materials of chemical plant construction L. R Scribner. Chem Eng 54 219-20+ F '47
What about silicone-glass laminates? Mod Plastics 24:184+ My '47

SILICOSIS
Analysis of 200 cases of proved silicosis, abstract. V V. Labbé and others. J Ind Hygiene 29:sup65 Jl '47
Appraising exposures to silica dust F. R. Holden and others. bibliog J Ind Hygiene 29:265-8 Jl '47
Conversion of silica during ignition, possible source of error in analysis of powdered samples. D A Bailey. bibliog il J Ind Hygiene 29:242-9 Jl '47
Effect of zinc on tuberculosis and silicosis. W E Ballard Safety Eng 94:60-2 Jl '47
Influence of calcium carbonate on settling characteristics of silica dust. M. W. First and L Silverman. bibliog J Ind Hygiene 29:259-64 Jl '47
Lung retention of quartz dust smaller than one-half micron T. F Hatch and V H Kindsvatter bibliog il diag J Ind Hygiene 29:342-6 S '47
Medical facts revealed by aluminum therapy tests W. D. Robson. Eng & Min J 148:64-7 My '47
Report on an investigation into dust and ventilation conditions in the copper mines and the Broken Hill mine in northern Rhodesia with particular reference to silicosis; abstract. J. De V Lambrechts. J Ind Hygiene 29:sup20 Ja '47
Silicosis and silicotic pneumoconiosis; abstract. M. Bariéty and A. Hanaut. J Ind Hygiene 29 sup27-8 Mr '47
Silicosis and the ceramics worker; report of Ohio industrial commission. L. M. Merritt. Safety Eng 93.61+ Ap '47
Silicosis can be controlled. W. A. Betz. Cer Ind 47:63-4 D '46; Same. Brick & Clay Rec 110 62+ F '47
Silicosis control in the United States. J. G. Townsend Safety Eng 93:64 F '47
Silicosis in the whiteware industry L. M Merritt Safety Eng 93:56 Je '47
Some aspects of silicosis in Switzerland; abstract. A Thomas. J Ind Hygiene 29 sup63-4 Jl '47
Techniques are improved for aluminum therapy A W. Jacob il diag Eng & Min J 148 84-8 Je '47
Use of aluminum powder in the prevention and treatment of silicosis; abstract. W. E George. J Ind Hygiene 29.sup90-1 S '47

SILK
Attempts to raise silk in America. Rayon 28:223 Ap '47
Government encouraging mills to use silk. G. Montgomery. Textile World 97:133+ Ag '47
Jockey silks for Dad's day ties. Textile Col 69.35 O '47
Return to silk means knitting changes. K. A. Hahn. il Textile World 97:131 Ja '47
Soft water for silk hosiery mill with zeolite water conditioning R. L. Nessler. il diag Rayon 28.284-6 My '47
Structure of protein fibers. F. R Senti. bibliog il diags Am Dyestuff Rep 36.230-7 My 5 '47

Analysis
Quantitative chromatography of silk hydrolysate A Polson and others Science 105.603-4 Je 6 '47

SILK and rayon printers and dyers association of America
Dyers' association program for 1947. H. J. Fletcher Textile Col 69:18-19+ Ja '47
Functions and accomplishments. Rayon 28:524-6 O '47

SILK mills
Employees
Wage structure of the rayon and silk industry, June-July, 1946. M. S. Caffee. Mo Labor R 64:816-23 My '47

SILK printing
Brilliant color, geometrics for spring prints. B. Cadwallader Textile Col 68.16-17 D '46
Screen printing of rayon and silk with acid and direct dyes. Rayon 28:341-3, 392-4 Je-Jl '47

SILK screen printing
Photomatic screen-printing machine prints 2 to 15 colors il Textile World 97:161 My '47
Screen printing. E S Beton Soc Dyers & Col J 63 100-1 Ap '47
Screen printing of rayon and silk with acid and direct dyes. Rayon 28:341-3, 392-4 Je-Jl '47
Screen-printing plant achieves line production; Riveredge printers, inc. H. S. Knowlton il Textile World 97:106-7+ My '47
Thickenings for screen printing pastes. F F. Jacobs. Rayon 27:666-7 D '46

SILK throwing
Silk throwing requires layout changes. S. J. Miller. Textile World 96.123 D '46

SILK trade
Government encouraging mills to use silk. G Montgomery. Textile World 97:133+ Ag '47
Silk demand still lags. Barron's 27:37 My 19 '47
Silk story. Textile Col 69:34+ S '47

History
Auffmordt ante-dates U.S. fabric industry. Rayon 28:358 Jl '47
Five centuries of silk tradition. Rayon 28:357 Jl '47

Canada
Rayon and silk industry in Canada Rayon 27:634 D '46

SILK trade—*Continued*

Greece

Home and factory production. For Comm W 27 27 Je 28 '47

Italy

Italian raw silk exports. A. Giordano. Rayon 28 419-20 Ag '47

Japan

Japanese silk production, July-Sept 1946, table. For Comm W 26·33 F 1 '47

SILLIMANITE

Alexander-Barber sillimanite properties, Spartanburg county, S C R. C Hickman 3pls U S Bur Mines Rep of Invest 4118·1-5 '47

Concentration and determination of grade in tests on sillimanite in Idaho schist K. G Skinner and H. J. Kelly il Am Cer Soc J 30 197-202 Jl 1 '47

Exploration of Georgia and South Carolina sillimanite deposits. W C. Hudson 16pls U S Bur Mines Rep of Invest 3927:1-44 '46

Les gisements français de sillimanite. V. Charrin. Génie Civil 124 178-9 My 1 '47

Kyanite substitute production, artificial sillimanite. Oil Paint & Drug Rep 150.74 D 23 '46

Minéraux alumineux industriels; sillimanite et béryl, leurs possibilités en France. V Charrin Chimie & Ind 58·197-8 Ag '47

Rate of creep at elevated temperatures of four sillimanite tank blocks Glass Ind 28 85 F '47

SILOXANES

Cyclo-diphenylsiloxanes. J F. Hyde and others. bibliog il Am Chem Soc J 69·488-92 Mr '47

Equilibria between linear and cyclic polymers in methylpolysiloxanes D. W. Scott. bibliog il Am Chem Soc J 68:2294-8 N '46

Hydrolytic cleavage of methyl and chloromethyl siloxanes. R. H. Krieble and J. R. Elliott. bibliog Am Chem Soc J 68 2291-4 N '46

Liquid methylpolysiloxane systems D F. Wilcock. bibliog Am Chem Soc J 69.477-86 Mr '47

Organosilicon polymers; infrared spectra of the methylpolysiloxanes. N Wright and M J. Hunter bibliog Am Chem Soc J 69: 803-9 Ap '47

Organosilicon polymers; open chain dimethylsiloxanes with trimethylsiloxy end groups. M. J Hunter and others. bibliog Am Chem Soc J 68:2284-90 N '46

Silicones; organo-polysiloxanes. M. J. Hunter il Can Chem & Process Ind 30:39-44 D '46

Viscometric investigation of dimethylsiloxane polymers A J. Barry bibliog J Ap Phys 17:1020-4 D '46

SILT

Inexpensive aeration tanks handle disposal problem, wash oil from silt. flow diag il Pet Processing 2 102-3 F '47

Model study of Brown Canyon debris barrier. K. J Bermel and R L. Sanks. il map diag Am Soc C E Proc 72.613-28 My '46; Discussion. 72.1325-6, 1401-6 N-D '46

Water treatment at Yuma, Ariz. aimed at reduction of silt content C. G. Ekstrom Eng N 138 52 Ja 9 '47

SILURIAN period. See Geology, Stratigraphic—Silurian

SILVACON. See Bark

SILVER

Absolute energies of $K\alpha$-radiation from thick targets of silver. P. Kirkpatrick and A. V Baez bibliog diag Phys R 71·521-9 Ap 15 '47

Fatigue of Ag-Cs_2O, Ag-Cs photoelectric surfaces. S. Pakswer. bibliog J Ap Phys 18: 203-6 F '47

Heterogeneous catalytic activity of colloidal silver in the reduction of silver acetate. B. Krishna and S. Ghosh bibliog J Phys & Colloid Chem 51 1130-7 S '47

Influence of glass composition on reducibility of Ag^{+}, Bi^{3+}, Sb^{3+}, and Pb^{2+}. A. W. Bastress Am Cer Soc J 30:52-3 F 1 '47

Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J M. Blocher, jr. and A. B Garrett bibliog Am Chem Soc J 69:1594-8 Jl '47

Recoil of silver nuclei due to *K*-capture in cadmium. B. T. Wright. bibliog diag Phys R 71 839-41 Je 15 '47

Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others bibliog diag Phys R 71:65-79 Ja 15 '47

Stopping power of various substances for fission fragments E. Segrè and C Wiegand. diag Phys R 70:808-11 D 1 '46

U.S gold, silver, and lead production low in 1946 Min & Met 28·112 F '47

Industrial applications

Acetic acid vs materials of chemical plant construction L. C. Burman. Chem Eng 53:262+ N '46

Latest developments in engine bearings P. M. Heldt il Automotive & Aviation Ind 96: 34-5 Ap 1 '47

Silver and platinum in chemical plant construction; abstract. J. M. Pirie. Chem & Ind p91-2 F 8 '47

Sleeping beauty of industry E L Cady. il Sci Am 177:154-6 O '47

See also
Silver solder

Isotopes

Isotopic assignment of Cd and Ag activities. A. C Helmholz. bibliog Phys R 70.982-3 D 1 '46

Results of H^3 bombardment of Ag leading to Pd^{100} D. N Kundu and M L Pool. bibliog Phys R 72 101-8 Jl 15 '47

Prices

Freer silver market. Economist 152.256 F 8 '47

New crime of silver; who's guilty? P. McCarran; S. Weeks. Min & Met 28:10-14 Ja '47; Discussion (Free market for silver). W. Symmes. 28.205-6 Ap '47

Silver adjusts itself. Economist 151:960-1 D 14 '46

Silver, 1946 D. H. Leavens. Eng & Min J 148:76-8 F '47

Silver price disparities. Economist 152.35 Ja 4 '47

SILVER, Molten

Capillarity of metallic surfaces. E R Parker and R Smoluchowski. il diag Am Soc for Metals Trans 35:362-71; Discussion. 371-3 '45

SILVER acetate

Heterogeneous catalytic activity of colloidal silver in the reduction of silver acetate. B Krishna and S. Ghosh. bibliog J Phys & Colloid Chem 51·1130-7 S '47

SILVER alloys

See also
Silver solder

Analysis

X-ray diffraction study of the silver-magnesium alloy system. H R. Letner and S S. Sidhu bibliog il J Ap Phys 18:833-7 S '47

SILVER as money

Silver at the crossroads. il Min Cong J 33:83-6 F '47

SILVER brazing. See Silver solder

SILVER bromide

Aging of precipitates and coprecipitation, low temperature conductivity of silver bromide. I. Shapiro and I. M. Kolthoff bibliog diags J Chem Phys 15 41-6 Ja '47

Analysis of particle formation and growth by size-frequency determinations of the silver halide precipitations of photographic emulsions. R. P. Loveland and A. P. H. Trivelli. bibliog J Phys & Colloid Chem 51:1004-27 Jl '47

Electrokinetic potentials of precipitates. L. H. Ryerson, I. M. Kolthoff and K. Coad. bibliog diags J Phys & Colloid Chem 51. 321-32 Ja '47

Fading of latent alpha-ray image in emulsions H. Yagoda and N Kaplan il Phys R 71:910-11 Je 15 '47

SILVER bromide—*Continued*
Studies on the aging of precipitates and coprecipitation; compressibility of silver bromide powders. I. Shapiro and I. M Kolthoff bibliog diags J Phys & Colloid Chem 51:483-93 Mr '47

SILVER chlorate
Electrical conductance of aqueous solutions; silver chlorate at 25° J H Jones bibliog Am Chem Soc J 69:2065-6 Ag '47

SILVER chloride
Characteristics of the silver chloride-magnesium water activated battery. J. B. Mullen and P. L. Howard. Electrochem Soc Trans 90 (preprint 33):411-22 '46
High transmission windows for radiation of 3 to 14 microns wave-length M. Hyman, jr. and B H. Billings. Opt Soc Am J 37 113-18 F '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H Billings and M Hyman, jr. Opt Soc Am J 37:119-21 F '47
Molal electrode potentials of the silver-silver chloride electrode in 2-propyl alcohol-water mixtures from 0 to 40°. R. L. Moore and W. A. Felsing. bibliog Am Chem Soc J 69. 1076-9 My '47
Optical silver chloride. H. C Kremers. il Opt Soc Am J 37.337-41 My '47
Purification of sodium chloride and potassium chloride for use in electrochemical work, and the determination of small amounts of bromide. G. D. Pinching and R. G. Bates. bibliog diags J Res Nat Bur Stand 37:311-19 N '46
Silver chloride crystals; illustrations. Chem & Eng N 25 1946-7 Jl 7 '47

SILVER compounds
Reactions of the halogens with the silver salts of carboxylic acids. J. Kleinberg. Chem R 40.381-90 Je '47

SILVER dust
Design of exhaust systems; elimination of such dusts as gold, silver and platinum. F. H. Stebbins il plan diags Sheet Metal Worker 37.48-50+ D '46

SILVER fluorides
Fluorination of petroleum oils in liquid phase with silver difluoride. W. S Struve and others. diag Ind & Eng Chem 39:352-4 Mr '47
Preparation of fluorocarbons by catalytic fluorination on hydrocarbons. G. H Cady and others. diag Ind & Eng Chem 39.290-2 Mr '47
Preparation of fused-ring fluorocarbons. E. T. McBee and L. D Bechtol bibliog il diags Ind & Eng Chem 39.380-4 Mr '47

SILVER halides
Heats of solution and heats of reaction in liquid ammonia E Hennelly and others. Am Chem Soc J 69.1025-7 My '47
Photo-conductivity in photographic systems. W. West and B. H. Carroll. bibliog il diags J Chem Phys 15.529-43 Ag '47
Solubility product and the silver-ammonia halides. K B. Morris. J Chem Educ 24·236-7 My '47

SILVER in the body
See also
Argyria

SILVER industry and trade
Future of silver. A. Murdock. Min Cong J 32:61-2 O '46
Silver adjusts itself. Economist 151:960-1 D 14 '46
Silver at the crossroads. il Min Cong J 33:83-6 F '47
Silver dealings decentralised. Economist 151: 804 N 16 '46
U.S silver off market; supply and demand balance; world production trends downward, with industrial use increasing. F. Roberts. Barron's 27:29-30 O 6 '47
What future for silver? V. L. Horoth. il Mag of Wall St 80.28-9+ Ap 12 '47

Statistics

Silver, 1946. D. H. Leavens. Eng & Min J 148: 76-8 F '47

SILVER iodide
Nucleation of ice formation by silver iodide. B Vonnegut J Ap Phys 18·593-5 Jl '47

SILVER metallurgy
St Joseph lead enterprise, Compania minera Aguilar, S A.; milling practice W. L. Lew flow sheet Min & Met 28:409-11 Ag '47

SILVER mines and mining

Arizona

Arizona manganese-silver ores. T M Romslo and S F Ravitz. pl U S Bur Mines Rep of Invest 4097.1-13 '47

Colorado

History of famous western mines; the Matchless mine. J McCaleb. Can Min J 68:320 My '47

France

La zone de plomb et de cuivre argentifères du Beaujolais (Rhône). map Génie Civil 124.299 Ag 1 '47

Idaho

Geology of the lead-silver deposits of the Clark Fork district, Bonner county, Idaho. A L Anderson. bibliog maps U S Geol S Bul 944-B:37-117, pl 5-13 '47

Mexico

Exploration drilling at Pachuca. C. J Barber. bibliog il plan diag Min Cong J 33:21-7 O '47
Fresnillo develops flexible underhand stoping method. F. C. Pickard. diags Eng & Min J 148:89-91 Ap '47

Ontario

Cobalt returns. il J Chem Educ 23:522-4 N '46

SILVER molybdate
Determination of the interatomic distances in silver molybdate, Ag_2MoO_4. J. Donohue and W. Shand, jr. bibliog Am Chem Soc J 69·222-3 F '47

SILVER nitrite
Reaction of *d*-α-phenethyl chloride with silver nitrite. R. H. Eastman and S. D. Ross. bibliog Am Chem Soc J 68:2398 N '46

SILVER ores
Lead-silver mineralization in the Clark Fork district, Bonner county, Idaho. A. L. Anderson il map diag Econ Geol 41:105-23 Mr '46; Discussion. 41:554-5; 42:305-6 Ag '46, My '47

SILVER plating
Box and paddle silverplates blades and clips. M. D. Pollock. diags Elec World 128:124+ O 25 '47
Electrodeposited silver on steel for glass-to-metal seals. N. S. Freedman. il Electrochem Soc Trans 91 (preprint 19):285-96 '47
New process for electropolishing silver. D. Gray and S E. Eaton. il Iron Age 159:64-5 Ap 10 '47
New silver polishing process. Mech Eng 68: 658 Jl '46; Same cond. Iron Age 157·65 Je 6 '46; Same cond. Chem Ind 59:304+ Ag '46; Same cond. il Sci Am 175:137 S '46; Same cond. Steel 119.110 D 16 '46
Rapid polish for silver plate. D. R. Turner. Metal Prog 51:970 Je '47
Silver plating facilitates bonding glass to steel il Steel 121:92+ Ag 25 '47

SILVER poisoning. See Argyria

SILVER polish
See also
Silverware—Cleaning

SILVER reductors. See Reductors

SILVER selenide
Solubility of silver selenide and silver telluride in aqueous ammonia. R. S. Young and A. Golledge. Ind & Eng Chem 39:1299-300 O '47

SILVER solder
Brazing three-piece assembly with induction heating unit; joining parts of lawn mower. il Mach 54:168 O '47
Design and production control of silver alloy brazed joints in aircraft structures. H. A. Smith and P. A. Koerner. il diags Welding J 25·1061-7 N '46; Same. Aero Digest 55.54-6+ Jl '47

SILVER solder—*Continued*
Design possibilities in the silver brazing of cast iron H. Frick. il diags Product Eng 18: 128-32 O '47
Designing for silver brazing with induction heating. J. B. Ross. il Iron Age 158:62-5 D 26 '46
Electric furnace brazing solves a problem. S P. Lathrop. Materials & Methods 26:110 S '47
Furnace brazing. H. D. Hendrick. il diags Automobile Eng 37.365-71 O '47
Heat gun makes possible new applications of induction heating. J. W Williamson. il Mach 53 180-1 Ap '47
How silver brazing may simplify casting design. S. D. Heron. il diags Steel 120 90-1+ Ap 7 '47
Induction brazing of oil-filter shells. il Mach 53:177 Ap '47
Induction soldering speeds kitchen utensil production. L. Gise and J. R. Stewart. il Welding J 25:1210-11 D '46; Same cond. Elec World 127·70 Ja 4 '47
Induction soldering stainless steel kitchen utensils; Adel precision products corp. il Steel 120:87+ Ja 13 '47
Inspection and testing of brazed joints with especial reference to silver alloy brazing J. L. Christie and A. M Setapen. il Welding J 26:767-70 S '47
Low temperature silver alloy brazing. A. M. Setapen. il Steel 121.76-7+ S 8 '47
Metal-ceramic vacuum seals N T. Williams il diags R Sci Instr 18·394-7 Je '47
Musts in silver brazing stainless. A W Swift il Steel 120·98-9+ Ap 28 '47
Silver alloy brazing and soldering; abstract. J. B. Ross. Chem Eng 53·252 D '46
Welding alloy steel piping. E. R. Seabloom. il Heating-Piping 18.83 D '46
Welding small cables for conveyors H. W. Young. il Mech Handling 34 206+ Ap '47

SILVER sulfate
Ternary systems silver sulfate—alkali sulfate —water. E. L. Simons and J. E. Ricci. bibliog Am Chem Soc J 68:2194-202 N '46

SILVER telluride
Solubility of silver selenide and silver telluride in aqueous ammonia. R. S Young and A Golledge. Ind & Eng Chem 39:1299-300 O '47

SILVER tubes. See Tubes, Silver

SILVERWARE
High prices may cut silverware demand. Barron's 27:7 F 17 '47
Jewellery and silverware Working party report Economist 151.966-7 D 14 '46
Press-shop operations in making silverware; Oneida limited; illustrations with text. Mach 53.152-3 Jl '47

Cleaning
Electropolishing process for silver. J Chem Educ 23:537 N '46

Manufacture
Electropolishing silver-plated parts in cyanide solutions. D. Gray and S. E. Eaton. il Materials & Methods 26:78-81 Ag '47
Electropolishing silver to reduce finishing costs. D. Gray and S. E. Eaton. il Metal Finishing 45·60-1+ My '47

SILVERWARE chests
Silverware chest molded of urea for beauty, utility. il Mod Plastics 24:96-8 F '47

SIMMONS company
Record sales and earnings in 1946; report to stockholders. Comm & Fin Chr 165·1500 Mr 17 '47
Thumbnail stock appraisal. Mag of Wall St 79.417 Ja 18 '47

SIMPLIFICATION in industry
Simplified practices assist in distribution. E. W Ely. Dom Comm 35.11-13 Je '47

See also
Standardization

SIMULTANEOUS equations. See Equations, Simultaneous

SINCLAIR, Sir Robert John, 1893-
Britain's brain trust. por Bsns W p113-14 Ap 12 '47

SINCLAIR, Upton Beall, 1878-
Insurance check recalls Sinclair's father's failing. Nat Underw (Life ed) 51:4 Ja 3 '47

SINE bars
Sine bars, blocks, plates and fixtures; commercial standard CS 141-47; reference book sheet. Am Mach 91.155 Je 5 '47

SINE plates
Sine bars, blocks, plates and fixtures; commercial standard CS 141-47, reference book sheet Am Mach 91.155 Je 5 '47

SINGAPORE
Japanese judgments may be set aside, Colony of Singapore incorporation. For Comm W 26·17 Mr 1 '47
Recovery in Singapore. Economist 152:422 Mr 22 '47
Singapore prepares to vote. Economist 153: 245 Ag 9 '47
Sterling area redefined by new order; import permits for hard-currency areas canceled For Comm W 28:20 S 13 '47

Water supply
Chemist in Singapore under the Japanese. J. F. Clark. il diags Chem & Ind p99-102 F 15 '47

SINGEING (textiles)
New system speeds and improves rayon-fabric singeing J. C. Moore il diag Textile World 97 112-13+ Je '47

SINING, China
Water supply
How an American sanitary engineer is selling water systems in China. T. Durdin. Eng N 138 390 Mr 6 '47

SINK and float process
Flotation plant in packaged units for assembly. Comp Air Mag 52:259 O '47
Mesabi range changes heavy-media practice. E. C Bitzer. flow sheets il diag Min Cong J 33·36-9 Je '47
Ore treatment by heavy-media separation. il diag Engineer 182:523 D 6 '46
Semi-portable sink-float plant. flow sheet il Rock Prod 50·72-3 My '47
Sink-and-float separation improves fluorospar recovery. W C. Lay flow sheet il Eng & Min J 148:80-3 O '47

SINTERED glass. See Glass, Powdered

SINTERING
Fernico from metal powders. E. E. Burger. il diag Gen Elec R 49:22-4 D '46
Good sinter and its production. T W. Plante. Blast F & Steel Pl 34:1515-19; 35:100+ D '46-Ja '47
Rate of sintering of copper powder A. J. Shaler and J. Wulff. Phys R 72:79-80 Jl 1 '47
Recovery of alumina from kaolin by the lime-soda sinter process. F. J Cservenyak. 18pls U S Bur Mines Rep of Invest 4069 1-59 '47
Sintered metal cavities il diags Mod Plastics 24:144-5 Mr '47
Sinters and sintering H. L. Saunders and H. J. Tress. Iron & Steel Inst J 152·303-15, pl 30-3 no 2 '45, Same cond. Blast F & Steel Pl 33.1385-90 N '45; Discussion. Iron & Steel Inst J 152:315-18 no 2 '45
Solving a steel production problem, sinter, a promising substitute. A. Hoffman. Min & Met 28 444-6 S '47
Use of sintered ore Chem Age (Lond) 57:469 O 4 '47

SINTERING machines
Igniter cuts fuel costs on Dwight-Lloyd sintering machines L M. P. Davison and C. M. Spencer. il diags Eng & Min J 148:75-6 S '47
Sintering machines for the iron and steel industry. W. J. Urban. il diag Blast F & Steel Pl 35·809-12 Jl '47

SIPHONS
Siphon culvert of Oswego lock gives long service; New York state barge canal. D. A. Watt. il diags Eng N 137·872-4 D 26 '46

SIPORIN, Mitchell, 1910-
Endless voyage; painting por Fortune 34: 170-1 D '46

SIRENS. See Whistles

SIRUPING machine
Solenoid syruper; bringing frozen fruit and berry packages to exact weight. il Mod Packaging 20:119 Ag '47

SIRUPS
How to improve low grade sweeteners; use of filter aids, alone, or in conjunction with activated carbon or ion exchange resins. W. J. Nelson flow sheet il Food Ind 18 1852-3 D '46
Ion exchange plant recovers sugar from fruit waste; Hawaiian pilot plant demineralizes 3,000 gals. of juice from pineapple shells daily. flow diags il Food Ind 18:1846-8+ D '46
Stability of ascorbic acid in blackcurrant syrup. A. Pollard and others. Chem & Ind p402-3 N 9 '46
Up from the barrel, new labels for Oelerich sirups, jams, etc il Mod Packaging 20. 134-6 Je '47

See also
Apple sirup
Corn sirup

Moisture content

Keeping properties of confectionery as influenced by its water vapour pressure. D W Grover bibliog Soc Chem Ind J 66 201-5 Jl '47

SISAL hemp
Higher sisal prices Economist 152:732 My 10 '47

SIZING (textiles)
Sizing agents, polyvinyl-alcohols; patent. Am Dyestuff Rep 36:418 Jl 28 '47
Test of warp size is in the weaving. P. V. Seydel il Textile World 97.125+ Je '47
Warp sizing with cellulose solutions; apparatus. diags Am Dyestuff Rep 35 719 D 30 '46

See also
Cotton sizing
Rayon sizing

SIZING of paper. See Paper sizing

SKATES
High-frequency hardening of ice-skate runners. il Mach 53·182 F '47
Wooden-ice-skate production, Netherlands. For Comm W 27·23 My 3 '47

See also
Roller skates

SKATING rinks
Ice rink piping fails during wartime shutdown. P. S Park Heating-Piping 19·97 Ap '47
Retractable ice rink used in night club. Heating-Piping 19.75 Jl '47

SKILL
Pride in craftsmanship W. H. Birks il diags Inst Mech Eng J & Proc 156:Proc39-42 Je '47

SKILLMAN, Hope
King Cotton's queen. por Textile Col 69·24-5 Ap '47

SKIN
Epidermal application of diethylene glycol monoethyl ether (carbitol) and some other glycols; absorption, toxicity and visceral damage. P. J. Hanzlik and others. il J Ind Hygiene 29.325-41 S '47
Studies of thermal injury, automatic recording caloric applicator and skin-tissue and skin-surface thermocouples. F C. Henriques, jr. bibliog diags R Sci Instr 18: 673-80 S '47

Diseases

Calcium necrosis of the skin, abstract. A. G. Heppleston. J Ind Hygiene 29·sup92 S '47
Cold wave dermatitis; report of two cases. C. M. McGill and L. F Ray. Ind Med 16: 238 My '47
Dermatological hazards; the poultry industry. M. H Samitz. Ind Med 16·489-90 O '47
Industrial dermatitis. Chem Age (Lond) 57: 420 S 27 '47
Occupational dermatitis and preventive methods L. Schwartz and P C. Campbell, jr. bibliog il Safety Eng 93·58-61+ Je, 94·52-4 Jl '47
Occupational skin diseases. F. M R Bulmer. Can Chem & Process Ind 31:524-6+ Je '47
Paraprol as a prophylactic and therapeutic agent in nickel dermatitis and chrome sores. R. P. Scott. Ind Med 15:681 D '46
Pompholyx and occupational (contact) dermatitis T Benedek bibliog il Ind Med 16· 344-9 Jl '47
Preventing skin infections. Nat Safety N 55: 166+ Mr '47
Skin trouble of miners; new research on prevention and protection. W Schweisheimer Can Min J 67·1122-3 D '46
Solvent volatility in summer, dermatitis difficulties may increase. Safety Eng 93 64-5 Je '47

See also
Pellagra
Ringworm

SKIN temperature. See Temperature, Animal and human

SKINNER, William, and sons
History of William Skinner & sons spans century of accomplishments Rayon 28 309-11 Je '47

SKIS, Airplane. See Airplanes—Landing gear

SKIS and skiing
Ski recreational markets look to a banner year J. Jackson. il Dom Comm 35·39-43 F '47

SKODA works
Skoda works; progress of reconstruction reviewed il Chem Age (Lond) 55:562-3 N 9 '46

SKRAUP reaction
Skraup reaction with acrolein and its derivatives; the preparation of 6-methoxy-8-nitroquinoline H L. Yale. bibliog Am Chem Soc J 69 1230 My '47
Skraup reaction with *m*-substituted anilines L Bradford, T. J Elliott and F M. Rowe. Chem Soc J p437-45 Ap '47
Some derivatives of 7-methylquinoline J D Capps bibliog Am Chem Soc J 69.179-81 Ja '47

SKUTTERUDITE. See Cobalt arsenides

SKY
Brightness and polarization of the daylight sky at various altitudes above sea level R. Tousey and E O. Hulburt Opt Soc Am J 37·78-92 F '47

SKYSCRAPERS. See High buildings

SLABS, Concrete. See Concrete slabs

SLAG
Acid openhearth slag fluidity and its significance. G R Fitterer and others Metal Prog 50:824 N '46
Application of slag control and an investigation of basic open-hearth furnace slags T. Fairley. bibliog Iron & Steel Inst J 155·161-71 F '47, Discussion 156·505-10; 157 206-8 Ag, O '47
Basic open hearth slag control C. R Funk. diags Blast F & Steel Pl 35:939-43, 1098-104+, 1230-4 Ag-O '47 (to be cont)
Basic openhearth slags. K L. Fetters and E W Mahaney. bibliog il Iron Age 159:62-6 Mr 6; 64-8 Mr 13 '47
Gravity flow of materials cuts handling costs; Schory cement block co uses slag for aggregates. il diag Rock Prod 50.133 Jl '47
Heats of formation of $3CaO \cdot B_2O_3$, $2CaO \cdot B_2O_3$, $CaO\ B_2O_3$ and $CaO \cdot 2B_2O_3$. D. R. Torgeson and C H. Shomate. bibliog Am Chem Soc J 69:2103-5 S '47
Improvement of the citric-acid solubility of basic open-hearth slags containing fluorspar T. F Pearson. Iron & Steel Inst J 152 441-53; Discussion. 453-6 no 2 '45
Melting high-speed steel in the basic electric arc furnace; with charts, tables and colored illustrations. H C. Bigge. Iron Age 160: 118-36 O 16 '47
Nocivité particulière des poussières de scories de déphosphoration F. Barillet Génie Civil 124.198-9 My 15 '47
Oxide systems pertaining to steel-making furnace slags A H Jay and K. W Andrews. bibliog Iron & Steel Inst J 152 15-18 no 2 '45
Production of low-silicon basic iron using high-magnesia slags M. E. Nickel bibliog Steel 119.112-14+ D 9 '46; Same. Blast F & Steel Pl 34:1522-6 D '46

SLAG—*Continued*
Single slag basic electric heats, effect on grain growth characteristics. M. V. Healey. il Steel 121 104+ Ag 25 '47
Specially processed silicon carbide as a deoxidizing agent in the reducing slag of basic electric steelmaking. E. A. Loria and others. bibliog Electrochem Soc Trans 91 (preprint 18):273-83 '47
X-ray diffraction studies of chrome-steel slags G P. Chatterjee and S S. Sidhu. diag J Ap Phys 18.519-21 Je '47

Analysis

Mineralogical observations on some basic open-hearth slags. S O. Agrell. bibliog Iron & Steel Inst J 152·19-55, pl 2-6 no 2 '46
Rapid control method for the determination of slag in portland-blast furnace slag cement. W. J. McCoy. Rock Prod 50:106-7 O '47
Slag control by routine spectrographic analysis. J T. Rozsa il Metal Prog 51:593-7 Ap '47

SLAG (in boilers)
Horizontal cyclone burner for use with crushed coal. A. E Grunert and others. il diags A S M E Trans 69.613-27 Ag '47; Excerpts. Elec World 126 69-71 D 21 '46; Abstract. Power 91.15-18+ Ja '47; Discussion. A S M E Trans 69.627-34 Ag '47
How is slag avoided on superheater tubes? diags Power 91 48-50 Ja '47

SLAG as fertilizer
Improvement of the citric-acid solubility of basic open-hearth slags containing fluorspar. T F. Pearson. Iron & Steel Inst J 152:441-53, Discussion. 453-6 no 2 '45

SLANDER. See Libel and slander

SLASHER sizing. See Cotton sizing

SLATE
Properties and new uses of Pennsylvania slate. il diags Pennsylvania State College Mineral Industries Exp Sta Bul 47:1-168 bibliog(p159-68) '47 (pa $2)

SLAUGHTERING and slaughterhouses
Slaughter house tough jobs. R. Walter. flow diag il diag Food Ind 19:1340-1+ O '47

SLAV literature

Bibliography

Bibliography of Slavonic bibliography in English N Y Pub Lib Bul 51:200-8 Ap '47

SLAVS

Bibliography

Bibliography of Slavonic bibliography in English. N Y Pub Lib Bul 51:200-8 Ap '47 [reprinted]

SLEDS
Hazard checked; sled mounted drill for slope quarrying; material for Blue Mountain dam. W. C. Coe. il Nat Safety N 55 24-5+ My '47; Same cond. Comp Air Mag 52:126-7 My '47

SLEEP
See also
Narcolepsy

SLEEPING cars
Clear way for Pullman rate-increase tariffs. Ry Age 123.455 S 13 '47
Model sleeping car for railways. il Engineer 182:426 N 8 '46
Publicity junket of Great Northern's Empire Builder. Fortune 35 139 Ap '47
Rate rise proposed by Pullman company for sleeping-car service. Ry Age 123:375-6 Ag 30 '47
Would O K. railroad plan to buy Pullman. Ry Age 122·330-2 F 8 '47
See also
Pullman companies

SLICK airways, Inc.
Slick's all-freight airline. il Aero Digest 55.92+ O '47

SLIDE films
Adventures of a library filmstrip in Scandinavia. M. R. Lingenfelter. Special Lib 38: 147-52 My-Je '47
Color films teach new skills to retail furniture salesmen. R. R Rau. il Sales Management 59:103-4+ S 1 '47
Color views sell planned lighting. C. D. Hollister. il Elec World 128:150+ O 25 '47
Diamond Match lifts dealers' sights on sales potentials. V. R. Kendall. il Sales Management 59·102+ O 15 '47
Film departments in ad agencies. M Frisbie. il Ptr Ink 219.61-2+ Ap 25 '47
Films for five sales objectives. Sales Management 58·45 Je 1 '47
Five points to check before you make a film. G. L. Hough. Adv & Sell 40·76 O '47
G.E's improved method for mass sales training. J. DeJen. il Ptr Ink 218 38-9+ Mr 28 '47
Greater use of films urged as teaching aid G. B Clark. Eng & Min J 148·94-5 Ag '47
How to train a jobber's salesman in 45 minutes, Stewart-Warner film slides with sound. L B. Colby. il Sales Management 58 66+ Je 1 '47
How we sell ourselves to prospective salesmen, slide film technique. J. N. Griffith. Ptr Ink 219.48+ My 2 '47
Lights' camera! moving pictures and slide films in employee training. J H Kostmayer. il Bus Transportation 26.56-7 Ag '47
Management listens too; one bank's relations with employees; Continental Illinois national bank and trust company of Chicago prepares Manual for managers and the Man in management. A. G. Bradt. il Banking 39.33-4 D '46
New films that speed sales training; National retail furniture association releases 15 color sound-slidefilms. il Am Bsns 17:26+ Ag '47
Portland Gas & Coke offers hot water soundslide film to industry. il Gas Age 100.35+ Ag 21 '47; Same cond Am Gas Assn Mo 29:388 S '47
Slidefilms are sound. C. F. Scheer. il Nat Safety N 55:26-7+ F '47
Sound films for on-the-job baggage training program Bus Transportation 26·67 F '47
Visual education goes to the job, Standard register company il Nat Safety N 56.37 S '47; Same. Safety Eng 94:64 O '47
Visual equipment and its use in woods operations D W. Emmerson. il Pulp & Pa of Can 47:110-12 N '46

Catalogs

Index of training films; a comprehensive listing of more than 2,000 industrial motion pictures and slidefilms and their sources for reference and training use in industry and vocational education. 2d ed 128p pa $3 Eastman Kodak co, Rochester 4, New York '47

Projectors

New automatic slide projectors tested. W. H. Davis. Ptr Ink 220·96 Ag 15 '47
Photo-slide projectors. Consumers Res Bul 20:21-3 Jl '47

SLIDE rule
How to speed up slide-rule work. L. Johnson. il Eng N 139·112-14 Jl 24 '47; Discussion. 139·411, 544-5 S 18, O 16 '47
Math tips; slide, rule, engineers' friend. J. King. Power 90:555, 632, 708, 786, 872; 91: 56 Ag '46-Ja '47
Scholastic slide rule has new slide arrangement to simplify computations. diags Sci Am 177:176 O '47
Slide rule for calculating press size. il Iron Age 158:69 N 28 '46
Slide rule for determining chicken red cell agglutination titer. M C. Davies. diag Science 106·273 S 19 '47
Slide rule for the study of music and musical acoustics. L. E. Waddington. bibliog il Acoustical Soc Am J 19:878-85 S '47
Slide rule is all that's needed to figure duct equivalents P. Franck. il Heating-Piping 19:76-7 My '47
Slide rule speeds pipe studies for water supply systems. B. C. Seal. Eng N 138:938-9 Je 12 '47
Slide rule; uses for the life insurance agent. Life Ins Courant 52 370-2, 412-14 S-O '47
Special slide rule solves pipe-line engineering problems. R. M. Hutchinson. diag Oil & Gas J 46:249-51 S 20 '47
Street light calculator yields lamp life, load. H. E. Brooks. il Elec World 126:77 D 21 '46
Where does that decimal go? D H. Spofford J Account 84.67 Jl '47
Winder production aided by slide-rule calipers. il Textile World 97:154+ O '47

SLIDING doors. See Doors, Sliding

SLINGS and hitches
Suggestions on swinging scaffolds. il diag Paper Ind 29:98-9 Ap '47

SLIPPERINESS. See Floors—Anti-slip surfaces

SLIPPERY elm. See Elms

SLIPS (ceramics)
Engobes, slips and underslips. C. W. Parmelee. bibliog Cer Ind 47:74+ Ag; 98+ S; 82+ O; 98 N; 94 D '46; 48.74-5 F; 100-1 Mr '47

SLIPS (underwear)
Promotion package helps retailers do a better job; Sel-Mor slips B. Merrill. il Ptr Ink 219.42+ My 30 '47

SLOAN, Alfred Pritchard, 1875-
Portrait. Bsns W p26 O 11 '47

SLOCOMBE, Charles S. d. 1946
Sketch. Personnel J 25:258 F '47

SLOGANS
Car card slogan, devised in wartime, still good; Topps gum M. M. Levin. il Ptr Ink 218:42 F 7 '47

Recent additions to P.I. slogan file Ptr Ink 218:72+ Ja 10; 220.125+ Jl 25 '47

Slogan used 10 years is still effective; Southern Pacific billboards. F. Q. Tredway. il Ptr Ink 218:47 F 7 '47

SLOGANS, Election
Operation had enough? E. Hoftyzer. Adv & Sell 40.52 F '47

SLOT machines, Vending. See Vending machines

SLOTTING
Double-acting fixture speeds screw slotting. S Framurz. diag Am Mach 91:107 F 27 '47

How to position a slotting cutter. E. J. Rogers diags Am Mach 91:104 Ja 2 '47

Swinging arm slots screwheads in drillpress L A H. Casper. diag Am Mach 91:144 F 13 '47

SLOTTING machines
Slotted-link mechanisms. A. T J. Kersey. diags Engineering 163:277-9, 301-2 Ap 11-18 '47

SLUDGE, Sewage. See Sewage sludge

SMALL, John D.
CPA chief resigns, agency merging. Comm & Fin Chr 164:3127 D 12 '46

SMALL business. See Business—Small business

SMALL business credit commission. See American bankers association—Small business credit commission

SMALL loans. See Loans, Bank—Small loans; Loans, Small

SMALL town stores. See Retail trade—Small town stores

SMALLPOX
Improved method of producing smallpox vaccine of low bacterial content. D. H. Ducor. Pub Health Rep 62.565-81, pl 1-3 Ap 18 '47

Smallpox immunization requirement in China. Pub Health Rep 62.717 My 16 '47

Smallpox immunization requirements for persons entering the United States from Europe. Pub Health Rep 62 1253 Ag 29 '47

SMEGMA
Carcinogenic action of smegma. A. Plaut and A. C Kohn-Speyer. bibliog Science 105:391-2 Ap 11 '47

SMELTER fumes
Selenium fume exposure. M. Clinton, jr bibliog J Ind Hygiene 29 225-6 Jl '47

SMELTING
Pilot-plant investigations; matte smelting of Chamberlain, S. Dak., manganese ore; with cost data D. R. Torgeson and others. bibliog 7pls U S Bur Mines Rep of Invest 3917: 1-47 '46

Smelting and refining of reclaimed nonferrous metals A. E St John. il Metal Prog 52: 609-12 O '47

See also
Blast furnaces
Furnaces, Metallurgical
Metallurgy
Ore treatment
Slag
Smelting works

SMELTING, Electric
Electric smelting. R. Durrer. Iron & Steel Inst J 156:257-60 Je '47; Abstract. Engineering 164.67; Discussion. 67-8 Jl 18 '47

Electric smelting of low-grade nickel ores. S F. Ravitz. 4pls U S Bur Mines Rep of Invest 4122:1-39 '47

Electric smelting plant at Choindez. E. Gehrig plan diag Iron & Steel Inst J 156. 293-8 Je '47

Electric smelting points way to lower cost. M. Sem and F C. Collin. il diag Eng & Min J 148.86-90 Ag '47

SMELTING works
Outokumpu's copper smelter doubles output during war P. Bryk and others. il Eng & Min J 148:68-72 Ja '47

Equipment

St Joseph lead enterprise; Herculaneum smelter W. T. Isbell and others il Min & Met 28 377-82 Ag '47

St Joseph lead enterprise; Josephtown electrothermic zinc smelter. H K. Najarian and others. il Min & Met 28.398-405 Ag '47

Safety measures

Safety dividends in morale and good will; Virginia smelting co. A. B. Butt, jr. il Safety Eng 93:20+ Mr '47

SMITH, Alexander, and sons carpet company
Big five in floor coverings. R. Colston. Mag of Wall St 81:50 O 11 '47

SMITH, Arthur L. J. 1860-1946
Sketch por Spectator (Property ed) 12.7 D 26 '46

SMITH, Harold Dewey, 1898-
Resigns as vice-president of World bank. por Comm & Fin Chr 164.3207 D 19 '46

SMITH, Harold DeWitt, 1896-1947
Sketch. H. R. Mauersberger. por Rayon 28: 114 Mr '47

SMITH, Herbert Edward, 1889-
Portrait. Fortune 35:118 Je '47

SMITH, Lee Irvin, 1891-
Sketch. por Chem & Eng N 25:3059 O 20 '47

SMITH, Marshall M. 1896-
President of E. W. Bliss co. por Bsns W p80 N 9 '46

SMITH, Nelson Lee, 1899-
Portrait. Bsns W p5 D 28 '46
Smith elected chairman of FPC when Olds quits. por Elec World News ed 126:5 D 28 '46

SMITH, Tom J. jr.
FTC starts to probe grey market in steel. por Bsns W p46 My 3 '47

SMITH bill, S.526. See National science foundation (proposed)

SMITHSONIAN Institution

International exchange service

International exchange service Science 104: 540 D 6 '46

SMOKE
Fuel a major factor in the smokeless operation of a locomotive or a stationary Diesel? R J. Bender. diag Diesel Power 25:34-8 Jl '47

Investigation of a method for the analysis of smokes according to particle size. W. N. Lipscomb and others. diags J Ap Phys 18: 72-9 Ja '47

Must Diesel engines smoke? P. H. Schweitzer bibliog diag Diesel Power 25:62-6+ Mr; 54-6+ Ap '47; Same cond. (pt 1) Power 91: 178-80+ Mr '47

Photoelectric instrument for comparing the concentrations of very dilute aerosols, and measuring low light intensities, F. T. Gucker, jr., H. B Pickard and C. T. O'Konski. bibliog diags Am Chem Soc J 69:429-38 F '47

Smoke measurement. Engineering 163:62 Ja 17 '47

Smoke tester measures density by visual comparison. il Sci Am 176:276-7 Je '47

Smoking tendency determines burning oil performance G T. Kaufman. il Heating-Piping 19:78 My '47

SMOKE—*Continued*
Study of certain factors affecting the filtration of smoke by fibrous materials. J J Perot, jr bibliog diags Paper Tr J 124 54-62 Je 19 '47; Excerpts. Paper Ind 29.1350-2 D '47
Tendency to smoke of organic substances on burning A. E Clarke and others. pl diags Inst Pet J 32·627-42, 643-55 O-N '46

See also
Combustion
Flue dust
Fuel
Fumes
Smoke prevention

SMOKE detectors
Smoke control includes use of electric eye to watch density; Ekco products co. il Steel 120.112 F 10 '47
Smoke-spotting eyes give plane-fire alert J. H Cantlin. il diags Aviation 46.44-5 Ap '47

SMOKE prevention
A.S M.E. sections study problems of urban smoke control. Mech Eng 69:177-8 F '47
Boiler draught production by means of the jet air-pump. S. F. Benson. diags Inst Mech Eng J & Proc 153 (War emergency issue no 9) 311-21; Discussion. 321-7 '45
Clean stacks, a job for the power engineer. L. N. Rowley and J C. McCabe. il Power 91 442-3 Jl '47
Common sense sought in smoke abatement. Coal Age 51·154+ N '46
Cut your smoke by increasing turbulence. diags Power 91:407-8 Je '47
Factors rarely considered in smoke abatement. H. F. Hebley. bibliog il map diags Mech Eng 69 281-7 Ap '47; Discussion 69·1048-9 D '47
How fuel burns; start of pollution and its remedy L N Rowley and J. C McCabe. diags Power 91:525-7 Ag '47
How to fire oil or gas without smoke. L. N. Rowley and J C. McCabe. il diags Power 91.592-6 S '47; Discussion 91 856-7+ D '47
Know coal and its selection for smokefree combustion. L. N. Rowley and J C. McCabe. il Power 91:758-61 N '47
Recent advances in atmospheric pollution research; abstract. A. C. Monkhouse. Chem & Ind p92-3 F 8 '47
Salt Lake City solves smoke problem. M. Thomas. il Power Pl Eng 51.74-7 Mr '47
Smoke abatement can pay off il diags Power 91·703-5 O '47
Smoke, dust, fumes, and their fellow travelers P. Sadtler. Chem & Eng N 25.2827-8 S 29 '47
Smoke law has smoggy debut; Pittsburgh ordinance. il Bsns W p21 O 11 '47, Discussion. J. Vogele. p 114 N 8 '47
Smoke menaces health. il Safety Eng 92·56-7+ D '46
Smokeless burning of refinery vent gases A. K Brumbaugh, jr. il diags Oil & Gas J 45: 126+ F 22 '47; Same Pet Processing 2. 168-70 Mr '47; Same Pet Refiner 26·111-14 Mr '47, Same. Pet Eng 18:59-61+ Mr '47
What the power engineer should know about electrostatic precipitators diags Power Pl Eng 51:80-2 S '47

See also
Locomotives—Smoke problem

SMOKELESS fuel. See Fuel—Smokeless fuel

SMOKELESS powder
Smokeless propellant in a Jato (jet-assisted take-off) unit designed for carrier-based aircraft. Mech Eng 69:236-7 Mr '47

Analysis
Determination of total volatiles in smokeless powder. W. E Shaefer and others diags Anal Chem 19:378-81 Je '47
Estimation of moisture in solventless double-base powders; desiccation, cone-and-dish, carbon tetrachloride distillation, and Karl Fischer procedures J. Hardy, W. D. Bonner, jr and R. M. Noyes. bibliog Ind & Eng Chem Anal ed 18:751-3 D '46

Manufacture
Ball powder process upsets explosives industry traditions. T. R. Olive. flow sheet(p136-9) il Chem Eng 53:92-6 D '46

SMOKING
Enter Lady Nicotine, smoking permitted in plant of Caterpillar tractor co il Safety Eng 94·16 Ag '47, Same. Nat Safety N 56:39 S '47

See also
Tobacco—Physiological effect

Fire hazards
Careless smoking held primary cause of Texas City blast. Nat Underw 51·14A S 4 '47

SMOOTHNESS of paper. See Paper—Smoothness measurement

SMOOTHNESS testing. See Surfaces—Smoothness testing

SMUCKER, J. M., company
Tree-grown profit, Ohio apple-butter firm. Bsns W p32+ O 25 '47

SMUTS, Jan Christiaan, 1870-
Portrait Fortune 34:165 D '46

SNAILS
Morocco's snail trade is advancing, and not at a snail's pace. R O. Waring. For Comm W 29·21 O 11 '47

SNAKES
When a snake bites N. Burch. il Nat Safety N 55 44+ My '47

SNOQUALMIE tunnel. See Tunnels and tunneling—Vehicular tunnels

SNOW
Man-made snow; production of ice crystals in a cloud of supercooled water droplets. V. J. Schaefer. il Mech Eng 69:32-3 Ja '47; Same abr Science 104·457-9 N 15 '46
New ways of producing man made snow. Franklin Inst J 244.165-6 Ag '47; Same. Chem & Eng N 25.552 F 24 '47
Snowfall statistics for Canada. Roads & Bridges 85·97 Ja '47

SNOW plows
Clearing airports by new snow plowing method J. R Shannon il Roads & Sts 90.87-9+ Jl '47, Same Roads & Bridges 85:95-6+ Ap '47
Service and maintenance of the new LaPlant-Choate hydraulic power control system. il Roads & Sts 90.104-5 Ap '47

SNOW removal
Best & co., New York, installs sidewalk snow melting system. H. H. Bond. il Heating-Piping 19:90-1 S '47
Hartford publicity builds public support of snow removal job. Roads & Sts 89:106 N '46
How to design snow melting coils. P. S. Park. Heating-Piping 19·97 Ja '47
Milwaukee snow blitzed! account of January '29 blizzard. H. J. McKeever. il Roads & Sts 90.74-6+ My '47
Milwaukee's normal snow plowing plan. H. B. Nelson. il Roads & Sts 90 78 My '47
Reports many advantages, reasonable cost for snow melting by pipe coils. L. S. Smith. il diag plan Heating-Piping 18 87-90 N '46
Snow drifts 20-ft deep isolate Ontario towns for week il maps Roads & Bridges 85:84-8+ Mr '47
Snow melting by embedded pipe; photo-electric control for delivery of hot water to pipes. T. N Adlam. il diags Heat & Ven 44:61-4 Ag '47
Snow-plowing an art, not a science, in the Ottawa district. J. L. Shearer. il Roads & Bridges 85:68+ F '47
Snow removal; roadway leading into plant of American cyanamid co. Welding J 26.66+ Ja '47, Same Safety Eng 93:26 Ja '47; Excerpts. il Civil Eng 16:537 D '46
Syracuse saves money on snow and ice removal and reduces accidents C. E. Billion. il Pub Works 78:17+ Ag '47
Winter-maintenance practice on Ontario highways. il Roads & Bridges 84:70-2+ N '46

See also
Airports—Snow protection and removal
Railroads—Snow protection and removal
Walks, Concrete—Heating

SNOW surveys
Measuring snow for power; Washington water power company. K. Jack. Pub Util 40:10-14 Jl 3 '47
Snow survey finds South dry, northern areas ok. R. A Work and P. A. Ewing. il map Elec West 98:72-4 My '47

SNYDER, Grace G.
Sketch. por Weekly Underw 156:181 Ja 11 '47

SOAKING pits. See Furnaces, Heating

SOAP
Blending of water with organic solvents by detergents. S. R Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47
Critical micelle concentration of anionic soap mixtures. H. B Klevens J Chem Phys 14.742 D '46
Decolorizing with soaps, patent. F. M. Sullivan Soap & San Chem 23:73 My '47
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W D. Harkins. bibliog Am Chem Soc J 69 679-83 Mr '47
Discuss soaps, detergents and metal cleaners at New York A C.S meeting; abstracts of papers. Soap & San Chem 23:41-3+ O '47
Disproportionated rosin soap in GR-S polymerization J. T. Hays, A E. Drake and Y T Pratt bibliog Ind & Eng Chem 39: 1129-32 S '47
Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens bibliog J Phys & Colloid Chem 51:1143-54 S '47
Floor soaps and cleaners. M A Lesser bibliog Soap & San Chem 23.36-9+ Jl '47
General theory of the mechanism of emulsion polymerization W D. Harkins. bibliog diags Am Chem Soc J 69:1428-44, pl 1-2 Je '47
Making soap at home. Consumers Res Bul 19:13-14 F '47
Morphology of lyogels. E. A. Hauser and D. S le Beau. bibliog il J Phys & Colloid Chem 51.278-85 Ja '47
New structure for soap micelles and the polymerization of rubber; abstract. W. D. Harkins, Science 105:635-6 Je 20 '47
Novelty soaps. M. A. Lesser. bibliog(38 ref) il Soap & San Chem 23:33-6+ Mr '47
Phase boundaries in concentrated systems of sodium oleate and water. R. D. Vold. bibliog J Phys & Colloid Chem 51:797-816 My '47
Phase nature of beta sodium palmitate. R. H. Ferguson, F B. Rosevear and H. Nordsieck. bibliog 2pls Am Chem Soc J 69:141-6 Ja '47
Phase study of commercial soap-alkaline electrolyte water-systems. R. C. Merrill. bibliog Ind & Eng Chem 39:158-66 F '47
Phase study of sodium palmitate-alkaline electrolyte-water systems R. C. Merrill and R. Getty. bibliog Am Chem Soc J 69:1875-82 Ag '47
Preparing soap samples with the laboratory press S. Klein il diags Soap & San Chem 23:33-4 S '47
Rates of solution of soaps in water. L Shedlovsky, G. D. Miles and G. V. Scott. bibliog diag J Phys & Colloid Chem 51:391-407 Mr '47
Soap expands industrial uses. M. A. Lesser. bibliog(90 ref) il Soap & San Chem 23:37-40+ Ag '47
Solubilization by solutions of long-chain colloidal electrolytes. R. S. Stearns and others. bibliog J Chem Phys 15:496-507 Jl '47
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A Green and J. W McBain. bibliog J Phys & Colloid Chem 51.286-98 Ja '47
Stability of synthetic rubber dispersions; low-temperature thickening of neoprene latex. H K. Livingston. bibliog J Phys & Colloid Chem 51:443-50 Mr '47
Structure for soap micelles as indicated by a previously unrecognized X-ray diffraction band. R. W Mattoon, R. S Stearns and W. D Harkins. diag J Chem Phys 15:209-10 Ap '47
Sudden application of a constant shearing motion to anomalous fluids; aluminum soap experiment. E. K. Carver and J R. Van Wazer bibliog il diags J Phys & Colloid Chem 51:751-63 My '47
Use of fatty acids and their soaps in the manufacture of butadiene synthetic rubber W L. Semon. bibliog India Rubber World 116.63-5+ Ap '47
Use of membrane electrodes in the study of soap solutions. C W. Carr, W F Johnson and I. M. Kolthoff. bibliog J Phys & Colloid Chem 51:636-44 My '47

See also
Cleaning compositions
Potassium laurate
Saponification
Shampoos
Sodium stearate
Stains—Removal

Drying
Mazzoni soap drying process. C Berti diag Soap & San Chem 23:38-40 My '47

Prices
In the wake of decontrol. Soap & San Chem 22:41-2 D '46
Rise in tallow forces soap price advance. Soap & San Chem 23.51 Ap '47

Rating
Laundry soaps. Consumers Res Bul 19.15-17 Ja '47

Testing
Influence of soap hydrolysis on detergent action. K. Tomlinson. Soc Dyers & Col J 63: 107-9 Ap '47

SOAP, Floating
Floating soap M. H. Ittner. Soap & San Chem 23.69 Ja '47

SOAP, Liquid
Liquid soaps from Napalm. diags Soap & San Chem 22:49-51 D '46

SOAP, Metallic
Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. B. Working. J Phys & Colloid Chem 51:974-80 Jl '47
Metallic soaps for greases. S. B. Elliott. bibliog Oil & Gas J 46:63-4+ N 1 '47
Soaps that wash nothing. D. H. Killeffer. il Sci Am 176:24-6 Ja '47
Studies of aluminum soaps; water sorption and moisture content. G W Shreve, H. H. Pomeroy and K. J. Mysels. bibliog J Phys & Colloid Chem 51:963-6 Jl '47
Viscometry of soap-in-hydrocarbon systems. G. F. Wood and others. bibliog 2pls diags Inst Pet J 33:71-94; Discussion. 94-102 F '47
Zinc soaps, flameproofing agents; patent. Am Dyestuff Rep 36:153 Mr 24 '47

SOAP, Powdered
Petroleum base soap; Oronite. Soap & San Chem 22:85 N '46

SOAP, Textile
New R & L soap distributing system. plan diag Rayon 27:614 N '46
Solubilization in textile processing. J. W. Creely. bibliog diags Am Dyestuff Rep 36: 411-12+ Jl 28 '47

SOAP associations
See also Association of American soap and glycerine producers; Potash soap association

SOAP factories
Comments on sanitary supply plant layout; Grace-Lee products company E. G. Thomssen. il Soap & San Chem 23:118-21 Jl '47

Equipment
Raw materials handling in the soap plant. Soap & San Chem 23.73+ Je '47
Soap plant observer Soap & San Chem 23: 52-3+ Ap '47

SOAP flakes
Solving a production problem in automatic soap flake packaging. il Soap & San Chem 23.38-9 S '47

SOAP industry and trade
Private brand toilet soaps il Soap & San Chem 23:36-9 Ja '47
Soap association meets, elects Wrisley. Soap & San Chem 23:41-4+ F '47

SOAP industry and trade—*Continued*
Soap export controls. il Soap & San Chem 23·35-6 Ag '47
Soap makers reduce inventory loss threat. Barron's 26·6 D 9 '46
Soap making rises Bsns W p21 D 28 '46
Soaps face a fight; use of synthetic detergents rising il Bsns W p60+ S 27 '47
Synthetic detergents G L. Parkhurst. Soap & San Chem 23 37-8 Mr '47
Synthetic detergents; what are soapers doing and planning to do about them? Soap & San Chem 23·45-7+ Ap '47

See also
Potash soap association

Advertising

Balanced ad program used to introduce soap in the West. L. F Thomann il Ptr Ink 219.42 Je 27 '47
Introduces new soap by kidding soap advertising; with not much of product available for sale, manufacturer chose this way to keep name before the public L. F. Thomann Ptr Ink 218:57 Ja 10 '47
No soft soap; Strykers soap company Sales Management 58·64 My 1 '47
Suds in your ears; some of the soap plugs that travel our well-lathered air-lanes. H Whitmore. il Adv & Sell 40:48+ S '47

Exhibitions

Soaps at toiletries show. Soap & San Chem 23 57 O '47

Statistics

A A S G P releases potash soap census data. Soap & San Chem 22·42 N '46
Canadian soap industry; statistical study of soaps, washing compounds, and cleaning preparations, 1944-1945. Soap & San Chem 23 46-9 O '47

Canada

Canadian soap industry; statistical study of soaps, washing compounds, and cleaning preparations, 1944-1945. Soap & San Chem 23:46-9 O '47

Great Britain

British soap industry. Soap & San Chem 23·33-4+ My '47
Small soap maker, J. M Vallance Soap & San Chem 23·43-5 Mr, 151+ Ap '47
Soapmaking at Port Sunlight. il Soap & San Chem 23 41-4 Ap '47

Italy

Developments in Italy's soap industry. For Comm W 29·28 O 25 '47
Raw materials for Italian soap industry in short supply. For Comm W 26.27 Mr 15 '47

Malayan Union

Soap manufacture and sales, British Malaya. For Comm W 29:24 O 18 '47
Soap production and exports, British Malaya. For Comm W 29.26 O 11 '47

Netherlands Indies

Soap production, during 1947. For Comm W 28 26 S 20 '47

Philippine Islands

Soap manufacture resumed by many firms. For Comm W 27 27-8 My 24 '47

South Africa

South African chemical plants developing new processes in soap production from sludge. Chem Eng 54:202, 204 F '47

Spain

Spanish soap industry. Chem Age (Lond) 56.674 My 24 '47

SOAP manufacture
British methods of fat splitting. J Seaman. Soap & San Chem 23 67+ Ja '47
Cold fractionation of fatty oils; Solexol. il Soap & San Chem 22:75+ D '46
Continuous process for soap G. W McBride. bibliog flow sheet(p 134-7) il Chem Eng 54·94-7 Ap '47; Abstract Soap & San Chem 23·67 S '47
Fat splitting with caustic. H Gronınger. Soap & San Chem 23:79 F '47
Fatty acid selection; review of manner in which physical chemistry of fatty acids affects soaps. J. W McCutcheon. diags Soap & San Chem 22.43-5+ D '46
French continuous process for soap making; salt removed by interchange with caustic soda; saponification accelerated by colloid mill. M J Seemuller. diags Soap & San Chem 23.73+ O '47
Industrial soaps J. W. McCutcheon. Soap & San Chem 23 40-2 Ja '47
Manufacture of sulpho-oxidized soaps from petroleum byproducts; abstract. Chem Eng 53 310 N '46
Mazzoni soap drying process. C. Berti. diag Soap & San Chem 23 38-40 My '47
Small soap maker. J M. Vallance. Soap & San Chem 23·43-5 Mr; 151+ Ap '47
Soap plant observer, cracking and streaking of soap cake Soap & San Chem 23·42-3 S '47
Soap plant observer, cracking of milled soap. Soap & San Chem 23 44-5+ My '47
Soap plant observer formulae. Soap & San Chem 23.43+ Jl '47
Soap plant observer; formulas for a laundry soap and a toilet soap. Soap & San Chem 23.50-1 O '47
Soapmaking at Port Sunlight il Soap & San Chem 23 41-4 Ap '47
Some observations for the small soaper on continuous processes. Soap & San Chem 23:75+ F; 73+ Mr '47

Perfuming

Perfuming milled toilet soap. C. Morel. Soap & San Chem 23 83 Ap '47
Perfuming your soap C. Morel; P Jellinek. Soap & San Chem 23·83 Ap; 65+ Jl, 65+ Ag; 65 S '47

SOAP materials
Alginates; their use as emulsifiers and thickeners in soaps and cosmetics N. J. Federici Soap & San Chem 23·35+ My '47
Canadian soap industry; materials used in manufacturing, 1944-1945. Soap & San Chem 23 47 O '47
Developments in soaps, fats and oils discussed by American oil chemists society. Soap & San Chem 22 38-9 N '46
Industrial soaps J W. McCutcheon. Soap & San Chem 23.40-2 Ja '47
Study of the caustic refining of vegetable oils; abstract R. H Fash. Soap & San Chem 23·48-9 Je '47
Wool wax acids E. S Lower. Soap & San Chem 23.94 O '47

See also
Mersol
Tallow

SOARING. See Gliders

SOCIAL conditions
Modern factors in individual security. J H. S. Bossard. Comm & Fin Chr 165:2195+ Ap 24 '47

SOCIAL ethics
Management's professional responsibilities; public and private administration. A G. Coons Advanced Management 11:142-6 D '46

SOCIAL insurance. See Insurance, Social

SOCIAL laws and legislation

See also
Insurance, Social
Insurance, Unemployment
Labor laws and legislation
Old age pensions
Public health laws
Workmen's compensation

SOCIAL problems

See also
Child labor
Housing
Medical service
Public health
Race prejudice
Safety movement
Unemployment

SOCIAL psychology
Psychology in market research. E. Dichter. Harvard Bsns R 25 no 4·432-43 [Jl] '47
Psychology of social change. D. G. Marquis. Ann Am Acad 249:75-80 Ja '47

SOCIAL research
Investigations of the Columbia Basin project and their procedural significance. D. S. Schwartz. J Land & Pub Util Econ 23:83-6 F '47

SOCIAL research—*Continued*
The machine, the worker, and the engineer. R K. Merton Science 105.79-84 Ja 24 '47; Same cond. Chem & Eng N 25 362-5 F 10 '47
Responsibility of social science L. Wirth Ann Am Acad 249·143-51 Ja '47

SOCIAL statistics
See also
Demography

SOCIAL surveys
Say it with figures. H. Zeisel. 250p $3 Harper & bros. 49 E. 33d st, New York 16 '47

SOCIAL work
Canadian social services H. M. Cassidy. Ann Am Acad 253·190-9 S '47

Directories
Directory of social agencies of the City of New York, 1946-1947; prepared under the direction of the Committee on information services of the Welfare council 424p $4 50 Columbia univ. press, 2960 Broadway, New York '47

SOCIAL work, Medical
Medical social service in tuberculosis control Pub Health Rep 62:327-36 Mr 7 '47

SOCIAL work, Rural
Rural rehabilitation in Washington county, Utah E. C. Banfield, jr. J Land & Pub Util Econ 23.261-70 Ag '47

SOCIALISM
Czech compromise; nationalized industries run on democratic principles il Bsns W p105-6 Mr 8 '47
European Socialists. Economist 153.589-90 O 11 '47
Show me any other country. B K. Hunt Am Dyestuff Rep 36·611-12+ O 20 '47
See also
Collectivism
Industry and state

SOCIETIES
See also
Benefit societies — Scientific societies
Chemical societies — Trade associations
Engineering societies — Trade unions

SOCIETY for experimental stress analysis
Annual meeting, New York, Dec 9-11. Steel 119:63 D 16 '46

SOCIETY for the study of development and growth
Annual symposium Science 106:8 Jl 4 '47

SOCIETY for visiting scientists
Society for visiting scientists. E. Simpson. Assn of Sp Lib & Inf Bur Proc 1946·72-4

SOCIETY of American bacteriologists
Annual meeting, 47th Chem & Eng N 25·1583 Je 2 '47

SOCIETY of automotive engineers
Annual meeting, Detroit Bus Transportation 26.84-5 Ja '47; Bsns W p44+ Ja 18 '47; Iron Age 159.107-9 Ja 30 '47; Steel 120 54 Ja 13 '47; Product Eng 18·161 F '47
Annual meeting, Detroit, Jan. 6-10; with review of technical papers. S A E J 55·17-39 F '47, il diags Automotive & Aviation Ind 96·30-6+ F 1 '47
Check list of SAE meetings papers. S A E J 55·65-7 Ja '47
Councilors and vice-presidents S A E J 55: 26-9 Ja '47
Message from our president C E Frudden. S A E J 55:17-18 Mr '47
National aeronautic meeting, Los Angeles, Oct. 3-5. S A E J 54 47-51+ N '46
National aeronautic meeting, Los Angeles. Automotive Ind 97:60 O 15 '47
National aeronautic meeting, New York, April 9-11. S A E J 55.19-23+ My '47
National aeronautic meeting, New York, April 9-11; abstracts of papers. Automotive & Aviation Ind 96.30-3 My 1 '47
National air transport engineering meeting, Chicago, Dec 2-4. S A E J 55·56-8+ Ja '47
National fuels and lubricants meeting, Tulsa, Nov. 7-8. Nat Pet N 38.60+ N 13 '46; Oil & Gas J 45·164-5 N 16 '46; Chem & Eng N 24:3041 N 25 '46; S A E J 54·18-21+ D '46
National production engineering meeting, Cleveland, Oct. 14. S A E J 54.19-20+ N '46
National tractor meeting, Milwaukee; abstracts of papers Automotive Ind 97·32-6 O 15 '47
National transportation and maintenance meeting, Chicago, Oct. 16-17. S A E J 54. 56-8 D '46
National transportation meeting, Chicago, April 16-18. S A E J 55·21-4 Je '47
National West coast transportation and maintenance meeting, Los Angeles, Aug. 21-22. S A E J 55 17-20+ O '47
President's report for 1946. L R. Buckendale. S A E J 55 17-24 Ja '47
Summer meeting, French Lick. Nat Pet N 39·47-9 Je 11 '47
Summer meeting, French Lick, Ind. June 2-6. Iron Age 159·129+ Je 5 '47
Summer meeting, French Lick; abstracts of papers. Automotive & Aviation Ind 96:38-43+ Je 15 '47; S A E J 55:17-30+ Jl '47; Pet Processing 2 592-3 Ag '47

SOCIETY of chemical industry
Annual dinner Chem Age (Lond) 57 184-6 Ag 9 '47; Chem & Ind p522-4 Ag 23 '47
Annual general meeting and dinner of Chemical engineering group, London, May 28. Chem & Ind p321-3 Je 7 '47
Annual general meeting, 66th, London Chem & Ind p489-92 Ag 9 '47
Sixty-sixth annual report of council Chem & Ind p459-62 Jl 26 '47

SOCIETY of cosmetic chemists
Annual meeting, 2d, New York, Dec. 6. Soap & San Chem 23 51 Ja '47
Meeting, New York, May 13 Oil Paint & Drug Rep 151·7+ My 19 '47

SOCIETY of dyers and colourists
Let the Society take up the challenge! C. M. Whittaker Soc Dyers & Col J 63:37-40; Discussion, 40-1 F '47
Officers, committees, medals, etc. Soc Dyers & Col J 63·1-5 Ja '47
Proceedings of the Society annual meeting, 63d, March, 1947. Soc Dyers & Col J 63: 125-36 My '47

SOCIETY of economic geologists
Annual meeting, 27th, New York, March 19-21; abstracts of papers Econ Geol 42.409-29 Je '47

SOCIETY of economic paleontologists and mineralogists
Annual meeting, Los Angeles, March 25-27; with abstracts of papers. Oil & Gas J 45: 104-5+ Mr 29 '47

SOCIETY of exploration geophysicists
Annual meeting, Los Angeles, March 25-27; with abstracts of papers. Oil & Gas J 45: 104-5+ Mr 29 '47

SOCIETY of motion picture engineers
Achievements for 1946. D. E. Hyndman. Soc Motion Picture Eng J 48·63-4 Ja '47
Officers and governors, list of committee members; constitution and by-laws; awards; treasurer's report. pors Soc Motion Picture Eng J 48:361-89 Ap '47
Report of the general secretary. Soc Motion Picture Eng J 48·203-10 Mr '47
Scrolls of achievement; awards Soc Motion Picture Eng J 47:521-4 D '46

SOCIETY of naval architects and marine engineers
Annual meeting, 54th, New York, Nov 13-16. Marine Eng 51:76-80 D '46; 52.92-7 Ja; 76-86 F '47

SOCIETY of plastics engineers
Annual meeting, 3d, Chicago, Jan. 27-31. Chem & Eng N 25:365 F 10 '47
Annual technical meeting reports; abstracts. Mod Plastics 24,121-4 F '47
Reviewing S.P.E.'s meeting and exhibit. Mod Plastics 24:102 Mr '47

SOCIETY of rheology
Annual meeting, New York, Nov. 1-2. Chem & Eng N 24·3051 N 25 '46
Annual meeting, New York, Oct. 30-Nov. 1; program. Science 106:364 O 17 '47

SOCIETY of the plastics industry
Annual convention, 10th, Chicago, May 6-10. Chem & Eng N 25:1580-1 Je 2 '47; Oil Paint & Drug Rep 151:5+ My 12 '47

SOCIETY of the plastics industry—*Continued*
Annual spring conference of the Pacific coast section, 4th, Santa Barbara, March 20-22. Mod Plastics 24·121-2 Ap '47
Fifth international conference. Niagara Falls, Feb. 19-20 Can Chem & Process Ind 31·218+ Mr '47
New officers. pors Mod Plastics 24.89 Je '47
Reviewing the S.P.I. annual meeting. Mod Plastics 24·91-104 Je '47
Second annual technical session of S.P I low-pressure industries division. Mod Plastics 24:122-3 Mr '47
SPI sponsors low-pressure conference; Jan. 23-24. Chem & Eng N 25:367 F 10 '47

SOCIOLOGY
Responsibility of social science. L. Wirth. Ann Am Acad 249:143-51 Ja '47

SOCONY-VACUUM oil company
Annual report. Comm & Fin Chr 165:2144 Ap 21 '47
Jersey Standard and Socony delay buying Aramco stock. Nat Pet N 39.12 Mr 19 '47

SODA
See also
Sodium carbonates
Sodium hydroxide

SODA ash
Output of Owens Lake chemicals shown G. D. Dub. Chem Eng 53:174+ D '46
Recovery of soda and removal of sulfate in the lime-soda process for alumina production. F. J. Frattali and others. bibliog 11 pls U S Bur Mines Rep of Invest 4126 1-14 '47
Shipment, storage and handling of soda ash. H. Seymour. Chem Age (Lond) 57.365-8+ S 13 '47
Soda ash outlook better. Bsns W p52+ S 6 '47
Soda ash shortage told by House group. Oil Paint & Drug Rep 151.41 Ap 14 '47

Manufacture

American Potash announces plant expansion. Chem Eng 53:164+ D '46

Statistics

Alkali production fails to meet requirements; estimated distribution of soda ash consumed in the United States 1944-46 Chem Eng 54.110-11 F '47

SODA fountains
Melamine soda fountain jars are useful and sanitary. il Mod Plastics 24:96-8 Jl '47

SODERBERG, Carl Richard, 1895-
Named M.I.T. engineering department head. Aeronautical Eng R 6 7 Ag '47

SODIUM
Conductivity of sodium-ammonia solutions. D K C MacDonald and others. Phys R 71 563-4 Ap 15 '47
Electrical conductivity of Na-ammonia solutions at low temperatures L. Giulotto and A. Gigli. Phys R 71:211-12 F 1 '47
Excitation-function of the γ-radiation generated by Po-α bombardment of Na. M. Kovács. bibliog diags Phys R 70·895-6 D 1 '46
Life and work of Hamilton Young Castner. A. Fleck Chem & Ind p515-21 Ag 23 '47
Magnetic susceptibility of sodium in liquid ammonia solutions at low temperatures. R B. Gibney and G. L. Pearson. bibliog Phys R 72 76-7 Jl 1 '47
Method for obtaining electronic eigenfunctions and eigenvalues in solids with an application to sodium F. C. von der Lage and H. A. Bethe. bibliog diags Phys R 71:·612-22 My 1 '47
Polymerization; acid-salt interchange and chain branching in sodium polymerization of dienes. A A. Morton and M. L Brown. Am Chem Soc J 69:160-1 Ja '47
Reduction by dissolving metals. A. J. Birch Chem Soc J p 102-5 Ja '47
Reduction of certain organic compounds in liquid ammonia. G. W Watt, C. M. Knowles and L. O. Morgan bibliog Am Chem Soc J 69·1657-9 Jl '47
Reduction of unsaturated hydrocarbons at the dropping mercury electrode, mechanism of the dimerizing addition of sodium to olefins. S. Wawzonek and J W. Fan bibliog Am Chem Soc J 68:2541-4 D '46
Sodium reduction of fatty acid esters. V. L. Hansley. bibliog(68 ref) diags Ind & Eng Chem 39 55-62 Ja '47
Use of sodium in the preparation of methylene-linked silanes J. T Goodwin, jr, W. E. Baldwin and R. R. McGregor Am Chem Soc J 69:2247 S '47

Analysis

Determination of sodium and potassium in silicates. S Kallmann. bibliog Ind & Eng Chem Anal ed 18:678-80 N '46
Polarographic determination of sodium or potassium in various materials. J. R. Weaver and L. Lykken. bibliog diag Anal Chem 19·372-6 Je '47
Spectrochemical determination of lithium, sodium, and iron in lithium-bearing ores. G. Oplinger. bibliog il Anal Chem 19 444-7 Jl '47

Isotopes

Angular distribution of gamma-rays in Na^{24}, Co^{60}, Y^{88}. W. M Good. bibliog Phys R 70: 978-9 D 1 '46
Disintegration energies of Na^{24} and Al^{28}. W H Barkas bibliog Phys R 72·346 Ag 15 '47
Disintegration scheme of Na^{24}. C S. Cook and others bibliog Phys R 70·985-6 D 1 '46
Metaborate compounds for internal cyclotron targets. A. S Weil and others R Sci Instr 18·556-8 Ag '47
Nuclear excitation functions, AZ^{27} $(d;p,\alpha)$ Na^{24} E. T. Clarke bibliog Phys R 71.187-91 F 1 '47
γ-Radiation of Na^{24} and the energy-level scheme of Mg^{24}. M. L Wiedenbeck. bibliog diags Phys R 72·429-30 S 1 '47
Total disintegration energy of Na^{24} E C. Barker. bibliog Phys R 71:453 Ap 1 '47

SODIUM acetylide
Reaction between cellulose nitrate and sodium acetylide in liquid ammonia. P C. Scherer and G A. Saul. bibliog Rayon 28 474-5, 537-8 S-O '47
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E R H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46

SODIUM alginate. See Alginates

SODIUM alloys
See also
Sodium amalgam

SODIUM aluminum fluoride. See Cryolite

SODIUM amalgam
Controlled sodium amalgam reduction of aldonolactones and their esters to aldoses and an improved synthesis of D-arabinose. N. Sperber, H. E Zaugg and W. M. Sandstrom bibliog Am Chem Soc J 69:915-20 Ap '47

SODIUM amide
Acylations of esters with esters to form β-keto esters using sodium amide. J. C. Shivers, M. L. Dillon and C. R. Hauser bibliog Am Chem Soc J 69:119-23 Ja '47
Amination of pyrazine with sodium amide. R N. Shreve and L Berg. bibliog Am Chem Soc J 69·2116-17 S '47

SODIUM azide
Pollution of water and food detected by new, rapid test, isolation of enterococci. Food Ind 18·1862 D '46

SODIUM benzene sulfinate
Determination of halates in sodium hypochlorite. S. Atkin Anal Chem 19:816 O '47

SODIUM benzoate
Effect of combining sodium benzoate with oral penicillins E H. Spaulding and others. bibliog Science 105.210-11 F 21 '47

SODIUM bisulfite
Mechanism of the Bucherer reaction; kinetics of the reaction between naphtholsulphonic acids and sodium hydrogen sulphite. W. A. Cowdrey. Chem Soc J p 1044-5 N '46

SODIUM borates
Metaborate compounds for internal cyclotron targets. A. S. Weil and others. R Sci Instr 18 556-8 Ag '47

SODIUM butoxide
Reduction of αβ-unsaturated carbonyl compounds by sodium butoxide C. Weizmann, M Sulzbacher and E Bergmann Chem Soc J p851 Je '47

SODIUM carbonates
Annealing salt for 18-8; exhaust manifolds, Ryan aeronautical co K Whitcomb. il Steel 120:106+ Je 16 '47
Fuel and soda value of tall oil skimmings; use of nomographs A Pollak and P. R. Wiley Paper Tr J 125.37-40 Ag 28 '47
Output of Owens Lake chemicals shown. G D. Dub. Chem Eng 53.174+ D '46
Penetration of air-borne particulates through the human nose. H. D. Landahl and S Black bibliog flow diag J Ind Hygiene 29. 269-77 Jl '47
Polish bicarbonate; largely increased production. Chem Age (Lond) 57·539 O 18 '47
Strength of solutions of doctor, caustic, and carbonate; nomographs. W. L. Nelson. Oil & Gas J 45:105 Ap 5 '47

See also
Soda ash

Analysis

Determination of free sodium hydroxide and sodium carbonate in plating solutions L. Silverman. Metal Finishing 45:72-3 Ap '47

SODIUM carboxymethyl cellulose. See Carboxymethyl cellulose

SODIUM chlorate
Elastic constants of sodium chlorate S Bhagavantam and D Suryanarayan. Phys R 71:553 Ap 15 '47

SODIUM chloride. See Salt

SODIUM chlorite
Chlorite bleaching of southern pine kraft pulp W. P. Lawrence Paper Tr J 124 38-40 My 22 '47, Same cond. Paper Ind 29. 1358-60 D '47
Finishing copper by oxidation with sodium chlorite W. R. Meyer and G P. Vincent. il Metal Finishing 45·61-3+ Mr '47
Maceration of woody tissue with acetic acid and sodium chlorite W E. Spearin and I. H. Isenberg. Science 105·214 F 21 '47

SODIUM chromate
Sodium chromate used in Permian basin drilling to combat salt-water corrosion. G Weber. il Oil & Gas J 45 103 D 7 '46
Use of corrosion inhibitors in products pipe lines I M. Parker. bibliog Am Pet Inst Proc 26(5):26-36 '46

SODIUM compounds
Allylic rearrangements; reaction of the sodium derivatives of allyl or propenylbenzene with proton donors. T. W. Campbell and W G. Young bibliog Am Chem Soc J 69:688-90 Mr '47
Crystal structure of sodium borohydride A M. Soldate. Am Chem Soc J 69.987-8 My '47
Determination of chlorinated phenol derivatives in treated cooling waters. C. E Headington and W. A. Sassaman il Pet Refiner 26 124-6 My '47
Hygroscopicity of penicillin salts. C. Carr and J A Riddick. Ind & Eng Chem 39.1021-3 Ag '47
Phase study of commercial soap-alkaline electrolyte water-systems. R. C. Merrill bibliog Ind & Eng Chem 39·158-66 F '47
Polymerization, catalytic polymerization of butadiene by phenylsodium and amylpotassium. A A. Morton and R L. Letsinger. bibliog Am Chem Soc J 69:172-6 Ja '47
Polymerization; examination of low molecular weight products from the reaction of amylsodium with dienes. A. A Morton, M L. Brown and E Magat bibliog Am Chem Soc J 69:161-7 Ja '47
Polymerization; reaction of organosodium reagents with styrene and 1,1-diphenylethylene. A A. Morton and H. C Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47
Polymerization; the structure of the alfin catalyst. A. A. Morton and M. E T Holden. bibliog Am Chem Soc J 69.1675-81 Jl '47
Stability of crystalline sodium penicillin G B. Berk, B. M. Shepard and C Glaser. Science 105:239 F 28 '47

SODIUM cyanide
Life and work of Hamilton Young Castner. A. Fleck Chem & Ind p515-21 Ag 23 '47
Preparation of benzaldehyde from benzene. W J. King and P. T. Izzo. Am Chem Soc J 69.1220 My '47

SODIUM decanesulfonate
X-ray crystallographic data for sodium 1-decanesulfonate hemihydrate. L H Jensen and E C Lingafelter. Am Chem Soc J 68 2730 D '46

SODIUM decyl sulfate
Effects of temperature upon the critical concentrations of anionic and cationic detergents H B. Klevens bibliog J Phys & Colloid Chem 51 1143-54 S '47

SODIUM dodecanesulfinate

Analysis

Reaction of sodium 1-dodecanesulfinate with mercuric chloride C. S. Marvel, C. E Adams and R. S. Johnson. bibliog Am Chem Soc J 68:2735 D '46

SODIUM dodecyl sulfate
Inhibitory effect of sodium dodecyl sulfate upon the gastric secretory response to histamine. H. Shay and others. bibliog Science 105·128-9 Ja 31 '47

SODIUM fluorescein. See Uranin

SODIUM fluoride
Active magnesia; adsorption of fluoride from aqueous solution. A C. Zettlemoyer, E A Zettlemoyer and W C Walker. bibliog Am Chem Soc J 69:1080-3 My '47
Effect of topically applied sodium fluoride on dental caries experience, report of findings for the third study year. J. W Knutson and W. D. Armstrong. Pub Health Rep 61· 1683-9 N 22 '46
Effect of topically applied sodium fluoride on dental caries experience; report of findings with two, four and six applications. J. W. Knutson and others. bibliog Pub Health Rep 62:425-30 Mr 21 '47
Properties of enamel slips, soluble salts in enamel slips. B W. King, jr and others. bibliog Am Cer Soc J 30 22-6 Ja 1 '47
Use of sodium fluoride in the manufacture of steel K E Markuson bibliog Ind Med 16.434-6 S '47

SODIUM fluoroacetate
Epidemic control with DDT, ANTU and 1080. H Elishewitz. bibliog Soap & San Chem 23 153+ Je '47
How ANTU and 1080 promise better rodent control il Chem Ind 59 828-9 N '46
Studies of deratization of surface vessels by means of 1080 (sodium fluoroacetate). J. H. Hughes. Pub Health Rep 62:933-40 Je 27 '47

SODIUM halates
Ternary systems sodium molybdate-water-sodium chlorate (bromate, or iodate) at 25° J E. Ricci and W. F. Linke. bibliog Am Chem Soc J 69 1080-3 My '47

SODIUM hexametaphosphate
Chemical cleaning of porous concrete wells, Wood River refinery. G N Andrews Am Water Works Assn J 39.729-33 Ag '47
Corrosion control with calgon O. Rice. il Am Water Works Assn J 39:552-60 Je '47

Advertising

Campaign renders knocks ineffective and creates good-will with former knockers; Calgon advertising. C. F. Wilner il Ptr Ink 217·35 N 29 '46

SODIUM hydride
Action of sodium hydride on certain carbonyl compounds; condensations and reductions. F W. Swamer and C. R. Hauser. bibliog Am Chem Soc J 68 2647-9 D '46
Alkali and alkaline earth hydrides; survey of their manufacture and uses. Chem Age (Lond) 55·675-7 N 30 '46

SODIUM hydroxide
Alkali outlook. A. B. Chadwick. Soap & San Chem 23.50-1+ F '47
Caustic soda as a quenching medium for steel K Rose. il Materials & Methods 25: 75-7 Ja '47
Caustic soda as used in the rayon industry. P. W. Frisk. diag Rayon 27:596-8 N '46

SODIUM hydroxide—*Continued*
Caustic soda solutions for quenching, engineering file facts K. Rose, comp. Materials & Methods 25 123 F '47
Caustic solutions, specify gravity from 60° to 212°F.; table W L. Nelson Oil & Gas J 45.119 D 7 '46
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 147-8 N '46
Electrolytic conductivity of NaOH in H_2O and of NaOD in D_2O at 25°; vacuum distilling apparatus for deuterium oxide E. Hetland diags Am Chem Soc J 68 2532-5 D '46
Extraction of aluminium from clay il diag Engineering 164 292-3 S 26 '47
Fat splitting with caustic. H Groninger. Soap & San Chem 23 79 F '47
First-aid treatment for caustic soda burns Paper Ind 29 1023 O '47
How to work with caustic soda. Safety Eng 94 92-3 O '47
Life and work of Hamilton Young Castner A. Fleck Chem & Ind p515-21 Ag 23 '47
Line coordinate charts for caustic soda solutions. D. S Davis. Chem Ind 60·284 F '47
Measurement of vapor pressures of aqueous solutions by bi-thermal equilibration through the vapor phase. R. H Stokes. bibliog diag Am Chem Soc J 69.1291-6 Je '47
Rearrangement of *l*-phenacyl-α-phenylethyldimethylammonium bromide A. Campbell, A. H. J. Houston and J. Kenyon Chem Soc J p93-5 Ja '47
Removal of carbon dioxide from atmospheric air N A Spector and B F. Dodge flow sheet flow diag Am Inst Chem Eng Trans 42·827-48 O-D '46
Sodium hydroxide method for the determination of vegetable matter in wool. G C. LeCompte and M. R Coe, jr. Am Dyestuff Rep 35:509-10 N 4 '46
Solubility of $Ca(OH)_2$ and $CaSO_4 \cdot 2H_2O$ in dilute alkali solutions; application to portland cement pastes. W. C. Hansen and E E Pressler bibliog Ind & Eng Chem 39:1280-2 O '47
Some case histories of corrosion problems in chemical process equipment; effect of corrosive impurities in caustic soda W. Z Friend and F. L. La Que Am Inst Chem Eng Trans 42 851-3 O-D '46, Same. Pet Eng (Ref annual) 18 212+ Jl 1 '47
Strength of solutions of doctor, caustic, and carbonate, nomographs W. L. Nelson Oil & Gas J 45:105 Ap 5 '47

Analysis

Determination of free sodium hydroxide and sodium carbonate in plating solutions. L. Silverman Metal Finishing 45:72-3 Ap '47
Determination of water in caustic soda and other alkaline materials, a distillation-titrimetric method H R. Suter. bibliog diag Anal Chem 19:326-9 My '47
Study concerning characteristics of the high-voltage a.c. arc. E. A. Boettner and C F Tufts. bibliog il diags Opt Soc Am J 37. 192-8 Mr '47

Manufacture

Diaphragm vs. amalgam cells for chlorine-caustic production. R. B. MacMullin. bibliog il Chem Ind 61 41-50 Jl '47
Marine chemicals in India. Chem Age (Lond) 56 431-3 Ap 12 '47
Mercury cell Chem Eng 54·148 S '47
Pacific Northwest gets new DDT, chlorine-caustic plants, Pennsalt's expansion program at Portland, Oregon. il Chem Ind 61: 60-1 Jl '47; Paper Tr J 125·20+ Jl 10 '47; Chem Eng 54 182+ Ag '47

Statistics

Alkali production fails to meet requirements; U.S. production, 1921-1946; estimated distribution by industry, 1944-46 Chem Eng 54.110-11 F '47

SODIUM hypobromite

Analysis

Analysis of hypochlorite-hypobromite solutions L. Farkas and M. Lewin. bibliog Anal Chem 19.662-4 S '47

SODIUM hypochlorite
Influence of oxidation of pulp on wet strength. M. C. Schur and R M Levy. bibliog Paper Tr J 124 43-6 My 15 '47
La stérilisation de l'atmosphère des ateliers par un aérosol d'hypochlorite de sodium. J. Wolf. diag Génie Civil 124:137 Ap 1 '47

Analysis

Analysis of hypochlorite-hypobromite solutions. L Farkas and M. Lewin. bibliog Anal Chem 19 662-4 S '47
Determination of halates in sodium hypochlorite. S. Atkin Anal Chem 19 816 O '47

SODIUM iodate
Crystal structure of sodium iodate. I. Náray-Szabó and J. Neugebauer. bibliog diag Am Chem Soc J 69·1280-3 Je '47

SODIUM laurate
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A Green and J W McBain. bibliog J Phys & Colloid Chem 51·286-98 Ja '47

SODIUM lauryl sulfate
Using froth flotation to clean vined canning peas. A M Neubert il diag Food Ind 19: 769-72+ Je '47

SODIUM melaminylphenylstibonate
Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis. E A. H. Friedheim, H. J. Vogel and R L Berman Am Chem Soc J 69 560-2 Mr '47

SODIUM metabisulfite
Lack of influence of thiosulfate and metabisulfite on the antibiotic activity of penicillin C. S. Leonard bibliog Science 104: 501-2 N 29 '46

SODIUM metaphosphates
Potassium and sodium metaphosphates as sources of phosphorus for animals H. F. Fraser and others. bibliog Pub Health Rep 61:1810-16, pl 1 D 13 '46

See also
Sodium hexametaphosphate

SODIUM molybdate
Ternary systems sodium molybdate-water-sodium chlorate (bromate, or iodate) at 25° J E Ricci and W. F. Linke. bibliog Am Chem Soc J 69 1080-3 My '47

SODIUM nitrate
Argentina, special agreement on nitrates signed with Chile For Comm W 28·16 S 27 '47
Chilean nitrate price study report filed. Oil Paint & Drug Rep 151:5+ Mr 3 '47

SODIUM nitrite
Circulating HTS as a pilot plant heat transfer medium. W B Johnson and W. M. Nagle diags Ind & Eng Chem 39·971-4 Ag '47
Comparison of methods for determination of sulfamates. W W Bowler and E. A. Arnold bibliog Anal Chem 19·336-7 My '47
Inhibition of polymerization; laboratory and plant control of popcorn polymer growth M S Kharasch and others bibliog il diags Ind & Eng Chem 39:830-7 Jl '47
Phase relations in heat transfer salt systems. J. Alexander, jr and S G. Hindin. diags Ind & Eng Chem 39 1044-9 Ag '47
Use of corrosion inhibitors in products pipe lines I M. Parker bibliog Am Pet Inst Proc 26(5):26-36 '46

SODIUM oleate
Phase boundaries in concentrated systems of sodium oleate and water R. D. Vold bibliog J Phys & Colloid Chem 51:797-816 My '47
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain bibliog J Phys & Colloid Chem 51:286-98 Ja '47

SODIUM oxide
Melting relations in the systems Na_2O-Al_2O_3-SiO_2 and K_2O-Al_2O_3-SiO_2. J F. Schairer and N. L. Bower. bibliog diags Am J Sci 245.193-204 Ap '47
Recovery of soda and removal of sulfate in the lime-soda process for alumina production F. J. Frattali and others. bibliog 11 pls U S Bur Mines Rep of Invest 4126:1-14 '47

SODIUM palmitate
Phase nature of beta sodium palmitate. R. H Ferguson, F. B. Rosevear and H. Nordsieck bibliog 2pls Am Chem Soc J 69.141-6 Ja '47
Phase study of sodium palmitate-alkaline electrolyte-water systems R C. Merrill and R Getty. bibliog Am Chem Soc J 69 1875-82 Ag '47

SODIUM pectinates
Electrophoretic mobilities and fractionation of sodium pectinates W. H Ward and others bibliog J Phys & Colloid Chem 51.1137-43 S '47

SODIUM pentachlorophenate
Determination of chlorinated phenol derivatives in treated cooling waters. C E. Headington and W. A. Sassaman. il Pet Refiner 26:124-6 My '47

SODIUM perchlorate
Isotonic solutions; osmotic and activity coefficients of lithium and sodium perchlorates at 25° C. J. H Jones. bibliog J Phys & Colloid Chem 51.516-21 Mr '47

SODIUM periodate
Influence of oxidation of pulp on wet strength. M O Schur and R M Levy. bibliog Paper Tr J 124:43-6 My 15 '47

SODIUM peroxide
Bleaching groundwood-sulphite pulp by continuous peroxide process; St Regis paper co, Bucksport, Me. J A. Lee. flow sheet (p 140-3) il diag Chem Eng 54:92-6 O '47
Continuous peroxide bleach reduces mill's costs; Dundee mills. E. D. White. il diags Textile World 97·141+ Je '47
Effect of certain variables in the bleaching of groundwood with sodium peroxide. W. E. Stobo and J. K Russell. bibliog Pulp & Pa of Can (Convention no) 48:224-32+ [F] '47

SODIUM phenylacetylene
Action of sodium, lithium and potassium phenylacetylene on acid derivatives. D. Nightingale and F T Wadsworth. bibliog Am Chem Soc J 69:1181-3 My '47

SODIUM phosphates
Chemistry of sodium phosphates. O. T. Quimby bibliog(140 ref) Chem R 40:141-79 F '47
Hydrolysis of dehydrated sodium phosphates. R. N. Bell bibliog Ind & Eng Chem 39: 136-40 F '47
Method for reclaiming dried zoological specimens. H J Van Cleave and J. A. Ross. Science 105:318 Mr 21 '47
New polyphosphates; abstract. G. Corsaro. Soap & San Chem 22.67 N '46
Phase study of sodium palmitate-alkaline electrolyte-water systems. R C. Merrill and R. Getty. bibliog Am Chem Soc J 69:1875-82 Ag '47
Polarographic study of sodium polyphosphates J. A. Campbell. bibliog Am Chem Soc J 69:109-10 Ja '47
Use of trisodium phosphate in microscopical technic. H. J Van Cleave and J. A. Ross. Science 106·194 Ag 29 '47
Use of trisodium phosphate with herbarium material and microfossils in peat W S. Benninghoff. Science 106:325-6 O 3 '47
See also
Sodium hexametaphosphate

SODIUM salicylate
Failure of sodium salicylate to inhibit hyaluronidase in vitro. R. M. Pike Science 105: 391 Ap 11 '47

SODIUM silicates
Continuous production of granulated sodium silicate N. A. Dodonov. diag Glass Ind 28: 467 S '47
Effect of freezing on the stability of colloidal dispersions; silica sols; preliminary report. F. Hazel bibliog diag J Phys & Colloid Chem 51:415-25 Mr '47
Finding a sillimanite substitute for use in wet patching F. H Norton. Brick & Clay Rec 110 70+ My '47
Phase study of sodium palmitate-alkaline electrolyte-water systems R. C Merrill and R Getty bibliog Am Chem Soc J 69:1875-82 Ag '47
Refractory coatings for permanent molds. H E. Bourassa. il Iron Age 159.58-9 F 6 '47

Analysis
Analysis of sodium silicate; TAPPI tentative standard T 632 m-46. Paper Tr J 123:42-4 D 19 '46

SODIUM stearate
Phase behavior of sodium stearate in anhydrous organic solvents G. H Smith and J. W McBain bibliog il J Phys & Colloid Chem 51:1189-204 S '47

SODIUM sulfamate
Solubility of sodium sulfamate in water. S H Laning and P. A van der Meulen. Am Chem Soc J 69 1828-30 Jl '47

SODIUM sulfates
Catalytic reduction of sodium sulfate C. J. Nyman and T D. O'Brien. bibliog diag Ind & Eng Chem 39 1019-21 Ag '47
Liquid carry over in a horizontal tube evaporator; entrainment splashing and foaming. H. E. O'Connell and E. S Pettyjohn. bibliog flow diag Am Inst Chem Eng Trans 42: 795-814 O-D '46
More sodium sulfate needed. Chem Ind 60: 967+ Je '47
Particle size of anthracite used for reduction of sodium sulfate E. Z. Zhitomirskaya Glass Ind 28·130 Mr '47
Removal of salt cake fume from sulphate recovery furnace stack gases by scrubbing T T. Collins, jr and others il diags Paper Tr J 124 45-9 Je 5 '47
Scrubbing of sulphate recovery furnace stack gases. T T. Collins, jr. bibliog il diag Paper Ind 29 680-6, 830-4, 984-6 Ag-O '47
Soap plant observer; synthetic detergent products. Soap & San Chem 23:44-5 Ag '47
System potassium sulfate-sodium sulfate-magnesium sulfate-water at 35°. N S. Bayliss and others. bibliog diag Am Chem Soc J 69·2033-6 Ag '47

SODIUM sulfide
Test for selenium based on a catalytic effect. F. Feigl and P. W. West. Anal Chem 19: 351-3 My '47

SODIUM sulfite
Influence of sodium sulphite and sodium thiosulphate in the sulphate pulping of Engelmann spruce M. W. Bray and B. Singer. il Paper Tr J 125:49-53 Ag 21 '47; Excerpts. Paper Ind 29 279-80 My '47
Production of high-strength steels with improved machining characteristics; addition of sodium sulfite. F. O. Johnson. Metal Prog 52:565-7 O '47
Pulping of straw with digestion liquors containing sodium sulphite. G. S. Hannaway. Paper Ind 29:714+ Ag '47
Pulping with sodium sulphite to produce strawboard. S. I Aronovsky and others. bibliog Paper Tr J 125.90+ N 6 '47, Same cond Paper Ind 29 280-1+ My '47
Sodium sulphite woodpulps. H. R Murdock. Paper Tr J 124·51-2 Ja 23 '47

SODIUM sulfonates
Reaction of certain diazosulphonates derived from β-naphthol-1-sulphonic acid; the stabilities of acrylic acid derivatives from sodium 1-arylazo-β-naphthaquinone-1-sulphonate and its derivatives, and an investigation of derived *iso*indolinones. F. M. Rowe, W. T. McFadyen and A. T. Peters Chem Soc J p468-73 Ap '47

SODIUM sulfosuccinates
See also
Aerosol MA

SODIUM thiomethoxide
Methyl thioethers derived from 2 : 2′-dichlorodiethyl sulphide and its analogues; possible uses for analysis. E. M Meade and R. C. G Moggridge. Chem Soc J p813-14 S '46

SODIUM thiosulfate
Influence of sodium sulphite and sodium thiosulphate in the sulphate pulping of Engelmann spruce. M. W Bray and B Singer. il Paper Tr J 125:49-53 Ag 21 '47; Excerpts. Paper Ind 29.279-80 My '47
Lack of influence of thiosulfate and metabisulfite on the antibiotic activity of penicillin. C. S. Leonard. bibliog Science 104: 501-2 N 29 '46
Preparation of sodium thiosulphate by the hydrogen sulphide method; abstract. J. I. Zilberman and V. M. Freedman. Chem Eng 53:268 D '46

SODIUM thymonucleate
Effects of X-radiation on thymus nucleic acid B Taylor and others. bibliog Science 105 263-4 Mr 7 '47

SOFT drinks. See Beverages

SOFTENING agents
Cationic softeners give permanent finish. C. N. Rabold. il Textile World 97:147+ F '47
Softeners for GR-S tires V. V Wheeler and others bibliog il Rubber Age 61:437-42, 555-62 Jl-Ag '47
Solubilities of unvulcanized rubbers D. V Sarbach and B S Garvey, jr India Rubber World 115:798-801 Mr '47

SOGENATE
Chemist develops drugs in home laboratory. Chem & Eng N 25.1042 Ap 14 '47

SOIL analysis
Rapid turbidimetric determination of inorganic nitrogen in soil and plant extracts. B Wolf bibliog Anal Chem 19 334-5 My '47

SOIL-cement pavements. See Pavements, Soil-cement

SOIL-cement roads. See Roads, Soil-cement

SOIL conservation
Development of natural resources the coming technological revolution on the land. H. H. Bennett Science 105 1-4 Ja 3 '47
Ditch retards to prevent erosion. G B. Finley. diags Pub Works 77:19-20+ D '46
Engineering opportunities in soil conservation A. W. Emerson il Eng N 138 1014-17 Je 26 '47
Iowa soil program of Hardin county bankers association il Banking 39 61 F '47
1,000 banker-farmer meetings. map Banking 40.54 Jl '47
Saving the soil Economist 152:66 Ja 11 '47
Soil of Canada. Economist 152 21-2 Ja 4 '47
Ten-year test of soil conservation; Thomas Jefferson country provides laboratory. il Banking 39:58-9 D '46
When farming declines, business declines; soil conservation program of Princeton bank and trust company, W. Va. A. Banov. Banking 39 44+ My '47
See also
Lime as fertilizer

SOIL consolidation. See Soils—Consolidation

SOIL corrosion. See Corrosion and anti-corrosives—Underground corrosion

SOIL cultivation. See Tillage

SOIL disinfection
Soil sterilization; advantages of electrical treatment. T. S Parkinson. il diag Elec R (Lond) 140:977-8 Je 13 '47

SOIL erosion. See Erosion

SOIL fertility
Forty-five years of continuous cropping with lima beans F L Smith and others. Science 105 179-80 F 14 '47

SOIL heating
See also
Hotbeds, Electric

SOIL mechanics
ASCE annual meeting; abstracts of papers before soil mechanics and foundations division diag Eng N 138 96-7 Ja 23 '47
Analysis of the position in soil mechanics. N J. Cochrane diags Engineering 164. 213-14 Ag 29 '47, Abstract. Engineer 184: 224 S 5 '47
Consolidation of fine-grained soils by drain wells R A. Barron. bibliog il diags Am Soc C E Proc 73:811-35 Je '47
Developments in soil mechanics. E. F Bennett Roads & Sts 90.54-5 Ap '47
Nomograph aids use of Boussinesq equation I. J. Hooks and H Gray. Civil Eng 17:332-3 Je '47
Putting soils knowledge to work on airfield runways E. E Seelye. il diags Eng N 138. 733-7 My 1 '47
Stability of soil slopes E Tan. diags Am Soc C E Proc 73:19-38 Ja '47; Discussion 73:723-8, 963-8, 1119-21 My-Je, S '47
Traction as influenced by soils and their condition. W. A. Gross, jr. and A. D. Elliott. il diags S A E J 54:26-8 D '46
Underground conduits; an appraisal of modern research. M G. Spangler bibliog diags Am Soc C E Proc 73 855-84 Je '47
Wall footing action poses enigmas. H. S Woodward diags Eng N 138:955-6 Je 12 '47
See also International conference on soil mechanics and foundation engineering

SOIL microorganisms
Chemistry of fungal antibiotics in relation to soil microbiology. J. C. McGowan. bibliog Chem & Ind p205-7 Ap 19 '47
Protecting pipe in open systems; protection against action of sulfate-reducing bacteria M. D. Appleman. bibliog Am Gas Assn Mo 29:194-6 Ap '47

SOIL moisture
Chart facilitates determination of unit weights of soils. E H Harlow Eng N 139 394-5 S 18 '47
Les condensations d'eau occultes dans les sols; leur mécanisme et leur influence dans les régions désertiques sahariennes R. Leroy Génie Civil 124.96 Mr 1 '47
Good anchoring is inexpensive guy insurance against storms; effect of soil moisture on holding power. D. C Hubbard and B O. Watkins. il Elec World 128:94-6 O 11 '47
Soil moisture lowers tomato acid content. Food Ind 19:964 Jl '47
Subgrade moisture conditions beneath highway and airfield pavements M. S. Kersten. Roads & Sts 89:94+ O '46

SOIL stabilization
Effect of subgrade treatments on pavement faulting and pumping E. A. Henderson and W T. Spencer. bibliog il diag Roads & Bridges 85:81-7+ Ap '47
Electrical stabilization of soil. B. A Rzhanitzin, D. I. Solntzev and B S Borkov. Eng N 138 822-3 My 15 '47
Granular stabilization, American road builders association, report by Soils calcium chloride granular stabilization committee il Roads & Bridges 85.53+ Jl '47
Lime stabilization and low cost road construction. W D. Dockery, D. E H Manigault. il Roads & Sts 90:91-5 Ag '47
Lime treatment permits use of substandard flexible base materials. B. B. Freeborough. il Pub Works 78:17-18+ Je '47
Progress report of the joint investigation of methods of roadbed stabilization R. B Peck. il diags Ill U Eng Exp Sta Reprint Ser 34.1-32 '46
Recommended construction practice for soil-bituminous roads il Roads & Bridges 85. 40-3+ Ja '47
Second report on tests for soil stabilization, by the soil stabilization panel of standardization sub-committee no 7, asphaltic bitumen pl diags Inst Pet J 33.113-28 F '47
Soil stabilization principles. L N McManus. Roads & Bridges 84:74+ N '46
Turf on mechanically stabilized shoulders. H. H. Iurka il Roads & Sts 90.68+ My '47
Waterproofed mechanical stabilization in road construction; soil-bituminous roads. il Roads & Bridges 85.72-5+ F '47

SOILLESS agriculture. See Plants—Soilless culture

SOILS
Chart facilitates determination of unit weights of soils E. H. Harlow. Eng N 139 394-5 S 18 '47
Designing two-soil mixtures. G. W. Shults. Roads & Sts 90.58+ Je '47
Facts and fads in garden soil management. W. B. Mack Consumers Res Bul 19:15-16 Je; 20:15-16 Jl; 22-4 O '47
Principle for maintaining earthworms in farm soils H Hopp and P. J Linder. bibliog Science 105.663-4 Je 27 '47
Soil conditions and tree growth; physiological aspects of the tree soil complex. L. Leyton bibliog Chem & Ind p558-60 S 13 '47
Soil conditions and tree growth; soil factors. G W. Dimbleby. bibliog Chem & Ind p560-2 S 13 '47

SOILS—*Continued*
World soil and fertilizer resources in relation to food needs. R. M. Salter. map Science 105.533-8 My 23 '47; Discussion. W. Vogt. 106:83-4 Jl 25 '47

See also
Agriculture
Clay
Drainage
Earthwork
Erosion
Fertilizers
Foundation soils
Highway engineering
Irrigation
Roads—Subgrades
Sand
Silt
Soil mechanics
Soil moisture

Bibliography
Bibliography of soil science, fertilizers and general agronomy, 1940-1944. 567p 30s Imperial bur. of soil science, Harpenden, England '46

Classification
Classification and identification of soils. A. Casagrande. bibliog Am Soc C E Proc 73: 783-810 Je '47; Discussion. 73:1166-9, 1310-18, 1435-43 S-N '47

Consolidation
Calcium chloride as a compaction aid in gravel base construction J. A. Knight. Roads & Bridges 85:90-3+ O '47
Compacting of soil by rolling and vibration. il Engineering 164:1-6 Jl 4 '47
Compaction; how states specify it today; Highway research board committee's summary, tabulated. Roads & Sts 90:55-9+ Ap '47
Consolidation of fine-grained soils by drain wells. R. A. Barron. bibliog il diags Am Soc C E Proc 73.811-35 Je '47
50,000 cu yd. daily for Baltimore airport il plan diag Eng N 139·532-5 O 16 '47
Soil compaction essential to good paving results. A. O. Williamson. il Roads & Bridges 85 93-4+ Ap '47; Roads & Sts 90·84+ My '47
Soil compaction experiments point way toward stronger, more economical subgrades. W. D. Curtis il Civil Eng 17·390-3+ Jl '47
Vibratory and impact methods for compaction of soils. G. P. Tschebotarioff. bibliog il Roads & Bridges 84:65-6+ D '46

Electric properties
Corrosion surveys; measuring soil resistivity. M. E Parker, jr diag Pet Eng (Ref annual) 18:270+ Jl 1 '47
Experience with the megger; ground resistivity meter used in locating corrosion leak in pipe line. W H. Simpson Oil & Gas J 46:192+ S 20 '47

Freezing
Alaska permafrost investigation; abstract H. J. Manger. Civil Eng 17:449 Ag '47
Solving the problem of nalyeds (surface ice formation) in permafrost regions A. Tchekotillo diags Eng N 137:724-7 N 28 '46
Studies determine proper construction procedures in permafrost areas il Civil Eng 17·387-9 Jl '47
Test study of foundation design for permafrost conditions il diags Eng N 139·404-7 S 18 '47

Sulfur content
Sulfur collection in precipitation by means of an all-weather noncorrosive rain and snow gauge. M. I Fried and M L. Jackson il diag Science 106·19-20 Jl 4 '47

Testing
Army engineers develop cone penetrometer il Eng N 137:809 D 12 '46
Home made soils equipment. R Valle R il Eng N 138·897-8 My 29 '47
Traction as influenced by soils and their condition. W. A. Gross, jr. and A D. Elliott. il diags S A E J 54:26-8 D '46

See also
Foundation soils—Testing

Alaska
Studies determine proper construction procedures in permafrost areas. il Civil Eng 17:387-9 Jl '47

Caribbean region
Question of soil surveys in the Caribbean. Science 106.313 O 3 '47

Dominican Republic
Aluminous lateritic soil of the Sierra de Bahoruco area, Dominican Republic, W I. S S Goldich and H R Bergquist maps U S Geol S Bul 953-C 53-84, pl 15-19; pa 40c Supt of doc. '47

France
Importance de la pédologie dans l'agronomie méditerranéene E Lemaire. map Génie Civil 124.315-16 Ag 15 '47

Japan
Reconnaissance soil survey work in Japan C L. W. Swanson. maps Science 106: 256-8 S 19 '47

SOLAR aircraft company
Securities disturbing investors E A Barnes. Mag of Wall St 80 387+ Jl 5 '47

SOLAR heating
George Fred Keck designs a solar house of brick with cavity walls and radiant heating; illustrations with text Brick & Clay Rec 110·18-20 F '47
Heating with sunbeams; solar house heating unit; house in Boulder, Colo. il diags Dom Eng 168.136-8+ D '46, Abstract. Mech Eng 69 160 F '47
Solar energy applied to home heating diag Coal Age 52:128 F '47
Solar heat test structure at M.I.T. F. N. Hollingsworth il Heat & Ven 44·76-7 My '47
Solar heating on the beam; Colorado experiments cut fuel bill 20%. il diag Bsns W p21-2 Mr 15 '47
Solar house heater yields 20% fuel saving in University of Colorado experimental installation; with excerpts from research report. il diags Arch Forum 86:121-2, 124+ F '47
Solar house heating, problem of heat storage; new method using the heat of fusion of chemical compounds. M Telkes. bibliog diags Heat & Ven 44.68-75 My '47
Solar house, second research progress report. F. W. Hutchinson. il Heat & Ven 44:55-9 Mr '47
Solar + radiant panel + warm air=comfort; residence of H M. Sloan, Glenview, Ill. il plan diag Arch Rec 101·92-5 Je '47
Solar radiation projects at Purdue, M.I.T. F. W. Hutchinson. Cer Ind 49:78 Ag '47

See also
Solar radiation

SOLAR house. See Orientation (architecture); Solar heating

SOLAR radiation
Artificial sunshine; solarium design. G. F. Prideaux bibliog il diag Gen Elec R 49: 40-4 N '46; Same. Illum Eng 41·762-74 N '46
Estimate of transparency of the atmospheric window 16 mu to 24 mu. A. Adel. Opt Soc Am J 37:769-71 O '47
New unit, the langley, proposed. L. B. Aldrich and others. Science 106·225 S 5 '47

See also
Solar heating

SOLAR spectrum. See Spectrum, Solar

SOLDER and soldering
Aluminum solder. il Sci Am 177:129-30 S '47
Aluminum solder that requires no flux. il Materials & Methods 25·81-2 My '47
Bonding sapphire to metal. T. C. Du Mond il Materials & Methods 26 84-6 O '47
Carbon soldering fixtures. F. C. Dupre. il diags Am Mach 91.101-3 My 8 '47
Continuous soldering of small motor rotors using high-frequency heat. W L. Tesch and P. A. Greenmeyer. il Materials & Methods 25.94-6 Je '47
High-speed assembly of radiators by induction soldering. il Mach 53:166-7 D '46; Same cond. Iron Age 158 55 O 24 '46
How to solder stainless steel fittings; illustrated instructions. Power 91.57, Ja '47
Induction soldering increases radiator production, tractor division of International harvester co il Steel 119:96 N 18 '46

SOLDER and soldering—*Continued*
Mechanized oxy-acetylene soft soldering; air-conditioning units il Sheet Metal Worker 38·51-2 Jl '47; Same. Steel 120·98+ Ap 14 '47
New flux makes easier the soldering of zinc-coated parts il Materials & Methods 26: 78-9 Jl '47
Self-soldering tape; needs neither torch nor iron il Sci Am 176 270 Je '47
Soft soldering. M. E. Fine and R. L. Dowdell. il Am Soc for Metals Trans 37 245-72 bibliog(p271-2) '46; Abstract. Steel 118:134 Ja 28 '46; Discussion. Am Soc for Metals Trans 37:273-7 '46
Solder stops steel tube-sheet corrosion; applied as coating to condenser tube sheets at the Long Beach steam plant. E R. Stauffacher. il Elec World 128 67 Ag 16 '47
Soldering aluminum G W. Birdsall. Iron Age 159·53 Je 26 '47
Soldering litz ends. E. Toth. Electronics 20: 158+ Mr '47
Temperature chart for soldering, brazing and welding processes; reference book sheet. R. C. Hitchcock. Product Eng 18:171 O '47
Welding alloy steel piping E. R. Seabloom. il Heating-Piping 18.82-3 D '46

See also
Brazing
Silver solder
Welding

SOLDERING apparatus
Battery powered solder iron. H. Menegus. diags Bus Transportation 26.60 Ag '47
How to recondition a soldering copper; illustrated instructions. Power 91:496 Jl '47

SOLDIERS, Disabled. See Veterans, Disabled

SOLDIERS, Discharged. See Veterans

SOLDIERS' bonus. See Veterans—Bonuses

SOLENOIDS
A-c magnets and solenoids. L T. Rader. diags Elec Eng 66·487-92 My '47
H.f. resistance and self-capacitance of single-layer solenoids. R. G. Medhurst. diags Wireless Eng 24.35-43, 80-92 bibliog(p92) F-Mr '47; Discussion. M. V. Callendar. 24:185 Je '47
Why do solenoid valves stick shut in ice and cold-storage plant? diags Power 91.638-9 S '47

SOLEXOL process. See Oil refining

SOLID carbon dioxide. See Carbon dioxide, Solid

SOLID solutions. See Solutions, Solid

SOLIDS
Bounded linear harmonic oscillator and phase transitions of second order. B. Suryan Phys R 71.741-2 My 15 '47
Cavitation from solid surfaces in the absence of gas nuclei. D. C. Pease and L R. Blinks. bibliog J Phys & Colloid Chem 51·556-67 Mr '47
Oscillator concept in the theory of solids. E. M. Corson and I. Kaplan. Phys R 71:130-1 Ja 15 '47
Solid-state interpretation of the structure near the limit of the continuous X-ray spectrum. J W M. DuMond. bibliog diags Phys R 72:276-83 Ag 15 '47
Studies of the solid state by means of nuclear magnetism. N. L. Alpert. Phys R 72.637-8 O 1 '47

See also
Crystals
Expansion (heat)
Melting points
Particles
Powders
Solutions, Solid
Surface phenomena

SOLUBILITY
Activity coefficients and activity product of potassium metaperiodate. J. H. Jones and N. Heckman. bibliog Am Chem Soc J 69: 536-8 Mr '47
Aqueous solubilities of some sulfamates, and the system ammonium sulfamate-sulfamic acid-water at 25°. J. E. Ricci and B. Selikson. bibliog Am Chem Soc J 69:995-8 My '47
Blending of water with organic solvents by detergents. S. R. Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47
Effect of molecular association and charge distribution on the gelation of pectin. R. Speiser, M. J. Copley and G. C. Nutting. bibliog J Phys & Colloid Chem 51:117-33 Ja '47
Electronic interpretations of organic chemistry; interpretation of the solubility of organic compounds. S. R. Palit. bibliog J Phys & Colloid Chem 51.837-57 My '47
Equilibria in saturated salt solutions; ternary systems $CaCl_2$-$MgCl_2$-H_2O, $CaCl_2$-KCl-H_2O and $MgCl_2$-KCl-H_2O at 75°. W. J Lightfoot and C. F. Prutton. Am Chem Soc J 69.2098-100 S '47
Fractional precipitation of molecular-weight species from high polymers; theories of the process and some experimental evidence. D R Morey and J. W. Tamblyn. bibliog diags J Phys & Colloid Chem 51·721-46 My '47
Influence of charge and configuration on the solvent power of benzene carboxylic acid ions. C. F Failey. bibliog Am Chem Soc J 68:2619-24 D '46
Investigations of the solubility in the solid state in the binary systems of the oxides CaO, MnO, MgO, and FeO, abstract. H. Pettersson. Am Cer Soc J 30 (Cer A):167 Ag 1 '47
Olive oil as a solvent for certain organic vapors. R Macy and B. Gehauf. Science 106.274-5 S 19 '47
Physical and chemical properties of hydrocarbon solutions of aluminum bromide; the solubility of aluminum bromide in *n*-hexane. E. R. Boedeker and A. G. Oblad. bibliog Am Chem Soc J 69:2036-9 Ag '47
Picric acid method for determination of aromatic content of aviation gasoline. C M. Gambrill and J B. Martin Ind & Eng Chem Anal ed 18·689-92 N '46
Rates of solution of soaps in water. L Shedlovsky, G D. Miles and G. V. Scott. bibliog diag J Phys & Colloid Chem 51:391-407 Mr '47
Relative solubilities of salts of calcium, strontium, and barium. G. W. Watt. J Chem Educ 24.174 Ap '47
Separation of isomers; β-(2- and β-(1-naphthoyl)-propionic acid; their ionization constants and solubilities and method of separation. M S. Newman and others. Am Chem Soc J 69:1784-6 Jl '47
Solubilities of ammonium and potassium alums in water; densities of the saturated solutions. D. Schlain, J. D Prater and S. F. Ravitz. bibliog diag Ind & Eng Chem 39:74-6 Ja '47
Solubilities of unvulcanized rubbers D. V. Sarbach and B S Garvey, jr. India Rubber World 115:798-801 Mr '47
Solubility, absorption spectrum and ionization constant for aloe-emodin. K. G. Stone and N. H. Furman Am Chem Soc J 68:2742 D '46
Solubility and melting point as functions of particle size; induction period of crystallization. L Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47
Solubility as a criterion of purity. D. Thorp. Soc Chem Ind J 65:414-19 D '46
Solubility of boron fluoride in normal pentane. G. N. Cade, R. E. Dunn and H. J. Hepp. Am Chem Soc J 68:2454-5 D '46
Solubility of cellulose in mixtures of nitrogen tetroxide with organic compounds. W F. Fowler, jr. and others. bibliog Am Chem Soc J 69:1636-40 Jl '47
Solubility of certain amino acids in aqueous solutions of amino acids and peptides. E. L. Sexton and M. S. Dunn. bibliog J Phys & Colloid Chem 51:648-54 My '47
Solubility of magnesium ammonium phosphate hexahydrate. R. F. Uncles and G. B. L. Smith. bibliog Ind & Eng Chem Anal ed 18:699-702 N '46
Solubility of nitrogen and methane in sulfur dioxide M. R. Dean and W. S. Walls. diag Ind & Eng Chem 39:1049-51 Ag '47
Solubility of oxygen in water. G. E. Mapstone. chart Chem Ind 60:662+ Ap '47
Solubility of paraffin-chain compounds. A. Bondi. bibliog J Phys & Colloid Chem 51: 891-903 Jl '47
Solubility of silver selenide and silver telluride in aqueous ammonia. R. S. Young and A. Golledge. Ind & Eng Chem 39:1299-300 O '47

SOLUBILITY—*Continued*
Solubility of sodium sulfamate in water. S. H. Laning and P. A. van der Meulen. Am Chem Soc J 69:1828-30 Jl '47
Solubility of sulphur dioxide in fuming sulphuric acid. F. D. Miles and T. Carson. diags Chem Soc J p786-90 S '46
Solubility product and the silver-ammonia halides. K. B. Morris. J Chem Educ 24. 236-7 My '47
Solubilization by solutions of long-chain colloidal electrolytes R S. Stearns and others. bibliog J Chem Phys 15·496-507 Jl '47
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A Green and J W McBain bibliog J Phys & Colloid Chem 51·286-98 Ja '47
Ternary systems sodium molybdate-water-sodium chlorate (bromate, or iodate) at 25° J E. Ricci and W. F Linke. bibliog Am Chem Soc J 69 1080-3 My '47

SOLUBLE coffee. See Coffee, Soluble

SOLUTION (chemistry)
Application of radioactive isotopes to the problem of diffusion of electrolytes in aqueous solutions. L. B. Robinson and J. B. Drew J Chem Phys 15.417-18 Je '47
Association of polymer molecules in dilute solution. P Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51.32-57 Ja '47
Concentration dependence of the rates of sedimentation and diffusion of macromolecules in solution; preliminary. S. J. Singer. bibliog J Chem Phys 15·341-8 Je '47
Decomposition of benzoyl peroxide B Barnett and W E Vaughan. bibliog J Phys & Colloid Chem 51.926-55 Jl '47
Distribution in hydrocarbon-solvent systems T. G Hunter and T. Brown Ind & Eng Chem 39·1343-5 O '47
Entropy of solution of molecules of different size J. H Hildebrand bibliog J Chem Phys 15 225-8 My '47
Equilibria in saturated salt solutions, ternary systems $CaCl_2$-$MgCl_2$-H_2O, $CaCl_2$-KCl-H_2O and $MgCl_2$-KCl-H_2O at 75°. W J. Lightfoot and C. F. Prutton. Am Chem Soc J 69·2098-100 S '47
Equilibrium properties of high polymer solutions and gels G. Gee. Chem Soc J p280-8 F '47
Generalization in the diffusion theory O. Lamm. bibliog J Phys & Colloid Chem 51·1063-78 S '47
Kinetics of dissolution of cadmium in hydrochloric acid J. F. Zimmerman and H. J McDonald. bibliog diags J Phys & Colloid Chem 51 857-68 My '47
Magnetic susceptibility of some nickel complexes in solution J. B. Willis and D P Mellor bibliog Am Chem Soc J 69 1237-40 Je '47
Measurement of vapor pressures of aqueous solutions by bi-thermal equilibration through the vapor phase R. H. Stokes. bibliog diag Am Chem Soc J 69·1291-6 Je '47
Movement of substances through a two-phased solution system. T. C Broyer. Science 105:67-9 Ja 17 '47
Polymerisation of monomers in aqueous solution. M. G. Evans Chem Soc J p266-74 F '47
Solubility product of bismuth oxychloride and the ionization constant of tetrachloro-bismuth ion. R. K. McAlpine. J Chem Educ 24.395-8 Ag '47
Some thermodynamic constants for the solution process of atoms in metallic solvents. S Wang. bibliog J Chem Phys 14:643-7 N '46
Viscosity of dilute solutions. J. S Gourlay. Soc Chem Ind J 65.423-5 D '46

See also
Colloids
Crystallization
Diffusion
Electrolysis
Electrolytes
Ions
Precipitation
Solubility
Solvents

SOLUTION, Heat of
Enthalpy concentration chart for hydrogen fluoride-water solutions E G. Vogt. Chem Eng Prog 43.39-40 Ja '47
Heats of combustion and solution of liquid styrene and solid polystyrene, and the heat of polymerization of styrene. D E. Roberts and others. bibliog(40 ref) J Res Nat Bur Stand 38.627-35 Je '47
Heats of formation of $3CaO\ B_2O_3$, $2CaO{\cdot}B_2O_3$, $CaO\ B_2O_3$ and $CaO\ 2B_2O_3$. D. R Torgeson and C. H. Shomate bibliog Am Chem Soc J 69.2103-5 S '47
Heats of solution and heats of reaction in liquid ammonia E Hennelly and others. Am Chem Soc J 69·1025-7 My '47
Heats of solution of solid solutions of hexacalcium dialumino ferrite and dicalcium ferrite. E S Newman bibliog J Res Nat Bur Stand 38·661-4 Je '47

SOLUTION-morel pebbles. See Pebbles

SOLUTIONS, Solid
Configuration of organic selenoxides; mixed crystals of selenoxides with sulfoxides H. Rheinboldt and E. Giesbrecht. bibliog Am Chem Soc J 68 2671-3 D '46
Coordination number in solid solutions, a mathematical paradox. D. R. Hudson. J Ap Phys 17 1126 D '46
Estrogenic action and isomorphism H. E. Ungnade and F. V Morriss bibliog Am Chem Soc J 69:1545-7 Je '47
Heats of solution of solid solutions of hexacalcium dialumino ferrite and dicalcium ferrite E S Newman bibliog J Res Nat Bur Stand 38.661-4 Je '47
Mixed crystals of sulfoxides, sulfones, selenoxides and selenones H. Rheinboldt and E. Giesbrecht. Am Chem Soc J 69.644-6 Mr '47
Phase nature of beta sodium palmitate R. H. Ferguson, F B Rosevear and H Nordsieck. bibliog 2pls Am Chem Soc J 69.141-6 Ja '47
Recognition of solid solutions. J. G Aston, M R. Cines and H L. Fink. Am Chem Soc J 69 1532-4 Je '47
Solid solution studies, equilibria in the binary systems 2,2-dimethylbutane-2,3-dimethylbutane and 2,2-dimethylbutane-cyclopentane H L. Fink and others. Am Chem Soc J 69:1501-6 Je '47
Stress induced preferential orientation of pairs of solute atoms in metallic solid solution. C. Zener. bibliog Phys R 71:34-8 Ja 1 '47
Symmetrical arrangement of atoms in aluminosilicates and random arrangement of two kinds of objects in a regular array. W G Schlecht. bibliog In U S Geol S Bul 950:35-82, pl 1 '46
Ternary systems silver sulfate—alkali sulfate—water. E. L Simons and J. E. Ricci. bibliog Am Chem Soc J 68:2194-202 N '46
Theory of the age hardening of aluminum-copper alloys, based on vacant lattice sites; abstract. F. Röhner Metal Prog 52.422+ S '47
X-ray analysis of chromium-molybdenum and chromium-tungsten alloys. W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47

SOLUTIONS, Viscosity of. See Viscosity

SOLUTIZER process. See Gasoline—Manufacture

SOLVENTS
Acid-base catalysis in non-aqueous solvents; isomerisation of methyl mesityl oxide oxalate in chlorobenzene solution at 99°. R P. Bell and S. M. Rybicka. Chem Soc J p24-31 Ja '47
Alcohol and solvents, 1939-1946. Chem Eng 54:114-15 F '47
Blending of water with organic solvents by detergents. S R. Palit and J W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47
Converted topping unit makes close-cut naphthas and solvents from gasoline. flow diag; il Pet Processing 2:191-2 Mr '47
DDT emulsion concentrates. H. A. Jones and others. Soap & San Chem 22.155+ D '46
Decomposition of benzoyl peroxide; the rates of decomposition in various solvents. B. Barnett and W. E. Vaughan bibliog J Phys & Colloid Chem 51:942-55 Jl '47
Dielectric studies; dipole moment of acetonitrile in solvents of unknown molecular weights N. C. C. Li and T. Chu. bibliog Am Chem Soc J 69.558-9 Mr '47

SOLVENTS—*Continued*
Electronic interpretations of organic chemistry, interpretation of the solubility of organic compounds. S R. Palit. bibliog J Phys & Colloid Chem 51 837-57 My '47
Electrostatic ignitibility of various solvent vapour-air mixtures. A R Boyle and F. J Llewellyn. bibliog diag Soc Chem Ind J 66·99-102 Mr '47
Films, resistant to organic solvents, for use in the electron microscope. S G. Ellis il J Ap Phys 18:846-7 S '47
Kinetics of the reaction between tin and solutions of bromine and iodine in organic solvents. A. F. Trotman-Dickenson and E J. F. James Chem Soc J p736-8 Je '47
Manufacture of sulfolanes and use as selective solvents H. G. Staaterman and others. flow diags il Chem Eng Prog 43.148-51 Ap '47
Moving boundary method for the measurement of non-electrolyte transport in mixed solvents. L. G. Longsworth. bibliog Am Chem Soc J 69 1288-91 Je '47
Petroleum derivatives. Published in weekly numbers of Oil, paint and drug reporter
Phase behavior of sodium stearate in anhydrous organic solvents. G H Smith and J. W. McBain. bibliog il J Phys & Colloid Chem 51:1189-204 S '47
Solubility of cellulose in mixtures of nitrogen tetroxide with organic compounds. W. F. Fowler, jr. and others. bibliog Am Chem Soc J 69 1636-40 Jl '47
Solvent effect in the Curtius rearrangement of benzazide. M S. Newman, S. H. Lee, jr. and A B. Garrett. bibliog Am Chem Soc J 69.113-16 Ja '47
Solvent extraction of humic acids from nitric acid; treated bituminous coal. T S. Polansky and C R Kinney. bibliog Ind & Eng Chem 39:925-9 Jl '47
Solvent quenching of fluorescence E. J. Bowen and E. Coates Chem Soc J p 105-9 Ja '47
Solvents for silicone grease. Chem & Eng N 25:1888+ Je 30 '47
Solvents offer quick removal of mill scale from new boilers. L. B. Wilson. il diags Power 91·458-60 Jl '47
Solvents situation will continue to improve. F. E. Bennett. Paint Oil & Chem R 109: 65 N 14 '46
Some thermodynamic constants for the solution processes of atoms in metallic solvents. S. Wang. bibliog J Chem Phys 14:643-7 N '46

See also
Acetone
Acetonitrile
Benzene
Butyl alcohol
Carbon disulfide
Carbon terachloride
Chloroform
Cleaning compositions
Extraction processes
Furfural
Methanol
Tetrahydrofuran

Physiological effect

Acute toxicity and general systemic actions of diethylene glycol monoethyl ether (carbitol) P. J. Hanzlik and others bibliog J Ind Hygiene 29.190-5 My '47
Further studies on sensory response to certain industrial solvent vapors L. Silverman and others. J Ind Hygiene 28:262-6 N '46
Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 66:48-50 F '47
Les solvants benzoliques et l'hygiène industrielle. A Vallaud. Chimie & Ind 57·391-4 Ap '47
Solvent volatility in summer; dermatitis difficulties may increase. Safety Eng 93.64-5 Je '47

Recovery

Progress in solvent recovery. flow sheet (p136-9) il Chem Eng 54:98-9 Ja '47

Safety measures

Dangerous solvent usage. Safety Eng 93:74 Mr '47
Dry cleaning with synthetic solvents. L. Gordon. il Nat Safety N 56:98-9+ O '47
How to use chlorinated solvents. Safety Eng 93:60+ Mr '47
How to use safely; carbon tetrachloride. il Safety Eng 93:66-7+ Ap '47
Marking and storing organic solvents. Safety Eng 92 90 O '46
Medical protection in solvent operations. L. Gordon Rubber Age 60.451-2 Ja '47
Relatively nontoxic termed misleading in classifying organic solvents. Safety Eng 93: 64 F '47
Safety tips on control of solvents. Power 91:673 O '47
Solvent control committees R. Reider Safety Eng 94·17+ Jl '47
Solvent risks increase in warm weather. Nat Safety N 55.56 Je '47
Use your nose; working with organic solvents. Safety Eng 92.87 O '46

Testing

Solubilities of unvulcanized rubbers D V. Sarbach and B. S Garvey, jr. India Rubber World 115.798-801 Mr '47

SOMERVELL, Brehon Burke, 1892-
Portrait. Bsns W p71 Jl 19 '47, Factory Management 105 67 Ag '47

SONAR
Marine sound equipment discussed at sonar symposiums; Pacific coast meeting, A I.E E Elec Eng 66.1019-20 O '47
Sofar sonar used to enable persons stranded at sea to signal their position. Electronics 20:196+ My '47
Sonar, the submarine's nemesis. C G. McProud. il diags Radio N 37 47-9+ Mr '47
Wartime activities of the San Diego laboratory of the University of California division of war research. F. N D Kurie and G. P. Harnwell. R Sci Instr 18 207-18 Ap '47

SONIC ray plotter. See Sound—Apparatus

SONNETT, John Francis, 1912-
New antitrust head. por Bsns W p67 My 10 '47

SOOT
Soot on the blades caused fan vibrations J. F. Salvinsky Power Pl Eng 51 92 Ja '47
Soot removal; an operating must J. C. McCabe il diags Power 91:88-9, 160-1, 235-8+ F-Ap '47

SOOT blowers
Cleaning boiler heating surfaces. il Comp Air Mag 52:108-12 My '47
Experiences with automatic air soot blowers at the Oswego and Charles R Huntley steam stations; with cost data. H. L. Smith il diags A S M E Trans 69.145-51 F '47; Abstract. Elec World 128:114 Jl 5 '47; Discussion. A S M E Trans 69.151-3 F '47
Memorandum on soot blowing. A. J. Anderson Power Pl Eng 51·86-7 Je '47
Placing the steam generator in operation. J C Gore diags Power Pl Eng 51.81-2 My '47
Soot removal; an operating must. J. C. McCabe. diags Power 91:160-1 Mr '47

SORBIC acid
Sorbic acid available in development quantities from Carbide & carbon chemicals corp Chem Eng 54·162+ Ap '47; Chem & Eng N 25 552 F 24 '47

SORBITOL
Anhydrides of polyhydric alcohols; 1·4-3 : 6-dianhydro mannitol and 1 . 4-3 . 6-dianhydro sorbitol from sucrose. R. Montgomery and L. F. Wiggins. Chem Soc J p433-6 Ap '47
Catalytic hydrogenation boosts sorbitol output. H. C. E Johnson. il Chem Ind 61:618-20 O '47
Lead tetraacetate oxidations in the sugar group; crystalline 2,4,3,5-diethylidene-*aldehydo*-L-xylose and several of its derivatives. R. C. Hockett and F. C Schaefer. bibliog Am Chem Soc J 69·849-51 Ap '47
Sorbitol supply increased by improved process. Oil Paint & Drug Rep 152:7+ S 8 '47
Sugar interconversion under reducing conditions; D,L-glucitol. M. L. Wolfrom and others. bibliog Am Chem Soc J 68:2342-3 N '46
Synthesis of polygalitol tetraacetate (tetraacetyl-1,5-anhydro-D-sorbitol). H. G. Fletcher, jr. bibliog Am Chem Soc J 69:706-7 Mr '47

SORGHUM
Sorghums, new industrial grain. Tech R 49: 21-2 N '46

SORPTION. See Absorption; Adsorption

SORRELL, Herbert
Hollywood muddle; beating of studio strike leader. por Bsns W p104 Mr 15 '47

SORTING devices
Adjustable gage sorts round stock accurately. B. Mogal. diag Am Mach 91:114 Ja 30 '47
Automatic inspection system, Limitron. C. W. Warren. il diags Machine Design 19:127-9 Jl '47
Automatic segregator. il Sci Am 177:84-5 Ag '47
Bad beans given the bounce; electronic sorting mechanism. il diags Food Ind 18.1031+ Jl '46; Product Eng 17:90-2 O '46; Mech Eng 68:1067-8 D '46
Small parts inspection by automatic gaging; Limitron, C W. Warren. il Iron Age 159. 64-5 Je 19 '47
Tribo-electrification principle applied to sort metals il Product Eng 18:93 My '47

SOUND
Connection between the fountain effect, second sound, and thermal conductivity in liquid helium II. L. Tisza. bibliog Phys R 72.353-4 Ag 15 '47
Conversion of ordinary sound into second sound. W. M. Fairbank and others. bibliog diag Phys R 72.645-6 O 1 '47
Liquid helium; low temperature, new kind of sound explored at Yale university. C. T. Lane Mech Eng 69:40 Ja '47
Program of the 32d meeting of the Acoustical society of America; with abstracts of papers. Acoustical Soc Am J 19:283-93 Ja '47
Program of the 33d meeting of the Acoustical society of America, New York, May 8-10, with abstracts of papers Acoustical Soc Am J 19:722-37 Jl '47
Properties of liquids at high sound pressure. H B. Briggs and others bibliog diags Acoustical Soc Am J 19:664-77 Jl '47
Reflection and transmission of sound by thin curved shells. H. Primakoff and J. B. Keller. Acoustical Soc Am J 19:320-32 S '47
Tonal-range and sound-intensity preferences of broadcast listeners. H. A. Chinn and P Eisenberg. Inst Radio Eng Proc 33:571-81 S '45, Discussion. 34:757-61, 35:378 O '46, Ap '47

See also
Acoustics, Architectural
Electroacoustics
Hearing
Music—Acoustics and physics
Noise
Radio broadcasting—Sound effects
Sound waves
Soundproofing
Speech
Supersonic waves
Television—Sound transmission
Vibration
Voice

Absorption
Absorption of supersonic waves in water near one megacycle. L. W. Labaw and A. O. Williams, jr bibliog Acoustical Soc Am J 19.30-4 Ja '47
High frequency absorption in air and other gases. L. J Sivian bibliog Acoustical Soc Am J 19:914-16 S '47
History of molecular absorption. L. J Sivian. Acoustical Soc Am J 19.254-5 Ja '47
Measurements of ultrasonic absorption and velocity in liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47
Origin of excess ultrasonic absorption in water. L. Hall. Phys R 71:318 Mr 1 '47
Sound absorption and impedance of acoustical materials H. J Sabine. diags Soc Motion Picture Eng J 49:262-78 S '47
Ultrasonic absorption from 75 to 280 mc/sec R. A Rapuano. diag Phys R 72.78-9 Jl '47

Apparatus
Acoustical concomitants of cavitation and boiling, produced by a hot wire. M. F. M. Osborne and F. H. Holland. bibliog il diags Acoustical Soc Am J 19:13-29 Ja '47
Aural current indicator. T. A. Benham. diags Electronics 20:164+ Jl '47
Circuit analyzer for the blind C. M Witcher. il diags Electronics 20:132+ S '47
Curvature meter for use in disk recording. L. W. Sepmeyer. bibliog il diag Acoustical Soc Am J 19:161-4 Ja '47
Detection of internal leaks in aircraft hydraulic systems. R. G. Nuckolls and H. M. Trent. il diags Acoustical Soc Am J 19: 364-7 Mr '47
Device for plotting rays in a stratified medium. A. W. Lawson and others. il R Sci Instr 18:117-20 F '47
Dramatic presentation of sound, display rooms for RCA Victor division, Camden, N.J. il plan Arch Rec 101:86-94 My '47
German use of sonic listening L. E. Holt. diags Acoustical Soc Am J 19.678-81 Jl '47
Measurement of acoustic impedance. L L. Beranek. bibliog il diags Acoustical Soc Am J 19:420-7 My '47
Review of acoustical patents R. W. Young. Published in monthly numbers of Journal of the Acoustical society of America
Short-tube method for measurement of impedance. R K. Cook. diag Acoustical Soc Am J 19 922-3 S '47
Simplified method for determining transducer directivity index. P. M. Kendig and R. E. Mueser. diags Acoustical Soc Am J 19:691-4 Jl '47
Some acoustic properties of marine fouling J. W Fitzgerald and others. bibliog il diags Acoustical Soc Am J 19:332-7 Mr '47
Thermophone as a source of sound in liquid helium and liquid hydrogen. H A. Fairbank and others bibliog diag Acoustical Soc Am J 19:475-7 My '47
Tone stylus provides precise duplicating; tension on stylus converted to sound, allows milling of thin contour sections to close limits. H. L Seekins. il diags Am Mach 91: 109-11 Je 19 '47
Two parabolic reflector underwater transducers. J R. Reitz and R. E Mueser. il diags Acoustical Soc Am J 19.35-43 Ja '47

See also
Acoustic patents
Earphones
Electroacoustic transducers
Headphones
Hearing aids, Mechanical
Hydrophone
Loud speaking apparatus
Microphones
Moving picture sound recording
Phonograph
Radio apparatus
Reflectoscope
Sound—Measurement
Sound—Recording and reproducing
Sound filters
Telephone
Whistles

Attenuation
Attenuation and scattering of high frequency sound waves in metals and glasses. W P. Mason and H. J. McSkimin bibliog diags Acoustical Soc Am J 19:464-73 My '47
History of molecular absorption. L. J. Sivian. Acoustical Soc Am J 19:254-5 Ja '47

Bibliography
References to contemporary papers on acoustics. A. T. Jones. Acoustical Soc Am J 19:263-77 Ja '47 [cont bimonthly]

Diffraction
Diffraction of sound around a circular disk. H. Primakoff and others. bibliog diag Acoustical Soc Am J 19 132-42 Ja '47
Diffraction of sound due to right-angled joints in rectangular tubes J. W. Miles. diags Acoustical Soc Am J 19:572-9 Jl '47
Equivalent circuit for a bifurcated cylindrical tube J W Miles diags Acoustical Soc Am J 19:579-84 Jl '47
Sound diffraction by rigid spheres and circular cylinders. F M. Wiener. bibliog Acoustical Soc Am J 19:444-51 My '47

Measurement
Acoustical materials and acoustical treatments for aircraft. R H. Nichols, jr. and others bibliog diags Acoustical Soc Am J 19:428-43 My '47
Airplane quieting, measurement of sound levels in flight L. L. Beranek and H. W. Rudmose. il diags A S M E Trans 69: 89-94 bibliog(p95) F '47
Attenuation and scattering of high frequency sound waves in metals and glasses W. P. Mason and H. J McSkimin. bibliog diags Acoustical Soc Am J 19:464-73 My '47
Calculation of sound rays in the atmosphere P. Rothwell diags Acoustical Soc Am J 19:205-21 Ja '47

SOUND—Measurement—*Continued*

Electrical method of measuring the intonation of cup-mouthpiece instruments. J. C. Webster. diag Acoustical Soc Am J 19:902-6 S '47

Factors affecting the accuracy of radio noise meters H. E Dinger and H G Paine. bibliog diags Inst Radio Eng Proc 35:75-81 Ja '47. Discussion. 35:1505-7 D '47

Headphone measurements and their interpretation. D W Martin and L. J Anderson bibliog diag Acoustical Soc Am J 19:63-70 Ja '47

Measurement conditions influencing the front-to-back discrimination of an underwater hydrophone L N. Miller. Acoustical Soc Am J 19 59-62 Ja '47

Measurement of acoustic impedence. L. L Beranek bibliog il diags Acoustical Soc Am J 19:420-7 My '47

Measurements of underwater noise produced by marine life. M B. Dobrin. Science 105: 19-23 Ja 3 '47

Methods of measuring speech spectra S. S. Stevens and others bibliog il diags Acoustical Soc Am J 19.771-80 S '47

Microbarometric pressures from large high explosive blasts E. F Cox. bibliog map diag Acoustical Soc Am J 19 832-46 S '47

Mouth organ engineering, how it reduces fan and duct noises, harmonica used to measure sound frequencies J. Cassie il diags Power Pl Eng 51:84-7 Ag '47

Noise, its character and measurement. C. R. Freberg Refrig Eng 53.119-23+ F '47

Noise reduction in aircraft H. W. Rudmose and L L. Beranek. diags J Aeronautical Sci 14.79-96 F '47

Periodic variations of pitch in sound reproduction by phonographs, wow meter study. U. R Furst. bibliog il diags Inst Radio Eng Proc 34:887-95 N '46

Propagation of sound through a liquid containing bubbles. E. L Carstensen and L. L. Foldy diags Acoustical Soc Am J 19: 481-501 My '47

Propagation of u h f sound in mercury. G R Ringo and others. Phys R 72.87-8 Jl 1 '47

Resonant circuit modulator for broad band acoustic measurements G F. Hull, jr. bibliog diags J Ap Phys 17:1066-75 D '46

Some considerations governing noise measurements on crystal mixers S. Roberts diags Inst Radio Eng Proc 35:257-65 Mr '47

Sound control in airplanes L. L. Beranek and H. W. Rudmose. bibliog Acoustical Soc Am J 19:357-64 Mr '47

Sound diffraction by rigid spheres and circular cylinders F. M Wiener bibliog Acoustical Soc Am J 19:444-51 My '47

Sound pressure measurement system il R Sci Instr 17:560-1 D '46

Studies on pitch discrimination in masking; effect of signal/noise differential. J. D Harris. Acoustical Soc Am J 19:816-19 S '47

Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton bibliog J Ap Phys 17.940-71 N '46

See also

Decibel (transmission unit)
Photography of sound

Recording and reproducing

Curvature meter for use in disk recording. L. W. Sepmeyer bibliog il diag Acoustical Soc Am J 19:161-4 Ja '47

Design of a high-fidelity disc recording equipment H Davies. bibliog il diags Inst E E J 94 pt 3 275-95; Discussion. 296-300 Jl '47

Emergency broadcast pickup techniques; equipment and methods used in remote broadcasts and news coverage G. Riley. il Electronics 20:108-11 My '47

Frequency range preference for speech and music. H. F. Olson il plan diags Acoustical Soc Am J 19:549-55 Jl '47; Same cond Electronics 20:80-1 Ag '47

Improved theory of the light pattern method for the modulation measurement in groove recording J. Hornbostel. Acoustical Soc Am J 19.165-9 Ja '47

Intermodulation distortion analysis as applied to disk recording and reproducing equipment H. E Roys bibliog diag Inst Radio Eng Proc 35 1149-52 O '47

Musical entertainment on trains; Santa Fe installation of sound equipment il Ry Age 123 575-7 O 4 '47

Periodic variations of pitch in sound reproduction by phonographs; wow meter study U R. Furst bibliog il diags Inst Radio Eng Proc 34.887-95 N '46

Planning for central sound systems in schools il plans Arch Rec 101 90-2 Ja '47

Recording and reproduction of sound. O. Read il diags Radio N 37.52-4+ Mr; 50-2+ Ap, 61-3+ My, 65-7+ Je, 38.55-7+ Jl; 57-9+ Ag, 62-4+ S; 51-3+ O, 48-50+ N '47 (to be cont)

Recording studio 3A; acoustical design problems G M Nixon il RCA R 7:634-40 D '46

Resonant circuit modulator for broad band acoustic measurements. G F Hull, jr. bibliog diags J Ap Phys 17:1066-75 D '46

Sound embossing at the high frequencies. M. Morse. diags Acoustical Soc Am J 19:169-72 Ja '47

Sound-recording system; high-fidelity stereophonic system il Mech Eng 69.604 Jl '47

Three-band variable equalizer. L. D Grignon. bibliog il diags Electronics 20.112-15 Ja '47

UAL records verbal orders C. A. Petry and S. A Sollie. il maps Aero Digest 55:74+ Ag '47

What voice recording can do in the power industry G W. Dyson. il Power Pl Eng 51 102-3 Jl '47

Wow-meter. il R Sci Instr 18 589-90 Ag '47

See also

Moving picture sound recording
Phonograph
Speech, Visible

Magnetic recording

Candid wire recordings put new life into IGA dealer meetings. H R. Gerhard il Sales Management 59:118+ Ag 15 '47

Developments in magnetic recording. P. T. Hobson. Electrician 138 935-6 Ap 11 '47

Frequency response of magnetic recording; magnetic properties, physical dimensions and velocity of a magnetic recording medium. O. Kornei. bibliog il diags Electronics 20.124-8 Ag '47

Magnetic tape recorder for movies and radio R. H. Ranger. il diags Electronics 20:99-103 O '47

Makers of wire recorders gird for price battle. E R. Abrams. Barron's 27.10 Ap 28 '47

New recorders challenge disks. Bsns W p58+ Ap 5 '47

Recent developments in the field of magnetic recording. S. J Begun and others. il diags Soc Motion Picture Eng J 48:1-62 Ja '47

Report on the Mail-A-Voice magnetic recorder, not recommended. il Consumers Res Bul 20:17-18 O '47

Some factors influencing the choice of a medium for magnetic recording L C. Holmes. Acoustical Soc Am J 19.395-403 My '47

Wire recorder, Sears, Roebuck home recorder built into radio-phonograph. Bsns W p24 Mr 15 '47

Wire recorder wow A. W. Sear diags Acoustical Soc Am J 19:172-8 Ja '47

Transmission thru sea water

Acoustic locating system, for finding torpedoes lost during test runs. E A Walker and P. M. Kendig. il diags Electronics 20:124-7 F '47

Device for plotting rays in a stratified medium. A. W Lawson and others. il R Sci Instr 18:117-20 F '47

Image interference in the presence of refraction R W. Young diag Acoustical Soc Am J 19:1-7 Ja '47

Navy underwater sound monitors. R Sci Instr 18 202 Mr '47

Ordnance research laboratory underwater sound calibration station. P Ebaugh. il plan diag Acoustical Soc Am J 19:478-80 My '47

Practical application of the reciprocity theorem in the calibration of underwater sound transducers. P. Ebaugh and R. E. Mueser bibliog Acoustical Soc Am J 19:695-700 Jl '47

SOUND—Transmission thru sea water—*Cont.*
Propagation of sound through a liquid containing bubbles. E L. Carstensen and L L Foldy. diags Acoustical Soc Am J 19:481-501 My '47
Simplified method for determining transducer directivity index. P. M. Kendig and R. E. Mueser diags Acoustical Soc Am J 19·691-4 Jl '47
Some acoustic properties of marine fouling. J. W. Fitzgerald and others bibliog il diags Acoustical Soc Am J 19.332-7 Mr '47
Sonar, the submarine's nemesis. C. G. McProud il diags Radio N 37.47-9+ Mr '47
Surface reflection of short supersonic pulses in the ocean. R. J. Urick and H. L Saxton. il Acoustical Soc Am J 19 8-12 Ja '47
Underwater acoustical measuring facilities at the U.S. navy underwater sound laboratory A. M Hill il diags Acoustical Soc Am J 19.907-9 S '47
Wartime activities of the San Diego laboratory of the University of California Division of war research. F N. D Kurie and G. P. Harnwell. R Sci Instr 18 207-18 Ap '47

Transmission thru water
Measurement conditions influencing the front-to-back discrimination of an underwater hydrophone. L. N. Miller Acoustical Soc Am J 19 59-62 Ja '47
Measurement of acoustic impedances of surfaces in water R. D. Fay and others. bibliog diags Acoustical Soc Am J 19.850-6 S '47

Velocity
Acoustic determination of the physical constants of rubber-like materials. A. W. Nolle diag Acoustical Soc Am J 19.194-201 Ja '47
Microbarometric pressures from large high explosive blasts E. F. Cox bibliog map diag Acoustical Soc Am J 19·832-46 S '47
Peculiar ultrasonic effect on a binary mixture of liquids. P. J. Ernst. bibliog il Acoustical Soc Am J 19.372 Mr '47
Sound velocity and the temperature change of molecular association in water. A. Weissler. bibliog J Chem Phys 15:210-11 Ap '47
Sound-velocity determination of molecular weights. G J. Dienes. J Ap Phys 18:848-9 S '47
Sound velocity method for determination of molecular weight of liquid polymers A. Weissler and others. bibliog diags J Ap Phys 18·434-8 My '47
Velocity of sound in hydrogen when rotational degrees of freedom fail to be excited. J. E. Rhodes, jr bibliog Phys R 70:932-8 D 1 '46
Wavelengths of sound; velocity table; nomograph B W. Henvis. Electronics 20·134+ Mr '47

SOUND absorbent materials
Acoustical materials and acoustical treatments for aircraft. R. H. Nichols, jr. and others. bibliog diags Acoustical Soc Am J 19:428-43 My '47
Acoustical properties of homogeneous, isotropic rigid tiles and flexible blankets. L. L Beranek. bibliog Acoustical Soc Am J 19:556-68 Jl '47
Convex wood splays for broadcast and motion picture studios. M. Rettinger. il diags Acoustical Soc Am J 19:343-5 Mr '47
Decorative fiberglas fabric, sound absorptive, can reduce fire hazard. Spectator (Property ed) 12:29+ Ap 24 '47
Design of perforated facings for acoustic materials. R. H. Bolt. Acoustical Soc Am J 19:917-21 S '47
Flow-resistance characteristics of fibrous acoustical materials. R. H. Nichols, jr. bibliog diag Acoustical Soc Am J 19:866-71 S '47
Functional sound absorbers. H. F. Olson. il diags RCA R 7:503-21 D '46
Properties of felt in the reduction of noise and vibration. F. G Tyzzer and H. C. Hardy bibliog il Acoustical Soc Am J 19: 872-8 S '47
Recording studio acoustics. L. Green, jr. and J. Y. Dunbar. il Acoustical Soc Am J 19: 412-14 My '47
Sound absorption and impedance of acoustical materials H. J. Sabine. diags Soc Motion Picture Eng J 49:262-78 S '47

Advertising
Brochure tells Armstrong Cushiontone dealers all about long range advertising campaign A Bernstein. il Ind Marketing 32: 68+ S '47

SOUND filters
Frequency range preference for speech and music H F. Olson il plan diags Acoustical Soc Am J 19 549-55 Jl '47; Same cond Electronics 20.80-1 Ag '47

SOUND laboratories
Ordnance research laboratory underwater sound calibration station. P. Ebaugh. il plan diag Acoustical Soc Am J 19:478-80 My '47

SOUND production by fishes
Measurements of underwater noise produced by marine life. M. B. Dobrin. Science 105: 19-23 Ja 3 '47
Piscatorial concerto; noise made by fish and crustacea M. B. Dobrin. il Tech R 49 271-2+ Mr '47

SOUND recording. See Sound—Recording and reproducing

SOUND recording, Moving picture. See Moving picture sound recording

SOUND recording studios
Recording studio acoustics. L. Green, jr. and J. Y. Dunbar. il Acoustical Soc Am J 19: 412-14 My '47

SOUND waves
Acoustic determination of the physical constants of rubber-like materials A W. Nolle. diag Acoustical Soc Am J 19:194-201 Ja '47
Acoustic wave fronts from a piston source. A. O Williams, jr. bibliog Acoustical Soc Am J 19:156-61 Ja '47
Acoustical properties of homogeneous, isotropic rigid tiles and flexible blankets. L. L. Beranek. bibliog Acoustical Soc Am J 19:556-68 Jl '47
Applications of sonic and ultrasonic vibrations; tabulation. A. A. McKenzie and F. Rockett. Electronics 20.140-1 (Buyers' guide) Mid-Je '47
Calculation of sound rays in the atmosphere. P. Rothwell diags Acoustical Soc Am J 19·205-21 Ja '47
Diffraction of a progressive sound wave by the human head F. M Wiener. bibliog Acoustical Soc Am J 19:143-6 Ja '47
Diffraction of sound due to right-angled joints in rectangular tubes J W. Miles. diags Acoustical Soc Am J 19:572-9 Jl '47
Equivalent circuit for a bifurcated cylindrical tube. J. W. Miles. diags Acoustical Soc Am J 19:579-84 Jl '47
Fluctuations in intensity of an acoustic wave transmitted through a turbulent heated lamina I Rudnick. il Acoustical Soc Am J 19:202-5 Ja '47
Masking effect of periodically pulsed tones as a function of time and frequency. R. L. Miller. bibliog diags Acoustical Soc Am J 19:798-807 S '47
Performance of cup-mouthpiece instruments. T. H Long. bibliog Acoustical Soc Am J 19:892-901 S '47
Phase effects in monaural perception. R. C. Mathes and R. L. Miller bibliog il diags Acoustical Soc Am J 19:780-97 S '47
Propagation of an acoustic wave along a boundary I. Rudnick. bibliog Acoustical Soc Am J 19.348-56 Mr '47
Propagation of sound through a liquid containing bubbles. E. L. Carstensen and L. L. Foldy diags Acoustical Soc Am J 19:481-501 My '47
Radiation pressure. B. B. Bauer. diags Acoustical Soc Am J 19:504-5 My '47
Radiation problem at high frequencies. M. Lax and H. Feshbach. diags Acoustical Soc Am J 19:682-90 Jl '47
Scattering of radiation in an inhomogeneous medium. C. L. Pekeris. Phys R 71:268-9 F 15 '47; Correction. 71 457 Ap 1 '47
Sound diffraction by rigid spheres and circular cylinders. F. M. Wiener. bibliog Acoustical Soc Am J 19:444-51 My '47

SOUND waves—*Continued*
Transient analysis of linear systems, using underwater explosion waves. M. F. M. Osborne and J L. Carter. il J Ap Phys 17: 871-3 N '46

See also
Photography of sound
Supersonic waves

SOUNDING
Marine echo sounder. il Electrician 137·1837 D 27 '46
Portable echo-sounding recorder speeds hydrographic surveys. il Eng N 139:132-3 Jl 24 '47
Topography of the Gulf of Maine; field season of 1940 H W. Murray bibliog maps Geol Soc Bul 58.153-96, pl 1-12 F '47

See also
Fathometer

SOUNDPROOFING
Acoustical linings for ducts F. A. Westbrook. diags Heat & Ven 44.100-2 Jl '47
Acoustical materials and acoustical treatments for aircraft. R H. Nichols, jr. and others. bibliog diags Acoustical Soc Am J 19:428-43 My '47
Flow-resistance characteristics of fibrous acoustical materials. R. H. Nichols, jr. bibliog diag Acoustical Soc Am J 19:866-71 S '47
Glass fibers as an engineering material. il Steel 120 96-9+ Mr 10 '47
Heat and sound insulation. L. M. Ball. il S A E J 54·39-40 D '46
Heat and sound insulation; abstract. L. M. Ball. Automotive & Aviation Ind 96:58+ Ja 1 '47
Noise reduction in aircraft H. W. Rudmose and L L. Beranek diags J Aeronautical Sci 14 79-96 F '47
Principles of noise reduction in offices and factories. M. A. Smith. il Eng N 137:643-5 N 14 '46
Sound control in airplanes. L. L. Beranek and H. W. Rudmose. bibliog Acoustical Soc Am J 19.357-64 Mr '47
Sound control in libraries. E. J. Content. plans diag Arch Rec 100:121 N '46

See also
Acoustics, Architectural
Sound absorbent materials

SOUTH
Real South. T. Sensing. Manuf Rec 115:33-4+ N '46

Bibliography
Books from Chapel Hill; a record and catalogue of twenty-four years of publishing. 206p $1 25 Univ. of N. C. press, Box 510, Chapel Hill, N C '46

Economic conditions
Income in the South. S. Shapiro. Mo Labor R 63.495-510 O '46
Living costs in large cities in the South. F. C. Mann. Mo Labor R 63:526-34 O '46
Readjustments faced by the South J. A. Daly. Manuf Rec 116.70+ Ja '47

Industries and resources
Appraising the development of our South central states. J. D. C. Weldon. il Mag of Wall St 80.265-7+ Je 7 '47
Blue book of southern progress reveals gains in South's industrial expansion. Manuf Rec 116:34+ F '47
Employment in southern manufactures. E. H. Barnes. Mo Labor R 64.305-17 F '47
Industrial development in the South F. Gould. Manuf Rec 116·25+ My '47
Investment opportunities down South. M. Halpern Trusts & Estates 84.515-16+ My '47
Opportunity lies about you. E. W. O'Brien. Mech Eng 69.401-2 My '47
Outlook for southern business in 1948; as seen by editors of six of the South's leading business publications. Ptr Ink 221:124-5 O 31 '47
South is on the march. L. R. Powell, jr Manuf Rec 116:71+ Ja '47
Southern industry; will Dixie hold wartime gains? A. Sharp. il Ind Marketing 31:43+ D '46; 32:60+ Ja '47
Southern lure; small towns plan for stable economic future. Bsns W p37 Ja 25 '47

See also Southern research institute, Birmingham, Alabama

SOUTH AFRICA

See also
Airlines—South Africa
Coal mines and mining—South Africa
Copper mines and mining—South Africa
Electricity supply—South Africa
Gold miners—South Africa
Public health—South Africa
Rubber industry and trade—South Africa
Steel industry and trade—South Africa
Tariff—South Africa

Commerce
Trade with the United States, January-June 1947. For Comm W 28.19 S 20 '47

Economic conditions
News by countries. For Comm W 27:19 Je 7; 28·20-2 S 6 '47

Industries and resources
Industrial census of 1943-44 For Comm W 26 17-18 F 8 '47
Industrial research in South Africa and in British colonies. R. C. Leslie. il For Comm W 29.6-7+ O 11 '47

Politics and government
Divided dominion. Economist 152·702-3 My 10 '47

Race problems
South African experiment. Economist 151: 820-1 N 23 '46

SOUTH AMERICA
South America wants share in new enterprises. R. H. Ramsey il Eng & Min J 148.68-71 My '47

See also
Geology—South America
Latin America
Mines and mineral resources—South America

Commerce
South America hopes for industrialization; market for U.S. imports may change character as movement proceeds. W. P Schuck. Barron's 27·29 My 12 '47

See also
Latin America—Commerce

Economic policy
Nationalism in South America. map Economist 152.333-4 Mr 8 '47

Industries and resources
Good neighbor, good business; corporation to aid economics of Latin American nations. Bsns W p17-18 Mr 1 '47
Hides and skins in the other American republics. M. E. Wambsganss. il For Comm W 25:10-11+ D 28 '46
South America hopes for industrialization. W. P. Schuck Barron's 27:29 My 12 '47
To aid progress in South America; American international association for economic and social development and international basic economy corporation. E. Whitmore. il Am Bsns 17:26+ Je '47

SOUTH ATLANTIC gas company
Stock offered. Comm & Fin Chr 166:1096 S 15 '47

SOUTH BEND, Indiana

Railroads
How station track upkeep cost was cut; New York Central installs asphalt ballast, effective drainage and welded rails. J. R. Scofield. il Ry Age 122.747-50 Ap 12 '47

SOUTH CAROLINA power company
Bonds offered. Comm & Fin Chr 165·2804 My 26 '47

SOUTH DAKOTA

Bibliography
Dakota imprints, 1858-1889 A. H. Allen, ed. 221p $6.50 R R Bowker co, 62 West 45th st, New York 19 '47

SOUTH JERSEY gas company
Bonds offered. Comm & Fin Chr 166·1724-5 O 27 '47

SOUTH MOUNTAIN
Oölite deformation in the South Mountain fold, Maryland. E Cloos. map diags Geol Soc Bul 58·843-917, pl 1-13 bibliog(p915-17) S '47

SOUTH pole
See also
Antarctic exploration

SOUTHAMPTON
Harbor
Port of Southampton; abstract and discussion. O. H. Lewis. Engineering 164·377 O 17 '47

SOUTHARD, Frank A. Jr
Joins staff of Treasury department. Comm & Fin Chr 165·2911 My 29 '47

SOUTHEAST
Industries and resources
Economic revolution in our southeastern states J. D. C. Weldon il Mag of Wall St 80 367-9 Jl 5 '47
New American market. il Bsns W p73-80 O 25 '47 [reprints 20c]

SOUTHEASTERN underwriters association
Annual meeting, Virginia Beach, June 4. East Underw 48 30 Je 13 '47; Nat Underw 51:7 Je 12 '47, Weekly Underw 156·1606-7+ Je 14 '47

SOUTHERN Bell telephone and telegraph company
Annual report. Comm & Fin Chr 165:1323 Mr 10 '47
Debentures offered. Comm & Fin Chr 166:59 Jl 7 '47

SOUTHERN California Edison company
Annual report; California commission approves proposed financing plan. Comm & Fin Chr 165:1773 Mr 31 '47
Preferred exchange offer. Comm & Fin Chr 165·2550 My 12 '47
Stock sold. Comm & Fin Chr 165:2930 Je 2 '47

SOUTHERN California gas company
Bonds offered. Comm & Fin Chr 165:3399 Je 30 '47

SOUTHERN California water company
Bonds offered. Comm & Fin Chr 165:2676 My 19 '47

SOUTHERN company
Organization meeting Comm & Fin Chr 166: 859 S 1 '47

SOUTHERN counties gas company of California
Bonds offered. Comm & Fin Chr 165:1773-4 Mr 31 '47

SOUTHERN cross trading corporation
Global trader. Bsns W p66+ Ja 4 '47

SOUTHERN Pacific railroad
Bonds offered Comm & Fin Chr 165:2676 My 19 '47
Industry moves West; migration reflected in Southern Pacific's progress. M. Halpern. Trusts & Estates 84.427-30 Ap '47
Selected stocks. Mag of Wall St 80.509-10 Ag 2 '47
Southern Pacific holds wartime gains. M. Halpern. Barron's 27.14 Ja 27 '47
Southern Pacific settles Kentucky tax suit. Bsns W p68 Ja 11 '47
Tax credit offsets loss. Comm & Fin Chr 165:113 Ja 6 '47

SOUTHERN railway
Annual report, 53d, for year ended Dec. 31, 1946. Comm & Fin Chr 165.1662-3, 1774 Mr 27-31 '47
Equipment trust certificates. Comm & Fin Chr 164:3335 D 23 '46
Railroad securities. Comm & Fin Chr 165: 282 Ja 16 '47

SOUTHERN research institute, Birmingham, Alabama
Institute reports progress. Chem & Eng N 25·1867 Je 30 '47

SOUTHWEST
New American market. il Bsns W p39-46 Jl 26 '47 [reprints 20c]
See also
Water supply—Southwestern states
Industries and resources
Assaying industrial prospects for California and mountain states J D C. Weldon il Mag of Wall St 79:657-9+ Mr 15 '47

SOUTHWEST research institute
Southwest research institute dedicated. Chem & Eng N 25·2828 S 29 '47

SOUTHWESTERN associated telephone company
Preferred stock offered. Comm & Fin Chr 165: 853 F 10 '47

SOUTHWESTERN gas and electric company
Building $5,500,000 plant near Shreveport, La Manuf Rec 116.48 F '47

SOUTHWESTERN power administration
Coals to Newcastle; SPA power grid carries hydro output to gas fields. map Elec World 127·102-4 F 15 '47
Is the SWPA attempting to put government in competing business? Pub Util 39:443-6 Mr 27 '47
SPA hydro program, summary and fallacies; steam and hydro costs compared. map Elec World 125·60-3 Mr 30 '46; Discussion (Analysis of SPA report criticized). 127:51+ Ja 4 '47
SPA seeks more customers for power from Denison dam. Elec World News ed 128. 11 Jl 26 '47
Will push construction on four projects during year. Elec World News ed 128 5 Ag 9 '47

SOUTHWESTERN public service company
Stocks offered. Comm & Fin Chr 165.1236 Mr 3 '47

SOUTHWESTERN states
See also
Chemical industries—Southwestern states

SOYBEAN flour
How to evaluate technical soya flour. G. Davidson and J. H. Cagle. il Paper Ind 29:364-6 Je '47

SOYBEAN meal
Extending phenolic resin plywood glues with proteinaceous materials; corn gluten, soybean meal, linseed meal. G. E. Babcock and A. K Smith. Ind & Eng Chem 39:85-8 Ja '47

SOYBEAN oil
Flavor reversion in soybean oil. C. Golumbic and B F. Daubert. bibliog il Food Ind 19·1075-7+ Ag '47
Future of soybean oil in American industry R. H Manley. Paint Oil & Chem R 110: 28+ S 18 '47
Improves soya oil; Solexol process. Food Ind 18:1896+ D '46
Oils splitting technique provides paint raw material, abstract. S. W. Gloyer. Oil Paint & Drug Rep 152:74 S 22 '47
Reactions occurring during heat polymerization of unsaturated fatty acid esters. H. J. Lanson and P. E. Spoerri. bibliog diags Paint Oil & Chem R 110.13-16 Mr 20 '47
Soya corp. develops new edible oil. Oil Paint & Drug Rep 151:70 Je 30 '47
Soybean oil in paint from a manufacturers viewpoint. F J. Stark. Paint Oil & Chem R 110·24+ S 18 '47
δ-Tocopherol; isolation from soybean oil and properties. M. H Stern and others. bibliog Am Chem Soc J 69:869-74 Ap '47
Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47

SOYBEANS
Activity of the red pigment from leguminous root nodules. H. N Little and R. H. Burris. bibliog Am Chem Soc J 69:838-41 Ap '47
La biologie et la culture du soya. P. Chouard. Génie Civil 124.272-4 Jl 15 '47

SOYBEANS—*Continued*
Effect of electrolytes on the foaming capacity of alpha soybean protein dispersions. J. M Perri, jr and F. Hazel. bibliog J Phys & Colloid Chem 51.661-6 My '47
Soybean ass'n to study foreign trade policies Oil Paint & Drug Rep 152:7 Ag 25 '47
Soybean, myth or miracle? W. G. Andrews. Paint Oil & Chem R 110:18+ My 1 '47
Soybean saga; Cincinnati's Drackett company. il Chem Ind 60 591-2 Ap '47
Soybeans to relieve protein shortage J. Fritz, E H Kramke and C A. Reed. Can Chem & Process Ind 31 337 Ap '47
Using soybean lecithin in the macaroni industry. J J Winston and B. R Jacobs. bibliog il Food Ind 19:166-9, 327-9 F-Mr '47
See also American soybean association

Storage
Slip forms for million-bushel elevator. H R. Straight. il plan diags Eng N 137.728-30 N 28 '46

SPACE buyers. See Advertising agencies—Space buyers

SPACE charge
Electron mechanics of induction acceleration. J. A. Rajchman and W H. Cherry. bibliog diags Franklin Inst J 243:261-85, 345-64 Ap-My '47
Negative corona in freon-air mixtures G L. Weissler and E I Mohr bibliog Phys R 72 289-94 Ag 15 '47

SPACESHIPS. See Interplanetary flight

SPAIN
See also
Coal mines and mining—Spain
Mines and mineral resources—Spain
Paint industry and trade—Spain

Colonies
Agrarian system of the Spanish American colonies D Weeks bibliog J Land & Pub Util Econ 23:153-68 My '47

Commerce
Privilege without planning; foreign trade position. Economist 153 283-4 Ag 16 '47

Economic conditions
Economic unrest in Spain. Mag of Wall St 79:221 N 23 '46
Economics of Franco's Spain. Economist 153: 283-4, 326-7 Ag 16-23 '47

Economic history
European antecedents of land tenures and agrarian organization of Hispanic America. D. Weeks. J Land & Pub Util Econ 23.60-75 F '47

Foreign relations
Public opinion against breaking off trade or diplomatic relations with Spain; Gallup poll. Iron Age 158:105+ D 26 '46

History
Civil war, 1936-1939
Electric power and national defense; lesson from Spanish revolution. J. W. Swaren. Power Pl Eng 51:67+ S '47

Politics and government
Spanish tight rope. Economist 153:645 O 18 '47

SPANG, Joseph Peter, 1893-
Sketch. por (cover) Bsns W p8 S 20 '47

SPARK arresters
S A E standards to douse fire due to engines. il S A E J 54:79-80 N '46

SPARK gap
Attempt to verify the theory of the long spark of Loeb and Meek. L. H. Fisher. bibliog diags Phys R 72:423-8 S 1 '47
Calibration of uniform-field spark-gaps for high-voltage measurement at power frequencies. F. M. Bruce. bibliog il diags Inst E E J 94 pt 2:138-49 Ap '47; Abstract Electrician 137.1517 N 29 '46; Discussion. Inst E E J 94 pt 2:149-54 Ap '47; Electrician 137.1517-18 N 29 '46
Experiments on the electric strength of air at centimetre wavelengths. R. Cooper. bibliog diags Inst E E J 94 pt 3:315-24 S '47
Spark gap switches for radar. F. S. Goucher and others. il diags Bell System Tech J 25: 563-602 O '46
Spark light source of short duration. J. W. Beams and others. il diags Opt Soc Am J 37:868-70 O '47

SPARK photography. See Photography, Spark

SPARK plugs
New pressure indicator design; piezoelectric type combined with spark plug. F. M. Mayes and M. A. Lindeman. il diags Automotive & Aviation Ind 96:38-9+ My 1 '47
New standards focus on spark-plug nut diags S A E J 55 73 Je '47

Testing
Tests will expose faulty spark plugs. S A E J 55:82-3 Mr '47

SPARKING potential. See Potential, Electric

SPARTANBURG, South Carolina
City buys suburb. il Bsns W p67-8 S 13 '47

Water supply
Power and water rates as affected by public demand, Spartanburg plant includes recreation park. R. B. Simms. il Water & Sewage Works 94 65-7 F '47

SPEARMINT oil
Mint oils 1946 output decreased. Oil Paint & Drug Rep 150:60 D 30 '46

SPECIAL libraries association
Annual convention, 38th, Chicago, June 10-13, 1947; program. Special Lib 38:131-7 My-Je '47
It's our association; Committee of five report E. J. Evans and others. Special Lib 38:141-7 My-Je '47
President's address to the Western New York chapter Special Lib 37:283-5 N '46
Reflections of a president. B. J. Cole. Special Lib 38:235-40 O '47
Reports of secretary, treasurer and editor and chapters, committees, etc. Special Lib 38 240-66 O '47
S.L.A. national officers, chapter presidents, group and committee chairmen and special representatives, 1947-1948 Special Lib 38: 220-2 S '47
Secretary's trip to West coast. K. B. Stebbins. Special Lib 38:23-8 Ja '47

Insurance group
Annual meeting, Chicago, June 10-13. Weekly Underw 156.1669+ Je 21 '47

Louisiana chapter
Our new chapter. B. J. Cole. Special Lib 38:20-1 Ja '47

SPECIAL sales
Merchants stage first postwar dollar days. Bsns W p16+ F 15 '47

SPECIAL weeks. See Advertising campaigns—Special weeks

SPECIALTIES (merchandizing)
Specialties for active merchandising; Spatz sheet metal works. il Sheet Metal Worker 38:59 O '47

SPECIALTY industries
General products; prospects for 1947. K. Davis. il Dom Comm 35:37-44 Ja '47

Securities
Financial survey of specialty stocks; tabulation Mag of Wall St 79.678-9; 80:550-1 Mr 15, Ag 16 '47

SPECIALTY stores
Neiman-Marcus formula il Bsns W p41-2+ D 21 '46
Operating results of department and specialty stores in 1946. M. P. McNair. (Bur. of business research bul. no. 126) 50p pa $3 50 Harvard univ. Graduate school of business administration, Soldiers field, Boston 63 '47

SPECIFIC copy. See Advertising copy—Specific copy

SPECIFIC gravity
Anomalous densities of 1-*n*-alkyl-cyclohexanols. H. B. Williams and W. R. Edwards, jr. Am Chem Soc J 69:336-8 F '47
Calculation of weight per cent ring and number of rings per molecule for aromatics. M. R. Lipkin and C. C. Martin. bibliog Anal Chem 19:183-9 Mr '47

SPECIFIC gravity—*Continued*
Caustic solutions; specific gravity from 60° to 212° F.; table. W. L. Nelson. Oil & Gas J 45:119 D 7 '46
Effect of the crude gravity on the performance of gas drive reservoirs. M. Muskat and M. O Taylor. Pet Eng 18·88+ D '46
50°-100° A P.I versus specific gravity; table. W. L. Nelson. Oil & Gas J 45·89 Ja 11 '47
Glass density determinations by sink-float method. R. D Duff. bibliog diag Am Cer Soc J 30:12-21 Ja 1 '47
Gravity and pH sampler for closed vessels. F L Culler, jr. diag Chem Eng 54:140 F '47
How to figure oil quantities for various temperatures and gravities. Power Pl Eng 51: 102-3 Ja '47
Micelle structure in aqueous solutions of colloidal electrolytes. R J. Vetter. bibliog J Phys & Colloid Chem 51 262-77 Ja '47
Pycnometer for the rapid routine determination of the specific gravity of small volumes of liquids. J. G. Reynolds. diags Chem & Ind p176-7 Ap 5 '47
Relationship between viscosity, density, and vapour pressure of liquids L. H. Thomas Chem Soc J p822-9 Je '47
Solubilities of ammonium and potassium alums in water; densities of the saturated solutions. D Schlain, J. D. Prater and S F. Ravitz. bibliog diag Ind & Eng Chem 39.74-6 Ja '47
Specific gravity (or density) and moisture content of pulpwood; TAPPI tentative standard T 18 m-47 Paper Tr J 125 33-6 Ag 28 '47
Sulfuric acid solutions; specific gravity from 32° to 212° F.; table W. L Nelson. Oil & Gas J 45 89 Mr 1 '47
Tests of instruments for the determination, indication, or recording of the specific gravities of gases F. A. Smith and others. il U S Nat Bur Stand Misc Pub M177:1-143 '47 ($1)
Viscosities, densities and refractive indices of solutions of dodecylammonium chloride in various dilutions of aqueous ethanol. A W. Ralston and C W. Hoerr. Am Chem Soc J 69 1867-9 Ag '47
Viscosity and density of four liquefied-gas aerosol solutions containing DDT L. D. Goodhue and A. C. Hazen. diags Anal Chem 19:248-50 Ap '47
Viscosity and density of sulphuric acid and oleum. N. F. H. Bright, H. Hutchison and D Smith Soc Chem Ind J 65·385-8 D '46

See also
Gravimeters
Gravimetric analysis
Hydrometers
Specific volume

SPECIFIC heat
Bounded linear harmonic oscillator and phase transitions of second order B Suryan. Phys R 71·741-2 My 15 '47
Correlation of C_p and k for dry air. L. Adams. bibliog Refrig Eng 54·140-1 Ag '47
Enthalpy, specific heat, and entropy of aluminum oxide from 0° to 900°C D. C. Ginnings and R. J. Corruccini. bibliog diags J Res Nat Bur Stand 38·593-600 Je '47
Entropy of nitromethane, heat capacity of solid and liquid, vapor pressure, heats of fusion and vaporization. W M Jones and W F. Giauque bibliog Am Chem Soc J 69.983-7 My '47
Heat capacities at low temperatures of titanium dioxide (rutile and anatase) C. H Shomate bibliog Am Chem Soc J 69.218-19 F '47
Heat capacities at low temperatures of VCl_2 and VCl_3. C H Shomate. bibliog Am Chem Soc J 69·220-1 F '47
Heat capacities, heats of fusion and entropies of the six pentenes S S. Todd, G D. Oliver and H. M Huffman. Am Chem Soc J 69.1519-25 Je '47
Heat capacities of gaseous oxygen, isobutane, and 1-butene from — 30° to + 90° C P F. Wacker and others bibliog diags J Res Nat Bur Stand 38.651-9 Je '47
Heat-capacity lag measurements in various gases P. W. Huber and A Kantrowitz J Chem Phys 15·275-84 My '47
Heat capacity of benzene vapor; the contribution of anharmonicity D W Scott and others bibliog J Chem Phys 15.566-8 Ag '47
Heat capacity of gaseous cyclopentane, cyclohexane and methylcyclohexane R. Spitzer and K S. Pitzer. Am Chem Soc J 68 2537-8 D '46
Improved flow calorimeter; experimental vapor heat capacities and heats of vaporization of *n*-heptane and 2,2,3-trimethylbutane G Waddington, S. S. Todd and H. M. Huffman. bibliog diag Am Chem Soc J 69·22-30 Ja '47
Low-temperature heat capacities and high-temperature heat contents of $Al_2O_3.3H_2O$ and $Al_2O_3.H_2O$. C. H. Shomate and O. A. Cook. bibliog Am Chem Soc J 68:2140-2 N '46
Measurement of mean specific heat of plate glass at high temperatures. S. Anderson. diags Am Cer Soc J 29.368-70 D 1 '46
Method of correcting for incomplete thermal isolation in measurements of small heat capacities J G Aston and G. J. Szasz. J Chem Phys 15:560-1 Ag '47
New temperature-total heat-entropy chart for gases with variable specific heats; for exploring performance of gas turbine plants. J R. Finniecome. fold chart Inst Mech Eng J & Proc 155 (War emergency issue no 17): 117-19 bibliog(p118); Discussion. 120-4 '46
Oscillator concept in the theory of solids. E. M. Corson and I. Kaplan. Phys R 71.130-1 Ja 15 '47
Ratio of specific heats of gases. R. Spitzer J Chem Educ 24 251-2 My '47
Specific heat data for evaluation of lime kiln performance J A. Murray. Rock Prod 50 148-50+ Ag '47
Specific heats of acetaldehyde and acetaldehyde dibutyl acetal. A Z Conner, P. J. Elving and S Steingiser Am Chem Soc J 69.1532 Je '47
Specific heats of foods in cooking. W. O. Ordinanz. Food Ind 18:1869 D '46
Thermal properties of cyclopentane and its use as a standard substance in low temperature thermal measurements G J Szasz and others bibliog J Chem Phys 15:562-4 Ag '47
Vaporization of fuels for gas turbines; heat quantities required to vaporize gas turbine fuels. B. P. Mullins. bibliog(20 ref) fold charts diags Inst Pet J 33:44-70 Ja '47

See also
Debye characteristic temperature

SPECIFIC inductive capacitance. See Dielectric constants

SPECIFIC surface
Relation of specific surface in various talcs to casting and dry pressing characteristics of talc bodies W W. Gaskins. Cer Ind 49: 90 Ag '47
Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47
Specific surface of powders; a modification of the theory of the air-permeability method P. J. Rigden. bibliog diags Soc Chem Ind J 66 130-6 Ap '47
Specific surfaces of bone, apatite, enamel, and dentine. N. V. Wood, jr bibliog Science 105.531-2 My 16 '47

SPECIFIC volume
Phase equilibria in hydrocarbon systems; methane—*n*-butane—decane system. H. H. Reamer, B. H. Sage and W N. Lacey. bibliog diag Ind & Eng Chem 39·77-82 Ja '47
Phase equilibria in hydrocarbon systems; volumetric behavior of methane-*n*-butane system at higher pressures. H H Reamer and others. Ind & Eng Chem 39.206-9 F '47
Physical-chemical characteristics of certain of the proteins of normal human plasma. J L Oncley, G. Scatchard and A. Brown. J Phys & Colloid Chem 51·184-98 Ja '47
Pressure-volume-temperature relations of 2, 2,3,3,-tetramethylbutane. W. A. Felsing, A. M Cuellar and W. M Newton. bibliog Am Chem Soc J 69·1972-4 Ag '47
Studies of the physical properties of hardened portland cement paste; specific volume measurements T. C. Powers and T. L. Brownyard. diag Am Concrete Inst J 18: 669-712 F '47

SPECIFICATIONS
ASTM accepts new and revised materials specifications. il Ind Stand 17:314-15 D '46
Can you specify what you want? how to write specifications. R H Emerick. il Power 91:467-9+ Jl '47
Importance of standardizing specifications for engineering materials. B. Melnitsky. Steel 121:106+ O 20 '47
National Bureau issues supplement to directory of commodity specifications. P. A. Cooley il Dom Comm 35.30-2 S '47
Specifications and their preparation J. M. Todd. Refrig Eng 52:415-16 N '46
See also subdivision Specifications under names of products, e g. Automobiles—Specifications; Steel—Specifications

SPECTACLES
Fashionwise glasses. il Mod Plastics 25.202-3 O '47
Plated eyeglasses il Mod Plastics 24.144 Jl '47

History
Worshipful company of spectacle makers and its continental antecedents L M. Angus-Butterworth. Glass Ind 28.26-7+ Ja '47

SPECTACLES, Telescope
Report on survey of optical aids for subnormal vision. V. J. Ellerbrock. bibliog il diags Opt Soc Am J 36:679-95 D '46

SPECTROGRAPH
Correlation of intensity measurements in Raman spectra obtained with different instruments D. H. Rank. Anal Chem 19. 766-7 O '47
Direct reading of spectral-line intensities. J. H Oldfield. bibliog Iron & Steel Inst J 156·78-80 My '47
Electronic spectrograph. Sci Am 176:220-1 My '47
Low energy alpha-particles from radium. W. Y. Chang. bibliog Phys R 70·632-9 N 1 '46
Method of correcting low angle X-ray diffraction curves for the study of small particle sizes J W M. DuMond. diags Phys R 72·83-4 Jl 1 '47
Microwave spectrograph. R. H Hughes and E B. Wilson, jr Phys R 71 562-3 Ap 15 '47
New electronic system for detecting microwave spectra. W Gordy and M. Kessler il Phys R 72:644 O 1 '47
New type of spectrograph. Elec Eng 66 868 S '47
Polarization and intensity measurement in Raman spectra by the photoelectric method. D H. Rank. bibliog il Opt Soc Am J 37 798-803 O '47
Raman spectra of hydrocarbons M. R. Fenske and others. bibliog diags Anal Chem 19:700-65 graphs(p723-65) O '47
Recording vacuum grating spectrometer for the infra-red. E. E Bell and others. bibliog il diags R Sci Instr 18·48-56 Ja '47
Spectrographic control of the converter blow. S T Jazwinski diags Iron Age 159 50-7 My 29 '47
Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses. G S. Fulcher. Opt Soc Am J 37:47-54 Ja '47
Theory of condensing lenses for Raman tubes of small volume J R Nielsen. diag Opt Soc Am J 37·494-9 Je '47

SPECTROGRAPH, Mass
A c. operated mass spectrograph of the Mattauch type. A. E. Shaw and W Rall. bibliog il diags R Sci Instr 18.278-88 My '47
Concentration of stable isotopes by the electromagnetic method C. P. Keim il diag Chem & Eng N 25·2624-5 S 15 '47

SPECTROGRAPH, Sonic
Methods of measuring speech spectra. S S. Stevens and others. bibliog il diags Acoustical Soc Am J 19·771-80 S '47

SPECTROGRAPHY
Chamber for operating arcs for spectrographic investigations in controlled atmospheres. G. W. Marks and M. Gardner. il R Sci Instr 18:370-1 My '47
Direct determination of wave-lengths from Fabry-Perot interferometer patterns. G. R Harrison. bibliog il diags Opt Soc Am J 36: 644-54 N '46
Easily cleaned measure for powders used in spectrography. C. Feldman. diags In U S Geol S Bul 950:133-4 '46
Interference in thin parallel surfaced transparent plates as a source of error in spectroquantitative analysis. J. Stern. il Opt Soc Am J 36.654-8 N '46
Spectrographic analysis of a complex ferrous alloy C. H. R. Gentry and G. P Mitchell. bibliog il diag Soc Chem Ind J 66 226-32 Jl '47

SPECTROHELIOGRAPH
Solar research and theoretical astrophysics at the Yerkes observatory. S. Chandrasekhar. Science 106 213-14 S 5 '47

SPECTROMETERS
Baird direct-reading spectrometer used for ferrous analyses R H Müller il diags Anal Chem 19·sup 19A-20A Jl '47
Bent crystal neutron spectrometer and its application to neutron cross-section measurements' R B. Sawyer and others bibliog diags Phys R 72·109-15 Jl 15 '47
Beta-ray spectrometer diag Mech Eng 69:596 Jl '47
Combination phosphorometer and spectroradiometer for luminescent materials. A. E. Hardy bibliog il diags Electrochem Soc Trans 91 (preprint 8):127-46 '47
Comparison of LiF and CaF_2 prisms for infrared use. R C. Gore and others Opt Soc Am J 37·23-8 Ja '47
Direct-reading device provides rapid steel analysis E. R. Vance il Steel 121.92+ S 22 '47
Direct-reading spectrometer for ferrous analysis R. O. Carpenter and others diags Opt Soc Am J 37 707-13 S '47
Double focusing beta-ray spectrometer. E. S. Rosenblum. Phys R 72.731 O 15 '47
Double focusing beta-ray spectrometer F. B. Shull and D M Dennison Phys R 71 681-7 My 15 '47, Correction. 72·256 Ag 1 '47
Electronics aids progress in refinery instrumentation D. M. Considine. il diags Oil & Gas J 45.255-6+ Mr 22 '47
Gamma- and beta-ray energies of some radioactive isotopes as measured by a thin magnetic lens beta-ray spectrometer W. Rall and R. G Wilkinson. Phys R 71.321 Mr 1 '47
Gamma-radiation from tantalum, iridium, and gold J. M. Cork il diag Phys R 72:581-5 O 1 '47
Gratings as broad band filters for the infrared. J U White. bibliog il Opt Soc Am J 37:713-17 S '47
High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays J. W. M. DuMond bibliog il diags R Sci Instr 18: 626-38 S '47
High temperature X-ray diffraction apparatus L. S Birks and H Friedman bibliog il diag R Sci Instr 18:576-80 Ag '47
High-temperature X-ray diffraction apparatus; furnace for use with Geiger-counter X-ray spectrometer. A. Van Valkenburg, jr and H F. McMurdie bibliog il diags J Res Nat Bur Stand 38:415-18 Ap '47; Same Am Cer Soc Bul 26.139-42 My 15 '47
Infra-red filters and cells of unpolished salt crystals J J. McGovern and R. A. Friedel. bibliog Opt Soc Am J 37·660-3 Ag '47
Infra-red prism spectrometer of high resolving power. J. R. Nielsen and others il diag Opt Soc Am J 37:296-301 Ap '47
Magnetic field measurement in beta-spectroscopy. J M. Cork and others. il diags R Sci Instr 18 315-16 My '47
Magnetic-lens electron spectrometer; radiations from 5 3 year cobalt^{60} L. C. Miller and L F. Curtiss. diags J Res Nat Bur Stand 38·359-64 Mr '47
Measurement of depth of cold work on X-ray spectrometer. M. Field. il R Sci Instr 18: 451-3 Je '47
Measurement of neutron cross sections with a crystal spectrometer W. J Sturm. bibliog diags Phys R 71 757-76 Je 1 '47
Metallurgical applications of the X-ray diffraction spectrometer. J. L. Abbott. bibliog il Iron Age 159:50-3 F 13; 57-61 F 20; 56-9 F 27 '47

SPECTROMETERS—*Continued*

Precision method of generating circular cylindrical surfaces of large radius of curvature for use in the curved-crystal spectrometer. J. W. M. DuMond and others. il diags R Sci Instr 18·617-26 S '47

Progress in industrial measurement; some new scientific aids described. L. Sanderson. Chem Age (Lond) 57·494-5 O 11 '47

Quantitative analysis of mixed powders with the Geiger-counter X-ray spectrometer. Z. W. Wilchinsky. diag J Ap Phys 18·929 O '47

Quantitative analysis with the X-ray spectrometer J. C. Redmond. Anal Chem 19·773-7 O '47

Recording vacuum grating spectrometer for the infra-red E. E. Bell and others. bibliog il diags R Sci Instr 18 48-56 Ja '47

Slow neutron absorption resonances in iodine W. B. Jones, jr. bibliog plan diags Phys R 72·362-77 S 1 '47

Slow neutron resonances in indium. B. D. McDaniel. bibliog diags Phys R 70:832-41 D 1 '46

Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens, jr. and others. Phys R 71 165-73 F 1 '47

Slow neutron velocity spectrometer studies; Cd, Ag, Sb, Ir, Mn. L. J. Rainwater and others. bibliog diag Phys R 71·65-79 Ja 15 '47

Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others. Phys R 71:174-81 F 1 '47

Stray radiation in Littrow-type spectrometers which employ collimating mirrors. H. W. Straat. diags Opt Soc Am J 37:507-9 Je '47

X-ray absorption structure of $GeCl_4$ and $AsCl_3$. S. T. Stephenson. bibliog Phys R 71: 84-7 Ja 15 '47

X-ray scattering at very small angles W. W. Beeman and P. Kaesberg. Phys R 72:512 S 15 '47

SPECTROMETERS, Mass

Analysis by the mass spectrometer of a liquefied hydrocarbon mixture containing C_3-C_5 paraffins and olefins. V. H. Dibeler and F. L. Mohler diags J Res Nat Bur Stand 39 149-54 Ag '47

Analysis of a natural gas by volumetric chemical methods and by mass spectrometer M. Shepherd bibliog Anal Chem 19:635-40 S '47

Cooperative analysis of a standard sample of natural gas with the mass spectrometer. M. Shepherd J Res Nat Bur Stand 38.491-8 My '47; Abstract. Blast F & Steel Pl 35·971-2 Ag '47

Detecting leaks, mass spectrometer type of detector J. E. Burroughs. diag Chem Eng 54:112-14 Ap '47

Detection of leaks in gas-filled and evacuated equipment. R. H. Munch. il Ind & Eng Chem 39.sup85A-6A Mr '47

Determination of the self-diffusion coefficient of methane E. B. Winn and E. P. Ney. Phys R 72:77-8 Jl 1 '47

Effect of temperature on the mass spectra of hydrocarbons. R. E. Fox and J. A. Hipple diag J Chem Phys 15 208 Ap '47

Fringing flux corrections for magnetic focusing devices N. D. Coggeshall. bibliog diags J Ap Phys 18.855-61 O '47

High-vacuum leak testing. J Chem Educ 23: 566 N '46

Isotopic constitution of tungsten, silicon, and boron. M. G. Inghram. bibliog diag Phys R 70.653-60 N 1 '46

Leaks and holes. Chem Ind 61:37-8 Jl '47

Mass spectrographic assignment of activities in Re^{186} and Re^{188}. D. C. Hess, jr and others Phys R 72 730 O 15 '47

Mass spectrometer and the control laboratory. D. Milsom diags Pet Refiner 26.83-8 O '47

Mass spectrometer and what it does. C. J. Deegan. il Oil & Gas J 46.64-5+ S 6 '47

Mass spectrometer for isotope and gas analysis A. O. Nier. bibliog il diags R Sci Instr 18.398-411 Je '47

Mass spectrometer for leak detection. A. O. Nier and others. bibliog diags J Ap Phys 18·30-3 Ja '47

Mass spectrometer in gas analysis Gas Age 100·35+ Ag 7 '47; Same. Pet Eng 18:248 S '47; Same abr. Mech Eng 69:764-5 S '47

Mass spectrometric study of CH_3D; dissociation probabilities of C—H and C—D bonds by electron impact. M. W. Evans and others. J Chem Phys 14.701-7 D '46

Mass-spectrometer study of the rare gases V. H. Dibeler and others. bibliog J Res Nat Bur Stand 38 617-20 Je '47

Mass spectroscope for analysis in the low mass range W. Sirl il diags R Sci Instr 18 540-5 Ag '47

Molecular dissociation by electron bombardment, a study of $SiCl_4$. R. H. Vought. Phys R 71 93-101 Ja 15 '47

New developments in vacuum engineering, K-25 gaseous diffusion plant for the separation of U^{235} R. B. Jacobs and H. F. Zuhr diags J Ap Phys 18 34-48 Ja '47

New method of analysis by mass spectrometry. S. E. J. Johnsen bibliog Anal Chem 19 305-6 My '47

Null method for the comparison of two ion currents in a mass spectrometer. A. O. Nier and others diags R Sci Instr 18·294-7 My '47

Panoramic mass spectrometer observation. A. T. Forrester and W. B. Whalley. il diags R Sci Instr 17.549-52 D '46

Relative abundance of the copper isotopes and the suitability of the photometric method for detecting small variations in isotopic abundance. H. E. Duckworth and B. G. Hogg. bibliog Phys R 71 212 F 1 '47

Self-diffusion coefficient of uranium hexafluoride. E. P. Ney and F. C. Armistead. diag Phys R 71:14-19 Ja 1 '47

Spectrometer and chemical methods compared Chem & Eng N 25 2392+ Ag 18 '47

Spectrometer vacuum leak detector. G. A. Doxey il diag Electronics 20:142+ My '47

Study of reaction intermediates by means of a mass spectrometer. G. C. Ellenton. bibliog diags J Chem Phys 15 455-81 Jl '47

SPECTROPHOTOMETERS

Automatic ratio recorder as applied to infra-red spectroscopy. R. F. Wild. bibliog diag R Sci Instr 18.436-42 Je '47

Automatic recording infra-red spectrophotometer. W. S. Baird and others. il diags Opt Soc Am J 37:754-61 O '47

Combination phosphorometer and spectroradiometer for luminescent materials A. E. Hardy. bibliog il diags Electrochem Soc Trans 91 (preprint 8):127-46 '47

Double-beam, percent transmission recording infra-red spectrophotometer. N. Wright and L. W. Herscher bibliog il diags Opt Soc Am J 37 211-16 Mr '47

Fast bolometer, tuned amplifier, and light-chopper provide the means for an infrared spectrophotometer. R. H. Müller. il diag Anal Chem 19·25A-6A Mr '47

Spectrophotometer for FBI, can trace cars used by hit-and-run drivers, abstract. D. J. Parsons. Electronics 20·166+ N '47

Use of rhodium surface mirrors in commercial ultraviolet spectrophotometers E. B. Claiborne. diag R Sci Instr 18.368-9 My '47

SPECTROPHOTOMETERS, Photoelectric

Adaptation of the Beckman quartz spectrophotometer for measurement of vitamin A by the Carr-Price reaction. G. I. Jones and others. diags Anal Chem 19·142-3 F '47

Automatic recording spectrophotometer. T. Coor, jr. and D. C. Smith. il diags R Sci Instr 18:173-81 Mr '47

Continuous recording ultraviolet spectrophotometer, application to butadiene analysis E. J. Rosenbaum and L. Stanton. il diags Anal Chem 19·794-8 O '47

Electronics in measurement L. G. Gitzendanner il diags Gen Elec R 50:25-8 Ag '47

Flame photometer accessory, developed to take advantage of resolving power and photometric precision of the Beckman spectrophotometer, is now in production. R. H. Müller. il Anal Chem 19:sup21A-22A Ag '47

New ultraviolet spectrophotometer. R. H. Munch il Ind & Eng Chem 39:75A-6A Ap '47

Permanganate test for alcohol quality studied by means of the spectrophotometer. O. S. Rask and F. M. Hildebrandt. bibliog Anal Chem 19 364-7 Je '47

Photoelectric measurement of fluorescence spectra R. A. Burdett and L. C. Jones, jr. bibliog il diag Opt Soc Am J 37·554-7 Jl '47

SPECTROPHOTOMETERS, Photoelectric— *Continued*
Photoelectric spectrophotometry, performance of quartz double monochromator in improved and more versatile photoelectric spectrophotometer F P Zscheile. bibliog il diags J Phys & Colloid Chem 51 903-26 Jl '47
Stable spectrophotometry of small density changes B. Chance il diags R Sci Instr 18:601-9 S '47
Thermostated cell compartment for the Beckman spectrophotometer. P H. Bell and C R Stryker il diags Science 105 415-16 Ap 18 '47
Transmission measurements with the Beckman quartz spectrophotometer. K S Gibson and M M Balcom il diag J Res Nat Bur Stand 38.601-16 Je '47; Same Opt Soc Am J 37 593-608 Ag '47

SPECTROPHOTOMETRY
Application of reflectance spectrophotometry to quantitative microanalysis. J Sendroy, jr and W C Granville. bibliog Anal Chem 19 500-1 Jl '47
Capillary absorption cells in spectrophotometry P. L Kirk, R S. Rosenfels and D J Hanahan. bibliog diags Anal Chem 19. 355-7 My '47
Colorimetric determination of titanium with disodium-1,2-dihydroxybenzene-3,5-disulfonate. J H. Yoe and A R. Armstrong. bibliog Anal Chem 19.100-2 F '47
Determination of chlorinated phenol derivatives in treated cooling waters. C. E Headington and W. A. Sassaman il Pet Refiner 26 124-6 My '47
Determination of extinction corrections in infrared analysis of gaseous hydrocarbon mixtures. J H. Lee. bibliog Ind & Eng Chem Anal ed 18:659-61 N '46
I.C I standard observer and co-ordinate system and their use in studies of the color of paper. J. A Van den Akker. bibliog Paper Tr J 125·49-54 Jl 10 '47
New spectrophotometric method for the determination of vitamin A; application to margarine. J Awapara and others. bibliog Science 104 602-4 D 20 '46
Photometer measures dissolved silica. N. I Sax il Power 91:762-3+ N '47
Precise method for the determination of the ionization constants of some weak organic acids R. S. Stearns and G W. Wheland bibliog Am Chem Soc J 69.2025-9 Ag '47
Spectrophotometric and potentiometric evaluation of apparent acid dissociation exponents of various 4-aminoquinolines J L Irvin and E. M Irvin. bibliog Am Chem Soc J 69 1091-9 My '47
Spectrophotometric determination of fluorine in glass M C. Parrish and others. bibliog Anal Chem 19 156-7 Mr '47
Spectrophotometric investigation of the interaction between ions of different oxidation states of an element J. Whitney and N Davidson Am Chem Soc J 69 2076-7 Ag '47
Spectrophotometric study of the hafnium-alizarin lake. H. A. Liebhafsky and E H Winslow bibliog Am Chem Soc J 69 1130-4 My '47
Spectrophotometry for chemists. R S Casey. bibliog diag J Chem Educ 24.446-9 S '47
Stable spectrophotometry of small density changes B. Chance. il diags R Sci Instr 18.601-9 S '47
Ultraspectrophotometric studies on cerebrospinal fluids M. Spiegel-Adolf and H. T Wycis bibliog J Phys Chem 50·447-52 N '46

SPECTROSCOPE
Control of Tropenas-converter blowing by a direct-vision spectroscope. S. T. Jazwinski. Iron & Steel Inst J 152.9-12, pl 1 no 2 '45; Same. Blast F & Steel Pl 33·1113-15 S '45; Abstract. Iron Age 156 63 N 15 '45; Discussion Iron & Steel Inst J 152:12-13 no 2 '45
Microwave spectroscope. il diag Electronics 20:198+ F '47
Mobile laboratory speeds steel analysis. H. A Tuttle and G A. Nahstoll. bibliog il Iron Age 160:68-72 S 25 '47
New spectroscopes fingerprint materials; infrared and microwave spectroscope. il diag Product Eng 18·153-4 F '47

See also
Spectrograph
Spectrometers
Spectrophotometers
Spectrum analysis

SPECTROSCOPIC laboratory. See Yerkes observatory—Spectroscopic laboratory

SPECTROSCOPY
Cathode ray scanning; general techniques. R. H. Müller bibliog il diags Anal Chem 19:74-7 F '47
High transmission windows for radiation of 3 to 14 microns wave-length. M Hyman, jr. and B. H. Billings. Opt Soc Am J 37.113-18 F '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H. Billings and M. Hyman, jr Opt Soc Am J 37:119-21 F '47
Interaction of γ-rays with matter and the spectroscopy of γ-radiation G. D. Latyshev. bibliog diags Rs Mod Phys 19.132-45 Ap '47
Recent advances in the physics and chemistry of rubber, ultraviolet absorption spectroscopy in rubber research. H P. Kaye bibliog Rubber Age 60 443-6 Ja '47

SPECTRUM
β-Ray spectrum of K^{40} and theory of β-decay. R. E. Marshak Phys R 70:980 D 1 '46
Determination of the sign and the energy spectrum of primary cosmic radiation. M. S. Vallarta and others bibliog Phys R 71: 393-8 Ap 1 '47
Helium molecular energy states as detected by collisions of the second kind in helium. R. Meyerott. bibliog Phys R 70:671-9 N 1 '46
Microwave spectra; methyl iodide. W. Gordy and others. Phys R 71.917 Je 15 '47
New electronic system for detecting microwave spectra W. Gordy and M. Kessler. il Phys R 72.644 O 1 '47
Non-degenerate vibrations of dimethylacetylene, diacetylene, and dimethyldiacetylene. A. G. Meister and F. F. Cleveland bibliog diags J Chem Phys 15.349-57 Je '47
Normalization of characteristic differentials in continuous spectra A. Wintner. Phys R 72 516-17 S 15 '47
Possibility of observing beat frequencies between lines in the visible spectrum. A. T. Forrester and others. diag Phys R 72.728 O 15 '47
Production of Hg^{198} as a possible source of an improved wave-length standard; transmutation of gold. J. H. Wiens. bibliog il Phys R 70·910-14 D 1 '46
Radioactive isotope of gold, $_{79}Au^{198}$ and low energy range of its spectrum S. Jnananda. bibliog Phys R 70:812-14 D 1 '46
Rotational spectra of some linear molecules near 1-cm wave-length. C H. Townes and others. Phys R 71:64 Ja 1 '47
Some spectroscopic changes connected with the stereoisomerization of diphenylbutadiene. A. Sandoval and L. Zechmeister. bibliog diag Am Chem Soc J 65:553-7 Mr '47
Spectrum of Th III. R J Lang. Phys R 71 907 Je 15 '47
Theory of accidental predissociation. I. Kovács and A. Budó bibliog J Chem Phys 15:166-73 Ap '47
Tunable narrow-band optical filter. B. H. Billings. il diags Opt Soc Am J 37:738-46 O '47
Use of deuterium in the analysis of vibrational spectra F. Halverson. bibliog(519 ref) il Rs Mod Phys 19.87-131 Ap '47

See also
Planets—Spectra
Raman effect
Spectrography
Spectroscopy
Spectrum analysis
Stark effect
Stars—Spectra
Talbot's bands
Zeeman effect

Absorption spectra

Absorption by hydrogen sulfide in the 3.5μ 4.5μ region E. A. Wilson, jr. and P C. Cross J Chem Phys 15.687 S '47
Absorption line width in the rotation spectrum of atmospheric water vapor. A. Adel. Phys R 71·806-8 Je 1 '47
Absorption of methyl alcohol and methylamine for 1,25-cm waves. W. D. Hershberger. Phys R 71·554 Ap 15 '47
Absorption spectra and tautomerism of cyanuric acid, melamine and some related compounds. I M. Klotz and T. Askounis. bibliog Am Chem Soc J 69;801-3 Ap '47

SPECTRUM—Absorption spectra—*Continued*
Absorption spectra in the detection of chemical changes in cellulose and cellulose derivatives. J. W Rowen and others. bibliog J Res Nat Bur Stand 39:133-40 Ag '47
Absorption spectra of heterocyclic compounds; quinolinols and isoquinolinols. G. W. Ewing and E. A. Steck. bibliog Am Chem Soc J 68.2181-7 N '46
Absorption spectra of organic compounds containing nitrogen, derivatives of hydantoin R. E. Stuckey. Chem Soc J p331-4 Mr '47
Absorption spectra of some N-acetyl derivatives of *p,p'*-diaminotriphenylmethane dyes. E. R. Katzenellenbogen and G. E. K. Branch Am Chem Soc J 69 1978-85 Ag '47
Absorption spectra of some benzene derivatives with unsaturated side chains T. W Campbell and others. Am Chem Soc J 69. 880-3 Ap '47
Absorption spectrum of borazole in the vacuum ultraviolet. J. R. Platt and others. bibliog J Chem Phys 15:598-601 Ag '47
Absorption spectrum of InCl H. M. Froslie and J G Winans bibliog il diag Phys R 72:481-91 S 15 '47
Activity of the red pigment from leguminous root nodules. H. N. Little and R H. Burris. bibliog Am Chem Soc J 69.838-41 Ap '47
Bond distances in OCS from microwave absorption lines. T. W. Dakin and others bibliog Phys R 71 640-1 My 1 '47
Contribution to the study of electronic spectra of bent triatomic molecules J Duchesne and B Rosen bibliog J Chem Phys 15:631-44 S '47
Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L Corrin and W D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47
Dissociation constants of melamine and certain of its compounds. J. K. Dixon, N. T. Woodberry and G. W Costa. bibliog Am Chem Soc J 69:599-603 Mr '47
Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins bibliog Am Chem Soc J 69:683-8 Mr '47
Electronic frequency stabilization of microwave oscillators. R. V. Pound. diags R Sci Instr 17.490-505 N '46
First-order Stark effect in the microwave spectrum of methyl alcohol B. P. Dailey. Phys R 72:84-5 Jl 1 '47
Indoaniline dyes; effect of multiple substitution on the absorption of phenol blue. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 69:152-5 Ja '47
Infrared absorption spectra of tetramethyl compounds. C. W. Young, J. S. Koehler and D. S. McKinney. bibliog Am Chem Soc J 69:1410-15 Je '47
Infrared and ultraviolet absorption spectra of two isomers of mesityl oxide H F. Gray, jr , R. S. Rasmussen and D. D. Tunnicliff. Am Chem Soc J 69 1630-1 Jl '47
Infra-red spectrometry from 15 to 25μ. E. K Plyler. Opt Soc Am J 37:746-53 O '47
Inversion spectrum of ammonia. B. Bleaney and R. P Penrose. Phys R 70:775-6 N 1 '46
Inversion spectrum of ammonia M. W P. Strandberg and others. Phys R 71:326 Mr 1 '47
Light absorption and resonance energies of some heterocyclic molecules. A. Maccoll. Chem Soc J p670-2 Ag '46
Limiting colors due to ideal absorption and transmission bands. I. H. Godlove. bibliog Opt Soc Am J 37:778-91 O '47
Microwave absorption frequencies of $N^{14}H_3$ and $N^{15}H_3$. W. E Good and D K. Coles. Phys R 71:383-4 Mr 15 '47
Microwave spectra of linear molecules. C H. Townes and others bibliog Phys R 72:513-14 S 15 '47
Pigments of cottonseed; gossycaerulin, a blue quinonoid gossypol derivative occurring in cooked cottonseed. C H. Boatner and others. bibliog Am Chem Soc J 69:668-72 Mr '47
Polyenes; the structure and absorption spectra of the ethyl α- and β-ionylideneacetates and related compounds. W. G. Young and S L Linden. Am Chem Soc J 69.2042-6 Ag '47
Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E A. Braude, E R H. Jones and E S Stern. Chem Soc J p 1087-96 Ag '47
Recent advances in the physics and chemistry of rubber; ultraviolet absorption spectroscopy in rubber research. H P. Kaye. bibliog Rubber Age 60:443-6 Ja '47
Solubility, absorption spectrum and ionization constant for aloe-emodin. K. G. Stone and N. H. Furman. Am Chem Soc J 68.2742 D '46
Spectra of the doubly charged positive ions of some *p,p'*-diaminotriphenylmethane dyes. B. M Tolbert and G. E K Branch Am Chem Soc J 69:1083-91 My '47
Spectral location of the absorption due to color centers in alkali halide crystals H F. Ivey. bibliog Phys R 72.341-3 Ag 15 '47
Spectrophotometric investigations of the interactions of proteins with organic anions. I. M Klotz. bibliog Am Chem Soc J 68: 2299-304 N '46
Stark and Zeeman effects in the inversion spectrum of ammonia. D. E Coles and W. E. Good. Phys R 70:979 D 1 '46
Steric effects in the ultraviolet absorption spectra of aromatic nitro compounds. W G. Brown and H Reagan. bibliog Am Chem Soc J 69.1032-3 My '47
Studies in light absorption; auxochromic properties and the periodic system. K. Bowden, E. A. Braude and E. R. H. Jones. Chem Soc J p948-52 O '46
Studies in light absorption, nitro-olefins. E A. Braude, E. R. H Jones and G. G. Rose. Chem Soc J p 1104-5 Ag '47
Ultraviolet absorption spectra of α,β-unsaturated ketones conjugated with an aromatic nucleus. A. L Wilds and others. bibliog Am Chem Soc J 69:1985-94 Ag '47

Band spectra

Absorption spectrum of InCl. H. M. Froslie and J. G. Winans. bibliog il diag Phys R 72:481-91 S 15 '47
Analysis of the vibration-rotation band ω_3 for $C^{12}O^{16}_2$ and $C^{13}O^{16}_2$. A H. Nielsen and Y. T. Yao. Phys R 68:173-80 O 1 '45, Correction. 71:825 Je 1 '47
Asymmetric rotor; analysis of 8.5-μ band of D_2O by punched-card techniques. G. W. King. bibliog J Chem Phys 15:85-8 F '47
Asymmetric rotor, analysis of the 3.7-μ band of H_2S by punched-card techniques R M. Hainer and G. W. King. bibliog J Chem Phys 15.89-91 F '47
Contribution to the study of electronic spectra of bent triatomic molecules. J. Duchesne and B. Rosen. bibliog J Chem Phys 15: 631-44 S '47
High pressure bands of carbon and the formation of C_2 molecules. G. Herzberg. bibliog Phys R 70.762-4 N 1 '46
Microwave spectrum of ammonia. L. N. Hadley and D. M. Dennison bibliog Phys R 70:780-1 N 1 '46
On the $^2\Pi_u \rightarrow {}^2\Pi_g$ bands of CO_2+. S Mrozowski. bibliog il Phys R 72:682-98 O 15 '47
Rotational structure of some electronic bands of chlorine dioxide. J. B. Coon. bibliog il diags J Chem Phys 14:665-86 N '46
Spectra of the *p*-dimethylaminochalcones and of their ions E R. Katzenellenbogen and G E. K. Branch Am Chem Soc J 69.1615-19 Jl '47
Spectral location of the absorption due to color centers in alkali halide crystals. H. F. Ivey. bibliog Phys R 72.341-3 Ag 15 '47

Excitation

Chamber for operating arcs for spectrographic investigations in controlled atmospheres G. W Marks and M. Gardner il R Sci Instr 18:370-1 My '47
Hollow cathode source applicable to spectrographic analysis for the halogens and gases. J. R McNally, jr. and others bibliog il Opt Soc Am J 37.93-8 F '47

SPECTRUM—Excitation—*Continued*
Magnetic rotation of the direct current arc in spectrographic analysis A. T Myers and B C Brunstetter. diag Anal Chem 19.71 Ja '47
Study concerning characteristics of the high-voltage a c arc. E A Boettner and C F Tufts. bibliog il diags Opt Soc Am J 37.192-8 Mr '47

Fine structure

Analysis of the hyperfine structure in the microwave spectrum of the symmetric top molecule CH_3I W. Gordy and others. Phys R 72 249-50 Ag 1 '47
Anomalous values of certain of the fine structure lines in the ammonia microwave spectrum. H H Nielsen and D M Dennison. Phys R 72 86-7 Jl 1 '47
Fine structure of Hα. L Giulotto Phys R 71.562 Ap 15 '47
Fine structure of the hydrogen atom by a microwave method W. E. Lamb, jr and R C Retherford bibliog Phys R 72·241-3 Ag 1 '47
Fine structure of zenithal curves of the cosmic radiation G. Cocconi and V. Tongiorgi bibliog Phys R 70 850-2 D 1 '46
Hyperfine structure and nuclear moments of columbium. W W. Meeks and R A Fisher. bibliog Phys R 72·451-5 S 15 '47
Hyperfine structure and the nuclear spin of U^{235} O. E Anderson and H. E. White Phys R 71.911 Je 15 '47
Hyperfine structure and the stark effect of the ammonia inversion spectrum. J. M. Jauch bibliog Phys R 72·715-23 O 15 '47
Hyperfine structure of atomic hydrogen and deuterium. J. E Nafe and others. bibliog Phys R 71:914-15 Je 15 '47
Hyperfine structure of the ground state of H and D atoms. O. Halpern. Phys R 72·245-6 Ag 1 '47
Hyperfine structure of the microwave spectrum of ammonia and the existence of a quadrupole moment in N^{14}. B P. Dailey and others Phys R 70·984 D 1 '46
Microwave spectra; the hyperfine structure of ammonia. W Gordy and M. Kessler bibliog il Phys R 71 640 My 1 '47
Millimeter-wave spectra; hyperfine structure of BrCN and ICN. W Gordy and others. bibliog Phys R 72.259-60 Ag 1 '47
Nuclear and molecular constants from microwave spectra, methyl chloride and methyl bromide. W. Gordy and others. Phys R 72 344-5 Ag 15 '47
Nuclear quadrupole moment effects in the inversion spectrum of ammonia R. J. Watts and D. Williams il Phys R 72:263-5 Ag 15 '47
Nuclear quadrupole moment effects in the microwave spectrum of ammonia, R. J Watts and D. Williams Phys R 71:639 My 1 '47
Quadrupole moments and spins of BR, Cl, and N nuclei C H Towns and others bibliog Phys R 71·644-5 My 1 '47
Secondary structure in the *K* absorption limit of germanium tetrachloride C. H. Shaw. bibliog Phys R 70.643-5 N 1 '46

Fluorescence spectra

Fluorescence spectrography as an aid in the identification of compounds. I. Berenblum and R. Schoental. pl Chem Soc J p 1017-18 N '46
Method for measuring the spectral energy distribution of low brightness light sources. F. J. Studer. il diag Opt Soc Am J 37:288-91 Ap '47
Photoelectric measurement of fluorescence spectra R. A. Burdett and L C. Jones, jr bibliog il diag Opt Soc Am J 37 554-7 Jl '47

Intensity

Correlation of intensity measurements in Raman spectra obtained with different instruments. D H. Rank Anal Chem 19: 766-7 O '47
Experimental determination of the intensities of infra-red absorption bands E. B. Wilson, jr and A. J. Wells. J Chem Phys 14:578-80, 15 157-65 O '46, Ap '47
Method for measuring the spectral energy distribution of low brightness light sources. F J. Studer. il diag Opt Soc Am J 37:288-91 Ap '47
Photoelectric intensity measurements of Raman spectra. J Chien and P. Bender bibliog diags J Chem Phys 15 376-82 Je '47
Study concerning characteristics of the high-voltage a.c arc E. A. Boettner and C. F. Tufts bibliog il diags Opt Soc Am J 37:192-8 Mr '47
Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses. L. W. Strock and G. E. Heggen. Opt Soc Am J 37·29-36 Ja '47

See also
Franck-Condon principle

Line breadth

Ammonia spectrum and line shapes near 1.25-cm wave-length. C. H. Townes. bibliog diags Phys R 70:665-71 N 1 '46
Saturation effect in microwave spectrum of ammonia W V Smith and R. L. Carter. Phys R 72 638-9 O 1 '47

Mass spectra

Differences in mass spectra of H_2 and D_2. N. Bauer and J. Y. Beach. bibliog J Chem Phys 15 150-1 Mr '47
65-hour element 61 formed in fission M G Inghram and others. Phys R 71 743 My 15 '47
Ionization and dissociation of *cis*- and *trans*-2-butene by electron impact. V. H. Dibeler bibliog diag J Res Nat Bur Stand 38: 329-36 Mr '47
Mass spectra of hydrogen and deuterium. D P Stevenson. bibliog J Chem Phys 15 409-11 Je '47
Peak contour and half-life of metastable ions appearing in mass spectra. J A Hipple. diag Phys R 71:594-9 My 1 '47

Measurement

Direct determination of wave-lengths from Fabry-Perot interferometer patterns G. R. Harrison bibliog il diags Opt Soc Am J 36·644-54 N '46

Multiplets

See Spectrum—Fine structure

Tables, etc.

Conversion factor for kx units to Angström units. W. L Bragg R Sci Instr 18.688-9 S '47
Raman spectra of hydrocarbons. M R Fenske and others. Anal Chem 19 712-22 O '47

SPECTRUM, Beta rays. See Beta rays

SPECTRUM, Infrared
Absorption spectra in the detection of chemical changes in cellulose and cellulose derivatives. J W Rowen and others. bibliog J Res Nat Bur Stand 39 133-40 Ag '47
Allergenic principles of poison ivy; note on the synthesis of 3-substituted catechols. H S Mason. bibliog Am Chem Soc J 69· 2241-2 S '47
Application of infrared spectroscopy to the analysis of liquid hydrocarbons J J. Heigl, M. F Bell and J. U. White. bibliog Anal Chem 19·293-8 My '47
Automatic ratio recorder as applied to infra-red spectroscopy R. F. Wild. bibliog diag R Sci Instr 18:436-42 Je '47
Automatic recording infra-red spectrophotometer W. S Baird and others. il diags Opt Soc Am J 37.754-61 O '47
Comparison of LiF and CaF_2 prisms for infra-red use. R. C. Gore and others. Opt Soc Am J 37·23-8 Ja '47
Diffuse spectral reflectance of paints in the near infra-red. J. A. Sanderson. bibliog diag Opt Soc Am J 37 771-7 O '47
Double-beam, percent transmission recording infra-red spectrophotometer. N. Wright and L W. Herscher. bibliog il diags Opt Soc Am J 37 211-16 Mr '47
Experimental determination of the intensities of infra-red absorption bands. E B. Wilson, jr and A J Wells J Chem Phys 14·578-80; 15.157-65 O '46, Ap '47
Gratings as broad band filters for the infra-red J. U. White bibliog il Opt Soc Am J 37 713-17 S '47
High transmission windows for radiation of 3 to 14 microns wave length. M Hyman, jr. and B. H. Billings. Opt Soc Am J 37:113-18 F '47

SPECTRUM, Infrared—*Continued*

Infra-red absorption in formaldehyde beyond 10μ. W. E. Singer. Phys R 71:531-3 Ap 15 '47

Infrared absorption spectra of liquid and gaseous morpholine R A. Friedel and D S. McKinney. bibliog diag Am Chem Soc J 69·604-7 Mr '47

Infrared absorption spectra of seven cyclopentanes and five cyclohexanes. E. K. Plyler and others bibliog il charts J Res Nat Bur Stand 38 211-28 F '47

Infra-red absorption spectra of some C_4 and C_5 dienes. R S. Rasmussen and R R. Brattain bibliog J Chem Phys 15.131-4 Mr '47

Infrared absorption spectra of some experimental glasses containing rare earth and other oxides R Stair and C. A. Faick. bibliog diags J Res Nat Bur Stand 38 95-101 Ja '47

Infra-red absorption spectra of some octenes R. S. Rasmussen and others. diags J Chem Phys 15 135-40 Mr '47

Infrared absorption spectra of tetramethyl compounds. C. W Young, J S. Koehler and D. S. McKinney. bibliog Am Chem Soc J 69·1410-15 Je '47

Infra-red absorption spectra of the C_2 to C_4 mono-olefins and of 2-methyl-2-butene R S Rasmussen and R R. Brattain. bibliog J Chem Phys 15 120-30 Mr '47

Infrared absorption spectrum of carbon disulfide. E K. Plyler and C. J. Humphreys bibliog J Res Nat Bur Stand 39:59-65 Jl '47

Infrared absorption studies, stereochemistry of the hydroxyl group in vinyl alcohols A M Buswell, W H Rodebush and R M. Whitney. Am Chem Soc J 69.770-2 Ap '47

Infrared analyses of alkylates and correlation of alkylate composition with motor tests. G. M. Webb and W. S. Gallaway. bibliog il Pet Processing 2:356-7+, 442-4+ My-Je '47

Infrared analysis of crystalline penicillins R. B. Barnes and others. bibliog il Anal Chem 19:620-7 S '47

Infrared analysis of mixtures of isooctane and normal heptane A. E. Herald and H A. Price Oil & Gas J 46·94-6 Jl 5 '47

Infrared emission spectra of krypton and argon C J. Humphreys and E. K. Plyler. bibliog J Res Nat Bur Stand 38:499-503 My '47

Infra-red prism spectrometer of high resolving power. J R. Nielsen and others. il diag Opt Soc Am J 37:296-301 Ap '47

Infra-red spectra and molecular structure of certain isomeric diazocyanides. N. Sheppard and G. B. B. M. Sutherland. Chem Soc J p453-6 Ap '47

Infrared spectra and structure of natural and synthetic polypeptides. S. E. Darmon and G B B M Sutherland Am Chem Soc J 69·2074 Ag '47

Infrared spectra of fifteen organic bromides from 500 to 800 $cm.^{-1}$. F. S Mortimer, R B Blodgett and F Daniels bibliog Am Chem Soc J 69·822-6 Ap '47

Infra-red spectra of monomeric formic acid and its deuterated forms. V. Williams. bibliog J Chem Phys 15:232-51 My '47

Infra-red spectra of solid and liquid alkylphenols T A. Kletz and W. C. Price. Chem Soc J p644-8 My '47

Infrared spectrometric quantitative analysis of multicomponent liquid hydrocarbon mixtures. J W. Kent and J. Y. Beach. bibliog Anal Chem 19.290-3 My '47

Infra-red spectrometry from 15 to 25μ. E K Plyler Opt Soc Am J 37:746-53 O '47

Infrared spectroscopic analysis of five isomers of 1,2,3,4,5,6-hexachlorocyclohexane. L W. Daasch. bibliog Anal Chem 19 779-85 O '47

Infrared spectroscopic investigations of hydrogen bonding in hindered and unhindered phenols. N. D. Coggeshall. bibliog Am Chem Soc J 69:1620-4 Jl '47

Infra-red spectrum and molecular constants of $C^{12}O^{16}$ and $C^{13}O^{16}$ R T. Lagemann and others. bibliog Phys R 72:284-9 Ag 15 '47

Infra-red spectrum and structural diagnosis: substituted carbazoles R. E. Richards. Chem Soc J p978-9 Jl '47

Infra-red spectrum of ketene. F. Halverson and V. Williams. bibliog J Chem Phys 15. 552-9 Ag '47

Infra-red spectrum of methyl fluoride K P. Yates and H. H Nielsen. bibliog il Phys R 71 349-59 Mr 15 '47

Methylcyclopropane, infrared absorption spectrum and synthesis from *i*-butyl chloride F. E. Condon and D E. Smith. Am Chem Soc J 69 965-6 Ap '47

Motions of molecules in condensed systems; infra-red spectra for cyclohexane solid II, solid I, liquid and vapor in the range from 3 to 15μ G. B. Carpenter and R. S. Halford bibliog J Chem Phys 15.99-106 F '47

Nature of the hydrogen bond in KHF_2. K. S. Pitzer and E F. Westrum. bibliog J Chem Phys 15·526 Jl '47

New atomic lines in the infra-red solar spectrum R R McMath and others. Phys R 72:644-5 O 1 '47

Normal coordinate analysis of the vibrational frequencies of ethylene, propylene, *cis*-2-butene, *trans*-2-butene, and isobutene. J E Kilpatrick and K. S. Pitzer. bibliog J Res Nat Bur Stand 38·191-209 F '47

Organosilicon polymers; infrared spectra of the methylpolysiloxanes. N. Wright and M J. Hunter bibliog Am Chem Soc J 69. 803-9 Ap '47

Preparation and identification of alkylcyclopropanes, 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane J. D Bartleson, R. E Burk and H. P. Lankelma bibliog Am Chem Soc J 68.2513-18 D '46

Pressure broadening in the infra-red and optical collision diameters. N D. Coggeshall and E L. Saier. bibliog J Chem Phys 15:65-71 Ja '47

Recording vacuum grating spectrometer for the infra-red. E. E. Bell and others bibliog il diags R Sci Instr 18.48-56 Ja '47

Short-cut methods of infrared analysis W D Seyfried and S. H. Hastings. bibliog Anal Chem 19·298-304 My '47

Some recent applications of infra-red spectroscopy, abstract and discussion. H. W. Thompson. Chem & Ind p76-7 F 1 '47

Spatial configuration of perfluorocyclobutane. W F Edgell. Am Chem Soc J 69:660-1 Mr '47

Structure of dimeric keten; infra-red measurements D. H. Whiffen and H. W Thompson. Chem Soc J p 1005-9 N '46

Study of macromolecules by infra-red spectroscopy H W. Thompson Chem Soc J p289-96, Discussion. 296-7 F '47

Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide. H. M. Spencer. bibliog J Chem Phys 14·729-32 D '46

SPECTRUM, Solar

Estimate of transparency of the atmospheric window 16 mu to 24 mu. A. Adel Opt Soc Am J 37.769-71 O '47

New atomic lines in the infra-red solar spectrum R R McMath and others Phys R 72.644-5 O 1 '47

Solar absorption lines between 2950 and 2200 angstroms E Durand and others il Phys R 71.827 Je 1 '47

Solar ultraviolet spectrum to 88 kilometers W A. Baum and others. il Phys R 70:781 N 1 '46

Spectroscopic laboratory at Yerkes observatory G Herzberg. Science 106.215-16 S 5 '47

SPECTRUM, Ultraviolet

Absorption spectra in the detection of chemical changes in cellulose and cellulose derivatives. J W. Rowen and others bibliog J Res Nat Bur Stand 39 133-40 Ag '47

Examination of heat polymerized oils by ultraviolet light; abstract. M. Pestemer and J. Tschinkel. Paint Oil & Chem R 110·40 Mr 20 '47

Filters for the isolation of the 3130 Å. spectral group of the mercury arc. R. E Hunt and W. Davis, jr. bibliog Am Chem Soc J 69.1415-18 Je '47

Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A Braude, E R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47

SPECTRUM, Ultraviolet—*Continued*
Quantitative analysis of isomeric cresols and cresol-phenol mixtures by ultraviolet absorption spectra of vapors. W. W. Robertson, N Ginsburg and F. A. Matsen. bibliog il Ind & Eng Chem Anal ed 18:746-50 D '46
Recent advances in the physics and chemistry of rubber; ultraviolet absorption spectroscopy in rubber research. H P. Kaye. bibliog Rubber Age 60:443-6 Ja '47
Steric effects in the ultraviolet absorption spectra of aromatic nitro compounds. W. G. Brown and H Reagan bibliog Am Chem Soc J 69:1032-3 My '47
Studies in light absorption, nitro-olefins. E. A. Braude, E R H. Jones and G. G Rose. Chem Soc J p 1104-5 Ag '47
Studies on the structures of some dibenznaphthacenes J C Nichol and others. bibliog Am Chem Soc J 69:376-80 F '47
Ultraviolet absorption spectra of mescaline sulfate and β-phenylethylamine sulfate. K. Salomon and A F. Bina. Am Chem Soc J 68 2403 N '46
Ultraviolet absorption spectra of thiouracils G B Elion, W. S. Ide and G. H. Hitchings bibliog Am Chem Soc J 68.2137-40 N '46
Ultraviolet absorption spectra of α,β-unsaturated ketones conjugated with an aromatic nucleus A L. Wilds and others bibliog Am Chem Soc J 69.1985-94 Ag '47
Ultraviolet absorption spectrum and the acid ionization constant of 8-hydroxyquinoline. K G Stone and L. Friedman bibliog Am Chem Soc J 69:209-11 F '47
Ultraviolet absorption spectrum of cerebrospinal fluid: ascorbic versus nucleic acid. L. A. Strait and others. bibliog Science 106:64-5 Jl 18 '47
Ultraviolet absorption spectrum of nitric oxide. H. J. Bernstein and G. Herzberg. bibliog J Chem Phys 15:77 Ja '47

SPECTRUM, X ray
Absolute energies of *Kα*-radiation from thick targets of silver P. Kirkpatrick and A V. Baez. bibliog diag Phys R 71:521-9 Ap 15 '47
Analysis of high energy X-ray spectra G. C. Baldwin and G. S Klaiber Phys R 71.554 Ap 15 '47
Solid-state interpretation of the structure near the limit of the continuous X-ray spectrum J W M DuMond bibliog diags Phys R 72 276-83 Ag 15 '47
K X-ray absorption edge of silicon V. P. Barton and G. A. Lindsay. il Phys R 71: 406-8 Ap 1 '47

SPECTRUM analysis
Adapting basic spectrographic equipment to precision quantitative analysis. P. H. Brotzman and H. E. Hemker. il Steel 121: 83+ Jl 14 '47
Analysis of silica-alumina cracking catalysts, spectrographic determination of contaminants R A. Burdett and L C. Jones, jr. bibliog Anal Chem 19:238-41 Ap '47
Analytical methods for carotenes of lycopersicon species and strains. F. P. Zscheile and J W. Porter. bibliog Anal Chem 19:47-51 Ja '47
Application of infrared spectroscopy to the analysis of liquid hydrocarbons. J. J. Heigl, M F. Bell and J. U. White. bibliog Anal Chem 19:293-8 My '47
Carotenoids of stored dehydrated carrots G. Mackinney and W. E. Ratzke. bibliog Anal Chem 19:614-15 Ag '47
Carrier distillation analysis of uranium. Chem & Eng N 25:777 Mr 17 '47; Same il Chem Ind 60:668 Ap '47; Same cond Elec Eng 66. 685 Jl '47
Carrier-distillation method for spectrographic analysis and its application to the analysis of uranium-base materials. B. F Scribner and H. R. Mullin bibliog pl diags J Res Nat Bur Stand 37.379-89 D '46; Abstract. Mech Eng 69:311-12 Ap '47
Chemical analyses and calculated modes of the Oliverian magma series, Mt Washington quadrangle, New Hampshire. M. P. Billings and J. C. Rabbitt. bibliog Geol Soc Bul 58:573-96 Jl '47
Correlation of intensity measurements in Raman spectra obtained with different instruments D. H. Rank. Anal Chem 19: 766-7 O '47
Direct reading of spectral-line intensities. J. H. Oldfield. bibliog Iron & Steel Inst J 156:78-80 My '47
Direct-reading spectrometer for ferrous analysis. R. O Carpenter and others. diags Opt Soc Am J 37:707-13 S '47
Disintegration of $_{17}Cl^{34}$. H. Zah-Wei. Phys R 70:782-3 N 1 '46
Economic significance of direct reading spectrochemical analysis. M. F. Hasler. il Iron Age 160:71-3 Ag 14 '47
Effect of alkali and alkaline earth salts on the spectrographic determination of strontium E Fast and J. R Nielsen. bibliog Opt Soc Am J 37 614-22 Ag '47
Errors in spectrochemical (flame) analysis. A C. Oertel and H C. T Stace. bibliog diags Soc Chem Ind J 65 350-4 N '46
High-speed alloy analyzer, Quantometer uses electronic eyes. il Bsns W p66-8+ O 18 '47
Hollow cathode source applicable to spectrographic analysis for the halogens and gases. J. R. McNally, jr. and others. bibliog il Opt Soc Am J 37:93-8 F '47
Infra-red absorption cell for quantitative analysis. N B. Colthup. diags R Sci Instr 18.64-5 Ja '47
Infrared analyses of alkylates and correlation of alkylate composition with motor tests G. M. Webb and W. S. Gallaway. bibliog il Pet Processing 2:356-7+, 442-4+ My-Je '47
Infrared analysis of crystalline penicillins. R B. Barnes and others bibliog il Anal Chem 19 620-7 S '47
Infrared analysis of mixtures of isooctane and normal heptane A E Herald and H. A Price. Oil & Gas J 46:94-6 Jl 5 '47
Infrared spectrometric quantitative analysis of multicomponent liquid hydrocarbon mixtures. J. W. Kent and J. Y. Beach. bibliog Anal Chem 19.290-3 My '47
Infrared spectroscopic analysis of five isomers of 1,2,3,4,5,6-hexachlorocyclohexane. L W. Daasch. bibliog Anal Chem 19.779-85 O '47
Interference in thin parallel surfaced transparent plates as a source of error in spectroquantitative analysis. J. Stern. il Opt Soc Am J 36:654-8 N '46
Magnetic rotation of the direct current arc in spectrographic analysis. A. T. Myers and B. C. Brunstetter. diag Anal Chem 19:71 Ja '47
Measurement of the intensity ratios of spectral lines with electron multiplier phototubes. K G. Kessler and R. A. Wolfe. bibliog diags Opt Soc Am J 37:133-44 Mr '47
Method for micro-spectrography of metals. F R. Bryan and G. A. Nahstoll bibliog il diag Opt Soc Am J 37:311-16 My '47
Method for the spectrochemical determination of germanium, tin, and lead in ore samples. G W. Marks and H. T. Hall. bibliog U S Bur Mines Rep of Invest 3965:1-38, pl 1-24 '46
Micro-spectrographic method for the quantitative analysis of steel segregates. J Convey and J H Oldfield. bibliog diag Iron & Steel Inst J 152 473-98, pl 46-8 no 2 '45; Same cond. il Engineering 160 481-4 D 7 '45; Abstracts. Engineer 180:464 D 7 '45; Iron Age 156:63 D 13 '45; Discussion. Iron & Steel Inst J 152.498-507, pl 48a-48b no 2 '45; Engineering 160:476-7 D 7 '45; Engineer 180.464-5 D 7 '45
Mobile laboratory speeds steel analysis. H. A. Tuttle and G. A Nahstoll. bibliog il Iron Age 160:68-72 S 25 '47
New differential X-ray absorption method for elementary chemical analysis. A. Engström. diag R Sci Instr 18.681-2 S '47
Polarization and intensity measurement in Raman spectra by the photoelectric method. D. H Rank. bibliog il Opt Soc Am J 37: 798-803 O '47
Quantitative analysis of hydrocarbon mixtures by means of Raman spectra. E. J. Rosenbaum, C. C. Martin and J. L Lauer. bibliog Ind & Eng Chem Anal ed 18:731-3 D '46

SPECTRUM analysis—*Continued*
Quantitative analysis of isomeric cresols and cresol-phenol mixtures by ultraviolet absorption spectra of vapors. W. W. Robertson, N. Ginsburg and F. A. Matsen. bibliog il Ind & Eng Chem Anal ed 18:746-50 D '46
Quick analyses of magnesium foundry heats. F. R. Bryan and G A. Nahstoll. il Materials & Methods 25:90-2 F '47
Raman spectra of hydrocarbons M R Fenske and others bibliog diags Anal Chem 19: 700-65 graphs(p723-65) O '47
Rapid, accurate, economic analysis of iron and steel by means of the spectrograph. R. F Lab. il Blast F & Steel Pl 34.1509-14 D '46
Report on standard samples for spectrochemical analysis. 23p American society for testing materials, 1916 Race st, Philadelphia 3 '47
Setting up for spectrographic analysis. P. J. Gruszecki. bibliog il Iron Age 159.44-6 Ap 17 '47
Short-cut methods of infrared analysis. W. D Seyfried and S H. Hastings. bibliog Anal Chem 19:298-304 My '47
Slag control by routine spectrographic analysis J. T. Rozsa. il Metal Prog 51:593-7 Ap '47
Spectrochemical analysis by the copper spark method M. Fred and others. bibliog il Opt Soc Am J 37:279-88 Ap '47
Spectrochemical analysis of ceramics and other non-metallic materials E. K. Jaycox. Opt Soc Am J 37:162-5 Mr '47, Abstract. Glass Ind 28:307+ Je '47
Spectrochemical analysis of high copper in cast iron and steel W. R. Kennedy. Opt Soc Am J 37:154-8 Mr '47
Spectrochemical analysis of nickel alloys. E. K. Jaycox. Opt Soc Am J 37:159-62 Mr '47
Spectrochemical analysis of rocks and minerals E. W Claffy. bibliog Am J Sci 245:35-48, pl 1-2 Ja '47
Spectrochemical determination of lithium, sodium, and iron in lithium-bearing ores. G Oplinger. bibliog il Anal Chem 19:444-7 Jl '47
Spectrochemical determination of the major constituents of minerals and rocks. A. Kvalheim. bibliog Opt Soc Am J 37:585-92 Jl '47
Spectrochemical sample logging of limestones. L L Sloss and S R. B. Cooke. bibliog diag Am Assn Pet Geologists Bul 30:1888-98 N '46, Same. Pet Eng 18.145+ Ag '47
Spectrographic analysis of a complex ferrous alloy. C. H. R. Gentry and G. P. Mitchell. bibliog il diag Soc Chem Ind J 66:226-32 Jl '47
Spectrographic analysis of cast iron; abstract. J. E. Hurst and R. V. Riley. Materials & Methods 24:1544 D '46
Spectrographic analysis of ferro-silicon. J. H. Coulliette. bibliog Opt Soc Am J 37:609-13 Ag '47
Spectrographic analysis of lubricating-oil additives, additive lubricants, and gasolines. L. E Calkins and M. M. White. Am Pet Inst Proc 26(3):80-90 '46
Spectrographic analysis of portland cement. Am Cer Soc Bul 26:260 Ag 15 '47; Excerpt. il Civil Eng 17:245 My '47
Spectrographic analysis of stainless steels D P. Jensen. bibliog Iron Age 160:47-8 Jl 17 '47
Spectrographic analysis of zinc and lead. J. Morris. Can Chem & Process Ind 31:665-6+ Jl '47
Spectrographic analysis of zinc-base alloys. R. W. Smith and J E. Hoagbin. il diags Anal Chem 19:86-92 F '47
Spectrographic determination of minor elements in portland cement. A. W. Helz and B. F. Scribner. bibliog diags J Res Nat Bur Stand 38:439-47 Ap '47
Spectrographic determination of trace elements in the cathode layer arc by the variable internal standard method. R O. Scott. bibliog Soc Chem Ind J 65:291-7 O '46
Spectrographic examination of organic precipitates; nickel dimethylglyoxime. M. Griffing, T. De Vries and M. G. Mellon. Anal Chem 19:654-5 S '47
Spectroscopic analysis; application of the hydrogen discharge lamp to the analysis of mixtures of C_8 aromatic hydrocarbons. R. R. Gordon and others. 2pls Inst Pet J 33 103-12 F '47
Spectroscopic laboratory at Yerkes observatory G. Herzberg. Science 106:215-16 S 5 '47
Study concerning characteristics of the high-voltage a c. arc. E A. Boettner and C. F. Tufts. bibliog il diags Opt Soc Am J 37: 192-8 Mr '47
Uranium analysis by carrier-distillation. il Chem Ind 60 668 Ap '47
Use of heterochromous lines in spectrographic photometry. S Levy and O. W. Christine. Opt Soc Am J 36:503-6 S '46; Correction. 36: 707 D '46
Use of incompletely consumed samples to illustrate effect of fractional distillation in carbon arc spectrochemical analyses. L. W. Strock and G. E. Heggen. Opt Soc Am J 37:29-36 Ja '47

See also
Spectroscope

Bibliography

Index to the literature on spectrochemical analysis, part II, 1940-1945 180p pa $3, with pt 1 $3.75 American society for testing materials, 1916 Race st, Philadelphia 3 '47

SPECTRUM analysis (mass spectra)
A.c operated mass spectrograph of the Mattauch type. A E. Shaw and W. Rall. bibliog il diags R Sci Instr 18.278-88 My '47
Laboratory low-temperature fractional distillation, optimum charging rates; samples analyzed by mass spectrometer C E. Starr, jr., J S. Anderson and V M. Davidson. bibliog Anal Chem 19 409-12 Je '47
Mass spectrometer and the control laboratory. D Milsom. diags Pet Refiner 26.83-8 O '47
Mass spectroscope for analysis in the low mass range. W. Siri il diags R Sci Instr 18:540-5 Ag '47
New method of analysis by mass spectrometry. S. E. J. Johnsen. bibliog Anal Chem 19: 305-6 My '47

SPECULATION
Stock exchange 12 years after; investment market, speculation machinery, gambling parlor? A. W. May. Comm & Fin Chr 165: 269 Ja 16 '47
There goes Mr Jordan. Fortune 35:132 F '47

See also
Hedging
Investments
Securities
Stock exchange
Stocks—Margin buying
Wall Street

SPEECH
Airplane quieting; specification of acceptable noise levels; ability of passengers to converse during flight. L. L Beranek. bibliog A S M E Trans 69:97-100 F '47
Design of speech communication systems for use in presence of noise. L. L. Beranek. bibliog diags Inst Radio Eng Proc 35: 880-90 S '47
Effects of distortion on the intelligibility of speech at high altitudes. G. A. Miller and S Mitchell. diag Acoustical Soc Am J 19: 120-5 Ja '47
Effects of impulsive interference upon a-m voice communication. J. C. R. Licklider and S. J Goffard bibliog diag Acoustical Soc Am J 19:653-63 Jl '47
Factors governing the intelligibility of speech sounds. N. R. French and J. C Steinberg. bibliog Acoustical Soc Am J 19:90-119 Ja '47
Frequency range preference for speech and music. H. F. Olson. il plan diags Acoustical Soc Am J 19:549-55 Jl '47; Same cond. Electronics 20:80-1 Ag '47
Methods of measuring speech spectra. S. S. Stevens and others. bibliog il diags Acoustical Soc Am J 19:771-80 S '47
Premodulation clipping in AM voice communication. K. D. Kryter and others. il diags Acoustical Soc Am J 19:125-31 Ja '47

SPEECH—*Continued*
Reaction of small enclosures on the human voice, specifications required for satisfactory intelligibility. C. T. Morrow. il diags Acoustical Soc Am J 19:645-52 Jl '47

See also
Public speaking

SPEECH, Visible
Cathode-ray tube for displaying speech waves; teaching aid for deaf children. il Electronics 20:142 F '47
Cathode-ray tube for viewing continuous patterns. J. B Johnson. il diags J Ap Phys 17 891-4 N '46

SPEED
High-speed photography for study of high speed mechanisms. G. A. Hawkins and C. E. Balleisen. bibliog il diags Machine Design 19:127-33 Ag; 121-6 S '47
Measuring speed with WWV; harmonics of station's signal obtained for calibrating oscillator used in measurement of shaft speed J. C. Coe. il diags Electronics 20 90-3 Ag '47
Speed spectrum; engineering data book. C. E. Pappas. Aviation 46:66 My '47

See also
Airplanes—Speed
Railroads—Train speed

SPEED Indicators
D.c rate gyro; Fairchild camera and instrument corporation il R Sci Instr 18.376 My '47
Rate-detecting gyro for measuring changes in velocity. V J. Canziani. il diag Machine Design 19.142-4 Ag '47
Useful speed-time analyser; used in design of dynamos and other auxiliary equipment on automobiles. il diags Engineer 184:316-17 O 3 '47, Elec R (Lond) 141:450 S 19 '47

See also
Tachometers

SPEED variation
Adjustable frequency control of high-speed induction motors. G. W. Heumann. diags Elec Eng 66:576-9 Je '47
Basic procedures in motor control; amplidyne control circuits. G. W. Heumann. il diags Gen Elec R 50:41-8 Jl '47
Brown and sons double-reduction gear with barring mechanism. il diags Engineering 163.32-3 Ja 10 '47
Centrifugal governor speed control for small motors. W M Yogerst. il diag Product Eng 18.138-9 Ag '47
Constant-current systems for electronic control of d-c motors. O. W. Livingston. diags Gen Elec R 50:38-44 My '47; Same. Elec Eng 66:432-7 My '47
Controlling speed of fractional horsepower motors. W. M. Yogerst. il diags Product Eng 18:130-4 My '47
Cyclic variations in speed, obtainable from cycloidal cranks. E. H. Schmidt. diags Machine Design 19:108-11+ Mr '47
Dandy roll drive for fine paper manufacture H. D. Johnston. il diags Paper Tr J 125:53-6 Ag 7 '47; Same cond. Paper Ind 29:116+ Ap '47
Donnacona machine and its new electronic amplidyne drive. D. G. P. Sanderson. Pulp & Pa of Can 48:111-13 My '47
Dual fields in d c motor provide simple eight to one speed control. R. W. Moore diags Product Eng 18:166-9 Ag '47
Eddy-current clutches for variable-speed drives. R. L. Jaeschke. il diags Machine Design 19:151-4 Ap '47
Electric control for metalworking machines. J. Van Voast. il diags Am Mach 90:127-30 D 5 '46
Electrical, mechanical and fluid variable speed transmissions. diags Product Eng 18.126-7 O; 128-9 N '47
Electronic amplidyne sectional drive. W A. Messervey. il diag Pulp & Pa of Can 48:108-10 My '47
Electronic frequency meter and speed regulator. E. Levin. il diags Elec Eng 65:Trans 779-86 D '46
Electronic speed control of a.c. commutator motors; abstract E. W Forster and L. C Ludbrook. diag Engineer 184:61-2 Jl 18 '47
Flexible control systems for tandem motor operation J. E. Jones. il diags Product Eng 18:167-72 Jl '47
Fluid drives for the pulp and paper industry. R. D. O'Neil. il diags Pulp & Pa of Can 48.70-4 Ap '47
Graphic method of selecting roller chain drives for multiple speed transmissions. W. Brown Pet Eng 18:156+ N '46
Hydraulic variable-speed transmissions as servomotors. G. C. Newton, jr. bibliog il diags Franklin Inst J 243.439-69 Je '47
Infinitely variable speed gear. il diag Engineer 183:167 F 14 '47
Metropolitan-Vickers electric sectional drive. il diags Engineer 183:448-9 My 23 '47
Nine-speed drilling rig air-operated. J. P. Van Vorst. il Pet Eng 18:184+ N '46
150,000 horsepower applied to aeronautical research, Ames aeronautical laboratory of the National advisory committee for aeronautics J. A White. il diags Elec Eng 65:Trans 833-8 D '46
Philips electronic motor control. il Engineer 184:207 Ag 29 '47
Planetary transmissions L A. Graham. diags Machine Design 18:115-19 N '46
Precise speeds from gear-tooth splitter. J. H Gepfert. il diag Machine Design 19:110-11 Ap '47
Radial piston pump for variable speed transmission; airport cargo trailers. il diag Product Eng 18.94-5 O '47
Sectional paper machine output increased with electronic regulator V B. Baker. il diags Paper Ind 29 987-91+ O '47
Speed control for the air-driven centrifuge. J. W. Beams and others. bibliog diag R Sci Instr 18:57-60 Ja '47
Speed control of d.c. motors. il diag Electrician 138.1458 My 30 '47
Speed gear regulated through variable throw crank il diag Product Eng 18:105 Ag '47
Speed reducer with wabble-gear mechanism A. W. Jansson diags Mach 53.178-80 Jl '47
Speed selector; development of planetary motion. il Mech Eng 68 903 O '46; Same. Steel 119:119 N 18 '46
Spot conversion drives in paper mills. R. Nelson. Paper Tr J 125.53-6 S 11 '47
Tri-Clad motors feature stepless speed adjustment. il Blast F & Steel Pl 35:1268+ O '47
Variable drive provides infinite speed changes at constant torque. il Mach 53:164 Mr '47
Variable-speed constant-frequency alternator. J. W. Crooks, jr. diags Elec Eng 66: 882-4 S '47
Variable-speed drives. diags Factory Management 105:113-24 Ag '47
Variable speed gear unit; Multibelt. il Engineer 184:298-9 S 26 '47, Mech Handling 34: 551-2 O '47
Variable-speed power drive. il diag Engineer 182:423 N 8 '46
Variable-speed press jumps output J. I. Karash. il diag Am Mach 91:112-15 Mr 13 '47
Variable-speed transmission, utilizing a differential and rolling ball system. il diag Machine Design 19:108-9 Je '47
Variable voltage drives for blooming mill tables and feed rolls. Z. W. Whitehouse and A. F. Kenyon. il diags Steel 119:92-4+ D 30 '46
Le variateur continu de vitesse Sadivar. diags Génie Civil 123:315 N 15 '46
Will motor operate below normal speed? diags Power 91:784-6 N '47

SPELLING
Consult authority when in doubt E. N. Teall. Inland Ptr 119:62 Je '47

SPELLING reform
Philosophical essay on language. E. N. Teall. Inland Ptr 118:34-5 Ja '47

SPENDING. See Consumption (economics); Purchasing

SPENCER, John D. 1859-1947
What being a community leader means East Underw 48:3 Ag 1 '47

SPENCER-STRONG, G. H., 1906-
Elected a vice-president of Pemco. bibliog por Am Cer Soc Bul 26:167-8 My 15 '47

SPERRY corporation
Pilotless plane flight points way for Sperry growth; it contributed to controls which flew C-54 to England; acquisitions boost sales. B Ravits Barron's 27.29-30 N 3 '47

SPERTI, inc.
Forms new subsidiary, McKay-Davis, inc.; acquires Faraday electric corp Comm & Fin Chr 166:707 Ag 18 '47

SPHERE gap. See Spark gap

SPHERES
Effective impedance of a sphere in a magnetic field. T. S. E. Thomas. Wireless Eng 23·322-4 D '46
Thin-skinned still; new spherical unit for vacuum distillation Chem Ind 61·34-5 Jl '47

SPHERICAL aberration. See Lenses

SPHERICAL harmonics
Spherical harmonic method as applied to the Milne problem for a sphere. R. E. Marshak. Phys R 71:443-6 Ap 1 '47

SPHERICAL surfaces
Accurate concave spherical seats made in boring mill F. G. Forquer. diags Am Mach 91·107-8 S 25 '47
Special setups turn spherical surfaces, ball and socket sections for self-aligning bearings and pillow blocks. C A. Bloom. il diags Am Mach 91:108-12 Ag 14 '47

SPHEROIDIZING of steel. See Steel—Metallography

SPHYGMOGRAPH
Improved electromagnetic sphygmograph. B. I. Panzer and others. diags Science 106:376 O 17 '47

SPICE trade association, American. See American spice trade association

SPICES
See also
American spice trade association
Clove
Mace
Nutmeg

SPIDERS
Black widow spiders; description, protection against and treatment of bites; data sheet. il Nat Safety N 56.40+ Jl '47

SPIEGEL, inc.
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80·230-1 My 24 '47

SPIEGELEISEN

Prices
Spiegeleisen, 19 to 21%, monthly, 1929-1946, tabulation. Iron Age 159·246 Ja 2 '47

SPILLERS limited
Statement by the chairman at ordinary general meeting M. Robertson. Economist 152: 827-8 My 24 '47

SPILLWAYS
Model study of Brown Canyon debris barrier. K. J. Bermel and R. L. Sanks il map diag Am Soc C E Proc 72:613-28 My '46; Discussion. 72:1401-6 D '46
Speedy repairs save Waco Dam spillway. C. S. Adams. il diag Eng N 138·439-41 Mr 20 '47
Spillway bridge of Shasta dam. il diag Engineering 163:325-7, 336 Ap 25 '47
Spillway energy dissipated on the face of a dam; Loskop and Vaalbank dams in South Africa D. F. Roberts il diags Eng N 137:783-5 D 12 '46

SPINACH
Effect of duration and temperature of blanch on proximate and mineral composition of certain vegetables. A. Kramer and M H. Smith. bibliog Ind & Eng Chem 39.1007-9 Ag '47
Effect of duration and temperature of blanch on vitamin retention by certain vegetables. N. B. Guerrant and others. Ind & Eng Chem 39:1000-7 Ag '47

SPINAL cord
Diagnosis and treatment of spinal cord injuries. J. Martin. Ind Med 16.130+ Mr '47

SPINAL fluid. See Cerebrospinal fluid

SPINELS
Physical properties and cation arrangement of oxides with spinel structures E. J. W. Verwey and others. bibliog J Chem Phys 15:174-87 Ap '47

SPINNERS' cancer. See Cancer

SPINNING
Experimental spinning in Siam by prisoners of war, 1945 G. H. Jolly. Textile Inst J 38.P223-4 Jl '47
Rayon in the spinning of asbestos. H. E. Shearer. Rayon 27 599 N '46
Spinner's task can be set quickly. F H. Gunther and M. Gross il Textile World 97: 108-9 Ap '47
See also
Cotton spinning
Nylon spinning
Rayon spinning
Woolen and worsted spinning

SPINNING machinery
Air injector threads German spinning machine diags Product Eng 17:95 D '46
Effects of accessory influences on ring spinning of cotton and spun rayon. E. Honegger and A. Fehr. bibliog il diags Textile Inst J 38 P353-79; Discussion P379-80 Ag '47
Fixers should know how to set builder F. H Gunther and M Gross. diags Textile World 97·139+ O '47
Influence of rayon staple on preparing and spinning machinery developments H Ashton. il diags Textile Inst J 38·P340-52 Ag '47
Lock back-roll gear to avoid cutting down ends. A. J. Redmond. diag Textile World 97:152+ Je '47
Mile-a-minute traveler must be right. S. Carter. il diags Textile World 97·161+ S '47
Pneumafil pneumatic collector replaces scavenger rolls on spinning frames. il Textile World 97·126 Ap '47
Separating pins prevent shady filling. C. G. Jenkins. diag Textile World 97·156 Ag '47
Spinning machine drafts without rolls. C. W. Bendigo il diag Textile World 97:113+ Mr '47
Spinning of worsted yarns on the American system R J. McConnell. il Rayon 28:135-6, 217-18 Mr-Ap '47; Same. Textile World 97. 110-12 Mr '47
Spinning refinements favored by Alabama mill men; meeting of Alabama textile operating executives Textile World 97:135+ F '47
Traverse-bar extension prevents bunching of yarn il Textile World 97:165 Jl '47

Cleaning
Pneumatic pickers speed spinning-roll cleaning E G Hubbard, jr. il Textile World 96.120-1 N '46

Lubrication
Interim report of the joint advisory committee of the cotton industry; mule spinners' cancer and automatic wiping-down motions. diags Textile Inst J 38·P5-14 Ja '47
Oiling of mule spindles. W. S. Moore. Textile Inst J 38 P1-5 Ja '47

Manufacture
Self-centering reaming fixture for spinning caps R Mawson. diags Mach 53 203-4 Je '47

SPINNING of airplanes. See Airplanes—Spinning

SPIRAL gearing. See Gearing, Spiral

SPIRO compounds
Experiments with Grignard solutions; action of Grignard solutions on thermochromic spiropyrans. A. Schönberg, A. Mustafa and W Asker. Chem Soc J p847-8 Je '47

SPIROCHETES
Isolation of an unidentified spirochete from hen's eggs after inoculation with liver tissue from hens. E. A. Steinhaus and L. E. Hughes. Pub Health Rep 62:309-11 F 28 '47

SPIROCHETICIDES
See also
Arsphenamine

SPIROPENTANE
Hydrogenation of spiropentane. V. A. Slabey. Am Chem Soc J 69·475 F '47

SPITSBERGEN
Spitsbergen; revision of the Spitsbergen (Svalbard) treaty of February 9, 1920. map Economist 152:501-2 Ap 5 '47

SPLEEN
Calcifications in the spleen; occurrence in histoplasmin and tuberculin reactors. R. H. High. bibliog Pub Health Rep 61:1782-6, pl 1 D 6 '46
Origin of monocytes in the spleen. P. Bueno. il Science 106:346 O 10 '47
Spleen extract and tumor growth. G. F. Watson and others. Science 106:348 O 10 '47

SPLICES. See Knots and splices

SPLINES. See Keys and keyways (machinery)

SPLINTERS
Subungual splinter removal. W. W. Weiss. il Ind Med 16:491 O '47

SPLIT-up of stocks. See Stocks—Split-up

SPOILAGE
See also
Food—Spoilage

SPOKANE, Washington

Lighting
Relighting Spokane's streets A. Gruber. il Elec West 99.80-1 S '47

Sanitary affairs
Fifteen-year experience proves efficiency of garbage incinerator. il Eng N 137.666-8 N 14 '46

SPONGE iron. See Iron, Sponge

SPONGE rubber. See Rubber, Sponge

SPONGES
New sponges obtainable now from British Honduras. For Comm W 25:39 N 23 '46
Sponges for export, Tunisia. For Comm W 25 38 N 16 '46

SPONTANEOUS combustion
Spontaneous combustion of hay. J. B. Firth and R E Stuckey. bibliog il diags Soc Chem Ind J 64:13-15; 65:275-7 Ja '45, S '46
Spontaneous development of heat in mixed fertilizers. J O. Hardesty and R. O E. Davis. bibliog Ind & Eng Chem 38:1298-303 D '46

SPORN, Philip
American Gas & Electric elects Sporn president. por Elec World News ed 127:20 My 31 '47

SPORTING goods
Increased use of leather developed from sports interest. M E Wambsganss. il Dom Comm 35:52-5 Je '47
Just for fun, demand for sporting goods. Bsns W p78+ Ag 2 '47
See also
Sportswear

Advertising
Over $500,000 in orders from one $1,500 ad, Wilson sports equipment company. F. M. Wilson. il Ptr Ink 219:43 My 23 '47
Sporting goods makers to bid for consumer brand acceptance in expanded ad drive. W. H. Davis. Ptr Ink 220.86 Jl 11 '47

SPORTS
Brooklyn Union builds summer load in major sports arenas H A Praeger. il Gas Age 100 11-13+ O 16 '47
See also
Skating rinks

Insurance aspects
Athletic accidents. T. E. Hopkins Rough Notes 90 38+ Jl '47
Continental Casualty extends coverage for teams; new policy covers amateur or semi-professional baseball and softball teams. East Underw 48:46 My 30 '47
Insurers shy from team accident on New Jersey schools. Nat Underw 51.20 Je 26 '47
Local athletic teams clue to large accident cases. Nat Underw 51:8 Ja 2 '47
New Jersey bill insuring school athletes passes Assembly. East Underw 48.41 Mr 21 '47
Opportunities in athletics J. W. Sedgwick. Rough Notes 89:18+ N '46
Provident Life & Accident broadens its student athletic coverage. East Underw 48.28 Ag 8 '47

SPORTS buildings. See Recreation buildings; Stadiums

SPORTSWEAR
Play time means big time for sportswear industry M E Poole. il Dom Comm 35:48-54 My '47
Product sold seasonally, advertising follows seasons, McGregor sportswear (David D. Doniger & co). map Ptr Ink 217:52 D 13 '46

SPOT removers. See Stains—Removal

SPOT tests. See Microanalysis

SPOT welding. See Electric welding

SPRAY drying. See Drying; Drying apparatus

SPRAYING apparatus
Blow-gun package; Swift telescoping, refillable paper tube functions as spray gun il Mod Packaging 20.100-3 My '47
Experimental compressed-air plant sprayer. T. Eastwood. Science 104.448 N 8 '46
Metal sprayed with molten porcelain enamel; air pressure blowgun, finishes metal surfaces with molten glass, metals or plastics. il Cer Ind 49:65+ S '47
Moistening moving webs by air sprays. il diags Comp Air Mag 52:45-6 F '47
New-type atomizer for large-scale application of 2,4-D. C. L. Hamner and H. B. Tukey. Science 105:104-5 Ja 24 '47
Principles of pressure spray nozzles. H L M Larcombe. diags Chem Age (Lond) 57. 563-6, 596-8, 621-3 bibliog(p623) O 25-N 8 '47
See also
Schori process

SPRAYING of enamel. See Enamel spraying

SPRAYING of plastics. See Plastic materials—Spraying

SPREADING
Application of spreading measurements on oil tests. N E. M. Hagethorn and F. H. Stieltjes. bibliog Inst Pet J 32 587-97 O '46
Equilibrium spreading coefficient of amphipathic organic liquids on water. E. Heymann and A Yoffe. bibliog diag J Phys Chem 49:239-45 My '45; Discussion. 50:283-4 My '46; [cont as] J Phys & Colloid Chem 51.359-60 Ja '47

SPRINGFIELD, Massachusetts

Water supply
Additions to Springfield's transmission mains. P. C. Karalekas. il N E Water Works Assn J 60 332-43 D '46

SPRINGFIELD, Missouri

Railroads
Frisco to expand rail yards at Springfield, cost $5,000,000 il Manuf Rec 115:46-7+ N '46

SPRINGS (furniture)
Convolute flat springs C. A. Tea. il diags Machine Design 18.109-13 D '46

SPRINGS (mechanism)
Creep in hot valve springs. A. Oreffice and L Locati. diag Metal Prog 51:269-70 F '47
Disk spring or Belleville washer. G. Ashworth. bibliog il diags Inst Mech Eng J & Proc 155 (War emergency issue no 16):93-100 '46
Liquid springing. A. E Bingham. il diags Engineering 164:289-91 S 26 '47; Same cond. Mech Eng 69 1044-5 D '47
Motion of a conical coil spring. I Epstein. diag J Ap Phys 18:368-74 Ap '47
Nonferrous alloy materials for mechanical springs. F P. Zimmerli. il Product Eng 17. 85-7 D '46
Selecting spring materials. F P. Zimmerli. Steel 121 78-9+ Ag 11 '47; Materials & Methods 26:74-9 S '47
Shear stresses in springs. L E. Adams. Engineering 164:280 S 19 '47
Stainless steels for springs. H. C R Carlson. il Product Eng 18.103-6 My; 153-6 Je '47
Surging of valve springs diag Automobile Eng 37 265-70 Jl '47

SPRINGS (mechanism)—*Continued*
Torsion springs ride rails. il Bsns W p56+ Mr 15 '47

See also
Automobiles—Springs and suspension
Car springs
Locomotives—Springs
Motor buses—Springs and suspension
Motor trucks—Springs and suspension
Motor vehicles, Military—Springs and suspension
Watch springs

Design

Application of tables for helical compression and extension spring design. H. F. Ross. A S M E Trans 69:725-34 O '47
Helical spring design tables; engineering data sheet H. F. Ross. Machine Design 19:153-8 Mr '47

Manufacture

Beryllium copper formed parts; advantages of fixture heat-treatment il diags Product Eng 18 118-21 F '47
Crucible Steel expands spring-making plant. il Steel 121:70-1 Jl 7 '47
Precise manufacture, repeated tests minimize service failure of Buick clutch springs. H. Chase. il Steel 120·100-2+ F 24 '47
Reducing embrittlement in electroplating of steel springs C. T. Eakin and H. W. Lownie, jr. bibliog il Iron Age 158·69-72 N 21 '46
Rubber wheel cuts short springs. C. E Lambert. diags Am Mach 91 107 Jl 31 '47
Shortcuts in spring manufacture, William and Harvey Rowland, inc. W. F. Whiteman. il Steel 119·72-4 N 25 '46
Shot peening of springs. A Oreffice. Metal Prog 50.676 O '46, Discussion 52.103 Jl '47

Testing

American steel foundries coil-spring test machine. il Ry Mech Eng 121:120-2 Mr '47
Laboratory testing of rubber torsion springs. D H. Cornell and J. R. Beatty. bibliog il diags Rubber Age 60:679-88 Mr '47; Same abr A S M E Trans 69:799-804 O '47
Will that spring do its job? C. W. Kennedy. il Am Mach 91:102-3 S 25 '47

SPRINKLING systems
Automatic protection. il Nat Safety N 55.148 Mr '47
Automatic sprinkler systems. R. W. Newcomb. Boston Soc C E J 34:93-101 Ap '47
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87 117-20 Jl '47
Exhaust system and curtain of water halts spread of fire gases il Safety Eng 93·20+ Je '47; Nat Safety N 56:44 S '47
Fire fighting with water spray systems. R W. Hendricks. il Safety Eng 93:17+ Ja '47
Fire hazards reduced, protective system prevents smoke and gases from spreading to upper building il diag Heat & Ven 44:114 Je '47
Freezing can handicap fire protection. Nat Safety N 55·37 Ja '47
Nitrogen-filled dry pipe sprinkler systems. il Safety Eng 93:28 Mr '47
Question of the month; fire protection for Christmas tree. il diags Dom Eng 169:112+ Ja '47
Sprinkler systems. A L Brown. il plan Factory Management 105.112-15 My '47
Sprinklers no hazard on molten metal. Nat Safety N 55.82 Je '47
Sprinklers overcome magnesium test fire. Safety Eng 92.77 O '46
We make sure our sprinklers are ready; National cash register company, Dayton E D. Smith. il Factory Management 104:108-9 D '46

SPROCKETS
Projection life of 16-mm film C. F Vilbrandt. il diags Soc Motion Picture Eng J 48·521-42 Je '47
Proposals for 16-mm and 8-mm sprocket standards. J S. Chandler and others bibliog diags Soc Motion Picture Eng J 48: 483-520 Je '47

SPRUCE
Decomposition of methylated sprucewood. F E. Brauns and J. J Yirak. bibliog Paper Tr J 125 55-60 S 18 '47
Elementary composition of lignin in northern pine and black spruce woods, and of the isolated Klason and periodate lignins W. J. Wald, P. F. Ritchie and C. B. Purves bibliog Am Chem Soc J 69:1371-7 Je '47
Extended periods of seedfall of white spruce and balsam fi E. I. Roe, comp. Paper Ind 29·213 My '47
Influence of sodium sulphite and sodium thiosulphate in the sulphate pulping of Engelmann spruce. M. W. Bray and B Singer il Paper Tr J 125 49-53 Ag 21 '47, Excerpts. Paper Ind 29.279-80 My '47
Pulps for shavings obtained in barking spruce; abstract. O. Wurz. Paper Ind 29: 134 Ap '47
Study of the inner bark and cambial zone of black spruce (picea mariana B S P.). E Anderson and W W. Pigman Science 105·601-2 Je 6 '47
Synthetic spruce; spruce lignin has been synthesized from vanillin. Chem Ind 61.612 O '47

SPUR gearing. See Gearing, Spur

SPUTUM
Homogenization of sputum specimens with a paint-conditioning machine. C. E. Woodruff. il Science 105·294-5 Mr 14 '47

SQUALENE
New diffusion pump oil. D A. Sutton. Chem & Ind p22 Ja 11 '47
South African fish products; application of the Fitelson method of squalene determination to some marine oils. M. L. Karnovsky and W. S Rapson. Soc Chem Ind J 66: 124-5 Ap '47

SQUARE (instrument)
Checking squares and angle plates; reference book sheet. E. J. Rychlik. diags Am Mach 91·155 O 9 '47

SQUARE wave generators. See Oscillators

SQUIBB, E. R., and sons
Annual report. Comm & Fin Chr 166·1619 O 20 '47

SQUIRRELS

See also
Ground squirrels

STABILIZATION in industry
Our country's number one economic problem, growth and stabilization. J. D. Gill. Ind Marketing 32·37-8+ Jl '47
What can capital goods industries do for economic stability? G. Terborgh. Comm & Fin Chr 165.3350+ Je 26 '47

See also
Business cycles
Employment—Stability
Production and sales, Coordination of
Seasonal industries

STABLES. See Barns and stables

STADIUMS
Baseball stadium for Caribbean Olympic games il Eng N 137:686 N 21 '46
Gas serves the champion Yanks, too! Gas Age 100:13+ O 16 '47
Stadium roof hung from hollow girder; Seattle's high school memorial stadium. il Concrete 55:7 O '47
Zürich sports stadium. il diags Engineer 183: 239 Mr 21 '47

Lighting

Ball park lighting modernized, Seals stadium in San Francisco. il Elec World 127:122+ My 10 '47
Highlighting the Seals; modernized layout for stadium at San Francisco. il Elec West 98:83 Ap '47
Lighting the Yankee stadium. J. E. Bock and R. J. Swackhamer. il plan Illum Eng 41 737-44; Discussion. 745-8 N '46

STAFF man. See Organization in industry

STAGE lighting
Fluorescent stage lighting. Electrician 137: 1748 D 20 '46

STAGGERED hours
Staggered hours in factories; relaxation of restrictions. Chem Age (Lond) 57 348 S 13 '47

STAGGERED hours—*Continued*
Staggered hours to be rule in Britain in coming winter Iron Age 160 140-1 Jl 17 '47
Staggering hours of work. Engineer 184·19 Jl 4 '47

STAINED glass
Battle of Britain memorial chapel. il Glass Ind 28:518-19 O '47
Principal processes in the making of a stained glass window; abstract. N D'Ascenzo Cer Ind 48.63 Je '47

STAINLESS steel. See Steel, Stainless

STAINS
Removal
Formulation of spot cleaners. I. Reich. il Chem Ind 60:423-4 Mr '47

STAINS and staining (microscopy)
Method for differential staining of mycorrhizal roots. L. W. R. Jackson. bibliog Science 105 291-2 Mr 14 '47
Quantitative estimation of potash and soda feldspars in pegmatite rock by means of chemical coloration; review of selected literature. G A. Munson and E. P. Barrett. bibliog U S Bur Mines Information Circ 7412:1-5 '47
Staining of nerve endings in mouse epidermis by Feulgen's nucleal reaction. C. H. U. Chu. Science 106·70 Jl 18 '47
Warm safranine for plant tissues. S. Shapiro. Science 105:50 Ja 10 '47

STAIRWAYS
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87:117-20 Jl '47
Firesafe stairways; water-curtain and ventilator system act as fire check in sprinklered building. il Arch Rec 102.119+ S '47
Stairs and ramps; safety measures il Nat Safety N 55:96-9 Mr '47
Use tile masonry in stairwells; illustrations. Brick & Clay Rec 109:28 N '46

See also
Steps

STAIRWAYS, Concrete
Adjustable all-steel form for concrete steps. il Eng N 137:809-10 D 12 '46

STALEY, A. E., manufacturing company
Outlook for companies in corn products field. E A. Barnes. Mag of Wall St 80·218, 232 My 24 '47

STAMP collecting. See Postage stamps

STAMP collection floater. See Insurance, Inland marine—Policies—Stamp collection floater

STAMP plan. See Food stamp plan

STAMP tax
Federal stamp taxes W. A. McDonald. J Account 83:320-1 Ap '47

See also
Stock transfer tax

STAMPING
Combined stamping operation. E V. Crane. Steel 121:102+ Ag 25 '47
Forming of aluminium by the drop stamp. Engineering 163.251 Mr 28 '47
Hole piercing and stamping in one operation. E. C. Morse il Materials & Methods 26:80-4 Jl '47
Metal stampings at phenomenal speeds; new type punch press il Steel 121:98+ Jl 14 '47
Metal stampings in small lots at reasonable fabrication cost. M. J. Mikulak. il diags Product Eng 18·105-9 Je '47
New equipment; stamping and forming presses. il Iron Age 159:67-72 F 27 '47
Plastic coating expedites stainless stamping operations. W. A. Phair. il Iron Age 159·47-51 My 15 '47
Practical design of thin-metal stampings W C. Mills. diags Am Mach 91:85-7 O 9, 94-7 O 23 '47
Progress report on branded metal stampings il Sales Management 59·104+ N 1 '47
Six-stage progressive die operation; produces blade sections for multivane centrifugal blower wheels; Morrison products inc. il Steel 120:88-9+ Ap 21 '47
Stamped bushings; National formetal co. D. B. Wilkin. il Steel 119:64-6+ N 25 '46
Successful drawing and redrawing thin-metal stampings. W. C Mills. diags Am Mach 91: 112-16 Je 19 '47
Synchronized stamping and plating; Eaton mfg co. D. Dewey. il Steel 120.94-6 F 3 '47
Threads made by stamping process. il diags Product Eng 18.97 F '47
When parts should be die castings rather than stampings. H. Chase. il Materials & Methods 26:87-91 O '47

STAMPS, Postage. See Postage stamps

STAMPS, Rubber. See Rubber stamps

STAND oils
Standoil; new discoveries on an old process J. Petit. Paint Oil & Chem R 110:14+ S 4 '47

STANDARD costs. See Cost accounting—Standard costs

STANDARD deviation
Best unbiased estimate of population standard deviation based on group ranges F. E. Grubbs and C. L. Weaver. Am Stat Assn J 42 224-41 Je '47
Development in the theory of coal sampling. E. H. M. Badger. Gas J (Lond) 251:34-8 Jl 2 '47
Short cuts to the estimation of standard errors, particularly in microbiological assays. E. C. Wood. Chem & Ind p334-6 Je 14 '47

STANDARD factors corporation
Securities offered. Comm & Fin Chr 165:1323 Mr 10 '47

STANDARD frequency radio stations. See Radio stations, Standard frequency

STANDARD gas and electric company
High asset value for Standard Gas $4 preferred. E. Etherington. Barron's 26.12 N 25 '46
Integration plan. Comm & Fin Chr 166:1412 O 9 '47
Seeks early solution of program; sale of holdings and payment of bank loan, etc. Comm & Fin Chr 165.1635 Mr 24 '47
Standard Gas & Electric plans O. Ely. Pub Util 40.653-4 N 6 '47

STANDARD of living
Business responsibility for better living standards. C Luckman Comm & Fin Chr 164·2465+ N 14 '46
Businessmen, not bureaucrats, responsible for America's high living standard. L. von Mises. Comm & Fin Chr 166·363 Jl 24 '47
Does distribution cost enough? role of distribution in U.S. economy of tomorrow. P. M. Mazur. Fortune 36:138-9+ N '47
Government by index numbers demands better figures from official sources; protests use of Heller budget as standard of living gauge in wage negotiations. J. Backman. Barron's 27·12 S 22 '47
Who lives best? market survey in Christian county, Ill. Bsns W p67-8 O 11 '47
World-wide better living standards is road to peace; address before International management congress, Stockholm W. L Batt Comm & Fin Chr 166:227+ Jl 17 '47; Same Mech Eng 69.836-40 O '47

STANDARD oil company (New Jersey)
Annual report. Comm & Fin Chr 165:2713-14 My 19 '47
Diversified stake in dynamic oil industry. H. L Blackburn. Mag of Wall St 80:92 Ap 26 '47
Jersey Standard and Socony delay buying Aramco stock Nat Pet N 39·12 Mr 19 '47
Lists world-wide construction program. Comm & Fin Chr 166:1155 S 22 '47
Middle East crude agreement. Comm & Fin Chr 165 114 Ja 6 '47
Partial costs of Standard (N.J.) domestic and foreign expansion program are disclosed. Nat Pet N 39:18 S 17 '47
Slight gain likely for Standard Oil of N.J net. Barron's 26·6 N 25 '46
Standard Oil medical departments. Ind Med 16 356-7 Jl '47
Stockholders, 500 strong, at Standard oil co. (N.J.) meeting. G R. McKee, jr Nat Pet N 39 32-3 Je 18 '47

STANDARD oil company of California
Exclusive-dealer contracts target of California antitrust suit. H. D. Ralph. Oil & Gas J 45:39-40 Ja 11 '47

STANDARD oil company of California—*Cont.*
Justice department names 2 oil companies in bus lines antitrust suit; charges oil, tire, truck companies control business in alleged nationwide City bus lines combine. Nat Pet N 39.9-10 Ap 16 '47
More customers for California Esso. Barron's 26:1+ N 25 '46
Social antitrust suit seen forerunner of other actions; with text of the exclusive dealing complaint. Nat Pet N 39.11, 41-3 Ja 8 '47

STANDARD oil development company
Technical committee meeting, 40th, Buck Hill Falls, Pa. Nov 18-20 Chem & Eng N 24 3183 D 10 '46

STANDARD power and light corporation
SEC denies right of corporation to dispose of shares of Standard Gas. Comm & Fin Chr 165:1110 F 24 '47
SEC staff disapproves plan to sell Standard Gas common holdings. Comm & Fin Chr 165:114 Ja 6 '47

STANDARD railway equipment manufacturing company
Stock offered. Comm & Fin Chr 165:2551 My 12 '47

STANDARD register company
Job simplification case histories key and theme for Standard Register G. L. Staudt. il Ind Marketing 31.59+ D '46

STANDARD-THOMSON corporation
Debentures offered Comm & Fin Chr 166:1524 O 13 '47

STANDARDIZATION
Abbreviations standardized for 2,000 terms for use on drawings. W. J. Kunz Ind Stand 18:84-7 Ap '47
Conference board reports on company standards Ind Stand 18 170-2 Jl '47
Economic aspects of standarization; internal wrenching bolt J. F. Cramer. il Ind Stand 18.164-6 Jl '47
Industrial standardisation; abstracts P Good. Engineer 184:368-9 O 17 '47; Elec R (Lond) 141:573 O 17 '47; Electrician 139:1137-8 O 17 '47
Reducing material costs through standardization H. R. Clauser. il Materials & Methods 26.63-7 S '47
Report of central committee on the standardization of oil-field equipment. diags Am Pet Inst Proc 25(4).105-315 '45
Report of central committee on the standardization of oil-field equipment. diags Am Pet Inst Proc 26(4):168-367 '46
Standardization accelerates turbine output; Fitchburg plant of General electric co. il Steel 121:80-1 S 8 '47
Standardization, national and international. P. G. Agnew. Ind Stand 17 299-301 D '46
Standardization offers great possibilities in reducing packaging and container cost. J. A. Warren. Chem & Eng N 25:1226 Ap 28 '47
Standards are studied as means of reducing costs in buyers' market. Iron Age 160.116 Jl 3 '47
Steel truck body members standardized for mass production. N. E Cole. il plans Steel 120 96-9+ My 5 '47
Third step. D Armstrong. Power Pl Eng 51:67+ Jl '47
Value of standards in planning for the future. J. Gaillard. il Ind Stand 18:237-41 O '47
Wartime technical work being salvaged for peacetime use. L. F. Adams. il Ind Stand 18:11-14 Ja '47
What the consumer wants in standardization. C W. Moffett. Ind Stand 18:6-8+ Ja '47

See also
Preferred numbers
Standards
also American standards association; United States—Standards, National bureau of

Study and teaching
Columbia university starts course in standardization. Ind Stand 18.56 Mr '47

STANDARDS
How TVA buys with standards. H B. Hendrix il Ind Stand 18:109-11 My '47
Industry's common language. Bsns W p52+ F 8 '47
New service in the public interest; a standard for certification procedures B. L. Oser. il Ind Stand 18.160-3 Jl '47; Same cond. Am Gas Assn Mo 29:385+ S '47
Product quality specifications. F E. Powell. Am Cer Soc Bul 26:181-3 Je 15 '47
Selling made effective with quality standards F. W Reynolds Dom Comm 35:15-18 F '47
Standard samples issued or in preparation by the National bureau of standards. U S Nat Bur Stand Circ C398 Sup:1-20 '46
Standards and free enterprise. E. Freedman. Ind Stand 18:9 Ja '47
Standards for selling. F W Reynolds. Paint Oil & Chem R 110:27-9 F 6 '47
Standards in governmental buying. C E. Mack Ind Stand 17:303-7 D '46
Value of standards in planning for the future. J Gaillard. il Ind Stand 18 237-41 O '47
Voluntary standards adopted by the trade. F W. Reynolds. Dom Comm 34:3-6 N '46

See also
Cost accounting—Standard costs
Electric standards
Preferred numbers
Production standards
Products, Certification of
Quality of products
Safety standards
Textile standards
Time study
Weights and measures
also subdivision Standards under various subjects, e.g.
Air navigation
Building
Color
Cutting tools
Employment management
Furniture
Hydrocarbons
Machinery
Oil containers
Roads
Tubes, Steel
Valves
Water meters
also Indian standards institution; United States—Standards, National bureau of

Bibliography
Actions on commercial standards and simplified practice recommendations Ind Stand 18:115+, 186, 230-1, 260-1 My, Jl, S-O '47
ASA standards activities, standards approved or being considered. Published in monthly issues of Industrial standardization
American standards with price list and index. Ind Stand 18:1-24 pt 2 Ag '47
New standards from other countries (cont). Ind Stand 17.290, 319; 18:70, 97, 127, 155-6, 204-5, 229, 258 N-D '46, Mr-Je, Ag-O '47
New standards in ASA library (cont) Ind Stand 17:291-2; 18:71-2, 99-100 N '46, Mr-Ap '47

Australia
Standards, labels used to protect quality of Australian furniture. Ind Stand 18:200 Ag '47

China
China's new standards program D Reck. Ind Stand 18 124-6 My '46

France
French adopt standard paper sizes. il Ind Stand 18:201-3 Ag '47
Standards in France. P. Salmon Ind Stand 17 316-17 D '46

Great Britain
British retail association again takes up standards. R Diplock. Ind Stand 18:181-2 Jl '47
Commonwealth conference studies uniform standards. Ind Stand 17.317 D '46

India
Indian standards institution to be established For Comm W 26:14 Ja 18 '47
Standards for India. Bsns W p106 N 9 '46

Latin America
Standards in Latin America. E C. Crittenden. For Comm W 27:14+ Ap 12 '47
Standards in Latin America. E. A. Pratt Ind Stand 17:289 N '46

Russia
Russian standards program. il Ind Stand 18:152-4 Je '47

STANDARDS, Engineering
For planning plant layout; standards for templates and three-dimensional models being developed. R. W. Mallick and R. Rimbach il diags Ind Stand 18:48-50 Mr '47

STANDARDS, Engineering—*Continued*

Importance of standardizing specifications for engineering materials B. Melnitsky. Steel 121:106+ O 20 '47

Reflections on standard specifications for structural design. A. M Freudenthal. Am Soc C E Proc 73 103-21 F '47; Discussion. 73 941-3 Je '47

Why the metric system? A Black. Aero Digest 54 151+ Ja '47; Reply (Why not a decimal system?) C. L. Bates 54 32 My '47

See also

Electric standards
Standardization
Weights and measures
also subdivision Standards under various subjects, e g
Building
Electric distribution
Electric equipment
Electric motors
Gearing
Lighting
Machinery
Screw threads
also United States—Standards, National bureau of

STANDARDS, International

ASA is first body to join international organization. Ind Stand 18:21-2 Ja '47

Facets of international standardization studied at all-day conference; summer meeting, AIEE. Elec Eng 66·812-15 Ag '47

How international electrical standards work is done by the International electrotechnical commission. Ind Stand 18:196-7 Ag '47

Interchangeability of large machine parts; work of International standards commission N N. Sawin. diags Am Mach 91:88-91 Ja 2 '47

International conference on unification of engineering standards under the auspices of the combined WPB Production resources board J J Dunn. Am Pet Inst Proc 25(4): 115-17 '45

International motion picture standards. D. E. Hyndman Soc Motion Picture Eng J 48: 126-8 F '47

International pipe-thread standards; is it a possibility? W O Clinedinst. diag Am Pet Inst Proc 25(4)·112-15 '45

International standards theme of staff executives' conference C. B LePage. Ind Stand 18·44-5 F '47

Standardization, national and international. P. G Agnew. Ind Stand 17:299-301 D '46

Standards can strengthen Pan-American trade relations. E. C. Crittenden. il For Comm W 27:13-14+ Ap 12 '47

Unification of screw threads; 1945 conferences in London, Manchester, and Birmingham; 1946 special meeting in London il diags Inst Mech Eng J & Proc 155 (War emergency issue no 18):145-200; Discussion. 161-92 '46

See also International organization for standardization

STANDARDS, National bureau of. See United States—Standards, National bureau of

STANDARDS association, American. See American standards association

STANDPIPES

Progress report of the committee on cathodic protection of steel tanks and standpipes. N E Water Works Assn J 61:97-104 Mr '47

STANFORD research institute

First industrial research institute in the West, founded Nov 1946 Chem & Eng N 25 2843 S 29 '47

STANFORD university

National rubber research Science 104:622 D 27 '46

Hopkins transportation library

West-coast transportation library. M. C. Oathout and J. M. Hitchcock. Special Lib 38·77-80 Mr '47

STANLEY, Wendell Meredith, 1904-

American chemists awarded Nobel prizes at Stockholm. por(cover) Chem & Eng N 25: 300-1 F 3 '47

Portrait. Science 104·cover N 22 '46

Willard Gibbs medal to Wendell M. Stanley. por Chem & Eng N 25 1726-7 Je 16 '47

STANLEY home products, inc.

Nice, friendly time; Hostess party plan Fortune 36.144+ N '47

STAPHYLOCOCCI

Inactivation of staphylocoagulase by trypsin and pensin B. S Walker and others. Science 106:347 O 10 '47

Influence of organic solvents on the bactericidal action of the phenols. E. A. Cooper. bibliog Soc Chem Ind J 64:51-3; 66:48-50 F '45, F '47

NAIDM-USDA report on quaternary ammonium testing, E typhosa and S aureus in various cultures. L S. Stuart Soap & San Chem 23.135+ S '47

Staphylococcus food poisoning still a serious problem. G. M. Dack. Food Ind 18 1868-9+ D '46

STAPLE fibers, Rayon. See Rayon fibers

STARCH

Calorimetric measurements of heats of hydration of starches. W G. Schrenk, A. C. Andrews and H H. King. bibliog diag Ind & Eng Chem 39·113-16 Ja '47

Configuration of starch in the starch-iodine complex, Fourier projections from X-ray diagrams R E Rundle bibliog il Am Chem Soc J 69.1769-72 Jl '47

Crystalline derivatives of 6-α-D-glucopyranosido-β-D-glucose from starch. E. M Montgomery, F. B. Weakley and G E. Hilbert. Am Chem Soc J 69·2249-50 S '47

Effect of urea resins on starch clay coating compositions P. S Hewett and others. il Paper Tr J 124·45-50 Je 12 '47

Improved preparation of allyl starch. Chem & Eng N 25:1138 Ap 21 '47

Liquid starch Chem Ind 61·613 O '47

New consistometer for starch pastes and some results obtained with it. R S. Higginbotham. bibliog il diags Textile Inst J 38 T131-50 Mr '47

Ohio TAPPI discusses starch. Paper Tr J 124:100+ F 27 '47

Preparing thick boiling starch. Am Dyestuff Rep 35:718 D 30 '46

Properties of allyl starch coatings and films; abstract. T. J. Dietz, J. E Hansen and M E. Gallagher. Chem Eng 54·254+ Je '47

La récente industrie de l'amidon adhésif aux États-Unis. Génie Civil 124·16-17 Ja 1 '47

Replacement of starch in the finishing of textile fibers and fabrics. il Am Dyestuff Rep 36.166-74 Ap 7 '47

Starch. W. N. Hawroth. il Chem Soc J p543-9 Je '46; Abstract. Soc Dyers & Col J 62: 320 O '46

Starch esters; patent Am Dyestuff Rep 36: 337 Je 16 '47

Starch, homogenized dispersions; patent. P. Wengraf. Am Dyestuff Rep 36.512 S 8 '47

Starch prevents scaling in Navy's evaporators C. J. Lamb. Chem Ind 60:411 Mr '47

Starch size, containing hexamethylene tetramine; U.S. patent. Am Dyestuff Rep 36: 418 Jl 28 '47

Starches and starch fractions. L. H. Lampitt and others. bibliog Soc Chem Ind J 66.68-73, 117-21, 142-7 Mr-My '47

Troublesome drilling problems solved by special muds. G. R. Gray. il Oil & Gas J 46: 142+ My 31 '47

Ultracentrifugal and viscometric studies of amylose acetates; further evidence for the helical structure of amylose. B. A. Dombrow and C. O. Beckmann. bibliog J Phys & Colloid Chem 51:107-17 Ja '47

Vulcanized starch. Chem & Eng N 25 928 Mr 31 '47

Vulcanized starches. Sci Am 176·271-2 Je '47

Wheat starch process; patent. Food Ind 19: 997 Jl '47

See also

Amyloses
Cornstarch

Analysis

Starches and starch fractions. L H. Lampitt and others bibliog Soc Chem Ind J 66:68-73, 117-21, 142-7 Mr-My '47

Manufacture

Starch dervish; centrifugal separation for starch production; Merco system. il Chem Ind 61.378-9 S '47

Testing

Applications of starch viscosity to the paper industry; new viscometer developed. W. G. Bechtel and C. C. Kesler. bibliog il Paper Tr J 125.35-9 O 16 '47

STARCH—Testing—*Continued*
Improved method for measurement of gel strength and data on starch gels. W. J. Hamer. bibliog diag J Res Nat Bur Stand 39.29-37 Jl '47
Recording viscometer for starches; corn industries viscometer. C. C. Kesler and W. G. Bechtel. bibliog il diag Anal Chem 19: 16-21 Ja '47

STARK effect
Determination of nuclear spin from the Stark effect of microwave rotational spectra. W. V. Smith. Phys R 71:126-7 Ja 15 '47
First-order Stark effect in the microwave spectrum of methyl alcohol. B. P. Dailey. Phys R 72:84-5 Jl 1 '47
Hyperfine structure and the stark effect of the ammonia inversion spectrum. J. M Jauch. bibliog Phys R 72:715-23 O 15 '47
Microwave spectrograph. R. H. Hughes and E. B. Wilson, jr. Phys R 71·562-3 Ap 15 '47
Stark and Zeeman effects in the inversion spectrum of ammonia. D. K. Coles and W. E. Good. Phys R 70:979 D 1 '46

STARS
Magnetism and angular momentum. Elec Eng 66·906 S '47
Stellar electromagnetic fields L. Davis, jr. bibliog Phys R 72:632-3 O 1 '47
Studies of the stellar system at Yerkes observatory. G. P. Kuiper and W. W. Morgan. Science 106:201-2 S 5 '47

Spectra
Spectral recorder developed at Northwestern university Mech Eng 69:312-13 Ap '47
Spectroscopic laboratory at Yerkes observatory. G. Herzberg. Science 106:215-16 S 5 '47
Stellar spectroscopy at Yerkes observatory. O. Struve Science 106 204-12 S 5 '47
Use of echelette gratings in high orders R. W. Wood. il Opt Soc Am J 37:733-7 O '47

STARS, Double
Antares (α scorpii). O. Struve. Science 106: 149-50 Ag 15 '47

STASSEN, Harold Edward, 1907-
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47
Strength and weaknesses of Stassen as candidate analyzed in nationwide poll. Iron Age 159:109+ Ja 9 '47
Transcript of talk with Stalin. por Comm & Fin Chr 165:2479+ My 8 '47

STATE advertising
Cities and states, led by Florida, intensify advertising for tourists and industries. Ptr Ink 218.76 Ja 3 '47
How to sell a state via New York office; New York city office of state of Mississippi. Sales Management 59:94 Jl 15 '47
Oregon invites the tourist, and bones up on how to sell him. L. Newkirk. il Sales Management 58·40-2 My 20 '47
Other states eye North Carolina's success in state-wide good health campaign. Ptr Ink 219.90 My 9 '47
Rifle shot appeal to specific markets; Louisiana slants its advertising to each type of desired industry. Sales Management 58:117 Je 1 '47
Winter resort promotion; Maine publicity bureau, Portland. Sales Management 58:57 F 15 '47

STATE banks. See Banks and banking, State

STATE bonds
State and city department bond proposals and negotiations. Published in weekly Monday numbers of Commercial and financial chronicle

STATE buildings
Proposed state office center for Michigan. il plans diags Arch Forum 86:79-87 F '47

STATE employees
Pay inducement; Michigan state dept. incentive-pay plan. Bsns W p45 O·25 '47

STATE finance
Comparison of costs of government in Minnesota and six neighboring states. (State governmental research bul. 19) 64p Minnesota inst. of governmental research, 702 Empire bank bldg, St Paul 1 '47
Municipals, the coming flood; borrowing by states. Bsns W p60+ Mr 1 '47
Possible improvements in the operation of state government; ten year analysis of state expenditures [in Minnesota]. (State governmental research bul. 20) 66p Minnesota inst. of governmental research, 702 Empire bank bldg, St Paul 1 '47
State government finances. Nat City Bank p21-3 F '47
See also State subdivisions under heading Finance, e.g. Finance—Minnesota

Bibliography
State and local finance and taxation; a bibliography of materials published, 1941-1946. D. C. Tompkins, comp. (Postwar bibliographies no. 2) 98p pa $1.50 Univ. of Calif. Bur. of public administration, Berkeley '46

Federal aid
Question before the House. J. Bingham. Comm & Fin Chr 165.126+ Ja 9 '47

STATE governments
See also
Highway departments
Public utilities commissions
State laws

Federal relations
Supreme court rules state board cannot rule on labor disputes covered by NLRH; New York Board's order for recognition by steel companies of foremen's unions. Comm & Fin Chr 165:2114 Ap 17 '47
See also
Federal power commission
Roads—Federal aid
State finance—Federal aid

STATE hospitals. See Hospitals, State

STATE insurance. See Insurance, State

STATE laws
Blue Sky law developments. J. F. Merkel. Comm & Fin Chr 166:1320+ O 2 '47
General regulatory laws; with particular application to health and accident business; tabulation by states. C. C. Frazier. Spectator (Property ed) 12.9 N 14 '46
Is a uniform statute on insurable interest desirable? R. H. Hollenberg. Weekly Underw 157.127-9 Jl 12 '47
Laws can reduce stop payment work. Bankers Mo 64.311-13 Jl '47
Legislation affecting trusts and estates; A.B.A. committee report. Trusts & Estates 85:335-42 O '47
Legislation affecting trusts and estates; A.B.A. committee report for 1946. Trusts & Estates 83:516-18 N '46
Legislation on hospital surveys, construction, and licensing enacted by state legislatures in 1945 and 1946 (as of November 15, 1946). Pub Health Rep 62:54-66 Ja 10 '47
1947 occupational disease legislation. T. C. Waters. Weekly Underw 157:228-30+ Jl 26 '47
On the legislative front; recent legislation affecting fiduciaries Trusts & Estates 84: 344, 459-60, 554-6, 645-6; 85.85, 160-2, 256 Mr-S '47
Patchwork of state laws taxing banks. P. Nichols Banking 39:30+ F '47
Problems of the conflict of laws in relation to binding receipts. P. B. McHaney. Weekly Underw 156:1655-7+, 1701-3 Je 14-21 '47
Progress of state minimum-wage legislation, 1946 A Angus and L. Sullivan. Mo Labor R 64:1040-51 Je '47
Recent revenue bond legislation. L N. Thompson. Am Water Works Assn J 39: 1032-7 O '47
Regulation of labor organizations by the states. T. J. Anderson, jr. Comm & Fin Chr 165:2597+ My 15 '47
Special obligation of utility labor; A.B.A. report on public utility labor legislation; with chart showing state labor statutes. Pub Util 40.591-5 O 23 '47
State court actions; decisions on federal tax liability of parties to state proceedings. C. Fairman. bibliog J Account 83:150-1 F '47
State labor legislation in 1946. A. Acee. Mo Labor R 63:754-62 N '46
State labor legislation in 1947. A. Acee. Mo Labor R 65.277-84 S '47
State workmen's compensation legislation in 1947. A. Acee. Mo Labor R 65:415-18 O '47

STATE laws—*Continued*
States lead in legislation. Bsns W p90+ Je 14 '47
Summary of state legislation during the 1946-1947 season affecting accountants J A. Phillips. J Account 84:131-7 Ag '47

See also
Taxation, State

STATE legislatures
Legislative sessions in 1947. Mo Labor R 63: 763-4 N '46

STATE publications

Bibliography
State publications for market research; industrial directories. R L. Vormelker. il Chem Ind 60 794-6; 61:235-6 My, Ag '47

STATE rights
New York challenges SEC authority on utilities; jurisdiction at stake in Kings County Lighting recap controversy. E. R. Abrams. Barron's 27·19 My 12 '47

See also
Federal power commission
Insurance companies—Regulation

STATE taxation. See Taxation, State

STATEN ISLAND Edison corporation
New York court of appeal upsets State commission's rate-making system. Comm & Fin Chr 165·3060 Je 9 '47

STATEN ISLAND ferry terminal. See Ferry terminals

STATEROOMS. See Ships—Staterooms

STATEX K process. See Carbon black—Manufacture

STATIC. See Radio communication—Interference

STATIC electricity. See Electricity, Static

STATICS

See also
Dynamics
Elasticity
Electrostatics
Graphic statics
Hydrostatics
Strains and stresses

STATIONARY engineers. See Steam engineers

STATIONERY
Period labels; Eaton links stationery boxes to women's tastes in home decor. il Mod Packaging 20:124+ Ag '47
Stationery production designed for business and social use. W L Neubrech. il Dom Comm 35:46-51 S '47

See also
Envelopes
Letterheads

STATISTICAL mechanics
Adsorption of hydrogen on tungsten powders. G. Halsey and H. S. Taylor J Chem Phys 15.624-30 S '47
Integral equations between distribution functions of molecules. J. E. Mayer. J Chem Phys 15·187-201 Ap '47
Statistical mechanical theory of transport processes; transport in gases. J. G. Kirkwood. J Chem Phys 15:72-6 Ja '47; Correction 15:155 Mr '47
Statistical mechanics of binary mixtures. A. R Miller. bibliog J Chem Phys 15:513-17 Jl '47

STATISTICAL methods
Accuracy of government statistics. G H. Moore. Harvard Bsns R 25 no 3:306-17 [Ap] '47
Application of statistical methods in industry. W. T. Rogers. Steel 120:82 Ja 20 '47
Application of statistical methods to food problems; abstracts and discussion D. J. Finney and others. Chem & Ind p43 Ja 18 '47
Applying control chart methods to taste testing. S. Marcuse. bibliog il Food Ind 19: 316-18 Mr '47
Charts help diagnose quality progress. E. Goddess. Am Mach 91 96-100 Je 5 '47
Common-sense quality control. E. L Fay. il Am Mach 91:76-8 S 25; 110-13 O 9 '47
Cost-utility as a measure of the efficiency of a test. J. Berkson. bibliog Am Stat Assn J 42:246-55 Je '47
Descriptive and sampling statistics. J. G. Peatman. 577p bibliog(p506) $4 50 Harper & bros, 49 E. 33d st, New York 16 '47
Diversity reception; statistical evaluation of possible gain. Z. Jelonek and others. diags Wireless Eng 24:54-62 F '47
Empirical approach to economic intelligence in World war II; analyzing markings and serial numbers obtained from captured German equipment. R Ruggles and H. Brodie Am Stat Assn J 42:72-91 Mr '47
Engineering and quality control. P. L. Alger. Elec Eng 66.16-19 Ja '47
Examination of industrial measurements. J. W. Dudley, jr 113p $2 McGraw-Hill book co, 330 W. 42d st, New York 18 '46
Factors affecting basic open-hearth operating rates. R. H Ede. Steel 121.94+ S 8 '47
How statistical quality control is being applied at Timken-Detroit plant. il Automotive Ind 97·29+ O 1 '47
How to increase tolerances and obtain closer fits. E. E. Bates. il diags Iron Age 160:58-61 Jl 3 '47
How to use statistical methods in quality control. R J. Davis. Chem Eng 53:115-17 D '46
Introduction to business statistics. J R Stockton. 2d ed rev 478p $4 D. C. Heath and co, 285 Columbus av, Boston 16 '47
Introduction to industrial statistics and quality control. P. Peach 2d ed 235p $5 Edwards and Broughton co, 214 S. Salisbury st, Raleigh, N.C. '47; Review, by L. C. Young. Mech Eng 69:843-4 O '47
Measurement of advertising results. H. V. Roberts. J Bsns 20.131-45 Jl '47
Measurement without theory, review of Measuring business cycles, by A F. Burns and W. C. Mitchell. T. C. Koopmans. R Econ Stat 29:161-72 Ag '47
Method for evaluating and reporting product quality. J. B Catlin and J. G. Strieby. Paper Tr J 124.57-60 Ap 10 '47
Method of evaluating the unbeaten strength of unbleached chemical wood pulp. N. S. Grant and others Pulp & Pa of Can (Convention no) 48:151-8 [F] '47; Same cond. Paper Ind 29.725-7 Ag '47
Methods of measuring the marginal propensity to consume. T. Haavelmo. Am Stat Assn J 42.104-22 Mr '47
Molecular size distribution in three dimensional polymers; post-gelation relationships. P. J. Flory. bibliog Am Chem Soc J 69: 30-5 Ja '47
Physical chemistry of lubricating oils; statistical analysis A. Bondi bibliog Pet Refiner 26·126-34 Mr '47
Practical application of statistical methods in a quality control program. W. T. Rogers bibliog Am Soc for Metals Trans 36·361-82 '46, Same cond. Steel 118.119-20 F 11 '46; Same. Blast F & Steel Pl 34:233-5 F '46; Abstract Chem & Met Eng 53.274+ Ap '46; Discussion. Am Soc for Metals Trans 36: 382-8 '46
Quality control aids supervisors. D. T. Armstrong. bibliog il Am Mach 91:101-5 F 13, 96-100 F 27; 133-6 Mr 13; 104-7 Mr 27 '47
Quality control for the pulp and paper industry. C. A. Bicking. bibliog Paper Tr J 124·63-7 Ap 24 '47
Rapid measurement of an index of fibre length. R de Montigny and P. Zborowski diag Pulp & Pa of Can (Convention no) 47: 99-112, 115, 294 [F] '46; Same. Paper Tr J 123 42-8 N 7; 29-34 N 28 '46; Same cond. Paper Ind 28·882+ S '46
Relation of control charts to analysis of variance and chi-square tests. H. Scheffé Am Stat Assn J 42.425-31 S '47
Safety of structures A. M. Freudenthal. bibliog Am Soc C E Proc 71·1157-91 O '45; Discussion. 72:251-5, 885-8; 73:208-18 F, Je '46, F '47
Say it with figures. H. Zeisel. 250p $3 Harper & bros. 49 E. 33d st, New York 16 '47
Service continuity standards aid economical distribution planning W. J. Lyman. Edison Elec Inst Bul 15:325-9+ S '47
Statistical and quality control methods in industrial chemistry; second Westman memorial lecture. A. E R. Westman. bibliog diags Can Chem & Process Ind 31:716-25+ Ag '47
Statistical control cuts scrap cost 88 percent; Federal products corporation, Providence C. W. Kennedy. il Factory Management 104: 102-5 N '46

STATISTICAL methods—*Continued*
Statistical control of accidents. J. M. Howell and L. Johnson. Iron Age 158:56-9 Jl 18 '46; Same. Ind Stand 18:116-19 My '47
Statistical methods applied to the inspection of porcelain enamel. L. S Kauffman. Cer Ind 49:61-2 Ag '47
Statistical methods simplify evaluation of data; predicting sunspot activity; probability of aircraft collisions. Electronics 20:194+ N '47
Statistical survey of some hardened steel forgings. R. F. Mather. il Metal Prog 51:79-85 Ja '47
Statistics of exploratory drilling W. J. Dixon and R. M. Swesnik. bibliog Am Assn Pet Geologists Bul 30:2035-9 D '46
Synthesizing cooking load. G. O. McLean. Elec R (Lond) 139:773-6 N 15 '46
Transverse shrinkage of welds; statistical study. F. Campus diags Welding J 26: sup485-8 Ag '47
Use of the angular transformation in biological assays L. F Knudsen and J. M. Curtis. bibliog Am Stat Assn J 42.282-96 Je '47

See also
Business forecasting
Correlation (statistics)
Frequency distribution (statistics)
Graphic methods
Index numbers (economics)
Least squares
Probabilities
Punched card system
Sampling (statistical methods)
Seasonal variation (statistics)
Significant difference (statistics)
Standard deviation
Variation (statistics)

Bibliography
Statistical methodology index. O. K Buros, ed Am Stat Assn J 42.203-8 Mr '47 [cont quarterly]

Study and teaching
Personnel and training problems created by recent growth of applied statistics in United States. Science 106:391-2 O 24 '47
Teaching of statistics for quality control. L. A Knowler. J Eng Educ 37.709-13 My '47
Training in statistical methods needed; abstract. S. S. Wilks. Chem Eng 54:266+ Je '47

STATISTICIANS
Bargains in brains, job market at meetings of learned societies. Bsns W p24+ F 1 '47
Need for statisticians. J. D. Paris. Comm & Fin Chr 165.610 Ja 30 '47
Personnel and training problems created by recent growth of applied statistics in United States. Science 106:391-2 O 24 '47

See also
Ayres, Leonard
Porter

STATISTICS
Statistical program of the Census bureau. P. M. Hauser. Am Stat Assn J 42.24-30 Mr '47

See also
Business statistics
Commercial statistics
Correlation (statistics)
Economic statistics
Financial statistics
Government statistics
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Industrial statistics
Market statistics
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Sampling (statistical methods)
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Variation (statistics)

also subdivision Statistics under various subjects, e g.
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Rubber industry and trade
Wages

also Canada—Statistics; Great Britain—Statistics; United States—Statistics

STATISTICS, Government. See Government statistics

STATISTICS, International
See also United nations—Statistical commission

STATUES
See also
Bronzes

STATUTE of limitations. See Limitation of actions

STAYBOLTS
Staybolt application and maintenance, report of Master boiler makers' assn. Ry Mech Eng 121:574-6 O '47

STEADYRESTS
Special steadyrest holds small cylindrical work A. D. Nixon. diag Am Mach 91.143 F 13 '47
Wire loop and proper oil improves steadyrests. E D. Clark. diag Am Mach 91.142 F 13 '47

STEAM
Conveyor steamer speeds preparation of cotton goods C. N Rabold. il diag Textile World 97:104+ Jl '47
Corrosion of plant equipment by steam and water. R C. Ulmer. il Power Pl Eng 50:72-5+ O; 90-2 N '46; 51:108-9+ Ja '47
Dryness fraction of steam; abstract. H Bannister. Gas J (Lond) 249:381 F 12 '47
Equation of state for a system with a single type of transformation. J. L. Finck. Franklin Inst J 243.117-29 F '47
Flexible pipe joint employs steam for packing to reduce failures; patent. diag Pet Processing 1:188+ N '46
Generation and utilization of steam in the heavy industries. G. E. Hider Inst Mech Eng J & Proc 155 (War emergency issue no22):376-84, Discussion. 385-6 '46
How boiler-water impurities can measure steam quality, chart. F. M. Gior. Power 91:427 Je '47
Kinetics of the reactions of steam and carbon dioxide with carbon. W. K. Lewis. Chem & Eng N 25:2815-18 S 29 '47
Plant-process heat used to generate steam. R. B. Tuttle il diag Oil & Gas J 45:73-4 Mr 8 '47
Production of synthesis gas by reacting light hydrocarbons with steam and carbon dioxide. R. E. Reitmeier and others. Pet Processing 2:732-3 O '47
Quick determination of steam moisture with a throttling calorimeter; chart; data sheet. Power 91:281 Ap '47
Some case histories of corrosion problems in chemical process equipment; effect of carbon dioxide in steam. W. Z. Friend and F. L La Que. Am Inst Chem Eng Trans 42:854-7 O-D '46; Same. Pet Eng (Ref annual) 18:214+ Jl 1 '47
Steam clean before overhauls cuts lay-up time by one-third, with cost data. A. E. Moore. il Roads & Sts 90:88+ Je '47
Steam demand for dyeing. W. Goldstern. il diags Soc Dyers & Col J 62:301-7 O '46
Steam injection method of introducing dyes to dye kettles. diag Rayon 28:53 Ja '47
Steam-making fundamentals. diags Power 90: 806-13 D '46
Thermodynamic properties of water substance 0° to 150°C. F. G. Keyes. bibliog J Chem Phys 15:602-12 Ag '47

See also
Boilers
Condensers (steam)
Electric plants (central stations)—Steam distribution
Evaporators
Exhaust steam
Feed water purification
Steam engines and other heading beginning Steam

Cost
Cost of steam varies according to type of boiler unit used in steam production. C. O. Brown diag Ind & Eng Chem 39:69A-70A Ap '47
Steam accounting. R. W. Arentson. N A C A Bul 28:1149-54 My 15 '47

Tables, calculations, etc.
Graphical determination of heat transfer film coefficient for steam. B. F. Raber and F. W. Hutchinson. Heat & Ven 43:94-6 D '46
Meaning of entropy and how to use the Mollier chart. J. Yavitch. diags Power Pl Eng 50:102-5 D '46

STEAM—Tables, calculations, etc —*Continued*
Practical applications of the Mollier diagram. W. Heidecker flow diag diags Power Pl Eng 51:88-90 Jl; 94 Ag; 88-9, 100 S; 90-1 O; 94-5 N '47
Steam consumption of pumping, charts. W. L. Nelson. Oil & Gas J 46 273 My 31, 131 Je 14 '47

See also
Steam flow

STEAM-air jets. See Air ejectors

STEAM automobiles. See Automobiles, Steam

STEAM boilers. See Boilers

STEAM cooking
H-P condensate return improves output of preserves at Colonial preserves, Buffalo flow sheet il Food Ind 19.630-1 My '47
It peels, blanches, cooks, fruits and vegetables processed in small batches. E S. Stateler. il diag Food Ind 19 1053-5 Ag '47

See also
Pressure cookers

STEAM distribution
Bellefield boiler plant continues expansion. R D. Spellman. il plan diags Power Pl Eng 51:112-14+ My '47

See also
Electric plants (central stations)—Steam distribution

STEAM ejectors. See Steam jets

STEAM engineering

See also
Boilers
Electric plants (central stations)—Steam distribution
Feed water
Marine engineering
Power (mechanics)
Power plants
Steam engines and other headings beginning Steam
Steamboats
Thermodynamics

STEAM engineers
Making of a stationary engineer. E. Pagett. Power Pl Eng 51.90-2 F '47

STEAM engines
Corliss engine that was bushed. W. S. White. Power Pl Eng 51:86-7 S '47
Flexibility of steam engines well suited to drilling. J. Zaba. Oil & Gas J 46:121 S 13 '47
Maximum inertia force and maximum speed of the crosshead in reciprocating engines. W. D. Kimball Franklin Inst J 242:309-24 O '46

See also
Automobiles, Steam
Locomotives
Steam turbines

History

Early steam engines in America. T Coulson il Franklin Inst J 243.219-33 Mr '47
Preserve the Cornish pump, Cornish engines preservation society. J. T. Kemp. il Min & Met 28·509-11+ O '47
Preserving the Cornish engine. J. T. Kemp il(p362) diag Mech Eng 69:365-9 My '47
Stationary steam engine in 1847. Engineering 163.480 Je 6 '47

Lubrication

How to care for engine and fan bearings and cylinders. J. G. Cronin. Heating-Piping 18: 90 D '46
Oil-line change corrects lube trouble. C. R. Robinson. diags Power 91.45 Ja '47
Specifications; steam refined stock. Oil & Gas J 45:67 Ja 4 '47

Valves

Practical lesson in Corliss valve setting G. Holman. il diags Power Pl Eng 51.88-90 Je '47

STEAM flow
Pulsating steam flow; your key to faster heat flow and more production. P. Harrison. Paper Ind 28:1648-9 F '47
Steam flow in nozzles; velocity coefficient at low steam speeds E. Giffen and T. F Crang. diags Inst Mech Eng J & Proc 155 (War emergency issue no 15):83-9 '46; Same. Engineer 180.273-4, 293-4 O 5-12 '45; Abstract. Engineering 160:255 S 28 '45; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue no 15):90-2 '46

STEAM generators. See Boilers

STEAM hammers
Fundamentals of forging; hammers. A. Ashburn. diags Am Mach 91 111-13 Ap 10 '47

STEAM heaters
High pressure steam with unit heaters. F. Tyler. il Heat & Ven 44:76-81 F '47
Practical suggestions on unit heater control. diag Heating-Piping 19.95-6 My '47
Two-stage condensation improves steam heater performance. il diag Product Eng 18·99 Jl '47
Unit heaters, finned pipe radiation for standardized factory building. il Heating-Piping 19.77 Ap '47
Unit heaters have advantages in many heating applications P J Menden il Heating-Piping 19.87-8 Mr '47

STEAM heating
Heating plant check-ups E. W. Fair Food Ind 19:631 My '47
Heating system installation diags Dom Eng 170·140+ Jl '47
Heating the Metropolitan Life apartment projects. L. Smith and W. Bessler. il plan diags Heating-Piping 19.77-82 S '47
Is one pipe steam system better than two pipe? S Lewis. Heating-Piping 19:115-16 S '47
Maintenance of steam-heat equipment. L. A Richardson. Ry Mech Eng 120.671-3 D '46
One pipe steam heating. J. L Shank il plans diag Am Bld 69 92-7 Ag '47
Riser arrangement for downfeed vacuum systems T W. Reynolds. diags Heat & Ven 44:80 Ja '47
Use of baseboard radiation for steam and hot water home heating C. F. Hill. Nat Pet N 39·39+ My 14 '47
What goes on in a typical one-pipe steam heating system T. W. Reynolds. diag Heat & Ven 44·81-4 My '47
World's biggest and best garage, heating, ventilation and air supply, eliminating carbon monoxide fumes; Cadillac headquarters in Chicago il Dom Eng 169:144-5+ Je '47

See also
Boilers, Heating
Heating from central stations
Steam heaters
Steam pipe coverings
Steam pipes

Control

Indicating lamps simplify trouble-shooting in heating plant, Bell & Howell company, Chicago B. Weaver. il diags Factory Management 105.86-8 F '47
Solenoid valves control this heating system. W Note diag Power 91 780 N '47

Return systems

High pressure condensate drainage for foundry heating J P. Turner. il diag Heat & Ven 43·73 N '46
High pressure condensate return for high pressure space heating. J. P Turner. diags Power Pl Eng 51 92 My '47
Proper drainage of oil separators. T. W. Reynolds. diags Heat & Ven 44·81-2 Je '47

See also
Steam plants—Condensate recovery

Tables, calculations, etc.

Greenhouse heating data. Heat & Ven 44:76a-76b Mr '47
Quick methods for checking radiation. S. R. Lewis. Heating-Piping 18.76 D '46

STEAM heating, Industrial
Application of the atmospheric tray dryer to the drying of chemical products. A. S. White. Chem Age (Lond) 55 597-8 N 16 '46
Electric-steam heating cuts spoilage; rubber printing plate press il Elec World 128:92 S 27 '47
Preheating plastics with live steam. S. K. Moxness and J. Formo. il diags Mod Plastics 24·141-7 F '47
Reducing condensate temperature in process heating. T. W. Reynolds. diags Heat & Ven 43:90-3 D '46
Roof steam coils eliminate cloud in lubricating oil storage C. M. Fabian. diags Pet Refiner 26 119 Mr '47

STEAM heating, Industrial—*Continued*
Sludge heating with live steam. A. M. Rawn and others. Water & Sewage 84:24+ N '46

See also
Steam plants—Combined power and process steam
Steam plants—Process steam

STEAM irons
Steam iron; Silex. il Consumers Res Bul 20 20-1 O '47

Advertising
Laundry tips booklet is sell-out for Silex steam iron. il Sales Management 58.140 F 15 '47

STEAM jacketed kettles. See Kettles, Steam jacketed

STEAM jets
Application of steam jet ejectors in the Houdry fixed-bed catalytic cracking process. P. Freneau and others. flow diag diags A S M E Trans 69:69-79 Ja '47
Coal pulverized by steam jet; Blaw-Knox pulverizer. il Blast F & Steel Pl 35 470-2 Ap '47, Elec World News ed 126:20 D 28 '46; Heat & Ven 44:87 F '47, Iron Age 159.144-6 Ap 3 '47, Chem Eng 54.150+ Ap '47, Power Pl Eng 51:101 Jl '47
Process equipment cost estimation, ejectors and condensers. D. W. Jackson Chem Eng 54:123-4 My '47
Steam jet blowers and fans on steam boilers at gas-works. R. L. Greaves. il Gas J (Lond) 250:288+ My 7 '47

See also
Air ejectors

STEAM locomotives. See Locomotives

STEAM pipe coverings
Insulated overhead pipe line solves a plant steam problem. il Heating-Piping 19:91-2 F '47
Insulating unhoused plants. D von Ludwig. il diags Chem Eng 54.114-17 Mr '47
Pipe-line insulation minimizes steam losses; Jones & Laughlin steel corp. il Steel 120: 107+ F 17 '47
Rapid method of determining the economical thickness of pipe insulation. U. W. Smith. Heating-Piping 19:118-21 O '47

STEAM pipe lines
Installation notes for underground steam piping. R. H. Emerick. diags Dom Eng 169: 120-1+ Ja '47
Insulated overhead pipe line solves a plant steam problem il Heating-Piping 19.91-2 F '47
Meets increased central steam demands with 4800 ft tie line; Rochester gas & electric corp. J. J. Schenk and R. H. McCumber. il Heating-Piping 19 74-6 Ap '47
Mile-long high-pressure steam line aids system economy and flexibility; Rochester gas & electric corp J. J. Schenck. il Power 91: 674-7 O '47
Pipe-line strainers can reduce maintenance costs R E Cochran. il diags Textile World 97:118-19+ Je '47
3350 ft of pipe=one boiler plant; overhead pipeline, Jones & Laughlin steel corp il Power 91:328-9 My '47

See also
Piping (power plants)

STEAM pipes
Carbon-molybdenum steel for steam pipes; abstract. L Rotherham. Engineering 164: 343 O 10 '47
Creep properties of steels utilized in high-pressure and high-temperature superheater and steam pipe practice; 0.5 per cent molybdenum steels H. J. Tapsell and R. W. Ridley. Inst Mech Eng J & Proc 153 (War emergency issue no 6).181-92, pl 1-2 '45
Further observation of graphitization in aluminum-killed carbon-molybdenum-steel steam piping R W. Emerson and M Morrow bibliog il plan A S M E Trans 68 597-607 Ag '46; Same. Welding J 26:sup139-49 Mr '47
High pressure steam with unit heaters. F. Tyler. il Heat & Ven 44·76-81 F '47
Is one pipe steam system better than two pipe? S. Lewis. Heating-Piping 19·115-16 S '47
Riser arrangement for downfeed vacuum systems. T. W. Reynolds. diags Heat & Ven 44:80 Ja '47

See also
Heating from central stations
Piping (power plants)
Steam pipe coverings

Tables, calculations, etc.
Calcul des contraintes dans les brides d'assemblage des tuyauteries. R. Nithart. diags Génie Civil 124:176-8 My 1 '47
Steam pipe chart Power Pl Eng 51.100 S '47

STEAM plants
Modern rotary drilling; steam-generating plants. J. Zaba. Oil & Gas J 46·105 Ag 30; 107 S 6 '47
More steam, illustrations with text. Elec West 99·62-3 Ag '47
New developments in fuels, steam power; abstracts of ASME papers. diags Power 90: 932-3 Mid-D '46
Power generation trend upward. H. A. Winne. Elec World 127:99-100 Ap 12 '47

See also
Boiler plants
Boilers
Electric plants
Feed water
Piping (power plants)
Power plants
Steam
Steam engines
Steam turbines

Accounting
Steam accounting R. W. Arentson. N A C A Bul 28:1149-54 My 15 '47

Auxiliaries
Power supply for generating station auxiliary services. W. Szwander. bibliog(36 titles) diags Inst E E J 94 pt 2.372-84; Discussion. 384-400 Ag '47
Protection of powerhouse auxiliaries. diags Elec Eng 65:Trans 746-51 N '46; Same abr. Power Pl Eng 51·118+ Mr '47

Binary vapor systems
For greater topping power use efficient mercury-steam cycle. C. G. Adams and J. B. McClure. il diag Power 91·10-14 Ja. '47
Mercury vapor plant. Power Pl Eng 51:76 Ja '47

By-product power
Distillery waste treatment works provides cattle feed and power byproducts S I. Zack flow diag il Eng N 138:940-1 Je 12 '47
Heat balance and the paper machine drive. R. R. Baker. il diags Paper Tr J 125:41-4 Jl 3 '47

See also Steam plants—Combined power and process steam

Combined heating and process steam
Byproduct steam cuts fuel cost in large pulp and paper mill; Kalamazoo vegetable parchment co. il diags Power 91:518-21+ Ag '47
Smoke abatement can pay off; steam for four loft buildings. il diags Power 91.703-5 O '47

Combined power and heating
Can I make power and heat with exhaust steam? Power 91:710+ O '47
Steam-air plants W. Karrer. diags Engineer 182:537-40 D 13 '46

See also Electric plants (central stations)—Steam distribution

Combined power and process steam
Boilers for power and process loads in small plants; with cost data W W. Gaylord. diags Power Pl Eng 51:84-5 My '47
Champion-International adds 70,000-lb-per-hr boiler. L B Rogers. flow diag il plan diags Power Pl Eng 51.68-73 S '47
Dependable steam and power for Lee of Conshohocken. F. Leopold. flow diag il diags Power Pl Eng 50.70-4 N '46
Electricity in the gas industry. G. M Rimmer. Gas J (Lond) 250 724-5 Je 25 '47
Feed-water treatment at Deerfield packing corp. T. Martin. flow sheet il Food Ind 18: 1692-4 N '46

STEAM plants—Combined power and process steam—*Continued*
Hot lime soda and internal treatment condition 100% feedwater makeup, power plant, Nicaro nickel co. V. H. Brogdon. flow sheet il Power 91:82-4 F '47
Industrial supply scheme; power plant of Scottish oils, ltd. il diags Elec R (Lond) 139:959-65 D 13 '46
New plant ties into old one without interruption; National lead co, Titanium pigment div. il diags Power 91 617-19 S '47
Power for Detroit sulphite pulp & paper co. flow diag il plan diags Power Pl Eng 51: 68-70 O '47
Production and use of power and heat in textile manufacturing. il Rayon 28:565-7 O '47
Steam accounting. R. W Arentson. N A C A Bul 28:1149-54 My 15 '47

Condensate recovery

Handling condensate from heating and process. E W. Feller. diags Power 91:239-54 Ap '47
H-P condensate return improves output of preserves at Colonial preserves, Buffalo. flow sheet il Food Ind 19:630-1 My '47
H.p. condensate return increases wall-board production R. J. Lundrigan. flow diag il diag Power Pl Eng 51:97-9 Ag '47
Intelligent planning cuts fuel loss, raises power factor; Hessler laundry service, inc. W. Note. il diags Power 91:399-400 Je '47
Reducing condensate temperature in process heating T. W. Reynolds. diags Heat & Ven 43:90-3 D '46
Utilizing the flash of condensate returns for the heating of water T. W. Reynolds. diags Heat & Ven 44.75-6 Jl '47

Costs

Steam v. hydro power. J. P. Callahan. Pub Util 39 28-33 Ja 2 '47

Diesel engine auxiliaries

Supercharged dual fuel application. il diags Diesel Power 25:34-8 S '47

Efficiency

Considerations affecting the improvements in the thermal efficiencies of non-reheating plants at high steam pressures. J. R. Finniecome. bibliog Inst Mech Eng J & Proc 155 (War emergency issue no 17):134-44 '46
Fuel returns; power station efficiencies in 1946; abstracts. Elec R (Lond) 141:178 Ag 1 '47; Electrician 139:337 Ag 1 '47
Improvements in thermal efficiencies with high steam pressures and temperatures in non-reheating plant. K. Baumann. Inst Mech Eng J & Proc 155 (War emergency issue no 17):125-8; Discussion. 129-33 '46

Equipment

Added steam capacity cuts coal use by increasing hydroelectric generation; Nova Scotia light & power co. flow diag il diags Power 91:2-6+ Ja '47
Bradford power station extensions. il Engineer 184:291 S 26 '47; Electrician 139:915-18 S 26 '47
Can steam-turbine stations profit by using higher temperatures? A. Meyer diags Power 91:743-5 N '47
Convenience in operation features plant extension; Dallas power & light co. F. C. Justice. il diags Elec World 127:116-19 Mr 15 '47
Dust collector at Peterborough power station. diags Engineer 182:442 N 15 '46
Electrical deaeration licks corrosion in this plant. V. Rodwell. diags Power 91:324-6 My '47
Experiences with automatic air soot blowers at the Oswego and Charles R. Huntley steam stations; with cost data. H. L. Smith. il diags A S M E Trans 69:145-51; Discussion. 151-3 F '47
Extension of Balmain power station, il Elec R (Lond) 41:574-7 O 17 '47
Extensions at Birmingham. il Electrician 139: 679-83 S 5 '47
How a pipe still was used as a steam generator. flow sheet il Chem Ind 60:282 F '47
How to select units for a steam-electric station. C. D. Gibbs. Power Pl Eng 51:104-7 Jl '47; Correction. 51:107 S '47
Intelligent planning cuts fuel loss, raises power factor; Hessler laundry service, inc. W. Note. il diags Power 91.399-400 Je '47
Kearsley extensions. il diag Elec R (Lond) 139:639-43 O 25 '46; Electrician 137.1126-9 O 25 '46; Engineering 162:402 O 25 '46
Littlebrook A; generating station of the Kent electric power company. il Elec R (Lond) 141:123-8 Jl 25 '47
Mississippi power company increases capacity of Plant Eaton to 45,000 kw. il diags Power 91.764-8 N '47
More power for Boston. G. A Orrok, jr. and W. P. Saunier il plan diags Power Pl Eng 51:68-71+ Je '47
Plant design and standardisation; Central board's 1950 programme reviewed. J. Wright diag Electrician 139.101-3 Jl 11 '47
Power plant equipment and operation. il diags Power Pl Eng 51.72-5 Ja '47
Power station developments; British and foreign plans for meeting deficiency. J. Wright; A. G. Christie; A. Meyer. Elec R (Lond) 141:69-70 Jl 11 '47
Protect your low-pressure equipment. H. M. Spring. il diag Power 91:481-3 Jl '47
Pulp plant revamps power by steps; Penobscot chemical fibre company. flow chart diags Power 91 755-7 N '47
Recent developments in power-station practice. F. W. Lawton Engineering 164:79, 115, 127-8, 151 Jl 25-Ag 15 '47; Same cond. Electrician 138.1741-7 Je 27 '47, Abstracts Engineer 184:14 Jl 4 '47; Elec R (Lond) 140: 1053-5 Je 27 '47; Discussion. Electrician 139.35-6+ Jl 4 '47; Elec R (Lond) 141:13-15 Jl 4 '47
Redondo Beach steam station has new operating features. il diags Elec World 128:62-4 S 27 '47
Reliable electronic controls for fan and stoker drives. D. L. Greene and R. L. Jaeschke. il diags Elec World 126:75-7 N 23; 96-9 D 7 '46
Sculcoates power station. il Electrician 137: 1662-5 D 13 '46; Elec R (Lond) 139:977-9 D 13 '46
Small duct change triples fan life, raises steam output 24%. J. Cassie. diags Power Pl Eng 51:78-80+ Mr '47
Station equipment patterns emerge for record breaking capacity increases. Power 91.370-1 Je '47
Steam-jet evacuators make vacuum during power-plant starting periods. P. Freneau. diags Power 91.162-5 Mr '47
Tidd plant of the Ohio power company. S. N. Fiala and E. H. Krieg il maps diags Power Pl Eng 51:68-73 Mr '47

See also
Coal handling
Condensers (steam)
Pumps, Feed water
Steam turbines
Stokers, Mechanical
Superheaters

High pressure

Considerations affecting the improvements in the thermal efficiencies of non-reheating plants at high steam pressures. J. R. Finniecome bibliog Inst Mech Eng J & Proc 155 (War emergency issue no 17):134-44 '46
Corrosion and embrittlement of boiler metal at 1350 pounds operating pressure. L. E. Hankison and M. D. Baker. bibliog il A S M E Trans 69:479-86; Discussion. 500-3 Jl '47
Experiences with internal-boiler-surface corrosion in 1450-lb open-pass boilers at West End station of the Cincinnati gas and electric company E. H. Mitsch and B. J. Yeager. il diag A S M E Trans 69:487-91; Discussion. 500-3 Jl '47
Improvements in thermal efficiencies with high steam pressures and temperatures in non-reheating plant. K. Baumann. Inst Mech Eng J & Proc 155 (War emergency issue no 17):125-8; Discussion. 129-33 '46
Modern methods of feedwater conditioning for high pressure boiler plants. S. D. Distelhorst. Paper Tr J 125:41-4 Jl 31 '47
Wall-tube corrosion in steam-generating equipment operating around 1300 psi. F. G. Straub. il diags A S M E Trans 69:493-9; Discussion. 499-503 Jl '47

See also
Steam plants—Superposition

STEAM plants—*Continued*

Maintenance and repair

Adequate maintenance and sound operating methods assure efficiency of steam power plants; with cost data. R. B. Tuttle. il Oil & Gas J 46:72-4+ My 10 '47

Process steam

Factory heat balance. Chem Age (Lond) 56: 766 Je 14 '47

Handling condensate from heating and process. E. W. Feller. diags Power 91:239-54 Ap '47

Packaged steam generators C. H. Neiman. il Heat & Ven 44:66-70 Jl '47

Pine gum processing labor and fuel costs. H P. Poole and E. L. Patton. Chem Eng 54 102-3 Ag '47

Pulp plant revamps power by steps; Penobscot chemical fibre company. flow chart diags Power 91:755-7 N '47

Superposition

Additional topping under way at Sherman Creek R T. Roberts, H. Knecht. il diags Power Pl Eng 51:108-12 F; 112-14+ Ap '47

Australia gets first topping unit. il Power 91.185 Mr '47

For greater topping power use efficient mercury-steam cycle. C. G. Adams and J. B. McClure. il diag Power 91:10-14 Ja '47

Production costs for plant with topping unit. Elec World 127 72 F 1 '47

STEAM pressure cookers. See Pressure cookers

STEAM research

Steam flow in nozzles; velocity coefficient at low steam speeds E. Giffen and T. F. Crang. diags Inst Mech Eng J & Proc 155 (War emergency issue no 15):83-89 '46; Same. Engineer 180 273-4, 293-4 O 5-12 '45; Discussion Inst Mech Eng J & Proc 155 (War emergency issue no 15):90-2 '46

STEAM separators

Steam separators. E. J. Glinske diags Rayon 28:228 Ap '47; Same. Power Pl Eng 51:86-7 Jl '47

STEAM traps

Check operation of steam traps. E W. Longner. Heating-Piping 19:86 Ap '47

Effective steam trap maintenance program; National cash register company. E D Smith. il Factory Management 104:140-1 N '46

Handling condensate from heating and process; separating traps. E W. Feller. diags Power 91:247-51 Ap '47

Slide valve trap diag Chem Eng 54:144 Je '47

STEAM turbines

Can steam-turbine stations profit by using higher temperatures? A. Meyer. diags Power 91 743-5 N '47

Effect of centrifugal force in axialflow turbines. B. Pochobradsky. diags Engineering 163:205-7 Mr 21 '47

G-E turbine generators on order will increase power generating capacity by 3 ½ million kilowatts C. S Coggeshall. Blast F & Steel Pl 34.1519 D '46

Large steam turbines attain new plateau in long-time development. C. B Campbell. il Power 91 534-7 Ag '47

Power, where do we go from here? H A. Winne. Blast F & Steel Pl 35:362+ Mr '47

Proposed multiphase high output Diesel; with gear coupled exhaust gas power turbine and steam waste heat turbine. R M. Tucker. Diesel Power 25:52-4 Ja '47

Recent advances in 3,600-rpm turbine generators il Elec Eng 66 352-4 Ap '47

Steam turbines for iron and steel works. I. V. Robinson. diags Iron & Steel Inst J 156: 81-9 My '47; Same. Blast F & Steel Pl 35: 842+, 980-2+ Jl-Ag '47

Blades

Boiler water conditioning to prevent turbine deposits. C. E. Imhoff. Paper Tr J 124.30+ Je 5 '47; Same cond. Paper Ind 29.732-4 Ag '47

Steam turbine blade deposits. F G. Straub. il diags Ill U Eng Exp Sta Bul 364.1-90 bibliog(p80-3) '46 (pa 70c)

Turbine deposits. L. A. Burkhardt il Paper Tr J 124 86+ My 29 '47; Same cond. Paper Ind 29:734-5 Ag '47

Cleaning

Removal of deposits from steam-turbine steam passages. G B. Warren and T W. Howard. il diags A S M E Trans 69:213-17 Ap '47, Same abr. Blast F & Steel Pl 34. 1418+, 1540+ N-D '46, Discussion. A S M E Trans 69.217-26 Ap '47

Control

Electronic frequency meter and speed regulator. E. Levin. il diags Elec Eng 65.Trans 779-86 D '46

Magnetic governor release for standby operation. B H. Mudgett. il diag Elec World 127.100-1 My 10 '47

Design

Stresses in turbine disks at high temperatures. E P Popov. bibliog Franklin Inst J 243:365-89 My '47

Turbine clearances. H Barson. diags Elec R (Lond) 140 211-12 Ja 31 '47

Efficiency

Feed-heating cycle; influence on performance of turbo-alternators. G. Oldroyd. flow diag Elec R (Lond) 140.115-18 Ja 17 '47

How to estimate turbine performance with uncontrolled extraction. E. V. Pollard. diags Power Pl Eng 51:74-7+ Ap '47

Exhaust

Can I make power and heat with exhaust steam? Power 91 710+ O '47

Extraction

How to estimate turbine performance with uncontrolled extraction. E. V. Pollard. diags Power Pl Eng 51:74-7+ Ap '47

Failure

Explosion wrecks 1400 hp turbine il Locomotive 46:187-8 Ap '47

History

Parsons, the man and his work. C. D. Gibb. diag Inst Mech Eng J & Proc 156:Proc 213-16, pl 1-4 S '47; Same cond. Engineer 183: 558-9 Je 27 '47

Lubrication

Evaporation-cooling for pure-water systems for turbine-generator gas and oil coolers. P. H. Knowlton. diags A S M E Trans 69: 771-7; Discussion 777-8 O '47

Turbine-shaft centrifugal oil pump works with oil-driven booster pump. R. Sheppard and J. W. Barnett. il diags Power 91:78-81 F '47

Manufacture

Furnace brazing; 12 per cent chromium low carbon steel. T H Gray. il diags Steel 121.104-6+ Jl 21 '47

Mobile laboratory measures surface finish in the shop, Steam division, Westinghouse electric corp A. A. Goodman. il Am Mach 91.104-5 O 23 '47

Standardization accelerates turbine output; Fitchburg plant of General electric co. il Steel 121:80-1 S 8 '47

X-raying turbine parts. J. A Pratt. il Steel 119:60-1+ D 23 '46

Protection

Pressure switch adapted for turbine unloader. G. F Campau diag Elec World 126:118 N 9 '46

Standards

Standardized turbine-generator units. J. R. Carlson. il Power Pl Eng 51:126+ Mr '47

Starting

Quick turbine starts cut costs. J. C. Falkner and others. diag Elec World 128:98 9 Jl 19 '47; Abstract. Power 91:621 S '47

Tables, calculations, etc.

Calculation of the stresses in a turbine wheel by the method of superposition. W. J. Kearton diags Inst Mech Eng J & Proc 155 (War emergency issue no 15).73-82 '46

STEAM turbines—*Continued*

Testing

Accurate field testing of a 5000 kw turbine generator unit. F. H. Wiley. il Power Pl Eng 51:74-7 Ag '47

STEAM turbines, Marine

Propulsion machinery for Alcoa ships. il plans Marine Eng 52 70-3 My '47

Steam turbines for main propulsion of high-powered combatant ship G B. Warren. il diags Marine Eng 52:76-81 Je; 100+ Jl; 106+ Ag; 78-84 S, 104+ O '47; Discussion 52 95-7 Ja '47

See also

Naval boiler and turbine laboratory

Efficiency

Heat-balance calculations for a marine steam power plant. F. V. Smith. diags Marine Eng 52 76-85 Jl '47

Lubrication

Design of sump tanks on certain turbine vessels diags Marine Eng 52.70-1 S '47

Standards

Naval machinery standardization G B. Warren. Machine Design 19 174+ F '47

Testing

Pametrada research station. il Engineering 162:559, 564 D 13 '46

STEAMBOAT lines

Delta line plans ahead. T. J. Conroy il Marine Eng 52:64+ Ja '47

Moore-McCormack gives up few chartered ships. Barron's 27:35 O 6 '47

Passenger ships recommended for United States essential services; with cost estimates Marine Eng 52.55-60 Jl '47

Ship lines offer speedier passenger fleets. P. A. Johnston. Barron's 26:9+ D 30 '46

United States Lines plans peacetime fleet Marine Eng 52.94-5 Je '47

See also

American export lines, inc.

Moore-McCormack lines, inc

Advertising

Grace Line aids foreign trade by promoting industry abroad. il Ind Marketing 32 50+ F '47

Airline competition

Air mail pay subsidy claim stir airline-steamship row. Aviation N 6:29 D 16 '46

Airplane auxiliaries

Air rights asked for steamship lines. il Marine Eng 52.93-4 Je '47

CAB clarifies stand on entry of sea carriers in air transport CAA J 8:38 Ap 15 '47

CAB ruling clears sea-air issue. Aviation N 7:36-7 Ap 7 '47

Chicago and Southern attacks sea-air ad. Aviation N 7:31 Mr 3 '47

Europe lets steamship lines own airlines. P. A. Johnston Barron's 27:23 My 26 '47

Letter to the editor from Sea-air committee. T. L. Ford. Air Transport 5:27-9 Mr '47

Our neglected sea-air opportunities. R. H. Wels. Comm & Fin Chr 166:220+ Jl 17 '47

Ramspeck, Ryan spearhead opposition to sea-air bill Aviation N 7 9-10 My 19 '47

Surface-carrier airline operation; discussion of H.R. 5687. J. A. Eubank. Aero Digest 53 48+ N '46

Waterman wins court review of case. Aviation N 7:23 F 24 '47

Wolverton supports sea-air operations. Aviation N 7:29 My 12 '47

Development work

Grace Line aids foreign trade by promoting industry abroad il Ind Marketing 32:50+ F '47

History

Orient mails via Pacific; monster American side-wheelers pioneered 7,500-mile artery of global trade. H. E. Lobdell il Tech R 49: 151-4+ Ja '47

Securities

Shipping stocks R. W. Babson. Comm & Fin Chr 165.2865 My 29 '47

Uncertain weather ahead for shipbuilders and shipping lines; with pertinent statistics of leading shipbuilders and shippers. H L Blackburn. Mag of Wall St 79.733-5 Mr 29 '47

Ticket offices

Ticket office for Matson line in Los Angeles. il plan Arch Forum 86:87-9 Mr '47

Great Britain

Cunard White Star, limited, statement of the chairman. F. A. Bates Economist 153:171 Jl 26 '47

Union-Castle mail steamship company, limited; statement by the chairman at annual general meeting. V. Thomson. Economist 153:85 Jl 12 '47

Will the shipping boom last? Economist 153: 162-3 Jl 26 '47

STEAMBOATS

Aspects of large passenger liner design. J. L. Bates and I. J. Wanless. Marine Eng 52:76-80; Discussion 80-4 F '47

British India steamer Kampala. il Engineer 184:276 S 19 '47

Cunard White Star liner Media. il Engineer 184:227-30 S 5 '47

Cunard White Star liner Queen Mary. il Engineer 184:108-9 Ag 1 '47

Delta Queen to operate on Mississippi and Ohio il Marine Eng 52 64 S '47

Double helical steamboat paddle wheel. il Marine Eng 52.85 Ag '47

Fuel consumption of Liberty ship reduced over 10 percent. il diag Marine Eng 52.86-8 Ap '47

Interior designs of new Alcoa ships. il Marine Eng 52:62-9 My '47

Launch of the Nova Scotia. il Engineer 182: 443 N 15 '46

Launch of the Orient liner Orcades. il Engineer 184 383-4 O 24 '47; Engineering 164: 402 O 24 '47

Liner America enters service. il Marine Eng 51.68-9 D '46

Luxury clipper planned for Lakes. Marine Eng 52.110+ Ja '47

Modern Great Lakes freighter. R. C. Stanbrook Marine Eng 52 73-5 Ap '47

New welded passenger ship; SS Del Norte. il Welding J 26:148+ F '47

Passenger and cargo liner Del Norte. il plans diags Marine Eng 52:65-91 Ja '47

Passenger-cargo vessel Alcoa Cavalier. il plans diags Marine Eng 52:52-60 My '47

Port and river steamer Portland il Marine Eng 52 77-9 O '47

Practical piping problems; design engineer reports on operating experience. J H. Clarke il map plans diags Heating-Piping 19.76-9 Ja; 82-5 F; 84-6 Mr; 89-93 Ap, 92-4 My; 79-82 Je; 83-6 Ag; 100-2 S, 91-4 O; 97-100 N '47 (to be cont)

Propulsion machinery for Alcoa ships. il plans Marine Eng 52.70-9 My '47

Queen Elizabeth, Cunard White Star liner. il plan diags Engineer 182:366-9, 386-8, 411-12 O 25-N 8 '46; Abstract Engineering 162.379 O 18 '46

Queen Mary reenters transatlantic service. Marine Eng 52:90 Ag '47

R.M S. Pretoria Castle. il Engineer 184:194-5 Ag 29 '47

Reconditioning of the America. J P. Comstock. il Marine Eng 51.70-80 N '46

Reconversion of the Santa Rosa. J. P. Comstock. il Marine Eng 52:56-62 Mr '47

Reconversion of the steamship Quirigua. il Marine Eng 52:62-6 Ap '47

Replacement in the shipping industry; Norwegian mercantile marine, 1932-39. J. Einarsen. R Econ Stat 28:225-30 N '46

Service performance of S S. Sussex Trader. Engineering 164:320 O 3 '47

Southern Railway Channel steamer Falaise. il Engineering 164 393-4 O 24 '47

Southern Railway cross-Channel steamer Falaise. il Engineer 184:86-7 Jl 25 '47

Steamship Yarmouth reconverted at Bethlehem yard. il Marine Eng 52:76 Ap '47

T3 tanker Stanvac Calcutta. il plans diags Marine Eng 52:63-9 F '47

Types of propulsion machinery used in prewar and postwar ships. T. M. Wick Marine Eng 52:88-95 S '47

STEAMBOATS—*Continued*
United fruit company adds nine Yaque class reefers to its fleet. il plans diag Marine Eng 52:54-64 S '47
United Fruit refrigerated cargo ships M L. Sellers. il plans diags Marine Eng 52 54-67 Ag '47
Whale-oil factory ship, Balaena. il Engineering 162:393 O 25 '46

See also
Boilers, Marine
Freight ships
Naval architecture
Ship propulsion
Shipbuilding
Shipping
Ships
Steam turbines, Marine
Steamboat lines

Funnels

Design of stacks to minimize smoke nuisance; abstract and discussion. R. W. Nolan Marine Eng 51:80-2 D '46

History

Builders model of Henry Bell's Comet. il Engineering 162 449 N 8 '46
Jubilee of the Turbinia, illustrations with text. Marine Eng 52:65 Je '47
Sir Charles Parsons and the Turbinia. H. P. Spratt. il Mech Eng 69:585 Jl '47

See also
Steamboat lines—History

STEANE, Jo Anne
Portrait. Marine Eng 51:148 D '46

STEARIC acid
Emersol process; staff report. R. L. Demmerle. bibliog flow sheet il diags Ind & Eng Chem 39.126-31 F '47
Le graissage des surfaces métalliques par un mélange d'acide stéarique et de stéarate de calcium Gregory and Spink. Génie Civil 124:378-9 O 1 '47
Synthesis of tuberculostearic acid F. S. Prout, J. Cason and A. W Ingersoll Am Chem Soc J 69.1233 My '47

STEATITE
Block talc J. E. Eagle. Am Cer Soc Bul 26. 272-4 S 15 '47
Microscopic and X-ray investigation of some steatite bodies M D. Rigterink. bibliog il Am Cer Soc J 30:214-18 Jl 1 '47
Source of infrared radiation; steatite refractory. Electronics 19.228+ D '46

STEEL
Annual engineering review. il Materials & Methods 25.89-91 Ja '47
Application of special steels to the pulp and paper industry. W. R. Dickie. Pulp & Pa of Can 48:77-9 O '47
Basic requirements of materials for induction hardening R. H. Lauderdale. il Product Eng 18 110-15 My '47
Chemical engineering materials of construction; review of literature from start of World war II, iron, mild steels, and low alloy steels. R. B Mears and S. C. Snyder. bibliog(134 ref) Ind & Eng Chem 39:1219-24 O '47
Die steels and their treatments pace drop forge industry. A. F. Finkl. il Metal Prog 52:581-4 O '47
Hard steels improve cone type speed transmission. il diag Product Eng 18:95 Mr '47
How to select and treat mold steels. R. J. Hoensheid. il Am Mach 90:130-2 D 19 '46
New all-steel motor cuts size, adds strength. F. C. Rushing. il diags Rayon 27:618-20 N '46, Abstract. Power Pl Eng 50:115-16 D '46
New steels M. Male Power Pl Eng 51:111 Ag '47
Physical properties of steel for tubular products. A B. Wilder. Steel 121:102+ S 29 '47
Post-war steels. Chem Age (Lond) 56.744-5 Je 7 '47
Recent developments in metals and their processing. W. F. Craig, jr. and others. il Machine Design 19 72-4 O '47
Relative thickness of lead, concrete, and steel required for protection against narrow beams of X-rays. G Singer and others. bibliog diag J Res Nat Bur Stand 38:665-72 Je '47
Selecting steels for casting dies. H. Chase. il Steel 120:98+ Ja 13 '47
Some experiments on corrosion of steel by boiling water. A. J Gould and U. R. Evans bibliog diag Iron & Steel Inst J 155.195-200 F '47
Steel for enameling G. H. McIntyre. Steel 119:80 D 23 '46
Steel for plastic molds; abstract. E T. Gill and G. N. Gee. Materials & Methods 26:122-3 S '47
Steelmaking practice as it affects properties of interest to the user C. H. Herty, jr. il Metal Prog 50.809-14+ N '46
Surface layers on steel in natural gas condensate wells. N Hackerman and D. A. Shock. bibliog il diags Ind & Eng Chem 39:863-7 Jl '47
Unfired cylindrical vessels subjected to external pressure; including charts for determining thickness when constructed of carbon or low-alloy steel, monel, "A" nickel, inconel, aluminum (commercially pure grade) and aluminum-manganese alloy. F. V. Hartman A S M E Trans 69:337-43; Discussion. 343-4 My '47

See also
Bridges, Iron and steel
Case hardening
Chromium nickel steel
Chromium steel
Cobalt steel
Concrete, Reinforced
Corrosion and anti-corrosives
Foundry practice
Iron
Manganese steel
Molybdenum steel
Nickel steel
Open hearth process
Pipes, Steel
Rails
Rolling (metal work)
Rolling mills
Sheet metal
Sheet steel
Silicon steel
Springs (mechanism)
Steel, Aircraft and other headings beginning Steel
Tool steel
Tubes, Steel

Analysis

Analytical survey of a rimming-steel ingot. J. S. Vatchagandhy and G P. Contractor. bibliog Iron & Steel Inst J 152:509-16, pl 49; Discussion. 516-17 no 2 '45
Colorimetric determination of phosphorus in steels U. T. Hill. bibliog Anal Chem 19: 318-19 My '47
Determination of carbon in low-carbon steel; low-pressure gasometric method. C. E. Nesbitt and J. Henderson. bibliog il diags Anal Chem 19:401-4 Je '47
Determination of hydrogen in liquid steel. J. E. Wells and K. C. Barraclough. pl diags Iron & Steel Inst J 155:27-32 Ja '47
Determination of nickel in cobalt steels and alloys. H Kirtchik. bibliog Anal Chem 19: 95-6 F '47
Determination of nitrogen in ferro-alloys and other materials by direct Nesslerisation without distillation. W. C. Newell. bibliog Iron & Steel Inst J 152:333-7 no 2 '45; Same cond. Engineering 160:505 D 14 '45; Discussion. Iron & Steel Inst J 152: 337-9 no 2 '45
Determination of oxygen in steel by the vacuum fusion method. L. Alexander, W. M Murray and S. E. Q Ashley. bibliog il diags Anal Chem 19:417-22 Je '47
Determination of phosphorus in austenitic chromium-nickel steels. Iron & Steel Inst J 155:373-91 Mr '47
Determination of titanium nitride in ferro-alloys. L Silverman. bibliog Iron Age 159: 68+ F 6 '47
Direct colorimetric method for phosphorus in all types of steel. H. L. Katz and K. L. Proctor. Anal Chem 19:612-14 Ag '47
Direct-reading device provides rapid steel analysis E. R. Vance. il Steel 121:92+ S 22 '47
Direct-reading spectrometer for ferrous analysis. R. O Carpenter and others. diags Opt Soc Am J 37.707-13 S '47
Measurement of the intensity ratios of spectral lines with electron multiplier phototubes K. G. Kessler and R. A. Wolfe. bibliog diags Opt Soc Am J 37:133-44 Mr '47

STEEL—Analysis—*Continued*
Micro-spectrographic method for the quantitative analysis of steel segregates. J. Convey and J. H. Oldfield bibliog diag Iron & Steel Inst J 152:473-98, pl 46-8 no 2 '45, Same cond il Engineering 160:481-4 D 7 '45; Abstracts, Engineer 180.464 D 7 '45; Iron Age 156·63 D 13 '45; Discussion Iron & Steel Inst J 152.498-507, pl 48a-48b no 2 '45; Engineering 160·476-7 D 7 '45; Engineer 180:464-5 D 7 '45
Mobile laboratory speeds steel analysis. H. A. Tuttle and G A. Nahstoll. bibliog il Iron Age 160 68-72 S 25 '47
Modified colorimetric determination of chromium in ferrous materials. E H. Baker. Foundry 75:92+ Ja '47
New scheme for the microchemical analysis of ferrous alloys E. J Vaughan and C. Whalley. bibliog il diags Iron & Steel Inst J 155 535-62 Ap '47; Discussion. 156:487-91, 157 191-3 Ag, O '47
Polarographic determination of vanadium in steel and other ferroalloys. J. J Lingane and L. Meites, jr. bibliog Anal Chem 19. 159-61 Mr '47
Preliminary investigation of the constitution of mild-steel arc-weld deposits H. A. Sloman and others Iron & Steel Inst J 152.127-55, pl 11-14 no 2 '45; Same Welding J 25·sup39-52 Ja '46; Same cond Engineering 160·197, 217-20, 238-9 S 7-21 '45
Rapid, accurate, economic analysis of iron and steel by means of the spectrograph. R F. Lab. il Blast F & Steel Pl 34.1509-14 D '46
Spectrochemical analysis of high copper in cast iron and steel W. R. Kennedy. Opt Soc Am J 37·154-8 Mr '47
Spectrographic analysis of stainless steels. D P. Jensen bibliog Iron Age 160·47-8 Jl 17 '47
Spot tests for steel. W E. Thrun and C. H. Bartelt. Iron Age 160 40-2 O 23 '47
Study of a high-speed steel ingot. C. F. Sawyer, jr. il diags Iron Age 160·140-2 O 16 '47
Use of isotopes as tracers; abstract. A. H. W. Aten, jr. and F A Heyn. Metal Prog 51:640+ Ap '47

Bibliography

Abstracts of current literature and book reviews Iron & Steel Inst J 155·145-60, 297-318, 453-80, 627-39, 156·127-44, 307-20, 435-48, 571-92; 157.139-60 Ja-S '47
Review of iron and steel literature for 1946 E. H. McClelland Blast F & Steel Pl 35·227-9+ F '47 [reprinted with additions by Carnegie library, Pittsburgh]
Survey of literature on the manufacture and properties of iron and steel, and kindred subjects. Iron & Steel Inst J 152·1A-203A no 2 '45

Boron content

Boron in iron and steel R. S. Dean and B. Silkes bibliog(297 titles) 13pls U S Bur Mines Information Circ 7363:1-56 '46
Boron in medium carbon steel; abstract G P. Contractor and J. S. Vatchagandhy. Materials & Methods 26:120-1 Ag '47
Boron in some alloy steels, abstract M. C. Udy and P. C Rosenthal. Iron Age 158: 64-5 N 28 '46
Boron in steel R. S. Archer. il Metal Prog 50:667-86 O '46
Boron in steel M. C. Udy. il Metal Prog 52: 257-64 Ag '47
Effect of carbon content on the hardenability of boron steels; abstract. G. D. Rahrer Iron Age 160·55-6 O 30 '47
Factors affecting the hardenability of boron-treated steels. R. A. Grange and T. M. Garvey. bibliog il Am Soc for Metals Trans 37:136-74; Discussion. 174-91 '46
Influence of boron on some properties of experimental and commercial steels. T. G. Digges and F. M Reinhart. bibliog il diags J Res Nat Bur Stand 39:67-131 Jl '47
Is the hardenability of boron steels indirectly due to complete deoxidation? G. H. Boss. Metal Prog 51:265 F '47
Low-cost boron elevates steel properties; report by SAE iron and steel technical committee S A E J 55:65 Ap '47

Brittleness

Correlated brittle fracture studies of notched bars and simple structures. C W. MacGregor and others bibliog il diags Welding J 26 sup50-6 Ja '47; Discussion. W P. Roop 26·sup333-4, Reply sup357 Je '47
Development of temper brittleness in alloy steels, abstracts. W. S Pellini and B. R. Queneau. Iron Age 158.56-7 N 28 '46; Engineer 183.286-7 Ap 4 '47
Effect of welding technique on brittle transition temperature. N Grossman and P. R. Shepler bibliog il diags Welding J 26: sup321-31, Discussion W. P. Roop 332 Je '47
High chromium-irons H. D Newell il Metal Prog 51:622-5 Ap '47
Metallographic etchant to reveal temper brittleness in steel, abstract J. B Cohen and others il Iron Age 158:57-8 N 28 '46
Mild steel; proper relationship of cold working to annealing protects against shock failure H Markus and D F Armiento. il Machine Design 18.123-6 N '46
Reducing embrittlement in electroplating of steel springs C. T. Eakin and H. W. Lownie, jr bibliog il Iron Age 158:69-72 N 21 '46
Speed of propagation of brittle cracks in steel G. Hudson and M Greenfield. il diag J Ap Phys 18·405-7 Ap '47; Abstract. Engineer 184·293 S 26 '47
Temper brittleness. J. H. Hollomon il Am Soc for Metals Trans 36:473-540 bibliog(64 titles, p537-40), Discussion 540-2 '46
Temper brittleness in boiler steels and rail steels. W. J Holtman and W C Keil. il 9pls Colorado School of Mines [Golden] Quarterly 42 no 2 1-56 bibliog(p55-6) Ap '47 (pa $1)
Über die alterungsempfindlichkeit von baustählen hoher festigkeit. A. Fry and L Kirschfeld. bibliog il VDI 87·123-7 Mr 3 '43; Abstract (Aging of high-tensile structural steel). Welding J 26 sup149-52 Mr '47

Case hardening

See Case hardening

Cathodic protection

Corrosion, cathodic methods. M. G. Fontana diag Ind & Eng Chem 39·sup93A-94A Ag '47

Cleaning

300 per cent increase in efficiency with a straight-line pickle plant; O'Keefe & Merritt co M. B. Smith il plan Cer Ind 48:53-4+ My '47

Decarburization

Fundamentals of carburization and decarburization of steel. J. K. Stanley. bibliog diags Steel 120 92-6+ Ap 14 '47
Gas chemistry, its role in metallurgy. O. E. Cullen il Steel 121:86-8+ Jl 7 '47
Mechanism of the surface decarburization of steel W. A. Pennington il diags Am Soc for Metals Trans 37:48-91 bibliog(p90-1); Discussion 91-109 '46
Use of controlled atmospheres to restore carbon to surface decarburized steels; abstract. O E. Cullen. Iron Age 159:133 Ap 3 '47

Defects

Detection of cracks in steel by means of supersonic waves. C. H. Desch and others. il diags Welding J 26:sup1-25 bibliog(sup3) Ja '47
Flakes in welds. M Lefevre. bibliog il Welding J 26·sup57-64 Ja '47
Flaking in alloy steels S. W. Poole bibliog il Iron Age 160:42-6 Jl 17 '47
Supersonic waves locate die-block flaws. R. W. Snowdon. il Steel 120:95+ Ap 7 '47

Failure

Arc atmospheres and underbead cracking. M. W Mallett and P. J. Rieppel. bibliog il diags Welding J 25·sup748-59 N '46
Cold cracking in the heat-affected zone. C. B. Voldrich. bibliog il Welding J 26: sup153-69 Mr '47
Forging failure caused by carbon pick-up due to heating in oil fired furnaces. M. B. Graham. bibliog il Iron Age 160:65-7 Jl 24 '47

STEEL—Failure—*Continued*
Hardenability and quench cracking L. D. Jaffe and J H. Hollomon. Metal Prog 50: 964+ N '46
High-hydrogen atmosphere intensifies quench cracking tendency. C A. Liedholm il diags Metal Prog 51:414-19 Mr '47
Investigation of a type of failure of 18-8 stabilized stainless steel. W. Kahn and others. il Am Soc for Metals Trans 37:567-82, Discussion. 582-5 '46
Mechanism of failure of 18 Cr-8 cracking still tubes. C. L. Clark and J. W. Freeman il Am Soc for Metals Trans 35:298-326 '45; Same Nat Pet N 36 pt 2:R854-6+ D 6 '44; Discussion. Am Soc for Metals Trans 35: 326-30 '45
Relationship between the deep drawing properties of autobody sheet, its austenitic grain size and McQuaid-Ehn carburizing characteristics. K. J. B. Wolfe. bibliog il diags Am Soc for Metals Trans 37:1-17; Discussion. 18-26 '46; Discussion. Steel 118: 122+ Ap 29 '46
Report on the fracture of metals, report submitted to the Bureau of ships of the U.S. navy. M Gensamer and others. Welding J 26.sup443-84 bibliog(293 titles, sup469-72, 483-4) Ag '47

See also
Steel—Brittleness

Finishing

Accurate holes with 0 6 micro-inch finish ground in one set-up C. H Wick. il diag Mach 53:162-6 My '47
Carbide-ball burnishing cuts bore-finishing cost 90%. J. Busch. il diag Am Mach 90: 129 D 19 '46
Chipping operation. R E. Chapman. il Foundry 75:72-5+ N '47
Continuity in the production of specified surface finish E. Swain. Inst Mech Eng J & Proc 153 (War emergency issue no 10)·345-7, pl 3-4 '45; Same il Engineering 159.258-60 Mr 30 '45; Same abr Engineer 179:250 Mr 30 '45; Same cond. Automobile Eng 35: 142-4 Ap '45
Detection, causes and prevention of injury in ground surfaces. L. P. Tarasov. il Am Soc for Metals Trans 36:389-440 bibliog (p439-40); Discussion. 441-51 '46
New techniques in conditioning stainless steel; abstract. A. E. Hamilton, jr. Steel 121·106+ O 13 '47
Offset machines produce wood grain on steel parts for automobiles in the Fisher body, Trenton, N.J plant. H Chase. il Iron Age 160·80-4 Ag 21 '47
Oxide conditioning speeds pickling operations. C. B. Murton, jr and M. F. Hawkes. Iron Age 160.46-8 O 30 '47
Results of an investigation of the removal of metals by the process of grinding. R E. McKee and others. il diags A S M E Trans 69:125-9 F '47
Some observations on chipping and scarfing operations. R. D. Hindson. Blast F & Steel Pl 35.439-42, 553-7 Ap-My '47
Strengthening metal parts by shot peening. H F. Moore. il diags Iron Age 158.70-6 N 28; 81-6 D 5 '46
Surface finish; effect on fatigue strength W. K. Wilson. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 10) 347-51 '45, Same il Engineering 159·277-80 Ap 6 '45; Same cond. Automobile Eng 35. 144-6 Ap '45
Surface finish of steel in face-milling A. O. Schmidt bibliog il diags A S M E Trans 69:325-7; Discussion A W. Meyer 327-8 My '47
Thread rolling, theory and practice, finishing thread rolling dies by grinding, lapping, and abrasive blasting J. W. Batchelder. bibliog il diags Iron Age 159.52-7 Ja 9 '47

Flakes

See Steel—Defects

Gas content

Gas evolution from cast steel at room temperature H. H. Johnson and others. il Am Soc for Metals Trans 37:309-30; Discussion. 330-6 '46

Graphitization

See Steel—Metallography

Hydrogen content

Determination of hydrogen in liquid steel. J. E. Wells and K C. Barraclough. pl diags Iron & Steel Inst J 155.27-32 Ja '47
Preliminary investigation of the constitution of mild-steel arc-weld deposits. H. A Sloman and others. Iron & Steel Inst J 152 127-55, pl 11-14 no 2 '45, Same Welding J 25:sup39-52 Ja '46; Same cond. Engineering 160:197, 217-20, 238-9 S 7-21 '45
Relation between the hydrogen content of weld metal and its oxygen content. L Reeve bibliog diag Iron & Steel Inst J 152:385-96 no 2 '45; Same. Welding J 24: sup618-23 N '45; Discussion. Iron & Steel Inst J 152:397-402 no 2 '45
Removal of hydrogen from steel; abstracts and discussion. J. H Andrew and others. Engineer 182.509-10 D 6 '46; Engineering 162:545-6 D 6 '46

Hydrogen effect

Cold cracking in the heat-affected zone. C. B. Voldrich. bibliog il Welding J 26: sup153-69 Mr '47
Effect of welding on ductility and notch sensitivity of some ship steels. R. D. Stout and others. il diags Welding J 26:sup335-57 Je '47
Flakes in welds M. Lefevre. bibliog il Welding J 26·sup57-64 Ja '47
High-hydrogen atmosphere intensifies quench cracking tendency. C. A Liedholm. il diags Metal Prog 51:414-19 Mr '47
Hydrogen and transformation characteristics in steel J H. Andrew and others bibliog 5pls diags Iron & Steel Inst J 156·208-53 Je '47; Abstracts. Engineer 184 96 Ag 1 '47; Engineering 164.89 Jl 25 '47; Discussion. Iron & Steel Inst J 157 377-81 N '47; Engineer 184·96-7 Ag 1 '47; Engineering 164: 89-90 Jl 25 '47
Hydrogen in steel manufacture. C. Sykes and others. bibliog il 2pls diags Iron & Steel Inst J 156·155-80 Je '47; Abstracts. Engineer 184.96 Ag 1 '47; Engineering 164·89 Jl 25 '47, Discussion Iron & Steel Inst J 157: 377-81 N '47, Engineer 184:96-7 Ag 1 '47; Engineering 164:89-90 Jl 25 '47
Investigation of the influence of hydrogen on the ductility of arc welds in mild steel A E Flanigan. bibliog (p210) il diags Welding J 26.sup193-214 Ap '47

Inclusions

Micro-examination of eight steels for the inclusions sub-committee. J H. Whiteley 4pls Iron & Steel Inst J 157:89-97 S '47
Origin and constitution of certain non-metallic inclusions in steel; abstract and discussion. J. R. Rait and H W. Pinder. Engineering 162:545 D 6 '46
Oxidized inclusions in steel; abstract. L Columbier. Materials & Methods 24:1242 N '46

Joining to aluminum

Aluminum timing gears for automotive use; aluminum bonded to steel by the Al-Fin process il Bus Transportation 26·227-9 My '47, Excerpts Iron Age 160.74 Jl 3 '47
Increased efficiency of heat transfer; aluminum cylinder barrel cast on thin-wall steel liner. il Machine Design 19:107 Je '47

Joining to glass

Silver plating facilitates bonding glass to steel. il Steel 121:92+ Ag 25 '47

Joining to tin alloys

Influence of composition on the adhesion of tin-base bearing alloys to steel. P. G. Forrester and L. T. Greenfield. il diags Engineering 163 322-4 Ap 18 '47; Abstract and discussion Engineer 183·234 Mr 21 '47

Lead content

Leaded alloy steels Engineer 183:170 F 14 '47

Machinability

See Steel cutting

Metallography

Application of electrolytic polishing to ferrous metallography. H. J. Merchant. bibliog 3pls diags Iron & Steel Inst J 155: 179-94 F '47

STEEL—Metallography—*Continued*
Application of Ms points to case depth measurement. E. S. Rowland and S. R. Lyle. bibliog il Am Soc for Metals Trans 37:27-46, Discussion. 46-7 '46
Application of single crystals to the study of tempered martensite. G. Kurdjumov and L. Lyssak. bibliog il Iron & Steel Inst J 156.29-36 My '47
Bainitic hardening of high-speed steel. C. K. Baer and A E Nehrenberg bibliog il Iron Age 160 65-70 S 4, 77-82 S 18 '47
Behaviour of a chromium steel in the Jominy hardenability test. W. I. Pumphrey. bibliog 2pls Iron & Steel Inst J 157:27-30 S '47
Cementation by beryllium. J. Laissus. Engineer 183.563 Je 27 '47
Controlling physical properties by the interrupted quench. H. E Boyer. il Iron Age 160·49-54 Jl 3 '47
Critical points of S.A E. 4340 steel as determined by the dilatometric method. D. Niconoff il Am Soc for Metals Trans 37: 337-53, Discussion. 353-9 '46
Determination of austenite grain size in cast steels. M F. Hawkes. il Iron Age 159.46-51 Mr 13 '47
Effect of carbide structure on corrosion resistance of steel. R. W. Manuel il Steel 121 82-4+ O 13 '47
Effect of changes in condition of carbides on some properties of steel J B Austin. il diags Am Soc for Metals Trans 38 28-69 bibliog(p68-9) '47; Excerpts Metal Prog 50. 1191-5 D '46, Abstract Iron Age 158.54-6 N 28 '46
Effect of forging on segregation in high-speed steel E. S Kopecki. il Iron Age 159.42-3 F 27 '47
Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel. N P. Goss bibliog il Steel 121·74-5+ S 29; 98-100+ O 6 '47
Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels. N. A. Ziegler and W L Meinhart. il diag Am Soc for Metals Trans 37·360-99 bibliog(49 titles, p397-9); Discussion. 399-401 '46
Effect of stabilizing and stress relief, heat treatment for 18-8 stainless. W G. Hubbell. il Steel 121:86-8+ Ag 25 '47
Electrical observations of the austenite-martensite transformation in steel. A. W. McReynolds. bibliog il diags J Ap Phys 17: 823-33 O '46; Abstract. Metal Prog 51:820+ My '47
Factors affecting the hardenability of boron-treated steels. R A. Grange and T M. Garvey. bibliog il Am Soc for Metals Trans 37:136-74; Discussion. 174-91 '46
Factors controlling graphitization of carbon steels at subcritical temperatures. C R. Austin and M. C. Fetzer bibliog il Am Soc for Metals Trans 35.485-529; Discussion. 529-35 '45
Ferrous physical metallurgy; review of 1946. R. F. Miller. Min & Met 28:74-7 F '47
Gas carburising. I Jenkins. il Engineering 162.285-7 S 20 '46; Same cond. Automobile Eng 37.63-6 F '47
Good and bad structures in machining steel N. E. Woldman il Materials & Methods 25.80-6 F '47
Graphite in cold-rolled subcritically annealed hypoeutectoid steels M. A Hughes and J. G. Cutton bibliog il Am Soc for Metals Trans 37.110-29 '46, Abstracts. Iron Age 157 74 F 14 '46, Blast F & Steel Pl 34:287+ F '46, Discussion. Am Soc for Metals Trans 37.129-35 '46
Hardened and tempered microstructure of high-speed tool steel as a factor in tool performance. W. H Wooding. il diags A S M E Trans 69.281-306 My '47
Heat treatment of heavy cast steel sections. P. C Rosenthal and G K. Manning il diag Steel 119 88-90+ N 18 '46
Heat treatment of high speed steels. H. E. Boyer. il Steel 120·110-13+ Mr 3; 92-5+ Mr 10 '47
High chromium-irons H. D. Newell. il Metal Prog 51:619-22 Ap '47
High forging temperatures revealed by facets in fracture tests. J. R. Strohm and W E Jominy. il Am Soc for Metals Trans 36 543-56, Discussion. 556-71 '46
How to predict suitability and determine method of martempering hypoeutectoid steel. D. Rosenblatt. bibliog il Steel 121.94-6+ O 20 '47
Induction hardening and austenitizing characteristics of several medium carbon steels. D. L. Martin and W. G. Van Note il Am Soc for Metals Trans 36 210-44 bibliog(p242-4); Discussion. 244-53 '46
Induction hardening of steel D. L. Martin and R. A. Gehr. bibliog il Steel 120.78-80+ Ja 27; 100-1+ F 3 '47
Influence of boron on some properties of experimental and commercial steels T. G Digges and F M Reinhart. bibliog il diags J Res Nat Bur Stand 39·67-131 Jl '47
Influence of carbon content upon the transformations in 3 per cent chromium steel. T. Lyman and A. R Troiano. il Am Soc for Metals Trans 37.402-44 bibliog(p444); Discussion. 444-8 '46
Influence of geometrical restraint and temperature on the toughness and mode of rupture of structural steel. A. R Anderson and A G Waggoner il diags Welding J 25.sup789-801 N '46
Interrupted quenching as a metallurgical tool. C. H Lekberg. Steel 121·79+ O 27 '47
Iron-carbon equilibrium diagram, revised 1946; data sheet Metal Prog 50:970 N '46
Isothermal transformation and end-quench hardenability of some NE steels. R L Rickett and others. bibliog il Am Soc for Metals Trans 35 22-43, Discussion 43-5 '45
Local heating in plain carbon steels; martensite formed from pearlite. W. J Wrażej. bibliog diags Iron & Steel Inst J 152.189-93, pl 19-22 no 2 '45
Machinability and structure of ferrous materials. C Sykes diag Inst Mech Eng J & Proc 155 (War emergency issue no 20)· 235-6 '46; Same. Engineering 161.573 Je 14 '46; Discussion. Inst Mech Eng J & Proc 155 (War emergency issue 20) 267-91 '46
Macro-etching and photomacrography of ferritic and austenitic welded joints in low-alloy steel O O. Miller and E. G. Houston. il diags Welding J 26 sup620-5 O '47
Mechanical properties and microstructures of open-butt oxyacetylene compression welds. H H Chiswik. il diag Welding J 26.sup 115-19 F '47
Mechanism of the surface decarburization of steel W. A. Pennington il diags Am Soc for Metals Trans 37.48-91 bibliog(p90-1); Discussion. 91-109 '46
Metallographic constituents of steels and cast iron as affecting flame hardening O. M Harrelson. il Welding J 26.771-5 S '47
Metallographic identification of sigma phase in 25-20 austenitic alloy. G. N. Emmanuel. il Metal Prog 52:78-9 Jl '47
Metallurgical applications of X-ray diffraction spectrometer J. L. Abbott il Iron Age 159:57-61 F 20 '47
Metallurgical characteristics of induction-hardened steel. J W Poynter. bibliog il Am Soc for Metals Trans 36·165-97; Discussion. 197-209 '46
Metallurgical microscope, its range and use. D E Roda. il Iron Age 159:53-5 F 27 '47
Method for determining the applicable welding procedure for steels B. Ronay. il diags Welding J 25:sup736-47 N '46
Microstructures and structural diagrams for Fe-Ni-Cr alloys A D Brasunas and J. T. Gow. il Metal Prog 51 777-80 My '47
New theory for corrosion of carbon steel, discussion of Effect of carbide structure on corrosion resistance of steel, by R. W. Manuel. W. C. Uhl Pet Processing 2·405-8 Je '47
Partition of molybdenum in hypoeutectoid iron-carbon-molybdenum alloys. F. E Bowman. bibliog Am Soc for Metals Trans 36:61-76; Discussion 76-80 '46
Partition of molybdenum in steel and its relation to hardenability F. E. Bowman. bibliog Am Soc for Metals Trans 35.112-25 '45, Same cond. Steel 115:82+ N 27 '44; Discussion. Am Soc for Metals Trans 35: 128-9 '45
Polishing of 0.60 carbon steels C. P. Kenyon. il Metal Prog 51:260-1 F '47
Practical approach to cold treatment of steel. O. E. Brown. il Materials & Methods 24: 1445-9 D '46

STEEL—Metallography—*Continued*
Rate of diffusion of molybdenum in austenite and in ferrite. J. L. Ham. Am Soc for Metals Trans 35:331-55 bibliog(p354-5); Discussion. il 355-61 '45
Relationship between the deep drawing properties of autobody sheet, its austenitic grain size and McQuaid-Ehn carburizing characteristics. K. J B. Wolfe. bibliog il diags Am Soc for Metals Trans 37:1-17, Discussion. 18-26 '46, Discussion. Steel 118: 122+ Ap 29 '46
S-curve for S.A.E. 4140 steel; data sheet. il Metal Prog 50·990 N '46
S-curves point the way for successful welding of any high-carbon or alloy steel. L. Berner. Welding J 26·110-13 F '47; Discussion. 26.689-92 Ag '47
Selection of austenitic electrodes for welding dissimilar metals A. L. Schaeffler. bibliog il Welding J 26·sup601-20 O '47
Shepherd grain size fracture standards; stereoscope photographs by G. K. Manning; data sheet. Metal Prog 50:1046 N '46
Single slag basic electric heats, effect on grain growth characteristics. M. V. Healey. il Steel 121.104+ Ag 25 '47
Some metallurgical aspects of carbon steel spot welding. J. Heuschkel. bibliog il diags Welding J 26:sup560-82 O '47
Stabilization, tempering, and relaxation in the austenite-martensite transformation. J. H. Hollomon and others. J Ap Phys 18:780-1 Ag '47
Structure of tempered martensite W. J. Wrazej. Metal Prog 50.966+ N '46
Suppression of pearlite in manganese-molybdenum steels. C. R. Austin and J. R Doig bibliog Am Soc for Metals Trans 36:336-60 '46
Temper brittleness. J. H. Hollomon. il Am Soc for Metals Trans 36·473-540 bibliog(64 titles, 537-40); Discussion. 540-2 '46
Temperature range of martensite formation; chart; data sheet. C. K. Donoho. Metal Prog 50:676b O '46
Tempering of toolsteels. M. Cohen. il Metal Prog 51:781-8, 962-8 My-Je '47
Transformation of X-4130 steel during continuous cooling; data sheet. C. A. Liedholm and others. il Metal Prog 50 998 N '46
Use of direct transformation data in determining preheat and postheat requirements for arc welding deep hardening steels and weld deposits L. F. Bowne, jr. bibliog il Welding J 25:sup234-41 Ap '46; Abstract. Metal Prog 52:436+ S '47
Welding hardenable steels. O. T. Barnett. il diag Steel 121:80-2 S 29 '47

See also
Piping (power plants)—Graphitization

Nitriding

See Case hardening—Nitriding process

Nitrogen content

Manufacture of basic Bessemer steel low in nitrogen. Y. Dardel. Metal Prog 52:252-6 Ag '47

Oxygen content

Determination of oxygen in steel by the vacuum fusion method. L. Alexander, W. M Murray and S. E Q. Ashley. bibliog il diags Anal Chem 19·417-22 Je '47
Determination of reactive oxygen; discussion of paper by I. M. Mackenzie. diag Iron & Steel Inst J 156·526-8 Ag '47
Oxygen in steel making; abstract F. B. Townsberry and G. V. Slottman. Chem Eng 54:254 Jl '47
Relation between the hydrogen content of weld metal and its oxygen content. L. Reeve bibliog diag Iron & Steel Inst J 152:385-96 no 2 '45; Same. Welding J 24 sup618-23 N '45; Discussion. Iron & Steel Inst J 152·397-402 no 2 '45

Phosphorus content

Dephosphorized Bessemer steel. G. M. Yocom il Metal Prog 51.243-7 F '47
Determination of phosphorus in austenitic chromium-nickel steels. Iron & Steel Inst J 155·373-91 Mr '47
Direct colorimetric method for phosphorus in all types of steel. H. L. Katz and K. L Proctor Anal Chem 19:612-14 Ag '47
Effect of temperature on the phosphorus reaction in the basic steelmaking process. K Balajiva and P. Vajragupta. Iron & Steel Inst J 155.563-7 Ap '47; Discussion. 156.505-10, 157 206-8 Ag, O '47
Use of isotopes as tracers; abstract. A H. W. Aten, jr and F. A Heyn. Metal Prog 51: 640+ Ap '47

Prices

American steel price move seen isolating British quotations. J. R. Hight. Iron Age 159:110-11 Ja 23 '47
Average monthly quotations in 1946. Steel 120.322 Ja 6 '47
Bars, plates, sheets, strip, etc.; monthly, 1929-1946; tabulations. Iron Age 159:218+ Ja 2 '47
Carnegie-Illinois changes extras in addition to price increases. D. I. Brown. Iron Age 160·122 Ag 7 '47
Carnegie-Illinois new extra price card may set pattern for industry. D. I. Brown. il Iron Age 158·99-100 D 26 '46
Coal wage rise to boost steel prices. Steel 121.54-5 Jl 14 '47
Comprehensive revision of extra cards accompanies price changes. Steel 119:30-1 D 23 '46
Conservative policy on steel prices seen. Steel 119:51-3 N 18 '46
Consumers like steel pricing system map Steel 121:57-9 O 20 '47
Durable goods producers favor steel price setup. il Steel 121:45-7 S 29 '47
Explains steel price increase. I. S. Olds. Comm & Fin Chr 166:439 Jl 31 '47
Federal trade commission blasts at industry on price setup T Campbell. Iron Age 160:113-14+ Ag 21 '47
FTC starts to probe grey market in steel. Bsns W p46 My 3 '47
Finished steel composite price; monthly, 1929-1946; tabulation. Iron Age 159:178 Ja 2 '47
Government blasts at prices, charging conspiracy Bsns W p20 Ag 23 '47
High tensile, low alloy steels, base prices, cents per pound, tabulation. Iron Age 159: 212 Ja 2 '47 (cont weekly)
Major extra revisions feature flat steel price changes. Iron Age 158:112 D 19 '46
Many steel customers intend to change sources of supply. T. Campbell. Iron Age 159:97-9 Mr 20 '47
New extra revisions lower steel price level Steel 120·43-5 Mr 24 '47
Price spread between hot and cold finished bars shows little change; changes in hot-rolled alloy bar extras; revisions in hot-rolled carbon bar extras. Steel 119:42-3+ D 30 '46
Recent revisions in extra cards for hot-rolled carbon bars clarified. Steel 120:46-7+ Ja 20 '47
Restrictive requirements covered in new forging quality steel extras; changes in extras on hot-rolled carbon plain plates. Steel 120: 45-6+ Ja 20 '47
Rising costs dictate wide steel price increases. T. Campbell. Iron Age 159:105 Ja 9 '47
Senate subcommittee starts gray market steel hearings. Iron Age 159·116 My 22 '47
Steel base prices advance an average of $5 90 per ton. T. Campbell. Iron Age 160:91 Jl 31 '47
Steel firms revise plate extras and clarify definitions. D. I. Brown. Iron Age 159:106-7 F 27 '47
Steel increase to fan out to durable goods. il Steel 121:59-61 Ag 4 '47
Steel pay pattern squeezes fabricators; higher steel prices and narrowed profit margins. Barron's 27:14 My 19 '47
Steel plans fight on FTC charge of price fixing and monopolistic practices. Steel 121: 46-7 S 1 '47
Steel price extras; what they are and why. E Newman. Steel 120:49+ F 24 '47
Steel price pattern being clarified. Steel 121: 60+ Ag 18 '47
Steel price revisions and extra card changes studied by buyers. Steel 120:55+ Ja 13 '47

STEEL—Prices—*Continued*
U.S steel export co. announces new carbon steel price schedule Iron Age 160:117 Ag 7 '47
Wages, and how they grew; tables showing steel wages, 1914-1947; steel prices, 1938-1947. Steel 120:68 Ap 28 '47

Protection

Antifouling paints; inactivation of highly pigmented antifouling films applied to steel. A L Alexander and R. L. Benemelis. il Ind & Eng Chem 39 1028-32 Ag '47
Bituminous coatings. Chem & Ind p66 F 1 '47
Ceramic coatings for high-temperature protection of steel. W. N. Harrison and others. il J Res Nat Bur Stand 38:293-307 Mr '47; Abstract Steel 120.92-3+ F 10 '47
Concrete linings in steel stacks G. T. Haddock il diags Power Pl Eng 51·116+ Ap '47
Formation, application of phosphate coatings. V. M Darsey and W. R. Cavanagh diags Steel 119 89, 146+ D 9 '46
Improved chromium plate. A. L. Peach. il Metal Finishing 44.531-3+ D '46
Metal spraying; reclamation of worn or faulty parts. J. Porter. il diags Automobile Eng 37.343-6 S '47
New anticorrosive finish gives 20 years protection; Zincilate. il Iron Age 159.76+ My 22 '47
New bonderizing process for aluminum and steel H. A Knight. il Materials & Methods 26.99-101 O '47
New phosphating tunnels installed at Ford. H. Chase. il Iron Age 159:82-4 Ap 10 '47
New tin-zinc coatings protect steel from rusting. Materials & Methods 25:132 F '47
New zinc-base finish for steel parts. J. A. Williams. il Materials & Methods 25·94-6 Mr '47
Preparing steel for porcelain enameling G. H. McIntyre. il Steel 121.102-3+ Jl 21 '47
Production line rustproofing; Banox process; Newark stove co. A. D. Stout, jr. il Iron Age 160:64-5 O 30 '47
Protective coatings for high temperature applications. W. N. Harrison. Steel 121:126+ N 3 '47
Rubber linings protect steel against corrosion and abrasion. O. S. True. il diags Product Eng 18:142-8 Ja '47
Suppression of radiations at high temperatures by means of ceramic coatings. D. G. Bennett. bibliog il diag Am Cer Soc J 30: 297-305 O 1 '47
Tin undercoating improves rust resistance of steel. Iron Age 160:45 O 23 '47
Tin-zinc alloy coatings; abstract. Materials & Methods 24.1248+ N '46
Use of a tin undercoat to improve the corrosion resistance of painted steel. E. S Hedges and others. bibliog Iron & Steel Inst J 152:429-37, pl 42-3 no 2 '45; Same cond. il Engineering 160·505-8 D 14 '45; Same, without il. Steel 118:103+ Ap 22 '46; Abstracts. Materials & Methods 22:1490+ N '45; Iron Age 156:64 D 6 '45; Discussion. Iron & Steel Inst J 152:437-40 no 2 '45
Use of metallic pigments in the preparation of protective paints. J. E. O Mayne. bibliog diags Soc Chem Ind J 66:93-5 Mr '47
War-developed ceramic coatings have peace uses. F. W Connor. il Dom Comm 35:30-3 Mr '47

See also
Steel—Cathodic protection

Rimmed steel

Analytical survey of a rimming-steel ingot. J. S. Vatchagandhy and G. P. Contractor. bibliog Iron & Steel Inst J 152.509-16, pl 49 no 2 '45; Abstract. Iron Age 156·70 N 15 '45; Discussion. Iron & Steel Inst J 152: 516-17 no 2 '45
Electric furnace rimmed steel; using oxygen for carbon reduction. D. I. Brown. il Iron Age 160:67-9+ Ag 7 '47
Production of rimmed steel in basic electric furnace; abstract. A. K. Moore. Steel 119: 120+ D 16 '46
Use of sodium fluoride in the manufacture of steel. K. E. Markuson. bibliog Ind Med 16:434-6 S '47

Scaling

Preliminary investigation of the spot welding of scaly and rusty structural steel. W. D. Doty and W. J. Childs. il diag Welding J 26:sup358-62 Je '47
Scaling behavior of high-strength heat-resisting steels in air and combustion gases in the gas turbine. W Stauffer and H. Kleiber il diags Iron & Steel Inst J 156: 181-8 Je '47
Solvents offer quick removal of mill scale from new boilers. L. B. Wilson il diags Power 91:458-60 Jl '47

Specifications

Economic approach to hardenability. D. I. Brown bibliog Iron Age 159:42-7 Mr 27; 53-5+ Ap 3 '47
H-band method tailors steel to function of part P. R Wray and R. W. Roush. S A E J 55:17-20 Ag '47
Specification for light-gage steel offers rational design formulas. Eng N 137:740 N 28 '46

Standards

Carbon steel for forging; reference book sheets. Am Mach 91:131, 133 Jl 31 '47
Electrical steel; reference book sheet. Am Mach 91:139, 141 O 23 '47
H steels, chemical composition ranges; electric furnace or openhearth bars, billets or blooms; data sheet. Metal Prog 50:830 N '46
H steels; chemical composition ranges; revised June 1947; data sheet. Metal Prog 52:576B O '47
Hot-rolled alloy steels; standard open-hearth and electric-furnace alloy steels; bars, billets, blooms and slabs, reference book sheet. Am Mach 91:147, 149 Ag 28 '47
Hot-rolled carbon steel bars; standard steels, simplified sizes; reference book sheet. Am Mach 91.127 F 27 '47
National emergency alloy steels; revised July 29, 1946; data sheet. Metal Prog 50:832 N '46
Popular types of steels. G. D Boyer. il Product Eng 18:81-5 Ja '47
Revised standard carbon and alloy steels; reference book sheet. Am Mach 90:137, 139 Ag 1 '46; Same abr. Metal Prog 50:820-1 N '46
Standard stainless steels; data sheet. Metal Prog 50:834 N '46
Standard steels; characteristics, properties, fabrication, etc. diag Machine Design 19: 157-67 S; 151-63 N '47

Strength

Apparent yield strength of plain carbon steel. J. A. Pope. diags Engineering 164:284-8 S 19 '47
Creep strength of steels; chart. W. L. Nelson Oil & Gas J 45:103 N 9 '46
Distribution of strength and ductility in welded steel plate as revealed by the static notch bar tensile test. W. F. Brown, jr. and others. bibliog il diags Welding J 26: sup545-54 O '47
Fatigue strength of steel parts. P. O. Johnson and C. Lipson. Product Eng 18:144-6 O '47
Izod impact strength of heat-treated alloy steel, abstract. W. Crafts and J. Lamont. Iron Age 159:63 Je 19 '47
Low-alloy, high-tensile steels, their properties, workability and weldability. G. M. Huck. il Welding J 26:32-5 Ja '47
Nomograph for allowable working stresses in steel parts; data sheet. C. K. Donoho. Metal Prog 51:968b Je '47
Production of high-strength steels with improved machining characteristics; addition of sodium sulfite. F. O. Johnson. Metal Prog 52:565-7 O '47
Raised (?) yield point in bend tests. T. J. Dolan and O. Sidebottom. il diags Metal Prog 50:653-7 O '46
Relationship between hardenability and tensile strength of normalized steels. L. A. Carapella. bibliog Am Soc for Metals Trans 35·435-45 '45
Research on fatigue strength of screw threads of different form. D. G Sopwith and T. Settle. il diags Inst Mech Eng J & Proc 155 (War emergency issue no 18):156-8 '46; Same cond. Engineering 160:58-9 Jl 20 '45

STEEL—Strength—*Continued*
Some engineering and design considerations in the utilization of ordinary and high-strength steels W. B. Brooks. bibliog diags Welding J 26·665-9 Ag '47
Strength and ductility. M. Gensamer bibliog il Am Soc for Metals Trans 36 30-60 '46; Excerpts Iron Age 157·66-71 F 14 '46; Metal Prog 49:731-4 Ap '46
Strength of rivets. H. M. Henderson. diags Engineer 182·416 N 8 '46
Strength of thin steel compression flanges. G. Winter. bibliog il diags Am Soc C E Proc 72:199-226 F '46, Discussion. 72:909-12, 1188-90, 1381-6; 73·39-42, 360-6 Je, O, D '46-Ja, Mr '47
Strength of welded joints at low temperatures and the selection and treatment of steels suitable for welded structures O. Graf. bibliog il diags Welding J 26.sup508-17 S '47
Strengthening metal parts by shot peening. H. F. Moore. bibliog il diags Iron Age 158:70-6 N 28; 81-6 D 5 '46
Surface finish; effect on fatigue strength. W. K Wilson. bibliog Inst Mech Eng J & Proc 153 (War emergency issue no 10): 347-51 '45; Same il Engineering 159·277-80 Ap 6 '45; Same cond. Automobile Eng 35: 144-6 Ap '45
Where to use low-alloy, high-strength steels. H. S. Wharen. il Am Mach 90:108-11 D 5 '46
Which cast steel? E. J. Wellauer. il Machine Design 18.101-5+ D '46; 19:111-17 Ja '47

Sulfur content

Determination of the equilibrium constant of the reaction between molten iron and hydrogen sulphide. J. White and H. Skelly. bibliog diags Iron & Steel Inst J 155·201-12 F '47

Testing

Air hardenability of steels. C. B. Post and others il diags Am Soc for Metals Trans 35.85-106 '45, Same cond. Steel 116:120-1+ Mr 5 '45; Discussion. Am Soc for Metals Trans 35 107-11 '45
Basic physical tests for steels H N. Lyle. diags Oil & Gas J 46 291 Jl 26 '47
Brinell hardness does not measure machinability G Schlesinger bibliog diags Am Mach 91:125-36 Jl 17 '47
Control of quality in steel manufacture. A. O. Schaefer. il Metal Prog 50·815-19+ N '46
Critical points of S.A E. 4340 steel as determined by the dilatometric method. D. Niconoff. il Am Soc for Metals Trans 37: 337-53; Discussion. 353-9 '46
Deformation of metals during single and repeated tensile impact. J. A. Pope. bibliog il diags Iron & Steel Inst J 157·31-54 S '47
Detection of cracks in steel by means of supersonic waves. C. H. Desch and others. il diags Welding J 26·sup1-25 bibliog(sup3) Ja '47
Effect of carbon content on hardenability. E. S. Rowland and others. bibliog Am Soc for Metals Trans 35·46-72; Discussion. 73-84 '45
Hardenability test for low carbon and shallow hardening steels. O. W. McMullan il Am Soc for Metals Trans 35.584-602; Discussion 602-8 '45
Important considerations in Charpy and Izod testing. C. M. Schwitter. il diags Product Eng 18·106-9 O; 159-62 N '47
Inspecting metals with supersonics. H. Nicholson and others. il diag Steel 120:72-5+ F 24 '47
Is cast iron superior in corrosion resistance to steel? R. W. White. il Materials & Methods 26·82-5 Ag '47
Metallurgical characteristics of induction-hardened steel. J. W. Poynter. bibliog il Am Soc for Metals Trans 36 165-97; Discussion. 197-209 '46
Micro-hardness testing il Sci Am 176.265-6 Je '47
Mild steel; proper relationship of cold working to annealing protects against shock failure H. Markus and D F. Armiento. il Machine Design 18·123-6 N '46
Quantitative determination of magnetic properties by use of the cathode-ray oscilloscope J Zamsky. diags Elec Eng 66: 678-80 Jl '47
Raised (?) yield point in bend tests. T. J. Dolan and O. Sidebottom. il diags Metal Prog 50·653-7 O '46
Recording magnetic detector locates flaws in ferrous metals. C H. Hastings. il diags Product Eng 18·110-12 Ap '47
Recording surface heats with radiation pyrometer. il diag Steel 119:74 D 30 '46
Speed of propagation of brittle cracks in steel. G Hudson and M Greenfield. il diag J Ap Phys 18·405-7 Ap '47
Tensile properties of several special steels and certain other materials under pressure P W Bridgman bibliog J Ap Phys 17·201-12 Mr '46; Abstract. Metal Prog 51: 306+ F '47
Test data on oil-field steels. H. N. Lyle. Oil & Gas J 46.97 Jl 19 '47

See also subdivision Testing under various Steel headings, e g Steel, Aircraft—Testing

Temperature effect

Abnormal creep in carbon steels; effect of manganese, silicon and molybdenum. J. Glen. il Iron & Steel Inst J 155:501-12 Ap '47, Abstract Metal Prog 52:280+ Ag '47
Carbon absorption of 18-8 at high temperatures; aircraft exhaust systems. W. G. Hubbell, il Steel 119:86+ D 30 '46
Cast steels; low-temperature properties. C. E Sims and F. W. Boulger. Metal Prog 51 316+ F '47
Comparison of some carbon steels on the basis of various creep limits. A. E. Johnson and H. J Tapsell. Inst Mech Eng J & Proc 153 (War emergency issue no 6): 169-79 '45
Correlated brittle fracture studies of notched bars and simple structures C. W. MacGregor and others. bibliog il diags Welding J 26:sup50-6 Ja '47
Creep properties of steels utilized in high-pressure and high-temperature superheater and steam pipe practice; 0 5 per cent molybdenum steels H. J. Tapsell and R. W. Ridley. Inst Mech Eng J & Proc 153 (War emergency issue no 6) 181-92, pl 1-2 '45
Graphite in cold-rolled subcritically annealed hypoeutectoid steels. M A. Hughes and J. G. Cutton. bibliog il Am Soc for Metals Trans 37:110-29, Discussion. 129-35 '46
High forging temperatures revealed by facets in fraction tests. J. R. Strohm and W. E. Jominy. il Am Soc for Metals Trans 36: 543-56; Discussion. 556-71 '46
Influence of geometrical restraint and temperature on the toughness and mode of rupture of structural steel. A. R. Anderson and A. G. Waggoner. il diags Welding J 25·sup789-801 N '46
Interpretation of creep and stress-rupture data F B. Foley. il Metal Prog 51.951-8 Je '47
Investigation of beams with butt-welded splices under impact; resistance to impact at sub-zero temperatures. W. J Krefeld and others. bibliog il Welding J 26:sup392-7 Jl '47
Local heating in plain carbon steels; martensite formed from pearlite. W. J. Wrażej. bibliog diags Iron & Steel Inst J 152:189-93, pl 19-22 no 2 '45
Stability of steel at elevated temperatures; extensive research program being conducted on high temperature piping materials. A. B. Wilder and J. D. Tyson. il diags Steel 121:86-9+ O 20 '47; Abstract. Blast F & Steel Pl 35·224-5 F '47
Steel at high temperatures; abstract. C. Schaub. Materials & Methods 24:1236+ N '46
Strength of welded joints at low temperatures and the selection and treatment of steels suitable for welded structures. O. Graf. bibliog il diags Welding J 26·sup508-17 S '47
Thermal expansion of cables. H. C. Boynton and H. J. Godfrey. bibliog Aero Digest 53:92+ N '46
Transition temperatures of steel plates studied Product Eng 18.173 S '47
Welded girder sustains high stresses in test at zero degrees F. L. Grover. il Eng N 139.256-7 Ag 21 '47

STEEL—*Continued*

Uses

Applications of Bessemer bars requiring quality. J D. Armour. Metal Prog 50·904-5 N '46

Coming, more steel in housing. il diags Sheet Metal Worker 38.130-3 Ja '47

New materials and new uses for old materials. M. Male. Blast F & Steel Pl 35: 560-2+ My '47

Typical farm tractor takes 1542 lbs of steel. diag Steel 119:63 D 30 '46

Use of steel forms for concrete house production W. J. Brooking. il Iron Age 159: 57-62 F 13 '47

Welding

Arc atmospheres and underbead cracking. M. W. Mallett and P. J. Rieppel. bibliog il diags Welding J 25·sup748-59 N '46

Carbide instability of carbon-molybdenum steel piping R. W. Emerson. bibliog il Welding J 26.sup 104-14 F '47

Cold cracking in the heat-affected zone. C. B. Voldrich. bibliog il Welding J 26·sup153-69 Mr '47

Design and methods of construction of welded steel merchant vessels; final report of Board of investigation il plans diags Welding J 26 569-619 bibliog(53 titles, p618-19) Jl '47

Determining plate quality before welding; Sperry supersonic reflectoscope. O. R. Carpenter. Marine Eng 51:80 N '46

Development of high-strength welding quality alloy steels and their postwar applications. H Miller. il Welding J 25.1077-9 N '46

Distribution of strength and ductility in welded steel plate as revealed by the static notch bar tensile test. W. F. Brown, jr. and others. bibliog il diags Welding J 26: sup545-54 O '47

Effect of alloying elements on the tensile properties of 25—20 weld metal. H. C. Campbell and R. D. Thomas, jr. il Welding J 25.sup760-8 N '46; Discussion. 26·sup119-20 F '47

Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels N. A. Ziegler and W. L Meinhart. il diag Am Soc for Metals Trans 37·360-99 bibliog(49 titles, p397-9); Discussion. 399-401 '46

Effect of welding on ductility and notch sensitivity of some ship steels. R. D. Stout and others. il diags Welding J 26: sup335-57 Je '47

Effect of welding technique on brittle transition temperature. N Grossman and P. R Shepler. bibliog il diags Welding J 26: sup321-31; Discussion W. P. Roop. 332 Je '47

Fatigue tests as criterion of the weldability of sheet, abstract R L'Hermite and others. Materials & Methods 25 128-9 Mr '47

Flash welding of concentrated areas up to 24 sq. in. in S.A E. 1020, NE 9440 and NE 8620 steels. D. B. Johnston. il diags Welding J 26:sup65-81 F '47

Flexible multi-transformer welder boosts steel drawer output. il Iron Age 159.79 Je 5 '47

Fundamentals of spot welding steel plate. W. F Hess and others. il diags Welding J 26:sup583-93 O '47

Influence of magnetic materials on the welding characteristics of resistance welding machines J. J Riley and C. E. Smith. bibliog diags Elec Eng 65:Trans 852-60 D '46

Investigation of the influence of hydrogen on the ductility of arc welds in mild steel. A. E. Flanigan. bibliog (p210) il diags Welding J 26·sup193-214 Ap '47

Lightweight all-welded steel trailer for transporting heavy construction equipment. C. W Lytton. il Welding J 26·770 S '47

Lincoln low-hydrogen electrode Blast F & Steel Pl 35:134 Ja '47

Low-alloy, high-tensile steels, their properties, workability and weldability. G M. Huck. il Welding J 26·32-5 Ja '47

Low alloy steels for welding; abstract. A. J. K. Honeyman and J. Erskine. Materials & Methods 24:1238+ N '46

Macro-etching and photomacrography of ferritic and austenitic welded joints in low-alloy steel. O. O. Miller and E. G. Houston. il diags Welding J 26.sup620-5 O '47

Mechanical properties and microstructures of open-butt oxyacetylene compression welds. H H. Chiswik. il diag Welding J 26·sup115-19 F '47

Method for determining the applicable welding procedure for steels. B. Ronay. il diags Welding J 25 sup736-47 N '46

More arc welded steel being used in machinery structures; abstract J F. Lincoln Steel 121·78-9 S 29 '47

New frontiers in welding. W. F. Hess. bibliog Welding J 26·114-20 F '47

Nonmagnetic arc welding joints between mild steel plates O C Frederick. il diags Steel 121·85+ O 13 '47

Notched-bead slow-bend tests of carbon-manganese steels C. B Voldrich and others diags Welding J 26 sup489-507 S '47

Projection welding of low carbon and stainless steel sheet M. L. Ochieano il diags Product Eng 18:124-6 Mr '47

Reinforcement of branch pieces. J. S. Blair. il diags Engineering 162 1-4, 217-21, 228, 508-11, 529-33, 540, 553-6, 577-81, 588, 605 Jl 5, S 6, N 29-D 27 '46

Relation between the hydrogen content of weld metal and its oxygen content. L. Reeve. bibliog diag Iron & Steel Inst J 152.385-96 no 2 '45; Same. Welding J 24:sup618-23 N '45; Discussion Iron & Steel Inst J 152:397-402 no 2 '45

Repair welding of steel castings. O. T Barnett bibliog il diags Foundry 75:74-7+ Ja '47

Resistance welding of spring steel to low-carbon steel. A Willink. il Welding J 26.30-1 Ja '47

S-curves point the way for successful welding of any high-carbon or alloy steel. L Berner Welding J 26:110-13 F '47; Discussion. 26 689-92 Ag '47

Selection of austenitic electrodes for welding dissimilar metals. A. L. Schaeffler. bibliog il Welding J 26·sup601-20 O '47

Shrinkage and distortion of welded joints. G. E. Claussen. diags Welding J 26:sup519-29 S '47

Shunt circuit impedance in spot welding ⅛-, ¼- and ½-in mild steel. R. H. Blair. diags Welding J 26.843-8 O '47

Some metallurgical aspects of carbon steel spot welding. J. Heuschkel. bibliog il diags Welding J 26 sup560-82 O '47

Some unusual features encountered in investigating cracked welds in 35/15 magnesium retorts. H. J. Nichols. il Welding J 26·881-4 O '47

Stress-corrosion cracking of welded mild-steel gas mains. Engineering 164·186 Ag 22 '47; Same Gas J (Lond) 251 355 Ag 13 '47

Theory of moving sources of heat and its application to metal treatments D. Rosenthal. il A S M E Trans 68:849-61 bibliog(p864) N '46

Transverse shrinkage of welds; statistical study. F Campus. diags Welding J 26: sup485-8 Ag '47

Use of direct transformation data in determining preheat and postheat requirements for arc welding deep hardening steels and weld deposits. L. F. Bowne, jr. bibliog il Welding J 25·sup234-41 Ap '46; Abstract. Metal Prog 52:436+ S '47

Weldability test for sheet metal in oxy-acetylene welding. R Woirin. Welding J 26·790 S '47

Weldable high strength steel castings. W. J. Crook. il diags Metal Prog 50:906-14 N '46

Welded steel container. T. M Fallon il Welding J 26·793 S '47

Welded steel furniture; Simmons company. D. Raffone il Welding J 26.761-6 S '47

Welded steel press. il Steel 120:90-1+ F 17 '47

Welding alloy steel piping. E. R. Seabloom. il diags Heating-Piping 18:67-70 O; 81-4 N; 79-83 D '46

Welding and flame cutting applied to stainless and clad steels; Dilts Hydrapulper installed in plant of National paper corp. S. F. Danes. il Materials & Methods 26:102-6 O '47

STEEL—Welding—*Continued*
Welding hardenable steels. O. T. Barnett. il diags Steel 121:72-4+ S 22; 80-4+ S 29 '47
Welding of high-temperature, high-pressure steel valves. V T. Malcolm and S Low. il Welding J 26 101-10 F '47
Welding spring steel; abstract. A. Willink. Iron Age 158:62 N 28 '46
Welding steel trailer door frames increases strength, saves weight. A. F Denham. il diags Materials & Methods 26:93-6 Ag '47

See also
Steel, Stainless—Welding
Steel, Structural—Welding
Steel construction—Welding

STEEL, Aircraft
Nickel-manganese-chromium steel wire for aircraft control cables. H. C. Boynton. il Materials & Methods 25 91-3 Ap '47
Physical properties of steel control cable with nearly same expansion rate as aluminum alloy C. W Meyers Automotive & Aviation Ind 95:44-5+ D 15 '46
Slow changes in hardened steel. V Kappel. Metal Prog 51:611-12 Ap '47

Testing
Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog il diags Welding J 26:sup26-49 Ja '47
Thermal expansion of cables. H. C Boynton and H. J. Godfrey. bibliog Aero Digest 53: 92+ N '46
Value of highly destructive testing. M. G. Corson. il Metal Prog 51.613-16 Ap '47

STEEL, Aluminum clad
Aluminum coated steel. il Steel 120:80-1+ Mr 31 '47

STEEL, Automobile
General Motors layoffs revive steel capacity charges. W. G. Patton. Iron Age 160 111+ Ag 28 '47
NAX steels replacing regular carbon sheet on some Hudson parts. Iron Age 160·130 S 25 '47
Relationship between the deep drawing properties of autobody sheet, its austenitic grain size and McQuaid-Ehn carburizing characteristics. K. J. B. Wolfe bibliog il diags Am Soc for Metals Trans 37:1-17; Discussion. 18-26 '46, Discussion. Steel 118:122+ Ap 29 '46
Shipments of steel to automotive industries, 1941-1947, tabulation. Automotive Ind 97: 22 Ag 15 '47
Statistical survey of some hardened steel forgings. R. F. Mather. il Metal Prog 51: 79-85 Ja '47

STEEL, Clad
Clad steels; cladding and backing materials, fabricating, heat treating, etc. il diags Materials & Methods 26:97-108 S '47
Clad steels for corrosion resistance applications; abstract. E. C. Gosnell. Materials & Methods 25.150 Ap '47
German bimetal tubing. Iron Age 158:76 N 28 '46
Processes have families; industrial developments initiate series of inventions, refinements, and modifications. E. L Cady. il Sci Am 176:249-51 Je '47

See also
Steel, Aluminum clad
Steel, Nickel clad

STEEL, Cold treatment of
Changes in size and toughness of high carbon; high chromium steels due to subzero treatments; abstract. L E Gippert and G. M. Butler, jr. Iron Age 158·68 N 28 '46
Plant freezer for fitting huge eccentric shafts. il Steel 120:98-9+ F 10 '47
Practical approach to cold treatment of steel. O. E. Brown. il Materials & Methods 24: 1445-9 D '46
Size stabilization. A. C. Jones. Metal Prog 51:85 Ja '47
Sub-zero temperatures in treating and assembling metal parts. G. B. Olson. il Mach 53:149-56 Ap '47
Sub-zero treatment of tool steel. Engineer 184:292-3 S 26 '47

STEEL, Cold working of
Cold strip rolling; John Summers & sons. il Elec R (Lond) 139.599-602 O 18 '46
Cold strip Y-mill il diag Iron Age 160:62-3 O 30 '47
Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel N. P. Goss. bibliog il Steel 121·74-5+ S 29, 98-100+ O 6 '47
Effect of speed of rolling in the cold-rolling process. H. Ford bibliog diags Iron & Steel Inst J 156 380-98 Jl '47; Same cond. Blast F & Steel Pl 35·1219-23, 1368-71 O-N '47
Forming steel by cold extrusion; Heintz mfg. co diags Steel 121·93+ O 20 '47
Graphite in cold-rolled subcritically annealed hypoeutectoid steels. M. A. Hughes and J G Cutton. bibliog il Am Soc for Metals Trans 37.110-29, Discussion. 129-35 '46
Metallurgical applications of X-ray diffraction spectrometer; effects of cold working on diffraction pattern of SAE X4340 steel. J L. Abbott. il Iron Age 159 57-61 F 20 '47
Mild steel; proper relationship of cold working to annealing protects against shock failure. H. Markus and D. F. Armiento. il Machine Design 18:123-6 N '46
New steel forming technique; cold extrusion. il Bsns W p21-2+ Ag 9 '47
Small diameter work rolls feature Montgomery cold strip mill. il diag Steel 121: 88+ O 27 '47

STEEL, Corrosion resisting
Corrosion resistance of steel and cast iron. A. W. Spitz. Chem Eng 54:135 F '47
Corrosion resistant chemical equipment of stainless steel. W. R. Meyer and H. L. Maxwell. Steel 121:131-2 N 3 '47
Corrosion resistant metals for valves and seats on heavy-duty engines. A. T. Colwell diags S A E J 55·21-3 O '47
Corrosion resisting steels for the textile industry J. A. McWilliam. Textile Inst J 38·P154-5 Ap '47
Electron diffraction study of oxide films formed on high temperature oxidation resistant alloys. J W Hickman and E. A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 32).467-83 '47
Fabrication notes on corrosion-resistant alloys; abstract. J. C. Holmberg. Pet Processing 2·314-15 Ap '47
High temperature corrosion of metals under alternate carburization and oxidation. H. K. Ihrig. bibliog il Electrochem Soc Trans 91 (preprint 23):333-44 '47
Microstructures and structural diagrams for Fe-Ni-Cr alloys. A. D. Brasunas and J. T. Gow. il Metal Prog 51:777-80 My '47

See also
Chromium nickel steel
Chromium steel
Steel, Stainless
Worthite

STEEL, Galvanized
Zone formation in galvanized steel; photomicrograph. il Steel 120:164 F 3 '47

STEEL, Hardening of
Air hardenability of steels. C. B. Post and others. il diags Am Soc for Metals Trans 35·85-106 '45; Same cond. Steel 116:120-1+ Mr 5 '45; Discussion. Am Soc for Metals Trans 35:107-11 '45
Bainitic hardening of high-speed steel. C. K. Baer and A E. Nehrenberg bibliog il Iron Age 160.65-70 S 4; 77-82 S 18 '47
Behaviour of a chromium steel in the Jominy hardenability test. W. I. Pumphrey. bibliog 2pls Iron & Steel Inst J 157:27-30 S '47
Boron in steel. R. S. Archer. il Metal Prog 50:677-86 O '46
Boron in steel. M. C. Udy. il Metal Prog 52: 257-64 Ag '47
Bright hardening stainless steel; National cash register co. il Steel 119:80+ N 25 '46
Buyer reluctance retards switch to H-band steels. S A E J 54:72 D '46
Controlling physical properties by the interrupted quench. H. E. Boyer. il Iron Age 160.49-54 Jl 3 '47
Cooling rates of plates and rounds; Jominy end-quenched specimens; data sheet. A. Prog 51:96b Ja '47
L. Boegehold and E. W. Weinman. Metal

STEEL, Hardening of—*Continued*
Cooling time in Jominy bars to half-temperature. C A. Liedholm. Metal Prog 51.265 F '47
Die steels and their treatments pace drop forge industry. A F. Finkl il Metal Prog 52 581-4 O '47
Economic approach to hardenability. D. I. Brown. bibliog Iron Age 159:42-7 Mr 27; 53-5+ Ap 3 '47
Effect of carbon content on hardenability. E. S Rowland and others. bibliog Am Soc for Metals Trans 35:46-72; Discussion. 73-84 '45
Effect of carbon content on the hardenability of boron steels; abstract. G D. Rahrer. Iron Age 160·55-6 O 30 '47
Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel. N. P Goss bibliog il Steel 121.74-5+ S 29; 98-100+ O 6 '47
End-quench hardenability versus hardness of quenched rounds. G. K. Manning. il Metal Prog 50:647-52 O '46
Examples of metallurgical progress at International harvester co, induction heating. il Metal Prog 52 616-19 O '47
Factors affecting the hardenability of boron-treated steels. R. A. Grange and T. M. Garvey. bibliog il Am Soc for Metals Trans 37:136-74, Discussion. 174-91 '46
Flame hardened steel. S. T. Jazwinski. il Steel 120 108-9+ My 12 '47
Free machining die steel. Steel 120:104 F 10 '47
Further developments of the end quench hardenability test. C. R Wilks and others. bibliog diags Am Soc for Metals Trans 35·1-20, Discussion. 20-1 '45
H-band method tailors steel to function of part. P. R Wray and R. W. Roush. S A E J 55.17-20 Ag '47
Hardenability, a revolutionary basis for steel specifications F. P. Peters. il diag Sci Am 176·210-13 My '47
Hardenability and quench cracking. L. D. Jaffe and J. H. Hollomon. Metal Prog 50: 964+ N '46
Hardenability bands for H-steels; reference book sheets Am Mach 91 155, 157, 159 N 6 '47
Hardenability developments; symposium at annual meeting of British iron and steel institute Steel 120:84 Je 30 '47
Hardenability of common toolsteels; Jominy end-quench tests; data sheet. S. M. DePoy. Metal Prog 50:1052 N '46
Hardenability of N.E 8600 H steels; charts; data sheet. A. L. Boegehold. Metal Prog 50.1220-B D '46
Hardenability of steel; summary of symposium. Engineering 163·415 My 16 '47, Discussion Engineer 183 445-7 My 23 '47; Engineering 163 437-8 My 23 '47, Iron & Steel Inst J 157:55-80 S '47
Hardened and tempered microstructure of high-speed tool steel as a factor in tool performance. W. H Wooding il diags A S M E Trans 69:281-306 My '47
Hardening shear blades. il Electronics 20: 164+ S '47
Hardening stresses. H. A. Strickland, jr. Am Mach 91.152+ Ja 2 '47
Hardness and hardenability in carbon and alloy steels. il diags Product Eng 18:141-3 Jl '47
Hardness distribution in chips and machined surfaces N. Zlatin and M. E Merchant bibliog il diags Iron Age 159:69-75 My 22 '47
Heat treatment of heavy cast steel sections P. C. Rosenthal and G. K Manning. il diag Steel 119 88-90+ N 18 '46
Hot hard high speed steel. H. G. Johnstin il Steel 120:98+ Ap 21 '47
Hot hardness testing. O Zmeskal. il Metal Prog 51·86 Ja '47
How to select die blocks. R. G. Sartorius. Iron Age 159:51 Ja 23 '47
Induction hardening steel bars at Jones & Laughlin. J F. Wilson. il Iron Age 159 44-6 My 15 '47
Influence of boron on some properties of experimental and commercial steels. T. G. Digges and F. M. Reinhart. bibliog il diags J Res Nat Bur Stand 39:67-131 Jl '47
Is the hardenability of boron steels indirectly due to complete deoxidation? G. H. Boss. Metal Prog 51:265 F '47
Isothermal transformation and end-quench hardenability of some NE steels. R. L. Rickett and others. bibliog il Am Soc for Metals Trans 35:22-43; Discussion. 43-5 '45
Maximum sizes of bars of required As-quenched center hardness (H steels); tables; data sheet. A. L. Boegehold. Metal Prog 51 272-B F '47
Microhardness of steel, device designed at Research laboratory of United States steel corporation Blast F & Steel Pl 35·484-5 Ap '47, Automotive & Aviation Ind 96.37+ My 1 '47; Mech Eng 69 408 My '47
Minimizing die-block distortion resulting from hardening diags Iron Age 160.79 Ag 14 '47
New deep hardening carburizing steels; SuperKore steels. Iron Age 160.62-4 Jl 24 '47
New tool steel features improved hot hardness; Vasco Supreme. Iron Age 158:63 D 12 '46
P-V test; new hardenability measure. E. S. Kopecki il Iron Age 158:66-9 N 14 '46
Partition of molybdenum in hypoeutectoid iron-carbon-molybdenum alloys. F. E. Bowman bibliog Am Soc for Metals Trans 36: 61-76, Discussion. 76-80 '46
Partition of molybdenum in steel and its relation to hardenability. F. E. Bowman. bibliog Am Soc for Metals Trans 35:112-25 '45; Same cond. Steel 115:82+ N 27 '44; Discussion. Am Soc for Metals Trans 35: 128-9 '45
Practical approach to cold treatment of steel. O E. Brown. il Materials & Methods 24: 1445-9 D '46
Precipitation hardening. L Sanderson Chem Age (Lond) 57.151-2 Ag 2 '47
Precipitation-hardening stainless steels. R. Smith and others. Engineer 183:122 Ja 31 '47
Precision heat treatment; aero-engine works of Rolls-Royce il Elec R (Lond) 141.311-15 Ag 29 '47
Relationship between hardenability and tensile strength of normalized steels. L. A. Carapella bibliog Am Soc for Metals Trans 35.435-45 '45
Salt baths for hardening high speed W. E. Bancroft. bibliog il Metal Prog 50:941-7 N '46
Selecting steels by hardenability bands. C. M. Parker. Materials & Methods 25.68-72 Mr '47
Selective hardening, methods and techniques; abstract A. E. Uitti. il Materials & Methods 25.129 Ja '47
Slow changes in hardened steel. V. Kappel Metal Prog 51.611-12 Ap '47
Some experiments on quenching media. F. W. Jones and W I. Pumphrey. bibliog diags Iron & Steel Inst J 156.37-54 My '47
Sources of error in diamond pyramid hardness measurements on hardened steel. W. N. Hindley. Iron & Steel Inst J 152:245-54, pl 23-23a no 2 '45; Same abr. Engineering 161.286-7 Mr 22 '46; Abstract. Metal Prog 49:610+ Mr '46; Discussion. Iron & Steel Inst J 152.254-8 no 2 '45
Standard hardenability test; Jominy end-quench test; data sheet. diags Metal Prog 50.1006 N '46
Standard steels; characteristics, properties, fabrication, etc. diag Machine Design 19: 157-67 S; 151-63 N '47
Statistical survey of some hardened steel forgings. R. F. Mather. il Metal Prog 51: 79-85 Ja '47
Sub-zero temperatures in treating and assembling metal parts. G. B. Olson. il Mach 53·149-56 Ap '47
Use of direct transformation data in determining preheat and postheat requirements for arc welding deep hardening steels and weld deposits L. F. Bowne, jr. bibliog il Welding J 25:sup234-41 Ap '46; Abstract. Metal Prog 52:436+ S '47
Welding hardenable steels. O. T. Barnett. il diags Steel 121:72-4+ S 22, 80-4+ S 29 '47

See also
Case hardening
Steel, Quenching of

STEEL, Heat resisting
Apparent influence of grain size on the high-temperature properties of authentic steels; abstract. C. L. Clark. Steel 119:40 N 25 '46
British high temperature steels for gas turbines. C C. Hall. il Steel 120.101+ Je 23 '47
Characteristics of three high temperature alloys for gas turbines, etc. developed by Allegheny Ludlum steel corp. J. B. Henry, jr. diags Iron Age 159:58-64 Je 12 '47
Creep strength of pipe still tubes. W. L. Nelson Oil & Gas J 45.283 Ja 25 '47
Evaluating high heat properties of steels. H Dobkin. bibliog Steel 120 86-7+ Ap 21 '47
Ferritic disks used for gas turbines; abstract. D. A Oliver and G. T. Harris. Materials & Methods 25:126 Mr '47
High creep strength austenitic gas turbine forgings. D. A Oliver and G. T. Harris Engineer 183:468-9, 502-3 My 30-Je 6 '47
High-creep strength austenitic steel for gas turbines. D. A. Oliver and G. T. Harris. Engineering 163 533-6 Je 20 '47
High-temperature metals; special section. L. N. Rowley and B G. A. Skrotzki. il diags Power 91.681-96 O '47
High temperature pipe cost reduced using both alloy and carbon steels; patent. diag Pet Processing 2·704 S '47
Metallurgical considerations of gas turbines. N. L. Mochel bibliog il diags A S M E Trans 69·561-8 Ag '47
Microstructures and structural diagrams for Fe-Ni-Cr alloys. A. D. Brasunas and J. T. Gow. il Metal Prog 51:777-80 My '47
Observations on conducting and evaluating creep tests; heat-resistant alloys used in the construction of gas turbines. W Siegfried. bibliog il diags Iron & Steel Inst J 156 189-207 Je '47; Discussion. 157:382-4 N '47
Precision forging of high temperature alloys C. H. Smith, jr. il diags Iron Age 158: 42-6 N 28 '46
Requirements of steel for gas turbines. H. R. Zschokke and K. H Niehus il diag Iron & Steel Inst J 156.271-83 Je '47; Abstracts. Engineer 184 97-8 Ag 1 '47, Engineering 164:136 Ag 8 '47; Discussion Iron & Steel Inst J 157 385-90 N '47; Engineer 184 98-9 Ag 1 '47, Engineering 164:136-7 Ag 8 '47
Requirements of steels for high temperature service. C L. Clark. il Metal Prog 50:897-903, 1199-203 N-D '46
Scaling behavior of high-strength heat-resisting steels in air and combustion gases in the gas turbine. W Stauffer and H. Kleiber. il diags Iron & Steel Inst J 156. 181-8 Je '47; Abstracts Engineer 184·98 Ag 1 '47, Engineering 164.136 Ag 8 '47; Discussion. Iron & Steel Inst J 157 385-90 N '47; Engineer 184.98-9 Ag 1 '47, Engineering 164:136-7 Ag 8 '47
Some unusual features encountered in investigating cracked welds in 35/15 magnesium retorts H J. Nichols. il Welding J 26.881-4 O '47
Steels for use at elevated temperatures. C. Sykes. 6pls Iron & Steel Inst J 156:321-69 bibliog(p338-69) Jl '47; Discussion. Engineering 164 136-7 Ag 8 '47, Iron & Steel Inst J 157 385-90 N '47
Welding of high-temperature, high-pressure steel valves. V T. Malcolm and S. Low. il Welding J 26.101-10 F '47

Bibliography

Bibliography on creep- and heat-resisting steels, covering the period 1937 to 1947. C. Sykes Iron & Steel Inst J 156:338-69 Jl '47

STEEL, Heat treatment of
Annual engineering review. Materials & Methods 25.105-6 Ja '47
Automatic continuous heat treatment. diag Iron Age 159.63 Ja 16 '47
Conveyorized automatic heat treatment. A. F. Holden. il diags Iron Age 158·70-4 N 14 '46
Critical points of S A.E. 4340 steel as determined by the dilatometric method. D. Niconoff il Am Soc for Metals Trans 37: 337-53; Discussion 353-9 '46
Detection, causes and prevention of injury in ground surfaces. L. P. Tarasov. il Am Soc for Metals Trans 36:389-440 bibliog(p439-40); Discussion. 441-51 '46
Effect of carbide structure on corrosion resistance of steel. R. W. Manuel. il Steel 121:82-4+ O 13 '47
Effect of heat treating and cold rolling on crystal structure of austenitic manganese steel N. P. Goss. bibliog il Steel 121. 74-5+ S 29, 98-100+ O 6 '47
Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels. N. A Ziegler and W L Meinhart. il diag Am Soc for Metals Trans 37:360-99 bibliog(49 titles, p397-9), Discussion. 399-401 '46
Effect of stabilizing and stress relief, heat treatment for 18-8 stainless. W. G Hubbell. il Steel 121 86-8+ Ag 25 '47, Abstract. Materials & Methods 24 1266+ N '46
Effect of stress relief heat treatment on the technical properties of structural steels and structural elements. O Graf. diags Welding J 26:sup517-18 S '47
Effect of variations in composition and heat treatment on some properties of 4 to 6 per cent chromium steel containing molybdenum and titanium. G. F. Comstock. bibliog il Am Soc for Metals Trans 36:81-110 '46; Conclusions. Steel 118:130-1 Ja 28 '46; Discussion. Am Soc for Metals Trans 36: 110-15 '46
Examples of metallurgical progress at International harvester co.; continuous heat treatment of ball bearing race rings. il Metal Prog 52:619-20 O '47
Factors controlling graphitization of carbon steels at subcritical temperatures. C. R. Austin and M. C. Fetzer. bibliog il Am Soc for Metals Trans 35.485-529; Discussion. 529-35 '45
Field heat treating of refinery piping. W. H. Fortney. diags Pet Refiner 25:122-4 D '46
Flaking in alloy steels. S W. Poole. bibliog il Iron Age 160.42-6 Jl 17 '47
Heat treatment of high speed steels. H. E. Boyer. il Steel 120.110-13+ Mr 3; 92-5+ Mr 10 '47
Heat treatment of some chromium-nickel alloys. H A. Campbell. bibliog il Iron Age 159·74-9 Je 5 '47
How to predict suitability and determine method of martempering hypoeutectoid steel. D. Rosenblatt. bibliog il Steel 121· 94-6+ O 20 '47
Hydrogen and transformation characteristics in steel. J. H. Andrew and others. bibliog 5pls diags Iron & Steel Inst J 156.208-53 Je '47; Discussion. 157 377-81 N '47
Influence of carbon content upon the transformation in 3 per cent chromium steel. T Lyman and A. R. Troiano il Am Soc for Metals Trans 37·402-44 bibliog(p444); Discussion. 444-8 '46
Influence of water vapor and methane on the heat treatment of steel in a $CO:H_2$ gas atmosphere. H M Heyn. il diag Metal Prog 52·232-7 Ag '47
Isothermal heat treatment of steel ball bearing races. H. A. Knight. diag Materials & Methods 26:86-7 Ag '47
Mechanism of the surface decarburization of steel. W A. Pennington. il diags Am Soc for Metals Trans 37:48-91 bibliog(p90-1); Discussion. 91-109 '46
Modern heat-treating methods in an automobile plant, Buick motor division, General motors corporation. C. H. Wick il diags Mach 53 141-9 Ja '47
Modernized setup cuts heat treat costs; Fellows gear shaper co. J. G. Gurney. il plan Iron Age 159;64-7 F 6 '47
Modified isothermal treatments minimize distortion. O. E. Brown. il Iron Age 159 54-6 Ap 17 '47
New heat treating atmosphere producer for neutralene gas. A G. Hotchkiss and H. M Webber. flow diag il diag Iron Age 158·48-55 N 21 '46; Same cond. Gen Elec R 49:21-7 N '46
Oxide conditioning speeds pickling operations. C. B. Murton, jr. and M. F. Hawkes. Iron Age 160:46-8 O 30 '47
Rectification of neutral salt baths; Neutra-Gas process. P. H. Kramer. il Iron Age 160·52-4 O 23 '47
Reducing embrittlement in electroplating of steel springs. C T. Eakin and H. W. Lownie, jr. bibliog il Iron Age 158 69-72 N 21 '46

STEEL, Heat treatment of—*Continued*
Relief of stresses in steel products; charts; engineering file facts. C. R. Jelm and S. A. Herres. Materials & Methods 24.1225 N '46
Salt baths for metals. E. L. Cady. il Sci Am 176.164-6 Ap '47
Some metallurgical aspects of carbon steel spot welding. J. Heuschkel. bibliog il diags Welding J 26.sup560-82 O '47
Success in steel treating depends on experience and common sense. W. R. Bennett. Steel 121:178+ O 6 '47
Supression of pearlite in manganese-molybdenum steels. C. R. Austin and J. R. Doig. bibliog Am Soc for Metals Trans 36·336-60 '46
Technical progress in metalworking; heat treating. Steel 120 280-2+ Ja 6 '47
Weldable high strength steel castings. W. J. Crook. il diags Metal Prog 50·906-14 N '46

See also
Annealing
Case hardening
Furnaces, Heat treating
Steel, Quenching of
Tempering

STEEL, High speed. See Tool steel

STEEL, Molten
Behavior of molding sand when in contact with liquid steel. J. B. Caine. il Foundry 75 72-7+ Jl '47
Determination of hydrogen in liquid steel. J. E Wells and K. C. Barraclough. pl diags Iron & Steel Inst J 155 27-32 Ja '47
Emissivity of molten iron and steel. D Knowles and R. J. Sarjant. bibliog diags Iron & Steel Inst J 155.577-92 Ap '47
Fluidity of furnace killed vs. ladle killed basic open hearth heats. D. J. Murphy. il Blast F & Steel Pl 35.558-9 My '47
Fluidity of steel, experimental investigations on fluidity/temperature relationships. R. Jackson and others. bibliog diags Iron & Steel Inst J 157 1-21 S '47
Improvement in design of immersion pyrometers for liquid steel. D. Manterfield and J. R. Thurston diags Blast F & Steel Pl 34.1520-1+ D '46; Abstract. Metal Prog 50: 504+ S '46
Photoelectric pyrometer for a small high-frequency induction furnace. T. Land and H Lund il diags Iron & Steel Inst J 156. 75-7 My '47
Photographic investigation of the brightness temperatures of liquid steel streams. J. A. Hall. pl diag Iron & Steel Inst J 155:55-85 Ja '47, Abstract. Engineer 183 476 My 30 '47; Discussion. Iron & Steel Inst J 156. 497-500, 157.197-200 Ag, O '47, Engineer 183.476 My 30 '47
Symposium on the contamination of platinum thermocouples, by the Liquid steel temperature *sub-committee*. T. Land and others. 4pls Iron & Steel Inst J 155·213-34 F '47, Discussion 156·497-500 Ag '47

STEEL, Nickel clad
Welding and flame cutting applied to stainless and clad steels, Dilts Hydrapulper installed in plant of National paper corp S. F. Danes. il Materials & Methods 26·102-6 O '47

STEEL, Powdered
Sintered iron and steel for structural parts, abstract. R Kieffer and others. Materials & Methods 26.133 O '47

STEEL, Quenching of
Art of quenching. R G. Roshong. diags Metal Prog 50:948-51 N '46
Caustic soda as a quenching medium for steel. K. Rose. il Materials & Methods 25: 75-7 Ja '47
Caustic soda solutions for quenching; engineering file facts. K. Rose, comp. Materials & Methods 25:123 F '47
Controlling physical properties by the interrupted quench. H. E. Boyer. il Iron Age 160 49-54 Jl 3 '47
Effect of carbon content on hardenability. E. S. Rowland and others. bibliog Am Soc for Metals Trans 35.46-72; Discussion. 73-84 '45
End-quench hardenability versus hardness of quenched rounds. G. K. Manning. il Metal Prog 50.647-52 O '46
Further developments of end quench hardenability test. C. R. Wilks and others. bibliog diags Am Soc for Metals Trans 35.1-20; Discussion. 20-1 '45
High-hydrogen atmosphere intensifies quench cracking tendency C. A. Liedholm. il diags Metal Prog 51:414-19 Mr '47
Ingenious steel quenching practices developed by farm implement makers. K. Rose. il Materials & Methods 25 77-80 Je '47
Interrupted quenching as a metallurgical tool. C. H. Lekberg. Steel 121·79+ O 27 '47
Isothermal transformation and end-quench hardenability of some NE steels. R. L. Rickett and others. bibliog il Am Soc for Metals Trans 35:22-43; Discussion. 43-5 '45
Mass temperature effects on quenching 36 per cent cobalt magnet steel. B. Falk. bibliog Am Soc for Metals Trans 37.192-212; Discussion. 212-15 '46
Quenching media and methods. H. L. Flynn. il diags Am Mach 91:105-16 Jl 3 '47 [reprints 25c]
Quenching of steel balls and rings; temperature-time-space relationships investigated on Heat and mass flow analyzer at Columbia university. V. Paschkis. bibliog diag Am Soc for Metals Trans 37:216-44 '46
Simple mechanical quenching device. il Iron Age 159.62 F 13 '47
Some experiments on quenching media. F. W. Jones and W. I. Pumphrey. bibliog diags Iron & Steel Inst J 156:37-54 My '47; Discussion. 156:524 Ag '47
Spray quench speeds induction hardening. F. W. Curtis. il diags Am Mach 91:79-81 S 25 '47

STEEL, Reinforcing
Column and beam spacing considered for economy in steel bar lengths. C. L. Dayton. Civil Eng 17:36 Ja '47
Corrosion of reinforcing steel in cracked concrete. B Tremper. il Am Concrete Inst J 18.1137-44 Je '47
Deformed bar reinforcing steel in Sweden. E. Reinius. bibliog il diags Engineer 182: 508-9 D 6 '46
Hot-heading and cold-forming bars in single operation. il Iron Age 160.60 Jl 17 '47
Improved design of reinforcing concrete bars now under way Iron Age 159:110 Ja 30 '47
Railroad rails serve as reinforcing steel in secondary road bridge construction S. W La Lance. il Civil Eng 17:544-5 S '47

See also
Concrete, Reinforced

Testing
Bond characteristics of commercial and prepared reinforcing bars. S. T. Collier. il diags Am Concrete Inst J 18:1125-33 Je '47
Comparative bond efficiency of deformed concrete reinforcing bars. A. P. Clark. il diags Am Concrete Inst J 18 381-400 D '46; Same. J Res Nat Bur Stand 37:399-407 D '46; Discussion. Am Concrete Inst J 18.400[1]-400[9] Je '47
Distribution of bond stress in concrete pullout specimens. D. Watstein il diags Am Concrete Inst J 18:1041-52 My '47

STEEL, Sheet. See Sheet steel

STEEL, Stainless
Acetic acid and chlorine vs materials of chemical plant construction. Chem Eng 54: 241-2, 246+ My '47
Bright hardening stainless steel; National cash register co. il Steel 119:80+ N 25 '46
Chemical engineering materials of construction; review of literature from start of World war II; stainless steels and other ferrous alloys. M. H. Brown and W. B. DeLong. bibliog(165 ref) Ind & Eng Chem 39:1248-54 O '47.
Corrosion resistant chemical equipment of stainless steel. W. R Meyer and H. L. Maxwell. Steel 121 131-2 N 3 '47
Cutting corrosion-resistant alloys by the Flux-injection method. il Mach 54:165-6 O '47
Electrolytic manganese in stainless steel; tests at the Timken roller bearing co., Canton, Ohio. F. Sillers, jr. and R. T. C Rasmussen. bibliog U S Bur Mines Rep of Invest 4078·1-17 '47

STEEL, Stainless—*Continued*
Etching reagent for stainless steels. R. A. Huseby. il Metal Prog 51:87 Ja '47
Flux-injection cutting stainless steels. G. E. Bellew. il diag Steel 120:86-8+ F 17; 80-2+ F 24 '47
Forging practice; stainless steels. A. Ashburn. Am Mach 91:125 My 8 '47
Forging stainless steel; engineering file facts. K. Rose, comp. Materials & Methods 26. 125 O '47
High speed annealing of stainless bars and tubes. E. S. Kopecki. il diag Iron Age 160·143-9 O 16 '47
High viscosity compounds improve stainless plate drawing, hydrogenated castor oil. Iron Age 160:130 O 16 '47
Honorable mention to Solar aircraft co. for achievement in drawing stainless steel. il Materials & Methods 24:1168-9 N '46
How to use carbide cutters for milling stainless steel. H A. Frommelt. il Iron Age 159: 56-9 Mr 20 '47
Induction soldering stainless steel kitchen utensils; Adel precision products corp. il Steel 120.87+ Ja 13 '47
Kinetics of oxide film formation on metals and alloys. E A. Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29).431-61 '47
Machining of stainless steels. W. H. Crisp and W. Burnan. il diags Engineering 162· 526-8 N 29 '46
Magnetic tests of spot welds in stainless steel il(p 180) Engineering 164·177-8 Ag 22 '47, Elec R (Lond) 141:325-6 Ag 29 '47
Motor haulage bodies of stainless steel. V. M. Drew. S A E J 55·24-6 Mr '47
Musts in silver brazing stainless. A. W. Swift. il Steel 120.98-9+ Ap 28 '47
New company makes stainless steel sheets and strip, Washington steel corp. il Steel 120·118-20+ Ap 28 '47
New fields for stainless. F. P. Peters. il Sci Am 177 10-12 Jl '47
New techniques in conditioning stainless steel, abstract. A. E. Hamilton, jr. Steel 121·106+ O 13 '47
New theory for the passivation and corrosion resistance of 18-8S stainless steel M. G. Fontana. Ind & Eng Chem 39:sup 103A-4A S '47
Passivity in chromium-iron alloys; adsorbed iron films on chromium; abstract H. H. Uhlig. diags Iron Age 160 60-1 O 30 '47
Plastic coating expedites stainless stamping operations. W. A. Phair. il Iron Age 159: 47-51 My 15 '47
Powder process in stainless steel production; abstract. E. M. Holub Steel 121:113 O 13 '47
Precipitation-hardening stainless steels. R. Smith and others. Engineer 183:122 Ja 31 '47
Resistance of several stainless steels to various corrosive media; tabulation; engineering file facts. Materials & Methods 26.121 Jl '47
Rigidized stainless. il Steel 120 117 Je 23 '47
Spectrographic analysis of stainless steels. D. P. Jensen. bibliog Iron Age 160:47-8 Jl 17 '47
Stainless steel cutting. H G. Hughey. il diags Welding J 26:393-9 My '47
Stainless steel electropolishing process. Metal Finishing 45·95 S '47
Stainless steel pays off. il Bsns W p37-8+ Mr 29 '47
Stainless steel piping. J. D. Mattimore. diags Heating-Piping 19:81-3 O; 84-7 N; 73-8 D '47
Stainless steels for springs. H. C. R Carlson. il Product Eng 18:103-6 My; 153-6 Je '47
Standard stainless steels; data sheet. Metal Prog 50:834 N '46
Standard type numbers, chemical composition limits and ranges for stainless steels; table; engineering file facts. Materials & Methods 25:123 Je '47
Steel industry largest consumer of nickel. R. C Stanley. Blast F & Steel Pl 35:56 Ja '47
Sulphur dioxide versus construction materials. Chem Eng 54:214+ S '47
Suppression of radiations at high temperatures by means of ceramic coatings D. G. Bennett bibliog il diag Am Cer Soc J 30. 297-305 O 1 '47
Use of exothermic cores in pouring stainless steel; Induction electric foundry. M. Beam. il Foundry 75·140+ N '47
Wider horizon for stainless, Air reduction co.'s flame-cutting process. Bsns W p64 N 16 '46

See also
Chromium nickel steel
Chromium steel

Testing

Intergranular corrosion determination; corrosion in aircraft materials caused by gasoline containing lead halides. H. Kirtchik. il Iron Age 159.67-70 Mr 6 '47
Spotting iron contamination on stainless surfaces, ferroxyl paper tests. M. A. Scheil. il Metal Prog 51:442-3 Mr '47

Welding

All-welded metal casket; Ryan aeronautical co W. P. Brotherton. il Welding J 26: 786-7 S '47
Annealing salt for 18-8; exhaust manifolds, Ryan aeronautical co. K. Whitcomb. il Steel 120:86-7+ Je 16 '47
Atomic hydrogen welding of stainless sheet; combustion chambers for General Electric's aircraft jet engine. G. Richardson. il diags Iron Age 159:72-4 My 8 '47
Attempt to select a suitable specimen for the study of corrosion cracking in 18-8 steel. M H. Springer and others. il diags Welding J 26 sup530-8 S '47
Correct technique necessary for stainless welding. L K. Stringham. il Iron Age 160: 61-3 Ag 28 '47
Crack sensitivity of chromium-nickel stainless weld metal. R. D. Thomas, jr. il Metal Prog 50.474-9 S '46; Discussion (Chemical composition of austenitic welding electrodes). R. K. Lee. 51:445-7 Mr '47
Effects of flux in welding stainless steel by the atomic hydrogen process G. Richardson. il Iron Age 159.42-6 My 1 '47
In welding stainless steel containers, distortion can be controlled L K. Stringham il diags Sheet Metal Worker 38:51-2 Ag '47
Inert arc welding makes stainless strip into belt. Steel 121.100 S 22 '47
Inert-arc welding stainless steel belt. M. J. Conway. Welding J 26:791-2 S '47
Magnetic tests of spot welds in stainless steel. il(p 180) Engineering 164:177-8 Ag 22 '47; Elec R (Lond) 141:325-6 Ag 29 '47; Electrician 139:266 Jl 25 '47
New stainless steel electrode specifications. R. D. Thomas. Welding J 26·792 S '47
Pressure welding of stainless steel. A. L. Rustay. il Metal Prog 52.238-42 Ag '47
Pressure-welding stainless steel rings. C. J. Burch and others. il diags Steel 120:88-90+ Ja 13 '47
Pressure-welding stainless steel rings. A. L. Rustay and others. il diags Welding J 26: 129-37 F '47
Problems in resistance welding stainless steel railway car structures J. H Van den Beemt. il Welding J 26.837-43 O '47
Projection welding of low carbon and stainless steel sheet. M L. Ochieano. il diags Product Eng 18:124-6 Mr '47
Resistance welding of stainless steels J. J. Riley. il diags Am Mach 90:112-15 N 7; 108-12 N 21; 134-8 D 5 '46
Roll bending and flash welding stainless steel turbosupercharger rings. P. B. Scharf. il diags Iron Age 159:52-6 Ja 23 '47
Seam welding stainless steel foil. il Iron Age 158 76 D 5 '46
Shop using Heliarc welding with four other processes; Phillips, Doup & co. il diags Sheet Metal Worker 38·55-7 S '47
Spot-weld testing; magnetic inspection of stainless steel fusion. il Elec R (Lond) 141. 325-6 Ag 29 '47
Stainless steel vent hoods and stacks fabricated by arc welding. P. C. Ziemke. il Welding J 26·700 Ag '47
Stainless steel welding electrodes; reference book sheet. Am Mach 91.147 Jl 3 '47
Submerged melt welding of corrosion-resistant metals. R. J. Anderson and H. J. Roberts il Welding J 26·341-2 Ap '47
Welding alloy steel piping. E. R. Seabloom. il Heating-Piping 18.79-83 D '46

STEEL, Stainless—Welding—*Continued*
Welding and flame cutting applied to stainless and clad steels; Dilts Hydrapulper installed in plant of National paper corp. S F. Danes. il Materials & Methods 26 102-6 O '47
Welding of stainless steel for jet propulsion E. J DeWitt and F. J. Lammers il diags Welding J 26.320-3 Ap '47

STEEL, Strip
Annealing plant for steel strip at Newport; abstract and discussion B. Jones and I. Jenkins. Engineering 162·568 D 13 '46
Bright-annealing plant for steel strip. B. Jones and I. Jenkins. il diag Engineering 163·92-6 Ja 24 '47
Cold strip reduced in one pass at 4000 feet per minute il Steel 120·80 Ja 20 '47
Cold strip Y-mill. il diag Iron Age 160·62-3 O 30 '47
Hot and cold strip mills in the Chicago area. E. D Martin il Metal Prog 52.560-4 O '47
Lubricating hot strip mills. A. F. Brewer and W. H. Mandy. il diags Steel 119.90-3+ D 9; 94-6+ D 16 '46
Muffler maker cuts material and manufacturing costs by installing equipment to handle coiled strip; Mackenzie muffler co il Steel 121 88-9+ O 13 '47
New company makes stainless steel sheets and strip; Washington steel corp. il Steel 120:118-20+ Ap 28 '47
New radar transformer steel. G. H. Cole and R S. Burns. il Materials & Methods 24.1457-60 D '46
Small diameter work rolls feature Montgomery cold strip mill. il diag Steel 121:88+ O 27 '47
Vertical normalizing furnace for strip steel. Iron Age 158·80 D 12 '46
Weirton, West Virginia, steel mill rolls mile-a-minute strip il Manuf Rec 116:41, 69 Je '47

STEEL, Structural
Analyzing substation structural weights. Elec World 127:169 Ja 18 '47
Armor plate steels used in huge coal stripping dipper. il Steel 119.84-6 N 18 '46
Inland licenses U.S steel corp to make Hi-Steel. Blast F & Steel Pl 35:467 Ap '47
New materials and new uses for old materials. M. Male. Blast F & Steel Pl 35:561-2+ My '47
Some engineering and design considerations in the utilization of ordinary and high-strength steels W. B. Brooks. bibliog diags Welding J 26:665-9 Ag '47

See also
Bridges, Iron and steel
Concrete, Reinforced
Steel, Aircraft
Steel, Automobile
Steel, Reinforcing
Steel construction

Testing
Auxiliary tests on the steels of I-beams tested in flexural impact at Columbia university G. G. Luther and others. il diags Welding J 26.sup400-8 Jl '47
Beurteilung der eigenschaften hochfester baustähle für geschweisste tragwerke. O. Graf. bibliog il diag V D I 87:422-4 Jl 10 '43; Abstract (Evaluation of mechanical properties of high-tensile steel for welded structures) Welding J 26·sup367-8 Je '47
Effect of stress distribution on yield points F. G. E Peterson il diags Am Soc C E Proc 72 445-59 bibliog(p458-9) Ap '46; Discussion. bibliog diags 72:1032-40, 1271-84, 1421-4; 73 381-2 S, N-D '46, Mr '47
Effect of stress relief heat treatment on the technical properties of structural steels and structural elements. O. Graf. diags Welding J 26 sup517-18 S '47

Welding
Alloy steels for welded locomotive boilers. H. L. Miller il Ry Mech Eng 121:6-8+; Discussion. 15 Ja '47
Correlated brittle fracture studies of notched bars and simple structures. C. W. MacGregor and others. bibliog il diags Welding J 26:sup50-6 Ja '47; Discussion W. P Roop. 26·sup333-4; Reply. sup357 Je '47
Ductility of steels for welded structures; abstract. A. B. Kinzel. diags Iron Age 160: 53-5 O 30 '47
Effect of stress relief heat treatment on the technical properties of structural steels and structural elements. O. Graf. diags Welding J 26.sup517-18 S '47
H-section welded trusses. A T. Waidelich. il diags Welding J 26.327-31 Ap '47
Influence of geometrical restraint and temperature on the toughness and mode of rupture of structural steel. A. R. Anderson and A. G. Waggoner. il diags Welding J 25·sup789-801 N '46
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others bibliog il diags Welding J 62·sup372-432 Jl '47
Investigation of the effect of welding on the transition temperature of navy high-tensile, low-alloy steels. G. G. Luther and others. bibliog il diags Welding J 25:sup634-45 O '46, Discussion. 25·sup847-8+; 26:sup251-2 D '46, Ap '47
Preliminary investigation of the spot welding of scaly and rusty structural steel. W. D. Doty and W. J. Childs. il diag Welding J 26.sup358-62 Je '47
Recent trends in concepts of design for welded steel structures. L. Grover. il diags Welding J 25.1091-108 N '46
Residual stresses in welded structures; report of an investigation. W. A Wilson and C Hao il diags Ill U Eng Exp Sta Bul 361·1-78 '46 (pa 75c); Same. Welding J 26: sup295-320 My '47
Strength of welded joints at low temperatures and the selection and treatment of steels suitable for welded structures. O. Graf. bibliog il diags Welding J 26:sup508-17 S '47
Über die alterungsempfindlichkeit von baustählen hoher festigkeit A. Fry and L. Kirschfeld. bibliog il VDI 87·123-7 Mr 3 '43; Abstract (Aging of high tensile structural steel) Welding J 26.sup149-52 Mr '47
Weldability of ship steels; effects of travel speed, preheat temperature and arc power level E. F Nippes and W F. Savage. il diags Welding J 25 sup776-87 N '46
Welded freight car construction. R. L. Rex. il Welding J 25.1043-8 N '46; Same cond. Ry Mech Eng 121·132-6 Mr '47; Discussion. W B. Brooks. 121 167-8 Ap '47
Welded girder sustains high stresses in test at zero degrees F. L Grover. il Eng N 139:256-7 Ag 21 '47

See also
Steel construction—Welding

STEEL alloys
Adapts pilot plant to manufacture of alloy steel; Bureau of mines plant in California. W. W. Stephens and J. L. Morning. il plan Steel 120:116+ My 5 '47
Alloy steel production holds at nine per cent of total output. T. Campbell. Iron Age 160: 119-20 O 2 '47
Alloy steels for welded locomotive boilers. H L. Miller. il Ry Mech Eng 121:6-8+; Discussion 15 Ja '47
Annual engineering review. il Materials & Methods 25 89-91 Ja '47
Chemical engineering materials of construction; review of literature from start of World war II; iron, mild steels, and low alloy steels. R B. Mears and S. C. Snyder. bibliog(134 ref) Ind & Eng Chem 39:1219-24 O '47
Development of high-strength welding quality alloy steels and their postwar applications H. Miller. il Welding J 25.1077-9 N '46
Economic approach to hardenability. D. I. Brown. bibliog Iron Age 159:42-7 Mr 27; 53-5+ Ap 3 '47
Economy steels in France A. Sourdillon. Engineer 183:356 Ap 25 '47
Effect of alloying elements on the tensile properties of 25—20 weld metal. H. C. Campbell and R D. Thomas, jr. il Welding J 25: sup760-8 N '46; Discussion. 26:sup119-20 F '47
Effect of alloys in steel on resistance to tempering; abstract. W. Crafts and J. L. Lamont. Iron Age 158:64 N 28 '46
Flaking in alloy steels. S. W Poole. bibliog il Iron Age 160:42-6 Jl 17 '47
Forging practice; alloy steels. A. Ashburn. diags Am Mach 91:123-4 My 8 '47

STEEL alloys—*Continued*
Hardness and hardenability in carbon and alloy steels. il diags Product Eng 18:141-3 Jl '47
Hot-rolled alloy steels, standard open-hearth and electric-furnace alloy steels, bars, billets, blooms and slabs, reference book sheets Am Mach 91:147, 149 Ag 28 '47
Low-alloy, high-strength steels; characteristics, properties, fabrication, etc. bibliog il diags Materials & Methods 26:101-16 Jl '47
Low-alloy, high-tensile steels, their properties, workability and weldability. G. M. Huck. il Welding J 26·32-5 Ja '47
Low alloy steels for welding; abstract. A. J. K. Honeyman and J. Erskine. Materials & Methods 24·1238+ N '46
Popular types of steels. G D. Boyer. il Product Eng 18·81-5 Ja '47
Postwar view of alloy steels. R. S. Archer. S A E J 54.22-5+ D '46
Revised standard alloy steels; reference book sheet. Am Mach 90:139 Ag 1 '46; Same abr. Metal Prog 50 821 N '46
Strength and ductility. M. Gensamer bibliog il Am Soc for Metals Trans 36 30-60 '46; Excerpts. Iron Age 157.66-71 F 14 '46, Metal Prog 49.731-4 Ap '46
Versatile plant makes alloys; M. W Kellogg co. of Jersey City il Bsns W p41-2+ S 27 '47
Wartime applications of nickel and alloys continue expanded use. Iron Age 158:150 D 5 '46

See also
Chromium nickel steel
Chromium steel
Cobalt steel
Ferroalloys
Iron alloys
Manganese steel
Molybdenum steel
Nickel steel
Silicon steel
Steel, Automobile
Steel, Stainless
Steel, Structural
Tool steel

Analysis

Alloy steel analysis, quantitative determination of heavy metal oxinates. W. G. Cass. Chem Age (Lond) 55:709-12 D 7 '46
Colorimetric method for the determination of cobalt in stainless steel H M Putsché and W. F. Malooly. bibliog Anal Chem 19: 236-8 Ap '47
Determination of phosphorus in austenitic chromium-nickel steels. Iron & Steel Inst J 155.373-91 Mr '47

Testing

Observations on conducting and evaluating creep tests, heat-resistant alloys used in the construction of gas turbines W. Siegfried. bibliog il diags Iron & Steel Inst J 156·189-207 Je '47, Discussion. 157·382-4 N '47

STEEL balls See Balls, Steel

STEEL bars
Applications of Bessemer bars requiring quality. J. D. Armour. Metal Prog 50·904-5 N '46
Hot-rolled carbon steel bars; standard steels, simplified sizes; reference book sheet. Am Mach 91:127 F 27 '47
Induction hardening steel bars at Jones & Laughlin. J. F Wilson. il Iron Age 159:44-6 My 15 '47
Maximum sizes of bars of required As-quenched center hardness (H steels); tables; data sheet A. L. Boegehold Metal Prog 51:272-B F '47
Receiving bar stock; unloading and checking of bars shipped by truck may be simplified. B. Melnitsky. il Steel 120·124+ Mr 3 '47
Recent revisions in extra cards for hot-rolled carbon bars clarified. Steel 120:46-7+ Ja 20 '47
Ring gears formed from steel bar stock K. Rose. il Materials & Methods 26:74-7 Ag '47

See also
Steel, Reinforcing

STEEL boxes. See Boxes, Steel

STEEL brothers and company, limited
Statement by the chairman at annual ordinary general meeting. J K. Michie. Economist 152·829-30 My 24 '47

STEEL buildings
Made-to-order steel buildings diag Steel 120: 102 Mr 10 '47
Quonset huts are back from the war il Arch Rec 101.102 Ja '47

See also
Steel houses

STEEL castings
Advances in the foundry industry C K Donoho il diag Metal Prog 51·768-70 My '47
Centrifugal casting process applied to stainless- and carbon-steel tubes J W Moore and J W. MacKay il diag Mech Eng 69. 551-8 Jl '47
Chipping operation R. E. Chapman. il Foundry 75.72-5+ N '47
Dry sand alloy steel castings recommended for crankshafts. H. L. Day. Steel 120:217 Ja 6 '47
First report of the side-blown converter practice sub-committee diags Iron & Steel Inst J 155·33-50 Ja '47, Discussion. 157.104-14 S '47
Flame hardened steel. S. T Jazwinski. il Steel 120 108-9+ My 12 '47
Fluidity of furnace killed vs. ladle killed basic open hearth heats D J. Murphy il Blast F & Steel Pl 35·558-9 My '47
Gains in fundamental research benefit steel casting industry. C. W. Briggs. Steel 120: 218 Ja 6 '47
Giant steel casting for forging press frame. il Sci Am 177.27 Jl '47
Heat treatment of heavy cast steel sections. P. C. Rosenthal and G. K Manning. il diag Steel 119·88-90+ N 18 '46
How much venting power must green sand molds possess? E. C. Troy. il diags Foundry 74·82-5+ D '46
How to cut costs of plastic molds; casting stainless-steel cavities, forces and inserts; pattern-making methods. H L. Flynn. diags Am Mach 91:93-100 Mr 27 '47
How to use carbide cutters for milling H. A. Frommelt. il Iron Age 159.47-52 F 27 '47
Making a 232-ton steel casting for forging press; United engineering & foundry co. il Foundry 75:78-9 My '47
Manufacture of small alloy steel castings by the investment process; abstract. J. P. Sellas. Foundry 75.159+ Ap '47
Manufacture of some thin-walled steel castings, with notes on the influence of pouring speed. diags Iron & Steel Inst J 152:519-34 no 2 '45
New uses for high tensile alloy steel castings; abstract. J. F. B. Jackson. Materials & Methods 25:125 Mr '47
Producing large steel castings; Bethlehem steel co P. Dwyer. il Foundry 75:74-7+ F '47
Producing steel castings by the thermit process. R. C. Wayne. il diags Foundry 75. 84-7+ Ag '47
Sands for heavy steel castings. D J Taylor Foundry 75:106-7+ Mr '47
Should molds be vented? J. R. Adams. il Foundry 75.86-7+ Je '47
Steel casting design details affect quality of product. F Kiper. il diags Product Eng 18: 86-9 Ag '47
Steel casting developments; abstracts of A.F.A. papers. Foundry 75:96-7+ Jl '47
Steel casting weighs 472,000 lbs. il Blast F & Steel Pl 35·223 F '47
Technical and operating problems, 2d annual conference of the Steel founders' society of America, Cleveland, June 5-7. Foundry 75.112+ Jl '47
Thirty years in steel founding; Crane co. H. W. Maack. il Metal Prog 52:631-5 O '47
United Engineering casts 472,000 lb. press frame. il Iron Age 159:49 My 1 '47
Use of exothermic cores in pouring stainless steel; Induction electric foundry. M. Beam. il Foundry 75:140+ N '47
Wartime plant makes large steel castings for peacetime uses, United engineering & foundry co. P Dwyer il Foundry 75:90-2+ S '47
Wetherill vacuum casting process. W. A Phair il Iron Age 160 67-70 Ag 14 '47
Which cast steel? E. J. Wellauer bibliog il diags Machine Design 18.101-5+ D '46; 19: 111-17 Ja; 138-42 F '47

See also
Steel ingots

STEEL castings—*Continued*

Repair

Repair welding of steel castings. O. T Barnett. bibliog il diags Foundry 75:74-7+ Ja '47

Statistics

Steel casting industry, shipments for 1946 analyzed Foundry 75:200 S '47

World production of steel ingots and castings; by countries; 1937-1946; tabulation. Steel 120:314 Ja 6 '47

Testing

Cast steels; low-temperature properties C. E. Sims and F. W. Boulger. Metal Prog 51 316+ F '47

Determination of austenite grain size in cast steels M. F. Hawkes. il Iron Age 159 46-51 Mr 13 '47

Effect of nickel on physical properties and thermal characteristics of some cast chromium-molybdenum steels. N. A. Ziegler and W L. Meinhart il diag Am Soc for Metals Trans 37:360-99 bibliog(49 titles, p397-9); Discussion 399-401 '46

Electrolytic manganese in acid-steel tests at Atlas steel casting co. and the Detroit steel casting co. R T. C. Rasmussen. U S Bur Mines Rep of Invest 3830:1-20 '45; Abstract. Metal Prog 50:1250+ D '46

Gas evolution from cast steel at room temperature H. H. Johnson and others. il Am Soc for Metals Trans 37:309-30; Discussion. 330-6 '46

Reducing metal wear with abrasion-resisting castings. J. S. Vanick. il Am Cer Soc Bul 26:109-16 Ap 15 '47

Steel casting practice modified by high-voltage inspection; use of million-volt X-rays. E H Grimm. il Steel 120.110-12+ My 12 '47

Studies on susceptibility of casting steels to graphitization. J J Kanter. il A S M E Trans 68:581-7 Ag '46; Same. Welding J 26:sup121-7 F '47

Supersonic inspection for internal fissures in cast rolls. J. Dugan. il Steel 121:80-1+ Jl 28 '47

Weldable high strength steel castings. W. J. Crook. il diags Metal Prog 50:906-14 N '46

STEEL chairs. See Chairs, Steel

STEEL chimneys. See Chimneys, Steel

STEEL construction

Economical steel framing details for small industrial buildings; with time-saver standards diags Arch Rec 102.115-16+ Ag '47

Factory designed for residential area; clothing factory and store for Bond stores, inc. in Rochester. il diags Eng N 138:511-13 Ap 3 '47

Ferguson engineers develop new low cost steel frame factory. Iron Age 158:154+ N 21 '46

Prefabricated steel locker plant in Stanton, N.J. il Am Bld 69:156 Je '47

Vertical sheet construction featured in new St Petersburg gas holder. G. C. Pfaff. il Gas Age 98:25 N 28 '46

See also

Concrete, Reinforced
Reservoirs, Steel
Riveting
Steel, Structural
Steel buildings
Steel houses

Concrete encasement

New piers for railway bridge save $1,400,000; use of steel piles encased in prepakt concrete J F Salmon. il diags Roads & Bridges 85 72-7+ Ag '47

Precast fireproofing on used steel reinforces columns for re-use; building for Cuneo press. il Eng N 139:464-5 O 2 '47

Design

Analysis of rigid knee-braced bents used in petroleum and chemical plants. W. H. Blank il diags Pet Refiner 25:111-18 D '46

Recent developments in steel construction. J. Singleton. Western Soc E J 51:183-90 D '46

Recent trends in concepts of design for welded steel structures. L. Grover. il diags Welding J 25:1091-108 N '46; Discussion. G M. Boyd 26 693-5 Ag '47

Specification for light-gage steel offers rational design formulas. Eng N 137.740 N 28 '46

Strength of beams as determined by lateral buckling. K. de Vries. diags Am Soc C E Proc 72.985-1011 S '46; Discussion. 72:1425-32; 73:236-8, 559-68, 953-9 D '46, F, Ap, Je '47

Suggestions for safe lateral bracing design. C M Throop. diags Eng N 138.218-19 F 6 '47

Suspension beam with unique hinge provides wide unobstructed floor. il diag Eng N 138: 1013 Je 26 '47

Testing of structural connections. A W Hendry. il diags Engineering 164 261-3 S 12 '47

Torsion in steel spandrel girders. J. E Lothers. diags Am Soc C E Proc 72:307-21 Mr '46; Discussion 72.1199-200, 1305-16; 73: 219-20 O-N '46, F '47

Erection

Steel erection for the Terrace Plaza hotel. il diag Eng N 139:336-9 S 4 '47

Specifications

Steel building code changes analyzed. T. R. Higgins il Eng N 137 529-33 O 17 '46; Discussion. 138.221-2 F 6 '47

Testing

Steel-arch hangar tested to destruction. H. E Wessman. il diags Eng N 139:539-43 O 16 '47

Welding

All-welded structure in Canada leads in economy, strength and appearance M. N. Vuchnich il diags Welding J 26:782-3 S '47

Building code requirements for welding structural steel. S A. Greenberg. Welding J 26: 219-22 Mr '47

Dry seal gas holders, all welded. R. Kraus. il diags Welding J 26:675-9 Ag '47

Field erected pressure vessels. F. L. Plummer. bibliog il diag Welding J 25 1081-9 N '46

Recent trends in concepts of design for welded steel structures L. Grover il diags Welding J 25:1091-108 N '46; Discussion. G. M. Boyd. 26 693-5 Ag '47

Rigid, unique watersphere design gained by use of electric arc-welding process. A. F. Davis il Welding J 26:512-13 Je '47

Roof trusses with welded joints tested by jacking against each other: General electric co's electronic-device research and manufacturing center. il Eng N 138.878-9 My 29 '47

Some engineering and design considerations in the utilization of ordinary and high-strength steels W. B Brooks. bibliog diags Welding J 26 665-7 Ag '47

Strength of arc-welded joints. J F Lincoln. il Mech Eng 69.325-6 Ap '47; Same cond Civil Eng 17 268 My '47, Same cond Arch Rec 101:112 Mr '47

Welded construction provides economical and rigid shop structure. A. F. Davis. il Welding J 26 18 Ja '47

Welded frame building designed for heavy loads, raisin-packing plant in Fresno, Calif. M. Falk. il diags Eng N 137:640-2 N 14 '46

STEEL construction, Subaqueous

Navy uses surplus steel in preserving inactive naval ships; berthing area at Green Cove Springs, Fla. B. K. Price. il Steel 120:76-7 F 10 '47

STEEL containers. See Containers, Steel

STEEL cutting

Automatic oxyacetylene operations R. F. Helmkamp. il Welding J 26:419-25 My '47

Brinell hardness does not measure machinability. G Schlesinger. bibliog diags Am Mach 91:125-36 Jl 17 '47

City gas and oxygen mixture effective in flame cutting steel. il Steel 120.77 Mr 24 '47

Cutting corrosion-resistant alloys by the Flux-injection method il Mach 54:165-6 O '47

Flame cutting operating data. A F. Chouinard. diags Welding J 25:1186-8 D '46

Flame cutting; structural shapes in quantity. il Steel 121:100-1 Jl 21 '47

Flux-injection cutting stainless steels G. E. Bellew. il diag Steel 120:86-8+ F 17; 80-2+ F 24 '47

Free machining die steel. Steel 120:104 F 10 '47

STEEL cutting—*Continued*
Good and bad structures in machining steel. N. E. Woldman il Materials & Methods 25. 80-6 F '47
Hardness distribution in chips and machined surfaces. N. Zlatin and M E Merchant. bibliog il diags Iron Age 159:69-75 My 22 '47
Heavy-cutting applications in foundry and steel mill. R S. Babcock. il diag Welding J 26·5-11 Ja '47
Hilshear small hand shearing machine diag Engineer 183·205 Mr 7 '47
How to set up carbide milling jobs H. A. Frommelt. il diags Am Mach 91:77-100 Ap 24 '47
How to use carbide cutters for milling. H A. Frommelt. il diags Iron Age 159:44-9 F 13; 48-53 F 20; 47-52 F 29; 74-8 Mr 6; 52-6 Mr 13; 56-9 Mr 20; 58-62 Mr 27; 78-81 Ap 10, 58-63 Ap 17; 58-62 Ap 24; 75-9 My 8; 62-5 My 15, 77-9 My 22; 80-3 Je 5; 65-8 Je 12; 77-80 Je 19; 160:69-72 Jl 3; 66-8 Jl 10, 61-4 Jl 17, 68-70 Jl 24 '47
Machinability and structure of ferrous materials. C. Sykes. diag Inst Mech Eng J & Proc 155 (War emergency issue no 20)·235-6 '46; Same. Engineering 161·573 Je 14 '46; Discussion Inst Mech Eng J & Proc 155 (War emergency issue no20).267-91 '46
Machinability rating, ferrous metals; tabulation. Am Mach 91·94 Jl 31 '47
Machinability testing apparatus and tests carried out at Naval ordnance inspection department, Sheffield, including development of drill test. D. G. W. Curry. Inst Mech Eng J & Proc 155 (War emergency issue no 20).244-6, pl 2-3(p420) '46; Same. Engineering 161:597-8 Je 21 '46
Machinability versus physical properties; use of charts M. E Merchant. il diags Metal Prog 50.1013-19 N '46
Machining of stainless steels. W. H. Crisp and W. Burnan. il diags Engineering 162: 526-8 N 29 '46
Machining steel car wheels. il Steel 120·115 Ja 13 '47
Mechanism of tool vibration in the cutting of steel. R. N. Arnold. il diags Inst Mech Eng J & Proc 154:Proc 261-76 bibliog(p276), pl 1-4 D '46; Same cond. Engineer 180.355-6, 379-80 N 2-9 '45; Abstract. Metal Prog 50: 700+ O '46; Discussion. Inst Mech Eng J & Proc 154:Proc 276-84, pl 5-6, 429-32 D '46, Mr '47; Engineer 180:350-2 N 2 '45
Mechanisms of metal cutting. W. H. Oldacre and H. A. Erickson. il diag Mech Eng 69: 655-7 Ag '47
Metal cutting; electroerosion process. T. P. Rekshinskaya diag Mech Eng 69 780-1 S '47
Oxygen cutting of steel at elevated temperatures. J. F. Kiernan and J. S. Sohn. bibliog il diags Welding J 26:301-13 Ap '47
Oxygen cutting of very heavy steel sections. il Engineer 183 236 Mr 21 '47
Powder-cutting and scarfing of oxidation-resistant materials. D. H. Fleming, jr. il diag Welding J 26:201-8 Mr '47; Abstract. Metal Prog 52:1034+ D '47
Powder cutting of high alloys; iron-rich powder is introduced into oxygen stream of cutting torch. D. H Fleming, jr. il Materials & Methods 25:73-6 F '47
Powder process in stainless steel production; abstract. E. M. Holub. Steel 121:113 O 13 '47
Production of high-strength steels with improved machining characteristics; addition of sodium sulfite F. O. Johnson. Metal Prog 52:565-7 O '47
Recommendations for the band-sawing of steel molding. H. J. Chamberland. diags Mach 54.190 O '47
Research makes milling cutters behave. A O. Schmidt. il Am Mach 91·83 Jl 31 '47
Slitting and trimming unit gives speeds up to 800 fpm. il Iron Age 160:78 Ag 28 '47
Solving a difficult machining problem; producing governor bodies. R. Mawson diags Materials & Methods 24:1505 D '46
Specific studies pertaining to tool wear, chip characteristics, and surface finish of free-cutting steels. G. P. Witteman. flow chart il diags A S M E Trans 69:643-56 Ag '47
Stainless steel cutting H. G. Hughey. il diags Welding J 26:393-9 My '47
Tool wear as a measure of machinability. C. Eatough diag Inst Mech Eng J & Proc 155 (War emergency issue no 20)·255-7, pl 4 (p240) '46; Same. Engineering 161:622-3 Je 28 '46
Valve split cotters; unusual tooling on Wickman five-spindle automatics. il diag Automobile Eng 37.337-8 S '47
Welding and flame cutting applied to stainless and clad steels, Dilts Hydrapulper installed in plant of National paper corp. S. F. Danes il Materials & Methods 26:102-6 O '47
Wider horizon for stainless; Air reduction co.'s flame-cutting process. Bsns W p64 N 16 '46

See also
Metal cutting

STEEL *fences.* See Fences, Steel

STEEL foil
Seam welding stainless steel foil. il Iron Age 158:76 D 5 '46

STEEL forgings
Carbon steel for forging; reference book sheets. Am Mach 91·131, 133 Jl 31 '47
Cold-heading makes pull rods faster. R. Le Grand. il diags Am Mach 91:86-7 Ja 30 '47
Continuous hardening, quenching, washing, drawing of forgings. il diag Steel 120:84+ Mr 24 '47
Effect of forging on segregation in high-speed steel. E. S. Kopecki il Iron Age 159.42-3 F 27 '47
Forging alloy steel radial engine crankcases; illustrations with text. A. J. Pepin and A. L Rustay. Metal Prog 50:1023-8 N '46
Forging failure caused by carbon pick-up due to heating in oil fired furnaces. M. B. Graham. bibliog il Iron Age 160.65-7 Jl 24 '47
Forging practice. A. Ashburn. il diags Am Mach 91:117-25 My 8 '47
Forging stainless steel; engineering file facts. K. Rose, comp. Materials & Methods 26:125 O '47
High creep strength austenitic gas turbine forgings. D. A. Oliver and G. T. Harris. Engineer 183.468-9, 502-3 My 30-Je 6 '47
High-creep strength austenitic steel for gas turbines. D. A. Oliver and G. T. Harris. Engineering 163·533-6 Je 20 '47
Precision forging of high temperature alloys. C. H. Smith, jr. il diags Iron Age 158:42-6 N 28 '46
Statistical survey of some hardened steel forgings. R. F. Mather. il Metal Prog 51: 79-85 Ja '47
Steel forging practice in Germany; abstract. J. Mowat. Materials & Methods 26:120 Ag '47
Steels for use at elevated temperatures C. Sykes. 6pls Iron & Steel Inst J 156:321-69 bibliog(p338-69) Jl '47

Testing
High forging temperatures revealed by facets in fracture tests. J. R. Strohm and W. E. Jominy. il Am Soc for Metals Trans 36: 543-56; Discussion 556-71 '46
Testing the forgeability of steels; abstract. R. Canard Materials & Methods 26:124-5 Ag '47
Value of highly destructive testing. M. G. Corson. il Metal Prog 51·613-16 Ap '47

STEEL founders' society of America
Annual meeting, 45th, Chicago, Feb. 12-13. Foundry 75.127+ Ap '47

STEEL handling
Fluid storage of bar stock; A. C. Gilbert co. il Steel 120.113 Ap 14 '47
Fork trucks for heavy handling sheet steel at American laundry machinery company. H. W. Knox. il Factory Management 104; 138-9 O '46
Improved handling repays initial cost in 10 months; Steel strapping company, Chicago. C L. Dryden il Factory Management 104: 112-15 N '46
Muffler maker cuts material and manufacturing costs by installing equipment to handle coiled strip; Mackenzie muffler co. il Steel 121:88-9+ O 13 '47
Receiving bar stock; unloading and checking of bars shipped by truck may be simplified. B. Melnitsky. il Steel 120:124+ Mr 3 '47

STEEL handling—*Continued*
Scrap handling system paid for itself in two months; Shakeproof division, Illinois tool works E. F. Sharpe. il Factory Management 105:84-5 F '47

STEEL houses
Begin building all-steel, porcelain finish prefabs. il Eng N 137:849 D 26 '46
Coming, more steel in housing. il diags Sheet Metal Worker 38:130-3 Ja '47
Dexterous handling of steel framing results in a beautifully articulated house. il plan diags Arch Forum 87 108-10 O '47
Harman corporation produces packaged, all-metal unit il plans diags Arch Forum 86. 90-3 Ja '47
Lustron corp develops an enameled steel house. il plans diags Arch Forum 86·105-10 Je '47
New materials and new uses for old materials M Male. Blast F & Steel Pl 35.561-2 My '47
Prefabricated steel house; Steelcraft manufacturing co, Cincinnati. il plan Am Bld 68:103 N '46
Steel frame house, Sausalito, Calif; 1200 steel frame houses for Baltimore housing development. il map plans diags Arch Forum 86.79-87 Ap '47
Steelcraft homes provide living quarters for Northwestern university students. il Am Bld 68:108-9 D '46
Stran-steel arch-rib home framing units. il plans Am Bld 69:120-1 My '47

STEEL industry and trade
Commercial research as it affects distribution C. H. H. Weikel. Ind Marketing 31:48+ N '46
How the steel cartel operated. G. Waldron. il Dun's R 55.20-3+ Ja '47
Industrial finds profit pay-off in men of three-way-skills; Lebanon salesman is engineer and trouble-shooter W. H Worrilow. il Sales Management 59:124+ O 1 '47
Marshall plan calls for two million tons of raw steel. J R Hight. Iron Age 160:181-3 O 16 '47
New tools boosting steel worker's output fast; rising costs being paid for out of gains in productivity. W J. Nolle. Barron's 27:9 N 3 '47
Open house can be effective public relations; U.S. Steel attracted more than 100,000 visitors. J C. MacDonald il Ptr Ink 221: 36-7 O 24 '47
Steel at a premium. Bsns W p21 Ja 18 '47
Steel industry and world economic conditions. E. T. Weir. Comm & Fin Chr 166·1641+ O 23 '47
Steel warehouse distributor. C. A. Livesey. Harvard Bsns R 25 no 3:397-408 [Ap] '47
Tighten steel export trade regulations. il Steel 121·41-2+ S 1 '47

See also
Iron industry and trade
Rolling mills
Sheet steel
Steel—Prices
Steel mergers
Steel using industries
Steel workers
Steel works

Advertising

Belabored steel puts up million to tell public the truth. E. L. Ryerson. il Sales Management 59 37-9 S 15 '47
Continued advertising despite shortages pays dividends; Monarch steel company, Indianapolis. S W Terry. Ptr Ink 220:33 Jl 4 '47
Historical approach adds color to Inland Steel film. il Ind Marketing 32:35+ S '47
How Carnegie-Illinois covers thousands of prospects by mail H R. Roberts. Sales Management 59:44-6+ S 1 '47

Finance

Comparison of steel industry's first quarter net earnings; tabulation. Steel 120.73 My 12 '47
Current earnings and higher prices leave steelmen gloomy. T. Campbell. Iron Age 160:109+ Ag 14 '47
Fifty-one steel companies earned $264,419,213 in 1946. Blast F & Steel Pl 35·816 Jl '47
Four-year decline in steel company earnings reversed during 1946; financial analysis of 25 companies. Steel 120:66a-66e Ap 21 '47
Rising costs cut steel earnings; second quarter Steel 121:64 Ag 4 '47
Steel company earnings fall 22 per cent in second quarter. G. F. Sullivan. Iron Age 160:116-17 Ag 7 '47
Steel company 1946 earnings gain despite drop in sales; 22 companies tabulated. fold supp Iron Age 159 126 Ap 10 '47
Steel industry's earnings show gain; preliminary reports of eight companies Steel 120·68 F 10 '47
Top eight in steel. Bsns W p22 My 3 '47
Wage boosts will cut steel makers' profits and make Nathan's CIO forecast look silly Barron's 27:31 My 19 '47

Securities

Profits vs wages in steel shares; with pertinent statistics on steel stocks. H. F. Travis. il Mag of Wall St 79.549-50+ F 15 '47
Pros and cons in steel potentials; with statistics on leading stocks. S Devlin. il Mag of Wall St 80 649-51+ S 13 '47
Steel prospects into the fall; with statistics on steel shares C. F. Morgan Mag of Wall St 80·310-11+ Je 21 '47

Statistics

Alloy steel production holds at nine per cent of total output T. Campbell. Iron Age 160·119-20 O 2 '47
Industry seeking economic balance; with charts, tables, etc. V. Bell. il Steel 120: 324-31 Ja 6 '47
Iron and steel exports in 1945 reported as 5,109,000 tons. Iron Age 159:114 Ja 23 '47
Light steels come back to prewar position; graph. Bsns W p15 N 16 '46
65,800,000 tons of steel produced by strike-harassed industry. W. S. Tower Blast F & Steel Pl 35·125 Ja '47
Status of the steel industry at the close of 1946. W. S. Tower. Blast F & Steel Pl 35: 55-6 Ja '47
Steel production, first four months of 1947. Mech Eng 69·846 O '47
Steel use by states. O. L. Johnson. map Iron Age 159.72-5 Ja 2 '47
World steel production. J. R Hight. il Iron Age 159:88-95 Ja 2 '47

See also
Steel ingots—Statistics

Argentina

Major stumbling blocks seen for Argentine steel industry. G. Hardy. Iron Age 160:115 Ag 14 '47

Australia

War born Whyalla is booming key town in Australian industry. J. Loughlin. il Iron Age 159.110-12 Ap 3 '47

Belgium

Belgian production tending upward despite shortages. Steel 120:317+ Ja 6 '47
Belgian wage demands worry steel leaders as strike wave hits. Iron Age 160:127 Ag 21 '47
France and Belgium attempting to eliminate steel subsidies. J. R. Hight. il Iron Age 159:128+ Ap 17 '47
Steel trade group in Belgium taking re-rollers into fold. Iron Age 160·258+ S 11 '47

California

Report foresees more growth in West's industry. Steel 120.60 Ja 20 '47

Canada

Canadian steel industry looks ahead to self-sufficiency. F. Sanderson. il Iron Age 158: 136-8 N 14 '46
Canadians expect some iron and steel price increases. F. Sanderson. Iron Age 159:109 F 6 '47

Czechoslovakia

Czech iron and steel industry faces huge task under new 2-yr. plan. Iron Age 158: 157 N 14 '46

STEEL industry and trade—*Continued*

Europe

New economic union in Europe will begin operation in August; Belgian-Netherlands-Luxemburg customs and economic union. Iron Age 159.130+ Je 26 '47
Shortages thwart Europe's recovery. V. Delport. il Steel 120.312-13+ Ja 6 '47

France

Commission issues report on plans for French steel industry. J. R. Hight. il Iron Age 159·114-23 Ja 30 '47
Committee settles question of French imports for 1947. Iron Age 159.112 F 27 '47
Economy steels in France. A. Sourdillon. Engineer 183:356 Ap 25 '47
France and Belgium attempting to eliminate steel subsidies. J. R. Hight. il Iron Age 159·128+ Ap 17 '47
French 5-yr. plan includes steel equipment modernization. J. R. Hight. Iron Age 158: 119 N 21 '46
French industry is still under rigid government control. Iron Age 160·236 S 11 '47
French industry's progress hinges on coal. L. Jaudoin. il Steel 120·316-17+ Ja 6 '47
Revival of steel industry Chem & Ind p90 F 8 '47
Ruhr coal cuts dim French steel hopes for high production. Iron Age 158:154-5 D 12 '46

Germany

British planning reorganization of German steel industry J R. Hight. il Iron Age 159: 106-9 F 20 '47
German basic Bessemer steels. T. P. Colclough and J. Simpson. Metal Prog 51: 462+ Mr '47
Germans fear growth of new steel monopoly. Steel 121:58 O 27 '47
Operations of German metalworking plants limited to 30 per cent of capacity by lack of steel. Steel 121·59 S 29 '47
Steel producing plants in the British zone of Germany; tabulation. Iron Age 158:98 N 28 '46
Steelmaking in Germany during the war. Mech Eng 69·681 Ag '47

Great Britain

American steel price move seen isolating British quotations. J. R. Hight. Iron Age 159: 110-11 Ja 23 '47
Britain concludes trade agreement with Belgium, Luxemburg. Iron Age 159 113-14 Ap 3 '47
British purchasing mission comes to grief again in steel market J. R. Hight Iron Age 159:111-12 Je 19 '47
British push steel industry modernization J. A. Horton. il Steel 120:314-15+ Ja 6 '47
British steel industry expects 1947 output to exceed 13 million tons. il Steel 120.54 Ja 27 '46
Colvilles limited; statement by the chairman at ordinary general meeting J. Craig. Economist 152:868-70 My 31 '47
Increased coal allocations to aid British steel industry. Iron Age 160 115 Jl 3 '47
Iron and steel development plan; some statistical considerations. R. M. Shone Engineer 183.540-1, 572-3 Je 20-27 '47, Same cond Iron Age 159:123+ Je 19 '47
Place of research in the iron and steel industry. Engineering 162:426-7 N 1 '46
Programme for steel Economist 152 75-6 Ja 11 '47
Steel shortage hinders Britain's postwar industrial recovery. Steel 119.53 D 23 '46
Substantial portion of British steel expansion plans approved. Steel 121:62-3 Ag 11 '47
Summary of United Kingdom steel statistics; 1944-1946; tabulation. Iron Age 159:113 F 6 '47
Work of the Iron and steel board Engineer 183.385-6 My 2 '47

See also
Dorman, Long and company
Steel workers—Great Britain
United steel companies

Italy

Italy plans to double pig iron production in 1947; iron and steel statistics J. R. Hight. Iron Age 159.116-18 Ja 9 '47

Netherlands

Dutch pig iron is showing the way up hard recovery road. Iron Age 160:104+ O 23 '47

Pacific coast

Protestants to lower Geneva rate get little support from users R T. Reinhardt. Iron Age 159 82+ F 27 '47
See fight for West Coast steel market; independent steelmakers protest freight rate cut il Steel 120 46-7 F 24 '47
Steel on the Pacific coast. L H Duschak. bibliog il Chem & Eng N 25.2707-9 S 22 '47
West coast, 1946. R. T. Reinhardt. il Iron Age 159.120-5 Ja 2 '47

Philippine Islands

Steel plant proposed for Philippine Islands. K. Rannells Iron Age 158:120-1 N 28 '46

Russia

Estimates Russian steel output at 25 4 million tons by 1950. Iron Age 160 115 S 25 '47

South Africa

South Africa expanding steel output to meet local needs J W. Vander Laan. il For Comm W 26.10-11 Mr 1 '47

Southern states

Steel moves South. C. R. Walker Manuf Rec 116:33+ S '47

Sweden

Old line Swedish steel companies planning expansions. J. R. Hight. il map Iron Age 158:106-9 D 26 '46

Texas

Texas' steel dream may now come true. Bsns W p20 Mr 15 '47

United States

After the turn of the year. T. Campbell. Comm & Fin Chr 165:424 Ja 23 '47
Alarm over shift in steel-making premature, ore will still be brought to coal, which remains handy to Great Lakes. J E. Kelly Barron's 27·7 O 6 '47
Federal agencies bring steel studies into sharper focus. G. Hardy. Iron Age 159 101-2 Ap 3 '47
First half 1947 steel demand estimated at 29 million tons. G Hardy. Iron Age 158:106-8 N 21 '46
Future of the steel industry; address before American iron and steel institute, New York, May 21. W. Sykes. Comm & Fin Chr 165:2979+ Je 5 '47, Same Blast F & Steel Pl 35 695-701 Je '47
Gray market forms own channels. Steel 121· 48-9 O 27 '47
Gray market seen as large factor to certain users. Iron Age 160·111-14 S 18 '47
Is steel capacity excessive? D. F. Austin. Comm & Fin Chr 165.3117+ Je 12 '47
Lake Superior iron ore reserves for the future operation of the U.S. iron and steel industry G. W. Hewitt Blast F & Steel Pl 34·1383-92+ N '46
Must steel industry move? drain on high-grade iron ore may bring plants to coast, nearer foreign sources. Bsns W p48 O 18 '47
Nathan's report for steelworkers half-right; hardly to his credit as economist. Barron's 27 23 Ap 7 '47
1946 domestic market summary. W M. Rooney. il Steel 120 320-1 Ja 6 '47
Outlook for 1947. R. J. Wean and others. Blast F & Steel Pl 35:123-4 Ja '47
Senate committee seeks details of steel gray market operations. Steel 120:46-7 Je 9 '47
Sheet-strip shortage continues acute, despite record output. il Steel 121:51-3 Jl 14 '47
Statement in regard to steel capacity of industry W S. Tower Blast F & Steel Pl 35:1259-60 O '47
Status of the steel industry at the close of 1946. W. S Tower Blast F & Steel Pl 35: 55-6 Ja '47
Steel expansion; real but slow il Bsns W p15-16 D 21 '46

STEEL industry and trade—United States— *Continued*
Steel exports to expand as supply permits. B. K. Price. il Steel 120:318-19+ Ja 6 '47
Steel; faint signs of relief. Bsns W p17 Mr 29 '47
Steel for 7000 new freight cars monthly to be provided by mills. Steel 120.65+ F 10 '47
Steel industry expansion mainly in light products. J. V. Sherman Barron's 27.31 S 22 '47
Steel industry faces new expansion drive. H. Davenport. Barron's 27 11 S 29 '47
Steel industry outlook. C R. Hook Sheet Metal Worker 38 91+ Ja '47
Steel industry today and tomorrow, address before American iron and steel institute, New York W. S Tower. Comm & Fin Chr 165.2855+ My 29 '47; Excerpts Blast F & Steel Pl 35:851-2 Jl '47
Steel industry voluntarily agrees to aid freight car program G. Hardy. Iron Age 159:102-3 F 13 '47
Steel men invited to make statements before Committee. Iron Age 160.121-2 Ag 28 '47
Steel, 1946-47. T. Campbell. Iron Age 159:66-71 Ja 2 '47
Steel production in 1946 tops that in any year prior to 1940. Steel 119:40 D 30 '46
Steel sales research men look for corrective period in 1947. T Campbell. Iron Age 159: 99-100 Ja 30 '47
Steel shortage seen ended by 1949; testimony before steel subcommittee of Senate small business committee. Steel 121:46-7 S 22 '47
Sticking to steel facts; Commerce dept report. Bsns W p 19-20 My 17 '47
Strike-plagued mills produced 65.8 million tons of steel in 1946. W. S. Tower. Iron Age 159:205 Ja 2 '47
Two years required for steel expansion to ten million tons; abstract C M. White. Blast F & Steel Pl 35:1257-8 O '47
Wanted, six million tons of steel for pipelines to be built in next few years D. I Brown il map Iron Age 160.113-17 O 9 '47
Warehouses get more steel. Bsns W p42+ My 3 '47
Who will suffer from steel scarcity; equitable allocations mean extreme hardships for some fabricators R M. Bleiberg. Barron's 27·7 Ap 7 '47
See also
United States steel corporation

Wales

South Wales steel industry development G. H. Lever. Engineer 183.204 Mr 7 '47
Tinplate companies in south Wales combine to form Steel co. of Wales. J. R. Hight. Iron Age 159 86+ F 27 '47

STEEL ingots
Analytical survey of a rimming-steel ingot J. S. Vatchagandhy and G P. Contractor, bibliog Iron & Steel Inst J 152·509-16, pl 49 no 2 '45; Abstract Iron Age 156:70 N 15 '45; Discussion Iron & Steel Inst J 152: 516-17 no 2 '45
Basic electric melting procedure for high quality alloy steels. A. L. Ascik. bibliog il diag Am Soc for Metals Trans 35 551-75, Discussion 575-83 '45
Hot tops in relation to ingot soundness E. W. Pierce Blast F & Steel Pl 35·552 My '47
Solidification of steel ingots. J. R Fleche. diags Iron Age 160:62-7 O 9; 55-62 O 23; 92-8 N 6; 94-8 N 13 '47

Molds

Graphite molds for casting vertical steel ingots. S. W. House and T. Killman. il Iron Age 159·59-63 Ja 16 '47
Sealing bottom-poured ingot molds with cast iron shot diag Steel 121:82 S 1 '47

Statistics

Steel ingot production and operating rates; monthly, 1929, 1940-1946. Steel 120:323 Ja 6 '47
Steel ingot production; monthly, 1921-1946; tabulation. Iron Age 159:178 Ja 2 '47
Steel ingot production statistics; monthly, 1945-1946. Steel 120:40 Ja 20 '47
World production of steel ingots and castings; by countries, 1937-1946; tabulation. Steel, 120:314 Ja. 6 '47

Testing

Structure, segregation and solidification of semikilled steel ingots; abstract M. Tenenbaum Iron Age 160·59-60 O 30 '47
Study of a high-speed steel ingot C. F. Sawyer, jr. il diags Iron Age 160:140-2 O 16 '47

STEEL lining
Continuous lining of corrugated steel waterproofs reconstructed tunnel J F. Laboon. il Civil Eng 17 536-8 S '47
Tower lining method reduces rivet head corrosion and cuts welding requirements il Pet Processing 2:178 Mr '47

STEEL mergers
U S moves to block Consolidated sale Steel 120.88 Mr 3 '47

STEEL metallurgy
Adapts pilot plant to manufacture of alloy steel; Bureau of mines plant in California. W. W. Stephens and J. L. Morning. il plan Steel 120 116+ My 5 '47
Blowing high manganese metal in a side blown converter. J. H Hall Foundry 75 85+ O '47
Boron in iron and steel. R. S. Dean and B Silkes. bibliog(297 titles) 13pls U S Bur Mines Information Circ 7363:1-56 '46
Changes in steel by friction; metallurgical transformation. il Chem Age (Lond) 56 409-12 Ap 5 '47
Control of Tropenas-converter blowing by a direct-vision spectroscope. S. T. Jazwinski. Iron & Steel Inst J 152:9-12, pl 1 no 2 '45; Same. Blast F & Steel Pl 33·1113-15 S '45; Discussion. Iron & Steel Inst J 152: 12-13 no 2 '45
Effect of temperature on the phosphorus reaction in the basic steelmaking process. K. Balajiva and P. Vajragupta Iron & Steel Inst J 155 563-7 Ap '47; Discussion. 156 505-10, 157.207-8 Ag, O '47
Electrolytic manganese in acid-steel tests at Atlas steel casting co. and the Detroit steel casting co. R. T. C. Rasmussen. U S Bur Mines Rep of Invest 3830 1-20 '45; Abstract. Metal Prog 50.1250+ D '46
Electrolytic manganese in stainless steel; tests at the Timken roller bearing co., Canton, Ohio F. Sillers, jr. and R. T. C. Rasmussen. bibliog U S Bur Mines Rep of Invest 4078·1-17 '47
Factors which determine iron and steel making processes; abstracts. H W. Graham. Iron Age 159:65-6 Mr 29 '47, Steel 120:97 Ap 7 '47
Ferrous production metallurgy in 1946 T B. Winkler and J. S. Marsh. Min & Met 28· 150-1 Mr '47
First report of the side-blown converter practice sub-committee. diags Iron & Steel Inst J 155:33-50 Ja '47; Discussion. 157 104-14 S '47
Flaking in alloy steels S. W Poole. bibliog il Iron Age 160·42-6 Jl 17 '47
Hydrogen in steel manufacture. C. Sykes and others. bibliog il 2pls diags Iron & Steel Inst J 156 155-80 Je '47, Discussion. 157 377-81 N '47
Metallurgical oxygen. E. E. Thum. il Metal Prog 52 67-70 Jl '47
Metallurgy in 1946. E. S. Kopecki. il diag Iron Age 159 96-103 Ja 2 '47
Monitors for molten metals. J. Markus. il diag Sci Am 177:64-6 Ag '47
Oxygen firm outlines its research program for steelmaking applications, Linde air products co il Iron Age 159·109-10 Je 12 '47
Oxygen in steel making; abstract. F. B. Townsberry and G. V. Slottman Chem Eng 54·254 Jl '47
Oxygen in the steel industry; abstract. H. W McQuaid. Steel 121:98+ O 13 '47
Physical properties of steel for tubular products. A. B. Wilder. Steel 121.102+ S 29 '47
Possibilities for the extended use of oxygen in the British iron and steel industry; abstract M. W Thring Engineering 164 67 Jl 18 '47; Discussion. 164.67-8, 89 Jl 18-25 '47
Recent developments in steelmaking. J. A. Kilby and W. G. Cameron. Engineering 163.209 Mr 21 '47
Le remplacement de l'air par l'oxygène dans les opérations métallurgiques. P Guillaumeron. il Génie Civil 124:85-6 Mr 1 '47

STEEL metallurgy—*Continued*
Slag control by routine spectrographic analysis. J. T. Rozsa. il Metal Prog 51:593-7 Ap '47
Solving a steel production problem; sinter, a promising substitute. A. Hoffman. Min & Met 28:444-6 S '47
Some recent trends in process controls for steel making. H. J. Forsyth. il Blast F & Steel Pl 35:76-81 Ja '47
Spectrographic control of the converter blow. S. T. Jazwinski. diags Iron Age 159:50-7 My 29 '47
Steelmaking oxygen presenting problems to delay applications. il Iron Age 160:113-15 Ag 7 '47
Steelmaking practice as it affects properties of interest to the user. C. H. Herty, jr. il Metal Prog 50:809-14+ N '46
Steel-melting practice. C. H. Herty, jr. il Metal Prog 51:747-51 My '47
Technical progress in metalworking; metal production. Steel 120:240+ Ja 6 '47
Technical progress in metalworking; metallurgy. Steel 120:212-17 Ja 6 '47
Toolsteel progress during 30 years. A. T. Clarage. il Metal Prog 52:568-71 O '47
Trends in steel industry; abstracts of papers at meeting of American iron and steel institute. Steel 120:114-16+ My 26 '47
Use of sintered ore. Chem Age (Lond) 57:469 O 4 '47
Use of sponge iron in steel production. R. C. Buehl and others. bibliog 4pls U S Bur Mines Rep of Invest 4096:1-74 '47
Uses of oxygen in steel production; abstract. J. H. Zimmerman. Steel 121:98 O 13 '47

See also
Bessemer process
Case hardening
Furnaces, Steel making
Iron metallurgy
Open hearth furnaces
Open hearth process
Steel—Decarburization
Steel—Metallography
Steel, Hardening of
Steel, Heat treatment of
Steel alloys
Steel castings
Steel ingots
Steel works

Duplex process

Duplexing by the acid Bessemer basic open hearth process. N. F. Dufty. Blast F & Steel Pl 34:1527-8 D '46

Electrometallurgy

Acid electric steel for castings. S. F. Carter and C. K. Donoho. bibliog il Electrochem Soc Trans 91 (preprint 12):183-202 '47; Abstracts. Metal Prog 51:992+ Je '47; Steel 121:102+ Jl 7 '47
Basic electric melting procedure for high quality alloy steels. A. L. Ascik. bibliog il diag Am Soc for Metals Trans 35:551-75; Discussion. 575-83 '45
Electric furnace alloy steel output far below rated capacity. T. E. Lloyd. Iron Age 159: 122-3 My 8 '47
Electric furnace practices for melting open-hearth grades of carbon steel. C. W. Briggs. il Metal Prog 51:71-5 Ja '47
Electric furnace rimmed steel; using oxygen for carbon reduction. D. I. Brown. il Iron Age 160:67-9+ Ag 7 '47
Electric furnace steel conference, Pittsburgh, Dec. 5-7. Foundry 75:124+ Ja '47; Iron Age 158:65-7 D 19 '46; Steel 119:118-20+ D 16 '46
Electric steel in the United States at forty-one. C. G. Merritt. Electrochem Soc Trans 91 (preprint 14):213-19 '47
Electrical sheet steel; research laboratories at Manor sheet iron works. Elec R (Lond) 139:648 O 25 '46; Electrician 137:1139-40 O 25 '46
Melting high-speed steel in the basic electric arc furnace; with charts, tables and colored illustrations. H. C. Bigge. Iron Age 160:118-36 O 16 '47
Preparation of raw materials for fast melting in an electric arc furnace. S. D. Gladding. Blast F & Steel Pl 34:1404-7 N '46
Single slag basic electric heats; effect on grain growth characteristics. M. V. Healey. il Steel 121:104+ Ag 25 '47
Specially processed silicon carbide as a deoxidizing agent in the reducing slag of basic electric steelmaking. E. A. Loria and others. bibliog Electrochem Soc Trans 91 (preprint 18):273-83 '47; Abstract. Steel 121: 105+ Jl 7 '47
Tool steel production in a modernized plant; Bethlehem steel co. R. J. Knerr and H. C. Bigge. il Mach 53:172-5 Jl '47
Use of oxygen in open-hearth and electric furnaces. W. G. Gude. il diags Foundry 75: 74-7+ O '47

See also
Electric furnaces, Steel making

History

Historical approach adds color to Inland Steel film. il Ind Marketing 32:35+ S '47

Study and teaching

Training of metallurgical engineers in the steel industry. F. C. Wright. Blast F & Steel Pl 34:373-5 Mr '46; Same. il Steel 119: 82-3+ D 23 '46

STEEL pavements. See Pavements, Steel

STEEL piling. See Sheet piling

STEEL plates
Fabricated steel plate axleboxes. il Engineer 183:133 Ja 31 '47
Fundamentals of spot welding steel plate. W. F. Hess and others. il diags Welding J 26: sup583-93 O '47
Nonmagnetic arc welding joints between mild steel plates. O. C. Frederick. il diags Steel 121:85+ O 13 '47
Steel plates for welded ships tested. il Marine Eng 52:110+ Mr '47; Same. Franklin Inst J 243:153-4 F '47
Transition temperatures of steel plates studied. Product Eng 18:173 S '47

See also
Armor plate
Ship plates

Testing

Distribution of strength and ductility in welded steel plate as revealed by the static notch bar tensile test. W. F. Brown, jr. and others. bibliog il diags Welding J 26:sup 545-54 O '47
Effects of section size on the static notch bar tensile properties of mild steel plate. W. F. Brown, jr. and others. bibliog il diag Welding J 26:sup554-9 O '47

STEEL research
Adapts pilot plant to manufacture of alloy steel; Bureau of mines plant in California. W. W. Stephens and J. L. Morning. il plan Steel 120:116+ My 5 '47
Boron in steel. M. C. Udy. il Metal Prog 52: 257-64 Ag '47
British laboratory for physical metallurgy. T. Bishop. Metal Prog 51:960-1 Je '47
Effect of temperature on the phosphorus reaction in the basic steelmaking process. K. Balajiva and P. Vajragupta. Iron & Steel Inst J 155:563-7 Ap '47; Discussion. 155:505-10; 157:206-8 Ag, O '47
Ferrous physical metallurgy; review of 1946. R. F. Miller. Min & Met 28:74-7 F '47
Fluidity of steel; experimental investigations on fluidity/temperature relationships. R. Jackson and others. bibliog diags Iron & Steel Inst J 157:1-21 S '47
Hydrogen and transformation characteristics in steel. J. H. Andrew and others. bibliog 6pls diags Iron & Steel Inst J 156:208-53 Je '47; Discussion. 157:377-81 N '47
Hydrogen in steel manufacture. C. Sykes and others. bibliog il 2pls diags Iron & Steel Inst J 156:155-80 Je '47; Discussion. 157: 377-81 N '47
Industrial research laboratories at Wolverhampton. Engineering 162:425 N 1 '46
Influence of boron on some properties of experimental and commercial steels. T. G. Digges and F. M. Reinhart. bibliog il diags J Res Nat Bur Stand 39:67-131 Jl '47
Mechanism of corrosion fatigue of steel in acid solution. M. T. Simnad and U. R. Evans. bibliog diag Iron & Steel Inst J 156:531-9 Ag '47

STEEL research—*Continued*
Metalworking industry gets real benefit from atomic pile; Oak Ridge lab sells isotopes for iron, steel testing. G. Hardy. Iron Age 160: 108-10 Jl 10 '47
Micro-examination of eight steels for the inclusions sub-committee. J. H. Whiteley. 4pls Iron & Steel Inst J 157:89-97 S '47
Place of research in the iron and steel industry. Engineering 162:426-7 N 1 '46
Radioactive tracers in metallurgical research. E. S. Kopecki. il Iron Age 160:60-4 S 4 '47
Scientific approach to technical problems. J. Johnston. Iron Age 158:146+ D 19 '46
Steel research helps meet needs of industry. C. M. Parker. il Materials & Methods 26: 65-70 Ag '47
Steels for use at elevated temperatures. C. Sykes. 6pls Iron & Steel Inst J 156:321-69 bibliog(p338-69) Jl '47
See also United States steel corporation —Research laboratory, Kearny

STEEL reservoirs. See Reservoirs, Steel

STEEL rings. See Rings, Steel

STEEL rods
Joliet coarse rod mill. R. R. Snow. plan Blast F & Steel Pl 35:687-90 Je '47

STEEL tanks. See Tanks, Steel; Water tanks, Steel

STEEL tubes. See Tubes, Steel

STEEL using industries
Fabricators resent basic steel influence in labor contracts. T. E. Lloyd. Iron Age 159: 99-100 Mr 27 '47
Many steel customers intend to change sources of supply. T. Campbell. Iron Age 159:97-9 Mr 20 '47
Steel pay pattern squeezes fabricators; high steel prices and narrowed profit margins. Barron's 27:14 My 19 '47

Statistics

Consumers' steel receipts up sharply; first four months of 1947. Steel 121:46-7 Jl 28 '47
Distribution of alloy steel products by market classifications during 1946; tabulation. Steel 121:56-7 Ag 11 '47
Distribution of steel consuming industries, first half, 1946; tabulation. Steel 119:58 N 18 '46
Reconversion in 1946 changes distribution pattern of steel. Steel 121:62-3 Ag 4 '47
Steel shipments by consuming industries, 1940-1946; tabulation. Am Mach 91:111 Ja 16 '47

STEEL warehouse association, American. See American steel warehouse association

STEEL waste
Furnace converts turnings into heavy melting stock. J. C. Sullivan. il Steel 120:124+ Je 23 '47
Prime steel scrap salvaged for other auto parts. il Am Mach 91:140 Mr 13 '47

STEEL wheels. See Wheels, Steel

STEEL wool
Bearings made from steel wool; landing gear strut. Iron Age 159:63 Je 19 '47
Bushings from steel wool made by North American Aviation. C. O. Herb. il Mach 53:164-7 Je '47

STEEL work
Air and hydraulic cylinder parts constructed of solid steel blocks. il Steel 121:129+ O 6 '47
Drawing and forming with zinc alloy dies. S. Menton. il Steel 120:92-3+ My 26; 104-5+ Je 2; 80-1+ Je 9; 94-6+ Je 16 '47
Fabricating by compressed air; shaping and joining stainless steel products; Solar aircraft co. il Sheet Metal Worker 38:49-50+ Ag '47
Hot-heading and cold forming bars in single operation. il Iron Age 160:60 Jl 17 '47
Low-alloy, high-strength steels; characteristics, properties, fabrication, etc. bibliog il diags Materials & Methods 26:101-16 Jl '47
Mass producing hollow metal door frames; Diebold, inc. il Iron Age 160:71 S 4 '47
Nitrided steel hot formed after heat treatment; Jack & Heintz precision industries, inc. J. Frazier. il diag Materials & Methods 26:80-3 O '47
Press-shaping bath tubs. il Steel 121:90-1 O 20 '47
Putting the fleet in mothballs; sheet steel structures protect naval guns. il Sheet Metal Worker 38:45 Mr '47; Same. cond. Steel 120:104-5 F 17 '47
Rail steel products; standards, fabricating methods; reference book sheet. diags Am Mach 91:143, 145, 147 Ag 14 '47
Shaping and forming. W. Trinks. diags Blast F & Steel Pl 35:964-70+ Ag '47
Steel truck body members standardized for mass production. N. E. Cole. il plans Steel 120:96-9+ My 5 '47
Where to use low-alloy, high-strength steels. H. S. Wharen. il Am Mach 90:108-11 D 5 '46
See also
Steel castings
Steel cutting
Steel forgings
Steel metallurgy

STEEL workers
Crane cab cooling poses new personnel problem in steel mill operation. il Blast F & Steel Pl 35:76+ Ap '47
Effect of administering a vitamin supplement, in capsules, to groups of workers in the steel industry. A. C. Ivy and others. Ind Med 16:163-7 Ap '47
Fabricators resent basic steel influence in labor contracts. T. E. Lloyd. Iron Age 159: 99-100 Mr 27 '47
Fairless-Murray confidence seen as major factor in contract extension. Iron Age 159: 103 Ja 30 '47
Is CIO demand for a guaranteed wage practicable in steel? E. M. Friedman. Comm & Fin Chr 165:736+ F 6 '47
Murray says USWA will go all out for higher wages. Iron Age 158:123-4 D 5 '46
Nathan's report for steelworkers half-right; hardly to his credit as economist. Barron's 27:23 Ap 7 '47
New phase in management-labor relations seen as real thing; management makes changes in policies while steel labor bans tieups. T. Campbell. Iron Age 159:103-4 My 29 '47
New tools boosting steel worker's output fast; rising costs being paid for out of gains in productivity. W. J. Nolle. Barron's 27:9 N 3 '47
No-strike clause with teeth; United Steelworkers and Murray co. Bsns W p15-16 N 16 '46
Plan for steel wage guarantee. Comm & Fin Chr 164:3126 D 12 '46
Second round looks better; C.I.O. opens steel wage bargaining. Bsns W p15-16 Ja 18 '47
Selling the company to the community; Allegheny Ludlum's public relations program. Factory Management 105:78-80 Ap '47
Steel pact firsts; union's contract with U.S. Steel. Bsns W p93-4+ My 10 '47
Steel truce has Lewis on spot. Bsns W p86-8 F 1 '47
Steel union threatens to sue for millions in walking time payments. G. F. Sullivan. Iron Age 158:134 N 14 '46
Steel wage negotiations lagging. Steel 120: 60-1 Ap 14 '47
Steel wage pact extender buoys production hope. il Steel 120:68 F 3 '47
Steelworkers prepare new wage demands. il Steel 119:57-8+ D 16 '46
U.S. Steel effects wage agreement with CIO union. Comm & Fin Chr 165:2253 Ap 24 '47
Wage rationalization program in United States Steel. R. Tilove. Mo Labor R 64: 967-82 Je '47
Wage settlements brighten outlook; provisions of U.S. Steel labor agreement. Steel 120:67-71 Ap 28 '47
Wages, and how they grew; tables showing steel wages, 1914-1947; steel prices, 1938-1947. Steel 120:68 Ap 28 '47
See also
United steelworkers of America

Great Britain

British steelworkers benefiting under guarantee of four shifts of work per week. J. R. Hight. Iron Age 159:88+ Ja 9 '47

STEEL works
Surplus government steel plants sold and leased to private industry; tabulations. Steel 120:70, 71 F 10 '47

STEEL works—*Continued*

WAA reports steel projects disposal; list of surplus steel plants sold, leased, and awaiting disposal. Iron Age 159:112-13 F 13 '47

Wheeling steel plant expansion program started. Steel 121:86 Jl 21 '47

See also

Blast furnaces
Foundries
Rolling mills
Steel metallurgy
Steel workers

Accidents

Safety record in steel improves; accident rates lowest in five years. Blast F & Steel Pl 35:1119 S '47

Electric equipment

A.c. and d.c. drives for steelworks cranes and ore bridges; discussion. Iron & Steel Inst J 155:271-88 F '47

Ore dock unloading capacity increased by installing rectifier stations; Gary works of the Carnegie-Illinois steel corp. H. E. Reinhold. il diags Steel 120:114+ F 10 '47

Steel plant and foundry application of mercury arc rectifiers. S. R. Durand. bibliog il Steel 121:102+ Jl 14 '47

Employees

See Steel workers

Equipment

Discussion on steelworks locomotives; Diesel versus steam. G. R. Walshaw and others. Iron & Steel Inst J 155:88-106 Ja '47

Expanded tool steel facilities; Bethlehem steel co. R. J. Knerr and H. C. Bigge. il Steel 120:110+ Je 16 '47; Same cond. Iron Age 159:69-73 Je 5 '47

Expansion program will increase range of products at Fontana. Blast F & Steel Pl 35: 81-2 Ja '47

Lubrication in iron and steel works engineering. H. J. Knight. Iron & Steel Inst J 155: 423-30 Mr '47; Same. Blast F & Steel Pl 35:1235-40 O '47; Discussion. Iron & Steel Inst J 155:431-41 Mr '47

Modernisation of the iron and steel industry. Engineer 184:8-9, 30-1, 56-7 Jl 4-18 '47; Abstract. Engineering 164:62 Jl 18 '47

New Homestead openhearths feature highly automatic control. R. Urquhart. il diags Iron Age 159:46-52 Ap 3 '47

Pacific Northwest plant rolls merchant bars; Oregon steel mills. G. E. Stedman. il Steel 120:128-30+ My 12 '47

Pipe-line insulation minimizes steam losses; Jones & Laughlin steel corp. il Steel 120: 107+ F 17 '47

Selecting correct lubricants for steel mill equipment. A. E. Hickel. Steel 120:106+ F 24 '47

Sintering machines for the iron and steel industry. W. J. Urban. il diag Blast F & Steel Pl 35:809-12 Jl '47

Steel plant design. J. B. R. Brooke. plans diags Mech Handling 33:750-6 D '46

3350 ft of pipe = one boiler plant; overhead pipeline, Jones & Laughlin steel corp. il Power 91:328-9 My '47

Tin plate transportation; Carnegie-Illinois steel corporation's Irvin works. il Steel 121:106+ S 15 '47

Tool steel production in a modernized plant; Bethlehem steel co. R. J. Knerr and H. C. Bigge. il Mach 53:172-5 Jl '47

Utilizing mechanized handling to speed maintenance; Bethlehem Steel. T. A. Lewis. il Factory Management 105:110-12 Ag '47

See also

Charging machines

Experimental plants

Adapts pilot plant to manufacture of alloy steel; Bureau of mines plant in California. W. W. Stephens and J. L. Morning. il plan Steel 120:116+ My 5 '47

Fuel

Coal for steel. Bsns W p45-6 O 18 '47

Developments in the use of blast-furnace gas at the Port Kembla steelworks. H. Escher. il plans diags Iron & Steel Inst J 156:1-27 My '47

Fuel utilization in iron and steel works. N. H. Turner and F. A. Gray. Blast F & Steel Pl 34:1408-12+ N '46

How a steel mill prepares blast-furnace gas for fuel. W. M. Cline, jr. il Power 91:746-7 N '47

Lighting

Relighting an iron and steel works. il Engineer 182:525 D 6 '46

Location

Must steel industry move? drain on high-grade iron ore may bring plants to coast, nearer foreign sources. Bsns W p48 O 18 '47

Management

Control of quality in steel manufacture. A. O. Schaefer. il Metal Prog 50:815-19+ N '46

Practical application of statistical methods in a quality control program. W. T. Rogers. bibliog Am Soc for Metals Trans 36:361-82 '46; Same cond. Steel 118:119-20 F 11 '46; Same. Blast F & Steel Pl 34:233-5 F '46; Discussion. Am Soc for Metals Trans 36:382-8 '46

Steel mill production scheduling. D. I. Brown. Iron Age 159:60-1 Ja 30 '47

Visual scheduling system steps up shipment of steel orders. J. S. Freese. il Steel 121: 78-9+ Ag 25 '47

Power

Gas turbine applications in iron and steel works. A. T. Bowden and others. il plans diags Iron & Steel Inst J 156:98-118 My '47; Discussion. 157:115-30 S '47

Insulated overhead pipe line solves a plant steam problem. il Heating-Piping 19:91-2 F '47

Steam generation in steel mills. F. X. Gilg. diags Blast F & Steel Pl 35:106+ Ja '47

Steam turbines for iron and steel works. I. V. Robinson. diags Iron & Steel Inst J 156: 81-9 My '47; Same. Blast F & Steel Pl 35: 842+, 980-2+ Jl-Ag '47

Trends in steam generation among steel mills. A. D. Blake. diags Blast F & Steel Pl 35: 112-13 Ja '47

Water-tube boilers for iron and steel works. Iron & Steel Inst J 156:90-7 My '47; Discussion. il diags 156:541-62 Ag '47

Works supply; distribution from private plant and public supply in steelworks; John Summers & sons. il Elec R (Lond) 139:767-71 N 15 '46

Records

700 orders kept on the beam by visual schedules; Allegheny Ludlum Steel. J. T. Purtell. il Factory Management 104:118-19 N '46

Visual scheduling system steps up shipment of steel orders. J. S. Freese. il Steel 121:78-9+ Ag 25 '47

Safety measures

No crippling injuries in three years' work; Clairton, Pa. works of Carnegie-Illinois steel corporation. Nat Safety N 55:56 Ap '47

Safe open hearth operation. E. T. Crocker. il Safety Eng 94:11+ S '47

Safety captain program; National tube co. R. M. Massenburg. il Steel 120:106+ Ap 21 '47

20 years of crane safety; Black-Sivalls & Bryson, inc. M. J. Kunert. il Safety Eng 92:14-15 N '46

Waste

Lime treatment of waste pickle liquor. C. J. Lewis. il Iron Age 159:45-9 Je 26 '47

Waste pickle conversion to new material. W. Bull. Chem Age (Lond) 57:465-6 O 4 '47

Waste pickle liquor. R. D. Hoak. bibliog il Ind & Eng Chem 39:614-18 My '47

Egypt

Egyptian-American mill in Assuan to operate without coke. Iron Age 160:122+ O 2 '47

Germany

Steelworks in the British zone of Germany. Engineering 162:439 N 8 '46

Great Britain

Modernisation of the iron and steel industry. Engineer 184:8-9, 30-1, 56-7 Jl 4-18 '47; Abstract. Engineering 164:62 Jl 18 '47

STEEL works—*Continued*

Norway

Norwegian government goes into steel business. J. R. Hight. Iron Age 158:86+ D 26 '46

Siberia

Russia opens new mines to supply Kuznetsk steelworks. A. Mikhailov. il Steel 119:104+ D 16 '46

Turkey

Melting shop of the Turkish state iron and steel works. diags Blast F & Steel Pl 35: 333-9 Mr '47

STEELE, Dwight C. 1914-
Portrait. Bsns W p 106 S 13 '47

STEERING
Electrical steering of ships; AEG Ward Leonard system. R. Beach. il diags Elec Eng 66:244-8 Mr '47

STEERING gear
See also
Automobiles—Steering gear

STEFAN, Karl, 1884-
Rep. Stefan, a specialist on cutting out expense. por Bsns W p20 My 10 '47

STELLITE
Haynes alloys for high-temperature service. W. O. Sweeny. il diags A S M E Trans 69:569-81 Ag '47

STENCILS and stencil cutting
Coded stencils simplify production control. O. M. Lund. il Am Mach 91:126-9 Ap 10 '47

STENOGRAPHIC departments
How one company developed a source of trained clerical workers; typing service department at Merck & company. P. Eastman. il Am Bsns 17:10-11+ Je '47
When yon need to write more letters; experience of R. L. Polk & company direct mail division, with 100 automatic typewriters. R. G. French. il Am Bsns 17:18-19+ O '47

STEP bearings. See Bearings, Thrust

STEP-stools. See Stools, Stepladder

STEPHENS, John Allen, 1895-
Vice-president in charge of industrial relations of United States Steel of Delaware. por(cover) Bsns W p8 Ja 18 '47

STEPHENSON, Hugh
Leaves WAA to join Bowes co. in New York. por Nat Underw 51:4 Ap 10 '47

STEPS
Proper foundation needed for brick steps. diags Brick & Clay Rec 110:31 Ap '47
See also
Stairways

STEREOCHEMISTRY
Chemistry of the pyrrocolines; reduction of acyl derivatives. E. T. Borrows, D. O. Holland and J. Kenyon. Chem Soc J p 1083-9 N '46
Configuration of deoxycholic acid. C. W. Shoppee. bibliog Chem & Ind p109-12 F 22-Mr 8 '47
Configuration of heterocyclic compounds; preparation of phenoxstibines and resolution of 10-*p*-carboxyphenyl-2-methylphenoxstibine. I. G. M. Campbell. Chem Soc J p4-10 Ja '47
Configuration of organic selenoxides; mixed crystals of selenoxides with sulfoxides. H. Rheinboldt and E. Giesbrecht. bibliog Am Chem Soc J 68:2671-3 D '46
Four aspects of basicity. A. Albert. bibliog Chem & Ind p51-5 Ja 25 '47
Furan and tetrahydrofuran derivatives; synthesis and biological activity of a number of oxybiotin homologs. K. Hofmann and others. bibliog Am Chem Soc J 69:191-5 F '47
Infrared absorption studies; stereochemistry of the hydroxyl group in vinyl alcohols. A. M. Buswell, W. H. Rodebush and R. M. Whitney. Am Chem Soc J 69:770-2 Ap '47
Lack of meaning of the phase inactive by internal compensation as applied to meso compounds. C. R. Noller. Science 102:508-9 N 16 '45; Discussion (Inactive by internal compensation). G. F. Wright. 104:190 Ag 23 '46; Reply. 105:546 My 23 '47
Neovitamin A. C. D. Robeson and J. G. Baxter. bibliog pl Am Chem Soc J 69: 136-41 Ja '47
Organic sulphur compounds; the stereochemistry of trimeric thioaldehydes. A. Schönberg and M. Z. Barakat. Chem Soc J p693 My '47
Spatial configuration of perfluorocyclobutane. W. F. Edgell. Am Chem Soc J 69:660-1 Mr '47
Steroids and the Walden inversion. C. W. Shoppee. Chem Soc J p 1138-51 D '46
Structural determination of paraffin boiling points. H. Wiener. bibliog Am Chem Soc J 69:17-20 Ja '47
Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47
Strychnine and brucine; constitution of the neo-series of bases and their oxidation products. L. H. Briggs, H. T. Openshaw and R. Robinson. Chem Soc J p903-8 O '46
Study of high-polymer structure by X-ray-diffraction methods. C. W. Bunn. pl diag Chem Soc J p297-305; Discussion. 305-6 F '47
Synthesis and stereochemistry of biotin and related products. S. A. Harris. bibliog il J Chem Educ 24:459-64 S '47
X-ray examination of cyclooctatetraene. H. S. Kaufman and others. J Chem Phys 15: 414-15 Je '47
See also
Isomerism
Isosterism
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STEREOPHOTOGRAPHY. See Photography, Stereoscopic

STEREOSCOPE
See also
Moving pictures, Stereoscopic

STEREOSCOPIC moving pictures. See Moving pictures, Stereoscopic

STEREOSCOPIC photography. See Photography, Stereoscopic

STEREOSCOPIC radiography. See Radiography, Stereoscopic

STERIC hindrance
Dehydration of a hindered tertiary alcohol. R. B. Carlin and D. A. Constantine. bibliog Am Chem Soc J 69:50-2 Ja '47
Dissociation of the compounds of trimethylboron with pyridine and the picolines; evidence for the steric nature of the ortho effect. H. C. Brown and G. K. Barbaras. bibliog il Am Chem Soc J 69:1137-44 My '47
Effect of steric hindrance on the course of Pfitzinger reactions; between ketones and various isatins. N. P. Buu-Hoï. Chem Soc J p795-7 S '46
Infrared spectroscopic investigations of hydrogen bonding in hindered and unhindered phenols. N. D. Coggeshall. bibliog Am Chem Soc J 69:1620-4 Jl '47
Optical activity from a new type of steric hindrance. M. S. Newman and A. S. Hussey. Am Chem Soc J 69:978-9 Ap '47
Some steric effects of the isopropyl group in organosilicon compounds. H. Gilman and R. N. Clark. bibliog Am Chem Soc J 69: 1499-500 Je '47
Steric effect of methylene groups. R. T. Arnold and E. Rondestvedt. bibliog Am Chem Soc J 68:2176-8 N '46
Steric effects in the ultraviolet absorption spectra of aromatic nitro compounds. W. G. Brown and H. Reagan. bibliog Am Chem Soc J 69:1032-3 My '47
Steric inhibition of resonance; basic strengths of some dimethyl-substituted aromatic primary and tertiary amines. G. Thomson. Chem Soc J p 1113-16 D '46
Theory of the racemization of optically active derivatives of diphenyl. F. H. Westheimer and J. E. Mayer. J Chem Phys 14: 733-8 D '46

STERILAMP. See Ultraviolet rays—Lamps

STERILITY
Is sterility induced in growing rats on a tryptophane-deficient diet? C. P. Berg and W. G. Rohse. Science 105:96-7 Ja 24 '47

STERILITY—*Continued*
Possible avian analogue of the scrotum. R. B. Cowles and A. Nordstrom. Science 104: 586-7 D 20 '46

STERILIZATION
Chemical sterilization of bacteriological media by means of mercuric oxycyanide and subsequent inactivation of the mercurial by thioglycolate. N. Grossowicz and D. Kaplan. bibliog Science 105:237 F 28 '47
Electronic sterilization of canned foods? problems of localized overheating, heat losses, etc. J. M. Jackson. bibliog il Food Ind 19:634-6+ My '47
Electronized Chemicals. il diag Fortune 35: 104-9+ Mr '47
Processing food for sterilization. C. O. Ball. il diag Food Ind 19:44-6+, 174-8+, 338-40+ Ja-Mr '47
Ultrashort application time of penetrating electrons; tool for sterilization and preservation of food in the raw state. A. Brasch and W. Huber. il Science 105:112-17 Ja 31 '47
Ultraviolet radiation as a means of sterilizing tissue culture materials. J. G. Carlson and others. il Science 105:187-8 F 14 '47

STERLING offices, ltd.
Thirtieth year of establishment of reinsurance firm. East Underw 48:25 F 28 '47

STERN, Julius David, 1886-
Stern bows out. Bsns W p16 F 8 '47

STEROIDS
Application of the method of molecular rotation differences to steroids; steroidal hormones and bile acids. D. H. R. Barton. bibliog(101 ref) Chem Soc J p 1116-23 D '46
Preparation of C-27 steroids from bile acids; coprostanetetrol-3(α),7(α),12(α),25. W. H. Pearlman. bibliog Am Chem Soc J 69:1475-6 Je '47
Some steroid mercaptols. H. Hauptmann. bibliog Am Chem Soc J 69:562-6 Mr '47
Steric structure of estriol and related steroids. M. N. Huffman and M. H. Lott. Am Chem Soc J 69:1835 Jl '47
Steroidal sapogenins. R. E. Marker and others. bibliog Am Chem Soc J 69:2167-230 S '47
Steroids and the Walden inversion. C. W. Shoppee. Chem Soc J p 1138-51 D '46
Synthesis of condensed ring compounds; total synthesis of a 10a-methyldodecahydrochrysene-1, 4-dione (a 10-methyl-D-homosteradiene-15,17a-dione). A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69:1165-70 My '47

STEROLS
Experiments on the synthesis of substances related to the sterols. J. W. Cornforth and R. Robinson. Chem Soc J p676-9 Ag '46
Steroidal sapogenins. R. E. Marker and others. bibliog Am Chem Soc J 69:2167-230 S '47

Analysis
Determination and nature of leaf sterols. M. E. Wall and E. G. Kelley. bibliog Anal Chem 19:677-83 S '47

STETHOSCOPE

Industrial applications
Novel detector quickly locates leaks in heat-exchanger tubes. il Oil & Gas J 46:102-3 S 6 '47

STEVEDORING companies
High court rules New York City stevedore tax invalid. Comm & Fin Chr 165:1570 Mr 20 '47

STEVENS, J. P., and company
Stock offered. Comm & Fin Chr 166:507-8 Ag 4 '47
Stock sale shows huge size of Stevens textile firm. Barron's 27:35 Jl 28 '47

STEVENS, Leslie Clark, 1895-
Sketch. por(p20) Aero Digest 54:21 Mr '47

STEVENS family
Sale of Hoboken waterfront recalls early transportation developments. Marine Eng 51:114+ D '46

STEVENSON, Alexander Russell, 1893-1946
Sketch. J Eng Educ 37:269 N '46

STEWART, Harold M.
New executive vice president of Prudential. C. Axman. por East Underw 48:3+ Ja 24 '47

STIBNITE
High transmission windows for radiation of 3 to 14 microns wave-length. M. Hyman, jr. and B. H. Billings. Opt Soc Am J 37:113-18 F '47
Infra-red refractive index and dispersion of evaporated stibnite films. B. H. Billings and M. Hyman, jr. Opt Soc Am J 37:119-21 F '47; Correction. 37:395 My '47

STIBONIC acids
Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis. E. A. H. Friedheim, H. J. Vogel and R. L. Berman. Am Chem Soc J 69: 560-2 Mr '47

STIEGLITZ, Julius, 1867-1937
Sketch. por Chem & Eng N 25:361 F 10 '47

STIFFNESS tester
Gurley's new tester measures stiffness. Paper Tr J 125:18 Ag 7 '47; Chem Ind 61:512+ S '47; Rubber Age 62:94 O '47

STIGMASTERYL acetate
Derivatives of bisnor-5-cholenaldehyde. F. W. Heyl, A. P. Centolella and M. E. Herr. bibliog Am Chem Soc J 69:1957-61 Ag '47

STILBENE
Attempts to find new chemotherapeutic amidines. J. O. Harris. Chem Soc J p690-2 My '47
Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives. I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47

STILBENECARBOXYLIC acids
Dialkylaminoalkyl esters of 4,4'-stilbenedicarboxylic and 4,4'-dibenzyldicarboxylic acid. L. S. Fosdick and K. F. Urbach. bibliog Am Chem Soc J 69:503-5 Mr '47

STILES-CRAWFORD effect
Stiles and Crawford effect in polarized light. B. O'Brien. diag Opt Soc Am J 37:275-8 Ap '47
Wright-Nelson explanation of the Stiles-Crawford effect. J. R. Platt. diag Opt Soc Am J 37:669-70 Ag '47

STILLING basins. See Dams—Design

STILLINGIA tree. See Chinese tallow tree

STILLS. See Distillation apparatus

STINE, Charles Milton Atland, 1882-
Sketch. A. D. McFadyen. por(cover) Chem & Eng N 25:432 F 17 '47

STIRRERS
Conversion of a bomb-release control to activate a solenoid stirrer. L. L. Merritt, jr. and others. diags J Chem Educ 23:612-13 D '46
See also
Agitators

STOBBE condensation. See Condensation, Chemical

STOCK cars
Timken bearings for Union Pacific stock cars. il Ry Age 122:1073-4 My 24 '47; Same. Ry Mech Eng 121:351-2 Jl '47

STOCK certificates. See Stocks—Certificates

STOCK dividends. See Dividends

STOCK exchange
Appraising the stock market. H. G. King. Comm & Fin Chr 165:2334+; 166:1004 My 1, S 11 '47
Big bull market ahead. J. L. Kerr. Comm & Fin Chr 166:1735+ O 30 '47
Bullish factors accumulating. L. Klybert. Comm & Fin Chr 165:2336+ My 1 '47
Case for scientific stock market analysis. N. Molodovsky. Comm & Fin Chr 165:2329+ My 1 '47
Characteristics of today's security markets. F. K. Dodge. il Mag of Wall St 79:652-3+ Mr 15 '47
Cleveland trust company bulletin questions stock market decline-business recession theory. Comm & Fin Chr 165:1010 F 20 '47
Demand performance and the stock market. G. A. Haas and J. J. Quinn. Comm & Fin Chr 165:1781+ Ap 3 '47

STOCK exchange—*Continued*
Dollar inflation and 1947 stock market outlook. J. R. Bancroft. Comm & Fin Chr 166: 1632+ O 23 '47
Factors in recent stock decline. Trusts & Estates 83:417 N '46
Hemispheric stock exchange conference was successful. For Comm W 29:11 O 11 '47
Illegitimate bear market. R. Rotnem. Comm & Fin Chr 166:210+ Jl 17 '47
Inflation and the market outlook. M. D. Safanie. Comm & Fin Chr 166:323 Jl 24 '47
Large volume suggests continuance of bear trend. B. Ravits. Barron's 27:9 Ja 27 '47
Last call for the diner. H. Gully. Comm & Fin Chr 165:2856+ My 29 '47
Lending variety; more borrowers are making private deals. Bsns W p74+ N 9 '46
Market factors as we enter new year. A. T. Miller. Mag of Wall St 79:292-3 D 21 '46
Market outlook; 1946 vs. 1920. J. Coe. Comm & Fin Chr 164:2747+ N 28 '46
Money and the security markets. M. Palyi. Comm & Fin Chr 165:734+ F 6 '47
Neither a new bull market nor an old one. F. W. La Farge. Comm & Fin Chr 166:517+ Ag 7 '47
1947 stock market. R. D. Naess. Comm & Fin Chr 165:3+ Ja 2 '47
Outlook for security prices. I. de Vegh. Comm & Fin Chr 166:1533+ O 16 '47
Outlook for the stock market. J. F. Hughes. Comm & Fin Chr 166:211+ Jl 17 '47
Outlook for the stock market. F. W. La Farge. Comm & Fin Chr 165:1645+ Mr 27 '47
Position of stock exchanges in U.S. economy. F. A. Truslow. Comm & Fin Chr 166:1116+ S 18 '47
Regional marts do a job. il Bsns W p84+ S 13 '47
Schram opens Hemispheric stock exchange conference. Comm & Fin Chr 166:1155 S 18 '47
SEC reports on market break of Sept. 3, 1946. Comm & Fin Chr 166:825 Ag 28 '47
Security exchanges in world finance. R. A. Foulke. 81p Dun & Bradstreet, 290 Broadway, New York 8 '47; Excerpts. Dun's R 54:11-12+ N; 11-14+ D '46
Stock and bond markets for early 1947. A. T. Miller. Mag of Wall St 79:346-7 Ja 4 '47
Stock exchange; a people's market. E. Schram. Comm & Fin Chr 165:2731+ My 22 '47
Stock exchange alfresco; Leslie A. Bohn, auctioneer. Fortune 35:148+ My '47
Stock exchange functions and over-regulation. W. W. Cumberland. Comm & Fin Chr 164:2745+, 2881+ N 28-D 5 '46
Stock market outlook. H. G. King. Comm & Fin Chr 166:108, 424 Jl 10, 31 '47
Stock market outlook for 1947. S. Boulton. Comm & Fin Chr 164:3345+ D 26 '46
Stock market prospects. G. Y. Billard. Comm & Fin Chr 164:2614+; 165:2609+; 166:818 N 21 '46, My 15, Ag 28 '47
Stock market ripe for major rise. A. Gaubis. Comm & Fin Chr 165:2193+; 166:318+ Ap 24, Jl 24 '47
Strike closing exchanges would be good thing; excerpts from radio address; with editorial comment. F. H. LaGuardia. Comm & Fin Chr 165:2196+ Ap 24 '47
Technical background of the 1947 stock market. J. F. Hughes. Comm & Fin Chr 165: 733+ F 6 '47
Technical stock market forecast. E. W. Tabell. Comm & Fin Chr 166:210+ Jl 17 '47
Technical viewpoint; background for stock accumulation in current position. O. K. Taylor. Comm & Fin Chr 166:1+, 1305+ Jl 3, O 2 '47
Technical viewpoint; projections for 1947 stock market. O. K. Taylor. Comm & Fin Chr 165:989+ F 20 '47
This perverse stock market. J. Coe. Comm & Fin Chr 166:108+ Jl 10 '47
Todays market; summary of the fortnight. A. T. Miller. Mag of Wall St 79:178-9 N 23 '46 [cont biweekly]
Un-curtaining the uncertainties. J. E. Loshar. Comm & Fin Chr 165:133 Ja 9 '47
Value of dollar changes today's market picture. P. Kircher. Barron's 27:29 Ag 18 '47
View of present stock market. G. G. Munn. Comm & Fin Chr 166:1312+ O 2 '47
War's aftermath and the stock market. M. B. Roberts. Comm & Fin Chr 165:2471+ My 8 '47
What's happened to the wolf? predicts series of baby bull and bear markets. S. B. Lurie. Comm & Fin Chr 166:1406+ O 9 '47
What's happening in world stock markets. V. L. Horoth. il Mag of Wall St 79:603-4+ Mr 1 '47
What's the market going to do? R. L. Heilbroner. Am Bsns 17:10-11+ Jl '47
Where does stock exchange trading originate? Bsns W p89 Ap 19 '47
Who said bear market? O. K. Taylor. Comm & Fin Chr 164:3345+ D 26 '46
Why doesn't the stock market tick as it should? E. Germain. Comm & Fin Chr 165:2851+ My 29 '47
Why stocks are not discounting high earnings. C. J. Collins. Comm & Fin Chr 166: 823 Ag 28 '47

See also
Bonds
Brokers
Financial placement and clearance center
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Speculation
Stocks
Wall Street
also names of exchanges, e.g.
Amsterdam stock exchange
Chicago stock exchange
London stock exchange
New York stock exchange

Floor traders

Floor trading procedure. E. C. Werle. Comm & Fin Chr 166:1215+ S 25 '47
NYSE clarifies floor trading curbs. Comm & Fin Chr 166:324 Jl 24 '47

History

Business-stock market anomaly parallels 1881-2. B. Ravits. Barron's 27:9 Jl 28 '47

Hours of business

New York brokers almost equally divided on question of Saturday closings of N.Y.S.E. Comm & Fin Chr 165:1120+ F 27 '47
NYSE says bulk of business originates in N.Y.; Pacific Coast and Rocky Mountain region supply less than 9 per cent; with tabulations of transactions for week beginning March 24th. Comm & Fin Chr 165:2070+ Ap 17 '47

Regulation

See also
Securities and exchange commission

STOCK exchange buildings
Air conditioning the New York stock exchange. D. A. Kepler. il plans Heating-Piping 19:69-73 Ap; 84-8 Je; 87-91 Ag '47

STOCK liquidation agreements
Disposition of business interests by inter vivos and testamentary trusts. M. Garwood. Trusts & Estates 83:465-73 N '46
See also Insurance, Business—Stock liquidation agreements

STOCK options. See Stock purchase options

STOCK ownership, Employees'. See Employees as stockholders

STOCK purchase agreements. See Stock liquidation agreements

STOCK purchase options
Options. R. Magill. J Account 83:405-6 My '47

STOCK taking. See Inventories—Accounting

STOCK transfer tax
Federal stock transfer tax modified. Comm & Fin Chr 166:636 Ag 14 '47
New York lawyers wondering what effect recent court ruling may have on stock transfer tax. E. Germain. Comm & Fin Chr 165:1428 Mr 13 '47
Taxes on stock transfers by non-members of an exchange. Comm & Fin Chr 165:268+ Ja 16 '47; Discussion. P. F. Fox. 165:1248 Mr 6 '47

STOCK transfers
Simplifying stock transfers; suggestions for reducing delay on estate securities. T. R. Taylor. Trusts & Estates 84:81-3 Ja '47

STOCKBROKERS. See Brokers

STOCKFISH
South African fish products; variations in the oil and vitamin A contents of the liver of the Cape hake (merluccius capensis, Cast.). E. R. Roux and C. J. Molteno. bibliog Soc Chem Ind J 65:281-4 O '46

STOCKFISH liver oil
South African fish products; variations in the oil and vitamin A contents of the liver of the Cape hake (merluccius capensis, Cast.). E. R. Roux and C. J. Molteno. bibliog Soc Chem Ind J 65:281-4 O '46

STOCKHOLDERS
ANA survey cites management's need for improved stockholder relations. N. Kelne. Ptr Ink 219:83+ My 30 '47
Camera highlights from a General Mills stockholders' meeting. Sales Management 57:46+ D 1 '46
Democracy for the stockholders; General mills holds regional meetings for stockholders. Pub Util 39:380-4 Mr 13 '47
Forgotten stockholder. M. H. Frank. Edison Elec Inst Bul 14:347-9 O '46
How stockholders are sold on management. R. G. Whalen. Adv & Sell 40:33-4+ Jl '47
How to link stockholders and management. B. C. Forbes. Comm & Fin Chr 165:2859+ My 29 '47
Informed stockholders can aid mining. T. Lyon. Eng & Min J 148:77-8 Ja '47
Investor relations. Bsns W p86+ Je 14 '47
Investors are people. H. S. Sutton. Comm & Fin Chr 165:2857+ My 29 '47
Is management disfranchising stockholders? B. A. Javits. Comm & Fin Chr 165:2983+ Je 5 '47
Letters from stockholders; what investors in America expect of management; editorial. Trusts & Estates 85:101-2 Ag '47
Management-stockholder cooperation; Pennsylvania railroad. Pub Util 40:381 S 11 '47
Management-stockholder versus union-worker relations. M. Woll. Comm & Fin Chr 165:2859+ My 29 '47
New stocks in old established companies. H. S. Coffin. Mag of Wall St 79:367-8+ Ja 4 '47
Reports increase in small stockholders; Federal reserve bank of New York. Comm & Fin Chr 164:2522 N 14 '46
SEC and the stockholder. E. H. Cashion. Comm & Fin Chr 165:2857+ My 29 '47
Stockholder and the NYSE. J. Haskell. Comm & Fin Chr 165:2857+. My 29 '47
Stockholder as a friend. J. W. Darr. il Dun's R 55:24-5+ Mr '47
Stockholders deserve to know; what leading corporations are doing. Trusts & Estates 84:481 My '47
Survey on stockholder relations; what 100 companies are doing. V. Burnett. Trusts & Estates 84:373-8 Ap '47
Well-planned stockholder information programs rare, ANA study reveals. Ind Marketing 32:126 Jl '47

See also
Banks and banking—Stockholders
Corporations—Reports and yearbooks
Employees as stockholders
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STOCKHOLDERS, Reports to. See Corporations—Reports and yearbooks

STOCKHOLDERS' liability. See Banks and banking—Stockholders' liability

STOCKPILING. See Minerals—Stockpiling

STOCKROOMS. See Department stores—Stockrooms; Stores systems

STOCKS
Common stock investments for diversification and stability; indirect investment through parent company shares. R. Colston. Mag of Wall St 81:85-6+ O 25 '47
Financial survey of specialty stocks; tabulation. Mag of Wall St 79:678-9; 80:550-1 Mr 15, Ag 16 '47
For profit and income. Mag of Wall St 80:613-14 Ag 30 '47
Four stocks selling below current net assets with promising futures. Mag of Wall St 80:702-4+ S 27 '47
Investment companies bought in June quarter; with tabulations. H. A. Long. Comm & Fin Chr 166:714+ Ag 21 '47
Management's stake in its own companies; effect on investments. W. S. Kane. Management R 36:457-8 S '47
Many trusts cushioned stock break with cash; analysis of third quarter operation. H. A. Long. Comm & Fin Chr 164:2458+ N 14 '46
New stocks in old established companies. H. S. Coffin. Mag of Wall St 79:367-8+ Ja 4 '47
Newcomers on the N.Y. stock exchange; with statistical information on new listings since May, 1946. W. A. Howell. Mag of Wall St 80:214-16+ My 24 '47
1947 special re-appraisals of values, earnings and dividend forecasts. Mag of Wall St 79:488-501+, 548-61+, 608-21+, 668-79+; 80:489-97+, 541-51+, 591-606+, 645-59+ F 1-Mr 15, Ag 2-S 13 '47
100 most active low priced stocks under $20 per share; with tabulation. F. K. Dodge. Mag of Wall St 79:736-40+ Mr 29 '47
Promising stocks selling near or below net quick asset value. Mag of Wall St 79:665-7 Mr 15 '47
Right and wrong ideas about stocks. L. O. Hooper. Comm & Fin Chr 165:737+ F 6 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:210-11+, 274-5+, 330-1+, 386-7+ My 24-Jl 5 '47
Selected stocks near buying point. Mag of Wall St 80:427-30, 486-8+ 538-40 Jl 19-Ag 16 '47
Selected stocks with higher earnings trend. H. F. Travis. Mag of Wall St 80:25-7+ Ap 12 '47
Six companies forging ahead in their fields. Mag of Wall St 80:378-81 Jl 5 '47
Six selected stocks with long dividend records. Mag of Wall St 79:201-3+ N 23 '46
Six stocks showing resistance to market decline; thumbnail stock appraisal. Mag of Wall St 79:313-15 D 21 '46
Six stocks with long dividend records; thumbnail stock appraisal. Mag of Wall St 79:259-61 D 7 '46
Special selection of recession resistant stocks; with data showing comparative market action. Mag of Wall St 80:157-9 My 10 '47
Ten market leaders for 1947; thumbnail stock appraisal. Mag of Wall St 79:415-20 Ja 18 '47
30 growth stocks for postwar investment. T. R. Price, jr. Barron's 26:9 D 23 '46
Treasure hunt for growth companies; with statistics on selected stocks. G. W. Mathis. Mag of Wall St 80:155-6+ My 10 '47

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Banks and banking—Stock
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Corporations
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Speculation
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Stock purchase options
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also subdivision Securities under names of industries, e.g.
Agricultural machinery industry
Chain stores
Electric apparatus industry
Electric utilities
Insurance companies
Office equipment industry
Petroleum industry and trade
Public utilities
Railroad supplies industry
Railroads
Retail trade
also names of exchanges, e.g. New York stock exchange

Certificates
Certificated art; stock-certificate engravings. Fortune 36:123 Ag '47
Law for the layman; spurious stock certificates. M. L. Hayward. Barron's 27:38 S 8 '47

Leverage
Six stocks with strong leverage potentials; thumbnail stock appraisal. Mag of Wall St 79:605-7 Mr 1 '47

Margin buying
Amendments to margin regulations T and U. Fed Res Bul 32:1347-8 D '46

STOCKS—Margin buying—*Continued*
Association of stock exchange firms protests credit prohibition on listed securities. Comm & Fin Chr 164:3211+ D 19 '46
Attacks federal reserve credit and margin controls. S. Bridges. Comm & Fin Chr 164: 3211+ D 19 '46
Curb president questions Federal Reserve objective in restriction on margin trading; exchange of correspondence. A. Sprout and F. A. Truslow. Comm & Fin Chr 166:119 Jl 10 '47
Easier margin rules may broaden trading. Barron's 27:10 Ja 20 '47
FRB eases margin rule for exercise of stock rights. Comm & Fin Chr 164:2474 N 14 '46
Federal reserve bank of New York defends margin and consumer credit controls. Comm & Fin Chr 165:2065+ Ap 17 '47
FRB restores margin trading; with text of Regulation U and T amendments. Comm & Fin Chr 165:493+ Ja 23 '47; Same. Fed Res Bul 33:149-51 F '47
IBA urges easing of margin trading curb. Comm & Fin Chr 165:8 Ja 2 '47
Margin requirements; borrowing of securities. Fed Res Bul 33:981 Ag '47
Margins, trading hours and commission rates. J. F. Burns, jr. Comm & Fin Chr 165:863+ F 13 '47
Proposes new system of margin requirement. A. W. Hawkes. Comm & Fin Chr 165:2475 My 8 '47
Protests New York reserve bank's support of Eccles' credit policy. E. Schram. Comm & Fin Chr 165:2215 Ap 24 '47
Scores margin restrictions. E. Schram. Comm & Fin Chr 165:1653+ Mr 27 '47

Marketing

Stock exchange alfresco; Leslie A. Bohn, auctioneer. Fortune 35:148+ My '47

Price-earnings ratios

Earnings and stock prices; with statistical data, 1895-1947. J. M. Templeton. Comm & Fin Chr 165:2063 Ap 17 '47
Evaluating stocks selling at very low price earnings ratios. P. Dobbs. Mag of Wall St 81:90-1+ O 25 '47
Market significance of low price-earnings ratios. L. O. Hooper. Comm & Fin Chr 166: 1201+ S 25 '47
Prices and price times earnings ratios, Dow-Jones industrial average, 1924-1947; chart. Comm & Fin Chr 166:1548 O 16 '47

Price fluctuations

High personal taxes slash stock values. C. Davidson, jr. Comm & Fin Chr 165:3228+ Je 19 '47; Abstract. Barron's 27:25 Je 23 '47
Inflation and common stocks. H. C. Yeager. Comm & Fin Chr 166:1630+ O 23 '47
Is the stock market really historically high? A. Gaubis. Comm & Fin Chr 166:1305+ O 2 '47
Master market cycles; with graph showing a half century of American stock prices, as reflected by the Dow-Jones industrial average. C. J. Collins. Comm & Fin Chr 165:2726+ My 22 '47
Rhythmic cycles in the stock market. F. R. Macaulay. Comm & Fin Chr 165:3114+ Je 12 '47
Security prices and inflation; with charts showing indices of common stock prices in France, 1919-1930. I. Wright and M. Henn. Comm & Fin Chr 166:8-9+ sec 2 Ag 28 '47
Short interest and market price movements; with graphs showing N.Y.S.E. short interest vs. market values, and General Motors prices, short interest and volume, 1932 to date. R. T. Shadoan. Comm & Fin Chr 166:618+ Ag 14 '47
Some stocks gain in period of sharp decline; with tabulation comparing Oct.-Nov. 1946 lows with those for April 1947. R. M. Bleiberg. Barron's 27:28-9 Ap 28 '47
Sun spots and stock prices. D. Pingree. Comm & Fin Chr 165:2856+ My 29 '47
Test for portfolio stability; measurement by arithmetical index suggested. G. E. Hale. Trusts & Estates 84:307-8+ Mr '47
Wholesale prices and industrial stock prices during and immediately after the two world wars. L. H. Bean. R Econ Stat 29:199-200 Ag '47

Price forecasting

Bond prices as a stock market forecaster. J. Coe. Comm & Fin Chr 165:862+ F 13 '47
Deflating prophets; forecasting errors. A. W. May. Comm & Fin Chr 166:1409+, 1537+, 1633+, 1737+ O 9, 16, 23, 30 '47; Discussion. 166:1632, 1736+ O 23, 30 '47
Effect of increased production on stock price levels. A. Slater. Comm & Fin Chr 165: 1922+ Ap 10 '47
Forecastability of the stock market. W. Dodge. Comm & Fin Chr 164:3201+ D 19 '46
How cheap are stocks? L. O. Hooper. Comm & Fin Chr 165:1921+ Ap 10 '47
Industrial share prices in 1947. F. P. Breckinridge. Comm & Fin Chr 164:3203+ D 19 '46
Outlook for security prices. R. D. Naess. Comm & Fin Chr 165:1245+ Mr 6 '47
Outlook for stock prices. A. Gaubis. Comm & Fin Chr 165:267+ Ja 16 '47

Price indexes and averages

Almanac of stock markets trader's guide to trends; seasonal changes in Dow-Jones industrial and railroad averages. Barron's 27:8 My 5 '47
Case for scientific stock market analysis. N. Molodovsky. Comm & Fin Chr 165:2329+ My 1 '47
Common stock index. Published in bi-weekly numbers of Magazine of Wall Street
Conversion formula adjusts 1914 break in Dow-Jones charts; with table of adjusted monthly closing market values for the Dow-Jones industrial-share averages, 1900-14. Barron's 27:28 N 3 '47
Earnings and stock prices; with statistical data, 1895-1947. J. M. Templeton. Comm & Fin Chr 165:2063 Ap 17 '47
Industrial earnings at 18-year high in 1946; with chart showing earnings on Dow-Jones industrial-share average, 1934-1946. Barron's 27:21 Mr 31 '47
Major changes in stock list for Dow-Jones utility averages. Barron's 27:30 My 12 '47; Correction. 27:37 My 19 '47
Master market cycles; with graph showing a half century of American stock prices, as reflected by the Dow-Jones industrial average. C. J. Collins. Comm & Fin Chr 165:2726+ My 22 '47
New index of 20 low-priced stocks now developed to replace 30-stock index discontinued in May, 1946. R. M. Bleiberg. Barron's 27:25-6 Je 16 '47
Rhythmic cycles in the stock market. F. R. Macaulay. Comm & Fin Chr 165:3114+ Je 12 '47
Stock prices, 1944-1946 average; monthly Dec. 1945-Dec. 1946; weekly Dec. 1946. Fed Res Bul 33:64 Ja '47 [cont monthly]

Prices

Depreciated dollar should mean higher stock prices. G. Y. Billard. Comm & Fin Chr 166: 428+ Jl 31 '47
How stock groups acted in 1946. F. A. Dodge. Mag of Wall St 79:309-10+ D 21 '46
Labor, capital and stock market. L. Manville. Comm & Fin Chr 165:392+ Ja 23 '47
Monthly range of prices on the New York stock exchange. Comm & Fin Chr 165:501-12 Ja 23 '47
100 stocks far below 1946 highs; with tabulation. L. S. Mott. Comm & Fin Chr 165: 3344+ Je 26 '47
Stock market at a glance. Published in weekly numbers of Barron's

Short selling

Attacks short selling. A. J. Sabath. Comm & Fin Chr 165:2852+ My 29 '47
NYSE seeks to work out plan for revealing short sales on tape. Comm & Fin Chr 164: 2751+ N 28 '46
Short interest and market price movement; with graphs showing N.Y.S.E. short interest vs. market values, and General Motors prices, short interest and volume, 1932 to date. R. T. Shadoan. Comm & Fin Chr 166:618+ Ag 14 '47

STOCKS—Short selling—*Continued*
Short interest as a bull market indicator; with graph showing action of industrial average on five occasions when short-interest ratio topped 1.50. Barron's 27:21 Je 2 '47
Short interest increased 3,300 shares last month. Barron's 27:19 Ap 21 '47
Short interest position increased 52,687 shares. Barron's 27:38 Ag 25 '47
Short interest ratio at three-year high point. Barron's 27:21 Je 23 '47

Split-up

Split-up stocks appraised; prominent 1946 splits plus potential 1947 candidates. P. Dobbs. Mag of Wall St 79:477-9+ F 1 '47
Stock splits and growth trends. G. W. Mathis. il Mag of Wall St 81:25-7+ O 11 '47
Stock splits widen corporate ownership, but don't add price stability to shares. Barron's 27:37 S 15 '47

Valuation

Evaluating stocks selling at very low price earnings ratios. P. Dobbs. Mag of Wall St 81:90-1+ O 25 '47
High personal taxes slash stock values. C. Davidson, jr. Comm & Fin Chr 165:3228+ Je 19 '47; Abstract. Barron's 27:25 Je 23 '47
Valuation of corporate common stock. W. R. Ginder. J Account 82:473-6 D '46
Working capital's importance in common stock valuation. E. S. Ferguson. Comm & Fin Chr 165:2725+ My 22 '47

Yields

Blue chip stocks outperform the averages. H. W. Abbot. Comm & Fin Chr 165:1119+ F 27 '47

STOCKS, Convertible. See Stocks, Preferred—Convertible stocks

STOCKS, Preferred

Convertible stocks

Convertible preferreds as investment hedges in today's market. S. Devlin. Mag of Wall St 81:22-4+ O 11 '47

Redemption premiums

Preferred stockholders' claims to redemption premiums. Comm & Fin Chr 165:2732 My 22 '47

STOCKYARDS

Employees

Q fever in the United States; outbreak among stock handlers and slaughter house workers; abstract. N. H. Topping and others. Nat Safety N 55:48 My '47

STOICHIOMETRY
Decomposition of benzoyl peroxide; the kinetics and stoichiometry in benzene. B. Barnett and W. E. Vaughan. bibliog J Phys & Colloid Chem 51:926-42 Jl '47
Mechanism of the oxynitration of benzene. F. H. Westheimer, E. Segel and R. Schramm. bibliog Am Chem Soc J 69:773-85 Ap '47
Oxynitration of benzene; studies relating to the reaction mechanisms. M. Carmack and others. bibliog Am Chem Soc J 69:785-90 Ap '47

STOKELY-VAN CAMP, Inc.
Builds defense against price cut. Barron's 27:33 Ap 28 '47
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:400-1 Jl 5 '47
Stokley diversifies. Bsns W p72-5 F 15 '47

STOKER manufacturers association
Annual meeting, 30th, Lookout Mountain, Tenn. June 16-18. Sheet Metal Worker 38: 90+ Jl '47; Dom Eng 170:154+ Jl '47

STOKERS, Mechanical
Automatic stoker transmission. il diags Machine Design 18:147-8 N '46
Babcock and Wilcox Roto Grate stoker. il diags Engineer 183:395-7 My 9 '47
Boiler installations on the Continent, and future problems. J. H. Bock. il map diags Inst Mech Eng J & Proc 155 (War emergency issue no 22):387-99; Discussion. 399-400 '46
Burning coke breeze on a chain grate stoker. F. X. Gilg. diags Blast F & Steel Pl 35: 1252-4+ O '47
Burning low-grade Midwestern coals on spreader stokers with continuous ash discharge; Iowa Falls, station of Central states electric co. J. M. Drabelle. il diags A S M E Trans 69:203-8; Discussion. 208-12 Ap '47
Cinder and fly-ash factors when burning small anthracite coal on traveling-grate stokers. C. S. Gladden. bibliog diag A S M E Trans 69:191-8 Ap '47; Excerpts. Power Pl Eng 50:124 D '46; Discussion. A S M E Trans 69:198-202 Ap '47
Glasgow technical exhibition; J. Brockhouse and co., ltd; Meldrums, ltd. il Engineer 182:463-4 N 22 '46
Mirrlees Watson automatic stoker designed to feed coke. il Engineer 182:599 D 27 '46
Reliable electronic controls for fan and stoker drives. D. L. Greene and R. L. Jaeschke. il diags Elec World 126:75-7 N 23; 96-9 D 7 '46
Seeks stoker design for brown coal. Power 91:543 Ag '47
Traveling grate, spreader feed stoker. il Power Pl Eng 51:107 Ag '47
Trend toward automatic heating may break stoker output record. V. Bell. Steel 120:65 F 17 '47
Universal stoker drive. il Mech Handling 33: 648-50 O '46

STOMACH

Diseases

Plastics for ulcers; resinous pills for stomach ulcers. Mod Plastics 25:182 S '47
Surgical management of peptic ulcers in railway employees. J. D. Bisgard. Ind Med 16:168-9 Ap '47

STONE

See also
Building stone
Dolomite
Granite
Limestone
Masonry
Pulpstones
Quarries and quarrying
Rocks

STONE, Crushed
County operated quarry and crusher save $30,000 yearly; Sebastian county, Ark. E. J. Roths. il Pub Works 78:15-16 My '47
Crushing boulders up to 20-in; Ohio gravel co. E. R. Cushing. il diags Rock Prod 49: 82-4 D '46
From lime burning to modern stone plant; John W. Karch stone co. D. Mocine. il plan Rock Prod 50:92-4 O '47
Produce numerous stone sizes with flexible plant layout; Auxvasse stone and gravel co. il Rock Prod 50:77+ Jl '47
Studies of stone vs. gravel in traffic-bound roads; abstract. A. T. Goldbeck. Rock Prod 50:80 Mr '47
Surge pile balances plant flow; Rockydale quarries corporation utilizes gravity to reduce transportation cost. il Rock Prod 50: 72-3 Jl '47
Triple production with improvements; Superior stone co. H. E. Swanson. il diag Rock Prod 50:103-5 Ja '47
Two men operate crushing plant; Radcliff & Berry, inc. flow sheet il Rock Prod 50:74-5 Mr '47

Transportation

L.M.S. wagon for roadstone transport. Engineer 182:452 N 15 '46

STONE container corporation
Stock offered. Comm & Fin Chr 165:1324 Mr 10 '47

STONE cutting

See also
Granite cutting

STONE sand. See Sand—Stone sand

STONES in glass. See Glass—Stones

STONEWARE
Acetic acid vs. materials of chemical plant construction; chemical stoneware. F. E. Herstein. Chem Eng 53:214+ D '46
Chemical engineering materials of construction; review of literature from start of World war II; chemical stoneware. F. E. Herstein. bibliog il Ind & Eng Chem 39: 1254-6 O '47
Sulphur dioxide versus construction materials; chemical stoneware. F. E. Herstein. Chem Eng 54:216+ S '47

STONEWARE—*Continued*
Wet and dry chlorine vs. materials of chemical plant construction; chemical stoneware. F. E. Herstein. Chem Eng 54:216+ Mr '47

STOOLS, Stepladder

Rating

Kitchen step-stools. il Consumers Res Bul 19: 5-7 Ap '47

STOP and shop, inc.
Grocery chain's big income promises extra dividend. Barron's 27:34 S 1 '47

STOP mechanism
Mechanism for automatically stopping press when stock fails to feed. F. H. Mayoh. diags Mach 53:201-2 Je '47

STOP payment. See Checks—Stop payment

STOPING methods. See Mining methods

STORAGE
Air rights give floor rights; tiering of stored materials. il Am Mach 91:108 Ap 10 '47
Better storing lowers production cost; Brown instrument company, Philadelphia. G. V. Fletcher. il Factory Management 104:108-10 N '46
Flammable liquids in drums; indoor and outdoor storage. il Safety Eng 93:22-3+ Ap '47
Fluid storage of bar stock; A. C. Gilbert co. il Steel 120:113 Ap 14 '47
Safeguarding storage areas. Mech Eng 69: 674 Ag '47
Storing in key areas cuts floor space 60 per cent; United specialities company, Chicago. N. Quigg. il Factory Management 105:125 Ag '47
Storing engineering materials. B. Melnitsky. il Steel 120:103-4+ Mr 17 '47

See also
Alfalfa meal—Storage
Apples—Storage
Coal storage
Cold storage
Food—Storage
Freight houses
Gas, Natural—Storage
Gas storage
Rubber latex—Storage
Soybeans—Storage
Stores systems
Warehousing
Water storage
Wood storage

STORAGE batteries
Adequate control voltage storage from batteries. W. A. Holland. Elec World 127: 48-50 Mr 29 '47
Application and use of the storage battery in Diesel-electric locomotives. il diags Diesel Power 25:45-9 O '47
Battery powered aluminum flashwelder. il Iron Age 158:51 D 26 '46
Corrosion and growth of lead-calcium alloy storage battery grids as a function of calcium content. U. B. Thomas and others. bibliog il Electrochem Soc Trans 92 (preprint 12):145-57 O '47
Market for replacement automobile storage batteries. H. E. Way. il Dom Comm 35:62-4 Ja '47
Novel lift devised to ease battery change. il Aviation 46:88 My '47
Resistance welding with storage-battery power. J. D. Gordon. il diag Welding J 25: 1049-54 N '46
Roll-out battery boxes; Southern Pacific. il Ry Mech Eng 121:482-3 S '47

Charging

Automatic control of battery charging. E. L. Deeter and A. C. Plautz. il diags Electronics 20:156+ My '47
Automobile battery chargers or boosters. il Consumers Res Bul 19:12-15 Ja '47
Charging industrial truck batteries by means of copper-oxide rectifiers. J. J. Buckley. il diags Gen Elec R 50:27-35 Ap '47
Lower battery cost by better charging; Sunshine Biscuits. E. W. Kerwin. il diag Factory Management 104:104-5 O '46
Mercury-arc rectifiers; incomplete control range of the grid-controlled type for battery charging. R. Wells. diag Elec R (Lond) 141:220-4 Ag 8 '47

Manufacture

Control of lead exposure in storage battery manufacture. G. S. Winn and C. Shroyer. J Ind Hygiene 29:351-6 S '47
Lead-nickel glass of controlled chemical durability for storage battery use. F. J. Williams and J. A. Orsino. Am Cer Soc J 29:313-16 N 1 '46; Abstract. Glass Ind 28: 85+ F '47
Storage battery plant surveyed for lead hazard. Safety Eng 92:100 O '46

Testing

Cycle-testing laboratory for aircraft batteries. Franklin Inst J 243:63-5 Ja '47; Excerpts. Product Eng 18:163 Ap '47

Transportation

Battery elevating and transporting cart. G. Habian. il Air Transport 5:76 My '47
Practical palletizing pays off. B. R. Loeper and J. R. Hughes. il Am Mach 90:113-15 N 21 '46

STORAGE tanks. See Tanks

STORCH, Henry Herman, 1894-
Portrait. Fortune 35:248 Ap '47

STORCH, Philip H.
Taft-Hartley foe loses; labor-backed candidate trounced by G.O.P. in Pennsylvania by-election. por Bsns W p 17 S 13 '47

STORE buildings
Builder and merchant profit alike from store modernization. il plans Am Bld 68:80-1 N '46
Building types study. N. A. Owings. il plans diags Arch Rec 101:86-104 F '47
Displays + parking = good business; Conrad Troll, Pasadena, Calif. il plan Am Bld 69:124-5 Ag '47
Modern beauty salon and shop building for suburban area, Seattle, Wash. il plans Am Bld 69:104-7 Mr '47
Modernization for merchants. il Bsns W p60+ Jl 19 '47
Report of Store modernization show urges retail modernization. Am Bsns 17:36 Mr '47
Retailers unload real estate; life insurance companies and colleges lead among buyers. Bsns W p48+ Ja 4 '47

See also
Retail trade—Store layout
Shopping centers

Electric equipment

All-service selling builds load in grocery. il Elec World 126:140 D 7 '46

Equipment

Identifying piping systems; Marshall Field & co. il Heating-Piping 19:81-2 Jl '47

Fires and fire protection

Fire insurance for merchants; inspection of stores. M. E. Bulske. Rough Notes 90:21+ Ap '47
Heavy store fire loss charged to carelessness; study by N.F.P.A. Weekly Underw 155: 1350 D 7 '46; Same cond. East Underw 47: 22 D 6 '46; Same cond. Spectator (Property ed) 12:16+ D 12 '46

Fronts

Open-front photo shop in Berkeley, Calif. il plan Arch Rec 101:104 F '47
Prize-winning store front of brick; illustrations. il Brick & Clay Rec 110:26 Je '47
Store fronts moderne. il Elec World 128:74+ Ag 30 '47

Lighting

Case studies of small business; improving lighting. plans Dom Comm 35:77-8 Ja '47
Cold cathode for a drug store. il Elec West 98:53 Ja '47
Field study of the practical factors affecting illumination design for merchandising areas. W. F. Rooney. il diags Illum Eng 42: 249-67 F '47; Excerpt. Elec World 127:62 F 1 '47
Functional store lighting development and application. F. C. Winkler. il plans diags Illum Eng 42:108-28; Discussion. 128-30 Ja '47

STORE buildings—Lighting—*Continued*
Incandescent down-lighting boosts fluorescent in new market; Miller's supermarket, Denver. il Elec World 126:90 D 21 '46
Lighting the package for effective selling. C. M. Cutler. il Mod Packaging 20:138-40 Ja '47
Outstanding example of modern store lighting; Miller-Taylor shoe co., Columbus, Ga. il diag Elec World 127:88 Mr 1 '47
Planned store lighting is theme of G-E exhibit at modernization show. J. S. Harrington. il Ind Marketing 32:54+ Ag '47
Seattle's Bellevue shopping square; lighting for dry goods store and food shop. il Elec West 97:89 O '46
Sport shop; Roos bros.; illustrations with text. Elec West 99:72-3 Ag '47
Store fronts moderne. il Elec World 128:74+ Ag 30 '47
Three-way remote control for market lighting. il Elec World 126:144 D 7 '46

STORE employees. See Retail workers

STORE fronts. See Store buildings—Fronts

STORE management. See Retail trade—Store management

STORE windows. See Show windows

STOREHOUSES, Concrete
Precast concrete storehouses. A. Amirikian. il diags Am Concrete Inst J 18:1097-1116 Je '47; Discussion. il 19:1116[1]-1116[12] pt 2 D '47
Precast concrete warehouse construction; with cost data. L. P. Corbetta. Am Concrete Inst J 18:1117-24 Je '47
Prefabricated concrete structures test new design concepts and construction techniques; two storehouses at the Naval supply depot, Mechanicsburg, Pa. A. Amirikian. il diags Civil Eng 17:383-6 Jl '47

STORES (retail trade)
Building types study. N. A. Owings. il plans diags Arch Rec 101:86-104 F '47
Contemporary shops in the United States. E. Nicholson. rev & enl 216p $10 Architectural book pub. co, 112 W. 46th st, New York 19 '46
Store modernization show in New York's Grand Central Palace; illustrations with text. Arch Forum 87:13 Ag '47

See also
Bakers and bakeries
Candy stores
Chain stores
Clothing stores
Company stores
Department stores
Drug stores
Electric shops (retail trade)
Florists' shops
Furniture stores
Jewelry stores
Market stores
Men's stores
Music stores
Plumbing shops
Retail trade
Self service stores
Shoe stores
Store buildings
Women's apparel shops

STORES, Traveling. See Traveling stores

STORES systems
Gearing purchases with production; General electric X-ray corporation. P. Eastman. il Am Bsns 17:20-1+ Ag '47
How to insure close control of stores; management data sheet. J. K. Lasser. Factory Management 105:143-4 Ja '47
Hudson parts control method. D. G. Baird. il Am Bsns 17:12-13+ O '47
Inventory and stock control for city and county public works departments. W. F. Freeborn and A. A. Kirkbright. il Pub Works 77:31-2 D '46; 78:28+ F '47
Manual coordinates decentralized stocks; Westinghouse electric corp. G. R. Kepner. il Am Mach 91:110-12 O 23 '47
Storage that means no waits for parts; National cash register company. R. J. Wood. il Factory Management 104:137 O '46

See also
Department stores—Stockrooms
Inventories
Tool rooms

STORM water. See Sewerage

STORMS
At last someone does something about the weather; Harrisburg railways utilized teletyped weather reports. il map Bus Transportation 26:60-1 Mr '47
Milwaukee snow blitzed! account of January '29 blizzard. H. J. McKeever. il Roads & Sts 90:74-6+ My '47

See also
Rain and rainfall
Snow
Thunderstorms

STOVE polish
Stove polishes. R. L. Stetson. Soap & San Chem 23:133+ Mr '47

STOVES
First porcelain enameled stove. il Cer Ind 49:67+ Ag '47

See also
Electric stoves
Gas stoves
Heaters

Manufacture
New coreroom is model of efficiency; Cleveland foundry co. P. Dwyer. il plan Foundry 75:66-71+ O '47
New $100,000 enameling plant ups production of stoves and ranges. il Cer Ind 49:69 S '47

STRAIGHT, James Luther, 1909-
Straight appointed I.A.S. western manager. por Aeronautical Eng R 6:5 Ja '47

STRAIGHTEDGES
Direct-reading straightedge tester uses three toolmakers' buttons. S. Framurz. diag Am Mach 91:101 Ja 2; 115 Mr 27 '47
Toolmaker's buttons establish accurate angles and straightedges. S. Framurz. diags Am Mach 90:139 D 5 '46
Toolpost grinder trues straightedges. F. E. Wells. Am Mach 91:110 Ja 30 '47

STRAIGHTENING
Electronic straighteners use two different systems. D. Eldred. il diags Textile World 97:123+ O '47

STRAIGHTENING machines
Hydraulic booster reduces cycle time; coil straightening press. G. M. Geiger. il diag Machine Design 19:113-14 Ap '47
New method of wire straightening. G. E. Shubrooks. il Materials & Methods 24:1230 N '46
Simple shaft straightener frees lathes for other refinery jobs. G. Cunningham. diags Pet Processing 2:661 S '47
Tube-straightening; conventional methods employed by the industries for straightening welded- and seamless-tube stock. E. W. Wrage. il diags Mech Eng 69:648-50 Ag '47

STRAIN gages
A.S.T.M.-D-13 holds spring meeting; symposium on use of electric strain gage for textile testing. Rayon 28:180-1 Ap '47
Atom smasher tank stresses as measured by SR-4 strain gages. T. F. Hengstenberg. il diags Welding J 26:sup363-6 Je '47
deForest recording strain gage. il Automotive Ind 97:52 Ag 1 '47; R Sci Instr 18:685-6 S '47
Equilateral electric strain gage rosette. G. Brewer. il diags Metal Prog 51:758-63 My '47
Equipment for separately measuring power in the cylinder shaft, threshing machinery and sickle bar components of combine harvesters; abstract. A. C. Ruge and others. il S A E J 55:66 Mr '47
Force measurements by means of resistance wire strain gages. W. C. Randels and V. C. Plane. diags J Aeronautical Sci 14: 59-62 Ja '47
How the Hartford steam boiler straingage is used in safeguarding engines; reprinted from Locomotive of April 1934. H. J. Vander Eb. il diags Locomotive 46:167-73 Ap '47
Measurement of transient hydraulic pressures. L. H. Montgomery and J. W. Ward. bibliog il diags R Sci Instr 18:289-93 My '47
Mobile laboratory measures stresses in steel trailers under road conditions. J. Parina, jr. il diags Steel 120:88-9+ Mr 10 '47
Mobile strain gauge recording. il Engineer 184:244-5 S 12 '47
Orientation of strain gages in stress analysis. A. W. Rankin. il diags Gen Elec R 50:14-21 S '47

STRAIN gages—*Continued*
Santa Fe makes stress tests on track and rolling stock; electrical strain gage recording equipment. il Ry Age 122:1165-6 Je 7 '47; Same. Ry Mech Eng 121:256-7 My '47
Small scratch-recording strain gage. il Iron Age 160:73 Ag 21 '47
Spotweld analyzer for maintenance work. D. F. Hays. il Iron Age 159:49-51 Je 12 '47
Strain gage and oscilloscope combined in hydraulic analyzer. il diag Product Eng 18: 96-7 Ap '47
Strain gages; deForest scratch-recording gage; Huggenberger tensometers. il Mech Eng 69:774 S '47
Stress distribution in punch presses analyzed with electric strain gages. il Mach 54:167-8 O '47
Stress-strain relations in ceramic materials. J. O. Everhart and M. Lassettre. il Ohio State U Eng Exp Sta Bul 126:1-23 '46 (pa 50c)
Structural investigation in still water of the welded tanker Neverita; instruments for measurement of strains and deflections in ship structures. F. B. Bull. il plans diags Welding J 25:sup809-21 D '46
Types of strain measuring devices and their range of utility. K. F. Smith. il diags Product Eng 18:107-10 Ja '47
Use of electric gaging equipment in machine design. P. E. Nokes and E. G. Carr. il Mech Eng 69:117-19 F '47; Same cond. Machine Design 19:125-6 F '47
Variation of longitudinal residual strain through the thickness of a 1-in. Unionmelt weld. J. L. Meriam and others. diags Welding J 25:sup844-7 D '46

See also
Extensometers

STRAINERS
Pipe-line strainers can reduce maintenance costs. R. E. Cochran. il diags Textile World 97:118-19+ Je '47

STRAINS and stresses
Analysis of stresses in U-bend pipe frame. J. Yeakel. Pet Refiner 26:125 Mr '47
Analysis of stresses in unsymmetrical pipe frame. J. Yeakel. il diags Pet Refiner 26: 113-15 Je '47
Apparent yield strength of plain carbon steel. J. A. Pope. diags Engineering 164:284-8 S 19 '47
Automatic spark recorder for stress-strain testing. R. Shearer. il diag India Rubber World 116:498+ Jl '47
Biaxial stresses in rigid vessel simulated in notched tension coupon. G. Brewer. il diags Metal Prog 51:91-6 Ja '47
Calculation of the stresses in a turbine wheel by the method of superposition. W. J. Kearton. diags Inst Mech Eng J & Proc 155 (War emergency issue no 15):73-82 '46
Computer for principal stresses. R. G. Manley. Engineering 164:340-1 O 10 '47
Control of internal stresses in heat-treated aluminum-alloy parts. L. E. Benson. Engineering 162:463 N 15 '46
Critical stresses in a circular ring; testing of rocks and concrete. E. A. Ripperger and N. Davids. bibliog Am Soc C E Proc 72: 159-68 F '46; Discussion. il diag 72:1185-7, 1291-4 O-N '46
Deflexion of a thick ring under a uniformly distributed couple. A. E. Johnson. Inst Mech Eng J & Proc 155 (War emergency issue no 16):101-11; Discussion. 111-15 '46
Deformation of metals during single and repeated tensile impact. J. A. Pope. bibliog il diags Iron & Steel Inst J 157:31-54 S '47
Design of compound cylinders for high-pressure service. W. R. D. Manning. bibliog Engineering 163:349-52 My 2 '47
Design of parts for conditions of variable stress. J. S. Caswell. diags Product Eng 18:118-19 Ja '47
Determination and presentation of compressive stress-strain data for thin sheet metal. W. Ramberg and J. A. Miller. bibliog il diags J Aeronautical Sci 13:569-80 N '46
Determination of stresses in oil well casing in place. C. H. Oberg and R. W. Masters. il diags Pet Eng 18:149-50+ Je '47
Developments and improvements in methods of stress-strain testing of rubber. J. W. Schade and F. L. Roth. il India Rubber World 116:777-80+ S '47
Disk spring or Belleville washer. G. Ashworth. bibliog il diags Inst Mech Eng J & Proc 155 (War emergency issue no 16):93-100 '46
Distribution of bond stress in concrete pull-out specimens. D. Watstein. il diags Am Concrete Inst J 18:1041-52 My '47
Effect of residual stresses on the fatigue strength of structural materials; abstract. J. O. Almen. S A E J 55:79-80 Ap '47
Effect of stress distribution on yield points. F. G. E. Peterson. il diags Am Soc C E Proc 72:445-59 bibliog(p458-9) Ap '46; Discussion. bibliog diags 72:1032-40, 1271-84, 1421-4; 73:381-2 S, N-D '46, Mr '47
Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdams, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46
Effects of pressure cycling on physical properties of materials. T. C. Poulter. il diag Product Eng 18:84-5 Ag '47
Experimental evidence of the viscous behavior of grain boundaries in metals. T. Kê. bibliog diags Phys R 71:533-46 Ap 15 '47; Abstract. Engineer 184:196-7 Ag 29 '47
Experimental stress analysis. F. R. Steinbacher. Product Eng 18:172 Jl '47
Experimental stress analysis; symposium of case histories. il diags Product Eng 17:121-36 D '46
Five theories of static failure explained and compared. C. Lipson. il Product Eng 18: 157-60 Je '47
Flow of metals at elevated temperatures. J. H. Hollomon and J. D. Lubahn. bibliog diags Gen Elec R 50:44-50 Ap '47
Forces and stresses in clutch and brake bands. A. C. Rasmussen. diags Product Eng 18:152-5 My '47
Fracture of metals under combined stresses. D. J. McAdam, jr. bibliog diags Am Soc for Metals Trans 37:538-66 '46
Fracture of some aluminum alloys under combined stress. E. G. Thomsen and others. bibliog il diags A S M E Trans 69:81-7 F '47
Graph for determining lug shear-out distance; reference book sheet. W. A. McGowan. diags Product Eng 18:157+ My '47
Hardening stresses. H. A. Strickland, jr. Am Mach 91:152+ Ja 2 '47
Influence charts for computation of vertical displacements in elastic foundations. N. M. Newmark. fold charts Ill U Eng Exp Sta Bul 367:1-11 '47 (pa 40c)
Internal stresses in metals and alloys; symposium. Engineer 184:393-4, 405-7, 431-3, 464-5, 476-8 O 24-N 21 '47; Engineering 164:401-2, 426, 449-50, 473 O 24-N 14 '47
Interpretation of creep and stress-rupture data. F. B. Foley. il Metal Prog 51:951-8 Je '47
Introduction to the mathematical theory of plasticity. W. Prager. diag J Ap Phys 18: 375-83 Ap '47
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup 372-432 Jl '47
Investigation of stress in circular rings. A. Samoiloff. diags Pet Refiner 26:99-103 Jl '47
Length changes in metals under torsional overstrain. H. W. Swift. diags Engineering 163:253-7 Ap 4 '47
Limits of torsional vibration stress in marine oil-engine shafting. S. F. Dorey. Engineering 163:509-11 Je 13 '47; Abstract. Engineer 183:310 Ap 11 '47; Discussion. Engineering 163:366-7 My 2 '47; Engineer 183: 306 Ap 11 '47
Measuring stresses and deformations in solid materials; abstract. N. Hast. Am Concrete Inst J 18:348-9 N '46
Method determines degree of fixity in footings and resulting frame stresses. A. Floris. diags Civil Eng 17:141-2+ Mr '47
New formulas for stresses in concrete pavements of airfields. H. M. Westergaard. bibliog Am Soc C E Proc 73:687-701 My '47

STRAINS and stresses—*Continued*
Nomograph aids determination of torsional stresses in shafts; engineering data sheet. C. P. Nachod. Machine Design 18:157-8 D '46
Nomograph aids use of Boussinesq equation. I. J. Hooks and H. Gray. Civil Eng 17:332-3 Je '47
Orientation of strain gages in stress analysis. A. W. Rankin. il diags Gen Elec R 50: 14-21 S '47
Photogrid process applied to problems in machine design. G. A. Brewer. bibliog il Machine Design 19:120-2 F '47
Plastic flow, creep, and stress relaxation. C. Mack. bibliog diags J Ap Phys 17:1086-107 D '46
Plates in tension joints under repeated loading. H. W. Foster. Product Eng 17:108-11 D '46
Principal stress method of stress analysis. H. B. Maris. bibliog Franklin Inst J 244: 27-62 Jl '47
Relation of mechanical properties and internal stresses to casting design. R. A. Flinn. diag Foundry 75:106-9+ Ap '47
Report on the fracture of metals; report submitted to the Bureau of ships of the U.S. navy. M. Gensamer and others. Welding J 26:sup443-84 bibliog(293 titles, sup469-72, 483-4) Ag '47
Rigid-frame structures subject to non-uniform thermal action; foundations for boilers and oil refinery furnaces. C. C. H. Tommerup. diags Am Soc C E Proc 72: 759-80 Je '46; Discussion. 72:1321-4; 73:79-84, 383-4, 915-22 N '46, Ja, Mr, Je '47
Rotating disks; stress calculations and analysis for disk profiles with external loading. A. H. Ehlinger. bibliog il diags Machine Design 19:132-7+ Mr '47
Shear stresses in springs. L. E. Adams. Engineering 164:280 S 19 '47
Some experiments on the effects of residual stresses on the fatigue of aluminum alloys; abstract. G. Forrest. Metal Prog 50: 1254+ D '46
Stability of thin cylindrical shells in torsion. R. G. Sturm. bibliog il diags Am Soc C E Proc 73:471-95 Ap '47; Discussion. 73:1302-4, 1448-9, 1549-52 O-D '47
Steel-arch hangar tested to destruction. H. E. Wessman. il diags Eng N 139:539-43 O 16 '47
Strength and ductility. M. Gensamer. bibliog il Am Soc for Metals Trans 36:30-60 '46; Excerpts. Iron Age 157:66-71 F 14 '46; Metal Prog 49:731-4 Ap '46
Strength of beams as determined by lateral buckling. K. de Vries. diags Am Soc C E Proc 72:985-1011 S '46; Discussion. 72:1425-32; 73:236-8, 397-403, 559-68, 953-9 D '46, F-Ap, Je '47
Stress analysis by X-ray diffraction. H. R. Isenburger. il Mach 53:167-8 Jl '47
Stress comparisons by correlation with high frequency magnetic and eddy current losses. P. E. Cavanagh. bibliog il diags Am Soc for Metals Trans 36:137-63; Discussion. 163-4 '46
Stress concentration and fatigue failures. S. Timoshenko. il diags Engineer 183:398-9, 421-2 My 9-16 '47
Stress-distribution in gravity dams; abstract. O. C. Zienkiewicz. Am Water Works Assn J 39:814-15 Ag '47
Stress relaxation across grain boundaries in metals. T. S. Kê. il Phys R 72:41-6 Jl 1 '47
Stress-strain properties of certain yarns and knitted fabrics made of rayon, nylon and natural fibers. H. M. Fletcher and P. A. Gilmore. bibliog Rayon 28:476-8, 542-5 S-O '47
Stresses by analysis and experiment. A. J. S. Pippard. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 13): 20-8; Discussion. il 28-40 '46
Stresses in hooks, and their determination by relaxation methods. L. Fox and R. V. Southwell. bibliog diags Inst Mech Eng J & Proc 155 (War emergency issue no 13): 1-6; Discussion. il 6-19 '46
Stresses in turbine disks at high temperatures. E. P. Popov. bibliog Franklin Inst J 243:365-89 My '47
Stressing of gas turbine blading. J. Hodge. diags Engineer 182:559-60 D 20 '46
System of microstresses in cold-worked metal. N. M. Blachman. bibliog Phys R 70: 698-704 N 1 '46
Tests verify accuracy of transformed-area method of predicting beam stresses. J. T. Thompson. diags Civil Eng 17:398-9 Jl '47
Theory of inelastic bending with reference to limit design. A. Hrennikoff. Am Soc C E Proc 73:255-89 Mr '47; Discussion. 73: 944-6, 1293-301 Je, O '47
Thin-shelled domes loaded eccentrically. W. C. Voss and others. il diags Am Soc C E Proc 73:1173-95 O '47
Triaxial compression test results applied to flexible pavement design. E. S. Barber. bibliog diags Pub Roads 25:1-8 S '47
Types of strain measuring devices and their range of utility. K. F. Smith. il diags Product Eng 18:107-10 Ja '47
Vibrations of shallow spherical shells. E. Reissner. diags J Ap Phys 17:1038-42 D '46

See also
Airplanes—Stresses
Beams and girders
Bending moment
Bridges—Stresses
Building
Columns
Concrete construction—Design
Creep of materials
Creep of metals
Deformations (mechanics)
Elasticity
Fatigue in metals
Graphic statics
Least work, Principle of
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Notched bar testing
Photoelasticity
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Ships—Strains and stresses
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Steel construction—Design
Strain gages
Strength of materials
Structural engineering—Design
Torsion
Trusses
Welding—Stresses
Wind pressure
also Society for experimental stress analysis

Brittle coating test
Brittle coating method for experimental stress analysis. R. G. Anderson. il Product Eng 17:122-4 D '46
Brittle lacquer technique used to test forged impeller design. H. Dobkin. il diag Steel 121:70-1+ S 1 '47
Car frame and crankcase improved by brittle coating tests. diags Automotive Ind 97: 31+ Jl 1 '47
Connecting rod design improved through brittle lacquer testing. W. T. Bean, jr. il Product Eng 17:128-30 D '46
Experimental determination of strains in aircraft landing wheels and brakes; stress-coat method. M. H. Polzin. il S A E J 55: 26-8+ Je '47
Stress determination by brittle coatings. G. Ellis. il Mech Eng 69:567-71 Jl '47

STRATFORD, William M.
Portrait. Fortune 35:246 Ap '47

STRATFORD, Ontario
Regina and Stratford have 30-year program of civic development. E. G. Faludi. il plans Roads & Bridges 84:66-9+ N '46

STRATIGRAPHIC commission. See American commission on stratigraphic nomenclature

STRATIGRAPHIC geology. See Geology, Stratigraphic

STRATTON, James Hobson, 1898-
Sketch. por(p41) Civil Eng 17:42 Ja '47

STRAW
Economics of straw utilization. E. C. Lathrop. Paper Tr J 125:59-60 Ag 21 '47
Effect of combined straw on new seedings. C. J. Willard and R. D. Lewis. il Paper Tr J 124:59-62 Ap 17 '47
Evaluation of nine-point straw for corrugating. N. F. Wilson. Paper Ind 29:1026+ O '47
Preservation of straw in ricks; report of joint meeting of TAPPI fibrous agricultural residues committee and chemical preservative manufacturers. S. I. Aronovsky. Paper Tr J 124:35-7 My 22 '47
Pulping of straw with digestion liquors containing sodium sulphite. G. S. Hannaway. Paper Ind 29:714+ Ag '47

STRAW board. See Paper board

STRAW hats
U.S. is buying Dominican hand-made straw hats. For Comm W 27:11 Ap 12 '47

STRAWBOARD. See Paper board

STRAY currents
Electric system curbs pipe damage caused by electrolysis. il Comp Air Mag 52:47 F '47
Plastic insulation provides protection against stray-current corrosion in wells and piping systems. J. A. Clay, jr. il diag Oil & Gas J 46:245-6+ Jl 26 '47
Stray current control system for prevention of electrolytic corrosion. il Am Gas J 166: 37 F '47

STREAM flow
Effect of density currents upon raw water quality; Watts Bar reservoir. M. A. Churchill. map Am Water Works Assn J 39:357-60 Ap '47
Entrainment of air in open-channel flow; abstract. L. G. Straub and W. W. De Lapp. Civil Eng 17:450-1 Ag '47
Ohio stream flow; summary of stream-flow records in Ohio, 1898-1944. C. V. Youngquist. bibliog il maps Ohio State U Eng Exp Sta Bul 127:1-189 '47 (pa $1)

See also
Stream measurement

STREAM measurement
Charts for canal flow computations. G. G. Commons and L. B. Griffith. Eng N 137: 664-5 N 14 '46

STREAM pollution. See Water pollution

STREET accidents

See also
Street lighting—Safety aspects

STREET cars
Glasgow experimental tram. il Elec R (Lond) 141:380 S 5 '47
Kriegsstrabenbahnwagen; German transit. G. Stetza. il Mass Transportation 43:236-8 Je '47
New Stockholm trams. il Elec R (Lond) 139: 1052 D 27 '46
Old horse car driver; personal reminiscence by W. K. Kelsey. il Mass Transportation 43:110-12 Mr '47
PCC car; is it the ride standard public now expects? E. C. Wrausmann. il Mass Transportation 43:18-20 Ja '47
PCC sets pace in city traffic. il Mass Transportation 42:532-4 D '46
Pullman will lead field; modern street cars and trolley buses. W. C. Wheeler. il Mass Transportation 43:14-17, 20 Ja '47
Some recent developments in the PCC car. S. B. Cooper. il Elec Eng 66:342-5 Ap '47; Abstract. Mass Transportation 43:426-7 S '47
Trolley coaches and PCC street cars provide successful city transportation. W. J. Clardy. il Elec Eng 66:915-18 S '47
Vehicle prospects for '48. il Mass Transportation 43:400-1 S '47

Lighting

See Car lighting

Size

Passenger seat miles versus vehicle miles; economic size of transit vehicles. C. A. Stephenson. Mass Transportation 42:535-6+ D '46

STREET cleaning
Cleaning of streets; discussion. Water & Sewage 85:78+ O '47
Improved street sanitation with a synthetic detergent; Nacconol NR. O. M. Morgan. il Water & Sewage 85:66-8+ O '47

See also
Refuse collection
Snow removal

STREET cleaning apparatus
Mechanical road sweepers. il Engineer 184: 182 Ag 22 '47
Vacuum machine for loading leaves. il Roads & Bridges 85:68 Jl '47

STREET dirt

Analysis

Comparative study of the lead content of street dirts in New York city in 1924 and 1934. S. Kaye and P. Reznikoff. J Ind Hygiene 29:178-9 My '47

STREET lighting
Association of public lighting engineers annual meeting, Southport. Electrician 139: 833-4, 931-4 S 19-26 '47; Elec R (Lond) 141: 429-31, 476-8 S 19-26 '47; Light & Lighting 40:175-82 O '47
Capital city takes the lead in modern street lighting. C. E. Waldron. il plan Elec World 128:64-5 Ag 16 '47
Challenge of street lighting to the electric utilities. E. C. Powers. Pub Util 39:480-2 Ap 10 '47
Denverites like mercury street lighting. Elec World 127:138+ Ap 12 '47
Developments in mercury lamps for street lighting. E. W. Beggs. Elec West 97:65 D '46
Earliest street lighting with arc lamps? reproduction of letter written by A. Siemens on May 12, 1910. Light & Lighting 39:194 N '46
Fluorescent street lighting; experimental installations in two London highways. il Electrician 137:1591-2 D 6 '46; Elec R (Lond) 139:981-2 D 13 '46
Fluorescent street lighting gets try-out in London. F. R. Brewster. il diag Elec World 128:58-60 S 27 '47
Fluorescent street lighting; London installations. Elec R (Lond) 141:395 S 12 '47
Lighting urban centres; tubular fluorescent lamps. J. G. Christopher. il Elec R (Lond) 140:427-32 Mr 21 '47
Modernizing street lighting in a small town; Penns Grove, N.J. J. J. Tynan. il Elec World 127:70-1 Mr 29 '47
Operating experience with fluorescent street lighting; supplements nos. 1-2 to 1945 report of committee on street and highway lighting. Illum Eng 42:774-80 S '47
Present day requirements for street lighting. L. Block. Light & Lighting 40:87-9 My '47
Public lighting conference; papers and discussions. Elec R (Lond) 139:445-7 S 20 '46; Light & Lighting 39:181-7 O '46
Public lighting engineer; his organisation, staff and training; abstracts. R. Parker. Electrician 137:729-30 S 13 '46; Light & Lighting 39:199-200 N '46
Relighting Spokane's streets. A. Gruber. il Elec West 99:80-1 S '47
Street light calculator yields lamp life, load. H. E. Brooks. il Elec World 126:77 D 21 '46
Street lighting; abstract. A. Barnes. Light & Lighting 39:195 N '46
Street-lighting demonstration at Southport. Engineering 164:405 O 24 '47
Street lighting; experience of Detroit; abstract. Elec West 97:64 D '46
Street lighting laboratory, a new promotional tool; Portland General Electric installs first West Coast outdoor laboratory. il diags Elec West 99:69-71 S '47
Street lighting; possibilities of the fluorescent tube; abstract and discussion. C. C. Smith. Electrician 139:1005-6 O 3 '47
Street lighting survey; abstracts. N. Boydell. Electrician 139:264 Jl 25 '47; Light & Lighting 40:144 Ag '47
Today's mercury lamp for street lighting. R. M. Swetland. il Elec World 127:96-7 My 10 '47
Wise economy in street lighting; abstract. L. T. Minchin. Light & Lighting 40:155 S '47

Control

Light meter checks street light controls. il Elec World News ed 126:19 D 28 '46
Multiple street lights controlled by Matthews Lamplighter. il Elec World News ed 127:29 My 17 '47
Remote control of street lighting. F. R. Miller. diags Elec World 127:61 Mr 1 '47
Remote control of street lighting in Ayrshire. il plan Engineer 184:348-9 O 10 '47; Engineering 164:318 O 3 '47; Elec R (Lond) 141: 510 O 3 '47; Electrician 139:928 S 26 '47

Cost

Better street lighting costs less per unit. A. F. Dickerson. Elec World 127:162 My 24 '47

STREET lighting—*Continued*

Safety aspects

Can't afford not to spend more for street lighting; abstract. A. F. Dickerson. Elec World 127:128 My 10 '47

Public lighting and protection of life and property. T. Wilkie. Gas J (Lond) 252:46-7 O 1 '47

Safer street lighting. Roads & Sts 89:83 O '46

Traffic and safety lighting plans for Buffalo, N.Y. H. W. Osborne. il map plans diags Illum Eng 41:749-61 N '46

Vital importance of fixed lighting of public ways. W. L. Cross, jr. and others. Illum Eng 41:609-25 S '46

STREET lighting fixtures

Association of public lighting engineers; gas lighting demonstration. il Gas J (Lond) 251: 668-70 S 24 '47

Experimental applications of tubular fluorescent lamps to street lighting; abstracts. L. J. Davies and W. D. Sinclair. il Electrician 137:732-4 S 13 '46; diags Elec R (Lond) 139:448-50 S 20 '46; Light & Lighting 39:201-3 N '46

Fluorescent fixtures for Spartanburg's White Way. A. M. Miles. diags Elec World 126: 78 D 21 '46

Plastics in public lighting. F. H. Pulvermacher. il Elec R (Lond) 140:991-2 Je 13 '47

Public works exhibition; street lighting. Elec R (Lond) 141:145-6 Jl 25 '47; il Electrician 139:201-2 Jl 18 '47

Street lamp globes molded of polystyrene. il Mod Plastics 24:144-5 My '47

Street lighting. il Electrician 139:835-8 S 19 '47; Elec R (Lond) 141:400-1 S 12 '47

Unifying street light mast arm construction. diags Elec World 127:74 Je 21 '47

STREET openings

Distribution maintenance work in small street openings. E. F. Schuldt. Am Gas Assn Proc 1946:324-6; Same. Gas Age 98:46+ O 31 '46; Same. Am Gas Assn Mo 28:550 D '46

Mine in Seventy-second street; sewerage excavation work in New York. C. H. Vivian. il plan diags Comp Air Mag 52:186-90 Ag '47

STREET railroads

Urban electric street traction, past, present and future. W. T. Wardale. Inst E E J 94 pt 1:141-3 Mr '47; Abstracts. Elec R (Lond) 139:615 O 18 '46; Electrician 137: 1080 O 18 '46

See also
Electric railroads
Rapid transit
Street cars
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Trolley buses

Advertising

When a car company needed friends; comic strip fellow called Joe Woe shows Los Angeles that cars and buses are run by just people. J. H. Collins. Pub Util 39:823-9 Je 19 '47

Fares

See also
Rapid transit—Fares

Motor bus substitution

New Orleans inaugurates $1,000,000 substitution program; changeover from street cars to buses and later to trolley buses. il Bus Transportation 25:66-7 N '46

Publicizing a changeover at El Paso, Texas. il Bus Transportation 26:101 O '47

Reconversion to buses boosts riding in Bangor, Maine. il map Bus Transportation 26:39-41 Ap '47

Third Avenue Transit starts reconversion. il map Bus Transportation 25:41-3 D '46

Public relations

When a car company needed friends; comic strip fellow called Joe Woe shows Los Angeles that cars and buses are run by just people. J. H. Collins. Pub Util 39:823-9 Je 19 '47

Safety measures

When this plan is perfected system costs must come down; safety program of Indianapolis railways. H. L. Myers. Mass Transportation 43:6-9 Ja '47

Track reclamation

Lift that track, tote them ties; track extractor for Honolulu rapid transit co. il Bus Transportation 26:67 Ap '47

Track pulling made easy; Honolulu rapid transit company. il Mass Transportation 42:540-1 D '46

STREET signs

Molded acrylic signs show up at night. il Mod Plastics 24:131 N '46

STREET traffic

Auto jam problems handed back to cities. Bsns W p22 S 20 '47

Bird's-eye view of ossification of the average city's transit life. R. N. Graham. Mass Transportation 43:280-1 Jl '47

Extensive street improvements planned for Montreal. C. E. Campeau. il maps plans Roads & Bridges 85:78-82+ O '47

Federal-aid highway act of 1944 holds great promise of aid to cities. T. H. MacDonald and H. S. Fairbank. Civil Eng 17:605+ O '47

Highway improvement advocated by Toronto planning board. plans diag Roads & Bridges 85:36-9+ Ja '47

Immediate expressway construction for Montreal urged. A. A. Cousineau; P. R. Walters. il maps Roads & Bridges 85:90-2+ Ap '47

Major thoroughfare plan for Greater Winnipeg. il plans diags Roads & Bridges 85: 64-7+ F; 146+ Ap '47

Making city streets adequate for the traffic load. J. R. Law. plans Pub Works 78:21-2 F '47

Miami improves traffic flow in central business district. E. J. Reeder. il Civil Eng 17:305 Je '47

Milwaukee considers huge traffic-easing plan. map Eng N 138:84 Ja 16 '47

Nation wide conference considers traffic problem. Bus Transportation 26:102 O '47

N.Y. traffic answer; Plan commission offers $132 million garage and highway plan. il plan Arch Forum 85:9 D '46

Parking meters as an aid in traffic control. H. Janes. il Roads & Bridges 85:87-9 O '47

Route planning in Connecticut cities. L. T. Scott-Smith. map plan Roads & Sts 89: 86-8 O '46

Solving the urban traffic problem; master plan for future development of Montreal. C. E. Campeau. Roads & Bridges 85:116+ S '47; Discussion. B. W. Marsh. 86:67-8+ Ja '48

Surety claim man heads auto safety drive in Greenwich Village; W. G. Bounds. East Underw 48:37 Je 20 '47

Traffic congestion increases. Eng N 139:612 O 30 '47

Urban expressways and the parking problem. P. Donald. Roads & Sts 89:91-2 O '46

What was done about traffic congestion in 1946? W. J. Shea. il Civil Eng 17:64-6 F '47

See also
Automobile parking
Traffic signals

STREETS

Legal decisions regarding streets and highways. J. Simpson. Pub Works 78:29 Mr '47

Making city streets adequate for the traffic load. J. R. Law. plans Pub Works 78:21-2 F '47

See also
Business streets
City planning
Curbs
Parkways
Pavements
Roads
Snow removal
Street lighting
Street traffic
also subdivision Streets under names of cities, e.g. Chicago—Streets

Ice control

Preventing ice ruts in Passaic; use of rock salt. A. Martini. il Pub Works 78:33-4 Ap '47

Syracuse saves money on snow and ice removal and reduces accidents. C. E. Billion. il Pub Works 78:17+ Ag '47

STREETS—*Continued*

Intersection

Speed transition ramps on a bridged rotary; to provide the speed transition between expressways and local streets. R. O. Swain. il diags Pub Roads 24:307-11 Ap '47; Same. Roads & Bridges 85:95-6+ Je '47

Traffic interchange plans for downtown Los Angeles parkways. map Eng N 138:574-5 Ap 17 '47

Traffic signals at the Bank Complex, city of London. il plans Engineer 184:76-7 Jl 25 '47; Electrician 139:252-4 Jl 25 '47

Maintenance and repair

City street programs; with cost data. Roads & Sts 90:69 Ag '47

How to rip up an old street in a hurry; illustrations with text. Roads & Sts 90:88 S '47

Street maintenance discussion. Roads & Sts 89:81-2 O '46

Street system inventory, Wichita, Kansas. E. N. Smith. il Pub Works 78:26-7 F '47

STRENGTH of materials

Aspects of the determination of the strength of materials; summaries of papers and discussions at two meetings held jointly with British rheologists' club and Royal aircraft establishment. Roy Aeronautical Soc J 51:65-8 Ja '47

Average ultimate strength of materials; tabulation; engineering file facts. Materials & Methods 25:119 My '47

Le calcul et l'expérience en résistance des matériaux. P. Laurent. Génie Civil 124:370-3 O 1 '47

Compound cylinder and the strength problem. C. W. MacGregor and L. F. Coffin, jr. Franklin Inst J 243:391-421 My '47

Computing strength of vessels subjected to external pressure. R. G. Sturm and H. L. O'Brien. A S M E Trans 69:353-8 My '47

Les critères de résistance de la matière. R. Vallete. Génie Civil 124:78-9 F 15 '47

Influence of shot peening on fatigue strength of 14ST alloy. C. B. Gleason. Iron Age 159:62-4 Ja 9 '47

Is beefing up the wrong answer? strength of piece can be increased by removing instead of adding metal. W. T. Bean, jr. diags Am Mach 91:132-3 Ap 10 '47

Material strength data for tool and die designers. Iron Age 158:46 N 28 '46

Report on the fracture of metals; report submitted to the Bureau of ships of the U.S. navy. M. Gensamer and others. Welding J 26:sup443-84 bibliog(293 titles, sup469-72, 483-4) Ag '47

Stability of thin cylindrical shells in torsion. R. G. Sturm. bibliog il diags Am Soc C E Proc 73:471-95 Ap '47; Discussion. 73:1302-4, 1448-9, 1549-52 O-D '47

Static-strength tests of fillet welds on aluminum alloy 61S-T plate. R. L. Moore. il diags Welding J 26:sup593-600 O '47

Strength of arc-welded joints. J. F. Lincoln. il Mech Eng 69:325-6 Ap '47

Strength of beams as determined by lateral buckling. K. de Vries. diags Am Soc C E Proc 72:985-1011 S '46; Discussion. 72:1425-32; 73:236-8, 397-403, 559-68 D '46, F-Ap '47

Stress and strength of machine parts. C. Lipson. il Machine Design 19:123-4 F '47

Theory of limit design applied to magnesium alloy and aluminium alloy structures. F. Panlilio. bibliog il diags Roy Aeronautical Soc J 51:534-71 Je '47

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Bending moment
Building materials
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Factor of safety
Fatigue in metals
Glass—Strength
Graphic statics
Rubber—Strength
Steel—Strength
Strains and stresses
Wood—Strength

STREPTIDINE

Streptomyces antibiotics; position of the linkage of streptobiosamine to streptidine in streptomycin. F. A. Kuehl, jr. and others. Am Chem Soc J 69:1234 My '47

STREPTOBIOSAMINE

Streptomyces antibiotics; degradation of streptomycin and dihydrostreptomycin with methanol. N. G. Brink and others. bibliog Am Chem Soc J 68:2557-61 D '46

Streptomyces antibiotics; position of the linkage of streptobiosamine to streptidine in streptomycin. F. A. Kuehl, jr. and others. Am Chem Soc J 69:1234 My '47

Streptomyces antibiotics; structure of streptobiosamine. F. A. Kuehl, jr. and others. bibliog Am Chem Soc J 68:2679-84 D '46

Streptomycin; 4-desoxy-L-erythrose (threose) phenylosazone from streptobiosamine. J. Fried, D. E. Walz and O. Wintersteiner. Am Chem Soc J 68:2746 D '46

Streptomycin; reduction and oxidation products of streptomycin and of streptobiosamine. J. Fried and O. Wintersteiner. bibliog Am Chem Soc J 69:79-86 Ja '47

STREPTOCOCCI

Derivatives of sulphanilylguanidine; preparation for pharmacological study. E. Haworth, F. L. Rose and F. H. Slinger. Chem Soc J p820-2 Je '47

Studies in chemotherapy; amides of pantoyltaurine. R. Winterbottom and others. bibliog Am Chem Soc J 69:1393-401 Je '47

STREPTOMYCES griseus

Actidione, an antibiotic from streptomyces griseus. B. E. Leach, J. H. Ford and A. J. Whiffen. Am Chem Soc J 69:474 F '47

STREPTOMYCIN

Chile establishes streptomycin control commission. For Comm W 26:11-12 Mr 29 '47

Color reaction given by streptomycin. J. V. Scudi and others. Science 104:486-7 N 22 '46

Degradative studies in streptomycin. R. U. Lemieux and others. Am Chem Soc J 68: 2747 D '46

Degradative studies on streptomycin. I. R. Hooper and others. bibliog Am Chem Soc J 69:1052-6 My '47

Degradative studies on streptomycin. R. U. Lemieux, C. W. DeWalt and M. L. Wolfrom. Am Chem Soc J 69:1838 Jl '47

Development of streptomycin-resistant variants of meningococcus. C. P. Miller and M. Bohnhoff. bibliog Science 105:620-1 Je 13 '47

Dihydrostreptomycin. Q. R. Bartz and others. bibliog Am Chem Soc J 68:2163-6 N '46

Duty-free importation, import and distribution control established in Argentina. For Comm W 25:14 D 28 '46

Effect of rubber tubing upon the stability of penicillin and streptomycin solutions. J. B. Huelsebusch and others. Science 104: 479-80 N 22 '46

Effect of streptomycin on the metabolism of certain mycobacteria. F. Bernheim and R. J. Fitzgerald. Science 105:435 Ap 25 '47

Effect of streptomycin on the oxygen uptake of eberthella typhosa. R. S. Benham. Science 105:69 Ja 17 '47

Effect on the chick embryo of the simultaneous inoculation of stool, streptomycin, and penicillin. J. H. Hodges. bibliog Science 104:460-1 N 15 '46

Eighth chemical engineering award goes to Merck for work on streptomycin. Chem Eng 54:179 O '47

Guatemala; streptomycin; trade-control measures revised. For Comm W 27:18 Je 14 '47

Merck means over twelve hundred fine chemicals. il Fortune 35:109-10 Je '47

Merck operates streptomycin plant in Virginia valley. il Manuf Rec 115:44+ D '46

Method for determining sensitivity to penicillin and streptomycin. R. E. Hoyt and M. G. Levine. il Science 106:171 Ag 22 '47

Penicillin and streptomycin supplement each other in safeguarding man's health. R. E. Gruber. il Tech R 49:155-6+ Ja '47

Peru; regulations governing importation and distribution. For Comm W 27:19 My 10 '47

Progress in drugs and fine chemicals. G. C. Green. Chem Age (Lond) 56:477-81 Ap 19 '47

Purification of streptomycin salts by means of alumina. G. P. Mueller. bibliog Am Chem Soc J 69:195-200 F '47

Streptomyces antibiotics; degradation of streptomycin and dihydrostreptomycin with methanol. N. G. Brink and others. bibliog Am Chem Soc J 68:2557-61 D '46

STREPTOMYCIN—*Continued*
Streptomyces antibiotics; position of the linkage of streptobiosamine to streptidine in streptomycin. F. A. Kuehl, jr. and others. Am Chem Soc J 69:1234 My '47
Streptomyces antibiotics; structure of streptobiosamine. F. A. Kuehl, jr. and others. bibliog Am Chem Soc J 68:2679-84 D '46
Streptomyces antibiotics; the structure of tetraacetylbisdesoxystreptobiosamine. N. G. Brink and others. bibliog Am Chem Soc J 68:2405-6 N '46
Streptomycin as an aid in isolating influenza virus. A. P. McKee and W. M. Hale. Science 105:41-2 Ja 10 '47
Streptomycin controls relaxation asked. Oil Paint & Drug Rep 150:4 N 25 '46
Streptomycin; degradation of streptomycin B to streptidine, streptobiosamine and D-mannose. J. Fried and H. E. Stavely. bibliog Am Chem Soc J 69:1549-50 Je '47
Streptomycin; 4-desoxy-L-erythrose (threose) phenylosazone from streptobiosamine. J. Fried, D. E. Walz and O. Wintersteiner. Am Chem Soc J 68:2746 D '46
Streptomycin; reduction and oxidation products of streptomycin and of streptobiosamine. J. Fried and O. Wintersteiner. bibliog Am Chem Soc J 69:79-86 Ja '47
Streptomycin test planned by FDA. Oil Paint & Drug Rep 150:7 D 30 '46
Studies on the stability of streptomycin in solution. E. J. Oswald and J. K. Nielsen. Science 105:184-5 F 14 '47
Thromboplastic properties of penicillin and streptomycin. D. I. Macht. bibliog Science 105:313-14 Mr 21 '47
Venezuela; importation prohibited except through government channels. For Comm W 25:21 D 28 '46

STRESSCOAT. See Strains and stresses—Brittle coating test

STRESSES. See Strains and stresses

STRETCH, Harold A.
Camden courier-post gets new owner. por Bsns W p21-2 My 10 '47

STRIEBY, Irene Macy
Our new president. Special Lib 38:187-8 Jl-Ag '47

STRIKES
Allis-Chalmers' experience with a left-wing union. W. Geist. Factory Management 105: 80-3 Mr '47
A.F.L. in St Louis cites the strike record. Bsns W p55 Ja 4 '47
Anti-strike plan generally approved; summary of opinions on plan of L. H. Hill. Elec World 127:41 Ja 4 '47
Bank strike tactics, strike of Financial employees guild at Brooklyn (N.Y.) trust company. il Trusts & Estates 85:190 S '47
CED seeks ways to prevent strikes during disputes. Am Bsns 16:18-19+ N '46
Conciliation services in labor relations. E. L. Warren. Ann Am Acad 248:120-9 N '46
Courts outlaw city employee strikes. Eng N 137:759 D 5 '46
From the workers' point of view; why the strikes? N. Sabsay. Harvard Bsns R 25 no 3:339-47 [Ap] '47
Grocery strike, Los Angeles. Bsns W p83 Ja 11 '47
Guide through labor relations chaos. P. Eliel. Advanced Management 11:147-51 D '46
Ideology trouble; U.A.W. strike notice at Ford. Bsns W p90-2 N 9 '46
In second year; T.P.&W., J. I. Case and redwood mills. Bsns W p86+ Ja 11 '47
Labour and the nation. Economist 152:89-90 Ja 18 '47
Management protection against wildcat strikes. R. C. Smyth. Personnel J 26:40-1 Je '47
Melodrama in movies strike. Bsns W p85 N 9 '46
Moral victory; Pullman-Standard takes $1 to settle wildcat strike suit. Bsns W p86 D 7 '46
NAM offers program to eliminate strikes. Oil Paint & Drug Rep 151:55 Ja 13 '47
New trends stem from telephone strike. Pub Util 39:700-2 My 22 '47
N.Y. Commerce group urges study of anti-strike procedure. Comm & Fin Chr 164: 3126 D 12 '46
Newspaper editors' views on the Pittsburgh power strike. Pub Util 38:770-1 D 5 '46
1947; good strike year or bad? Bsns W p94+ Je 7 '47
No contract, no work on the seas. il Bsns W p80 Je 21 '47
No strikes for utilities; comments on report of Twentieth century fund. R. Ames. Pub Util 39:687-91 My 22 '47
Pittsburgh power strike. L. D. Farrar. Pub Util 38:89-94 Ja 16 '47
Pittsburgh story; power strike. G. Doying and others. il Elec World 126:101-8 D 7 '46
Postwar work stoppages caused by labor-management disputes. Mo Labor R 63:872-92 D '46
Public necessity abrogates the right to strike. E. S. Tillinghast. Eng & Min J 148:61 Mr '47
Public utility strikes can be averted; Chicago Motor Coach strike developed a suggested pattern. H. B. Dorau. il Bus Transportation 26:37-52 Mr; 45-56 Ap '47; Excerpt (pt2). Pub Util 39:578-80 Ap 24 '47
Seller's delay on government contract not excused by strike. M. M. Shipman. Oil Paint & Drug Rep 150:7+ D 16 '46
Settlement of telephone stoppage. Mo Labor R 64:1071-2 Je '47
Shall we arbitrate? strikes in the electric light and power industry must be outlawed. J. C. McIntosh. Pub Util 39:80-4 Ja 16 '47
Shipyard tie-up; strike goes into third month. Bsns W p90 S 6 '47
Significant recent controversies. Mo Labor R 63:591-5 O '46
State mediation board official obtains quick settlement of New York cotton exchange strike. Comm & Fin Chr 165:1252+ Mr 6 '47
Striking employees of government-owned corp. to be discharged. Comm & Fin Chr 164:2815 N 28 '46
U.A.W. gives in; strike at J. I. Case settled. Bsns W p100 Mr 15 '47
What do the facts show? H. Gluck. Comm & Fin Chr 165:2725+ My 22 '47
What the factory worker really thinks. Factory Management 103:86-7 D '45; 104:81-8 O '46
What to do about the labor mess. S. H. Slichter. Factory Management 104:100-4 D '46
When facts fail; TWA pilots' refusal to accept board award. Bsns W p92+ N 9 '46
When to strike, and why. H. F. Willkie. Factory Management 105:88-91 O '47
Wildcat strike means trouble ahead. R. W. Putney. Personnel J 26:3-5 My '47

See also
Arbitration, Industrial
Coal strikes
Labor disputes
Picketing
Railroad strikes
also United automobile workers of America

Advertising
Ads in plant-city newspapers show workers and public extent of strike-induced losses; Hinde & Dauch paper company, Sandusky. Ptr Ink 217:65 D 27 '46
Advertising can help settle labor disputes; case history. M. Davis. il Ptr Ink 217: 77-8+ D 13 '46
Courageous advertising bridges strike crisis for Allis-Chalmers. il Sales Management 59:104+ Ag 1 '47

Cost
Allis-Chalmers' strike is estimated to have cost about $85 million. Iron Age 159:165-6 Ap 10 '47

Economic aspects
Strikes; what they cost; study by American economic foundation. Nat Pet N 39:41-2 Ja 15 '47

General strikes
Oakland general strike protests police action. Bsns W p16 D 7 '46

Law
Antistrike law; Missouri adopts measure to curb public utility strikes. Bsns W p80-1 My 17 '47

STRIKES—Law—*Continued*
Anti-strike law with teeth; permits outright dismissal of New York civil service employees. Bsns W p85-6+ Mr 22 '47
Blow aimed at C.I.O. hits A.F.L.; striking barge workers are suspended. Bsns W p90 D 14 '46
Canadian law? meat strike points up need for government intervention in national disputes. Bsns W p90 S 27 '47
Defends his legislative program; upholds measure prohibiting strikes by public employees; Condon-Wadlin bill. T. E. Dewey. Comm & Fin Chr 165:2249+ Ap 24 '47
Experience with strike legislation abroad. E. E. Witte. Ann Am Acad 248:138-45 N '46
Fortune survey; strike bills. Fortune 35:20+ Mr '47
How practical personnel men think the labor law will work; illegal strikes. J. H. Eikenberg. Factory Management 105:92-3 Ag '47
How practical personnel men think the labor law will work; national welfare strikes. G. F. Gamber. Factory Management 105:86-7 S '47
Labor disputes and public utilities. D. R. Richberg. Pub Util 38:714-21 N 21 '46
Law that failed; New Jersey's statute to curb walkouts in public utilities. Bsns W p58 Ja 4 '47
Limiting right of public service workers to strike favored; Gallup poll. Iron Age 159: 107 Ap 17 '47
New Jersey law fought as phone strike continues. Elec World News ed 127:12 Ap 19 '47
Public favors law to prohibit strikes and lockouts; Gallup poll. Iron Age 158:121 D 5 '46
Restrictions on right to strike. L. Pressman. Comm & Fin Chr 165:872+ F 13 '47
Significance of legislation forbidding strikes by public employees. W. R. LaDue. Am Water Works Assn J 39:844-54 S '47; Same. Water & Sewage Works 94:353-8 O '47
State laws on utility strikes. B. Jones. Pub Util 39:34-7 Ja 2 '47
Strike control listed as first problem for new Congress; Gallup poll. Iron Age 158:115+ D 12 '46
Strike laws tested; Indiana, Virginia phone workers comply; New Jersey law defied. Bsns W p101-3 Ap 19 '47
Two states get tough; Virginia and Indiana antistrike laws. Pub Util 39:701 My 22 '47
USITA wants antistrike law. Pub Util 38: 664 N 21 '46
Utility antistrike laws. R. Ames. Pub Util 40:163-8 Jl 31 '47
Utility labor bills in state capitals. J. J. Hassett. Pub Util 39:276-81 F 27 '47
Will the Taft-Hartley law stop utility strikes? I. Bowen. Pub Util 40:631-5 N 6 '47

Statistics

Fewer strikes; effect of T-H law. il Bsns W p 103-4 O 18 '47
How the states ranked labor-wise in 1946. Bsns W p79 My 3 '47
1946 trend; graph. Bsns W p93 F 1 '47
Review of work stoppages in 1946. Mo Labor R 64:263-4 F '47
Significant recent controversies, December 1946; work stoppages in November. Mo Labor R 64:78-81 Ja '47 [cont monthly]
Strikes in all industry, by months, 1942-1946; by years, 1928-1946; tables. Automotive & Aviation Ind 96:74-5 Mr 15 '47
Work stoppages. Published in Monthly labor review
Work stoppages caused by labor-management disputes in 1946. D. Q. Crowther and others. Mo Labor R 64:780-800 My '47; Same, with additional data. U S Bur Labor Statistics Bul 918:1-47; pa 15c Supt. of doc. '47
Work stoppages in the first quarter of 1947. Mo Labor R 64:837; 65:335-6 My, S '47

Canada

Industrial unrest in Canada. Economist 151: 793 N 16 '46

Sweden

Many strikes in Sweden in protest against slowness of contract negotiations. Comm & Fin Chr 165:915 F 13 '47

STRINGED instruments
Plate vibration of stringed instruments at the wolfnote. J. A. Kessler. bibliog il diag Acoustical Soc Am J 19:886-91 S '47

See also
Piano

STRINGS (music)
Manufacture of strings for musical instruments, United Kingdom. For Comm W 27: 27 Je 14 '47

STRIP steel. See Steel, Strip

STRIPPER wells. See Petroleum—Stripper wells

STRIPPING operations. See Coal mines and mining—Stripping operations; Mining methods—Stripping operations

STROBOSCOPIC instruments
Variation of phase along the basilar membrane with sinusoidal vibrations. G. v. Békésy. bibliog diags Acoustical Soc Am J 19:452-60 My '47

STRONTIUM
Kinds of greases; strontium. W. L. Nelson. Oil & Gas J 46:108 Ag 9 '47
Phase of scattering of thermal neutrons by aluminum and strontium. E. Fermi and L. Marshall. Phys R 71:915 Je 15 '47
Strontium greases satisfactory for severe service applications. H. J. Worth and L. W. McClennan. il Oil & Gas J 45:74+ Mr 1 '47

Analysis

Effect of alkali and alkaline earth salts on the spectrographic determination of strontium. E. Fast and J. R. Nielsen. bibliog Opt Soc Am J 37:614-22 Ag '47
Quantitative separation of barium from strontium. G. L. Beyer and W. Rieman, 3d. bibliog Anal Chem 19:35-7 Ja '47

Isotopes

Beta-ray thickness gage for sheet steel; G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O. J. M. Smith. il diags Electronics 20:106-12 O '47
Reaction $_{38}Sr^{86}(n,\gamma)_{38}Sr^{87}$ produced by thermal neutrons. L. Seren and others. bibliog Phys R 71:454 Ap 1 '47

STRONTIUM azide
Crystal structure of strontium azide. F. J. Llewellyn and F. E. Whitmore. diags Chem Soc J p881-4 Jl '47

STRONTIUM selenide
Function of fluxes in the preparation of infrared sensitive phosphors of the alkaline earth sulfides and selenides. W. Primak, R. K. Osterheld and R. Ward. bibliog Am Chem Soc J 69:1283-7 Je '47
Preparation of strontium selenide and its properties as a base material for phosphors stimulated by infrared. A. L. Smith, R. D. Rosenstein and R. Ward. bibliog diags Am Chem Soc J 69:1725-9 Jl '47

STRONTIUM sulfate

See also
Celestite

STRONTIUM sulfide
Function of fluxes in the preparation of infrared sensitive phosphors of the alkaline earth sulfides and selenides. W. Primak, R. K. Osterheld and R. Ward. bibliog Am Chem Soc J 69:1283-7 Je '47

STRONTIUM titanate
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47; Same. J Res Nat Bur Stand 38:337-49 Mr '47

STRUCTURAL aluminum. See Aluminum, Structural

STRUCTURAL carbon. See Carbon, Structural

STRUCTURAL clay products institute
Annual meeting, New Orleans, Oct. 23-25. Brick & Clay Rec 109:43-6 N '46
Annual meeting, Sept. 22-25. Brick & Clay Rec 111:46+ O '47

STRUCTURAL engineering
Some fundamental theorems of structural mechanics in vector notation. R. J. Dunholter. J Eng Educ 37:207-9 N '46

See also
Building
Concrete construction
Foundations
Least work, Principle of
Steel construction
Strains and stresses
Strength of materials
Wind pressure

Design

Analysis of stepped-column mill bents. D. S. Ling. diags Am Soc C E Proc 73:1271-92 O '47
Analysis of unsymmetrical beams by the method of segments. S. Lifsitz. diags Am Soc C E Proc 72:323-35 Mr '46; Discussion. 72:1191-8, 1297-9 O-N '46
Continuous frame analysis by elastic support action. J. C. Rathbun and C. E. Cunningham. diags Am Soc C E Proc 73: 413-49 Ap '47; Discussion. 73:1139-56, 1419-34 S, N '47
Effective flange width of stiffened plating in longitudinal bending. G. M. Boyd. diags Engineering 162:603-4 D 27 '46
Influence charts for computation of vertical displacements in elastic foundations. N. M. Newmark. fold charts Ill U Eng Exp Sta Bul 367:1-11 '47 (pa 40c)
Influence lines for continuous structures by geometrical computation. D. F. Peterson, jr. diags Am Soc C E Proc 73:1009-25 S '47
Matrix analysis of continuous beams. S. U. Benscoter. diags Am Soc C E Proc 72:1091-122 O '46; Discussion. 73:241-50, 543-56, 960-2 F, Ap, Je '47
Measurements as an aid to design. F. G. Tatnall. Machine Design 19:194+ Ap '47
Method determines degree of fixity in footings and resulting frame stresses. A. Floris. diags Civil Eng 17:141-2+ Mr '47
Moment-stiffness relations in continuous frames with prismatic members. G. H. Dell. Am Soc C E Proc 72:587-611 My '46; Discussion. 72:1182-4; 73:528-30, 899-903 O '46, Ap, Je '47
Palace, the Bridge and the Tower; 19th century's golden leap in structural design. J. M. Fitch. il Arch Forum 87:88-95 O '47
Philosophy of stress analysis. L. T. Wyly. J Eng Educ 37:610-15 Ap '47; Discussion (Comments on mechanics analysis). R. M. Cook. 38:320-2 D '47
Planning for elevator installations. diags Eng N 137:875-9 D 26 '46
Rational explanation of column behavior. F. L. Ryder. Am Soc C E Proc 73:311-41 Mr '47; Discussion. 73:756-8, 969-72 My-Je '47
Reflections on standard specifications for structural design. A. M. Freudenthal. Am Soc C E Proc 73:103-21 F '47; Discussion. 73:941-3 Je '47
Safety of structures. A. M. Freudenthal. bibliog Am Soc C E Proc 71:1157-91 O '45; Discussion. 72:111-14, 251-5, 559-60, 885-8; 73: 208-18 Ja-F, Ap, Je '46, F '47
Shape of conduits for structural efficiency. S. U. Benscoter. diags Western Soc E J 51:180-2 D '46
Theory of inelastic bending with reference to limit design. A. Hrennikoff. Am Soc C E Proc 73:255-89 Mr '47; Discussion. 73: 944-6, 1293-301 Je, O '47
Thin-shelled domes loaded eccentrically. W. C. Voss and others. il diags Am Soc C E Proc 73:1173-95 O '47

See also
Beams and girders
Bridge design
Concrete construction—Design
Steel construction—Design

Study and teaching

Philosophy of stress analysis. L. T. Wyly. J Eng Educ 37:610-15 Ap '47

Tables, calculations, etc.

Approximate formulæ for beam-columns. R. O. Whiting. diag Engineering 164:25-6 Jl 11 '47
Investigation of stress in circular rings. A. Samoiloff. diags Pet Refiner 26:99-103 Jl '47
New piling formula. O. Faber. Engineering 163:156-7 F 14 '47
Variation of coefficients of simultaneous linear equations. B. L. Weiner. Am Soc C E Proc 73:1219-44 O '47

STRUCTURAL glass. See Glass, Structural

STRUCTURAL steel. See Steel, Structural

STRUCTURES, Theory of

See also
Bending moment
Graphic statics
Structural engineering

STRUVE, Otto, 1897-
Department of astronomy of the University of Chicago. R. M. Hutchins. Science 106: 195 S 5 '47

STRYCHNINE
Structure of strychnine. R. B. Woodward, W. J. Brehm and A. L. Nelson. Am Chem Soc J 69:2250 S '47
Strychnine and brucine; constitution of the neo-series of bases and their oxidation products. L. H. Briggs, H. T. Openshaw and R. Robinson. Chem Soc J p903-8 O '46
Strychnine and brucine; cuninecarboxylic acid. H. L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p908-10 O '46
Strychnine and brucine; preparation of *neo*-strychnine and *neo*brucine. R. N. Chakravarti and R. Robinson. Chem Soc J p78-80 Ja '47
Strychnine and brucine; synthetical experiments. H. L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p910-18 O '46
Strychnine. G. R. Clemo and R. Raper. Chem Soc J p891-2 O '46

STUCCO

Standards

New plaster and stucco standards to prevent failures. J. W. McBurney. il Ind Stand 18:79-80 Ap '47

STUDEBAKER corporation
Studebaker takes a novel step in promoting labor-management relations; financial report to employees. W. G. Patton. Iron Age 159:92+ Ap 10 '47

STUDENTS

See also
Grading and marking (students)

STUDENTS, Interchange of
International educational exchange; laboratory experiment in human relations. L. Duggan. Chem & Eng N 25:1178-81 Ap 28 '47

STUDIOS
Art studio squeezes maximum of use from minimum office area. il plan Arch Forum 85:128 N '46
Photographic and art studio; Kling studios building, Chicago. il plans diags Arch Forum 87:114-20 O '47
Small studio-home for a musician-teacher and her family. il plan Arch Forum 86: 102 F '47

See also
Moving picture studios
Photography—Studios and darkrooms
Radio broadcasting studios
Television studios

STUDS. See Bolts and nuts

STUFFING boxes
Improvement in agitator stuffing box. J. E. Troyan. diag Oil & Gas J 46:89+ Je 21 '47
Tips on repacking the stuffing box. Power Pl Eng 51:95 Ag '47

STYLUSES, Phonograph
Distortion reducing stylus for disk reproduction. E. F. McClain, jr. Acoustical Soc Am J 19:326-8 Mr '47

STYRENE
Addition reactions in phospho-organic syntheses; addition of phosphorus pentachloride to olefins. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 68:2540-1 D '46
British lenses combine molding, casting. D. Starkie. il diags Mod Plastics 25:107-9 O '47
Continuous preparation of butadiene-styrene copolymer. J. J. Owen, C. T. Steele and P. T. Parker. Ind & Eng Chem 39:110-13 Ja '47

STYRENE—*Continued*

Copolymerization; mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce and E. C. Chapin. bibliog Am Chem Soc J 69:581-3 Mr '47

Copolymerization; mechanism of emulsion copolymerization of styrene and itaconic acid. R. G. Fordyce and G. E. Ham. Am Chem Soc J 69:695-6 Mr '47

Copolymerization of vinyl compounds with dienes. T. Alfrey, jr., A. I. Goldberg and W. P. Hohenstein. bibliog Am Chem Soc J 68:2464-7 D '46

Copolymerization; the mechanism of emulsion copolymerization of styrene and acrylonitrile. R. G. Fordyce. Am Chem Soc J 69:1903-4 Ag '47

Deoxygenation of certain aldehydes and ketones; preparation of butadiene and styrene. W. M. Quattlebaum, W. J. Toussaint and J. T. Dunn. bibliog Am Chem Soc J 69:593-9 Mr '47

Dow styrene process. flow diag Pet Refiner (Process Handbook sec) 26:140-1 Ap '47

Effects of impurities on copolymerization of butadiene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:893-5 Jl '47

Effects of impurities on copolymerization of isoprene and styrene. R. L. Frank and others. bibliog Ind & Eng Chem 39:887-93 Jl '47

Heat capacity, heats of fusion and vaporization, vapor pressure, entropy, vibration frequencies and barrier to internal rotation of styrene. K. S. Pitzer, L. Guttman and E. F. Westrum, jr. bibliog Am Chem Soc J 68:2209-12 N '46

Heat of combustion and formation of 1,3,5,7-cyclooctatetraene and its heat of isomerization to styrene. E. J. Prosen, W. H. Johnson and F. D. Rossini. bibliog Am Chem Soc J 69:2068-9 Ag '47

Heats of combustion and solution of liquid styrene and solid polystyrene, and the heat of polymerization of styrene. D. E. Roberts and others. bibliog(40 ref) J Res Nat Bur Stand 38:627-35 Je '47

Heats of polymerization; styrene and substituted styrenes. L. K. J. Tong and W. O. Kenyon. bibliog Am Chem Soc J 69: 1402-5 Je '47

High heat resistant polystyrene. R. I. Dunlap, jr. and S. E. Glick. il Mod Plastics 24:127-9 Ag '47

Improved polystyrene. Chem Ind 60:978 Je '47

Inhibition and retardation of the peroxide initiated polymerization of styrene. S. G. Cohen. bibliog Am Chem Soc J 69:1057-64 My '47

Inhibition of polymerization; laboratory and plant control of popcorn polymer growth. M. S. Kharasch and others. bibliog il diags Ind & Eng Chem 39:830-7 Jl '47

Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives. I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47

Koppers purchases Kobuta styrene facilities. Chem Eng 53:181 N '46

Large scale distillation of isoprene; emulsion copolymerization of isoprene with styrene. C. F. Fryling. bibliog Ind & Eng Chem 39: 882-6 Jl '47

Longitudinal dispersion of infrared rays in polystyrenes. W. W. Lepeschkin. il J Phys & Colloid Chem 51:868-75 My '47

Los Angeles styrene plant. H. H. Smith. flow diags il Chem Eng Prog 43:152-4 Ap '47

Marketing pretests indicated plastics; kitchen fixtures of cellulose acetate and styrene meet the demand for colorful, easy-to-clean hardware. il Mod Plastics 24:126 D '46

Mechanism of emulsion polymerizations; effect of oxygen on the emulsion polymerization of styrene. I. M. Kolthoff and W. J. Dale. bibliog Am Chem Soc J 69:441-6 F '47

Mechanism of emulsion polymerizations; oxygen as a comonomer in the emulsion polymerization of styrene. F. A. Bovey and I. M. Kolthoff. bibliog diags Am Chem Soc J 69:2143-53 S '47

Modified polystyrenes suited for new uses; Logoquant. Paint Oil & Chem R 110:27 S 18 '47; Chem Ind 61:642+ O '47; Mod Plastics 25:162-4 N '47

Molded kitchen ware of polystyrene. il Mod Plastics 25:194-5 O '47

Molding and marketing three lines of styrene bathroom fixtures. il Mod Plastics 24:126-8 My '47

Monomers and polymers; fluorinated styrenes. G. B. Bachman and L. L. Lewis. bibliog Am Chem Soc J 69:2022-5 Ag '47

N.B.S. cast resin for high-impedance circuits. P. J. Franklin and M. Weinberg. il Mod Plastics 24:99-100 Jl '47; Abstract. Elec World 128:121+ S 13 '47

One-cup coffee makers. il Mod Plastics 25: 208+ O '47

Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46

Packaging tools in styrene boxes. il Mod Plastics 24:127 F '47; Same. Mod Packaging 20:135 Mr '47

Polymerization; reaction of organosodium reagents with styrene and 1,1-diphenylethylene. A. A. Morton and H. C. Wohlers. bibliog Am Chem Soc J 69:167-72 Ja '47

Polystyrene boxes. T. C. Willson, jr. and E. S. Marsh. il Mod Packaging 21:149-52+ O '47

Polystyrene in a non-spill desk set. il Mod Plastics 24:104-5 Jl '47

Polystyrene makes good in refrigerators; defrosting receptacles and meat storage trays. il Mod Plastics 24:106-8 Je '47

Polystyrene wall tile. il diags Mod Plastics 24:110-12 My '47

Powder boxes combine styrene and acetate. il Mod Plastics 24:132 N '46

Preparation and polymerization of *p*-N,N-dimethylsulfonamidostyrene. G. E. Inskeep and R. Deanin. Am Chem Soc J 69:2237-8 S '47

Production of styrene in Germany. G. M. Kline and others. diags Mod Plastics 25: 151-3+ O '47

Properties of polymers as functions of conversion; intrinsic viscosities. F. T. Wall and others. bibliog Am Chem Soc J 69:904-7 Ap '47

Pyrolytic dehydrogenation of ethylbenzene to styrene. G. A. Webb and B. B. Corson. bibliog flow diag diags Ind & Eng Chem 39:1153-6 S '47

Razor edge; Gem injection-molded plastic packages and displays. il Mod Packaging 20:122-3 Je '47

Recent developments; modified styrenes. il Product Eng 18:[116-17] insert 4-5 Ap '47

Small plastic blocks clamped with vacuum chuck. H. W. Heacock. diag Am Mach 91: 113 Ja 30 '47

Street lamp globes molded of polystyrene. il Mod Plastics 24:144-5 My '47

Study of the structure of butadiene polymers by means of ozonolysis. N. Rabjohn and others. bibliog Am Chem Soc J 69:314-19 F '47

Styrene cabinet lid. il Mod Plastics 24:164 Jl '47

Styrene copolymer solvent reacting varnishes; Fosterite resins; abstract. N. C. Foster. Chem Eng 54:242+ Ja '47

Styrene copolymers in coatings; abstract. D. H. Hewitt and F. Armitage. Paint Oil & Chem R 109:47 O 17 '46

Styrene radio case. il Mod Plastics 24:160-1 Jl '47

Substituted styrenes; preparation of *p*-iodo-, *p*-nitro- and *p*-dimethylaminostyrene and α-vinylthiophene. R. W. Strassburg, R. A. Gregg and C. Walling. bibliog Am Chem Soc J 69:2141-3 S '47

Substituted styrenes; the decarboxylation of substituted cinnamic acids. C. Walling and K. B. Wolfstirn. bibliog Am Chem Soc J 69:852-4 Ap '47

Taking the stress out of styrene. C. A. Breskin. il Sci Am 176:11-14 Ja '47

Thermodynamics of styrene and its methyl derivatives. C. W. Beckett and K. S. Pitzer. bibliog Am Chem Soc J 68:2213-14 N '46

Three plastics add to beauty, usefulness of cookware line. il Mod Plastics 25:106-8 S '47

12 uses for styrene in the new refrigerator. A. C. Martinelli. il Mod Plastics 24:122-3 N '46

Two phosphorescent polystyrene housings. il Mod Plastics 24:134-5 Je '47

STYRENE—*Continued*
Undercut bottle made of blown polystyrene. il Mod Plastics 25:97 O '47
Use of liquid phase oxidation for the preparation of nuclearly substituted styrenes; *p*-vinylbenzyl acetate. W. S. Emerson and others. bibliog Am Chem Soc J 69:1905-6 Ag '47
Variation of composition of 40:60 isoprene-styrene copolymers with conversion. E. Dyer and D. L. Munroe. bibliog Am Chem Soc J 68:2726 D '46
Why polystyrene tableware? il Mod Plastics 24:86-7 Jl '47

Analysis

Amperometric titration of styrene with potassium bromate using the rotating platinum electrode. I. M. Kolthoff and F. A. Bovey. bibliog Anal Chem 19:498-500 Jl '47
Detection of radioactive persulfate fragments in emulsion polymerized styrene. W. V. Smith and H. N. Campbell. J Chem Phys 15:338 My '47
Gravimetric determination of styrene as styrene nitrosite. G. R. Bond, jr. Anal Chem 19:390-2 Je '47

Manufacture

Preparation of styrene by catalytic dehydrogenation of ethylbenzene; abstract. A. A. Balandin and G. M. Marukyan. Chem Eng 54:272+ Je '47

STYRENE nitrosite
Gravimetric determinatibn of styrene as styrene nitrosite. G. R. Bond, jr. Anal Chem 19:390-2 Je '47

STYRENE oxide
Malonic ester synthesis with styrene oxide and with butadiene oxide. R. R. Russell and C. A. VanderWerf. bibliog Am Chem Soc J 69:11-13 Ja '47

STYRYL compounds
Preparation and ultra-violet light absorption of some substituted phenylpropenyl- and styrylmethyl-carbinols and 1-phenylbutadienes. E. A. Braude, E. R. H. Jones and E. S. Stern. Chem Soc J p 1087-96 Ag '47

SUBAQUEOUS blasting. See Blasting, Subaqueous

SUBAQUEOUS construction. See Concrete construction, Subaqueous; Steel construction, Subaqueous

SUBAQUEOUS cutting. See Metal cutting, Subaqueous

SUBAQUEOUS excavation. See Excavation, Subaqueous

SUBAQUEOUS metal cutting. See Metal cutting, Subaqueous

SUBAQUEOUS pipe laying. See Pipe laying, Subaqueous

SUBAQUEOUS welding. See Electric welding—Subaqueous welding; Electric welding, Arc—Subaqueous welding

SUBCONSCIOUSNESS
Anesthesia's second power; probing the mind. H. K. Beecher. bibliog Science 105:164-6 F 14 '47

SUBCONTRACTING
Building contractor's liability for negligence of subcontractor. il Am Bld 69:131 S '47

SUBDIVISION of land. See Land—Subdivision

SUBJECT headings
Dental index headings; alphabetical plan. p317-54 American dental assn, 222 E. Superior st, Chicago 11 '46
Subject headings in special libraries. A. O. Hanson. bibliog Special Lib 37:317-22 D '46
Subject headings used in the dictionary catalogs of the Library of Congress; cumulated supplement January-December 1946, to be used with the main volumes of the 4th edition and the cumulated supplements. 61p pa $1.50; Supplements, 1947, 2 pts pa $1.50 H. W. Wilson co, New York '47 [Publication taken over by Library of Congress 1948]

SUBLIMATION apparatus
Turbo subliming unit. diag Chem Eng 54:140 Ag '47

SUBMARINE bases
La base sous-marine construite à Saint-Nazaire par la marine allemande pendant l'occupation. M. Lecreux. il plan diags Génie Civil 124:1-4 Ja 1 '47

SUBMARINE boats
Aluminum fairwater on submarine. H. J. Andrews. il Marine Eng 52:83-4 Ag '47
British submarine design during the war; discussion of paper by A. J. Sims. Engineer 183:291 Ap 4 '47; Engineering 163:319 Ap 18 '47
Hydrogen peroxide for propulsive power; production and use by the Germans during World war II. L. McKee. diag Mech Eng 68:1047-8 D '46; Abstract. Engineering 163: 307-8 Ap 18 '47; Discussion. Mech Eng 69: 682-4 Ag '47
Sonar, the submarine's nemesis. C. G. McProud. il diags Radio N 37:47-9+ Mr '47
Submarine design. A. I. McKee. Mech Eng 69:218-20 Mr '47
Submarine engines for the Turkish navy. il Engineer 183:79-81 Ja 17 '47

Tenders

America's highest powered motorships; Proteus, one of group of submarine tenders. il Marine Eng 52:69-70 S '47

SUBMARINE mines. See Mines, Submarine

SUBMARINE telegraph. See Telegraph, Submarine

SUBMARINE warfare
Electronics in submarine warfare. C. A. Lockwood. Inst Radio Eng Proc 35:712-15 Jl '47
German use of sonic listening. L. E. Holt. diags Acoustical Soc Am J 19:678-81 Jl '47
Wartime activities of the San Diego laboratory of the University of California Division of war research. F. N. D. Kurie and G. P. Harnwell. R Sci Instr 18:207-18 Ap '47

See also
Mines, Submarine
Submarine bases
Submarine boats

SUBMERGIBLE pumps. See Pumps, Submergible

SUBROGATION
Courts divided on subrogation rights of fidelity companies. F. E. Pausch. East Underw 48:38 S 26 '47; Same cond. Nat Underw 51:25 O 2 '47
New York decision causes concern as to subrogation rights; Alexandria restaurant vs. New Hampshire Fire. D. Ticktin. Nat Underw 51:1 Jl 17 '47
Restrictions placed by courts on subrogation. C. R. Conklin. Nat Underw 51:3 My 22 '47
Subrogation and soft hearts; editorial. Nat Underw 51:10 F 27 '47; Discussion. 51:3 Ap 17 '47
Subrogation, split causes of action; digest of recent cases. J. L. Roesch. Spectator (Property ed) 12:30-1 F 27 '47

SUBSIDENCES (earth movements)
Subsidence of the Terminal Island-Long Beach area, California; effect of water and oil pumping. F. R. Harris and E. H. Harlow. il plans diags Am Soc C E Proc 73: 1197-218 bibliog(p1217-18) O '47

See also
Mine subsidences

SUBSIDIES
Agricultural limestone; existence of conservation program is at stake. D. W. Aitken. il Rock Prod 50:118-19+ Ap '47
Agricultural limestone; replies to questionnaire sent to producers indicate continuing need for government support. B. Nordberg. il Rock Prod 50:106-10+ Ap '47
Evolving policy on waterways subsidies. C. S. Duncan. Ry Age 122:494-7 Mr 8 '47
Facts on the subsidies. Economist 152:682-3 My 3 '47
Farm price supports may be made less expensive. Barron's 26:5+ N 25 '46
Food policy and subsidies. Economist 152: 524-5 Ap 12 '47
Minerals subsidies continuation favored by Public lands committee. Oil Paint & Drug Rep 151:5 My 5 '47

SUBSIDIES—*Continued*
Perhaps consumers can fight against farm subsidies as well as labor union excesses. Barron's 27:10 S 8 '47
Senators vote new wool growers-subsidy; one dissenter fears effect on all crops. Barron's 27:27 Ap 7 '47
Subsidy pay to date total $138 million. Oil Paint & Drug Rep 150:64 D 2 '46
Three billion in subsidies; why they can be cut today; how they affect your taxes, your income. N. T. Carruthers. Mag of Wall St 79:722-3+ Mr 29 '47
U.S. spent $43 billion in subsidies from 1934 to 1946. H. F. Byrd. Iron Age 159:114 Mr 13 '47

SUBSTANDARD risks. See Insurance, Life—Substandard risks

SUBSTATIONS, Electric. See Electric substations

SUBSTITUTES
Metallurgical substitutions. A. M. Portevin. Metal Prog 51:271-2 F '47
See also
Mica, Substitutes for

SUBSTITUTION (chemistry)
Acenaphthene series; bromo-, nitro-, and amino-derivatives of 3 : 4-di-*tert.*-butylacenaphthene, and some brominated thioindigoid dyes; novel *ace*substitution. A. T. Peters. Chem Soc J p742-6 Je '47
Aromatic substitution; the cleavage of diphenylmercury. A. H. Corwin and M. A. Naylor, jr. bibliog Am Chem Soc J 69: 1004-9 My '47
Electrical conductivities of long-chain quaternary ammonium chlorides containing hydroxyalkyl groups. A. W. Ralston and others. Am Chem Soc J 69:2095-7 S '47
Indoaniline dyes; effect of multiple substitution on the absorption of phenol blue. P. W. Vittum and G. H. Brown. bibliog Am Chem Soc J 69:152-5 Ja '47
Kinetics of anionotropic rearrangement; effects of methyl, methoxy-, and halogen substituents attached to a phenyl group. E. A. Braude and E. S. Stern. Chem Soc J p 1096-104 Ag '47
Kinetics of some benzidine rearrangements, and a note on the mechanism of aromatic substitution. M. J. S. Dewar. Chem Soc J p777-81 S '46
Mechanism of aromatic side-chain reactions with special reference to the polar effects of substituents; kinetic examination of the reaction of aryl *iso*cyanates with methyl alcohol. J. W. Baker and J. B. Holdsworth. Chem Soc J p713-26 Je '47
Mechanism of substitution at a saturated carbon atom. A. G. Evans, M. G. Evans and M. Polanyi. Chem Soc J p558-9 Ap '47
Metalation of compounds that have meta-directing groups and the electrophilic character of organoalkali metal reagents. A. A. Morton. bibliog Am Chem Soc J 69:969-71 Ap '47
Preparation of some monosubstituted derivatives of pyrrole by the Mannich reaction. W. Herz, K. Dittmer and S. J. Cristol. bibliog Am Chem Soc J 69:1698-700 Jl '47
Study of the properties of fluorine-substituted 5-aminoacridines and related compounds; monofluoro-5-aminoacridines. J. H. Wilkinson and I. L. Finar. Chem Soc J p759-62 Je '47
Theoretical discussion of further substitution in disubstituted naphthalenes; the further nitration of the dinitronaphthalenes. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:141-4 My '47
Tilden lecture, delivered in Leeds on November 26th, 1945, and in London on January 17th, 1946. E. D. Hughes. Chem Soc J p968-79 O '46
See also
Sandmeyer reaction

SUBSTITUTION (merchandizing)
Survey shows drug chains now push national brands; study of Madison (Wis.) market. L. J. Houfek. Ptr Ink 217:40-2 N 22 '46

SUBTILIN
Action of subtilin in reducing infection by a seed-borne pathogen. J. J. Goodman and A. W. Henry. Science 105:320-1 Mr 21 '47
Subtilin from asparagus waste. Chem & Eng N 25:1070-1 Ap 14 '47
Subtilin output and purification. Oil Paint & Drug Rep 151:5+ Ap 7 '47

SUBURBAN development
Builder and architect combine their talents; development in Gorge View Park, Lewiston Heights, N.Y. il plans Am Bld 69:75-7 Ja '47
Daytona Village, a multiple garden apartment project in Dayton, Ohio. il plans Am Bld 69:112-13 F '47
For easy shopping; centralized retail area will be built in Beverly, Mass.; Chicago firm plans new community. map Bsns W p24+ N 9 '46
Green Acres, Le Sueur, Minn.; new residential subdivision. il plans Am Bld 68:96-7 D '46
J. C. Nichols, dean of city planners, master community builder; Kansas City developer's Prairie Village. il maps plans Am Bld 69:94-9 Mr '47
Oak Hill Village, a model suburban community; Newton Center, Mass. il plans Am Bld 69:108-11 S '47
Shopping center for suburban Boston, near Beverly, Mass. il maps plans Arch Forum 86:84-93 Je '47
Texas subdivision has 4780 different houses; Oak Forest, Houston. il plans Arch Forum 87:86-7 Jl '47
1200 steel-framed houses for Baltimore veterans; Harundale development. il map plan diags Arch Forum 86:82-7 Ap '47
Washington builders developing suburban community of quality homes; Glen Mar Park. il plans Am Bld 69:93-5+ My '47
See also
Land—Subdivision

SUBURBAN homes
Hemming in the small lot contributes privacy to typical suburban site; house in Richmond, Calif. il plans diags Arch Forum 86: 72-5 Ja '47
Prize winner of 1945 as built today. il plan Am Bld 69:94-5 Je '47
Spread wide for comfort; suburban home at Lynnridge, Portland, Oregon. il Am Bld 69:106-7 Jl '47
Suburban house combines privacy and open planning on a standard lot; San Marino, Calif. il plan Arch Forum 86:98 Je '47

SUBURBAN traffic. See Railroads—Suburban traffic

SUBWAY cars. See Cars, Subway

SUBWAY stations
Present status of the Toronto rapid transit subways; with cost data. il plan diag Roads & Bridges 84:54-7+ D '46

SUBWAYS
See also
Rapid transit
also subdivision Subways under names of cities, e.g. London—Subways

Cost
Platform extensions to IRT subway stations, New York city; unit prices. Eng N 137:747 N 28 '46

Design
Present status of the Toronto rapid transit subways; with cost data. il plan diags Roads & Bridges 84:54-7+ D '46

Fires and fire protection
Guarding a subway against fire; Independent subway system of New York city transit system. P. W. Eberhardt. il Nat Safety N 54:22-3 D '46

SUCCESS
How advertising is helping a new business to success; Hortense Hewitt garters. C. J. Swan. il Ptr Ink 218:67-8 Ja 24 '47
Illusion of success. W. T. Nichols. Chem Eng Prog 43:sup 15-19 Mr '47
Night watch, A. D. Converse, jr. Ptr Ink 219: 154 Ap 25 '47; Discussion. 219:67, 148 My 16 '47
Thomas Roy Jones prepared himself to achieve his goal. il Inland Ptr 119:46-9 Ap '47

SUCCESSION. See Inheritance and succession

SUCCINATES
Rubberlike products from linear polyesters. B. S. Biggs, R. H. Erickson and C. S. Fuller. bibliog il diags Ind & Eng Chem 39:1090-7 S '47

See also
Aerosol MA

SUCCINIMIDOBENZENESULFONYL chloride
Preparation of N^4-carboxyacylsulphonamides; reactions of succinimidobenzenesulphonyl chloride and succinylsulphanilyl chloride. C. W. Picard, E. Reid and D. E. Seymour. Chem Soc J p751-3 Ag '46

SUCCINYLGLYCINE dimethyl ester
Cyclization of N-succinylglycine dimethyl ester. H. Werbin and P. E. Spoerri. bibliog Am Chem Soc J 69:1681-4 Jl '47

SUCCINYLSULFANILAMIDE
Preparation of N^4-carboxyacylsulphonamides; reactions of succinimidobenzenesulphonyl chloride and succinylsulphanilyl chloride. C. W. Picard, E. Reid and D. E. Seymour. Chem Soc J p751-3 Ag '46

SUCCINYLSULFANILYL chloride
Preparation of N^4-carboxyacylsulphonamides; reactions of succinimidobenzenesulphonyl chloride and succinylsulphanilyl chloride. C. W. Picard, E. Reid and D. E. Seymour. Chem Soc J p751-3 Ag '46

SUCKER rods
Monel sucker rods. Oil & Gas J 46:95 Je 21 '47
Pumping unit design lowers rod acceleration. J. B. Wrigley. diags Pet Eng 18:92+ Ja '47
Scrapers on sucker rods reduce paraffin deposits. E. V. Garrett. il diags Pet Eng 18: 132+ Ag '47
Subsurface sucker-rod pumps. R. L. Chenault. diags Oil & Gas J 46:104+ O 18 '47
Sucker rods for corrosion fatigue. W. L. Nelson. Oil & Gas J 45:283 Ja 25 '47

SUCROSE. See Sugar

SUEZ canal company
Statement by the chairman at annual general meeting. Marquis de Vogué. Economist 153: 132 Jl 19 '47

SUFFRIDGE, James Arthur, 1909-
Victory plus; A.F.L.'s rejuvenated union wins on West coast. por Bsns W p97-100+ Je 14 '47

SUGAR
Anhydrides of polyhydric alcohols; 1 : 4-3 : 6-dianhydro mannitol and 1 : 4-3 : 6-dianhydro sorbitol from sucrose. R. Montgomery and L. F. Wiggins. Chem Soc J p433-6 Ap '47
Conversion of sucrose into furan compounds; some amidino-furans. F. H. Newth and L. F. Wiggins. Chem Soc J p396-8 Mr '47
Conversion of sucrose into pyridazine derivatives; 4-amino-2-phenyl-6-methyl-3-pyridazone, 4-amino-2-(*p*-nitrophenyl)-6-methyl-3-pyridazone, and their sulphanilamido-derivatives. W. G. Overend and L. F. Wiggins. Chem Soc J p549-54 Ap '47
Conversion of sucrose into pyridazine derivatives; 3-sulphanilamido-6-methylpyridazine. W. G. Overend and L. F. Wiggins. Chem Soc J p239-44 F '47
Conversion of sucrose into thiazole derivatives; sulphanilamidothiazoles derived from lœvulic acid. H. Gregory and L. F. Wiggins. Chem Soc J p590-2 My '47
Effect of heat on aqueous solutions of sucrose and other carbohydrates. R. Montgomery and L. F. Wiggins. bibliog Soc Chem Ind J 66:31-2 Ja '47
Ion exchange plant recovers sugar from fruit waste; Hawaiian pilot plant demineralizes 3,000 gals. of juice from pineapple shells daily. flow diags il Food Ind 18:1846-8+ D '46
Isosucrose synthesis. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 68: 2171-2 N '46
Levulose from sucrose. il Chem Ind 59:834 N '46
Recovery of sucrose from cane blackstrap and beet molasses. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 69:664-5 Mr '47
Sugar salesmen; new packages for National Sugar families. il Mod Packaging 20:108-11 Ja '47
Sweet plastics story; octallyl sucrose, varnish resin. Chem Ind 60:767 My '47
Utilization of cane sugar; abstract. L. F. Wiggins. Chem & Ind p228 Ap 26 '47

See also

Beets and beet sugar	Sirups
	Sugars

Manufacture and refining

Automatic control of the quintuple effect sugar house evaporator. diag Chem Eng 54:221-2+ Je '47
Beet sugar manufacture; Bonelli method. Chem Age (Lond) 56:533 Ap 26 '47
Chem. & Met. report on ion exchange. il diags Chem Eng 54:123-30 Jl '47
Clarifying sugar juices; patent. Food Ind 18: 1801 N '46
Decolourization by vegetable carbons; Percofil process; Collactivit process; abstracts. L. Wickenden; D. Ramondt. Chem & Ind p445 D 14 '46
Filtration process; Percofil. L. Wickenden. Chem Ind 60:634+ Ap '47
From the log of experience; Imperial refinery at Sugarland, Texas. D. Gutleben. Chem Eng 54:221-2+ O '47
From the log of experience; Magnus Swenson. D. Gutleben. Chem Eng 54:227-8+ S '47
Industrial wastes; beet sugar industry. B. M. McDill. flow sheets il diag Ind & Eng Chem 39:657-69 My '47
Influence of anions on the decoloration of sugar sirups by means of bone black; abstract. K. Löwy. Chem Eng 54:276+ F '47
Italian beet sugar process. W. G. Cass. Chem & Eng N 25:1388 My 12 '47
Micro-organisms in raw and refined sugar and intermediate products. H. C. S. de Whalley and M. P. Scarr. bibliog Chem & Ind p531-6 Ag 30 '47; Discussion. p44 Ja 18 '47
Multiple effect evaporation in the sugar industry. D. M. Semple. il diags Inst Chem Eng Trans 21:11-17; Discussion. 17-18 '43
Sugar in the making; pictures of manufacture of sugar from beets. Food Ind 19:312-15 Mr '47
This is gur; processing raw sugar cane juice in India; illustrations. Food Ind 19:465-7 Ap '47

See also
Sugar factories

By-products

Hard wax recovery from sugar. Oil Paint & Drug Rep 151:4+ Je 23 '47

Moisture content

Keeping properties of confectionery as influenced by its water vapour pressure. D. W. Grover. bibliog Soc Chem Ind J 66: 201-5 Jl '47

Sampling

Raw sugar; sampling, mixing, and testing. E. F. Kenney. bibliog Ind & Eng Chem Anal ed 18:684-8 N '46

Tables, calculations, etc.

Weights per United States gallon and weights per cubic foot of sugar solutions. C. F. Snyder and L. D. Hammond, comp. U S Nat Bur Stand Circ C457:1-28; pa 10c Supt. of doc. '46

Testing

Raw sugar; sampling, mixing, and testing. E. F. Kenney. bibliog Ind & Eng Chem Anal ed 18:684-8 N '46

SUGAR analysis
Chromatography of sugars and their derivatives. L. W. Georges, R. S. Bower and M. L. Wolfrom. bibliog diags Am Chem Soc J 68:2169-71 N '46
Identification and determination of D-xylose. L. E. Wise and E. K. Ratliff. Anal Chem 19:694-5 S '47
Preparation and chromatographic separation of *p*-phenylazophenyl polyacetylglycosides. C. D. Hurd and R. P. Zelinski. bibliog Am Chem Soc J 69:243-6 F '47
Quantitative determination of galactose, mannose, arabinose, and rhamnose. E. L. Hirst, J. K. N. Jones and E. A. Woods. Chem Soc J p 1048-51 Ag '47

SUGAR analysis—*Continued*
Starches and starch fractions. L. H. Lampitt and others. bibliog Soc Chem Ind J 66: 68-73, 117-21 Mr-Ap '47
Study of Ofner's method for the determination of invert sugar. E. J. McDonald and A. L. Turcotte. bibliog J Res Nat Bur Stand 37:429-34 D '46

SUGAR cane
Growth inhibitor and a growth promoter in sugar cane. C. J. Engard and A. H. Nakata. bibliog Science 105:577-80 My 30 '47
Wax from sugarcane, by new process holds promise. Paint Oil & Chem R 110:22+ Jl 10 '47; Chem & Eng N 25:2222-3 Ag 4 '47; Chem Ind 61:210-11 Ag '47

SUGAR factories
Baltimore sugar refinery celebrates twenty-five years of operation; American sugar refining company. il Manuf Rec 116:37+ Je '47
From the log of experience; Imperial refinery at Sugarland, Texas. D. Gutleben. Chem Eng 54:221-2+ O '47

Waste
Beet sugar industry. B. M. McDill. flow sheets il diag Ind & Eng Chem 39:657-69 My '47
Treatment and control methods for industrial wastes. L. F. Oeming. il Water & Sewage Works 94:108-9 Mr '47

SUGAR in the body
Digestible carbohydrates in the diet of human beings. J. R. Marrack. bibliog Chem & Ind p619-20 O 11 '47

SUGAR industry and trade
Advocates free sugar market. O. H. Lamborn. Comm & Fin Chr 164:2665+ N 21 '46
End of sugar rationing would upset supply-demand, lead to scramble in canning time. Barron's 27:28 Je 2 '47
Machines cut costs for domestic sugar growers; they provide an offset to the lower labor costs of off-shore producers. H. W. Knodel. Barron's 27:38 S 22 '47
More sugar, if. Bsns W p41-2+ Mr 8 '47
President signs sugar control extension bill. Comm & Fin Chr 165:1980 Ap 10 '47
Sugar balance. il Bsns W p40+ Je 21 '47
Sugar keeps pouring in. Barron's 27:36 Jl 28 '47
Sugar price supported. Barron's 27:37 S 8 '47
Sugar prospects. Economist 153:298-9 Ag 16 '47
Sugar rationing ended for industrial users. Oil Paint & Drug Rep 152:3 Ag 4 '47
Sugar so plentiful more may go abroad. Bsns W p45 S 13 '47
Sugar still short. Bsns W p18 Ja 4 '47
Sugar surplus grows. Barron's 27:37 S 29 '47
Sugar to be plentiful. Barron's 27:29 Mr 31 '47
Sugar we're entitled to. Barron's 27:37 Mr 17 '47
Sugar will be more plentiful next year. Barron's 26:5 D 2 '46
Sweet solution; new sugar legislation slicing up U.S. market for next five years. Bsns W p17-18 Jl 19 '47
See also
Cuban Atlantic sugar company
New York coffee and sugar exchange

Securities
Favorable factors in beet sugar shares. R. H. Burton. Comm & Fin Chr 165:738+ F 6 '47
Investment reappraisal of sugar companies; with statistics on leading stocks. W. Beecher. il Mag of Wall St 80:160-1+ My 10 '47

Cuba
Cuban production and exports. For Comm W 28:25 Ag 30 '47

Guatemala
Rationing abolished; price control continued. For Comm W 29:14 O 4 '47

Hawaii
Chemistry in Hawaii; pineapples and sugar, around which Hawaiian industry has grown up. R. C. Brasted. il Chem & Eng N 25: 495-8 F 24 '47

India
This is gur; processing raw sugar cane juice; illustrations. Food Ind 19:465-7 Ap '47

Italy
Sugar production and crop prospects. For Comm W 29:24 O 25 '47

Persia
Increase in Iranian sugar production. For Comm W 29:21 O 18 '47

Philippine Islands
Situation in sugar industry, Republic of the Philippines. For Comm W 25:38 D 21 '46

SUGAR maple. See Maple

SUGAR research
Cori wins sugar research prize. Chem & Eng N 25:1375 My 12 '47

SUGAR research foundation
Prizes totaling $40,000 established. Science 105:62 Ja 17 '47

SUGARS
Action of acidic reagents on ethylene oxide anhydro sugars; action of acid reagents on 4 : 6-benzylidene 2 : 3-anhydro α-methylalloside. F. H. Newth, W. G. Overend and L. F. Wiggins. Chem Soc J p 10-18 Ja '47
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of some heptoses. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1050-2 My '47
Action of copper sulfate on the phenylosazones of the sugars; the phenylosotriazoles of L-rhamnose, L-fucose and melibiose. W. T. Haskins, R. M. Hann and C. S. Hudson. Am Chem Soc J 69:1461-3 Je '47
Basra dates; relationship between ripening and sugar content of twelve varieties. A. J. Cavell. il Soc Chem Ind J 66:195-8 Je '47
Carbohydrate C-nitroalcohols; the acetylated nitroölefins. J. C. Sowden and H. O. L. Fischer. bibliog Am Chem Soc J 69:1048-50 My '47
Chemical composition of barks. E. F. Kurth. bibliog Chem R 40:33-49 F '47
Chemistry of some plant gums and mucilages. E. L. Hirst and J. K. N. Jones. bibliog Soc Dyers & Col J 63:249-54 Ag '47
Constitution of cherry gum; products of hydrolysis of methylated cherry gum. J. K. N. Jones. Chem Soc J p 1055-9 Ag '47
Constitution of egg-plum gum. E. L. Hirst and J. K. N. Jones. Chem Soc J p 1064-8 Ag '47
Constitution of the mucilage from the bark of ulmus fulva (slippery elm mucilage); sugars formed in the hydrolysis of the methylated mucilage. R. E. Gill, E. L. Hirst and J. K. N. Jones. Chem Soc J p 1025-9 N '46
Dibenzylidene-xylitol and its reaction with tetraacetyl-D-glucosyl bromide; dibenzylidene-L-fucitol. M. L. Wolfrom, W. J. Burke and E. A. Metcalf. bibliog Am Chem Soc J 69:1667-8 Jl '47
Effect of heat on aqueous solutions of sucrose and other carbohydrates. R. Montgomery and L. F. Wiggins. bibliog Soc Chem Ind J 66:31-2 Ja '47
Lead tetraacetate oxidations in the sugar group; crystalline 2,4,3,5-diethylidene-*aldehydo*-L-xylose and several of its derivatives. R. C. Hockett and F. C. Schaefer. bibliog Am Chem Soc J 69:849-51 Ap '47
Preparation of some sugar acid derivatives of sulfanilamide. C. L. Mehltretter. Am Chem Soc J 69:2133-4 S '47
Relations between rotatory power and structure in the sugar group; some 2'-naphthyl 1-thioglycopyranosides and their acetates. W. T. Haskins, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 69:1668-72 Jl '47
Some observations on the ring scission of 4 : 6-benzylidene 2 : 3-anhydro α-methylmannoside with ammonia. L. F. Wiggins. Chem Soc J p 18-21 Ja '47

SUGARS—*Continued*
Sugar interconversion under reducing conditions; D,L-glucitol. M. L. Wolfrom and others. bibliog Am Chem Soc J 68:2342-3 N '46

See also
Aldoses
Arabinose
Carbohydrates
Desoxyxylose
Difructose anhydride
Fermentation
Fructose
Galactose
Glucose
Invertase
Optical rotation
Polysaccharides
Rhamnose
Ribose
Sugar
Wood saccharification

Nomenclature

Nomenclature of certain sugar derivatives. J. C. Sowden. bibliog Am Chem Soc J 69: 1047 My '47

Patents

Patents on the reactions of sugars. A. Guttag. (Technological report ser. no. 1) 108p Sugar research foundation, 52 Wall st, New York 5 '47

SUGGESTION selling. See Salesmanship, Retail

SUGGESTION systems
Advertise to get more and better suggestions from employees. D. Markstein. Ptr Ink 220:62+ S 19 '47
Cartoon strips promote the suggestion system; AC spark plug's employee magazine. il Factory Management 105:87 My '47
Employe suggestion plan proves worth to insurer; experience of American Surety. C. H. Hall. Nat Underw (Life ed) 51:10 My 9 '47; Excerpt. Weekly Underw 156:1227 My 3 '47
Employee suggestion program; Southern California gas co. F. A. Herr. Am Gas J 166:14-15 Je '47
Employees' suggestions; basic principles, problems, and potentialities. D. C. Ling. Automobile Eng 36:585-9; 37:70 D '46, F '47
Make your suggestion plan work. H. W. Seinwerth. Am Mach 91:93-5 Ja 2 '47
Suggestion campaign. il Ptr Ink 220:66+ Ag 15 '47
Suggestion programs in the office. Management R 36:137-9 Mr '47
Suggestion systems play major peacetime role. R. M. Bleiberg. Barron's 27:31 O 27 '47

SUITS, Chauncey Guy, 1905-
G.E.'s youngest V.P. por Fortune 35:134+ F '47

SULFAGUANIDINE
Derivatives of sulphanilylguanidine; preparation for pharmacological study. E. Haworth, F. L. Rose and F. H. Slinger. Chem Soc J p820-2 Je '47

SULFAMATES
Aqueous solubilities of some sulfamates, and the system ammonium sulfamate-sulfamic acid-water at 25°. J. E. Ricci and B. Selikson. bibliog Am Chem Soc J 69:995-8 My '47

Analysis

Comparison of methods for determination of sulfamates. W. W. Bowler and E. A. Arnold. bibliog Anal Chem 19:336-7 My '47

SULFAMIC acid
Aqueous solubilities of some sulfamates, and the system ammonium sulfamate-sulfamic acid-water at 25°. J. E. Ricci and B. Selikson. bibliog Am Chem Soc J 69:995-8 My '47
Reaction of the dioxane-sulfotrioxide reagent with aniline; classification of the sulfamic acids. C. D. Hurd and N. Kharasch. bibliog Am Chem Soc J 69:2113-15 S '47

SULFANILAMIDE
Amination of pyrazine with sodium amide. R. N. Shreve and L. Berg. bibliog Am Chem Soc J 69:2116-17 S '47
Conversion of sucrose into pyridazine derivatives; 4-amino-2-phenyl-6-methyl-3-pyridazone, 4-amino-2-(*p*-nitrophenyl)-6-methyl-3-pyridazone, and their sulphanilamido-derivatives. W. G. Overend and L. F. Wiggins. Chem Soc J p549-54 Ap '47
Conversion of sucrose into pyridazine derivatives; 3-sulphanilamido-6-methylpyridazine. W. G. Overend and L. F. Wiggins. Chem Soc J p239-44 F '47
Conversion of sucrose into thiazole derivatives; sulphanilamidothiazoles derived from lœvulic acid. H. Gregory and L. F. Wiggins. Chem Soc J p590-2 My '47
Halogenated sulfonanilides. A. Mooradian and G. W. Leubner. Am Chem Soc J 69: 2067-8 Ag '47
Preparation of some sugar acid derivatives of sulfanilamide. C. L. Mehltretter. Am Chem Soc J 69:2133-4 S '47

SULFANILAMIDOMETHYLPYRIDAZINE
Conversion of sucrose into pyridazine derivatives; 3-sulphanilamido-6-methylpyridazine. W. G. Overend and L. F. Wiggins. Chem Soc J p239-44 F '47

SULFANILAMIDOTHIAZOLE. See Sulfathiazole

SULFAPYRIDINE
Some substituted sulfanilamidopyridines. J. Bernstein and others. Am Chem Soc J 69: 1158-60 My '47

SULFATE process. See Paper making—Sulfate process

SULFATES
Recovery of soda and removal of sulfate in the lime-soda process for alumina production. F. J. Frattali and others. bibliog 11 pls U S Bur Mines Rep of Invest 4126:1-14 '47

See also
Alums

Analysis

Analysis of external deposits from boilers; method in use at British coal utilisation research association for the analysis of external boiler deposits rich in phosphates. A. H. Edwards. Soc Chem Ind J 65:254-6 S '46
Apparatus for rapid conductometric titrations; determination of sulfate. L. J. Anderson and R. R. Revelle. bibliog diag Anal Chem 19:264-8 Ap '47
Determination of sulfate as barium sulfate; in the presence of metals of the acid hydrogen sulfide group. W. H. Millett and W. M. McNabb. bibliog Franklin Inst J 243:205-17 Mr '47
Determination of sulphates in sulphite waste liquor; abstract. H. Eng and others. Paper Ind 29:598 Jl '47
Sulfite waste liquor analysis; determination of sulfate by a conductometric titration method. Q. P. Peniston, V. F. Felicetta and J. L. McCarthy. bibliog diag Anal Chem 19:332-4 My '47

SULFATHIAZOLE
Conversion of sucrose into thiazole derivatives; sulphanilamidothiazoles derived from lœvulic acid. H. Gregory and L. F. Wiggins. Chem Soc J p590-2 My '47

SULFENIC acids
Derivatives of sulfenic acids; reactions of 2-nitrobenzenesulfenyl chloride, 2,4-dinitrobenzenesulfenyl chloride and of the corresponding sulfenyl thiocyanates with olefins and with methyl ketones. N. Kharasch, H. L. Wehrmeister and H. Tigerman. bibliog Am Chem Soc J 69:1612-15 Jl '47

SULFENYL chlorides
Arylsulfenyl chlorides; addition to unsaturated compounds. R. A. Turner and R. Connor. bibliog Am Chem Soc J 69:1009-12 My '47

SULFENYL thiocyanates
Derivatives of sulfenic acids; reactions of 2-nitrobenzenesulfenyl chloride, 2,4-dinitrobenzenesulfenyl chloride and of the corresponding sulfenyl thiocyanates with olefins and with methyl ketones. N. Kharasch, H. L. Wehrmeister and H. Tigerman. bibliog Am Chem Soc J 69:1612-15 Jl '47

SULFIDES
Cleavage of organic sulfides with chlorine. R. H. Baker, R. M. Dodson and B. Riegel. bibliog Am Chem Soc J 68:2636-9 D '46
Conversion of certain mercaptans into acetates and sulfides. T. P. Dawson. Am Chem Soc J 69:1211-12 My '47

SULFIDES—*Continued*
Decomposition reactions of the aromatic diazo-compounds; mechanism of formation of azo-compounds, polyaryls, and aryl sulphides. K. H. Saunders and W. A. Waters. Chem Soc J p 1154-6 D '46
Methyl thioethers derived from 2 : 2′-dichlorodiethyl sulphide and its analogues. R. C. G. Moggridge and others. Chem Soc J p813-19 S '46
Some basically substituted diaryl sulfides and sulfones. H. Gilman and H. S. Broadbent. bibliog Am Chem Soc J 69:2053-7 Ag '47
Studies on biological methylation; the fission of the mono- and di-sulphide links by moulds. F. Challenger and P. T. Charlton. Chem Soc J p424-9 Mr '47
Sulfur bond in vulcanizates; mineral sulfide as index of disulfide cross bonding. C. M. Hull, S. R. Olsen, and W. G. France. bibliog Ind & Eng Chem 38:1282-8 D '46
Synthesis of 4-hydroxyquinolines; quinoline derivatives with sulfur-containing substituents. C. C. Price, N. J. Leonard and G. W. Stacy. Am Chem Soc J 69:855-8 Ap '47

See also
Mustard gas
Pyrites
Wittichenite

SULFILIMINE
Preparation of a series of *p*-toluene-sulfilimines. T. P. Dawson. Am Chem Soc J 69:968 Ap '47

SULFINATES
Alkyl thiolsulfinates. L. D. Small, J. H. Bailey and C. J. Cavallito. Am Chem Soc J 69:1710-13 Jl '47

SULFINIC acids
Preparation of 4-aminophenyl sulphones; reaction between 4-acetamidobenzenesulphinic acid and aromatic nitroso-compounds. S. Pickholz. Chem Soc J p 1058-62 N '46
Preparation of 4-aminophenyl sulphones; reaction between aromatic sulphinic acids and quinones or quinoneimines. S. Pickholz. Chem Soc J p685-7 Ag '46

Analysis
Reaction of sodium 1-dodecanesulfinate with mercuric chloride. C. S. Marvel, C. E. Adams and R. S. Johnson. bibliog Am Chem Soc J 68:2735 D '46

SULFITE liquor
Alcohol from sulfite waste liquor. E. O. Ericsson. flow diag il Chem Eng Prog 43: 165-7 Ap '47
Alcohol from waste sulfite liquor; abstract. H. G. Joseph. Water & Sewage Works 93: 462 D '46
Aquatic yeast; paper mills' plan to make feed from sulphite pulp waste. Bsns W p28 N 9 '46
Diffusion study of lignin sulfonic acids in sulfite waste liquor. D. Pennington and D. M. Ritter. bibliog Am Chem Soc J 69: 665-7 Mr '47
Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61: 232-4 Ag '47
Edible yeasts produced from sulphite liquors; abstract. H. J. Bunker. Food Ind 18:1801 N '46
Foam phase and conventional biological oxidation of waste sulfite liquor; abstract. R. P. Logan and H. Heukelekian. Water & Sewage Works 94:57-8 F '47
Food yeast from timber waste. Chem Age (Lond) 57:497-8 O 11 '47
Lignosol production at Gaspesia Sulphite. Pulp & Pa of Can 48:70 Ag '47
Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. Paper Tr J 124:41-3 Ja 9 '47
New form of lignin; developments of Howard Smith paper mills, ltd. N. B. Powter. il Paper Ind 28:1744-6 Mr '47; Same cond. Mod Plastics 24:106-8 Ap '47
Production of fodder yeast from wood sugars. E. E. Harris and others. il diags Paper Ind 29:879-81 S '47
La récupération des sous-produits de la fabrication de la pâte à papier. Génie Civil 124:255-6 Jl 1 '47
Report from Germany, nutritional yeast; conversion of lyes of sulphite-cellulose factories. O. Goy. Paper Tr J 125:24 Ag 7 '47
Sulphite liquor alcohol output increased. Chem Eng 53:212 N '46
Tanning properties of lignosulphonates produced by different cooking conditions. M. A. Buchanan and others. bibliog Paper Tr J 124:38-44 My 1 '47
Treatment of sulphite waste liquors on trickling filters; abstract. R. G. Tyler and others. Paper Ind 29:134 Ap '47
Yeast from sulfite liquor; Germans used wood sugars to produce yeast for livestock feeds and for human consumption. il Chem Ind 60:56-7 Ja '47

Analysis
Colorimetric determination of sulphite waste liquor; abstract. B. S. Zaidenberg. Paper Ind 29:286 My '47
Determination of sulphates in sulphite waste liquor; abstract. H. Eng and others. Paper Ind 29:598 Jl '47
Sulphate content of sulphite liquors during the cook; abstract. O. Samuelson. Paper Ind 29:742 Ag '47
Sulfite waste liquor analysis; determination of sulfate by a conductometric titration method. Q. P. Peniston, V. F. Felicetta and J. L. McCarthy. bibliog diag Anal Chem 19:332-4 My '47

SULFITE pulp process. See Paper making—Sulfite process

SULFITES
Mechanism of the Bucherer reaction; isolation of bisulphite compounds from naphthionic acid. W. A. Cowdrey. Chem Soc J p 1041-4 N '46
Mechanism of the Bucherer reaction; kinetics of the conversion of naphthylamines into naphthols. W. A. Cowdrey and C. N. Hinshelwood. Chem Soc J p 1036-41 N '46

SULFOBENZOIC acid
Tartaric, *o*-sulfobenzoic and β-sulfopropionic acid derivatives of some sulfonamides. V. B. Fish, J. R. Stevens and R. G. D. Moore. Am Chem Soc J 69:1391-3 Je '47

SULFOLANES
Manufacture of sulfolanes and use as selective solvents. H. G. Staaterman and others. flow diags il Chem Eng Prog 43:148-51 Ap '47

SULFONAMIDES
Amidines; preparation of substituted amidines from ammonium or substituted ammonium salts and *N*-acylbenzenesulphonalkylamides or acylbenzenesulphonanilides. P. Oxley and W. F. Short. Chem Soc J p382-9 Mr '47
Preparation of N^4-carboxyacylsulphonamides; reactions of succinimidobenzenesulphonyl chloride and succinylsulphanilyl chloride. C. W. Picard, E. Reid and D. E. Seymour. Chem Soc J p751-3 Ag '46
Some *p*-alkoxybenzenesulphonamides and their *N*-chloro-derivatives. W. E. Hanby and H. N. Rydon. Chem Soc J p865-6 O '46
Some products formed in the reaction of *p*-acetamidobenzene-sulphonyl azide with pyridine. J. N. Ashley, G. L. Buchanan and A. P. T. Easson. Chem Soc J p60-7 Ja '47
Studies in chemotherapy; amides of pantoyltaurine. R. Winterbottom and others. bibliog Am Chem Soc J 69:1393-401 Je '47
p-Substituted phenyl isothiocyanates and some related thioureas. R. L. McKee and R. W. Bost. Am Chem Soc J 68:2506-7 D '46
Sulfonamide plasticizers and resins. H. S. Bergen, jr. and J. K. Craver. bibliog Ind & Eng Chem 39:1082-7 S '47
Tartaric, *o*-sulfobenzoic and β-sulfopropionic acid derivatives of some sulfonamides. V. B. Fish, J. R. Stevens and R. G. D. Moore. Am Chem Soc J 69:1391-3 Je '47
Utility of sulfa drugs for the inhibition of mold respiration in grain. M. Milner. Science 104:463-4 N 15 '46

SULFONATES

Aliphatic and aromatic sulfonates of phenyloctadecane. B. B. Schaeffer and A. J. Stirton. bibliog Am Chem Soc J 69:2071-2 Ag '47

Alkyl aryl sulfonates. L. H. Flett. il Soap & San Chem 22:46-8+ D '46

Soap plant observer; synthetic detergent products. Soap & San Chem 23:44-5 Ag '47

See also

Lignosulfonates

SULFONATION

Chemistry of 1-azanthraquinone; sulphonation of 1-azanthraquinone. G. R. Clemo and N. Legg. Chem Soc J p539-44 Ap '47

Manufacture of snythetic phenols, resorcinol, pure anthracene and pure carbazole. Chem Age (Lond) 56:676-7 My 24 '47

Mechanism of the sulfonation of aromatic amines; sulfonation at elevated temperatures with sulfuric acid. E. R. Alexander. bibliog Am Chem Soc J 69:1599-602 Jl '47

Sulphonating action of diethyl sulphate; abstract. V. N. Belov and M. Z. Finkelstein. Chem Eng 54:270+ Je '47

Sulphonation of some derivatives of eugenol. G. R. Clemo and J. H. Turnbull. Chem Soc J p 124-7 Ja '47

Theoretical discussion of further substitution in disubstituted naphthalenes; a comparison of the sulphonation and nitration of polynitronaphthalenes, naphthalene polysulphonic acids and naphthalene nitrosulphonic acids. H. H. Hodgson and E. R. Ward. bibliog Soc Dyers & Col J 63:177-8 Je '47

Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; α- and β-naphthols, α- and β-naphthylamines, and their common monosulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:109-12 Ap '47

Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; naphthalene and its sulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:46-8 F '47

SULFONEPHTHALEIN

See also

Phenolsulfonephthalein

SULFONES

Crease resistant finishes; polysulfones as curing agents; patent. Am Dyestuff Rep 36:281 My 19 '47

Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68:2521-4 D '46

Mixed crystals of sulfoxides, sulfones, selenoxides and selenones. H. Rheinboldt and E. Giesbrecht. Am Chem Soc J 69:644-6 Mr '47

Some basically substituted diaryl sulfides and sulfones. H. Gilman and H. S. Broadbent. bibliog Am Chem Soc J 69:2053-7 Ag '47

Studies in the sulfone series; mono-N-heterocyclic derivatives of 4,4'-diaminodiphenylsulfone. E. D. Amstutz, E. A. Fehnel and J. W. Woods. bibliog Am Chem Soc J 69: 1922-5 Ag '47

Studies in the sulfone series; the preparation and properties of 2,8-diaminothiaxanthone- and 2,8-thiaxanthene-5-dioxides and some related compounds. E. D. Amstutz and C. R. Neumoyer. bibliog Am Chem Soc J 69: 1925-9 Ag '47

Studies in the sulfone series; the preparation of 2,8-diaminodibenzothiophene-5-dioxide. C. R. Neumoyer and E. D. Amstutz. bibliog Am Chem Soc J 69:1920-1 Ag '47

Synthesis of some aryl pyridyl sulphones (arylsulphonylpyridines). H. Burton and W. A. Davy. Chem Soc J p52-5 Ja '47

SULFONIC acids

4-Chloro-2-aminophenol-5- and -6-sulphonic acids, their characterisation and differentiation. J. F. Gaunt and others. bibliog Soc Dyers & Col J 63:48-51 F '47

Furan and tetrahydrofuran derivatives; the synthesis of the sulfonic acid analogs of oxybiotin and homooxybiotin. K. Hofmann, A. Bridgwater and A. E. Axelrod. Am Chem Soc J 69:1550-1 Je '47

New acids for electroplating. Chem Ind 60: 982 Je '47

Sugar sulphonic acids formed in the sulphite cook; abstract. E. Adler. Paper Ind 28:1817 Mr '47

Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; α- and β-naphthols, α- and β-naphthylamines, and their common monosulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63: 109-12 Ap '47

Theoretical discussion of positional sulphonation of naphthalene and of some of its derivatives; naphthalene and its sulphonic acids. H. H. Hodgson and D. E. Hathway. bibliog Soc Dyers & Col J 63:46-8 F '47

SULFONIUM compounds

Alkaline fission of some 2-substituted dimethylethylsulphonium iodides. C. W. Crane and H. N. Rydon. Chem Soc J p766-72 Je '47

SULFONYL chlorides

Molar refraction of sulfonyl chlorides. E. F. Landau. Am Chem Soc J 69:1219 My '47

SULFONYL compounds

Series of ω-alkylmercapto and ω-alkylsulfonyl acids. L. Rapoport, A. Smith and M. S. Newman. bibliog Am Chem Soc J 69:693-4 Mr '47

SULFOPROPIONIC acid

Tartaric, *o*-sulfobenzoic and β-sulfopropionic acid derivatives of some sulfonamides. V. B. Fish, J. R. Stevens and R. G. D. Moore. Am Chem Soc J 69:1391-3 Je '47

SULFOXIDES

Configuration of organic selenoxides; mixed crystals of selenoxides with sulfoxides. H. Rheinboldt and E. Giesbrecht. bibliog Am Chem Soc J 68:2671-3 D '46

Mixed crystals of sulfoxides, sulfones, selenoxides and selenones. H. Rheinboldt and E. Giesbrecht. Am Chem Soc J 69:644-6 Mr '47

SULFUR

Determination of the particle size of monodispersed systems by the scattering of light. I. Johnson and V. K. La Mer. bibliog diags Am Chem Soc J 69:1184-92 My '47

Dispersants from sulfite liquor. J. R. Salvesen and W. C. Browning. il Chem Ind 61:232-4 Ag '47

Preparation of hydrobromic acid by the reduction of bromine with sulphur. R. Bloch and others. bibliog diags Soc Chem Ind J 66:115-17 Ap '47

Rate of vaporization of sulfur. F. M. Turrell. bibliog Science 105:434 Ap 25 '47

Some new extreme pressure (e.p.) lubricating oil additives containing chlorine and sulphur. W. Davey. Inst Pet J 33:527-30 Ag '47

Sulfur bond in vulcanizates. S. R. Olsen, C. M. Hull and W. G. France. bibliog Ind & Eng Chem 38:1273-88 D '46

Sulfur collection in precipitation by means of an all-weather noncorrosive rain and snow gauge. M. I. Fried and M. L. Jackson. il diag Science 106:19-20 Jl 4 '47

Sulfur linkage in vulcanized rubber; reaction of sulfur with 2-methyl-2-butene. M. L. Selker and A. R. Kemp. bibliog diag Ind & Eng Chem 39:895-900 Jl '47

Thiophene; new industrial chemical from butane and sulfur. H. E. Rasmussen and F. E. Ray. flow diag il Chem Ind 60:593-5+ Ap '47

Vulcanization of rubber with sulfur. I. Williams. bibliog Ind & Eng Chem 39:901-6 Jl '47; Same. India Rubber World 117:69-74 O '47

See also

Gas—Sulfur content
Gasoline—Sulfur content
Iron—Sulfur content
Petroleum refining—Sulfur removal
Steel—Sulfur content
Sulfuration
Vulcanization

Analysis

Determination of sulfur by combustion in a vertical tube. D. B. Hagerman. bibliog il diags Anal Chem 19:381-3 Je '47

SULFUR—Analysis—*Continued*
Estimation of small quantities of total sulphur in benzoles. K. H. V. French and G. Claxton. bibliog diags Soc Chem Ind J 65:344-8 N '46
Estimation of sulphur compounds in crude and refined benzoles. G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 65: 333-44 N '46
Microdetermination of halogens and sulfur using the Grote combustion apparatus. O. C. Sundberg and G. L. Royer. bibliog il diags Ind & Eng Chem Anal ed 18:719-23 N '46
Volumetric semimicrodetermination of sulfur in organic compounds by use of oxygen bomb. E. C. Wagner and S. H. Miles. bibliog Anal Chem 19:274-7 Ap '47

Manufacture

Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46
Sulfur from sour gas. G. Weber. flow chart il Oil & Gas J 45:58-9+ Mr 8 '47

SULFUR, Liquid
Determination of pressure drop for flowing molten sulfur. D. S. Davis. Chem Ind 61: 278+ Ag '47

SULFUR bacteria
Bacterial release of oil from sedimentary materials. C. E. ZoBell. il Oil & Gas J 46:62-5 Ag 2 '47
Corrosion of buried pipes; action of sulphate-reducing bacteria. Engineer 183:425 My 16 '47
Corrosion of concrete caused by sulphur-oxidising bacteria. C. B. Taylor and G. H. Hutchinson. bibliog il Soc Chem Ind J 66:54-7 F '47
Effect of bacteria on oil production. C. J. Deegan. il map diag Oil & Gas J 46:78-9+ Je 21: 101-2+ Je 28 '47
Protecting pipe in open systems; protection against action of sulfate-reducing bacteria. M. D. Appleman. bibliog Am Gas Assn Mo 29:194-6 Ap '47
Role of microorganisms in acid mine drainage; a preliminary report. A. R. Colmer and M. E. Hinkle. bibliog Science 106:253-6 S 19 '47

SULFUR compounds
Alkali inspector sums up; troublesome sulphur compounds. W. A. Damon. Chem Age (Lond) 57:257-8 Ag 23 '47
Evaluation of sulfur compounds in gasolines. F. C. Moriarty. Pet Refiner 25:106-8 O '46; Same. Pet Eng 18:167+ F '47; Abstract. flow diag Pet Processing 1:208+ N '46
Organic sulphur compounds; the stereochemistry of trimeric thioaldehydes. A. Schönberg and M. Z. Barakat. Chem Soc J p693 My '47
Selenenyl sulfur compounds. O. Foss. Am Chem Soc J 69:2236-7 S '47
Sulfur-containing amines. S. C. Laskowski and R. O. Clinton. Am Chem Soc J 69:519-21 Mr '47
Sulfur in petroleum; boiling points, freezing points, densities, and refractive indices of some sulfur compounds. W. E. Haines and others. bibliog U S Bur Mines Rep of Invest 4060:1-42 '46
Sulfur resistant catalysts. H. R. Batchelder. diag Am Gas Assn Mo 29:222-5+ My '47
Tentative procedures for determining individual organic sulfur compounds in gas. H. Hakewill and E. M. Rueck. il diags Am Gas Assn Proc 1946:529-38

See also
Mercaptans
Sulfides
Sulfonamides
Sulfones
Sulfuric acid
Thiols

Analysis

Conversion of organic sulfur to hydrogen sulfide for analysis. E. Field and C. S. Oldach. bibliog Ind & Eng Chem Anal ed 18:668-9 N '46
Estimation of sulfur compounds in air. B. Feiner and others. bibliog J Ind Hygiene 28:276-7 N '46
Estimation of sulphur compounds in crude and refined benzoles. G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 65:333-44 N '46
Identification of sulfur compounds in gas mixtures. C. S. Oldach and E. Field. bibliog diags Ind & Eng Chem Anal ed 18: 669-72 N '46; Same. Pet Eng (Ref annual) 18:226+ Jl 1 '47

SULFUR dioxide
Absorption of sulphur dioxide by worsted yarn. R. W. Moncrieff. Soc Dyers & Col J 63:51-2 F '47
Cleaning filter sand with sulphur dioxide. C. F. Angle. il Water & Sewage Works 94:92-4 Mr '47
Constant-length bar for outdoor use; temperature maintained by electrically heated sulfur dioxide. H. I. Andrews. il diags Engineering 163:25-6 Ja 10 '47
Contribution to the study of electronic spectra of bent triatomic molecules. J. Duchesne and B. Rosen. bibliog J Chem Phys 15:631-44 S '47
Electric smelting points way to lower cost; sulfur dioxide recovery. M. Sem and F. C. Collin. Eng & Min J 148:90 Ag '47
Estimation of sulphur trioxide in its mixtures with sulphur dioxide by the method of amperometric titration. D. W. E. Axford and T. M. Sugden. diag Chem Soc J p901-3 O '46
Gas absorption and humidification in cyclone spray towers. H. F. Johnstone and H. E. Silcox. bibliog il diags Ind & Eng Chem 39:808-17 Jl '47
Kinetics of the diene sulfur dioxide reaction. L. R. Drake, S. C. Stowe and A. M. Partansky. bibliog Am Chem Soc J 68: 2521-4 D '46
Polymerization of drying oils and the influence of SO_2 upon this process. D. Cannegieter. bibliog Paint Oil & Chem R 110: 17-18+ F 20 '47
Reaction of sulfur dioxide, water and oxygen in an electrolytic cell. W. F. Seyer and others. bibliog diag Electrochem Soc Trans 91 (preprint 22):319-32 '47
Scaling at high temperatures in sulfur dioxide, oxygen and nitrogen-containing atmospheres. J. H. Nicholson and E. J. Kwasney. Electrochem Soc Trans 91 (preprint 28):419-29 '47
Solubility of nitrogen and methane in sulfur dioxide. M. R. Dean and W. S. Walls. diag Ind & Eng Chem 39:1049-51 Ag '47
Solubility of sulphur dioxide in fuming sulphuric acid. F. D. Miles and T. Carson. diags Chem Soc J p786-90 S '46
Structure of molecular compounds; crystal structure of addition complexes of quinol with certain volatile compounds. D. E. Palin and H. M. Powell. pl diags Chem Soc J p208-21 F '47
SO_2 control problem solved in sea water bromine plants; abstract. P. Hart. Chem Eng 54:102 O '47
Sulfur dioxide leaching tests on various western manganese ores. W. F. Wyman and S. F. Ravitz. bibliog U S Bur Mines Rep of Invest 4077:1-12 '47
Sulphur dioxide vs. materials of chemical plant construction; symposium. Chem Eng 54:221-2+ Jl; 209-10+ Ag; 209-10+ S '47

Analysis

Analysis of anhydrous hydrogen fluoride. C. D. Cook and F. G. Findlater. bibliog diags Soc Chem Ind J 66:169-72 Je '47
Colorimetric determination of sulfur dioxide. W. M. Grant. Anal Chem 19:345-6 My '47
Determination of oxides of sulphur in flue gas. E. W. F. Gillham. Soc Chem Ind J 65:370-2 N '46
Determination of sulphur dioxide by the Reich test. O. T. Fasullo. Chem Ind 60: 838+ My '47
Estimation of sulfur compounds in air. B. Feiner and others. bibliog J Ind Hygiene 28:276-7 N '46

SULFUR fluoride
Alkyl- and aryl-substituted fluorides of sulphur, selenium, tellurium, and iodine. H. J. Emeléus and H. G. Heal. Chem Soc J p 1126-31 D '46

SULFUR hexafluoride
Gaseous dielectric; sulfur and fluorine combine. Chem Ind 61:40 Jl '47
Preparation and properties of sulfur hexafluoride. W. C. Schumb. bibliog Ind & Eng Chem 39:421-3 Mr '47

SULFUR industry and trade
Sulphur export corp. gets FTC suggestions. Oil Paint & Drug Rep 151:7+ F 17 '47
Sulfur in 1946. G. W. Josephson. il Min Cong J 33:105-6 F '47

Securities

Investment comparison of two leading sulphur companies; Freeport vs. Texas Gulf. R. Carleson. il Mag of Wall St 79:369-70+ Ja 4 '47

Statistics

Sulphur and sulphuric acid face promising futures; data and estimates, 1944-46. Chem Eng 54:108-9 F '47

France

Le problème français du soufre. E. G. Voiret. Chimie & Ind 58:188-93 Ag '47; Abstracts. (French sulphur economy). Chem Age (Lond) 57:762 D 13 '47; Chem & Eng N 26: 61 Ja 5 '48

Italy

Italian sulphur industry. Chem Age (Lond) 56:670 My 24 '47

SULFUR mines and mining

Alaska

Exploration of the copper-sulfur deposit, Khayyam and Stumble-On properties, Prince of Wales island, Alaska. E. L. Fosse. 5pls U S Bur Mines Rep of Invest 3942:1-8 '46

France

L'exploitation des mines de soufre en France. G. Vié. map Génie Civil 124:269-72 Jl 15 '47

Texas

L'exploitation du gisement de soufre souterrain de Clemens dome (Texas), au moyen d'eau chaude. diags Génie Civil 124:239 Je 15 '47

United States

Hunt is on for new deposits to extend sulphur reserves. Barron's 27:39 Ap 21 '47

Wyoming

Exploration of the Brutch sulfur deposits, Hot Springs county, Wyo. F. H. Majors. 5pls U S Bur Mines Rep of Invest 3964:1-15 '46

SULFUR oxides
Investigations on the equilibria in the system V_2O_4, V_2O_5, $VOSO_4$, SO_2,SO_3. H. Flood and O. J. Kleppa. bibliog il diags Am Chem Soc J 69:998-1002 My '47

See also
Sulfur dioxide
Sulfur trioxide

SULFUR trioxide
122.5 per cent sulfuric; new stabilizer opens broader fields for sulfur trioxide. Chem Ind 60:771 My '47
Reaction of the dioxane-sulfotrioxide reagent with aniline; classification of the sulfamic acids. C. D. Hurd and N. Kharasch. bibliog Am Chem Soc J 69:2113-15 S '47

Analysis

Automatic estimation of sulphur trioxide in flue gas. E. W. F. Gillham. diags Soc Chem Ind J 65:405-9 D '46
Determination of oxides of sulphur in flue gas. E. W. F. Gillham. Soc Chem Ind J 65:370-2 N '46
Estimation of sulphur trioxide in its mixtures with sulphur dioxide by the method of amperometric titration. D. W. E. Axford and T. M. Sugden. diag Chem Soc J p901-3 O '46

SULFURATION
Certain fundamental concepts relating to non-polar mechanisms in olefinic systems. E. H. Farmer. bibliog Soc Chem Ind J 66:86-93 Mr '47
Resinous products from petroleum polymer sulfurization. M. G. Mayberry, P. V. McKinney and H. E. Westlake, jr. bibliog Ind & Eng Chem 39:166-7 F '47

SULFURIC acid
Acid neutralization. H. L. Jacobs. diags Chem Eng Prog 43:247-53; Discussion. 253-4 My '47
Acid quality, plant and laboratory, tabulation. W. L. Nelson. Oil & Gas J 45:183 Ap 26 '47
Alkylation acid regeneration process; Chemical construction corporation. flow diag Pet Refiner (Process Handbook sec) 26:104-5 Ap '47
Canadian acid industry, how it was built up. Chem Age (Lond) 56:807 Je 21 '47
Chemical refining of aromatic hydrocarbons from petroleum; toluene treating. P. L. Brandt, R. J. Lee and F. T. Wadsworth. bibliog il diag Ind & Eng Chem 39:1010-18 Ag '47
Chemical resistance of constructional metals and non-metals; tabulation. Chem Eng 53: 149-50 N '46
Formation of tervalent manganese in strong sulfuric acid solution. J. F. G. Hicks, jr. and E. Krockmalski. bibliog Am Chem Soc J 69:1970-1 Ag '47
Heavy chemicals; abstract. J. P. Baxter. Chem & Ind p397 N 2 '46
Ionization of ethyl nitrate in sulfuric acid. L. P. Kuhn. bibliog Am Chem Soc J 69: 1974-6 Ag '47
Mechanical and metallurgical control of sulfuric acid corrosion in petroleum processes; abstracts. E. R. Wilkinson. Oil & Gas J 45:96 O 12 '46; Pet Processing 1:174 N '46
Mechanism of the sulfonation of aromatic amines; sulfonation at elevated temperatures with sulfuric acid. E. R. Alexander. bibliog Am Chem Soc J 69:1599-602 Jl '47
Nitration in sulphuric acid; kinetics of the nitration of 2 : 4-dinitrotoluene. G. M. Bennett and others. Chem Soc J p474-92 Ap '47
Nitration in sulphuric acid; migration of nitric acid to the cathode during electrolysis in oleum solution. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p875-80 O '46
Nitration in sulphuric acid; nature of the nitrating agent in nitric-sulphuric acid mixtures. G. M. Bennett, J. C. D. Brand and G. Williams. Chem Soc J p869-75 O '46
Solubility of sulphur dioxide in fuming sulphuric acid. F. D. Miles and T. Carson. diags Chem Soc J p786-90 S '46
Studies of rosin sizing; use of sulfuric acid. D. Price and D. D. Cameron. bibliog Pulp & Pa of Can (Convention no) 47:142-8 F '46; Same. Paper Tr J 123:35-41 D 19 '46; Excerpts. Paper Ind 27:1890-3 Mr '46
Sulfuric acid alkylation. flow diag Oil & Gas J 45:160 Mr 22 '47
Sulfuric acid solutions; specific gravity from 32° to 212° F.; table. W. L. Nelson. Oil & Gas J 45:89 Mr 1 '47
Viscosity and density of sulphuric acid and oleum. N. F. H. Bright, H. Hutchison and D. Smith. Soc Chem Ind J 65:385-8 D '46

Analysis

Analysis of mixtures of mercurous and mercuric mercury and sulfuric acid. B. Warshowsky and P. J. Elving. bibliog Anal Chem 19:112-14 F '47
Analysis of waste pickle liquor. R. D. Hoak. il Iron Age 160:55-7 Jl 3 '47
Evaluating pickling acid inhibitors; colorimetric test method. E. L. Colichman and others. bibliog Iron Age 159:55-7 Ap 24 '47
Nitration in sulphuric acid; influence of nitric acid and other substances upon the oleum-water titration. J. C. D. Brand. Chem Soc J p880-4 O '46

Manufacture

Acid plant for Ceylon; abstract. D. H. Balfour. Chem Age (Lond) 57:66 Jl 12 '47
Billingham anhydrite mine. Chem Age (Lond) 55:698 D 7 '46
Chemico drum-type sulfuric acid concentrator. J. H. Berger and A. J. Gloster. il diag Chem Eng Prog 43:225-36 My '47
Concentration of sulfuric acid under vacuum. J. F. Burke and E. Mantius. diags Chem Eng Prog 43:237-46 My '47
Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46
Layout of a contact sulphuric acid plant, using arsenical pyrites as the raw material. P. Parrish. Chem Age (Lond) 56:48 Ja 11 '47

SULFURIC acid—Manufacture—*Continued*
Manufacture of sulphuric acid in contact plants. V. F. Gloag and R. J. Barritt. il diags Inst Chem Eng Trans 21:30-4; Discussion. 34-7 '43
Reaction of sulfur dioxide, water and oxygen in an electrolytic cell. W. F. Seyer and others. bibliog diag Electrochem Soc Trans 91 (preprint 22):319-32 '47
Scaling at high temperatures in sulfur dioxide, oxygen and nitrogen-containing atmospheres. J. H. Nicholson and E. J. Kwasney. Electrochem Soc Trans 91 (preprint 28):419-29 '47
Sulphuric acid concentration; a summary. il diags Chem Ind 60:50-2+ Ja '47
Sulfuric acid concentraton; Du Pont falling-film process. F. S. Chambers and R. F. Peterson. diag Chem Eng Prog 43:219-24 My '47
Sulfuric-acid industry's development in Latin America. W. R. Koster. il For Comm W 28:3-4+ Ag 9 '47

Statistics

Sulphur and sulphuric acid face promising futures; data and estimates, 1944-46. Chem Eng 54:108-9 F '47
Sulphuric acid industry; April 1-June 30, 1947. Chem & Ind p509 Ag 16 '47
Sulphuric acid; production and use in January-March. Chem Age (Lond) 56:667 My 24 '47
Sulphuric acid production; third quarter of 1946. Chem Age (Lond) 55:609 N 16 '46
Sulphuric acid statistics, April-June. Chem Age (Lond) 57:215 Ag 16 '47
Sulphuric acid supply and consumption in 1946. Chem Age (Lond) 56:258 F 15 '47
Sulphuric acid use in war. Oil Paint & Drug Rep 150:45 N 11 '46

SULFURIZATION. See Sulfuration

SULFUROUS acid
Sulphur dioxide vs. materials of chemical plant construction; symposium. il Chem Eng 54:221-2+ Jl; 209-10+ Ag; 209-10+ S '47

Analysis

Electrometric indicator to replace starch in iodine titrations of sulphurous acid in fruit juices. M. Ingram. bibliog Soc Chem Ind J 66:50-4 F '47
Investigation of errors arising in iodometric determination of free sulphurous acid by the acetone procedure. M. Ingram. bibliog Soc Chem Ind J 66:105-15 Ap '47

SULPHUR. See Sulfur

SULZER engine
Fifty years of Sulzer Diesel engines, 1897-1947. il Engineer 184:275 S 19 '47

SUMMER
See also
Hot weather

SUMMER resorts
New England sets up vacation index. Sales Management 59:101 Ag 15 '47
Ohio converts a flood project into resort area. Bsns W p74 Ag 16 '47

SUMNER, James Batcheller, 1887-
American chemists awarded Nobel prizes at Stockholm. por(cover) Chem & Eng N 25:300-1 F 3 '47

SUN
Solar magnetic field and diurnal variation of cosmic radiation. H. Alfvén. bibliog Phys R 72:88-9 Jl 1 '47
Solar research and theoretical astrophysics at the Yerkes observatory. S. Chandrasekhar. Science 106:213-14 S 5 '47
See also
Milne's equation
Solar heating
Solar radiation
Spectrum, Solar
Sunspots

Corona

Camera filter for photographing the solar prominences. B. Billings. Mech Eng 69:162 F '47
Sun and earth; coronagraphic research. W. O. Roberts. il diag Tech R 49:33-6+ N '46

SUN burn. See Sunburn

SUN glasses
Sun glasses bow to fashion. il Bsns W p31-2 Jl 12 '47
Visibility of lines and squares at high brightnesses. S. Hecht and others. bibliog diag Opt Soc Am J 37:500-7 Je '47

SUN helmets
Transfer of heat through sun helmets; abstract. P. S. H. Henry and W. H. Rees. J Ind Hygiene 29:sup88 S '47

SUN lamps
New meters employing light-sensitive cells for the measurement of erythemal energy. G. P. Kerr. bibliog il R Sci Instr 18:472-3 Jl '47

SUN oil company
Annual report. Comm & Fin Chr 165:2458-9 My 5 '47
J. Howard and Arthur E. Pew resign Sun posts; Robert G. Dunlop slated to become president. pors Nat Pet N 39:19 Mr 12 '47

SUN spots. See Sunspots

SUNBURN
Sunburn, poison ivy, and seasickness. il Fortune 36:110-15+ Ag '47

SUNGARI river, Manchuria
Sungari River dam declared a hazard. il Eng N 139:453 O 2 '47

SUNLIGHT
See also
Orientation (architecture)

SUNLIGHT, Artificial
Artificial sunshine; solarium design. G. F. Prideaux. bibliog il diag Gen Elec R 49:40-4 N '46; Same. Illum Eng 41:762-74 N '46
Move the sun indoors; experimental sunshine room built by General electric company. il Arch Rec 101:113 F '47

SUNRAY oil corporation
Directors approve merger plans. Comm & Fin Chr 166:1725 O 27 '47

SUNSHINE
Duration and intensity of sunshine. F. Benford. il map diags Illum Eng 42:527-44, 877-89 My, N '47

SUNSHINE biscuits, inc. (formerly Loose Wiles biscuit company)
Companies forging ahead. Mag of Wall St 80:380 Jl 5 '47

SUNSHINE mining company
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:387 Jl 5 '47

SUNSPOTS
More about sun spots and economic cycles. D. Pingree. Comm & Fin Chr 166:719 Ag 21 '47
Statistical methods simplify evaluation of data. Electronics 20:194+ N '47
Sun spots and stock prices. D. Pingree. Comm & Fin Chr 165:2856+ My 29 '47
Sunspot predicting service. Electronics 20:252-3 Jl '47
Sunspots and telegraphy. C. H. Cramer. il Elec Eng 66:557-60 Je '47

SUPER market institute
Annual convention. Ptr Ink 217:160 N 15 '46

SUPERCHARGERS
Analysis of positive supercharger losses. R. J. S. Pigott. diags S A E J 55:59-64 Ja '47
Centrifugal impellers; their design for applications such as superchargers and gas turbines. H. Woodhouse. diags Machine Design 19:121-6 Ag '47
See also
Airplane engines—Superchargers
Airplanes—Cabins—Supercharging

Manufacture

Roll bending and flash welding stainless steel turbosupercharger rings. P. B. Scharf. il diags Iron Age 159:52-6 Ja 23 '47

Testing

Brittle lacquer technique used to test forged impeller design. H. Dobkin. il diag Steel 121:70-1+ S 1 '47
Pneumatic fatigue testing; machine for testing turbosupercharger and gas turbine buckets. F. B. Quinlan. il diags Automotive & Aviation Ind 96:30-1+ Ja 15 '47

SUPERCHARGERS—Testing—*Continued*
Tensile testing at elevated temperatures; equipment for testing turbosupercharger and gas turbine parts. A. W. Brunot. il diag Steel 121:90-1+ Ag 4 '47

SUPERCONDUCTIVITY. See Electric conductivity

SUPERFINISH. See Metal finishing

SUPERHEATED steam
Can steam-turbine stations profit by using higher temperatures? A. Meyer. diags Power 91:743-5 N '47
Equation of state for a system with a single type of transformation. J. L. Finck. Franklin Inst J 243:117-29 F '47

See also
Superheaters

SUPERHEATERS
Bailey superheater protection for warships. il diag Marine Eng 52:102 Ap '47
Boiler construction; superheaters. diags Power 90:839-40 D '46
Corrosion and oxidation experiences in high pressure and high temperature steam service. P. M. Brister and J. B. Romer. bibliog il diags Electrochem Soc Trans 91 (preprint 17):249-72 '47; Abstract. Blast F & Steel Pl 35:578+ My '47
Creep properties of steels utilized in high-pressure and high-temperature superheater and steam pipe practice; 0.5 per cent molybdenum steels. H. J. Tapsell and R. W. Ridley. Inst Mech Eng J & Proc 153 (War emergency issue no 6):181-92, pl 1-2 '45
1400-F superheater built of high chromium-nickel alloys. diag Power Pl Eng 50:92 N '46
Furnace temperature control for large steam-generating units. O. de Lorenzi. Blast F & Steel Pl 35:724-9 Je '47
How is slag avoided on superheater tubes? diags Power 91:48-50 Ja '47
Rolling superheater flues. il Ry Mech Eng 121:195 Ap '47
Some practical applications of flue gas recirculation; installation at Neches butane products company. W. H. Rowand and E. Durham. diags Pet Refiner 26:99-102 Ja '47
Superheaters, their care and operation. J. Waitkus. il diags Locomotive 46:98-106+ O '46
Superheating by electricity. il Chem Age (Lond) 57:363 S 13 '47

SUPERHIGHWAYS. See Roads—Superhighways

SUPERIOR, Lake

See also
Iron ores—Lake Superior region

SUPERIOR aircraft company
New Wichita firm takes Culver plane sponsorship. Aviation W 47:37 Jl 28 '47

SUPERIOR steel corporation
Annual report. Comm & Fin Chr 165:2144+ Ap 21 '47

SUPERMALLOY. See Magnetic materials

SUPERMARKETS. See Market stores

SUPERPOSITION, Principle of
Calculation of the stresses in a turbine wheel by the method of superposition. W. J. Kearton. diags Inst Mech Eng J & Proc 155 (War emergency issue no 15):73-82 '46
Evaluation of simultaneous faults on three-phase systems; application of superposition principle. J. R. Mortlock. diags Inst E E J 94 pt 2:166-90 Je '47

SUPERSATURATION
Solubility and melting point as functions of particle size; induction period of crystallization. L. Harbury. bibliog J Phys & Colloid Chem 51:382-91 Mr '47

SUPERSONIC lenses
Measurement and specification of ultrasonic lenses. P. J. Ernst. Acoustical Soc Am J 19:474 My '47

SUPERSONIC waves
Absorption of supersonic waves in water near one megacycle. L. W. Labaw and A. O. Williams, jr. bibliog Acoustical Soc Am J 19:30-4 Ja '47
Acoustic wave fronts from a piston source. A. O. Williams, jr. bibliog Acoustical Soc Am J 19:156-61 Ja '47
Application of ultrasonic waves to the study of electrolytic solutions; a modification of Debye's equation for the determination of the masses of electrolytic ions by means of ultrasonic waves. J. Bugosh and others. bibliog J Chem Phys 15:592-7 Ag '47
Applications of sonic and ultrasonic vibrations; tabulation. A. A. McKenzie and F. Rockett. Electronics 20:140-1 (Buyers' guide) Mid-Je '47
Automatic Sonigage; measures thickness, tests metals and plastics for flaws and defective bond. W. S. Erwin and G. M. Rassweiler. il diags Iron Age 160:48-55 Jl 24 '47
Comparison of supersonic intensities by means of a magnetostriction gauge. A. W. Smith and D. K. Weimer. il diags R Sci Instr 18:188-90 Mr '47
Detection of cracks in steel by means of supersonic waves. C. H. Desch and others. il diags Welding J 26:sup 1-25 bibliog(sup3) Ja '47
Editorial citation to Aluminum co. of America for achievement in supersonic inspection of aluminum alloy. il Materials & Methods 24:1172-3 N '46
Exact and approximate solutions of two-dimensional oblique shock flow. E. V. Laitone. bibliog J Aeronautical Sci 14:25-41+ Ja '47; Discussion. C. Chang. 14:456 Ag '47
Gamma ray and supersonic equipment-inspection methods used in Continental Oil's eight refineries; Penetron and Audigage. L. S. McCaslin. il diags Oil & Gas J 46:100-3+ O 18 '47
High frequency absorption in air and other gases. L. J. Sivian. bibliog Acoustical Soc Am J 19:914-16 S '47
High intensity ultrasonics; the power output of a piezoelectric quartz crystal. L. F. Epstein and others. bibliog Acoustical Soc Am J 19:248-53 Ja '47
Inspecting metals with supersonics. H. Nicholson and others. il diag Steel 120:72-5+ F 24 '47
Laundering ultrasonically. il Electronics 20: 136 Ag '47
Linearized supersonic flow through ducts. H. F. Ludloff and F. Reiche. J Ap Phys 18:681-2 Jl '47
Locating internal defects; Supersonic Reflectoscope. B. Carlin. il diags Am Gas Assn Mo 29:391-3 S '47; Excerpt. Chem Eng 54:250+ O '47
Materials tester; General Electric ultrasonic tester. Electronics 19:206+ D '46
Measurement and specification of ultrasonic lenses. P. J. Ernst. Acoustical Soc Am J 19:474 My '47
Measurements of ultrasonic absorption and velocity in liquid mixtures. F. H. Willis. bibliog diags Acoustical Soc Am J 19:242-8 Ja '47
Optical study of acoustic fields near diffracting edges. J. C. Hubbard and others. bibliog il diags Opt Soc Am J 37:832-6 O '47
Origin of excess ultrasonic absorption in water. L. Hall. Phys R 71:318 Mr 1 '47
Peculiar ultrasonic effect on a binary mixture of liquids. P. J. Ernst. bibliog il Acoustical Soc Am J 19:372 Mr '47
Portable instrument checks parts with high-frequency sound waves. Mach 53:156 Jl '47
Propagation of u. h. f. sound in mercury. G. R. Ringo and others. Phys R 72:87-8 Jl 1 '47
Propagation of ultrasonic waves through liquid mixtures and the dynamics of their molecular interaction. R. Parshad. bibliog J Chem Phys 15:418-19 Je '47
La recherche aéronautique dans le domaine supersonique. P. Poisson-Quinton. il diags Génie Civil 124:25-9 Ja 15 '47
Rigorous solution of linearized supersonic flow through ducts. C. E. Mack, jr. and others. J Ap Phys 18:682-3 Jl '47
Separation by diffusion in fields of ultrasonic waves. H. Frei and M. Schiffer. bibliog Phys R 71:555 Ap 15 '47
Some factors influencing the choice of a medium for magnetic recording. L. C. Holmes. Acoustical Soc Am J 19:395-403 My '47

SUPERSONIC waves—*Continued*
Sound waves inspect metal; German technicians develop supersonic method. Comp Air Mag 52:230 S '47
Supersonic aerodynamics, principles and applications. T. von Kármán. il diags J Aeronautical Sci 14:373-98 bibliog(p398-402) Jl '47; Abstracts. Aviation N 6:10 D 23 '46; Mech Eng 69:153 F '47; Discussion. J Aeronautical Sci 14:403-9 Jl '47
Supersonic equipment available for finding flaws. G. A. Van Brunt. il diags Factory Management 105:94-6 My '47
Supersonic examination of materials. B. Carlin. il diags Product Eng 18:113-18 O '47
Supersonic flaw detector. diag Electronics 19: 198+ D '46
Supersonic inspection for internal fissures in cast rolls. J. Dugan. il Steel 121:80-1+ Jl 28 '47
Supersonic wave penetration into materials; tabulation; reference book sheet. B. Carlin. Product Eng 18:169 O '47
Supersonic waves locate die-block flaws. R. W. Snowdon. il Steel 120:95+ Ap 7 '47
Surface reflection of short supersonic pulses in the ocean. R. J. Urick and H. L. Saxton. il Acoustical Soc Am J 19:8-12 Ja '47
Temperature coefficient of ultrasonic velocity in solutions. G. W. Willard. bibliog Acoustical Soc Am J 19:235-41 Ja '47
Ultrasonic absorption from 75 to 280 mc/sec. R. A. Rapuano. diag Phys R 72:78-9 Jl 1 '47
Ultrasonic garage-door opener. B. A. Andrews. il diags Electronics 20:116-18 Mr '47
Ultrasonic measurement of wall thickness in Diesel cylinder liners. F. W. Struthers and H. M. Trent. il diags Acoustical Soc Am J 19:368-71 Mr '47
Ultrasonic measurements on single crystals. H. B. Huntington. bibliog diag Phys R 72: 321-31 Ag 15 '47
Ultrasonic modulation of a light beam. R. F. Humphreys and others. diags J Ap Phys 18:845-6 S '47
Ultrasonic propagation in open air. H. K. Schilling and others. bibliog Acoustical Soc Am J 19:222-34 Ja '47
Ultrasonic velocity in ethanol-water mixtures. A. Giacomini. bibliog Acoustical Soc Am J 19:701-2 Jl '47
Ultrasonics, a new tool. diags Electronics 20: 190+ Mr '47
Wavelengths of sound; velocity table; nomograph. B. W. Henvis. Electronics 20:134+ Mr '47

Physiological effect

Army-navy research will probe supersonic sickness; efforts to determine effects on human beings of high-frequency vibrations emitted by jet engines. il Aviation W 47:17 Ag 18 '47
Freak supersonic sickness threatens jet engine testers; caused by impact of ultra-high sound waves. W. Kroger. Aviation W 47:21-2 Jl 14 '47

SUPERSONIC wind tunnels. See Wind tunnels

SUPERTHERM heating system. See Hot water heating, Industrial

SUPERVISORY workers
Bottom-up management; more freedom and initiative for department heads. W. B. Given, jr. Trusts & Estates 84:161-2 F '47
Building tomorrow's supervisory staff for railroad mechanical departments; prize winning papers. il Ry Mech Eng 121:285-95 Je '47
Credit swiping nurses hidden losses. B. H. Hopkins. Chem Eng 54:110-11 Jl '47
Foundations for better supervision; new proverbs for bosses. P. W. Swain. Coal Age 52:100+ My '47
How to be a supervisor in 7 easy lessons; satire. Am Gas Assn Mo 29:76 F '47
Incentive plan for supervisory personnel. J. J. Bigge. N A C A Bul 28:1325-9 Jl 1 '47
Incentive plan includes supervisors; Reed-Prentice corporation. Am Mach 91:130-1 Ap 10 '47
Keyman; supervisory incentives. J. A. Lowden. Advanced Management 12:7-13 Mr '47
Leaders again; war trained supervisors should try to dispel tension between labor and management. E. B. Lightfoot. Personnel J 25:285-6 F '47
Management listens, too; one bank's relations with employees; Continental Illinois national bank and trust company of Chicago prepares Manual for managers and the Man in management. A. G. Bradt. il Banking 39:33-4 D '46
Petroleum engineer as a supervisor. T. C. Frick. Pet Eng 18:160+ Ja '47
Post-war supervisor; detective in human relations. J. E. Eitington. Personnel J 26: 19-22 My '47
Some reflections on the responsibilities of supervisors in the field of labor relations. G. R. Schenck. Paper Tr J 122:143-6 Je 20 '46; Same cond. Paper Ind 29:267-70 My '47
Training understudies and promoting supervisors; report of Locomotive maintenance officers association. Ry Mech Eng 121:522-5 O '47

See also
Foremen
Sales managers

Training

Cartoons give technical information to supervisors; Hytron radio and electronics corporation. R. C. Berman. il Factory Management 104:130-3 N '46
Duties of the office supervisor. Personnel J 26:146-9 O '47
How to develop successful office supervisors. R. S. Schultz. Personnel J 25:273-81 F '47
Let's train the trainers. W. H. Senyard. Pub Util 39:152-6 Ja 30 '47
Man-to-man conferences on the Espee; Southern Pacific's training program on human relations. il Ry Age 123:44-7 Jl 12 '47
Personnel case-studies aid supervisor training. R. T. Taylor. il Textile World 96:112-13+ O; 116-17 N '46
Selection and training for supervisory jobs. D. A. Gildersleeve. Rock Prod 50:80 Jl '47
Supervisor and employee training is a selling job; Louisiana power & light co. W. H. Senyard. Elec World 128:72-3 Ag 16 '47
Supervisor training center; Standard oil company of New Jersey. il Mech Eng 69:238 Mr '47
Supervisory training methods; E. I. du Pont de Nemours. P. B. Lewis. Personnel J 25: 316-22 Mr '47
Tested plan for training supervisors. R. C. Rutherford. Bankers Mo 64:236-7 My '47
Training and improved techniques result from supervisory conferences. E. Mottershead. Bankers Mo 64:365-7 Ag '47
Training apprentices and supervisors. W. H. Sagstetter. Ry Mech Eng 121:176-7+ Ap '47
Training center; Standard of N.J.'s new school. il Nat Pet N 39:31-3 F 19 '47
Training of maintenance supervisors; motor vehicle maintenance. C. G. Seashore. Am Gas Assn Proc 1946:337-40
Training supervisors. Elec R (Lond) 139:1041-2 D 20 '46
Training supervisors big challenge. R. J. W. O'Toole. Nat Underw (Life ed) 51:1 O 3 '47

See also
Foremen—Training

SUPPLEE, George Cornell, 1889-
Borden award to G. C. Supplee. por Chem & Eng N 25:2811+ S 29 '47
Recipient of the 1947 Borden award. por (cover) Chem & Eng N 25:2621 S 15 '47

SUPPLY and demand
Demand performance and the stock market. G. A. Haas and J. J. Quinn. Comm & Fin Chr 165:1781+ Ap 3 '47
Economic policy in the transition. S. M. Livingston. R Econ Stat 29:20-4 F '47
Elasticity of physical quantities and flexibility of unit prices in the dimension of time. F. C. Mills. Am Stat Assn J 41:439-67 D '46
Extent of industrial stabilization; where sellers' markets continue; where buyers' markets have arrived. P. Dobbs. Mag of Wall St 81:11-13 O 11 '47
Industrial productivity and economic equilibrium. J. D. Gill. Comm & Fin Chr 165: 1932+ Ap 10 '47

SUPPLY and demand—*Continued*
Production vs. demand in 40 leading industries; graph and tabular summary. F. R. Walters. il Mag of Wall St 80:419-20 Jl 19 '47

See also
Consumption (economics)
Production

SUPRARENAL bodies. See Adrenal bodies

SUPREME court. See United States—Supreme court

SURETY and fidelity insurance. See Insurance, Surety and fidelity

SURETY association of America
Annual meeting, New York, Jan. 9, East Underw 48:33 Ja 17 '47; Weekly Underw 156:221 Ja 18 '47

SURETY claim men's forum (formerly Surety company claim men's forum)
Annual meeting, New York. East Underw 48:31 Je 20 '47; Nat Underw 51:21 Je 19 '47

SURETY company claim men's forum. See Surety claim men's forum

SURETYSHIP and guaranty
Bond protection and claim procedure on public and private contracts. C. G. Roth. Weekly Underw 157:999-1001+, 1055-7, 1110-11 O 18-N 1 '47

SURFACE active substances
Details of German chemicals; surface-active agents, synthetic waxes, etc. Chem Age (Lond) 56:614-15 My 10 '47

Development and industrial application of wetting agents; abstract. A. V. Billinghame. Chem & Ind p453 D 21 '46

Evaluation of synthetic detergents. Soap & San Chem 23:69+ My '47

Properties and uses of surface-active cations. R. R. Ackley. Soap & San Chem 23:39-42+ Mr '47

Synthetic detergents and surface activity. C. T. Snell. J Chem Educ 24:505-11 O '47

See also
Sodium lauryl sulfate

SURFACE area of particles. See Particles

SURFACE phenomena
Conductivity of metallic surfaces at microwave frequencies. E. Maxwell. diags J Ap Phys 18:629-38 Jl '47; Correction. 18:928 O '47

Density of surface states on silicon deduced from contact potential measurements. W. H. Brattain and W. Shockley. Phys R 72: 345 Ag 15 '47

Evidence for surface states on semiconductors from change in contact potential on illumination. W. H. Brattain. Phys R 72:345 Ag 15 '47

Heterogeneity of catalyst surfaces for chemisorption; zinc oxide. H. S. Taylor and S. C. Liang. bibliog Am Chem Soc J 69:1306-12 Je '47

Magnitude of the experimental error in the adsorption of nitrogen at 78°K on various surfaces. W. V. Loebenstein and V. R. Deitz. J Chem Phys 15:687-8 S '47

Proposed interpretation of the zeta-potential. L. B. Robinson. bibliog J Chem Phys 14: 721-4 D '46

Some practical aspects of the surface chemistry of glass. W. A. Weyl. bibliog(88 ref) diags Glass Ind 28:231-5+, 300-2+, 349-53+, 408-12+ My-Ag '47

Surface states and rectification at a metal semi-conductor contact. J. Bardeen. bibliog diags Phys R 71:717-27 My 15 '47

Surface studies of glass; contact angles. L. A. Spitze and D. O. Richards. bibliog il J Ap Phys 18:904-11 O '47

Unusual liquid interface. A. R. Olson and J. H. Hildebrand. il J Phys & Colloid Chem 51: 567-8 Mr '47

See also
Adsorption
Catalysis
Films
Friction
Surface tension

SURFACE tension
Additional data on the recovery of wet pulp mats from compressive deformation. C. O. Seborg and F. A. Simmonds. il diags Paper Tr J 125:63-7 O 9 '47

Application of spreading measurements on oil tests. N. E. M. Hagethorn and F. H. Stieltjes. bibliog Inst Pet J 32:587-97 O '46

Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15:314-32 My '47

Effect of pressure on surface tension. O. K. Rice. bibliog J Chem Phys 15:333-5 My '47

Increasing the spreading coefficient of mustard gas. W. H. C. Rueggeberg. Science 105:532 My 16 '47

Measurement of surface tension. R. Weil. J Ap Phys 18:426 Ap '47

New surface-tension method; abstract. R. Matalon. Soap & San Chem 22:91 D '46

New type of precision capillarimeter. J. J. Jasper and K. D. Herrington. bibliog diag Am Chem Soc J 68:2142-4 N '46

Physico-chemical aspects of reinforcement. G. Antonoff. bibliog diags Rubber Age 60: 187-92 N '46

Pressure coefficient of surface tension and the expansion ratio of high pressure cloud chambers. T. H. Johnson. Phys R 72:86 Jl 1 '47

Relation between the heat of evaporation and the surface tension of liquids. J. C. de Wijs. J Phys & Colloid Chem 51:747-50 My '47

Surface tension method for measuring the perimeters of fibres and the contact angles of liquids against fibres. G. E. Collins. diag Textile Inst J 38:T73-7; Discussion. T77 F '47

Surface tension of liquid crystals. W. M. Schwartz and H. W. Moseley. bibliog il diags J Phys & Colloid Chem 51:826-37 My '47

Surface tensions of some optical glasses. L. Shartsis and A. W. Smock. bibliog diags J Res Nat Bur Stand 38:241-50 F '47; Same. Am Cer Soc J 30:130-6 Ap 1 '47

Surface tension of the PbO-B_2O_3 and PbO-SiO_2 systems; abstract. L. Shartsis and others. Glass Ind 28:292+ Je '47

SURFACES
Analysis of surface quality of zinc base die castings. A. W. Sundwick. il Steel 121:94-5+ S 15 '47; Same abr. Am Mach 91:127, 129, 131 S 25 '47

Capillarity of metallic surfaces. E. R. Parker and R. Smoluchowski. il diag Am Soc for Metals Trans 35:362-71; Discussion. 371-3 '45

Cavitation from solid surfaces in the absence of gas nuclei. D. C. Pease and L. R. Blinks. bibliog J Phys & Colloid Chem 51:556-67 Mr '47

Conference on surface finish. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):331-51, pl 1-10 '45; Same. Engineering 159:215-20, 237-9, 258-60, 277-80, 299 Mr 16-Ap 13 '45; Same cond. Engineer 179:218-20, 230-1, 250-1 Mr 16-30 '45; Discussion. Inst Mech Eng J & Proc 153 (War emergency issue no 10):352-79 '45; Engineer 179:209-11, 234-6 Mr 16-23 '45

Control and measurement of surface finishes. J. A. Broadston. il Steel 120:82-3+ Ja 13 '47

Detection, causes and prevention of injury in ground surfaces. L. P. Tarasov. il Am Soc for Metals Trans 36:389-440 bibliog (p439-40); Discussion. 441-51 '46

Differential method for introducing non-spherical surfaces into calculation of optical systems. D. S. Volosov. Opt Soc Am J 37:342-8 My '47

High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays. J. W. M. DuMond. bibliog il diags R Sci Instr 18:626-38 S '47

Measures contours of surfaces; instrument designed by Harvard underwater sound laboratory. F. R. Nitchie, jr. il Machine Design 19:136 Jl '47

Multilayer gas adsorption on composite surfaces. W. G. McMillan. bibliog J Chem Phys 15:390-7 Je '47

SURFACES—*Continued*
Operating test for the evaluation of the surface durability of gears. T. H. Wickenden and others. il diags Diesel Power 24:1334-7+ N '46; Same cond. Machine Design 18:142-6 Jl '46; Same cond. Automotive & Aviation Ind 95:36-40 Ag 1 '46; Abstract. Product Eng 17:138-9 D '46; Discussion. Diesel Power 24:1458-60 D '46
Optical methods for evaluation of metal surfaces. A. A. Vernon and J. Broomfield. bibliog diags Metal Finishing 45:70-1 Ap '47
Precision method of generating circular cylindrical surfaces of large radius of curvature for use in the curved-crystal spectrometer. J. W. M. DuMond and others. il diags R Sci Instr 18:617-26 S '47
Smooth surfaces increase plain-bearing capacity. E. L. Hemingway. il diags Am Mach 91:92-5 Je 5 '47
Surface roughness, waviness and lay; American standard; reference book sheet. diags Am Mach 91:155 Ap 10 '47
Surface texture study of electroplated zinc; with photomicrographs. R. L. Lunt. Metal Finishing 45:68-9 Ag '47
Tapering for surface inspection. W. J. Darmody. il diags Am Mach 90:134-5 D 19 '46
Testing of flatness by the beam comparator method. R. Marriner and W. O. Jennings. il Engineer 184:164-5 Ag 22 '47
Torpedo propeller-blade surfacing. G. L. Brown. il diags Engineering 163:73-6 Ja 24 '47

See also
Boundary value problems
Films
Glass—Surface
Metal finishing

Smoothness testing

David Brown and sons Topograph surface recorder. il diags Engineer 183:suppl4 My 9 '47
Determining surface roughness. W. Mikelson. il Mech Eng 69:391-3 My '47
Evaluating surface roughness of gear teeth. L. D. Martin. Iron Age 158:144+ N 21 '46
How to measure surface roughness of castings. G. Hobman. il diag Am Mach 91:94-5 Jl 3 '47
Measurement of surface waviness. C. Timms. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):337-9, pl 1-2 '45; Same. il Engineering 159:217-20 Mr 16 '45
Measuring millionths with new British surface measuring instrument; Topograph. il Steel 120:114 Je 2 '47
Mobile laboratory measures surface finish in the shop; Steam division, Westinghouse electric corp. A. A. Goodman. il Am Mach 91:104-5 O 23 '47
New replica techniques for evaluating engine wear; surface finishes reproduced in plastic. il diag Automotive & Aviation Ind 96:36-7+ Ap 15 '47; Excerpt. Product Eng 18:146 Je '47
Practical aspects of surface finish measurement instrumentation. J. A. Broadston. il Iron Age 159:51-5 Mr 20 '47
Rational specification of surface finish. W. A. Tuplin. Inst Mech Eng J & Proc 153 (War emergency issue no 10):340-1 '45; Same. Engineering 159:237 Mr 23 '45; Same cond. Engineer 179:230 Mr 23 '45
Requirements in surface finish. D. McConnell. Inst Mech Eng J & Proc 153 (War emergency issue no 10):341-2 '45; Same. Engineering 159:238 Mr 23 '45
Some principles and methods of surface measurement. R. E. Reason. diags Inst Mech Eng J & Proc 153 (War emergency issue no 10):335-7 '45; Same. Engineering 159: 216-17 Mr 16 '45
Surface analyzer. Chem Ind 60:1018 Je '47
Surface-quality control does pay. J. A. Broadston. il Am Mach 91:102-3 Ap 10 '47
Tracer-point sharpness as affecting roughness measurements. D. E. Williamson. il diags A S M E Trans 69:319-23 My '47

SURGERY
Industrial medicine and surgery; abstracts of proceedings of midwinter scientific meeting of Central states society of industrial medicine and surgery, Dec. 6, 1946. Ind Med 16:238+ My '47
Laceration of the liver. C. Halberstam and others. Ind Med 16:52-7 F '47
Refrigeration surgery. L. W. Crossman and F. M. Allen. Mech Eng 69:502-3 Je '47

See also
Amputation
Bone grafting
Fractures (surgery)

SURGICAL expense insurance. See Insurance, Surgical expense

SURGICAL glove powder. See Gelatin powder

SURGICAL instruments and apparatus
Five reasons surgeons use plastics. il Mod Plastics 24:102-3 N '46
Locator probe aids medical science; indicates presence of metals in the body. il Gen Elec R 49:54-5 O '46; Same abr. Safety Eng 92: 64 N '46
Stereotaxic apparatus for operations on the human brain. E. A. Spiegel and others. il Science 106:349-50 O 10 '47
Surgical instrument industry foresees foreign competition. W. Thompson. Dom Comm 35:35-7 Ag '47

See also
Trephines

SURINAM. See Dutch Guiana

SURPLUS
Capital stock and earned surplus in financial statements. C. G. Blough. J Account 83: 327-8 Ap '47
Creating earned surplus. J Account 83:157 F '47

SURPLUS plants. See Industrial demobilization—Government plants

SURPLUS products
Big job still ahead in surplus plant disposal; many plants already sold or leased. Bsns W p21-2 F 1 '47
Colombia to purchase U.S. surplus property. For Comm W 25:26 D 14 '46
Details disposal of U.S. war items in European theatre. il Iron Age 158:117-18 N 21 '46
Disposal of peacetime surpluses. R. A. Morgan. N A C A Bul 28:1230-8 Je 1 '47
Industrial helps sell war surplus of own products; Ohio crankshaft co. W. E. Benninghof. Sales Management 59:143 S 15 '47
Overseas disposal program; report of Office of foreign liquidation commissioner. Comm & Fin Chr 165:1049 F 20 '47
Regional small business section in N.Y. for surplus property disposal. Comm & Fin Chr 164:2812 N 28 '46
State organization for managing surplus allied material established in Greece. For Comm W 26:19-20 Mr 1 '47
Stepped-up war disposal threatens sales backlogs. S. E. Cohen. Ind Marketing 32: 52-3+ Jl '47
Surplus help; State department lifts import restrictions. Bsns W p28+ F 8 '47
Transfer of war surplus to France almost complete. C. L. Hyssong. Iron Age 159:118 F 6 '47
WAA veterans' store in New Orleans sells scarce wares at retail. D. Markstein. Barron's 26:11 D 23 '46
War surplus disposals. J. B. Epstein. Survey of Cur Bsns 27:10-17 O '47

See also
Airplanes—Surplus airplanes
Food stamp plan
Industrial demobilization—Government plants
Machine tool industry—Surplus tools
Ships—Surplus ships

Insurance aspects

America Fore group gets exclusive WAA contract; covers war goods and property sold on time-payment plan. Weekly Underw 156:1002+ Ap 12 '47
Auto experience terrible on trucks bought via GI bill. Nat Underw 51:12 F 13 '47
WAA insurance setup dovetails with credit program; America Fore gives automatic cover under all-risk policy. H. C. Hallam. Nat Underw 51:3 Ja 30 '47

SURPLUS war plants. See Industrial demobilization—Government plants

SURVEYING
Area of irregular plots with circular curve boundaries computed by DMD method. O. D. Keese. Civil Eng 17:481-2 Ag '47

SURVEYING—*Continued*
Coordinate control methods applied to design and construction of city expressways. G. M. Leatherwood. il maps plans Roads & Sts 90:78+ Ja '47
Jungle surveys for oil exploration in eastern Venezuela. P. Charles. il map Eng N 138: 519-21 Ap 3 '47
State bureaus of maps and surveys aid planning of engineering projects; Ohio coordinate system. O. J. Marshall and M. T. Jones. il map Civil Eng 17:198-201 Ap '47
Surveyor's parabolic vertical curve simplified. J. A. Oakey. Civil Eng 16:459-60 O '46; Discussion. diag 17:88, 207-8 F, Ap '47

See also
Hydrographic surveying
Leveling
Petroleum—Well surveying
Photographic surveying
Topographical maps
Topographical surveying
Transit, Surveyor's
Triangulation

also American congress on surveying and mapping

SURVEYING, Aerial
Aerial surveying on the Alaska highway, 1942. W. T. Pryor. il maps Pub Roads 24: 275-90 Ja '47
Aerial surveys aid highway location; symposium. il maps Civil Eng 17:80-6 F '47
Comparative study of magnetic surveys of Worcester county, Md., made on the ground and from airplane observations. H. E. Kuehn and G. E. Dent. 8pls U S Bur Mines Rep of Invest 4070:1-23 '47
Space resection problems in photogrammetry. P. H. Underwood. Am Soc C E Proc 72: 939-62 S '46; Discussion. 72:1435-6; 73:89-93, 718-20, 904-6 D '46-Ja, My-Je '47

SURVEYING, Photographic. See Photographic surveying

SURVEYING instruments
Accurate, continuous elevations at automobile speeds measured by Stanolind's new surveying tool. C. J. Deegan. il diags Oil & Gas J 46:86+ Ag 9 '47
Technique of surveying diamond-drill holes with the Wright radiolite borehole-surveying instrument. J. W. Townsend and W. H. King. 6pls U S Bur Mines Rep of Invest 4061:1-7 '47

See also
Transit, Surveyor's

SURVEYORS
Selection, duties, and salaries of deputy county surveyors. A. Ellison. Roads & Sts 89:107 D '46

SURVEYOR'S transit. See Transit, Surveyor's

SUSPENSIOMETER
Useful apparatus for measuring yield value of enamel slips. G. Morren. diag Am Cer Soc Bul 26:180-1 Je 15 '47

SUSPENSIONS

See also
Dispersion
Electric precipitation
Sedimentation
Separation

SUSPENSOID process. See Gasoline—Manufacture

SWAGING
Horizontal crank press swages tubes automatically. D. A. Baker. diag Am Mach 91: 111 Mr 27 '47

SWAGING machines
Production processes; their influence on design; rotary impact swaging. R. W. Bolz. il diags Machine Design 19:101-6 O '47

SWAIN, Robert Cuthbertson, 1907-
Sketch. por Chem & Eng N 25:3062 O 20 '47

SWARTS reaction
Ethyl trichlorosilane and its fluorination products. H. S. Booth and P. H. Carnell. bibliog Am Chem Soc J 68:2650-2 D '46
Fluorination of *n*-propyl trichlorosilane. H. S. Booth and H. S. Halbedel. bibliog diag Am Chem Soc J 68:2652-4 D '46

SWEDEN

See also
Airplane industry and trade—Sweden
Cement industry and trade—Sweden
Corporation law—Sweden
Hydroelectric plants—Sweden
Machine tool industry—Sweden
Oil shales—Sweden
Package goods—Sweden
Paper industry and trade—Sweden
Petroleum industry and trade—Sweden
Wages—Sweden
Wood pulp—Sweden

Commerce

Imports of selected products, first six months of 1947; tables. For Comm W 29:21 N 1 '47
Sweden and the German vacuum. Economist 153:366-7 Ag 30 '47

Commercial policy

Credit and trade agreements between Sweden and the Soviet Union. G. Olson. il For Comm W 25:9-11 D 21 '46
Import restrictions extended and made more stringent. For Comm W 26:19 Mr 29 '47; Correction. 27:26 Ap 12 '47
Sweden controls all imports. Comm & Fin Chr 165:2116 Ap 17 '47
Sweden defends import ban. Bsns W p113-14 Ap 5 '47
Sweden drastically curbs imports. Comm & Fin Chr 165:1664 Mr 27 '47
Sweden issues embargo list; chemical products affected. Oil Paint & Drug Rep 151: 3+ Ap 14 '47
Sweden modifies import rules. Oil Paint & Drug Rep 151:3 My 12 '47
Understanding reached between the United States and Sweden relative to treatment of American products under the Swedish quantitative import restrictions. For Comm W 28:18-19 Jl 5 '47

Economic policy

Swedish anti-depression program. B. Ohlin. Comm & Fin Chr 165:1125+ F 27 '47
Swedish labor and industry disagree on socialism's progress. A. Iveroth; T. Lindbom. Comm & Fin Chr 165:1646+ Mr 27 '47

Industries and resources

Fuels used in Sweden. G. Egloff. Pet Eng 18:86+ F '47
Sweden and nationalisation. Economist 151: 1003-4 D 21 '46

SWEET, Stanley A. 1884-
Chairman of board of Sweet-Orr. por Sales Management 58:45 F 15 '47

SWEET potato flour
Baking with sweet potato flour; cakes have improved flavor and texture when sweet potato flour is used to replace part of eggs, butter and sugar. L. M. Ware and others. il Food Ind 19:1365+ O '47

SWEET potatoes
Candies from sweet potatoes pack health-promoting values. M. S. Van de Mark and L. M. Ware. il Food Ind 19:1204-5 S '47
Chlorogenic acid and respiration of sweet potatoes. G. O. Rudkin and J. M. Nelson. bibliog Am Chem Soc J 69:1470-5 Je '47
Farmer learns to sell; Felix Dezauche, Opelousas, Louisiana, farmer markets sweet potatoes. il Am Bsns 17:14-15+ F '47
Gold in the golden yam. L. J. Cobb. Manuf Rec 116:33+ Mr '47

Advertising

Louisiana advertises yam sweet potatoes. D. H. Halsey. Ptr Ink 218:80+ F 7 '47

SWEET potatoes, Dried
Mechanical dehydration adds to southern crop value; dried sweet potatoes as livestock feed. B. Buck. il Manuf Rec 116:42+ Ap '47

SWEETENING agents
How to improve low grade sweeteners; use of filter aids, alone, or in conjunction with activated carbon or ion exchange resins. W. J. Nelson. flow sheet il Food Ind 18:1852-3 D '46
New sweetening agents; 1-*n*-propoxy-2-amino-4-nitrobenzene. P. E. Verkade. Chem & Eng N 24:2912 N 10 '46
Sweetening agent is 4000 times sweeter than cane sugar. Sci Am 176:160 Ap '47
Sweetening from fruit; patent. Food Ind 19: 411 Mr '47

SWELLING
Action of safety fuel hydrocarbons on Perbunan compounds. R. M. Howlett and E. N. Cunningham. bibliog Rubber Age 60: 562-4 F '47
Axial swelling of rayons. J. M. Preston and S. Das Gupta. diag Textile Inst J 38:T60-4 F '47
Direct measurement of the transverse swelling of wool fibres in water vapour. F. L. Warburton. bibliog diag Textile Inst J 38: T65-72 F '47
Surface tension method for measuring the perimeters of fibres and the contact angles of liquids against fibres. G. E. Collins. diag Textile Inst J 38:T73-7; Discussion. T77 F '47

SWELLING of rubber. See Rubber—Swelling

SWENSON, Magnus, 1854-1936
From the log of experience. D. Gutleben. por Chem Eng 54:227-8+ S '47

SWIFT and company
Annual report. Comm & Fin Chr 165:114 Ja 6 '47
Big four in meat packing. R. Colston. Mag of Wall St 80:441 Jl 19 '47
Debentures offered. Comm & Fin Chr 165:344 Ja 20 '47
LIFO held down 1946 profit. Barron's 27:24 Ja 27 '47

SWIM, Allan La Verne, 1911-
Portrait. Bsns W p70 Ag 2 '47

SWIMMING pools
Condensation problems serious with indoor swimming pools. S. Lewis. il Heating-Piping 19:99-100 My '47
Father Knickerbocker looks ahead; Diesel powered equipment for swimming pools. il Diesel Power 24:1452-4 D '46
Swimming pool sanitation; abstract. Am Water Works Assn J 39:600 Je '47

Lighting
Warm light. il Elec West 99:76 Ag '47

SWIMMING suits. See Bathing suits

SWINDLERS and swindling
See also
Checks, Fraudulent

SWINE
Fewer pigs an OPA gift. Barron's 27:36-7 S 8 '47
Pig crop estimates may prove low. Barron's 26:5 D 30 '46

Prices
Last year's bill. Bsns W p39-40 Mr 8 '47

SWINE houses

Heating and ventilation
Heat and ventilation in the design of hog farrowing houses. J. L. Strahan. diags Heat & Ven 44:95-8 Je '47

SWITCHBOARDS
Switchboard failure temporarily halts paper production. il Locomotive 46:200-2 Jl '47

SWITCHBOARDS, Telephone. See Telephone switchboards

SWITCHES, Electric. See Electric switchgear

SWITZERLAND
See also
Chemical industries—Switzerland
Electricity supply—Switzerland
Forests and forestry—Switzerland
Lumber trade—Switzerland
Motor bus lines—Switzerland

Commerce
Swiss trade relations during 1946; Swiss-Swedish trade agreement revised. For Comm W 27:20 Ap 5 '47

Economic conditions
Boom in Switzerland. Economist 152:336 Mr 8 '47

Economic relations
Germany
Switzerland's wartime economic policy. E. Speiser. Comm & Fin Chr 164:2604+ N 21 '46
United States
Problems in Swiss-American financial relations. A. Jann. Comm & Fin Chr 164:2747+ N 28 '46

Industries and resources
Review of the Swiss metal and engineering industries. W. M. von Orelli. bibliog Iron & Steel Inst J 156:145-54 Je '47
Swiss industrial plants; character, scope, aims. A. M. Ewing. il For Comm W 25:4-7+ N 23 '46

Politics and government
Switzerland keeps right. Economist 153:485-6 S 20 '47

SWIVELS
Hydraulic swivel designs. B. J. McCabe. il diags Aero Digest 54:88+ My '47

SWOPE, Gerard, 1872-
Mr Wilson at work; General Electric's president. por Fortune 35:121-3+ My '47
1945 recipient, A.S.M. medal for the advancement of research. M. Weiss. por Metal Prog 51:752-4 My '47

SWORDS
Samurai swords. S. V. Grancsay. il diags Mech Eng 68:1070-2 D '46; Same cond. Iron Age 159:61 Ja 9 '47

SYKES, Wilfred, 1883-
Portrait. Bsns W p77 Ja 25 '47

SYLVAN. See Methyl furan

SYLVANIA electric products, inc.
Decentralized sales management; how it's working out at Sylvania. F. W. Mansfield. Sales Management 58:76+ F 15 '47
Low costs key to Sylvania's plans. Barron's 27:6 F 3 '47
Sylvania Electric, out from under G.E.'s protective custody, is flourishing in electric lamp and radio business. il Fortune 35:112-15+ My '47
Sylvania's Huntington plant producing radio tubes. P. McCoppin. Manuf Rec 116:49 F '47

SYMBOLS
Chemical engineering materials of construction; review of literature from start of World war II; codification of materials. C. S. Grove, jr., J. W. Perry and R. S. Casey. bibliog Ind & Eng Chem 39:1261-4 O '47
Standard symbols and abbreviations for chemical engineering. J. H. Perry. Chem Eng Prog 43:sup20-1 Mr '47; Same. Ind Stand 18:60-2 Mr '47
Standardization of chemical engineering letter symbols. J. H. Perry and others. bibliog Ind & Eng Chem 39:438-9 Ap '47; Chem Eng 54:112-13 Je '47
Symbols for combustion research; engineering data. Aviation W 47:29-30 O 13 '47
See also
Chemical symbols
Control equipment—Symbols
Electronics—Symbols
Refrigerating engineering—Symbols

SYMMETRIC functions
Use of symmetric functions in the solution of linear differential equations with constant coefficients. M. Goland and Y. L. Luke. Franklin Inst J 244:221-3 S '47

SYMPATHOMIMETIC substances
Preparation of some primary and secondary β-cyclohexylalkylamines. B. L. Zenitz, E. B. Macks and M. L. Moore. bibliog Am Chem Soc J 69:1117-21 My '47

SYNAGOGS
Religious buildings. il plans Arch Rec 102: 99-101 S '47
Temples; Eric Mendelsohn's designs for Cleveland and St Louis. il plans Arch Forum 86:73-7 My '47

SYNCHRONIZING
Curtiss propeller synchronizer. il diags Aero Digest 54:73-4 F '47
Dial feeds synchronized by air. J. F. Budnick. diags Am Mach 91:101-3 N 6 '47
Paralleling Diesel sets. diags Elec R (Lond) 141:131-2, 284-5 Jl 25, Ag 22 '47
Synchronization of auxiliary apparatus with a betatron. G. C. Baldwin and others. diags R Sci Instr 18:121-4 F '47
Synchronization of oscillators. R. D. Huntoon and A. Weiss. diags J Res Nat Bur Stand 38:397-410 Ap '47

SYNCHRONOUS machines. See Electric generators, Synchronous

SYNCHRONOUS motors. See Electric motors, Synchronous

SYNCHROSCOPE

Calibrated synchroscope predicts power flow. W. G Parmenter. il diag Elec World 127: 126+ F 15 '47

C-r tube on power lines, use as synchroscope in making reconnections at points of circuit interruption. Electronics 20.158+ S '47

Portable pulse generator. E. W. Titterton and V. L. Fitch. diags R Sci Instr 18:639-43 S '47

SYNCHROTRON

Accelerators under construction at Berkeley. M. L Kastens. il diag Chem & Eng N 25: 224-7 Ja 27 '47

Atom smasher uses low pressure laminate; synchrotron 10 plastic parts. il Mod Plastics 24:91 Jl '47

Atomic artillery; principles and mechanisms of electron and ion accelerators. J. Stokley il diags Gen Elec R 50:9-19 Je '47

Electron light, electron beam made visible in the new 70,000,000-volt synchrotron. Gen Elec R 50 51 Jl '47

GE atom-smasher, combining betatron and cyclotron. il Chem & Eng N 25:102 Ja 13 '47

New 70-million-electron-volt synchrotron. il Elec Eng 66:197 F '47

On-orbit injector for betatrons and synchrotrons. D. C. dePackh and A. V. Haeff. diag Phys R 72 247-8 Ag 1 '47

Particle accelerators. Product Eng 18:150 Ja '47

Racetrack stability. D. M. Dennison and T. Berlin. Phys R 70.764-5 N 1 '46

Radiation from electrons in a synchrotron F. R Elder and others. Phys R 71.829-30 Je 1 '47

70-Mev synchrotron. F. R. Elder and others. bibliog il diags J Ap Phys 18:810-18 S '47

Synchrotron yields 70,000,000-v X-rays. Power Pl Eng 51:113 Ja '47, Same. il Mech Eng 69: 155 F '47

Theory of the synchro-cyclotron. D. Bohm and L. L. Foldy. bibliog Phys R 72:649-61 O 15 '47

SYNDICATE selling (periodical)

Business magazines. il Sales Management 59: 146 N 1 '47

SYNERGISM

Mechanism of the antioxygenic synergism of quinones and quinols with phosphoric acid and other acids in fat systems. V. P. Calkins. bibliog Am Chem Soc J 69:384-8 F '47

SYNONYMS

Roget's international thesaurus, new ed rev 1194p $4; thumb indexed $4.50 Thomas Y. Crowell co, 432 4th av, New York 16 '46

Standard handbook of synonyms, antonyms, and prepositions. J. C. Fernald. rev ed 515p $3 Funk & Wagnalls co, 153 E. 24th st, New York 10 '47

SYNTHESIS

Aliphatic trienes; synthesis from acetylenediols. R. E. Werner and W. B. Reynolds. bibliog Am Chem Soc J 69.633-4 Mr '47

Angular aryl group; 10-phenyldecahydroquinoline and 9-phenyldecalin V. Boekelheide. bibliog Am Chem Soc J 69:790-2 Ap '47

1,5-Anhydro-D-arabitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69.1672-4 Jl '47

Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47

Aromatization studies; synthesis of alkylanilines from alkylcyclohexenones E. C. Horning and M. G. Horning. Am Chem Soc J 69:1907-8 Ag '47

Attempted asymmetric synthesis in a metathetical Grignard reaction. W. A Bonner. Am Chem Soc J 69:183-4 Ja '47

Chemistry and autarchy; abstract. R. P. Linstead. Chem & Ind p244 My 3 '47

Compounds related to penicillic acid; synthesis of dihydropenicillic acid R. A. Raphael. Chem Soc J p805-8 Je '47

Diels-Alder syntheses with hexachlorocyclopentadiene E. A. Prill. Am Chem Soc J 69 62-3 Ja '47

Electro-organic chemical preparations S. Swann, jr. bibliog tables Electrochem Soc Trans 88 (preprint 23).237-54 '45; Same. Ill U Eng Exp Sta Reprint Ser 36:103-20 '47 (pa 25c)

Experiments on the synthesis of purine nucleosides. J. Davoll, B. Lythgoe, A. R. Todd and others Chem Soc J p833-8, 852-65 S-O '46

Experiments on the synthesis of substances related to the sterols. J. W. Cornforth and R. Robinson. Chem Soc J p676-9 Ag '46

Experiments on the synthesis of the pyrethrins; structure of cinerone. S. H. Harper. Chem Soc J p892-5 O '46

Hydrocarbon synthesis in the presence of cobalt catalysts at medium pressures. C. C. Hall and S L. Smith. flow diag Inst Pet J 33:439-59 Jl '47

Impact of synthesis on the rubber industry, abstract P. Schidrowitz. India Rubber World 116.833-4 S '47

Improved syntheses of phenazines; 1-aminophenazine and 1:3-diaminophenazine. A. Albert and H Duewell. bibliog Soc Chem Ind J 66:11-13 Ja '47

Improved synthesis of the selenium analogs of methionine and homocystine H J. Klosterman and E. P. Painter. Am Chem Soc J 69:2009-10 Ag '47

Isosucrose synthesis. W. W. Binkley and M. L. Wolfrom. bibliog Am Chem Soc J 68: 2171-2 N '46

Method for the synthesis of tertiary aromatic arsines. W. E. Hanby and W. A. Waters. Chem Soc J p 1029-31 N '46

Methyl thioethers derived from 2 : 2′-dichlorodiethyl sulphide and its analogues; synthetic experiments. R. Brown and R. C. G Moggridge. Chem Soc J p816-19 S '46

New synthesis of benzopyrylium salts. A. W. Johnson and R R Melhuish. Chem Soc J p346-50 Mr '47

New syntheses of heterocyclic compounds; 9-amino-6: 8-dimethyl-7: 10-diazaphenanthrenes. V. A. Petrow. Chem Soc J p884-8 O '46

New synthesis of oxazoles and iminazoles including its application to the preparation of oxazole. J. W. Cornforth and R. H Cornforth. Chem Soc J p96-102 Ja '47

New syntheses of the selenium analogs of *dl*-cystine and cysteine derivatives. E. P. Painter. bibliog Am Chem Soc J 69:229-32 F '47

New synthesis of 1,2-benzanthracene. M. S. Newman and R. T. Hart. bibliog Am Chem Soc J 69:298-300 F '47

New synthesis with maleic anhydride. E. Berner. Chem Soc J p 1052-8 N '46

Organic syntheses; an annual publication of satisfactory methods for the preparation of organic chemicals. v26 124p $1.75 John Wiley, 440 4th av, New York 16 '46

Production of synthesis gas; symposium. A. R. Powell and others. diags Pet Processing 2:731-3 O '47

Strychnine and brucine; synthetical experiments. H L. Holmes, H. T. Openshaw and R. Robinson. Chem Soc J p910-18 O '46

Syntheses of some β-chlorinated amines. A. H Ford-Moore, A. G. Lidstone and W. A. Waters Chem Soc J p819-20 S '46

Synthesis and physical properties of tetraethylmethane. A W. Horton bibliog Am Chem Soc J 69:182-3 Ja '47

Synthesis and properties of hydrocarbons of high molecular weight R. W. Schiessler and others. bibliog il Am Pet Inst Proc 26(3).254-302 '46

Synthesis and stereochemistry of biotin and related products. S. A. Harris. bibliog il J Chem Educ 24:459-64 S '47

Synthesis and structure of tetrahydropyrethrolone. H. J. Dauben, jr. and E. Wenkert. bibliog Am Chem Soc J 69:2074-5 Ag '47

Synthesis of amino-substituted phosphonic acids G. M Kosolapoff bibliog Am Chem Soc J 69:2112-13 S '47

Synthesis of analgesic substances. J. A. Barltrop. Chem Soc J p958-65 O '46

SYNTHESIS—*Continued*
Synthesis of 2-arylfurans. A. W. Johnson. Chem Soc J p895-9 O '46
Synthesis of cephalin. W. G. Rose. bibliog Am Chem Soc J 69:1384-7 Je '47
Synthesis of certain α-amino acid esters from malonic ester. J. C. Shivers and C. R. Hauser. bibliog Am Chem Soc J 69:1264-5 Je '47
Synthesis of certain substituted 2,2′-bipyridyls. F. H. Case bibliog Am Chem Soc J 68:2574-7 D '46
Synthesis of 7-chloro-4-hydroxyquinoline derivatives employing oxalacetic ester. G. F. Lisk and G. W. Stacy. Am Chem Soc J 68:2686-8 D '46
Synthesis of compounds related to vitamin A from hydroxymethylene β-ionone. E. M. Shantz Am Chem Soc J 68 2553-7 D '46
Synthesis of condensed ring compounds; dimethylsteradienones A. M. Gaddis and L. W. Butz Am Chem Soc J 69:1203-4 My '47
Synthesis of condensed ring compounds; the addition of quinones to a dienyne. L. W. Butz, A. M. Gaddis and E. W. J. Butz. bibliog Am Chem Soc J 69:924-5 Ap '47
Synthesis of condensed ring compounds; total synthesis of a 10a-methyldodecahydrochrysene-1,4-dione (a 10-methyl-D-homosteradiene-15,17a-dione). A. M. Gaddis and L. W. Butz. bibliog Am Chem Soc J 69:1165-70 My '47
Synthesis of cytidine. G. A. Howard, B. Lythgoe and A. R. Todd. Chem Soc J p 1052-4 Ag '47
Synthesis of β-(3 : 4-dihydroxyphenyl)-*N*-methylserine (adrenalinecarboxylic acid). C. E. Dalgliesh and F. G. Mann. Chem Soc J p658-62 My '47
Synthesis of 3,4-dihydro-10-hydroxy-1,2-benzanthracene and derivatives. H. E. Zaugg. bibliog Am Chem Soc J 68:2492-4 D '46
Synthesis of estradiol and 1-methylestradiol from cholesterol. A. L. Wilds and C. Djerassi. bibliog Am Chem Soc J 68:2125-33 N '46
Synthesis of hydroaromatic compounds containing angular groups; 9,4a(2)-iminoethanohydrophenanthrene series. M. S. Newman and B. J. Magerlein. bibliog Am Chem Soc J 69:942-4 Ap '47
Synthesis of 2-hydroxy-17-equilenone. W. E. Bachmann and W. J. Horton. bibliog Am Chem Soc J 69:58-61 Ja '47
Synthesis of 4-hydroxyquinolines; quinoline derivatives with sulfur-containing substituents. C. C. Price, N. J. Leonard and G. W. Stacy. Am Chem Soc J 69:855-8 Ap '47
Synthesis of maltose-1-phosphate and D-xylose-1-phosphate. W. R. Meagher and W. Z. Hassid. bibliog Am Chem Soc J 68:2135-7 N '46
Synthesis of 3-methyl*iso*quinolines. G. R. Clemo and J. H. Turnbull. Chem Soc J p533-5, 701-5 Ag '45, Ag '46
Synthesis of organic compounds labelled with isotopic carbon. W. Sakami, W. E. Evans and S. Gurin bibliog Am Chem Soc J 69:1110-12 My '47
Synthesis of possible degradation products of morphine and metathebainone. H. L. Holmes and K. M. Mann. bibliog Am Chem Soc J 69:2000-3 Ag '47
Synthesis of protein analogs. R. B. Woodward and C. H. Schramm. Am Chem Soc J 69:1551-2 Je '47
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68:2510-13 D '46
Synthesis of pyrrolizidines. N. J. Leonard, L. R. Hruda and F. W. Long. bibliog Am Chem Soc J 69:690-2 Mr '47
Synthesis of racemic menthol. W. R. Brode and R. W. Van Dolah. bibliog Ind & Eng Chem 39:1157-60 S '47
Synthesis of selenium analogs of *dl*-methionine and *dl*-homocystine. E. P. Painter. bibliog Am Chem Soc J 69:232-4 F '47
Synthesis of some α-(2-piperidyl)-quinolinemethanols. R. A. Seibert and others. bibliog Am Chem Soc J 68:2721-3 D '46
Synthesis of tetrafluoroethylene; pyrolysis of monochlorodifluoromethane. J. D. Park and others. bibliog flow diag Ind & Eng Chem 39:354-8 Mr '47
Synthetic phenol. R. M. Crawford. il Chem & Eng N 25:235 Ja 27 '47
Tetra-acetyl glucosone hydrate; syntheses of analogues of ascorbic acid and possible transformation of hexoses into kojic acid. M. Stacey and L. M. Turton. Chem Soc J p661-5 Ag '46
Tetra-aryl-phosphonium, -arsonium, and -stibonium salts; the synthesis and properties of tetra-aryl-arsonium salts having four dissimilar aryl groups. F. G. Mann and J. Watson. Chem Soc J p505-13 Ap '47

See also
Fischer-Tropsch process
Friedel-Crafts reaction
Polymerization

SYNTHETIC organic chemical manufacturers association
Brief history C. A. Mace. Am Dyestuff Rep 35:622-4 D 2 '46
Message from the president. R. E. Dorland. Am Dyestuff Rep 35:621 D 2 '46
Midyear outing and meeting. Chem & Eng N 25:1734-5 Je 16 '47
Twenty-fifth anniversary, New York, Dec 17 Chem & Eng N 25:19 Ja 6 '47; Oil Paint & Drug Rep 150:5+ D 23 '46

SYNTHETIC products
Chemical research again surges upward; synthetic organics H. B. McClure Chem Ind 61:387-8 S '47
Chemistry and autarchy. R. P. Linstead. Chem & Ind p417-20 Jl 12 '47
How the organic chemist can best serve the food field R. E. Kremers. il Food Ind 19:601-2+ My '47
Oil company synthetic fuels and lubes show good records in navy tests. flow sheet il Pet Processing 2:37-9+ Ja '47
Synthetic aliphatic industry. H. B. McClure and R. L. Bateman Chem & Eng N 25:3208-14, 3286-9 N 3-10 '47
Synthetic chemicals in the textile industry. P. I. Smith. Soap & San Chem 23:40-1 S '47
Synthetic proteins. R. B. Woodward. Mech Eng 69:764 S '47
Utilization of natural gas for chemical products. H. M. Smith and W. C. Holliman. bibliog (218 titles) 12 pls U. S. Bur Mines Information Circ 7347.1-24 '47; Same, without bibliog. Pet Refiner 26:75-84 Ap '47

See also
Resinous products
Silicones
Textile fibers, Synthetic

SYNTHOL process. See Gasoline, Natural—Manufacture—Synthol process

SYPHILIS
Comparison of the spirocheticidal activity of arsphenamines and phenarsines (arsenoxides) in experimental syphilis. T. F. Probey. bibliog Pub Health Rep 62:1041-8 Jl 18 '47
Loss of virulence of treponema pallidum during processing of dried blood serum. T. F. Probey. bibliog Pub Health Rep 62:1199-1202 Ag 15 '47

SYRACUSE, New York

Industries
Syracuse makes a comeback. Bsns W p44+ Ap 26 '47

Streets
Syracuse saves money on snow and ice removal and reduces accidents. C. E. Billion. il Pub Works 78:17+ Ag '47

SYRIA

See also
Railroads—Syria

SYRINGES
Practical syringe microburet. P. A. Shaffer, jr., P. S. Farrington and C. Niemann. bibliog il Anal Chem 19:492-4 Jl '47

SYRUPING machine. See Siruping machine

SYRUPS. See Sirups

SYSTEMS and procedures association
Systems men start own organization. Am Bsns 16.42 N '46

T

T A.T. See Tween-asolectin-thioglycollate

TCC process. See Gasoline—Manufacture

TNT. See Trinitrotoluene

TABER, George H., Jr
Lack is ASA president; Taber new vice president. por Ind Stand 18:17 Ja '47

TABLECLOTHS
Vinyl butyral coated tablecloths. il Mod Plastics 24:112 N '46
Wipe-clean cloth owes properties to plastics finish. Sci Am 176:14 Ja '47

TABLES
Phenolics are being molded into card table tops il Mod Plastics 24:120-1 Je '47

TABLES, Laboratory
Mobile collapsible laboratory and field table. G. D. Clayton. diags Pub Health Rep 62: 613-14 Ap 25 '47

TABLEWARE
Alumina in whiteware; vitreous chinaware, semivitreous dinnerware, electrical porcelain, cooking ware and sanitary ware. C. R. Austin and others. il Am Cer Soc J 29:341-54 D 1 '46
Chinaware industry for Dixie; Design, inc. plant at Marietta, Ga. J. Mebane. il Manuf Rec 116.30-1+ Mr '47
Forming true porcelain dinnerware. R. Gould. diags Cer Ind 49:92 S '47
Industrial design in dinnerware; abstract. R. G Cowan. Cer Ind 48:64 Je '47
Pottery makers go modern; industry mechanizes to cut costs, improve quality. Bsns W p20 S 13 '47
Reducing atmosphere prevents over-firing of china. R. Gould. Cer Ind 49:79-80 Ag '47
Stress strain relations in dinnerware bodies; abstract. J. O. Everhart. Cer Ind 48:60 Ja '47

See also
Cups

TABLEWARE, Plastic
Urea tableware. il Mod Plastics 24:226 Ap '47
Why polystyrene tableware? il Mod Plastics 24:86-7 Jl '47

TABULATION
Problems of multiple-punching with Hollerith machines. K. Benjamin. diags Am Stat Assn J 42:46-71 Mr '47

See also subdivision Tables, calculations, etc. under special subjects, e.g Aeronautic engineering—Tables, calculations, etc.

TACHOMETERS
Condenser discharge reflects r.p.m; electric hand tachometer. il diags Product Eng 18: 103 F '47
Measuring speed with WWV; harmonics of station's signal obtained for calibrating oscillator used in measurement of shaft speed. J. C. Coe. il diags Electronics 20: 90-3 Ag '47
Remote reading tachometer utilizes capacitor circuit. C. B. Cunningham. il diags Machine Design 19:127-8 Ja '47
Tachometric audio-frequency meter. E. Kasner. il diags Electronics 20:121-3 F '47

Testing
Production testing of tachometers. H. F. Storm. il diags Electronics 20:92-6 Mr '47

TACOMA, Washington

Sewerage
Machine grouts joints in trunk sewer. C. S. Seabrook il Eng N 138.50-2 Ja 9 '47
Three-million-dollar Tacoma sewer project employs machine-made joints. C. S Seabrook il Civil Eng 17:314-16 Je '47

TACONITE
Oglebay Norton to build taconite beneficiation plant. B. Lloyd. flow chart Iron Age 160:110-12 Ag 14 '47

TACT
Putting the tact in contact by mail. W. H. Butterfield. Ptr Ink 220:30-2 Jl 4 '47

TAFT, Charles Phelps, 1897-
Charlie Taft's big chance as the first lay leader of U.S. Protestantism. pors Fortune 36:84-7+ Ag '47

TAFT, Robert Alphonso, 1889-
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47

TAFT-HARTLEY law. See Labor laws and legislation—United States—Taft-Hartley law

TAGS
Don't overlook tags, they often clinch the sale. il Ptr Ink 218:42-3 Mr 21 '47
Tags; midget mediums that carry a hefty sales load; Marcel Schulhoff & co.'s six criteria. il Sales Management 59:45-6 Ag 15 '47

TAILINGS
Retreatment of corundum tailings at Craigmont. A. G. Roach. bibliog flow sheet il Can Min J 68:563-8 Ag '47
Sampling the Fox and Mills tailing piles, Lafayette county, Wisconsin. G. A. Apell. 4pls U S Bur Mines Rep of Invest 3991:1-7 '47
Stream pollution control in Idaho; illustrations Min Cong J 33:32-3 Jl '47

TAILOR shops
Design for displaying merchandise; fabrics, Richard Bennett, Chicago. il Arch Rec 101:78 Mr '47

TAIWAN. See Formosa

TALBOT, Benjamin, 1864-
Sketch. por Iron & Steel Inst J 155:front F '47

TALBOT, Ralph H.
Citation on the work of Ralph H. Talbot. E. K. Carver por Soc Motion Picture Eng J 48:65-6 Ja '47

TALBOT'S bands
Talbot's bands. F. B. Pidduck. diags Opt Soc Am J 37.55-8 Ja '47

TALC
Georgia talc industry helped by geologic study. K. H. Teague. il Eng & Min J 147:63-5 N '46
Relation of specific surface in various talcs to casting and dry pressing characteristics of talc bodies. W. W. Gaskins. Cer Ind 49:90 Ag '47

See also
Steatite

TALCUM powder
Talc of the town; bottle of polyethylene; a dispensing talcumizer for bath powder. il Mod Packaging 20:87 Ag '47

TALITOL
Some methylene acetals of D-talitol. R. M. Hann, W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:624-9 Mr '47

TALL buildings. See High buildings

TALL oil
Canadian tall oils; their compositions and potential uses. G. N. B. Burch and others. bibliog(45 ref) Pulp & Pa of Can (Convention no) 48:127-32 [F] '47
Determining phthalic acid in alkyds containing tall oil, abstract. F. Philipp and E. Scholz Paint Oil & Chem R 109:50 D 12 '46
Fatty acids in tall oil; literature review. B. L. Browning and J. B. Calkin. bibliog Paper Tr J 123:45-7 D 26 '46
Tall oil; a product for paint chemists to conjure with. bibliog Paint Oil & Chem R 110: 22-4+ Ag 7 '47
Tall oil from the consumer's viewpoint. L. Byman. patent list and bibliog(111 ref) Paper Tr J 123.35-40 N 28 '46
Tall oil in printing inks. C. J. Vander Valk and H. Burrell. Paper Tr J 123:53-6 N 14 '46

Analysis
Analysis of tall oil; abstract. Paper Ind 28: 1224 N '46

TALLOW
Rise in tallow forces soap price advance. Soap & San Chem 23:51 Ap '47
Solexol plant to refine tallow. Chem & Eng N 25:2568+ S 8 '47

TANK barges
Mississippi barge capacity 10% greater than last year, but still short of needs; East coast and Great Lakes fleets. Nat Pet N 39:43-4 Jl 23 '47
New tank barges for transportation of chlorine. il Marine Eng 52:79-80 O '47

TANK cars
Crude oil tank car shipments top war peaks on T. & P. il map Ry Age 123:731-2 N 1 '47
Report of MCA tank car committee. H. J. Gronemeyer. Chem & Eng N 25.2400 Ag 18 '47
Return to 200-mile limit on tank cars considered D. E. Harbour Nat Pet N 39:11-12 Jl 9 '47

TANK roofs. See Oil tanks—Roofs

TANK ships
Diesel-propelled tanker operation. J. H. G. McConechy Marine Eng 51:101-2 D '46
Loss of USMC authority to operate tankers would threaten oil supplies. Nat Pet N 39: 11-12 My 7 '47
Motorship Esso Nicaragua. il Marine Eng 51: 120+ N '46
Preventing accidents on tankers. C. L. Boyle. Marine Eng 52:63-5 O '47
Replacement in the shipping industry; Norwegian mercantile marine, 1932-39. J. Einarsen. R Econ Stat 28:225-30 N '46
Structural investigation in still water of the welded tanker Neverita. F. B. Bull and others. bibliog il plans diags Welding J 25: sup809-43 D '46; Abstract. Engineer 181: 385; Discussion. 385-6 Ap 26 '46; Engineering 161:425-6 My 3 '46
Sun-built T2-SE-A1 tankers. il plans diags Marine Eng 52:62-75+ Jl '47
T3 tanker Stanvac Calcutta. il plans diags Marine Eng 52 63-9 F '47
Tank ships, present world tonnage and other statistical data B. Saurino. Oil & Gas J 45 160-3+ D 28 '46
Warren completes first ocean-going propane tank ship. R. B Tuttle. il Oil & Gas J 46: 50-1+ O 11 '47

See also
Loading and unloading—Tank ships

TANK trucks
Tank truck pumps; survey figures show high percentage of companies plan purchases H. Ridder Nat Pet N 39:29-30 Je 25 '47
Uniform calibration of truck tanks seen not too difficult. E. Lamm. Nat Pet N 39:9 O 15 '47

See also
Loading and unloading—Tank trucks

Cleaning
Miniature industrial waste treatment plant; truck washing waste. R. F. Weston il plan Water & Sewage Works 94:111-14 Mr '47

Safety measures
Fleet pays bonus to tank truckers as safety spur. M. E. Bealey. Nat Pet N 38:46+ N 6 '46

TANKERS. See Tank ships

TANKS
Corrosion in storage tanks for crude sulphate turpentine. S G. Norton and others. Paper Tr J 124:34-5 My 1 '47
Inexpensive aeration tanks handle disposal problem; wash oil from silt. flow diag il Pet Processing 2:102-3 F '47
Investigation of stress in circular rings. A. Samoiloff. diags Pet Refiner 26:99-103 Jl '47
Propane storage tanks made of 26-inch pipe. il Pet Refiner 26:142+ Mr '47
Vapor-lift tank. il diag Chem Eng 53:131 D '46

See also
Airplanes—Fuel tanks
Boilers
Gas holders
Gasoline tanks
Hot water tanks
Imhoff tanks
Oil tanks
Pressure vessels
Septic tanks
Settling tanks
Sewage tanks
Tank ships
Tank trucks
Water tanks

Cleaning
Cleaning and repairing flammable liquid tanks. il Safety Eng 93:18-19+ Ja '47
Death lurks in an empty tank; accident on board ship. Marine Eng 52:87 S '47
Strict tests precede each Utopian tank cleaning job. F. J. Sluze. il Pet Processing 2:353 My '47
Ten ways to make tanks safe for workmen. W. E Rossnagel. il diags Power 91:322-3+ My '47

Costs
Determining costs of tanks, spheres and drums R. A. Dickson. Chem Eng 54 122 Ag '47

Lining
Ceramic acid and corrosion resistant linings. E. F. Tucker. Pulp & Pa of Can 48.71-4 Ag '47
Increased life of lead-lined tanks by revised method of fastening; patent. diags Pet Processing 2 543 Jl '47
Low-cost thickener; clay plants of Edgar brothers co. C D. Frobes. il diag Eng & Min J 148 81-2 S '47
Rubber linings protect steel against corrosion and abrasion. O. S. True. il diags Product Eng 18:142-8 Ja '47

Measurement
Handy chart for determining contents of rectangular tanks. W. F. Schaphorst. Paper Ind 28 1637 F '47
Wide range cylindrical tank chart. Can Min J 68.14 Ja '47

Ventilation
Effective exhaust for tanks. B. F. Postman and W. P. Battista. il diags Heat & Ven 44:53-6 Ja; 83-7 F '47
Semi-lateral tank ventilation hood controls contamination, cuts costs W. P. Battista. diags Heating-Piping 19:85-9 Ja '47

TANKS, Aluminum

See also
Water tanks, Aluminum

TANKS, Concrete
Deterioration of concrete in brine storage tanks I. Lyse. il Am Concrete Inst J 19: 141-7 O '47
Hipped plate construction. G. Winter and Minglung Pei. bibliog il diags Am Concrete Inst J 18.505-31 Ja '47

TANKS, Gasoline. See Gasoline tanks

TANKS, Military
British and German tanks. Economist 151: 942-3 D 14 '46
Mobility of army tanks Engineering 163:242 Mr 28 '47
Symposium on development of emergency power plants for tanks. H. T. Woolson and others il diags A S M E Trans 69:1-34 Ja '47

Manufacture
Efficiency of war-born operating methods is inspiration for today's welding production; Cleveland steel erecting co., fabrication of tank-tread units. A. F. Davis. il Welding J 25:1193-4 D '46

Transmission
Evolution of a tank transmission. H. E. Merritt. il diags Inst Mech Eng J & Proc 154: Proc 412-21 Mr '47; Same abr. Engineer 181:343-4, 366-7 Ap 12-19 '46; Discussion. Inst Mech Eng J & Proc 154:Proc 421-8 Mr '47; Engineering 161:353-4, 378-9 Ap 12-19 '46
Fluid drive; hydra-matic transmission. W. L Carnegie. Am Gas Assn Proc 1946:335-7

Transportation
Scammell military vehicles; tank transporter. il diags Automobile Eng 37:199-205 Je '47

Wheels
Mass production of tank wheels in black heart malleable; abstract A. B. Bill and J. Peters. Materials & Methods 25:125 Ja '47

TANKS, Plastic
Lucite tanks for liquid storage Safety Eng 93:32 Mr '47
New phenolic photographic tank. il Mod Plastics 24:166-7 Ag '47
Plastic used for brine tanks; Plexiglas used by processor of olives. il Food Ind 19:464 Ap '47

TANKS, Ship model. See Ship model tanks

TANKS, Steel

Report of committee on the standardization of tanks for oil storage. diags Am Pet Inst Proc 26(4):344-67 '46

Report of subcommittee on the standardization of tanks for oil storage. Am Pet Inst Proc 25(4).298-311 '45

Storage tank design; low pressure tanks for liquid chemical storage. J G. Henderson. diags Chem Eng 54·104-7+ Mr '47

See also

Water tanks, Steel

Cost

Estimation of field-erected tanks; correction for material, location, type of construction and other factors. L. E. Fox. Chem Eng 54:100-1+ Ag '47

Manufacture

Full automatic hot zinc galvanizing of tanks R. F. Ledford. il diag Iron Age 160·56-60 Jl 31 '47

TANKS, Wood

Report of subcommittee on the standardization of tanks for oil storage. Am Pet Inst Proc 25(4)·312-15 '45

Sulphur dioxide versus construction materials. S. E. Chaney. Chem Eng 54.218+ S '47

Wet and dry chlorine vs. materials of chemical plant construction S. E. Chaney. Chem Eng 54 232+ F '47

TANNERIES

See also

Tanning

Waste

Effective tannery waste treatment plant H. T. Reuning and R. F. Coltart il plan Pub Works 78·21-2 Mr '47

Grit and grease chamber reduces sewer cleaning and pollution problems; sewage from Salem and Peabody, Mass. carries wastes from leather-making industries, high in grease and silt content. F. L. Flood. il plans diags Eng N 139:391-3 S 18 '47

Industrial wastes; tanning industry R Sutherland bibliog flow sheets il Ind & Eng Chem 39·628-31 My '47

TANNIC acids. See Tannins

TANNIN solutizer process. See Gasoline—Manufacture

TANNING

Experimental arguments against the concept of chrome tanning as an adsorption process. K. H. Gustavson. bibliog J Phys & Colloid Chem 51:1181-8 S '47

Wetting agents in the modern tannery. P. I. Smith. Soap & San Chem 22:43+ N '46

TANNING materials

New specialties exploit chemical research; leather chemicals. H. G. Turley. Chem Ind 61:403-4 S '47

Tanning properties of lignosulphonates produced by different cooking conditions. M. A Buchanan and others. bibliog Paper Tr J 124:38-44 My 1 '47

Textile and leather chemicals. Published in weekly numbers of Oil, paint and drug reporter

TANNINS

California scientists hunt tanbark from native oak. H. J. Ashe. Barron's 26.9 N 25 '46

Chemical composition of barks. E. F. Kurth. bibliog Chem R 40:33-49 F '47

Colorimetric phosphate tests for boiler waters containing tannin. L. Goldman and R. N. Love. U S Bur Mines Rep of Invest 3983·1-11, pl 1-2 '46; Same. Power Pl Eng 50:76-9 N '46

Tannins research planned by USDA. Oil Paint & Drug Rep 152:40 O 27 '47

TANTALUM

Acetic acid vs. materials of chemical plant construction. F. L. Hunter. il Chem Eng 53:264 N '46

Coaxial tantalum cylinder cathode for continuous-wave magnetrons. R. L. Jepsen. bibliog diags RCA R 8:301-11 Je '47

Exploration of Harding tantalum-lithium deposits, Taos county, N.Mex J. H Soule. U S Bur Mines Rep of Invest 3986:1-10, pl 1-6 '46

Refractory metal industry since 1914 A. L. Percy. il Metal Prog 52:600-2 O '47

Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W W. Havens, jr and others. Phys R 71·165-73 F 1 '47

Some applications of tantalum in electronics. L. F. Yntema and R. W. Yancey. Electrochem Soc Trans 91 (preprint 33):485-8 '47

Sulphur dioxide versus construction materials. F. L Hunter. Chem Eng 54:210+ S '47

Tantalum as an engineering material K. Rose. il Materials & Methods 26:94-8 O '47

Wet and dry chlorine vs. materials of chemical plant construction. L. R. Scribner. Chem Eng 54:219 F '47

Isotopes

Fission of bismuth, lead, thallium, platinum, and tantalum with high energy particles. I Perlman and others Phys R 72·352 Ag 15 '47

Gamma-radiation from tantalum, iridium, and gold J. M. Cork. il diag Phys R 72:581-5 O 1 '47

TANTALUM alloys

See also

Tantung

TANTUNG

Tantung, what it is, how to use it. D. I. Brown. il diags Iron Age 158.76-81 N 14 '46

TAPE

Some developments in machinery for woven smallwares W. Holt. il Textile Inst J 38.P381-9 Ag '47

TAPE, Insulating. See Insulating tape

TAPERS

Gage for measuring taper per inch. H. Moore diag Mach 53:179 Mr '47

Precision taper measurement with micrometer calipers. S. Framurz. diags Am Mach 91:131-3 My 22 '47

Tapering for surface inspection. W. J. Darmody. il diags Am Mach 90.134-5 D 19 '46

TAPESTRY, French

Exposition de tapisseries françaises; pictorial supplement Textile Col 69:40a-40d S '47

Tapestry of color; French government loan to the Metropolitan museum. M. H. Rorke Textile Col 69:22-3+ O '47

TAPPING

Method of drilling and tapping carbides. il Steel 120:94 Mr 31 '47

Single-cycle tapping reduces breakage. E. Anderson. diags Am Mach 91:105-6 My 22 '47

V-block and clamp unit speeds tapping jobs. D. A Baker. diag Am Mach 91:129 Je 5 '47

TAPPING machines

Bodine automatic, multispindle machines. il diags Product Eng 18:134-5 S '47

Cleveland Model E leadscrew tapping machine made in six sizes. il Am Mach 91:162 O 9 '47

Garvin hi-power tapping machine il Am Mach 91:172 My 22 '47

High-production nut tapper made from standard parts. D. A. Baker. diag Mach 53 192-3 Ap '47

Kaukauna portable drilling machine will drill, tap work at any angle. il Am Mach 91: 169 F 13 '47; Iron Age 159:51 Ja 9 '47; Mach 53:218+ Ja '47

Machine tool show in print; tapping and threading. il Am Mach 91:236-8 S 11 '47

Turnbuckles tapped in specially designed multiple tapping head. il Sci Am 177:174 O '47

TAPS

How to sharpen taps; illustrations with text. H. S. Wharen. Am Mach 91:114-15 Ag 28 '47

Old reliable tap extractor. H. A. Livingston. Am Mach 91:111 Jl 17 '47

Tap support increases flute grinder accuracy. il diags Product Eng 18:98-9 Je '47

TAR
Dehydration of water gas tars Am Gas Assn Mo 29:389-90 S '47
See also
Coal tar products
Road tar

TAR distillation
Association of tar distillers; annual report for 1946. Chem Age (Lond) 56:434+ Ap 12 '47
German high-temperature coal-tar industry. E. O. Rhodes. 8pls U S Bur Mines Information Circ 7409:1-117 '47

TAR distillation plants
Chemical engineering in the tar industry; abstract. R. Scott. Chem & Ind p396 N 2 '46

TARCHER, Jack David
Gallery B. S. Laitin. por Adv & Sell 40:88+ Jl '47

TARDINESS
Minor illness, short medical absenteeism, lateness and separation in a mail order firm. L. P. Hellman and others. Ind Med 16: 14-17 Ja '47

TARGET guns. See Guns, Target

TARIFF
Interim report on Geneva; tariff bargaining Economist 152:941 Je 14 '47
New economic union in Europe will begin operation in August; Belgian-Netherlands-Luxemburg customs and economic union. Iron Age 159:130+ Je 26 '47
See also
Free trade and protection

Afghanistan
Changes in tariff rates. For Comm W 29.14 O 25 '47

Belgium
See also
Benelux Union

Bolivia
Tariffs and trade controls. For Comm W 28: 15 Ag 30 '47

British Guiana
Certain alcoholic, petroleum, and tobacco products, import duties increased; with schedule of changes. For Comm W 27:13-14 Ap 26 '47

Canada
Canadian tariff policy. O. J. McDiarmid. Ann Am Acad 253:150-7 S '47
Removal of Canadian-American tariff barriers. O. G. Villard. Dun's R 55.23-4+ Jl '47

China
Import duty-paying value; Shanghai Customs notification no. 83. For Comm W 25:20 N 30 '46

Czechoslovakia
Czechoslovak customs tariff revised. For Comm W 27:17 Je 14 '47

Finland
Automobiles; ad valorem import duties reintroduced. For Comm W 25:23 N 9 '46

France
Chiffre d'affaires (turn-over) taxes modified; changes which affect imports. For Comm W 27:17-18 Je 14 '47

Guadeloupe
Import-tax schedule revised. For Comm W 29: 14 O 11 '47
Tariffs and trade controls. For Comm W 28: 17-18 Ag 23 '47

Hong Kong, China
Import duties; present rates on wines, liquor, tobacco products, hydrocarbon oils, proprietary medicines and toilet preparations. For Comm W 26 23-4 F 22 '47

India
Chemical import duties increased by India. Oil Paint & Drug Rep 151:5 Ja 6 '47

Italy
Import-license tax doubled; valuation procedure for ad valorem taxes fixed. For Comm W 29:15 O 18 '47

Luxemburg
See also
Benelux Union

Martinique
Certain foods and other products; import duties revised. For Comm W 27.15-16 Je 7 '47

Mexico
Tariffs and trade controls; Mexico suspends importation of certain goods regarded as nonessential, and increases import duties on additional commodities; with tabulations. For Comm W 28:20-3 Jl 19 '47, Correction. 28:18-19 Ag 2 '47

Netherlands
See also
Benelux Union

Panama
Tariff commission created, import-duty changes For Comm W 25.28-9 N 16 '46

Peru
New import tariff schedule; application authorized by Executive. For Comm W 27:17 My 24 '47

South Africa
Changes in duty rates. For Comm W 26: 19+ Mr 29 '47
Tariff rates reduced on more than 30 items. For Comm W 28:19-20 Ag 23 '47

Turkey
General increase in specific rates of import duty. For Comm W 26.23 Mr 8 '47

United States
Forging U.S. trade policy; Reciprocity committee hearings. Bsns W p17-18 Ja 18 '47
Fortune survey; tariffs and our foreign trade. Fortune 35.30 Mr '47
German, Japanese products take normal import duties. Oil Paint & Drug Rep 152:3 S 22 '47
Importers seek to simplify customs valuing. P A. Johnston. Barron's 27 19 Jl 21 '47
Largest reciprocal trade agreement reflects tariff cuts. Iron Age 158:113-14 N 21 '46
Now, if we could get a tariff Fortune 35: 132 Ap '47
Our tariff policy in crisis. H. Burnstein. bibliog Comm & Fin Chr 165:989+ F 20 '47
Proposes new tariff set-up. A. W. Hawkes. Comm & Fin Chr 166:1648 O 23 '47
Red tape wraps escape clauses in trade pacts. Barron's 27:34 Je 16 '47
Removal of Canadian-American tariff barriers. O. G. Villard. Dun's R 55:23-4+ Jl '47
Re-opening foreign trade channels V. L. Horoth. il Mag of Wall St 79:239-41+ D 7 '46
Tariff, a challenge to the Republican party. H. E. Stassen. Comm & Fin Chr 165:999+ F 20 '47
Tariff bargaining scope outlined by Interdepartmental trade agreements organization. Oil Paint & Drug Rep 150:3+ D 2 '46
Tariff battle brewing in Congress. Steel 120: 65-6 F 3 '47
Tariff compromise. Bsns W p18 Mr 8 '47
United States tariff policy as it affects association interests E. H. Killheffer. Am Dyestuff Rep 35:618-20 D 2 '46

Chemicals
Chemicals tariff rate cuts through trade pacts opposed. Oil Paint & Drug Rep 151:5+ Ja 6; 3+ Ja 20; 3+ Ja 27; 5+ F 3 '47
Tariff changes on chemicals. Chem & Eng N 25:349 F 10 '47

Copper
Copper import tax suspension approved. Oil Paint & Drug Rep 151.5 Ap 28 '47
Copper tariff suspension. Barron's 27.29 My 5 '47

TARIFF—United States—Copper—*Continued*
Copper tariff suspension preferred to reduction. Barron's 26.5 D 30 '46
Remove tariff on copper? J. T. Patterson. Comm & Fin Chr 165.918 F 13 '47

Glass

Glassware industry disputes ill-timed action on reciprocity trade agreements; Committee for reciprocity information for American glassware association. Glass Ind 28.78-80+ F '47

Oils and fats

Peanut acid oil duty decision reversed. Oil Paint & Drug Rep 151·5 Je 9; 5 Je 23 '47

Paper

Reciprocal trade agreements. W. B. Bullock. Paper Ind 28:1303 D '46

Wool

Wool tariff cut in offing? Barron's 27·28-9 Ag 4 '47

Venezuela

Import duties modified on miscellaneous products; with table of tariff classifications affected. For Comm W 28:18+ Ag 9 '47

West Indies, British

Tobacco and alcoholic beverages; import duties amended, Trinidad and Tobago; table. For Comm W 27:19-20 Ap 12 '47

TARIFF (export duties)

Belgium

Temporary and partial suspension of transmission-tax exemption on exports. For Comm W 29:10-11 N 1 '47

Bolivia

Export tax on tin paid by Banco minero reduced. For Comm W 29:14 O 25 '47

Mexico

Export valuations modified on certain items. For Comm W 28:15-16 S 13 '47

TARNISHING of metals
Mechanism of oxidation and tarnishing. U. R. Evans. bibliog diags Electrochem Soc Trans 91 (preprint 5):73-96 '47

TARPAULIN
Package simplifies tarpaulin buying. il Sales Management 58:94 My 1 '47

TARTARIC acid
Tartaric, *o*-sulfobenzoic and β-sulfopropionic acid derivatives of some sulfonamides. V. B Fish, J. R. Stevens and R G. D. Moore. Am Chem Soc J 69:1391-3 Je '47

TARTRATES
La fabrication des produits tartriques à partir des lies de vins hydrolysées. A. Baouman. Génie Civil 123.314-15 N 15 '46
Tartrates from winery pomace. E. K. Metzner flow sheet il Chem Eng Prog 43·160-2 Ap '47

TASTE
Applying control chart methods to taste testing. S Marcuse. bibliog il Food Ind 19: 316-18 Mr '47
Testing food by taste. Food Ind 19·570+ Ap '47

See also
Flavor
Water purification—
Taste and odor removal

TATA institute of fundamental research
World wide chemistry. A. P. Som. Chem & Eng N 25 1972 Jl 7 '47

TATE, John Torrence, 1889-
Presidential medal for merit presented to Dr J T. Tate. Acoustical Soc Am J 19: 704 Jl '47

TATE, Vernon Dale, 1909-
Librarian designee. por Tech R 49 43 N '46
Sketch Special Lib 38:140-1 My-Je '47

TAURINE
Synthesis of taurine and *N*-methyltaurine J. W. Schick and E. F Degering. flow sheet bibliog Ind & Eng Chem 39.906-9 Jl '47

See also
Pantoyltaurine

TAUTOMERISM
Absorption spectra and tautomerism of cyanuric acid, melamine and some related compounds. I. M. Klotz and T. Askounis. bibliog Am Chem Soc J 69:801-3 Ap '47
Extension of the modified Stobbe condensation; acid-catalyzed decomposition of the products and a lacto-enoic tautomerism. W. S Johnson, J. W. Petersen and W P. Schneider. bibliog Am Chem Soc J 69 74-9 Ja '47
Polarographic study of the restriction of the tautomerism of amidines by hydrogen bonding. M. E Runner, M. L. Kilpatrick and E C. Wagner. bibliog Am Chem Soc J 69 1406-10 Je '47
Synthesis of protoanemonin; tautomerism of acetylacrylic acid and of penicillic acid. E. Shaw. bibliog Am Chem Soc J 68·2510-13 D '46
Tautomerism in cyclohexane derivatives; reassignment of configuration of the 1,3-dimethylcyclohexanes. K. S. Pitzer and C. W Beckett Am Chem Soc J 69:977-8 Ap '47

See also
Isomerism

TAX administration
Accounting and the accountant in the administration of income taxation. G. O. May. bibliog J Account 83·370-84 My '47
How the United States Treasury applies tax laws. R. N. Miller. J Account 83:409-14 My '47
Plague on both their houses; the accountant-lawyer differences over tax practice. L S. Goldberg. bibliog J Account 84:188-95 S '47

TAX consultants
Accountancy and law. W. P. Jordan. J Account 83:161-2 F '47
CPA may give tax advice; New York county lawyers association, petitioner, to punish for contempt and to enjoin the unlawful practice of the law by Bernard Bercu. J Account 83.342-8 Ap '47

TAX court. See United States—Tax court

TAX evasion and avoidance
Bank loans to buy policies again popular with wealthy. Nat Underw (Life ed) 51:6 Ag 8 '47; Correction. 51.11 S 5 '47; Discussion. 51·5 Ag 22 '47
CIO's Mr Rich beats income tax. H. L. Lutz. Comm & Fin Chr 165:1245+ Mr 6 '47
Contemplation of death; an old bogey in a new light. L. M. Bregy. East Underw 48: 136+ pt 2 O 3 '47
Deferred compensation under employment contracts. R. W. Hamilton. East Underw 48 136 pt 2 O 3 '47
Federal tax problems confronting the mortgagor and mortgagee V. D. Edwards. Banking Law J 64·165-74 F '47
Foreign trade taxwisely; when should corporations be organized in the United States and when should they be formed abroad to do business in foreign countries? J. K. Lasser and H. Silverson. Dun's R 54:17-18+ D '46
How to minimize your taxes; analysis of capital gain and loss position. J A. Finley. Mag of Wall St 81:70-1+ O 25 '47
Ingenious taxpayer. Fortune 35:108-11+ F '47
Minimizing tax outgo through business policies in purchase and sale of property J. K. Lasser. J Account 84 106-12 Ag '47
Special aspects of deferred compensation problems. G. Simons. East Underw 48.18 Ap 11 '47
Use of trusts in federal estate tax planning. G. E. Ray and O W Hammonds. J Account 83:283-90 Ap '47

See also
Excess profits tax
Taxation, Exemption from

TAX exempt securities. See Taxation, Exemption from

TAX exemption. See Taxation, Exemption from

TAX manuals
Personalized tax manual for your corporation H. C. Weber. N A C A Bul 28:1280-5 Je 15 '47

TAX refunds
Treasury gives tax refund in portal suits. Comm & Fin Chr 165 786 F 6 '47

TAXATION
Coordinating federal, state, municipal taxes; with tabulation showing national income and total federal, state and local tax revenues, 1916-1946. J A Finley. Mag of Wall St 80 82-3+ Ap 26 '47
Tax policies for prosperity; address at University of Miami, B. Ruml Comm & Fin Chr 165 1933+ Ap 10 '47

See also
Capital levy
Debts, Public
Excess profits tax
Excise tax
Forest taxation
Gift tax
Income tax
Inheritance tax
Municipal taxation
Sales tax
Tariff
Tariff (export duties)
Window tax
also subdivision Taxation under special subjects, e g
Banks and banking
Cooperative associations
Corporations
Gasoline
Insurance companies
Public utilities
Railroads

Accounting
Our real difficulties in understanding tax problems C Gruneberg bibliog J Account 83:35-47 Ja '47
Tax clinic J K. Lasser, ed. J Account 83: 57-61 Ja '47 [cont monthly]

See also
Income tax—Accounting

Law
How to write a tax bill. Bsns W p 18-20 Ag 2 '47
Our real difficulties in understanding tax problems. C. Gruneberg. bibliog J Account 83 35-47 Ja '47
State court actions; decisions on federal tax liability of parties to state proceedings. C Fairman. bibliog J Account 83:150-1 F '47

Social aspects
Randolph Paul's tax philosophy; how taxation is used as a social tool R Magill. J Account 83:402-4 My '47

Australia
Taxation collections during fiscal 1946 increased. For Comm W 27:13 Je 7 '47

California
California banks may get big tax refund Bsns W p38 Ag 23 '47

Canada
Gasoline tax cut; Ottawa's plan to centralize income taxes Bsns W p80 D 28 '46
Tax bargain. Bsns W p117 N 23 '46

See also
Income tax—Canada

Cuba
Gross sales tax amended. For Comm W 29:14 O 18 '47

Czechoslovakia
Turn-over tax and license fees revised. For Comm W 26 18-19 Mr 15 '47

France
Twenty-five percent increase in National solidarity tax. For Comm W 29:18 O 25 '47

Germany
Post-war changes of direct taxes. For Comm W 28:17 Jl 19 '47

Great Britain
Britain's heavy taxation may have affected initiative of the people; results of survey. Iron Age 159:144 Ja 23 '47
Window tax L M Angus-Butterworth. Glass Ind 28:415-16 Ag '47

Illinois
Bills for tax reform reduce its popularity. Barron's 27:6 My 12 '47

Mexico
See also
Tariff (export duties) —Mexico

Netherlands
Sales-tax rates increased; new luxury tax established. For Comm W 28 21+ Ag 16 '47

New York (city)
High court rules stevedore tax invalid. Comm & Fin Chr 165:1570 Mr 20 '47

Philippine Islands
Sales and compensating taxes increased. For Comm W 25:40 N 30 '46

Puerto Rico
Puerto Rico spreads bounty for industry; tax exemption legislation. Barron's 27 36 Je 30 '47

Toledo, Ohio
Income taxing, Toledo and St Louis. Bsns W p51-2 Ap 26 '47

United States
American consumers to pay over 38 billion in taxes; Northwestern National survey. Weekly Underw 156 930 Ap 5 '47
Budget and federal taxes. I. Wright Comm & Fin Chr 165 2057+ Ap 17 '47
Budget and tax relief. Nat City Bank p27-31 Mr '47
Comments on sixteen proposals for revising federal taxes; a symposium. R. S Bock and others. J Account 83:463-76 Je '47
Current federal tax notes. S. J. Foosaner. Trusts & Estates 84:107-11 Ja '47 [cont monthly]
Design for our federal tax system. R. Magill. Comm & Fin Chr 164:3010+ D 12 '46
How to have your own foundation. Fortune 36 108-9+ Ag '47
Incentive tax F. W Main Bsns W p31-2 My 10 '47
Our federal tax problem. H. B. Fernald. Min Cong J 32:62 O '46
Our tax structure; an overhauling job needs to be done. Bsns W p39-46 F 1 '47
Outlook for tax revision. H. L. Lutz. Am Pet Inst Proc 26(1):110-14 '46; Same. Comm & Fin Chr 164:2457+ N 14 '46
Randolph Paul's tax philosophy; how taxation is used as a social tool R. Magill. J Account 83:402-4 My '47
Relief for an overtaxed economy. H. E. Humphreys, jr Comm & Fin Chr 164: 3352+ D 26 '46
Right kind of tax reduction. H. L. Lutz Comm & Fin Chr 166:1733+ O 30 '47
Safeguarding Nation's financial solvency; need of arousing public interest in taxation and government expenditures. J. W. Hanes. Comm & Fin Chr 166:1534+ O 16 '47
Second thoughts on taxes. Bsns W p17-18 N 30 '46
Sees $3 to $4 billion current surplus; taxes could be cut 20% to 30%. J. W. Hanes. Comm & Fin Chr 165:2064+ Ap 17 '47
Sound tax system; statement before Ways and means committee of the House. J. W. Snyder. Comm & Fin Chr 165:2739+ My 22 '47
Tax clinic. J. K. Lasser, ed. Published in monthly numbers of Journal of accountancy
Tax digest for investors and business men. B. V. Tornborgh. Published in Barron's
Tax duplication; a start toward a solution. Bsns W p 16 Ag 9 '47
Tax inequalities that need correction. J. A. Finley. Mag of Wall St 79:598-9 Mr 1 '47
Tax on enterprise E. O. Shreve. Comm & Fin Chr 166:1649+ O 23 '47
Tax picture at Washington. C. T. Curtis. Comm & Fin Chr 165:1128+ F 27 '47
Tax program for a solvent America; Committee on postwar tax policy supplementary report J Account 83:355-6 Ap '47
Tax reduction a deflationary influence; battle for take home pay would be less intense if levies fell. V. C. Smith. Barron's 27:7 S 1 '47
Tax relief program for 1948. H. Knutson. Comm & Fin Chr 165:2654 My 15 '47

TAXATION—United States—*Continued*
Taxation for free enterprise. R. Magill Comm & Fin Chr 165:2194+ Ap 24 '47
Taxes destroy incentives. R. W. Babson. Comm & Fin Chr 165:3028 Je 5 '47
Taxes in the years ahead H A Bullis. Comm & Fin Chr 165·2333+ My 1 '47
Taxes now 1948's riddle Bsns W p 17 Je 21 '47
Trade and taxes after the war. R. C. Leffingwell. Comm & Fin Chr 165·861+ F 13 '47
Truman might still accept tax reduction next year. E. Blair. Barron's 27 10 Ag 25 '47
Truman's veto of tax bill sustained; with text of veto message. Comm & Fin Chr 165. 3241+ Je 19 '47
Vanishing paycheck; attacks CIO brochure. H. Lutz. Comm & Fin Chr 165:733+ F 6 '47
What business wants in the tax system R. Magill Comm & Fin Chr 165:740+ F 6 '47

See also
Corporations—Taxation
Excess profits tax
Excise tax
Income tax—United States
Tariff—United States

Bibliography
State and local finance and taxation; a bibliography of materials published, 1941-1946. D. C. Tompkins, comp. (Postwar bibliographies no 2) 98p pa $1 50 Univ. of Calif Bur. of public administration, Berkeley '46

TAXATION, Double
Double taxation of corporate profits; abstract. R. Goode. Comm & Fin Chr 164: 3029 D 12 '46
Tax convention between France and the United States signed. For Comm W 25:24 N 9 '46
Treaty relieves British insurers of double tax. Nat Underw 51:3 F 13 '47

TAXATION, Exemption from
Co-op tax exemption, a threat to free enterprise. P W. Shafer. Pub Util 40:267-77 Ag 28 '47
Exemption of security interest from income taxes in the United States; an economic and statistical analysis. L. Derrick. bibliog J Bsns 19 pt 2:1-81 O '46
Interest received on notes before transfer to corporation exempt from income tax Banking Law J 64:703-7 S '47
Nonprofit profits; New York university gets big stake in Mueller co ; earnings tax-free Bsns W p89-90 O 18 '47
Puerto Rico spreads bounty for industry, tax exemption legislation. Barron's 27:36 Je 30 '47
Tax exemption feature alone no longer assures success for bond offerings. Barron's 27·26 Ag 4 '47
Why yields on tax-exempt bonds should increase. C. P. Burgess. Comm & Fin Chr 164·2760+ N 28 '46

See also
Cooperative associations—Taxation

TAXATION, Municipal. See Municipal taxation

TAXATION, State
Coordinating federal, state, municipal taxes; with tabulation showing national income and total federal, state and local tax revenues, 1916-1946. J A Finley. Mag of Wall St 80:82-3+ Ap 26 '47
Income versus property taxation for state and local governments. H. M. Groves J Land & Pub Util Econ 22:346-51 N '46
New taxes for utilities; developments in state legislative sessions. B. Jones. Pub Util 39: 556-62 Ap 24 '47

TAXATION of securities

See also
Stock transfer tax
Taxation, Exemption from

TAXICAB insurance. See Insurance, Taxicab

TAXICABS
G I.'s taxis outlawed in Philadelphia. il Bsns W p19-20 Ap 12 '47

Radio equipment
Radio dispatching for taxicabs. il map Electronics 20:97-9 Mr '47
Radiotelephone licenses stay on short terms. Pub Util 39·43 Ja 2 '47
Two-way taxicab radio circuits. il Electronics 20·146+ Ap '47

TAXPAYERS' associations

See also
Governmental research associations

TAYLOR, Reese Hale, 1900-
Portrait. Bsns W p22 F 15 '47

TAYLORCRAFT, Inc.
New Taylorcraft firm may stay in Alliance. Aviation W 47·44 O 13 '47

TAYLORCRAFT aviation corporation
Court to weigh rival plans for Taylorcraft reorganization. A. McSurely. Aviation N 6:25 D 16 '46

TEA
Catechins of green tea A E. Bradfield, M Penney and W. B Wright. Chem Soc J p32-6 Ja '47
Positive weight control; electronic device flashes signals to govern adjustment of filling machine; Lipton tea co. il Mod Packaging 20·130-4 Mr '47

TEA industry and trade

Exhibitions
Tea centre; information center and exhibition hall for Empire tea bureau, London. il plan Arch Forum 87:104-7 Jl '47

China
Conditions in China's tea industry. For Comm W 28:28 Jl 19 '47
Kiangsi (China) tea trade facing depression. For Comm W 26:29 Mr 8 '47

Formosa
Tea production and exports, Taiwan (Formosa). For Comm W 28.21 Jl 5 '47

Great Britain
Tea prices and supplies. Economist 152.728+ My 10 '47
Trade in tea. Economist 153:380 Ag 30 '47

Netherlands Indies
Conditions in tea industry, Java and Sumatra For Comm W 27:22-3 Je 28 '47
Tea production, Netherlands Indies. For Comm W 28.25 S 6 '47

TEACHERS
Buffalo, N Y. teachers' strike. Mo Labor R 64:494-5 Mr '47
Miss O'Reilly of Slocum. il Fortune 35:128-31+ F '47

See also
College professors and instructors
Engineering colleges—Professors and instructors
Science teachers

Insurance requirements
Teachers held liable for student injuries; insurance to cover instructors under state law in Connecticut. Weekly Underw 155: 1200 N 16 '46

Pensions
Remarkable advance in providing retirement plans for college teaching staffs. R. M. Lloyd. Weekly Underw 155:1566 D 28 '46; Same abr. East Underw 47:14 D 27 '46

Salaries
Applications are invited; being a short guide to the teaching profession E. A. Rudge. Chem & Ind p207-8 Ap 19 '47
Industrialist sells higher wages for teachers; Lebanon steel foundry helps Lebanon schools. H. S. Bolan. il Sales Management 59:124+ Jl 15 '47
School teachers have widespread public sympathy; Gallup poll. Iron Age 159:107 Mr 13 '47

TEACHERS insurance and annuity association of America
$200 million assets; policyholders number 45,000 East Underw 48:7 Ap 18 '47

TEACHING
Forgotten man in higher education. A. A. Potter. J Eng Educ 37:777-9 Je '47

TEACHING—*Continued*
New avenues of classroom communication. M E Kramer. Ann Am Acad 250:41-52 Mr '47
Practical teaching credo. A. D. Topping. J Eng Educ 37:831-6 Je '47

See also
Education
Engineering colleges
Engineering education
Industrial education
Teachers
Visual instruction
also subdivision Study and teaching under special subjects, e.g Chemistry—Study and teaching

TEALL, Edward Nelson, 1880-1947
Sketch. Inland Ptr 118:71 Mr '47
Three Tealls were scholar-proofreaders. J. Lasky. Inland Ptr 119 74 Ag '47

TEALL, Francis Augustus, 1822-1894
Three Tealls were scholar-proofreaders. J. Lasky. Inland Ptr 119:74 Ag '47

TEALL, Francis Horace, 1850-1923
Three Tealls were scholar-proofreaders. J. Lasky. Inland Ptr 119:74 Ag '47

TEAMS' public liability insurance. See Insurance, Teams' public liability

TEARE, Benjamin Richard, jr, 1907-
George Westinghouse award por J Eng Educ 38 6-8 S '47

TEASER campaigns. See Advertising campaigns—Teaser campaigns

TECHNETIUM (element 43). See Chemical elements

TECHNICAL and scientific societies council of San Diego
Open meeting and science exposition. Chem & Eng N 24:2918 N 10 '46

TECHNICAL association of the pulp and paper industry
Abridgements from papers presented at annual meeting, New York, Feb. 25-28, 1946. Paper Ind 27:1894-902+; 28:114+, 284-95, 422+, 576+, 712+, 878+, 1043-6+, 1499-507 Mr-O '46, Ja '47
Abridgments from papers presented at annual meeting, New York, Feb 24-27, 1947. Paper Ind 28:1795-8; 29.100+, 271-81+, 712+, 879-82+, 1026+, 1204-10 Mr-My, Ag-N '47
Annual meeting, New York, Feb. 24-27. Oil Paint & Drug Rep 151:7+ Mr 3 '47
Annual meeting program. Paper Tr J 124:37-40 F 6 '47
Annual report of the secretary for 1946 R. G. Macdonald. Paper Tr J 124:84+ F 27 '47
Fall conference features plastics, Syracuse, Sept. 25-26 Chem & Eng N 25:2974 O 13 '47
Fall meeting, 4th, Alton, Ill. Oct. 23-24. Paper Tr J 125:48 O 30 '47
Fall meeting, New Orleans, Oct. 14-16. Paper Tr J 123:48-50 O 24 '46; Paper Ind 28: 1170+ N '46; Chem & Eng N 24:2919 N 10 '46
Fall meeting on plastics, pulp and paper; Syracuse, Sept. 25-26; abstracts of papers. Paper Ind 29:1004+ O '47
Meeting, 32d, New York, Feb. 24-27 Chem & Eng N 25:766-7 Mr 17 '47; Paper Ind 28: 1757-8+ Mr '47; Mod Packaging 20:159-60 Ap '47
Pacific section, midwinter meeting, Longview, Washington, Jan 14. Paper Ind 28:1616+ F '47
Regional meeting, Appleton, Wis. Sept. 3-5. Paper Ind 29:997-8+ O '47
TAPPI and APPMSA groups hold twin meetings, Asheville Paper Tr J 125.7+ O 16 '47
TAPPI looks forward. G W. E. Nicholson. Paper Tr J 124:80+ F 27 '47

TECHNICAL committee on packaging. See Federal specifications board—Technical committee on packaging

TECHNICAL education
Approved technical institutes; a handbook of information for vocational guidance officers, student advisors, etc. 47p pa 15c National council of technical schools, 839 17th st, NW, Washington 6, D.C. '47
Educational programs at research centers; navy electronics laboratory, in-service education R. Bennett. Science 106 283-4 S 26 '47
Industry's responsibility for technical education F. J. Curtis Chem Eng Prog 43: 389-90 Ag '47
New degrees for technologists; Parliamentary and scientific committee's proposals. Chem Age (Lond) 57:224-5 Ag 16 '47
Shortage of scientific and technical personnel; what industry is doing about it. K A. Meade Science 105:457-61 My 2 '47
Technical institutes, second annual survey. L. F. Smith. J Eng Educ 37:353-5 D '46
Technical institutes; third annual survey. L. F. Smith. Mech Eng 69:593-4 Jl '47
Training production specialists, LeTourneau technical institute. W. J Brooking. il Steel 120:114+ Ap 28 '47

See also
Aeronautic schools
Apprentices
Chemical education
Employees, Training of
Engineering colleges
Engineering education
Industrial education
Mining schools and education
Radio schools and training
Textile education
Trade associations—Educational work
Vocational education
also Massachusetts institute of technology

Engineering, science and management war training
Electric training for industry; war training programs conducted by the University of California in cooperation with the U.S. Office of education. C F. Dalziel and others. J Eng Educ 37:520-30 Mr '47

Great Britain
Applications are invited; being a short guide to the teaching profession. E. A. Rudge. Chem & Ind p207-8 Ap 19 '47
Colleges of technology and technical manpower. Engineer 184:133 Ag 8 '47
Technical colleges and research. Chem Age (Lond) 56:467-8 Ap 19 '47
Technical colleges need help; staff, laboratory space and equipment. J F. Yates. Elec R (Lond) 140:275-6 F 7 '47
Technical education in England and Wales. C. F. Partridge. Inst E E J 94 pt 1:99-102 F '47
Whitworth scholarships. Engineering 163:385-6 My 9 '47

TECHNICAL institutes. See Technical education

TECHNICAL libraries
Intelligence group in a technical team. R. E. Stradling. Assn of Sp Lib & Inf Bur Proc 1946:27-33

See also
Aeronautic libraries
Business libraries
Chemical libraries
Medical libraries
also American standards association—Library; Engineering societies library, New York; United States—Technical services, Office of—Library

TECHNICAL literature
Bibliography compilation in technical fields. R. H. Hopp. bibliog Special Lib 37:291-3 N '46
Compendium of German technology. Chem & Eng N 25,1025 Ap 14 '47
Effect of atomic energy on scientific and technical publications. R. E. Peierls. Engineering 164:305, 318 S 26-O 3 '47
FIAT review of German science. R. L Kenyon. il Chem & Eng N 25.962-3 Ap 7 '47
Information service and the petroleum industry. B H Weil. bibliog Pet Refiner 26: 152+ F '47
Some aspects of the demand for British scientific and technical books for Europe. J. Lancaster-Jones. Assn of Sp Lib & Inf Bur Proc 1946.69-71
Technical book publishing in Europe, 1947; impressions from visits to eleven countries. J. S. Thompson. Science 106.47-53 Jl 18 '47; Excerpts. Mech Eng 69:849-51 O '47
Technical data at your fingertips? more indexing needed. M Bedinger. Power Pl Eng 51:67+ Je '47
World-wide responsibilities of technical book authors. J. S. Thompson. J Eng Educ 37: 373-7 Ja '47

See also
Technical periodicals
Technical writing
Technology—Bibliography

TECHNICAL periodicals
ASLIB microfilm service; the story of its wartime activities; with list of films available in the A.M.S. library. L. Moholy. J Doc 2.147-73 D '46
Our plant executives read industrial ads for profit; test proves these ads contain answers to many problems. V. P. Thomas. il Ptr Ink 217.37-9 D 6 '46
Study of reviewing mediums for technical books. M M. Field. Special Lib 37:324-6 D '46

Bibliography
Business papers and directories as sources of chemical market data. F. Waldo. il Chem Ind 60:970-2+ Je '47
Union list of technical periodicals in two hundred libraries of the Science-technology group of the Special libraries association. E. G. Bowerman, comp. 3d ed 285p pa $6 Special libraries assn, 31 E. 10th st, New York 3 '47

TECHNICAL products
See also
Equipment industries
Industrial market
Machinery industry

Advertising
Engineering advertising solves a problem; Trane company's institutional campaign. il Ind Marketing 32.43+ Je '47
Industrial advertising puts over war-developed product, engineers and purchasing agent had to be convinced that cost increases were valid; Truarc retaining rings. il Ptr Ink 219 43 My 30 '47
Memorability is important in industrial ads too, highlight company and product names. C. Graves. il Ptr Ink 218.46-7 Ja 31 '47
Number of inquiries doubled while cost per inquiry dropped 69%; Kimsul insulation. il Ptr Ink 218·49 F 14 '47
Power plant performance reports step up sales for Northern equipment company. D Allshouse. il Ind Marketing 32:46-7+ Ap '47
Transparency printing solves technical sales problem; Eaton axles. R. H. Gale. il Ptr Ink 217:56+ N 15 '46
What to do when customers don't know your story; Norton company direct mail folders. R A Reed. il Sales Management 58:102+ Mr 15 '47
See also
Bearings, Anti-friction—Advertising
Piston rings—Advertising

TECHNICAL schools. See Technical education

TECHNICAL service association
Organized commercial chemical development; introductory remarks. J. H. Boyd. Chem & Eng N 24:3314-15 D 25 '46

TECHNICAL services, Office of. See United States—Technical services, Office of

TECHNICAL societies
Technical co-ordination on an international basis in communication and allied fields. M. Deloraine Inst Radio Eng Proc 34:872-3 N '46

TECHNICAL workers
Colleges of technology and technical manpower. Engineer 184.133 Ag 8 '47
Position of technical personnel in Canada; supply and demand Pulp & Pa of Can 48.98-9 S '47
Predicts a shortage of technical manpower into 1949 or 1950; Westinghouse graduate student course. H. N Muller. Iron Age 160 208+ O 16 '47
Salaries of technical persons. Can Chem & Process Ind 30:90+ D '46
Scientists' union recognized by NLRB, election ordered; Shell development co. Nat Pet N 39·14 F 12 '47
Selection and placement of technical personnel. R. A Fear. Chem Eng Prog 43. sup 12-14 Ag '47
Shortage of scientific and technical personnel; what industry is doing about it. K A. Meade. Science 105.457-61 My 2 '47
Social and economic role of engineers and technicians J. H E. Fried. bibliog Int Labour R 55.512-37 Je '47
Strike with a difference; engineers and technicians on picket line. il Bsns W p98+ S 20 '47
Survey of professional openings. Can Chem & Process Ind 31·831-5 S '47
Union oil company's manufacturing department technical trainee program. W. K. Park. Pet Refiner 26·162 Ap '47
See also
Chemical workers
Electric workers
Engineers
Laboratory workers
Radio workers
Research workers
Telegraphers

TECHNICAL writing
Chemical report writing. S. J. Cook. Can Chem & Process Ind 30.43-5 N '46; Same. J Chem Educ 24:190-2 Ap '47
Footnote and fancy free; varied forms and practices for listing cited literature in technical periodicals J. A. Walter. J Eng Educ 37·356-8 D '46
Guide to authors; preparation of papers for publication in Illuminating engineering. Illum Eng 41:648-53 S '46
How to write and present an engineering paper R. C. Jordan. il diags Refrig Eng 53:1-8 sec 2 F '47
Style manual for Journal authors Am Water Works Assn J 39:473-88 bibliog(p484-5) My '47
Technical writing. D. S. Davis. Chem Eng 54·97 Ja '47
See also
Chemical writing
Engineering reports
Scientific writing

TECHNIFINISH laboratory, inc.
Challenge in films. Bsns W p46+ F 15 '47

TECHNOLOGY
Atom-taming equations turn to peace tasks; pure science, higher mathematics get bigger industrial roles. A. Lion. Barron's 27: 21 Ja 6 '47
Improving American production; utilization of German techniques. T. M. Odarenko. Mech Eng 69:149 F '47
Remarques sur le progrès technique. A Detœuf. Génie Civil 124:118-19 Mr 15 '47
Reports from Germany. Mech Eng 69:858-60 O '47
Science and the practical arts. J. B. Conant. Harvard Bsns R 25 no 4A:545-53 [O] '47
Technical knowledge and engineering progress; abstract. R. W. Bailey. Engineer 184: 89 Jl 25 '47
Technological gains and their uses. F. C. Mills. Science 105·220-3 F 28 '47
Technology and international relations. N. J. Padelford. J Eng Educ 37:751-8 Je '47
Technology imports from Germany; new world-trade opportunities. J. C. Green. il For Comm W 27·3-5+ My 3 '47
Today's efficiencies, tomorrow's wastes; much for chemistry and technology to do in making most efficient use of raw materials. C. M A Stine. il Chem Ind 59:824-6 N '46; Same. Chem & Eng N 25:307-8 F 3 '47
What happened to the dreamworld? to that thermoplastic, aerodynamic, supersonic, electronic, gadgetonic world the admen promised. il Fortune 35 90-3+ F '47
See also
Building
Ceramics
Chemistry, Technical
Concrete
Dyes and dyeing
Electric engineering
Engineering
Glass manufacture
Inventions
Machinery
Manufactures
Metallurgy
Paper making
Pottery
Printing
Radio communication
Railroad engineering
Rubber
Soap
Steel
Technical education
Textile industry
also International technical congress

Bibliography
Bibliography of scientific and industrial reports; U.S. Commerce department publication. L S. Thompson. J Doc 3:3-8 Je '47

TECHNOLOGY—Bibliography—*Continued*
Bibliography of scientific and industrial reports. Published weekly by U.S Dept. of commerce, Office of technical services. Free to government agencies and scientific societies; for sale by Supt. of doc. $10
German and Japanese technical reports. Chem Age (Lond) 56.729; 57 302 My 31, Ag 30 '47
German technical reports. Chem Age (Lond) 56:168, 384, 438, 626, 684 Ja 25, Mr 29, Ap 12, My 10, 24 '47
German wartime technical developments. Iron Age 157:67 Je 27; 158:39 Ag 29; 80 S 26; 67 O 10; 81 N 14 '46; 159:64 Ja 9; 70 Mr 6; 57 Ap 17; 160:66 Jl 3; 62 Jl 31; 77 O 9 '47
Index to bibliography of scientific and industrial reports. 3v v 1, 169p pa 50c; v 2, 89p pa 35c, v 3, 103p pa 35c Supt. of doc, Washington, D.C. '46
Reports on enemy science and technology. Can Chem & Process Ind 30:92+ N '46
Science and technology; a record of literature recently added to the Carnegie library of Pittsburgh. Published quarterly $1 a year. Carnegie lib of Pittsburgh, 4400 Forbes st, Pittsburgh 13 '46
Study of reviewing mediums for technical books. M. M. Field. Special Lib 37:324-6 D '46
Technical books of the month Published in monthly numbers of New York public library bulletin

Dictionaries

Dictionary of technical terms. F. S. Crispin. 7th ed rev 427p $2.75 Bruce publishing co, 540 N Milwaukee st, Milwaukee 1 '47
Russian-English technical and chemical dictionary L I. Callaham. 794p $10 John Wiley & sons, 440 4th av, New York '47
Technical dictionaries and glossaries. M. Gosset. Assn of Sp Lib & Inf Bur Proc 1946: 112-14; Discussion. 114-17

Social aspects

The machine, the worker, and the engineer. R. K. Merton Science 105:79-84 Ja 24 '47; Same cond. Chem & Eng N 25.362-5 F 10 '47
Security, freedom, and modern technology. W. Haber Ann Am Acad 249 152-9 Ja '47

TEETH
Histochemical demonstration of alkaline phosphatase in decalcified dental and osseous tissues. R. O Greep and others. Science 105 666 Je 27 '47
Shadowed replicas of ground sections through teeth D. B Scott and R W G. Wyckoff. bibliog Pub Health Rep 62 422-5, pl 1-8 Mr 21 '47
Specific surfaces of bone, apatite, enamel, and dentine. N V. Wood, jr. bibliog Science 105:531-2 My 16 '47
Variation in the molars of the living African elephant and a critical revision of the fossil proboscidea of southern Africa. H. B. S Cooke. bibliog il diags Am J Sci 245·434-57, 492-517 Jl-Ag '47

Diseases and defects

Carious tooth as a portal of entry for poliomyelitis H H. Reese and J G Frisch. Ind Med 16 145-6 Mr '47
Chemistry of tooth tissues. R. W. Phillips and G Van Huysen bibliog il diag J Chem Educ 23.579-81 D '46
Do certain drinking waters favor dental caries? H. Klein. Science 105·4-5 Ja 3 '47
Effect of topically applied sodium fluoride on dental caries experience; report of findings for the third study year. J. W. Knutson and W. D Armstrong. Pub Health Rep 61:1683-9 N 22 '46
Effect of topically applied sodium fluoride on dental caries experience; report of findings with two, four and six applications. J. W Knutson and others. bibliog Pub Health Rep 62·425-30 Mr 21 '47
Family and dental disease; caries experience among parents and offspring exposed to drinking water containing fluoride H Klein. Pub Health Rep 62 1247-53 Ag 29 '47
How to feed fluorine; Newburgh, N Y. experiment to determine effect of fluorine in water supply on tooth formation and protection. C. R. Cox. il Eng N 139·67-8 Jl 10 '47
Lactobacillus acidophilus counts in the saliva of children drinking artificially fluorinated and fluorine-free communal waters S B. Finn and D. B. Ast. bibliog Science 106· 292-3 S 26 '47
Present knowledge of the relation of nutrition to dental caries. Ind Med 16.202+ Ap '47
Should public water supplies be used for mass medication? adding fluorine to prevent tooth decay. A Wolman bibliog Am Water Works Assn J 39:834-41 S '47, Same Water & Sewage Works 94·327-30 S '47, Discussion Am Water Works Assn J 39 841-3 S '47, Water & Sewage Works 94.330-1 S '47
Simplified appraisal of dental-health programs J. W. Knutson and others. bibliog Pub Health Rep 62·413-22 Mr 21 '47
Water-borne fluorides and dental health; abstract H T Dean. Am Water Works Assn J 39 701-2 Jl '47

TEETH, Fossil
Measurement of variability and relative variability of teeth of fossil mammals G. G. Simpson Am J Sci 245:522-5 Ag '47

TEFLON
Heat resistant plastic insulator; Teflon. Iron Age 158·74 N 14 '46
High temperature seal for rotating shafts. F. B. Eastman and H O. McMahon. diags Chem Eng 54:157-8 My '47
Pyrolysis of polytetrafluoroethylene. E. E. Lewis and M A Naylor bibliog diag Am Chem Soc J 69·1968-70 Ag '47
Recent developments; polytetrafluoroethylene il Product Eng 18 [114-15] insert 2-3 Ap '47
Unique new plastic by du Pont, abstract. E B Yelton il Safety Eng 94.22+ Jl '47

TEHUANTEPEC, Isthmus of
Tehuantepec route rehabilitation undertaken by Mexico. C. S. Hill. il maps plans Eng N 137·734-7 N 28 '46

TELAUTOGRAPH corporation
Annual report Comm & Fin Chr 165.2180 Ap 21 '47

TELECOMMUNICATION. See Electric communication

TELEGRAPH
Radio versus line for communication systems A. H. Mumford. Inst E E J 94 pt 3 357-8 S '47; Same abr. Engineering 163.321 Ap 18 '47; Discussion. Inst E E J 94 pt 3: 358 S '47
Sunspots and telegraphy. C H. Cramer. il Elec Eng 66 557-60 Je '47
Synoptic review of electrical engineering progress, particularly during the last quarter century J D Ferguson. Inst E E J 94 pt 1 73-4 F '47
Tape relay system for radiotelegraph operation. S. Sparks and R. G Kreer. il map RCA R 8 393-426 S '47
Telegraphy; pony express to beam radio. G. C. Hillis. il diag Western Soc E J 51:135-47 S '46
Telephony and telegraphy; review of progress. W. G Radley. bibliog Inst E E J 93 pt 1:575 D '46; Same cond Engineering 163 441 My 23 '47

See also
Electric communication
Light telegraph
Radio telegraph
Teletype

Radio relays

Tape relay system for radiotelegraph operation. S Sparks and R. G. Kreer. il map RCA R 8 393-426 S '47

Rates

New telegraph bill ends government wire subsidy. Pub Util 40·107 Jl 17 '47
Western Union rates boosted 10 per cent. Pub Util 39 105 Ja 16 '47

Colombia

Telegraph service in Colombia to be improved. For Comm W 26:30 Mr 15 '47

TELEGRAPH, Light. See Light telegraph

TELEGRAPH, Submarine

Some modern techniques in ocean cable telegraphy. C H. Cramer. diags Elec Eng 66. 765-7 Ag '47

Stations

Cable station designed to make life bearable for American staff in tropical Guam. il plans diags Arch Forum 87:93-7 Jl '47

TELEGRAPH companies

See also
Western union telegraph company

Employees

Higher wages, a case study; Western union telegraph co. Bsns W p103 Ja 11 '47

Securities

New profit potentials for communication companies; with statistics on leading companies. W Beecher. il Mag of Wall St 80.319-21+ Je 21 '47

TELEGRAPH stations, Submarine. See Telegraph, Submarine—Stations

TELEGRAPHERS

Wire trouble; C I.O. and A.F L. telegraphers in jurisdictional fight. Bsns W p88+ Mr 8 '47

TELEMETERING

Airborne television telemetering. il Electronics 20.138+ F '47

Carrier controls lake water pumps over seven miles of cable circuit; U.S. sugar corp., Clewiston, Fla. W. A. Derr and others. il diag Elec World 128:66-9 Ag 2 '47

Data radioed back by V-2 rocket. Franklin Inst J 244.208 S '47

Electronic commutation for telemetering; for transmission over an F-M radio link during flight tests of new aircraft or on pilotless runs. L. L. Rauch. il diags Electronics 20.114-20 F '47

Electronic position pickup; used to transmit position of altimeter hand to distant station D. W. Moore, jr. il diags Electronics 20.100-1 Ja '47

Impedance bridge for flow-rate metering. F. J Curran. il diags Electronics 20:106-8 Ap '47

Improved method of transmission line fault location; Tobe Telemetroscope. il Elec World 127.130+ Mr 15 '47

Magslip transmission. il diags Engineer 183: 317-19 Ap 11 '47; Abstract. Elec R (Lond) 140:389 Mr 14 '47

Phantom pumper enables remote control of wells, tanks from a centralized panel L. S. McCaslin, jr. il diag Oil & Gas J 46 60-1+ Ag 2 '47

Radio equipment for a Canadian power system. Engineer 183:338 Ap 18 '47

Remote indication by a Wheatstone bridge system; telemetering system for automatic substation. I. M. E. Aitken. Inst E E J 94.pt 2.201 Je '47

Telemetering at United's Carthage plant. W. M. Moore. il diag Oil & Gas J 46.189-91 S 20 '47

Telemetering fathometer to secure continuous depth indications beneath remote-controlled pilotless ship. E. F. Kiernan il diags Electronics 20:96-8 O '47

Telemetering from V-2 rockets; time-modulated pulse system in nose samples instruments and transmits readings to ground station. V. L. Heeren and others. il diags Electronics 20.100-5 Mr; 124-7 Ap '47

TELEPHONE

Bell Telephone improves ceramic insulators. M. D. Rigterink. il Cer Ind 48.81-3 My '47

Design of speech communication systems for use in presence of noise. L. L. Beranek. bibliog diags Inst Radio Eng Proc 35:880-90 S '47

Radio versus line for communication systems. A. H Mumford. Inst E E J 94 pt 3:357-8 S '47; Same abr Engineering 163:321 Ap 18 '47; Discussion. Inst E E J 94 pt 3.358 S '47

Telephony and telegraphy; review of progress. W G. Radley. Inst E E J 93 pt 1:569-74 bibliog(49 titles, p576) D '46, Same cond. Engineering 163:402-3, 441 My 16-23 '47

See also
Electric communication
Electric lines—Inductive interference
Light telephone
Radio communication—Wire line connections
Radio telephone
Railroads—Telephone
Telephone, Carrier current

Apparatus and supplies

Development and design of colonial telecommunication systems and plant. C. Lawton and V H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47

Slow-acting relays. A. B. Smith and others. il diags Elec Eng 65:557-63 D '46

Dial telephone

See Telephone, Automatic

History

Aftermath and side lights to invention of the telephone. Pub Util 39:427-9 Mr 27 '47

Alexander Graham Bell, scientist. F. J. Mann. bibliog il diags Elec Eng 66:215-29 Mr '47

Fifty years of independent telephony. E. C. Blomeyer. Pub Util 40:413-24 S 25 '47

Graham Bell, pioneer; an era of outstanding developments in world communication Inst E E J 94 pt 1 269-74 Je '47

Growth of Mr Bell's idea; illustrations. Elec Eng 66:230-1 Mr '47

How Bell invented the telephone; address at annual meeting of AIEE in 1915. T. A. Watson il Elec Eng 66:232-6 Mr '47

Synoptic review of electrical engineering progress, particularly during the last quarter century J. D. Ferguson. Inst E E J 94 pt 1:74-6 F '47

Telephony in its pioneer era. E. L. Bowles. Tech R 49:397+ My '47

Where was the telephone invented? G. W. O. Howe. Wireless Eng 24:221-2 Ag '47

Installation

What about the telephone; built-in facilities for telephone wiring. il plan Am Bld 69: 132-3 F '47

International aspects

Modernization of the international telephone service, and its reaction on national telephone systems. E. P. G. Wright. bibliog map diags Inst E E J 94 pt 1:391-413 S '47: Abstract. Electrician 138:787 Mr 28 '47; Discussion. Inst E E J 94 pt 1:413-16 S '47; Electrician 138:787-8 Mr 28 '47

Laws and regulations

Murder by telephone; illegal use of telephone. F X Welch. Pub Util 39:543-9 Ap 24 '47

Long distance

Analysis of the problems of long-line telephone signalling; abstract and discussion. T. S. Skillman. Electrician 138:1385-6 My 23 '47

Automatic call ticketing in metropolitan telephone areas. J. E Ostline. il map Western Soc E J 52:3-13 Mr '47

Dial for distance. Bsns W p38+ Ap 19 '47

Modernization of the international telephone service, and its reaction on national telephone systems. E. P. G. Wright. bibliog map diags Inst E E J 94 pt 1:391-413; Discussion. 413-16 S '47

Study of the delays encountered by toll operators in obtaining an idle trunk. S. C. Rappleye. Bell System Tech J 25:539-62 O '46

Radio telephone connection

Mobile radio-telephone service links nation. F. E Butler. il diags Radio N 37:45-7+ My '47

Phone service on trains Electronics 20:246+ O '47

Rural radiotelephone experiment at Cheyenne Wells, Colo J. H. Moore and others. il map diag Elec Eng 66:346-8 Ap '47

TELEPHONE—*Continued*

Rates

Intrastate telephone toll charges need not be as low as interstate tolls; Northwestern Bell telephone company case. Pub Util 40:604-5 O 23 '47
Is the Two Rivers case a straw in the wind? Pub Util 40·441-2 S 25 '47
North Carolina leads way on rate increases. Pub Util 39:42 Ja 2 '47
Rate increases dot phone landscape. Pub Util 39:241 F 13 '47
Rate rise requests slacken across the country. Pub Util 39 169-70 Ja 30 '47
South Dakota telephone rates fixed on statewide basis. Pub Util 39:192 Ja 30 '47
Telephone companies lead march to higher rates. Pub Util 40·582-3 O 23 '47
What is ahead in telephone regulation D T. Swanson Pub Util 40:69-77 Jl 17 '47
Wisconsin commission abandons fairness test; Two Rivers case. E R Abrams. Barron's 27:30 S 29 '47
Wisconsin phone rate rise kills share-the-credit plan Barron's 27:34 O 27 '47
Wisconsin PSC abandons fair-return rate formula Elec World News ed 128.20 S 20 '47

See also
Radio telephone—Rates

Tables, calculations, etc.

Probability functions for the modulus and angle of the normal complex variate. R S. Hoyt. Bell System Tech J 26:318-59 Ap '47

Argentina

Telephone information about Argentina. Inst E E J 94 pt 1.406 S '47

Belgium

Telephone information about Belgium. Inst E E J 94 pt 1:407 S '47

Bolivia

Bolivian power co. gives up phone business. For Comm W 26:31 Mr 1 '47

Colombia

Bogota phone installation threatened by lack of funds For Comm W 26:29 Mr 15 '47
Colombia acts to centralize telecommunications activities For Comm W 28·31 Jl 26 '47
Rates vary, service suffers, in Colombia's phone set-up. For Comm W 27:30 My 3 '47

Denmark

Telephone information about Denmark. Inst E E J 94 pt 1:407-8 S '47

Ecuador

Ecuadoran assembly raises Quito's telephone rates. For Comm W 26:30-1 Mr 1 '47

France

Telephone information about France. diag Inst E E J 94 pt 1:408-9 S '47

Great Britain

Colonial telecommunications; abstract. C. Lawton and V. H. Winson. Electrician 137: 1519-20 N 29 '46

Ireland

Eire has long-range plan to extend phone system. For Comm W 26:31 Ja 4 '47

Netherlands

Telephone information about the Netherlands Inst E E J 94 pt 1:409-11 S '47

Norway

Norway government out to buy private phone firms. For Comm W 26:23 Ja 11 '47

Paraguay

Paraguay nationalizes telephone system. For Comm W 28:27 Ag 9 '47
Paraguay paves way to expand its telecommunications. For Comm W 25:31 D 28 '46

Spanish Guinea

Telecommunications monopoly for Spanish Guinea. For Comm W 28:30-1 S 6 '47

Sweden

Telephone information about Sweden. Inst E E J 94 pt 1:411-13 S '47

Venice, Italy

Venice has success with prefabricated duct line. M. Stoppoloni il diags Elec World 126·80-1 N 23 '46

TELEPHONE, Automatic

Automatic call ticketing in metropolitan telephone areas J. E. Ostline. il map Western Soc E J 52:3-13 Mr '47
Calling-line identification in automatic telephone exchanges. G T. Baker. bibliog diags Inst E E J 94 pt 3·146-52 Mr '47
Dial for distance. Bsns W p38+ Ap 19 '47
Function of the director in automatic telephony R. Brough diags Inst E E J 93 pt 1:578-80 D '46
Modernization of the international telephone service, and its reaction on national telephone systems. E. P. G. Wright. bibliog map diags Inst E E J 94 pt 1.391-413; Discussion. 413-16 S '47
Stromberg-Carlson *XY* dial telephone system. H R. Reed. il diag Elec Eng 66:437-40 My '47

TELEPHONE, Carrier current

Cable carrier developments diags Elec Eng 66:650-6 Jl '47
Carryphone in service on Pennsylvania; portable inductive telephone. W. R Triem. il Ry Age 121:764-6 N 9 '46; Same. Ry Mech Eng 120:676+ D '46
Field tests on power-line carrier-current equipment. R. H. Miller and E. S. Prud'homme. diags Elec Eng 65:Trans 824-7 D '46
First three-phase rural carrier telephone. il Elec West 99·86-7 S '47
Highly - selective transmission - measuring equipment for communication circuits. D. G Tucker. bibliog diags Inst E E J 94 pt 3: 211-16 My '47; Same. Inst E E J 94 pt 2.247-52 Je '47
Modern power line carrier equipment. R. C. Cheek. il Power Pl Eng 51:81-3 Ag '47
New single-side-band carrier system B. E. Lenehan. bibliog diags Elec Eng 66 549-52 Je '47
Rural carrier telephony. J. M. Barstow and others. il diags Elec Eng 66:425-31 My '47
Talking by power wire; Pacific tel & tel co. inaugurates rural telephone service in Teanaway Valley, Wash R. E. Kistler. il diags Elec West 98:76-7 Ap '47
Two-way radio offers efficient communication at Pando. il Coal Age 51:98-9 N '46
Two-way shaft communications; Homestake mining company C. N Kravig and R. Tario. il Min Cong J 33:20-4 Ja '47

Broadcasting

See Radio broadcasting—Wired radio

TELEPHONE, Light. See Light telephone

TELEPHONE, Portable

Portable induction phone permits constant communication il Sci Am 176.125 Mr '47

TELEPHONE and general trust, limited

Statement of the chairman. A. Roger. Economist 152·478 Mr 29 '47

TELEPHONE cables

Engineering by crystal ball; Los Angeles Substructure committee. J. H. Collins. Pub Util 38:734-9 D 5 '46

Coaxial cables

High-frequency telephone cables; abstract. A. C Holmes. Inst E E J 93 pt 1·568 D '46
New methods for locating cable faults, particularly on high-frequency cables; applying pulse and frequency-modulation methods on wide-band coaxial telephone cables F F Roberts. il diags Inst E E J 93 pt 3: 385-95 bibliog(p393) N '46; Abstract. Engineer 181.222-3 Mr 8 '46; Discussion. Inst E E J.93 pt 3:395-404 N '46
Truck horse goes up a mountain; telephone company builds coaxial highway up Mount Wilson J. H. Collins. Pub Util 39:607-14 My 8 '47

TELEPHONE cables—*Continued*

Installation

Venice has success with prefabricated duct line. M. Stoppoloni. il diags Elec World 126:80-1 N 23 '46

Testing

New methods for locating cable faults, particularly on high-frequency cables; applying pulse and frequency-modulation methods on wide-band coaxial telephone cables. F F. Roberts. il diags Inst E E J 93 pt 3: 385-95 bibliog(p393) N '46, Abstract. Engineer 181:222-3 Mr 8 '46; Discussion Inst E E J 93 pt 3:395-404 N '46

Pilot-cable faults; method of localization on telephone type cables suspended beneath power lines. F. K Fowkes. diags Elec R (Lond) 141:392-3 S 12 '47

TELEPHONE calls, Employees'

Personal phone calls in the office, abstract. Management R 35:507-8 D '46

TELEPHONE companies

Fifty years of independent telephony. E. C. Blomeyer. Pub Util 40:413-24 S 25 '47

USITA men see bright future. Pub Util 40: 649-51 N 6 '47

See also American telephone and telegraph company; Anglo-Portuguese telephone company, limited; New England telephone and telegraph company

Accounting

Accounting implications of the New York telephone company decision. G. O. May. J Account 82:456-9 D '46

Another milestone in regulation; New York telephone company case G. O. May. J Land & Pub Util Econ 23:22-8 F '47

Should customer contributions be charged against the utility? M H Diels. Pub Util 40:354-64 S 11 '47

Emergency problems

Mutual assistance plan of Connecticut electric utilities and New England telephone company. W. A Upham. Edison Elec Inst Bul 14 425-6+ D '46; Same abr. map Elec World 126:62-4 D 21 '46

Employees

Company booklet helps employes explain shortages. il Sales Management 57:53 D 15 '46

C.I.O. rejected; phone workers vote for an independent, centralized union. Bsns W p85 Je 21 '47

Employees will share in Argentine telephone profits. For Comm W 26:21 F 15 '47

Fruits of defeat, N.F.T W phone strike. Bsns W p 102-4 Je 7 '47

Independents set; phone union's resurgence in fight against C.I O. Bsns W p92-3 S 6 '47

Key phone unions headed for CIO. Pub Util 40:581-2 O 23 '47

Long lines moves for CIO-CWA showdown. Pub Util 40:301-3 Ag 28 '47

NFTW forms one national union. Pub Util 38:758-9 D 5 '46

New Jersey law fought as phone strike continues. Elec World News ed 127:12 Ap 19 '47

New labor law and wire services; Taft-Hartley act. Pub Util 40:105-6 Jl 17 '47

New trends stem from telephone strike. Pub Util 39:700 My 22 '47

Settlement of telephone stoppage. Mo Labor R 64:1071-2 Je '47

Telephone unions gird for contract battles. Pub Util 38.827-8 D 19 '46

Telephone workers' union asks 30 per cent wage hike. Pub Util 39:106-7 Ja 16 '47

Tonic for seller's blues; Southern California telephone company gets out booklet to arouse employee pride. J. H. Collins. Pub Util 39 296-302 F 27 '47

You and business; Pennsylvania Bell Telephone's demonstration class. il Trusts & Estates 83:429-32 N '46

Finance

Chesapeake and Potomac telephone companies spending $38,500,000 in four states. il Manuf Rec 115:44-5+ N '46

Financing problems for the independents F. J. McDiarmid. Pub Util 40:211-16 Ag 14 '47

Robbing Peter to pay Paul? proposal of Joseph A. Beirne Pub Util 40:303 Ag 28 '47

Telephone companies spend many millions in South il Manuf Rec 116:36-7+ S '47

Telephone operations by months, 1944-1946; graph Pub Util 39:378 Mr 13 '47

Law

See also
Telephone—Laws and regulations

Management

Bell executive defines management trust. W. S Gifford. Pub Util 40 181-2 Jl 31 '47

Regulation

Shortages and the obligation to serve. C. S. Bailey. Pub Util 39:267-75 F 27 '47

What is ahead in telephone regulation. D T. Swanson Pub Util 40:69-77 Jl 17 '47

See also
Telephone—Rates

Securities

New profit potentials for communication companies; with statistics on leading companies. W. Beecher. il Mag of Wall St 80: 319-21+ Je 21 '47

Service

Tonic for seller's blues, Southern California telephone company gets out booklet to arouse employee pride. J. H. Collins. Pub Util 39.296-302 F 27 '47

TELEPHONE conversation

But where do you find such gals? how Los Angeles gas company trains girls for its telephone service bureau. J. R. Collins. Pub Util 39 73-9 Ja 16 '47

How to treat telephone callers courteously. Bankers Mo 64:164 Ap '47

Telephone pests I have known. H. Little Pub Util 39:159-63 Ja 30 '47

Recording devices

See Telephone recorders

TELEPHONE directories

See also
Advertising mediums —Telephone directories

TELEPHONE exchanges

Calling-line identification in automatic telephone exchanges. G. T. Baker. bibliog diags Inst E E J 94 pt 3.146-52 Mr '47

Emergency telephone power. F. K. Rowe. il Diesel Power 25.64-7+ F '47

Study of the delays encountered by toll operators in obtaining an idle trunk. S. C. Rappleye. Bell System Tech J 25:539-62 O '46

TELEPHONE in business

Increasing insurance by telephone. W. W. Hargert. Rough Notes 90:34+ Ja '47

Phone conferences grease sales wheels for Pierce. S. Zanditon. Sales Management 58: 78+ Ja 1 '47

TELEPHONE lines

Development and design of colonial telecommunication systems and plant. C. Lawton and V H. Winson. diags Inst E E J 94 pt 3:229-44; Discussion. 251-9 Jl '47

See also
Telephone cables

Inspection

Air rescue of phone cables. il Bsns W p24+ Je 21 '47

Protection

Remote hi-line telephone protection. G. G. Mendenhal. il plan diag Elec World 128: 112+ Jl 19 '47

See also
Electric lines—Inductive interference

Rural service

See Telephone service, Rural

TELEPHONE operators
But where do you find such gals? how Los Angeles gas company trains girls for its telephone service bureau. J. R. Collins. Pub Util 39:73-9 Ja 16 '47
Phone girl is big asset. Nat Underw 50:5 D 26 '46

TELEPHONE rates. See Telephone—Rates

TELEPHONE receivers
Attachment for the telephone that is often useful il Consumers Res Bul 20.30-1 O '47

TELEPHONE recorders
Not-at-home device records phone messages; Ipsophone. Elec World 127:82+ Mr 1 '47
Robot telephone; Swiss-invented Ipsophon L Laden il diag Radio N 38.39-41+ Ag '47
Telephone recording; electronic dictating machines can be used to record telephone conversations K. L. MacIlvain. diags Electronics 20:89 Ag '47
What to do about the tattle-tale telephone. L. D. Farrar. Pub Util 38·725-33 D 5 '46
What voice recording can do in the power industry G W. Dyson. il Power Pl Eng 51: 102-3 Jl '47

TELEPHONE rentals, limited
Annual general meeting, London. Economist 153:542 S 27 '47

TELEPHONE service, Rural
Contract made for joint use of power facilities, Texas co-op and Southwestern Bell co. make five-year agreement. Elec World 128: 46 S 27 '47
Does the farm living standard demand a telephone? open sessions of Agriculture committee of the House. Pub Util 39:782 Je 5 '47
Farm telephony is going ahead. F. X Welch. maps table Pub Util 39:406-12 Mr 27 '47
First three-phase rural carrier telephone. il Elec West 99·86-7 S '47
Rural carrier telephony J M. Barstow and others. il diags Elec Eng 66:425-31 My '47
REA and A.T.& T. agreement fixes joint use of facilities Elec World News ed 127: 13 Je 28 '47
REA-Bell system reach rural phone agreement. Pub Util 40:37-9 Jl 3 '47
REA telephone bill pops up again. Pub Util 39:499-500 Ap 10 '47
Rural electrification and electroagriculture. M. M Samuels. Elec Eng 66:25 Ja '47
Rural radiotelephone experiment at Cheyenne Wells, Colo. J. H. Moore and others. il map diag Elec Eng 66 346-8 Ap '47
RTA proposal is rapped at NARUC convention. W. F. Whitney. Pub Util 38:826-7 D 19 '46
Talking by power wire; Pacific tel. & tel. co inaugurates rural telephone service in Teanaway Valley, Wash. R. E. Kistler. il diags Elec West 98.76-7 Ap '47
Texas leads parade to rural telephony, first approved contract between REA co-op and privately owned telephone company. Pub Util 40 512-13 O 9 '47

TELEPHONE switchboards
New telephone installation at Bouverie house. il Electrician 139:767 S 12 '47

TELEPHONE workers. See Communications workers of America; Telephone companies —Employees; Telephone operators

TELEPHONE workers, National federation of. See National federation of telephone workers

TELERAN. See Television aids to aviation

TELESCOPE
Effect of magnification on the precision of indoor telescope pointing F. E. Washer. bibliog il J Res Nat Bur Stand 39 163-71 Ag '47
Focal plane diffraction anomalies in telescopic systems. A. I. Mahan bibliog il diag Opt Soc Am J 37·852-67 O '47
Giant telescope of Palomar. il diags Fortune 35·120-1 Ja '47
Interferometer studies of telescopic systems. H. S Coleman and others. il diags Opt Soc Am J 37 671-84 S '47
Maksutov telescopes. il diags Sci Am 177: 188-91 O '47
Photographic measurements of atmospheric boil. L. A. Riggs and others. bibliog il Opt Soc Am J 37 415-20 Je '47
Reduction in image contrast caused by the aberrations in telescopic systems. H S. Coleman. Opt Soc Am J 37 684-6 S '47
Stray light in optical systems. H. S. Coleman. il diags Opt Soc Am J 37.434-51 Je '47
Telescope objective without spherical aberration for large apertures, consisting of four crown glass lenses. G. S. Fulcher. Opt Soc Am J 37:47-54 Ja '47
Telescoptics; Draper machine. D. Broadhead. il diags Sci Am 177.45-8, 93-5 Jl-Ag '47

Mirrors

Broadhead thin mirrors A G. Ingalls. il diag Sci Am 176 283-6 Je '47
Telescoptics; cerium oxide for polishing. A. G. Ingalls. Sci Am 176:189-92 Ap '47
Telescoptics; mirror thickness A. G. Ingalls. il Sci Am 176.235-8 My '47
Telescoptics; pencil mark test A. G. Ingalls. Sci Am 176·47-8 Ja '47

TELESCOPE spectacles. See Spectacles, Telescope

TELETYPE
Customer specifications teletyped to assembly; Kaiser-Fraser corporation, Willow Run, Mich H J. Bustetter il Factory Management 105·86-8 Je '47
Photoelectric transmitting typewriter used in air traffic control. G. L. Bush il diags Electronics 20 96-9 Ap '47
Tailor-made cars by teletype; production scheduling at Dodge plant of equipment and combinations of body types, colors, accessories and other options. J. Geschelin il Automotive Ind 97.32-3+ Jl 15 '47
Telegraph writer permits inexperienced operator to send clear, rapid code. il Sci Am 177·36-7 Jl '47
Two-way teletype in air. diag Electronics 20·168+ Ap '47
Use of teletype in industry. F. E. D. McDowell Pulp & Pa of Can 48:60 Mr '47
Weatherproofed communications; CAA's radio teletype weather information for Alaskan aviation. L. LeKashman. il Aero Digest 53: 56+ N '46

TELEVISION
After the turn of the year; 1947 outlook. D. Sarnoff. Comm & Fin Chr 165:466+ Ja 23 '47
Analysis of lengthening of modulated repetitive pulses S. C. Kleene. diag Inst Radio Eng Proc 35 1049-53 O '47
Progress in television. G R Town bibliog il diags Elec Eng 66:580-90 Je '47
Radio progress during 1946, television bibliog Inst Radio Eng Proc 35:418-20 Ap '47
Silicate phosphors for cathode-ray tubes P. N. Campbell Soc Chem Ind J 66·191-4 Je '47
Television V. K Zworykin il diags Franklin Inst J 244·131-45 Ag '47
Television; a review of present status. E. W. Engstrom and R. D. Kell. Elec West 97: 82-3 O '46
Television goal; Chicago plans campaign. il Bsns W p50 N 30 '46
Television; problems and prospects. D Horton. il Dun's R 55:18-20+ Ag '47
Television, retrospect and prospect. V K. Zworykin il Tech R 49·333-6+ Ap '47
Television; the next great American industry. E. A. Nicholas Comm & Fin Chr 166: 329+ Jl 24 '47
Television via light beams il R Sci Instr 18:253-5 Ap '47

See also
Moving picture theaters—Television
Radio facsimile

Bibliography

Bibliography of technical papers by RCA authors, 1929-1946. RCA R 7:641-52 D '46
Radio broadcasting and television; an annotated bibliography. O. Rose, ed. p93-7 H. W. Wilson co, New York '47

Color

All-electronic color television. il diags Electronics 19:140+ D '46

TELEVISION—Color—*Continued*
Color television electronically produced by splitting light beams diag Sci Am 176: 269 Je '47
Color television. will it make tomorrow's biggest media news? Sales Management 58·131 Ja 15 '47
Colorimetry in television. W. H. Cherry. bibliog diag RCA R 8:427-59 S '47
C.B S. and two glimps; DuMont and color video. Adv & Sell 40:116 Ja '47
CBS tells FCC color will enhance video appeal. Ptr Ink 217.112 D 13 '46
Experimental simultaneous color-television system. R. D Kell and others bibliog il diags Inst Radio Eng Proc 35 861-75 S '47
FCC denies CBS petition for sequential color television. Electronics 20:150+ My '47
FCC views television advances. il diags Electronics 20:80-1 Mr '47
New color video; RCA's all-electronic unit. il Bsns W p36+ N 9 '46
Progress in television. G. R Town. diags Elec Eng 66:588-90 Je '47
Simultaneous all-electronic color television; progress report. il diags RCA R 7:459-68 D '46
Television bigwigs battle over color, but 35-year-old FCC head steals the show. Ptr Ink 218:93 F 14 '47
Television color transmitted electronically. il diags Sci Am 176.10 Ja '47
Television industry awaits FCC color ruling. Ptr Ink 218.86 F 21 '47
Two systems of color. D. G. Fink. il diag Electronics 20·72-7 Ja '47
What's behind color television? il diag Machine Design 19·114 Ag '47

Industrial applications

Hell Gate boiler operator observes water level by television. il Power Pl Eng 51:130 Ap '47
Remote viewer represents television's entry into industry; Utiliscope. il Sci Am 176:126 Mr '47
Simplified television for industry. R. E. Barrett and M M Goodman il diags Electronics 20·120-4 Je '47
Television enters utility field; Utiliscope shows water level in boiler remotely located. il Am Gas Assn Mo 29:71+ F '47
Television system for industrial applications. il diags Electronics 20.138+ My '47

Rates

First commercial television rates set by A T. & T. Barron's 27:33 Je 16 '47

Sound transmission

Carrier-difference reception of television sound. R. B Dome. il diags Electronics 20.102-5 Ja '47

France

Developmental television in France. il Electronics 20:188+ Jl '47
Les récents progrès de la télévision en France. Génie Civil 124:97-9 Mr 1 '47

Great Britain

Developments in television, United Kingdom. For Comm W 29·29 O 4 '47

Russia

Soviet television scheduled to boom under postwar five-year plan. il Bsns W p 100-1 Ag 16 '47

TELEVISION advertising
Ad man experiments with television advertising. E Franklin. Adv & Sell 40.46 Ja '47
Agencies, sponsors push video activity; 500,000 new sets to follow FCC ruling D. Bruner. Ptr Ink 218:84+ Mr 28 '47
Annual advertising awards, 1946; television distinguished service. Adv & Sell 40:33 Mr '47
Can advertising support large-scale television? No! E F. McDonald, jr.; Yes! P. B. Mowrey. il Ptr Ink 218·44-6+ F 21 '47
Color television: will it make tomorrow's biggest media news? Sales Management 58: 131 Ja 15 '47
Commercials that click on television sports programs. D. Horton and H. V. Barrett. il Ptr Ink 221.46-7 O 24 '47
Film your television before putting it on the air. T. R. Cox, jr. il Adv & Sell 40. 50 My '47
General Foods' television committee; what it is, how it operates. H M. Chapin. Sales Management 58:65 My 1 '47
How A.M.A. uses television in its public relations H. Cushing. il Adv & Sell 40:41+ Ap '47
How Esso selected a subject for television commercials. J. R. Allen. il Ptr Ink 220:46 S 19 '47
News and sports films most popular for television use by agencies and stations. L. F. Thomann Ptr Ink 219·96 Ap 4 '47
Selling by sight over the air. il Sales Management 59 74-5 N 1 '47
Television prospects. H C. Bonfig. Comm & Fin Chr 165·403+ Ja 23 '47
12 steps for beginners in television advertising L H. Foster. il Ptr Ink 221:46-7 O 17 '47

Premium offers

Television premium offer. il Ptr Ink 218:37 F 28 '47

TELEVISION aids to aviation
Teleran; air navigation and traffic control by means of television and radar. D. H. Ewing and R. W K. Smith. diags RCA R 7.601-20 D '46
Teleran system of air navigation and traffic control; abstract. L. F. Jones. Aeronautical Eng R 5:24-5 D '46
See also Television apparatus on aircraft

TELEVISION antennas
All-wave television FM antenna. il Radio N 38 49+ O '47
Biconical television antenna il Elec Eng 66· 1011 O '47
Design and performance of receiving aerials for television; discussion Inst E E J 94 pt 3.345-6 S '47
Dipole with unbalanced feeder. D. A. Bell. diags Wireless Eng 24.3-5 Ja '47
Folded dipole fm and television antenna. il diags Radio N 37:84+ Ap '47
Slotted-cylinder antenna. E. C. Jordan and W. E Miller il diags Electronics 20:90-3 F '47
Television antenna installation. S. Rubin. diag Radio N 37:128 Ap '47
Television antenna problem. il Electronics 20:88-9 Ap '47
Television antennas for apartments. il diags Electronics 20.96-102 My '47
Television installation. W. W. Waye il diag Radio N 38:44-6+ S; 54-6+ O; 56-8+ N '47 (to be cont)
Television receiver antenna. J. J. Teevan. il Radio N 36:29+ D '46
Triplex antenna for television and f-m. L. J. Wolf. il diags Electronics 20:88-91 Jl '47

TELEVISION apparatus
Bandwidth and speed of build-up as performance criteria for pulse and television amplifiers. D. G. Tucker. bibliog Inst E E J 94 pt 3:218-26 My '47
Electron beam deflection. R. G. E. Hutter. bibliog il diags J Ap Phys 18:740-58, 797-810 Ag-S '47
High-impedance cable. H. E. Kallmann. diags Inst Radio Eng Proc 34:348-51 Je '46; Discussion. 35:1097-100 O '47
Image formation in cathode-ray tubes and the relation of fluorescent spot size and final anode voltage. G. Liebmann. bibliog diags Inst Radio Eng Proc 33.381-9 Je '45; Discussion. 34:580-6; 35:791 Ag '46, Ag '47
Linear sweep circuits. R. P. Owen. diags Electronics 19:136+ D '46
Magnetic-deflection circuits for cathode-ray tubes O. H. Schade. diags RCA R 8:506-38 S '47
Magnetic deflection of kinescopes. K. Schlesinger il diags Inst Radio Eng Proc 35: 813-21 Ag '47
Memory tube; pattern is produced, stored, and scanned on dielectric screen by electron beams. A V. Haeff. il diags Electronics 20: 80-3 S '47
New techniques in synchronizing-signal generators. E. Schoenfeld and others. diags RCA R 8:237-50 Je '47

TELEVISION apparatus—*Continued*
New uses for pentagrids. A. H. Taylor. diags Electronics 19:142+ D '46
One-kilowatt frequency-modulated magnetron for 900 megacycles. J. S Donal and others il diag Inst Radio Eng Proc 35:664-9 Jl '47
Parallel plate optics for rapid scanning S. B Myers. diags J Ap Phys 18.221-9 F '47
Transient response of v.f. couplings; compensated networks for wide-band amplifiers. W. E. Thomson. bibliog diags Wireless Eng 24:20-7 Ja '47

See also
Television antennas
Television cameras
Television receiving apparatus
Television transmitters

Manufacture

Gas heat speeds production of electron tubes. il Glass Ind 28·75-7 F '47

Power supply

R f. power supplies. J. C McGuire il diags Radio N 37:51+ Je '47
Television high voltage r-f supplies. R S. Mautner and O H. Schade. il diags RCA R 8.43-81 Mr '47
Voltage-regulated power supplies. L. Mautner. bibliog diags Elec Eng 66·894-900 S '47

Testing

Square-wave response; nomograph A. J. Baracket. Electronics 20 130 Ag '47
Television test equipment facilitates production. il Elec World News ed 126·21 N 16 '46

TELEVISION apparatus industry
Television set makers entering volume phase. J. P. Lynch. Barron's 27 33-4 S 15 '47
Television set makers get signal to go ahead. Barron's 27:30 Mr 24 '47

Securities

Television, here at last? investment or speculation; with earnings and dividend record of leading companies E A. Barnes. il Mag of Wall St 80:475-6+ Ag 2 '47

TELEVISION apparatus on aircraft
Airborne television telemetering. il Electronics 20:138+ F '47
Television equipment for aircraft. M. A. Trainer and W. J. Poch. il diags RCA R 7:469-502 D '46
Television takes to the air; systems which will be used for airborne on-the-spot news coverage J. McQuay. il diags Radio N 37: 57-9+ F '47

TELEVISION broadcasting
CBS agreement covering four eastern stations may be basis for new television network. D. Bruner. Ptr Ink 221.190 O 31 '47
Effect of time element in television program operations. H. R. Lubcke. il Soc Motion Picture Eng J 48:543-7 Je '47
Interconnecting facilities for television broadcasting. W. E. Bloecker. il diags Electronics 20:102-7 N '47
London-Birmingham television link. Engineering 163.518 Je 20 '47
Network video via microwave; G.E. service between New York and Schenectady. il Bsns W p66 O 4 '47
Networks for television. J McQuay. il maps Radio N 38:39-41+ N '47
Progress in television. G. R. Town. bibliog il diags Elec Eng 66:580-90 Je '47
Sponsor becomes a television showman R. V. Fuchs and L. Wisser. il Ptr Ink 220.36-7 Ag 8 '47
Television network facilities. L. G. Abraham and H. I. Romnes. il map diag Elec Eng 66. 477-82 My '47
Television takes to the air; systems which will be used for airborne on-the-spot news coverage. J. McQuay. il diags Radio N 37: 57-9+ F '47
Television via light beam; Photovision. il Bsns W p66 D 7 '46
Television's audience problem. il Bsns W p70-1+ S 13 '47
Very-high-frequency and ultra-high-frequency signal ranges as limited by noise and co-channel interference. E. W. Allen, jr. bibliog maps diags Inst Radio Eng Proc 35: 128-36; Discussion. 136-52 F '47
Video worry Bsns W p58-9 Ag 16 '47

Finance

Zenith unveils plan to make video pay. Bsns W p 16 Jl 12 '47

Moving pictures

Film projectors for television. R V. Little, jr. bibliog il diags Soc Motion Picture Eng J 48.93-110 F '47

Sports programs

Commercials that click on television sports programs. D. Horton and H. V. Barrett. il Ptr Ink 221·46-7 O 24 '47

TELEVISION cables
Networks for television; use of coaxial cable. J. McQuay. il maps Radio N 38.39-41+ N '47

TELEVISION cameras
Iconoscope. M S Kiver. il Radio N 38 90+ N '47
Image-orthicon camera Mech Eng 69.782 S '47
RCA develops new television camera. Elec Eng 66:936 S '47
Television camera tubes. H. J Seitz bibliog il diags Radio N 38.46-8+ O '47

TELEVISION interference. See Television transmission—Interference

TELEVISION projection
Method of computing correction plate for Schmidt system for near projection, with special reference to system for television projection. H S. Friedman. diags Opt Soc Am J 37:480-4 Je '47
New television projection system. W. E. Bradley and E. Traub. il diags Electronics 20 84-9 S '47
Optical techniques for improving television pictures il Electronics 20.188+ Je '47
Reflective optical system for projection television V. K. Zworykin. il diags Radio N 38 54-6+ S '47

TELEVISION receiving apparatus
Application of I.C.I. color system to development of all-sulfide white television screen. A. E. Hardy bibliog RCA R 8·554-63 S '47
Build your own television receiver, construction details L S. Wecker and T. Gootée. il diags Radio N 38·45-8+ Ag '47
Carrier-difference reception of television sound. R. B. Dome. il diags Electronics 20 102-5 Ja '47
Economics and subjective requirements of television picture sizes, discussion. Inst E E J 94 pt 3:228 My '47
Experimental cathode ray tubes for television. il diags Electronics 20:112-15 Mr '47
Learn as you build, complete construction details for experimental type television receiver A. Liebscher. il diag Radio N 38: 39-42+ S '47
Magnetic deflection of kinescopes. K. Schlesinger. il diags Inst Radio Eng Proc 35.813-21 Ag '47
Molding television lens; abstract. R. V. Beshgetoor. Mod Plastics 24 121 F '47
New television projection system. W. E. Bradley and E. Traub. il diags Electronics 20 84-9 S '47
Optical system for television sets; projection-type receivers. il Glass Ind 28:129+ Mr '47
Postwar television receivers. D. W. Pugsley. il diags Elec Eng 66:249-53 Mr '47
Pulsed rectifiers for television receivers. I. G. Maloff il diags Electronics 20:110-11 Ag '47
Reflective optical system for projection television. V. K. Zworykin. il diags Radio N 38:54-6+ S '47
Super radio set; RCA radio-phono-video combination. Bsns W p21 Jl 26 '47
Television deflection circuits; transformer and yoke cores molded from powdered iron. A. W. Friend. il diags RCA R 8.98-138 Mr '47
Television equipment for aircraft. M. A. Trainer and W. J. Poch. il diags RCA R 7:469-502 D '46

TELEVISION receiving apparatus—*Continued*
Television receiver antenna. J. J. Teevan. il Radio N 36:29+ D '46
Television receivers. A. Wright. il pl diags RCA R 8.5-28 Mr '47
Television receivers in mass production. il diags Electronics 20:86-91 Je '47
Television set fee added to rates in Norwich, Conn. Elec World 127.106 My 24 '47
Transmission line systems for FM and television home receivers. C. Spear il diags Radio N 37·44-6+ F '47
Visual alignment of television receivers. M H. Kronenberg il diags Radio N 38 64-5+ Ag '47

Advertising

Television use taught at point of sale. Ptr Ink 219:92+ My 23 '47

Installation

Television installation. W. W. Waye. il diag Radio N 38.44-6+ S; 54-6+ O; 56-8+ N '47 (to be cont)

Manufacture

Television comes of age; assembly-line production adapted by RCA. il plan Am Mach 91:98-101 S 25 '47
Television production line; RCA Victor plant. il Electronics 20:132+ O '47

Power supply

Television deflection circuits; combined low-loss horizontal deflecting and high voltage power supply systems. A. W. Friend. diags RCA R 8:115-38 Mr '47

Repair

Micrometer tuning signal generator. S. Miller. il diag Radio N 37:57-9+ My '47
Servicing of radio and television receivers R. C G. Williams. Inst E E J 94 pt 3:11-19 Ja '47
Servicing television receivers. P H. Wendel. il Radio N 38:43+ S '47
Sweep-frequency signal generator. R. Endall. il diags Radio N 37:47-50+ Je '47

Testing

Special applications of ultra-high-frequency wide-band sweep generators J. A. Bauer. il diags RCA R 8:564-75 S '47
Wide-range sweeping oscillator. il diags Electronics 20.112-15 Ag '47

TELEVISION reception
Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton. bibliog J Ap Phys 17:940-71 N '46

TELEVISION relay stations
Experimental cathode ray tubes for television. il diags Electronics 20:112-15 Mr '47
Interconnecting facilities for television broadcasting W. E. Bloecker. il diags Electronics 20:102-7 N '47
Microwave television relay system between New York and Schenectady. il diag Electronics 20:152+ N '47
Networks for television. J. McQuay. il maps Radio N 38:39-41+ N '47
Radio relay link for television. il Engineer 183·561 Je 27 '47; Elec R (Lond) 140:984 Je 13 '47; Electrician 138:1593-4 Je 13 '47
Television radio links; demonstration of retransmission over distance of 24 miles. il Electrician 138:1769 Je 27 '47
UHF television relay system; wideband frequency-modulation equipment. W. Boothroyd. il diags Electronics 20:86-91 Mr '47

TELEVISION studios
Pocket ear; pocket type radio with tube for conducting sound into ear; used by television stage directors in studio operation. J. L. Hathaway and W. Hotine. il diags RCA R 8:139-46 Mr '47

Lighting

Television studio lighting. W. C. Eddy. il Soc Motion Picture Eng J 49:334-41 O '47

TELEVISION transmission
Impedance measurements at vhf. E. G. Hills. diags Electronics 20:124-8 Jl '47
Pay-as-you-see television; Phone Vision operates by sending vital portion of picture signal over telephone power line to the user Electronics 20 144+ S '47
Phone-vision startles telephone industry; Zenith's plan for television by telephone. Pub Util 40:172-3 Jl 31 '47
Precision device for measurement of pulse width and pulse slope. H L. Morrison. il diags RCA R 8:276-88 Je '47
Radar trips to the moon. A. C. Omberg. il Aero Digest 53:80-1+ D '46
Television horizon is widened by new test; transmission between San Diego and Los Angeles. Elec West 99·112 S '47
Truck horse goes up a mountain; telephone company builds coaxial highway up Mount Wilson. J. H. Collins. Pub Util 39·607-14 My 8 '47

Interference

Check motor vehicle interference with video and radio reception. il S A E J 55·83-4 Mr '47

TELEVISION transmitters
Television counters; circuits used to produce horizontal and vertical sweep frequencies at the television transmitter. E. M. Noll. diags Radio N 38:52-3+ S '47
Television equipment for aircraft. M. A. Trainer and W. J. Poch. il diags RCA R 7:469-502 D '46

TELLERS. See Banks and banking—Tellers

TELLERS' cages. See Bank buildings—Tellers' cages

TELLURIUM
Mode of occurrence of tellurium in cast iron. H. Morrogh. bibliog pl Iron & Steel Inst J 155:21-3 Ja '47; Discussion. il 156:491-6 Ag '47
Tellurium corewashes. J. O. Vadeboncoeur. il Am Soc for Metals Trans 37:303-7 '46; Abstract. Iron Age 157:73 F 14 '46; Discussion. Am Soc for Metals Trans 37:307-8 '46
Two-step isomeric transition in Te^{121}. P. T. Bittencourt and M. Goldhaber. Phys R 70: 780 N 1 '46

TELLURIUM bromide
Structure of tellurium dibromide. M. T. Rogers and R. A. Spurr. bibliog Am Chem Soc J 69:2102-3 S '47

TELLURIUM compounds
Contribution to the study of electronic spectra of bent triatomic molecules. J. Duchesne and B. Rosen. bibliog J Chem Phys 15: 631-44 S '47

TELLURIUM fluoride
Alkyl- and aryl-substituted fluorides of sulphur, selenium, tellurium, and iodine. H. J. Emeléus and H. G. Heal. Chem Soc J p 1126-31 D '46

TEMPER brittleness. See Steel—Brittleness

TEMPERATURE
Effect of temperature on the phosphorus reaction in the basic steelmaking process. K. Balajiva and P. Vajragupta. Iron & Steel Inst J 155:563-7 Ap '47
Effect of temperature on the strength and fatigue of glass rods. B. Vonnegut and J. L. Glathart. bibliog diag J Ap Phys 17: 1082-5 D '46
Effects of temperature upon the critical concentrations of anionic and cationic detergents. H. B. Klevens. bibliog J Phys & Colloid Chem 51:1143-54 S '47
Temperature charts for induction and constant-temperature heating. M. P. Heisler. bibliog A S M E Trans 69:227-36 Ap '47
Temperature coefficients for proving rings. B. L. Wilson and others. bibliog 2pls diag J Res Nat Bur Stand 37:35-41 Jl '46
Temperature dependence of viscosities of liquids and activation energy. M. S. Telang. J Chem Phys 15:525 Jl '47

See also
Atmospheric temperature
Boiling points
Cold
Color temperature
Debye characteristic temperature
Earth temperature
Electric machinery—Temperature
Heat
Melting points
Metals—Temperature effect
Petroleum—Well temperature
Temperature, Low
Thermochemistry

TEMPERATURE—*Continued*

Measurement

Air temperature gradients in a panel heated room. J. M. Ayres and B. W. Levy. il Heating-Piping 19.113-17 O '47

Application of the sliding thermocouple method to the determination of temperatures at the interface of a moving bullet and a gun barrel. E L. Armi and others. il diag J Ap Phys 18·88-94 Ja '47

Chart to determine temperature rise by change of resistance. L. Gorin. Elec World 127 68 F 1 '47

Electrically heated glove for determining local values of heat-transfer coefficients; used in designing anti-icing systems for airfoils. J K Goss. diags A S M E Trans 69:705-7; Discussion. il 707-8 Ag '47

Emissivity of molten iron and steel. D. Knowles and R. J. Sarjant. bibliog diags Iron & Steel Inst J 155:577-92 Ap '47

Extended applications of the hot-wire anemometer. S. Corrsin. bibliog R Sci Instr 18·469-71 Jl '47

Five-year temperature record of a thin concrete dam. S D. Burks. Am Concrete Inst J 19.65-76 S '47

Fluidity of steel; experimental investigations on fluidity/temperature relationships. R. Jackson and others. bibliog diags Iron & Steel Inst J 157:1-21 S '47

How to maintain temperature indicators for generators and large transformers. W. F. Dunkle. diag Elec World 128.106 Jl 19; 80 Ag 2; 90 Ag 16; 66 Ag 30, 132 S 13; 78 S 27 '47

Isothermal and nonisothermal air-jet investigations. V. Cleeves and L. M. K Boelter. bibliog diags Chem Eng Proc 43:123-32; Discussion. 132-4 Mr '47

Measurement of temperature in the open hearth. J. R. Green. il diags Blast F & Steel Pl 35:344-7, 443-7 Mr-Ap '47

Measurement of temperatures in gas retorts. E. Heaton and A. T. Green. diags Gas J (Lond) 249·151-2+, 207-10 Ja 15-22 '47

Measurement of tool-tip temperature. B A. Crowder. diag Engineering 162:435-6 N 8 '46

Method of correcting for incomplete thermal isolation in measurements of small heat capacities. J. G Aston and G. J. Szasz. J Chem Phys 15 560-1 Ag '47

Remote thermometer transmits readings by air-pressure medium. il diags Sci Am 176: 134-5 Mr '47; Chem Eng 54.148 Ja '47

Superconductivity and the Debye characteristic temperature. J de Launay and R. L. Dolecek. Phys R 72.141-3 Jl 15 '47

Temperature coefficient of ultrasonic velocity in solutions. G. W. Willard. bibliog Acoustical Soc Am J 19:235-41 Ja '47

Temperature conversions; data sheet. Metal Prog 50:803 N '46

Temperature distribution in white-oak laminated timbers heated in a high-frequency electric field. M E. Dunlap and E R. Bell. il diag A S M E Trans 69:509-17, Discussion. 517-18 Jl '47

Temperature indicator for alternator rotors. il diags Engineering 164.391-2 O 24 '47

Temperature surveys in producing wells. C. R. Dale. Pet Eng 18:146+ S '47

Thermal properties of cyclopentane and its use as a standard substance in low temperature thermal measurements. G. J. Szasz and others. bibliog J Chem Phys 15:562-4 Ag '47

Transient temperatures around heating pipes maintained at constant temperature. A. Gemant. bibliog J Ap Phys 17:1076-81 D '46

See also

Alloys, Temperature indicating
Bolometers
Calorimeters and calorimetry
Pyrometers and pyrometry
Thermocouples
Thermometers and thermometry
Thermopiles
Thermowells

Physiological effect

Comfort reactions of 275 workers during occupancy of air conditioned offices. F. B. Rowley and others Heating-Piping 19: 113-16 Je '47, Discussion. 19:126-8 Ag '47

Conditions for comfort. C. S. Leopold. charts Heating-Piping 19:117-21 Je '47; Discussion. 19·125-6 Ag '47

Crane cab cooling poses new personnel problem in steel mill operation. il Blast F & Steel Pl 35 76+ Ap '47

Human tolerance to heat W. Machle. Heating-Piping 19:109-10 F '47

Influence of food on body heat; experiments at University of Illinois research hospital on sub-zero temperatures. Heat & Ven 43: 79 N '46

Method for improving the effective temperature index. C. P Yaglou. bibliog Heating-Piping 19 131-3, Discussion. 134-40 S '47

Physiological adjustments of human beings to sudden change in environment. N Glickman and others bibliog(44 titles) il Heating-Piping 19·101-15 Jl '47, Discussion. 19: 124-5 Ag '47

Tolerance of man toward hot atmospheres. E. F. Adolph. bibliog(73 titles) (Public health rep supp 192) 38p U.S. Public health service, Washington; pa 10c Supt. of doc. '46

Worker limitations of physical exertion in high heat and humidity determined in experiments. Steel 121·108 S 8 '47

See also

Heat exhaustion
Heat stroke

Regulation

Furnace temperature control for large steam-generating units O. de Lorenzi. Blast F & Steel Pl 35:724-9 Je '47

Improving glass feeder operation through electronic pneumatic control. J R. Green and E. A. Murphy. il Glass Ind 28:81+ F '47

New CO-H_2 converter provides better temperature control il Chem Ind 60:793 My '47

See also

Temperature regulators
Thermostats

TEMPERATURE, Animal and human

Effect of body temperature on the duration of barbiturate anesthesia in mice. F. A. Fuhrman. bibliog Science 105:387-8 Ap 11 '47

Method for improving the effective temperature index; mean skin temperature as index of warmth C. P Yaglou. Heating-Piping 19 132-3 S '47

Semantically poor thermal terminology in elementary zoology books and descriptive handbooks. R B. Cowles and C. M. Bogert. Science 105:282 Mr 14 '47

Vascular changes in the wings of bats. R. B. Cowles. bibliog Science 105·362-3 Ap 4 '47

See also

Thermometers and thermometry, Medical

TEMPERATURE, Atmospheric. See Atmospheric temperature

TEMPERATURE, Low

Adsorption-desorption isotherm studies of catalysts; comparison of low temperature isotherms of ammonia and nitrogen. H. E. Ries, jr., R A. Van Nordstrand and W. E. Kreger. bibliog Am Chem Soc J 69:35-40 Ja '47

Application of low temperatures to chemical research. J. G. Aston and H. L. Fink. bibliog(287 ref) il diags Chem R 39.357-96 D '46

Application of the electric hygrometer to the determination of water-vapor permeability at low temperature. J. A. Van den Akker. bibliog diags Paper Tr J 124:51-6 Je 12 '47; Same cond. Paper Ind 29 108+ Ap '47

Cast steels; low-temperature properties. C. E. Sims and F. W. Boulger. Metal Prog 51:316+ F '47

Coldest cold bath employed in research on super-cooled metals. il Sci Am 177:222 N '47

Conversion of ordinary sound into second sound W. M. Fairbank and others. bibliog diag Phys R 72:645-6 O 1 '47

Describes work on liquefied gases; abstract. L. I. Dana. Chem & Eng N 25:1575-6 Je 2 '47

TEMPERATURE, Low—*Continued*
Effects of combined stresses and low temperatures on the mechanical properties of some nonferrous metals. D. J. McAdam, jr. and others. bibliog Am Soc for Metals Trans 37:497-537 '46
Factors affecting measurement of water vapor permeability at low temperatures. W. H. Aiken. bibliog Paper Tr J 125:31-5 O 2 '47
Five years of applied science in the low-temperature field, liquid oxygen units for submarines and airplanes F. G. Keyes. flow diag il Chem R 39:449-80 D '46
Liquid helium; low temperature, new kind of sound explored at Yale university. C. T. Lane. Mech Eng 69:40 Ja '47
Low mean temperature thermal conductivity studies F. B. Rowley and others. il Refrig Eng 53:35-9 Ja '47
Low temperature characteristics of elastomers S. D Gehman, D. E. Woodford and C S Wilkinson, jr. bibliog il diag Ind & Eng Chem 39:1108-15 S '47
Low temperature impact strength of cellulosic plastics W E Gloor. bibliog il Ind & Eng Chem 39 1125-9 S '47
Low temperature physics. S. C Collins. Refrig Eng 52:442+ N '46
Low temperature transformation in lithium. C S Barrett. Phys R 72:245 Ag 1 '47
Low temperature transport properties of gases; helium. I. Amdur bibliog J Chem Phys 15:482-7 Jl '47
Metallic film formation at low temperatures. A. Goetz and others. bibliog diags Chem R 39 481-95 D '46
Nuclear magnetic resonances at low temperatures. F Bitter and others. Phys R 71:738 My 15 '47
Possible use of thermal noise for low temperature thermometry E. Gerjuoy and A. T. Forrester. diag Phys R 71:375-6 Mr 15 '47
Progress in low temperature refrigeration; research at M.I.T. S. C. Collins. il diags Tech R 49:161-2+ Ja '47
Properties of various alloys at sub-zero temperatures Iron Age 158:75 N 14 '46
Second sound in liquid helium II C. T. Lane and others diag Phys R 71:600-5 My 1 '47; Correction. 72:1129 D 1 '47
Simple carbon-resistance thermometer for low temperatures H A. Fairbank and C. T. Lane. diag R Sci Instr 18:525-6 Jl '47
Strength of welded joints at low temperatures and the selection and treatment of steels suitable for welded structures. O. Graf bibliog il diags Welding J 26:sup508-17 S '47
Theory of second sound in helium II; abstract. L. Tisza Phys R 71 477-8 Ap 1 '47
Thermal properties of cyclopentane and its use as a standard substance in low temperature thermal measurements. G J. Szasz and others bibliog J Chem Phys 15.562-4 Ag '47

See also
Cold
Cryogenic laboratories
Freezing
Refrigeration and refrigerating machinery
Testing laboratories—Cold rooms

TEMPERATURE regulators
Bright chromium plating and temperature control M G. Herbach and C W. Bowden, jr. diags Metal Prog 51:257-9 F '47
Electronic air conditioning control; Chesapeake & Ohio will equip 284 new cars. il Ry Mech Eng 121 32-4 Ja '47; Same. Ry Age 122.498-9+ Mr 8 '47
Fundamental improvement in temperature measurement and control. H. W. Bluethe. il Metal Prog 52.591-3 O '47
Low-cost resistance-thermometer temperature controller; Electromax. R H Munch. il Ind & Eng Chem 39:sup77A-8A F '47
Modern constant-temperature bath M. R. Cannon and K. J. Heidrich. il diag Pet Refiner 26:123-5 F '47
Temperature control for octane tests; vacuum-tube relay circuit. P. J. Malraison. il diags Electronics 20:99-101 N '47
Temperature controller for airplane cabins. J. W Bancroft. il diag Electronics 20:178+ Je '47

TEMPERING
Application of single crystals to the study of tempered martensite. G. Kurdjumov and L. Lyssak bibliog il Iron & Steel Inst J 156:29-36 My '47
Effect of alloys in steel on resistance to tempering; abstract W. Crafts and J. L. Lamont. Iron Age 158:64 N 28 '46
Hardened and tempered microstructure of high-speed tool steel as a factor in tool performance W H. Wooding il diags A S M E Trans 69:281-306 My '47
Induction heat tempers case-hardened screws, Screw machine products co. W. A. Gish il Elec World 126.140+ N 9 '46
Structure of tempered martensite. W. J. Wrazej. Metal Prog 50:966+ N '46
Temper brittleness J H. Hollomon. il Am Soc for Metals Trans 36:473-540 bibliog(64 titles, 537-40); Discussion. 540-2 '46
Tempering of toolsteels. M. Cohen. il Metal Prog 51 781-8, 962-8 My-Je '47
Tempering tool steels. G. A. Roberts. Steel 121.72-4+ Jl 28; 96-8+ Ag 4 '47, Abstract. Iron Age 158:58 N 28 '46

TEMPLATES. See Templets

TEMPLES
See also
Synagogs

TEMPLETS
Electrons guide the cutting torch T. H. Ayling. il diags Sci Am 177:213-15 N '47
How photography helps production. R. Le Grand. il Am Mach 91:102-4 Je 5 '47
Lofting and template reproduction. S. P Woodley. Roy Aeronautical Soc J 51:306-24; Discussion. 324-8 Mr '47
Magnetic template tracing increases accuracy of shape-cutting. il diags Product Eng 18: 92-6 F '47
Photographic reproduction as an engineering tool; Ryan aeronautical co. D. E. Clark. il Iron Age 159:60-3+ F 6 '47; Same abr. Aero Digest 53:78-9+ Ag '46

TEMPORARY controls, Office of. See United States—Temporary controls, Office of

TENANTS. See Landlord and tenant

TENDERS, Locomotive. See Locomotive tenders

1080. See Sodium fluoroacetate

TENITE III. See Cellulose acetate propionate

TENNANT, Smithson, 1761-1815
Smithson Tennant, equestrian chemist. M. Schofield. Chem & Ind p506-7 Ag 16 '47

TENNESSEE
See also
Clay—Tennessee
Iron ores—Tennessee

Industries and resources
Tennessee industry in 1946. G. I. Whitlatch. il Manuf Rec 116:34-5+ Mr '47

See also
Morristown, Tennessee—Industries

TENNESSEE gas and transmission company (Tennessee)
Precocious war baby operates Uncle Sam's pipelines. Bsns W p22 D 14 '46

TENNESSEE gas transmission company (Delaware)
Public utility securities. Comm & Fin Chr 166:912 S 4 '47
Securities offered. Comm & Fin Chr 166.1096-7 S 15 '47

TENNESSEE valley
Progress of pollution abatement in the Tennessee valley. W. G. Stromquist. Paper Tr J 124:41-2 My 15 '47; Same cond. Paper Ind 29:1360-1 D '47

TENNESSEE Valley authority
Accounting office TVA report neither whitewash nor slam. Elec World News ed 127:3-4 Ap 5 '47
Call for tighter congressional control of TVA construction, auditing methods. Eng N 138: 491 Ap 3 '47
End of TVA yardstick? Bsns W p17-18 Ap 5 '47
Federal audit whittles TVA yardstick. Elec World 127:104-5+ Ap 12 '47

TENNESSEE Valley authority—*Continued*
How TVA buys with standards. H. B. Hendrix. il Ind Stand 18:109-11 My '47
TVA earnings. Pub Util 39:172-3 Ja 30 '47
TVA escapes economy knife; new restrictions minor ones Elec World News ed 127: 4-5 Je 14 '47
TVA program; a bibliography of selected readings. 29p Technical lib, Tennessee Valley authority, Knoxville, Tenn. '46
TVA reforms for 1948 Pub Util 40:365-6 S 11 '47
TVA's first audit by GAO points way to businesslike evaluation J Account 83.507-10 Je '47
TVA's 1946 activities down; E.E.I charges TVA deficit. Elec World News ed 127:5 Ja 11 '47
What is the color of the T.V.A.? M. Henle and A. C. Spurr. il Adv & Sell 40:39-40+ Ap '47

Bibliography

TVA program; a bibliography of slected readings. 29p Tennessee Valley authority technical lib. Knoxville '46

TENNESSEE Valley project
Cleaning and grouting of limestone foundations, Tennessee Valley authority. A. L. Pauls; T. F. Taylor. il map plan diags Am Soc C E Proc 72.1330-69 D '46; Discussion 73:391-6, 923-35 Mr, Je '47
Uses of compressed air in TVA hydroelectric plants H. J. Petersen. il diag Comp Air Mag 52:13-15 Ja '47

TENNIS rackets
Manufacturing laminated tennis rackets J. N. Tynan. il Mech Eng 69:735-8 S '47

TENSION control. See Winding machines—Tension control

TENSORS
First and second order equations for piezoelectric crystals expressed in tensor form. W. P. Mason diags Bell System Tech J 26:80-138 Ja '47

TENTERING machines
Overfeed pin tenter operates 90 yd. per min. il Textile World 96:156 D '46

TEP (insecticide). See Insecticides

TEREDOS
Companies unite against ravages of salt water in research at Kure Beach ocean laboratory. W. W. Burns. il Oil & Gas J 46:108+ Je 28 '47

TERMINALS
Mechanized goods depot; Consolidated freightways, inc. H. G. Jarman. il Mech Handling 34:370-3 Jl '47
Perpetual motion; conveyor system handles 1½-million lb. at freight terminal; Consolidated freightways inc. il Steel 120:124 Ap 28 '47

See also
Airlines—Terminals
Ferry terminals
Locomotive terminals
Motor bus lines—Terminals
Petroleum pipe lines—Terminals
Ports
Produce terminals
Railroads—Terminals

TERMINALS, Produce. See Produce terminals

TERMINOLOGY. See subdivision Terminology under special subjects, e.g. Advertising—Terminology

TERMITES
Building construction and insect prevention. J. J. Davis. il Am Bld 69:90-1+ Ja '47
Development of castes in higher termites. S F. Light and F. M. Weesner. bibliog Science 106.244-5 S 12 '47
Methods for culturing termites. S F. Light and F. M. Weesner. bibliog Science 106: 131-2 Ag 8 '47

TERPENES
Otto Wallach; first organizer of the terpenes; 1910 Nobel prize winner. W. S Partridge and E. R. Schierz. bibliog J Chem Educ 24:106-8 Mr '47
Some unsaponifiable constituents of the deodorisation distillates of vegetable oils. H. Jasperson and R. Jones. bibliog Soc Chem Ind J 66:13-17 Ja '47
Studies in the terpene series; destructive hydrogenation of bicyclic dihydroterpenic hydrocarbons. V. N. Ipatieff, H. Pines and M. Savoy bibliog Am Chem Soc J 69:1948-52 Ag '47

TERPHENYL
Fluorination of polychloroterphenyls. F. B. Stilmar, W. S. Struve and W. V. Wirth Ind & Eng Chem 39 348-50 Mr '47

TERRA cotta
Northwestern terra cotta corp. improving plant for straight-line production. il Brick & Clay Rec 110:58+ My '47
Terra-cotta finishing tanks solve corrosion problem. il diag Textile World 97:152 Mr '47

TERRA pise. See Pisé

TERRELL, Daniel Voiers, 1886-
Sketch. por(p550) Civil Eng 16:553 D '46

TERRY fabrics
Even the simple terry towel requires considerable calculation. T. Hargreaves. Textile World 96:143+ D '46

TERTHIENYL
Blue-fluorescing compound, terthienyl, isolated from marigolds. L. Zechmeister and J. W. Sease. bibliog Am Chem Soc J 69: 273-5 F '47

TERYLENE
Better than nylon? il Chem Ind 60:764 My '47
Produced from a polyester derived essentially from terephthalic acid and ethylene glycol. Textile Inst J 38:P61-2 F '47
Terylene Chem & Ind p374 O 12 '46; Chem Eng 53:176 N '46; Rayon 27.600 N '46
Terylene going into commercial production. F. R Brewster. il Textile World 97:123+ Je '47
Terylene; new British synthetic textile fiber. K Turner. Textile Col 69:22-3+ Ja '47

TERZAGHI, Karl, 1883-
Sketch. por(p41) Civil Eng 17:40 Ja '47

TESTIMONY. See Evidence (law)

TESTING
Acoustic determination of the physical constants of rubber-like materials. A. W. Nolle. diag Acoustical Soc Am J 19:194-201 Ja '47
ASTM accepts new and revised materials specifications. il Ind Stand 17:314-15 D '46
Annual engineering review; testing and inspection. Materials & Methods 25:108-10 Ja '47
Application of electrical technique to the service of some other industries; discussion of paper by H. C. Turner and G. M. Tomlin. Electrician 138:365-6 Ja 31 '47
Automatic Sonigage; measures thickness, tests metals and plastics for flaws and defective bond. W. S. Erwin and G. M Rassweiler il diags Iron Age 160:48-55 Jl 24 '47
Fault detector in quality control. H. T. McLean il diags Gen Elec R 50.52-3 Ap '47
Materials tester; General Electric ultrasonic tester. Electronics 19.206+ D '46
New equipment. il Iron Age 159.85-90 Mr 6 '47
Nondestructive testing of materials Siemens-Werner Werk; abstract. Product Eng 17: 137-8 D '46
Portable instrument checks parts with high-frequency sound waves. Mach 53.156 Jl '47
Supersonic equipment available for finding flaws. G. A. Van Brunt. il diags Factory Management 105:94-6 My '47
Supersonic examination of materials. B. Carlin il diags Product Eng 18:113-18 O '47
Testing, testing Fortune 36.126 S '47
Tests of increased severity. C. W. Churchman and B. Epstein. Am Stat Assn J 41: 567-90 D '46

See also
Electric testing
Magnetic testing
Oil testing
also subdivision Testing under various subjects, e.g.
Corrosion and anti-corrosives
Hardness
Testing laboratories
Testing machines
Textile testing
Metals
Plastic materials
Steel
also American society for testing materials

TESTING laboratories
Advantages of a testing laboratory to a retail store. A. W. Kattermann, jr. J Retailing 22:78-82 O '46
Arco opens new laboratory for organic coating research il Paint Oil & Chem R 110: 47-8 Ag 21 '47
Experimental laboratory for paint testing; Newcomb-Detroit co. il Automotive & Aviation Ind 96:45 My 15 '47
Gage laboratory, standardization center for measuring aids il Steel 120:130 Je 23 '47
Kodak's new lab. il Mod Packaging 20:130-3 Ja '47

See also
American gas association—Appliance testing laboratory
Underwriters' laboratories

Cold rooms
AAF's climatic hangar. C. W. Kniffin. il diag Refrig Eng 54.128-31+ Ag '47
All-weather tests speeded by new AAF climatic hangar. Aviation W 47 32 Jl 21 '47
Big process refrigeration installation used in research on aircraft engines; NACA laboratory at Cleveland. il Heating-Piping 18: 113-14 D '46
Chamber checks tubes in wide temperature range. il Elec World News ed 126:20 N 16 '46
Climatic hangar for all-weather testing; Air proving ground command, Eglin field, Florida. il Product Eng 18:147-9 O '47
Climatic hangar provides all-weather, year-around testing facilities for army air forces planes and equipment Heat & Ven 44:112+ O '47
Fully automatic test laboratory holds -70 F. W. H. Cook and others bibliog il plan diag Refrig Eng 54:29-31+ Jl '47
NACA test lab requires enormous cooling plant il Refrig Eng 54:342-3+ O '47
New rubber-testing cold room. il Aero Digest 54.78 Ap '47
Refrigerated altitude chamber for aircraft testing; North American aviation L. P. Spalding. il Automotive & Aviation Ind 95: 33+ D 1 '46
Vickers-Armstrongs stratosphere chamber. il diags Engineer 184:296-8 S 26 '47; Engineering 164 257-8 S 12 '47
Wright field has its own North pole. il Refrig Eng 52:418-19 N '46; Same. Mech Eng 69:39 Ja '47

Equipment
New equipment. il Iron Age 158:81-4 D 19 '46

TESTING machines
American steel foundries coil-spring test machine. il Ry Mech Eng 121:120-2 Mr '47
Automatic spark recorder for stress-strain testing. R. Shearer. il diag India Rubber World 116:498+ Jl '47
Baldwin creep-testing and fatigue-testing machines. il Mach 53.210-11 Je '47
Bearing test machine evaluated; abstract. E. T. Johnson. Machine Design 18:180 D '46
Constant-force fatigue testing machine. il diag Machine Design 19:152 Je '47
Container strength measured by a new puncture tester. C. J. Falk. il Food Ind 19:454-5+ Ap '47
Creep testing unit; abstract. G. T. Harris. Materials & Methods 25:126 Ja '47
Electro-magnetic vibration exciter and calibrator. il diags Product Eng 18:92-4 Jl '47
Fatigue tester. il diag Sci Am 176:224 My '47
Fatigue tester works on principle of slide trombone il Comp Air Mag 51:308 N '46
Fatigue-testing machine. B. J. Lazan. bibliog il diags Machine Design 19:123-7 My '47
French testing machines; abstract. R. L'Hermite. Materials & Methods 24:1546 D '46
Hot-strength characteristics of moulding sands. W. Davies and W. J. Rees. diags Iron & Steel Inst J 152.61-70 no 2 '45; Same abr. Engineering 161:190-2 F 22 '46
How to measure machinability in the shop. G. Schlesinger. bibliog il diags Am Mach 90:117-28 N 21 '46
Laboratory testing of rubber torsion springs. D. H. Cornell and J. R. Beatty. il diags Rubber Age 60:686-7 Mr '47
Life measurement of ball-bearing grease. D. F. Wilcock bibliog il diag Gen Elec R 50: 37-9 O '47
Machinability testing apparatus and tests carried out at Naval ordnance inspection department, Sheffield, including development of drill test D. G. W. Curry. Inst Mech Eng J & Proc 155 (War emergency issue no 20).244-6, pl 2-3(p240) '46, Same. Engineering 161.597-8 Je 21 '46
Machinability testing methods using pendulum machines A. S. Kenneford diags Inst Mech Eng J & Proc 155 (War emergency issue no 20) 241-3, pl 2(p240) '46; Same. Engineering 161:599-600 Je 21 '46
Measuring equipment, exhibition arranged by Alfred Herbert ltd. il Automobile Eng 36: 492-6 N '46
Metal strength test il Sci Am 176.174 Ap '47
New Goodyear device tests twenty tire fabrics simultaneously. il Rubber Age 61:704 S '47
New method for the presentation of test results on the four ball machine. W. Davey. Inst Pet J 33.574-7 S '47
Northwestern university's testing machine to test artificial limbs Science 105:430 Ap 25 '47
Nouvelle machine d'essai des courroies trapézoidales. H. Wintsch and A. Tenot. il diag Génie Civil 124.293-5 Ag 1 '47
Nouvelle machine d'essai dynamique des textiles et du caoutchouc. A. Tenot. il diag Génie Civil 124:349-51 S 15 '47
Pneumatic fatigue testing; machine for testing turbosupercharger and gas turbine buckets. F. B. Quinlan. il diags Automotive & Aviation Ind 96:30-1+ Ja 15 '47
Proving rings. il diags Engineering 164:169-72 Ag 22 '47
Rigid testing machine designed and built by Baldwin locomotive works. il Sci Am 177 171 O '47
Screw-driven creep-rupture testing machine. M. J. Manjoine. il Metal Prog 50:1100-1 N '46
Solution to the problem of uniform abrasion. Rubber Age 61.328 Je '47
Temperature coefficients for proving rings B. L. Wilson and others bibliog 2pls diag J Res Nat Bur Stand 37:35-41 Jl '46
Testing wrought steel wheels. R. L. Kenyon. il diags Ry Mech Eng 121:347-50+ Jl '47
Transverse-strength machine based on chainomatic principle. C. R. Amberg. diags Am Cer Soc J 30:256-9 Ag 1 '47
Tuned air columns in pneumatic circuits simplify design of fatigue testing machines. diags Machine Design 18:106 N '46
Tuned air columns induce resonance for fatigue testing. il diags Product Eng 18: 98-9 F '47
Two-million-pound testing machine given first trial at University of Washington. Eng N 139:366 S 11 '47; Mech Eng 69:860 O '47
Unique machine tests engine mount materials. il Automotive & Aviation Ind 96:42+ My 10 '47
Vibration exciter for structural tests. P. J. Holmes. il diags Electronics 19:96-100 D '46

See also
Dynamometers
Gear testing machines
Textile testing machines

TESTING machines, Textile. See Textile testing machines

TESTS, Ability. See Ability tests

TESTS, Personality. See Personality tests

TETANUS
Role of the axis cylinder in transport of tetanus toxin. P. G. Roofe. Science 105: 180 F 14 '47

TETRAACETYL glucosone
Tetra-acetyl glucosone hydrate; syntheses of analogues of ascorbic acid and possible transformation of hexoses into kojic acid. M. Stacey and L. M. Turton. Chem Soc J p661-5 Ag '46

TETRAACETYLGLUCOSYL bromide
Dibenzylidene-xylitol and its reaction with tetraacetyl-D-glucosyl bromide; dibenzylidene-L-fucitol. M. L. Wolfrom, W. J. Burke and E. A. Metcalf. bibliog Am Chem Soc J 69:1667-8 Jl '47

TETRABROMIDES
β-Phellandrene tetrabromide P. A Berry and A K MacBeth. Chem Soc J p 1039-41 Ag '47

TETRACHLORIDES
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole. H. H Sisler and J C. Cory Am Chem Soc J 69 1515-19 Je '47

TETRACHLORODIFLUOROETHANE
Fluorinated ethers. E T McBee and R. O Bolt. bibliog Ind & Eng Chem 39:412-15 Mr '47

TETRACHLORODIOXANE
2,2,3,3-Tetrachloro-1,4-dioxane R K. Summerbell, R R Umhoeffer and G R. Lappin. bibliog Am Chem Soc J 69:1352-4 Je '47

TETRACHLOROETHANE
Determination of acetylene tetrachloride in air; protection afforded by gas mask canisters against acetylene tetrachloride J. Goldenson and J. W. Thomas. bibliog il diag J Ind Hygiene 29 14-22 Ja '47

TETRAETHYLAMMONIUM chloride
Tetraethylammonium chloride as nerve block. Chem & Eng N 25·998 Ap 7 '47

TETRAETHYLAMMONIUM sulfamate
Conductance of tetraethylammonium sulfamate in liquid hydrogen sulfide. E E. Lineken. Am Chem Soc J 69:467-8 F '47

TETRAETHYL lead
Lead to burn. il Chem Ind 61 39-40 Jl '47

Analysis

Determination of tetraethyllead in aviation gasoline; rapid iodometric method. L. Newman, J F Phillip and A R. Jensen Anal Chem 19:451-3 Jl '47

Microdetermination of tetraethyllead in gasoline. B E. Gordon and R. A. Burdett. bibliog diags Anal Chem 19 137-40 F '47

Tetra-ethyl-lead, new method for determination in air. Chem Age (Lond) 57:505-6 O 11 '47

TETRAETHYLMETHANE
Synthesis and physical properties of tetraethylmethane A. W. Horton. bibliog Am Chem Soc J 69·182-3 Ja '47

TETRAETHYLPYROPHOSPHATE
Pest killer tested. il Sci Am 177.78-9 Ag '47

Rats and mites; chemical holding promise as both insecticide and rodenticide il Chem Ind 60:765 My '47

TETRAETHYLENEPENTAMINE
Tetraethylenepentamine as a colorimetric reagent for copper. T. B. Crumpler. Anal Chem 19:325-6 My '47

TETRAFLUOROETHYLENE
Synthesis of tetrafluoroethylene; pyrolysis of monochlorodifluoromethane. J. D. Park and others. bibliog flow diag Ind & Eng Chem 39.354-8 Mr '47

TETRAFLUOROETHYLENE, Polymeric. See Teflon

TETRAHYDROACRIDINE
Some amino-derivatives of dihydro-β-quinindene and tetrahydroacridine. V. Petrow. Chem Soc J p634-7 My '47

TETRAHYDROACRIDONE
Tetrahydroacridones and related compounds as antimalarials J M. L Stephen, I M. Tonkin and J. Walker. Chem Soc J p 1034-9 Ag '47

TETRAHYDROFURAN
Furan and tetrahydrofuran derivatives; synthesis and biological activity of a number of oxybiotin homologs. K. Hofmann and others. bibliog Am Chem Soc J 69.191-5 F '47

Nylon constituent made from farm wastes il Sci Am 177·30-1 Jl '47

Tetrahydrofuran; agricultural wastes, petroleum and coal are possible raw materials. Chem Ind 60:766 My '47

TETRAHYDROFURYL acetonitrile
Direct replacement of the mesyloxy group by cyanide. M. Zief, H. G Fletcher, jr. and H R Kirshen. Am Chem Soc J 68: 2743-4 D '46

TETRAHYDRONAPHTHOL
Determination of 1,2,3,4-tetrahydro-2-naphthol in impregnated clothing. J. Goldenson and S. Sass. bibliog Anal Chem 19:322-4 My '47

TETRAHYDROPHTHALIC anhydride
Improved synthesis of *cis*-Δ^4-tetrahydrophthalic anhydride and *cis*-hexahydrophthalic acid. E. F. Jenkins and E. J. Costello. Am Chem Soc J 68.2733 D '46

TETRAHYDROPYRETHROLONE
Synthesis and structure of tetrahydropyrethrolone H J. Dauben, jr and E Wenkert. bibliog Am Chem Soc J 69·2074-5 Ag '47

TETRAHYDROQUINOLINE
Nitrogen compounds in petroleum distillates; confirmation of presence of Bz-tetrahydroquinolines in California petroleum. P. L. Pickard and H. L. Lochte. bibliog Am Chem Soc J 69:14-16 Ja '47

TETRAHYDROQUINOXALINE
1-Alkyl-1,2,3,4-tetrahydroquinoxalines J. C. Cavagnol and F. Y. Wiselogle bibliog Am Chem Soc J 69·795-9 Ap '47

TETRAHYDROTHIOPHENE
Tetrahydrothiophene (thiophane) derivatives R. B. Woodward and R H. Eastman. bibliog Am Chem Soc J 68.2229-35 N '46

TETRAHYDROTHIOPYRAN
Syntheses in the thiopyran series; tetrahydroderivatives R. F. Naylor. Chem Soc J p 1106-8 Ag '47

TETRAHYDROXYQUINONE
Oxidation-reduction potentials and ionization constants of the reversible series; hexahydroxybenzene - tetrahydroxyquinone - rhodizonic acid. P W. Preisler, L. Berger and E. S. Hill. bibliog Am Chem Soc J 69·326-9 F '47

TETRALIN
Evidence for the homolytic bond fission of positive halogen compounds A. Robertson and W. A. Waters. Chem Soc J p492-7 Ap '47; Abstract and discussion Chem & Ind p446 D 14 '46

See also
Methoxytetralin

Analysis

Analysis of naphthalene-tetralin-decalin mixtures. W J. Cerveny, J. A. Hinckley, jr. and B B. Corson bibliog il diag Anal Chem 19:82-6 F '47

TETRALONE
Preparation of β-tetralone by the catalytic reduction of β-naphthol. G Stork and E. L. Foreman. bibliog Am Chem Soc J 68:2172-4 N '46

Synthesis of analgesic substances. J. A. Barltrop. Chem Soc J p958-65 O '46

TETRAMETHYLBUTANE
Pressure-volume-temperature relations of 2,2,3,3-tetramethylbutane. W. A. Felsing, A M Cuellar and W M Newton. bibliog Am Chem Soc J 69.1972-4 Ag '47

TETRAMETHYL compounds
Infrared absorption spectra of tetramethyl compounds C W Young, J. S. Koehler and D S McKinney. bibliog Am Chem Soc J 69: 1410-15 Je '47

TETRANITROMETHANE
Toxic effects of tetranitromethane; contaminant in crude TNT R. F. Sievers and others. bibliog Pub Health Rep 62.1048-61 Jl 18 '47

TETRAPROPIONYL glucose
Crystalline 2,3,4,6-tetrapropionyl-β-D-glucose. W A. Bonner, C. D. Hurd and S. M. Cantor. bibliog Am Chem Soc J 69·1816-19 Jl '47

TETRASILANE. See Silicane

TETRAZOLES
Chemistry of the tetrazoles. F. R. Benson. Chem R 41:1-61 bibliog(147 ref, p57-61) Ag '47

TETRAZOLIUM compounds
Triphenyltetrazolium chloride as a dye for vital tissues. A M Mattson and others. bibliog Science 106:294-5 S 26 '47

TEXAS

See also
Gas, Natural—Texas
Petroleum—Texas
Physical geography—Texas
Roads—Texas

TEXAS agricultural and mechanical college
Petroleum engineering schools. il Oil & Gas J 46.91 S 27 '47

TEXAS and New Orleans railroad
Joint purchase of line. Comm & Fin Chr 165: 344 Ja 20 '47

TEXAS and Pacific railway
Texas & Pacific railway grows with Lone Star state. M. Halpern. Barron's 27·14 Ja 6 '47

TEXAS CITY, Texas
Blasts raise havoc in Texas City. C. K. Waters, jr il Spectator (Property ed) 12: 12-15 Ap 24 '47
Emergency action in Texas City. Am Gas Assn Mo 29·209 My '47
Fire underwriters report on Texas City disaster il Nat Pet N 39:38-9 Je 11 '47
Human relations come first, Monsanto's rehabilitation program for employee victims of Texas City blast. Bsns W p76+ My 3 '47
Liability for blast will be difficult to determine; government seems to be in clear. Nat Underw 51·11 Ap 24 '47
Monsanto only Texas City plant materially damaged by ship blast. C. C Pryor. il Pet Refiner 26:170+ My '47
Monsanto suffers most in Texas City tragedy. J. V. Hightower. il Chem Eng 54:144-5 My '47
No blame placed on oil, chemical industries in Texas City disaster; abstracts G. Armistead, jr Nat Pet N 39:24 Jl 23 '47; Pet Refiner 26·145 Jl '47; East Underw 48:24 Jl 18 '47
Over 90 per cent of claims in Texas City paid East Underw 48:19 Jl 4 '47
Preliminary reports of Texas City damage from April 16 disaster emphasize effects of flying fragments and ground shock from explosion; contamination of ammonium nitrate as underlying cause il Chem & Eng N 25·1198+ Ap 28 '47
Progress on the uphill road back il Bsns W p21 My 31 '47
Report gives summary of petroleum tankage damage sustained during Texas City disaster. Nat Pet N 39:45 S 17 '47
Report on Texas City disaster cites fire and explosion precautions. Safety Eng 93:22+ Je '47
Reverberations; Texas City's explosion will accentuate tank car and other shortages. il Bsns W p22 Ap 26 '47
Texas City, a survey. W. H. Shearon, jr. il Chem & Eng N 25.1334-5 My 12 '47
Texas City disaster. J S Felton. Ind Med 16·304 Je '47
Texas City disaster. D. F. Summers. il Manuf Rec 116:26-7+ My '47
Texas disaster loss may be $50,000,000. J. C Leissler, jr. Weekly Underw 156:1125+ Ap 26 '47; Same abr. East Underw 48:24+ Ap 25 '47; Same cond. Nat Underw 51.1+ Ap 24 '47
Utilities of Texas City withstood catastrophe well. Eng N 138.888 My 29 '47
Utilities' quick action restores electric service at Texas City. il Elec World 127.33-4 Ap 26 '47

TEXAS company
Annual report Comm & Fin Chr 165·1636 Mr 24 '47
Over 98 per cent of stock subscribed for Comm & Fin Chr 166·1620 O 20 '47
Texaco issues additional stock to finance expansion program to help meet big demand. Nat Pet N 39 41 S 24 '47
Texas co's Arabian venture begins to pay out. F K Nelson. Barron's 27:29 Jl 14 '47

TEXAS electric service company
Bonds offered. Comm & Fin Chr 166·1397 O 6 '47

TEXAS engineering and manufacturing company
TEMCO seen as major factor in personal plane field. il Aviation W 47:21 Jl 28 '47

TEXAS gas transmission corporation
Acquisitions approved. Comm & Fin Chr 165: 114 Ja 6 '47

TEXAS Gulf sulphur company
Earnings reflect boom in sulphur. Barron's 27:33 Ag 11 '47
Selected stocks Mag of Wall St 80:488+ Ag 2 '47

TEXAS mid-continent oil and gas association
Victory meeting, Houston, Oct. 17-18. Chem & Eng N 24:2910 N 10 '46

TEXAS power and light company
Bonds offered. Comm & Fin Chr 166·1620-1 O 20 '47

TEXAS state research foundation
Texas state research foundation. W. H. Shearon, jr. Chem & Eng N 25:157 Ja 20 '47
Texas state research foundation marks first anniversary. il Chem & Eng N 25.3152 O 27 '47

TEXAS university
Petroleum engineering schools. il Oil & Gas J 46·81+ S 6 '47

TEXTILE analysis
Acid nature of vegetable fibres in relation to basic dye absorption. P. B. Sarkar and others. bibliog Soc Dyers & Col J 63:229-31 Jl '47
Identification of urea resins in wrinkle-proof fabrics. J. C. Pfeiffer. Rayon 27:651-2 D '46
Practical hints in analysis of textiles. P. G. Alexander. diag Rayon 28·426 Ag '47

See also
Cotton—Analysis
Jute—Analysis
Wool—Analysis

TEXTILE associations

See also American association of textile chemists and colorists; National federal of textiles; Silk and rayon printers and dyers association of America

TEXTILE chemicals
Alphabetical list of new products developed since November, 1945. il diag Am Dyestuff Rep 35:680-7 D 16 '46
Caustic soda as used in the rayon industry. P. W. Frisk. diag Rayon 27:596-8 N '46
Chemical developments in textile finishing. L. J Sheps. bibliog Can Chem & Process Ind 31:304-7 Ap '47
Chemistry for consumers. D. H. Powers. Textile Col 69:28+ F '47
Modern roles for glycerine in textile processes. G. Leffingwell and O. S. Linkletter. bibliog Rayon 28:50-2 Ja '47
New dyeing assistant and scouring agent; Oridex D. M. Mytelka. Rayon 27:607-9 N '46
New fabrics created from older materials by addition of chemicals. il Sci Am 175:270 D '46
New specialties exploit chemical research. D. H Powers. Chem Ind 61:404 S '47
Pectin and other hydrophilic powders; patent. Am Dyestuff Rep 36:337-8 Je 16 '47
Synthetic chemicals in the textile industry. P. I. Smith. Soap & San Chem 23:40-1 S '47
Textile and leather chemicals. Published in weekly numbers of Oil, paint and drug reporter
Textile chemical specialties in the United States from 1921 to 1946. C. Z. Draves. bibliog Am Dyestuff Rep 35·641-4+ D 2 '46
Textile lubricants; alkylphosphoric acid compounds; patent. Am Dyestuff Rep 36:366 Je 30 '47
Thickenings for screen printing pastes. F. F. Jacobs. Rayon 27:666-7 D '46

See also
Dyes and dyeing
Fireproofing of textiles
Resinous products—Textile uses
Starch
Surface active substances
Waterproofing of textiles
Wetting agents

Directories
Textile chemical specialty guide, 1946-47. 4th ed 405p pa $5 Textile book publishers, 303 Fifth av, New York 16 '46

TEXTILE chemistry
Chemical developments in textiles in 1946. M Harris and L. L. Cox. Chem & Eng N 25:96-7 Ja 13 '47
Conversion method aids plant and laboratory. Textile World 97:154+ Ja '47
Engineered fabrics. Mech Eng 68:1075 D '46
Enzymes in textile processing. P. J. Wood. il Am Dyestuff Rep 36:355-61 Je 30 '47
Mechano-chemical methods for use with animal fibres J B. Speakman. bibliog diags Textile Inst J 38:T102-21, Discussion. T121-6 F '47
Textile chemistry advanced by AATCC jubilee. Textile World 97:139+ Ja '47
Twenty-five years progress in the organic chemical industry. E G Robinson. Am Dyestuff Rep 35:613-14 D 2 '46

See also
Bleaching
Cotton finishing
Dyes and dyeing—Chemistry
Jute—Analysis
Nylon
Resinous products—Textile uses
Sizing (textiles)
Textile analysis
Textile chemicals
Textile finishing
Waterproofing of textiles
Wool—Chemistry

TEXTILE chemists and colorists, American association of. See American association of textile chemists and colorists

TEXTILE color card association
Tremendous gain in color interest. Textile Col 69:26+ Ja '47

TEXTILE design
Agreement of members of Print group of the Textile distributors institute; voluntary system of design protection. Textile Col 69:36+ My '47
American angles of textile designing. R. Fatherly. Textile Col 69.20+ Ag '47
Art and economics of printed textile design. il Textile Col 69·28+ O '47 (to be cont)
Brilliant color, geometrics for spring prints. B. Cadwallader Textile Col 68·16-17 D '46
Construction of fabrics for specific purposes. G E. Collins. fold pl Textile Inst J 37: P392-402 Jl '46
Men's ties swipe design and promotion ideas from women's wear. N. S Goldsmith. il Sales Management 58:60+ Je 15 '47
New rayons and old fibres; a suggested line of development in the production of fine yarns A. Johnson. Textile Inst J 37:P403-11 Jl '46
New school of French designers. M. Greenberg. Textile Col 69.22 Ag '47
Primitive designs from the South Seas. M. S Croudace and L. S. Spencer il Textile Col 69.30-2 O '47
Role of the stylist. R. Hilf. Textile Col 69: 38+ S '47

See also
American council of style and design
Tapestry, French
Textile printing

TEXTILE distributors institute
Contract stabilization. J. Spears. Textile Col 69:32+ S '47
You must practice self discipline. H. Chopak. Textile Col 68.14-15+ N '46

TEXTILE drying
Electrostatic filter cleans air for yarn-package drying; Adelaide mills. H. L. Dozier il Textile World 97:135 Je '47
Some aspects of the drying and heating of textiles. J. M. Preston and J. C. Chen. bibliog diag Soc Dyers & Col J 62:361-8 D '46; Abstract. Am Dyestuff Rep 36 252 My 5 '47

See also
Drying apparatus—Textiles

TEXTILE education
Development of technical education, including recruitment and training of operatives. P. E. Burns. Textile Inst J 37:P549-54; Discussion. P554-5, P573-5 D '46
Examination in general textile technology Textile Inst J 38:P77-80 F '47
Group lesson plans for textiles. I. B Wingate. J Retailing 23·53-5+ Ap '47
New England textile foundation launches fund raising campaign. Rayon 27:590 N '46
Trends in textile research and education. W. F. Luther. Am Dyestuff Rep 35:702-3+ D 30 '46

TEXTILE engineering
Engineering textile tension E J. Saxl. diag Rayon 28:465-7, 539-41, 588-90 S-N '47
Functional engineering in textiles. W. F. Luther. bibliog Am Dyestuff Rep 36:215-16 Ap 21 '47

TEXTILE fabrics
Construction of fabrics for specific purposes. G. E. Collins. fold pl Textile Inst J 37: P392-402 Jl '46
Development in blended fabrics; abstract F. A. Adams; F. Bonnet. Rayon 28:115 Mr '47
Dyeing, printing and finishing in relation to fabric construction. R. S. Greenwood and C P Atkinson. Soc Dyers & Col J 63:208-13 Jl '47
Effects of various kinds of perspiration on fabrics L. C Barail il diag Rayon 28: 439-43, 496-8 Ag-S '47
Engineered fabrics Mech Eng 68.1075 D '46; Rayon 27·660-1 D '46
Fabric buyers' keynote for spring. N. Appelbaum. Textile Col 69:24-5 F '47
Fabrics. G. G. Denny. 6th ed 202p bibliog p201-2) $3 J. B. Lippincott co, 227 S. 6th St, Philadelphia 5 '47
Fine crepes, satins, nylons and brocades in Canadian housecoats. E. F. Mann. il Rayon 28 431 Ag '47
Interview with Christian Dior. il Textile Col 69 36-7 O '47
Modern mill building features control of air; manufacture of Lumite fabrics; Chicopee mfg corp 's new plant at Cornelia, Ga il Textile World 97:120-1 F '47
New fabrics created from older materials by addition of chemicals il Sci Am 175:270 D '46
Perspiration; what do textile men know about it? L. C. Barail. il Rayon 27:663-6; 28:93-7 D '46, F '47
Plan for the ideal fabric department. E P. Behles. il Textile Col 68·32-3+ O '46
Plastic fabrics; Lumite and saran E C. Fetter. il Chem Eng 54 129 F '47
Retail demonstrations teach women how to sew Plastron il Sales Management 59:84+ O 1 '47
Role of the retailer in present market; fabrics should be fitted to use. T. I. Felner. Textile Col 68·20-1+ D '46
Textiles in the laundry. F. R. Hill. Textile Inst J 38·P423-30 S '47
Thumbnail sketch of new materials. Rayon 28:116 Mr '47

See also
Airplane fabrics
Automobile fabrics
Bleaching
Brattice cloth
Carpets
Cotton fabrics
Duck (textile)
Felt
Knit goods
Laundry
Linen fabrics
Mildew
Nylon
Nylon fabrics
Rayon fabrics
Rugs
Saran
Shoe fabrics
Sizing (textiles)
Terry fabrics
Textile fibers
Textile finishing
Textile printing
Textile research
Tire fabrics
Woolen and worsted fabrics

Antiseptic treatment
Improved method for quantitative impregnation of textiles with germicidal emulsifiable oils. Science 104:60-1 Jl 19 '46; Abstract. Soap & San Chem 22.159 D '46
Perspiration, what do textile men know about it?; preventing bacterial decomposition of perspiration. L. C. Barail. il Rayon 28:93-7 F '47
Toxicity of germicides. L. C. Barail. Am Dyestuff Rep 35:521-4 N 4 '46

Bibliography
Abstracts. Published in monthly numbers of Textile institute journal
Review of periodicals. Published in monthly numbers of Rayon textile monthly

Coating
Background material on vinyl butyral in textile applications. Rayon 27:603-4 N '46

TEXTILE fabrics—Coating—*Continued*
Ether esters, plasticizers for vinyl coating. F J. Tuttle and E. B. Kester. diag Mod Plastics 24:163-6 D '46
Making and using thermoplastic laminates. il Mod Plastics 24·91-5 F '47
Modern decor; Barret coats hand prints with transparent plastic, vinyl butyral Textile Col 69:24 Ag '47
New approach to coated fabrics D S Plumb. Am Dyestuff Rep 36·332-4; Discussion. 334 Je 16 '47
Outlets for polyvinyl chloride paste il Mod Plastics 24:110-11 Je '47
Polyvinyl butyral for stainproof fabrics. Chem Ind 59·1038+ D '46
Vinyl butyral coated tablecloths. il Mod Plastics 24:112 N '46; Sci Am 176:14 Ja '47
Vinyl paste resin; Geon 100-X-210 M N. Burleson. il Mod Plastics 24:108-11 Ag '47

See also
Flock covered fabrics

Cutting

Automatic stacker applied to converted paper cutter for use on fabric. il Textile World 96.158 N '46

Heat transmission

Effect of dyestuffs on the temperature rise of fabrics exposed to light bibliog il diags Am Dyestuff Rep 36:159-65 Ap 7 '47
Protective value of clothing W H. Rees. bibliog il Textile Inst J 37:P132-53 Jl '46

Inflammability

California changes its mind. Textile Col 69: 22+ Mr '47
California law bans inflammable textiles. Textile World 97·218 Ja '47
Flammability, burning question, indeed! Textile Col 69.16-17+ F '47
Flammability of consumer textiles. H. E. Hager. Textile Col 68:18-19+ D '46
Flammability of wearing apparel. H. E. Hager. Am Dyestuff Rep 36·141+ Mr 24 '47; Discussion. 36.345-6 Je 30 '47
From Washington, D.C ; flammability issue. H. B. Rogers Textile Col 69:22-3+ Ap; 40-1+ My '47
New flammability law of California prohibits manufacture and sale of garments and textiles not meeting tests. Weekly Underw 155·1477+ D 21 '46
Reporting on the flammability hearing Mod Plastics 24·182-5 Ap '47
Retailers' views on flammability. E Freedman. Textile Col 69:20-1+ Ap '47
Status of flammability legislation; its relation to plastics, abstract. W. F. Chandler. Mod Plastics 24:98 Je '47
Testing for fire resistance. J. R. Redmond Am Dyestuff Rep 36.140+ Mr 24 '47

Infrared rays transmission

Effect of dyestuffs on the temperature rise of fabrics exposed to light. bibliog il diags Am Dyestuff Rep 36:159-65 Ap 7 '47
Heat resistant dyes reflect more infra-red radiation than other dyestuffs identical in color; research project. Heat & Ven 44: 105-6 O '47

Moisture content

Electronic control of cloth-drying machines. N H. Chamberlain. diags Textile Inst J 37:P249-62 Jl '46
Some aspects of the drying and heating of textiles; the moisture in fabrics J. M. Preston and J. C. Chen. bibliog diag Soc Dyers & Col J 62·361-4 D '46

See also
Textile fibers—Moisture content

Permeability

Apermeter; new air permeability determination apparatus. J. H. Skinkle and A. J Moreau il diag Am Dyestuff Rep 36:245-7 My 5 '47
Permeability of proofed fabrics to fumigants. F P. W. Winteringham and A. Harrison. diag Soc Chem Ind J 65:409-12 D '46

Protection

Carpet-beetle control unsolved wool problem. H. N. Mitchell. Textile World 96:170+ N '46
Fire and rot resistant finish; vinyl polymers; patent. Am Dyestuff Rep 36:467 Ag 25 '47
Mildewproofing cloth; diphenyl derivatives. Am Dyestuff Rep 36:17 Ja 13 '47
New sales appeals born as chemists lick mildew menace. E. M. Kelley. il Sales Management 58:84-8 F 1 '47

See also
Cotton fabrics—Protection
Fireproofing of textiles
Mothproofing preparations
Textile fabrics—Coating

Shrinkage

American association of textile chemists and colorists; research on dimensional changes. Am Dyestuff Rep 36·199-201 Ap 21 '47
Modern fibres and modern processes. G. R. Perdue. Textile Inst J 38:P203-7 Je '47
New fabric stabilization process, Definized process Rayon 27:595 N '46
Shrinking devices; patent. diag Am Dyestuff Rep 36.219 Ap 21 '47
Weapons against wool, cotton, rayon shrinkage. Bsns W p66-7 Je 28 '47

See also
Cotton fabrics—Shrinkage
Rayon fabrics—Shrinkage
Woolen and worsted fabrics—Shrinkage

Testing

Correlation of water-repellent garment performance and laboratory penetration tests on fabrics G A Slowinske and A. G. Pope. bibliog il diags Am Dyestuff Rep 36:108-21 Mr 10 '47
New simplified form of the Drapemeter. J. H Skinkle and A. J Moreau. il Am Dyestuff Rep 36 559-60 O 6 '47
Protective value of clothing. W. H Rees. bibliog il Textile Inst J 37:P132-53 Jl '46
Puncture and tearing tests for heavy fabrics intended for wagon covers. J. Hayes. diags 2pl Textile Inst J 38:T1-10 Ja '47
Recent advances in abrasion testing of textiles. F R. Dean. bibliog Textile Inst J 37:P380-9; Discussion. P389-91 Jl '46
Tearing strength of textiles, investigation of methods of test. J. Creswick il diags Textile Inst J 38·T307-17 S '47
20 years of textile testing at Macy's. E. Freedman Textile Col 69.29 Jl '47

See also
Textile fabrics—Inflammability

Water resistance

Converter's note book; water repellency. Textile Col 69·54+ My '47
Correlation of water-repellent garment performance and laboratory penetration tests on fabrics. G A. Slowinske and A. G. Pope. bibliog il diags Am Dyestuff Rep 36·108-21 Mr 10 '47
Life water repellent and conditioner. Consumers Res Bul 19:25-6 Je '47
Methods for evaluation of permanent water-repellent finishes. G. A. Slowinske. Am Dyestuff Rep 36 482 Ag 25 '47
1947 rainwear show. Textile Col 69:24+ Jl '47
Properties of water-repellent fabrics J. W. Rowen and D Gagliardi J Res Nat Bur Stand 38:103-17 bibliog(p 116-17) Ja '47; Same Am Dyestuff Rep 36:533-40 S 22 '47
Rain-resistant tests. G. A. Slowinske. Textile Col 69:26 Mr '47
Research necessary to rainwear fabrics. G. A Slowinske. il Textile Col 69:31+ S '47
Standards for water repellency. A. Kahn. Textile Col 69:26-7+ S '47
Tentative textile standard no. 7, 1947; specification for a Bundesmann type water-repellency testing apparatus. diags Textile Inst J 38·S1-14 F '47
Water repellency of textile fabrics. Rayon 28: 481-2 S '47
Water repellent finishes for service and protection R. H Armitage. il Textile Col 69: 28-9+ S '47

TEXTILE fabrics—Water resistance—*Cont.*
Waterproofing D H. Powers. il Textile Col 69:33 S '47

See also
Cotton fabrics—Water resistance
Waterproofing of textiles

TEXTILE fabrics, Laminated
Laminated fabrics; thermosetting and thermoplastic resins used; patent. Am Dyestuff Rep 36.467 Ag 25 '47

TEXTILE fibers
Acid nature of vegetable fibres in relation to basic dye absorption. P. B. Sarkar and others bibliog Soc Dyers & Col J 63·229-31 Jl '47
Application of microscopy to the textile field G L Royer and C. Maresh. bibliog(52 ref) il 3pls diags Soc Dyers & Col J 63:287-93 S '47
Application of phase microscopy to textile fiber research; abstract. H. Reumuth. Am Dyestuff Rep 36:335 Je 16 '47
Elastic properties of textile fibres. R. Meredith diags Textile Inst J 37:P469-80 O '46
Frictional properties of wool and other textile fibres. E H Mercer and K R. Makinson. bibliog diags Textile Inst J 38:T227-40 My '47
Matthews' textile fibers; their physical, microscopical, and chemical properties. H. R. Mauersberger, ed. 5th ed 1133p $12.50 John Wiley & sons, 440 4th av, New York 16 '47
Modern fibres and modern processes. G. R. Perdue. Textile Inst J 38.P203-7 Je '47
Natural and man-made fibres. A. J. Turner Textile Inst J 38·P411-13 Ag '47
Natural fibres versus man-made fibres; natural fibres, by A. B. D. Cassie; Man-made fibres, by L. Rose. Textile Inst J 37:P556-65; Discussion. P565-7 D '46
Physical properties of fibres and textile performances. A. B. D Cassie. bibliog Textile Inst J 37:P154-67 Jl '46
Structure of protein fibers. F. R. Senti bibliog il diags Am Dyestuff Rep 36:230-7 My 5 '47

See also
Cotton fibers
Flax
Jute
Manila hemp
Mohair
Plastic coated fibers
Ramie
Silk
Wool

Bibliography
Abstracts Published in monthly numbers of Textile institute journal

Blending
Dyers and finishers lauded; New York board of trade discuss blended fabrics. Textile Col 69.20+ Mr '47

Identification
New dye technique shows maturity of cotton. C F. Goldthwait and others. il Textile World 97.105-8+ Jl '47
Stains identify textile fibers. Rayon 28:160 Mr '47

Measurement
Surface tension method for measuring the perimeters of fibres and the contact angles of liquids against fibres. G E Collins. diag Textile Inst J 38:T73-7; Discussion. T77 F '47

Moisture content
Calorimetric investigation of moisture in textile fibers. F. C Magne, H. J. Portas and H. Wakeham. bibliog diag Am Chem Soc J 69:1896-902 Ag '47
Effect of moisture on nylon yarns and fabrics. G Loasby and H O. Puls. bibliog Textile Inst J 38:P30-40 Ja '47

See also
Cotton—Moisture content
Textile fabrics—Moisture content

Optical properties
Measurement of the refractive indices of fibres J. M Preston bibliog Textile Inst J 38.T78-83 F '47

Size
Yarns for special purposes; effect of filament size. D. Finlayson. Textile Inst J 37:P168-80 Jl '46

Strength
Determination of tensile properties and torsional rigidity of fibres. R. Meredith. bibliog il diag Textile Inst J 38:T15-19; Discussion. T37 F '47
Shear strength of filaments and fibres. D. Finlayson. diag Textile Inst J 38:T50-3; Discussion. T53 F '47
Stress-strain properties of certain yarns and knitted fabrics made of rayon, nylon and natural fibers. H. M Fletcher and P. A. Gilmore. bibliog Rayon 28·476-8, 542-5 S-O '47

Testing
Bending fracture of fibres; Franz and Henning instrument. R. H. K. Thomson and D. Traill. il Textile Inst J 38:T43-8; Discussion. T48-9 F '47
Determination of tensile properties and torsional rigidity of fibres R. Meredith. bibliog il diag Textile Inst J 38:T15-19; Discussion. T37 F '47
Equipment for single fibre testing. C. S. Whewell. bibliog Textile Inst J 38:T127-8 F '47
Estimation of fibre quality. J. L. Spencer-Smith. bibliog Textile Inst J 38:P257-72 Ag '47
Fiber extensometer. il R Sci Instr 18·455-6 Je '47
Measurement of torsional relaxation in textile fibres W. E. Morton and F. Permanyer. il diags Textile Inst J 38:T54-9 F '47
Photographic recording extensometer J. Sikorski and others. diags Textile Inst J 38:T20-36; Discussion. T37 F '47
Sampling problem in single fibre testing. R C. Palmer and H. E. Daniels. bibliog Textile Inst J 38 T94-100; Discussion. T101 F '47
X-ray diffraction camera for microtechniques. F. G. Chesley. il diag R Sci Instr 18:422-4 Je '47

See also
Cotton fibers—Testing

Weight
Microbalance for weighing textile fibres. E. Lord. il Textile Inst J 38:T84-92; Discussion. T92-3 F '47

TEXTILE fibers, Effect of light on
Effect of dyestuffs on the temperature rise of fabrics exposed to light. bibliog il diags Am Dyestuff Rep 36.159-65 Ap 7 '47

TEXTILE fibers, Metallic
Metal thread sealed between acetate film. Mod Plastics 24·121 N '46

TEXTILE fibers, Synthetic
Acrylonitriles; new class of synthetic fibers. J V Sherman. patent list (p102) Textile World 97.101-2+ Mr '47
Application of modern textile fibers. R. S. Greenwood. Rayon 27:647-50; 28:17-18, 75-6 D '46-F '47
German synthetic fibres; wet processing; abstract. H. Samuels and others. Soc Dyers & Col J 63:235 Jl '47
Italy's production of synthetic fibers, 1939-45. For Comm W 26·27 Ja 11 '47
Let's look at the cottonless cotton mill; Gray mills, inc. makes cotton system work on varied blends. il Textile World 97:147+ S '47
Manufacture of modern textile fibers. C. Diamond. bibliog il diags Rayon 28:123-6, 190-2, 329-31, 369-70, 421-2 Mr-Ap, Je-Ag '47
Natural fibres versus man-made fibres; natural fibres, by A. B. D. Cassie, Man-made fibres, by L. Rose Textile Inst J 37:P556-65; Discussion. P565-7 D '46
New fibers increase role in textile industry. J. V. Sherman. Barron's 27·13 Ja 6 '47
1947 revision; Textile World's synthetic-fiber table. C. W. Bendigo, comp. il Textile World 97·121-8 S '47
Non-cellulosic synthetics. W J. Hamburger. Textile World 96·214+ N '46

TEXTILE fibers, Synthetic—*Continued*

Proteins synthetic fibres. D. Traill. bibliog Textile Inst J 37:P295-300; Discussion. P300-1 Jl '46

Retail demonstrations teach women how to sew Plastron il Sales Management 59.84+ O 1 '47

Slasher solves problem in warping monofilaments. A. Frantz. Textile World 96.252+ N '46

Some principles of the structure of synthetic fibers. H. F. Mark. Am Dyestuff Rep 36:323-7 Je 16 '47

Structure of protein fibers. F. R. Senti. bibliog il Am Dyestuff Rep 36 234-7 My 5 '47

Synthetic fibers and their dyeing. E. Koester. Am Dyestuff Rep 36:189-92+ Ap 21 '47

Synthetics continue growth and diversification. Textile World 97:113-28 S '47 [reprints 25c]

Terylene. Chem & Ind p374 O 12 '46; Rayon 27:600 N '46

Terylene going into commercial production. F. R. Brewster. il Textile World 97:123+ Je '47

Terylene; new British synthetic textile fiber. K. Turner. Textile Col 69:22-3+ Ja '47

Terylene produced from a polyester derived essentially from terephthalic acid and ethylene glycol Textile Inst J 38:P61-2 F '47

Textile research shows rapid growth. J. V. Sherman. map Textile World 97:135+ Ja '47

X-ray contributions to the evolution of man-made fibres; abstract. W. T. Astbury. Chem & Ind p244 My 3 '47

See also

Dyes and dyeing—Synthetic fibers
Nylon
Nylon fibers
Rayon
Saran
Vinyon

Directories

How to contact fiber producers; addresses. Textile World 97:120 S '47

Testing

Measurement of the bending modulus of monofils; Cambridge fibre extensometer. P. W. Carlene. il diag Textile Inst J 38: T38-42; Discussion. T48-9 F '47

See also

Rayon fibers—Testing

TEXTILE finishing

Better finishes at less cost is goal of industry C. N. Rabold and N. D. Marius. Textile World 97 114 F '47

Cationic softeners give permanent finish. C. N. Rabold. il Textile World 97:147+ F '47

Chemical developments in textile finishing. L. J. Sheps. bibliog Can Chem & Process Ind 31.304-7 Ap '47

Conversion method aids plant and laboratory. Textile World 97:154+ Ja '47

Durability sought by textile finishers; twenty-five years' progress. R. A. Pingree. il Textile World 96:108-9+ D '46

Dyeing, printing and finishing in relation to fabric construction. R. S. Greenwood and C. P. Atkinson Soc Dyers & Col J 63:208-13 Jl '47

Efficiency and flexibility offered by finishing ranges C. N. Rabold. diags Textile World 97:106-11 O '47

Engineered fabrics. Rayon 27.660-1 D '46; Mech Eng 68:1075 D '46

Enzymes in textile processing. P. J. Wood il Am Dyestuff Rep 36:355-61 Je 30 '47

Fabric finishes for the future. A. E. Etchells. Textile Col 69 18-19+ Je '47

Fabric finishing. R. W. Powell. Am Dyestuff Rep 36:13-15+ Ja 13 '47

Finishes. Textile Col 69:22+ F '47 [cont monthly]

Latest trends in textile finishing. M. Pagerie il Textile Col 69:30-1 Jl '47

Modern roles for glycerine in textile processes. G. Leffingwell and O. S. Linkletter. bibliog Rayon 28 50-2 Ja '47

Modern textile finishes. F. W. Perry. Textile Col 68:16-17+ O '46

Moiré finishing of today's fabrics. H. A. Holterhoff. il Am Dyestuff Rep 36:150-2 Mr 24 '47

New finishes. F. L. Barrett. Textile Inst J 38:P145-54 Ap '47

Observations of twenty-five years in textile processing. R. W. Jacoby. Am Dyestuff Rep 35:630 D 2 '46

Part played by finishes. H. H. Mosher. Textile Col 69.22-3 S '47

Post-war textile processing, production, quality and distribution of costs. R. W. Jacoby Am Dyestuff Rep 36:347-51; Discussion. 351+ Je 30 '47

Problems connected with dyeing and finishing synthetic fabrics. W. Helmus. Am Dyestuff Rep 36:2-5 Ja 13 '47

Raising of textile fabrics. C. S. Whewell and others. Textile Inst J 37:P198-9 Jl '46

Replacement of starch in the finishing of textile fibers and fabrics. il Am Dyestuff Rep 36.166-74 Ap 7 '47; Abstract. Textile Col 68:22-3+ N '46

Sheerset featured at Copacabana il Textile Col 69:35 S '47

Solubilization in textile processing. J. W. Creely. bibliog diags Am Dyestuff Rep 36. 411-12+ Jl 28 '47

Special techniques required for circular-knit finishing. I. Teplitz. il Textile World 97. 129+ Je '47

Tell your dyer. A. J. Cohen. Textile Col 69: 26-7+ Ap '47

Textile treating resins. il Mod Plastics 24:97 Ja '47

Twenty-five years of textile resin finishing. J. E. Lynn. bibliog Am Dyestuff Rep 35: 653-4 D 2 '46

Wax to wear; Drax, wax emulsion textile rinse. il Chem Ind 61 610-11 O '47

See also

Bleaching
Cotton finishing
Creasing of textiles
Dyes and dyeing
Rayon finishing
Sizing (textiles)
Tentering machines
Textile fabrics—Coating
Textile fabrics—Water resistance
Waterproofing of textiles
Woolen and worsted finishing

TEXTILE industry

American association of textile chemists and colorists, abstracts of papers to be presented at technical program. Am Dyestuff Rep 36.594-9 O 20 '47

Developments in the textile and apparel industries. L. J. Atkinson. charts Survey of Cur Bsns 27:14-20 My '47

Dip in textiles is under way, but it will be mild. S. Parker. Textile World 97:101-3+ My '47

Economic tendencies affecting the converter. A. W. Zelomek. Textile Col 68:20-1+ N '46

Huge volume continues in government contracts for textile, apparel products; labor provisions of Public contracts act. Rayon 28:408-9 Ag '47

Informative labeling of textiles; a 25-year review of pros and cons. H. F. Herrmann Am Dyestuff Rep 35:616-17+ D 2 '46

Marketing and technology share forum at National textile seminar. Textile World 97:133+ Je '47

1946 industry improvement programs estimated to total $298,500,000; annual mill check-up il Textile World 96:103-10+ N '46

Plastics and textiles A. V. Pringle. Textile Inst J 38:P176-9 My '47

Post-war textile processing; production, quality and distribution of costs. R. W. Jacoby. Am Dyestuff Rep 36:347-51; Discussion. 351+ Je 30 '47

Progress in textile technology; how can we make it effective now? W. R. Kuenzel. Am Dyestuff Rep 36:212-14 Ap 21 '47

Role of the retailer in present market. T. I. Felner. Textile Col 68.20-1+ D '46

Second national textile seminar, Shawnee-On-Delaware, May 12 Textile Col 69:36-7 Je '47

Simplify distribution. A. Gimbel Textile Col 69.23 F '47

Squeezed converters regaining market position, but at a price. Textile Col 68:12+ D '46

TEXTILE industry—*Continued*
Textile head scores recession predictions. C. F. H. Johnson, jr. Comm & Fin Chr 166 118 Jl 10 '47
Textile trade asks whether history will repeat itself. H. N. Blackman. Dom Comm 35:11-22 Ag '47
Textiles' future looks good. Bsns W p56+ Ag 23 '47
Textiles on the upswing. il Bsns W p20 Jl 5 '47
Textiles; prospects for 1947. Dom Comm 35. 57-62 Ja '46
Textiles show power to reach new heights; statistical review and forecast. W. B. Dall and others. Textile World 97:101-16+ F '47
Wave of verticals recedes. W. Lawrence. Textile Col 69:22+ My '47

See also
Carpets
Clothing trade
Cotton trade
Coverlets
Dye industry
Dyes and dyeing
Hosiery trade
Knit goods
Rayon industry
Rugs
Silk
Silk trade
Textile fibers
Textile mills
Weaving
Wool trade

Bibliography
Abstracts. Published in monthly numbers of Textile institute journal
Review of periodicals. Published in monthly numbers of Rayon textile monthly

Exhibitions
Duplex Fabrics' textile exhibit at New York's Grand Central Palace. il diags Arch Forum 87 122+ Ag '47
International exposition of textiles, Grand Central Palace, New York, June 2. il Textile Col 69 20-31 Je '47
Research committee exhibit, Silver jubilee convention, Boston, Mass., Dec. 12-24, 1946. Am Dyestuff Rep 36:22-4 Ja 27 '47
Textile exposition fills Grand Central Palace. il Textile World 97 147+ Jl '47

Finance
Financing can be fitted to mill's circumstances. E. T. Neville. Textile World 97: 111+ My '47
Lower profit margins ahead in textiles. G. H. Arris. Barron's 27·14 Mr 10 '47
Textile profits break records. Bsns W p82 O 11 '47
Textron. il Fortune 35.133-7+ My '47

Securities
Varying future for textiles; with statistical appraisal of leading shares. H. F. Travis. il Mag of Wall St 80:96-8+ Ap 26 '47

Statistics
Textiles show power to reach new heights; statistical review and forecast W B. Dall and others Textile World 97:101-16+ F '47

Terminology
List of new brandnames for rayon or rayon mixture fabrics, rayon yarns, and other fibers listed during 1946. Rayon 27:701 D '46

Africa, West
History of West African styles. F Crompton. Soc Dyers & Col J 62:307-8 O '46

Angola, West Africa
Angola's output and trade in 1946. For Comm W 28 27 S 13 '47

Belgium
Average monthly output, Belgium textile industry, 1937 and 1946; table. For Comm W 27:22 My 31 '47

Brazil
Report shows importance of textiles to Brazil. Textile World 96:238 D '46

Chile
Chile; textile agreement signed with Brazil. For Comm W 26:12 F 8 '47

Denmark
Textile production and dyeing in Denmark. H. Boothroyd Soc Dyers & Col J 63:79-80 Mr '47

Europe
Economic observations abroad. N S W. Vanderhoef. Comm & Fin Chr 166·222 Jl 17 '47
Textile machinery and fabric trends in Europe R Bouvet. Rayon 28.417-18 Ag '47

France
Textile exporters permitted to use portion of foreign exchange derived from exports for purchase of plant equipment abroad. For Comm W 26.14 F 8 '47

Georgia
Chenille industry on the road back. Bsns W p 16 Ag 23 '47

Germany
Denkendorf reports disclose advanced German technology diags Textile World 97: 133+ Mr '47
Textile auxiliary products manufactured by I G. Farbenindustrie, and other German companies W Baird and others. Soc Dyers & Col J 62·321-4 O '46

Great Britain
British textile industries face challenging difficulties, with tabulations of exports for 1938 and 1946 M. E Poole. il For Comm W 27·3-5+ Je 28 '47
Let the Society take up the challenge! C M Whittaker. Soc Dyers & Col J 63: 37-40; Discussion. 40-1 F '47
Looking ahead. R. Streat. Textile Inst J 38: P87-90 Mr '47
Outlook for textiles. R. Streat Textile Inst J 37:P494-7 O '46
Virtuous monopolist; comments on the inquiry into organisations dominating the manufacture of cement and of textile machinery Economist 153:54-5 Jl 12 '47

India
Report from India on textile-industry developments. J. K. Van Denburg, jr. maps Textile World 97:108-112+ S '47

Italy
Import surtax on yarns replaces additional tax on textiles. For Comm W 26:20 Mr 15 '47
Italian textile industry in 1947. A. Giordano. Rayon 28:263-4 My '47
Progress in Italian industry. For Comm W 27:30 Je 14 '47
Report on the Italian rayon and other textiles industries. A. Giordano. Rayon 27·605 N '46

Japan
Exports of textiles from Japan, September 1945 to February 1947; table. For Comm W 28·25 Jl 5 '47
Japanese production of selected fabrics, 1939, 1946 and Jan.-April 1947; tabulation. For Comm W 28.29 Jl 26 '47

Mexico
Mexican exports of textile manufactures, 1934-39 average, yearly figures, 1940-1946. For Comm W 26:28 Mr 22 '47
Mexican textile industry. Economist 152 287 F 15 '47
Textile industry furthers good-neighbor policy; visit of Mexican textile officials to the United States. M. E. Poole. Dom Comm 34:40-2 D '46

Middle western states
Textile industry in the Middle-West. A. T Brainerd. il Am Dyestuff Rep 36:590-1 O 20 '47

Missouri
Missouri offers opportunity for textile development. map Textile World 97:224+ O '47

Netherlands
Netherlands textile industry. L. D Gruberg. Rayon 28.359 Jl '47

TEXTILE industry—*Continued*

Palestine

Palestine's textile industry. For Comm W 28:29-30 Jl 26 '47

Pennsylvania

September is Pennsylvania textile month. il Textile Col 69:86-7+ S '47

Persia

Textile-industry development, Iran. For Comm W 29:25 O 18 '47

Russia

Situation in textile industry. For Comm W 25:21+ D 14 '46
Textile setback. Bsns W p108 Ja 18 '47

Ryukyu Islands

Situation in Ryukyu Islands. For Comm W 28.25 Jl 12 '47

Southern states

More textiles move South; worsted, woolen mills join trek started by rayons, and cottons. il Bsns W p 17-18 Ag 16 '47
Southern textiles come of age, new mills J. A. Daly. il Manuf Rec 116:44-5+ O '47
Textile dollars go South Bsns W p19 N 30 '46
Textile industry expansion program estimated at $500,000,000 in five years. J. A. Daly. il Manuf Rec 115:45+ D '46
Textile manufacture; second southern industry. C. R. Walker. Manuf Rec 116:29+ Ap '47
Textile's ills hit South. Bsns W p21-2 My 31 '47

Spain

Spain has one really modern textile mill. C. S. Underwood. il map Textile World 97:101-3 Jl '47

Sweden

Textile production and dyeing in Sweden H. Boothroyd. Soc Dyers & Col J 63.77-8 Mr '47

TEXTILE institute

British textile convention. Textile Col 68:13+ O '46
Conference at Scarborough, June 13th to 18th, 1946. Textile Inst J 37:P125-31 Jl '46
Lancashire section; Blackburn branch; inaugural meeting. Textile Inst J 37:P465-9 O '46

TEXTILE laboratories

Celanese opens central research laboratories. H R Mauersberger. il Rayon 28:526-7 O '47
Dan River completes research organization. C. M. Bowden. il plan Textile World 97:104-6 Mr '47
Efficient laboratory a must for modern finishers; Union bleachery, Greenville, S.C. il Textile World 97:129 Mr '47
Research on carpets at its finest; A. S. Smith and sons laboratory. H. R Mauersberger. il Rayon 27:587-8 N '46
Triangle of research; Textile research institute, Textile foundation, and Princeton university. W. A. Newell. il Textile World 97:101-5+ O '47
Twenty-five years of progress in mill laboratories. W. H. Cady. bibliog Am Dyestuff Rep 35:645+ D 2 '46

TEXTILE laws and regulations

California changes its mind. Textile Col 69:22+ Mr '47
Flammability, burning question, indeed! Textile Col 69:16-17+ F '47
Flammability of consumer textiles. H. E. Hager. Textile Col 68 18-19+ D '46
Flammability of wearing apparel H E. Hager. Am Dyestuff Rep 36.141+ Mr 24 '47
New decisions affect laws applying to mills. L. T. Parker. Textile World 97.139+ Ag '47
New flammability law of California prohibits manufacture and sale of garments and textiles not meeting tests. Weekly Underw 155·1477+ D 21 '46

TEXTILE machinery

Basle fair is focus for new Swiss machinery. H. Seligman il Textile World 97:137+ Je '47
Bobbin refinishing machine gives low-cost, uniform results. il Textile World 97·148+ Ag '47
Color on machines in textile industry. W. Schweisheimer. il Rayon 27.621-2 N '46
Engineering textile tension E. J. Saxl. il diag Rayon 28.539-41, 588-90 O-N '47
Improved modern machinery. il Rayon 28·149-52 Mr '47
Knitting and finishing lead new machine development. G. B M Walker. Textile World 97:112-13 F '47
Laminates important to textile machines il Mod Plastics 25.109 S '47
Life of parts lengthened by chrome plating. D. B. McPherson il Textile World 96: 139+ D '46
Loading industrial machinery pneumatically il diag Comp Air Mag 52:124-5 My '47
Modern trends in textile machinery. E. Cannity. il diags Am Dyestuff Rep 36:25-31+ Ja 27 '47
Muschamp Taylor winder requires no yarn tension. il Textile World 97 161 My '47
New fiber bonded machine. il diag Rayon 27·658 D '46
Permanent magnets reduce fires and damage. il diag Textile World 97:118-19+ Ag '47
Plastics improve textile machinery. il diags Mod Plastics 24:73-9 Jl '47
Sandwich blend made mechanically. il diag Textile World 97:149 O '47
Some trends in the continuous processing of cellulosic textiles. R. G. Fargher. Textile Inst J 38:P219-22 Jl '47
Spooler-knotter bumper eliminates manual timing. diags Textile World 97:182+ S '47
Textile machinery and fabric trends in Europe R. Bouvet. Rayon 28:367-8, 417-18 Jl-Ag '47, Same abr. Textile World 97:127+ Je '47

See also

Bobbins
Carding machines
Combing machines
Cotton picking machines
Dyeing machines
Fulling mills
Hosiery machines
Knitting machines
Looms
Rayon machinery
Spinning machinery
Tentering machines
Textile printing machines
Textile testing machines
Twisting machines
Warping machines
Winding machines
Woolen and worsted machinery

Lubrication

Lubrication an important factor in reducing textile production costs il Rayon 28:41-3 Ja '47

Noise

Noise reduction in textile machinery due to the substitution of gears by chain drives. A. L. Mayor. Textile Inst J 37:P522-5 N '46

Patents

Dyeing and washing device, reducing tension diag Am Dyestuff Rep 36:280 My 19 '47
Opening webs in rope form diags Am Dyestuff Rep 36·218-19 Ap 21 '47
Sizing agents, polyvinyl-alcohols; patent. Am Dyestuff Rep 36:418 Jl 28 '47

See also Textile printing machines—Patents

TEXTILE machinery industry

Machines, men, money, tailor-made textile, chemical equipment plus technicians for foreign customers. il Bsns W p93-4+ Jl 12 '47

Europe

Textile machinery and fabric trends in Europe. R. Bouvet. Rayon 28:367-8, 417-18 Jl-Ag '47; Same abr, Textile World 97·127+ Je '47

Great Britain

Engineering outlook. Engineering 163:246-7, 268-70 Mr 28-Ap 4 '47
Spotlight on cotton machinery. Economist 152 862 My 31 '47

Switzerland

Basle fair is focus for new Swiss machinery H. Seligman. il Textile World 97·137+ J' '47

TEXTILE mills
Cheney brothers; new plant at Manchester, Conn. il Factory Management 105:B60-2 pt 2 Ap '47
Functionalism is rule for modern mill building. L. V. Lacey. il Textile World 97:117+ Ap '47
Glass house for Duplan insulates for nylon throwing, Foamglas in side walls and roof protects against condensation il Textile World 97:114-15 My '47
Let's look at the cottonless cotton mill, Gray mills, inc. makes cotton system work on varied blends. il Textile World 97.147+ S '47
Modern mill building features control of air; manufacture of Lumite fabrics; Chicopee mfg. corp.'s new plant at Cornelia, Ga. il Textile World 97.120-1 F '47
New trends develop in southern textile mill design il Eng N 138:805-9 My 15 '47
1946 industry improvement programs estimated to total $298,500,000; annual mill check-up. il Textile World 96:103-10+ N '46
Nylon keeps right on working for Cheney Brothers il Rayon 28.23-5 Ja '47
One-story mills favored by modern engineering Textile World 97:115 F '47
Textile manufacture; second southern industry. C. R. Walker. Manuf Rec 116:29+ Ap '47

See also
Cotton mills
Electric driving—Textile mills
Hosiery mills
Knitting mills
Rayon mills
Water supply for textile mills
Woolen and worsted mills

Accidents

National safety council presents safety award to Avondale mills. Textile World 97:143 Mr '47

Air conditioning

Effective temperature influences air-conditioning. P. L. Davidson. il Textile World 97:111+ Ap '47
Greater profits through air-conditioning. il Rayon 28 396-7 Jl '47
Refrigeration for textile mill air conditioning. P. L. Davidson. il Heat & Ven 44: 57-62 My '47

See also
Cotton mills—Air conditioning

Cleaning

See also
Cotton mills—Cleaning

Costs

Every pick up adds to handling cost. C. M Bowden. il Textile World 97.104-5 My '47

Electric equipment

Electric trucks in the textile industry. il Mech Handling 33:676-8 N '46
Electrical equipment for two-for-one twister, abstracts. E. C Gwaltney and J. H. Burnham. diag Product Eng 18:128-9 My '47; Elec Eng 66 474-6 My '47

Employees

See Textile workers

Equipment

Alphabetical list of new products developed since November, 1945. il diag Am Dyestuff Rep 35.688-90 D 16 '46
Aluminum has many uses in textile equipment C. Braglio. il Textile World 97:123+ Ap '47
Automatic cloth lower handles 120 rolls per day. il Textile World 97:103 Mr '47
Corrosion resisting steels for the textile industry. J. A. McWilliam. Textile Inst J 38 P154-5 Ap '47
Expect great savings from new, improved equipment. il Textile World 96.109-10+ N '46
Extending use of welding. C. W. Brett. il Textile Inst J 38:P24-6 Ja '47
How to sell gas in textile processing. E. V. K. Schutt. Am Gas J 166:43-5 My '47
Mechanical systems for handling textile materials. il Rayon 28:447-9 Ag '47
Modern slasher room features automatic controls; Seminole mills. P. M Thomas. il Textile World 97:135+ S '47
New R & L soap distributing system plan diag Rayon 27:614 N '46
Pipe-line strainers can reduce maintenance costs. R. E. Cochran. il diags Textile World 97:118-19+ Je '47
Textile progress accents instrumentation R. Pollack, jr. il diags Rayon 28.509-11, 546-8 S-O '47

See also
Textile machinery

Fires and fire protection

Fire and accident hazards can and do affect profits il Rayon 27:615-17 N '46
Firebugs in textile mills. G. R Shepherd. il Nat Safety N 56 96-7+ O '47
Permanent magnets reduce fires and damage il diag Textile World 97:118-19+ Ag '47

See also
Cotton mills—Fires and fire protection

Floors

Mechanized floor maintenance saves money at Macon Textiles D W. Barnes. il Textile World 97:151+ S '47
Wood-asphalt-concrete sandwich answers mill floor problem P. L Geiringer. diags Textile World 96.141+ N '46

Heating and ventilation

Radiant panel heating system solves textile plant problems; Verney mills. G. L. Wiggs. il diag Heating-Piping 19:75-8 Mr '47

Lighting

Getting the most from fluorescent lighting. S. H. Eaton. il Textile World 96.116-17 D '46
Importance of adequate lighting il Rayon 28:87-9 F '47

Maintenance and repair

Mill should figure closely on its machine-shop needs C. H. Smith. il Textile World 97: 131+ Je '47

Management

Every pick up adds to handling cost. C. M. Bowden il Textile World 97 104-5 My '47
Financing can be fitted to mill's circumstances. E. T. Neville. Textile World 97. 111+ My '47
Indirect labor can be accurately controlled. T. H. Gallier. Textile World 97:106-7+ Ap '47
Progress in textile manufacturing due to research, development and modernization. il Rayon 28:503-8 S '47
Spinner's task can be set quickly. F. H. Gunther and M. Gross. il Textile World 97: 108-9 Ap '47

Power

Modern power transmission results in lower power costs. il Rayon 28:345-8 Je '47
Production and use of power and heat in textile manufacturing. il Rayon 28.565-7 O '47

Safety measures

Fire and accident hazards can and do affect profits. il Rayon 27.615-17 N '46

Waste

Proper condition of waste liquor from a finishing plant when entering streams in Pennsylvania F. B. Milligan. Am Dyestuff Rep 36:482-4 Ag 25 '47
Recent developments in retting of flax and disposal of the waste waters. T. W. Brandon and C. B. Taylor. bibliog diags Soc Chem Ind J 65.390-6 D '46
Stream-sanitation research is four-fold. il Textile World 97:125+ Jl '47
Textile industry; textile wastes combined with municipal sewage. J. C. Geyer. diags Ind & Eng Chem 39.653-6 My '47

Water supply

See Water supply for textile mills

TEXTILE mills, Underground. See Factories, Underground

TEXTILE patents
Patent digest. Published in American dyestuff reporter
Patent index, 1946. Rayon 27 699-700 D '46
Patent reports. Published in monthly numbers of Rayon textile monthly

See also
Dye patents
Nylon—Patents
Textile machinery—Patents
Textile printing—Patents

Bibliography
Index to patent digest, by subject and patent number, of patent abstracts July, 1946-June, 1947. Am Dyestuff Rep 36:467-9 Ag 25 '47

TEXTILE printing
Change has been gradual in textile printing; twenty-five years' progress. R. W. Jacoby. il Textile World 96·110-11 D '46
Dyeing, printing and finishing in relation to fabric construction. R. S Greenwood and C. P Atkinson. Soc Dyers & Col J 63:208-13 Jl '47
Dyeing process uses molten metal; fabric passed through molten-metal bath for aftertreatment F S. Richardson, comp. diag Textile World 97:133+ S '47
Exhibition of print styles N. Hamer and others Soc Dyers & Col J 63 97-101 Ap '47
New emulsions developed for textile printing. il Textile World 97·143+ S '47
Photographic printing process brings reality to print designs. il Textile Col 69:22-3 Jl '47
Pigment printing comes of age. il Am Dyestuff Rep 35·sup132 D 2 '46
Quarter of a century of textile printing. P J Wood. il diags Am Dyestuff Rep 35: 655-61 D 2 '46
Textile printing in Germany. H. Samuels and others Soc Dyers & Col J 63·185-6 Je '47
Thickening agents and tinctorial strength Rayon 28.499 S '47

See also
Calico printing
Rayon printing
Silk printing
Silk screen printing
Textile printing machines

Mixed fabrics
Printing of mixed fabrics. G. A Northup. Am Dyestuff Rep 36:6-7+ Ja 13 '47

Patents
Cellulose zincate solutions used in transparentizing printing operations, patents. Am Dyestuff Rep 36 367 Je 30 '47
Chrome dyestuffs printing; lake formed in the drying operation. Am Dyestuff Rep 36·395 Jl 14 '47
Indigosol printing Am Dyestuff Rep 36.438 Ag 11 '47
Oat preparations for printing thickeners; British patent. Am Dyestuff Rep 36·280 My 19 '47
Pigment printing, partially gelled resin solutions; patent. Am Dyestuff Rep 36 366 Je 30 '47
Pigment printings; starch preparations used, patent. Am Dyestuff Rep 36:367 Je 30 '47
Printing solubilized vat dyestuffs; adding caffeine Am Dyestuff Rep 36.219 Ap 21 '47
Reproducing prints by azo dye formation, using electric current. Am Dyestuff Rep 36.579 O 6 '47
Screen printing apparatus. diags Am Dyestuff Rep 36 578-9 O 6 '47
Screen printing method; preventing juncture marking. diags Am Dyestuff Rep 36:579 O 6 '47
Textile printing blanket; Canadian patent. il Am Dyestuff Rep 36:155 Mr 24 '47
Vat dyes printing; alkyl carbamates added; patent. Am Dyestuff Rep 36·614 O 20 '47

TEXTILE printing machines

Patents
Printing machine; applying powder to the printing blanket. diag Am Dyestuff Rep 36·439 Ag 11 '47
Printing mechanism; back greys omitted. diags Am Dyestuff Rep 36:16 Ja 13 '47
Screen printing machine for pile fabrics, patent P Wengraf diag Am Dyestuff Rep 36·513 S 8 '47

TEXTILE research
American association of textile chemists and colorists research committee, 149th meeting, Boston, Dec. 14, 1946 Am Dyestuff Rep 36·195-207 Ap 21 '47
American association of textile chemists and colorists third annual report of executive committee on research. Am Dyestuff Rep 36:32-3 Ja 27 '47
Application of microscopy to the textile field. G L. Royer and C Maresh. bibliog(52 ref) il 3pls diags Soc Dyers & Col J 63 287-93 S '47
Application of phase microscopy to textile fiber research, abstract. H Reumuth. Am Dyestuff Rep 36:335 Je 16 '47
Chemical developments in textiles in 1946. M Harris and L L. Cox Chem & Eng N 25.96-7 Ja 13 '47
Executive committee on research sponsors special meeting on future of AATCC research, questionnaire Am Dyestuff Rep 36 376-7 Jl 14 '47
Factors affecting the development of mould on cotton fabrics and related materials. W. I Illman and M. W. Weatherburn bibliog il Am Dyestuff Rep 36.343-4+ Je 30 '47
Integration of sciences in textile research S. J. Davis. Am Dyestuff Rep 36:510-11 S 8 '47
New, scientific approach to textile technology. Rayon 27.659 D '46
Present AATCC research program. H. W. Stiegler. Am Dyestuff Rep 35:586-7+ D 2 '46
Progress in textile technology; how can we make it effective now? W. R. Kuenzel. Am Dyestuff Rep 36.212-14 Ap 21 '47
Research must be applied is theme of Textile research institute meeting. Textile World 96.149+ D '46
Research promises noteworthy future for textiles J. F. Smith. Textile World 97: 111-12 F '47
Stream-sanitation research is four-fold il Textile World 97·125+ Jl '47
Textile research shows rapid growth. J. V. Sherman. map Textile World 97:135+ Ja '47
Trends in textile research and education. W F Luther. Am Dyestuff Rep 35:702-3+ D 30 '46
Triangle of research; Textile research institute, Textile foundation, and Princeton university. W. A. Newell il Textile World 97:101-5+ O '47

See also
Cotton research
Rayon research
Textile laboratories
Wool research
also Institute of textile technology

TEXTILE research institute
Annual meeting, 17th, New York, Nov. 8. Textile Col 68 24+ N '46

TEXTILE samples
Time- and money-saving method of attaching sample swatches to catalogs. il diags Inland Ptr 118·61 D '46

TEXTILE schools
ITT combines degree granting with research M. C. Powers il Textile World 97.103-7 Je '47
Plans made by textile schools for coming year. Textile Col 69:25+ Jl '47
Textile schools prepare for openings. Textile Col 69:26+ Ag '47

See also
Lowell textile institute

TEXTILE sizing. See Sizing (textiles)

TEXTILE soap. See Soap, Textile

TEXTILE standards
A S T.M. standards on textile materials (with related information); specifications, tolerances, methods of testing, definitions and terms 490p pa $4 Am. soc for testing materials, 1916 Race st, Philadelphia 3 '46 [issued annually]
Informative labeling of textiles; a 25-year review of pros and cons. H. F. Hermann. Am Dyestuff Rep 35.616-17+ D 2 '46

TEXTILE standards—*Continued*
Interest in standards grows as basis for increasing sales il Ind Stand 18:62+ Mr '47
People, things and words. A. G. Ashcroft. bibliog Rayon 28 187-90, 259-62 Ap-My '47
TEXTILE technology, Institute of. See Institute of textile technology
TEXTILE terms. See Textile industry—Terminology
TEXTILE testing
A S T.M.-D-13 holds spring meeting; symposium on use of electric strain gage for textile testing. Rayon 28.180-1 Ap '47
A.S.T M fall meeting of D-13 committee on textiles, New York, Oct. 16-18. Rayon 27: 580-1 N '46
A S T M standards on textile materials (with related information), specifications, tolerances, methods of testing, definitions and terms 490p pa $4 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '46 [issued annually]
Recent advances in abrasion testing of textiles. F R. Dean bibliog Textile Inst J 37.P380-9, Discussion. P389-91 Jl '46
Study of the wetting of textile materials, the use of a hydrometer method. I J Gruntfest and others. diag Am Dyestuff Rep 36 225-6+ My 5 '47
Tearing strength of textiles, investigation of methods of test. J. Creswick. il diags Textile Inst J 38 T307-17 S '47

See also
Dye testing
Textile fabrics—Testing
Textile fibers—Testing
Yarn—Testing

TEXTILE testing machines
Abrasion testing. R. H. Armitage. Rayon 28: 420 Ag '47
Bending fracture of fibres; Franz and Henning instrument. R. H. K. Thomson and D. Traill. il Textile Inst J 38:T43-8; Discussion, T48-9 F '47
Determination of tensile properties and torsional rigidity of fibres. R. Meredith. bibliog il diag Textile Inst J 38.T15-19; Discussion. T37 F '47
Modification of the Moscrop yarn tester J G. Martindale and B. Hogley il diags Textile Inst J 37:T281-4 D '46
Nouvelle machine d'essai dynamique des textiles et du caoutchouc. A. Tenot. il diag Génie Civil 124 349-51 S 15 '47
Shear strength of filaments and fibres. D. Finlayson. diag Textile Inst J 38:T50-3; Discussion. T53 F '47
Solution of problem of producing uniform abrasion and its application to the testing of textiles. H. F. Schiefer. bibliog il diags J Res Nat Bur Stand 39.1-10 Jl '47
Tentative textile standard no. 7, 1947, specification for a Bundesmann type water-repellency testing apparatus. diags Textile Inst J 38 S1-14 F '47

See also
Extensometers

TEXTILE workers
Control of absenteeism in the textile industry W. Schweisheimer Rayon 28.147-8 Mr '47
Demand and supply relative to employment and training in the textile bleaching and finishing industry. P. A. Wells Soc Dyers & Col J 63:147 My '47
First meeting of the I.L O. textiles committee. Int Labour R 55.77-85 Ja-F '47
How the new labor law affects textile mills. B. Werne. Textile World 97:112-13+ Jl '47
Personnel case-studies aid supervisor training. R T. Taylor il Textile World 96.112-13+ O; 116-17 N '46
Personnel relations reach firmer ground. C. M. Bowden. Textile World 97 116 F '47
Reeves mill employees wear functional clothing. il Textile World 97:159 S '47
Survey gives clues to best working hours for women. Textile World 97:127 Mr '47
Textile job is a good job; labor conditions in South Carolina. F. S. Lewis. il Textile World 97:115+ Ap '47
Textile pay policy. Bsns W p88-9 Je 21 '47
Training operatives F. Hill. Textile Inst J 38 P96-104, Discussion, P104-6 Mr '47
Wage structure of textile dyeing and finishing industry, July 1946 L. Badenhoop. Mo Labor R 64:1034-9 Je '47

See also
Cotton mills—Employees
Woolen and worsted mills—Employees

TEXTILE workers union of America
Bargaining works; C I.O.'s textile workers negotiate wage increases. Bsns W p83-4 F 8 '47
Handling work assignment changes S. Barkin. Harvard Bsns R 25 no 4:473-82 [Jl] '47
TEXTOLITE
Insulating plastic; Textolite #1422; General electric co Chem Ind 59:860 N '46
TEXTRON, Inc.
Consolidating recent growth Barron's 27:15 Ja 6 '47
Earnings in 1946, other details of operations Comm & Fin Chr 165:1111 F 24 '47
Textron. il Fortune 35.133-7+ My '47
To acquire English firm Comm & Fin Chr 165:3399 Je 30 '47
THAILAND. See Siam (Thailand)
THALLIUM
Abundance of thallium in the earth's crust L. H Ahrens. Science 106:268 S 19 '47
New ultraviolet phosphors. H C. Froelich bibliog il Electrochem Soc Trans 91 (preprint 11):161-81 '47
Slow neutron velocity spectrometer studies; I, Os, Co, Tl, Cb, Ge. C. S. Wu and others Phys R 71 174-81 F 1 '47

Isotopes

Fission of bismuth, lead, thallium, platinum, and tantalum with high energy particles. I. Perlman and others. Phys R 72:352 Ag 15 '47
Magnetic moment of Tl^{205} H L Poss bibliog Phys R 72.637 O 1 '47

THALLIUM compounds
Kinetics of oxidizing—reducing potentials; abstract A L. Rotinyan, I. I. Appenin and V G Tkachenko. Chem Eng 54:256+ O '47
THALLIUM hydroxide
Methylation of β-methylglucopyranoside and αβ-methylxylopyranosides by thallous hydroxide and methyl iodide. C. C. Barker, E. L. Hirst and J. K. N. Jones. Chem Soc J p783-4 S '46
THALLIUM sulfide
High-sensitivity photoconductive cell C. W. Hewlett il diags Gen Elec R 50:22-5 Ap '47
THAMES river
Thames flood control; abstract. R V. W. Stock. Engineer 184:63 Jl 18 '47
THATCHER glass manufacturing company
Places loan privately. Comm & Fin Chr 166. 707 Ag 18 '47
THAWING
Thawing frozen ladings il Nat Safety N 54: 38-9+ N '46

See also
Walks, Concrete—Heating

THAWING, Electric
How to use welding equipment to thaw frozen water pipes. R. F. Wyer. Elec World 127:55 Ja 4 '47; Same. Rayon 27.673-4 D '46, Same. Dom Eng 169:122+ Ja '47, Same. Paper Ind 28:1491 Ja '47; Same. Ry Mech Eng 121 87 F '47; Same. Coal Age 52:108 My '47; Excerpt (tables). Elec Eng 66.177 F '47
THEATERS
Acoustical tests in the Scala theater of Milan E Paolini. plan Acoustical Soc Am J 19:346-7 Mr '47
Le bombardement de Rotterdam, ses effets sur les constructions en béton armé; la reconstruction du port et du théâtre municipal. A Bijls. plan diag Génie Civil 124: 328 S 1 '47

See also
Moving picture theaters
Radio broadcasting studios

Heating and ventilation

Theater return air intakes diags Heating-Piping 19:107-8 Ag; 113-14 S; 103-5 N '47

THEATERS—*Continued*

Lighting

Engine-generator supplies emergency lighting. il Elec World 126:116+ N 23 '46

See also
Stage lighting

THEATRICAL production

Insurance requirements

Insure boy actor for $3,000,000; Richard Tyler; coverage in Lloyd's; production itself insured in stock company. R. Rhodes. East Underw 47:12 D 27 '46

THEFT

Prevention of fidelity and crime losses. C. A. Sullivan. Management R 36.227-9 Ap '47

See also
Embezzlement

THEFT insurance. See Insurance, Theft

THERAPEUTICS

Alcohol as a disinfectant against the tubercle bacillus. C. R. Smith. bibliog Pub Health Rep 62:1285-95 S 5 '47

See also
Aluminum, Powdered—Therapeutic use
Chemotherapy
Electrotherapeutics
Inhalation (therapeutics)
Phototherapy
Radiotherapy
Ultraviolet rays—Therapeutic use
Vaccines

THERMAL analysis

Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui diag Opt Soc Am J 37.37-41 Ja '47

THERMISTORS. See Electric resistors

THERMIT

Producing steel castings by the thermit process R C. Wayne. il diags Foundry 75: 84-7+ Ag '47

Analysis

Analysis of thermite-type incendiary and pyrotechnic mixtures C E Danner and J. Goldenson. bibliog Anal Chem 19:627-30 S '47

THERMOCHEMISTRY

Determination of the heat of combustion of nitroglycerin and the thermochemical constants of nitrocellulose. J. Taylor and C. R. L. Hall. bibliog diags J Phys & Colloid Chem 51:593-611 Mr '47

Heat of combustion and formation of 1,3,5,7-cyclooctatetraene and its heat of isomerization to styrene. E J. Prosen, W H Johnson and F. D. Rossini. bibliog Am Chem Soc J 69.2068-9 Ag '47

Heats of formation and isomerization of the eight C_8H_{12} alkylcyclohexanes in the liquid and gaseous states. E. J. Prosen and others. bibliog J Res Nat Bur Stand 39: 173-5 Ag '47

Heats of formation of $3CaO \cdot B_2O_3$, $2CaO\ B_2O_3$, $CaO \cdot B_2O_3$ and $CaO\ 2B_2O_3$ D R Torgeson and C. H Shomate. bibliog Am Chem Soc J 69:2103-5 S '47

Heats of solution and heats of reaction in liquid ammonia E Hennelly and others. Am Chem Soc J 69:1025-7 My '47

Resonance energies from thermal data. T. L Cottrell and L. E Sutton. bibliog J Chem Phys 15.685-6 S '47

^5S state of carbon. A G. Shenstone. bibliog il Phys R 72:411-14 S 1 '47

Some preliminary investigations of the phenol-formaldehyde reaction T T. Jones. diags Soc Chem Ind J 65.264-75 S '46

Thermochemistry of propellent explosives. J. Taylor, C. R L. Hall and H. Thomas. bibliog J Phys & Colloid Chem 51:580-92 Mr '47

See also
Combustion
Combustion, Heat of
Combustion analysis
Denaturation, Heat of
Melting points
Neutralization, Heat of
Polymerization, Heat of
Solution, Heat of
Specific heat
Thermodynamics
Vapor pressure
Vaporization, Heat of

THERMOCHROMISM

Experiments with Grignard solutions, action of Grignard solutions on thermochromic spiropyrans A. Schönberg, A. Mustafa and W Asker. Chem Soc J p847-8 Je '47

THERMOCOUPLES

Application of the sliding thermocouple method to the determination of temperatures at the interface of a moving bullet and a gun barrel. E L Armi and others. il diag J Ap Phys 18:88-94 Ja '47

Characteristics of thermocouples. C. T Weller. il Gen Elec R 49 50-3 N '46

Design of thermocouple and thermometer wells G R. Feeley. diags Pet Processing 1:222-3+ N '46

Determination of molten metal temperatures, abstracts G Vennerholm and L C Tate Iron Age 159:85-6 My 8 '47; Metal Prog 52:426+ S '47

Determination of the thermal correction for a single-shielded thermocouple. W M Rohsenow and J P. Hunsaker bibliog diags A S M E Trans 69:699-703, Discussion 703-4 Ag '47

Estimate of transparency of the atmospheric window 16 mu to 24 mu. A. Adel. Opt Soc Am J 37 769-71 O '47

High nickel-chromium alloys increase thermocouple life; abstract E A. Murphy. Materials & Methods 25 133 Mr '47

How to select and install pyrometer leadwires C. C. Roberts and C A. Vogelsang il diag Power 91:447-9+ Jl '47; Same Steel 121:91+ Ag 18 '47; Same cond. Power Pl Eng 51:110-12+ S '47; Same cond. Iron Age 159:82-4 Mr 6 '47; Same Glass Ind 28:354-5+ Jl '47

Instrument for piston temperature measurement. A C Scholp and others il diag S A E J 55 37-9 My '47; Abstract. Automotive & Aviation Ind 96:34 F 1 '47

Instrumentation for flight testing of thermal anti-icing systems W C. Droege. bibliog il diag A S M E Trans 69 695-8 Ag '47

Mercury switch for thermocouples. D. R. Martin diags Science 105:265 Mr 7 '47

Multiple thermal analyses. J. L Kulp and P F. Kerr. diag Science 105:413-14 Ap 18 '47

Radiation thermocouple. il R Sci Instr 18: 373 My '47

Studies of thermal injury, automatic recording caloric applicator and skin-tissue and skin-surface thermocouples. F. C. Henriques, jr bibliog diags R Sci Instr 18. 673-80 S '47

Symposium on the contamination of platinum thermocouples, by the Liquid steel temperature sub-committee. T. Land and others. 4pls Iron & Steel Inst J 155:213-34 F '47; Discussion. 156.497-500 Ag '47

Thermocouple actuates waste gas torch ignitor when pilot flame fails. A. Krieg. diag Pet Processing 2:258 Ap '47

Thermocouple protecting tubes; engineering file facts. Materials & Methods 25:143 Ap '47

Use of protecting tubes and wells. Cer Ind 48:51 Je '47

See also
Thermopiles

THERMODYNAMICS

Applications of thermodynamics to hydrocarbon processing. W C. Edmister bibliog Pet Refiner 26 77-82 Jl; 83-8 Ag; 105-11 S; 99-105 O; 110-17 N '47 (to be cont)

Behavior of pure substances near the critical point. O. K. Rice. bibliog J Chem Phys 15: 314-32 My '47

Binary mixtures of *n*-butane, isobutane, and 1-butene with furfural; vapor-liquid equilibria and thermodynamic properties. T. S. Mertes and A P. Colburn. bibliog diags Ind & Eng Chem 39:787-96 Je '47

Coefficient of performance of the heat pump. W. Parkerson diags Heat & Ven 44:63-7 My '47

Comparative thermodynamic properties of the restricted rotator and the harmonic oscillator. J O. Halford. J Chem Phys 15: 364-7 Je '47

Composition, pressure, and temperature relationships in binary azeotropic systems E. A. Coulson and E. F. G. Herington. Chem Soc J p597-607 My '47

THERMODYNAMICS—*Continued*
Contribution of restricted rotation to electron scattering by gases. J Karle. bibliog J Chem Phys 15 202-7 Ap '47
Electromechanical properties of Rochelle salt at the lower Curie point R M Lichtenstein bibliog diags Phys R 72.492-501 S 15 '47
Enthalpy concentration chart for hydrogen fluoride-water solutions. E G. Vogt. Chem Eng Prog 43 39-40 Ja '47
Enthalpy, specific heat, and entropy of aluminum oxide from 0° to 900° C D. C Ginnings and R. J. Corruccini bibliog diags J Res Nat Bur Stand 38.593-600 Je '47
Entropies and related properties of branched paraffin hydrocarbons. K. S. Pitzer and J. E. Kilpatrick. bibliog Chem R 39:435-47 D '46
Entropy of nitromethane; heat capacity of solid and liquid; vapor pressure, heats of fusion and vaporization. W M. Jones and W F. Giauque. bibliog Am Chem Soc J 69.983-7 My '47
Equation of state for a system with a single type of transformation. J. L. Finck Franklin Inst J 243:117-29 F '47
Equilibrium constants of some reactions involved in the production of 1,3-butadiene F. G. Brickwedde, M Moskow and J. G. Aston. bibliog(75 ref) J Res Nat Bur Stand 37 263-79 N '46
Fractional precipitation of molecular-weight species from high polymers; theories of the process and some experimental evidence D. R. Morey and J. W. Tamblyn. bibliog diags J Phys & Colloid Chem 51: 721-46 My '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Gas enthalpies (at low pressures); chart; data sheet. W. M. Rohsenow and D. A. Mooney. Power 91.135, 209 F-Mr '47
Heat capacities, heats of fusion and entropies of the six pentenes. S. S. Todd, G. D. Oliver and H. M Huffman. Am Chem Soc J 69:1519-25 Je '47
Heat capacity, heats of fusion and vaporization, vapor pressure, entropy, vibration frequencies and barrier to internal rotation of styrene. K. S. Pitzer. L. Guttman and E. F. Westrum, jr. bibliog Am Chem Soc J 68:2209-12 N '46
High-temperature heat contents of uranium, uranium dioxide and uranium trioxide. G. E Moore and K K. Kelley. bibliog Am Chem Soc J 69 2105-7 S '47
High-temperature heat contents of V_2O_3, V_2O_4 and V_2O_5. O. A. Cook. Am Chem Soc J 69.331-3 F '47
λ-Point of NH_4Cl and thermodynamic equilibria of the second order. E. O. Hall. bibliog Phys R 71:916-17 Je 15 '47
Laboratory compressor for higher pressures. B. H Sage and W. N. Lacey. diags R Sci Instr 18.650-4 S '47
Losses in the cycle of a heat pump using a ground coil R. A. Budenholzer diag Dom Eng 170 103-5+ Ag; 110-13+ S '47
Low-temperature calorimetry at the Bartlesville station of the Bureau of mines H. M. Huffman. flow diags bibliog il diags Chem R 40:1-14 F '47
Low-temperature heat capacities and high-temperature heat contents of $Al_2O_3.3H_2O$ and $Al_2O_3 H_2O$ C. H. Shomate and O. A. Cook. bibliog Am Chem Soc J 68:2140-2 N '46
Meaning of entropy and how to use the Mollier chart, J. Yavitch. diags Power Pl Eng 50.102-5 D '46
Metastable states of equilibrium in thermodynamics. J. L. Finck. Franklin Inst J 243: 1-12 Ja '47
One-dimensional theory of steady compressible fluid flow in ducts with friction and heat addition. B. L. Hicks and others. bibliog J Ap Phys 18.891-902 O '47
Phenomenological theory of transport processes in fluids. B. Leaf. bibliog Phys R 70:748-58 N 1 '46
Quantum correction for thermodynamic equilibrium. J. E. Mayer and W. Band. J Chem Phys 15:141-9 Mr '47
Relations between the derivatives of the thermodynamic functions. B Carroll and A. Lehrman J Chem Educ 24 389-92 Ag '47
Restricted rotator thermodynamic properties from the old quantum theory. J. O. Halford bibliog J Chem Phys 15 645-51 S '47
Solubility of paraffin-chain compounds A Bondi bibliog J Phys & Colloid Chem 51. 891-903 Jl '47
Some thermodynamic constants for the solution processes of atoms in metallic solvents. S. Wang bibliog J Chem Phys 14 643-7 N '46
Steady flow of a gas through a tube with heat exchange or chemical reaction P. Chambre and C. Lin. bibliog diags J Aeronautical Sci 13 537-42 O '46; Discussion. G P. Wood. 14:24+ Ja '47
Studies of the physical properties of hardened portland cement paste; thermodynamics of adsorption of water on hardened paste T. C. Powers and T. L Brownyard. bibliog diag Am Concrete Inst J 18:549-602 Ja '47
Thermodynamic factors in turbine-aircraft design. J. Whitney. il Aviation 46:46-8 Je '47
Thermodynamic properties of acetaldehyde from spectroscopic data. J. M. Smith. bibliog Am Inst Chem Eng Trans 42:983-8 O-D '46
Thermodynamic properties of ammonium and potassium alums and related substances, with reference to extraction of alumina from clay and alunite. K. K Kelley and others. bibliog U S Bur Mines Tech Pa 688:1-104, pa 20c Supt. of doc. '46
Thermodynamic properties of ethane. C. H. Barkelew and others. Chem Eng Prog 43: 25-38 bibliog(p37) Ja '47, Discussion. bibliog 43.385-8 Jl '47
Thermodynamic properties of gaseous boron trifluoride, boron trichloride, and boron tribromide H. M. Spencer. bibliog J Chem Phys 14.729-32 D '46
Thermodynamic properties of isotopic substances. H C. Urey. bibliog Chem Soc J p562-81 Ap '47
Thermodynamic properties of propane. W. V. Stearns and E. J. George. bibliog Ind & Eng Chem 35.602-7 My '43; Correction. 38:1322 D '46, Same. Pet Eng (Ref annual) 14:262-3+ Jl 1 '43
Thermodynamic properties of saturated propylene, propane, isobutane, isobutylene and normal butane. G H. Hanson. bibliog Am Inst Chem Eng Trans 42:959-73 O-D '46
Thermodynamic properties of water substance 0° to 150° C. F G. Keyes. bibliog J Chem Phys 15.602-12 Ag '47
Thermodynamic properties; saturated liquid and vapor of ammonia-water mixtures. G. Scatchard and others. bibliog Refrig Eng 53 413-19+ My '47
Thermodynamic theory of circulation in water-tube boilers R S Silver. Inst Mech Eng J & Proc 153 (War emergency issue no 9).261-71 bibliog(p271); Discussion diags 272-81 '45
Thermodynamics of aqueous hydrofluoric acid solutions. H H Broene and T De Vries. bibliog Am Chem Soc J 69:1644-6 Jl '47
Thermodynamics of crystallization in high polymers, crystallization induced by stretching P J Flory. bibliog J Chem Phys 15 397-408 Je '47
Thermodynamics of crystallization in high polymers; dependence of melting points of polyesters on molecular weight and composition R. D. Evans and others J Chem Phys 15:685 S '47
Thermodynamics of crystallization in high polymers; simplified derivation of melting-point relationships. P J. Flory. J Chem Phys 15:684 S '47
Thermodynamics of styrene and its methyl derivatives. C. W. Beckett and K. S. Pitzer bibliog Am Chem Soc J 68:2213-14 N '46
Thermodynamics of the heat pump. J. Kestin. diags Engineering 163.552 Je 27 '47
Thermodynamics of vapor power plants for motor vehicles; abstracts. E. B Neil. diags S A E J 55.22-3+ S '47; Automotive & Aviation Ind 96.43 Je 15 '47

THERMODYNAMICS—*Continued*
Vibrational frequencies of semirigid molecules; a general method and values for ethylbenzene W. J. Taylor and K. S. Pitzer bibliog J Res Nat Bur Stand 38:1-17 Ja '47

See also
Boiling
Entropy
Equation of state
Evaporation
Free energy
Heat, Mechanical equivalent of
Joule-Thomson effect
Melting points
Specific heat
Vapor pressure

Study and teaching

Presentation of the thermodynamic functions C. C Coffin bibliog J Chem Educ 23.584-8 D '46
Reversible process in thermodynamics E. R Rechel. bibliog J Chem Educ 24:298-301 Je '47

THERMOELECTRICITY
Resistance-temperature relation and thermoelectric properties of uranium A. I. Dahl and M S. Van Dusen. diag J Res Nat Bur Stand 39.53-8 Jl '47
Temperature-dependent resistors, use as electric circuit elements W. H. B Cooper and R A Seymour. il diags Wireless Eng 24.298-306 O '47
Thermo-variable resistors, glass-bulb Urdox resistor C. C Roloff il diags Elec R (Lond) 110·315-16 F 14 '47
Transition from classical to quantum statistics in germanium semiconductors at low temperature. V. A Johnson and K. Lark-Horovitz. bibliog Phys R 71·374-5 Mr 15 '47

See also
Thermocouples

THERMOFOR process. See Gasoline—Manufacture

THERMOID company
Common stock offered. Comm & Fin Chr 166·572 Ag 11 '47

THERMOMETERS and thermometry
Amalgam thermometers. Can Chem & Process Ind 30 85 D '46
Benzoic acid cell, a new thermometric standard. diag Chem Age (Lond) 57:540 O 18 '47
Centigrade-Fahrenheit conversions. Aviation 46:71 F; 66 Ap '47
Design of thermocouple and thermometer wells; abstracts. G. R. Feeley. diags Pet Processing 1:222-3+ N '46, Machine Design 18.143-5 D '46
Determination of airplane thermometer recovery factors in flight. H. W Sibert. J Aeronautical Sci 14·364+ Je '47
Easily remembered temperature conversion formula C E. Heinz. Mach 53:167 Ap '47
Further remarks on the possible use of Brownian motion in low temperature thermometry. A W. Lawson and E. A. Long. Phys R 70.977-8 D 1 '46
Gallium thermometer. Sci Am 176.152 Ap '47
How to find stack gas temperature with an ordinary thermometer. R H Norton. Power Pl Eng 51:101 Ag '47
Mechanical erosion of thermometer stems. A. H. Lamb. il diags Power Pl Eng 51·88-9 O '47
Modern thermometry in the power plant A H Lamb il Power Pl Eng 51.90-2 Ag '47
Nickel alloys form multihelix thermometer element. il diag Product Eng 18:98 Ap '47
Possible use of thermal noise for low temperature thermometry. E. Gerjuoy and A. T. Forrester. diag Phys R 71:375-6 Mr 15 '47
Remote thermometer transmits readings by air-pressure medium. il diags Sci Am 176. 134-5 Mr '47; Chem Eng 54·148 Ja '47
Resetting of Beckmann thermometers. J. G Reynolds. diag Chem & Ind p563 S 13 '47
Resistance thermometry. E. W. Hayes. diags Pet Refiner 25:139-40 D '46
Simple carbon-resistance thermometer for low temperatures. H. A. Fairbank and C T Lane. diag R Sci Instr 18:525-6 Jl '47
Theoretical consideration in heat and infrared detection, with particular reference to the pneumatic detector. M J. E. Golay. diags R Sci Instr 18:347-56 My '47
Thermometric standard. il Chem & Eng N 25:2170 Jl 28 '47
Why of bimetal thermometers. A H Lamb. il diags Power Pl Eng 51·90-2 S '47

See also
Atmospheric temperature
Bolometers
Calorimeters and calorimetry
Color temperature
Pyrometers and pyrometry

THERMOMETERS and thermometry, Medical
Simple resistance thermometer for blood-temperature measurements. L F. Drummeter, jr and W G Fastie. diags Science 105:73-5 Ja 17 '47

THERMOPHONES
Thermophone as a source of sound in liquid helium and liquid hydrogen. H. A. Fairbank and others bibliog diag Acoustical Soc Am J 19·475-7 My '47

THERMOPILES
Design of fast thermopiles and the ultimate sensitivity of thermal detectors. D F. Hornig and B. J. O'Keefe. bibliog R Sci Instr 18.474-82 Jl '47

THERMOSTATS
Basic conditions for comfort performance of warm-air winter air conditioning systems. R Ulrich il Sheet Metal Worker 38·76+ S '47
Bimetallic thermal element study. H J Hense and A. A. Kampman. Am Gas Assn Mo 29:335-6 Jl-Ag '47
Experience with relays in heater circuits O. S Gibbs Science 105·574-5 My 30 '47
Miniature thermostat has 1,500-watt rating. il Elec World News ed 126:20 D 28 '46
Minneapolis-Honeywell Diesel engine temperature control. diags Ry Mech Eng 121. 267-8 My '47
Moduflow controls for automatic heating systems. il Consumers Res Bul 19:13-16 Ap '47
Plastic-sealed thermostats in electric comforter. il diags Product Eng 18·99 My '47
Small thermostat Sci Am 175:276 D '46
Temperature control; factors influencing performance of thermostatic systems. S Tweedy diags Elec R (Lond) 140:121-3 Ja 17 '47
Temperature controller; Electromax. il Sci Am 176:138 Mr '47
Thermal controls. W. C. Stevens il Machine Design 19.161-4 Ap '47
Thermostated cell compartment for the Beckman spectrophotometer. P. H. Bell and C. R Stryker. il diags Science 105:415-16 Ap 18 '47
Thermostatic bimetals. C. F. Alban. il diags Machine Design 18·124-8 D '46
Why of bimetal thermometers. A. H. Lamb. il diags Power Pl Eng 51:90-2 S '47

THERMOWELLS
Thermowells designed according to suitability of materials of construction. R H. Munch diags Ind & Eng Chem 39:sup95A-6A O '47

THESES. See Dissertations, Academic

THIADIAZOLINETHIONE
Metal salts of 2-mercapto-4-phenyl-Δ^2-1,4,4-thiadiazoline-5-thione. G. W. Watt and M. E. Boyd Am Chem Soc J 69:185 Ja '47

THIAMIN. See Vitamins—Vitamin B_1

THIANAPHTHENE. See Thionaphthene

THIAXANTHENE
Studies in the sulfone series; the preparation and properties of 2,8-diaminothiaxanthone- and 2,8-thiaxanthene-5-dioxides and some related compounds. E D. Amstutz and C. R. Neumoyer bibliog Am Chem Soc J 69 1925-9 Ag '47

THIAXANTHONE
Studies in the sulfone series; the preparation and properties of 2,8-diaminothiaxanthone- and 2,8-thiaxanthene-5-dioxides and some related compounds E D. Amstutz and C. R Neumoyer bibliog Am Chem Soc J 69· 1925-9 Ag '47

THIAZOLE
Conversion of sucrose into thiazole derivatives; sulphanilamidothiazoles derived from lœvulic acid. H. Gregory and L F. Wiggins. Chem Soc J p590-2 My '47

THIAZOLE—*Continued*
Derivatives of 2-amino-4-methylthiazole. J. M. Sprague, A. H. Land and C. Ziegler. bibliog Am Chem Soc J 48:2155-9 N '46
Studies in the thiazole series, the reaction between thiourea and *s*-dichloroacetone. J. Harley-Mason. Chem Soc J p323-5 Mr '47

THIAZOLES
Rearrangement of 2-benzenesulphenamidothiazoles, thiazole compounds not substituted in position 4 E Hoggarth. Chem Soc J p 110-14 Ja '47
Rearrangement of 2-benzenesulphenamidothiazoles; thiazole compounds substituted in position 4. E Hoggarth. Chem Soc J p 114-18 Ja '47

THICKENERS
Carboxymethyl cellulose now produced in U.S. il Chem Ind 60.236-7 F '47
Low-cost thickener; clay plants of Edgar brothers co C. D Frobes il diag Eng & Min J 148 81-2 S '47
Pipe coils embedded in concrete mat heat tank H J Lang il Heating-Piping 19.94 Ag '47
Thickening agents and tinctorial strength Rayon 28 499 S '47

THICKNESS measurement
Automatic Sonigage; measures thickness, tests metals and plastics for flaws and defective bond. W. S Erwin and G M Rassweiler. il diags Iron Age 160:48-55 Jl 24 '47
Beta-ray thickness gage for sheet steel, G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O J. M. Smith. il diags Electronics 20:106-12 O '47
Branson audigage. il R Sci Instr 18:70 Ja '47
Coating thickness measurement by interferometry M F Bechtold bibliog il diag Opt Soc Am J 37:873-8 O '47
Evaluation of methods for determining the thickness of electrodeposited coatings; abstract. H. J Read Metal Finishing 45:52-3 Ag '47
Evaluation of piston skirt deposits A. C Scholp, B J. Conta and C D. Russell. bibliog il diags Anal Chem 19:466-71 Jl '47
Gage for moving materials; Measuray. il Blast F & Steel Pl 34:1564+ D '46
Gage placed on outside of pipe measures thickness. il Mach 53:172 Mr '47
Gamma ray and supersonic equipment-inspection methods used in Continental Oil's eight refineries; Penetron and Audigage L. S. McCaslin. il diags Oil & Gas J 46:100-3+ O 18 '47
Measurement of corrosion pits in boiler tubes. B. M Thornton. il diag Engineering 163:229-30 Mr 28 '47
Micrometer attachments measure tubes. S. Framurz. diags Am Mach 91:126 Ag 28 '47
New optical thickness gauge for flat glass; abstract L A. Shussett. Glass Ind 28:532 O '47
Non-destructive thickness measurements, engineering data sheet. Metal Finishing 45:87 O '47
Shielding principle provides electronic micrometer. il Pet Eng 18:113 Ap '47; Same abr. Mech Eng 69:406-7 My '47; Abstracts. Oil & Gas J 46.93 My 10 '47; Machine Design 19.107-8 Je '47, Electronics 20.150+ Jl '47
Technical data on electronic micrometer. il diags Electronics 20:172+ N '47
Thickness detector. il Chem Eng 54:143 Ja '47
Thickness gage saves $600 monthly at Florence stove co. il Cer Ind 48:72 Mr '47
Ultrasonic measurement of wall thickness in Diesel cylinder liners. F. W. Struthers and H. M. Trent. il diags Acoustical Soc Am J 19:368-71 Mr '47
X-ray method for measuring the thickness of thin crystalline films. A. Eisenstein. bibliog diags J Ap Phys 17.874-8 N '46

THIENYL group
Chromatographic and spectral characteristics of some polythienyls. J. W. Sease and L. Zechmeister. bibliog Am Chem Soc J 69:270-3 F '47

THIOACETIC acid
Semitechnical preparation of thioacetic acid. C H G. Hands and F. R. Whitt. diags Soc Chem Ind J 66 173-4 Je '47

THIOACETOPHENONE
Thiocarbonyls, the Willgerodt reaction with thioacetophenone E Campaigne and P. V. Rutan. Am Chem Soc J 69 1211 My '47

THIOALDEHYDES. See Aldehydes

THIOCARBONYLS
Thiocarbonyls; the Willgerodt reaction with thioacetophenone E. Campaigne and P. V Rutan. Am Chem Soc J 69:1211 My '47

THIOCYANIC acid
New reaction of thiocyanic esters E. Hoggarth and W A. Sexton. Chem Soc J p815-18 Je '47
Strength of aqueous thiocyanic acid M. Gorman and J. Connell Am Chem Soc J 69 2063-4 Ag '47

THIODIGLYCOL
Analysis
Amperometric titration of thiodiglycol with electrolytically generated bromine. J. W. Sease, C. Niemann and E H Swift. diags Anal Chem 19:197-200 Mr '47

THIOETHERS. See Sulfides

THIOGLYCOLIC acid. See Mercaptoacetic acid

THIOGLYCOPYRANOSIDES
Relations between rotatory power and structure in the sugar group; some 2′-naphthyl 1-thioglycopyranosides and their acetates. W T Haskins, R M. Hann and C S Hudson. bibliog Am Chem Soc J 69:1668-72 Jl '47

THIOHYDANTOINS. See Hydantoins

THIOKOL SC-10
Dithiodiglycol. Chem Ind 59:1034 D '46

THIOLACTIC acid. See Mercaptopropionic acid

THIOLS
Interaction of thiols and quinones. M Schubert. Am Chem Soc J 69:712-13 Mr '47
Reaction of iodonium salts with thiol compounds. R B. Sandin and others Am Chem Soc J 69.1550 Je '47

THIONAPHTHENE
Catalytic synthesis of benzothiophene R. J. Moore and B. S Greensfelder. bibliog Am Chem Soc J 69:2008-9 Ag '47

THIONAPHTHINDOLE
Preparation and properties of thionaphthindoles. C. E. Dalgliesh and F. G Mann. Chem Soc J p653-8 My '47

THIONYL chloride
Study of the reaction of alcohols with thionyl chloride W E. Bissinger and F. E Kung bibliog Am Chem Soc J 69:2158-63 S '47

THIONYL halides
Experiments on the interaction of hydroxy-compounds and phosphorus and thionyl halides in the absence and in the presence of tertiary bases. W. Gerrard. Chem Soc J p741-4 Ag '46

THIOPHANE. See Tetrahydrothiophene

THIOPHENE
Diazo reactions in the thiophene and furan series. C D Hurd and H M. Priestley Am Chem Soc J 69:859-64 Ap '47
Reaction of thiophene with formaldehyde and salts of hydroxylamine. H. D. Hartough. bibliog Am Chem Soc J 69:1355-8 Je '47
Replacement of halogen by the nitro group in halogenated acetothiophenamides. H. M. Priestley and C D. Hurd. Am Chem Soc J 69:1173-5 My '47
Studies in the detoxication of catalyst poisons, thiophen. E B. Maxted. Chem Soc J p624-7 My '47
Thiophene-containing antihistaminic agents. L P Kyrides, F. C. Meyer and F B. Zienty. bibliog Am Chem Soc J 69:2239-40 S '47
Thiophene; new industrial chemical from butane and sulfur. H. E Rasmussen and F E. Ray flow diag il Chem Ind 60:593-5+ Ap '47

THIOPHENE—*Continued*

Analysis

Estimation of sulphur compounds in crude and refined benzoles. G. Claxton and W. H. Hoffert. bibliog Soc Chem Ind J 65:333-44 N '46

THIOPHENECARBINOL
Microbiological synthesis of 2-thiophenecarbinol. F. W. Dunn and K. Dittmer. bibliog Chem Soc J 68:2561-2 D '46

THIOPHENEGLYOXAL
Synthesis of thiophene-2-glyoxal F. Kipnis and J. Ornfelt. Am Chem Soc J 68.2734 D '46

THIOPHENOL
Addition of thio-compounds to olefins, reactions of thioglycollic acid, thiophenol, and isopentanethiol J. I. Cunneen. Chem Soc J p36-40 Ja '47

THIOPYRAN
Syntheses in the thiopyran series; tetrahydroderivatives. R. F. Naylor. Chem Soc J p 1106-8 Ag '47

THIOPYRIMIDINE. See Mercaptopyrimidine

THIOSULFATES
Thiosulphate complexes of the tervalent metals, iron, aluminium, and chromium. N Uri. Chem Soc J p335-6 Mr '47

THIOSULFINATES
Alkyl thiolsulfinates. L. D. Small, J. H. Bailey and C. J. Cavallito. Am Chem Soc J 69:1710-13 Jl '47
Garlic antibiotic now synthesized. Chem Ind 60:986 Je '47

THIOURACIL
Ultraviolet absorption spectra of thiouracils. G. B. Elion, W. S. Ide and G. H. Hitchings. bibliog Am Chem Soc J 68:2137-40 N '46

THIOUREA
t-Aminoalkyl derivatives of 2-aminothiazole. A. H. Land, C. Ziegler and J. M. Sprague. bibliog Am Chem Soc J 69.125-8 Ja '47
Derivatives of 2-amino-4-methylthiazole J. M. Sprague, A. H. Land and C. Ziegler bibliog Am Chem Soc J 68 2155-9 N '46
Oxidation-reduction potentials of thiol-dithio systems; thiourea-formamidine disulfide. P. W. Preisler and L. Berger. bibliog Am Chem Soc J 69:322-5 F '47
Studies in the thiazole series; the reaction between thiourea and *s*-dichloroacetone. J. Harley-Mason. Chem Soc J p323-5 Mr '47
p-Substituted phenyl isothiocyanates and some related thioureas. R. L. McKee and R. W. Bost. Am Chem Soc J 68.2506-7 D '46
Synthesis of tetrahydro-5-substituted-2(1)-*s*-triazones W. J. Burke. bibliog Am Chem Soc J 69.2136-7 S '47

THIRD parties (law)
Lawyers discuss impleader and last clear chance. L. S. Saxe. Nat Underw 51:18 Ja 30 '47

THIURAM disulfide
Reaction of thiuram disulfide with halomethyl ketones. J. J. Ritter and H. Sokol. Am Chem Soc J 69:2069-70 Ag '47

THIXOTROPY
Non-Newtonian fluid showing marked inverse thixotropy. A. De Waele. Chem & Ind p431 N 30 '46
Plastic flow, creep, and stress relaxation; creep and elastic after-effect. C. Mack. bibliog diag J Ap Phys 17:1101-7 D '46
Some rheological properties of carbon black suspensions; discussion. J. E. Arnold. Chem Age (Lond) 55:775 D 21 '46
Sudden application of a constant shearing motion to anomalous fluids. E. K. Carver and J. R. Van Wazer bibliog il diags J Phys & Colloid Chem 51:751-63 My '47

THOMAJAN, Zareh Garabed
Proprietor of high-priced haberdashery in downtown Boston Fortune 36:148 N '47

THOMAS, Charles Allen, 1900-
Awarded Industrial research medal. por Chem & Eng N 25:1860-1 Je 30 '47
Portrait. Bsns W p24 Mr 29 '47

THOMAS, Charles Fillius, 1872-
Secretary Western underwriters association retires after 53 years. C. M. Cartwright. Nat Underw 51:3+ Ap 24 '47

THOMAS, Roland Jay, 1900-
Portrait. Bsns W p94 O 11 '47

THOMAS bill, S.525. See National science foundation (proposed)

THOMAS steel company
Sales above prewar rate. Barron's 27:7 Ja 27 '47

THOMPSON, Browder J. 1903-1944
B. J. Thompson memorial. por Inst Radio Eng Proc 34:934-5 D '46

THOMPSON, Frank Abner, 1880-
Frisco's new officers named. por Ry Age 121: 1087-8 D 28 '46
Portrait Bsns W p56 D 28 '46

THOMPSON, J. Walter, company
J. Walter Thompson company. il Fortune 36 94-101+ N '47
1912 quiz kids of J.W.T. N. Lewis. Ptr Ink 218 128 Mr 28 '47

THOMPSON, James Walter
J. Walter Thompson company. por Fortune 36 94-101+ N '47

THOMPSON, John C.
Portrait. Bsns W p84 O 18 '47

THOMPSON products, inc.
Fred Crawford's company; neat balance between auto parts and aircraft components il Fortune 34:146-51+ D '46

THOMSON, Joseph John, 1856-1940
Electron jubilee; fiftieth anniversary of Sir J. J. Thomson's discovery. Electrician 139. 921-3, 992 S 26-O 3 '47; por Engineer 184: 315 O 3 '47

THORDARSON, Chester H.
Wisconsin to buy Thordarson library. Chem & Eng N 25:115 Ja 13 '47

THORIUM
AEC clamps down; new controls over uranium and thorium. Bsns W p38 Mr 22 '47
Atomic fuel from thorium. Chem & Eng N 25 1588 Je 2 '47
L'extraction du thorium des minerais thorifères et des débris de manchons de becs Auer. Génie Civil 124:156 Ap 15 '47
Lamp filament to atomic pile. Chem & Eng N 25.236 Ja 27 '47
Materials having 0.05 uranium, thorium need license for transfer Iron Age 159:155-6 Ap 3 '47
Note on the spectrum of Th III. R. J. Lang Phys R 71:907 Je 15 '47
Photo-fission in heavy elements. G. C. Baldwin and G. S. Klaiber. bibliog diags Phys R 71:3-10 Ja 1 '47
Recent developments in rare metals. J. W. Marden and others. diags Steel 120:93-4+ Ap 7 '47
Regulations for control of uranium and thorium issued by Atomic energy commission. Chem & Eng N 25:916 Mr 31 '47
Uranium and thorium minerals, information for the use of prospectors. H. S. Spence. Can Min J 68:636-42 S '47
Uranium and thorium prospecting with the Geiger counter. J. De Ment. il diags Min Cong J 33 30-2+ Ag '47
Uranium, thorium controls tightened. Oil Paint & Drug Rep 151:5 Mr 24 '47
Zirconium and thorium electrodes in discharge lamps. H. C. Rentschler and others. il Electrochem Soc Trans 91 (preprint 21): 311-17 '47

Analysis

Determination of thorium and its separation from uranium by ferron. D. E. Ryan, W. J. McDonnell and F. E. Beamish. bibliog Anal Chem 19:416-17 Je '47
New titrimetric methods for thorium. C. V. Banks and H. Diehl. bibliog Anal Chem 19: 222-4 Ap '47

THORIUM chloride
Measurement of potentials at the interface between vitreous silica and solutions of thorium chloride and lanthanum chloride. L. A. Wood and L. B. Robinson. Am Chem Soc J 69.1862-6 Ag '47

THOUGHT and thinking
Do you know how to think? M. Wiseman. Adv & Sell 40:72+ Je '47

THREAD
See also
Nylon thread

THREAD cutting
Diehead improvements solve small-thread problems. I. K. Schlamp. diags Am Mach 91:107 Ja 2 '47
Fast multiple threading C. D MacKinnon. diag Am Mach 91·112 Jl 31 '47
Greenlee device for lead-screw threading il Automotive Ind 97 48 Jl 15 '47; Am Mach 91·150 Ag 14 '47, Mach 53 179 Ag '47; Product Eng 18·122-3 S '47
Marlco internal threading toolpost. il Automobile Eng 37.106 Mr '47, Engineering 163: 264 Ap 4 '47
Milling threads on valve stems. E N. Olson. Mach 53.169 Ag '47
Modified lathe set-up for continuous threading of bar stock M. W. Purser. il diag Mach 53 167-8 Ag '47
Space multiple threads without touching leadscrew. F. T. Lynch. Am Mach 91:108 Jl 31 '47
See also
Screw threads
Tapping

THREAD rolling
Landis thread rolling machine il diags Product Eng 18·110-11 S '47
Production processes; their influence on design; thread and form rolling R W. Bolz il diag Machine Design 19:145-50 Ag '47
Thread forming in thin metal. W C Mills. diags Am Mach 91·101-4 Mr 13 '47
Thread rolling, theory and practice. J. W Batchelder bibliog il diags Iron Age 158· 58-64 D 19; 55-61 D 26 '46; 159:52-7 Ja 9 '47
Watson-Flagg thread-rolling machine. il Mach 53:201 Ja '47; Am Mach 91:172 F 13 '47

THREADING machines
Comparison of crush dressing and diamond dressing as applied to thread grinding. E. V. Flanders. Mech Eng 69:123-7 F '47
Coulter thread milling machine for straight and tapered dies. il Mach 53.174 Ag '47
Coventry gauge and tool co.'s high-precision thread-grinding machine. il Engineering 163·104-6 Ja 31 '47
Landis centerless thread grinder and thread rolling machine il Mach 54·156-7 S '47
Landis thread rolling machine. il diags Product Eng 18 110-11 S '47
Machine tool show in print; tapping and threading. il Am Mach 91.236-8 S 11 '47

THRESHING machines
Combines used in threshing and baling straw. Netherlands. For Comm W 26:25-6 Mr 15 '47

THRIFT. See Saving

THROMBIN
Preparation and properties of serum and plasma proteins; conversion of human fibrinogen to fibrin under various conditions J. D. Ferry and P. R. Morrison. bibliog diags Am Chem Soc J 69·388-400 F '47
See also
Prothrombin

THROMBOCYTOPENIC purpura. See Purpura

THRUST bearings. See Bearings, Thrust

THRUST faults. See Faults (geology)

THRUSTORS
Thrustor lowering control system for a c crane hoists; abstract. E L. Schwarz-Kast. Product Eng 18:134-6 Jl '47

THUNDERSTORMS
Electrical charge on precipitation at various altitudes and its relation to thunderstorms. R. Gunn. Phys R 71:181-6 F 1 '47
Location of thunderstorms by radio direction-finding F. Adcock and C. Clarke. bibliog il diags Inst E E J 94 pt 3·118-25 Mr '47; Abstract Electrician 137.1215 N 1 '46; Discussion. Inst E E J 94 pt 3:133-40 Mr '47
Some aspects and recent results of electromagnetic effects of thunderstorms. H. Norinder il Franklin Inst J 244:109-30, 167-207 Ag-S '47

THYMINE
Inability of thymine to substitute for folic acid in the rat H. G. Petering and R. A Delor. bibliog Science 105 547-8 My 23 '47

THYMOL
Some phenol-chloral condensations. J. B. Niederl and A A. Bothner-By. bibliog Am Chem Soc J 69 1172-3 My '47
Synthesis of racemic menthol. W. R. Brode and R W. Van Dolah. bibliog Ind & Eng Chem 39.1157-60 S '47

THYMOL benzein
Dipole moments and resonance of some benzein indicators and related compounds. A A. Maryott and S F. Acree bibliog il J Res Nat Bur Stand 38·505-12 My '47

THYMOL iodide
Physiological availability of iodine in dithymol diiodide. R R Baldwin and others. il Science 106.317-19 O 3 '47

THYRATRON
Automatic control of battery charging. E. L. Deeter and A. C. Plautz. il diags Electronics 20·156+ My '47
Carbide structures in carburized thoriated-tungsten filaments. C. W. Horsting. bibliog il diags J Ap Phys 18 95-102 Ja '47
Electronic speed control for slip-ring motors W H. Elliot diag Elec World 128.44 Ag 30 '47
Frequency performance of thyratrons H. H-Wittenberg. bibliog diags Elec Eng 65: Trans 843-7 D '46
Multiple thyratron circuits I. Sager. diags Electronics 19·158+ D '46
Reliable electronic controls for fan and stoker drives. D. L Green and R. L. Jaeschke. il diags Elec World 126:96-9 D 7 '46
Simple pulse converter for gas tube applications. L. Reifel and K Rothschild. diags R Sci Instr 18:181-3 Mr '47
What you should know about industrial electronics; applications of phanotron and thyratron rectifiers. diags Am Mach 90: 134 N 21 '46

THYROID gland
Theory of reactions of cells to goitrogenic thiopyrimidines. L. Laufer and E. D. Stewart bibliog Science 105.327-8 Mr 28 '47

TICKET offices. See Airlines—Ticket offices; Railroads—Ticket offices; Steamboat lines —Ticket offices

TICKLER files. See Files and filing (documents, etc.)—Tickler files

TICKS
Preliminary report on some organic materials as tick repellents and toxic agents J. M. Brennan. Pub Health Rep 62:1162-5 Ag 8 '47

TIDAL basins
Equilibrium of form and forces in tidal basins of coast of Texas and Louisiana W. A. Price bibliog maps Am Assn Pet Geologists Bul 31:1619-63 S '47

TIDE water associated oil company
Weighs buying in 30 per cent of its common. Barron's 27·35 O 27 '47

TIDE water power company
Merger approved, places $1,000,000 preferred stock privately Comm & Fin Chr 165·1501 Mr 17 '47
Stock offered. Comm & Fin Chr 165:2551-2 My 12 '47

TIDES
Tidal illumination diagrams. H. R. Seiwell Science 106 76-7 Jl 25 '47
Tidal model of the firth of Tay; abstract. J. Allen. map Engineering 164·238 S 5 '47

TIE-IN advertisements. See Advertising, Cooperative—Tie-in advertisements

TIENTSIN, China
Lighter shortage handicaps trade at port of Tientsin. For Comm W 27:28 My 10 '47

TIERING trucks. See Motor trucks, Industrial —Tiering trucks

TIES. See Neckties

TIES, Railroad. See Railroad ties

TIGERSCHIÖLD, Magnus, 1893-
Portrait. Iron & Steel Inst J 156:front Ag '47

TILE construction
All-ceramic homes; symposium. A. F. Greaves-Walker and others. Brick & Clay Rec 110·50 My '47
Brick and tile masonry faces its biggest chance in building history. A. S. Low. Brick & Clay Rec 109:26+ D '46
Develop new hollow tile wall in English houses. il diag Brick & Clay Rec 109:29 N '46
FHA's building code does not cover 10" cavity or 6" masonry walls. Brick & Clay Rec 111:34 Ag '47
Fire cannot attack 400,000 all ceramic homes a year. diag Brick & Clay Rec 110:29 F '47
It's easy to build a ceramic home il plan diags Brick & Clay Rec 109·31 N '46
Proper construction details; use of brick and tile in wall construction; illustrations with text Am Bld 69·130-1 Je '47
Tile gives colorful front to bowling alley; views. Brick & Clay Rec 109:24 N '46
Use tile masonry in stairwells; illustrations. Brick & Clay Rec 109:28 N '46
Why not sell all-ceramic houses to those homeless veterans? il diags Brick & Clay Rec 109:23-4 D '46

TILES
Chinese brick and tile industry in Tientsin area. For Comm W 25:27 D 28 '46
What's wrong with present structural clay products? symposium. E. J. Jacobsen and others Brick & Clay Rec 110 49-50 My '47

Manufacture
Metropolitan makes 40 tons modular tile daily in new tunnel kiln. il Brick & Clay Rec 110:57-8 Mr '47

TILES, Plastic
Laminated vinyl tile flooring. il Mod Plastics 24.123-5 Ap '47
Polystyrene wall tile. il diags Mod Plastics 24·110-12 My '47

TILLAGE
Present day ideas on soil cultivation; abstract and discussion. E. W. Russell. Chem & Ind p146-7 Mr 22 '47

TIMBER
See also
Lumbering
Wood

TIME
See also
Academy of time

TIME, Standard
Royal observatory; annual report of the Astronomer royal. Engineering 164·304-5 S 26 '47

TIME cards
Payroll, costs, and personnel figures from one system; Ferro machine & foundry company. J. Turner. il Am Bsns 16:16-17+ D '46
Personalized time card; Central Hanover bank, New York city il Burroughs Clearing House 31 6-7 My '47

TIME clocks
Power factor correction controlled by time clocks; Wallace & Tiernan company. il diags Factory Management 105·111-13 Jl '47

TIME lapse movies. See Moving picture photography—Industrial applications

TIME limit relays. See Relays, Time limit

TIME measurement
Measurement of ultra-short time intervals. S. H. Neddermeyer and others. il diags R Sci Instr 18:488-96 Jl '47
Spiral chronograph for measurement of single millisecond time intervals with microsecond accuracy. R. J. Emrich. il diags R Sci Instr 18:150-7 Mr '47
Standard of frequency and its applications. C. F Booth and F. J. M. Laver. diags Inst E E J 93 pt 3·223-36 bibliog(p235-6) Jl '46; Discussion. 93 pt 3:236-41, 427-8 Jl, N '46
See also
Chronoscope
Timing devices

TIME series (statistics)
Some applications of multivariate analysis to economic data. G. Tintner. bibliog Am Stat Assn J 41:472-500 D '46

TIME signals, Radio
Electronic crystal clock. V E. Heaton. il Mech Eng 69 158-9 F '47; Same cond. with diag. Product Eng 18.141 My '47
Electronic crystal clock for accurate time signals. Mach 53·166 F '47
Royal observatory; annual report of the Astronomer royal. Engineering 164:304-5 S 26 '47
WWV schedules. Electronics 20·87 My '47

TIME study
Analysis of man-power efficiency in drilling procedures in the Tri-state mining district J. D Forrester and J A Fuller bibliog Mo U Sch Mines & Met Bul tech ser v 17 no 1:1-54 '46
Better rates through element time standards W. R. Wright N A C A Bul 29:191-200 O 15 '47
How union and workers bought time study and bonus, Liquid Carbonic plan. il Factory Management 105:74-5 O '47
Incentives work in the toolroom too. E. H. Heywood Am Mach 91 106-8 Ap 24 '47
Industrial engineering, a survey of practice in 80 plants. R. M Barnes. Factory Management 105:102-4 Mr '47
Production costs; method of reduction with maintenance of wage rates. J. W Hendry. Automobile Eng 37:233-5 Je '47
Responsibility for establishing, maintaining time standards; data sheet. G. Z. Wollam. Factory Management 105:134+ S '47
Setting worker-normals for time study purposes; Minneapolis-Honeywell regulator company. W B Wisecarver. il Factory Management 104:122-6 O '46
Spinner's task can be set quickly. F. H. Gunther and M. Gross. il Textile World 97 108-9 Ap '47
Time and motion study in the chemical process industries. H. Rossmoore and R. S Asies bibliog diags Chem & Eng N 25.3142-4 O 27 '47
Time standards; their systematic use in industrial management. H. G. Houghton. Automobile Eng 37·171-4 My '47
Time studies possible now on federal jobs. Barron's 27:6 Je 9 '47
Time studies show how to reduce distribution costs; evaluation of milk distributor efficiency. A. Morrow. il Food Ind 19 794-6+ Je '47
Time studies to improve mechanical operation. D. R. Mitchell and R. L. Ash. Min Cong J 33·26-30 Jl '47
Time study and production standards in union contracts; abstract. Management R 36·417-19 Ag '47
Use of time study data; abstract. M Annich Foundry 75:136 Jl '47

Study and teaching
Time study training for stewards and committeemen; American Type Founders. H. M Hinkel. il Factory Management 105:78-80 Ag '47

TIME study (of machinery)
Measuring idle time. D. M. Sutter. il Steel 120:77+ Ja 27 '47
Power screwdrivers paid when used 30 minutes a day. A. Kahn Factory Management 105·137-8 Jl '47

TIME tables. See Motor bus lines—Time tables; Railroads—Time tables

TIMING devices
Accurate production control in direct-current arc welding. il Steel 121·108 Ag 25 '47
Additional timing period of new motor-driven control increases gun welder speed. H I Stanback. il diags Welding J 25:1055-60 N '46
Automatic sectionalizing applied to 4-kv; electronic timer control. H. C. Denison. diag Elec World 128:55 Ag 30 '47
Blanking timer for electromechanical oscillograph. T O Meyer. il R Sci Instr 18.194-5 Mr '47
Clock hands set schedules in program clock. il diag Machine Design 19·150 Je '47
Cycle controller. il Chem Eng 54:156+ O '47
Design of mercury delay lanes for radar, computers, and memory devices T. K. Sharpless. il diags Electronics 20:134-6+ N '47

TIMING devices—*Continued*
Electrolytic integrating tube; explosions of oxygen and hydrogen produced by electrolysis provide method of duplicating time cycles or integrating flow of liquid or gas J. Sivertsen il diags Electronics 20 92-5 Je '47
Electronic photo-timer. L. A. Gallegos. il diags Radio N 38:50-1+ Jl '47
Electronic timing device and reflux ratio controller. G. O Thacker and B. Y. Walker. il diags Soc Chem Ind J 65·259-61 S '46; Correction. diag 66 32 Ja '47
Evolving a new speed record; apparatus used to measure speed of AAF-Lockheed P-80R Shooting Star. plan Aero Digest 55 81+ Ag '47
Fluorescent lamp delay timer diag Electronics 20:184+ Mr '47
Instrument for short-period frequency comparisons of great accuracy. H. B. Law. bibliog diags Inst E E J 94 pt 3 38-41 Ja '47
Interval timer. E. L. Deeter and W. K. Dau. il diag Electronics 20·86-7 Jl '47
Interval-timing, automatically resetting switch to operate after any given number of counts J R Ballew and A. S. Marrazzi. diag Science 106:324 O 3 '47
Londex process timer. il Engineer 183 456 My 23 '47
Neon synchronizing light for timing magnetos. il diag Aero Digest 55 62-3 Jl '47
Oscilloscope time-base circuit. H. den Hartog and F A. Muller. diags Wireless Eng 24: 287-92 O '47
Pulse rise and decay time measurement. A. Easton diags Electronics 20:180+ S '47
Pulse timing circuit for cosmic-ray research. H. K Ticho. il diags R Sci Instr 18:271-8 My '47
Punch press protector; faulty operation causes timer to shut off power J. Isaacs. il diags Electronics 19:101-3 D '46
Recorder and timer for short intervals; designed to meet the needs of nucleonic research. W H. Bliss. il diags Electronics 20: 126-7 N '47
Signaling timer opens or closes control circuits. il Sci Am 176.272-3 Je '47; Chem Eng 54:142+ Ag '47
Simple pulse converter for gas tube applications. L. Reifel and K. Rothschild. diags R Sci Instr 18:181-3 Mr '47
Some precision circuit techniques used in wave-form generation and time measurement B Chance. il diags R Sci Instr 17: 396-415 O '46
Spiral sweep oscilloscope timer R. B. Moran, jr. il diags Electronics 20:120-3 O '47
Spooler-knotter bumper eliminates manual timing. diags Textile World 97:182+ S '47
Time switch suitable for all experimental work. J. S Charlesworth and E. Tipman. il Chem Eng 54 157 My '47
Timer for diecasting machine G. DeLong. il diag Electronics 20·110-11 Mr '47
Value of water heater time control questioned H W Berning. Elec World 128: 100-1 Jl 19 '47
Viscosity measurement; new electronic timer perfected. il Chem Age (Lond) 57:579 O 25 '47

See also
Chronograph

Manufacture

Machining problems in production of industrial timing mechanisms; Macnick co. C. R Horton. il Materials & Methods 25:69-71 Je '47

TIMOSHENKO, Stephen Prokop, 1878-
Awarded 1947 James Watt international medal. por Mech Eng 69:338 Ap '47
Portrait Science 105.cover My 16 '47

TIN
Chemical engineering materials of construction; review of literature from start of World war II; lead, tin, zinc, and their alloys. G. O. Hiers. bibliog(77 ref) il Ind & Eng Chem 39:1224-8 O '47
Effect of tin content on the properties of degassed chill-cast tin bronze; abstract W. T. Pell-Walpole. il Metal Prog 51:138+ Ja '47
Kinetics of the reaction between tin and solutions of bromine and iodine in organic solvents A F. Trotman-Dickenson and E. J. F. James. Chem Soc J p736-8 Je '47

Analysis

Method for the spectrochemical determination of germanium, tin, and lead in ore samples G W. Marks and H. T. Hall. bibliog U S Bur Mines Rep of Invest 3965 1-38, pl 1-24 '46
Polarographic determination of tin in foods and biological materials. E M Godar and O. R Alexander bibliog diag Ind & Eng Chem Anal ed 18:681-4 N '46
Rapid determination of tin in copper base alloys; use of Stanreduce. M. Sherman. Steel 120:102 My 19 '47

Prices

Straits tin at New York, monthly, 1929-1946; tabulation. Iron Age 159:244 Ja 2 '47

TIN alloys
Chemical engineering materials of construction; review of literature from start of World war II; lead, tin, zinc, and their alloys. G. O Hiers. bibliog(77 ref) il Ind & Eng Chem 39:1224-8 O '47
Influence of composition on the adhesion of tin-base bearing alloys to steel. P G. Forrester and L T. Greenfield. il diags Engineering 163.322-4 Ap 18 '47
Tin-zinc alloy coatings; abstract. Materials & Methods 24:1248+ N '46

See also
Bronze
Solder and soldering

TIN cans
Thermoplastics in tin cans il Mod Plastics 24 188+ Ag '47
Tin can output may set new record. Bsns W p16 Ja 4 '47

TIN chlorides
Color reactions of amine antioxidants. H. P. Burchfield and J. N. Judy. bibliog Anal Chem 19:786-9 O '47
Determination of mercury in organic and inorganic compounds; stannous chloride reduction method. J. N. Bartlett and W. M. McNabb. bibliog diags Anal Chem 19:484-7 Jl '47
Molecular addition compounds of the group IVa tetrachlorides with diphenyl ether and anisole H. H. Sisler and J C. Cory. Am Chem Soc J 69:1515-19 Je '47

TIN coating
Tin undercoating improves rust resistance of steel. Iron Age 160:45 O 23 '47

See also
Tin plating

TIN compounds
Cobaltammines and chlorostannic acid T. P. McCutcheon and E L. d'Ouville. Am Chem Soc J 69.989-90 My '47

TIN dredging
Large American-built tin dredgers for the East Indies il Engineer 183:568-9 Je 27 '47
Tin-mining placer dredges. il Marine Eng 52: 88-9 My '47

TIN industry and trade
Allocations of tin metal. Chem Age (Lond) 57 286 Ag 30 '47
Combined tin committee sets quota for first half of 1947. Iron Age 159:141 Ja 30 '47
Enough tin seen by end of next year. Bsns W p22+ Ap 26 '47
Prospects for copper, lead, and tin in 1947. J. Levin. il Dom Comm 35:46-50 Mr '47
Siamese tin pact to ease shortage. Oil Paint & Drug Rep 150:3 D 16 '46
Slow recovery in tin supplies. Economist 151: 1014 D 21 '46
Tin allocations and supply situation. For Comm W 26:23 Mr 8 '47
Tin production reviewed; survey of sources and methods. Chem Age (Lond) 55:713-14 D 7 '46
Tin users face two more years of scarcity. Barron's 27:5+ Ja 6 '47
United States tin position summarized; imports from Far East very low For Comm W 26:27 Ja 18 '47

TIN industry and trade—*Continued*
Warns that 1947 tin consumption will far exceed production. K Rannells. Iron Age 159:120 Mr 6 '47

Statistics

1946 domestic tin use declines; imports increase 6500 tons to October. Iron Age 159: 106-7 Ja 9 '47
Tin, 1946. J. C. Johnson. Eng & Min J 148: 78+ F '47
Tin study group sees shortages through 1949 with stocks declining. Iron Age 160·113 Ag 28 '47

Bolivia

Bolivia to sell 50% of tin supply to U.S. Oil Paint & Drug Rep 151:3 Mr 31 '47
Bolivians want more for tin. Barron's 27 5 F 10 '47

TIN metallurgy
Beneficiation of oxide tin ores from the states of Zacatecas and Guanajuato, Mexico. W G Sandell and others U S Bur Mines Rep of Invest 4080·1-10 '47
Making tin flotation work; Bolivian ores. A. M Gaudin and others. bibliog flow sheet il diag Eng & Min J 147:54-9 O, 72-4 N; 68-72 D '46; 148·84-7 Ja; 70-2 Mr '47

Electrometallurgy

New addition agent for the electrolytic refining of tin and lead. F. C. Mathers and M. M Felger. Electrochem Soc Trans 90 (preprint 28):347-50 '46

TIN mines and mining

See also
Tin dredging

Alaska

Exploration of Cape Mountain lode-tin deposits, Seward peninsula H. E. Heide and others. bibliog U S Bur Mines Rep of Invest 3978.1-16, pl 1-8 '46

Australia

Alluvial tin mining in Australia; illustrations with text. Iron Age 159:115 Ja 23 '47

Bolivia

Engineer looks at Bolivia. R Hammond. Engineer 183.509-11, 535-6 Je 13-20 '47
Geology of the Colquiri tin mine D. F. Campbell. il maps diags Econ Geol 42:1-21 Ja '47
Making tin flotation work; Bolivian ores. A. M. Gaudin and others. bibliog flow sheets il diag Eng & Min J 147:54-9 O; 72-4 N; 68-72 D '46; 148:84-7 Ja; 70-2 Mr '47
Mauricio Hochschild. Fortune 36:84-7+ Jl '47

Great Britain

Cornwall as a tin producer; today and tomorrow. G. H M. Farley. il Eng & Min J 147:78-9 N '46

Malayan Union

Malayan tin problems. Economist 152:214 F 1 '47
Tin production reviewed; survey of sources and methods. Chem Age (Lond) 55:713-14 D 7 '46
Why Malayan tin output lags J C. Davey. map Eng & Min J 148:86-8 S '47

Mexico

Beneficiation of oxide tin ores from the states of Zacatecas and Guanajuato, Mexico W. G. Sandell and others. U S Bur Mines Rep of Invest 4080:1-10 '47

Netherlands Indies

Large American-built tin dredgers for the East Indies. il Engineer 183:568-9 Je 27 '47

New Mexico

Catron and Sierra Counties tin deposits, N. Mex. M. E. Volin and others. 25pls U S Bur Mines Rep of Invest 4068:1-60 '47

Siam

Siam's mining industry offers new opportunities. J. J. Croston. map Eng & Min J 147: 60-4 D '46

TIN ores
Beneficiation of oxide tin ores from the states of Zacatecas and Guanajuato, Mexico. W. G. Sandell and others. U S Bur Mines Rep of Invest 4080:1-10 '47
Making tin flotation work; Bolivian ores. A. M. Gaudin and others bibliog flow sheets il diag Eng & Min J 147:54-9 O; 72-4 N; 68-72 D '46; 148:84-7 Ja; 70-2 Mr '47

See also
Cassiterite

TIN plate
American Can to allocate tin plate to users. D. W. Figgis. Steel 120:53 Ja 27 '47
Convection annealing; large diameter tin plate coils, Dominion foundries and steel, ltd. W. F. Toerge. il diag Steel 121:130+ Jl 21 '47
Electrolytic tinplate output seen passing hot dipped this year. T. Lloyd. Iron Age 160 100-2 Jl 17 '47
Protective filming process for tinplate; known as Protectatin. H. R. Clauser. il Materials & Methods 26.97-100 Ag '47
Tinplate consumers express concern over small U.S. allocations. J. Anthony. Iron Age 159.127-8 Ap 10 '47
Tin plate demand 25% over supply. T. N Sandifer. il Steel 120.63 F 10 '47
Tin plate transportation, Carnegie-Illinois steel corporation's Irvin works. il Steel 121:106+ S 15 '47

TIN plating
Design of exhaust systems; ventilating a retinning vat. F. H. Stebbins. diags Sheet Metal Worker 37·40-1 N '46
Electro-tinplate; influence of coating thickness on porosity and resistance to corrosion. R. Kerr, R. M. Angles and K. W. Caulfield. Soc Chem Ind J 66:5-7 Ja '47
Electro-tinplate; influence of pickling conditions on porosity and corrosion resistance. K. W. Caulfield, R. Kerr and R. M. Angles. il Soc Chem Ind J 66:7-11 Ja '47
Electro-tinplate; influence of plating conditions on the quality of electro-tinplate deposited from the stannous sulphate bath R M. Angles, K. W. Caulfield and R. Kerr bibliog Soc Chem Ind J 65:430-3 D '46
Fusing of electrodeposited tin coatings. J. Falk. il Metal Finishing 45:63-5+ Ap '47
Tin coating meehanite. il Iron Age 159:57 Je 26 '47
Tinning cast iron. Iron Age 159:44-5 Ja 16 '47
Tinning of cast iron. R. A. Cresswell. bibliog Iron & Steel Inst J 152:157-69, pl 15-18 no 2 '45; Same. Engineering 161.526-8, 550-1 My 31-Je 7 '46; Abstract. Metal Prog 51 802+ My '47
Use of a tin undercoat to improve the corrosion resistance of painted steel. E. S. Hedges and others. bibliog Iron & Steel Inst J 152·429-37, pl 42-3 no 2 '45; Same cond. il Engineering 160.505-8 D 14 '45; Same, without il. Steel 118:103+ Ap 22 '46; Abstracts. Materials & Methods 22·1490+ N '45; Iron Age 156·64 D 6 '45; Discussion. Iron & Steel Inst J 152:437-40 no 2 '45

TIN tetrachloride. See Tin chlorides

TINNERMAN, George A.
Nuts to Ford; Tinnerman spring-lock nuts. Fortune 36:144 N '47

TINSMAN, Robert, 1879-
Bob Tinsman remembers. por Adv & Sell 40: 43 Ag; 52 S; 54 O '47

TIPPING
Wanted; a rule of reason in tipping. E. Whitmore. Am Bsns 17:22+ S '47

TIRE fabrics
Equitable use of fibers in tire construction. Rayon 28:533 O '47
High tenacity rayon yarn earns passenger car tire adoption. H. B. Kline. Rayon 28: 4 Ja '47
Practical problems in the manufacture and service of tires built with continuous filament cord J. H. Dillon. bibliog Am Dyestuff Rep 36.385-9; Discussion. 389-90 Jl 14 '47
Progress in treating rayon fabrics for tire cord C. H. Beaver. il Rayon 28:471 S '47

TIRE fabrics—*Continued*
Technical control means better tire cord. C. M Bowden. il diag Textile World 96 122-3+ N '46

Testing
Measurement of the dynamic stretch-modulus and hysteresis of tire cords. W J Lyons and I B Prettyman. bibliog diag J Ap Phys 18.586-7 Je '47
Moisture transfer to and from tire cords encased in GR-S W. J. Lyons and others il India Rubber World 116:199-204+ My '47
New Goodyear device tests twenty tire fabrics simultaneously. il Rubber Age 61: 704 S '47

TIRE factories

Employees
Wage and merit rating stopped wage squabbles; Lake Shore tire & rubber company. H. S. Bown. Factory Management 104:127-30 O '46

Equipment
Machines expedite tire production. il Comp Air Mag 51·305 N '46
Whittington duster-deduster for inner tubes. il Rubber Age 61.606 Ag '47

Management
Increasing production efficiency through visual control. K. Kern. il Rubber Age 61:195-6 My '47
Maintenance is well done because well planned; Goodyear tire & rubber company. E Clark. Factory Management 105:109 F '47

TIRE industry and trade
After the turn of the year. P. W. Litchfield. Comm & Fin Chr 165:446+ Ja 23 '47
Buyer's market in automobile tires returns as department store, mail order prices drop Nat Pet N 39.20 My 28 '47
Discounts offset high truck tire prices. Bsns W p64 Jl 19 '47
Gain in sale of tires, tubes at service stations forecast. E. Lamm. Nat Pet N 39.45-6 Ap 30 '47
Jobber finds separate sales organization helps to increase volume of TBA sales, Spartan petroleum co. sets up separate company under name of Tire sales, inc. F. C. Sturtevant. il Nat Pet N 38:40+ D 4 '46
Oil-tires deal. Sales Management 58.108 Ja 15 '47
Retail tire market weakens. il Bsns W p68-9 Mr 15 '47
Rubber companies' outlook, present and future. H. Murphy; C. R. Sutton. Barron's 27:11+ Ja 20 '47
Sears, Ward bring back second-line tires. Bsns W p 17-18 S 13 '47
Tips to distributors on manpower management; U.S Rubber's booklet. Sales Management 58·84 Mr 15 '47
Tire cutback due as supply meets demand. Bsns W p 17-18 Ag 2 '47
Tire industry suit. India Rubber World 116· 800+ S '47
Tire manufacturers accused of price-fixing practices. Rubber Age 61:715 S '47
Tires a profit builder for marketers, stations if proper approach is used. F. C. Sturtevant. Nat Pet N 39:27+ S 10 '47
Trouble in synthetic rubber. il Fortune 35: 114-19+ Je '47
Who sells tires? 1941 and 1946 compared. Bsns W p66+ S 6 '47

Advertising
Laminates for outdoor displays, polyester resin impregnated glass mat and cloth used in molding tire display figures and stands. il diag Mod Plastics 24:100-1 Mr '47
This small-budget advertiser competes with giants; **Pharis tire & rubber co. H. Pitner.** il Ptr Ink 219 37-9 Ap 11 '47

Securities
What's ahead for tires and rubbers; with statistics on leading companies. R. Colston. Mag of Wall St 79:613-15 Mr 1 '47

Statistics
Automotive tires and tubes; exports, production, shipments, stocks, monthly figures, 1941-1945. Survey of Cur Bsns 26·22 D '46
Production of tires in 1946 establishes all-time record. Rubber Age 60·702 Mr '47
Survey shows oil company unit sales of tires up 100 per cent in '46 over 1941 Nat Pet N 39.19-20 S 3 '47
Tire production and shipments set all-time records in 1946. Rubber Age 61.83 Ap '47

Argentina
Argentine tire-market forecast. For Comm W 26:19 F 15 '47
Operation of the tire manufacturing industry in Argentina Rubber Age 60·688 Mr '47

Brazil
Brazil's tire production doubles. For Comm W 27.35 My 31 '47

TIRE rims
Wide base rims and their effect on truck design and operation; symposium. R. B. Wuerfel and others. Automotive & Aviation Ind 95 38-9+ D 15 '46
Wide-base rims stretch tire life; based on papers by W. S. Brink and others. S A E J 55 59-60 Mr '47

TIRES, Airplane
Plane tire progress. R. D. Evans. S A E J 54.67 D '46

TIRES, Automobile
Anti-static powder blown into automobile inner tubes to reduce static shock and car radio static. Chem Eng 54.164+ Ap '47; Elec World News ed 127.29 Ap 5 '47
Fine gauge wire for tires. Blast F & Steel Pl 34:1426 N '46, Same Iron Age 158.104 N 14 '46; Same. Mech Eng 69:40 Ja '47
Future of the rubber manufacturing industry. A Healey. Rubber Age 61:446-8 Jl '47
Look; no tubes il Bsns W p31 My 17 '47
New tire and tube. il Consumers Res Bul 19:12 F '47
New tire introduced by Goodyear tire & rubber co. il Steel 121 74 Ag 18 '47
Tire development, present and future; abstract. A. N Carleton. S A E J 55.59 Ap '47
Tubeless tires il Mech Eng 69.596-7 Jl '47
See also
Tire fabrics
Tire industry and trade

Manufacture
Effect of airbag thickness on the cure of a 6 00x16 tire. H. A. Freeman. bibliog diag India Rubber World 116:639-40 Ag '47
Practical problems in the manufacture and service of tires built with continuous filament cord. J H. Dillon. bibliog Am Dyestuff Rep 36·385-9, Discussion. 389-90 Jl 14 '47
Softeners for GR-S tires V V. Wheeler and others bibliog il Rubber Age 61:437-42, 555-62 Jl-Ag '47

Prices
Tire industry faces stiff price battle. Bsns W p21 Je 7 '47
Tire prices fade. Bsns W p 17 My 31 '47

Repair
Counter card does neat sales job for tire kit. il Sales Management 57:105 N 20 '46

Testing
Correlation of laboratory and service abrasion tests. A. E. Juve and others. India Rubber World 116·208-10 My '47
Performance of butyl inner tubes; influence on tire life. I. E. Lightbown, L. S. Verde and J. R. Brown, jr il diag Ind & Eng Chem 39:141-6 F '47

TIRES, Motor bus
Air powered tire changer. il Bus Transportation 26:72-3 F '47

TIRES, Motor truck
Firestone develops wire cord tire. il India Rubber World 115.831 Mr '47; Rubber Age 61·83 Ap '47
Present-day tire maintenance; abstract. B. Sorci. S A E J 55:64 Mr '47

TIRES, Motor truck—*Continued*
Steel carrier simplifies truck tire changing. il Steel 120:114 Ja 27 '47
Types and constructions of tires for heavy hauling equipment; abstract. L. W. Fox. il S A E J 55:66+ My '47
Wide base rims and their effect on truck design and operation; symposium. R. B Wuerfel and others. Automotive & Aviation Ind 95·38-9+ D 15 '46
Wire cord tires for heavy duty trucks H P. Coats. Metal Prog 51:959 Je '47

TIRES, Rubber
Correlation of tensile strength with brittle points of vulcanized diene polymers A M Borders and R D. Juve. bibliog Ind & Eng Chem 38 1066-70 O '46
Goodrich puncture-sealing tubeless tire. Rubber Age 61·454 Jl '47
Rubber tires and inner tube materials from 1944 to 1946 E. G. Holt. il Dom Comm 35: 42-7 Je '47
Rubber; will we make it or take a chance; abstract. J E. Hale. India Rubber World 115.673 F '47

Inflation system

Tyre pressure control whilst running; amphibian vehicle. diags Engineer 182.108-9 Ag 2 '46; il Engineering 162.296-8 S 27 '46; Automobile Eng 36:441-2 O '46, Mech Eng 68·1074-5 D '46; Discussion. S. E. Opperman Engineering 162:352 O 11 '46

Manufacture

See also
Rubber, Artificial—Tire use

TIRES, Tractor
SAE advances tire size listing for future farm tractor design, S A E J 55:73-4 My '47
Tractor tires with new tread design. il Sci Am 176.36 Ja '47
Types and constructions of tires for heavy hauling equipment; abstract. L. W. Fox. il S A E J 55:66+ My '47

TISELIUS apparatus. See Electrophoresis

TISSUE culture commission
First meeting. Science 105·120 Ja 31 '47

TISSUE paper
Air scrubbers for tissue mills. W. K Metcalfe. il Paper Tr J 124:128+ My 29 '47

TISSUES

Culture mediums

Cultivation of mammalian liver cells in large numbers. T. N. Harris and S. Harris. Science 105·75-6 Ja 17 '47
Ultraviolet radiation as a means of sterilizing tissue culture materials. J. G. Carlson and others il Science 105:187-8 F 14 '47

TITANATES
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30:114-25 Ap 1 '47

TITANIA. See Titanium oxides

TITANIUM
Effect of variations in composition and heat treatment on some properties of 4 to 6 per cent chromium steel containing molybdenum and titanium. G. F. Comstock. bibliog il Am Soc for Metals Trans 36:81-110; Discussion 110-15 '46
Exploration of Iron Mountain titaniferous magnetite deposits, Albancy county, Wyo. E. Frey. U S Bur Mines Rep of Invest 3986·1-37, pl 1-13 '46
How Westinghouse cuts enamel losses; titanium enamels reduce shipping damage; better crating methods; special steels. R. F. Bisbee Cer Ind 48:63-4 My '47
Metallic titanium and its alloys. R. S Dean and B. Silkes. bibliog and patent list (265 titles) 5pls U S Bur Mines Information Circ 7381:1-38 '46
New process promises wider titanium use. Bsns W p41 F 15 '47
Technology of zirconium and titanium and their compounds; abstract. E. Wainer. Am Cer Soc J (Cer A):90 Ap 1 '47
Titanium and zirconium; two metals of the future. W. J. Kroll and A W. Schlechten. Materials & Methods 25:129 F '47
Titanium-bearing white enamels in shop practice. P. A. Huppert. Cer Ind 49·64-5 Ag '47
Titanium enamels; abstract. A. I. Andrews and others. Cer Ind 48:69-70 Je '47
Titanium for enamelling steel. Chem Age (Lond) 56.569 My 3 '47
Titanium, 1946. A. F. Matthews Eng & Min J 148:82 F '47

See also
Rutile

Analysis

Colorimetric determination of titanium with disodium-1, 2-dihydroxybenzene - 3,5 - disulfonate. J. H. Yoe and A. R. Armstrong. bibliog Anal Chem 19:100-2 F '47

TITANIUM alloys
Metallic titanium and its alloys. R. S. Dean and B. Silkes. bibliog and patent list (265 titles) 5pls U S Bur Mines Information Circ 7381.1-38 '46

TITANIUM compounds
Contribution à la chimie des sels titaneux; préparation du sulfate titaneux, ses applications industrielles et biologiques. R. Jonnard. Chimie & Ind 57:551-7 bibliog(86 ref, p556-7) Je '47
Recent developments in dielectric materials. W. Jackson. bibliog diag Inst E E J 94 pt 1:33 Ja '47, Same. Inst E E J 94 pt 3: 9 Ja '47
Titanium monopoly dissolution upheld. Oil Paint & Drug Rep 151·5+ Je 30 '47
Titanium pigments. R. Mansell. Paint Oil & Chem R 110.18+ F 6 '47

See also
Barium titanate

TITANIUM hydride
Metal-ceramic brazed seals for microwave tubes. R. J. Bondley. il Electronics 20·97-9 Jl '47

TITANIUM iodide
Vapor pressure of liquid titanium tetraiodide. J. M. Blocher, jr and I. E Campbell. bibliog diags Am Chem Soc J 69:2100-1 S '47

TITANIUM nitride

Analysis

Determination of titanium nitride in ferroalloys. L. Silverman. bibliog Iron Age 159· 68+ F 6 '47

TITANIUM ores
Virginia titanium deposits. C. S. Ross. Econ Geol 42:194-8 Mr '47

TITANIUM oxides
Economical use of titanium dioxide in enamels W. G. Armstrong and W. H. Madson. Ind & Eng Chem 39:944-7 Ag '47
Effect of composition on properties of titanium enamels. A. L. Friedberg and others. bibliog Am Cer Soc J 30:261-77 S 1 '47
Fabrication of thin ceramic sheets for capacitors. G. N. Howatt and others. il diags Am Cer Soc J 30:237-42 Ag 1 '47
Heat capacities at low temperatures of titanium dioxide (rutile and anatase). C. H. Shomate. bibliog Am Chem Soc J 69·218-19 F '47
Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37:826-32 O '47
Partially reflecting mirrors of high efficiency and durability. M. Banning. Opt Soc Am J 37:688-9 S '47
Properties of barium-strontium titanate dielectrics. E. N. Bunting and others. bibliog Am Cer Soc J 30.114-25 Ap 1 '47, Same. J Res Nat Bur Stand 38:337-49 Mr '47
Statistical relation between TiO_2, Fe_2O_3, and FeO in rocks and ores during differentiation of a titaniferous magma. P. Evrard. bibliog Geol Soc Bul 58:197-210, Mr '47

See also
Rutile

TITANIUM steel
How Westinghouse cuts enamel losses; titanium enamels reduce shipping damage; better crating methods; special steels. R. F. Bisbee. Cer Ind 48:63-4 My '47
Porcelain enameling characteristics of some common ferrous metals; diffusibility of atomic hydrogen. W. A. Deringer. il diag Am Cer Soc J 29.332-40 N 1 '46

TITANIUM sulfate
Contribution à la chimie des sels titaneux; préparation du sulfate titaneux, ses applications industrielles et biologiques. R. Jonnard Chimie & Ind 57 551-7 bibliog(86 ref, p556-7) Je '47

TITANIUM tetraiodide. See Titanium iodide

TITLE insurance. See Insurance, Title

TITLES of honor and nobility
Styles of address, a manual of usage in writing and in speech. H Measures. 209p $3 Thomas Y. Crowell co, 432 Fourth av, New York 16 '47

TITRATION. See Volumetric analysis

TOBACCO
Curing and fermentation of tobacco. H. H Evers bibliog Chem & Ind p423-5 Jl 12 '47; Discussion. p 116 F 22-Mr 8 '47
Low-nicotine tobacco for milder smoking. Bsns W p34 Jl 5 '47
Suppression of axillary growth in decapitated tobacco plants by chemicals. R. A. Steinberg. Science 105.435-6 Ap 25 '47
Switch to oil heat for tobacco curing swells kerosine market in Southeast. F. C Sturtevant. il plan Nat Pet N 39:26-8+ Je 11 '47

See also
Cigarets

Physiological effect

Alcohol, tobacco and longevity. W. G. Bowerman. il Spectator (Life ed) 154 26-9+ N '46

TOBACCO as money. See Money

TOBACCO industry and trade
Special clearing agreement between Greece and Swedish tobacco monopoly effective. For Comm W 29:15 N 1 '47
Tobacco acreage cuts. Barron's 27:36 O 27 '47
Tobacco and related products. Published in Foreign commerce weekly
Tobacco growers to help bolster export market Bsns W p48 Je 7 '47
Tobacco sales preview future. Barron's 27:29 Ag 4 '47
Tobacco surplus. Bsns W p46-9 O 11 '47
Tobacco trouble, Maryland auction shuts down. Bsns W p19 My 3 '47
Wholesalers' role in the tobacco trade. J. Albright. maps Dom Comm 35·18-22 Jl '47

See also
Cigar industry and trade
Cigaret industry and trade
also British-American tobacco company; Imperial tobacco company of Great Britain and Ireland

Securities

Weighing outlook for tobaccos, with position of leading companies. J. C. Clifford. il Mag of Wall St 80.501-2 Ag 2 '47
What of the tobaccos now? with position of leading companies. E. A. Barnes. il Mag of Wall St 79·500-1+ F 1 '47

Taxation

Effect of British tobacco tax to be slight here Barron's 27:32 Ap 28 '47
Germany; tobacco; internal tax increased. For Comm W 28:12 Jl 12 '47

Australia

Australia's foreign trade For Comm W 28: 29+ Ag 23 '47

Canada

Canadian tobacco exports show increasing overseas demand. N. A. MacRae Can Chem & Process Ind 31:45-6+ Ja '47

Germany

Germany; tobacco; internal tax increased. For Comm W 28.12 Jl 12 '47

Great Britain

Britain's tobacco position; war and postwar oversea trade. A. H. Carroll il For Comm W 26·7-9+ Mr 8 '47
Tobacco shares now; what does the higher duty imply? Economist 152·594-5 Ap 19 '47

Guatemala

Tobacco and tobacco products, and cigarette paper; basic regulations governing merchandise, importation, taxation, and sale consolidated. For Comm W 29·18-19 O 25 '47

Persia

Statistical report, Iran For Comm W 29:27 N 1 '47

Philippine Islands

Philippine foreign trade in tobacco products. For Comm W 27 30+ Je 21 '47

Portugal

Supplies of tobacco furnished by imports For Comm W 29:31 N 1 '47

Southern states

Tobacco, sixth southern industry C Walker Manuf Rec 116 130 Ag '47

Sweden

Sweden's foreign trade. For Comm W 26.29 Ja 4 '47

TOBACCO mosaic virus
Light scattering studies of tobacco mosaic virus. G Oster, P. M. Doty and B. H. Zimm bibliog Am Chem Soc J 69:1193-7 My '47
Viscosity studies on the association of tobacco mosaic virus. H. K Schachman. bibliog Am Chem Soc J 69:1841-6 Ag '47

TOBACCO products export corporation
Plan for partial liquidation approved Comm & Fin Chr 164 3336 D 23 '46

TOBACCO workers

See also
Cigar factories—Employees

TOBEY bill (S. 829). See Banks and banking—Holding companies

TOBEY bill (S. 408). See Loans, Bank—Guaranty

TOCOPHEROL. See Vitamins—Vitamin E

TOILET goods
Imports of cosmetics and toilet preparations, Mexico, 1944 and first half of 1945. For Comm W 25:37 N 16 '46
Molded housing for electric manicurer. il Mod Plastics 24 109 D '46
New Sportsman; John Hudson Moore has a plastic talcum bottle; new line of toiletries for juniors. il Mod Packaging 20·126-7 F '47
Pressure in bottles; breakage avoided by controlling filling height. H. J. Wing. diag Mod Packaging 20:146-7+ Ja '47
Prestige expansion; Mark Cross branches out into men's toiletries. Bsns W p60+ N 16 '46
World knows and wants U.S. toilet preparations; with tabulation showing U.S. exports of toilet preparations, 1945, by areas, countries, and commodities. T. W Delahanty. il For Comm W 25.8-11+ D 14 '46

See also
Cosmetics
Hair preparations
Lotions
Perfumery
Soap

TOILET goods association
Annual convention, 12th, New York, May 14-16. Oil Paint & Drug Rep 151:65-70+ My 19 '47
Annual meeting, New York, May 14-16. Soap & San Chem 23:41-2 Je '47
Winter meeting, New York, Dec. 5. Oil Paint & Drug Rep 150.7+ D 9 '46

TOILET rooms. See Lavatories

TOLEDO
Operation L-M-C, Labor-management-citizens committee. J. D. Biggers. Trusts & Estates 83·559-61 D '46

TOLEDO Edison company
Securities offered. Comm & Fin Chr 165:3328 Je 23 '47

TOLEDO, Peoria & western railroad
Aftermath. Bsns W p97-8 Mr 22 '47
Background of the T P. & W. strike. Ry Age 122.596-7+ Mr 22 '47
Labor peace comes to strikebound railroad. Bsns W p111-12 Ap 26 '47

TOLERANCE
Composite dimensioning speeds production and inspection. J. T. Bennett diags Product Eng 18:141-3 O '47
Dimensions and tolerances. M. F. Spotts. bibliog diags Product Eng 18.160-4 Ja; 88-91 F '47
Experiment in the use of a standard limit system. J. Loxham. diags Inst Mech Eng J & Proc 156:Proc 103-12; Discussion. 112-25 S '47
How to increase tolerances and obtain closer fits E. E. Bates. il diags Iron Age 160: 58-61 Jl 3 '47
Interchangeability of large machine parts; work of International standards commission. N. N. Sawin. diags Am Mach 91 88-91 Ja 2 '47
Standard tolerances for forgings up to 100 lb, data sheet. Metal Prog 50·1039 N '46
Tolerance charts forecast accuracy J. K. Matter. diags Am Mach 91·114-18 O 23 '47
Tolerances for impression die forgings; chart; engineering file facts Materials & Methods 25:125 Je '47; Same. Iron Age 159 57 Je 12 '47

See also
Fits (machinery)

TOLIDIN
Ortho-tolidine titration procedure for measuring chlorine residuals. C. H Connell. bibliog Am Water Works Assn J 39·209-18; Discussion. N. S. Chamberlin. 218-19 Mr '47

TOLL roads. See Roads—Tolls

TOLL system. See Telephone—Long distance

TOLMAN, Richard Chace, 1881-
Portrait. Fortune 35.124 Ja '47

TOLSON, Gustave I.
To head cotton mart. por Bsns W p98 Ap 26 '47

TOLUENE
Catalytic formation of toluene from benzene and benzene-methane at high pressures. V. N Ipatieff and G. S. Monroe. Am Chem Soc J 69.710 Mr '47
Effect of temperature on the proportions of isomers formed in the mononitration of toluene. W. W. Jones and M. Russell Chem Soc J p921-3 Jl '47
Evaluation of azeotropic entrainers. L. Berg and J M. Harrison. bibliog Chem Eng Prog 43:487-96 S '47
Fractionation of binary mixtures in packed columns J. A Storrow and B. D Willson. bibliog diags Soc Chem Ind J 66:79-84 Mr '47
No-bond resonance, competitive bromination of toluene and *t*-butylbenzene. E. Berliner and F J. Bondhus. bibliog Am Chem Soc J 68:2355-8 N '46
Oxidation of organic compounds in liquid hydrogen fluoride. J H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Plate efficiencies of benzene-toluene-xylene systems in distillation. M. Nord. bibliog Am Inst Chem Eng Trans 42.863-81 O-D '46
Rectification of benzene-toluene; effect of operating variables on plate efficiency. J. Griswold and P. S Stewart. bibliog il diags Ind & Eng Chem 39·752-62 Je '47
Solvent separation of hydrocarbon mixtures by vapor-liquid extraction. M. R. Fenske, C. S. Carlson and D Quiggle bibliog diags Ind & Eng Chem 39:1322-8 O '47
Some catalysed gas-phase reactions of aromatic hydrocarbons; interaction of benzene with methyl ether. P. H. Given and D L. Hammick Chem Soc J p928-35 Jl '47
Synthesis of aromatic phosphonic acids and their derivatives; the derivatives of benzene, toluene and chlorobenzenes. G. M. Kosolapoff and W. F. Huber. Am Chem Soc J 69.2020-1 Ag '47
Vibrational frequencies of semirigid molecules; a general method and values for ethylbenzene. W. J. Taylor and K. S Pitzer. bibliog J Res Nat Bur Stand 38:1-17 Ja '47

Analysis

Determination of carbon and hydrogen in petroleum distillates; lamp technique. M. C. Simmons. diags Anal Chem 19:385-9 Je '47

Manufacture

Azeotropic fractionation process; Union oil company of California, flow diag Pet Refiner (Process Handbook sec) 26.108-9 Ap '47
Chemical refining of aromatic hydrocarbons from petroleum; toluene treating P L. Brandt, R. J Lee and F. T. Wadsworth. bibliog il diag Ind & Eng Chem 39:1010-18 Ag '47
Experiments on the production of toluene from coal tar products and other sources. C M. Cawley and others. bibliog flow diags plan Inst Pet J 32·660-83 N '46
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments at atmospheric pressures E A Coulson and others. bibliog diag Soc Chem Ind J 65·396-8 D '46
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments in metal reaction tubes, and with increase of pressure above atmospheric. E. A Coulson and R. Handley diag Soc Chem Ind J 65.398-402 D '46
Production of toluene under optimum conditions; abstract A. A. Burton and others. Chem Eng 54 258+ Je '47

TOLUENESULFILIMINE
Preparation of a series of *p*-toluenesulfilimines. T. P. Dawson. Am Chem Soc J 69·968 Ap '47

TOLUENESULFONAMIDO group
Some reactions and derivatives of 6- and 7-nitro-2-naphthylamines; bromination, halogeno-derivatives, and the preparation of the new 7-nitro-2-naphthol. H H. Hodgson and E. R. Ward. Chem Soc J p327-31 Mr '47

TOLUIC acid
Preparation of iodinated mono- and diphenyl-acetic and -propionic acids. J. W. Barnett, F. A. Robinson and B M. Wilson. Chem Soc J p202-4 F '47

TOLUIDINE blue
Hyperheparinemia; cause of the hemorrhagic syndrome associated with total body exposure to ionizing radiation. J G Allen and L O. Jacobson Science 105:388-9 Ap 11 '47

TOLYLAZONAPHTHOL. See Orange OT

TOLYLMERCAPTOPROPANONES
Tolylmercaptopropanones and their condensation with isatins. O. Newell and P. K. Callaway. Am Chem Soc J 69.116-17 Ja '47

TOMATIN
Two new antibiotics reported at National Institute symposium. Chem & Eng N 25: 436 F 17 '47

TOMATO sauce
Tomato sauce breaks trail for line as Hunt opens New York market. J. H. Collins. il Sales Management 58:41-3 Ja 1 '47

Advertising

How a regional advertiser went national successfully, Hunt Foods 90-item line spearheaded by tomato sauce campaign. L. F. Thomann il Ptr Ink 220:29-30+ S 5 '47

TOMATOES
Soil moisture lowers tomato acid content. Food Ind 19·964 Jl '47

Analysis

Analytical methods for carotenes of lycopersicon species and strains. F. P. Zscheile and J. W. Porter. bibliog Anal Chem 19: 47-51 Ja '47
Vitamin *C* content of vegetables; tomatoes. L. C. Baker and T. L. Parkinson. Soc Chem Ind J 66:1-2 Ja '47

TOMBSTONE, Arizona
Too tough to die; story of Tombstone. H. Keyes. il Comp Air Mag 52:85-9 Ap '47

TOMBSTONES
Marker inroads; tombstone industry reports record sales Bsns W p22+ Ag 30 '47

TOMMASINI, A. R.
Designer, typographer, University of California press. por Inland Ptr 118:46 Ja '47

TONES
Analyses of the tones of wooden and metal clarinets S. E. Parker. bibliog il Acoustical Soc Am J 19:415-19 My '47

TONES—*Continued*
Auditory thresholds of short tones as a function of repetition rates. W. R Garner. il diag Acoustical Soc Am J 19·600-8 Jl '47
Decay rates of piano tones. D. W. Martin bibliog il Acoustical Soc Am J 19:535-41 Jl '47
Identification of musical instruments when heard directly and over a public-address system. H V Eagleson and O W. Eagleson. Acoustical Soc Am J 19 338-42 Mr '47
Musical tone qualities as a factor in expressiveness A. Pepinsky. Acoustical Soc Am J 19·542-4 Jl '47
Plate vibration of stringed instruments at the wolfnote. J. A. Kessler bibliog il diag Acoustical Soc Am J 19 886-91 S '47

TONGS
Automatic tongs can solve many handling problems. il Mech Handling 34 250-2 My '47
Tong accidents. Safety Eng 93·56 Mr '47

TOOL boxes
Cushion wrap; tool set protectively packed; cellulose crepe wadding. il Mod Packaging 20 142 Mr '47
Packaging tools in styrene boxes il Mod Plastics 24 127 F '47; Same. Mod Packaging 20:135 Mr '47

TOOL engineering
Methods and tooling geared for change; Fisher Body-Ternstedt division C. S Ricker. diags Am Mach 91:118-22 Jl 3 '47
Tooling the Convair 240. G. F. Gerhauser. flow chart. il Aero Digest 54:81-3+ Mr '47

TOOL owners union
Says tools of production must be replaced by 1950 or output will drop. Nat Pet N 39·44 Ja 15 '47
Tool setback, New York Labor dept. denies charter to Tool owners union. Bsns W p96+ Mr 8 '47

TOOL rooms
Incentives work in the toolroom too. E. H. Heywood Am Mach 91·106-8 Ap 24 '47
Planning a toolroom heat-treating department. R. C Onan. il plans diag Iron Age 160.40-4 Jl 31; 70-7 Ag 7 '47
Simplified tool control for decentralized operation; Thompson Products T. M. Landy il Factory Management 105.106-8 Ag '47

Layout
Planning a toolroom heat-treating department. R. C Onan. il diag Iron Age 160: 70-7 Ag 7 '47

TOOL steel
Arcwelding tool steel; abstract. A. R. Butler and F. E. Kessler. Iron Age 158·59-61 N 28 '46
Bainitic hardening of high-speed steel C. K. Baer and A E. Nehrenberg. bibliog il Iron Age 160:65-70 S 4; 77-82 S 18 '47
Die steels for hot work; abstract. D. W Rudorff. Materials & Methods 24:1510 D '46
Effect of forging on segregation in high-speed steel. E. S. Kopecki. il Iron Age 159:42-3 F 27 '47
Expanded tool steel facilities; Bethlehem steel co. R J. Knerr and H. C. Bigge il Steel 120·110+ Je 16 '47; Same cond. Iron Age 159:69-73 Je 5 '47
Forging practice; high-speed steels. A. Ashburn. Am Mach 91:124 My 8 '47
Free machining die steel. Steel 120:104 F 10 '47
Hardenability of common toolsteels; Jominy end-quench tests; data sheet. S. M. DePoy. Metal Prog 50:1052 N '46
Hardened and tempered microstructure of high-speed tool steel as a factor in tool performance. W. H Wooding. il diags A S M E Trans 69:281-306 My '47
Heat treatment of high speed steels. H. E. Boyer. il Steel 120:110-13+ Mr 3; 92-5+ Mr 10 '47
High impact strength die steels provided by Latrobe process il Steel 121:86 S 1 '47
Hot hard high speed steel H G. Johnstin. il Steel 120:98+ Ap 21 '47
How to select die blocks. R. G. Sartorius. Iron Age 159.57 Ja 23 '47
Melting high-speed steel in the basic electric arc furnace; with charts, tables and colored illustrations. H. C. Bigge. Iron Age 160: 118-36 O 16 '47
New tool steel features improved hot hardness; Vasco Supreme. Iron Age 158:63 D 12 '46
Salt baths for hardening high speed W E. Bancroft. bibliog il Metal Prog 50:941-7 N '46
Sub-zero treatment of tool steel. Engineer 184·292-3 S 26 '47
Tempering of toolsteels. M Cohen. il Metal Prog 51 781-8, 962-8 My-Je '47
Tempering tool steels G. A Roberts. Steel 121.72-4+ Jl 28; 96-8+ Ag 4 '47; Abstract. Iron Age 158·58 N 28 '46
Thread rolling, theory and practice; dies. J. W. Batchelder. bibliog il diags Iron Age 158.55-61 D 26 '46; 159:52-7 Ja 9 '47
Tool materials. J E Attwood Inst Mech Eng J & Proc 155 (War emergency issue no 20):260-1 '46; Same. Engineering 161: 596 Je 21 '46
Tool steel production in a modernized plant; Bethlehem steel co R. J. Knerr and H. C. Bigge il Mach 53·172-5 Jl '47
Toolsteel progress during 30 years. A. T. Clarage. il Metal Prog 52·568-71 O '47
Tool steel tubing. E. L. Cady. il Materials & Methods 25.87-9 F '47
Types of steel in machine tools. Product Eng 18:97 S '47

Testing
Measurement of tool-tip temperature. B. A. Crowder diag Engineering 162:435-6 N 8 '46
Study of a high-speed steel ingot C. F Sawyer, jr. il diags Iron Age 160:140-2 O 16 '47
Testing hardness up to 700°F. A. L. Pranses. Metal Prog 52:249-50 Ag '47

TOOLING docks
Radically different method of building motor coaches; Consolidated-Vultee's use of master tooling dock and geometric mastering system L. A. Bryant. il Automotive Ind 97:24-8 O 1 '47
Tooling dock simplifies building assembly fixtures L. A Bryant. diags Iron Age 159:60-2 Mr 20 '47

TOOLS
Cradle-to-the-grave tool control C. G. Rising Am Mach 91:82-3 Ja 2 '47
Glass in the laboratory; tools and accessories used in lamp working. I C. P Smith. il diags Chem Age (Lond) 57.571-3 O 25 '47
Hand tools involved in many accidents. Nat Safety N 55:61-2 Mr '47
Hand tools; safe aids for many trades Nat Safety N 55·126 Mr '47
Hardest man-made material; boron carbide applied to metalworking operations. il Am Mach 91 122-4 Je 19 '47
Hints on small tools. E. R. Goddard. diags Am Mach 91:104-5 F 27; 114 Ap 24 '47
New equipment. il Iron Age 158 69-72 D 26 '46; 159:73-8 F 6; 65-70 Mr 20; 69-74 Ap 3 '47
Racked tools reduce setup time. H L. Flynn. il diags Am Mach 91.94-5 F 27 '47
Safe-ending impact tools. il diags Nat Safety N 55:40+ Je '47
34th annual review number; tools and accessories. il diags Am Mach 91:150-65 Ja 16 '47

See also
Chisels
Cutting tools
Electric tools, Portable
Machine tools
Machinery
Pneumatic tools
Saws
Tool rooms
Tool steel

TOOLS, Plastic
Better tools from molded laminates; glass fabric impregnated with unsaturated polyester resins and addition-type polymers. L. Wittman. il Mod Plastics 24:132-7 Je '47
Cast plastics and casting processes. P. E. Erbe and J. T. Grey Mod Plastics 24.153-6+ N '46
Plastic tooling. T. A. Dickinson. Mech Eng 68:1068 D '46

TOOTH paste and powder. See Dentrifices

TOOTHBRUSHES
Folding toothbrush. il Mod Plastics 25:154 S '47

TOPAZ
Topaz as an admixture in refractory concrete. F. E Lobaugh. Blast F & Steel Pl 35:868-9 Jl '47; Abstract. Iron Age 160:44 Jl 31 '47

TOPOGRAPHICAL maps
How the camera transit is used in survey work. R. G. Sanders. bibliog il Pub Works 77:23-4+ D '46
Topographic surveys; progress report of the Committee of the surveying and mapping division on topographic surveys. Am Soc C E Proc 72:483-97 Ap '46; Discussion. 72: 1175-81, 1303-4 O-N '46

TOPOGRAPHICAL surveying
Topographic surveys, progress report of the Committee of the surveying and mapping division on topographic surveys. Am Soc C E Proc 72:483-97 Ap '46; Discussion. 72: 1175-81, 1303-4 O-N '46

See also
Altitude

TORBANITE
Chemical constitution of torbanite kerogen R. F Cane bibliog Soc Chem Ind J 65.412-14 D '46

TORCHES
Hydrogen-fluorine torch. H F Priest and A. V. Grosse bibliog il diag Ind & Eng Chem 39:431-3 Mr '47
Small blow torch burns dry chemical fuel in tablet form il Sci Am 177 84 Ag '47

See also
Oxyacetylene flame

TORNADO insurance. See Insurance, Tornado

TORNADOES

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Insurance, Tornado

TORONTO, Ontario
Two important civic improvements approved by Toronto ratepayers; housing redevelopment and construction of civic square. plans Roads & Bridges 85:44-5+ Ja '47

Rapid transit

Economics of trolley coaches for public transit. il map Roads & Bridges 85:78-9+ F '47
Key to good public transit operation; enabling legislation approved in 1920, which permitted Toronto to operate its city transit. Mass Transportation 43:489-90 O '47
Toronto, 25 years. il Mass Transportation 42.480-2+ N '46
Trolley coach comes to Toronto. il plan Bus Transportation 25:44-5 D '46

Sewerage

Sewage treatment in Toronto. W. Storrie. plans diags Water & Sewage 84:49-51+ O '46

Streets

Highway improvement advocated by Toronto planning board plans diag Roads & Bridges 85:36-9+ Ja '47

Subways

Present status of the Toronto rapid transit subways; with cost data. il plan diag Roads & Bridges 84:54-7+ D '46

Water supply

Toronto water-works extensions; general description of the system with details of some outstanding features. W. Storrie. il 12 pls N E Water Works Assn J 61.1-29 Mr '47; Abstract. Water & Sewage Works 93:419-20 N '46; Discussion. N E Water Works Assn J 61:30-3 Mr '47
Toronto's new filtration plant reduces chemical costs. N. J. Howard il Water & Sewage 85:18+ F '47

TORONTO university
Forestry department. J. W. B. Sisam. il Pulp & Pa. of Can 48:85-8+ Je '47

TORPEDOES
Acoustic locating system; for finding torpedoes lost during test runs. E. A. Walker and P. M. Kendig. il diags Electronics 20: 124-7 F '47
Super-torpedoes for navy. Marine Eng 51:97 D '46
Torpedo motor may affect future conventional machine designs. R. E. Kelly. Elec World News ed 126:17 D 28 '46
Torpedo propeller-blade surfacing. G L. Brown il diags Engineering 163:73-6 Ja 24 '47

TORQUE
Cam design and analysis for high speeds and torques. M. A. Sanders. diags Product Eng 18:84-7 Mr '47
Does torque weaken bolts? H. O. Hill. Eng N 139 120-1 Jl 24 '47
Equipment for separately measuring power in the cylinder shaft, threshing machinery and sickle bar components of combine harvesters; abstract. A. C. Ruge and others il S A E J 55.66 Mr '47
Fluctuations of the distribution of torque between rolling-milling spindles. E A W Hoff diags Iron & Steel Inst J 155:51-4 Ja '47, Discussion. diags 156.511-22 Ag '47

TORQUE converters
Analysis of epicyclic gear systems for torque converters. A Y. Dodge. diags Automotive Ind 97:38-40+ Ag 1; 34-7 Ag 15 '47
Anatomy of the torque converter. M. C. Horine. il diags Bus Transportation 26:78-83 Je '47
Crawler tractor performance with hydraulic torque converter drive; abstract. A H. Diemel. S A E J 55.96-7 Ap '47
Modern rotary drilling; hydraulic torque converter finds increasing application J. Zaba diag Oil & Gas J 46:99 Je 7 '47
Torque converter for bus engines; assembly of aluminum parts made by furnace brazing. E. E. Thum. Metal Prog 52:230 Ag '47

TORQUE meters
NACA balanced diaphragm dynamometer-torque indicator. C S. Moore and others. diags Automotive & Aviation Ind 96:41+ Je 1 '47
Unique torquemeter. K. W. Miller. il diags Automotive & Aviation Ind 96 36-7 Je 1 '47
Variable speed rotational viscosimeter. R. Buchdahl and others. il diags R Sci Instr 18:168-72 Mr '47

TORREY pine. See Pine

TORSION
Associated matrices of bending and coupled bending-torsion vibrations. W. P. Targoff. bibliog diags J Aeronautical Sci 14:579-82 O '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84, 884-930 F, S, N '47 (to be cont)
Length changes in metals under torsional overstrain. H. W. Swift. diags Engineering 163:253-7 Ap 4 '47
Numerical solution of axisymmetrical problems, with applications to electrostatics and torsion. G. Shortley, P Darby and E. H Gamble. J Ap Phys 18:116-29 Ja '47
Some practical applications of rubber dampers for the suppression of torsional vibrations in engine systems. R. W. Zdanowich and J. E. Moyal. bibliog il diags Inst Mech Eng J & Proc 153 (War emergency issue no 3).61-76; Discussion. 76-82 '45
Stability of thin cylindrical shells in torsion R. G Sturm. bibliog il diags Am Soc C E Proc 73:471-95 Ap '47; Discussion. 73: 1302-4, 1448-9, 1549-52 O-D '47
Torsion in steel spandrel girders. J. E. Lothers. diags Am Soc C E Proc 72:307-21 Mr '46; Discussion 72.1199-200, 1305-16; 73:219-20 O-N '46, F '47
Torsion of a rubber cylinder. R. S. Rivlin. il J Ap Phys 18:444-9 My '47; Correction 18:837 S '47; Same. J Res Nat Bur Stand 38.637-42 Je '47
Torsional deflection of hollow shafts; charts, reference book sheet Product Eng 18:171, 173 Ap '47
Variation with frequency of the torsional modulus of German silver wire and its relation to gyromagnetic measurements. S J. Barnett and D. S. Webber. diags Phys R 71:896-902 Je 15 '47

TORSION meters
Measurement of torsional relaxation in textile fibres W. E Morton and F. Permanyer. il diags Textile Inst J 38.T54-9 F '47

TORSION meters—*Continued*
Three new photoelectric instruments for high-speed engine research K. J. De-Juhasz diags Automotive Ind 97.38-9 Jl 1 '47
Torsional vibration amplitudes at non-resonant speeds with special reference to the interpretation of torsiograph records. W. K. Wilson bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 3). 83-98, Discussion il 99-108 '45

TORSION springs. See Springs (mechanism)

TOTALITARIANISM
American takes inventory C. G. Kuebler. Am Inst Banking Bul 28.3-6+ O '46
Good, evil, and beyond. G N. Shuster. Ann Am Acad 219 169-76 Ja '47
Incentives and enterprise J. F Lincoln. Iron Age 159 55-6 Mr 27 '47

TOULMIN, Harry Aubrey, Jr. 1890-
Portrait Bsns W p24 My 24 '47

TOURIST baggage insurance. See Insurance, Tourist baggage

TOURIST camps, hostels, etc.
Motor courts developing into a lusty industry. H. B. Love. il Dom Comm 34·7-11 N '46
Recreation business index for New England's vacation establishments Banking 40:96 Ag '47

TOURIST cards
Costa Rica; tourist cards may be used by air tourists in lieu of passports. For Comm W 25 23 N 16 '46
International travel plan for airlines, cards will give travelers greater ease in transportation. Weekly Underw 156:171 Ja 11 '47

TOURIST trade
America takes a trip. il Bsns W p22 Jl 26 '47
Foreign travel, chief import of U.S. plays impressive role. F. P. Sasscer il For Comm W 27.3-6+ My 10 '47
Greyhound goes after foreign tourists. Bsns W p26 N 30 '46
Holiday mood; living costs and return of consumer goods cut into domestic vacations. Bsns W p19 F 15 '47
Travel boom ahead? Barron's 27.12 Ag 11 '47
World neighbors campaign for invisible export; tourism F. E. Forbes. il For Comm W 27:7-8+ My 10 '47

See also
Tourist camps, hostels, etc.

Advertising
Oregon invites the tourist, and bones up on how to sell him. L. Newkirk. il Sales Management 58 40-2 My 20 '47
States and cities seek tourists, industries. Adv & Sell 40:45-6 Ja '47

Belgium
All-inclusive tourist vouchers now offered by Belgian government. For Comm W 27:30 Je 28 '47

Caribbean region
Tourism in the Caribbean; new developments planned E. M. Braderman. il For Comm W 25:6-7+ N 9 '46

Cuba
Cuban tourist trade vies with tobacco industry. For Comm W 27:32 Ap 12 '47

Denmark
Denmark prepared to welcome 100,000 tourists this year. For Comm W 27:18 My 24 '47

Europe
European travel boom on. il Bsns W p19-20 Mr 29 '47
Going abroad? Europe is willing, if U.S issues passport. Bsns W p98+ N 30 '46

France
Paris in the summer. Fortune 36·120 Ag '47

Great Britain
British railways point for future tourist trade H F. Meyer. il Ptr Ink 217:42-4 D 13 '46
England wants tourists. Bsns W p109 N 16 '46

Italy
Florence, Italy, ready for many travelers For Comm W 27 15 My 10 '47

Norway
Norway plans to welcome 125,000 foreign travelers this summer. For Comm W 27 13 My 10 '47

Uruguay
Tourist's automobile; temporary-admission regulations consolidated For Comm W 27: 36 Ap 5 '47

TOWBOATS
Cycloidal propeller installed on harbor tug. il Marine Eng 51:116+ D '46
Diesel tug for pineapple barge towing. il Marine Eng 52.93-4 Mr '47
Double helical steamboat paddle wheel. il Marine Eng 52 85 Ag '47
Dravo builds river craft for Argentina. il Marine Eng 52 87-8 Ag '47
First railroad tug radio installed at Baltimore by B & O. il Manuf Rec 116.78+ Ja '47
General Motors repowers Ohio River towboat. il Marine Eng 52 134 Ag '47
Logging tug of unusual design. il Pulp & Pa of Can 47:112+ D '46
Marquette adds to water fleet. il Concrete 55: 40 Ag '47
Peacetime radar; towboat traffic on narrow inland waterways expedited. B. B. Talley. il maps Electronics 20.113-15 O '47
Pontons et remorqueurs de grande puissance pour le renflouement des navires. H. Faure. diags Génie Civil 124.71-3 F 15 '47
Radar for river towboat traffic. il Electronics 20·150 Ap '47
Solvay, standardized river towboat il Marine Eng 52 85-7 S '47
Testing integrated barge fleets. A. B. Murray. il diag Marine Eng 51:106-8 D '46

TOWEL supply service. See Linen supply service

TOWELS
Even the simple terry towel requires considerable calculation. T. Hargreaves. Textile World 96:143+ D '46

TOWELS, Paper. See Paper towels

TOWER, Walter Sheldon, 1881-
We can meet the demand, steel man testifies. por Bsns W p15 Jl 19 '47

TOWERS, Steel

Testing
Testing transmission towers to failure. F. Mendel. il Eng N 139 255-6 Ag 21 '47

TOWING of automobiles. See Automobiles—Towing

TOWING tanks. See Ship model tanks

TOWN and country (periodical)
Magazine's 100th year sets new records. il Ptr Ink 217.108 D 13 '46

TOWN planning. See City planning

TOWNS. See Cities and towns

TOWNSEND equation
Mechanism of the negative point corona at atmospheric pressure in relation to the first Townsend coefficient. L. B. Loeb. bibliog Phys R 71·712-14 My 15 '47

TOWNSHIP roads. See Roads, Township

TOXAPHENE
Progress report on a new insecticide; test results with new chlorinated bicyclic terpene against household insects, compared with DDT and OTI. L. A Stearns. bibliog Soap & San Chem 23.117-19+ Ja '47
Residual insecticide. Chem Ind 60:76 Ja '47

TOXINS and antitoxins
Mechanism of renin tachyphylaxis; restoration of responsiveness by tetraethyl ammonium ion. I. H. Page and R. D. Taylor. bibliog Science 105:622 Je 13 '47
Purification of diphtherial toxoid. L Pillemer and D Toll. bibliog Science 105:102 Ja 24 '47

TOXINS and antitoxins—*Continued*
Role of the axis cylinder in transport of tetanus toxin. P. G. Roofe. Science 105 180-1 F 14 '47

See also
Antigens and antibodies
Immunity

TOY automobiles. See Automobiles, Toy

TOY banks
Where are the toy banks of yesteryear? P. Dwyer il Foundry 75:116-19+ Ap; 84-5+ My '47

TOY industry and trade
Advertising budgets for toys to increase as national sales volume promises 25% rise N. Kelne. Ptr Ink 218:106 Mr 7 '47
Case studies in small business; marketing toys. Dom Comm 35.65 Je '47
Package gets distribution for new line; Garrett toys A. E Aldridge. il Ptr Ink 217: 46 N 29 '46
Simplified toy packs; Goodman packaging combines selling punch with production speed. il Mod Packaging 21.142-3 S '47
Toy tycoon. H. Coons. Adv & Sell 39:49+ N '46

Directories
Playthings directory of the toy industry, 1947. 520p pa 50c McCready pub. co, 71 W. 23d st, New York 10 '47

Exhibitions
Exhibit stresses modern approach to toy selling, Toy guidance council. il Sales Management 59·88+ Ag 1 '47

Netherlands
Expansion in Netherlands toy industry. For Comm W 26:26 Mr 1 '47

TOY trains. See Railroads—Models

TOYS
See also
Rubber toys

TOYS, Plastic
Carrying through a good idea, job is not finished till it is merchandised; toy washing machine. il Mod Plastics 24:117-18 Mr '47
Four-in-one plastic toy car kit. il Mod Plastics 24:131 Ja '47
Plastic toys. il Mod Plastics 24:164-8+ Je '47
Plastics and metal make a sturdy toy roadster, il Mod Plastics 24:110-11 Ap '47
Tomorrow's toy is engineered; plastic motor truck cab il Mod Plastics 24:104-5 F '47
Vinyl sheet toys. il Mod Plastics 25:180-1 O '47

See also
Dolls, Plastic

TRACE analysis
Determination of gallium in silicate rocks. E B. Sandell bibliog Anal Chem 19:63-5 Ja '47
Determination of traces of fluorine in organic compounds. W. B. Huckabay, R. H. Busey and A. V. Metler. bibliog il diags Anal Chem 19.59-63 Ja '47
Spectrographic determination of trace elements in the cathode layer arc by the variable internal standard method. R. O Scott. bibliog Soc Chem Ind J 65:291-7 O '46

TRACERLAB, inc.
Isotope eye, tagged atoms to study chemical and physical processes Bsns W p20-1 My 3 '47

TRACTOR conveyor. See Conveying machinery, Portable

TRACTOR industry and trade
Big expansion ahead in tractor industry. H. E. Everett. il Automotive Ind 97.28-30+ Jl 1 '47
Ford tractor sales setup; the who, the why and the how F. R Pierce. il Sales Management 59:48+ Ag 15 '47
Ford tractors move to showrooms. Bsns W p28 Jl 12 '47
How Ellinwood dealers grub for tractor sales ideas; farmer-suggested changes in the Bearcat. J. Collins. il Sales Management 57: 84+ D 1 '46
Tractor split; Ford Motor to stop making units for Ferguson Bsns W p17 N 23 '46
Tractor tyro, Empire Ordnance's Frank Cohen il Bsns W p21 Ag 16 '47

See also
Caterpillar tractor company
Ferguson, Harry, inc.

Advertising
Allis-Chalmers finds novelties sound low-cost advertising buy. C M Karr. il Sales Management 59 156+ S 15 '47
Powerful graphics, personalized copy help launch new Harvester division. il Ind Marketing 32 46-7+ S '47
This program increased dealer advertising 940 per cent; Allis-Chalmers tractor division. M O. Gustafson. il Ptr Ink 219.42-3 Ap 11 '47

Statistics
Cars, trucks and tractors on farms, by states; 1945 compared with 1940; tabulation. Automotive & Aviation Ind 96 108 Mr 15 '47
Farm and non-farm tractor production; 1935-1946, tabulations and chart. Automotive & Aviation Ind 96.87 Mr 15 '47

TRACTOR tires. See Tires, Tractor

TRACTORS
Allis-Chalmers HD-19 Diesel, world's largest crawler tractor. il Diesel Power 25·50 O '47
Automotive engineering brightens farm outlook. F. McCormick. S A E J 54:17-18 N '46
Brown 25 h.p. wheeled tractors. il Engineer 182·543 D 13 '46
Caterpillar starts production of new engine, tractor and grader. il Automotive Ind 97: 30-1 O 15 '47
Current influences of integral equipment in the tractor industry; abstract. K. W. Anderson S A E J 55.69 Ja '47
Diesel engine requirements for farm tractors; abstracts. L. A. Gilmer S A E J 55:71-2 Ja '47; Automotive & Aviation Ind 96·36 Ja 1 '47
Economics of the application of Diesel power to farm tractor operation; abstract. H. F. Bryan. Automotive & Aviation Ind 96:37-9 Ja 1 '47
L'extension de l'emploi des tracteurs à chenilles; les bulldozers. P. Razous. il diags Génie Civil 123 289-91 N 1 '46
Farmall Cub details. il Automotive Ind 97:33 Ag 15 '47
Ferguson tractor. il diags Automobile Eng 37: 43-52 F '47
Ferguson tractor for mounted implements. il Engineering 163:151 F 14 '47
Ford's great new tractor. W. G. Patton. Iron Age 160:70 Jl 17 '47
French agricultural tractor. il Engineer 182: 525 D 6 '46
Gravel-spreading cost reduced by use of tractor-scrapers; highway in British Columbia. il Roads & Bridges 85·76-7+ O '47
Hydraulic power lift unit and linkage for use on farm tractors. diag Mech Handling 34 440-2 Ag '47
International harvester co. producing small tractors at Louisville. Steel 120:88 Je 23 '47
Load reductions, weight transfer and operational effects resulting from the mounting of implements on tractors. D. C. Heitshu. diags S A E J 55:72-4 F '47
Mounted plough for tractor farming. il Engineering 162 536 D 6 '46
Power requirements of self-propelled implements; abstract J. Borland. S A E J 55:67 Mr '47
Practical approach to operator's comfort; abstract. C. W. Cannon and E. Cox. Automotive Ind 97:35-6 O 15 '47
Sawyer-Massey light-weight tractor. il Roads & Bridges 84.89 N '46
Traction efficiency. C. T. O'Harrow. il S A E J 54:29 D '46
Tractor power lift; hydraulic unit for the David Brown Cropmaster. diags Automobile Eng 37.377-8 O '47
Tractor with facilities for equal forward and reverse operation; abstract. A. W. Turner. diags S A E J 55:82-3 F '47
Typical farm tractor takes 1542 lbs of steel. diag Steel 119:63 D 30 '46

See also
Electric tractors

TRACTORS—*Continued*

Bearings

Comparison of stationary and rotating axle idler wheel mountings for tractor and implement service; abstract G. W. Curtis. diags Automotive Ind 97.33-4 O 15 '47

Cost of operation

Economics of the application of Diesel power to farm tractor operation. H. F. Bryan. Diesel Power 25 80-3+ F '47; Excerpts. Automotive & Aviation Ind 96:37-9 Ja 1 '47; Abstract. Nat Pet N 38:34 S 25 '46

Fuel

Butane and propane as tractor fuels; abstract E A. Jamison and J. R. Strother. Automotive Ind 97 34-5 O 15 '47

Manufacture

Electronics in the Caterpillar tractor plant. il diags Electronics 20:104-9 F '47

Examples of metallurgical progress at International harvester co. il Metal Prog 52. 614-24 O '47

Farmall Cub tractor and implements, abstract. C. A. Hubert and J L. Hipple. il Automotive Ind 97:32-3 O 15 '47

High-speed assembly of radiators by induction soldering. il Mach 53.166-7 D '46; Same cond Iron Age 158:55 O 24 '46

International Harvester's Louisville plant making Farmall Cub tractors. Manuf Rec 116·178 Ag '47

Keeping Caterpillars from burning; Caterpillar tractor company's Peoria plant. E. B Warberg. il Safety Eng 92:74-6 O '46

Production control at Caterpillar. W. G Thannert. il Iron Age 159:40-4 Je 26; 160. 52-7 Jl 10 '47

Specifications

American tractors; tabulations Automotive & Aviation Ind 96·136-9 Mr 15 '47

Steering gear

Tractor steering il diag Automobile Eng 37: 67-9 F '47; Discussion. 37:379-80, 504 O, D '47

Transmission

Crawler tractor performance with hydraulic torque converter drive; abstract. A. H. Diemel S A E J 55.96-7 Ap '47

TRACTORS, Electric. See Electric tractors

TRACTORS, Industrial

Brown general-purpose industrial tractors il Engineering 163:57 Ja 17 '47

Bulldozer arms carry cable reel. il diags Elec World 127:72 Mr 29 '47

Food movement by tractors at Swiss hospital. F H. Slade. il plan Mech Handling 34:207-13 Ap '47

Reducing cost of sludge removal; experiences with saddle-bag tractor. W. A. Sperry. il Water & Sewage Works 94 R227-8 Jl '47

Rubber-tired tractor performs many jobs. T. W. Pearson. il Coal Age 52:126 Ap '47

Small industrial tractor. il diags Automobile Eng 36:497-500 N '46

Special tractor facilitates truck trailer handling. il Iron Age 159.49 Je 26 '47

TRACTORS, Military

Scammell military vehicles il diags Automobile Eng 37 159-68 My '47

See also
Tanks, Military

TRADE. See Commerce

TRADE agreements

Agreement analysis card of the International association of machinists A. Epstein. il Mo Labor R 65:75-7 Jl '47

Better management and better union leadership C. F Mugridge. Ann Am Acad 248 76-81 N '46

Coal contracts, labor-monopoly products il Coal Age 52 74-6 Ag '47

Collective bargaining with associations and groups of employers. R. M. Patterson Mo Labor R 64:397-410 Mr '47

Contract or law? C.I O's objective. Bsns W p66 Ag 2 '47

Curtain raiser; U A W. starts talks with Chrysler on new contract. Bsns W p84+ Ja 25 '47

Extent of collective agreements in seven European countries. J. A Flexner and others. Mo Labor R 64:1019-28 Je '47

Functions of the lawyer in labor relations. L. Hazard Management R 36·462-4 S '47

Getting ideas from foremen for labor contract changes; SKF Industries. H. F. Gracey. Factory Management 105:94-5 O '47

Handling demands for standard contracts. Factory Management 104:274+ D '46

Improving observance of labor contracts E. H van Delden Management R 36 322-5 Je '47

Industry-wide bargaining. R. C. Smyth and M J Murphy Personnel J 26:109-15 S '47

Negotiating the collective bargaining agreement. R. C Smyth and M. J. Murphy. Personnel J 26:136-43, 184-98 O-N '47

New bituminous contract signed July 8; anthracite revisions adopted July 10; complete text of bituminous agreement. il Coal Age 52 119-20, 144+ Ag '47

Plain talk; Hudson helps workers understand their union contracts. Bsns W p92 Ag 16 '47

Rand labor-relations formula at work; Ford motor company of Canada. Factory Management 105·94-6 Mr '47

Right of discharge for employee incompetency; effect of union agreement. M. M. Shipman. Oil Paint & Drug Rep 150·5+ D 23 '46

Steel pact firsts; union's contract with U S. Steel. Bsns W p93-4+ My 10 '47

Steel truce has Lewis on spot. Bsns W p86-8 F 1 '47

Time study and production standards in union contracts; abstract. Management R 36.417-19 Ag '47

Two-year contracts upheld by NLRB. Comm & Fin Chr 165:1294 Mr 6 '47

Union agreements in the cotton-textile industry. il U S Bur Labor Statistics Bul 885· 1-64; pa 20c Supt. of doc. '46; Same cond. Mo Labor R 62:413-23 Mr '46

Union agreements; power laundries, cleaning and dyeing. C. Sorenson. Mo Labor R 65· 158-66 Ag '47

Union contract clauses, United States, 1946-1947 Factory Management 105:73 Je '47

Union participation in high productivity. W. Gomberg Ann Am Acad 248:70-5 N '46

Union-security provisions in collective bargaining A. Weiss and others. U S Bur Labor Statistics Bul 908·1-53; pa 15c Supt. of doc. '47

U.E begins talks; drives by C I.O. unions. Bsns W p84+ F 22 '47

Worker security next big union objective Factory Management 105·74-82 F '47

See also
Collective bargaining
Wages—Call-in pay

Health clauses

Collective-bargaining developments in health and welfare plans. L. M. Kramer and R. Theodore. bibliog Mo Labor R 64:191-201 F '47

Collective bargaining in health; question of sick leave with pay, and health and hospital coverage. A. Fletcher. Min & Met 27: 552-3 N '46; Same cond. il Min Cong J 32: 44-5 D '46

Legal developments respecting occupational health. T. C. Waters. Ind Med 16:90 F '47

Union contract and industrial hygiene; abstract. B. S. Coleman. Ind Med 16:454 S '47

Insurance clauses

Employe cover subject to approval of labor unions; AFL lawyer treats pending Inland Steel NLRB case. J. E Gubbins. Nat Underw (Life ed) 51:3+ Ap 11 '47

Union politics is pervading group field Nat Underw 51 24 S 25 '47; Same Nat Underw (Life ed) 51·7 S 19 '47

Welfare at issue, unions demanding insurance plans in new contracts. Bsns W p88+ F 1 '47

Seniority clauses

Seniority provisions and promotions to managerial positions. M. M Shipman. Oil Paint & Drug Rep 151:7+ F 10 '47

TRADE agreements—*Continued*

Strike clauses

IBEW will sign no-strike pacts with electric utilities. Elec World News ed 128:12 Ag 23 '47

Management protection against wildcat strikes. R. C Smyth Personnel J 26.40-1 Je '47

No-strike clause with teeth; United steelworkers and Murray co. Bsns W p15-16 N 16 '46

Wage clauses

Adjustment of wages to changes in the cost of living. F. Lutz Mo Labor R 63:733-43 N '46

Coal wage agreement reached Elec World News ed 128:4-5 Jl 12 '47

Contract wording technicalities cause court to permit overtime pay pyramid. N. C. Rockwood. Inland Ptr 118.29-30 Mr '47; Same Rock Prod 50.68 Mr '47; Same abr Chem Ind 60:626 Ap '47

Demands are in; major industrial unions are seeking guaranteed wages, portal pay, welfare and wage boosts Bsns W p106+ Ap 5 '47

Holiday and vacation clauses. N C. Rockwood. Inland Ptr 119:49-50 Je '47; Same Rock Prod 50 99+ Je '47, Same Chem Ind 61:112+ Jl '47

Oil industry again may set wage pattern. Bsns W p85 D 7 '46

Premium pay provisions in selected union agreements. Mo Labor R 65.419-25 O '47

Two-way incentive, contract between Air conditioning institute and the A.F.L. sheet metal workers. Bsns W p78+ Ag 16 '47

Wage rationalization program in United States Steel R. Tilove Mo Labor R 64.967-82 Je '47

Wage settlements brighten outlook; provisions of U.S. Steel labor agreement. Steel 120 67-71 Ap 28 '47

Work assignment clauses

Handling work assignment changes S Barkin Harvard Bsns R 25 no 4:473-82 [Jl] '47

TRADE agreements, Commercial. See Commercial treaties and agreements

TRADE areas. See Market areas; Shopping areas

TRADE associations

Association highlights. C. J. Judkins. Dom Comm 35:83-6 Ja '47 [cont monthly]

Association highlights; 1945-46 contest for distinguished trade association service with list of award winners. C. J. Judkins map Dom Comm 34:76-82 N '46

Association public relations. D. E. Gilman. Am Pet Inst Proc 26(1):123-7 '46

Management's union, the trade association. D. B. Straus. Comm & Fin Chr 164:3346+ D 26 '46

1947 jobs-markets trends surveyed by associations J Judkins. il Dom Comm 35:6-10 Je '47

Pattern shop and our national economy. A. J Tuscany. Foundry 75:79+ Ja '47

See also

Advertising, Association
Advertising associations
Export associations
Insurance associations
Paper associations
Retail associations
Trade unions

also names of associations, e.g.

American petroleum institute
Cotton textile institute
Glass container manufacturers institute
Mid-continent world trade council
National association of manufacturers
National paint, varnish and lacquer association

Credit service

Credit to irresponsibles; are agreements to refuse credit lawful? W. R. Montgomery. Credit & Fin Management 49:10-13 Je '47

Directories

Alphabetical list of scientific and trade organizations in the chemical and allied fields. Chem Ind 59 697-8 pt 2 (Buyers guidebook no) N '46

Associations and societies Roads & Bridges 85.190 Je '47

Directory of professional, scientific, technical and trade associations and societies. Chem Eng 54.234+ Jl '47

See also

Advertising associations—Directories
Motor bus associations—Directories

Educational work

Association highlights, American hotel association and National restaurant association sponsor training programs in universities and vocational schools; with list of schools offering courses T K. Pasma il Dom Comm 35.80-5 Jl '47

How associations provide retail sales training, Carpet institute, toy, gas, bedding associations as examples. H Evans. il Ptr Ink 218.50+ Mr 21 '47

How British set standards, qualify men for sales profession il Sales Management 58: 112+ Mr 15 '47

Technical education programs and how to promote them, Joint technical education committee of paint associations. C H Reed Paint Oil & Chem R 110:23+ Ja 9 '47

See also Printing industry of America—Committee on education

Law

Trade association practices and antitrust law. J S. Hays and J L. Ratzkin. Harvard Bsns R 25 no 4:501-20 [Jl] '47

Research work

Association highlights; types of marketing research activities being carried on by trade associations. T. K. Pasma Dom Comm 35:81-7 S '47

Service

Association highlights; how business organizations and government work together in war and peace. G E. Larson. il Dom Comm 35 69-75 F '47

Statistical work

Trade associations and government statistics. E Constantine. Am Stat Assn J 42:20-2 Mr '47

TRADE barriers. See Commercial policy

TRADE characters. See Advertising characters

TRADE directories

Buyers' guide; bus parts, materials, accessories, shop equipment and tools. Bus Transportation 26:207-21+ Je '47

Buyers guidebook number, 22d annual revision R. L. Taylor, ed. Chem Ind 59:1-925 pt 2 (Buyers guidebook no) N '46 (pa $2)

Classified index of products used in waterworks and sewerage field Water & Sewage Works 94.R2-12 Jl '47

Directory of machinery and equipment for the rock products industry. Rock Prod 50: 203-71 Ja '47

Directory of manufacturers; buyers' guide of over 700 power products. Power 90: sup55-138d Mid-D '46

Directory of materials. Machine Design 19: 179-246 O '47 [reprints $1]

Directory of materials for the construction of chemical equipment. Chem Eng 53:110-19 N '46

Directory section, names and addresses of manufacturers of equipment and products used in warm-air heating, air conditioning, ventilation and sheet metal work. Sheet Metal Worker 38:166-82 Ja '47

Electronics buyers' guide Electronics 20:D1-144 Mid-Je '47

Engineers' power plant directory and classified products listing for Indiana, Illinois, Wisconsin. 311p pa $10 Rockwell F. Clancy co, 75 East Wacker drive, Chicago 1 '46

Inland Printer's 1947 directory of equipment and supplies Inland Ptr 118:93-137 D '46

Iron Age directory of trade names. T. W Lippert. Iron Age 159:172-5+ Ja 2; 65-8+ Ja 9; 64-6+ Ja 16; 63-8+ Ja 23; 62-6+ Ja 30; 69-72 F 6, 66+ F 13; 62-4+ F 20; 63-6+ F 27, 79-81 Mr 6 '47

TRADE directories - *Continued*
Manufacturers and agents; highway construction equipment, products index. Roads & Bridges 85.192+, 228+ Je '47
1947 buyers' guide and industrial directory of Chicago. 12th annual ed 376p Chicago assn. of commerce, 1 North La Salle st, Chicago 2 '47
1947 directory of heating, piping, and air conditioning equipment for industrial, commercial, institutional and public buildings, classified by products, trade names, and manufacturers addresses Heating-Piping 19.241-342 Ja '47
1948 buyers' directory, equipment and materials used in production, handling, use and transportation of concrete, concrete products and ready-mixed concrete Concrete 55 53-64 S '47
Record retailing yearbook, 1946 512p $5 M & N. Harrison, inc 274 Madison av, N.Y. 16 '46
Where-to-buy; products directory of current advertisers in steel Steel 120:1-46 sec 2 F 17 '47

See also
Air conditioning industries—Directories
Airplane accessories industry—Directories
Airplane industry and trade—Directories
Diesel engines—Directories
Electric apparatus industry—Directories
Equipment industries—Directories
Jewelry trade—Directories
Machinery industry—Directories
Music trade—Directories
Petroleum industry and trade—Directories
Petroleum refineries—Directories
Toy industry and trade—Directories

Bibliography
Business reference publications; catalogs, directories, buyers' guides, etc. Ind Marketing 31:129-30 O 25 '46
State publications for market research; industrial directories. R. L Vormelker. il Chem Ind 60:794-6 My '47

TRADE discount. See Discount, Trade

TRADE exhibitions. See Exhibitions

TRADE-in policies
Trade-in offers are back! they're difficult, dangerous. Ptr Ink 218:38-9 F 28 '47

TRADE journals
Printers' Ink annual survey; list of journals classified by industry Ptr Ink 218.48+ F 28 '47
Responsibilities of business papers. E L. Shaner. Power Pl Eng 51 67+ My '47

See also
Advertising mediums—Trade journals

Bibliography
Business papers and directories as sources of chemical market data. F. Waldo. il Chem Ind 60:970-2+ Je '47

Directories
Market data book number, 1947. Ind Marketing 31:1-511 O 25 '46

Editors
Recognition for editorial achievement; 10th annual business paper editorial awards sponsored by Industrial marketing. Ind Marketing 32.53 Je '47

Finance
Advertising rates in business papers are too low J K Lasser Ptr Ink 220:38-40 S 19 '47
Will business papers survive a drop in income? J K. Lasser. Ptr Ink 220:35-7 S 26 '47

Service
Business publication trains retail sales personnel; Beauty Fashion magazine establishes a cosmetic school. E. M Housman. Ptr Ink 217:46-7 N 22 '46

Canada
Expansion of industrial publishing in Canada R. C. Rowe Ind Marketing 32:43-4+ Ap '47

TRADE marks
Balanced sales effort peps up this merchandising program, broadcasts and revised sales plan bring bigger sales to Lee hats Ptr Ink 219:45 Je 20 '47
Carter's guide to the classification of goods for trade-mark registration. C. P. Carter, comp 3d ed 32p $5 Chauncey P. Carter, 3111 Foxhall road, Washington 16, D.C. '46
Colonial's rooster; unique trademark pulls attention to Colonial Stores' private brands. il Mod Packaging 21:112-15 O '47
Hallmark for Ritter; stylized R as a trademark il Mod Packaging 20 128-9 Je '47
How the Jantzen Mills grew from a small knitting shop G Hogan il Adv & Sell 40:39-40+ Ja '47
New household appliance carries old industrial trade-mark, Yale Tip Toe iron. A. B. Cassedy il Ptr Ink 220:34-5 Jl 25 '47
New script for Scripto il Mod Packaging 20: 138-9 Je '47
New trade-marks of the textile industry. Published in monthly numbers of Rayon textile monthly
Patents and trade marks. Published in monthly numbers of India rubber world
Product makes the trademark; Hassall's line of special nails, rivets and screws. il Mod Packaging 20.104-6 N '46
Simplifying a trademark; Colonial House candies switches to doorway as design theme. il Mod Packaging 20:138 Ap '47
Ten famous trade-marks and what inspired them. J D. Woolf. il Adv & Sell 40:35-6+ O '47
Trade-mark applications [chiefly Latin American] Published in Foreign commerce weekly
20th century heraldry; display and packaging plan for Meadow Gold. W. H. East, jr. il Mod Packaging 20 106-10+ Ap '47

See also
Advertising characters
Patent laws and legislation
Patents
Private brands
Trade names

Law
Caution urged under Lanham patent law Bsns W p 18-19 Jl 12 '47
Chemical trade-marks of the future F. C. Browne Chem & Eng N 25.1498-500 My 26 '47
Far-reaching change in American trade-mark law effective July, 1947. Elec World 127:104 F 1 '47
Five points about the Lanham act. C W. Ooms Ptr Ink 220 30+ Jl 18 '47
How does Lanham trade mark act affect your business? E. Haase. Adv & Sell 40.38+ Ja '47
Jokers in Lanham act cancel trade mark aid. R. M. Bleiberg Barron's 27:6 Jl 21 '47
Lanham act W. J Derenberg. Soap & San Chem 23:37-40+ Je '47
Lanham act; analysis prepared by Lawyers' advisory committee of the United States trade-mark association Am Cer Soc Bul 26:136-8 Ap 15 '47
Lanham act (Public law 489) supersedes existing statutes. Chem & Eng N 25:349 F 10 '47
Lanham trade-mark act. I. W. Digges. Ptr Ink 217:30-4+ N 29 '46
Lanham trademark act interpreted. W J. Derenberg. Oil Paint & Drug Rep 151:65+ My 19 '47
Legal aspect; Ford insecticide and other trade names. Adv & Sell 40:80 Je '47
New trade-mark law. N. H. Borden. Harvard Bsns R 25 no 3:289-305 [Ap] '47
New trade-mark law. V. A. Scher. Rayon 28:512-14 S '47
New trademark law; makes possible registration of package itself as a trade symbol. H. Mock Mod Packaging 20:98-9+ My '47
Own your own trademark; the Lanham act provisions that concern food manufacturers P D Boone. Food Ind 19:933-4+ Jl '47
Patent office publishes new trademark rules. Product Eng 18.166-7 S '47
Qualifying a trademark for registration under the Lanham act. W J. Derenberg. Ind Marketing 32.35-6+ Ja; 47-9+ F '47; Same cond. Paper Ind 28:1492-5 Ja '47

TRADE marks—Law—*Continued*
Review of the Lanham trade mark act now in effect. H. A. Wiedenfeld. Textile Col 69: 21 Ag '47
Rights and remedies, Lanham act. Chem Ind 60.943 Je '47
Trademark fight over Lanham act. Bsns W p99-100 My 17 '47
Trademarks for machines. G. V. Woodling. il Machine Design 19.133-6 F '47
Trade-marks registered under the Lanham act are not incontestable. P. E. Williamson, jr. Ptr Ink 219.68+ Je 6; 46+ Je 13 '47
What to do about new trade mark law. C. A. Holcomb. Adv & Sell 40:44 Jl '47

Protection
Liliputian bazaar. Adv & Sell 40·69 Ja '47

TRADE names
Alphabetical list of current brandnames of American rayon yarns. Rayon 27.661 D '46
Birth of Alligators. il Mod Packaging 20.144 Jl '47
Condensed review of some recently developed materials, arranged alphabetically by trade names. Mach 54·169-81 O '47
F.T.C. reversed on definition of glass. Glass Ind 28:188 Ap '47
Heating, piping and air conditioning equipment for industry and large buildings. Heating-Piping 19.317-28 Ja '47
How public learned to pronounce Suchard. C. S. Grube. il Adv & Sell 40:68+ O '47
Index and trade name dictionary. Chem Ind 59·833-925 pt 2 (Buyers guidebook no) N '46
Iron Age directory of trade names. T. W. Lippert. Iron Age 159:172-5+ Ja 2; 65-8+ Ja 9, 64-6+ Ja 16, 63-8+ Ja 23; 62-6+ Ja 30; 69-72+ F 6; 66+ F 13; 62-4+ F 20; 63-6+ F 27; 79-81 Mr 6 '47
Item-by-item package refurbishing spotlights Carborundum trade-mark M. S. Ireys. il Sales Management 57.55 N 20 '46
List of new brandnames for rayon or rayon mixture fabrics, rayon yarns, and other fibers listed during 1946. Rayon 27:701 D '46
Logotype goes to work; Independent Pneumatic employs a standard logotype in all company operations. J. F. Corkery. il Ind Marketing 31·53+ D '46
Materials listed by trade names. Machine Design 19:181-228 O '47
Stressing brand name in selling furniture; Morgan furniture company N. S. Irwin. il Adv & Sell 40:50 S '47
Table of trade names of plastics materials. K Rose Materials & Methods 25.133-4 Ap '47
Trade names are tricky; B. F. Goodrich chemical co. products. J. R. Hoover. Chem Ind 61:621 O '47
Trade names of manufacturers' equipment for the rock products industry. Rock Prod 50.272-86 Ja '47
23,000 items; Butler bros., quality branding and coordinated packaging program. H. C. Isaacs. il Mod Packaging 20:103-7+ Ja '47
Use imagination when you select a trade name. J. D. Woolf. Ptr Ink 217:85+ N 15 '46
When brand name is better known than company name. J. J. Nance. il Ptr Ink 219:44-5 My 16 '47

Advertising
Advertisers urged to push brand name story. N. Kelne. Ptr Ink 219 118 Ap 25 '47
Introduces new soap by kidding soap advertising; with not much of product available for sale, manufacturer chose this way to keep name before the public. L. F. Thomann. Ptr Ink 218·57 Ja 10 '47
Memorability is important in industrial ads too; highlight company and product names. C. Graves. il Ptr Ink 218:46-7 Ja 31 '47
We built a new brand name with almost nothing to sell; Cole swim suits. E. D. Adams. il Ptr Ink 218:48-9 Ja 24 '47

Protection
Advertising protects brand name from becoming generic term. il Ptr Ink 220·59 S 5 '47

TRADE pacts. See Commercial treaties and agreements

TRADE practices
FTC on new tack. Bsns W p55-6+ N 30 '46
FTC setting up trade practice conferences to settle complaints Iron Age 160.110 Ag 28 '47; Oil Paint & Drug Rep 152 5 Ag 25 '47
FTC tackles the gyp-artist, calls industry-wide conferences that correct abuses, protect consumers and industry itself. B Clark Adv & Sell 40.112+ Mr '47
FTC's trade practices program reflects new industrial attitude. S. E. Cohen. Ind Marketing 32:41+ Ja '47
Household dye fair trade rules studied. Oil Paint & Drug Rep 150:7 N 25 '46
Household dyes trade rules issued. Oil Paint & Drug Rep 151.5+ F 3 '47
Major companies invite trouble for industry by giving small tanks to farm customers. Nat Pet N 38.19 O 30 '46; Discussion. 38: 18-19 N 6 '46
Mason proposes industry assume liability for trade practices; model bill drawn up Oil Paint & Drug Rep 152:3+ O 20 '47
Setting up fair trade practice rules. H. Miller. Textile Col 69 31+ Mr '47
Trade association practices and antitrust law. J. S. Hays and J. L Ratzkin Harvard Bsns R 25 no 4:501-20 [Jl] '47

See also
Dealer relations
Discount, Trade
Federal trade commission
Price cutting
Price fixing
Price fixing, Resale
Price policies
Restraint of trade
Returned goods
Sales policies
also International trade organization (proposed)

TRADE schools
New industrial school constructed in Mexico city For Comm W 27.24 Ap 26 '47
Trade school, Boys Town, Nebraska. il plan Arch Rec 101:72 Ja '47

See also
Hershey industrial school

TRADE union advertising. See Advertising, Trade union

TRADE union committee for democracy
Solidarity on the right; C.I.O locals organize to fight Communists in New York City unions. Bsns W p94+ Mr 15 '47

TRADE union cooperative stores. See Cooperative stores, Trade union

TRADE unions
Collective bargaining at the crossroads. P. Taft. Mech Eng 68:1061-3 D '46
Conflicting forces. Bsns W p88 S 6 '47
Drive on offices; campaign to organize white-collar workers in automotive companies. Bsns W p90-2 Je 21 '47
Employer policy in prosecuting unions for unfair labor practices. C. E. French. Comm & Fin Chr 166.486 Jl 31 '47
Engineers face problem of unionization. D. R. Yarnall. Factory Management 105:240+ F '47
Freedom and labor monopoly. D. R. Richberg. Comm & Fin Chr 165:2342+ My 1 '47
Freedom for professions; coercion of engineers and other professional men into labor unions. W. F. Ryan. Bsns W p28+ F 15 '47
Is there a field for accountants in the future of labor negotiations? management's side. F E King J Account 84:10-12 Jl '47
Labor monopoly, a road to state-ism. B. B. Smith. Automotive & Aviation Ind 95:15+ N 15 '46
Labor's responsibility for full productivity. E Herrick. Advanced Management 12:14-19 Mr '47
Lauds unionism T E. Dewey. Comm & Fin Chr 166·520 Ag 7 '47
Management, labor cooperate at Wisconsin industrial plant; CIO union employes sell drop forgings. Ind Marketing 32·122 Jl '47
Management-stockholder versus union-worker relations. M. Woll Comm & Fin Chr 165: 2859+ My 29 '47

TRADE unions—*Continued*

Model labor relationship; Commercial telegraphers' union functions in Wall Street. J. B Alcorn. Comm & Fin Chr 165.141+ Ja 9 '47

Mutual survival; labor-management problem. E. W. Bakke. Elec Eng 66.124-30 F '47

Outlook for office unionization. H. L. Wylie Management R 36.187-9 Ap '47

Pitfalls for the unions. Mag of Wall St 80: 271+ Je 7 '47

Recession inevitable with higher wages; advocates legal regulation of labor unions. H. Ford, 2d. Comm & Fin Chr 165·265+ Ja 16 '47

Revolt on the right; group of locals secedes from Smelter Workers. Bsns W p94+ F 15 '47

Role of labor in modern industrial society C. S Golden Advanced Management 12 35-8 Mr '47

Shall we fight or welcome foremen's unions? J. Wolff Mech Eng 69:128-30+ F '47

State of the unions M. R. Franks. Factory Management 105:112-14 F '47

Supreme court decision in Packard foremen unionization case A. H. Allen. Steel 120:81 Mr 17 '47

Supreme court rule on foremen meets with mixed reactions. Iron Age 159.102 Mr 20 '47

Supreme court upholds right of foremen to form unions. Elec World 127:87-8 Mr 15 '47

Teamsters use embargo as unionization weapon. Bsns W p92 Ja 18 '47

Telephone unions gird for contract battles. Pub Util 38:827-8 D 19 '46

Trade unionists and scientific management. G. J. Anyon. Advanced Management 12.65-73 Je '47

Union activities in banks and trust companies. Trusts & Estates 83.556 D '46

Union helps sell; U.A.W. members at Unit Drop Forge get new business, save their jobs. Bsns W p76+ Ag 23 '47

Union official disputes contention employees of banks with public funds shouldn't organize. E. Germain. Comm & Fin Chr 164: 2886+ D 5 '46

Unionism; enemy of labor! L. Block. Comm & Fin Chr 165:125+ Ja 9 '47

Unionization of bank employees against public interest. J S. Baker. Comm & Fin Chr 164:2889+ D 5 '46

Unionization of professional engineers and chemists. H. R. Northrup. 52p pa $1.50 Industrial relations counselors, New York '46

Voters favor labor unions and support right to strike; Gallup poll. Iron Age 160·235 S 11 '47

What labor law revisions are needed R. Littler. Factory Management 104:280+ D '46

What the factory worker really thinks about union behavior and industry earnings Factory Management 104·81-5 N '46

What's ahead for the unions. F. Rising. Factory Management 105·50-3 Ap '47

When foremen organize, here's what they demand. Factory Management 105·62-4 Ap '47

Who is joining white-collar unions, and why. il Factory Management 105.97-100 My '47

Women in labor unions. G. Dickason. Ann Am Acad 251:70-8 My '47

See also

American federation of labor
Arbitration, Industrial
Banks and banking, Trade union
Boycott
Congress of industrial organizations
Gilds
Insurance agents—Unions
Labor and laboring classes
Open and closed shop
Picketing
Radio broadcasting—Trade union programs
Shop stewards
Strikes
Trade agreements

also names of unions, e g.

Actors' equity association
American federation of musicians
Federation of architects, engineers, chemists, and technical workers
Foreman's association of America
Industrial union of marine and shipbuilding workers of America
International ladies' garment workers' union
International typographical union
Office employees international union
Textile workers union of America
United automobile workers of America
United clerical, technical and supervisory association of America
United financial employees
United mine workers of America
United steelworkers of America

Benefit funds

Analyze union health-welfare fund. H. A. Gray and others. Nat Underw 51 22 Je 19 '47; Same. Nat Underw (Life ed) 51.6 My 23 '47

Collective-bargaining developments in health and welfare plans. L. M. Kramer and R. Theodore bibliog Mo Labor R 64.191-201 F '47

Demands broader, permanent welfare fund. J. L Lewis Nat Underw (Life ed) 51:3 Ap 18 '47; Same abr. Nat Underw 51.22 Ap 17 '47

Outlines purposes of miners' health fund. J. L Lewis. Nat Underw 51:22 Ap 10 '47; Same Nat Underw (Life ed) 51:6 Ap 11 '47

Trade-union welfare programs. N. M. Minkoff. Mo Labor R 64·201-14 F '47

Union pension. Bsns W p90+ F 8 '47

Communist problem

Allis-Chalmers' experience with a left-wing union W. Geist Factory Management 105· 80-3 Mr '47

A.F.L. joins the boycott; Lewis forces decision against signing non-Communist affidavits Bsns W p89-90+ S 20 '47

C.I O. left-wing under fire. Bsns W p64+ D 28 '46

Family squabble; left-wing feuds flare up in three C.I O. unions. Bsns W p91-2+ Mr 8 '47

Leftist unions strong in defense zones. il map Bsns W p44+ N 23 '46

NLRB ruling averts split. il Bsns W p88+ O 11 '47

Solidarity on the right; C.I.O. locals organize to fight Communists in New York City unions. Bsns W p94+ Mr 15 '47

Taft law rocks the C.I O. Bsns W p96-7 O 18 '47

Directories

Directory of labor unions in the United States; national and international unions, state labor organizations and union research directors, May 1947. U S Bur Labor Statistics Bul 901 1-30; pa 10c Supt of doc '47

Educational work

Junior unions attract rural children in South. il Bsns W p94 Je 14 '47

Unions start them in the cradle. il Bsns W p 104 O 25 '47

Finance

U.A.W.'s red ink. Bsns W p90+ F 22 '47

Health service

Health plan works; employer-financed medical service for St Louis members of retail union. Bsns W p88+ Ja 18 '47

Insurance plans

Hotel-union group deal under fire in Pennsylvania; contract between Pittsburgh hotels and Local 237. Nat Underw 51.30 Mr 13 '47; Nat Underw (Life ed) 51:24 Mr 14 '47; East Underw 48:16 Mr 14 '47

Hotel union may take Malone into court; decision is extended. Nat Underw 51 22 Mr 27 '47; Same. Nat Underw (Life ed) 51·18 Mr 28 '47

Malone bars Pittsburgh hotel-union proposal; holds agreement illegal. East Underw 48: 35+ Mr 28 '47; Same cond Nat Underw 51: 29 Mr 20 '47; Same cond. Nat Underw (Life ed) 51:18-19 Mr 21 '47

TRADE unions—*Continued*

International aspects

International confederation of Christian trade unions, ninth congress, Amsterdam, June 4-6, 1946. Int Labour R 54.100-1 Jl '46

See also
World federation of trade unions

Jurisdictional disputes

Beer feud pact between A.F.L.'s teamsters and C I O.'s brewerymen. Bsns W p105-6 Ap 12 '47
Death by boycott Bsns W p102-5 Ap 12 '47
How practical personnel men think the labor law will work, jurisdictional disputes. H. O. Eby. Factory Management 105:88-9 Ag '47
How to handle jurisdictional disputes; abstract. Management R 35:457-8 N '46
Jurisdictional disputes P. Taft. Ann Am Acad 248:37-43 N '46
No movie peace. Bsns W p98+ N 23 '46
Slap at swapping. Bsns W p95 Mr 8 '47
Wire trouble, C.I.O. and A F.L. telegraphers in jurisdictional fight. Bsns W p88+ Mr 8 '47

Law

Effect of Norris-LaGuardia act upon union's responsibility for unlawful conspiracy, decision of United States Supreme court. Mo Labor R 64.862-3 My '47
Filing begins; Labor dept. set to receive and act on reports. Bsns W p72+ Ag 23 '47
How practical personnel men think the labor law will work; damage suits by and against unions. A. Curtiss. Factory Management 105:94-5 Ag '47
How practical personnel men think the labor law will work; rights of individual workers. J. E. Moody Factory Management 105:87-8 S '47
Regulation of labor organizations by the states. T. J. Anderson, jr. Comm & Fin Chr 165:2597+ My 15 '47
State laws requiring union registration and financial reports. Mo Labor R 64:1052-6 Je '47
Ten-point bill of rights for labor; some form of regulation of unions needed. W. W. Cenerazzo. East Underw 48:4 Ap 25 '47
Trend toward regulation of labor unions by government agencies. H. Volk. J Account 83:208-13 Mr '47
Wants a Maloney act for labor. G. W. Morgan Comm & Fin Chr 165:135+ Ja 9 '47

Maintenance of membership

How practical personnel men think the labor law will work, compulsory union membership. E. H. Van Delden Factory Management 105:93-4 Ag '47

Management

Better management and better union leadership. C. F. Mugridge. Ann Am Acad 248: 76-81 N '46
Union administration and civil liberties. R. N. Baldwin. Ann Am Acad 248:54-61 N '46
Union finances and elections. T. Wolfson. Ann Am Acad 248:31-6 N '46

Objectives

Labor's objectives F P Fenton. Harvard Bsns R 25 no 4:463-72 [Jl] '47

Political activities

Hawaiian standoff; C.I.O.-P.A.C. helped elect 15 members of territory's 30-man lower house Bsns W p82+ My 10 '47
How practical personnel men think the labor law will work; political contributions. B. F. McClancy Factory Management 105:92 S '47
Unified effort; C I O., A F.L. stress need for concerted labor action in 1948 political campaign. Bsns W p88+ My 24 '47
Unions begin '48 campaign. Bsns W p94+ O 25 '47

Public relations

How to make unionism serve the public interest; review of Challenge of industrial relations, by S N. Slichter Ry Age 123:240 Ag 9 '47
Labor relations and the public. H Feldman, ed. Ann Am Acad 248:1-267 N '46

Purchasing service

Merchandise at a discount for union members. Bsns W p54 N 16 '46

Retail selling

See Cooperative stores, Trade union

Social work

Angle in charity; Chicago unions share in administering community welfare plan. Bsns W p92+ S 27 '47

Statistical work

Agreement analysis card of the International association of machinists. A. Epstein. il Mo Labor R 65 75-7 Jl '47

Alaska

Leftist unions strong in defense zones. il map Bsns W p44+ N 23 '46

Brazil

Developments in Brazilian labor organization since VJ-day. J. Henry. Mo Labor R 64: 433-42 Mr '47

Canada

Formula studied; Rand contracts. Bsns W p 100-1 N 30 '46
Labor organization in Canada I Wilson. Ann Am Acad 253:98-104 S '47

Danubian countries

Workers and industry. Economist 152:132-4 Ja 25 '47

Denmark

Danish confederation of trade unions triennial ordinary congress, Copenhagen, May 23-26, 1946. Int Labour R 54:105-7 Jl '46

Germany

German unions in transition. R. Smith. il Bsns W p90-3 O 4 '47
Trade unions in the British zone. Economist 152:802-3 My 24 '47

Great Britain

After Brighton. Economist 151:700-1 N 2 '46
Annual session, 78th, of the British trades union congress, Brighton, Oct. 21-25, 1946. Int Labour R 55:152-6 Ja-F '47
Labour and the nation. Economist 152:89-90 Ja 18 '47
New functions of British trade unions. C. Dukes. Comm & Fin Chr 164:2468+ N 14 '46
Overhauling the TUC. Economist 153:452-3 S 13 '47
Trade union law in Great Britain. Int Labour R 54:85-6 Jl '46
Unions in nationalized industries; Britain's National union of mineworkers. Bsns W p92+ N 16 '46

Hawaiian Islands

Hawaiian standoff; C.I.O.-P.A C. helped elect 15 members of territory's 30-man lower house. Bsns W p82+ My 10 '47
Leftist unions strong in defense zones. il map Bsns W p44+ N 23 '46

Hungary

Industrial relations in Hungary Int Labour R 55:247-60 Mr-Ap '47

Latin America

Labour and politics in Latin America. Economist 153:367-8 Ag 30 '47
Workers' movement in Latin America. Int Labour R 54:101-5 Jl '46

Netherlands

Trade-union membership. Mo Labor R 65:462 O '47

Pacific coast

Strikes, boycotts, closed-shop issue harass West coast engineers. W. E. Jessup. Civil Eng 16:538-9+ D '46

Panama Canal Zone

Leftist unions strong in defense zones. il map Bsns W p44+ N 23 '46

TRADE unions—*Continued*

St Louis

A.F.L. in St Louis cites the strike record. Bsns W p55 Ja 4 '47

Southern states

Development of trade-unionism in the South. H. M. Douty. bibliog Mo Labor R 63:555-82 O '46

Operation Dixie. Manuf Rec 116:32 F '47

Operation Dixie slows up. Bsns W p 19-20 O 25 '47

Unions meet resistance in South. J. A. Daly. Manuf Rec 116.32+ Mr '47

Sweden

Quinquennial congress of the Swedish confederation of trade unions. Int Labour R 54: 237-8 S-O '46

Turkey

Turkey; change in legal status of labor unions and employers' associations Mo Labor R 65:197-8 Ag '47

United States

AFL and CIO members favor merging into one organization, Gallup poll. Iron Age 160. 115 Ag 28 '47

Discipline and democracy. Iron Age 158.111+ D 26 '46

Extent of collective bargaining and union recognition, 1946. U S Bur Labor Statistics Bul 909:1-11; pa 5c Supt. of doc. '47, Same cond. Mo Labor R 64.765-9 Mr '47

Fruits of defeat; N.F.T.W. phone strike. Bsns W p 102-4 Je 7 '47

How's business? labor monopoly. Barron's 26.1 N 18 '46

John Lewis's catch-all unions, who they are and what they are up to. P. French. Factory Management 104.118-20 D '46

Labor dept. promotes labor union philosophies in educational institutions. E Bunting. Comm & Fin Chr 165:1702 Mr 27 '47

Labor relations and the public. H. Feldman, ed. Ann Am Acad 248:1-267 N '46

Labor turmoil ahead; now what to do? F. E. Lee. Comm & Fin Chr 165:1+ Ja 2 '47

Labor union coverage hits peak in 1946. L W. Moffett. Iron Age 159 96 My 8 '47

Labor's objectives. F. P. Fenton. Harvard Bsns R 25 no 4:463-72 [Jl] '47

NFTW forms one national union. Pub Util 38:758-9 D 5 '46

Public awakened; reform will take time. Barron's 26:1 D 9 '46

Resistance to unions grows. Bsns W p74+ Ja 11 '47

Trade union leadership and our economic problems. L. B. Schwellenbach. Comm & Fin Chr 166:1545+ O 16 '47

Union labor; how it has grown. Bsns W p74 My 17 '47

Union monopolies weak without goons. Barron's 27:1+ Ap 21 '47

Union relations. Coal Age 52:56-60 Ja '47

Unions to defy labor reform act. Steel 121:60-1 Jl 7 '47

What to do about the labor mess. S. H. Slichter. Factory Management 104.100-4 D '46

What's most needed now to solve our labor problems. C. E Wilson. Automotive & Aviation Ind 96:42+ F 15 '47

Who does the thinking for American labor? Bsns W p92 S 20, 88 O 4 '47

With proper responsibility labor will go from adolescence to maturity P. T. Sheldrick. Mag of Wall St 80:141-3+ My 10 '47

TRADE waste

Atmospheric trade wastes. P. Drinker. J Chem Educ 24:498-501 O '47

Determination of cyanides. T. R. Haseltine. bibliog flow diag il Water & Sewage Works 94:187-91 My '47

Developments of 1946 in sewage and industrial waste treatment. F. S. Friel. flow diag il diag Water & Sewage Works 94:43-54 F '47

Disposal of cyanide wastes J. G. Dobson. bibliog il diags Metal Finishing 45:78-81 F; 68-71 Mr '47

Effective tannery waste treatment plant. H T. Reuning and R. F. Coltart. il plan Pub Works 78:21-2 Mr '47

Effects of industrial wastes; abstract. R. Hazen. Water & Sewage Works 94:285-6 Ag '47

Effects of sewage and waste disposal practices on industrial operating costs, abstract and discussion. W. J. O'Connell, jr. Water & Sewage Works 94:386-7 O '47

Examination of acid sludge from the treatment of cracked shale gasoline G. E Mapstone. bibliog Pet Refiner 26.86-8 Jl '47

Experiments on precipitation of trade-waste sewage; use of chlorinated copperas. C Lumb and others Water & Sewage 85:28-9+ Jl '47

German waste treatment. Chem Eng 54:94 Jl '47

Industrial use of streams. L. L. Hedgepeth. Am Water Works Assn J 39:532-8 Je '47; Same. Water & Sewage Works 94:203-5 Je '47

Industrial waste conference at Purdue. Chem & Eng N 25 1736 Je 16 '47

Industrial waste disposal. G. E Barnes. bibliog Mech Eng 69.465-70 Je '47

Industrial waste sessions; Michigan sewage association Water & Sewage Works 94: 264-6 Jl '47

Industrial waste symposium, Pennsylvania sewage works association. Water & Sewage Works 94:376-8 O '47

Industrial waste symposium; Sanitary engineering division, A.S.C.E. Water & Sewage Works 94.60-1 F '47

Industrial waste symposium highlights ASCE sanitary sessions. C. A. Knapp and M. Lyman. Civil Eng 17:96 F '47

Industrial wastes; a chemical engineering approach to a national problem flow sheets il diags Ind & Eng Chem 39.557-682 My '47

Influence of wastes on treatment and use of water; with cost data C. F. Hauck. bibliog Chem Eng Prog 43:481-5; Discussion. 485-6 S '47

Miniature industrial waste treatment plant; truck washing waste. R. F Weston il plan Water & Sewage Works 94:111-14 Mr '47

Pennsylvania chemists discuss waste treatment Chem & Eng N 25.1119 Ap 21 '47

Prevention of water pollution by oil from engineering works. C. Hogg and others. il plan diags Engineering 163:513-16, 537-9 Je 20-27 '47

Proceedings of the second Industrial waste conference, held at Purdue university, January 10-11, 1946. Purdue Univ, Eng Ext Dept, Ext Ser 60:1-182 '46

Re-use of waste waters from industrial processes B. A. Southgate. Chem & Ind p309-10 My 31 '47

Sand filtration of some organic wastes. W. Rudolfs and V. Del Guercio Water & Sewage Works 94 349-51 S '47

Some problems of trade effluent disposal; abstract. T Rendle Chem & Ind p340 Je 14 '47

Some thoughts on controlling industrial wastes. H. Malin. Water & Sewage Works 94:115-16 Mr '47

Special charges for industrial wastes in municipal sewage. Water & Sewage Works 94: 37-8 Ja '47

Treating cyanide waste from metalworking plants, use of chlorine. J. G. Dobson. il plans Steel 121 92-3+ S 15 '47

Treatment and control methods for industrial wastes. L. F. Oeming il Water & Sewage Works 94.105-10 Mr '47

Virginia organizes Industrial waste and sewage works association. Water & Sewage Works 94:137-40 Ap '47

Waste-disposal barge for National lead company. il Marine Eng 52:132 Jl '47

Yeast waste treated at Crystal Lake, Ill. il Water & Sewage Works 94.194 My '47

See also

Acid waste
Canneries—Waste
Coal mines and mining—Waste disposal
Dairy waste
Paper mills—Waste
Petroleum—Water problem
Petroleum waste
Refuse disposal
Rubber factories—Waste
Sewage disposal
Sewerage
Steel works—Waste
Sulfite liquor
Textile mills—Waste
Waste, Utilization of
Water pollution

TRADEMARKS. See Trade marks

TRADES union congress. See Trade unions—Great Britain

TRADING areas. See Market areas; Shopping areas

TRADING up
Trade-up programs help both buyer and seller; by getting old customers to spend more and by reaching into higher-income markets. Ptr Ink 218:46-7 Mr 28 '47

TRAFFIC circles
Lighting road roundabouts, and an interesting experiment; illuminated glass wall. A G. Brown. il Light & Lighting 39:215-18 D '46

TRAFFIC departments, Industrial
15 ways to stop traffic cost leaks. W. Alwyn-Schmidt Management R 36 205-7 Ap '47
Transportation for the future; abstract F. W. Ashton Management R 36:94-6 F '47
Verification of traffic and transportation functions. D. J. Menges. N A C A Bul 28: 1271-9 Je 15 '47

TRAFFIC engineering
Capacity of a traffic lane W. Jacobsohn. Engineering 162:433-4 N 8 '46
Express highway planning in metropolitan areas. J. Barnett. il maps Am Soc C E Proc 72:287-305 Mr '46; Discussion 72.722-4, 1057-69, 1247-70; 73:533-40 My, S, N '46, Ap '47
Of men and machines; applying scientific method to automobile traffic systems. P. M. Morse. il Tech R 49:29-31+ N '46
Route planning in Connecticut cities. L. T. Scott-Smith. map plan Roads & Sts 89. 86-8 O '46
Traffic engineering for traffic safety. S Baker. diags Bus Transportation 26:75-7 Mr '47
Urban highways and the interstate system. R. E. Jorgensen. map Roads & Sts 89:84-6 O '46

See also
Road traffic
Street traffic

TRAFFIC lines
Big dividends in traffic safety from dividing strips. il Roads & Sts 90 77 S '47
Dash line road striping made easy; Push-mobile developed in New York. C. R. Waters il Eng N 138.208-10 F 6 '47
High speed curb marker. il Bus Transportation 26:82-3 Ja '47
Missouri paints with narrow rig; painting stripes on pavements. R. P. Cummins. il Eng N 138.211 F 6 '47
Needed; uniform pavement marking. H. J. McKeever. il diag Roads & Sts 89:74-8 N '46
Pavement striping methods. il diag Roads & Sts 90:78+ Ap '47
Reflector beads widely used in Michigan's pavement marking program. C. M. Ziegler. il Roads & Sts 90:71-4 Ja '47
Safety driving line proposed E. L. Worthington. Roads & Sts 90:73 Ja '47
Standard truck serves Virginia; marking the center-line of highway pavements. C. B. Leech, jr. il Eng N 138:210 F 6 '47

TRAFFIC signals
Traffic signals at the Bank Complex, city of London il plans Engineer 184 76-7 Jl 25 '47, Electrician 139.252-4 Jl 25 '47

Repair
Two-way radio phone in traffic signal repair work. L. C. Smith. il Roads & Sts 90:86+ Ja '47

TRAFFIC signs

Testing
Hunter night-visibility meter. diag R Sci Instr 18:684-5 S '47

TRAFFIC surveys
Traffic studies as an aid to design of road intersections W. B Wilson, jr. il diags Roads & Bridges 85:84-9+ Je '47
Traffic trends on rural roads in 1945. T. B. Dimmick. map Pub Roads 24:268-74 O '46

TRAGACANTH
Stabilization of emulsions with vegetable gums; citrus emulsions. C. M. Ferri. il Food Ind 19:784-5 Je '47

TRAILERS
Axle load spread aids beer deliveries. il Food Ind 19:56 Ja '47
Civilian trailer production, 1939-1941 and 1944; truck trailer production, 1942-1945, civilian and military; tabulations. Automotive & Aviation Ind 96:87 Mr 15 '47
Fifth wheel cuts loading time; trailer-tractor connections made from within driver's cab. il Food Ind 18:1714-15 N '46
Highway trailer trips doubled by efficient unit loading, Electric storage battery co il Steel 121.108 Jl 14 '47
Lightweight all-welded steel trailer for transporting heavy construction equipment. C. W. Lytton. il Welding J 26:770 S '47
Nine states are added to the list of those permitting the use of tandem-axle trailers. Nat Pet N 38:48+ N 6 '46
1946 truck trailer production, by type and by months; tabulation. Automotive & Aviation Ind 96.86 Mr 15 '47
Self-sufficient pipe trailer gives pick-up and delivery service. il Eng N 138:63 Ja 9 '47
Semi-trailers speed up grocery deliveries; Tulsa wholesaler uses two trailers for each tractor. il map Food Ind 19:790-1 Je '47
SAE checks menace of runaway trailers. il S A E J 54:71 D '46
Special tractor facilitates truck trailer handling. il Iron Age 159:49 Je 26 '47
State length limits of tractor-semi-trailer units; table. Arch Rec 102.151 O '47
Torsion bar suspension; application on a trailer bogie. diags Automobile Eng 37:174 My '47
Trailers; design and production methods of Taskers, ltd. il diags Automobile Eng 37: 129-36 Ap '47
Trailers increase maintenance efficiency; portable tool rooms and storehouses at Magnolia petroleum's company's refinery. J. A Oslin. il Pet Refiner 26:107-8 F '47
Use double bottoms on big unit deliveries; three vehicle train spreads heavy load on five axles. il Food Ind 19:194 F '47

See also
Automobile trailers

Manufacture
Processing torsion bars with special equipment; Fruehauf trailer co. il Automotive & Aviation Ind 96:52+ Je 15 '47
Welding steel trailer door frames increases strength, saves weight. A. F. Denham. il diags Materials & Methods 26:93-6 Ag '47
Welding time cut in half on trailer body panels; Fruehauf trailer co. using dual 100 kva seam welder. il Automotive & Aviation Ind 96:44 Je 15 '47

Testing
Mobile laboratory measures stresses in steel trailers under road conditions. J. Parina, jr. il diags Steel 120:88-9+ Mr 10 '47

Transportation
Empty trailerships. Bsns W p74+ Ag 23 '47
LST's converted to trailerships for transporting loaded trucks and trailers. il Marine Eng 52.76-8 Ag '47
LST's in mufti; to haul trailers on Hudson from New York to Albany. il Bsns W p32+ Ag 9 '47

TRAILERS, Automobile. See Automobile trailers

TRAIN control, Automatic. See Railroads—Automatic stop and train control

TRAIN dispatching. See Railroads—Train dispatching

TRAIN ferries
Canadian car ferry Abegweit. il Marine Eng 52:86+ Ag '47
Danish motor train ferry Fyn. il plans Marine Eng 52:72-7 S '47
World's largest train ferry launched. il Marine Eng 51:85 N '46

TRAIN speed. See Railroads—Train speed

TRAINS. See Railroads—Trains

TRANSAMERICA corporation
A.P. wins a pair; SEC drops all charges against Transamerica corp. Bsns W p97-8 Ap 26 '47

TRANSCONTINENTAL and western air, inc.
Airline puzzle; rumor has TWA and Pan American merging. Bsns W p18-19 Mr 1 '47
CAB studies TWA control as Hughes seeks RFC loan Aviation N 7:28-9 F 17 '47
Hughes levels new charges in Pan American-TWA feud Aviation W 47:11 Ag 11 '47
Hughes, PAA officials open TWA merger discussions Aviation N 7:7-8 Mr 3 '47
Hughes tool co to deposit TWA stock in voting trust in move to obtain loan Comm & Fin Chr 165.1111 F 24 '47
Hughes' views Bsns W p31-2 F 22 '47
LaMotte Cohu new president. Aviation N 7 44-5 My 5 '47
More airline changes? Bsns W p20 F 15 '47
Senate committee probes finances of U.S. international airlines. Aviation N 7:22-3 Ja 20 '47
TWA loss hits $14,919,503 for 1946. Aviation N 7:10 Ap 7 '47
TWA seeks large mail pay boost. Aviation N 7.26 Mr 24 '47

TRANSDUCERS, Electroacoustic. See Electroacoustic transducers

TRANSFAX
Reproducing drawings on metal; Kodak Transfax process. S. H. Barmasel. il Iron Age 158:62-4 N 21 '46

TRANSFORMER oil. See Insulating oil

TRANSFORMERS, Electric. See Electric transformers

TRANSFORMERS, Radio. See Radio transformers

TRANSIT, Surveyor's
How the camera transit is used in survey work. R. G. Sanders. bibliog il Pub Works 77:23-4+ D '46
Outlaw masonry rules of thumb; be accurate: use a transit. il Brick & Clay Rec 110.33 My '47
Surveying simplified by new camera transit. il Roads & Bridges 84:90+ N '46

TRANSIT association, American. See American transit association

TRANSIT mutual insurance company
Boston Elevated insurer denies state auditor charges E. E. Whiting. Nat Underw 51.26 Ap 24 '47
Insurer is problem in Boston elevated railway public ownership; fate of Transit Mutual. Nat Underw 51 17 Ap 17 '47

TRANSIT policies. See Insurance, Inland marine—Policies

TRANSITE pipe. See Pipes, Asbestos cement

TRANSITION, Heat of
Phase boundaries in concentrated systems of sodium oleate and water. R. D. Vold. bibliog J Phys & Colloid Chem 51.797-816 My '47

TRANSJORDAN
See also
Irrigation—Transjordan
Mines and mineral resources—Transjordan

TRANSLUCENCY
Translucency meter for use in whiteware research N L. Haldy and others. il diags Am Cer Soc J 30:153-9 My 1 '47

TRANSMITTERS, Radio. See Radio transmitters

TRANSMITTERS, Television. See Television transmitters

TRANSMUTATION (chemistry)
Atomic structure and transmutation. H Greinacher. il diags Engineering 162:406-7, 429-30 O 25-N 1 '46
Production of Hg^{198} as a possible source of an improved wave-length standard; transmutation of gold. J. H. Wiens. bibliog il Phys R 70:910-14 D 1 '46
Search for the transmutation products of gamma-meson reactions induced by 100-Mev X-rays. N. A. Bonner and others bibliog il diag Phys R 71:511-20 Ap 15 '47
What is the atom's industrial future? R. B. Colburn Bsns W p26 Mr 8 '47
See also
Radioactivity

TRANSPARENT containers. See Containers, Transparent

TRANSPARENT plastic materials. See Plastic materials, Transparent

TRANSPORT workers union
Are the Reds in transit? J. B. Poston. Mass Transportation 42:507-8 N '46

TRANSPORTATION
Transportation equipment a southern opportunity. C. R. Walker. il Manuf Rec 116:36, 52 Jl '47
See also
Aeronautics, Commercial
Aircraft
Airlines
Airplanes
Automobiles
Barges
Carriers
Commerce
Electric railroads
Electric traction
Freight car service
Freight cars
Freight handling
Freight ships
Gasoline pipe lines
Highway transportation
Mechanical handling
Merchant marine
Mine haulage
Motor bus lines
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Ships
Steamboat lines
Street railroads
Street traffic
Streets
Terminals
Towboats
Traffic engineering
Trailers
Trolley buses
Trucks
Waterways

Finance
Economic welfare of nation depends on evaluation and coordination of transportation J. W. Wheeler. il Civil Eng 17:175-9+ Ap '47

Statistics
Bus industry and other transportation; basic facts; 1944-1946; tables Bus Transportation 26:52-4 Ja '47
Economy in reconversion; domestic transportation in 1946; with figures for other years. Survey of Cur Bsns 27:22-4 F '47

Alaska
Blow to Alaska; shipping strike in Seattle. Bsns W p22+ Ja 18 '47

Arkansas
Featuring Arkansas. il Manuf Rec 116.113-15 Ag '47

Austria
Austrian transport makes rapid come-back in U.S. zone. For Comm W 27.27 My 31 '47

Canada
Transportation problem. A. W. Currie. Ann Am Acad 253.81-7 S '47

China
Transportation equipment in Canton, China, poses problems. For Comm W 25:37 D 7 '46

Great Britain
Britain's problem of transport nationalization. H. T. Banyard. Pub Util 40:93-100 Jl 17 '47
How Britons react to effort to socialize all transport. W. V. Morland. Mass Transportation 43:181+ My '47
Labor government may take over all transport in England in 1948 W. V. Morland Mass Transportation 43:66-8 F '47
Nationalisation of transport. G. R. Strauss. Engineer 182.513 D 6 '46
Transport bill amended. Economist 152:545-6 Ap 12 '47
Transport bill; extracts from speeches in the House of commons Engineer 182:566 D 20 '46
Transport bill now. Economist 153:115-17 Jl 19 '47
Transport bill; summary. Engineer 182:515 D 6 '46
Transport bill; Transport bill dissected. Economist 151.897-9, 914-15 D 7 '46

TRANSPORTATION—Great Britain—*Cont.*
Transport questions unanswered. Economist 151.1007-8 D 21 '46

Missouri

Transportation in the hub state of the Nation. il Manuf Rec 116:117-20 Ja '47

United States

Carriers get I.C C. recognition, 60th annual report Bus Transportation 26:59 F '47
Current inquiry into our postwar national transportation policy. F B Dow. Am Pet Inst Proc 26(5).9-15 '46
Economic welfare of nation depends on evaluation and coordination of transportation. J. W. Wheeler. il Civil Eng 17.175-9+ Ap '47
House group reports on transport survey Ry Age 122:139-41 Ja 11 '47
Improved national policy on transportation urged by speakers at API convention. Nat Pet N 38.46 N 20 '46
Major projects, brief reports on status of construction operations. il Eng N 138.320-3 F 20 '47
Mixed economy in transportation C. S. Duncan. Ry Age 123 99-103 Jl 19 '47
National association of railroad and utilities commissioners, annual meeting, Los Angeles. Ry Age 121:872-4+ N 23 '46
One agency should govern all transport. H A. Wheeler. Ry Age 121:884+ N 23 '46
Postwar transportation; National industrial conference board report. Comm & Fin Chr 165.2206+ Ap 24 '47
Proposes to catch up on transport spending, Truman message. Ry Age 122·200+ Ja 18 '47
Transportation and world trade. G. Metzman. Comm & Fin Chr 166.1638+ O 23 '47
Transportation association of America D. D Conn. Am Pet Inst Proc 26(5)·6-8 '46
Transportation outlook, 1947. J C. Nelson. Comm & Fin Chr 165:594+ Ja 30 '47; Same. Dom Comm 35:65-9 Ja '47
Transportation system will be influenced by traffic men. A. H. Schwietert. Iron Age 159:135-6+ F 6 '47

See also
Shipping—United States
Waterways—United States

TRANSPORTATION, Military

See also United States—Air service, Army—Transport command

TRANSPORTATION association of America
Transportation association of America D D Conn. Am Pet Inst Proc 26(5).6-8 '46

TRANSPORTATION in war

See also
Railroads in war

TRANSPORTATION libraries

See also
Stanford university—Hopkins transportation library

TRANSPORTATION of employees. See Employees, Transportation of

TRANSPORTATION workers
Inland transport committee of the International labour organisation second session, Geneva, May 7-16 Int Labour R 55:556-63 Je '47

TRANSURANIUM elements
Plutonium and other transuranium elements G. T. Seaborg. il Chem & Eng N 25:358-60+ F 10 '47

TRAPS
Better mouse traps, humorous packages sell Animal trap co. products. il Mod Packaging 20:108-10 Jl '47

TRAUMA
Refrigeration in trauma of the extremities. P. Pernworth. il Ind Med 16:3-5 Ja '47
Traumatic heart conditions N. C Gilbert. bibliog il Ind Med 16·223-5 My '47

See also
Edema

TRAUMATIC neuroses. See Neuroses, Traumatic

TRAVEL
Battle is brewing for the passenger's travel dollar; planes, trains and busses equipped with luxury trappings. il Sales Management 58 43-5 Mr 1 '47
New efforts to lift or lighten burdensome barriers to travel; with text of U N. Geneva meeting recommendations on passports and frontier formalities H. A. Wilkinson. il For Comm W 28·3-5+ Jl 5 '47
Repeal of 15 percent tax big aid to oversea travel. For Comm W 27·17 My 10 '47

See also
Air travel
Ocean travel
Railroads—Passenger traffic
Tourist trade

Advertising

British railways point for future tourist trade H. F. Meyer il Ptr Ink 217.42-4 D 13 '46
Travel lure sells gas. il Sales Management 59:67 Jl 15 '47

TRAVEL bureaus
Do airlines need a new sales technique? cooperation of travel agents can increase load factors G. Forbes il Air Transport 5:34-5+ O '47
Greyhound looks abroad, setting up new agencies and reactivating old ones. il Bus Transportation 26.56-8 Mr '47

TRAVELING exhibits. See Exhibits, Traveling

TRAVELING stores

Insurance requirements

Development of mobile stores gives agents and underwriters food for thought. Nat Underw 50:6 N 21 '46

TRAVIS, Maurice
Portrait. Bsns W p94 Mr 22 '47

TRAWLERS. See Fishing boats

TRAYS
Getting the right color by spray coating. il Mod Plastics 24·148-9 N '46

TRAYS, Packaging
Lock-tab tray; lightweight board sets up into rigid tray automatically on widely adjustable machine. il diag Mod Packaging 20: 114-15 Ag '47

TREASURY department. See United States—Treasury department

TREATIES

See also
Commercial treaties and agreements
Financial treaties and agreements
also subdivision Treaties under names of countries, e.g. Australia—Treaties

TREE planting
Reforestation on the Quabbin Reservoir project. R Snow. fold maps N E Water Works Assn J 61:34-47; Discussion. W. R La Due. 47-9 Mr '47
Tax allowance for costs of tree planting sought. E. W. Tinker. Paper Tr J 125: 7+ Jl 10 '47

TREES
Chemical treatment of live trees; proposed process for easy barking and providing of more solid wood per cord A R. White. Pulp & Pa of Can 48·67-71 F '47
Soil conditions and tree growth; physiological aspects of the tree soil complex. L. Leyton bibliog Chem & Ind p558-60 S 13 '47
Soil conditions and tree growth; soil factors. G W. Dimbleby. bibliog Chem & Ind p560-2 S 13 '47

See also
Aspen
Cypress
Electric lines—Tree problem
Fruit trees
Pine
Spruce

Diseases and pests

Insect destruction in British Columbia. H. A Richmond. Pulp & Pa of Can 48:112+ Jl '47
Needs of forest pathology A. Koroleff. Pulp & Pa of Can (Convention no) 48·264 [F] '47

TREES, Care of
Treatment of damaged trees Consumers Res Bul 20·25 S '47

TREMATASPIS
Exoskeleton of trematáspis. R. H. Denison bibliog diags Am J Sci 245 337-65, pl 1-3 Je '47

TRENCHING machinery
Functional mechanization for gas distribution departments; use of trenching machinery; with cost data J E C. Currens il Gas Age 100 59-66+ O 2 '47

Lightweight service trenchers F J. Hall Gas Age 99·17-18+ My 1 '47

Today's costs of water main extensions. F. J. Reny. il Water & Sewage Works 94 229-32 Jl '47

TRENTON chemical company
Stock offered. Comm & Fin Chr 166.707 Ag 18 '47

TREPHINES
Vertebral body trephine. A. A Michele and F. J. Krueger. Pub Health Rep 62:1166-7, pl 1 Ag 8 '47

TREPONEMA pallidum. See Syphilis

TRIANGULATION
Least squares adjustment of triangulation net between geodetic stations E F. Coddington and O C. J. Marshall diags Am Soc C E Proc 73.1047-64 S '47

TRIAZINE
Fluorinated heterocyclic compounds (perhaloalkyl)triazines. E. T. McBee, O. R. Pierce and R. O Bolt. Ind & Eng Chem 39.391-2 Mr '47

Organic antimony compounds derived from s-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis. E A H Friedheim, H. J Vogel and R. L. Berman Am Chem Soc J 69·560-2 Mr '47

Synthetic antimalarials; some 1 : 3 : 5-triazine derivatives F. H. S. Curd, J. K. Landquist and F L Rose Chem Soc J p 154-60 F '47

TRIAZOLE
See also
Osotriazoles

TRIAZONE
Synthesis of tetrahydro-5-substituted-2(1)-s-triazones. W. J. Burke. bibliog Am Chem Soc J 69 2136-7 S '47

TRIBOELECTRICITY. See Electricity, Static

TRIBORINE triamine. See Borazole

TRIBROMOANILINE
Interpretation of the Sandmeyer reaction, the behaviour of diazotised 2 4 6-trichloro- and 2 : 4 . 6-tribromoaniline towards the Sandmeyer reagent H. H. Hodgson and A. P. Mahadevan. Chem Soc J p 173-4 F '47

TRICARBOCYANINES
Symmetrical tricarbocyanines having one or more methyl groups as substituents on the chain. F. M. Hamer and R J Rathbone Chem Soc J p960-3 Jl '47

TRICHINA and trichinosis
Who is liable for trichinosis? study of court decisions J A Tobey bibliog il Food Ind 19.474-5+ Ap '47

TRICHLOROACETATES
Kinetics of the decomposition of certain salts of trichloroacetic acid in ethanol-water mixtures. G A. Hall, jr. and F. H Verhoek bibliog Am Chem Soc J 69.613-16 Mr '47

TRICHLOROACETIC acid
Adaptation of the silicomolybdic acid method for the estimation of morphine to the photoelectric colorimeter. F. E. Shideman and A. R. Kelly Science 106:298-9 S 26 '47

Conductimetric titrations of acids and bases in benzene and dioxane. A A. Maryott. bibliog il J Res Nat Bur Stand 38·527-36 My '47

TRICHLOROANILINE
Interpretation of the Sandmeyer reaction; the behaviour of diazotised 2 : 4 : 6-trichloro- and 2 : 4 . 6-tribromoaniline towards the Sandmeyer reagent. H. H. Hodgson and A P Mahadevan. Chem Soc J p 173-4 F '47

TRICHLOROBISAMINOPHENYL ethane
Antitubercular action of 1,1,1-trichloro-2,2-bis (*p*-aminophenyl)-ethane. S. Kirkwood and P H. Phillips bibliog Am Chem Soc J 69: 934-6 Ap '47

TRICHLOROBUTYRALDEHYDE
Reaction of α,α,β-trichlorobutyraldehyde with a number of Grignard reagents. V. W. Floutz. Am Chem Soc J 68·2490-1 D '46

TRICHLORODIETHYL sulfide
Nature of the 2-chloroethyl chlorovinyl sulphide isomers. R. C G. Moggridge Chem Soc J p 1105-8 D '46

TRICHLOROETHANE
Antitubercular studies; bis-(*p*-aminophenyl) derivatives of ethyl ether and trichloroethane. E. Graef and A. Burger. Am Chem Soc J 68·2400-1 N '46

TRICHLOROETHYLENE
Limit on trichloroethylene defined to protect workers. il Ind Stand 17·302 D '46; Same. Safety Eng 92 56 N '46

Phosgene investigation in Connecticut; hospitalization of man working in vicinity of trichlorethylene degreaser and oil-fired drying oven E Glanz. Safety Eng 94:81 O '47

TRICHLOROSILICANE
Ethyl trichlorosilane [and other alkyl trichlorosilanes] and its fluorination products H. S Booth and others bibliog diag Am Chem Soc J 68.2650-65 D '46

Peroxide-catalyzed addition of trichlorosilane to 1-octene. L H. Sommer, E W. Pietrusza and F C Whitmore. bibliog Am Chem Soc J 69.188 Ja '47

TRICHLOROTRIETHYLAMINE
Syntheses of some β-chlorinated amines. A. H. Ford-Moore, A. G. Lidstone and W. A. Waters. Chem Soc J p819-20 S '46

TRICKLING filters. See Sewage disposal—Filtration

TRIDYMITE
Conversion of silica during ignition; possible source of error in analysis of powdered samples D. A Bailey. bibliog il J Ind Hygiene 29·242-9 Jl '47

TRIETHANOLAMINE
Industrial application of chemicals, triethanolamine abietate. Oil Paint & Drug Rep 151 7 Je 2 '47

TRIETHYLAMINE
Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott bibliog il J Res Nat Bur Stand 38:527-36 My '47

TRIETHYLBENZENE
Assembly and testing of 52-foot laboratory adsorption column; separation of hydrocarbons by adsorption. B. J. Mair, A. L Gaboriault and F. D Rossini. bibliog diags Ind & Eng Chem 39·1072-81 S '47

TRIETHYLENE glycol
Air conditioning and sterilized air; use of triethylene glycol and propylene glycol. E. H Jennings bibliog il Western Soc E J 51 115-19 S '46

Nemesis for germs; sterilization of air by glycol vapor Chem Ind 61 207-8 Ag '47

Pioneer in the use of triethylene glycol for air sterilization; Seamen's bank for savings. T Barrett il Power 91:389-91 Je '47

Portable glycol vaporizers for air disinfection F. C W Olson and others. bibliog diags Science 105:23-4 Ja 3 '47

Saturation concentrations of triethylene glycol vapor at various relative humidities and temperatures. H Wise and T. T. Puck Science 105·556-7 My 23 '47

Triethylene glycol for air sterilization. L. D. Polderman. bibliog Soap & San Chem 23· 133+ Jl '47

Triethylene glycol vapor distribution for air sterilization; experiment at an army training camp E Bigg and others. bibliog il diags Heating-Piping 19·103-7 My '47; Discussion 19·129-31 Ag '47

TRIFLUOROACETIC acid
Improved preparation of trifluoroacetic acid A L Henne and P Trott. Am Chem Soc J 69:1820 Jl '47

Modified synthesis of ethyl trifluoroacetate J. C Reid. Am Chem Soc J 69·2069 Ag '47

TRIFLUOROMETHYL benzene

Manufacture

Preparation of bis(trifluoromethyl)benzenes E. T McBee and others. il diag Ind & Eng Chem 39 298-301 Mr '47

Production of bis(trifluoromethyl)benzene R. L. Murray, W. S. Beanblossom and B. H. Wojcik, diags Ind & Eng Chem 39:302-5 Mr '47

TRIFLUOROTOLUENE

Action of elementary fluorine upon organic compounds; vapor phase addition to certain deactivated or condensed aromatic rings. R. Y. Tompson, P. Tarrant and L. A. Bigelow. bibliog diag Am Chem Soc J 68:2187-92 N '46

TRIGLYCERIDES. See Glycerides

TRIGONELLA foenum-graecum. See Fenugreek

TRIGONOMETRY

Transition curve trigonometry; the ellipse. F. T. Murray. Engineering 162:409-11 N 1 '46; Discussion 162:544; 163:40, 88, 139-40 D 6 '46, Ja 10, 24, F 7 '47

TRIKETOHYDRINDENEHYDRATE. See Ninhydrin

TRILOBITES

Muscle scars in the Ordovician trilobite illaenus. G. W. Sinclair. bibliog Am J Sci 245:529-36, pl 1 S '47

New Cambrian fauna from western Newfoundland. J. C. Troelsen. bibliog diag Am J Sci 245:537-44, pl 1 S '47

New gastropods and trilobites critical in the correlation of lower Ordovician rocks J. Bridge and P. E. Cloud, jr bibliog map Am J Sci 245:545-59, pl 1-2 S '47

Ordovician trilobite dimeropyge G. W. Sinclair. bibliog Am J Sci 244:854-60, pl 1 D '46

Two examples of injury in Ordovician trilobites G. W. Sinclair bibliog pl Am J Sci 245:250-7 Ap '47

TRIMETHYLAMINE

Methylamine production; abstract. R. S Egly. Chem & Eng N 25.1506-7 My 26 '47

Two much tri; new process tricks suppress formation of trimethylamine. Chem Ind 60. 942 Je '47

TRIMETHYLAMINE oxide

Trimethylamine oxide in marine products O A Ronold and F. Jakobsen bibliog Soc Chem Ind J 66:160-6 My '47

TRIMETHYLBENZENE. See Mesitylene

TRIMETHYLBORON. See Boron trimethyl

TRIMETHYLBUTANE

Improved flow calorimeter; experimental vapor heat capacities and heats of vaporization of *n*-heptane and 2,2,3-trimethylbutane. G. Waddington, S. S. Todd and H. M. Huffman. bibliog diag Am Chem Soc J 69.22-30 Ja '47

TRIMETHYLCHLOROSILICANE

Preparation and fluorination of dimethyl and trimethyl chlorosilanes. H. S. Booth and J. F. Suttle bibliog Am Chem Soc J 68: 2658-60 D '46

TRIMETHYLCYCLOPENTANE

Hydrocarbons in the 102° to 108° C fraction of petroleum. A R. Glasgow, jr. and others. bibliog J Res Nat Bur Stand 38 621-6 Je '47

TRIMETHYLCYCLOPROPANE

Preparation and identification of alkylcyclopropanes; 1,1,2-trimethylcyclopropane and 1,2-dimethyl-3-ethylcyclopropane. J. D. Bartleson, R. E Burk and H. P Lankelma. bibliog Am Chem Soc J 68:2513-18 D '46

TRIMETHYLETHYLENE

Reversible esterification of carboxylic acids with isobutene and trimethylethylene; quantitative studies and synthetic applications R Altschul. bibliog Am Chem Soc J 68:2605-9 D '46

TRIMETHYLPENTANE. See Isooctane

TRIMETHYLPENTENE

Infra-red absorption spectra of some octenes. R. S. Rasmussen and others diags J Chem Phys 15:135-40 Mr '47

TRIMETHYLPHENANTHRYLACETIC acid

Optical activity from a new type of steric hindrance M S. Newman and A. S. Hussey Am Chem Soc J 69.978-9 Ap '47

TRIMETHYLENEDIAMINE

Respiratory stimulants, fully-substituted ureas derived from αω-alkylenediamines W. R Boon Chem Soc J p307-18 Mr '47

TRINIDAD

See also
Petroleum industry and trade—Trinidad

TRINIDAD petroleum development company, limited

Statement by the chairman at annual ordinary meeting. Economist 151:769 N 9 '46

TRINITROBENZOIC acid

Improved preparation of 2 · 4 : 6-trinitrobenzoic acid. D. J. Brown Soc Chem Ind J 66.168 My '47

TRINITROBENZYL nitrate

Aromatic-aliphatic nitro compounds; Ponzio reaction; 2,4,6-trinitrobenzyl nitrate. L. F. Fieser and W. von E. Doering. Am Chem Soc J 68·2252-3 N '46

TRINITROFLUORENONE

Molecular complexes with 2,4,7-trinitrofluorenone M. Orchin, L. Reggel and E. O Woolfolk. Am Chem Soc J 69.1225-7 My '47

TRINITROTOLUENE

Bomb filling with 80:20 amatol; procedure may have peace-time application. H. Graham and others. il diags Can Chem & Process Ind 30:37-41 N '46

Effect of temperature on the proportions of isomers formed in the mononitration of toluene. W. W Jones and M. Russell. Chem Soc J p921-3 Jl '47

Trinitro-phenylethyl amines from TNT. H. A. Bruson and G. B. Butler. bibliog Am Chem Soc J 68:2348-50 N '46

TRINITROTOLUENE poisoning

Toxic effects of tetranitromethane; contaminant in crude TNT. R. F. Sievers and others. bibliog Pub Health Rep 62:1048-61 Jl 18 '47

TRIODE cathode follower. See Cathode followers

TRIOLEIN. See Olein

TRIOXANE

Formaldehyde polymer. Chem Eng 54·168 F '47

Polymer of formaldehyde useful as fuel, solvent, plasticizer, etc. Chem Ind 60:86 Ja '47

Trioxane as a source of formaldehyde. J. F Walker and A. F. Chadwick. bibliog Ind & Eng Chem 39·974-7 Ag '47

TRIPHENYLARSINE

Method for the synthesis of tertiary aromatic arsines. W. E Hanby and W. A. Waters. Chem Soc J p 1029-31 N '46

TRIPHENYLETHYLENE

Substitution reactions of triphenylethylene and its derivatives; a contribution to the problem of synthetic analogues of progesterone, abstract and discussion. Buu-Hoi and R. Royer. Chem & Ind p373-4 Je 28 '47

TRIPHENYLMETHYL compounds

Reactions of cellulose. J. Honeyman. Chem Soc J p 168-73 F '47

TRIPHENYLTETRAZOLIUM chloride

Triphenyltetrazolium chloride as a dye for vital tissues A. M. Mattson and others. bibliog Science 106:294-5 S 26 '47

TRIPLE bonds

2-Butyne-1 : 4-diol; reactions involving the triple bonds. A. W. Johnson. Chem Soc J p 1014-17 N '46

TRIPOLI

Tripoli; production, uses, marketing, list of producers, etc. R. W. Metcalf. bibliog(65 titles) U S Bur Mines Information Circ 7371:1-25 '46

TRIPTANE

More efficient utilization of fuels; new high-compression automobile engines C. F. Kettering. diags Oil & Gas J 46:73-4+ Jl 12 '47

TRIPTANE—*Continued*
Practical process for making triptane; abstract V Haensel and V N. Ipatieff. Chem Eng 54 256+ Je '47
Selective demethylation of paraffin hydrocarbons, preparation of triptane and neopentane V Haensel and V N Ipatieff. diag Ind & Eng Chem 39 853-7 Jl '47
Super-gas synthesis. Chem Ind 60.768 My '47
UOP process for triptane by demethylation of isooctane; patent. P J Gaylor. flow diag Pet Processing 2:620+ Ag '47

TRITHIOCARBONATES
Reactions of ethylene oxides; preparation of ethylene sulphides and trithiocarbonates. C C J. Culvenor, W. Davies and K. H. Pausaker. Chem Soc J p 1050-2 N '46

TRITIUM
Beta-rays from H^3. R. J. Watts and D. Williams. Phys R 70·640-2 N 1 '46
Magnetic exchange moment for H^3 and He^3 F Villars bibliog Phys R 72·256-7 Ag 1 '47
Results of H^3 bombardment of Ag leading to Pd^{109}. D. N Kundu and M. L Pool. bibliog Phys R 72 101-8 Jl 15 '47
Spin and magnetic moment of tritium. F. Bloch and others. Phys R 71:373-4 Mr 15 '47
Upper limit to the tritium content of ordinary water. M L. Eidinoff J Chem Phys 15·416 Je '47

TRITON X-100
Solubilization of water-insoluble dye by pure soaps and detergents of different types. A. A. Green and J. W. McBain. bibliog J Phys & Colloid Chem 51:286-98 Ja '47

TRITONS
Interpretation of the triton moment. R. G. Sachs. bibliog Phys R 72.312-20 Ag 15 '47
Magnetic moment of the triton H. L. Anderson and A. Novick. Phys R 71·372-3 Mr 15 '47
Magnetic moment of the triton. R. G. Sachs. Phys R 71:457 Ap 1 '47
Relative moments of H_1 and H_3. F. Bloch and others Phys R 71:551 Ap 15 '47

TRITYLATION. See Triphenylmethyl compounds

TROLLEY buses
Atlanta expands trolley bus express service. il Bus Transportation 26:39-41 F '47
Economics of trolley coaches for public transit. il map Roads & Bridges 85:78-9+ F '47
Is trolley coach to render much of coming rapid transit? G. M. Woods. il Mass Transportation 43 418-21 S '47
Los Angeles trolley coaches bow in. G. Gifford. il Mass Transportation 43:378-81 S '47
Manhour production with transit vehicles; Super-Twin buses L. J. Fageol. il Mass Transportation 43 282-3 Jl '47
Marmon-Herrington TC-44 trolley bus in production il Bus Transportation 25:62-3 D '46
Marmon-Herrington's trolley bus. il Bus Transportation 26:53 Ag '47
New 48 interview with C. Guernsey. Mass Transportation 43:477 O '47
New Orleans inaugurates $1,000,000 substitution program; changeover from street cars to buses and later to trolley buses. il Bus Transportation 25:66-7 N '46
Place of the trolley coach in the modern transit system C. Guernsey. il S A E J 55:36-7 Mr '47
Public transport and the trolley-bus. J. H Cansdale. il Elec R (Lond) 140:537-9 Ap 4 '47
Pullman will lead field; modern street cars and trolley buses. W. C. Wheeler. il Mass Transportation 43:14-17, 20 Ja '47
Transit mountain goats on San Francisco hills; inauguration of trolley coach service. S. B. Cooper. il Mass Transportation 43: 482-4 O '47
Transit scene; from 1913 to 1946; illustrations with text. Mass Transportation 42: 500-1 N '46
Trolley bus vs. motor bus. J H. Gauss. Bus Transportation 26·65-8 Mr '47; Editorial. 26.37-8 Ap '47; Discussion. 26·54-5 Ag '47
Trolley buses in the Hub. il maps Bus Transportation 26.75-9 Ap '47
Trolley coach comes to Toronto. il plan Bus Transportation 25:44-5 D '46
Trolley coach has special niche in today's traffic. W. F. Sherman. S A E J 55:88 Ja '47
Trolley coaches and PCC street cars provide successful city transportation W. J. Clardy. il Elec Eng 66 915-18 S '47
Urban electric street traction, past, present and future. W. T Wardale. Inst E E J 94 pt 1:141-3 Mr '47

Air conditioning
Cooled trolley coaches for Atlanta in-city service Heat & Ven 44:116 Ap '47
Trolleys can also be cool, Georgia power company of Atlanta, air conditioned trackless trolleys il Refrig Eng 53.514+ Je '47

Maintenance and repair
Only 26 pull-ins in four years; preventative maintenance developed by the Delaware coach company J S. Wanstall. il Bus Transportation 26.46-50 S '47

Overhead construction
Celestial hardware; overhead trolley wire structure. H. R Blomquist il Bus Transportation 26:96-8 O '47
Metropolitan-Vickers contactor for trolley-buses. il Elec R (Lond) 139:672 O 25 '46
Seattle trolley bus overhead maintenance. map Mass Transportation 43:114-16 Mr '47
Trolley-bus systems. A. H. Spence. il diags Elec R (Lond) 140.387-9 Mr 14 '47

Specifications
1947 trolley bus specifications; tabulated. Bus Transportation 26:62-3 Ja '47

Statistics
Bus industry and other transportation; basic facts; 1944-1946; tables. Bus Transportation 26 52-3 Ja '47
Trolley bus operations in 1946. C. Speare. il Bus Transportation 26:62-4 Ja '47
What the 1946 figures show. C. W. Stocks. Bus Transportation 26:40-1 Ja '47

TROLLEY conveyors. See Monorail conveyors

TROPENAS process. See Converters

TROPICAL hard woods. See Hard woods

TROPICAL medicine and malaria, International congresses on. See International congresses on tropical medicine and malaria

TROPICS
Corrosion in the tropics. K. G. Compton. il Electrochem Soc Trans 91 (preprint 35): 629-38 '47
Development and design of colonial telecommunication systems and plant. C Lawton and V. H. Winson diags Inst E E J 94 pt 3 229-44; Discussion 251-9 Jl '47
General planning and organization of colonial telecommunication systems C Lawton and V. H. Winson. Inst E E J 94 pt 3:245-51; Discussion 251-9 Jl '47
Materials and finishes for tropical service. C. D. Cook and C. Merritt, jr. il Materials & Methods 25:77-80 My '47

See also
Forests and forestry —Tropics

Diseases and hygiene
Loose versus close-fitting clothing for work in tropical heat. C P. Yaglou and M. N. Rao. J Ind Hygiene 29:140-2 Mr '47
Tropical diseases in industry. Z. T. Bercovitz. Ind Med 16.45-51 F '47

See also
Malaria
Tsutsugamushi disease

TROPSCH, Hans
Portrait. Fortune 35.104 Ap '47

TROTTER, Alexander Pelham, 1857-1947
Sketch por Light & Lighting 40·143 Ag '47
Some personal recollections. J. T. MacGregor-Morris. Light & Lighting 40:163 S '47

TRUCKS
Aluminum hand truck cast in permanent mold H. R. Noyes. il Iron Age 159:72-3 Mr 6 '47

TRUCKS—*Continued*
Hand manipulated lift truck; patent. diags Mech Handling 33.697-9 N '46
Modern materials handling, a way to reduce costs. il Sheet Metal Worker 38:43-5 My '47
Should a hand truck be pushed or pulled? panel discussion Nat Safety N 56.24-5+ Ag '47
Warehousing nuts on pallets, fork-lift trucks handle 1750 tons of walnuts daily il Food Ind 19:923+ Jl '47

See also
Electric trucks, Industrial
Motor trucks

TRUMAN, Harry S. 1884-
Affirms foreign and domestic aims; Jefferson day address. por Comm & Fin Chr 165. 1921+ Ap 10 '47
Going their way. Bsns W p17-19 Ja 11 '47
Mexico rolls out the carpet for President Truman's visit. Bsns W p89-90 Mr 1 '47
1948's battle lines forming por Bsns W p 19-20 Je 7 '47
Outlines program to Congress, text of message on state of Union. Comm & Fin Chr 165:185+ Ja 9 '47
Republicans; Republican problem. Fortune 35: 77-85+ Ap '47
Truman in his home town. R W. Babson. Comm & Fin Chr 165:2612 My 15 '47
We mean to achieve peace; Inter-American defense conferences, Petropolis, Brazil, address before American Legion convention, New York. por Comm & Fin Chr 166:905+ S 4 '47
We must be strong to avoid war; Kansas City and Ottawa addresses. Comm & Fin Chr 165:3109+ Je 12 '47
We shall march on with President Truman. R. E. Hannegan. Comm & Fin Chr 165: 866+ F 13 '47

TRUMPET
Electrical method of measuring the intonation of cup-mouthpiece instruments. J. C. Webster. diag Acoustical Soc Am J 19: 902-6 S '47
Performance of cup-mouthpiece instruments T. H. Long. bibliog Acoustical Soc Am J 19:892-901 S '47

TRUMPET mutes
Molding hollow thermosetting products. G W. DeBell. il Mod Plastics 24:143 Ap '47

TRUSLOW, Francis Adams, 1906-
Indoors, it's still the Curb. por Bsns W p44+ Mr 15 '47
New Curb president. por Comm & Fin Chr 165:50 Ja 2 '47
President of N.Y. curb exchange. por Comm & Fin Chr 164.3357 D 26 '46
Takes office as Curb president. por Comm & Fin Chr 165:1284 Mr 6 '47

TRUSSES
Aluminum roof trusses for an enginehouse. il Eng N 138.820-1 My 15 '47
H-section welded trusses. A T. Waidelich. il diags Welding J 26.327-31 Ap '47
Hangars analyzed; with detailed consideration of trusses. F. N Severud. il diags Arch Rec 101:114-21 Ap '47
Lessons taught by wood-truss failures; split-ring connector joints. N. B Green. il diags Eng N 138.753-5 My 1 '47
Timber trusses of cathedral roof supported by outside cantilever beams; St Patrick's cathedral, New York. il diags Eng N 137: 720-1 N 28 '46

See also
Beams and girders

Testing
Full-size timber trusses tested under long-time loads, demonstrate conservatism of recommendation for increase in connector values. R H. Gloss. il diags Eng N 139: 386-9 S 18 '47
Roof trusses with welded joints tested by jacking against each other; General electric co.'s electronic-device research and manufacturing center. il Eng N 138:878-9 My 29 '47
Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:585-635 My '47

TRUST associations
Tasks for trust associations U Scott Trusts & Estates 84.213-18 F '47

TRUST companies
People of moderate means largest users of trust services says ABA. Comm & Fin Chr 165:3037 Je 5 '47
Trends in the trust business; report to A.B A. mid-winter trust conference. B. L. Smith and others Trusts & Estates 84: 205-12 F '47
Trust prospects in the Midwest; with reports by groups of states. J. A. Reid and others. Trusts & Estates 83:607-15 D '46

See also
Banks and banking—Trust departments
Estate planning
Investment trusts
also American bankers association—Trust division; Savings banks trust company, New York

Accounting
Audit review of trust administration. E. P Neilan Trusts & Estates 84.533-5 My '47
Practical trust cost analysis. G. A. Biggs. Trusts & Estates 84:85-8 Ja '47
Taking guesswork out of trust costs. E Lasseter Trusts & Estates 85:57-61, 120-4 Jl-Ag '47

Advertising
Evolution of trust advertising. A. Journeay. Trusts & Estates 85.29-33 Jl '47
Putting a price tag on trust service. E. S. Lindemann. Trusts & Estates 84:171-4 F '47

Costs
Lessening risk costs in trust administration R. S. Osgood. Trusts & Estates 83:617-20 D '46
Practical trust cost analysis. G. A. Biggs. Trusts & Estates 84:85-8 Ja '47
Taking guesswork out of trust costs. E. Lasseter Trusts & Estates 85:57-61, 120-4 Jl-Ag '47

Customer relations
Customer relations for trust institutions. H. H. Page. Trusts & Estates 83:591-4 D '46

Fees
See Trust fees

Investments
See Trusts and trustees—Investments

Law
Bank deposit by trust company as trustee in company's banking department held proper; City bank farmers trust co. v. Pedrick, U.S. district court, S.D. New York. Banking Law J 64:461-8 Je '47
Duty of care required of trust company with regard to collateral assets; Montclair trust co. v. Star co., Court of chancery of New Jersey. Banking Law J 64:405-9 My '47
Suggested reciprocal act authorizing out-of-state banks and trust companies to serve as fiduciaries. Trusts & Estates 83:658 D '46

See also
Trusts and trustees

Lawyers' cooperation
Bases for lawyer-trustman collaboration; Connecticut has successful pattern. W. W. Gager. Trusts & Estates 84:167-9 F '47
Delaware lawyers and bankers agree on policies with respect to wills and irrevocable trust instruments. Trusts & Estates 83:654 D '46

Legal service
Bases for lawyer-trustman collaboration; Connecticut has successful pattern. W. W. Gager. Trusts & Estates 84:167-9 F '47
Delaware lawyers and bankers agree on policies with respect to wills and irrevocable trust instruments. Trusts & Estates 83:654 D '46

Life underwriters' cooperation
Insurance-trust cooperation. H. E. Widenhofer. Trusts & Estates 84:174 F '47

TRUST companies—Life underwriters' cooperation—*Continued*
Teamwork in estate planning. G. M. Venable. Trusts & Estates 84:43-4 Ja '47
What's wrong with insurance-trust cooperation? H T Powers Trusts & Estates 85:377-8 O '47

Management

Lessening risk costs in trust administration. R. S Osgood. Trusts & Estates 83:617-20 D '46
Profits, past and present, true picture of trust profitability shown by analysis of new and renegotiated accounts. G. A. Biggs. Trusts & Estates 84:321-4 Mr '47
Trust service at a profit E. G. Schwalm. Trusts & Estates 84:631-2 Je '47

Public relations

Public relations program; successful pattern of Chicago Corporate Fiduciaries. H. H Page. Trusts & Estates 84:63-4 Ja '47
Trust companies learn public opinions; survey by Trust companies association of Ontario. Trusts & Estates 85:110-12 Ag '47

See also
Trust companies—
Customer relations

Records

Operating a trust tickler. G. C. Robinson Trusts & Estates 85:238-9 S '47

Great Britain

Trust investment in England; how the government's cheap money policy affects trust corporations B. C Crouch Trusts & Estates 85:151-4 Ag '47
Trustee trends in England. B. C. Crouch. Trusts & Estates 84 325-8 Mr '47

TRUST deeds. See Deeds of trust

TRUST departments. See Banks and banking—Trust departments

TRUST fees
Extraordinary and interim trust fees. R. A Wilson. Trusts & Estates 84:627-30 Je '47
Pay-as-you go compensation. R. A. Wilson. Trusts & Estates 84:84 Ja '47
Pay-as-you-go trust compensation; with tabulation showing rates in selected cities. J. W. White. bibliog Trusts & Estates 83: 597-605 D '46
Profits, past and present; true picture of trust profitability shown by analysis of new and renegotiated accounts. G. A. Biggs. Trusts & Estates 84.321-4 Mr '47
Putting a price tag on trust service. E. S. Lindemann. Trusts & Estates 84.171-4 F '47
Trust fees based on cost analysis; new schedule adopts pay-as-you-go principle. R. L. Cooch. Trusts & Estates 83 528-30 N '46
Trust service at a profit. E. G. Schwalm. Trusts & Estates 84:631-2 Je '47

TRUST receipts
Trust receipts; legal device can be a hazard to unwary credit men. C. B. Everberg. Credit & Fin Management 49:18+ O '47

TRUSTEESHIP council. See United nations—Trusteeship council

TRUSTS, Industrial
Alcoa asks trust suit dismissal. Oil Paint & Drug Rep 151:68 Ap 7 '47
Announces new anti-trust drive. T. C. Clark Comm & Fin Chr 166:627 Ag 14 '47
A & P decision. R L. Klein. J Retailing 23: 16-22 F '47
Corn products trust charged. Oil Paint & Drug Rep 151:5+ Je 30 '47
Discussion of anti-trust charges. W. A. Howell. il Mag of Wall St 80:636-7+ S 13 '47
FTC asks adequate funds to halt merger of competitors. Oil Paint & Drug Rep 151:3+ Ja 6 '47
FTC asks more authority on mergers. Oil Paint & Drug Rep 151:3+ Mr 17 '47
Is U S. military government deserting economic democracy? H. M. Bratter. Comm & Fin Chr 164:2616+ N 21 '46
Justice dept acts to control mergers; formation of merger unit. Oil Paint & Drug Rep 151:3+ Mr 24 '47
Justice department files suit against Phillips screw manufacturers. Iron Age 159 107 Ja 23 '47
New anti-trust moves by Justice department Comm & Fin Chr 166.720+ Ag 21 '47
Threat to independent business W. Berge. Comm & Fin Chr 164:3207+ D 19 '46
Today's business giants; little businesses grown up. A. W. Robertson il Dun's R 55 15-19+ Ap '47
Urges more merger curbs. R. H. Freer Comm & Fin Chr 165:3238 Je 19 '47
Where does monopoly really lie; attacks FTC report E. Bunting Comm & Fin Chr 165 2197+ Ap 24 '47

See also
Glass container industry
Monopolies
Price fixing
Restraint of trade
Steel mergers
also Petroleum industry and trade—United States—Antitrust suit

International trusts

Aluminum cartels R L. Bishop Mech Eng 69 663-5 Ag '47
How the steel cartel operated. G Waldron. il Dun's R 55 20-3+ Ja '47

Law

Anti-trust activity. Economist 152:497 Ap 5 '47, Same. Iron Age 159 111+ Ap 17 '47
Antitrust suits up Bsns W p 16 S 20 '47
Application of the antitrust laws to regulated industries E. A. Smith. Pub Util 38:691-705 bibliog(p703-5) N 21 '46
Bill to regulate mergers, Kefauver bill. Nat City Bank p79-82 Jl '47
Department of justice accuses 15 companies of violations of anti-trust laws. Comm & Fin Chr 165:134 Ja 9 '47
Justice department names 2 oil companies in bus line antitrust suit; charges oil, tire, truck companies control business in alleged nationwide City bus lines combine. Nat Pet N 39:9-10 Ap 16 '47
N.A R.D fined in New Jersey and New York trust suits Oil Paint & Drug Rep 151:3 F 3; 4 F 10 '47
National City and others indicted by federal grand jury with conspiracy in restraint of domestic trade and monopoly in violation of anti-trust laws. Bus Transportation 26:101-2 My '47
Trade association practices and antitrust law J. S Hays and J L Ratzkin Harvard Bsns R 25 no 4:501-20 [Jl] '47

Germany

Is U S military government deserting economic democracy? H. M. Bratter. Comm & Fin Chr 164.2616+ N 21 '46

TRUSTS and trustees
Bank deposit by trust company as trustee in company's banking department held proper, City bank farmers trust co v Pedrick, U S district court, S D. New York. Banking Law J 64 461-8 Je '47
Chicago trust panel sponsored by Women's finance forum. Burroughs Clearing House 31:3-4 F '47
Deposit not changed to trust fund; Fidelity & casualty co. of New York v. Niles bank co. Court of appeals of Ohio Banking Law J 64.496-510 Je '47
Disposition of business interests by inter vivos and testamentary trusts. M. Garwood. Trusts & Estates 83:465-73 N '46
Fifty years of trust law A. W. Scott. Trusts & Estates 84.228-32 F '47
Legislation affecting trusts and estates; A.B A committee report Trusts & Estates 85.335-42 O '47
Legislation affecting trusts and estates; A.B.A. committee report for 1946. Trusts & Estates 83.516-18 N '46
Life tenant vs remainderman; suggestions for resolving traditional conflicts re investments, income and drafting. E. Stone Trusts & Estates 84:530-2 My '47
On the legislative front; recent legislation affecting fiduciaries Trusts & Estates 84: 344, 459-60, 554-6, 645-6, 85:85, 160-2, 256 Mr-S '47
Pennsylvania's new estates and trusts legislation E. C. S Highley. bibliog Trusts & Estates 85:72-8 Jl '47

TRUSTS and trustees—*Continued*
Probate and trust decisions; A.B.A. committee report. Trusts & Estates 85.346-59 O '47
Probate and trust decisions, 1945-1946; A.B.A. committee report. Trusts & Estates 83:508-15 N '46
Proceedings of probate and trust law divisions, American bar association. Trusts & Estates 83:443-58+ N '46
Proceedings of probate and trust law divisions, American bar association. Trusts & Estates 85.285-366 O '47
Recent decisions. Published in monthly numbers of Trusts and estates
Relief for life tenants; percentage annuity plan to help the income beneficiary. H. D. Roschen, jr. Trusts & Estates 85.113-19 Ag '47
Secret trust funds in deposit account. C. R. Rosenberg, jr. Burroughs Clearing House 31:51-2 D '46
Standard clauses for wills and trusts. J. S. Montgomery, jr. Trusts & Estates 83:461-3 N '46
Standard clauses for wills and trusts, A.B.A. committee report Trusts & Estates 85:334 O '47
Trusts for welfare benefits; trust service vital in plans keyed to production. L. G. Hanmer. Trusts & Estates 84:403-8 Ap '47
Trusts from an appellate court's view C. V. Weygandt. Trusts & Estates 85·313-15 O '47
Use of principal for life beneficiaries; drafting and tax considerations; with appendix of forms. J. Trachtman. Trusts & Estates 83:444-58 N '46
Use of trusts in federal estate tax planning. G. E. Ray and O. W. Hammonds. J Account 83.283-90 Ap '47
Writing on bank deposit signature card held to establish valid trust entitling beneficiary to fund. Banking Law J 63:843-6 N '46

See also
Banks and banking—Trust departments
Community trusts
Deeds of trust
Employees' trusts
Executors and administrators
Investment trusts
Pension trusts
also American bankers association—Trust division

Bibliography
Trust and probate literature; A.B.A. committee report. Trusts & Estates 85·360-6 O '47
Trust and probate literature, 1945-1946. Trusts & Estates 83:519-23 N '46

Charitable trusts
Control of charitable trusts; regular supervision by Attorney General urged. E. R. D'Amours. Trusts & Estates 84:345-7 Mr '47

Common trust funds
Common trust fund practices approved; court rules favorably on policies of Bank of New York. Trusts & Estates 83:621-4 D '46
Common trust funds, acquisition of interest in participations. Fed Res Bul 33:980-1 Ag '47
Common trust funds; operation as investment trust Fed Res Bul 33:1115 S '47
New York common trust fund law unconstitutional, decision of Surrogate Witmer of Rochester Trusts & Estates 84:549 My '47
Pooling of trust funds in New York unconstitutional. Comm & Fin Chr 165·2659 My 15 '47
Transferring trusts to a common fund. I. S. Pruitt. Trusts & Estates 84:75-9 Ja '47
What price common trust funds? T. W. Matthews. Am Inst Banking Bul 29·5-7 Ap '47

Employees' trusts
See Employees' trusts

Investments
Analysis of trust income; method weighs income stability and risk factor H. G. Bruns. Trusts & Estates 85 49-50 Jl '47
Asset diversification of prudent investors; with charts. H. M. Bodwell. Trusts & Estates 84:625 Je '47
Current conditions affecting investments. M. Nadler. Comm & Fin Chr 165.738+ F 6 '47; Same cond. Trusts & Estates 84 198-200 F '47
Insured shares for small trusts. W. M. Bastian. Trusts & Estates 83:640 D '46
Investing for trusts, policy of Detroit trust company; abstract. O. L. Buhr. Trusts & Estates 84 431 Ap '47
Investment company shares, their place in investment management A. B. Stevenson Trusts & Estates 84.416+, 521-8, 611-12+, 85.39-40+, 141-2+ Ap-Ag '47
Investment review in smaller trusts. F. C. Mayne, jr. Trusts & Estates 83:631-2+ D '46
Investment trust shares as trust investment. Burroughs Clearing House 32·50-2 O '47
New theory of trust management. M. A. Shattuck. Trusts & Estates 84·185-6+ F '47
Present problems of trust funds investment. J. H. Weedon. Comm & Fin Chr 165·2984+ Je 5 '47
Prudent man rule of trust investments; A.B.A. committee report. Trusts & Estates 83:475 N '46
Prudent man rule of trust investments, A.B.A. committee report. Trusts & Estates 85·331-2 O '47
Test for portfolio stability; measurement by arithmetical index suggested. G. E. Hale. Trusts & Estates 84:307-8+ Mr '47
Today's prudent portfolio. R. P. Chapman. Trusts & Estates 84:623-4 Je '47
Trust investment in England; how the government's cheap money policy affects trust corporations. B. C. Crouch. Trusts & Estates 85:151-4 Ag '47

Living trusts
Rights of spouse and creditor in inter vivos trusts R. P. Goldman. bibliog Trusts & Estates 85.305-11 O '47

Pension trusts
See Pension trusts

Revocable trusts
Reappraisal of the revocable trust; cautions to avoid invalidity in face of spouse's and creditor's rights. E. C. King. Trusts & Estates 83·649-53 D '46

Small trust funds
Insured shares for small trusts. W. M. Bastian. Trusts & Estates 83:640 D '46

See also
Trusts and trustees—Common trust funds

Taxation
Amended Clifford regulations. A. J. Casner. Trusts & Estates 85.249-50 S '47; Correction. 85:386 O '47
Clifford regulations analyzed; trustee's responsibility in income taxation of irrevocable trusts. W. H. Avery, jr. Trusts & Estates 83:645-8 D '46
Estate planning under Hallock case; effect of Treasury decision 5512. H. C. Smith. Trusts & Estates 84:337-43, 448-52 Mr-Ap '47
State and federal taxation; A.B.A. committee report Trusts & Estates 85:317-28 O '47
Taxation of incomes under T.D. 5488 as modified by proposed amendments to Clifford regulations. A. J. Casner. Trusts & Estates 84:233-45 F '47

TRYPANOCIDES
Attempts to find new chemotherapeutic amidines. J. O. Harris Chem Soc J p690-2 My '47
Chemotherapy of phenanthridine compounds. L. P. Walls. bibliog Soc Chem Ind J 66·182-7 Je '47
Conversion of sucrose into furan compounds; some amidino-furans. F. H. Newth and L. F. Wiggins Chem Soc J p396-8 Mr '47
Cyano-ethylation of arsines, and the preparation of amidino-alkyl-arsines and carboxy-alkyl-arsines. R. C. Cookson and F. G. Mann. Chem Soc J p618-24 My '47

TRYPANOCIDES—*Continued*
Derivatives of 5-chloro-8-hydroxyquinoline M Weizmann and E. Bograchov Am Chem Soc J 69 1222-3 My '47
Immunizing effect in the action of trypanocidal agents. C. S. Leonard. Science 104. 556 D 6 '46
Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis E. A H Friedheim, H. J. Vogel and R. L Berman Am Chem Soc J 69 560-2 Mr '47
Researches in the phenanthridine series; further investigation of trypanocidal types. L. P Walls Chem Soc J p67-74 Ja '47
Researches in the phenanthridine series, quaternary salts with urethane and urea substituents L P. Walls. Chem Soc J p 1031-3 N '46
Search for chemotherapeutic amidines, two polyamidines H. J. Barber and R. Slack. Chem Soc J p82-4 Ja '47
Some alkoxy- and alkylenedioxydi-amines and alkoxy- and alkylenedioxydi-guanidines A. T. Fuller and H. King. Chem Soc J p963-9 Jl '47

TRYPANOSOMES
Effect of age of infection upon the oxidative metabolism of trypanosoma lewisi. J W. Moulder. bibliog Science 106 168-9 Ag 22 '47

TRYPANOSOMIASIS
Organic antimony compounds derived from *s*-triazine with therapeutic and prophylactic activity in experimental trypanosomiasis E A. H Friedheim, H. J Vogel and R. L. Berman. Am Chem Soc J 69.560-2 Mr '47

TRYPSIN
Inactivation of staphylocoagulase by trypsin and pepsin. B S. Walker and others Science 106 347 O 10 '47

TRYPTOPHAN
Chemistry of nitroacetic acid and its esters; alkylation of alkylnitroacetates with gramine. D. A. Lyttle and D. I. Weisblat. bibliog Am Chem Soc J 69:2118-19 S '47
Is sterility induced in growing rats on a tryptophane-deficient diet? C P. Berg and W. G. Rohse Science 105:96-7 Ja 24 '47
Maillard reaction in microbiological assay. E. G. Hill and A. R. Patton. Science 105: 481-2 My 2 '47
Tryptophan as a competitive growth inhibiting analog of phenylalanine. E Beerstecher, Jr. and W. Shive. bibliog Am Chem Soc J 69 461-2 F '47

TSUTSUGAMUSHI disease
Therapy of experimental tsutsugamushi disease (scrub typhus). W F. McLimans and C. W. Grant. bibliog Science 105:181-2 F 14 '47

TUBE bending
How to bend tubular aluminum bus. T. L. Bourbonnais, 2d. il Elec World 127.70-1 Je 21 '47
Tube bender meets short radius needs. diags Elec World 128:106 Jl 5 '47
Tube bending C F. Moores il diags Refrig Eng 53:409-11 My '47

TUBE Investments, limited
Annual general meeting, Birmingham Economist 151:1021 D 21 '46

TUBE mills
Brown and sons double-reduction gear with barring mechanism. il diags Engineering 163:32-3 Ja 10 '47
Notes on the operation of a rod mill at Kirkland Lake Gold. J. Dixon. Can Min J 67:1030 N '46
Reducing pea gravel to sand with rod mills. W B Lenhart. il Rock Prod 50·103-5 O '47
Rod mill grinding experience. D. A. Gildersleeve. il Rock Prod 50:105 O '47
What is in the future for grinding? J. M. Wolfe. diags Rock Prod 50:119-23+ Ja '47

TUBERCLE bacilli
Antigenic carbohydrate-lipid isolated from paraffin-oil extract of dead tubercle bacilli. N. Choucroun. Science 105·46-7 Ja 10 '47
Diagnostic demonstration of tubercle bacilli. J. Holm and V. Lester. Pub Health Rep 62·847-54 Je 6 '47

TUBERCULIN
Passive transfer of tuberculin sensitivity in the guinea pig. M M. Cummings and others. bibliog Pub Health Rep 62.994-7 Jl 4 '47
Standardization of tuberculin. J. Holm and P. Lind. bibliog Pub Health Rep 62:188-201 F 7 '47

TUBERCULOSIS
Advising the suspect case. H. E Hilleboe. Pub Health Rep 62:325-6 Mr 7 '47
Alcohol as a disinfectant against the tubercle bacillus. C R. Smith. bibliog Pub Health Rep 62 1285-95 S 5 '47
Antibiotic compound isolated from the lichen ramalina reticulata A. Marshak and others. bibliog Science 106.394-5 O 24 '47
Antibiotics; the new weapon on tuberculosis H. E. Hilleboe. Pub Health Rep 62:1-3 Ja 3 '47
Antiseptic action of glycerite of hydrogen peroxide on mycobacterium tuberculosis (var. hominis). E. A. Brown and L. W. Slanetz. bibliog Science 105:312-13 Mr 21 '47
Antitubercular action of 1,1,1-trichloro-2, 2-bis-(*p*-aminophenyl)-ethane. S. Kirkwood and P. H. Phillips. bibliog Am Chem Soc J 69·934-6 Ap '47
Antitubercular studies; bis-(*p*-aminophenyl) derivatives of ethyl ether and trichloroethane. E Graef and A. Burger. Am Chem Soc J 68:2400-1 N '46
Attempts to find new chemotherapeutic amidines; some aliphatic monoamidines. G. Newbery and W. Webster. Chem Soc J p738-42 Je '47
Calcifications in the spleen; occurrence in histoplasmin and tuberculin reactors. R. H. High. bibliog Pub Health Rep 61:1782-6, pl 1 D 6 '46
Community as a force in the control of tuberculosis. F. J Weber. Pub Health Rep 62:1283-5 S 5 '47
Community-wide chest X-ray surveys. F. J Weber. Pub Health Rep 62:652-8 My 2 '47
Comparative study of live and killed vaccines in experimental tuberculosis B. J. Olson and others. Pub Health Rep 62. 293-6 F 28 '47
Comparison of the effectiveness, for tuberculosis case finding, of various roentgenographic and photofluorographic methods. Pub Health Rep 62:350-4 Mr 7 '47
Control of tuberculosis in the Americas T. Parran. Pub Health Rep 62·827-33 Je 6 '47
Controversial issues in tuberculosis control. H. E. Hilleboe. Pub Health Rep 61·1561-3 N 1 '46
Crystalline antibacterial substance from the lichen ramalina reticulata. A Marshak. bibliog Pub Health Rep 62·3-19 Ja 3 '47
Effect of streptomycin on the metabolism of certain mycobacteria F Bernheim and R. J Fitzgerald. Science 105.435 Ap 25 '47
Effect of zinc on tuberculosis and silicosis W E. Ballard Safety Eng 94 60-2 Jl '47
Establishment and use of fundamental procedures in tuberculosis control J A. Myers. Pub Health Rep 61:1563-83 N 1 '46
Evolution of official tuberculosis control in the United States R. G Paterson. bibliog Pub Health Rep 62.336-41 Mr 7 '47
French national railroads fight disease with clinics on wheels. il Ry Age 123.398-9 S 6 '47
General practitioner in tuberculosis control. H. E. Hilleboe Pub Health Rep 61:1757-9 D 6 '46
Guide for disposition of persons with abnormal pulmonary findings on X-ray films. H. E Hilleboe and J Holm. fold pl Pub Health Rep 61.1759-69 D 6 '46
Immunizing value of the BCG dry glucose vaccine. Pub Health Rep 62·211-13 F 7 '47
Inherent efficiency of the X-ray methods used in the detection of tuberculosis. R. H. Morgan and others bibliog Pub Health Rep 62:201-11 F 7 '47
International control of tuberculosis. H E. Hilleboe and J. Holm Pub Health Rep 62: 1114-28 Ag 1 '47
Mass chest survey at Douglas Aircraft plant. E. C. Armes. il Ind Med 16·225-7 My '47
Mass radiography in general hospitals. H. E. Hilleboe Pub Health Rep 62:629-31 My 2 '47

TUBERCULOSIS—*Continued*
Medical social service in tuberculosis control Pub Health Rep 62 327-36 Mr 7 '47
New methods in the treatment of tuberculosis C H. Gellenthien. bibliog Ind Med 16.117-22 Mr '47
Northern Ireland tuberculosis act. Pub Health Rep 61.1589-90 N 1 '46
Operation of an urban sheltered workshop for the tuberculous. R. L. McNamara and A. W. Brewster. Pub Health Rep 62:971-91 Jl 4 '47
Production of antibiotics by fungi, javanicin, an antibacterial pigment from fusarium javanicum. H. R V Arnstein and A. H. Cook Chem Soc J p 1021-8 Ag '47
Progress in drugs and fine chemicals, tuberculostatic substances G. C Green Chem Age (Lond) 56 477-81 Ap 19 '47
Rehabilitating the tuberculous H. E Hilleboe. Pub Health Rep 62.969-71 Jl 4 '47
Rehabilitation and the Open case Pub Health Rep 62:513-14 Ap 4 '47
Report of a conference on BCG vaccination. Pub Health Rep 62 346-50 Mr 7 '47
Some basically substituted diaryl sulfides and sulfones. H. Gilman and H S. Broadbent bibliog Am Chem Soc J 69·2053-7 Ag '47
Studies of fungus antigens; quantitative studies of cross-reactions between histoplasmin and blastomycin in guinea pigs. A Howell, jr bibliog Pub Health Rep 62·631-51 My 2 '47
Surface chemotherapy M A. Phillips Chem & Ind p133-4 Mr 15 '47
Synthesis of tuberculostearic acid F. S Prout, J. Cason and A W. Ingersoll Am Chem Soc J 69 1233 My '47
Time element in tuberculosis control. H. E. Hilleboe Pub Health Rep 62.825-7 Je 6 '47
Tuberculosis in general hospitals from insurance company's viewpoint. B E Kuechle East Underw 48:30 Jl 25 '47
Tuberculostatic compounds, alkoxy-aminopyrimidines. L. D Braitberg and others. Am Chem Soc J 69.2005-6 Ag '47
Tuberculostatic compounds; ethers of 2-hydroxy-5-aminopyridine. H. L Friedman and others Am Chem Soc J 69.1204-6 My '47
Tuberculostatic compounds; N⁵-derivatives of 2-butoxy-5-aminopyridine. H. L Friedman and others. bibliog Am Chem Soc J 69: 1795-6 Jl '47
Variation with age in the frequency of tuberculous pulmonary calcification R H High and H. B. Zwerling. bibliog Pub Health Rep 61:1769-82 D 6 '46
W.A T A. library. K G. Mullen. Special Lib 37.327 D '46

Hospitals and sanatoriums

Economy of bed usage in tuberculosis H. E Hilleboe. Pub Health Rep 62 185-7 F 7 '47
General library administration in a Veterans administration tuberculosis hospital. D. R. Shapleigh. Special Lib 38:181-7 Jl-Ag '47
Ownership of tuberculosis sanatoria and hospitals; with number of beds; maps. Pub Health Rep 62.344-5 Mr 7 '47

Statistics

Deaths from respiratory tuberculosis in institutions in the United States, 1945. R. V. Kasius and E H Halpin map Pub Health Rep 62·1296-315 S 5 '47
Tuberculosis (all forms) death rates per 100,000 population and number of deaths and cases, United States, 1944; maps Pub Health Rep 62·342-3, Mr 7 '47
Tuberculosis (all forms) death rates per 100,000 population and number of deaths and cases, United States, 1945 maps Pub Health Rep 62:992-3 Jl 4 '47
Tuberculosis mortality in the United States and in each state, 1945 E. H Pitney and R. V. Kasius maps Pub Health Rep 62: 487-511 Ap 4 '47

TUBERCULOSTEARIC acid
Synthesis of tuberculostearic acid F. S. Prout, J. Cason and A. W. Ingersoll Am Chem Soc J 69.1233 My '47

TUBES
Answering some questions about pipe and tubing. W F McConnor Dom Eng 170 121+ Jl '47
Equivalent circuit for a bifurcated cylindrical tube. J. W. Miles. diags Acoustical Soc Am J 19 579-84 Jl '47
General theory of cylindrical and conical tubes under torsion and bending loads. J. Hadji-Argyris and P. C. Dunne. diags Roy Aeronautical Soc J 51:199-269 bibliog(p208-9), 757-84 F, S '47 (to be cont)
Stability of thin cylindrical shells in torsion. R G Sturm bibliog il diags Am Soc C E Proc 73.471-95 Ap '47, Discussion 73·1302-4, 1448-9 O-N '47

See also
Boiler tubes
Pipes

Manufacture

Effect of spacing between dies in the tandem drawing of tubular parts G. Sachs and G. Espey. il diags A S M E Trans 69 139-43 F '47
Extrusion method of manufacturing tubes of stainless steel, special steel, nickel, monel, and inconel. H. Lorant. il diags Mech Eng 69 471-4 Je '47; Same cond Mach 53:170-1 Jl '47, Discussion. Mech Eng 69 1052-3 D '47
Horizontal crank press swages tubes automatically. D. A. Baker. diag Am Mach 91: 111 Mr 27 '47
Machining operations eliminated by formed tubing. il Iron Age 159:59 Je 19 '47
Mechanical cold drawbenches for ferrous and non-ferrous tubes. G. W. Garwig and A. L. Thurman il Blast F & Steel Pl 35:348-54+, 549-52 Mr, My '47

See also
Tubes, Steel—Manufacture

Testing

Electrical calipers for inspecting vertical and horizontal tubes. I. S. Roberts il Oil & Gas J 46:117 O 18 '47

TUBES (containers)
Blow-gun package; Swift telescoping, refillable paper tube functions as spray gun. il Mod Packaging 20:100-3 My '47

TUBES, Aluminum

Testing

Fracture of some aluminum alloys under combined stress. E. G Thomsen and others bibliog il diags A S M E Trans 69:81-7 F '47

TUBES, Bronze

Manufacture

General Electric rotary hearth electric furnace il Engineer 182·402 N 1 '46

TUBES, Copper
Assembling small diameter copper tubes with S A.E. fittings il Paper Ind 28:1192-3 N '46
Dimensional and capacity data for copper tubing, tables, reference data Heat & Ven 44 96a-96b Jl; 94a-94b Ag '47
Panel heat with copper tubing; experiment in practice. D L. Mills and L. J Latart il Heat & Ven 44 65-9 O, 95-8 N '47
Radiant heating for schools simplified by use of copper tubes. il Eng N 138:1020 Je 26 '47

TUBES, Glass. See Glass tubing

TUBES, Magnesium

Testing

Magnesium extruded round tubing; reference book sheet diags Am Mach 91.159 My 22 '47

TUBES, Molybdenum
Seamless molybdenum tubing. Iron Age 159: 78 Mr 6 '47

TUBES, Nickel
Double wall tubing il Steel 120.76+ Ja 27 '47

TUBES, Plastic
Plastic tubes cut plating solution loss; floated on chrome bath solution, Iron Age 159:44 Je 26 '47

TUBES, Silver
Fine silver welded tubing. J. G. Henderson Product Eng 18·160 Je '47

TUBES, Steel
German bimetal tubing. Iron Age 158·76 N 28 '46

TUBES, Steel—*Continued*
High speed annealing of stainless bars and tubes E S. Kopecki il diag Iron Age 160: 143-9 O 16 '47
Internal pressure chart for round stainless steel tubing; reference book sheet. B. Ostlind. Product Eng 18.177 S '47
Mechanical tubing, permissible variations in diameter and wall thickness, reference book sheet. Am Mach 91.163, 165, 167 Mr 13 '47
New 9% nickel steel tubing; properties and processing. H. D Newell and others il diags Materials & Methods 25.62-7+ Ja '47
Service life of austenitic alloy furnace tubes C. S Pugsley, jr. Pet Refiner 26 119-20 O '47; Abstract. Pet Processing 2:881 N '47
Standard bridge railing of steel tube. il Eng N 138.154 Ja 23 '47
Tool steel tubing. E. L. Cady. il Materials & Methods 25:87-9 F '47
Tubular steel pile piers withstand rigid test; two piers of Garrison Dam construction bridge subjected to unusual ice load. E. E. Howard. il map diags Civil Eng 17 580-3+ O '47
Weight of steel tubing, table. W. L. Nelson Oil & Gas J 45:113 D 14 '46
Welded steel tubular bridges; used for sea forts off British coast. il plan diag Engineering 162.391, 396 O 25 '46

See also
Pipes, Steel

Manufacture

Centrifugal casting process applied to stainless- and carbon-steel tubes. J. W. Moore and J. W MacKay. il diags Mech Eng 69: 551-8 Jl '47
Employs stretch principle in steel tube production Steel 119:96 N 25 '46; Same. Blast F & Steel Pl 34:1531 D '46
Gas heating speeds seamless tube production, Babcock & Wilcox tube co. E. S Kopecki. il diag Iron Age 159.64-8 Je 5 '47
Killed Bessemer steel for seamless tubes. E. C Wright. Metal Prog 50:662-4 O '46
Tube-straightening, conventional methods employed by the industries for straightening welded- and seamless-tube stock. E W. Wrage il diags Mech Eng 69.648-50 Ag '47
Tubing made by stretch-rolling in continuous seamless-tube mill. Mach 53 178-9 Ap '47

Standards

Standard list of seamless mechanical tubing; reference book sheet. Am Mach 91:123 F 27 '47

Testing

Commerce reports on tests made on steel ship plates and tubes. Iron Age 160:126 Jl 31 '47
Mechanism of failure of 18 Cr-8 Ni cracking still tubes. C L. Clark and J. W. Freeman il Am Soc for Metals Trans 35:298-326 '45; Same. Nat Pet N 36 pt 2:R854-6+ D 6 '44; Discussion. Am Soc for Metals Trans 35: 326-30 '45

TUBES, Vacuum. See Vacuum tubes

TUCKER, Charles William, 1872-
Tucker family. H. C. Lythgoe. por Chem & Eng N 25:164-6 Ja 20 '47

TUCKER, Preston
Portrait. Bsns W p24 My 24 '47

TUCKER, Stanley Allison, 1905-
Appointed associate editor of Electrical world. por Elec World News ed 127.13 Ja 11 '47

TUCKER corporation
California bans sale of Tucker stock. Bsns W p66+ Ag 9 '47
Class A stock offered Comm & Fin Chr 166: 412-13 Jl 28 '47
SEC balks Tucker. Bsns W p76+ Je 21 '47
Tucker gets a breather. Bsns W p 19 Jl 5 '47
Tucker stock issue finally in the clear. il Bsns W p20 Jl 26 '47
Tucker takes step no.2. Bsns W p24+ My 24 '47
What are chances for Tucker car? J. Turner. il Am Bsns 17:20-1+ Je '47

TUCKER family
Tucker family. H. C. Lythgoe. pors Chem & Eng N 25:164-6 Ja 20 '47

TUCUMCARI lake
Eolian dam near Tucumcari, New Mexico. E. Dobrovolny and R C Townsend. map Econ Geol 42.492-7 Ag '47

TUFTED textile manufacturers association
Bedspread Boulevard; tufted textile manufacturing companies J Mebane. il Manuf Rec 115.38-9+ D '46

TUGS. See Towboats

TUITION fees insurance. See Insurance, Tuition fees

TUKON hardness tester. See Hardness—Testing

TULAREMIA
Skin reaction in rabbits produced by intradermal inoculation of suspensions of killed pasteurella tularensis. C. L. Larson. Pub Health Rep 61.1797-806, pl 1 D 13 '46

TUMBLING barrels
Manufacturing economies result from barrel finishing. H. Chase. il Materials & Methods 25 84-8 Je '47
Modern tumbling techniques cut finishing costs. H. Chase. il Iron Age 159.62-6 My 1 '47
Precision tumbling of metal parts. R. M. Lord il Materials & Methods 24:1227+ N '46
Production processes; their influence on design, barrel finishing R W Bolz. il Machine Design 19:131-6 My '47

See also
Plating barrels

TUMORS
Contagious nature of a lymphoid tumor in chickens N. F. Waters bibliog Science 106.246-7 S 12 '47
Failure to produce neoplasms in rats by feeding heated wheat-germ oil. C Hoffman and others. Science 105:336 Mr 28 '47
Granulosa cell tumors in intrapancreatic ovarian grafts in castrated mice Min Hsin Li and W. U Gardner Science 106:270 S 19 '47
Hypervolemia in mice bearing transplantable granulosa cell tumors. J. Furth and H. Sobel. Science 105:41 Ja 10 '47
Tumors in intrasplenic ovarian transplants in castrated mice. Min Hsin Li and W. U. Gardner. bibliog Science 105:13-15 Ja 3 '47

See also
Cancer

TUNG oil
American tung Fortune 36.148+ O '47
Rapid method for determining oil content of tung kernels. J Hamilton and S. G. Gilbert bibliog Anal Chem 19:453-6 Jl '47
Tung oil situation; abstract D. H. Litter Oil Paint & Drug Rep 151:70 Ap 21 '47

Analysis

Detection of tung oil; abstract. G. Zeidler and others Paint Oil & Chem R 109:50 D 12 '46

TUNGSTEN
Attack method for preparing tungsten. H. W. Woods. il Metal Prog 51:261-3 F '47
Codeposition of tungsten and nickel from an aqueous ammoniacal citrate bath. L. E Vaaler and M. L. Holt bibliog Electrochem Soc Trans 90 (preprint 9):151-62 '46; Abstract Steel 119:88 D 9 '46
Industry viewpoint of metal subsidies, tariffs and stockpiling. B. Burwell. Min Cong J 32 68 O '46
Interference films on tungsten. I. H. Parsons diags J Chem Educ 24:483 O '47
Kinetics of oxide film formation on metals and alloys E. A Gulbransen. bibliog Electrochem Soc Trans 91 (preprint 29).431-61 '47
Refractory metal industry since 1914. A. L. Percy. il Metal Prog 52:600-2 O '47
Russia dominates Chinese tungsten market as lone customer. J. R. Hight. map Iron Age 159.97-8 Je 26 '47
Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens, jr. and others. Phys R 71:165-73 F 1 '47
Some pipe deposits of eastern Australia R. Blanchard maps plans diags Econ Geol 42: 265-304 bibliog(p303-4) My '47

TUNGSTEN—*Continued*
System of microstresses in cold-worked metal. N. M. Blachman. bibliog Phys R 70:698-704 N 1 '46
Tungsten, 1946 H. W Davis. Eng & Min J 148:88 F '47
Vanadium and tungsten compounds being promoted. C. J Krister. Chem & Ind p113 F 22-Mr 8 '47

Analysis

Field test for the detection and estimation of tungsten V. North and F. S. Grimaldi. In U S Geol S Bul 950.129-31 '46
Gravimetric determination of tungsten with brucine. F. S. Grimaldi and N. Davidson. bibliog In U S Geol S Bul 950:135-8 '46

Isotopes

Gamma-rays from tungsten and molybdenum. W. M. Schwarz and M. L. Pool. bibliog Phys R 71:122-3 Ja 15 '47
Isotopic constitution of tungsten, silicon, and boron. M. G. Inghram. bibliog diag Phys R 70:653-60 N 1 '46

TUNGSTEN, Powdered
Adsorption of hydrogen on tungsten powders G Halsey and H. S. Taylor. J Chem Phys 15:624-30 S '47

TUNGSTEN alloys
Nouvel alliage de tungstène à forte densité, pour l'équilibrage des organes de machines. Génie Civil 123:299-300 N 1 '46

See also
Stellite

Analysis

X-ray analysis of chromium-molybdenum and chromium-tungsten alloys W. Trzebiatowski, H. Ploszek and J. Lobzowski. bibliog Anal Chem 19:93-5 F '47

TUNGSTEN carbide
Attaching carbide parts by threaded inserts. il Iron Age 159:56 Ap 17 '47
Carbide structures in carburized thoriated-tungsten filaments. C. W. Horsting bibliog il diags J Ap Phys 18·95-102 Ja '47
Carbides seek new jobs. il Bsns W p48+ Mr 22 '47
Cemented carbide used for high production dies and punches; Lynn River works of General electric co. il Iron Age 160·64-6 Ag 28 '47
Cemented carbide wire straightening dies. il Iron Age 160:54 Jl 3 '47
Experiment with tungsten carbide bits C. W. Nicolson. il diag Min Cong J 33:36-7+ Jl '47
Hard alloys go underground; tungsten carbide insert bits in rock drilling. S. P. Wimpfen. il Min & Met 28:148-9 Mr '47
Hard materials; increased use of diamond substitutes Chem Age (Lond) 56:259-60 F 15 '47
Heat of combustion of tungsten carbide, WC. L. D. McGraw, H. Seltz and P. E. Snyder. bibliog Am Chem Soc J 69·329-31 F '47
How to design carbide draw dies E. Glen. diags Am Mach 91:101-3 Jl 31 '47
Ingersoll-Rand carbide jackbit promises faster drilling. il Comp Air Mag 52:102 Ap '47
Manufacture and application of sintered carbides. E M. Trent. il Engineer 184:396-7 O 24 '47
Solid carbide boring bars. il diags Iron Age 160·44-5 O 23 '47
Some metallurgical aspects of cemented carbides. J. C. Redmond. bibliog il Iron Age 159:42-5+ Ja 30 '47
Thread rolling, theory and practice; dies. J. W. Batchelder. Iron Age 158:60-1 D 26 '46
Tungsten carbide bits; key to low-cost drilling. il Eng & Min J 148.102 Ap '47
Tungsten carbide promises faster, cheaper drilling. R. G. Sullivan. il Eng & Min J 148:57-60 Mr '47
Tungsten carbide rolls for wire flattening E C Slick and R E. White il Iron Age 160.74-7 O 9 '47

See also
Cutting tools, Carbide

Analysis

Quantitative analysis with the X-ray spectrometer J. C Redmond Anal Chem 19:773-7 O '47

Testing

Effect of hydrostatic pressure on the fracture of brittle substances. P W. Bridgman. diags J Ap Phys 18 246-58 F '47

TUNGSTEN lamps. See Electric lamps, Tungsten

TUNGSTEN mines and mining

Alaska

Exploration of Mountain View tungsten deposit, Hyder, Alaska. A. W. Erickson. 7pls U S Bur Mines Rep of Invest 3944.1-10 '46

Bolivia

Chojlla mine unusual in geological features G. D. Bellows. il diags Eng & Min J 148 68-70 S '47

British Columbia

Geology of the Red Rose tungsten mine, Hazelton, British Columbia. J S. Stevenson. bibliog il map diags Econ Geol 42:433-64 Ag '47

Korea

Sangdong tungsten deposit, southern Korea. M. R. Klepper. bibliog il map plan diags Econ Geol 42.465-77 Ag '47

Mexico

Tungsten deposits of the southern part of Sonora, Mexico. J. H. Wiese and S. Cardenas diags U S Geol S Bul 946-D:103-30, fold maps(pl 39-44); pa 15c Supt. of doc. '45

Nevada

Exploration of the Riley tungsten mine, Humboldt county, Nevada. G. H. Holmes, jr 15pls U S Bur Mines Rep of Invest 3945:1-7 '46

New Mexico

Iron Mountain tungsten deposits, Sierra county. W. R Storms. 5pls U S Bur Mines Rep of Invest 4035·1-5 '47

North Carolina

Tungsten deposits of Vance county, North Carolina, and Mecklenburg county, Virginia G. H. Espenshade. map U S Geol S Bul 948-A:1-17, pl 1-5(in pocket); pa 50c Supt. of doc. '47

Virginia

Tungsten deposits of Vance county, North Carolina, and Mecklenburg county, Virginia. G. H. Espenshade. map U S Geol S Bul 948-A:1-17, pl 1-5(in pocket); pa 50c Supt. of doc '47

TUNGSTEN ores
Scheelite in the Boulder district, Colorado. O. Tweto. bibliog diags Econ Geol 42:47-56 Ja '47

TUNING forks
Tuning forks; abstract H. Shorland. Inst E E J 94 pt 1:53-4 Ja '47

TUNIS (state)

Commerce

Foreign trade of Tunisia in 1946 For Comm W 26:19-20 Mr 15 '47
Tunisian foreign trade. For Comm W 28:12 Jl 12 '47

Commercial policy

Revision of import tariff, consumption taxes, customs formality tax, and export taxes in Tunisia. For Comm W 27.18-19 Ap 26 '47

Economic conditions

Developments in Tunisia in 1946 For Comm W 28:13-14 S 20 '47

TUNISIA. See Tunis (state)

TUNNEL air
Diesel engines underground; use of Diesel locomotives in construction of the Delaware aqueduct; effect of exhaust gases upon quality of tunnel air. L. B Berger and others. bibliog 2 pls U S Bur Mines Rep of Invest 4032:1-26 '47

See also
Tunnel ventilation

TUNNEL lining
Continuous lining of corrugated steel waterproofs reconstructed tunnel. J. F. Laboon. il Civil Eng 17:536-8 S '47
Lining of the Alva B. Adams tunnel. R. J. Willson. il diags Am Concrete Inst J 18: 209-38 N '46
Maintenance and reconstruction of concrete tunnel linings with treated mortar and special concrete. B. D. Keatts il diags Am Concrete Inst J 18.813-26 Mr '47
Pneumatic concrete placers speed lining of small tunnels of the San Diego aqueduct. il diags Eng N 138·502-4 Ap 3 '47
Repairing unlined portions of tunnel involves difficult transportation job. il Eng N 139. 202-4 Ag 7 '47
Tunnel trouble and how to correct it; repair of concrete linings. W. W. Morrison and E. E. Seelye. il diags Ry Age 122.412-14 F 22 '47

TUNNEL ventilation
Ventilation of long tunnels during construction; Delaware aqueduct tunnel. W. B. Harris. il diags Heat & Ven 44.63-5 Jl; 95-9 Ag; 97-9 S '47

TUNNELS and tunneling
Application of geology to tunneling problems. E. E. Wahlstrom. diags Am Soc C E Proc 73 1245-56 O '47
Colorado-Big Thompson project progresses. C. H. Vivian. il maps diag Comp Air Mag 51:314-20 D '46
Constructing a big sewer by tunneling. il Eng N 139:408-10 S 18 '47
Faulted rock passed by grouting on Copenhagen sewer tunnel. K Pilgaard. il plan diags Eng N 138 40-2 Ja 9 '47
Friction coefficients in a large tunnel G. H. Hickox and others. bibliog il plan diags Am Soc C E Proc 73:451-70 Ap '47, Discussion. 73:1122-38, 1307-9, 1450-4 S-N '47
Long concrete tunnel under stockpile serves both trucks and conveyor; Arizona sand and rock co. W. B Lenhart. il Rock Prod 50:92-3 Je '47
Mine in Seventy-second street, sewerage excavation work in New York C. H. Vivian. il plan diags Comp Air Mag 52·186-90 Ag '47
More water for St Catharines, Canada. W G McLaughlin. il Comp Air Mag 52·196-9 Ag '47
New tunnel for C.&O. R S Siegrist. il diag Explosives Eng 25:11-14 Ja '47
New tunnel shortens rail line; Fort Spring tunnel of the Chesapeake & Ohio railway. W S. Powell. il plan diag Comp Air Mag 52:236-9 O '47
Railroad relocated above Conemaugh dam. il map diags Eng N 139:176-80 Ag 7 '47
San Diego aqueduct. M. Wharton. il maps diags Explosives Eng 24:169-72+ N '46
Transite pipes in tunnel form new feeder main for St Catharines. W. G. McLaughlin. il Water & Sewage 85:13-17+ F '47; Excerpt. Roads & Bridges 85:80+ F '47
Water through mountains; Alva B Adams tunnel. Comp Air Mag 52.178 Jl '47

See also
Aqueducts
Pipe laying
Sewerage
Tunnel lining

Repair
Maintenance and reconstruction of concrete tunnel linings with treated mortar and special concrete. B. D. Keatts. il diags Am Concrete Inst J 18.813-26 Mr '47
Repairing unlined portions of tunnel involves difficult transportation job. il Eng N 139. 202-4 Ag 7 '47
Tunnel trouble and how to correct it; repair of concrete linings. W. W. Morrison and E. E. Seelye. il diags Ry Age 122:412-14 F 22 '47

Vehicular tunnels
Brooklyn-Battery tunnel in New York city. il diags Eng N 138:930-7 Je 12 '47
Snoqualmie tunnel plan provides low-level route through Cascade mountains. O. Singstad. il map diag Civil Eng 17:122-5+ Mr '47
Tunnels and bridges solve difficult location problems on 476-mile Blue Ridge parkway H. J. Spelman. il diag Civil Eng 17:378-82+ Jl '47
Two mile tunnel in Snoqualmie Pass proposed for Cascade Mountain road. map Eng N 138:255 F 20 '47; Discussion. H. M. Hadley. 138:580 Ap 17 '47
Tyne tunnel. diag plan Engineering 163:493 Je 13 '47; Engineer 183:523 Je 13 '47
Under the Bay to Brooklyn. R. G. Skerrett. il plan diags Comp Air Mag 52·210-16, 246-50 S-O '47

TUNNELS and tunneling, Subaqueous
Brooklyn-Battery tunnel in New York city. il diags Eng N 138.930-7 Je 12 '47
Divers dam Chicago water tunnel to confine tremie concrete plug. il plan diags Eng N 139 332-5 S 4 '47
Old gives way to the new; historic buildings razed in construction of Brooklyn-Manhattan tunnel R. G. Skerrett. il maps Comp Air Mag 52·62-5 Mr '47
Tyne tunnel. diag plan Engineering 163:493 Je 13 '47; Engineer 183:523 Je 13 '47
Under the Bay to Brooklyn. R. G. Skerrett. il plan diags Comp Air Mag 52:210-16, 246-50 S-O '47

TURBIDIMETERS

See also
Nephelometers
Tyndall meter

TURBIDIMETRIC analysis
Apparatus for rapid electrometric titration of acid; determination of pH and measurement of turbidity in microbiological assays. L B Rockland and M. S. Dunn. bibliog diags Anal Chem 19.812-13 O '47
Rapid turbidimetric determination of inorganic nitrogen in soil and plant extracts. B Wolf bibliog Anal Chem 19.334-5 My '47
Spectroturbidimetric study of the proteins of milk A. Leviton and H. S. Haller. bibliog J Phys & Colloid Chem 51·460-73 Mr '47

TURBIDITY
Association of polymer molecules in dilute solution. P. Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51:32-57 Ja '47
Determination of polymeric molecular weights by light scattering in solvent-precipitant systems. R. H Ewart and others. J Chem Phys 14 687-95 N '46
Molecular-weight determination by light scattering. P. Debye. bibliog J Phys & Colloid Chem 51.18-32 Ja '47

TURBINE pumps. See Pumps, Turbine

TURBINES
Feathering-blade water turbine with hydrobrake il diag(p396) Engineering 164·390-1 O 24 '47
Water-turbine improvements. il Elec R (Lond) 141:259 Ag 15 '47

See also
Air turbines
Gas turbines
Mercury turbines
Steam turbines

Bearings
Performance of vertical water wheel thrust bearings during the starting period. C. M. Laffoon and others. il diags A S M E Trans 69 371-7; Discussion. 377-9 My '47

Efficiency
Characteristics of hydraulic turbines that affect operating efficiency. J. F Roberts. Elec Eng 66·542-6 Je '47; Abstract. Power 91·177 Mr '47

Lubrication
Performance of vertical water wheel thrust bearings during the starting period. C. M. Laffoon and others. il diags A S M E Trans 69:371-7; Discussion. 377-9 My '47

Repair
Metal spray restores original efficiency of turbine seal rings. F. Britt. il diag Power 91:188 Mr '47

TURBINES, Gas. See Gas turbines

TURBINES, Mercury. See Mercury turbines

TURBINES, Steam. See Steam turbines

TURBULENCE
Cut your smoke by increasing turbulence. diags Power 91:407-8 Je '47

TURBULENCE—*Continued*
Extended applications of the hot-wire anemometer. S Corrsin bibliog R Sci Instr 18·469-71 Jl '47
Interaction between boundary layer and shock waves in transonic flow. H. W. Liepmann. bibliog il diags J Aeronautical Sci 13:623-37 D '46
Isothermal and nonisothermal air-jet investigations. V Cleeves and L. M. K Boelter. bibliog diags Chem Eng Prog 43:123-32; Discussion. 132-4 Mr '47
Laminar boundary-layer oscillations and stability of laminar flow. G B. Schubauer and H K. Skramstad. bibliog il diags J Aeronautical Sci 14·69-78 F '47; Discussion. 14: 410-11 Jl '47
Laminar boundary-layer oscillations and transition on a flat plate. G. B. Schubauer and H. K. Skramstad bibliog il diags J Res Nat Bur Stand 38:251-92 F '47
Studies substantiate theory of laminar-to-turbulent flow, wind tunnel experiments at the National bureau of standards. diag Aviation W 47·28+ Jl 21 '47; Excerpts. Product Eng 18.167 S '47
Temperature gradients in turbulent gas streams. W. H. Corcoran, B. Rondebush and B. H Sage. bibliog diags Chem Eng Prog 43:135-42 Mr '47
Use of damping screens for the reduction of wind-tunnel turbulence H L. Dryden and G B. Schubauer. bibliog diag J Aeronautical Sci 14·221-8 Ap '47, Abstract. Aeronautical Eng R 6.24 F '47
Wind-tunnel turbulence effects; historical account. D P. Riabouchinsky. bibliog diag J Aeronautical Sci 14·190-2 Mr '47

TURF
Turf on mechanically stabilized shoulders H. H. Iurka. il Roads & Sts 90:68+ My '47

TURKEY
Commercial policy
Turkey to end curbs on foreign capital. Comm & Fin Chr 165 2904 My 29 '47
Defenses
Watch on the Straits. map Economist 152. 925-7 Je 14 '47
Economic conditions
What's ahead for Turkey? new five-year plan is under way. map Bsns W p117-18 Ap 26 '47
Economic policy
Turkey: aid for what? business criteria for helping a nation help itself. M. W. Thornburg. il map Fortune 36:106-7+ O '47
Foreign relations
United States
Greco-Turkish aid bill signed. Comm & Fin Chr 165·2909 My 29 '47
Truman asks aid for both Greece and Turkey; text of address before Congress. Comm & Fin Chr 165:1373+ Mr 13 '47
Turkish democracy and the American loan. Economist 152·1031 Je 28 '47
U.S. and the defense of Turkey. E Kaskeline. Comm & Fin Chr 165·1245+ Mr 6 '47
Industries and resources
Industrialisation in Turkey. Economist 152: 335 Mr 8 '47
Turkey: aid for what? business criteria for helping a nation help itself M W Thornburg il map Fortune 36.106-7+ O '47
Turkey enters the industrial age. A. R. Taney Mech Eng 69:244-5 Mr '47
Twentieth century fund launches significant studies For Comm W 26:31 F 15 '47
Navy
Submarine engines for the Turkish navy il Engineer 183:79-81 Ja 17 '47

TURKEYS
See also
Insurance, Turkey

TURKEYS, Frozen
A la carte turkey makes debut; Swanson markets frozen, pre-packaged cut-up turkey. il Sales Management 58.44 Ja 1 '47
Packaging the gobbler C. Pollock il Food Ind 19:179-81 F '47

TURNBUCKLES
Manufacture
Profile machining of turn-buckles for aircraft N J Cooke diags Engineer 183.342 Ap 18 '47

TURNER and Newall, limited
Statement by the chairman. W. W F Shepherd Economist 152·86 Ja 11 '47

TURNING
Ball turning attachment uses power feed G A Giller. diag Am Mach 91 153 Je 19 '47
Lathe attachment for spherical turning il diags Engineering 164 128-9 Ag 8 '47
Life of carbide-tipped turning tools. F. F. P. Bisacre and G. H Bisacre. bibliog il diags Engineer 183:153-6, Discussion 151-2 F 7 '47
Machine tool show in print, turning. il diags Am Mach 91 196-214 S 11 '47
Simple device for radius or profile turning. D Baker diags Mach 53:204 Je '47
Special setups turn spherical surfaces; ball and socket sections for self-aligning bearings and pillow blocks C A. Bloom il diags Am Mach 91·108-12 Ag 14 '47
Tools revolve about work in turning large crankshafts. il diags Steel 121.84-5+ Ag 25 '47
Turning with modern machine tools G. Hubbard. il Steel 120 74-5+ Je 9 '47

TURNOVER
Keep turnover high; postwar periods are always dangerous for creditors J. E Bullard Credit & Fin Management 49 28-32+ Jl '47

TURNOVER, Labor. See Labor turnover

TURNTABLES
Swiss mechanised car parking system. C. F. Armstrong. il plan diags Engineer 183 554-6 Je 27 '47
Turntables aid assembly-line testing; production of Hotpoint electric dishwashers. B. C Brosheer il plan Am Mach 91·129-32 F 13 '47
Turntables simplify assembly il Am Mach 91. 108 N 6 '47

TURNTABLES, Phonograph. See Phonograph—Turntables

TURPENTINE
Collection of sulphate turpentine. W. P. Lawrence diag Paper Tr J 124:128+ F 27 '47
Composition of gum turpentine of Torrey pine. A. J. Haagen-Smit, C. T. Redemann and N. T Mirov Am Chem Soc J 69 2014-17 Ag '47
Continuous still, developed for producing rosin, turpentine. il diag Manuf Rec 116: 74-5+ Ja '47
Corrosion in storage tanks for crude sulphate turpentine. S. G. Norton and others. Paper Tr J 124·34-5 My 1 '47
Distillation of pine gum to produce turpentine and rosin il Chem & Eng N 25.440 F 17 '47
Turpentine recovery in pulp mills. flow diag diags Pulp & Pa of Can 48:79-81 Je '47
Statistics
Naval stores; supply and distribution of turpentine and rosin. Chem Eng 54:121 F '47

TURTLES
Migration of newly-hatched loggerhead turtles toward the sea. R. S. Daniel and K. U. Smith. bibliog Science 106:398-9 O 24 '47

TUSKEGEE Institute
Starts project to provide southern farmers with low-cost concrete masonry homes. il Concrete 55.30-1 My '47

TUYAS. See Volcanoes

TWEEN-asolectin-thioglycollate
New medium for study of quaternary bactericides. E. H. Armbruster and G. M. Ridenour bibliog Soap & San Chem 23·119-21+ Ag '47

TWENHOFEL, William Henry, 1875-
Sketch R. R. Shrock. Am Assn Pet Geologists Bul 31·835-40 My '47

TWENTIETH Century-Fox film corporation
Securities disturbing investors. E. A Barnes. Mag of Wall St 80:285-6 Je 7 '47

TWENTIETH Century-Fox film corporation—*Continued*
Statement regarding options and filing registration statement with SEC. Comm & Fin Chr 165·2931 Je 2 '47
TWISTING machines
Electrical equipment for two-for-one twister, abstracts E C. Gwaltney and J. H. Burnham diag Product Eng 18·128-9 My '47, Elec Eng 66 474-6 My '47
Multistage yarn twisting machine. il diag Machine Design 19 140-2 My '47
TWITCHELL reagent
Good by Twitchell? new process for producing fatty acids; abstract. H. D. Allen. flow diag Chem Ind 60·592 Ap '47
TWO-family houses. See Architecture, Domestic—Two-family houses
2,4-D. See Dichlorophenoxyacetic acid
TYNDALL effect
Determination of the particle size of monodispersed systems by the scattering of light I. Johnson and V K. La Mer bibliog diags Am Chem Soc J 69 1184-92 My '47
Longitudinal dispersion of infrared rays in optically empty and turbid media, and molecular weights of substances W. W Lepeschkin. bibliog J Phys & Colloid Chem 51 875-84 My '47
Longitudinal dispersion of infrared rays in polystyrenes W W. Lepeschkin il J Phys & Colloid Chem 51·868-75 My '47
TYNDALL meter
Tyndallometer for colored solutions H P Kortschak. diag Anal Chem 19:692 S '47
TYPE *and type founding*
Any type can be used for offset reproduction—but. G. J Church. il Inland Ptr 120·42-3 O '47
Fitting a vital step in the perfection of a type face. A. R. Hopper. il Inland Ptr 119: 50-2 Ap '47
Frederic William Goudy, designer of type faces. Inland Ptr 119 42-3 Je '47
Orchestration of type. A. R. Hopper. il Ind Marketing 32·34-8 Mr '47
So you're going to get out a type book? G. J. Church il Inland Ptr 120·60-2 O '47
Type for books and advertising. E. M. Ettenberg 160p $6 D. Van Nostrand co, 250 4th av, New York 3 '47
Uniform type specimen book idea causes heated argument Inland Ptr 119:83 Je '47
Which three faces would you select? E H. Stuart. Inland Ptr 118 43-4 Mr '47
TYPE metal
Preventing metal impoverishment J F. Sorace. Inland Ptr 120·64 O '47
TYPESETTING
Early type sample compositors spiced work with wit and humor. R R. Karch il Inland Ptr 118.43-4 Ja '47
Modified sewing machine becomes handy thin-space cutting device. W. B. Morawski il Inland Ptr 119·74 Jl '47
Personalities in type designs. J M. Secrest. il Ptr Ink 218 52-3 F 14 '47
Three-dimensional effects you can get with type, rule, a little time and ingenuity. G J. Church. Inland Ptr 118.49 Mr '47
Typographic clinic. G. J. Church. Inland Ptr 118.48-9 Ja '47 [cont monthly]
TYPEWRITERS
Elliott Fisher lettering machine for drawings, plans, charts prepared in engineering offices. il Ry Age 123.490 S 20 '47
TYPEWRITERS, Automatic
Automatic typewriter. il Sci Am 176 133 Mr '47
Proportional spacing typewriter and right-hand margin justifier are highly-important advancements in typewriter composition for reproduction by the offset process. G. J. Church il Inland Ptr 118·34-5 Mr '47
Robotyper. il Sales Management 58.56 F 1 '47
When you need to write more letters; experience of R. L Polk & company direct mail division, with 100 automatic typewriters. R. G French. il Am Bsns 17.18-19+ O '47
TYPEWRITERS, Portable
Rating
Portable typewriters. il Consumers Res Bul 20:8-10 Ag '47
TYPHOID fever
Effect of streptomycin on the oxygen uptake of eberthella typhosa. R. S. Benham. Science 105:69 Ja 17 '47
NAIDM-USDA report on quaternary ammonium testing; E typhosa and S aureus in various cultures L. S. Stuart Soap & San Chem 23 135+ S '47
Report on a typhoid fever epidemic at Manteno state hospital in 1939; abstract. Am Water Works Assn J 38 1315-16 N '46
Typhoid fever, health problems in Uruguay, abstract C. Fabini. Am Water Works Assn J 39.190-1 F '47
Typhoid in the large cities of the United States in 1945; with tabulations. Am Water Works Assn J 39 184-90 F '47
TYPHUS fever
Control of rat ectoparasites with DDT. R. G. Ludwig. diags Pub Health Rep 62:77-84, pl 1-3 Ja 17 '47
Epidemic control with DDT, ANTU and 1080. H Elishewitz. Soap & San Chem 23·127-9+ My '47
Study of murine typhus fever in Coffee county, Alabama. E. L. Hill and S. C. Ingraham, 2d. Pub Health Rep 62.875-81 Je 13 '47
Use of DDT to control murine typhus fever in San Antonio, Texas. D. E Davis. Pub Health Rep 62·449-63 Mr 28 '47
TYPOGRAPHICAL union, International. See International typographical union
TYROSINASE
Measurement of the cresolase activity of tyrosinase M. F. Mallette and C. R. Dawson. Am Chem Soc J 69·466-7 F '47
TYROSINE
Competitive inhibition of the metabolism of α-amino acids by their halogenated analogs. H K Mitchell and C Niemann Am Chem Soc J 69.1232 My '47
Synthesis of tyrosine labeled with C^{14}. J. C. Reid. Science 105 208 F 21 '47

U

U.A.W. See United automobile workers of America
UGANDA
See also
Printing—Uganda
ULCERS
See also
Duodenum—Ulcers
Stomach—Diseases
Varicose ulcer (term)
ULMUS fulva. See Elms
ULTRACENTRIFUGE. See Centrifuges
ULTRAMAR company, limited
Annual general meeting, 11th, London. Economist 153.40 Jl 5 '47
ULTRASONIC waves. See Supersonic waves
ULTRAVIOLET rays
Black light. il Gen Elec R 49.55 N '46
Black light, fluorescence, and ceramics. F C. Arrance. bibliog il diag Am Cer Soc J 30 250-5 Ag 1 '47
Effects of ultraviolet radiation on visual thresholds E. Wolf. Science 105.366 Ap 4 '47
Luminescent phenomena as aides in the localization of minerals in polished sections. H. Yagoda. bibliog il diags Econ Geol 41:813-19 D '46
Method for making filters transmitting the near ultraviolet and absorbing visual light. B. Smith. Science 104:490-1 N 22 '46
New ultraviolet phosphors. H C. Froelich. bibliog il Electrochem Soc Trans 91 (preprint 11):161-81 '47
Some effects of ultraviolet light on 2,4-D and related compounds. M. G. Payne and J. L Fults bibliog il Science 106:37-9 Jl 11 '47
Stability of phosphors under ultraviolet irradiation. H. C. Froelich Opt Soc Am J 37·308 Ap '47

ULTRAVIOLET rays—*Continued*
Stability of phosphors under ultraviolet irradiation G. Meister and R. Nagy Opt Soc Am J 37:403 My '47

Biological effect

Comparative study of live and killed vaccines in experimental tuberculosis. B J Olson and others. Pub Health Rep 62.293-6 F 28 '47
Killing bacteria in water under pressure M. Luckiesh and others. il diags Gen Elec R 50:16-21 My '47
New meters for germicidal energy A. H Taylor and H. Haynes. il diags Gen Elec R 50 27-9 O '47
Ultraviolet irradiation in the production of potent antirabies vaccines. K Habel. bibliog Pub Health Rep 62 791-800 My 30 '47
Ultraviolet radiation as a means of sterilizing tissue culture materials. J G. Carlson and others. il Science 105·187-8 F 14 '47

Lamps

Determining and reducing the concentration of air-borne micro-organisms. M. Luckiesh and A. H. Taylor. bibliog il Heating-Piping 19.113-17 Ja '47; Abstract. Heat & Ven 44: 106 F '47; Discussion. Heating-Piping 19: 121-2 Ap '47
Germicidal lamps prevent roup among chicks. il Elec World 127:78 Ap 26 '47
Killing air-borne respiratory micro-organisms with germicidal energy. M Luckiesh and others. bibliog il diags Franklin Inst J 244 267-90 O '47
Killing bacteria in water under pressure. M Luckiesh and others. il diags Gen Elec R 50:16-21 My '47
Killing germs with lamps; disinfection by ultraviolet light Consumers Res Bul 19.19-24 F; 20·26 S '47
Miniature ultraviolet lamp developed for home refrigerators. C. W. Flood, jr. Franklin Inst J 242:342 O '46
New developments in mercury lamps and their applications. E. W. Beggs. il diags Illum Eng 42:435-62; Discussion 463-5 Ap '47
Recent ozone investigations. A W. Ewell bibliog diag J Ap Phys 17·908-11 N '46
Ultraviolet lamps to control fungi. R. Nagy. il Food Ind 19.928-9 Jl '47
Ultraviolet phosphors and fluorescent sun tan lamps R. H Clapp and R. J Ginther Opt Soc Am J 37:355-62 My '47
Ultraviolet + refrigeration = health; use of Sterilamp A. J. Dusault. il Refrig Eng 54:125-6 Ag '47
Ultraviolet sanitary ventilation W. T. Anderson, jr. il Heat & Ven 44:63-8 Ap '47
Zirconium and thorium electrodes in discharge lamps. H C. Rentschler and others. il Electrochem Soc Trans 91 (preprint 21): 311-17 '47

Rating

Sunlamps. il Consumers Res Bul 19:28-33 Mr '47

Measurement

Automatic-recording ultraviolet photometer for laboratory and field use. I. M. Klotz and M. Dole bibliog il diag Ind & Eng Chem Anal ed 18:741-5 D '46; Abstract. Electronics 20·140+ F '47
Electronic switch measures UV radiation. T. Temple. diag Elec World 127:74+ Mr 1 '47
New meters employing light-sensitive cells for the measurement of erythemal energy. G P Kerr. bibliog il R Sci Instr 18·472-3 Jl '47
New meters for germicidal energy. A. H. Taylor and H. Haynes il diags Gen Elec R 50·27-9 O '47

Therapeutic use

Artificial sunlight. Ind Med 16·266+ My '47
Evaluation of the minimal prophylactic dose of antirachitic radiation for rats with observations on antirachitic wavelength absorption by smoky atmospheres. K. K. Kay and H. M. Barrett. bibliog J Ind Hygiene 29.41-6 Ja '47
Sources of ultraviolet and infrared radiation used in therapy. W. W. Coblentz. Illum Eng 41·903-4 D '46

ULTRAVIOLET spectrum. See Spectrum, Ultraviolet

UNCLAIMED policies. See Insurance, Life—Policy settlement—Unclaimed policies

UNDECYLENIC acid
Undecylenic acid in the treatment of pruritus ani and pruritus vulvae. R H. Aldrich bibliog Ind Med 16.491-2 O '47

UNDERGROUND construction

See also
Tunnels and tunneling
Underground structures

UNDERGROUND corrosion. See Corrosion and anti-corrosives—Underground corrosion

UNDERGROUND factories. See Factories, Underground

UNDERGROUND photography. See Photography, Underground

UNDERGROUND structures
City official believes underground parking would pay for itself; parking problem of Memphis, Tenn. Eng N 137.665 N 14 '46
Engineering by crystal ball; Los Angeles Substructure committee J. H. Collins. Pub Util 38:734-9 D 5 '46
Heat pump plant protects works of art stored in subterranean workings A. C. Pallot. diags Heating-Piping 18·95-6 N '46
Location of underground services. Pub Works 78 38-9 Je '47
Pipeline tunnels for upkeep economy and continuous service, Liquid carbonic corp. D. L Ramp. il diag Factory Management 105: 128-9 F '47
Underground conduits; an appraisal of modern research. M. G. Spangler. bibliog diags Am Soc C E Proc 73·855-84 Je '47
Underground conveyors handle ammunition. il Mech Handling 33:607-11 O '46
La ventilation des locaux par succion de l'air du sol. M. Hottinger. diag Génie Civil 123.329 D 1 '46

See also
Factories, Underground
Pipe lines
Sewerage
Sewers, Concrete
Tunnels and tunneling

Air conditioning

Data on heat loss from underground walls given in British air conditioning report; storage of explosives. Heating-Piping 19·96 Mr '47

UNDERGROUND water. See Water, Underground

UNDERPINNING. See Shoring and underpinning

UNDERWEAR

See also
Hosiery
Slips (underwear)

UNDERWRITERS' laboratories
Annual meeting, Chicago. Nat Underw 51·2 My 1 '47
How about these Underwriters? what the organization is, and what it does. H. Dodge Elec West 98:77-8 My; 99:63-4 Jl '47
Story of service. W. S. Austin. Nat Underw 50th anniv no.128+ 1947
Underwriters' laboratories, inc. and the refrigeration industry. E. F. Tabisz. il Refrig Eng 54:18-21 Jl '47

UNDISTRIBUTED profits tax. See Corporations—Taxation

UNEMPLOYMENT
Nature and extent of frictional unemployment. L M. Pearlman and others. Mo Labor R 64:1-10 Ja '47

See also
Employment
Layoff systems

Relief measures

See also
Industrial estates

Federal relief

Various groups express differences on role of our government in guaranteeing jobs; Gallup poll. Iron Age 159:117+ My 22 '47

UNEMPLOYMENT—Relief measures—*Cont.*

Finance

Unemployment relief financing in the states. R S Stout bibliog Pennsylvania State College Bur of Business Research Bul 26·1-28 '46

Public works

Development works and full employment. D. C. Tait Int Labour R 54:309-20 N '46

Statistics

Unemployment, employment and hours of work Int Labour R 53:283-93, 455-65, 54. 239-49; 55.587-98, 56:108-16, 235-43, 364-75, 510-18 Mr-Ap, My-Je, S-O '46, Je-O '47

Greece

Unemployment among Greek seafarers. Int Labour R 55 575 Je '47

Italy

Efforts to create employment. Mo Labor R 65·336-7 S '47

Rhode Island

Job losses; unemployment spreads. Bsns W p22 My 17 '47

Scotland

Post-war Scotland. Economist 151:916-17 D 7 '46

United States

Employment during the transition period, in prospect and retrospect. E. Schiff. R Econ Stat 28:231-6 N '46

Nature and extent of frictional unemployment L. M. Pearlman and others. Mo Labor R 64:1-10 Ja '47

One fifth in index of job optimism see possibility of unemployment within year; Gallup poll. Iron Age 160.113+ Jl 3 '47

UNEMPLOYMENT insurance. See Insurance, Unemployment

UNFILLED orders. See Orders, Unfilled

UNION agreements. See Trade agreements

UNION bag and paper corporation

Annual report Comm & Fin Chr 165.1910 Ap 7 '47

Gain in earnings likely in 1947. Barron's 27: 29 Ap 14 '47

UNION carbide and carbon corporation

Annual report. Comm & Fin Chr 165:1362 Mr 10 '47

Holds sales gain, improves plants. Barron's 27:7 Mr 10 '47

Sales rise from postwar dip. Barron's 27:13 Ap 21 '47

Thumbnail stock appraisal. Mag of Wall St 79:259 D 7 '46

UNION catalogs. See Catalogs, Union

UNION contracts. See Trade agreements

UNION nationale des associations d'anciens élèves des écoles et instituts de chimie

L'union nationale des associations d'anciens élèves des écoles et instituts de chimie. J. Boisseau. Chimie & Ind 57:602-3 Je '47

UNION of South Africa. See South Africa

UNION oil company of California

Annual report. Comm & Fin Chr 165:1911 Ap 7 '47

UNION Pacific railroad

Annual report, 50th, year ended Dec. 31, 1946. Comm & Fin Chr 165:2352-3 My 1 '47, Same. Ry Age 122:915-17 My 3 '47

Annual report; with consolidated income statement for calendar years 1943-1946. Comm & Fin Chr 165:2459-60 My 5 '47

UNIONMELT process. See Electric welding—Unionmelt process

UNISOL process. See Gasoline—Manufacture

UNIT heaters. See Heaters; Hot water heaters, Steam heaters

UNIT processes

Economic interrelationships of certain unit processes. R. H. Ewell bibliog Chem & Eng N 25.502-3 F 24 '47

Unit operations review. bibliog il diags Ind & Eng Chem 39:3-42 Ja '47

UNITED air lines

Anti-climax seen in CAB approval of Denver-Los Angeles route sale S. Altschul. Aviation W 47·18 S 8 '47

CAB approves UAL route purchase. Aviation W 47 12 S 1 '47

CAB grants United's 8-year plea for direct entry into Los Angeles Aviation N 7 26 Je 2 '47

Financing plans of United indicate airline credit rise Aviation N 7.18 F 3 '47

Gets direct entry to Los Angeles from the East. S. Altschul. Barron's 27 26 My 26 '47

Gets prized entry to Los Angeles market. Barron's 27·33 Mr 10 '47

Major CAB policy test seen in Western's Denver route sale. Aviation N 7 9 Mr 17 '47

Preferred stock oversubscribed. Comm & Fin Chr 165 1237 Mr 3 '47

Starts restoring earnings; new routes and new planes promise to reverse poor 1946. S. Altschul. Barron's 27:17 Ap 21 '47

United airlines plans $85,165,000 program. Aviation N 7·27 Ja 27 '47

Western-United route deal influences finance program. Aviation N 7·23 Mr 31 '47

UNITED aircraft corporation

Buys certain facilities from the government; arranges bank credit. Comm & Fin Chr 166 995 S 8 '47

Overcoming perils of peace; huge plane-engine-propeller maker doing better than aviation industry B. Ravits. Barron's 27·26 Mr 10 '47

Rolls-Royce Nene gives lead in jet power to United Aircraft. Barron's 27:26 Je 2 '47

UNITED automobile workers of America (International union, United automobile, aircraft and agricultural implement workers of America)

Annual pay tried; U.A.W. contract with auto-parts maker. Bsns W p110-11 Ap 26 '47

Convention mood; U.A.W. meeting. Bsns W p106-8 Mr 15 '47

Curtain raiser, U.A.W. starts talks with Chrysler on new contract. Bsns W p84+ Ja 25 '47

Factionalism hits again. Bsns W p94+ O 11 '47

Ford terms a national pattern? expedient of delay gets around union liability section of Taft-Hartley act. Bsns W p70+ Ag 9 '47

Marathon ends, but who was chief loser in Allis-Chalmers strike? Bsns W p90+ Mr 29 '47

New U.A.W. rift. Bsns W p90+ F 15 '47

Retirement pensions may become UAW's main objective W. G Patton. Iron Age 160: 105-6 Jl 10 '47

Taft law strike; walkout at Murray corp. Bsns W p63-4 Ag 2 '47

U.A.W. gives in; strike at J. I. Case settled Bsns W p100 Mr 15 '47

U.A.W.'s red ink. Bsns W p90+ F 22 '47

UNITED clerical, technical and supervisory association of America

Foremen revamp. Bsns W p76-8 Ag 9 '47

UNITED corporation

Annual report. Comm & Fin Chr 165:2008+ Ap 14 '47

SEC consents to voting plan; plan for the future. Comm & Fin Chr 165:984 F 17 '47

United corporation plan. Pub Util 40:585-6 O 23 '47

UNITED dairies, limited

Statement by the chairman at ordinary general meeting L. Maggs. Economist 151:725 N 2 '46

UNITED distributors, inc.

Washers wash, refrigerators cool, radios play, at United Distributors Boston showrooms. J. Mass il Sales Management 57:74+ D 1 '46

UNITED electrical, radio and machine workers of America

Union on air. Bsns W p95 Ap 19 '47

U.E. begins talks; drives by C.I.O. unions. Bsns W p84+ F 22 '47

U.E. joins farmers in food-cost attack; direct farmer-consumer marketing. il Bsns W p 108 S 13 '47

UNITED engineering trustees, inc.
Report for 1945-1946. J. P. H. Perry. Mech Eng 69:86-7 Ja '47; Same cond. Elec Eng 66:201 F '46

UNITED financial employees
Employees of Ward, Gruver & co, choose UFE as collective bargaining agent, 10 to 7. Comm & Fin Chr 165:2988 Je 5 '47
Indoors, it's still the Curb. Bsns W p44+ Mr 15 '47
Mediation board fails to settle dispute between U.F.E. and A. W. Kidder & co. E Germain. Comm & Fin Chr 165:1796 Ap 3 '47
New York cotton exchange refuses to negotiate until employees exercise right to leave union. Comm & Fin Chr 165.916 F 13 '47
No-strike impasse Bsns W p82 N 9 '46
Seeks collective bargaining rights for employees of Drysdale & co. E. Germain. Comm & Fin Chr 165:2335+ My 1 '47
Storm signal in Wall Street il Bsns W p74+ Mr 22 '47
Street divided; financial workers union competes with C.I O. guild Bsns W p83-4+ D 14 '46
Strike date set. Bsns W p43-4 Mr 29 '47
Threatened UFE strike against A. M Kidder co could also mean strikes against the Exchanges. E. Germain. Comm & Fin Chr 165: 1380+ Mr 13 '47
UFE and NYSE sign new contract extending to Jan. 31, 1948. Comm & Fin Chr 164:2615 N 21 '46
Wall Street drifts toward strike as union and A. M Kidder & co. fail to agree. E. Germain. Comm & Fin Chr 1517+ Mr 20 '47
Wins election at Drysdale & co. but loses Labor Board decision in Harris, Upham case. Comm & Fin Chr 165:2732, 2775 My 22 '47

UNITED fruit company
New ships to raise United Fruit sales. Barron's 27:18 F 10 '47
United Fruit awaits ships to expand banana sales. Barron's 27:35 S 22 '47

UNITED gas corporation
Annual report Comm & Fin Chr 165:3176 Je 16 '47

UNITED glass bottle manufacturers limited
Statement by the chairman at ordinary general meeting. W. Sinclair. Economist 152: 781 My 17 '47

UNITED light and railways company
Stockholder files plan for mergers. Comm & Fin Chr 166:802 Ag 25 '47
Submits new plan. Comm & Fin Chr 166:96 Jl 7 '47
United Light to pay more in American Light common stock. Barron's 27:27 Ag 4 '47

UNITED mine workers of America
Cash position of UAW-CIO reduced more than $2 million; abstract. G. F. Addes. Iron Age 159:136 Mr 13 '47
Coal and the coal miner Coal Age 51:67-82 D '46
Coal strike threat deferred by high court ruling against Lewis il Steel 120 59-61 Mr 10 '47
Court ties down the whistle Bsns W p15-16 Mr 15 '47
District court rulings in United mine workers case. Mo Labor R 64:271-2 F '47
John Lewis keeps his date; U.M.W. walkout to protest Centralia disaster. il Bsns W p96-9 Ap 5 '47
Lewis brings danger of nationalization closer. C. H. Grattan. Barron's 27:10 Ap 7 '47
Lewis loses in Supreme court. Coal Age 52: 107 Mr '47
Railroad Diesel program draws coal union fire. Iron Age 159:119 F 6 '47
Supreme court decision. Mo Labor R 64:855-7 My '47

District 50
Auto fight coming; John L. Lewis turns again to Detroit industry. Bsns W p94 F 1 '47
District 50 local loses in back-to-work fight. Bsns W p96 Mr 29 '47
John Lewis's catch-all unions, who they are and what they are up to. P. French Factory Management 104:118-20 D '46

UNITED nations
Americans dissatisfied with progress of United nations, Gallup poll Iron Age 159: 165-6 My 8 '47
Before the General assembly. Economist 153. 428-30 S 13 '47
Britain's faith in United nations. E. Bevin Comm & Fin Chr 164 2473+ N 14 '46
Close-up of UN. Iron Age 158:121+ D 19 '46
Commencement of the United nations. W. R Austin. Tech R 49 533-4+ Jl '47
European economic cooperation; within or without the UN? purposes of Economic commission for Europe F. Haussmann. Comm & Fin Chr 166.1203+ S 25 '47
How we built community support for the United nations; Calco division, American cyanamid co. G. B. Meynell. il Ptr Ink 220 30-1+ S 26 '47
I.L O. and the United nations; the Director-general's address to the Assembly Int Labour R 54:281-4 N '46
Must Uno split? Economist 153:506-8 S 27 '47
No teeth for Uno, comments on report of Military staff committee Economist 152 699-700 My 10 '47
Progress and prospects of the United nations E. M. Patterson, ed Ann Am Acad 252:1-105 Jl '47
Public faith in United nations found growing; Gallup poll. Iron Age 159.107 Ja 16 '47
Should the U.S withdraw from the United nations? a retrospect. W. A. Robertson. Comm & Fin Chr 165:1645+ Mr 27 '47
Soviet sabotage of United nations. E. Johnston Comm & Fin Chr 165.1933+ Ap 10 '47
United nations and world peace. A. Sweetser. Comm & Fin Chr 165:132+ Ja 9 '47
United nations at work; basic documents. 147p pa 40c World peace foundation, 40 Mt. Vernon st, Boston '47
United nations must take immediate action, address before General assembly of the United nations. G. C. Marshall. Comm & Fin Chr 166:1115+ S 18 '47
U-N votes may point the course of trade Barron's 27:1+ S 22 '47
U.S. should remain in UN despite Soviet obstinacy; Gallup poll. Iron Age 160:101 O 30 '47
Vandenberg's plan to consult United nations on aid to Greece in line with public sentiment; Gallup poll. Iron Age 159:103+ Ap 24 '47
Veto. Economist 151:701-2 N 2 '46
Voters want to see United nations strengthened; Gallup poll Iron Age 160:121+ S 25 '47

See also
Food and agriculture organization of the United nations
International trade organization (proposed)
World health organization

Accounting
Accounting and auditing for the United nations. J. B Payne. J Account 83:129-34 F '47
External auditors of the United nations. J Account 83:181-2 F '47

Balkan commission
Solve Balkan problem or pack up; supports report of UN Balkan commission. A. Cadogan Comm & Fin Chr 166:113+ Jl 10 '47

Biography
Bibliography
Sources for biographical data on United Nations personnel. G. Lloyd Special Lib 38:219 S '47

Commission on the status of women
Victories on the international front D. Kenyon Ann Am Acad 251.17-23 My '47

Economic and social council
Economic and social task of United nations. L D. Stinebower Comm & Fin Chr 165: 1045+ F 20 '47

UNITED nations—Economic and social council —*Continued*
Terms of reference and membership composition of the statistical population, social, and narcotic drugs commissions of the Economic and social council. Pub Health Rep 62 243-8 F 14 '47

Employees
Aetna writes United Nations group, covers members of UN staff. East Underw 48:10 Ap 25 '47

Employees' pensions
Pension plan of United nations; provisional system for secretariat and agencies adopted by General assembly W. Hay. Weekly Underw 157:400 Ag 16 '47

Finance
Bank service for the United nations, Chemical bank & trust company, New York. il Banking 39:17+ D '46
Share of UN expenses which United States should bear; Gallup poll Iron Age 158:158-9 D 12 '46

Headquarters
Five basic buildings located; illustrations with text. Arch Forum 86:11 Ap '47
Harrison named to plan U N site. Arch Rec 101:10 F '47
Men at work. il Arch Forum 86:11 Mr '47
New York proposes a world capitol. il plan Arch Forum 85:116-20 N '46
Planning for peace. il plans diags Arch Rec 101:72-81 Ap '47
Plans are beginning to jell. il plans Arch Forum 86.12-14 Je '47
United nations, agreement! il Arch Forum 87: 13 O '47
U N. capital imposes exceptional problem in heat transfer through huge glass area Heat & Ven 44 105 O '47
United nations gets title insurance commission on policy to protect world capital site. East Underw 48:50 Ap 25 '47
United nations, men for the job; architectural chief and associates il Arch Forum 86:11 F '47
United nations select New York city for skyscraper world capital center map Eng N 137.825 D 19 '46
U N takes Manhattan. il Arch Forum 86: 11-12 Ja '47

Housing project
Precast floor slabs for UN housing L. F. Booth. il diags Eng N 138:455-7 Mr 20 '47
Precast floor slabs speed U.N. housing project. il diag Civil Eng 17:18-19 Ja '47

Security council
U.S. declares military force may be necessary in Greece; statement before Security council. W. R Austin. Comm & Fin Chr 166:16+ Jl 3 '47

Statistical commission
U S participation in international statistics. S A Rice. Comm & Fin Chr 165:1701+ Mr 27 '47

Trusteeship council
Trusteeship. Economist 151:741-2 N 9 '46

Palestine
What road to Zion? in U N. showdown, U.S. must define its attitude toward an historic Jewish movement J. McDonald. il Fortune 36:116-19+ S '47

UNITED nations educational, scientific, and cultural organization
Can UNESCO succeed? G. N. Shuster. Chem & Eng N 25:1182-3 Ap 28 '47
Place of science in the program of UNESCO; abstract A. H Compton Science 106:119-20 Ag 8 '47
UNESCO, a program for peace through understanding. H. O. Croft. J Eng Educ 37: 478-82 Mr '47
UNESCO holds first general session in Paris; Natural sciences subcommission conclusions. W A Noyes, jr Chem & Eng N 25:294-9 F 3 '47

UNITED nations relief and rehabilitation administration
Congress completes action on $350,000,000 foreign relief measure Comm & Fin Chr 165: 2906 My 29 '47
Relief and rehabilitation shipments by areas and countries, by economic class and commodity for 1945 and first half of 1946; tabulations For Comm W 25:11, 12 D 7 '46

Accounting
Financial control of operations and accounting for UNRRA. H. E. Howell. J Account 83:235-45 Mr '47

UNITED nations world (periodical)
Egbert White talks shop about his newest project. Ptr Ink 217 85 D 20 '46

UNITED packinghouse workers of America
Meat crisis nears. Bsns W p108 N 23 '46

UNITED parcel service, inc.
Namm quits U.P S. Bsns W p63-4 O 18 '47

UNITED public utilities corporation
Annual report. Comm & Fin Chr 165:2552 My 12 '47

UNITED STATES

Agricultural and industrial chemistry, Bureau of
Report. Chem & Eng N 25:1114 Ap 21 '47

Agriculture, Department of
Activities in which refrigeration plays part. Refrig Eng 52.420+ N '46
House appropriations committee emphasizes research in appropriations bills for navy and Department of agriculture. A. Leggin. Chem & Eng N 25 1649 Je 9 '47
Some aspects of the statistics program in the Department of agriculture C. Taeuber. Am Stat Assn J 42:41-5 Mr '47

Graduate school
Graduate school course entitled Progress in field of antibiotics. Science 104:466 N 15 '46

Production and marketing division
Agricultural limestone; existence of conservation program is at stake. D. W. Aitken. il Rock Prod 50:118-19+ Ap '47
Agricultural limestone; replies to questionnaire sent to producers indicate continuing need for government support. B Nordberg. il Rock Prod 50:106-10+ Ap '47

Air service
Air force names top policy group Aviation W 47:15 O 6 '47
Army-navy split on role of air power in atom warfare. R. Hotz. il Aviation N 7:7-8 Ap 21 '47
How strong is our air force today? R. McLarren Automotive Ind 97:45+ Ag 1 '47
New U.S. air force studying organization. Aviation W 47:12 Ag 4 '47
Unification; time's awasting. K. K. Hoyt. Aero Digest 54:21+ Ap '47
United States air force emerges from new defense organization. Aviation W 47:9-10 S 29 '47

Air service, Army
Air force reserve training. M. F. Scanlon. Aero Digest 55:68 S '47
Air force streamlines top level staff; promotes 13 generals. R. Hotz. Aviation W 47.11-12 O 13 '47
Air-reserve program. G. E. Stratemeyer. il Aero Digest 54:30-1 My '47
AAF crash rescue equipment. il Aero Digest 54 38-9 Je '47
AAF developing 500 mph. multi-jet bomber fleet. il Aviation N 7:7-8 Ap 14 '47
Army air forces development program. L. C. Craigie. Aeronautical Eng R 6:24 Mr '47
Army air forces embarks on a new management program. G. Hardy. Iron Age 159: 124-6 Ja 30 '47
AAF's proving ground airport. il diag Roads & Sts 89:65-70 O '46
Army air forces research and development. A. Leggin. il Chem & Eng N 24:2914-15 N 10 '46
Army flies all weather; Army air forces' all-weather flying center at Wilmington, Ohio. R. B Hotz. il Air Transport 5:31-3 Ap '47

UNITED STATES—Air service, Army—*Cont.*
Army planes, today and beyond. N. F. Twining. Aero Digest 54·95+ Ja '47
Automatic flight pioneered on AAF all-weather airline. R. B. Hotz. Aviation N 7: 10-11 F 24 '47
Discovery of aptitude and achievement variables. J. P. Guilford. bibliog Science 106: 279-82 S 26 '47
Engineering and research planning of the army air forces. L. C. Craigie. S A E J 55.19-22+ Mr '47
Proud and imposing record. il Aero Digest 54. 22-3+ Ap '47
Scientific development of the use of human resources; progress in the army air forces. J. C. Flanagan. Science 105·57-60 Ja 17 '47
Use of civilian skills in the army air forces T. W. Harrell. Science 106 26-8 Jl 11 '47

See also United States—Army air forces institute of technology

Safety program

AAF guards the Nation and its own. il Nat Safety N 56:27 Jl '47
Army air forces rewarded by results of safety program. Safety Eng 92:28 D '46

Transport command

Flying Tigers speed preparations to take over trans-Pacific run. S. Bangs. il Aviation N 7:19-20 Ja 6 '47
Top flight safety in the ATC M. E. Sanders. il Safety Eng 94·12-13+ S '47

Air service, Navy

Development of naval aircraft L. C. Stevens. il S A E J 55:30-1+ My '47
Naval needs, problems of naval aviation confronting the aeronautical engineer. L. C. Stevens. Aeronautical Eng R 6·22-3 F '47
Navy accents aviation future fleets; will operate 6,130 planes. W. Kroger. Aviation N 7:7-8 My 26 '47
Navy planes, today and beyond. A. W. Radford. Aero Digest 54·96+ Ja '47

Transport service

NATS calls it progressive maintenance. G. Herrick il Air Transport 5:43-4+ S '47; Discussion. 5:63 O '47

Alien property custodian

Property seized by Alien property custodian; salient points highlighted in terminal report. J. E. Markham. For Comm W 25:34 N 9 '46

Appropriations and expenditures

Federal construction work gets large appropriations. Eng N 139.145-6 Jl 31 '47
House appropriations committee emphasizes research in appropriations bills for navy and Department of agriculture. A. Leggin. Chem & Eng N 25·1649 Je 9 '47
Let's have a consolidated federal appropriations bill H. F. Byrd. Comm & Fin Chr 165.1001+ F 20 '47
Public believes government spending can be cut, Gallup poll. Iron Age 159:103 Mr 20 '47
U.S. spent $43 billion in subsidies from 1934 to 1946. H. F Byrd Iron Age 159·114 Mr 13 '47
Where it hurts; House slash in Labor department funds. Bsns W p101-2+ Ap 5 '47

See also
Budget—United States
Government expenditures

Armed services

Army-navy merger. Iron Age 159:117+ F 6 '47
Fortune survey; how did U.S. troops react to Europe? Fortune 34:5-6 D '46
Majority favor leaving armed forces untouched; Gallup poll. Iron Age 159:109 Ja 9 '47
Military procurement in peacetime. J. P Miller. Harvard Bsns R 25 no 4:444-62 [Jl] '47
Personnel and pay in military branch of federal government, yearly figures, 1939 and 1943 and monthly May 1946-May 1947. Mo Labor R 65:107 Jl '47 [cont monthly]
Three armed services to procure needs independent of each other. Steel 121:61 Ag 11 '47
Truman sends service merger bill to Congress. Comm & Fin Chr 165·1296 Mr 6 '47
Unity at home in support of unity abroad. W. S. Symington. Aero Digest 53·23, 125-6 N '46
War-navy chiefs agree on merger. Comm & Fin Chr 165:584 Ja 27 '47

See also
United States—Air service
United States—Army
United States—Navy
Veterans

Medical and sanitary affairs

Legislation affecting scientists in the armed forces. H. S. Wigodsky. Science 105.404-6 Ap 18 '47

Pay, allowances, etc.

Leave bond cashing went smoothly. il Banking 40 98+ O '47
Redemption of armed forces leave bonds. Survey of Cur Bsns 27 7-8+ Ag '47
Terminal leave bonds; with chart showing comparison with adjusted service bonds. Dom Comm 35:72-3 S '47

Army

Army to begin program of mobilizing reserves of specialized workers. Iron Age 159:130 Je 12 '47
Factory army; War dept. to build reserve units in many plants. Bsns W p31 Je 7 '47
Possibility of moving the Army chemical center from Edgewood, Md , to Huntsville, Ala A Leggin. Chem & Eng N 25:3135 O 27 '47

See also
Military service
Veterans

Commissariat

Army winter-tests rations il Food Ind 19: 478+ Ap '47
Home service teaches mess sergeants art of embellishing chow. il Am Gas Assn Mo 29: 88 F '47

Crimes and misdemeanors

Detection of incipient army criminals. G. L. Betts. Science 106.93-6 Ag 1 '47

Education

Industry to train army; Army training in industry program. il Bsns W p 17 My 10 '47
Personnel management stressed in army's officer training program. Steel 119:87 D 2 '46

Engineer corps

AGC agrees to sponsor reserve units for army engineer utilization. Eng N 139·489 O 9 '47
Biggest army research study started by Engineer corps. Eng N 139.351+ S 11 '47
Civil works program of the Corps of engineers. R. A. Wheeler. Western Soc E J 51:190-6 D '46
Corps of engineers shares acclaim of army's many brilliant accomplishments. il Civil Eng 17:184-5 Ap '47
Engineer corps program of civil works for 1947-48. R A. Wheeler. Iron Age 159.116-17 F 13 '47
GI foundry in the South Pacific. R. P Dunphy. il Foundry 74.108-9+ D '46

Equipment and supplies

Simplify military petroleum supply functions. R. L. Webb. Nat Pet N 39·32+ O 8 '47
Testing army fighting gear. E J. Tangerman. il Am Mach 90:156-7 D 5 '46

Medical and sanitary affairs

Army outlaws garbage dumps. R. R. Durham. il Pub Works 77:33 N '46
Sanitation for the American forces in Calcutta. D. C. Teal Am Water Works Assn J 39:416-22 My '47
Triethylene glycol vapor distribution for air sterilization; experiment at an army training camp. E. Bigg and others. bibliog il diags Heating-Piping 19:103-7 My '47
Why the army favors sanitary fills for refuse disposal. R. R. Durham. il diag Pub Works 78:21-2 Je '47

UNITED STATES—Army—*Continued*

Medical corps

Medical corps research and development. A. Leggin il Chem & Eng N 25·168+ Ja 20 '47

Personnel problems

Personnel management stressed in army's officer training program. Steel 119 87 D 2 '46

Research

Army engineer research and development laboratories. Mech Eng 69:597-8 Jl '47

Army research program Oil Paint & Drug Rep 151·7+ My 12 '47

See also United States—War department —Research and development division

Safety program

See also United States—Air service, Army —Safety program

Army air forces institute of technology

Old Air force engineering school expanded and renamed. Mech Eng 69.230-1 Mr '47

Army medical library

Army medical library. R. Hood. il Science 105:422-6 Ap 25 '47

Bibliography

Books published in the United States, 1945; a selection for reference libraries. 37p pa 50c American library assn, 520 N. Michigan av, Chicago '47

Budget, Bureau of

Criticism of government fiscal organization and procedure. S. Tsai. J Account 83:296-303 Ap '47

Cabinet

But always subject to change; photograph. Bsns W p20 F 8 '47

New cabinet department of social welfare. J. Bingham. Comm & Fin Chr 166 9+ Jl 3 '47

Census, Bureau of

Census bureau adopts program to save businessman's time; preparing for census of manufactures. A A. Eisenstat. Dom Comm 35:20-3 S '47

Census has problems in measuring small business. R. C. Janoschka. il Dom Comm 35: 3-7 Mr '47

Enlists statistical help Bsns W p61-2 Ag 23 '47

Income data; planning tool, Census bureau study of distribution of families by income levels. Bsns W p94-7 My 17 '47

Statistical program. P. M. Hauser. Am Stat Assn J 42·24-30 Mr '47

Bibliography

Census publications subject guide, Jan -June 30, 1946. 176p U.S. Bur. of the census, Dept. of commerce, Washington 25, D.C. '46

Chemical corps (formerly Chemical warfare service)

Chemical corps research and development. A. Leggin. Chem & Eng N 24:3178-9+ D 10 '46

Urges industry-military cooperation; abstract. A. H. Waitt. Chem & Eng N 25. 1803 Je 23 '47

Civilian production administration

CPA chief resigns, agency merging. Comm & Fin Chr 164:3127 D 12 '46

Small issues final report. Comm & Fin Chr 165:16+ Ja 2 '47

Coast and geodetic survey

Coast and geodetic survey helps business and consumers. J Senior. il Dom Comm 35. 24-8 Je '47

Coast guard

Development of ice-breaking vessels for the U.S. Coast guard H. F. Johnson. il plans diags Marine Eng 51:88-97; Discussion. 84-5 D '46

Commerce

Advertising council paves way for mass world-mindedness, potent world-trade stimulus envisaged by broad campaign C Cloyes il For Comm W 27:3+ Je 7 '47

Economist warns U S must increase foreign purchases to maintain big exports. J. F. Dewhurst. Ind Marketing 32.84+ Ag '47

Economy in reconversion; foreign trade in 1946; with figures for other years. Survey of Cur Bsns 27:27-9 F '47

Future of foreign trade; a Printers' Ink market exploration. W. P. Burn. Ptr Ink 218: 41 Mr 7 '47

Government foreign transactions during the fiscal year 1946 J. Shirer Survey of Cur Bsns 26·18-20 D '46

Import trade promotion P J Stevenson. Comm & Fin Chr 166:1635+ O 23 '47

International transactions of the United States in 1946. Survey of Cur Bsns 27.11-16 Mr '47

International transactions of the United States in the first postwar year. Fed Res Bul 32:1321-34 D '46

International transactions of the United States, third quarter of 1946. Survey of Cur Bsns 26:11-13+ D '46

International transactions of the United States during the first quarter of 1947. Survey of Cur Bsns 27.5-9 Je '47

International transactions during the second quarter of 1947 Survey of Cur Bsns 27.5-8 S '47

Merchandise exports and imports, monthly, Jan. 1942-Oct. 1946. Fed Res Bul 33:80 Ja '47 [cont monthly]

Myth of Uncle Sap. Fortune 34:126-7+ D '46

New year holds promise for U.S. world trade A. Paul For Comm W 26:3+ Ja 18 '47

Our European trade outlook. W. Ward. Comm & Fin Chr 166:1107+ S 18 '47

Our opportunities in world commerce. W. C. Foster. Comm & Fin Chr 165·2335+ My 1 '47

Postwar trends in U.S. trade to midyear 1946; with charts and tabulations. G. A. Witherow. il For Comm W 25:6-19 D 7 '46

Practical promotion of our import trade; radio discussion. W. M. Friedlaender and others il For Comm W 26:3-4+ Ja 4 '47

Purchases from Pan-American areas bring benefits to U S.; imports strengthen economy, raise living standards. D. R. Crone. il For Comm W 27:8-11 Ap 12 '47

U.S. foreign trade in 1945 and 1946; with tabulations. Comm & Fin Chr 165:1851 Ap 3 '47

United States foreign trade; total trade, distribution by countries and areas and by leading commodities, and figures for private relief shipments; 1936-38 monthly average and monthly figures, Nov. 1945-Oct. 1946. For Comm W 26:10-14 Ja 25 '47 [cont monthly]

U.S. ocean-borne world trade far exceeds prewar tonnages. J. E. Ely and N. Habib il For Comm W 26:3-5 Mr 1 '47

United States production and trade in selected commodities D. S. Parris. il For Comm W 28.3-5+ Ag 2 '47

U.S. trade up to mid-point in this year of crucial issues; with charts and tabulations. G. A. Witherow. For Comm W 29:3-5+ O 18 '47

United States transactions with Europe in the year 1946; balance-of-payments structure shows impressive changes. W. McCarroll. For Comm W 28:3-5+ Ag 16 '47

U.S. water-borne foreign commerce by trade area and flag of vessel during first 10 months of 1946. N. Habib For Comm W 27:39-41 Ap 12 '47

U S. world trade in 1946 witnessed remarkable shifts. G. A. Witherow. For Comm W 27:4-8 My 17 '47

See also

Aeronautics, Commercial—United States
Chamber of commerce of the United States
Export trade
Imports
Interstate commerce
Merchant marine —United States
Shipping—United States
United States—Commercial policy

UNITED STATES—Commerce—*Continued*

Burma

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Germany

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India

See India—Commerce

Latin America

See Latin America—Commerce

Russia

See Russia—Commerce

South Africa

See South Africa—Commerce

Commerce, Department of

Commerce department staffed for service to Main Street. C. Hayward. Dom Comm 34: 8-10 D '46

Decries budget slash W. A. Harriman. Oil Paint & Drug Rep 151:4 My 12 '47

Services available to retailers from the United States Department of commerce. B. H. Gordon J Retailing 23:14-15 F '47

U.S. government publications in relation to industry. I. M Meyer. Special Lib 38:35-8 F '47

Bibliography

Business service check list. Published weekly by U.S. Dept. of commerce; for sale by U.S Supt. of doc $1 a year

Office of international trade

See United States—International trade, Office of

Commercial policy

Bevin could be right! not giving away our gold, but purchases of selected currencies might lubricate trade. T McCarthy. Barron's 27.8-9 S 8 '47

Calls for end of economic wars; text of Waco, Texas, address H. S. Truman Comm & Fin Chr 165:1429+ Mr 13 '47

Chances of freer trade. Iron Age 159:129+ Mr 6 '47

Clarifying our position on world economic affairs H M Tremaine. il Mag of Wall St 79:353-5+ Ja 4 '47

Expanded exports essential for stability. W. A. Harriman. Comm & Fin Chr 165:997+ F 20 '47

Foreign economic policy of the United States. W. L. Clayton. Comm & Fin Chr 164:2471+ N 14 '46

Foreign trade. G F. Sullivan. il Iron Age 159: 82-7 Ja 2 '47

Foreign trade freedom; declaration by National foreign trade council. Banking 39:77 Ja '47

How much more foreign aid? Bsns W p 113-14 Je 7 '47

How to balance U S. trade; building up strategic reserves will reduce the export surplus. P Einzig. Banking 40:37-8+ S '47

Japan must compete. R C. Kramer. Fortune 35:112-13+ Je '47

N.Y. board of trade wants bi-partisan action and two-way trade in trade agreements. Comm & Fin Chr 164:3395 D 26 '46

Orienting international economic collaboration. W. Ward Comm & Fin Chr 165:645+ Ja 30 '47

Our opportunities in world commerce. W. A. Harriman. Comm & Fin Chr 164:2464+ N 14 '46; Same For Comm W 25.3-4+ N 30 '46

Our trade policy; expanded trade or economic warfare? radio discussion. W. Thorp and others. For Comm W 25:3-5+ D 21 '46

Outlook for exports; our foreign economic program and our export position. Nat City Bank p39-42 Ap '47

Questions of foreign economic policy. R. F. Mikesell. Comm & Fin Chr 164:3215+ D 19 '46

Reciprocal trade; a consistent bi-partisan policy, statement before House Ways and means committee. W. A. Harriman. Comm & Fin Chr 165:2335+ My 1 '47

Reciprocal trade agreements; their importance to this country and the world. Index 27 no 1:13-22 [Mr] '47

Re-opening foreign trade channels. V. L Horoth. il Mag of Wall St 79 239-41+ D 7 '46

Steel and equipment exports could aid in preventing new world crisis. C A. Koons. Steel 120.47 Je 30 '47

Twentieth century fund presents its concept of world-trade policies. For Comm W 25.25 N 9 '46

Two-way world trade; will it be a dream or a reality? W. S. Lockwood. Sales Management 57:37-9 D 1 '46

U.S. must join the sterling area; must also scrap Bretton Woods. W. Craven-Ellis Comm & Fin Chr 165:2741 My 22 '47

We have a stake in our economic foreign policy; address before American farm bureau federation; abstract. W. L. Thorp. Dom Com 35:3-9 F '47

World trade is your business W. A. Harriman. il Dom Comm 35:3-8 My '47

See also

Commercial treaties and agreements
Reciprocity
Tariff—United States
United States—International trade, Office of

Conciliation service (now Federal mediation and conciliation service)

Administration moves to iron out labor troubles. L. W. Moffett. Iron Age 159:80+ Ja 23 '47

Expansion of U.S. Conciliation service. E L. Warren. Comm & Fin Chr 165:13+ Ja 2 '47

For arbitration, trucking commission, now in Labor dept. settles disputes. Bsns W p74+ Mr 1 '47

Labor management policy for U. S. Conciliation service. Mo Labor R 64:81-3 Ja '47

Mediation experts accept service with U.S. Conciliation service. Mo Labor R 64:265-7 F '47

No need for Federal mediation board. L. B. Schwellenbach. Comm & Fin Chr 165:1045+ F 20 '47

United States Conciliation service, 1913-47. Mo Labor R 65:172-4 Ag '47

Work of the United States Conciliation service since VJ-day. Mo Labor R 63.891-2 D '46

Technical service branch

Incentive service; federal technical agency offers help. Bsns W p96+ N 23 '46

Congress

Achievements of the GOP Congress R. A. Taft. Comm & Fin Chr 166:517+; Reply. G Sullivan 522+ Ag 7 '47

Analyzes performance of Congress on election mandates, Gallup poll. Iron Age 160:103+ Jl 17 '47

80th Congress fulfilled pledges on economy and labor. C A. Halleck. Comm & Fin Chr 166:619+ Ag 14 '47

Form national committee to strengthen Congress. Comm & Fin Chr 165:383 Ja 20 '47

Gains in congressional efficiency reflected in work of first session of 80th Congress. A. S M Monroney. Steel 121:50 S 1 '47

Laws passed by the 80th Congress, first session, of special interest to public utilities. F. X Welch. Pub Util 40:292-7 Ag 28 '47

No! this was not a do nothing session of Congress. C. Bargeron Comm & Fin Chr 166:421+ Jl 31 '47

100 per cent rise seen in cost of Congress. Comm & Fin Chr 165:2650 My 15 '47

Republican Congress kept pledges; radio address. C A. Halleck. Comm & Fin Chr 166:422+ Jl 31 '47

Substantial segment of population can't say which party has most members in Congress; results of poll. Iron Age 159:142+ My 29 '47

UNITED STATES—Congress—*Continued*
Two economists for congressional staff posts. Bsns W p18 Ap 12 '47

Council of economic advisers

Economic report. Bsns W p20 Jl 26 '47
Employment act of 1946 in operation J. Viner R Econ Stat 29 74-9 My '47
First report of Council of economic advisers, text Comm & Fin Chr 164:3351+ D 26 '46; Same. Fed Res Bul 33:13 Ja '47; Abstract. Mo Labor R 64:43-4 Ja '47
Peacetime economic planners Bsns W p22+ My 3 '47

Cultural relations

American libraries in foreign service. R. H. Heindel. Special Lib 38 3-5 Ja '47

Defenses

The army, the navy, and the taxpayer H. S. Taylor and R M. Bleiberg. Barron's 27:3 F 24 '47
CAB sees excessive costs in creating transport reserve C. Adams. Aviation W 47·51-2 N 3 '47
Defensive air patrols urged for U.S. frontiers. G. C. Kenney. Aviation W 47:15 Ag 18 '47
Defense of North America. A. G. L. McNaughton. Elec Eng 66.754-7 Ag '47
Electric power and national defense; lesson from Spanish revolution J W. Swaren. Power Pl Eng 51·67+ S '47
Every airport counts. H. S. Vandenberg. Aero Digest 55:26-7 Ag '47
National security in the atomic age. Metal Prog 52:77 Jl '47
Plan for national security, brief look at two wars, the last one and the next one. I. C. Eaker. il Elec Eng 66:237-40 Mr '47
Plans for total economic mobilization agreed necessary. Iron Age 160:100 O 30 '47
Research for national defense G. C. Kenney. Tech R 49·523-4+ Jl '47
Three civilian war mobilization agencies forming in Washington. G. Baker. Iron Age 160:118 Ag 7 '47
U.S.-Canada to continue joint defense. Comm & Fin Chr 165:1042 F 20 '47
War department plans reserve service units within industry. Automotive Ind 97:146+ S 1 '47

See also
United States—Armed services

Economic conditions

American economy under full employment; a pattern for 1950; based on Bureau of labor statistics study. W. D. Evans and others. Dun's R 55:17-19+ Jl; 17-20+ S '47
America's needs and resources; a Twentieth century fund survey which includes estimates for 1950 and 1960 J. F Dewhurst. 812p $5 Twentieth century fund, 330 W. 42d st, New York 18 '47; Synopsis (U.S A 1950-1960). Air Transport 5:51-66 My '47; Same. Am Mach 91·132a-132p My 8 '47; Same. Aviation 46:99-114 My '47; Same. Aviation N 7·21-36 My 5 '47; Same Bsns W p55-70 Ap 26 '47; Same. Coal Age 52·86a-86p My '47; Same Elec World News ed 127:17-32 My 3 '47; Same. Eng & Min J 148·50a-50p My '47; Same. Factory Management 105·96a-96p My '47; Same. Food Ind 19.sup71-86 My '47; Same. Product Eng 18:144a-144p My '47
Appraising our expanding economy. W. C. Hanson. Mag of Wall St 79:472-4+ F 1 '47
As we enter our most significant era. W. Gates Mag of Wall St 80:248-50+ Je 7 '47
Can prosperity last. Fortune 35:2-4 My '47
Colmer committee sees no need for depression. Comm & Fin Chr 164:3221+ D 19 '46
Danger signals of government agencies point in opposite direction from Truman's. Barron's 27:8 Ag 4 '47·
Economy in reconversion; review of 1946. Survey of Cur Bsns 27:1-31 F '47
Facts of life W. Gates. Mag of Wall St 79: 592-4+ Mr 1 '47
Financial expert looks at U.S.; address before Economic club of Detroit A. N. Young. Comm & Fin Chr 165:2201+ Ap 24 '47
Fortune survey; Fortune consumer outlook. E. Roper. Fortune 36:5-6+ N '47
Fortune survey, the economic mood, summer 1947 Fortune 36:10+ S '47
Full employment patterns, 1950 J. Cornfield and others bibliog Mo Labor R 64:163-90, 420-32 F-Mr '47
How well can Americans live? charts Fortune 35.124-32 My '47
Inventory of our situation. J. W. Snyder. Comm & Fin Chr 165:868+ F 13 '47
Is a recession necessary? S H. Slichter. il Dun's R 55 11-14+ Ag '47
Liquidation of the middle brackets. Fortune 35:136+ Ja '47
Market; 1948 il Fortune 36:77-85+ N '47
Nation's 1946 output in dollars equals wartime peak Comm & Fin Chr 165:1439 Mr 13 '47
President's economic report to Congress, January 8, 1947; summary. Mo Labor R 64: 234-8 F '47
President's economic report under Full employment act, abstract. Comm & Fin Chr 165 128 Ja 9 '47
President's mid-year economic report; foreword and summary, text of Section V. Comm & Fin Chr 166:320+, 433+ Jl 24, 31 '47
President's midyear economic report to Congress, excerpts of foreword and summary. Mo Labor R 65·321-5 S '47
Realistic reappraisal of the financial condition of the U S. H. M. Tremaine. Mag of Wall St 80:195-6+ My 24 '47
Technological gains and their uses. F. C Mills. Science 105·220-3 F 28 '47

See also
Business conditions
Debts, Public—United States
Finance—United States
Income—United States
Labor and laboring classes—United States
Wages—United States

Economic history

Comparison of 1919-1920 and now. K. W. Schlubach. Comm & Fin Chr 166:1736+ O 30 '47
Inflations and deflations of my eighty years. I. Fisher. Comm & Fin Chr 165·1377+ Mr 13 '47
National product since 1869; abstract. S. Kuznets. Comm & Fin Chr 165:2483 My 8 '47
Roosevelt's new deal revealed as biggest market manipulator in history, diary of Henry Morgenthau, jr discloses. Comm & Fin Chr 165:127+ Ja 9 '47

Economic policy

Accomplishing economic stability; statement before Joint committee on the economic report. E. P. Schmidt Comm & Fin Chr 166: 214+ Jl 17 '47
Affirmative program R. A Taft. Comm & Fin Chr 165·265+ Ja 16 '47
American economy in transition; symposium. C. Hitch and others. R Econ Stat 29:16-38 F '47
Blueprint of a better economy for U.S. J. D. Mooney Steel 121.59-60 Jl 28 '47
Causes and remedies of present inflation; statement prepared for Congressional joint committee on the economic report. P. H. Nystrom. Comm & Fin Chr 166:1311+ O 2 '47
Congress and economic stability; problems of Joint committee on the economic report. C O Hardy. Comm & Fin Chr 166·2+ Jl 3 '47
Congress committee takes no issue with President's economic report. Comm & Fin Chr 165·919 F 13 '47
Curb inflation and provide foreign aid; reasons for special session of Congress; radio address. H. S Truman. Comm & Fin Chr 166:1739+ O 30 '47
Definition of American economy. P. G. Hoffman. Comm & Fin Chr 166·1640+ O 23 '47
Demand action on Bowles-ADA report; 52 congressmen agree boom-and-bust must be averted Comm & Fin Chr 165:3044 Je 5 '47
Economic control and political freedom C E Wilson Gen Elec R 50:11-15 Ag '47

UNITED STATES—Economic policy—*Cont.*
Economic instability; causes and remedies, statement before Joint congressional committee on the economic report P. G Hoffman. Comm & Fin Chr 166·226+ Jl 17 '47
Employment act of 1946 in operation J Viner R Econ Stat 29 74-9 My '47
Favorable outlook for 1947 held dependent on labor policies. S M Foster. East Underw 48·1+ Ja 3 '47; Same. Weekly Underw 156:100-2 Ja 4 '47; Same Life Ins Courant 52·12-14 Ja '47; Same. Spectator (Life ed) 154·12-15 Ja '47; Abstract. Nat Underw (Life ed) 51·1 Ja 3 '47
First reports under the Employment act of 1946; President's report A. H. Hansen R Econ Stat 29.69-74 My '47
Free enterprise and the future W. A. Harriman. Comm & Fin Chr 165 265+ Ja 16 '47
Government and business; address before Congress of American industry. A W. Harriman. Comm & Fin Chr 164·2887+ D 5 '46
House special committee issues Economic primer for 1947. Iron Age 159:133-5+ Ja 9 '47
How to maintain prosperity; statement before Joint congressional committee on the economic report S. S. Colt. Comm & Fin Chr 165.3338+ Je 26 '47
Major problems in creating full employment; statement before Joint congressional committee on the economic report; abstracts. C E. Wilson Comm & Fin Chr 165.3339+ Je 26 '47, Pub Util 40.112-14 Jl 17 '47
Making the free market free. Fortune 36.2-4 N '47
Markets in de-Rooseveltization. M. Palyi. Comm & Fin Chr 164:3009+ D 12 '46
Our aim; economic progress abroad and at home J. W Snyder. Comm & Fin Chr 164.2522+ N 14 '46
Our primary task, a healthy economy; address before U.S. Chamber of commerce W. A. Harriman Comm & Fin Chr 165: 2476+ My 8 '47
Outlook for freedom. P. G Hoffman Mech Eng 69:10-12 Ja '47; Same cond. Power Pl Eng 51 67+ F '47
Politics and the planners. Iron Age 158:125+ D 5 '46
President's economic report to Congress, January 8, 1947; summary. Mo Labor R 64: 234-8 F '47
Program of stabilized abundance; statement before Joint congressional committee on the economic report. J. M. Ney. Comm & Fin Chr 166:323+ Jl 24 '47
Remedies for our shaky economic situation; statement before Joint congressional committee on the economic report L. Henderson Comm & Fin Chr 166·322+ Jl 24 '47
Sustaining prosperity and general stability. E P. Schmidt. Comm & Fin Chr 166·1410+ O 9 '47
Task of the new Congress. J. W. Martin, jr. Comm & Fin Chr 165.126+ Ja 9 '47
Truman can't afford sharp deflation move Barron's 27.1+ N 3 '47
Truman short-range economic program; excerpts from Economic report to Congress. Comm & Fin Chr 165:272, 301 Ja 16 '47
We must prevent doom and bust. L Henderson Comm & Fin Chr 165 2860+ My 29 '47
We've outgrown our thinking R Moley. Comm & Fin Chr 165.1165+ F 27 '47
What makes American enterprise keep ticking? V. Jordan. Edison Elec Inst Bul 15. 235-40+ Je '47, Excerpts. Elec World 127: 95 Je 7 '47
Why the confusion A. P Sloan, jr. Am Pet Inst Proc 26(1)·53-7 '46

See also
Committee for economic development
Economic planning
Economic policy
Finance—United States
Government regulation of industry
Industry and state—United States
Inflation (finance)
Railroads and state—United States
Reconstruction finance corporation
Taxation—United States

Economic relations
America's creditor role; address before National industrial conference board. J. Abbink, Comm & Fin Chr 165:1652+ Mr 27 '47
Clarifying our position on world economic affairs. H M. Tremaine. il Mag of Wall St 79 353-5+ Ja 4 '47
Dollar diplomacy Fortune 36 2-3 Ag '47
Fight against world crisis V. L Horoth. il Mag of Wall St 80.580-2+ Ag 30 '47
For export U S know-how. il Bsns W p85-6+ Jl 5; 93-4+ Jl 12; 98+ Jl 19, 94+ Jl 26 '47
Free trade possible only if we buy it Barron's 27 1+ Ag 25 '47
Our domestic economy and foreign affairs, address before Economic club of New York. W L Thorp. Comm & Fin Chr 165.2065+ Ap 17 '47; Same. Dun's R 55:11-14+ Je '47
Our economic responsibilities in the world today, address before Herald tribune forum. W. A. Harriman. Comm & Fin Chr 164: 2208+ O 31 '46; Same. For Comm W 25: 3+ N 23 '46
Our investment in free enterprise; economic implications of our foreign policy H. M. Tremaine il Mag of Wall St 80.76-8+ Ap 26 '47
Role of the United States in world trade. M S. Rosenthal. Ann Am Acad 252.35-44 Jl '47
To the boards of directors of American business, buy peace, cut prices, encourage loans, foster imports, send engineering missions abroad. Fortune 35·2-4 Je '47; Discussion 36.28+ Ag '47
Turkey aid for what? business criteria for helping a nation help itself. M W. Thornburg. il map Fortune 36 106-7+ O '47
U.S. opportunity il Fortune 35:83-5+ Je '47; Discussion. 36·26+ S '47
United States responsibilities in foreign reconstruction D. Acheson Comm & Fin Chr 165.2730+ My 22 '47

Austria
See Austria—Economic relations—United States

Great Britain
See Great Britain—Economic relations—United States

Latin America
See Latin America—Economic relations—United States

Switzerland
See Switzerland—Economic relations—United States

Education, Office of
Engineering colleges and the U.S. Office of education H. H. Armsby. J Eng Educ 37. 601-9 Ap '47

Employees' compensation commission
Compensation unit sings swan song. Nat Underw 51:21 F 20 '47

Employment service
Aid to executives; USES merges placement functions. Bsns W p70+ D 28 '46

Executive departments
Administrative management in the government of the United States, report of the President's committee on administrative management. 47p pa $1 Public administration service, 1313 E. 60th st, Chicago 37 '47
Truman urges uniting various agencies. Comm & Fin Chr 165·2529 My 8 '47
Where you can get government market data; with chart. W. P Burn. Ptr Ink 218 43-6 F 7 '47

See also
Administrative procedure act, 1946

Federal bureau of investigation
Metallurgical examinations, analyses aid FBI. J. E. Hoover. il Steel 120 52-3 Ja 20 '47; Same abr. Mech Eng 69.234-5 Mr '47

Federal mediation and conciliation service
Local handling for labor disputes. Bsns W p 100 O 11 '47
New approach to mediation. Bsns W p77-8 Ag 16 '47

UNITED STATES—Federal mediation and conciliation service—*Continued*
New mediation board. J. R Bangs Factory Management 105 91-2 S '47

Federal power commission
See Federal power commission

Federal trade commission
See Federal trade commission

Finance
See Finance—United States

Food and drug administration
Congress acting to restore seizure powers to FDA; Wolverton bill Oil Paint & Drug Rep 151·3+ Je 16 '47
Drug act tests. Bsns W p64-5 N 9 '46
FDA asks restoration of seizure authority. Oil Paint & Drug Rep 151:5 Ap 7 '47
FDA gets two knocks, two boosts from courts. Bsns W p74+ Je 7 '47
FDA inspection fund increase refused. Oil Paint & Drug Rep 151 5 Mr 31 '47
F D A violations reported for 1946. Oil Paint & Drug Rep 151.7+ F 17 '47
Food and drug blow Bsns W p20 F 22 '47
Increasing efficiency of FDA phenol-coefficient test A R. Cade. Soap & San Chem 23:131+ O '47

Foreign and domestic commerce, Bureau of
See also
United States—International trade, Office of

Foreign relations
Americophobia Economist 153 628-9 O 18 '47
Asia and the Truman doctrine. map Economist 152 483-4 Ap 5 '47
Back up the Truman doctrine A. M. Landon Comm & Fin Chr 166·13+ Jl 3 '47
Business and investment aspects of our foreign policy J Dana. Mag of Wall St 81: 14-15+ O 11 '47
Dangers of our foreign policy. G W Malone Comm & Fin Chr 166·906+ S 4 '47
Dollar diplomacy; British view P. Einzig Comm & Fin Chr 166·14 Jl 3 '47
Emergent policy. Economist 152·624-5 Ap 26 '47; Same. Iron Age 159:129+ My 8 '47
Foreign policy; ideals, not deals J. F. Dulles. Comm & Fin Chr 165.996+ F 20 '47
GOP set to take lead in salvaging Europe. E Blair Barron's 27 10 Je 16 '47
Greeks and gifts. Economist 152.456-7 Mr 29 '47; Same. Iron Age 159·129+ Ap 10 '47
House members go after facts on Europe's needs. E. Blair. Barron's 27.10 S 1 '47
How can U.S. contribute to better world? M. Nadler Comm & Fin Chr 165 2737+ My 22 '47
How's business? foreign policy of the United States Barron's 27:1 F 3 '47
Imperialism or indifference? Economist 152: 785-7 My 24 '47
Imperialist U.S. needs new deal; B.B.C. radio address, April 13, 1947. H A Wallace. Comm & Fin Chr 165.2060+ Ap 17 '47
Implement the Truman doctrine; Jefferson day address. T. C Clark. Comm & Fin Chr 165·2203+ Ap 24 '47
Interplay between domestic and foreign policy W. L. Thorp. Dun's R 55.13-15+ Ja '47
Korea: the U S gets to work il map Fortune 35 98-103+ Je '47
Marshall plan finds wide support among U.S. voters, Gallup poll Iron Age 160.97+ Jl 31 '47
Marshall states foreign policy in first news conference Comm & Fin Chr 165 1050 F 20 '47
Mr Marshall's round. Economist 152.657-8 My 3 '47
More information on foreign policy wanted by public; Gallup poll. Iron Age 160·119 S 4 '47
New diplomacy, new business; U S. drive to stop communism abroad. il maps Bsns W p15-17 Mr 22 '47
No American imperialism; address before Belgium-American society, Brussels. E Johnston. Comm & Fin Chr 166·12+ Jl 3 '47
Non-partisan U S. world policy. H. E. Stassen. Comm & Fin Chr 164.2796 N 28 '46
Our foreign aid policy; letter to Senator Bridges. H Hoover. Comm & Fin Chr 165 3230+ Je 19 '47
Our foreign economic policy; address at meeting sponsored by United nations council of Philadelphia J. W Snyder. Comm & Fin Chr 165:1927+ Ap 10 '47
Our foreign problems, address at Wesleyan university. D Acheson. Comm & Fin Chr 165·3352+ Je 26 '47
Our new foreign policy A. M Landon. Comm & Fin Chr 165.1651+ Mr 27 '47
Program for foreign rehabilitation aid. H. E Stassen. Comm & Fin Chr 165.2852+ My 29 '47
Red coup in Hungary forcing us into stronger stand. Barron's 27.1+ Je 9 '47
Revised foreign policy. R A. Taft. Comm & Fin Chr 166:1323+ O 2 '47
Scores war mongering in U S.; address at United nations general assembly. A. Vishinsky. Comm & Fin Chr 166·1222-3 S 25 '47
Testing our foreign policy, address before Foreign policy association J P. Warburg. Comm & Fin Chr 165 1651+ Mr 27 '47
Tough line Economist 152.401-2 Mr 22 '47; Same. Iron Age 159 115+ Ap 3 '47
Truman asks aid for both Greece and Turkey, text of address before Congress. Comm & Fin Chr 165:1373+ Mr 13 '47
Truman's Greek policy winning wide public support; Gallup poll. Iron Age 159·125+ Ap 10 '47
Turning point in foreign relations; address before Conference of governors, Salt Lake City G C Marshall Comm & Fin Chr 166 228 Jl 17 '47
U-N votes may point the course of trade. Barron's 27 1+ S 22 '47
United States and the world crisis. J P. Warburg Comm & Fin Chr 166 1753+ O 30 '47
U S foreign policy stands. J. F. Byrnes. Comm & Fin Chr 164:2472+ N 14 '46
United States in Europe; need of sound money, free prices and open markets. Fortune 36·2-4 Jl '47
U S vs. communism in one world; radio address H. E Stassen. Comm & Fin Chr 166:209+ Jl 17 '47
U S will help her friends; speech before joint session of the Brazilian congress. H S. Truman. Comm & Fin Chr 166:1010+ S 11 '47
Waging world peace Economist 152 712-13 My 10 '47; Same. Iron Age 159.121+ My 22 '47
Wall Street rule and foreign policy. H. A. Wallace. Comm & Fin Chr 166.1118+ S 18 '47
Wants Baruch survey of America's assets before undertaking President's proposed foreign assistance program. H F Byrd Comm & Fin Chr 165:1923+ Ap 10 '47
See also Reconstruction (World war, 1939-1945)—Marshall plan

China
See China—Foreign relations—United States

Great Britain
See Great Britain—Foreign relations—United States

Greece
See Greece—Foreign relations—United States

India
See India—Foreign relations—United States

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See Nepal—Foreign relations—United States

Russia
See Russia—Foreign relations—United States

Turkey
See Turkey—Foreign relations—United States

UNITED STATES—*Continued*

Foreign service

U.S.foreign service and American business C M. Ravndal and E. M. Braderman. il For Comm W 28.3-5+ Ag 23 '47

Forest service

Safety measures

First law of nature in the Forest service. H. E. Hedges il Nat Safety N 55:20-1+ Je '47

General accounting office

Criticism of government fiscal organization and procedure. S. Tsai. J Account 83:296-303 Ap '47

Geological survey

Geological survey completes new structure map for Rangely field N. W. Bass. map Oil & Gas J 45:86-7+ N 30 '46

How the U.S G.S may serve the mining industry. R. N Hunt. il Min Cong J 32.37-40 D '46

Role of the Geological survey in mineral exploration. W. E Wrather. Min Cong J 32.79-80 O '46

Government property

See also

Industrial demobilization—Government plants

Government publications

See Government publications

Industries and resources

America's needs and resources; a Twentieth century fund survey which includes estimates for 1950 and 1960. J. F. Dewhurst 812p $5 Twentieth century fund, 330 W. 42d st, New York 18 '47

Business so good it hurts; Krug report on national resources and foreign aid. Bsns W p23-4 O 25 '47

CPA reports outlook optimistic for high economy during 1947. Iron Age 159:127+ Mr 20 '47

House committee reports on economic concentration. G. Hardy and K. Rannells. Iron Age 159.109-10 Ja 16 '47

New American market, Great Lakes. Bsns W p41-8 My 31 '47 [reprints 20c]

New American market; Middle Atlantic states Bsns W p55-62 Jl 5 '47 [reprints 20c]

New American market; New England. Bsns W p43-50 Ag 30 '47 [reprints 20c]

New American market; Southwest. il Bsns W p39-46 Jl 26 '47 [reprints 20c]

New American market; the Far West. Bsns W p43-52 Ap 12 '47 [reprints 20c]

New American market; the farm West. il Bsns W p65-72 S 27 '47 [reprints 20c]

New American market, the Southeast. il Bsns W p73-80 O 25 '47 [reprints 20c]

Productivity changes since 1939. C. S. Gody and A. D Searle. Mo Labor R 63:893-917 D '46

Secretary Krug reports. Pub Util 40.646-7 N 6 '47

See also

Northwest—Industries and resources
Southwest—Industries and resources
West—Industries and resources

also subdivision United States under names of various industries, e g.

Airplane industry and trade
Automobile industry and trade
Chemical industries
Furniture industry and trade
Mines and mineral resources
Wool trade

Interior, Department of

Post-war statistical planning in the Department of interior. G. A. Lamb Am Stat Assn J 42:37-41 Mr '47

Internal revenue bureau

Commissioner's power Freeman and Kirschner. bibliog J Account 84:59 Jl '47

International information and cultural affairs, Office of

American libraries in foreign service R. H. Heindel. Special Lib 38:3-5 Ja '47

International trade, Office of

Thomas C. Blaisdell, jr., becomes new director, succeeding Arthur Paul For Comm W 26:42 Ja 18 '47

Joint research and development board

Address at general engineering meeting. V. Bush Science 105:89-91 Ja 24 '47

Justice, Department of

Anti-trust division

Anti-trust unit to act on mergers. Comm & Fin Chr 165.1705 Mr 27 '47

Justice dept. acts to control mergers; formation of merger unit Oil Paint & Drug Rep 151:3+ Mr 24 '47

Labor, Department of

Fresh start, Labor dept wipes out many pre-portal act orders. Bsns W p76+ Jl 5 '47

Labor dept. promotes labor union philosophies in educational institutions. E. Bunting. Comm & Fin Chr 165 1702 Mr 27 '47

Where it hurts; House slash in Labor department funds. Bsns W p101-2+ Ap 5 '47

Conciliation service

See United States—Conciliation service

Wage and hour division

Bureau slowdown. Bsns W p 102-3 S 13 '47

Labor statistics, Bureau of

BLS program for 1947-48. C. D. Stewart. Mo Labor R 65:409-14 O '47

Developments in labor market and price statistics in 1945 and 1946. A F. Hinrichs. Am Stat Assn J 42.31-7 Mr '47

U.S. Bureau of labor statistics (Business literature v. 19, no. 3) p51-2 Business library, Newark public lib, Newark, N.J. N '46

Bibliography

Publications of the Bureau of labor statistics. Published monthly by Bureau of labor statistics, Washington 25, D.C. (free to libraries)

Library of Congress

See Library of Congress

Marine corps

Honorable discharge; upon twenty-one survivors of Company K, U.S. marines, it bestowed twenty-one veteran's problems; with biographical sketches G. P. Hunt. Fortune 36:69-77+ S '47

Maritime commission

Annual report. Marine Eng 52:79-80 Mr '47

Loss of USMC authority to operate tankers would threaten oil supplies. Nat Pet N 39. 11-12 My 7 '47

Maritime commission loses 2 million tons of ship plates; demands refund from firms which overshipped. G. Hardy. Iron Age 160.111-12 S 4 '47

Maritime service

Top management does training. W. G. Torpey. Personnel J 25:208-10 D '46

Materials distribution, Office of

CPA functions transferred to OMD. Oil Paint & Drug Rep 151.5 My 12 '47

Consulting technical committees of the OMD Rubber division. Rubber Age 61:464 Jl '47

Merchant marine

See Merchant marine—United States

Mines, Bureau of

Bureau of mines asks $30,000,000 more for synthetic liquid fuels research. W. F. Bland and W C. Uhl flow diag Pet Processing 2: 85-7 F '47

Government research on synthine process and other synthetic fuels studies. Pet Processing 2.172 Mr '47

UNITED STATES—Mines, Bureau of—*Cont.*
Metallurgical research program of the Bureau of mines relating to the nonferrous metals. R S Dean and B. Silkes. 10pls U S Bur Mines Rep of Invest 4064:1-22 bibliog(p3-6) '47
Significance of Bureau of mines approval in selection of respiratory devices. S. J. Pearce and H. H Schrenk. il diag Safety Eng 93: 54-9 Ja '47

Bibliography

Bibliography of Bureau of mines investigations of coal and its products, 1940 to 1945. A C. Fieldner and others. U S Bur Mines Tech Pa 698:1-53, pa 15c Supt. of doc. '47
Bureau of mines papers published in the technical press, January 1, 1938, to January 1, 1946. M. E. Winslow and H. J. Stratton, comps 230p U.S. Bur mines, Washington, D.C. '47

Mint

Mint finds present comage laws burdensome. Comm & Fin Chr 165:495 Ja 23 '47

National advisory committee for aeronautics

Supersonic compressor, new ramjets revealed at NACA shows; first inspection of Cleveland Flight propulsion research laboratory R Hotz il Aviation W 47.11-12 O 20 '47

National park service

Men in green. B De Voto. Fortune 35 135 Je '47

National security resources board

For a peacetime WPB. Bsns W p8 S 13 '47
Pentagon businessman. Bsns W p6 S 13 '47

Naval reserve

New civilian Naval reserve Marine Eng 52 92-3 My '47
United States naval reserve. D S. Wicks. Inst Radio Eng Proc 34:973-4 D '46

Navy

See also
Moving pictures in naval education
Navy yards and naval stations
Oil reserves (United States navy)
United States—Air service, Navy
Warships—United States

Construction battalions

Stepping stones to victory; Herculean efforts in engineering construction; work of seabees in the Pacific area. W. M. Angas. il Tech R 49:337-40+ Ap '47

Education

Industrial training for naval officers. Marine Eng 51:102 D '46

Electronics laboratory

Educational programs at research centers. R Bennett. Science 106:283-4 S 26 '47

Equipment and supplies

Moving hot stuff for the fleet; lift trucks, small cranes and utility loaders for handling ammunition. G. F. Hussey, jr. il Ry Age 122:232-4 Ja 25 '47
Navy's procurement program. M. L. Ring. Marine Eng 52:86-7 Je '47

Laboratories

See Naval boiler and turbine laboratory; Naval research laboratory; Pennsylvania state college—Ordnance research laboratory

Navy department

Accounting

Navy accounting; a lesson in adaptation. L. A. Schmidt. Harvard Bsns R 25 no2.243-54 [Ja] '47

Employees

Board of U.S. civil service examiners for scientific and technical personnel of the Potomac River naval command organized. Mech Eng 68:1067 D '46

Insurance requirements

Agents assail navy centralized insurance deal on ships' service stores. H. C. Hallam. Nat Underw 51:1+ Mr 20 '47
Fight navy's ship service stores insurance setup Nat Underw 51:17 Mr 13 '47

Naval research, Office of

Electronic research sponsored by the Office of naval research. E R. Piore. bibliog Inst Radio Eng Proc 35:1119-21 O '47
Navy's investment in research. P. F. Lee. Marine Eng 52 85-6 Je '47
Office of naval research. H. G. Bowen Welding J 26 489-93 Je '47
Office of naval research. A. Leggin. Chem & Eng N 25 1728-30 Je 16 '47

Ordnance department

Army ordnance-university gage laboratories il Product Eng 18:137 My '47
Ordnance department research and development. A. Leggin. il Chem & Eng N 24: 3350-1 D 25 '46

Patent office

Reorganized by C. W. Ooms. Oil Paint & Drug Rep 151:64 F 17 '47

Politics and government

Fortune survey; the Roosevelt legend Fortune 35.10+ Mr '47
Postwar discontentment found in U S. and Britain; public opinion polls Iron Age 158: 135 N 14 '46

See also
Democratic party
Republican party

Post office department

See also
Postal service—United States

Price administration, Office of

OPA must aim to please. Bsns W p17 N 9 '46
President by executive orders ends OPA June 1. Comm & Fin Chr 165:2392 My 1 '47

Public health service

New horizons in medical research. C. J. Van Slyke. Science 104:559-67 D 13 '46
Public health service and industrial pollution. T Parran Ind & Eng Chem 39.560-1 My '47

See also
National institute of health
Water supply—Standards

Bibliography

Public health service publications issued during the period January-June 1946. Pub Health Rep 62 131-6 Ja 24 '47
Public health service publications issued during the period July-December 1946. Pub Health Rep 62 1022-6 Jl 11 '47

Public roads administration

Highway research develops better methods of road construction. il Roads & Bridges 85: 88-9+ Ap '47
Work of Public Roads research laboratory. il Eng N 138.998-1002 Je 26 '47

Quartermaster corps

Quartermaster corps research and development A. Leggin. il Chem & Eng N 24: 3044-5+ N 25 '46

Reclamation, Bureau of

Battle that never was; no last-ditch struggle to put back Reclamation Bureau items in budget. Pub Util 39:697-9 My 22 '47
Engineering laboratories of the Bureau of reclamation J W. Shaver. Concrete 55: 20-2 S '47
More water conservation for the West. K. Markwell il Eng N 138:291-4 F 20 '47
Pushes construction on many projects. Pub Util 38:773-4 D 5 '46
Reclamation bureau lists power expenditures during current fiscal year. Pub. Util 40: 439-40 S 25 '47

UNITED STATES—Reclamation, Bureau of—*Continued*
Research laboratories of the Reclamation bureau R F. Blanks and others. il Eng N 139.380-3, 472-6, 524-8, 603-7, 655-8, 737-40 S 18, O 2, 16, 30, N 13, 27 '47
Six-year reclamation power plan would cost U S. $801,070,480. Elec World News ed 127: 3-4 Mr 8 '47

Ships, Bureau of

See also Naval boiler and turbine laboratory

Social conditions

People; habits, vanities, vices, religion, and morbidity. Fortune 35:130-2 My '47

Standards, National bureau of

Building technology division set up Eng N 139.304 S 4 '47; Same. Ind Stand 18·245-6 O '47, Same abr. Heat & Ven 44 116+ S '47
Industry's common language Bsns W p52+ F 8 '47
National bureau of standards names new division chiefs. Ind Stand 17.285 N '46
Rubber research and technology at the National bureau of standards L. A. Wood. bibliog(174 titles) India Rubber World 115: 789-97 Mr '47
Standards bureau forms atomic physics division Oil Paint & Drug Rep 152:40 O 20 '47
Two wars put U S at the top in optical glass; research carried on by National bureau of standards. il Cer Ind 48:96-7 Ap '47

State department

Blueprint for planning; Marshall frees new Policy planning staff from administrative duties. Bsns W p97-8 Jl 19 '47
Resignation of Secretary Byrnes; General Marshall to succeed him in State department. Comm & Fin Chr 165.183 Ja 9 '47

Statistics

America's needs and resources; a Twentieth century fund survey which includes estimates for 1950 and 1960. J. F. Dewhurst 812p $5 Twentieth century fund, 330 W. 42d st, New York 18 '47; Synopsis (U.S.A. 1950-1960). Air Transport 5:51-66 My '47; Same. Am Mach 91:132a-132p My 8 '47; Same. Aviation 46.99-114 My '47; Same. Aviation N 7·21-36 My 5 '47; Same. Bsns W p55-70 Ap 26 '47; Same. Coal Age 52.86a-86p My '47; Same. Elec World News ed 127·17-32 My 3 '47; Same. Eng & Min J 148.50a-50p My '47 Same. Factory Management 105· 96a-96p My '47; Same. Food Ind 19:sup71-86 My '47, Same Bus Transportation 26· 71-86 My '47; Same Chem Eng 54·75-90 My '47; Same. Elec West 98 79-94 My '47, Same. Electronics 20:40a-40p Je '47; Same Eng & Min J 148.50a-50p My '47, Same Eng N 138 827-42 My 15 '47; Same Power 91 427a-427p Je '47; Same. Product Eng 18:144a-144p My '47; Same. Textile World 97·121-36 My '47
Financial, industrial, and commercial statistics Published in monthly numbers of Federal reserve bulletin
How well can Americans live? charts Fortune 35 124-32 My '47
United States government program for statistics Am Stat Assn J 42·20-45 Mr '47

See also
United States—
Census, Bureau of

Supreme court

Flashed out? Supreme court and patent validity. Fortune 35:136+ F '47
Supreme court makes finding unfavorable to general contractors, case of United States v. Howard P Foley company, inc. G. R. Shields. Eng N 138·110 Ja 23 '47
Supreme court: 1947. A M. Schlesinger, jr. Fortune 35:73-9+ Ja '47
Third arm. Economist 152:328-9 Mr 8 '47; Same. Iron Age 159:111+ Mr 20 '47

Tax court

Debate on HR 3214 making Tax court a court of record. J Account 84:249-61 S '47
Revision of title 28, United States code. J Account 84 84-6 Jl '47

Technical services, Office of

ACS intercedes with Congress for OTS. R Adams and A H. Emery. Chem & Eng N 25 1565-6 Je 2 '47
Bibliography of scientific and industrial reports Published weekly by U S. Dept. of commerce, Office of technical services Free to government agencies and scientific societies, for sale by Supt of doc. $10
Office of technical services. J. Perry. Am Cer Soc Bul 26·27-8 Ja 15 '47
OTS reports. Chem & Eng N 24 3225-7+, 3392+, 25:117, 187-8, 254, 326-7, 455-6, 553-4, 628, 716-17, 796, 872-3, 929, 999, 1754, 3102-3+ D 10-25 '46, Ja 13-F 3, 17-Ap 7, Je 16, O 20 '47
OTS translation clearinghouse J C. Green Chem & Eng N 25·1335-6 My 12 '47

Library

Central O T S library formed. Chem Ind 59:826 N '46

Temporary controls, Office of

Inventory solace; Office of temporary controls decries fears that stocks are too high Bsns W p21 D 21 '46
OTC ordered to windup June 1 Oil Paint & Drug Rep 151:5 Ap 28 '47
OTC termination voted by Senate. Oil Paint & Drug Rep 151:3+ Mr 10 '47
War agencies pass to old hand at alphabet trimming Bsns W p5 D 21 '46

Treasury department

Criticism of government fiscal organization and procedure S Tsai. J Account 83 296-303 Ap '47
How the United States Treasury applies tax laws R N. Miller J Account 83:409-14 My '47

War department

Insurance branch changes made; Col. Stark retires as chief. East Underw 48 33 Je 13 '47
War department determines bridge clearance required for public navigation. R. A. Wheeler. il Civil Eng 17 69-71 F '47
War department fire losses show substantial reduction for 1946 East Underw 48:23 Jl 11 '47

Buildings

Army map service gets a new home in Washington, D C. il Eng N 138·367-70 Mr 6 '47

Knolls atomic power laboratory

War department plans $20,000,000 Knolls atomic power laboratory Chem & Eng N 24:3058 N 25 '46

Research and development division

Army air forces research and development. A Leggin il Chem & Eng N 24·2914-15 N 10 '46
Army reveals plans to industry. Chem & Eng N 25:306 F 3 '47
Chemical corps research and development. A. Leggin. Chem & Eng N 24:3178-9+ D 10 '46
Medical corps research and development. A Leggin. il Chem & Eng N 25 168+ Ja 20 '47
Ordnance department research and development. A Leggin il Chem & Eng N 24·3350-1 D 25 '46

War mobilization and reconstruction, Office of

Summary report OWMR advisory board Mo Labor R 65·40 Jl '47

Weather bureau

Eye to weather; government bureau offers climatological service to business. Bsns W p50+ Mr 15 '47

UNITED STATES and international securities corporation

Annual report Comm & Fin Chr 165:1363 Mr 10 '47

UNITED STATES gypsum company

Consolidated income account for calendar year, 1945 and 1946. Comm & Fin Chr 165: 1911 Ap 7 '47

UNITED STATES gypsum company—*Cont.*
Prepares for building boom Barron's 27:1+ F 17 '47
Selected stocks with long dividend records Mag of Wall St 79 203+ N 23 '46

UNITED STATES independent telephone association
Anniversary meeting, 50th, Chicago, Oct. 13-16 Pub Util 40 649-51 N 6 '47

UNITED STATES industrial chemicals, inc.
New products boost sales. Barron's 27:27 My 5 '47
U. S. Industrial Chemical deal gains cheap alcohol supply. Barron's 27:34 Ag 25 '47

UNITED STATES information libraries
American libraries in foreign service R. H Heindel. Special Lib 38 3-5 Ja '47

UNITED STATES leather company
Sales and income higher. Barron's 27.33 Mr 10 '47

UNITED STATES lines company
Plans peacetime fleet. Marine Eng 52·94-5 Je '47

UNITED STATES military academy, West Point
More water for West Point. R. G. Skerrett. il map Comp Air Mag 52:28-32 F '47

UNITED STATES pipe and foundry company
End of pig iron allocation stimulates U S. Pipe's sales. Barron's 27:35 S 8 '47

UNITED STATES plywood corporation
Net at record level. Barron's 27:27 Mr 3 '47
Outlook for U S. Plywood and Atlas Plywood R. Carleson. il Mag of Wall St 80· 99-101 Ap 26 '47
To supervise erection of mill in French Equatorial Africa. Comm & Fin Chr 165:115 Ja 6 '47

UNITED STATES potters association
Annual meeting, 68th, Pittsburgh, Dec. 16-17. Cer Ind 48:54-6 Ja '47

UNITED STATES rubber company
Big four in rubber. R. Colston Mag of Wall St 80 327 Je 21 '47
Debentures offered Comm & Fin Chr 165: 2181, 2319-20 Ap 21-28 '47
New funds fill needs for working capital. Barron's 27.40 Ap 21 '47
Thumbnail stock appraisal. Mag of Wall St 79:607 Mr 1 '47
U S. rubber co. hits high note in public relations; sponsors spring tour of 24 cities by New York Philharmonic orchestra. il Sales Management 58:97-8 Ap 1 '47

UNITED STATES scientific export association, inc.
Trade association formed. Oil Paint & Drug Rep 150:4 N 11 '46

UNITED STATES smelting, refining and mining company
Earnings reflect freedom from strike Barron's 27:32 Jl 14 '47

UNITED STATES steel corporation
Annual report. Comm & Fin Chr 165:1719-21, 1775 Mr 31 '47; Excerpt. Blast F & Steel Pl 35:477-8 Ap '47
Attorney General holds acquisition of Consolidated by Columbia will violate anti-trust laws. Comm & Fin Chr 165·1238 Mr 3 '47
Earnings subnormal despite high level of operations; with tabulated financial data, 1902-1946. Steel 120·55-6 Mr 31 '47
1946 net profit largest since 1941. Steel 120. 70 F 3 '47
Number of stockholders. Comm & Fin Chr 165·2552 My 12 '47
Quarterly report and comparison of years 1946 and 1945. Comm & Fin Chr 165:726 F 3 '47
Sales hit peak in 1946; weekly wages dip slightly. Iron Age 159.104 Mr 27 '47
Stockholders increased. Comm & Fin Chr 166·610 Ag 11 '47
Thumbnail stock appraisal. Mag of Wall St 79:419 Ja 18 '47
Wages and prices; a case study. H. H Wein. R Econ Stat 29.108-23 My '47

Research laboratory, Kearny
James Bliss Austin heads United States Steel research laboratory. il Am Cer Soc Bul 26: 2-4+ Ja 15 '47

UNITED STATES television manufacturing corporation
Preferred stock offered. Comm & Fin Chr 166.802-3 Ag 25 '47

UNITED STATES testing company
Testing, testing Fortune 36 126 S '47

UNITED STATES tobacco company
Annual report. Comm & Fin Chr 165:2181 Ap 21 '47

UNITED steel companies
Reversion to peace-time operations; statement at annual general meeting. W. B. Jones. Economist 151.846-7 N 23 '46

UNITED steelworkers of America
Details leading to wage contracts; abstract. J. A Stephens. Iron Age 159.115 Je 19 '47
Steel unionism; anniversary and challenge. Bsns W p19 Mr 8 '47
See also
Steel workers

UNITED utilities and specialty corporation
Preferred stock offered. Comm & Fin Chr 166·1397 O 6 '47

UNITED utility unions of America
UUU dissolves and locals favor affiliation with CIO Elec World 128·87 O 25 '47

UNITS
Changes in electrical and photometric units. Chem & Eng N 25 1090 Ap 14 '47
Simple method for changing units F. L. Robeson. Science 106:352 O 10 '47
X-ray wave-length standards E. A. Wood Phys R 72·436-7 S 1 '47
See also
Metric system

UNIVERSAL joints. See Joints, Universal

UNIVERSAL oil products company
Recapitalization Chem & Eng N 25.1027 Ap 14 '47

UNIVERSAL pictures company
Annual report. Comm & Fin Chr 165:726 F 3 '47

UNIVERSAL winding company
Stock offered Comm & Fin Chr 165:1501 Mr 17 '47

UNIVERSE
Astrophysics; highlights of the new universe, circa 1947. col il diags Fortune 35:112-23 Ja '47
Universe; 1947 models. Fortune 35:125+ Ja '47

UNIVERSITIES. See Colleges and universities

UNIVERSITY of North Carolina press
Books from Chapel Hill, a record and catalogue of twenty-four years of publishing 206p $1 25 Univ of N C. press, Box 510, Chapel Hill, N.C. '46

UNIVERSITY teachers of insurance, American association of. See American association of university teachers of insurance

UNLISTED securities. See Securities—Unlisted securities

UNSATURATED compounds
Arylsulfenyl chlorides; addition to unsaturated compounds. R A. Turner and R. Connor bibliog Am Chem Soc J 69:1009-12 My '47
Condensation of saturated halides with unsaturated compounds; condensation of *t*-butyl chloride with cyclohexane. L Schmerling. bibliog Am Chem Soc J 69: 1121-5 My '47
Electric moments of some unsaturated aldehydes, ethers and halogen compounds. M. T. Rogers. bibliog Am Chem Soc J 69:1243-6 Je '47
Investigations on the stereoisomerism of unsaturated compounds, the catalytic hydrogenation of butadiene W. G. Young and others. bibliog diags Am Chem Soc J 69: 2046-50 Ag '47
Kinetics of halogen addition to unsaturated compounds; styrene, stilbene, and their derivatives I. Ting and P. W. Robertson. Chem Soc J p628-30 My '47
Kinetics of halogen addition to unsaturated compounds; the halogeno-ethylenes B. E. Swedlund and P. W. Robertson. Chem Soc J p630-4 My '47

UNSATURATED compounds—*Continued*
Performic acid hydroxylation of α,β-unsaturated acids and esters. J. English, jr. and J. D. Gregory. bibliog Am Chem Soc J 69:2120-2 S '47
Reduction of αβ-unsaturated carbonyl compounds by sodium butoxide. C Weizmann, M Sulzbacher and E. Bergmann. Chem Soc J p851 Je '47
See also
Olefins

UNSHRINKABLE wool. See Wool, Unshrinkable

UNTERZAUCHER method. See Oxygen—Analysis

UPHOLSTERY
Plastic monofilaments are on their way il Mod Plastics 24:94-6 Ag '47
See also
Springs (furniture)

UPPER atmosphere. See Atmosphere, Upper

UPPER peninsula power company
Merger approved Comm & Fin Chr 165 2931-2 Je 2 '47
Securities offered. Comm & Fin Chr 165 3099 Je 9 '47

UPSET forging. See Forging

UPSON, Charles Ayrault, 1876-
Upson elects Upsons por Bsns W p44 My 17 '47

URACIL
Direct thiation of uracils G B Elion and G H. Hitchings bibliog Am Chem Soc J 69:2138-9 S '47

URACIL carboxylic acid. See Orotic acid

URACIL riboside. See Uridin

URANIN
Fluorescein as an agent in the differentiation of normal and malignant tissues. G. E. Moore Science 106:130-1 Ag 8 '47

URANIUM
AEC clamps down; new controls over uranium and thorium. Bsns W p38 Mr 22 '47
Determination of thorium and its separation from uranium by ferron D. E. Ryan, W J. McDonnell and F. E. Beamish. bibliog Anal Chem 19.416-17 Je '47
Elementary theory of the chain-reacting pile. E. Fermi. Science 105:27-32 Ja 10 '47
German observer tells of Soviet uranium mining. Eng & Min J 148.104 Ag '47
High-temperature heat contents of uranium, uranium dioxide and uranium trioxide G. E. Moore and K. K. Kelley. bibliog Am Chem Soc J 69:2105-7 S '47
Lamp filament to atomic pile Chem & Eng N 25:236 Ja 27 '47
Materials having 0.05 uranium, thorium need license for transfer. Iron Age 159:155-6 Ap 3 '47
Powers search far places for atomic energy resources. B. Ravits. Barron's 27:23-4 Mr 31 '47
Recent advance in the physical sciences H. R. Crane. Ann Am Acad 249:1-8 Ja '47
Recent developments in rare metals J. W. Marden and others. diags Steel 120.93-4+ Ap 7 '47
Regulations for control of uranium and thorium issued by Atomic energy commission. Chem & Eng N 25:916 Mr 31 '47
Resistance-temperature relation and thermoelectric properties of uranium. A I Dahl and M. S. Van Dusen. diag J Res Nat Bur Stand 39 53-8 Jl '47
Stopping power of various substances for fission fragments. E Segrè and C. Wiegand. diag Phys R 70:808-11 D 1 '46
Uranium and thorium minerals; information for the use of prospectors. H. S. Spence. Can Min J 68.636-42 S '47
Uranium and thorium prospecting with the Geiger counter. J De Ment. il diags Min Cong J 33:30-2+ Ag '47
Uranium metal suggested as monetary standard. Sci Am 176:62 F '47
Uranium, thorium controls tightened Oil Paint & Drug Rep 151:5 Mr 24 '47

Analysis

Behavior of uranyl solutions in a mercury reductor E. R. Caley and L. B Rogers. bibliog Am Chem Soc J 68:2202-4 N '46
Carrier distillation analysis of uranium. Chem & Eng N 25 777 Mr 17 '47; Same il Chem Ind 60 668 Ap '47, Same cond Elec Eng 66 685 Jl '47
Carrier-distillation method for spectrographic analysis and its application to the analysis of uranium-base materials. B. F. Scribner and H. R. Mullin. bibliog pl diags J Res Nat Bur Stand 37:379-89 D '46, Abstract Mech Eng 69:311-12 Ap '47
Colorimetric determination of uranium with thiocyanate J E. Currah and F E Beamish. Anal Chem 19:609-12 Ag '47
Fluorescence test for uranium in aqueous solution C W. Sill and H E Peterson. bibliog il Anal Chem 19 646-51 S '47
Polarography of uranium, polarography in very weakly acid, neutral or basic solution. W E Harris and I. M Kolthoff. bibliog Am Chem Soc J 69.446-51 F '47
Semiquantitative determination of traces of uranium; a fluorophotometric method for field use T. R. P Gibb, jr and H. T. Evans, jr. diags Science 105 72-3 Ja 17 '47

Isotopes

Alpha-particles associated with fission. E. O Wollan and others. bibliog il Phys R 72.447-51 S 15 '47
Delayed neutrons in plutonium and uranium fission W C. Redman and D. Saxon bibliog diag Phys R 72:570-5 O 1 '47
Equation of U^{235} fission; abstract. A. V. Grosse Chem Eng 54:264+ Je '47
Fourth radioactive series. Chem Age (Lond) 57:401 S 20 '47
Half-life of uranium (234). O. Chamberlain and others. bibliog Phys R 70 580-2 N 1 '46
Hyperfine structure and the nuclear spin of U^{235} O E Anderson and H E. White Phys R 71.911 Je 15 '47
Long range alpha-particles emitted in connection with fission; preliminary report G Farwell and others. diag Phys R 71 327-30 Mr 15 '47, Correction 71:639 My 1 '47
New developments in vacuum engineering; K-25 gaseous diffusion plant for the separation of U^{235}. R B. Jacobs and H. F. Zuhr. diags J Ap Phys 18:34-48 Ja '47
New fission processes of uranium nuclei T. San-Tsiang and others bibliog il Phys R 71:383-4 Mr 15 '47
Nuclear properties of U^{233} a new fissionable isotope of uranium. G. T. Seaborg and others Phys R 71 378 Mr 15 '47
Pairs of fission fragments from U^{235}, P. Demers. il Phys R 70:974 D 1 '46
Photo-fission in heavy elements. G. C. Baldwin and G. S Klaiber. bibliog diags Phys R 71:3-10 Ja 1 '47
$(4n+1)$ Radioactive series; the decay products of U^{233}. F. Hagemann and others. bibliog Phys R 72:252 Ag 1 '47
Studies of the delayed neutrons; decay curve and the intensity of the delayed neutrons; chemical isolation of the 56-second and the 23-second activities A. H. Snell and others. bibliog diags Phys R 72 541-9 O 1 '47
Uranium fission yields 34 elements Chem & Eng N 25:1509 My 26 '47
X-rays associated with U^{234}. R L. Macklin and G E. Knight. Phys R 72:435 S 1 '47
Yield of photo-neutrons from U^{235} fission products in heavy water. S Bernstein and others. diag Phys R 71.573-81 My 1 '47

Physiological effect

Safe and beneficial utilization of nuclear energy. A. H Dowdy. Ind Med 16:456+ S '47

URANIUM hexafluoride
Critical ionization potentials of uranium hexafluoride and hydrogen fluoride. J R White and A. E Cameron. Phys R 71:907 Je 15 '47
Self-diffusion coefficient of uranium hexafluoride. E. P. Ney and F. C. Armistead. diag Phys R 71:14-19 Ja 1 '47

URANIUM hydride
Structure of uranium hydride and deuteride R E. Rundle. bibliog Am Chem Soc J 69 1719-23 Jl '47

URANIUM oxides
High-temperature heat contents of uranium, uranium dioxide and uranium trioxide G E Moore and K K. Kelley bibliog Am Chem Soc J 69·2105-7 S '47
Quantitative alpha-particle counting by the emulsion technique H. Yagoda and N Kaplan il Phys R 72.356 Ag 15 '47

URANIUM poisoning
Chemical hazards of uranium handling; abstract. A. H Dowdy Chem Eng 54·236+ Ja '47

URANYL chloride
Anodic current efficiency in the counterflow electrolysis of uranyl chloride solutions W J. Hamer bibliog diag J Res Nat Bur Stand 39.141-7 Ag '47

URANYL nitrate
Determination of the ranges of the fission fragments emitting delayed neutrons; chemical identification of the 4 51-sec. delayed neutron activity N Sugarman. bibliog diag J Chem Phys 15·544-51 Ag '47

UREA
Alkoxyl content of urea formaldehyde resin films. B M Shaw. diags Soc Chem Ind J 66.147-9 My '47; Abstract. Paint Oil & Chem R 110:60+ O 16 '47
Intermediates in the synthesis of orotic acid from oxalacetic ester and urea H K Mitchell and J F Nyc. bibliog Am Chem Soc J 69.674-7 Mr '47
Kinetic study of the urea-formaldehyde reaction. L. E Smythe bibliog J Phys & Colloid Chem 51 369-78 Mr '47
Mechanism of urease inhibition by urea C. L Deasy Am Chem Soc J 69 294-5 F '47
New condensation products of formaldehyde with amides and amines. H. Scheuermann Paper Ind 28 1495-6 Ja '47; Same Mod Plastics 24.161-2+ F '47
Reaction of ammoesters with ethyl isocyanate; open chain models of desthiobiotin. E M. Schultz, bibliog Am Chem Soc J 69:1056-7 My '47
Researches in the phenanthridine series, quaternary salts with urethane and urea substituents L P. Walls Chem Soc J p 1031-3 N '46
Respiratory stimulants; fully-substituted ureas derived from αω-alkylenediamines. W. R. Boon. Chem Soc J p307-18 Mr '47
Silverware chest molded of urea for beauty, utility il Mod Plastics 24 96-8 F '47
Synthesis of tetrahydro-5-substituted-2(1)-*s*-triazones W J Burke. bibliog Am Chem Soc J 69:2136-7 S '47
Urea alkyl sulfates. C L. Carter and P. A. Ongley Am Chem Soc J 69·460-1 F '47
Urea-formaldehyde condensates stabilizing; patent. Am Dyestuff Rep 36:153 Mr 24 '47
Urea lighting fixtures il Mod Plastics 24. 178-80+ My '47
Urea manufacture data available. Oil Paint & Drug Rep 150·48 D 23 '46
Urea saltcellars. il Mod Plastics 25.150 S '47
Urea tableware. il Mod Plastics 24:226 Ap '47

UREASE
Mechanism of urease inhibition by urea. C. L. Deasy. Am Chem Soc J 69:294-5 F '47

URETHANE
Anomalous densities of 1-*n*-alkyl-cyclohexanols H. B. Williams and W R. Edwards, jr. Am Chem Soc J 69:336-8 F '47
Combined influence of temperature and urethan on the respiration of rhizobium. H. Koffler, F H Johnson and P. W. Wilson bibliog Am Chem Soc J 69·1113-17 My '47
Effect of urethane on mouse myelogenous leukemia. R M Engstrom and others. Science 105:255-6 Mr 7 '47
Inhibitory effects of ethyl carbamate on prostatic cancer. C. Huggins and others bibliog Science 106.147-8 Ag 15 '47
Investigations on the influence of chemical constitution upon toxicity; compounds related to miotine R. E. Davies and others. Chem Soc J p 191-6 F '47
Investigations on the influence of chemical constitution upon toxicity, compounds related to prostigmine. R. D. Haworth, A H. Lamberton and D. Woodcock. Chem Soc J p 182-91 F '47
Polyurethane resins; abstract. Paint Oil & Chem R 110·49 Ag 21 '47
Polyurethanes A. Bayer Mod Plastics 24 149-52+ Je '47; Abstract India Rubber World 116·515-16 Jl '47
Researches in the phenanthridine series, quaternary salts with urethane and urea substituents. L. P. Walls Chem Soc J p 1031-3 N '46

URIDIN
Synthesis of cytidine. G \ Howard, B Lythgoe and A R Todd Chem Soc J p 1052-4 Ag '47

URIDIN phosphate
Constitution of yeast ribonucleic acid, synthesis of uridine-2′ phosphate. J. M. Gulland and H Smith. Chem Soc J p338-42 Mr '47

URINE
Concentration and preservation of urinary substances by lyophilization. H. B. Friedgood and others. diag Science 105.99-100 Ja 24 '47
Results of creatinine, hippurate, and inulin clearance estimations in rats. J. A Shannon and others. Science 106·127 Ag 8 '47; Replies 106:265, 341 S 19, O 10 '47

Analysis
Acute and chronic toxicity of methyl chloride; hematology and biochemical studies. W W Smith. bibliog(34 titles) J Ind Hygiene 29 185-9 My '47
Changes in urinary steroid excretion and correlated metabolic effects during prolonged administration of adrenocorticotropic hormone in man. G. W Thorn and others Science 105 528 My 16 '47
Daily nitrogen urinary excretion in people of the working class of Caracas. F. De Venanzi. bibliog Science 105 524-5 My 16 '47
Some experiences with polarographic methods in controlling a lead hazard in brass foundries H. J Weber. il J Ind Hygiene 29 158-67 My '47

URONIC acid
Browning (Maillard) reaction in heated solutions of uronic acids. J L. Seaver and Z I Kertesz. bibliog Am Chem Soc J 68. 2178-9 N '46
Investigation of the properties of cellulose oxidized by nitrogen dioxide; evolution of carbon dioxide from uronic acids and polyuronides. E. W. Taylor and others. bibliog Am Chem Soc J 69:342-7 F '47
Uronic acid component of mucoitinsulfuric acid. M. L. Wolfrom and F. A H. Rice. Am Chem Soc J 69:1833 Jl '47

URQUHART, George
Portrait. Fortune 36:91 S '47

URUGUAY
See also
Airlines—Uruguay
Public health—Uruguay

Economic conditions
News by countries. For Comm W 25:43-4 N 16, 35 D 21 '46, 26 20 Ja 18; 26-7 F 22; 21-2 Mr 22, 27:20+ Je 14; 28:19+ Jl 5; 21 Ag 2; 29 19+ O 11 '47

Politics and government
Election issues in Uruguay. Economist 151: 794 N 16 '46

URUSHIOL
Some derivatives of catechol and pyrogallol R D Haworth and D Woodcock. Chem Soc J p999-1003 N '46

USE and occupancy insurance. See Insurance, Use and occupancy

USED cars. See Automobile industry and trade—Used cars, Automobiles, Used

USED lumber. See Lumber, Used

USURY
Bank's charges for loan of money held usurious; Independent foods, inc , v. Lucas county savings bank, Court of appeals of Ohio. Banking Law J 64 513-20 Je '47
Contract held joint venture and not usurious loan. Banking Law J 64:123-31 F '47
Interest payments in advance of due dates held not violation of usury statute Banking Law J 63:932-7 D '46

USURY—*Continued*
Lender in usurious contract not entitled to any interest; borrower required to pay only principal of loan to obtain equitable relief; St Germain v. Lapp, Supreme court of Rhode Island. Banking Law J 64:29-38 Ja '47
Note payable out of profits not usurious. Banking Law J 64:643-4 Ag '47
Transfer of installment notes held sales and not pledges rendering transaction usurious loan. Banking Law J 63:861-9 N '46
Usury statute applicable only to loans of money; Henry v. P. & E finance co, Supreme court of Oklahoma. Banking Law J 64:238-40 Mr '47

UTAH
See also
Iron ores—Utah
Manganese mines and mining—Utah

Economic conditions
Rural rehabilitation in Washington county. E. C Banfield, jr. J Land & Pub Util Econ 23:261-70 Ag '47

UTILISCOPE. See Television—Industrial applications

UTILITIES, Public. See Public utilities

UTILITY units. See Houses—Mechanical equipment

UTILITY workers union
UWU trying board member for spurning anti-Red oath. Elec World News ed 128:11 N 1 '47

UTOPIA college, Eureka, Kansas
Utopia in Eureka. Bsns W p34+ Jl 12 '47

V

VACATIONS
Airlines promoting vacations by plane. Aviation W 47 61 Ag 11 '47
Bus industry has huge stake in staggered vacation idea. Bus Transportation 26:83 Mr '47
For top executives; vacations. H. G. Vincent. il Burroughs Clearing House 31:23+ N '46
Holiday and vacation clauses N. C. Rockwood. Inland Ptr 119:49-50 Je '47; Same. Rock Prod 50:99+ Je '47; Same Chem Ind 61:112+ Jl '47
New England sets up vacation index. Sales Management 59:101 Ag 15 '47
Paid vacations and sick leave in industry, 1945-46. E. M. Bunn. Mo Labor R 65:331-4 S '47
Plant-wide vacations gain popularity. Bsns W p 16 Je 21 '47
Production clinic E. G. Thomssen. Soap & San Chem 23.75 My '47
Vacations for industrial workers. Management R 36:142-4 Mr '47
Veterans' rights; vacation benefit barred for lack of continuous service B. Werne. Factory Management 105 218+ F '47

VACCINATION
Health education campaign is good public relations, Sharp & Dohme information on immunization of children. E. J. Dever, jr. il Ptr Ink 218:44-5 Mr 14 '47
Mass immunization against influenza types A & B in an industrial plant; Bigelow-Sanford carpet co. B S. Dignam. Ind Med 16.200+ Ap '47
Protective effect of vaccination against epidemic influenza B in an industrial plant. W. D. Norwood and R. R. Sachs. bibliog Ind Med 16:1-3 Ja '47
See also
Inoculation

VACCINES
Comparative study of live and killed vaccines in experimental tuberculosis. B. J Olson and others. Pub Health Rep 62:293-6 F 28 '47
Consideration of vaccination against influenza; abstract. T. Francis, jr. Nat Safety N 55:48+ My '47
Immunizing value of the BCG dry glucose vaccine Pub Health Rep 62:211-13 F 7 '47
Improved method of producing smallpox vaccine of low bacterial content D. H. Ducor Pub Health Rep 62.565-81, pl 1-3 Ap 18 '47
Incidence of reactions to a new type of influenza virus vaccine in industry. R. R. Bresler. bibliog Ind Med 16 301-3 Je '47
Preparation of mumps vaccines and immunization of monkeys against experimental mumps infection. K. Habel. bibliog Pub Health Rep 61:1655-64 N 15 '46
Report of a conference on BCG vaccination. Pub Health Rep 62 346-50 Mr 7 '47
Simplified techniques for inoculating chick embryos and a means of avoiding egg white in vaccines. W I. B Beveridge. Science 106.324-5 O 3 '47
Study of absenteeism during a five-month period following influenza A and B vaccination. M. N. Newquist and R. C. Page. Ind Med 15:676-7 D '46
Ultraviolet irradiation in the production of potent antirabies vaccines K Habel bibliog Pub Health Rep 62 791-800 My 30 '47
Yellow fever vaccine inactivation studies. H. W. Burruss and M. V. Hargett bibliog Pub Health Rep 62:940-56 Je 27 '47

VACUUM
Dehydration by high vacuum H. Weingartner. Refrig Eng 53:222+ Mr '47
Efficient sleeve-type vacuum jackets for fractionating columns. I Dostrovsky and T R Jacobs diags Chem & Ind p627 O 11 '47
Flash freezing of foods. L. C. Mazzola. il diags Food Ind 18:1841-5+ D '46
High vacuum and its process applications. B W Whitehurst diags Chem Eng 54: 98-102 O '47
Insulation of high voltages in vacuum. J. G. Trump and R. J. van de Graaff. bibliog diag J Ap Phys 18:327-32 Mr '47
Liquid-vapor equilibria in high vacuum; two phthalate-sebacate systems at 0.10 mm. E S. Perry and R E. Fuguitt. bibliog diags Ind & Eng Chem 39 782-7 Je '47
New developments in vacuum engineering; K-25 gaseous diffusion plant for the separation of U^{235}. R. B. Jacobs and H. F. Zuhr. diags J Ap Phys 18:34-48 Ja '47
Steam-jet evacuators make vacuum during power-plant starting periods. P. Freneau diags Power 91 162-5 Mr '47
Vacuum impregnation of cables and capacitors B. W. Whitehurst. diag Elec World 127.49 Ap 26 '47

VACUUM apparatus
Adjustable gas leak. A. O C. Nier and others. diag R Sci Instr 18:191 Mr '47
Cam operated vacuum valve D. D'Eustachio. diags R Sci Instr 18.369-70 My '47
Concentration of sulfuric acid under vacuum J. F Burke and E. Mantius diags Chem Eng Prog 43.237-46 My '47
Dependable type of vacuum alarm P. C. Ziemke. diag Chem Eng 54:121 Ag '47
High vacuum and its process applications B. W. Whitehurst. diags Chem Eng 54 98-102 O '47
High vacuum technology. R. S. Morse bibliog il diags Ind & Eng Chem 39.1064-71 S '47
New means of precasting concrete; vacuum mats hasten curing; use of vacuum lifter. A. M Hoffmann. il diag Comp Air Mag 52:152-3 Je '47
Pfaudler equipment for many industries. R. G Skerrett. il Comp Air Mag 51:292-7 N '46
Practical furnace for vacuum melting A. U. Seybolt diags Metal Prog 50:1102-6 N '46
Producing high purity metals with vacuum. J. D. Nisbet diags Iron Age 159:56-9 Je 19 '47
Raytheon vacuum condensers. il R Sci Instr 18:140-1 F '47
Tablets in a vacuum. Bsns W p43-4 Ag 9 '47
Vacuum exposure holder for microradiography H. F. Sherwood. bibliog il diags R Sci Instr 18:80-3 F '47

VACUUM apparatus—*Continued*
Vacuum heating element G S. Lewin. diag Inst Radio Eng Proc 35·494 My '47
Vacuum melting and casting. A. G. Gray. il diags Steel 120:86-8+ Ap 14 '47
Vacuum melting and casting of beryllium A. R Kaufmann and E Gordon. diags Metal Prog 52 387-90 S '47
Vacuum pressure regulator F. W. Melpolder diag Anal Chem 19·617 Ag '47
Vacuum valve I Estermann and S. N. Foner. diag R Sci Instr 18·64 Ja '47
Wetherill vacuum casting process W. A. Phair il Iron Age 160·67-70 Ag 14 '47

See also
Air compressors
Evaporation
Pressure gages
Vacuum gages
Vacuum pumps

Testing
Detecting leaks; mass spectrometer type of detector. J. E. Burroughs. diag Chem Eng 54:112-14 Ap '47
Mass spectrometer for leak detection. A. O. Nier and others. bibliog diags J Ap Phys 18:30-3 Ja '47
New developments in vacuum engineering; K-25 gaseous diffusion plant for the separation of U^{235}. R. B. Jacobs and H. F. Zuhr. diags J Ap Phys 18.34-48 Ja '47
Spectrometer vacuum leak detector G. A Doxey. il diag Electronics 20·142+ My '47

VACUUM brakes. See Brakes, Vacuum

VACUUM cleaners
Compact cleaner; package for Lewyt vacuum cleaner, made of hinged panels of solid fibre serves as permanent storage receptacle il Mod Packaging 20:111 Jl '47
Dust removal from electric railway rolling stock. il Engineer 184:148 Ag 15 '47
Five advantages of acetate moth suffocator; vacuum cleaner attachment. il Mod Plastics 24 101 Ag '47
Janitor's idea outmodes the broom; portable electric vacuum cleaner; Hoover co. developed and refined unit. W. J. Campbell. il Steel 119:70-1+ D 9 '46
Vacuum cleaner for the Diesel shop; Denver & Rio Grande Western. il Ry Mech Eng 121:145 Mr '47
Vacuum cleaners for home and car. il Mod Plastics 24·106-7 F '47

History
Vacuum in the home. S. Giedion. bibliog il diags Tech R 49:157-60+ Ja '47

Manufacture
Conveyors aid the production of electric cleaners, Messrs Hoover, ltd. il plans diag Mech Handling 34 232-44+ My '47
Making vacuum cleaners; British vacuum cleaner & engineering co. il Elec R (Lond) 140:177-8 Ja 24 '47

Merchandizing
It's clean selling. il Elec West 98:77-9 Mr '47

Rating
Report on eleven vacuum cleaners. il Consumers Res Bul 19:5-10 Mr '47

VACUUM containers
Pfaudler equipment for many industries. R. G. Skerrett. il Comp Air Mag 51:292-7 N '46

Testing
Flexible vacuum package. il Mod Packaging 20.100-1+ Je '47
Measurement and analysis of gases in vacuum-packed food containers. L. C. Cartwright. bibliog diags Ind & Eng Chem Anal ed 18·779-85 D '46
Ottawa test sand; evaluation of gas permeability of sealed flexible packages. L. C Cartwright. bibliog il diag Mod Packaging 20:145-7+ My '47; Same. Paper Tr J 124: 51-3 Je 19 '47

VACUUM dispenser
Vacuum dispenser for discharging carboys J B Whittum. diag Chem Eng 54:122-3 Mr '47

VACUUM fusion method. See Steel—Analysis

VACUUM gages
Instrumentation R H. Munch. il Ind & Eng Chem 39 sup87A-88A Ag '47
Molecular weight determination with a vacuum micromanometer. W. S. Young and R C. Taylor. bibliog diag Anal Chem 19: 133-5 F '47
Skanascope; a new vacuum gauge. il R Sci Instr 18 257 Ap '47
Vacuum gage. il Sci Am 176:34 Ja '47
Vacuum-gauge tubes. il R Sci Instr 18.593 Ag '47
Vacuum micromanometer. W. S. Young and R C Taylor. bibliog diag Anal Chem 19: 133-5 F '47

VACUUM pumps
Glass circulating pump for gases and liquids. J. E. Nickels. diag Anal Chem 19:216 Mr '47
Ion beams in high voltage tubes using differential pumping. E. S. Lamar and W. W. Buechner. bibliog diag J Ap Phys 18:22-7 Ja '47
New diffusion pump oil. D. A. Sutton. bibliog Chem & Ind p22 Ja 11 '47
Protective device for oil diffusion pumps. I. Amdur. diag R Sci Instr 18:66 Ja '47
Silicone oils; their applications. D. F. Wilcock. il diag Gen Elec R 49:32-3 D '46

VACUUM tube amplifiers. See Amplifiers, Vacuum tube

VACUUM tube voltmeters. See Voltmeters, Vacuum tube

VACUUM tubes
Beam-deflection control for amplifier tubes. G. R Kilgore bibliog diags RCA R 8: 480-505 S '47
Carbide structures in carburized thoriated-tungsten filaments. C. W. Horsting. bibliog il diags J Ap Phys 18:95-102 Ja '47
Cathodes, filaments and heaters. Radio N 38.153-4 Jl '47
Concerning estimates of the minimum sparking potential based upon the cathode work function. D. H Hale and W. S. Huxford. bibliog J Ap Phys 18:586 Je '47
Contemporary receiving tubes; tabulated. J. D. Askew. Electronics 20 126-9 (Buyers' guide) Mid-Je '47
Copper-oxide rectifier and the thermionic tube in the voltage-doubling circuit. R. R. Gilmour. diags Inst Radio Eng Proc 35: 213-16 F '47
Decade-ring scaling circuit. L Seren. il diags R Sci Instr 18·654-9 S '47
Determination of current and dissipation values for high-vacuum rectifier tubes. A. P. Kauzmann diags RCA R 8:82-97 Mr '47
Development of radio valves for radar, abstract. J. H. E. Griffiths Inst E E J 93 pt 1.475-7 O '46
Development of the pentode. Radio N 37: 86+ Je '47
807 makes low cost power packaged modulator. R P Turner. diag Radio N 38:46+ Jl '47
829-B and 832-A at audio frequencies. J. A. Fred. il diag Radio N 38.60+ S '47
Electron-ray tuning indicator for frequency modulation F M Bailey il diags Inst Radio Eng Proc 35:1158-60 O '47
Electron reflectors with a quadratic axial potential distribution. J. M. Lafferty. diags Inst Radio Eng Proc 35:778-83 Ag '47
Electron tubes in World war II J E Gorham. il Inst Radio Eng Proc 35:295-301 Mr '47
Experimental audio output tetrode. W. S. Brian il diag Electronics 20:121-3 Ag '47
Grounded-grid amplifier valves for very short waves and Triodes for very short waves; oscillators for radar; discussion of papers by J Foster; J. Bell and others Inst E E J 94 pt 3·364-8 S '47
How's and why's of aircraft electronic tubes. F. Rockett. il diags Aviation 46:85-6+ Ap '47
Hydrogen discharge tube G. B. Arnold and L Donn bibliog il diags Anal Chem 19· 666-7 S '47
Medium-power triode for 600 megacycles. S. Frankel and others. il diags Inst Radio Eng Proc 34:986-91 D '46
Metal-ceramic vacuum seals. N. T. Williams. il diags R Sci Instr 18.394-7 Je '47

VACUUM tubes—*Continued*
Microwave oscillators using disk-seal tubes. A. M Gurewitsch and J. R Whinnery. bibliog il diags Inst Radio Eng Proc 35:462-73 My '47
Minimum sparking potentials of barium, magnesium, and aluminum in argon. H. Jacobs and A P. LaRocque. bibliog diags J Ap Phys 18:199-203 F '47
Minimum sparking potentials of barium, magnesium, and aluminum in helium. H Jacobs and A. P. LaRocque bibliog diags Electrochem Soc Trans 91 (preprint 20): 297-310 '47
New system of frequency modulation, phasitron tube R Adler il diags Inst Radio Eng Proc 35·25-31 Ja '47
New uses for pentagrids. A. H. Taylor. diags Electronics 19:142+ D '46
Picturesque oxidation of molybdenum vacuum-tube leads. H. A. Liebhafsky. il J Ap Phys 17 901-2 N '46
Practical radio course, superheterodyne converter and mixer tubes. A. A Ghirardi. il diags Radio N 36:46-52+ S; 52-4+ O; 40-1+ D '46
Preferred list of army-navy electron tubes; tabulation. Electronics 20·146 Jl '47
Radio Corporation four new tubes. il R Sci Instr 18 68-9 Ja '47
Space-current division in the power tetrode C M. Wallis. bibliog diags Inst Radio Eng Proc 35 369-77 Ap '47
Theory of the beam-type traveling-wave tube. J R. Pierce. Inst Radio Eng Proc 35:111-23 F '47
Theory of the equivalent diode. G. B. Walker. bibliog Wireless Eng 24.5-7 Ja '47; Discussion J. Eastabrook 24 188-9 Je '47
Transit-angle suppression in microwave tubes. J. H O Harries diags Electronics 20·132-4 Je '47
Transit-time effects in ultra-high-frequency class-C operation W. G Dow. bibliog diags Inst Radio Eng Proc 35·35-42 Ja '47
Traveling-wave tube as amplifier at microwaves R Kompfner. diags Inst Radio Eng Proc 35:124-7 F '47
Travelling-wave tube; centimetre-wave amplifier R Kompfner diags Wireless Eng 24·255-66 S '47
Traveling-wave tubes. J. R. Pierce and L. M Field il diags Inst Radio Eng Proc 35: 108-11 F '47
Traveling-wave vacuum tube. il diag Machine Design 19.107 F '47
Tube registry; tube types registered by RMA (starting Oct. 1946). diags Electronics 20: 244+ F; 251+ Mr; 253+ Ap; 254+ My; 244+ Je, 240+ Jl; 232 Ag '47
Two-inch packless through-vacuum valve. R. Krohn. diag R Sci Instr 18 682-3 S '47
Valve equivalent circuit. B. Salzberg. diags Wireless Eng 24.124-5; Editorial. G. W O. Howe 97-9 Ap '47; Discussion A W. Keen. 24·217-18; Reply. 218 Jl '47
Valves in window; one acetate-and-paperboard package serves for six Thermotron valves; sold only to repairmen. il Mod Packaging 20.111 Ap '47
Wide-tuning-range microwave oscillator tube J W Clark and A. L. Samuel. il diags Inst Radio Eng Proc 35 81-3 Ja '47

See also

Amplifiers, Vacuum tube
Cathode followers
Cathode ray tubes
Dynatron
Electric discharges
Geiger-Müller counters
Klystron
Magnetron
Multivibrators
Photoelectric cells
Radio receiving apparatus
Radio rectifiers
Thyratron
Voltmeters, Vacuum tube
X ray tubes

Bibliography

Radio progress during 1946; electron tubes. Inst Radio Eng Proc 35:411-15 Ap '47

Cold cathode tubes

Cold cathode rectifier. W. H. Bennett. bibliog il J Ap Phys 18:479-82 My '47
Cold cathode relay tube reduces firing delay. il Elec World 126:98 D 21 '46

Control uses

Automatic sectionalizing applied to 4-kv; electronic timer control H. C. Denison. diag Elec World 128 55 Ag 30 '47
Bigger digger, an electronic Hercules; walking dragline operated by International minerals and chemical corporation. J. A. Barr, jr il Rock Prod 49:66-7+ N '46
Build your own high-speed photo flash. L. M. Dezettel. il diag Radio N 36.52-3+ D '46
Characteristics of certain voltage-regulator tubes. G. M. Kirkpatrick bibliog il diags Inst Radio Eng Proc 35 485-9 My '47
Constant-current systems for electronic control of d-c motors. O W. Livingston. diags Gen Elec R 50 38-44 My '47, Same. Elec Eng 66 432-7 My '47
Diode-controlled voltage regulators. L Helterline. il diags Electronics 20 96-7 Je '47
Eddy-current clutches for variable-speed drives. R. L. Jaeschke. il diags Machine Design 19 151-4 Ap '47
Electronic air conditioning control, Chesapeake & Ohio will equip 284 new cars il Ry Mech Eng 121:32-4 Ja '47; Same. Ry Age 122:498-9+ Mr 8 '47
Electronic commutation for telemetering, for transmission over an F-M radio link during flight tests of new aircraft or on pilotless runs. L L. Rauch. il diags Electronics 20: 114-20 F '47
Electronic contouring control. J. M. Morgan il diags Steel 119:94-6+ D 9 '46, Same abr. Electronics 19:92-6 O '46
Electronic control of mechanisms for automatic circular knitter. H. W. Anderson. il diags Machine Design 19.101-4 Ap '47
Electronic device controls wool-card feed G Zellnik. il diag Textile World 97:145+ S '47
Electronic feed drives for milling machines; abstract M Morgan Product Eng 18·135-6 Ag '47
Electronic ignition system in experimental stage. A. J. Poole. diags Automotive & Aviation Ind 96·37+ F 1 '47
Electronic insurance in the shop. J. Markus il diag Sci Am 176·119-21 Mr '47
Electronic photo-timer. L A. Gallegos. il diags Radio N 38 50-1+ Jl '47
Electronic speed control of a.c. commutator motors; abstract E W. Forster and L. C. Ludbrook diag Engineer 184:61-2 Jl 18 '47
Electronic warper drive gives constant yarn speed. R. J. Demartini. il diag Textile World 97·121+ Ap '47
Electronically controlled permanent wave machine. E. W Nelson. il diags Electronics 20·140+ N '47
Electronics and precision grinding machines; development of Churchill machine tool company il Engineer 182 300-1 O 4 '46; Automobile Eng 37.53-4 F '47
Experimental ignition systems. diag Electronics 20 180+ Jl '47
Extending frequency range of pen-type recorders H S Hemstreet and R. G. Hill. diag Electronics 20 164+ Ag '47
Improving glass feeder operation through electronic pneumatic control. J. R. Green and E. A. Murphy. il Glass Ind 28:81+ F '47
Interval timer. E. L Deeter and W. K Dau. il diag Electronics 20 86-7 Jl '47
Laboratory four-channel electronic switch F. S Replogle, jr. and V. M Albers. il diags R Sci Instr 18:114-17 F '47
Micromatic hone; electronically controlled sizing mechanism. il diags Product Eng 18:116-17 S '47
Motron, a packaged continuous-balance control system. il R Sci Instr 18·258-9 Ap '47
New 400-needle electronic ladies' nylon hosiery machine. il Rayon 28:203 Ap '47
Optimum parameter for gas tube voltage regulators. W R. Berg diag Electronics 20 136+ O '47
Parallel operation of aircraft alternators using frequency changers. O E Bowlus and P T. Nims il diags Elec Eng 66· 463-6 My '47
Philips electronic motor control. il Engineer 184.207 Ag 29 '47
Precision energy-storage spot welder R Briggs and H. Klemperer. il diag Electronics 20.102-4 Je '47

VACUUM tubes—Control uses—*Continued*
Predetermined counters. J J. Wild. il diags Electronics 20:120-3 Mr '47
Punch press protector; faulty operation causes timer to shut off power. J. Isaacs il diags Electronics 19:101-3 D '46
Reliable electronic controls for fan and stoker drives. D L. Greene and R L. Jaeschke il diags Elec World 126.75-7 N 23, 96-9 D 7 '46
Reversible-motor controller J. G. Stephenson diag Electronics 20.93 S '47
Sectional paper machine output increased with electronic regulator V. B. Baker. il diags Paper Ind 29 987-91+ O '47
Temperature control for octane tests; vacuum-tube relay circuit P J Malraison. il diags Electronics 20:99-101 N '47
Temperature controller for airplane cabins J W Bancroft. il diag Electronics 20 178+ Ja '47
Timer for diecasting machine. G. DeLong il diag Electronics 20 110-11 Mr '47
Ultrasonic garage-door opener. B A. Andrews il diags Electronics 20·116-18 Mr '47
Vane-actuated controller W. H. Wannamaker, jr bibliog and patent list il diags Electronics 20:117-19 Je '47
Voltage-regulated power supplies. L. Mautner. bibliog diags Elec Eng 66 894-900 S '47

Failure

Tube failures in ENIAC F R. Michael. il diags Electronics 20:116-19 O '47

Generating action

Cavity resonators and electron beams J. H O. Harries. bibliog diags Wireless Eng 24·71-80, 109-18, 135-42 Mr-My '47
Generating microwaves. S. Freedman il Radio N 37·35-7+ Mr '47
Generation of centimeter waves. H. D. Hagstrum. bibliog il diags Inst Radio Eng Proc 35:548-64 Je '47
High frequency local oscillators; special type tubes S. Fishman il diags Radio N 37:54-5+ Ap '47
Reflex oscillators. J. R. Pierce and W. G. Shepherd. il diags Bell System Tech J 26: 460-681 Jl '47

See also
Oscillators

History

Audion. L. de Forest. Elec Eng 66.255-7 Mr '47
Quarter century of electronics. I. E Mouromtseff. bibliog(38 titles) il Elec Eng 66: 171-7 F '47
Synoptic review of electrical engineering progress, particularly during the last quarter century. J D. Ferguson. Inst E E J 94 pt 1·79-81 F '47

Industrial applications

Bad beans given the bounce; electronic sorting mechanism. il diags Food Ind 18:1031+ Jl '46, Product Eng 17:90-2 O '46; Mech Eng 68:1067-8 D '46
Cornelius electronic comparators il Automobile Eng 37:206-8, 271-2, 310-12 Je-Ag '47
Electronic applications; breakdown of present and potential market for 119 basic types of electronic equipment in each of 28 major industries. J. Markus. chart Electronics 20: 102-5 (Buyers' guide) Mid-Je '47
Electronic frequency converters for induction melting furnaces S. R. Durand. il Iron Age 160.64-7+ S 25 '47
Electronic maintenance. J. Fiske. Elec West 97:73 N; 56-7 D '46; 98:45 Ja '47
Electronic pipe finding and leak locating. C R. Fisher. il diags Am Water Works Assn J 38 1330-4 D '46; Same. Water & Sewage Works 94·R101-2 Jl '47
Electronics aids progress in refinery instrumentation. D. M. Considine il diags Oil & Gas J 45.245-6+ Mr 22 '47
Electronics in industry. Economist 152:154-6 Ja 25 '47
Electronics in the Caterpillar tractor plant. il diags Electronics 20:104-9 F '47
Fault detector in quality control. H T. McLean. il diags Gen Elec R 50:52-5 Ap '47
Fault locator for power lines. diag Electronics 19:198 D '46
Fundamental improvement in temperature measurement and control. H. W. Bluethe. il Metal Prog 52:591-3 O '47
Handling and maintenance of industrial electron tubes Electronics 20:114-15 (Buyers' guide) Mid-Je '47
Industrial applications of electronic techniques. H. A. Thomas. diags Inst E E J 94 pt 1·309-31 bibliog(81 titles, p330-1) Jl '47; Same cond. Engineer 183 247-8, 271-2, 295-7 Mr 21-Ap 4 '47; Abstract. Electrician 138 285 Ja 24 '47; Discussion. Inst E E J 94 pt 1.331-8 Jl '47; Electrician 138·285-6 Ja 24 '47
Maintenance of industrial electronic equipment il Power Pl Eng 50.92-3 S; 98-9 O; 94-5 N; 100-1 D '46; 51:94-6 Ja '47
Mechano-electronic transducers H. F Olson. il diags Acoustical Soc Am J 19:307-19 Mr '47
Monitors for molten metals. J. Markus il diag Sci Am 177.64-6 Ag '47
New principle in induction heating; Gordon Trigatron. T. E Lloyd. il Iron Age 159·46-8 Je 12 '47
Outer-case testing of refrigeration equipment. F. H. Catlin il diag Gen Elec R 50·41-2 O '47
Precision balancing at mass-production speed; electronic balancer of automatic pilot rotor. S. Bousky il diags Electronics 20 98-104 S '47
Production testing of tachometers H. F. Storm. il diags Electronics 20:92-6 Mr '47
Progress in engineering knowledge during 1946, electronics. P L. Alger and others. il diags Gen Elec R 50 45-6 Mr '47
16,000 tubes work for one railroad Electronics 20:186+ Ap '47
Some aspects of electronic engineering T. P Allen. Inst E E J 94 pt 1·113-15 F '47
Special-purpose power supply for 160/1500-volt operation; for such devices as klystron oscillators, phototubes and electron multipliers, cathode-ray tube circuits, and multistage direct-coupled amplifiers. P. W. Howells. il diags Gen Elec R 50 34-9 Je '47
Stabilizing electrical and mechanical characteristics of circuits; embedding parts in resin. il Electronics 20·136+ Jl '47
Tone stylus provides precise duplicating; tension on stylus converted to sound, allows milling of thin contour sections to close limits. H. L Seekins. il diags Am Mach 91: 109-11 Je 19 '47
Tubes find iron in ore. Electronics 20·172 Ag '47
Vertical position indicator diag Electronics 20·190+ N '47
Vibration exciter for structural tests. P. J Holmes il diags Electronics 19:96-100 D '46
What electronics may do on diners; New York railroad club symposium E. D Campbell and others. il plans Ry Age 122: 784-91 Ap 19 '47
What you should know about industrial electronics. il diags Am Mach 89:103 D 20 '45; 90.87 Ja 3; 88 Ja 31; 138 F 14; 104 F 28; 138 Mr 14; 111 Mr 28; 142 Ap 11; 132 Ap 25; 138 My 9; 116 My 23; 116 Je 6; 154 Je 20; 124 Jl 4; 141 Jl 18; 130 Ag 1; 184 Ag 15; 122 Ag 29; 138 S 12; 132 S 26; 138 O 10; 130 O 24; 138 N 7; 134 N 21 '46

Manufacture

Carbide structures in carburized thoriated-tungsten filaments C W. Horsting. bibliog il diags J Ap Phys 18 95-102 Ja '47
Cases in work simplification; RCA tube department il Factory Management 105:108-10 My '47
Electrodeposited silver on steel for glass-to-metal seals. N. S Freedman. il Electrochem Soc Trans 91 (preprint 19):285-96 '47
Gas heat speeds production of electron tubes. il Glass Ind 28 75-7 F '47
Honzl and Eisler patents. diags Glass Ind 28·84 F '47
Metal-ceramic brazed seals for microwave tubes. R J. Bondley. il Electronics 20:97-9 Jl '47

VACUUM tubes—Manufacture—*Continued*
Method of sealing exhaust tubulations to electronic discharge tube envelopes; patent. diags(p82) Glass Ind 28:83 F '47
New series of small radio tubes; abstract. G. Alma and F. Prakke. il diags Glass Ind 28:180+ Ap '47
Overcoming labour shortage; miniature radio valve assembly. il Elec R (Lond) 140:765-6 My 9 '47
Scale glass as substitute for mica. J. M. Stevels. Glass Ind 27:607-8+ D '46
Silver plating facilitates bonding glass to steel. il Steel 121 92+ Ag 25 '47
Some applications of tantalum in electronics. L. F. Yntema and R. W Yancey. Electrochem Soc Trans 91 (preprint 33):485-8 '47
Tube production techniques V G. Jarman. il Electronics 20:160+ O '47

Measurement uses

Beta-ray thickness gage for sheet steel; G-M counters and integrating circuits, responding to absorption of beta rays by steel moving over a radiostrontium source. O. J. M Smith. il diags Electronics 20:106-12 O '47
Coaxial-line diode noise source for u-h-f. H. Johnson. il diags RCA R 8:169-85 Mr '47
D-c amplifier for low-level signals; used in measurement of physical quantities in research and materials testing laboratories. C. B. Aiken and W. C. Welz. il diags Electronics 20.124-8+ O '47
Electrolytic integrating tube; explosions of oxygen and hydrogen produced by electrolysis provide method of duplicating time cycles or integrating flow of liquid or gas. J Silvertsen. il diags Electronics 20:92-5 Je '47
Electronic detonation meter for motor-fuel antiknock rating. D. R. deBolsblanc and H. M. Trimble. bibliog il diags Oil & Gas J 45:57-9 N 9 '46
Electronic magnetometer. J. H. Rubenstein. il diags Electronics 20:156+ Ja '47
Electronic measuring equipment for aeronautical research. Engineer 184:85+ Jl 25 '47; Engineering 164 91 Jl 25 '47
Electronic recording instruments; symposium. W. R. Clark and others. il diags Elec Eng 66:36-44 Ja '47
Electronic switch measures UV radiation. T. Temple diag Elec World 127:74+ Mr 1 '47
Electronics for cosmic-ray experiments B. Howland and others. diags R Sci Instr 18: 551-6 Ag '47
Electronics in measurement. L G. Gitzendanner. il diags Gen Elec R 50.24-9 Ag '47
Electronics in measurements. R. J. Kryter. Elec Eng 66:31-5 Ja '47
Impedance bridge for flow-rate metering. F. J Curran. il diags Electronics 20.106-8 Ap '47
Measurement of small currents: characteristics of types 38, 954, and 959 as reduced grid current tubes. C. E. Nielsen. bibliog R Sci Instr 18:18-31 Ja '47
Measuring pressures of industrial explosions N. J. Thompson and E. W. Cousins. il diags Electronics 20.90-3 N '47
Pulse-type tester for high-power tubes used for loran apparatus. E. C. Easton and E. L. Chaffee. diags Electronics 20:97-9 F '47
Rate-of-change meter R. W. Treharne and others diag Electronics 20.106-7 My '47
Recorder and timer for short intervals; designed to meet the needs of nucleonic research W H Bliss. il diags Electronics 20: 126-7 N '47
Scale of N counting circuits. B Howland. bibliog diags Electronics 20:138+ Jl '47
Shielding principle provides electronic micrometer. il Pet Eng 18:113 Ap '47, Same abr. Mech Eng 69:406-7 My '47, Abstracts. Machine Design 19:107-8 Je '47; Electronics 20:150+ Jl '47
Stabilized d-c amplifier with high sensitivity. H S Anker. diags Electronics 20.138+ Je '47
Tachometric audio-frequency meter. E. Kasner. il diags Electronics 20:121-3 F '47
Technical data on electronic micrometer. il diags Electronics 20.172+ N '47
Using a 959 as electrometer tube. Electronics 20:178+ Jl '47
Vacuum-tube acceleration pickup. W. Ramberg 4pls diags J Res Nat Bur Stand 37: 391-8 D '46, Abstract. il R Sci Instr 18:67-8 Ja '47
Vacuum tube acceleration pickup; measures changing accelerations of airplane parts and pilots in flight il Electronics 20.152+ Ja '47; Franklin Inst J 243:66-7 Ja '47
Vacuum tube for acceleration measurement. W Ramberg. il diags Elec Eng 66:555-6 Je '47

See also
Voltmeters, Vacuum tube

Miniature tubes

High fidelity miniature tube receiver. J. C. Hoadley. il diags Radio N 37:47-9+ Ap '47
Improvements in small tubes. il diag Electronics 20 144+ N '47
Metal-ceramic brazed seals; for microwave tubes. R. J. Bondley. il Electronics 20:97-9 Jl '47
Midget electronic equipment. il diags Electronics 20:84-9 F '47
Miniature tubes in war and peace. N. H. Green il RCA R 8 331-41 Je '47
New series of small radio tubes; abstract G. Alma and F Prakke. il diags Glass Ind 28 180+ Ap '47
Some designs and applications for packaged amplifiers using subminiature tubes. B Chance and others bibliog il diags R Sci Instr 18:610-16 S '47
Subminiature electrometer tube. C. D. Gould il diags Electronics 20:106-9 Mr '47

Noise

Effects of magnetic field on oscillations and noise in hot-cathode arcs. J. D. Cobine and C J. Gallagher. J Ap Phys 18:110-16 Ja '47
Excess noise in cavity magnetrons. R. L. Sproull. bibliog diags J Ap Phys 18:314-20 Mr '47
Linearity range of noise-measuring amplifiers. R. L. Bell. Wireless Eng 24:119-22 Ap '47
Noise and oscillations in hot cathode arcs. J. D Cobine and C. J. Gallagher bibliog Franklin Inst J 243.41-54 Ja '47
Noise in gas tubes for visual presentation of filter frequency response and for reverberation J D Cobine and C J. Gallagher. Electronics 20.144+ Mr '47
Practical radio course, tube noise in superheterodyne frequency converters.. A. A. Ghirardi. il Radio N 36:40-1+ D '46
Reduction of microphonics in triodes. V W. Cohen and A. Bloom. J Ap Phys 18:847-8 S '47
Reduction of microphonics in triodes. A H. Waynick bibliog diags J Ap Phys 18.239-45 F '47
Spontaneous fluctuations in a double-cathode valve D K. C. MacDonald. Wireless Eng 24:30 Ja '47
Theoretical comparison of the visual, aural, and meter reception of pulsed signals in the presence of noise. J. H. Van Vleck and D. Middleton. bibliog J Ap Phys 17:940-71 N '46

Nomenclature

ASA undertakes broad program on glass bulb nomenclature A Brann and F J Gallogly. il Ind Stand 18 32-3 F '47
Nomenclature system for glass bulbs. A. Brann. Electronics 20.184+ My '47

Patents

Glass headers for electron tubes; patent diag Glass Ind 28:521+ O '47

Scientific applications

Electroencephalographic technique from an engineer's point of view. W. G. Egan. bibliog il diags Inst Radio Eng Proc 34: 1000-4 D '46
Electronic computing circuits of the ENIAC (electronic numerical integrator and computer). A. W. Burks bibliog diags Inst Radio Eng Proc 35:756-67 Ag '47
Electronic seismograph. R. L. Arringdale. diags Electronics 20.150+ Ap '47
Electronics; workhorse at Bikini. D. G. Fink and others. il Elec Eng 66 6-10 Ja '47

VACUUM tubes—Scientific applications—*Cont.*
Ionosphere equipment for field use during a solar eclipse. G H. Musselman. il diag Electronics 20:112-16 My '47
Tube failures in ENIAC F. R. Michael. il diags Electronics 20:116-19 O '47
Variable-frequency stimulator for electrophysiology. W. I Weiss il diag Electronics 20 182+ O '47

Testing

Chamber checks tubes in wide temperature range. il Elec World News ed 126.20 N 16 '46
Electrode dissipation at ultra-high frequencies. Z W Wilchinsky diag Inst Radio Eng Proc 35:1155-7 O '47
Ion beams in high voltage tubes using differential pumping. E. S. Lamar and W. W. Buechner. bibliog diag J Ap Phys 18·22-7 Ja '47
Producing tube curves on an oscilloscope. H E Webking il diags Electronics 20:128-31 N '47
Pulse-type tester for high-power tubes used for loran apparatus. E. C Easton and E. L. Chaffee. diags Electronics 20·97-9 F '47
Q-meter control for power losses. il Electronics 20:162+ Ag '47
Serviceman's tube tester. F J. Lingel il diags Radio N 38·57-9+ O '47

Velocity modulation tubes

Current and power in velocity-modulation tubes L J. Black and P. L Morton bibliog diags Inst Radio Eng Proc 32:477-82 Ag '44; Discussion. 35:43-5 Ja '47
Theory of small signal bunching in a parallel electron beam of rectangular cross section. E. Feenberg and D. Feldman. J Ap Phys 17·1025-37 D '46
Velocity-modulated reflex oscillator. J. M. Lafferty. diags Inst Radio Eng Proc 35: 913-19 S '47
Velocity-modulation valves for radar; discussion of paper by L. F. Broadway and others. diags Inst E E J 94 pt 3.359-63 S '47

See also
Klystron

VALENCE
Energy additivity in oxygen-containing crystals and glasses. K. Sun and M. L. Huggins J Phys & Colloid Chem 51:438-43 Mr '47

See also
Chemical bonds
Double bonds
Molecules

Study and teaching

Fairy story of valence. A. Standen J Chem Educ 24:481-2 O '47

VALENTINE, Willard Lee, 1904-1947
Editor of Science. W. R. Miles. por Science 105:638-40 Je 20 '47

VALERIUS, Michael Marcus, 1872-1947
Sketch. V. H. Hughes por Am Assn Pet Geologists Bul 31:1700-2 S '47

VALEROLACTONE
Derivatives of γ-valerolactone, 1,4-pentanediol and 1,4-di-(β-cyanoethoxy)-pentane. R. V. Christian, jr, H. D Brown and R. M. Hixon. bibliog Am Chem Soc J 69:1961-3 Ag '47

VALLEY authorities. See Missouri Valley authority (proposed); Tennessee Valley authority

VALLEYS
Landslide near Georgetown, Texas, and its relation to valley development H. R. Blank. bibliog Am J Sci 245:380-7, pl 1-2 Je '47

VALPARAISO, Chile

Water supply

Water shortage hastens plans for new supply system. A. T. Cook. map Eng N 137.731-2 N 28 '46

VALSPAR corporation
Directors reply to Bruder's criticism. Oil Paint & Drug Rep 150·78 D 16 '46
Proxy battle for control. Comm & Fin Chr 165:1111 F 24 '47

VALUABLE papers insurance. See Insurance, Valuable papers

VALUATION
Value of publishers' plates. J. D. Phillips. J Account 83·143-7 F '47

See also
Depreciation
Insurance, Fire—Valuation of property
Inventories—Accounting
Mine valuation
Real property—Valuation
Stocks—Valuation

VALVES
Apparatus for measuring Joule-Thomson effects in gases by direct expansion through a valve. H. L. Johnston bibliog diags Am Chem Soc J 68·2362-6 N '46
Automatic valves for control of small flows of acids or other corrosive materials. K E Kunkel diags Chem Eng 54:120-1 Jl '47
By-pass valves N. T. Pef diags Power Pl Eng 51 99; Discussion. 99-100 Ag '47
Cam operated vacuum valve. D. D'Eustachio. diags R Sci Instr 18·369-70 My '47
Diaphragm control valves; construction materials and designs for corrosive and high-temperature service in the chemical industries. A. J. Koch. il diag Chem Eng 54.207-8+ Je '47
Electromagnetic liquid flow-stop valve. G G. Blake. diags Chem & Ind p536-7 Ag 30 '47
Fluid flow friction factors for pipes, valves and fittings V L Streeter. diag Product Eng 18·89-91 Jl '47
Hammel-Dahl packless control valve. il Chem Eng 54:144+ Ap '47
How to select a control valve B. A. Irwin il Power 91:627-30, 670-3 S-O '47
Metal spray reconditions plug valves for longer life; Hiram Walker & sons, inc. B. L Bailie. il Power 91:312-13 My '47
Metallurgical progress in the valve, fitting and piping industry. J. J. Kanter. il Metal Prog 52:629-31 O '47
New valve will handle fluids at temperatures up to 2600° F; patent. diags Pet Processing 2·30 Ja '47
Plug valve repacking simplified with hollow stud arrangement; patent. diag Pet Processing 2·623 Ag '47
Power brake valves; abstracts. E. F. Loweke diags Automotive & Aviation Ind 94:33-4 Ja 15 '46; S A E J 55:68 Ja '47
Several reasons are given to show the advantages of operating two types of valves mechanically. C. O Brown. il Ind & Eng Chem 39:sup91A-2A S '47
Two-part valve; fueling aircraft tanks from the bottom. il diags Machine Design 19:95-6 My '47

See also
Automobile engines—Valves
Safety valves
Steam engines—Valves

Electric control

Compressor starting auxiliaries il diag Engineer 183·525 Je 13 '47
Solenoid valves control this heating system. W Note diag Power 91.780 N '47
Valve controller. il Chem Eng 54:152+ O '47
Why do solenoid valves stick shut in ice and cold-storage plant? diags Power 91·638-9 S '47

Manufacture

Arc-welded fabrication is lowering cost, extending life of modern valves. H. H. Stahl il diags Welding J 26·620-1 Jl '47
Jigs simplify precision grinding of faces on gate valve wedges and seat-rings. diags Pet Processing 1:178 N '46
Milling threads on valve stems. E. N. Olson Mach 53.169 Ag '47
Welding of high-temperature, high-pressure steel valves. V T. Malcolm and S. Low. il Welding J 26:101-10 F '47

Standards

Diaphragm control valves conform to preferred numbers. B A. Irwin. il Product Eng 18:85-9 Ap '47
Report of committee on the standardization of valves and fittings diags Am Pet Inst Proc 26(4).253-75 '46

VALVES—Standards—*Continued*
Standard specifications for gray iron castings for valves, flanges and pipe fittings, data sheet. diags Foundry 75:117-18 N '47

Testing

Pressure losses in valves E. B. Pool. il Heating-Piping 19:74-7 Je '47

VALVES, Electron. See Vacuum tubes

VALVES, Hydraulic
Corrosion-erosion of boiler feed pumps and regulating valves. H A Wagner and others. il diags A S M E Trans 69:389-97; Discussion. 397-403 My '47
Gate valve care and maintenance. R W. Esty il Water & Sewage Works 94.R84-6 Jl '47
Graphitic corrosion of cast iron. L. M. Leedom Am Water Works Assn J 38:1392-7 D '46
Hydraulics for the practical water works man; effect of valves in pipes; flows through fire nozzles and metering nozzles. R W. Angus. diags Water & Sewage Works 94:122-5 Ap '47
Machine hydraulics. A. H. Dall diags Machine Design 18:87-90 O; 119-23 D '46
Pressure above or below disk of a globe valve? W. P. Kearney. Power 91:410-11 Je '47
Reciprocating pump; liquid valves; design and operation. E. F. Wright. diags Power 91:272-4+ Ap '47

Control

Surpression engendrée par la fermeture d'une vanne papillon à la suite de la rupture des organes de commande. L Escande. Génie Civil 123.342-5 D 15 '46

Standards

Value of hydrant, valve and meter standardization. G J. Van Dorp. Am Water Works Assn J 39.470-2 My '47

VANADIUM
Exploration of vanadium region of western Colorado and eastern Utah. W. P. Huleatt and others. 40pls U S Bur Mines Rep of Invest 3930:1-30 '46
Polarographic characteristics of vanadium in oxalate solutions. J. J. Lingane and L. Meites, jr bibliog Am Chem Soc J 69:1021-5 My '47
Polarographic oxidation of +4 vanadium J J. Lingane and L Meites, jr. Am Chem Soc J 69 1882-6 Ag '47
Role of vanadium in gray iron castings, abstract. T. E. Barlow. Product Eng 18:132 Mr '47
Story of Mina Ragra, premier vanadium find. D F. Hewett. il Eng & Min J 148:59-63 Ja '47
Vanadium and tungsten compounds being promoted C. J. Krister. Chem & Ind p113 F 22-Mr 8 '47
Le vanadium en France. Génie Civil 124:199 My 15 '47

See also
Roscoelite

Analysis

Extraction of vanadium from aqueous acid solutions by isopropyl ether J. J Lingane and L Meites, jr. bibliog Am Chem Soc J 68:2443-7 D '46
Field test for vanadium J M. Axelrod. In U S Geol S Bul 950:19-23 '46
Polarographic determination of vanadium in steel and other ferroalloys. J. J Lingane and L Meites, jr. bibliog Anal Chem 19: 159-61 Mr '47
Reduction of +5 vanadium in the silver reductor. J. J. Lingane and L Meites, jr. bibliog Am Chem Soc J 69:277-9 F '47
Separation of small amounts of chromium from vanadium with ethyl acetate M D. Foster In U S Geol S Bul 950 15-18 '46
Studies on the peroxide method for determining vanadium in minerals and ores. M D. Foster. In U S Geol S Bul 950 7-13 '46
Study of methods for the determination of vanadium V North bibliog In U S Geol S Bul 950.83-9 '46

VANADIUM chlorides
Heat capacities at low temperatures of VCl_2 and VCl_3. C H. Shomate. bibliog Am Chem Soc J 69:220-1 F '47

VANADIUM oxides
High-temperature heat contents of V_2O_3, V_2O_4 and V_2O_5 O. A. Cook. Am Chem Soc J 69:331-3 F '47
Hydrogenolysis of aliphatic alcohols. V. I. Komarewsky, C. F. Price and J. R. Coley. Am Chem Soc J 69:238-9 F '47
Investigation of flow in liquids by use of birefringent colloidal solutions of vanadium pentoxide. P. Ullyott. bibliog il A S M E Trans 69:245-9; Discussion. 249-51 Ap '47
Investigations on the equilibria in the system V_2O_4, V_2O_5, $VOSO_4$, SO_2, SO_3. H. Flood and O J. Kleppa. bibliog il diags Am Chem Soc J 69:998-1002 My '47

VANADIUM pentoxide. See Vanadium oxides

VANADYL sulfate
Investigations on the equilibria in the system V_2O_4, V_2O_5, $VOSO_4$, SO_2, SO_3 H. Flood and O. J. Kleppa. bibliog il diags Am Chem Soc J 69:998-1002 My '47

VANDALISM insurance. See Insurance, Fire—Policies—Extended coverage endorsements

VAN DE GRAAFF generator. See Electric generators, Electrostatic

VANDENBERG, Arthur Hendrick, 1884-
Ranking Republican. por(cover) Bsns W p8 Mr 22 '47
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47

VANDERBILT, Harold Stirling, 1884-
Portrait. Bsns W p68 F 8 '47

VAN DER GRACHT, W. A. J. M. van Waterschoot. See Waterschoot van der Gracht, Willem Anton Josef Maria van

VAN DER WAALS equation. See Equation of state

VAN HELMONT, Jan Baptist. See Helmont, J. B. van

VANILLA
Dominica's vanilla industry. For Comm W 27.34 My 31 '47
Increased vanilla production, Mexico. For Comm W 27:21 My 24 '47

VANILLIC acid
Preparation of vanillic acid amide from vanillonitrile D M. Ritter. bibliog Am Chem Soc J 68 2738-9 D '46
Reactions of vanillin and its derived compounds, caustic fusion of vanillin. I. A. Pearl Am Chem Soc J 68:2180-1 N '46

VANILLIN
Oxidation potentials of some compounds related to vanillin. D. M. Ritter. bibliog Am Chem Soc J 69:46-50 Ja '47
Reactions of vanillin and its derived compounds; caustic fusion of vanillin. I. A. Pearl. Am Chem Soc J 68:2180-1 N '46
Some amines and amides derived from vanillin. A A. L. Challis and G. R. Clemo Chem Soc J p613-18 My '47
Synthetic spruce, spruce lignin has been synthesized from vanillin. Chem Ind 61 612 O '47

VAN NORMAN company
Debentures offered. Comm & Fin Chr 166:310 Jl 21 '47

VAN SCHOICK, Emily C. 1894-
E Van Schoick named librarian at New York state college of ceramics. por Am Cer Soc Bul 26:283 S 15 '47

VAN SWERINGEN, Mantis James, 1881-1935
Vans' real estate reorganized. Bsns W p80+ O 18 '47

VAN SWERINGEN, Oris Paxton, 1879-1936
Vans' real estate reorganized Bsns W p80+ O 18 '47

VAN WATERSCHOOT VAN DER GRACHT, W. A. J. M. See Waterschoot van der Gracht, Willem Anton Josef Maria van

VAPOFIERS. See Oil burners

VAPOR pressure

Activity of orthophosphoric acid in aqueous solution at 25° from vapor pressure measurements K L Elmore, C M Mason and J. H Christensen bibliog Am Chem Soc J 68.2528-32 D '46

Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25°C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51 1154-71 S '47

Antoine vapor-pressure equation for mononuclear aromatic hydrocarbons. N. Corbin, M. Alexander and G. Egloff J Phys & Colloid Chem 51.528-40 Mr '47

Composition of vapors from boiling binary solutions; acetonitrile-water system D. F. Othmer and S. Josefowitz. bibliog Ind & Eng Chem 39:1175-7 S '47

Cuprous chloride derivatives of C_5 diolefins. A L. Ward and E. C Makin, jr. bibliog Am Chem Soc J 69 657-9 Mr '47

Determination of the boiling-points of liquids of low vapour pressure. G. Burrows. bibliog diag Soc Chem Ind J 65:360-5 N '46

Determination of the vapor pressure of liquids on a milligram scale C. Gould, jr., G. Holzman and C. Niemann. bibliog diag Anal Chem 19:204-6 Mr '47

Determination of vapor pressures below 10^{-3} mm Hg S. F. Kapff and R. B. Jacobs bibliog diags R Sci Instr 18:581-4 Ag '47

Distillation properties of aromatic hydrocarbons J. Griswold and J A. May bibliog il Pet Refiner 26·85-8 Mr '47

Graphical method for predicting azeotropism and effect of pressure on azeotropic constants L. H. Horsley Anal Chem 19·603-9 Ag '47

Graphical method for predicting effect of pressure on azeotropic systems. H. S. Nutting and L H Horsley. Anal Chem 19·602-3 Ag '47

Isolation and purification of two isomers of mesityl oxide F. H Stross, J. M Monger and H. de V. Finch. bibliog Am Chem Soc J 69:1627-8 Jl '47

Keeping properties of confectionery as influenced by its water vapour pressure. D. W. Grover. bibliog Soc Chem Ind J 66·201-5 Jl '47

Measurement of vapor pressures of aqueous solutions by bi-thermal equilibration through the vapor phase. R H. Stokes bibliog diag Am Chem Soc J 69:1291-6 Je '47

Microdetermination of molecular weight by a vapor pressure comparison method. L. K Nash. bibliog diags Anal Chem 19·799-802 O '47

Nomographic chart for vapor pressures. I. J. Hooks. Chem Eng 54:134 Ja '47

Pressure-volume-temperature relations of benzene E. J. Gornowski, E. H Amick, jr and A N. Hixson. bibliog diag Ind & Eng Chem 39·1348-52 O '47

Proof of the Kelvin-Helmholtz equation for the equilibrium vapor pressure above a meniscus. W O. Smith. bibliog diag J Eng Educ 37 809-10 Je '47

Relation of Reid to true vapor pressure. W. L. Nelson. Oil & Gas J 46·84 My 10 '47

Relation of vapor-pressure deficit to evaporation from a spherical atmometer in an air-conditioned room. B. E. Livingston and J. D. Wilson. Science 104.487-8 N 22 '46

Relationship between viscosity, density, and vapour pressure of liquids L. H Thomas. Chem Soc J p822-9 Je '47

Specular reflection from mercury vapor. J. M Hansen and H. W Webb. diags Phys R 72;332-9 Ag 15 '47

Thermodynamic properties of isotopic substances H. C Urey. bibliog Chem Soc J p562-81 Ap '47

Thermodynamic properties of water substance 0° to 150° C. F G. Keyes. bibliog J Chem Phys 15:602-12 Ag '47

Vapor-liquid equilibrium diagrams of alcohol-ketone azeotropes as a function of pressure. E. C. Britton, H. S Nutting and L. H. Horsley. Anal Chem 19·601-2 Ag '47

Vapor pressure and heat of vaporization of acetylmethylcarbinol A. Efron and R. H. Blom. J Phys & Colloid Chem 51·480-3 Mr '47

Vapor pressure of hydrofluoric acid solutions. J. C Brosheer, F A. Lenfesty and K. L. Elmore. bibliog il Ind & Eng Chem 39: 423-7 Mr '47

Vapor pressure of liquid titanium tetraiodide. J. M. Blocher, jr. and I. E. Campbell. bibliog diags Am Chem Soc J 69.2100-1 S '47

Vapour pressure of phthalic anhydride. D. A. Crooks and F M. Feetham. Chem Soc J p899-901 O '46

Vapor pressure of pure substances; inorganic compounds; tables [p541-6]. D R. Stull bibliog(499 ref) Ind & Eng Chem 39: 540-50 Ap '47

Vapor pressure of pure substances; organic compounds; tables [p518-36]. D. R. Stull. bibliog(494 ref) Ind & Eng Chem 39·517-40 Ap '47; Correction. 39:1684 D '47

Vapor pressure of water adsorbed on dehydrated alfalfa W. G Schrenk and H. H. King. bibliog Ind & Eng Chem 39.1165-7 S '47

Vapor pressure; what it is and does. E. R. Queer and E. R McLaughlin. il Heating-Piping 19 78-80 Ag '47

Vapor pressures and saturated liquid and vapor densities of cyclopentane, methylcyclopentane, ethylcyclopentane and methylcyclohexane. W. B. Kay. bibliog diag Am Chem Soc J 69 1273-7 Je '47

Vapor pressures and some other properties of di-i-butyl ketone and di-i-butylcarbinol. F. H Stross, C. M Gable and G C. Rounds bibliog Am Chem Soc J 69:1629-30 Jl '47

Vapour pressures of ammonia and carbon dioxide in equilibrium with aqueous solutions at 90°. E H. M. Badger and D. S. Wilson diag Soc Chem Ind J 66·84-6 Mr '47

Vapor pressures of chromic salt solutions. N. O. Smith. bibliog Am Chem Soc J 69: 91-3 Ja '47

Vapor pressures of some organic fluorides. F H. Field and J. H. Saylor. Am Chem Soc J 68:2649 D '46

Vapor pressures of twelve four-carbon-atom hydrocarbons. K. Hachmuth, G. H. Hanson and M. L Smith bibliog Am Inst Chem Eng Trans 42:975-82 O-D '46

VAPORIZATION

Intermolecular forces and energies of vaporization of liquids. S. W. Benson. bibliog J Chem Phys 15.367-73 Je '47

Nomograph for flash vaporization. M. Nord. Anal Chem 19:431-2 Je '47

Rate of vaporization of sulfur. F. M. Turrell. bibliog Science 105:434 Ap 25 '47

Relative volatility method for calculating equilibrium-vaporization curves. D. A. Smith and G. W. Wilson. bibliog Am Inst Chem Eng Trans 42:927-37 O-D '46

Séparation par distillation d'un mélange de deux corps en présence d'une entraîneur. J P. Zwilling. diag Chimie & Ind 57:336-40 Ap '47

Vaporization of fuels for gas turbines; bubble-points and dew-points of liquid hydrocarbon fuels. B P. Mullins bibliog (82 ref) fold charts pl diags Inst Pet J 32: 703-37, 33.44-70 D '46-Ja '47

See also

Hildebrand rule

VAPORIZATION, Heat of

Determination of the vapor pressure of liquids on a milligram scale. C. Gould, jr, G Holzman and C. Niemann. bibliog diag Anal Chem 19:204-6 Mr '47

Distillation properties of aromatic hydrocarbons. J Griswold and J. A. May. bibliog il Pet Refiner 26·85-8 Mr '47

Heat and the external work of vaporization of ethylbenzene from 0 to 140° J. E Haggenmacher. bibliog Am Chem Soc J 69:707-8 Mr '47

Heat capacity of benzene vapor; the contribution of anharmonicity. D. W. Scott and others bibliog J Chem Phys 15·565-8 Ag '47

Improved flow calorimeter; experimental vapor heat capacities and heats of vaporization of *n*-heptane and 2,2,3-trimethylbutane. G. Waddington, S. S. Todd and H. M. Huffman bibliog diag Am Chem Soc J 69.22-30 Ja '47

Quarter circle rule for latent heats. J. R. Hopkins. Chem Eng 54.111 Jl '47

VAPORIZATION, Heat of—*Continued*
Vapor pressure and heat of vaporization of acetylmethylcarbinol. A. Efron and R H. Blom. J Phys & Colloid Chem 51:480-3 Mr '47
Vaporization of fuels for gas turbines; heat quantities required to vaporize gas turbine fuels B P Mullins. diags Inst Pet J 33:52-61 Ja '47

VAPORIZERS
Fuel vaporizer il Sci Am 177:75-6 Ag '47
Method of coloring flames with salts A. G. Collard. diag R Sci Instr 18:451 Je '47
Portable glycol vaporizers for air disinfection. F C. W Olson and others. bibliog diags Science 105:23-4 Ja 3 '47

Rating
Vaporizers and bottle warmers. il Consumers Res Bul 19:5-7 My '47

VAPORS
Adsorption isotherms of mixed vapors of carbon tetrachloride and methanol on activated charcoal at 25°C. W. B. Innes and H. H. Rowley. bibliog diag J Phys & Colloid Chem 51:1154-71 S '47
Composition of vapors from boiling binary solutions; acetonitrile-water system. D F. Othmer and S. Josefowitz. bibliog Ind & Eng Chem 39:1175-7 S '47
Diffusion of vapors in films. P E. Rouse, jr. bibliog diag Am Chem Soc J 69:1068-73 My '47
Effect of vapour composition on the assessment of fractionating columns in terms of heights of a transfer unit. J. A Storrow bibliog diags Soc Chem Ind J 66 41-8, 73-9 F-Mr '47
Further studies on sensory response to certain industrial solvent vapors. L Silverman and others J Ind Hygiene 28:262-6 N '46
Heat transfer coefficients for condensing hydrocarbon vapors. D. A. Donohue. bibliog Ind & Eng Chem 39:62-4 Ja '47; Same. Pet Eng (Ref annual) 18.222+ Jl 1 '47; Same Pet Refiner 26 116-17 Ag '47
Magnetic susceptibilities of the vapors of benzene and carbon tetrachloride. R. K. Reber and G F. Boeker bibliog diags J Chem Phys 15:508-13 Jl '47
Quinone vapors and their harmful effects; corneal and conjunctival injury. J H. Sterner and others flow diag J Ind Hygiene 29:60-84, pl 1-2 bibliog(p73, 84) Mr '47
Radial density variation of gases and vapors in a centrifugal field. J. W. Beams. Phys R 72:433-4 S 1 '47

See also
Adsorption
Electric precipitation
Evaporation
Fumes
Gases
Solvents
Steam
Vapor pressure
Vaporization
Water vapor

VARIABLES, Complex
Application of the theory of the complex variable to the mapping of some potential functions. E. L. Morgan. diags Franklin Inst J 243:309-22 Ap '47

VARIATION (statistics)
Probability functions for the modulus and angle of the normal complex variate. R S. Hoyt Bell System Tech J 26:318-59 Ap '47
Relation of control charts to analysis of variance and chi-square tests H. Scheffé. Am Stat Assn J 42:425-31 S '47
Some applications of multivariate analysis to economic data G. Tintner. bibliog Am Stat Assn J 41:472-500 D '46

VARICOSE ulcer (term)
Fallacy of the term varicose ulcer. O. Meyer. Ind Med 15:689-90 D '46

VARIETY chains. See Department stores—Variety chains

VARIETY stores

See also
Department stores—Variety chains

Finance
Expenses and profits of limited price variety stores in 1946; chains and independents. E. A Burnham (Bur of business research bul. 127) 42p pa $2 Harvard univ. Graduate school of business administration, Div. of research, Soldiers Field, Boston 63, '47
Sales drop may cut variety chains' margins; one solace, they outdo department stores; study by Harvard university. E. A. Burnham. Barron's 27 33 S 22 '47

VARNISH, Insulating
Cashew resins, their use in manufacture of insulating varnishes. A. E. Williams Elec R (Lond) 141 244-5 Ag 15 '47
Inside of electrical machines. R. H. Robinson il diags Electrician 136:1239-43; 137:314-17, 1205-6, 1361-3 My 10, Ag 2, N 1, 15 '46

VARNISH analysis
Determination of solids in resin solutions. J. H Vail. Anal Chem 19:412-13 Je '47
Improvements in varnish distillations. J H. Vail. diag Anal Chem 19:506 Jl '47
Volumetric determination of water in paints and varnishes. M. H Swann. bibliog Ind & Eng Chem Anal ed 18:799-800 D '46

VARNISH and varnishing
Anti-skinning agents. bibliog Paint Oil & Chem R 109 88-9 N 14 '46
Blooming of varnish films; abstract. W. E Wornum Paint Oil & Chem R 109:20+ D 26 '46
Organic films capable of deformation; abstract. H. F. Sarx Metal Prog 50:720+ O '46
Silicon organic compounds; resins, varnishes, silicone liquids, greases and lubricants. A. E L. Jervis and K Mochlinski. Chem Age (Lond) 57.219-20 Ag 16 '47
Styrene copolymer solvent reacting varnishes; Fosterite resins, abstract. N. C Foster Chem Eng 54:242+ Ja '47
Survey of the paint, varnish, and lacquer industry for 1946. C. P. Neidig and H. Burrell. il Chem & Eng N 25:93-5 Ja 13 '47
Sweet plastics story; octallyl sucrose, varnish resin. Chem Ind 60:767 My '47

See also
Drying oils
Lacquer and lacquering
Tung oil
Varnish factories

VARNISH factories
Design for a modern varnish plant. il plans diags Paint Oil & Chem R 109:32+ N 14 '46
Vehicle manufacturing in set kettles and stills. T. F. Byron. Paint Oil & Chem R 110:14+ Ap 17 '47

VAT dyes. See Dyes and dyeing—Vat dyes

VATICAN CITY

See also
Radio broadcasting stations—Vatican City

VAUGHAN, Thomas Wayland, 1870-
Presentation of Penrose medal; citation by J E Adams, response by Dr Vaughan. por (pl 2) Geol Soc Proc 1946:69-75 Jl '47

VAULTS (electric installation)
Graphical determination of heating attainment factor for transformers installed in vaults J E. Gahagan. Elec World 127:72-3 Mr 1 '47

See also
Electric lines

VECTOR analysis
Analysis of hunting by means of vector diagrams B. Adkins. diags Inst E E J 93 pt 2.541-8 D '46
Energy export and import; use of the four-quadrant vector diagram. A. Salzmann. diags Elec R (Lond) 139.869-72 N 29 '46
Projections of a rotating vector I F. Ritter. il J Eng Educ 37:616-17 Ap '47
Simplifying the calculation of vector resultants. C O. vonDannenberg Power Pl Eng 51.95 Mr '47
Star connected resistances, taking balanced currents G W Stubbings. Electrician 139:395-6 Ag 8 '47
Star voltages. G. W Stubbings. Electrician 139:1211-12 O 24 '47
Vector analysis of epicyclic gear trains; reference book sheet. L. Avondoglio. diags Product Eng 18:171+ Ag '47

See also
Tensors

VEEDER-ROOT, Inc.
Veeder-Root opens new plant addition il Rayon 28:13-14 Ja '47

VEGETABLE gardening
Victory gardens, still growing. il Bsns W p21 My 24 '47

VEGETABLE oils. See Oils and fats

VEGETABLE parchment. See Parchment paper

VEGETABLE washing machines
Farmers aren't hard to sell when approached properly, American Specialty vegetable washing machine. J A. Ignat. il Ptr Ink 217 50-1 D 13 '46

VEGETABLES
Fresh vegetable and fruit production and exports, Cuba For Comm W 29 23 O 25 '47
It peels, blanches, cooks; fruits and vegetables processed in small batches. E. S. Stateler. il diag Food Ind 19·1053-5 Ag '47
Million carlots of fruits and vegetables go to market. W W. Hubbell. il Dom Comm 35: 65-70 S '47

See also
Canned food
Cooling of fruits and vegetables
Drying (fruits and vegetables)
Produce terminals
also names of vegetables, e g.
Bean sprouts
Beans
Cabbage
Carrots
Corn
Peas
Potatoes
Sweet potatoes
Tomatoes

Mineral content

Effect of duration and temperature of blanch on proximate and mineral composition of certain vegetables A. Kramer and M. H Smith bibliog Ind & Eng Chem 39 1007-9 Ag '47

Prepackaging

Challenge of pre-packaging. Mod Packaging 20:134-5 N '46
Developments in pre-packaged perishable foods. A. L. Martin. Mod Packaging 20: 150-2 Ap '47; Abstract. Refrig Eng 53:420+ My '47
Glenmar farms, grower and packager. il Mod Packaging 20·93-8 D '46
New process keeps vegetables fresher. Bsns W p61 Ja 18 '47
Opinions on packaged produce. S. K. Bradley. Food Ind 19·50 Ja '47
Packaged produce without refrigeration; Purdue experiment. F. C. Gaylord and K. I Fawcett. il Mod Packaging 20:124-8+ D '46
Prepackaging broadened. Bsns W p32 D 7 '46
Prepackaging of produce. N. Allen. il Food Ind 19:51 Ja '47
Produce marketers survey pre-packaging to stem competition from frozen foods. B. Tolk. Ptr Ink 218:70 Ja 3 '47
Produce wastage; government survey of waste and spoilage of non-packaged produce at retail level. D. R Stokes. Mod Packaging 21:120-4+ O '47
Refrigeration of prepackaged fruits and vegetables. C. O. Bratley. il Refrig Eng 52:516-20+ D '46
Whither pre-packaging? views of a government marketing economist. F. L. Thomsen. Mod Packaging 20:132-4 N '46

Preservation

Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables J. R Wagner, F M. Strong and C A Elvehjem Ind & Eng Chem 39.990-3 Ag '47
How a service adds value to branded fresh produce; Brogdexing. il Sales Management 57 102-3 N 20 '46
Millions are lost from spoiled fruits and vegetables in self-service stores when refrigeration is not used. D. R. Stokes. Refrig Eng 54.355-8 O '47
Nutritive value of canned foods; effect of commercial canning operations on the ascorbic acid, thiamine, riboflavin, and niacin contents of vegetables J R Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Production of cured vegetables for pickle manufacture. J. G. Baumgartner. bibliog Chem & Ind p350-3 Je 21 '47

See also
Vegetables, Dried
Vegetables, Frozen

Transportation

Flying perishables to market J L. Nicholson il Food Ind 19·786-9 Je '47
New fruit and vegetable vans for L.M S. Engineer 183:548 Je 20 '47

VEGETABLES, Dried

See also
Cabbage, Dried
Carrots, Dried
Potatoes, Dried

Advertising

100 sales letters a week keep the customers coming; California vegetable concentrates, inc. J. B. Pardieck. il Sales Management 58 70-1 Mr 1 '47

Storage

Browning of dehydrated vegetables during storage R R. Legault and others. bibliog Ind & Eng Chem 39:1294-9 O '47
Commercially dehydrated vegetables; oxidative enzymes and other factors. M. F. Mallette and others. bibliog Ind & Eng Chem 39·1345-8 O '47

VEGETABLES, Frozen
Freezing rates of fruits and vegetables at various air velocities. W. R. Phillips. bibliog Refrig Eng 53:401-3 My '47
Frozen foods; Wisbech produce canners il Elec R (Lond) 140 51-3 Ja 10 '47

See also
Peas, Frozen

VEHICLES

See also
Automobiles
Cars
Motor buses
Motor trucks
Motor vehicles
Street cars

VEHICULAR tunnels. See Tunnels and tunneling—Vehicular tunnels

VELAN
Some chemical aspects of the application of velan PF to cotton fabrics. F. V. Davis. Soc Dyers & Col J 63:260-3 Ag '47

VELOCITY
Alternative methods of velocity determination in mechanisms. I. W. Smith. J Eng Educ 37:540-50; Discussion. 550-7 Mr '47
Measurement of sea-water velocities by electromagnetic induction. R. W. Guelke and C. A. Schoute-Vanneck. bibliog diags Inst E E J 94 pt 2:71-4 F '47
Terminal velocity as the measure of dust-particle characteristics R. B Foley. il A S M E Trans 69:101-7 bibliog(p106); Discussion 107-8 F '47

See also
Electrons—Velocity
Sound—Velocity

VELOCITY modulation tubes. See Vacuum tubes—Velocity modulation tubes

VELOCITY of chemical reaction. See Chemical reaction—Velocity

VELVETEEN
Cotton is a winter fabric. M. Herzog il Textile Col 69·24-5 O '47

VENDING machines
Automatic merchandising sales goal three billion. C. E. Anderson. il Dom Comm 35: 29-33 Ap '47
Automatic salesman Mech Eng 69·324 Ap '47
Automatic vendors. il Mod Packaging 20:75-80 Ag '47
California O.K s vending machines policy. Nat Underw 51:29 My 22 '47
Coin machine industry sees $150 million year. W. J. Campbell il Steel 121.57-9 Ag 18 '47
Coin trouble Bsns W p76+ F 15 '47
Electrically operated coin changer. il diags Product Eng 18.92-3 Mr '47; Same. Mech Eng 69:412-13 My '47
Insurograph boosts aviation accident policy sales Nat Underw 50:12 D 5 '46

VENDING machines—*Continued*
Launderettes grow apace, and Mrs America rocks while Bendix washes. E. M. Kelley. il Sales Management 59:44-6 S 15 '47
Machine as salesman; the Rowe corp. automatic cigarette dispensing il Fortune 35: 116-21+ Mr '47
Pre-cooked frozen meals in vending machines il Ptr Ink 218 71 Ja 31 '47
Vending picks up. Bsns W p57+ N 16 '46
Will retail robots revolutionize marketing? automatic groceries, laundries, gas stations. B R Canfield il Adv & Sell 40·33-4+ Ag '47; Abstract. Management R 36·479-81 S '47

See also
Radio receiving apparatus—Coin operation

Taxation
Perpetual jackpot; slot machines, pinball games, juke boxes, etc. Bsns W p78 Jl 19 '47

VENDORS and purchasers
Property buyer bears fire loss occurring before possession. Nat Underw 50:4 N 21 '46
What would you do? customer refuses delivery of goods. C. B. Everberg. Credit & Fin Management 49·9-10 Jl '47

See also
Sales

VENEERS and veneering
Wood treatment with urea resin-forming systems (comparison with phenolic resins for making compreg). M A Millett and A J. Stamm. Mod Plastics 24·159-60+ F '47

VENEZUELA

See also
Architecture—Venezuela
Housing—Venezuela
Petroleum—Venezuela

Economic conditions
News by countries. For Comm W 25:37-9 N 23; 35+ D 21 '46, 26 21+ Ja 18; 21 Mr 22; 18-19+ F 8; 27·26-7 Ap 12; 18-19 My 24; 22+ Je 21, 28 22+ Jl 26; 22-3 Ag 30, 36 S 20; 29 20+ O 25 '47
Venezuela, in 1946, witnessed growth, dearth, brisk trade. H. T. Hoffman. il For Comm W 27:8-9+ Ap 5 '47

VENICE, Italy

See also
Telephone—Venice, Italy

VENOM

See also
Snakes

VENTILATION
Adequate light and ventilation goal of new building standards. H. Vermilya. il Ind Stand 17:277-8 N '46
Air volume increased 64 per cent by simple ductwork changes; rifle range and swimming pool at state university. J. Cassie diags Heat & Ven 44:78-80 Je '47
Causes of drafts, and how they are eliminated. L R. Phillips il Sheet Metal Worker 38·104+ S '47
Condensation problems serious with indoor swimming pools. S. Lewis. il Heating-Piping 19.99-100 My '47
Design of injectors for low-pressure air flow. diags Heat & Ven 44.82-94 Jl '47
Experience is my classroom T. W. Reynolds. Heat & Ven 44·80-2 Mr '47 [cont monthly]
Intakes, outlets in courtways can lead to plenty of grief S. Lewis diags Heating-Piping 19 105-6 Ag '47
Ultraviolet sanitary ventilation. W. T. Anderson, jr. il Heat & Ven 44.63-8 Ap '47
La ventilation des locaux par succion de l'air du sol. M. Hottinger. diag Génie Civil 123·329 D 1 '46
Ventilation in grain and seed bins. Safety Eng 94 95 O '47
Ventilation involved in the use of gasoline-powered equipment in enclosed spaces (not in mines or tunnels) L. B. Berger. 4pls U S Bur Mines Information Circ 7404·1-8 '47
Wrong exhaust opening can cause ventilating troubles. S. Lewis. diags Heating-Piping 19 94-5 Ap '47

See also
Air conditioning
Air diffusers
Air filters
Air pipes
Air pollution
Air purification
Cooling
Dust removal
Electric fans, Ventilating
Elevators—Ventilation
Exhaust systems
Fans, Mechanical
Gas appliances—Ventilation
Heating
Humidity
Mine ventilation
Plumbing—Ventilation
Tanks
Ventilators

also subdivision Heating and ventilation under various subjects, e g.
Airplanes
Factories
Foundries
Motor buses
School buildings

Standards
ILO ventilation code reviewed by U.S. experts. Chem & Eng N 25:917 Mr 31 '47

Tables, calculations, etc.
Convection velocities and their measurement. L. Silverman. diags Heat & Ven 44:84-92 Je '47
Throw of air from slots and jets. R. D. Madison and W. R. Elliot. Heating-Piping 18: 108-9 N '46

VENTILATION equipment

See also
Air conditioning equipment
Ventilators

VENTILATION research
Challenge of the ASHVE research program. C Tasker. il Heating-Piping 19:119-24 Ag '47
Minimal replenishment air required for living spaces, under conditions of mechanical cooling and removal of odors; ship's berthing space. W V Consolazio and L. J. Pecora. bibliog plan diag Heating-Piping 19·103-14 Mr '47
Nature of air flow at suction openings A D Brandt and others. bibliog diags Heating-Piping 19 101-7, Discussion 107-8 F '47
1946 report of Committee on research. il Heating-Piping 19·115-22 Mr '47

VENTILATORS
How to guard against ventilation failures. Heating-Piping 19:92 S '47, Same Sheet Metal Worker 38.82 O '47
Unusual in sheet metal as seen by a reporter's camera; illustrations with text. Sheet Metal Worker 38·92-3 Ja '47

VENTS (architecture)
Disaster-proof buildings may result from flame-and-smoke control system developed by three-company research. il diags Arch Forum 87·117-20 Jl '47
Preventing the spread of fire; question of proper venting. M. Webster. diags Arch Rec 101.110 F '47

VENTURI meters
Hydraulics for the practical water works man; measurement of discharge through pipes. R. W. Angus. diags Water & Sewage Works 94·215-16 Je '47
Venturi fabricated faster by transfer molding. diags Am Mach 91.87 Jl 31 '47

VENTURI tubes. See Venturi meters

VERBS
Word finder J I Rodale, comp. 1317p $6 50 Rodale press, Allentown, Pa. '47

VERMICULITE
Finished product story of the month. il Manuf Rec 116;45+ S '47
From the movies to lightweight aggregates; AleXitE engineering division of Alexander film co develops two lightweight aggregates; manufactures concrete brick. W. B. Lenhart il Rock Prod 50:155-6+ O '47
Industrial application of chemicals; vermiculite. Oil Paint & Drug Rep 152·7 Jl 7 '47
Marvels of mikolite. J McCaleb Can Min J 68·571 Ag '47
Report on the various applications of vermiculite in building; abstract G. B. Coggins. Brick & Clay Rec 110:45 Je '47

VERMICULITE—*Continued*
Vermiculite insulating brick. R. F. Rea. bibliog il Am Cer Soc Bul 26:36-8 F 15 '47; Abstract. Brick & Clay Rec 108:68 My '46
Vermiculites and their utilization. A. Goldstein, jr. il Colorado School of Mines [Golden] Quarterly 41 no 4 1-64 bibliog(170 titles) O '46 (pa $1)

VERMONT
See also
Hydroelectric plants —Vermont

VERTEBRAL body trephines. See Trephines

VERTEBRATES, Fossil
Functions of vertebrate paleontology in the earth sciences. E. H. Colbert. Geol Soc Bul 58:287-91 Ap '47

VESICANTS
Chemistry of 2-chloroalkylamines; preparation and general reactions. W. E. Hanby and H N. Rydon. Chem Soc J p513-19 Ap '47
Chemistry of 2-chloroalkylamines; reactions of tertiary 2-chloroalkylamines in water W. E. Hanby and others. Chem Soc J p519-27 Ap '47
Chemistry of 2-chloroalkylamines; the dimerisation and hydrolysis of 2 . 2′ : 2″-trichlorotriethylamine. C. W. Crane and H. N. Rydon. Chem Soc J p527-30 Ap '47
See also
Trichlorotriethylamine

VETERANS
Bonds for veterans' estates. C. W. Laird. Rough Notes 90.30+ F '47
Business as usual despite cashing of veterans' terminal leave bonds. Bsns W p22+ S 20 '47
For GI bridegrooms: alien fiancée bonds. Rough Notes 90:49 F '47
Fortune survey; how do veterans feel toward business and industry? Fortune 34:6+ D '46
Hospitalization for ex-GI's. Rough Notes 90: 52 Ap '47
Veterans and the government. Economist 151: 751-3 N 9 '46; Same. Iron Age 158:115+ N 21 '46
WAA veterans' store in New Orleans sells scarce wares at retail. D. Markstein. Barron's 26·11 D 23 '46
See also
Hospitals, Military

Adjustment problems
See Veterans—Readjustment problems

Bonuses
Michigan national bank of Flint gives veterans bonus-application aid il Burroughs Clearing House 31:10-11 Je '47
Soldiers' bonus proposals. Nat City Bank p22-3 F '47

Business plans
G.I.'s taxis outlawed in Philadelphia. il Bsns W p19-20 Ap 12 '47
Plan network of restaurants on wheels. il Ptr Ink 219:88 My 30 '47
Policy behind DoAll's packaged shop program; model repair and service shops for GI's and others. il Sales Management 57:90+ N 20 '46
Service station possibilities; a basis for financing owners. J. S. Cordell. Bankers Mo 63: 544-5 N '46
So he built himself a house; Bob Dominick builds for other GIs il Banking 39:55 Ja '47
20-year-old veteran launches building business. il plans Am Bld 69:98 Jl '47

Education
Approve Florida agents' program of on-the-job training Nat Underw 51.14 Mr 6 '47
Courses fit GI's for utility jobs; South Carolina power co. il Elec World 128.114 O 11 '47
Flying start; Royal air force's educational and vocational training schemes. R. Cooke. Personnel J 25:282-4 F '47
Insurance study by mail open to all war veterans. Weekly Underw 157:239 Jl 26 '47
It's tomorrow, how American institute of banking aids veterans L. Lewis Am Inst Banking Bul 29 16 Ja '47
New problems arise in GI job training programs; VA insists on wage progression; disqualifies men on commission Nat Underw 51:1 Ja 23 '47, Same. Nat Underw (Life ed) 51:1+ Ja 24 '47
On-the-job training for veterans of World war II. C. L. Derrick. Edison Elec Inst Bul 14 387-9 N '46
On the job training for white collar employees. A. P. Coombs. Am Gas Assn Proc 1946:114-17
Vet training programs for oil burner servicing; Oil heat institute of New England aids in planning instruction; job breakdown; list of tools. F. C. Sturtevant. Nat Pet N 38: 48-53 N 13 '46
VA approves Scovill training course. Factory Management 105:76 Mr '47
VA clarifies points on GI insurance training H V. Stirling. Nat Underw 51:16 Ap 3 '47; Same abr. Nat Underw (Life ed) 51:11+ Ap 4 '47
Veterans turned scholars. C. J Freund. J Eng Educ 37.762-4 Je '47
What is the veteran's attitude toward college? C. M. Edwards, jr. J Retailing 22.65-6 O '46

Employment
Cream of veterans enter agencies, ad departments as apprentices. A. B. Barber. Ind Marketing 32.45-6+ Ja '47
Readjustment of veterans to civilian life. Mo Labor R 63:712-20 N '46
Veterans return to the Nation's factories. E. J. Polinsky. Mo Labor R 63:924-34 D '46
Veterans' rights B. Werne. Factory Management 105:218+ F '47
Vets fill job and union ranks. Bsns W p78+ Ja 25 '47
When the veteran needs help; program of Standard register company. J. N Griffith. Am Bsns 16·10-11+ D '46
See also
Veterans—Reemployment
Veterans, Disabled —Employment

Housing
Bank's village for veterans; Farmers and mechanics savings bank of Minneapolis housing project, Penn Model village. P. Edmonds. il Banking 39:49 D '46
Boston's two-year argument; federal low-rent housing project for veterans. il Arch Forum 86:14-15 Ap '47
Cooperative apartment project for veterans in Chicago. il plans Am Bld 69·136-7 F '47
For veterans in the Southwest; General Panel of California produces four room house. il plan diag Arch Forum 86·118-19 F '47
Holyoke builds precision-built homes for vets; Memorial Village. il plans diags Am Bld 69:98-101 Ag '47
How much for rent? ability to pay; study of 60,000 veterans in a large metropolitan community. Am Bld 69:121 Je '47
Seventeen veterans meet their housing problem in suburb of Toledo, Ohio. il plans Am Bld 69:108-9+ Mr '47
To buy now or not to buy; booklet of Home builders council offers advice to veterans. O. J Hartwig Am Bld 69·123 Ap '47
Veterans' rental housing plan, Worcester, Mass community plan. il Banking 40:56-7 S '47

Insurance
See Insurance, Life—Veterans' policies; Insurance, Military and naval service

Land settlement
G.I. farm co-op; Dayton coal & iron co., helping war veterans start project. Bsns W p37 S 6 '47
Homesteads for veterans in Yakima valley. Mo Labor R 64·609 Ap '47

Laws and legislation
Redemption of armed forces leave bonds Survey of Cur Bsns 27:7-8+ Ag '47
Social security vet amendment often misconstrued, to aid survivors of veterans who die within three years of discharge. Nat Underw (Life ed) 51 23 F 14 '47
Terminal leave bonds; with chart showing comparison with adjusted service bonds Dom Comm 35·72-3 S '47

VETERANS—Laws and legislation—*Cont.*
What will the veterans do to the rest of us? 200 bills in new Congress seek to multiply present $7.3 billion cost. E. M. Haller. Barron's 27:3 F 3 '47

See also
Veterans—Loans

Loans

Average home loan is bigger; with table giving size of average G.I. home loan made by all lenders, U.S. and state totals for first three quarters of 1946. M. Kane. Banking 39:51 D '46
Average weekly volume of G.I. home loan applications, by months July 1945-Aug. 1946; chart. Burroughs Clearing House 31:6 N '46
82 G.I. loans in this three-million dollar bank, and not one delinquency; Kanabec state bank, Mora, Minn. F. P. Powers. Bankers Mo 64:188-9 Ap '47
GI loan experience. J. P. Fordyce. East Underw 48:8 Ap 4 '47
G.I. loan program in a country bank. G. E. Detrick. il Burroughs Clearing House 31: 24-6+ Ja '47
G.I. mortgage loans. N. P. Gregory. Burroughs Clearing House 31:31-2 Ap '47
Loans to war veterans; new A.B.A. manual published. Banking 39:114 D '46
Present status of lending to veterans; statement by Committee on service to war veterans. Banking 39:120 My '47
Private investment and the secondary market for GI home loans. T. B. King. Comm & Fin Chr 166:824 Ag 28 '47
Seven new homes in Muncy, Pa. il Banking 39:60+ Ja '47
Veterans' loans. W. R. Chapman. Am Inst Banking Bul 29:5-6+ Ja '47

Political activities

Fortune survey; what political line will veterans follow? Fortune 34:14 D '46

Readjustment problems

Honorable discharge; upon twenty-one survivors of Company K, U.S. marines, it bestowed twenty-one veteran's problems; with biographical sketches. G. P. Hunt. Fortune 36:69-77+ S '47
Readjustment of veterans to civilian life. Mo Labor R 63:712-20 N '46
Veterans' adjustment to civilian life; a resurvey. B. Mandel. Mo Labor R 65:62-7 Jl '47

Reemployment

Federal court denies veteran special immunity to discharge. M. M. Shipman. Oil Paint & Drug Rep 151:7+ Ja 6 '47
Labor laws and decisions; reemployment. Mo Labor R 63:769-73; 64:487-9 N '46, Mr '47
Recent decisions of interest to labor. Mo Labor R 65:208-10, 348-9, 466-7 Ag-O '47
Reemployment of veterans under collective bargaining. J. Silver and I. Atkins. Mo Labor R 64:801-15 My '47
Supreme court limits vet seniority. Comm & Fin Chr 165:2364 My 1 '47
Veterans' reemployment rights. H. J. Ashe. Pet Refiner 25:160+ D '46
Veteran's rights. Factory Management 104: 236+ O '46

Seniority rights

See Veterans—Reemployment

Great Britain

Flying start; Royal air force's educational and vocational training scheme. R. Cooke. Personnel J 25:282-4 F '47

VETERANS, Disabled
Disabled are learning to drive readily at N.Y. safety education center. Nat Underw 50:10 N 21 '46

Employment

Agency ad attracts wounded veterans anxious for jobs they can perform. Ptr Ink 217:91-2 N 22 '46
Blind veterans find employment. Nat Safety N 55:95-6 Je '47
Commends Association of casualty and surety executives; lauds work for impaired. P. Faulkner. East Underw 47:38 N 22 '46
Everyone wins; bank job program for disabled veterans; Bank of the Manhattan company. J. T. DePalma. il Banking 39: 25-6 Mr '47
Training sightless veterans for precision work. A. Ivimey. Personnel J 25:358-61 Ap '47
Utilities can with advantage use disabled veterans. M. Hammett. Pub Util 40:29-33 Jl 3 '47

Rehabilitation

Medical rehabilitation. C. J. S. O'Malley. Nat Safety N 55:104 Ja '47

VETERANS administration

Buildings

Office building finished on schedule; office of Veterans administration at Wilkes-Barre. il Eng N 139:307 S 4 '47
Wyoming Valley veterans' building, Wilkes-Barre, Pa. il Arch Rec 102:140-1 O '47

Libraries

General library administration in a Veterans administration tuberculosis hospital. D. R. Shapleigh. Special Lib 38:181-7 Jl-Ag '47
Library service in a Veterans administration general hospital. S. M. Connell. Special Lib 38:176-8 Jl-Ag '47
Library service in a Veterans administration neuropsychiatric hospital. K. Mushake. Special Lib 38:179-81 Jl-Ag '47
Medical care second to none. M. L. Kent and M. M. Kinney. Special Lib 38:172-6 Jl-Ag '47

VETERINARY hospitals. See Hospitals, Veterinary

VIBRATION
Asymmetrical vibrations of cones. P. G. Bordoni. bibliog il diags Acoustical Soc Am J 19:146-55 Ja '47
Damping capacity and the fatigue of metals. R. F. Hanstock and A. Murray. il diags Engineering 161:358-60, 381-3 Ap 12-19 '46; Abstract. Metal Prog 50:1108+ N '46; Discussion. Engineer 181:284-5 Mr 29 '46
Electro-magnetic vibration exciter and calibrator. il diags Product Eng 18:92-4 Jl '47
Motion of an unarticulated helicopter blade. J. Winson. bibliog J Aeronautical Sci 14: 520-6 S '47
Natural modes of vibration of simple frames. S. Bennon. Franklin Inst J 243:13-39 Ja '47
Note on a boundary value problem of Reissner and Sagoci. I. N. Sneddon. bibliog J Ap Phys 18:130-2 Ja '47
Plate vibration of stringed instruments at the wolfnote. J. A. Kessler. bibliog il diag Acoustical Soc Am J 19:886-91 S '47
Properties of felt in the reduction of noise and vibration. F. G. Tyzzer and H. C. Hardy. bibliog il Acoustical Soc Am J 19: 872-8 S '47
Vibration exciter for structural tests. P. J. Holmes. il diags Electronics 19:96-100 D '46
Vibration fatigue of GR-S in the Goodrich flexometer. M. C. Throdahl. India Rubber World 116:69-70 Ap '47
Vibrations of shallow spherical shells. E. Reissner. diags J Ap Phys 17:1038-42 D '46

See also
Airplanes—Vibration
Balancing of machinery
Gas turbines, Aircraft—Vibration
Machinery—Vibration
Sound waves

Measurement

Analysis of vibration problems. A. J. King. diags Inst E E J 93 pt 2:435-58 bibliog(p446, 458); Discussion. 458-62 O '46
Blasting vibration measurements indicate no danger to green concrete in Ross dam. F. Neumann. il Civil Eng 17:32-3; Discussion. H. A. Coombs. 33-4 Ja '47
Davis, Wynn and Andrews small vibrometer. il Engineer 183:156 F 7 '47
Electronics in measurement. L. G. Gitzendanner. il diag Gen Elec R 50:28-9 Ag '47
Higher modes of vibration by a method of sweeping. L. Beskin and R. M. Rosenberg. bibliog J Aeronautical Sci 13:597-604 N '46
How to find sympathetic vibrations. il Bsns W p48 D 28 '46

VIBRATION—Measurement—*Continued*
Little shakers test big structures. J. Markus. il Sci Am 176:6-10 Ja '47
Televiso's 11-B vibrometer. il R Sci Instr 18:72 Ja '47; Sci Am 176:80 F '47
Torsional vibration amplitudes at non-resonant speeds with special reference to the interpretation of torsiograph records. W. K. Wilson. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 3):83-98; Discussion. il 99-108 '45
Vibration testing and product acceptability. H. Johnston. il diag Iron Age 159:58-61 My 15 '47
Vibration testing technique and its use in improving designs. J. A. Dickie. il diag Product Eng 18:115-19 Jl '47
Vibrations of a helicopter on the ground. G. Horvay. bibliog J Aeronautical Sci 13:605-19 N '46

Physiological effect

Army-navy research will probe supersonic sickness; efforts to determine effects on human beings of high-frequency vibrations emitted by jet engines. il Aviation W 47: 17 Ag 18 '47
Effects of high speed vibrating tools on operators engaged in the airplane industry; abstract. E. E. Dart. Nat Safety N 54:46+ N '46
Human response to vertical vibration. S. Lippert. S A E J 55:32-4 My '47
Power-driven vibrating tools; health hazards. il Safety Eng 94:19+ S '47

VIBRATION absorbers
Control of vibration can increase production efficiency. J. Parina, jr. il diags Steel 120: 94-6+ F 17; 76-9+ F 24; 116-20+ Mr 3 '47
Torsional vibration damper; utilizing silicone fluid. B. E. O'Connor. il Machine Design 19:155-9 Ap '47

VIBRATION of molecules. See Molecules—Vibration

VIBRATORS
How to find sympathetic vibrations. il Bsns W p48 D 28 '46
Little shakers test big structures. J. Markus. il Sci Am 176:6-10 Ja '47
Oscillator permits stepless adjustment; for inducing vibrations in dynamic testing. il Iron Age 158:66 N 28 '46
Solution to a difficult conveying problem; electric vibrating conveyors. J. H. Whitelock. il Mech Handling 34:523-7 O '47

VICKERS, limited
Statement by the chairman at 80th annual general meeting. A. Jamieson. Economist 152:909-10 Je 7 '47

VICTOR chemical works
Preferred stock offered. Comm & Fin Chr 166:509 Ag 4 '47
Products opening huge new fields. Barron's 27:28 Mr 10 '47

VIEH, Walter Frederick, 1894-
Portrait. Bsns W p26 F 15 '47

VIMLITE
Plastics-coated mesh. Sci Am 176:163 Ap '47

VINEGAR
Nutritive value of vinegar, pickles and condiments. H. Sarson. Chem & Ind p187-8 Ap 12 '47

Manufacture

Vinegar in Britain. flow sheet il Food Ind 19:1218-20 S '47

VINSON, Frederick Moore, 1890-
Supreme court: 1947. A. M. Schlesinger, jr. por Fortune 35:73-9+ Ja '47

VINYL acetate
Photochemical polymerization of vinyl acetate vapour; radical sensitized polymerization of vinyl acetate vapour; abstract. H. W. Melville and R. F. Tuckett. Chem & Ind p132 Mr 15 '47
Polyvinyl acetate in powder metallurgy. H. L. Strauss, jr. Mod Plastics 24:196+ Je '47
Rate constants of the steps in addition polymerization; induction period in the polymerization of vinyl acetate. K. Nozaki and P. D. Bartlett. Am Chem Soc J 68:2377-80 N '46
Rate constants of the steps in addition polymerization; use of the rotating-sector method on liquid vinyl acetate. C. G. Swain and P. D. Bartlett. bibliog Am Chem Soc J 68:2381-6 N '46
Vinyl acetate; process and equipment at Hoechst, Germany. L. W. Greene. flow sheet il Chem Eng 54:98-9 Jl '47

VINYL alcohol
Absorption of water by films of cellophane and polyvinyl alcohol. E. Creutz and R. R. Wilson. J Chem Phys 14:725-8 D '46
Infrared absorption studies; stereochemistry of the hydroxyl group in vinyl alcohols. A. M. Buswell, W. H. Rodebush and R. M. Whitney. Am Chem Soc J 69:770-2 Ap '47

VINYLBENZYL acetate
Use of liquid phase oxidation for the preparation of nuclearly substituted styrenes; *p*-vinylbenzyl acetate. W. S. Emerson and others. bibliog Am Chem Soc J 69:1905-6 Ag '47

VINYL bromide
Use of diarylvinyl bromides as diene components in the Wagner-Jauregg reaction. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1777-9 Jl '47

VINYL butyrolactone
Malonic ester synthesis with styrene oxide and with butadiene oxide. R. R. Russell and C. A. VanderWerf. bibliog Am Chem Soc J 69:11-13 Ja '47

VINYL chloride
Association of polymer molecules in dilute solution. P. Doty, H. Wagner and S. Singer. bibliog diag J Phys & Colloid Chem 51:32-57 Ja '47
Characteristics, properties and applications of Geon polyblend. J. E. Pittenger and G. F. Cohan. il Rubber Age 61:563-6 Ag '47; Same. Mod Plastics 25:81-6 S '47
Decorating of vinyl films. A. B. Sherry. India Rubber World 116:655 Ag '47
Dielectric identity test for plasticizers; polyvinyl chloride plastics type. M. A. Elliott, A. R. Jones and L. B. Lockhart. bibliog il diags Anal Chem 19:10-15 Ja '47
Diffusion of plasticisers from polyvinyl chloride. P. A. Small. bibliog Soc Chem Ind J 66:17-19 Ja '47
Geon polyblend for extruding and calendering. il Chem & Eng N 25:2390-1 Ag 18 '47
Investigation of aqueous acrysol, Geon and saran dispersions. Paint Oil & Chem R 109:50-6 N 14 '46
Mesamoll plasticizers for polyvinyl chloride. Mod Plastics 24:154-6+ Mr '47
Methods for evaluating plasticizers for polyvinyl chloride. D. L. Kent and P. J. Weaver. flow sheet India Rubber World 115:813-17 Mr '47
Outlets for polyvinyl chloride paste. il Mod Plastics 24:110-11 Je '47
Paste-forming resin; Geon resin 100-X-26. Chem & Eng N 25:1752 Je 16 '47
PVC-nitrile rubber plastic blends. Chem Ind 61:74+ Jl '47
Printing on vinyl film. C. M. Robbins. il Rubber Age 60:203-5 N '46; Same. Textile Col 68:16-18+ N '46
Recent developments; vinyl plastics. il Product Eng 18:[119-22] insert 7-10 Ap '47
Recent German developments in the manufacture of vinyl plastics. Rubber Age 60:452 Ja '47; Same. Oil Paint & Drug Rep 150: 79 D 2 '46
Temperature dependence of the osmotic pressure of polyvinyl chloride solutions. P. Doty and E. Mishuck. bibliog diag Am Chem Soc J 69:1631-6 Jl '47
Thermoplastic polyblend, Geon polyblend 500 x 503. Sci Am 177:179 O '47
Vinyl paste resin; Geon 100-X-210. M. N. Burleson. il Mod Plastics 24:108-11 Ag '47

VINYL compounds
Acetylene to vinyl resins; abstract. F. K. Schoenfield. Chem Eng 54:244+ O '47
Background material on vinyl butyral in textile applications. Rayon 27:603-4 N '46
Copolymerization of vinyl compounds with dienes. T. Alfrey, jr., A. I. Goldberg and W. P. Hohenstein. bibliog Am Chem Soc J 68:2464-7 D '46

VINYL compounds—*Continued*
Emulsion polymerization of diene hydrocarbons. H. W. Starkweather and others. bibliog Ind & Eng Chem 39:210-22 F '47
Laminated vinyl tile flooring. il Mod Plastics 24:123-5 Ap '47
Making and applying cast film; polyvinyl resin is the base of this textured cast sheeting. il Mod Plastics 24:128-30 N '46
Merchandising of vinyl sheeting; O'Sullivan rubber corporation. Mod Plastics 24:109 Ap '47
Molded vinyl phonograph records. il Mod Plastics 24:107-11 Jl '47
New approach to coated fabrics. D. S. Plumb. Am Dyestuff Rep 36:332-4; Discussion. 334 Je 16 '47
New chemical coating to protect metals; polyvinylbutyral resin-phosphoric acid wash primer. il Chem Ind 59:1001 D '46
Oxygen as activator and deactivator of polymerization. C. Heuck. bibliog(59 ref) Mod Plastics 24:158-62+ D '46
Plastic monofilaments are on their way. il Mod Plastics 24:89-97 Ag '47
Polymerisation of vinyl compounds in the gas and in the liquid phase. H. W. Melville. Chem Soc J p274-9; Discussion. 279-80 F '47
Polyvinyl butyral for stainproof fabrics. Chem Ind 59:1038+ D '46
Polyvinyl carbazole in Germany; Luvican. G. M. Kline. diags Mod Plastics 24:157-8+ N '46
Polyvinyl carbazole resin. W. M. Shine. il diags Mod Plastics 25:130-2+ S '47
Recent developments; vinyl plastics. il Product Eng 18:[119-22] insert 7-10 Ap '47
Researches on acetylenic compounds; carbinols derived from methyl β-chlorovinyl ketone and their conversion into unsaturated aldehydes. E. R. H. Jones and B. C. L. Weedon. Chem Soc J p937-9 O '46
Shrink seals of tough vinyl plastics. il Mod Packaging 20:138-9 N '46
Stabilizer for vinyl resins; Tribase and Plumb-O-Sil. Chem Eng 54:167 F '47; India Rubber World 115:679 F '47
Statistical theory of discoloration for halogen-containing polymers and copolymers. R. F. Boyer. bibliog(46 ref) J Phys & Colloid Chem 51:80-106 Ja '47
Thermoplastic rubber. R. B. Stanton. il Mod Plastics 24:126-7 Ap '47
Thermosetting vinyl polymers. E. L. Kropa. bibliog il Electrochem Soc Trans 90 (preprint 29):351-65 '46
Uses for extruded vinyl. il Mod Plastics 24: 206 D '46
Uses of printed vinyl laminates. il Mod Plastics 24:125-6 F '47
Vinyl acts to preserve anatomical structures. il Mod Plastics 24:127 D '46
Vinyl aromatic compounds; 4-propenylchlorobenzenes. D. T. Mowry, W. F. Huber and E. L. Ringwald. bibliog Am Chem Soc J 69:851-2 Ap '47
Vinyl butyral coated tablecloths. il Mod Plastics 24:112 N '46
Vinyl compounds. J. H. Brown. Chem Age (Lond) 57:121-6 Jl 26 '47
Vinyl dip-coat; Tygoflex. il Mod Plastics 24: 156-8 Jl '47
Vinyl resins as consumers of C_2H_2 and C_2H_4. H. H. Atlas and R. S. Aries. flow sheet Chem Eng 54:101-3+ Mr '47; Abstract. Pet Processing 2:333 My '47
Vinyls down but not out. Mod Plastics 25: 228, 230 O '47

See also
Saran
Vinyl alcohol
Vinyl ethers
Vinyon

VINYL cyanide. See Acrylonitrile

VINYL ethers
Ethylvinylether offered by General Aniline. Oil Paint & Drug Rep 150:68 N 18 '46
German manufacture of polyvinyl ethers. G. M. Kline. flow diags Chem Ind 59:1018-20 D '46; Same. Mod Plastics 24:150-60+ Ja '47
New series of vinyl ethers by Carbide & carbon chemicals corp. Chem Eng 54:167 F '47; Chem Ind 60:250 F '47
Spray polymerization of vinyl ethers. H. Fikentscher and others. Mod Plastics 24: 162 F '47
Vinyl alkyl ethers. C. E. Schildknecht, A. O. Zoss and C. McKinley. bibliog(63 ref) Ind & Eng Chem 39:180-6 F '47
Vinyl ethers. Chem Eng 54:172+ O '47
Vinyl ethers. Sci Am 176:261 Je '47

VINYL fluoride
Preparation and polymerization of vinyl fluoride. A. E. Newkirk. bibliog diags Am Chem Soc J 68:2467-71 D '46

VINYLTHIOPHENE
Substituted styrenes; preparation of *p*-iodo-, *p*-nitro- and *p*-dimethylaminostyrene and α-vinylthiophene. R. W. Strassburg, R. A. Gregg and C. Walling. bibliog Am Chem Soc J 69:2141-3 S '47

VINYLAMINE
Preparation of polyvinylamine, polyvinylamine salts, and related nitrogenous resins. D. D. Reynolds and W. O. Kenyon. Am Chem Soc J 69:911-15 Ap '47

VINYLIDENE chloride. See Dichloroethylene; Saran

VINYLITE
Bubble boom. il Chem Ind 61:612 O '47
Uniform gaskets can be cut quickly and accurately from vinylite plastic tubing. A. B. Kourt. il diags Pet Processing 2:350 My '47
Vinyl balloons, a booming kid craze. il Mod Plastics 25:110 O '47
Vinyl covers afford maximum protection. il Mod Plastics 24:113 My '47
Vinyl elastomers for extrusion and molding. G. W. Jargstorff. il India Rubber World 116:797-8 S '47
Vinyl sheet for fruit packaging. il Mod Plastics 24:126 F '47
Vinyl sheet formed into dispenser-display unit; Pepsi-Cola glass replica. il Mod Plastics 24:102-3 Ag '47

VINYON
Acrylonitriles; new class of synthetic fibers. J. V. Sherman. patent list(p102) Textile World 97:101-2+ Mr '47
American viscose corp. achievements in development of vinyon yarns. Rayon 28:179 Ap '47
Carbide and carbon corp. produce new type vinyl yarn; vinyon type N. Rayon 28:178 Ap '47
Cement repairs vinyon filter cloths. J. Karslo. Chem Eng 54:156-7 My '47
Manufacture of modern textile fibers. C. Diamond. Rayon 28:421-2 Ag '47
1947 revision, Textile World's synthetic-fiber table. C. W. Bendigo, comp. Textile World 97:121-8 S '47
1947 table of commercial synthetic yarns and fibers. Textile World 97:117-20 S '47
Sail cloths, dope-dyed yarns are new horizons in vinyon. Rayon 28:456-7 S '47

VIR DEN, Ray
Gallery; e pluribus Vir Den. J. G. Schneider. por Adv & Sell 40:104+ O '47

VIRGINIA
See also
Roads—Virginia
Tungsten mines and mining—Virginia

VIRGINIA electric and power company
Public utility securities. Comm & Fin Chr 165:3345 Je 26 '47

VIRUSES
Chemical studies on viruses; abstract. W. M. Stanley. Chem & Eng N 25:1726-7 Je 16 '47
Contributions of virus research to chemistry and physics. M. A. Lauffer. bibliog il diags Chem & Eng N 24:2896-9 N 10 '46
Determining and reducing the concentration of air-borne micro-organisms. M. Luckiesh and A. H. Taylor. bibliog il Heating-Piping 19:113-17 Ja '47
pH stability of viruses of Newcastle disease and fowl plague. H. E. Moses and others. bibliog Science 105:477-9 My 2 '47
Inactivation of certain neurotropic viruses in vitro by serum lipids. J. Casals and P. K. Olitsky. Science 106:267-8 S 19 '47
Virus hemagglutination. M. Bovarnick and P. M. de Burgh. bibliog Science 105:550-2 My 23 '47
Virus nomenclature. R. P. Hanson. Science 104:606 D 20 '46

VIRUSES—*Continued*

Culture mediums

Effect on the chick embryo of the simultaneous inoculation of stool, streptomycin, and penicillin. J. H. Hodges. bibliog Science 104:460-1 N 15 '46

VIRUSES, Plant

See also
Tobacco mosaic virus

VISAS. See Passports

VISCOMETERS. See Viscosimeters

VISCOSE

Action of acrylonitrile on viscose; carboxylated rayons. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:929-30 Jl '47

Action of acrylonitrile on viscose; effect on the normal aging process. J. P. Hollihan and S. A. Moss, jr. bibliog Ind & Eng Chem 39:222-4 F '47

Manufacture of viscose from sugar maple. C. W. Tasker and C. E. Libby. bibliog Paper Tr J 123:139-48 D 5 '46

Properties of pulps and their behavior in making viscose; abstract. T. Kleinert and others. Paper Ind 28:1366 D '46

VISCOSIMETERS

Applications of starch viscosity to the paper industry; new viscometer developed. W. G. Bechtel and C. C. Kesler. bibliog il Paper Tr J 125:35-9 O 16 '47

Capillary-type viscometer for volatile solvents and measurements of viscosities of nitrocelluloses. D. P. Shoemaker and others. diags Anal Chem 19:131-2 F '47

Flow properties of pseudoplastic fluids. C. C. Winding, G. P. Baumann and W. L. Kranich. bibliog diags Chem Eng Prog 43: 527-36 O '47 (to be cont)

How to determine the desirable rheological properties of coatings. H. Green. bibliog diag Paper Tr J 125:49-53 S 11 '47

Instrument for measuring rheological properties of elastic fluids. H. Goldberg and O. Sandvik. bibliog diags Anal Chem 19:123-31 F '47

Recording viscometer for starches; corn industries viscometer. C. C. Kesler and W. G. Bechtel. bibliog il diag Anal Chem 19:16-21 Ja '47

Sudden application of a constant shearing motion to anomalous fluids. E. K. Carver and J. R. Van Wazer. bibliog il diags J Phys & Colloid Chem 51:751-63 My '47

Variable speed rotational viscosimeter. R. Buchdahl and others. il diags R Sci Instr 18:168-72 Mr '47

Viscosimeter assures proper thickness of spraying enamel. il Sci Am 177:171 O '47

VISCOSITY

Adapting domestic egg albumin to industrial use. F. S. Lombardo. Chem Ind 60:599-600 Ap '47

Applications of starch viscosity to the paper industry; new viscometer developed. W. G. Bechtel and C. C. Kesler. bibliog il Paper Tr J 125:35-9 O 16 '47

Cupriethylenediamine disperse viscosity of pulp; TAPPI suggested method T 230 sm-46. bibliog diags Paper Tr J 124:37-41 Ja 2 '47

Distribution of the molecular weight of nylon as determined by fractionation in a phenol-water system. G. B. Taylor. bibliog Am Chem Soc J 69:638-44 Mr '47

Do you know the viscosity of your SAE lubricating oil? C. M. Larson. Power 91: 332-4 My '47

Extrusion properties of high polymers with included crystalline filler. J. H. Greenblatt and D. Fensom. diag Ind & Eng Chem 39: 1037-42 Ag '47

Flow properties of pseudoplastic fluids. C. C. Winding, G. P. Baumann and W. L. Kranich. bibliog diags Chem Eng Prog 43: 527-36 O '47 (to be cont)

Friction loss and heat balance in viscous flow between plates. O. E. Teichmann. diags Product Eng 18:146-50 Ag '47

L'importance de la viscosité dans l'emploi des liants hydrocarbonés. L. Christophe. Génie Civil 124:73-6, 86-9 F 15-Mr 1 '47

Influence of viscosity on centrifugal-pump performance. A. T. Ippen. il diags A S M E Trans 68:823-38 bibliog(p838); Discussion. 839-48 N '46

Liquid methylpolysiloxane systems. D. F. Wilcock. bibliog Am Chem Soc J 69:477-86 Mr '47

Low temperature impact strength of cellulosic plastics. W. E. Gloor. bibliog il Ind & Eng Chem 39:1125-9 S '47

Measurement of elasticity in fluids of low viscosity. J. R. Van Wazer and H. Goldberg. diags J Ap Phys 18:207-11 F '47

Micelle structure in aqueous solutions of colloidal electrolytes. R. J. Vetter. bibliog J Phys & Colloid Chem 51:262-77 Ja '47

Molecular properties of nitrocellulose; studies of molecular heterogeneity. R. H. Blaker, R. M. Badger and R. M. Noyes. bibliog J Phys & Colloid Chem 51:574-9 Mr '47

Molecular properties of nitrocellulose; studies of viscosity. G. J. Doyle and others. bibliog J Phys & Colloid Chem 51:569-74 Mr '47

Molecular weight and intrinsic viscosity of nitric triesters of corn starches and dextrins. G. V. Caesar, N. S. Gruenhut and M. L. Cushing. bibliog Am Chem Soc J 69:617-21 Mr '47

Optimum dilution in viscous liquid filtration. E. J. Reeves. Ind & Eng Chem 39:203-6 F '47

Plastic flow, creep, and stress relaxation. C. Mack. bibliog diags J Ap Phys 17:1086-107 D '46

Pressure coefficient of viscosity. A. Bondi. J Chem Phys 15:527 Jl '47

Properties of polymers as functions of conversion; intrinsic viscosities. F. T. Wall and others. bibliog Am Chem Soc J 69:904-7 Ap '47

Relation between gel content, plasticity, and dilute solution viscosity of elastomers. A. L. Back. bibliog(63 ref) Ind & Eng Chem 39:1339-43 O '47

Relation of the viscosity of nylon solutions in formic acid to molecular weight as determined by end-group measurements. G. B. Taylor. bibliog Am Chem Soc J 69:635-8 Mr '47

Relationship between viscosity, density, and vapour pressure of liquids. L. H. Thomas. Chem Soc J p822-9 Je '47

Stability of synthetic rubber dispersions; low-temperature thickening of neoprene latex. H. K. Livingston. bibliog J Phys & Colloid Chem 51:443-50 Mr '47

Two-dimensional steady flow of a compressible viscous fluid far behind a solid symmetrical body. M. Z. Krzywoblocki. Franklin Inst J 243:471-86 Je '47

Ultracentrifugal and viscometric studies of amylose acetates; further evidence for the helical structure of amylose. B. A. Dombrow and C. O. Beckmann. bibliog J Phys & Colloid Chem 51:107-17 Ja '47

Viscosities, densities and refractive indices of solutions of dodecylammonium chloride in various dilutions of aqueous ethanol. A. W. Ralston and C. W. Hoerr. Am Chem Soc J 69:1867-9 Ag '47

Viscosities of aqueous solutions of amino-acids, with some conductivity values. A. E. Bell and W. M. Madgin. Chem Soc J p74-6 Ja '47

Viscosity and centrifugal pumps. W. L. Nelson. Oil & Gas J 46:129-30 O 25 '47

Viscosity and density of four liquefied-gas aerosol solutions containing DDT. L. D. Goodhue and A. C. Hazen. diags Anal Chem 19:248-50 Ap '47

Viscosity and density of sulphuric acid and oleum. N. F. H. Bright, H. Hutchison and D. Smith. Soc Chem Ind J 65:385-8 D '46

Viscosity changes in storage of paints containing basic pigments. Paint Oil & Chem R 109:18+ N 14 '46

Viscosity conversion chart; reference data. P. J. Olmstead. Heat & Ven 44:90b O '47

Viscosity-molecular weight relationship for cellulose acetate. W. J. Badgley and H. Mark. bibliog J Phys & Colloid Chem 51: 58-70 Ja '47

Viscosity of dilute solutions. J. S. Gourlay. Soc Chem Ind J 65:423-5 D '46

Viscosity of some glasses in the annealing range. Glass Ind 27:615 D '46

VISCOSITY—*Continued*
Viscosity studies on the association of tobacco mosaic virus. H. K. Schachman. bibliog Am Chem Soc J 69:1841-6 Ag '47

See also
Fluidity
Plasticity
Surface tension
Thickeners

Measurement

Acoustic determination of the physical constants of rubber-like materials. A. W. Nolle. diag Acoustical Soc Am J 19:194-201 Ja '47

Aluminum dilaurate as association colloid in benzene. J. W. McBain and E. B. Working. J Phys & Colloid Chem 51:974-80 Jl '47

Effect of molecular weight distribution on the reduced viscosity-concentration coefficient. W. E. Davis. bibliog Am Chem Soc J 69:1453-7 Je '47

Low temperature transport properties of gases; helium. I. Amdur. bibliog J Chem Phys 15:482-7 Jl '47

Measurement of the viscosity and shear elasticity of liquids by means of a torsionally vibrating crystal. W. P. Mason. bibliog il diags A S M E Trans 69:359-67; Discussion. 368-70 My '47

Nomographic treatment of the results from the cuprieth ylenediamine method of determining the viscosity of cellulose. G. Beall. Paper Tr J 124:37-8 My 15 '47

Pilot pipe-line unit for determining viscosity-temperature relationships. R. B. Beckman, H. G. Corneil and R. J. Michael. flow diags Am Inst Chem Eng Trans 42:947-58 O-D '46; Same. Pet Eng (Ref annual) 18:263-4+ Jl 1 '47

Polymolecularity of cellulose; fractional precipitation method for its determination. J. E. Tasman and A. J. Corey. bibliog diag Pulp & Pa of Can (Convention no) 48: 166-70 [F] '47

Temperature dependence of viscosities of liquids and activation energy. M. S. Telang. J Chem Phys 15:525 Jl '47

Viscometric investigation of dimethylsiloxane polymers. A. J. Barry. bibliog J Ap Phys 17:1020-4 D '46

Viscometry of soap-in-hydrocarbon systems. G. F. Wood and others. bibliog 2pls diags Inst Pet J 33:71-94; Discussion. 94-102 F '47

Viscosity by different instruments; table. W. L. Nelson. Oil & Gas J 45:99 F 8 '47

Viscosity measurement; new electronic timer perfected. il Chem Age (Lond) 57:579 O 25 '47

See also
Viscosimeters

VISIBILITY

Effect of atmospheric scattering upon the appearance of a dark object against a sky background. G. A. Fry and others. diags Opt Soc Am J 37:635-41 Ag '47

Footcandles for critical seeing. M. Luckiesh and A. A. Eastman. bibliog Illum Eng 41: 828-46 D '46

Hunted night-visibility meter. diag R Sci Instr 18:684-5 S '47

Relation of the configuration of a brightness contrast border to its visibility. G. A. Fry. diags Opt Soc Am J 37:166-75 Mr '47

Size, shape, and contrast in detection of targets by daylight vision; data and analytical description. E. S. Lamar and others. bibliog diag Opt Soc Am J 37:531-45 Jl '47

Visibility measurements by transmissometer. C. A. Douglas. il diags Electronics 20:106-9 Ag '47 .

Visual thresholds of steady point sources of light in fields of brightness from dark to daylight. H. A. Knoll and others. diags Opt Soc Am J 36:480-2 Ag '46; Discussion. S. Hecht. 37:59 Ja '47

VISIBLE records. See Records, Visible

VISIBLE speech. See Speech, Visible

VISION. See Sight

VISITORS

Company's open house made friends of new neighbors; Pennsylvania transformer co. I. R. Isaacs. il Ptr Ink 220:40-1 S 5 '47

How to turn a plant dedication into a trade and community event; Benjamin Electric publicizes outstanding laboratory design in advertising, house organs, plant visits. B. F. Stevens. il Ind Marketing 32:30-3+ Ja '47

How we organized our open house; Rockbestos products corporation. B. H. Reeves. il Factory Management 105:115-18 F '47

It's open house at Alcoa's sales office. R. A. Sweet. il Sales Management 59:130+ O 1 '47

Malleable iron plant holds open house; Saginaw plant of General motors corp. il Foundry 75:88-9 Ja '47

Mill guest house; friendly addition to an industrial plant; Eastern corporation, South Brewer, Me. il plans Arch Forum 86:94-6 Mr '47

Northwestern Mutual employes' families tour home office. Nat Underw (Life ed) 51:3 Je 13 '47

Open house can be effective public relations; U.S. Steel attracted more than 100,000 visitors. J. C. MacDonald. il Ptr Ink 221:36-7 O 24 '47

Public visits a foundry; Belle City malleable iron co. il Foundry 75:90-2+ F '47

Salesmen start as factory-tour guides; Oneida, ltd. R. W. Drummond. il Ptr Ink 219:50-1 Ap 11 '47

Sell your factory to dealers and consumers. D. Ross. Ptr Ink 220:60+ Ag 22 '47

Workers tell company story at open house; Pitney-Bowes, inc. il Factory Management 105:109 Ag '47

VISKING corporation

1946 net near peacetime high. Barron's 26:6 D 2 '46

VISUAL instruction

Audio-visual departments. il plans diags Arch Rec 100:72-9 N '46

Econorama; three dimensional graphic portrayal of economic principles and business operations. il Trusts & Estates 85: 183-6 S '47

Graphics pierce fog of medical jargon in Lederle training clinics; Hile-Damroth method for Ledinac. il Sales Management 58:42-3 Ap 15 '47

Here come the visual aids. H. B. Duffus. Safety Eng 94:18-19+ Ag '47; Same. Nat Safety N 54:18-19+ D '46

New avenues of classroom communication. M. E. Kramer. Ann Am Acad 250:41-52 Mr '47

Retooling for education, 1948. W. A. Wittich. Soc Motion Picture Eng J 49:187-91 S '47

Use of visual aids in department-store training. J. J. Gress. J Retailing 23:91-8+ O '47

Visual aids drive home points in training programs; Minnesota mining & manufacturing co. E. S. Howard. il Factory Management 105:80-1 O '47

Visual aids in executive training for Standard Oil supervisors and technical personnel. il Factory Management 105:75-6 Mr '47

See also
Slide films

Equipment

Directory of accredited retail dealers in audio-visual equipment, materials, supplies and films. 16p National assn. of visual education dealers, 431 South Dearborn st, Chicago 5 '47

VISUAL purple

Kinetics of visual dark adaptation. T. L. Jahn. Opt Soc Am J 36:659-65 N '46

VITAL statistics

See also
Birth rate
Demography
Diseases—Statistics
Mortality—Statistics
Population—Statistics
Sickness

VITALLIUM

Honorable mention to Haynes stellite co., for achievement in high temperature alloys. il Materials & Methods 24:1162-3 N '46

Limitations on precision cast parts. N. J. Grant. il Iron Age 160:62-6 Ag 7 '47

VITAMINS
Effect of administering a vitamin supplement, in capsules, to groups of workers in the steel industry. A. C. Ivy and others. Ind Med 16:163-7 Ap '47
Effect of duration and temperature of blanch on vitamin retention by certain vegetables. N. B. Guerrant and others. Ind & Eng Chem 39:1000-7 Ag '47
Effect of time and temperature of storage on vitamin content of commercially canned fruits and fruit juices (stored 12 months). D. S. Moschette, W. F. Hinman and E. G. Halliday. bibliog Ind & Eng Chem 39: 994-9 Ag '47
Effects of blanching on the retention of ascorbic acid, thiamine, and niacin in vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:990-3 Ag '47
Nutritive value of canned foods; effect of commercial canning operations on the ascorbic acid, thiamine, riboflavin, and niacin contents of vegetables. J. R. Wagner, F. M. Strong and C. A. Elvehjem. Ind & Eng Chem 39:985-90 Ag '47
Preserving vitamin oils; patent. Food Ind 19: 712 My '47
Recent reports on the results of glucose tolerance tests in vitamin-deficient animals. V. R. Potter. Science 106:290 S 26 '47
Synthetic vitamins and human nutrition. R. R. Williams. Ind & Eng Chem 39:464-6 Ap '47; Same abr. Chem & Ind p123-6 Mr 15 '47; Abstract. Oil Paint & Drug Rep 151: 5+ Ja 20 '47
Vitamin content of dehydrated meats; abstract. R. A. Whitmore and others. Food Ind 19:411 Mr '47
See also
Biotin
National vitamin foundation

Terminology

Vitaminology. C. I. Reed. Science 106:226 S 5 '47

Vitamin A

Chemistry of vitamin-A; abstract. L. Heilbron. Chem & Ind p211 Ap 19 '47
Crystalline kitol. F. B. Clough and others. Science 105:436 Ap 25 '47
Depletion of vitamin A reserves in the livers of cattle. P. R. Frey and R. Jensen. Science 105:313 Mr 21 '47
Fish oil fadeout; synthesis of vitamin A, now in pilot plant. il Chem Ind 61:611 O '47
Liver oils of elasmobranch fish of south Indian waters. U. S. Kini and K. Chidambaram. bibliog Soc Chem Ind J 66:233-8 Jl '47
Neovitamin A. C. D. Robeson and J. G. Baxter. bibliog pl Am Chem Soc J 69:136-41 Ja '47
New synthesis of 1-(2',6',6'-trimethylcyclohexen-1'-YL)-3-methylhexa-1,3,5-trien-7-one (C_{18} ketone). N. A. Milas and T. M. Harrington. bibliog Am Chem Soc J 69:2247-8 S '47
Oxidation of β-carotene with osmium tetroxide. G. C. L. Goss and W. D. McFarlane. bibliog Science 106:375 O 17 '47
Recent work on the chemistry and estimation of vitamin-A. N. T. Gridgeman. bibliog Chem & Ind p555-8, 574-6 S 13-20 '47
South African fish products; recovery of vitamin A in the unsaponifiable matter of fish liver oils. M. M. Black and others. bibliog Soc Chem Ind J 65:249-51 S '46
South African fish products; variations in the oil and vitamin A contents of the liver of the Cape hake (merluccius capensis, Cast.). E. R. Roux and C. J. Molteno. bibliog Soc Chem Ind J 65:281-4 O '46
Studies in the polyene series; C_{17} acid and C_{18} ketone related to vitamin A. I. Heilbron, E. R. H. Jones and D. G. O'Sullivan. Chem Soc J p866-9 O '46
Synthesis of compounds related to vitamin A from hydroxymethylene β-ionone. E. M. Shantz. Am Chem Soc J 68:2553-7 D '46
Synthetic vitamin A produced in Holland. Oil Paint & Drug Rep 152:7 Ag 25 '47
Tocopherols as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:225-32 F '47
Utilization of vitamin A in water emulsion. G. R. Halpern and others. bibliog Science 106:40-1 Jl 11 '47
Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47
Vitamin A and oil content of fish livers and viscera; fishes of the Oregon coast. R. O. Sinnhuber and D. K. Law. bibliog Ind & Eng Chem 39:1309-10 O '47
Vitamin A synthesized in Holland. il Chem & Eng N 25:3106 O 20 '47
Vitamin-A synthetically prepared. Chem & Ind p612 O 4 '47
See also
Carotene

Analysis

Adaptation of the Beckman quartz spectrophotometer for measurement of vitamin A by the Carr-Price reaction. G. I. Jones and others. diags Anal Chem 19:142-3 F '47
Determination of vitamin A in fish liver oils with activated glycerol dichlorohydrin; comparison with spectrophotometric and antimony trichloride methods. A. E. Sobel and H. Werbin. bibliog Anal Chem 19:107-12 F '47
New spectrophotometric method for the determination of vitamin A; application to margarine. J. Awapara and others. bibliog Science 104:602-4 D 20 '46
Recent work on the chemistry and estimation of vitamin-A. N. T. Gridgeman. bibliog Chem & Ind p574-6 S 20 '47

Vitamin Bc

Hydrogenation of vitamin Bc (pteroylglutamic acid) and related pterines. B. L. O'Dell and others. Am Chem Soc J 69: 250-3 F '47
Isolation and characterization of vitamin Bc from liver and yeast; occurrence of an acid-labile chick antianemia factor in liver. J. J. Pfiffner and others. bibliog il Am Chem Soc J 69:1476-87 Je '47
Oxidative degradation of vitamin Bc (pteroylglutamic acid). E. L. Wittle and others. Am Chem Soc J 69:1786-92 Jl '47

Vitamin B complex

Conversion process retains rice vitamins. W. W. O'Donnell. flow diags il Food Ind 19: 763-8+ Je '47
Effect of vitamin B complex on inactivation of estrone in vivo and in vitro. B. Zondek and M. Finkelstein. bibliog Science 105: 259-60 Mr 7 '47
Nicotinic acid content of coffee. E. B. Hughes and R. F. Smith. bibliog Soc Chem Ind J 65:284-6 O '46
Storage and microbial action upon vitamins of the B-complex in pork; abstract. E. E. Rice, J. E. Fried and W. R. Hess. Food Ind 19:261 F '47
Variation among lamb carcasses in the B vitamin content of meat. S. Cover and others. Science 105:364-5 Ap 4 '47

Vitamin B_1

Action of thiamine applied directly to the cerebral cortex. M. V. Dias. bibliog Science 105:211-13 F 21 '47
Chronic vitamin B_1 deprivation. I. A. Berg. Science 105:252 Mr 7 '47
Perkin medal awarded to Robert R. Williams for synthesis of vitamin B_1. Ind & Eng Chem 39:462-4 Ap '47
Reduction of 2-amino-4-methyl-5-β-hydroxyethylthiazole in the synthesis of thiamin. J. B. Hatcher. Am Chem Soc J 69:465 F '47
Toxicity study of thiamine hydrochloride. T. J. Haley and A. M. Flesher. bibliog Science 104:567-8 D 13 '46
Williams awarded Perkin medal for synthesis of vitamin B_1. Chem & Eng N 25:160-1 Ja 20 '47

Analysis

Determination of thiamine and riboflavin in the presence of reduced iron. E. De Ritter and S. H. Rubin. bibliog Anal Chem 19:243-8 Ap '47

Vitamin B_2

Effect of nicotinamide on the solubility of riboflavin in water. D. V. Frost. bibliog Am Chem Soc J 69:1064-5 My '47

VITAMINS—Vitamin B_2—*Continued*
Reaction between o-aminoazo compounds and barbituric acid; a new synthesis of riboflavin. M. Tishler and others. bibliog Am Chem Soc J 69:1487-92 Je '47

Analysis

Determination of thiamine and riboflavin in the presence of reduced iron. E. De Ritter and S. H. Rubin. bibliog Anal Chem 19: 243-8 Ap '47

Vitamin B_6

Analogs of pyridoxine. G. E. McCasland and others. bibliog Am Chem Soc J 68:2390-5 N '46

Analysis

Vitamin B_6 group; extraction procedures for the microbiological determination of vitamin B_6. J. C. Rabinowitz and E. E. Snell. bibliog Anal Chem 19:277-80 Ap '47

Vitamin C

Ascorbic acid and carotene in dehydrated peaches; abstract. M. S. Eheart and M. L. Sholes. Food Ind 19:126+ Ja '47

Assay of new rich natural sources of ascorbic acid. J. Tuba and others. Science 105:70 Ja 17 '47

Blood plasma ascorbic acid levels on controlled intakes of ascorbic acid. M. L. Dodds and F. L. MacLeod. Science 106: 67 Jl 18 '47

Browning (Maillard) reaction in heated solutions of uronic acids. J. L. Seaver and Z. I. Ketesz. bibliog Am Chem Soc J 68: 2178-9 N '46

Cabbage as a source of ascorbic acid in human diet. M. Olliver. bibliog Chem & Ind p235-40 My 3 '47

Comprehensive survey of the ascorbic acid content of dehydrated cabbage prepared in the factories operating in the United Kingdom in the season 1945. W. Price-Davies. bibliog Soc Chem Ind J 66:29-31 Ja '47

Crystalline dihydrate of calcium ascorbate. S. L. Ruskin and A. T. Merrill. Science 105:504-5 My 9 '47

Determination of gold with ascorbic acid. E. C. Stathis and H. C. Gatos. Ind & Eng Chem Anal ed 18:801 D '46

Drying of vegetables; loss of ascorbic acid in drying cabbage and potato in large-scale factory plants. R. J. L. Allen and L. W. Mapson. Soc Chem Ind J 66:166-8 My '47

Guava-flavored pectin powder is rich in ascorbic acid. Y. Kanehiro and G. D. Sherman. flow sheet il Food Ind 18:1688-9+ N '46

Stability of ascorbic acid in blackcurrant syrup. A. Pollard and others. Chem & Ind p402-3 N 9 '46

Tetra-acetyl glucosone hydrate; syntheses of analogues of ascorbic acid and possible transformation of hexoses into kojic acid. M. Stacey and L. M. Turton. Chem Soc J p661-5 Ag '46

Ultraviolet absorption spectrum of cerebrospinal fluid: ascorbic versus nucleic acid. L. A. Strait and others. bibliog Science 106:64-5 Jl 18 '47

Vitamin C content of Mexican ornamental plants. F. Giral and L. M. de la Torre. Science 105:65-6 Ja 17 '47

Vitamin C content of potatoes grown on reclaimed land. L. C. Baker, T. L. Parkinson and L. H. Lampitt. bibliog Soc Chem Ind J 65:428-30 D '46

Vitamin C content of vegetables; tomatoes. L. C. Baker and T. L. Parkinson. Soc Chem Ind J 66:1-2 Ja '47

Vitamin E

δ-Tocopherol; isolation from soybean oil and properties. M. H. Stern and others. bibliog Am Chem Soc J 69:869-74 Ap '47

Tocopherols as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:225-32 F '47

Analysis

Molecular distillation as a step in the chemical determination of total and gamma-tocopherols. M. L. Quaife and P. L. Harris. bibliog diag Ind & Eng Chem Anal ed 18: 707-8 N '46

VITRIFIED clay pipes. See Pipes, Vitrified clay

VITRIFIED clay sewer pipes. See Sewer pipes, Vitrified clay

VOCABULARY
Hartrampf's vocabulary-builder. G. A. Hartrampf. rev & enl ed 522p $2 Grosset & Dunlap, 1107 Broadway, New York 10 '47

Word finder. J. I. Rodale, comp. 1317p $6.50 Rodale press, Allentown, Pa. '47

VOCATIONAL education
Concept of vocational education in the thinking of the general educator, 1845 to 1945. A. B. Mays. (Bur. of educational research bul. no. 62) 107p pa 75c Univ. of Illinois, College of education, Urbana '46

See also
Apprentices
Chemical education
Employees, Training of
Engineering education
Industrial education
Mining schools and education
Technical education
Textile education
Trade schools
Veterans—Education

British Columbia

Vocational training in the British Columbia logging industry. W. Black. Pulp & Pa of Can 48:134+ My '47

France

Rapid vocational training in France. Int Labour R 55:298-301 Mr-Ap '47

Great Britain

Craze for training. Economist 151:703-4 N 2 '46

Latin America

Vocational training in South and Central America. Int Labour R 55:570-5 Je '47

VOCATIONAL guidance
Commonsense counseling. P. T. Kosiak. Personnel J 25:343-52 Ap '47

See also
Financial placement and clearance center

VOCATIONAL schools. See Trade schools

VOICE
Effects of impulsive interference upon a-m voice communication. J. C. R. Licklider and S. J. Goffard. bibliog diag Acoustical Soc Am J 19:653-63 Jl '47

Reaction of small enclosures on the human voice; specifications required for satisfactory intelligibility. C. T. Morrow. il diags Acoustical Soc Am J 19:645-52 Jl '47

VOLATILITY
Calculation of relative volatility from boiling points. F. W. Melpolder and C. E. Headington. bibliog Ind & Eng Chem 39: 763-6 Je '47

VOLCANOES
Criticism of Graton's Conjectures regarding volcanic heat. bibliog R. H. Finch. Am J Sci 245:181-3 Mr '47

Honolulu series, Oahu, Hawaii. H. Winchell. bibliog il maps Geol Soc Bul 58:1-48, fold map(pl 1) pl 2 Ja '47

Koolau basalt series, Oahu, Hawaii. C. K. Wentworth and H. Winchell. bibliog maps Geol Soc Bul 58:49-77, pl 1-4 Ja '47

Origin and development of craters. T. A. Jaggar. (Memoir 21) 508p, pl 1-87 bibliog (p419-25) Geological soc. of America, 419 W. 117th st, New York 27 '47

Phosphate deposits of the Eastern Province, Uganda. K. A. Davies. bibliog map Econ Geol 42:137-46 Mr '47

Tuyas, flat-topped volcanoes in northern British Columbia. W. H. Mathews. bibliog diags Am J Sci 245:560-70, pl 1 S '47

See also
Parícutin

VOLEMITOL
Identification of Emil Fischer's phenyl-volemosazone as D-mannoheptose phenylosazone. W. T. Haskins and C. S. Hudson. bibliog Am Chem Soc J 69:1370-1 Je '47

VOLTAGE
Plating bath voltage. G. W. Croninger and J. B. Mohler. Iron Age 160:66-8 O 30 '47

VOLTAGE—*Continued*
Single-element of oscillograph records three line voltages. F. R. Schleif. diags Elec World 127:69-70 Mr 1 '47
Some observations on decomposition voltages. J. O. Bockris and S. Ignatowicz. bibliog diag Electrochem Soc Trans 92 (preprint 9):115-22 '47
Voltage calculation on multi-grounded rural lines. J. S. Francis. diag Elec World 127: 59-60 Mr 29 '47
Watt and var solution of voltage problems. E. C. Goodale. Elec World 128:114+ Jl 19 '47
See also
High voltages

VOLTAGE regulation
Approximate voltage regulation at different power factors. K. M. Lovewell. diag Elec World 126:100 N 23; 120 D 7 '46
Automatic switching schemes for capacitors. W. H. Cuttino. diags Power Pl Eng 51: 101-3+ Je '47
Basic procedures in motor control; amplidyne control circuits. G. W. Heumann. il diags Gen Elec R 50:41-8 Jl '47
Cone pivot voltage relay. il Engineer 183:226 Mr 14 '47
Flexible control systems for tandem motor operation. J. E. Jones. il diags Product Eng 18:167-72 Jl '47
Load-ratio control equipment for unit substations. R. E. Coates and E. M. Hunter. il diags Gen Elec R 49:8-12 N '46
Low impedance transformers pay distribution dividends. H. E. Smith. Elec World 126: 102-3 N 9 '46
Power supply for microwave equipment. O. Hoag. bibliog il diags Electronics 20:110-13 F '47
Series capacitors for improving voltage regulation on circuits supplying power to resistance-welder loads. W. C. Bloomquist and R. C. Wilson. il diags Gen Elec R 50: 21-3 Je '47; Abstract. Elec World 128:82 Ag 16 '47
Voltage-regulated power supplies. P. Koontz and E. Dilatush. diags Electronics 20:119-23 Jl '47
Voltage-regulated power supplies. L. Mautner. bibliog diags Elec Eng 66:894-900 S '47

VOLTAGE regulators
Characteristics of certain voltage-regulator tubes. G. M. Kirkpatrick. bibliog il diags Inst Radio Eng Proc 35:485-9 My '47
Characteristics of the pre-corona discharge and its use as a reference potential in voltage stabilizers. S. C. Brown. bibliog diag R Sci Instr 17:543-9 D '46
Diode-controlled voltage regulators. L. Helterline. il diags Electronics 20:96-7 Je '47
Fitting the primary to the regulator rating. Elec World 127:117-18 F 15 '47
Optimum parameter for gas tube voltage regulators. W. R. Berg. diag Electronics 20:136+ O '47
Voltage regulation for three-phase circuits. C. J. Lake. il diags Gen Elec R 49:47-51 D '46
See also
Rototrol

VOLTAGE standards
Sensible pattern of voltages for apparatus standardization. H. P. Seelye and A. C. Monteith. Elec World 127:88-90 Ap 12 '47

VOLTMETERS
Audio-frequency millivoltmeter. il Engineer 182:575 D 20 '46
Audio voltmeter. il Sci Am 176:136 Mr '47
Combination voltmeter and safety bleeder for transmitter power supply. G. E. Dexter. diag Radio N 38:124 Ag '47
Design of an ellipsoid voltmeter for the precision measurement of high alternating voltages. F. M. Bruce. diags Inst E E J 94 pt 2:129-37 Ap '47; Abstract. Electrician 137:1517 N 29 '46; Discussion. Inst E E J 94 pt 2:149-54 Ap '47; Electrician 137:1517-18 N 29 '46
Sensitive crystal voltmeter. diag Radio N 37:116 Ja '47
Synchronization of oscillators. R. D. Huntoon and A. Weiss. J Res Nat Bur Stand 38: 405-7 Ap '47
Universal voltmeter; uses crystal diodes. J. H. Carlisle. il diag Radio N 37:64+ Je '47
Voltmeter loading; use of nomograph. R. E. Lafferty. diag Electronics 20:132-3 N '47

VOLTMETERS, Vacuum tube
Advanced Voltohmyst. il R Sci Instr 17:521 N '46
Automatic-slideback peak voltmeter for measuring pulses. C. J. Creveling and L. Mautner. diags Inst Radio Eng Proc 35: 208-11 F '47
High impedance pulse voltmeter. D. E. Howes. diag R Sci Instr 16:322 N '45; Abstract. Electronics 20:178+ S '47
Home constructed v.t.v.m. J. H. Carlisle. il diag Radio N 37:54-5+ Ja '47
Measuring complex components of voltage. G. E. Pihl. il diags Electronics 20:128-31 F '47
Pocket v.t.v.m. R. P. Turner. il diags Radio N 38:64-6+ N '47
Simple foolproof production tester. M. F. Beavers. diags Electronics 20:178+ F '47
Stable voltmeter. R. W. Gilbert. il diags Electronics 20:130-3 Mr '47
Vacuum-tube voltmeter. il R Sci Instr 17: 520-1 N '46

VOLTOLIZATION (term)
Production of synthetic lubricating oils by the voltolization processes. G. G. Pritzker. bibliog and patent list Pet. Processing 2: 291+ Ap '47

VOLUME
Reservoir volumes; barrels of free-gas space. J. C. Calhoun, jr. Oil & Gas J 46:125 O 25 '47
Volume of liquid at high temperatures; table. W. L. Nelson. Oil & Gas J 46:105 Jl 12 '47

VOLUMETRIC analysis
Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47
Amperometric titration of styrene with potassium bromate using the rotating platinum electrode. I. M. Kolthoff and F. A. Bovey. bibliog Anal Chem 19:498-500 Jl '47
Amperometric titration of thiodiglycol with electrolytically generated bromine. J. W. Sease, C. Niemann and E. H. Swift. diags Anal Chem 19:197-200 Mr '47
Analysis of a natural gas by volumetric chemical methods and by mass spectrometer. M. Shepherd. bibliog Anal Chem 19:635-40 S '47
Analysis of a standard sample of natural gas by laboratories cooperating with the American society for testing materials. M. Shepherd. flow diag J Res Nat Bur Stand 38:19-51 Ja '47
Analysis of furfural-water solutions. J. Griswold, M. E. Klecka and R. V. O. West, jr. bibliog diag Ind & Eng Chem Anal ed 18: 696-8 N '46
Analysis of hypochlorite-hypobromite solutions. L. Farkas and M. Lewin. bibliog Anal Chem 19:662-4 S '47
Analysis of mixtures of mercurous and mercuric mercury and sulfuric acid. B. Warshowsky and P. J. Elving. bibliog Anal Chem 19:112-14 F '47
Application of cacotheline in volumetric analysis; abstract. M. L. Kuchment and A. I. Gengrinovich. Am Water Works Assn J 39: 597-8 Je '47
Application of methyl ethyl ketone to the analysis of developers for Elon and hydroquinone. V. C. Shaner and M. R. Sparks. bibliog Soc Motion Picture Eng J 47:409-17 N '46
Behavior of uranyl solutions in a mercury reductor. E. R. Caley and L. B. Rogers. bibliog Am Chem Soc J 68:2202-4 N '46
2,2'-Bipyridine ferrous complex ion as indicator in the determination of iron. F. W. Cagle, jr. and G. F. Smith. bibliog Anal Chem 19:384-5 Je '47
Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46
Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46

VOLUMETRIC analysis—*Continued*

Chemistry of sodium phosphates. O. T. Quimby. bibliog Chem R 40:141-79 F '47

Combined absorption and titration tube for volumetric determination of carbon dioxide. E. J. Roberts. bibliog diags Anal Chem 19:616-17 Ag '47

Comparison of methods for determination of sulfamates. W. W. Bowler and E. A. Arnold. bibliog Anal Chem 19:336-7 My '47

Conductimetric titrations of acids and bases in benzene and dioxane. A. A. Maryott. bibliog il J Res Nat Bur Stand 38:527-36 My '47

Determination of acetyl number of fats and oils; modification of the method of Roberts and Schuette. K. Helrich and W. Rieman, 3d. bibliog Anal Chem 19:691 S '47

Determination of boric oxide in glass. M. Hollander and W. Rieman. 3d. bibliog Ind & Eng Chem Anal ed 18:788-9 D '46

Determination of calcium by potentiometric titration. N. Uri. Anal Chem 19:192-3 Mr '47

Determination of degree of substitution of sodium carboxymethylcellulose. R. W. Eyler, E. D. Klug and F. Diephuis. bibliog diag Anal Chem 19:24-7 Ja '47

Determination of 2,4-dichlorophenoxyacetic acid and its compounds in commercial herbicides. H. A. Rooney. Anal Chem 19:475-6 Jl '47

Determination of free sodium hydroxide and sodium carbonate in plating solutions. L. Silverman. Metal Finishing 45:72-3 Ap '47

Determination of gold with ascorbic acid. E. C. Stathis and H. C. Gatos. Ind & Eng Chem Anal ed 18:801 D '46

Determination of metallic aluminum in aluminum pigments. A. K. Light and L. E. Russell. bibliog diag Anal Chem 19:337-8 My '47

Determination of methoxyl and ethoxyl groups in acetals and easily volatile alcohols. D. O. Hoffman and M. L. Wolfrom. bibliog diags Anal Chem 19:225-8 Ap '47

Determination of mono- and dialkylacetylenes. C. D. Wagner, T. Goldstein and E. D. Peters. bibliog Anal Chem 19:103-5 F '47

Determination of nickel in cobalt steels and alloys. H. Kirtchik. bibliog Anal Chem 19: 95-6 F '47

Determination of olefinic unsaturation; nitrogen tetroxide method as applied to petroleum hydrocarbons in the gasoline boiling range. G. R. Bond, jr. diags Ind & Eng Chem Anal ed 18:692-6 N '46

Determination of phosphorus in phosphate rock; separation from cations by ion-exchange resin. K. Helrich and W. Rieman, 3d. bibliog diag Anal Chem 19:651-2 S '47

Determination of 1,2,3,4-tetrahydro-2-naphthol in impregnated clothing. J. Goldenson and S. Sass. bibliog Anal Chem 19:322-4 My '47

Determination of the critical concentration for micelle formation in solutions of colloidal electrolytes by the spectral change of a dye. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:679-83 Mr '47

Determination of the pyrethrin content of dilute preparations of pyrethrum flowers in oil. G. T. Bray and K. A. Lord. Soc Chem Ind J 65:382-4 D '46

Determination of the pyrethrins in pyrethrum concentrates in mineral oil. J. T. Martin and S. T. P. Brightwell. bibliog Soc Chem Ind J 65:379-82 D '46

Determination of water in caustic soda and other alkaline materials; a distillation-titrimetric method. H. R. Suter. bibliog diag Anal Chem 19:326-9 My '47

Effect of salts on the critical concentration for the formation of micelles in colloidal electrolytes. M. L. Corrin and W. D. Harkins. bibliog Am Chem Soc J 69:683-8 Mr '47

Electrometric indicator to replace starch in iodine titrations of sulphurous acid in fruit juices. M. Ingram. bibliog Soc Chem Ind J 66:50-4 F '47

Electrometric study of the reaction between chromate and indium ions. A. Palm. Am Chem Soc J 69:224-5 F '47

Electrometric titrations of weak acids and bases in aqueous solution. D. O. Jordan and H. F. W. Taylor. Chem Soc J p994-7 N '46

Estimation of sulphur trioxide in its mixtures with sulphur dioxide by the method of amperometric titration. D. W. E. Axford and T. M. Sugden. diag Chem Soc J p901-3 O '46

Estimation of triphosphoric and pyrophosphoric acids in the presence of ortho- and metaphosphoric acids. R. N. Bell. bibliog Anal Chem 19:97-100 F '47

Importance of the normality basis and equivalents in the teaching of volumetric analysis. C. C. Meloche. bibliog J Chem Educ 24:475-7 O '47

Improved method for the determination of hydroquinone and metol in photographic developers. H. L. Baumbach. bibliog Soc Motion Picture Eng J 47:403-8 N '46

Investigation of the properties of cellulose oxidized by nitrogen dioxide; potentiometric titration of polyuronides. C. C. Unruh and others. bibliog Am Chem Soc J 69:349-54 F '47

Kjeldahl determination of nitrogen; elimination of the distillation. K. Marcali and W. Rieman, 3d. bibliog Ind & Eng Chem Anal ed 18:709-10 N '46

Microdetermination of halogens and sulfur using the Grote combustion apparatus. O. C. Sundberg and G. L. Royer. bibliog il diags Ind & Eng Chem Anal ed 18:719-23 N '46

Microdetermination of tetraethyllead in gasoline. B. A. Gordon and R. A. Burdett. bibliog diags Anal Chem 19:137-40 F '47

New titrimetric methods for thorium. C. V. Banks and H. Diehl. bibliog Anal Chem 19: 222-4 Ap '47

Nitration in sulphuric acid; influence of nitric acid and other substances upon the oleum-water titration. J. C. D. Brand. Chem Soc J p880-4 O '46

Ortho-tolidine titration procedure for measuring chlorine residuals. C. H. Connell. bibliog Am Water Works Assn J 39:209-18; Discussion. N. S. Chamberlin. 218-19 Mr '47

Polarisation end points; abstract. D. P. Evans. Chem Age (Lond) 55:642 N 23 '46

Quantitative method for aconitic acid and aconitates. E. J. Roberts and J. A. Ambler. bibliog Anal Chem 19:118-20 F '47

Quantitative separation of barium from strontium. G. L. Beyer and W. Rieman, 3d. bibliog Anal Chem 19:35-7 Ja '47

Rapid control method for the determination of slag in portland-blast furnace slag cement. W. J. McCoy. Rock Prod 50:106-7 O '47

Rapid determination of tin in copper base alloys; use of Stanreduce. M. Sherman. Steel 120:102 My 19 '47

Rapid electrometric determination of the alkalinity of sea water using a glass electrode. D. H. Anderson and R. J. Robinson. bibliog Ind & Eng Chem Anal ed 18:767-9 D '46

Reduction of +5 vanadium in the silver reductor. J. J. Lingane and L. Meites, jr. bibliog Am Chem Soc J 69:277-9 F '47

Routine method for determining selenium in horticultural materials. J. S. McNulty. bibliog diags Anal Chem 19:809-10 O '47

Sampling and analysis of boron trifluoride. C. F. Swinehart, A. R. Bumblis and H. F. Flisik. bibliog diags Anal Chem 19:28-32 Ja '47

Some applications of electrometric methods to analysis; abstract. R. J. Carter. Chem Age (Lond) 55:641-2 N 23 '46

Source of acetic acid obtained by oxidation of coal. C. R. Kinney. bibliog Am Chem Soc J 69:284-9 F '47

South African fish products; occurrence of α-glyceryl ethers in the unsaponifiable fractions of natural fats. M. L. Karnovsky, W. S. Rapson and M. Black. bibliog Soc Chem Ind J 65:425-8 D '46

Studies on carbon black; electrometric titration. D. S. Villars. bibliog Am Chem Soc J 69:214-17 F '47

Study of methods for the determination of vanadium. V. North. bibliog In U S Geol S Bul 950:83-9 '46

VOLUMETRIC analysis—*Continued*
Sulfite waste liquor analysis; determination of sulfate by a conductometric titration method. Q. P. Peniston, V. F. Felicetta and J. L. McCarthy. bibliog diag Anal Chem 19:332-4 My '47
Titration of acids by electrolytically generated hydroxyl ion. J. Epstein, H. A. Sober and S. D. Silver. diags Anal Chem 19:675-7 S '47
Volumetric determination of cobalt. A. J. Hall and R. S. Young. Chem & Ind p394-5 N 2 '46
Volumetric determination of water in paints and varnishes. M. H. Swann. bibliog Ind & Eng Chem Anal ed 18:799-800 D '46
Volumetric method for the determination of carbon dioxide. J. J. Fahey. diag In U S Geol S Bul 950:139-41 '46
Volumetric semimicrodetermination of sulfur in organic compounds by use of oxygen bomb. E. C. Wagner and S. H. Miles. bibliog Anal Chem 19:274-7 Ap '47
Water analyses by selective specific conductance. J. W. Polsky. Anal Chem 19: 657-60 S '47

See also
Colorimetric analysis
Indicators and test papers
Iodometry

Apparatus

Apparatus for rapid conductometric titrations; determination of sulfate. L. J. Anderson and R. R. Revelle. bibliog diag Anal Chem 19:264-8 Ap '47
Apparatus for rapid electrometric titration of acid; determination of pH and measurement of turbidity in microbiological assays. L. B. Rockland and M. S. Dunn. bibliog diags Anal Chem 19:812-13 O '47
Improved apparatus for Karl Fischer water determination. R. Kieselbach. bibliog diags Ind & Eng Chem Anal ed 18:726-7 N '46
Practical syringe microburet. P. A. Shaffer, jr., P. S. Farrington and C. Nieman. bibliog il Anal Chem 19:492-4 Jl '47
Recent developments in apparatus for *p*H measurement and electro-titrations; abstract. A. D. E. Lauchlan. Chem Age (Lond) 55:641 N 23 '46

VOLUNTARY chain systems
One-brand labeling; Red & White voluntary grocery group's simplified new package family. il Mod Packaging 20:137 Je '47

See also
Independent grocers' alliance of America

VOLUNTARY umpire system. See Arbitration, Industrial

VOLWILER, Ernest H. 1893-
Honor scroll of Chicago chapter of American institute of chemists awarded to E. H. Volwiler. por Chem & Eng N 25:3148 O 27 '47
Sketch. por(cover) Chem & Eng N 25:2972 O 13 '47

VON KÁRMÁN, Theodore, 1881-
Gives tenth annual Wright brothers lecture. por Aeronautical Eng R 6:8 Ja '47

VOORHIS, Jerry
From Congress to Co-op. por Bsns W p73 Mr 22 '47

VORTEX tubes
Use of the expansion of gases in a centrifugal field as cooling process. R. Hilsch. diags R Sci Instr 18:108-13 F '47

VOUCHERS
Simplified accounts payable procedure. L. P. Bullat. N A C A Bul 28:673-6 F 1 '47

VULCANIZATION
Cross-linkage of linear polyesters by free radicals. W. O. Baker. bibliog Am Chem Soc J 69:1125-30 My '47
Effect of airbag thickness on the cure of a 6.00x16 tire. H. A. Freeman. bibliog diag India Rubber World 116:639-40 Ag '47
Rubberlike products from linear polyesters. B. S. Biggs, R. H. Erickson and C. S. Fuller. bibliog il diags Ind & Eng Chem 39:1090-7 S '47
Sulfur bond in vulcanizates. S. R. Olsen, C. M. Hull and W. G. France. bibliog Ind & Eng Chem 38:1273-88 D '46
Sulfur linkage in vulcanized rubber; reaction of sulfur with 2-methyl-2-butene. M. L. Selker and A. R. Kemp. bibliog diag Ind & Eng Chem 39:895-900 Jl '47
Vulcanization of GR-S with halogen compounds. B. M. Sturgis, A. A. Baum and J. H. Trepagnier. bibliog Ind & Eng Chem 39: 64-8 Ja '47
Vulcanization of rubber with sulfur. I. Williams. bibliog Ind & Eng Chem 39:901-6 Jl '47; Same. India Rubber World 117:69-74 O '47

Accelerators

Toxicity and toxicology of several accelerators used in the rubber industry; abstract. H. Brieger. Ind Med 16:473-4 S '47

VULCANIZED fiber
Vulcanized fibre in arc interrupting devices. G. A. Albert. il diag Mod Plastics 24:88-90 Jl '47

W

WABASH railroad
Atkinson and Pitcairn assume new Wabash positions. Ry Age 122:900 My 3 '47

WACO, Texas

Industries

Awakened Waco. P. D. Marable, jr. il Manuf Rec 115:48-9+ D '46

WAGE clauses. See Trade agreements—Wage clauses

WAGE determination
Economics of wage-dispute settlement. J. T. Dunlop. Management R 36:521-4 O '47

WAGE differentials
Gearing salaries of nation-wide chains to the geographical structure of wages. S. L. Balmer and J. Dean. J Bsns 20:96-115 Ap '47
Premium pay provisions in selected union agreements; shift differentials. Mo Labor R 65:423-4 O '47
Regional wage differentials. H. Ober and C. Glasser. Mo Labor R 63:511-25 O '46
Shift differentials in manufacturing, 1945-46. K. Hafen. Mo Labor R 65:183-5 Ag '47
Wage rate differentials: comparative data for Los Angeles and other urban areas. R. Macfarlane. 164p pa $1.50 Haynes foundation, 2324 South Figueroa st, Los Angeles 7 '46

WAGE dividends. See Profit sharing

WAGE fixing
Wages and prices; a case study. H. H. Wein. R Econ Stat 29:108-23 My '47

See also
Wage scales

WAGE fixing, Government
See also
Minimum wage
Wages—Regulation

WAGE incentive plans. See Wage payment plans

WAGE payment plans
Better rates through element time standards. W. R. Wright. N A C A Bul 29:191-200 O 15 '47
Bonuses for profit; Kaiser-Fraser production pool fund and Bundy Tubing cost savings sharing plan. Bsns W p86+ Je 21 '47
Bundy workers profiting by participating cost savings plan. Iron Age 159:134 F 13 '47
Case for wage incentives. F. Brine. Aviation 46:93-4 Ap '47
Current foremen's compensation, practices. Management R 36:466-8 S '47
Direct and indirect incentives; practical problems surrounding their installation. A. Strong. Advanced Management 12:20-8 Mr '47
Does your incentive wage payment plan measure up? E. A. Cyrol. N A C A Bul 28:1210-29 Je 1 '47
Extending wage incentives to jobs which cannot be accurately measured; abstract. W. George. Management R 36:269-71 My '47

WAGE payment plans—*Continued*
Extent of nonproduction bonuses, 1945-46. L. Badenhoop. Mo Labor R 65:451-2 O '47
Failure of a wage plan. E. J. LaBine. il Am Bsns 17:14-15+ Je '47
How the Kaiser-Fraser production bonus works. il Factory Management 105:106-7 Jl '47
How to apply profit-sharing; payments based on average individual productivity. S. A. Tucker. Am Mach 90:108-9 D 19 '46
Incentive pay program for Nueces bus drivers. R. McDaniel. Mass Transportation 42: 502-4 N '46
Incentive plan for chain stores; managers. R. L. Urban. N A C A Bul 28:1086-90 My 1 '47
Incentive plan for supervisory personnel. J. J. Bigge. N A C A Bul 28:1325-9 Jl 1 '47
Incentive plan includes supervisors; Reed-Prentice corporation. Am Mach 91:130-1 Ap 10 '47; Same. Management R 36:267-8 My '47
Incentive service; federal technical agency offers help. Bsns W p96+ N 23 '46
Incentives work in the toolroom too. E. H. Heywood. Am Mach 91:106-8 Ap 24 '47
Industrial engineering; a survey of practice in 80 plants. R. M. Barnes. Factory Management 105:102-4 Mr '47
Keyman; supervisory incentives. J. A. Lowden. Advanced Management 12:7-13 Mr '47
Labour and incentives. Economist 152:992-3 Je 21 '47
Labor's attitude toward wage incentives; abstract. R. A. Hedden. Management R 35:468-70 N '46
More workers will be employed. Steel 120: sup12-19 Ja 6 '47
Pay inducement; Michigan state dept. incentive-pay plan. Bsns W p45 O 25 '47
Payment by results. Economist 153:491-2 S 20 '47
Responsibility for incentive administration; management data sheets. G. Z. Wollam. Factory Management 105:134+ O '47
Selling the incentive plan to workers. Factory Management 104:157 D '46
Simple incentive method that pays. A. O. Harding. N A C A Bul 28:1484-6 Ag 1 '47
Simplifying wage adjustments. Bsns W p86+ N 16 '46
Snares in incentive wage plans. N. C. Rockwood. Rock Prod 50:76+ Jl '47
They earn what they make, and like it; Sandal-Craft, St Louis footwear manufacturer. A. N. Wecksler. Management R 36:532-3 O '47
35+5=42 ½, a new wage plan; Guardian electric manufacturing company, Chicago. R. H. Scobell. il Factory Management 105:102-3 My '47
Union-accepted wage incentive plan based on group effort; Bundy tubing co. L. Westrate. Automotive & Aviation Ind 95:17+ N 15 '46
Union helps solve production problems; Dumore company, Racine, Wis. Management R 36:273-4 My '47
Validity of weekly guaranty contracts reaffirmed by United States Supreme court. Mo Labor R 64:1059-60 Je '47
Vote for measured day work. F. A. Schotters. Am Mach 91:202+ Mr 13 '47
Wage administration made easy. J. D. Kingery and W. A. Garrett. Bankers Mo 64:213-14 My '47
Wage incentives. J. K. Louden. Personnel J 25:338-42 Ap '47
Wage incentives reconsidered. S. J. Fecht. Mech Eng 69:746-9 S '47
Wage policies that boost production. R. W. Ells. Am Bsns 17:24-6 Ja '47
Wages are tied to profits, both workers and company gain; Whiting corporation, Harvey, Ill. S. H. Hammond. Factory Management 105:105-6 Mr '47

See also
Bonus system
Overtime
Payrolls
Piece work
Profit sharing
Salesmen—Salaries and commissions
Trade agreements—Wage clauses

Cost of living bonus
Cost-of-living bonus aids employee relations. H. J. Ashe. Am Mach 91:140 Mr 13 '47

Group bonus
Group bonus plan raises production, wages and profits. R. L. Gunnell. N A C A Bul 28:604-7 Ja 15 '47

Guaranty of earnings
Annual guarantees. H. Polland. Personnel J 25:203-7 D '46
Annual pay plan for Gernes, Kansas garment maker. Bsns W p99-101 Ap 19 '47
Annual pay tried; U.A.W. contract with auto-parts maker. Bsns W p110-11 Ap 26 '47
Annual wage guarantee would mean drop in employment. A. D. H. Kaplan. Iron Age 159:162+ Mr 6 '47
Annual wage hopes are illusions. J. Abels. Barron's 27:32-3 Mr 17 '47
Annual wage move grows. Bsns W p96+ N 9 '46
British steelworkers benefiting under guarantee of four shifts of work per week. J. R. Hight. Iron Age 159:88+ Ja 9 '47
Economic analysis of guaranteed wages. U S Bur Labor Statistics Bul 907:1-62; pa 25c Supt. of doc. '47
Employment stabilization and the guaranteed annual wage. A. M. Sakolski. Comm & Fin Chr 165:122+ Ja 9 '47
Fuel for annual wage fire; Latimer report. Bsns W p78+ D 21 '46
Government report revives annual wage issue. Iron Age 158:122 D 5 '46
Guarantee of annual wages. A. D. H. Kaplan. 269p bibliog(p261-2) pa $3.50 Brookings inst, 722 Jackson pl, NW, Washington 6, D.C. '47
Guaranteed annual wage. I. Mosher. Comm & Fin Chr 164:3202+ D 19 '46
Guaranteed annual wage implies planned economy, less freedom; Brookings institution study. A. D. H. Kaplan. Steel 121:51+ S 29 '47
Guaranteed annual wage study considered too narrow. L. W. Moffett. Iron Age 159:78+ Mr 27 '47
Guaranteed wage. Fortune 35:120-3+ Ap '47
Guaranteed wage; mirage or reasonable goal? E. P. Schmidt. Comm & Fin Chr 165:2727+ My 22 '47
Guaranteed wage or employment plans. U S Bur Labor Statistics Bul 906:1-17; pa 15c Supt. of doc. '47
Is CIO demand for a guaranteed wage practicable in steel? E. M. Friedman. Comm & Fin Chr 165:736+ F 6 '47
Limited liability, co-ordination with state jobless insurance laws necessary to guarantee programs; interim report of Guaranteed wage study staff. Steel 119:47-9 D 30 '46
National industrial conference board lays down factors for success of annual wage. Comm & Fin Chr 164:3359 D 26 '46
OWMR study cites benefits of guaranteed wage plans. M. W. Latimer. Steel 119:37-9 D 23 '46
Plan for steel wage guarantee. Comm & Fin Chr 164:3126 D 12 '46
Plus and minus of the annual wage. B. Finney. Am Mach 91:85-92 F 27 '47
Q and A method used to explain guaranteed income plan; Visking corp. L. C. Bajork. Factory Management 105:129-30 O '47
U.S. study urges guaranteed yearly pay. M. W. Latimer. Comm & Fin Chr 164:3122 D 12 '46
Wage study out; Latimer report gives boost to guaranteed annual pay plans. Bsns W p100+ F 15 '47
Worker security next big union objective; guaranteed annual wages. Factory Management 105:79-82 F '47

Bibliography
Guaranteed annual wage; an annotated bibliography of source material. J. C. Vradenburg. 101p pa $1.50 Stanford univ. press, Stanford University, Calif. '47

WAGE scales
Gearing salaries of nation-wide chains to the geographical structure of wages. S. L. Balmer and J. Dean. J Bsns 20:96-115 Ap '47
J-E; what it is and how it is installed. C. J. Sammond. il Food Ind 19:614-16 My '47

WAGE scales—*Continued*
Story of your salary; International resistance co. H. T. Stephens. Personnel J 25: 330-4 Ap '47
Survey shows how pay differentials are set. Factory Management 105:246+ O '47
Wage and merit rating stopped wage squabbles; Lake Shore tire & rubber company. H. S. Bown. Factory Management 104:127-30 O '46
Wage rationalization program in United States Steel. R. Tilove. Mo Labor R 64: 967-82 Je '47

WAGE stabilization board, National. See National wage stabilization board

WAGE tax. See Taxation—Toledo, Ohio

WAGES
American federation of labor's wage policy. W. Green. Ann Am Acad 248:1-5 N '46
Fair day's pay for a fair day's work. R. Kelly. il Dun's R 55:11-13+ S '47
National industrial conference board survey shows management eager to maintain equity in wages and salaries. Barron's 27: 12 Ag 11 '47
Pay rises are the workers' right; radio address. L. B. Schwellenbach. Comm & Fin Chr 166:1017+ S 11 '47
Wages and industrial progress. G. W. Taylor. Comm & Fin Chr 165:399+ Ja 23 '47
What the factory worker really thinks. Factory Management 103:83-5 D '45; 104:81-8 O '46

See also
Bonus system
Executives—Salaries
Labor and laboring classes
Overtime
Payrolls
Pensions, Industrial
Profit sharing
Railroads—Wages
Salaries
Salesmen—Salaries and commissions
Wage payment plans
Wage scales

Bibliography
Wage levels; discussions of general principles and criteria in wage determination. (no. 16) 4p pa 10c Industrial relations section, Princeton univ, Princeton, N.J. '47

Call-in pay
Employer's liability for call-in pay. M. M. Shipman. Oil Paint & Drug Rep 150:7+ D 9 '46

Economic aspects
AFL denounces Nathan report. Comm & Fin Chr 165:408 Ja 23 '47
A.F.L. stresses productivity. Bsns W p94+ Ja 18 '47
Another round of wage increases would be disastrous; disputes Nathan report. G. Terborgh. Comm & Fin Chr 165:1926+ Ap 10 '47
Answering Mr Nathan, G. Terborgh. Comm & Fin Chr 164:3345+ D 26 '46
Critical appraisal of Nathan report. J. Backman. Comm & Fin Chr 165:607 Ja 30 '47
Develop new approach to wage-profit-price relationship. G. H. Blackett and H. B. Dalby. Iron Age 159:106-10 F 13 '47
Economics of wage-dispute settlement. J. T. Dunlop. Management R 36:521-4 O '47
Either increased wages or severe depression. E. Cotton. Comm & Fin Chr 165:1927+ Ap 10 '47
Facts vs. the Nathan report. R. Robey. Comm & Fin Chr 165:7+ Ja 2 '47
Fallacies of Nathan-CIO assertions. E. P. Schmidt. Comm & Fin Chr 165:8+ Ja 2 '47
Fallacies of the Nathan report. Factory Management 105:97 Ja '47
Fallacies of the Nathan report. M. B. Roberts. Comm & Fin Chr 165:390+ Ja 23 '47
Higher wages, a case study; Western union telegraph co. Bsns W p 103+ Ja 11 '47
Higher wages needed to keep prosperity. P. Murray. Comm & Fin Chr 165:15 Ja 2 '47
How labor costs affect credit; boosting of wage scales important to economy. J. E. LeRossignol. Credit & Fin Management 49: 20+ S '47
How wages hike prices. Elec West 99:83 S '47
Imbalance between wages, prices and profits. R. V. Gilbert. Comm & Fin Chr 165:873+ F 13 '47
Industry discredits Nathan wage report. Steel 119:25-6 D 23 '46
Industry's problem in offsetting high wages. L. E. Osborne. Comm & Fin Chr 165:2905+ My 29 '47
Industry's viewpoint on labor's demands. H. W. Steinkraus. Ann Am Acad 248:11-19 N '46
Inter-relations of wages, prices and profits in a free society. E. P. Schmidt. Comm & Fin Chr 165:1509+ Mr 20 '47
Is AFL pointing the way to management-labor cooperation? W. Williams. Factory Management 105:119-20 F '47
Labor policy on productivity gains. S. Barkin. Comm & Fin Chr 164:3122+ D 12 '46
Lessons of reconversion; economic forecasting, inflation, bottlenecks. C. Hitch. R Econ Stat 29:16-20 F '47
Nathan report on wage policy. Nat City Bank p5-9 Ja '47
Nathan's study claims 21 pct wage boost possible. K. Rannells. Iron Age 158:118-19 D 19 '46
No depression from high wages. K. Johnson. Comm & Fin Chr 165:138 Ja 9 '47
Prices, wages and profits; a plea for labor-management understanding. F. D. Newbury. Comm & Fin Chr 166:810+ Ag 28 '47
Pricing policies and social trends. H. G. Moulton. Mech Eng 69:109-11 F '47; Excerpts. Comm & Fin Chr 164:2895+ D 5 '46
Profits without responsibility; comment on CIO-Nathan report. S. Hamlin. Comm & Fin Chr 164:3224+ D 19 '46
Public interest in current wage issues. D. M. Keezer. Ann Am Acad 248:20-30 N '46
Recession inevitable with higher wages. H. Ford, 2d. Comm & Fin Chr 165:265+ Ja 16 '47
Reduce prices; don't raise wages. H. W. Steinkraus. Comm & Fin Chr 165:1927+ Ap 10 '47
Reuther owes Ford, Nathan's reasoning shows; absurdities of wage-raising arguments. J. Abels. Barron's 26:3 D 23 '46
Scores purchasing power theory. H. Hazlitt. Comm & Fin Chr 165:1133 F 27 '47
Sharp bust would follow continued profit-wage distortions; charges his Report has been misinterpreted. R. R. Nathan. Comm & Fin Chr 165:1926+ Ap 10 '47
Symposium; wage policy. S. E. Harris; S. H. Slichter; J. T. Dunlop. bibliog R Econ Stat 29:137-60 Ag '47
Unionism; enemy of labor! L. Block. Comm & Fin Chr 165:125+ Ja 9 '47
Vanishing paycheck; attacks CIO brochure. H. Lutz. Comm & Fin Chr 165:733+ F 6 '47
Wage adjustments, down and up, could mitigate depressions' evils. E. M. Friedman. Comm & Fin Chr 165:2470+ My 8 '47
Wage policy for 1947 prepared for CIO by Robert R. Nathan associates; text. Comm & Fin Chr 164:3209+ D 19 '46
Wage rates and purchasing power; address before Chamber of commerce of U.S. R. S. Tucker. Comm & Fin Chr 165:2645+ My 15 '47
Wages and prices; a case study. H. H. Wein. R Econ Stat 29:108-23 My '47
Wages and productivity. R. S. Tucker. Comm & Fin Chr 164:2886+ D 5 '46; Same. Mech Eng 69:288+ Ap '47
Wages are still rising although prices pass peak; pattern typical of recession years. Barron's 27:10 My 26 '47
Wages, prices, and profits. N. H. Engle. J Bsns 20:121-30 Jl '47
Wages, profits, prices, and taxes. W. Leontief. il Dun's R 55:21-3+ Je '47
What can business do about pricing? effects of excessive wage and price rises. R. E. Flanders. Comm & Fin Chr 166:1206+ S 25 '47
Where will the rising spiral of wages and prices end? economics of pensions. F. Rising. Steel 121:75-6+ Ag 4 '47

Law
Avoid claims for overtime wages by classifying employes under federal law. Inland Ptr 118: 41-3 F '47
Back-wage limit contested; Ohio union sues Alcoa. Bsns W p76-8 D 7 '46

WAGES—Law—*Continued*
Congress faces portal issue. Bsns W p54 Ja 4 '47
Congressional action on portal pay begins as 6 more oil suits are filed. Nat Pet N 39:12-13 Ja 8 '47
Drama of the stop watches; portal-to-portal wage trial at Detroit. il Bsns W p17-18 F 8 '47
How industry looks at portal-to-portal pay. Factory Management 104:116-17 N '46
Increasing wages during union organizing period. M. M. Shipman. Oil Paint & Drug Rep 150:7+ N 25 '46
Industrialists urge legislation restricting portal pay suits. Iron Age 159:103 Ja 23 '47
Legal guideposts for portal-pay limitations. Bsns W p88 Ja 18 '47
Management hits back on portal issue. Bsns W p90 Ja 11 '47
Mt Clemens decision leaves portal still open. Bsns W p86 F 15 '47
Mt Clemens portal pay case dismissed. Comm & Fin Chr 165:1046 F 20 '47
Mt Clemens portal-pay decision, its meaning and effect. M. M. Shipman. Oil Paint & Drug Rep 151:7+ F 24; 7+ Mr 3 '47
Portal pay act on statute books but faces test in the courts. Steel 120:69-70 Je 16 '47
Portal pay; Congress drive to limit claims for back wages. Bsns W p88 Mr 22 '47
Portal-pay formulae. F. A. Baird. Personnel J 25:335-7 Ap '47
Portal-pay law; Gwynne bill. Bsns W p86+ F 8 '47
Portal pay threat; suits for millions in back pay. Bsns W p102+ N 23 '46
Portal suits entail bankruptcy, commerce under-secretary warns. W. C. Foster. Comm & Fin Chr 165:646 Ja 30 '47
Portal-to-portal act of 1947. Mo Labor R 65: 199-202 Ag '47
Portal-to-portal act; recent decisions. Mo Labor R 65:464-5 O '47
Portal-to-portal claim of Mt. Clemens pottery-workers denied. Mo Labor R 64:483-4 Mr '47
Portal-to-portal legislation. J. D. Conover. Min Cong J 33:23-4+ F '47
Portal-to-portal pay control asked. Oil Paint & Drug Rep 151:4 Ja 13 '47
Portal to portal pay developments. N. C. Rockwood. Rock Prod 50:93 Ap '47; Same abr. Chem Ind 60:844 My '47
Portal-to-portal pay fight enters electrical manufacturing field. J. C. Meier. Elec World News ed 127:21 Ja 11 '47
Portal-to-portal pay; questions and answers. Factory Management 105:74-5 Ja '47
Prisoners sue; Michigan convicts seeking back wages on war work done in jail. il Bsns W p106-7 Ap 26 '47
Snares in incentive wage plans. N. C. Rockwood. Rock Prod 50:76+ Jl '47
Supreme court rules on railway trainees; Jackson assails Court on wage-hour law. Comm & Fin Chr 165:1166 F 27 '47
Supreme court's dissenting opinions clarify thinking on portal cases. Nat Pet N 39: 37-40 Ja 8 '47
Tell your workers their side of the portal-to-portal issue. F. Rudge and H. Hosking. Ptr Ink 213:31-3 Ja 17 '47
Terms Mount Clemens decision as judicial legislation. H. Hazlitt. Comm & Fin Chr 165:217 Ja 16 '47
Time problem; portal-to-portal pay. Bsns W p96+ D 14 '46
Travel and preparation time. N. C. Rockwood. Chem Ind 59:1032+ D '46
Treasury gives tax refund in portal suits. Comm & Fin Chr 165:786 F 6 '47
Truman signs portal pay bill. Comm & Fin Chr 165:2778, 2787 My 22 '47
Unions fight portal curbs, but flood of suits recedes. Bsns W p90 Ja 25 '47
U.S. Chamber of commerce acts in pending portal-to-portal suits. Comm & Fin Chr 165:186 Ja 9 '47
Validity of weekly guaranty contracts reaffirmed by United States Supreme court. Mo Labor R 64:1059-60 Je '47
Windfall tax on retroactive portal pay. W. L. O'Daniel. Comm & Fin Chr 165:608+ Ja 30 '47

See also
Minimum wage
Overtime

Regulation

CIO on industrial profits; wages and ability to pay. Nat City Bank p138-42 D '46
Decontrol of prices and wages. Mo Labor R 63:977-8 D '46
Fortune survey; minimum wage. Fortune 35: 18 Mr '47
Government by index numbers demands better figures from official sources; protests use of Heller budget as standard of living gauge in wage negotiations. J. Backman. Barron's 27:12 S 22 '47
Rate regulation v. wage regulation. A. Haines. Pub Util 40:84-92 Jl 17 '47
Some problems concerning wage-reopening clauses. M. M. Shipman. Oil Paint & Drug Rep 151:7+ Ja 27 '47
Wage-hour regulations. Factory Management 104:240+ O '46

Statistics

Average weekly earnings in manufacturing industries, 1939-April 1947; graph. Survey of Cur Bsns 27:4 Je '47
Construction wage rates and trends, 1926-1946. Eng N 138:621+ Ap 17 '47
Distribution of factory workers by hourly earnings, Oct. 1946. J. H. Mayer. Mo Labor R 65:47-9 Jl '47
Electric light and power wage structure. J. W. Bloch. Pub Util 39:143-51 Ja 30 '47
Hourly and weekly earnings and hours worked per week; by years, 1899-1946, by months, 1942-1946; tables and chart. Automotive & Aviation Ind 96:76-8 Mr 15 '47
Hourly and weekly earnings; 29 manufacturing industries, average, 1946. Factory Management 105:93 My '47
Hourly wages in the chemical industry, 1946. D. L. Helm. Chem Ind 60:596-8+ Ap '47
How real income of employees has changed. Bsns W p20 F 15 '47
Income on the West coast. S. Shapiro. Mo Labor R 64:599-609 Ap '47
New indexes of hourly and weekly earnings compiled by the Federal reserve bank of New York. G. Garvy and R. E. Lewis. Am Stat Assn J 42:256-70 Je '47
Postwar wage developments in the Pacific region. L. R. Linsenmayer. Mo Labor R 64:610-26 Ap '47
Profits and wages in manufacturing, 1929-1945; graph. Factory Management 105:83 F '47
Salaries and wages per full-time employee; private industries, 1929 and 1939-1946; charts. Factory Management 105:128 O '47
Statistics of the general level of wages in various countries; hourly rates or earnings; daily, weekly or monthly earnings; yearly 1929-1945; quarterly Dec. 1945-Dec. 1946. Int Labour R 55:176-87 Ja-F '47 [cont quarterly]
Trend of factory earnings, 1939 to October 1946. Mo Labor R 64:151-2 Ja '47 [cont monthly]
Trends of earnings and hours. Published in Monthly labor review
Union wages and hours of local transit operating employees, July 1, 1946. U S Bur Labor Statistics Bul 903:1-17; pa 10c Supt. of doc. '47
Urban wage-rate trends in manufacturing industries, October 1946. Mo Labor R 64: 369-77 Mr '47
Wage and hour statistics. Published in numbers of Monthly labor review
Wage rates in manufacturing, United States, 1941, 1945, 1946. Factory Management 105: 77 S '47
Wage structure of general automobile repair shops, July 1946. F. W. Mohr. Mo Labor R 64:824-8 My '47
Wage structure of textile dyeing and finishing industry, July 1946. L. Badenhoop. Mo Labor R 64:1034-9 Je '47
Wage structure of the hosiery industry, January 1946. H. W. Callaway. Mo Labor R 63:954-61 D '46
Wage structure of the industrial chemical industry, January 1946. D. L. Helm. Mo Labor R 63:744-9 N '46

WAGES—Statistics—*Continued*
Wage structure of the rayon and silk industry, June-July 1946. M. S. Caffee. Mo Labor R 64:816-23 My '47
Wages and employment in the public utility industries. E. Neuner, jr. bibliog J Land & Pub Util Econ 22:363-80 N '46
Wages and normal hours of work of adult males in certain occupations in various countries in October 1945. Int Labour R 54: 257-73 S-O '46
Wages in radio manufacture, Jan. 1947. Mo Labor R 65:320 S '47
Wages in sawmills in the South, September-October 1946. J. F. Laciskey. Mo Labor R 64:1029-33 Je '47
Wages in the machinery industries, Oct. 1946. J. F. Laciskey. Mo Labor R 65:317-20 S '47
Wages in the metal furniture industry, Jan. 1947. D. L. Helm. Mo Labor R 65:446-9 O '47
Wages in women's blouse and waist industry, Jan. 1947. F. W. Mohr. Mo Labor R 65:314-16 S '47
Wages of foundry workers, October 1946. D. L. Helm. Mo Labor R 65:180-3 Ag '47
Weekly earnings reattain war peak; overtime pay drops out; with charts and table. Survey of Cur Bsns 26:9-11 D '46
Weekly salaries of clerical workers in 20 cities, October 1946; table. Mo Labor R 64: 829 My '47
Your wage score before a second round; industry-by-industry figures. Bsns W p88 N 9 '46

Australia

Australian incentive. Bsns W p98 S 13 '47

Canada

Holidays with pay in Canada. Int Labour R 54:381-3 N '46
Statistics of average hours worked and average hourly earnings as reported at the beginning of January, 1947. 14p pa $1 Canada. Dominion bur. of statistics, Ottawa '47
Wage trends and wage policies, 1939-47. J. Mintzes. Mo Labor R 65:426-30 O '47

France

France; wage trends and wage policies, 1938-47. H. I. Cowan. Mo Labor R 65:149-57 Ag '47
Wages and wage supplements, 1938, 1946, and 1947. Mo Labor R 65:461-2 O '47

Germany

Allied policy on wages in occupied Germany. M. A. Kelly. Int Labour R 55:351-71 My '47

Great Britain

Great Britain; wage trends and policies, 1938-47. J. A. Flexner. Mo Labor R 65:285-92 S '47
Labour and incentives; with data on minimum wage rates in selected industries. Economist 152:992-3 Je 21 '47
Trend of wages. Economist 151:876-7 N 30 '46
Wages and industrial unrest. Economist 153: 75-6 Jl 12 '47

New York (city)

Wage rates per hour, New York city; building trades 1874-1946. Eng N 138:630 Ap 17 '47

Pacific coast

Postwar wage developments in the Pacific region. L. R. Linsenmayer. Mo Labor R 64:610-26 Ap '47

Southern states

Wages in sawmills in the South, September-October 1946. J. F. Laciskey. Mo Labor R 64:1029-33 Je '47

Sweden

Wage trends and wage policies, 1939-47. M. B. Cheney. Mo Labor R 65:431-5 O '47

United States

Air transport industry wages, payrolls climb to new peaks. C. Adams. Aviation W 47: 41-2 S 22 '47
Annual averages of employment and pay rolls, 1945 and 1946; tables. Mo Labor R 64: 917-20 My '47
Average earnings in metalworking industries; 1941-1946, tabulation. Am Mach 91:115 Ja 16 '47
Bargaining works; C.I.O.'s textile workers negotiate wage increases. Bsns W p83-4 F 8 '47
BLS reports earnings for industrial workers up $5 weekly. Iron Age 158:126 D 5 '46
Century of wage inflation. H. P. Gillette. Roads & Sts 90:76 S '47
Changes in wage trends. L. Wolman. Comm & Fin Chr 164:3016+ D 12 '46
CIO and wages. P. Murray. Comm & Fin Chr 164:2609+ N 21 '46
CIO's wage policy; resolution adopted at Atlantic City convention. Comm & Fin Chr 164:2895+ D 5 '46
Construction wage rates and trends, 1926-1946. Eng N 138:621+ Ap 17 '47
Current labor market; wages. Fed Res Bul 33:1203-6 O '47
Employment opportunities in aviation occupations; duties, qualifications, earnings, and working conditions. il U S Bur Labor Statistics Bul 837 pt 2:31-8; pa 20c Supt. of doc. '46; Same. Mo Labor R 63:186-94 Ag '46
Hotel wages in large cities, June 1947. Mo Labor R 65:450 O '47
Industry can pay higher wages. W. Reuther. Comm & Fin Chr 164:2891+ D 5 '46
Money and real weekly earnings during defense, war, and reconversion periods. M. Derber and S. Netreba. Mo Labor R 64: 983-96 Je '47
Possible wage pattern set; 15c an hour increase for 30,000 G.M. employees. Bsns W p92-3 Ap 19 '47
Pressure for higher pay found widespread among labor; Gallup poll. Iron Age 159:105 Ja 23 '47
Productivity, wages and prices. J. Backman. Blast F & Steel Pl 35:448-53 Ap '47
Reconversion. J. B. Hubbard. R Econ Stat 29: 31-8 F '47
Second round score; postwar wage boosts of various industries. Bsns W p92 Jl 19 '47
Seven out of ten predict wages will dip or stand pat; Gallup poll. Iron Age 160: 127 S 18 '47
Steel pact breaks the dam. Bsns W p100+ Ap 26 '47
Survey shows hourly wages of production workers have risen. Iron Age 159:127 Je 5 '47
Symposium; wage policy S. E. Harris; S. H. Slichter; J. T. Dunlop. bibliog R Econ Stat 29:137-60 Ag '47
Trends in urban wage rates, April 1946. Mo Labor R 63:657-68 N '46
Trends of earnings and hours. Published in Monthly labor review
Union wages and hours in the building trades, July 1, 1946. D. H. Gerrish and others. Mo Labor R 64:53-66 Ja '47; Same, with additional data. U S Bur Labor Statistics Bul 910:1-73; pa 20c Supt. of doc. '47
Union wages and hours in the printing, trucking, local transit, and baking industries, 1946. J. P. Corkery and H. M. Abowitz. Mo Labor R 64:444-53 Mr '47
Wage demands; second-round pattern. Bsns W p86+ N 9 '46
Wage rates in the building trades. Sheet Metal Worker 38:102 Ja '47
Wage structure in cotton-textile mills, April-May, 1946. K. B. Mohn. Mo Labor R 64: 454-61 Mr '47
Wage structure in woolen and worsted industry, April 1946. Mo Labor R 64:461-8 Mr '47
Wage structure of the cigar manufacturing industry, January 1946. K. B. Mohn. Mo Labor R 64:45-52 Ja '47
Wage trends in the bus operating industry. Bus Transportation 25:71 N '46
Wages, and how they grew; tables showing steel wages, 1914-1947; steel prices, 1938-1947. Steel 120:68 Ap 28 '47
What's happening to productivity. Factory Management 105:66-9 S '47

See also
Trade agreements —Wage clauses

WAGNER-JAUREGG reaction
Condensation of 1,1-diarylethylenes with maleic anhydride. F. Bergmann, J. Szmuszkowicz and G. Fawaz. bibliog Am Chem Soc J 69:1773-7 Jl '47
Ortho effects in the Wagner-Jauregg reaction. J. Szmuszkowicz and F. Bergmann. Am Chem Soc J 69:1779-80 Jl '47
Use of diarylvinyl bromides as diene components in the Wagner-Jauregg reaction. F. Bergmann and J. Szmuszkowicz. bibliog Am Chem Soc J 69:1777-9 Jl '47

WAGNER labor act. See Labor laws and legislation—United States

WAGNER-MURRAY-DINGELL bill. See Insurance, Health—Legislation, Proposed

WALDEN inversion
Simple apparatus to demonstrate Walden inversion. C. R. Noller. diag J Chem Educ 24:277 Je '47
Steroids and the Walden inversion. C. W. Shoppee. Chem Soc J p 1138-51 D '46

WALDORF system, inc.
Sales run counter to national trend. Barron's 27:27 Je 9 '47

WALES
Industries and resources
Industrial Wales exhibition, London. Engineering 164:258 S 12 '47

Politics and government
Welsh independence. Economist 151:698-700 N 2 '46

WALKER, George W.
Herald of change. por Bsns W p42 Je 14 '47

WALKER, Hiram,-Gooderham and Worts, limited
Annual report. Comm & Fin Chr 165:210 Ja 13 '47

WALKS, Concrete
Heating
Best & co., New York, installs sidewalk snow melting system. H. H. Bond. il Heating-Piping 19:90-1 S '47
How to design snow melting coils. P. S. Park. Heating-Piping 19:97 Ja '47
Reports many advantages, reasonable cost for snow melting by pipe coils. L. S. Smith. il diag plan Heating-Piping 18:87-90 N '46
Transient temperatures around heating pipes maintained at constant temperature. A. Gemant. bibliog J Ap Phys 17:1076-81 D '46

WALKWAYS. See Floors; Sidewalks

WALL board
Continuous structural board from sawdust. il Mod Plastics 25:89-91 S '47
Development and uses of structural insulation board. D. Linville. il Dom Comm 35:23-9 Jl '47
Experiments on the production of insulating board and hardboard from western sawmill and logging waste. S. L. Schwartz and others. Paper Tr J 125:37-42 O 2 '47; Same cond. Paper Ind 29:884+ S '47
H.p. condensate return increases wallboard production. R. J. Lundrigan. flow diag il diag Power Pl Eng 51:97-9 Ag '47
Newest plaster board plant on West coast; Standard gypsum co. il Rock Prod 50:74-7 S '47
Outline of the insulation board industry. C. G. Muench. Paper Tr J 125:48-50 Jl 31 '47
Penetration of water in insulation board. W. A. Wink and J. A. Van den Akker. bibliog diags Paper Tr J 125:54-8 Ag 21 '47; Same cond. Paper Ind 28:1795-8 Mr '47
There is no secret to the Cemesto system of construction; builder Joseph Leopold's answer to permanent low cost housing in Clayton, Mo. il plan diag Am Bld 69:134-5 Ap '47

WALL paper. See Wallpaper

WALL Street
Third union enters Wall Street scene as UFE wins limited arbitration of wages at Kidder, E. Germain. Comm & Fin Chr 165: 2197+ Ap 24 '47
Wall Street is misunderstood. J. G. Buckley. Comm & Fin Chr 166:1006+ S 11 '47

WALLACE, Henry Agard, 1888-
Analyzes Wallace's following on third party sentiment; Gallup poll. Iron Age 160:107 Jl 10 '47
Imperialist U.S. needs new deal; B.B.C. radio address, April 13, 1947, por Comm & Fin Chr 165:2060+ Ap 17 '47
The new statesman. Economist 152:571-2 Ap 19 '47; Same. Iron Age 159:113+ My 1 '47
Wallace's popularity falling; Gallup poll. Iron Age 159:107 My 1 '47

WALLACE, S. Rains, Jr, 1913-
Named L.I.A.M.A. research director. Nat Underw (Life ed) 51:1 Ja 24 '47

WALLACH, Otto, 1847-1931
First organizer of the terpenes; 1910 Nobel prize winner. W. S. Partridge and E. R. Schierz. bibliog por(front) J Chem Educ 24:106-8 Mr '47
Sketch. Chem & Ind p362 Je 28 '47

WALLBOARD. See Wall board

WALLPAPER
Package wallpaper? United finds it aids dealer, eliminates waste, preludes errors. il Mod Packaging 20:142-4+ Jl '47

WALLS
Cavity walls and slab bands cut costs for multi-story public housing project; Elliott project, New York city; with cost data. il diags Eng N 138:584-7 Ap 17 '47
Curtain wall. il Arch Rec 102:124 Jl '47
Metal-clad insulated curtain wall promises many economies to multi-story housing; with details of Republic Steel's modification. il plans diags Arch Forum 86:97-100 My '47
Thermal properties of walls; various application of fiberglas insulation. diags Brick & Clay Rec 110:35 Mr '47
Wall construction unit featuring metal-clad insulation. Heat & Ven 44:114 Jl '47; il Steel 120:101 Je 30 '47
Wall footing action poses enigmas. H. S. Woodward. diags Eng N 138:955-6 Je 12 '47; Discussion. V. R. Bergman. 139:891 D 25 '47

WALLS, Brick
Average weight of solid brick walls; table. Brick & Clay Rec 110:28 Je '47
Avoiding wet walls in high humidity industrial plants. G. R. Morgan. Heat & Ven 43:74-9 N '46
FHA's building code does not cover 10" cavity of 6" masonry walls. Brick & Clay Rec 111: 34 Ag '47
Glass block details for brick veneer walls. diags Brick & Clay Rec 110:33 F '47
How to construct walls of reinforced brick masonry. diags Brick & Clay Rec 110:35+ Ap '47
How to tuck point masonry walls. il diag Brick & Clay Rec 110:42 Mr '47
Insulated brick cavity wall ventilated for dryness. C. E. Baty. diag Brick & Clay Rec 110:32 Ja '47
Leaky and eroded walls made watertight by veneering with face brick. il diags Brick & Clay Rec 111:26-7 S '47
Masonry details for modern brickbuilders. L. Maffett. diags Brick & Clay Rec 110: 39-40 Ja; 21-2 F; 38-9 Mr '47
Properties of cavity brick wall construction. Brick & Clay Rec 110:32 Ap '47
Solid exterior walls above grade; common bond ½ in. joints, partly filled; table. Brick & Clay Rec 111:31 Ag '47
Solid exterior walls in Flemish, English and English cross bonds; ½ in. joints, partly filled; tabulation. Brick & Clay Rec 110: 35 Ja '47
Three-in-one cavity wall, insulated, vapor-sealed and water-stopped. diags Brick & Clay Rec 111:28-31 O '47
Weep hole locations; drawings. Brick & Clay Rec 110:31 Ap '47
What to do about efflorescing walls. il Brick & Clay Rec 110:41 Mr '47
Why I'm using an improved cavity wall in my all-masonry house. C. E. Baty. il plans diag Brick & Clay Rec 111:33-4 Jl '47

See also
Retaining walls, Brick

WALLS, Concrete
Foundation walls for engine plant; Diesel engine factory, Caterpillar tractor co. il Concrete 55:22 My '47
High test cell walls and roof concreted as a monolith; Hamilton standard propeller division of United aircraft corp. R. F. Egelhoff. diags Concrete 55:3-5 Ja '47
How to calculate heat transmission coefficients and vapor condensation temperatures of concrete masonry walls. diags Concrete 55:28-9 Ja '47
Unusual concrete walls divide stockpiles; Pioneer sand and gravel co. il Rock Prod 50:84 F '47

WALLS, Glass
Lighting road roundabouts, and an interesting experiment; illuminated glass wall. A. G. Brown. il Light & Lighting 39:215-18 D '46

WALLS, Interior
Dry wall construction popular. il plan Am Bld 69:124-5 O '47
Electrostatic spraying of steel wall panels. W. S. Reed. il Materials & Methods 25:77-9 F '47
Interiors decorated with brick and tile; illustrations. Brick & Clay Rec 111:24 S '47

See also
Paneling

WALNUTS
Assay of new rich natural sources of ascorbic acid. J. Tuba and others. Science 105:70 Ja 17 '47
Warehousing nuts on pallets; fork-lift trucks handle 1750 tons of walnuts daily. il Food Ind 19:923+ Jl '47

Advertising

Special grower campaign moves surplus stocks held by dealers; Diamond walnuts. L. F. Thomann. il Ptr Ink 220:38-9 Ag 15 '47

WAMPLER, Elrey Cloud, 1895-
Portrait. Bsns W p54 O 25 '47

WANT ads. See Advertisements, Classified—Want ads

WANT slips. See Retail trade—Records

WAR
Engineers' war detection plan receives national recognition; Look magazine features plan in article. Civil Eng 16:536-7 D '46
Fear of another war is rising; Gallup poll. Iron Age 159:125+ My 8; 160:147 Ag 14 '47
Plan for national security; brief look at two wars, the last one and the next one. I. C. Eaker. il Elec Eng 66:237-40 Mr '47
Scores war mongering in U.S.; address at United nations general assembly. A. Vishinsky. Comm & Fin Chr 166:1222-3 S 25 '47
War specter over Europe? F. E. Gannett. Credit & Fin Management 48:6-8+ N '46

See also
Aeronautics, Military
Air raids
Chemical warfare
Communication, Military
Electricity in war
Military engineering
Munitions
Peace
Railroads in war

also names of wars, e.g. World war, 1939-1945

also subdivision War problems under special subjects, e.g. Electric utilities—War problems; Petroleum industry and trade—War problems

Economic aspects

New economic doctrines in wake of war. W. A. Irwin. Comm & Fin Chr 165:917+ F 13 '47
Wholesale prices and industrial stock prices during and immediately after the two world wars. L. H. Bean. R Econ Stat 29: 199-200 Ag '47

Labor problems

See also
World war, 1939-1945—Labor problems

Social aspects

Total war and the preservation of democracy. A. W. Bromage. Ann Am Acad 249: 66-74 Ja '47

WAR, Cost of
Rising cost of war to U.S. in 100 years cited by War department. Comm & Fin Chr 165: 2126 Ap 17 '47

WAR, Psychology of

See also
Psychology, Military

WAR administration
Official appraisal of the war economy and its administration; review of United States at war; development and administration of the war program by the federal government, by War records section, Bureau of the budget. L. Gordon. R Econ Stat 29: 183-8 Ag '47

WAR and science
Scientist in war time. E. Appleton. diags Inst Mech Eng J & Proc 154:Proc 303-16, pl 1-4 D '46; Same cond. Engineer 180:417-19, 432-3, 454-5 N 23-D 7 '45
Scientist rebels against furnishing information concerning controlled missiles. N. Wiener. il Metal Prog 51:598 Ap '47
Speech before physicists. H. S. Aurand. Science 105:171-2 F 14 '47
Two wars; the last and the next. I. C. Eaker. Ind Stand 18:2-3+ Ja '47

See also
World war, 1939-1945—Science and the war

WAR assets administration
America Fore group gets exclusive WAA contract; covers war goods and property sold on time-payment plan. Weekly Underw 156:1002+ Ap 12 '47
Customer service center arouses Washington interest. Iron Age 159:148-50 Mr 27 '47
Dumping policy ordered as surplus sales drop. Bsns W p7 N 16 '46
Export sales policy; statement by the Administrator. For Comm W 26:40 F 22 '47
Stepped-up war disposal threatens sales backlogs. S. E. Cohen. Ind Marketing 32: 52-3+ Jl '47
Surplus job nears end. il Bsns W p26+ S 13 '47
WAA announces policy. Comm & Fin Chr 164:2526 N 14 '46
WAA signs 30 agencies for regional campaigns. Ptr Ink 217:104 N 22 '46

WAR claims. See World war, 1939-1945—Claims

WAR criminals. See World war, 1939-1945—War criminals

WAR damage corporation
Discusses RFC and work of War damage corp. J. D. Goodloe. East Underw 48:20-1 Jl 4 '47
Early end of WDC seen; closing last few claims. R. C. Goodale. Nat Underw 51:6 Ap 24 '47
Matlaw corporation wants premiums back; court takes war damage coverage action under advisement. Weekly Underw 156: 323 F 1 '47
RFC lists WDC liability to insurers at $20,015,556. Nat Underw 51:4 Ja 30 '47
Sue to compel WDC to refund premiums to insured. Nat Underw 50:3 N 14 '46
U.S. Treasury gets $210 million from WDC. Nat Underw 51:2 Je 19 '47

WAR death claims. See Insurance, Life—War death claims

WAR debts. See Debts, Public

WAR finance
Federal reserve system report for 1945. C. O. Hardy. Harvard Bsns R 25 no2:207-12 [Ja] '47

See also
Bonds, Government—United States
Finance—Great Britain

WAR labor board, National. See National war labor board

WAR maps. See Maps, Military

WAR measures
Duration of war terminated only by proclamation of President; ruling by Appellate division, Second department, of New York. Comm & Fin Chr 165:2654 My 15 '47
End of hostilities spurs labor and farm legislation. Bsns W p20 Ja 11 '47

WAR measures—*Continued*
President asks war powers extension for a year beyond June 30. Comm & Fin Chr 165:3033 Je 5 '47
President officially ends hostilities. Oil Paint & Drug Rep 151:3+ Ja 6 '47
Truman asks continuation of some wartime powers. Comm & Fin Chr 165:789+ F 6 '47
Truman proclaims hostilities' end; text of proclamation. Comm & Fin Chr 165:9+ Ja 2 '47
War powers; peace problem. Bsns W p19-20 D 28 '46

See also
Electric utilities—War problems
Enemy property
Prices—Regulation
Railroads in war
Rationing

WAR memorials
Saarinen memorial; Milwaukee plans a spacious center for community use. il Arch Forum 85:12 D '46

WAR profits
Italy; confiscation of war profits. For Comm W 26:20 Ja 4 '47

WAR risk insurance. See Insurance, War risk

WAR veterans. See Veterans

WARD, Harold Sidney
Gallery; Sid Ward. S. Jones. por Adv & Sell 40:96+ Je '47

WARD-LEONARD control. See Electric control

WAREHOUSE receipts
Banker tells how to get capital. R. H. Clark. Management R 36:485-6 S '47
Field warehousing is automatic. S. D. Hart. Bankers Mo 64:382 Ag '47
Non-negotiable warehouse receipts have advantages to banks. R. L. Gordon. il Bankers Mo 64:317-19 Jl '47
We make extra profit and serve customers better by lending on field warehouse receipts. R. J. McElroy. il Bankers Mo 64:209-11 My '47

WAREHOUSEMEN'S liability insurance. See Insurance, Warehousemen's liability

WAREHOUSES
Circular warehouse for mail order house. il plans Arch Forum 85:121-3+ N '46
Department store, garage and warehouse, built as a unit, permit mechanized system of stock handling, controlled customer traffic; Foley store in Houston, Tex. il plans diags Arch Forum 86:106-9 Ap '47
Economical handling in a warehouse. W. S. Wheeler. il Factory Management 105:126-8 Je '47
Warehouse act bars state commissions. Food Ind 19:957-8 Jl '47
Warehouse design and construction. B. Hainsworth. il Factory Management 105: B70-1 pt 2 Ap '47
Warehouse trains pick stock for retail grocery stores; National tea company. il plan Food Ind 19:53-5 Ja '47
What to do when customers don't know your story; Norton company advertises warehouse service. R. A. Reed. il Sales Management 58:102+ Mr 15 '47

See also
Freight houses
Storage

Heating and ventilation
Direct fired units meet changed heating needs; War assets administration sales center and warehouse in Cleveland. A. A. Kosarin. il Heating-Piping 19:92-3 Ag '47

Layout
25 per cent more products handled and stored by 63 per cent fewer people; Reliance electric & engineering company. C. R. Newpher. il Factory Management 105:90-3 Ja '47

WAREHOUSING
Damage to stored gas equipment and merchandise; legal aspects. L. T. Parker. Am Gas J 165:48-50 N '46
Steel warehouse distributor. C. A. Livesey. Harvard Bsns R 25 no 3:397-408 [Ap] '47

See also
Cold storage warehouses
Warehouses receipts

WARFIELD, Henry M. 1867-1947
Sketch. East Underw 48:46 O 17 '47

WARM air heating. See Heating, Warm air

WARNER, John Christian, 1897-
Sketch. por Chem & Eng N 25:3059-60 O 20 '47

WARNER, Samuel L. 1888-1927
SMPE honor roll awards; pioneers in development of talking moving pictures. Soc Motion Picture Eng J 48:443-6 My '47

WARNER, William R., and company, inc.
Hudnut expanding. Bsns W p74+ N 23 '46

WARPING machines
Modern rayon warping methods. H. E. Wenrich. il diags Rayon 27:643-6 D '46

WARRANTY
Liability of FDIC for breach of warranty. Banking Law J 64:131-40 F '47

WARREN, Earl, 1891-
Republicans; Republican problem. por Fortune 35:77-85+ Ap '47

WARREN petroleum company
Preferred stock offered. Comm & Fin Chr 166:164+ Jl 14 '47

WARREN steam pump company
Fifty years of pump building. il Marine Eng 52:96-8 Je '47

WARSHIPS
Bailey superheater protection for warships. il diag Marine Eng 52:102 Ap '47
Corvettes and frigates; discussion of paper by A. W. Watson. Engineer 183:335-6 Ap 18 '47; Engineering 163:389-90 My 9 '47
Naval construction in 1946. F. McMurtrie. il Engineer 183:4-6, supp 5, 38-40, supp 2 Ja 3-10 '47
Naval replacement. il Engineer 183:19-21 Ja 3 '47

See also
Submarine boats

Air conditioning
Navy plans to air condition all its major combatant ships. il Heating-Piping 18:85-6 N '46

Models
Radio control for model battleship. G. C. Fitzgerrell. il diags Electronics 20:106-11 Ja '47

Tenders

See also
Submarine boats—Tenders

Germany
German wartime technical developments; abstract and discussion. H. A. Schade. Marine Eng 51:82-4 D '46

Great Britain
British gas-turbine installation on British torpedo boat. il Marine Eng 52:85-6 O '47
Coastal force design; discussion of paper by W. J. Holt. Engineering 163:390-1 My 9 '47
Gas turbine propelled M.G.B. 2009. il diags Engineer 184:218-20, 248-9, 260-2 S 5-19 '47
Gas-turbine propelling machinery for British gunboat. il diag Engineering 164:271-4, 276 S 19 '47
Naval construction in 1946. F. McMurtrie. il Engineer 183:4-6, supp5 Ja 3 '47

United States
Laying up the American navy. il plans Engineer 183:162-5 F 14 '47
Naval machinery standardization. G. B. Warren. Machine Design 19:174+ F '47
Navy plans to air condition all its major combatant ships. il Heating-Piping 18:85-6 N '46; Same cond. Heat & Ven 44:101-2 My '47
Navy uses surplus steel in preserving inactive naval ships; berthing area at Green Cove Springs, Fla. F. K. Price. il Steel 120:76-7 F 10 '47
Putting fighting ships in moth balls. R. G. Skerrett. il Comp Air Mag 52:136-41 Je '47
Putting the fleet in mothballs; sheet steel structures protect naval guns. il Sheet Metal Worker 38:45 Mr '47; Same cond. Steel 120:104-5 F 17 '47

WARSHIPS—United States—*Continued*
Rating dynamic dehumidification equipment; preventing corrosion of equipment on naval vessels on the inactive list. E. R. Queer and E. R. McLaughlin. il diag Heating-Piping 19:103-8 Ja '47
Refrigeration on U.S. naval ships. C. V. Hawk. il Refrig Eng 53:200-2+ Mr '47
Saga of Ramp 224 (former U.S.S. Stewart). Marine Eng 52:81-2 Ap '47
Steam turbines for main propulsion of high-powered combatant ship. G. B. Warren. il diags Marine Eng 52:76-81 Je; 100+ Jl; 106+ Ag; 78-84 S; 104+ O '47; Discussion. 52:95-7 Ja '47

WASHBURN, Thomas Savier, 1901-
Sketch. por Min & Met 28:436 S '47

WASHERS (faucets)
Molded nylon faucet washers; injection molded in eight diameters. il Mod Plastics 24:105 Je '47

WASHERS (machinery)
American standard spring lock-washers; data sheet. Mach 53:267 N '46
Compound punch and die makes three washers. B. Menkin. diags Am Mach 91:119 O 23 '47
Device for indexing, locating, and feeding lock-washer blanks. J. W. Gulliksen and J. W. Hillhouse. diags Mach 53:194-5 Ja '47
Disk spring or Belleville washer. G. Ashworth. bibliog il diags Inst Mech Eng J & Proc 155 (War emergency issue no 16):93-100 '46
Fabricating spacers, bushings, and washers. W. L. Nye. Air Transport 5:58+ F '47
Rubber washer cutter. P. E. Wasser. diag Am Mach 91:113 Ap 24 '47

WASHING apparatus
Auto laundry, new style. il Am Gas J 166:47 Mr '47
Locomotive washing and stripping rack. il Ry Mech Eng 120:629-30 N '46

WASHING machines
Appliance corp. automatic washing machine enclosed in Plexiglas. il Mod Plastics 25: 108 S '47
Automatic washer has all-mechanical controls. il diag Machine Design 19:155 Je '47
Bendix seeks washer sell-out with million dollar contest; free-for-all among 9,000 dealers and 25,000 retail salespeople. il Sales Management 59:54+ S 1 '47
Bendix sued; Justice dept. charges illegal restraints on automatic washer rentals. Bsns W p20 D 21 '46
Bendix uses 7,300 women to post-sell every customer; give home demonstrations. il Sales Management 57:53-4+ D 1 '46
Best-selling Bendix. il Fortune 36:132-7+ N '47
Commercial washer employs novel V-belt reversing mechanism. il diags Machine Design 19:151-2 Je '47
Launderettes grow apace, and Mrs America rocks while Bendix washes. E. M. Kelley. il Sales Management 59:44-6 S 15 '47
Preliminary report on Launderall automatic washing machine. Consumers Res Bul 19:15 F '47
Sears' automatic washer. il Bsns W p77 Ap 26 '47
Sizing gas water heaters to meet automatic washer requirements. L. F. Vixler. Am Gas J 167:11-14 Jl '47
Squeeze action by hydraulic pressure simplifies washer design; built by Appliance corporation of America. il diags Product Eng 18: 100-2 F '47
Suggestions for selling the home laundry. R. E. Poulsen. Gas Age 98:22+ D 26 '46
You're going to be in hot water; need for adequate supply. W. J. Schmidt. Gas Age 99:25-30+ Mr 20 '47; Same cond. Am Gas Assn Mo 29:288-91 Je '47

Manufacture
Air fixtures speed hollow milling; washing-machine wringer. K. F. Brooks. il diag Am Mach 91:106-7 Mr 13 '47
Automatic washers; Birmingham factory of Bendix home appliances, ltd. il Elec R (Lond) 141:261-2 Ag 15 '47
Conveyor hoppers supply assembly hardware; production of washing machines and ironers. K. F. Brooks. il Am Mach 91:140 F 13 '47
Electric washer production. il Elec R (Lond) 140:119 Ja 17 '47
Modern finishing methods; Landers Frary & Clark. L. A. Brown. il plans diags Am Mach 91:77-81 Ja 30 '47
Novel tools cut cost of gear sector; drive-gear boxes of domestic washing machines. K. F. Brooks. il diags Am Mach 91:93-5 Ap 10 '47
Washer bases fabricated from sheet; Nineteen hundred corporation. K. F. Brooks. il Am Mach 91:110-12 My 22 '47

Rating
Washing machines; report on eight additional machines. il Consumers Res Bul 19:14-21 Mr '47

WASHING machines (for metal parts)
Cleaning engine components; automatic washing machines; General motors corp. il diag Steel 119:108+ N 18 '46
Flat conveyor type metal washing machine. il Metal Finishing 45:84 Ap '47
Mabor small parts washing machine. il Metal Finishing 45:84 My '47

WASHINGTON, D.C.

Rapid transit
Gaining public acceptance for needed fare increase; Capital transit company. E. C. Giddings. il Pub Util 40:425-30 S 25 '47
History of transportation. R. Souter. il Mass Transportation 43:414-16, 486-8 S-O '47
Urban transportation of yesterday and today; its origin and growth in the Nation's capital. E. D. Merrill. Pub Util 40:3-9 Jl 3 '47

See also
Motor bus lines—Washington, D.C.

Sanitary affairs
Washington suburban sanitary district. H. R. Hall and H. B. Shaw. maps plans diags Am Water Works Assn J 39:869-904 S '47; Abstract. Water & Sewage Works 94:360 O '47

Sewerage
Constructing a big sewer by tunneling. il Eng N 139:408-10 S 18 '47

Streets
Battle of the bottleneck; underpass for Dupont circle. B. M. Gudridge. Pub Util 40: 144-50 Jl 31 '47

Water supply
Expansion of District of Columbia water system; with cost data. E. A. Schmitt and O. D. Voigt. diags map Am Water Works Assn J 39:291-321 Ap '47

WASHINGTON (state)

See also
Lead mines and mining—Washington (state)
Zinc mines and mining—Washington (state)

WASHINGTON award
Compton urges science foundation in accepting Washington award. Chem & Eng N 25: 765 Mr 17 '47
Washington award for 1947 presented to Karl Taylor Compton; presentation by W. V. Kahler; address by K. T. Compton. il Western Soc E J 52:50-61 Je '47

WASHINGTON conference on theoretical physics. See Conference on theoretical physics

WASHINGTON county, Utah
Rural rehabilitation in Washington county. E. C. Banfield, jr. J Land & Pub Util Econ 23:261-70 Ag '47

WASHINGTON railway and electric company
Amended plan approved by SEC. Comm & Fin Chr 165:2932 Je 2 '47
Amendments to plan. Comm & Fin Chr 165: 1363 Mr 10 '47
Deals approved. Comm & Fin Chr 165:256 Ja 13 '47

WASHINGTON railway and electric company —*Continued*
Hearing on plan. Comm & Fin Chr 164: 2737 N 25 '46
Offers 120,000 shares of Capital transit co. to stockholders. Comm & Fin Chr 166:1194 S 22 '47

WASHROOMS. See Lavatories

WASON, Robert R. 1888-
Heading N.A.M. means travel. pors Bsns W p20 D 7 '46

WASTE
Economic effects of waste; wartime shortages emphasize need for conservation. Index 27 no 3:61-70 [S] '47
Scrap reduction gains recognition. J. K. Matter. Am Mach 91:114-15 O 9 '47
See also
Canneries—Waste
Conservation of resources
Dairy waste
Exhaust steam
Metal waste
Paper mills—Waste
Salvage (waste, etc.)
Scrap metal
Trade waste
Waste fuel
Waste heat
Waste paper
Wood waste

WASTE, Utilization of
Alcohol from sulfite waste liquor. E. O. Ericsson. flow diag il Chem Eng Prog 43: 165-7 Ap '47
Aquatic yeast; paper mills' plan to make feed from sulphite pulp waste. Bsns W p28 N 9 '46
Equipment and design; comparison between 1911 and now. C. O. Brown. Ind & Eng Chem 39:sup 75A-6A My '47
Proceedings of the second Industrial waste conference, held at Purdue university, January 10-11, 1946. Purdue Univ, Eng Ext Dept, Ext Ser 60:1-182 '46
Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47
Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47
Utilizing waste wood. A. M. Spamer. il diags Mech Eng 69:783 S '47
See also
Oil reclamation
Salvage (waste, etc.)
Scrap metal
Sewage sludge as fertilizer
Solvents—Recovery
Waste fuel
Waste heat
Wood waste

WASTE disposal. See Refuse disposal; Sewage disposal; Trade waste

WASTE fuel
Byproduct steam cuts fuel cost in large pulp and paper mill; Kalamazoo vegetable parchment co. il diags Power 91:518-21+ Ag '47
Elimination of waste products of high moisture content in a gas-turbine system. J. H. Potter. bibliog flow diag diags Mech Eng 69:820-2 O '47
Fuel and soda value of tall oil skimmings; use of nomographs. A. Pollak and P. R. Wiley. Paper Tr J 125:37-40 Ag 28 '47
Plant saves fuel by burning waste hemp; Plymouth cordage co. C. B. Hudson. il diags Power 91:555-7 Ag '47
Soda black liquor generates steam at new S. D. Warren co. plant. R. E. Gilman. il diag Power Pl Eng 51:114-18 Ja '47
See also
Coal waste
Sewage sludge—Gas production

WASTE heat
Alkali and heat recovery in deinking systems. H. P. Bailey and A. H. Nadelman. bibliog Paper Tr J 125:43-5 Jl 10 '47
Calculation of heat recovery at Cities Service refinery with continuous blowoff system. M. C. McKeown. il diag Pet Refiner 26:107-9 Jl '47; Excerpt(chart). Elec World 128:79 Ag 2 '47
Elimination of waste products of high moisture content in a gas-turbine system. J. H. Potter. bibliog flow diag diags Mech Eng 69:820-2 O '47
Hot blast cupola. M. Bader. bibliog diag Foundry 74:104-7+ D '46
Plant-process heat used to generate steam. R. B. Tuttle. il diag Oil & Gas J 45:73-4 Mr 8 '47
Proposed multiphase high output Diesel; with gear coupled exhaust gas power turbine and steam waste heat turbine. R. M. Tucker. Diesel Power 25:52-4 Ja '47
Some practical applications of flue gas recirculation; installation at Neches butane products company. W. H. Rowand and E. Durham. diags Pet Refiner 26:99-102 Ja '47
Utilizing the flash of condensate returns for the heating of water. T. W. Reynolds. diags Heat & Ven 44:75-6 Jl '47
See also
Blast furnace gas
Coke-oven gas
Heat exchangers
Sewage sludge—Gas production

WASTE heat boilers. See Boilers, Waste heat

WASTE paper
Alkali and heat recovery in deinking systems. H. P. Bailey and A. H. Nadelman. bibliog Paper Tr J 125:43-5 Jl 10 '47
Characteristics and methods for treatment of de-inking wastes. W. W. Hodge and P. F. Morgan. Water & Sewage 84:46-8+ O '46
Fibrous waste materials. Paper Tr J 124:165 F 27 '47
Public relations program increases waste paper supply. Paper Ind 29:841-3 S '47
Stapley pulper; de-inking and de-fibering method for waste paper. S. G. Stapley. il diags Pulp & Pa of Can (Convention no) 48:184-7+ [F] '47

WASTE products
Alkali and heat recovery in deinking systems. H. P. Bailey and A. H. Nadelman. bibliog Paper Tr J 125:43-5 Jl 10 '47
Distillery waste treatment works provides cattle feed and power byproducts. S. I. Zack. flow diag il Eng N 138:940-1 Je 12 '47
Lignosol production at Gaspesia Sulphite. Pulp & Pa of Can 48:70 Ag '47
Masonite offers by-products of widespread application; water soluble hemicellulose and hydrolyzed lignocellulose. Paper Tr J 125:16 Jl 10 '47
See also
Bark
Blast furnace gas
Chemurgy
Citrus fruit—By-products
Coke manufacture—By-products
Coke-oven gas
Corncobs
Cottonseed
Farm produce—By-products
Flue dust
Flue gas
Fruit waste
Lignin
Metal waste
Packing houses—By-products
Paper making—By-products
Rags
Salvage (waste, etc.)
Scrap metal
Sewage sludge
Slag
Straw
Sulfite liquor
Trade waste
Waste, Utilization of
Waste paper
Wood waste

WATCH factories
Good organization assures safety plan's success; Illinois watch case company. D. D. Davis. il Factory Management 104:132-3 O '46
It's management's job to fight economic quackery; Elgin national watch co. T. A. Potter. Factory Management 105:84-6 My '47

Employees
Union brags about its company; American watch workers union (Waltham division). Factory Management 105:240+ Ja '47

WATCH springs
Alloy to watch; Elgin's development is nonmagnetic, resists corrosion. Bsns W p59-60 Mr 15 '47
New strong, nonmagnetic spring material has high corrosion resistance; Elgiloy, announced by Elgin national watch co. il Materials & Methods 25:94-5 Ap '47

WATCH straps
Nylon has advantages for watch straps. il Mod Plastics 25:127 O '47
Why of polyethylene watch straps. il Mod Plastics 24:129-30 My '47

WATCHES

Hamilton watch. il Fortune 35:100-5+ Ja '47

Monthly or monthly average clock and watch production and consumption, United Kingdom, 1935, 1943-1946. For Comm W 26:26-7 Mr 8 '47

Sales of clocks and watches nearly half billion dollars. S. Y. Scrogin. il Dom Comm 35:60-4 S '47

Self-winding watches. A. Amend. il diags Machine Design 19:128-30 My '47

U.S. imports for consumption of watches and movements, 1946 and comparisons, 1935-1939. For Comm W 26:25-6 Mr 22 '47

U.S. imports of watches and parts, first eight months, 1946 and 1947. For Comm W 29:25 O 25 '47

Watch; antique timepieces from the Morgan collection. il diags Fortune 35:98-9 Ja '47

See also
Watch springs

Advertising

Coast-to-coast campaign launches Elgin's new mainspring with 9 lives. H. D. Shaeffer. il Sales Management 58:44-6 My 20 '47

Manufacture

Economical electroplating of small parts; Hamilton watch co. il Steel 119:114 N 18 '46

Shop shots at Hamilton Watch; illustrations with text. R. Loomis. il diags Am Mach 90:129-31 N 21 '46

See also
Watch factories

Repair

Watch insurance. Bsns W p22 My 24 '47

WATCHMEN

Is your next watchman a has-been? industry makes mistake in placing responsibilities of plant watchman in hands of aging or disabled employee. R. K. Anderson. Safety Eng 93:11+ Je '47

WATER

Absorption of water by films of cellophane and polyvinyl alcohol. E. Creutz and R. R. Wilson. J Chem Phys 14:725-8 D '46

Blending of water with organic solvents by detergents. S. R. Palit and J. W. McBain. bibliog Soc Chem Ind J 66:3-5 Ja '47

Cavity formation in water. E. N. Harvey and others. bibliog il J Ap Phys 18:162-72 F '47

Determination of water in caustic soda and other alkaline materials; a distillation-titrimetric method. H. R. Suter. bibliog diag Anal Chem 19:326-9 My '47

Determination of water in phenol. L. R. Pollack. bibliog Anal Chem 19:241-2 Ap '47

Expected microwave absorption coefficients of water and related molecules. G. W. King and others. bibliog Phys R 71:433-43 Ap 1 '47

Hydrogen bonding and some observations on the physical properties of the hydrogen compounds of the elements of groups 4a, 5a, 6a, and 7a. R. W. Taft, jr. and H. H. Sisler. bibliog J Chem Educ 24:175-81 Ap '47

Raman spectra of aqueous solutions of potassium thiocyanate. J. Chien. bibliog Am Chem Soc J 69:20-2 Ja '47

Sound velocity and the temperature change of molecular association in water. A. Weissler. bibliog J Chem Phys 15:210-11 Ap '47

Thermodynamic properties of water substance 0° to 150°C. F. G. Keyes. bibliog J Chem Phys 15:602-12 Ag '47

Thermodynamic properties; saturated liquid and vapor of ammonia-water mixtures. G. Scatchard and others. bibliog Refrig Eng 53:413-19+ My '47

Upper limit to the tritium content of ordinary water. M. L. Eidinoff. J Chem Phys 15:416 Je '47

Vibrational frequencies of the isotopic water molecules; equilibria with the isotopic hydrogens. W. F. Libby. bibliog J Chem Phys 11:101-9 Mr '43; Correction. 15:339 My '47

Volumetric determination of water in paints and varnishes. M. H. Swann. bibliog Ind & Eng Chem Anal ed 18:799-800 D '46

See also

Cooling water
Dehydration
Drinking water systems
Drying
Erosion
Feed water
Fire service (water supply)
Floods
Humidity
Hydraulic engineering
Hydraulics
Hydrolysis
Ice on rivers, lakes, etc.
Irrigation
Lakes
Moisture
Pumping
Rain and rainfall
Rivers
Sea water
Solution (chemistry)
Steam
Water supply and other headings beginning Water
Waterways
Wells

Analysis

Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47

Analysis of furfural-water solutions. J. Griswold, M. E. Klecka and R. V. O. West, jr. bibliog diag Ind & Eng Chem Anal ed 18: 696-8 N '46

Automatic residual chlorine analyzer. S. C. Gray and D. V. Moses. flow diag il diags Am Water Works Assn J 39:693-700 Jl '47

Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46

Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46

Character of Quabbin reservoir water during reservoir filling. C. H. Reed. N E Water Works Assn J 61:181-201 Je '47

Colorimetric phosphate tests for boiler waters containing tannin. L. Goldman and R. N. Love. U S Bur Mines Rep of Invest 3983:1-11, pl 1-2 '46; Same. Power Pl Eng 50:76-9 N '46

Colorimetry and photometry in water analysis. M. G. Mellon. bibliog Am Water Works Assn J 39:341-51 Ap '47

Determination of chlorinated phenol derivatives in treated cooling waters. C. E. Headington and W. A. Sassaman. il Pet Refiner 26:124-6 My '47

Determination of sulphates in drinking water; abstract. Chem Eng 53:306+ N '46

Fluorine determination in water, using an electrophotometer. A. R. Todd. Water & Sewage Works 94:369 O '47

Geochemical alterations in ground waters of the Los Angeles coastal plain. C. Wilson. Am Water Works Assn J 39:423-9 My '47

Improved apparatus for Karl Fischer water determination. R. Kieselbach. bibliog diags Ind & Eng Chem Anal ed 18:726-7 N '46

Influence of phosphates on zirconium-alizarin method of fluoride determination. D. M. Taylor and R. E. Frazier. Am Water Works Assn J 39:52-6 Ja '47

New pH indicators for determination of total alkalinity in water; disodium 4,4′-bis(*p*-dimethylaminophenylazo) - 2,2′-stilbenedisulfonate and disodium 4,4′-bis(*o*-tolyltriazeno)-2,2′-stilbenedisulfonate. M. Taras. bibliog Anal Chem 19:339-41 My '47

Note on an enzymatic method of estimating chlorine. P. K. Stumpf and D. E. Green. Am Water Works Assn J 38:1306-8 N '46

Ortho-tolidine titration procedure for measuring chlorine residuals. C. H. Connell. bibliog Am Water Works Assn J 39:309-18; Discussion. N. S. Chamberlin. 218-19 Mr '47

Photometer measures dissolved silica. N. I. Sax. il Power 91:762-3+ N '47

Polarographic determination of sodium and lithium in natural waters; abstract. A. A. Reznikov and A. S. S. Smagina. Am Water Works Assn J 39:595-6 Je '47

Water analyses by selective specific conductance. J. W. Polsky. Anal Chem 19: 657-60 S '47

WATER—*Continued*

Bacteriology

Bacterial deterioration of water in distribution systems; infection from jute jointing material; abstract. R. Ferramola. Am Water Works Assn J 39:391 Ap '47

Bactericidal properties of chlorine dioxide. G. M. Ridenour and R. S. Ingols. Am Water Works Assn J 39:561-7 Je '47

Laboratory procedures and water standards. M. H. McCrady and J. Archambault. bibliog Am Water Works Assn J 39:734-8 Ag '47; Same. il Water & Sewage 85:24-5+ Ap '47

Microbial fouling of zeolite water softeners. W. L. Williams. Am Water Works Assn J 39:779-82 Ag '47

Mode of action of chlorine. D. E. Green and P. K. Stumpf. Am Water Works Assn J 38: 1301-5 N '46

Results of the control of water quality in the Baltimore distribution system. E. S. Hopkins and S. E. Edwards. bibliog il Pub Works 78:20-4+ Ja '47

Studies on false confirmed test using B.G.B. and comparison studies on lauryl sulfate tryptose broth as a presumptive medium. M. S. Shane. Am Water Works Assn J 39: 337-40 Ap '47

Deactivation and deaeration

Atomizing deaerators on new Alcoa ships. Marine Eng 52:79+ My '47

De-aeration of feed water. diag Chem Age (Lond) 56:702+ My 31 '47

Deaeration of water. Oil & Gas J 45:91 Ja 11 '47

Electrical deaeration licks corrosion in this plant. V. Rodwell. diags Power 91:324-6 My '47

Vacuum deaeration rids cold water of dissolved gas; saves pipelines. S. T. Powell. bibliog diags Power 91:403-6 Je '47

Heavy water

Asymmetric rotor; analysis of 8.5-μ band of D_2O by punched-card techniques. G. W. King. bibiog J Chem Phys 15:85-8 F '47

Deuterium oxide; the United States atomic energy commission plans for distribution of heavy water. Chem Ind 61:82 Jl '47

Electrolytic conductivity of NaOH in H_2O and of NaOD in D_2O at 25°; vacuum distilling apparatus for deuterium oxide. E. Hetland. diags Am Chem Soc J 68:2532-5 D '46

Expected microwave absorption coefficients of water and related molecules. G. W. King and others. bibliog Phys R 71:433-43 Ap 1 '47

Heavy water and deuterium gas are now being made available by the U.S. Atomic energy commission. Science 105:517 My 16 '47

Total scattering cross sections of deuterium and oxygen for fast neutrons. R. G. Nuckolls and others. bibliog Phys R 70:805-7 D 1 '46

Yield of photo-neutrons from U^{235} fission products in heavy water. S. Bernstein and others. diag Phys R 71:573-81 My 1 '47

Mineral content

Les mélanges de nappes aquifères et leur résistivité électrique. A. Guillerd and A. Vibert. Génie Civil 124:110-12 Mr 15 '47

Synthesis

Low pressure explosive limits in the hydrogen-oxygen combination. F. Brescia. bibliog J Chem Educ 24:289-91 Je '47

Testing

Pollution of water and food detected by new, rapid test; isolation of enterococci. Food Ind 18:1862 D '46

Transparency

See also
Ocean—Transparency

WATER, Distilled

Changes in distilled water stored in glass ampuls. A. L. Hinson and others. bibliog diag Am Cer Soc J 30:211-14 Jl 1 '47

Second-hand heat; principle of vapor recompression will yield distilled water for chemical processing. Chem Ind 61:213 Ag '47

WATER, Underground

API research project 27: functions of water in the production of oil from reservoirs. F. E. Bartell. bibliog Am Pet Inst Proc 26(4):154-6 '46

Basic concepts in ground water law. A. P. Black. bibliog Am Water Works Assn J 39:989-1002 O '47; Abstracts. Eng N 139:253-4 Ag 21 '47; Water & Sewage Works 94:319-20 S '47

Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46

Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46

Developing standards for protection of ground water. R. F. Goudey. Am Water Works Assn J 39:1010-20 O '47; Abstract. Water & Sewage Works 94:321 S '47

Formulating legislation to protect ground water from pollution. B. E. Doll. Am Water Works Assn J 39:1003-9 O '47; Abstracts. Water & Sewage Works 94:320-1 S '47; Eng N 137:785 D 12 '46

Ground water; a neglected natural resource. M. Pirnie and R. W. Sawyer. il maps plans diag Am Water Works Assn J 39:968-78 O '47

Hydrology of ground water supplies. diags Water & Sewage 85:26-30+ Mr '47

Recharge and depletion of ground-water supplies. C. L. McGuinness. bibliog(47 titles) map Am Soc C E Proc 72:963-84 S '46; Discussion. 73:389-90, 557-8 Mr-Ap '47

Report of sub-committee on reservoir fluids, related constituents and conditions. bibliog Am Assn Pet Geologists Bul 31:375-93 F '47

Review of ground water collection and development methods. J. H. Adamson, jr. bibliog Am Water Works Assn J 39:739-46 Ag '47

River infiltration as a source of ground water supply. R. G. Kazmann. il map diag Am Soc C E Proc 73:837-53 Je '47

Steady underground flow; abstract. C. Jaeger. diag Am Water Works Assn J 39:929-30 S '47

Subsidence of the Terminal Island-Long Beach area, California; effect of water and oil pumping. F. R. Harris and E. H. Harlow. il plans diags Am Soc C E Proc 73: 1197-218 bibliog(p1217-18) O '47

Useful technic in ground water infiltration studies; infiltration into sewer system. C. A. McLoughlin. plan diag Water & Sewage Works 94:R169-70 Jl '47

Vertical water velocity in deep wells. C. R. Erickson. diags Am Water Works Assn J 38:1263-9; Discussion. 1269-72 N '46

See also
Artesian wells
Petroleum—Water problem
Wells

Cooling use

Legislative protection for Indiana ground waters; restriction use for air conditioning. Am Water Works Assn J 39:527-8 Je '47

California

Formulating legislation to protect ground water from pollution. B. E. Doll. Am Water Works Assn J 39:1003-9 O '47; Abstracts. Water & Sewage Works 94:320-1 S '47; Eng N 137:785 D 12 '46

Geochemical alterations in ground waters of the Los Angeles coastal plain. C. Wilson. Am Water Works Assn J 39:423-9 My '47

France

Captage d'eau d'alimentation dans les cendres volcaniques. diag Génie Civil 123:331 D 1 '46

Iceland

Hot water distribution system for Reykjavik, Iceland; underground hot water; abstract. H. B. White. Am Water Works Assn J 39:395-6 Ap '47

WATER, Underground—*Continued*

Indiana

Legislative protection for Indiana ground waters; restriction use for air conditioning. Am Water Works Assn J 39:527-8 Je '47

Michigan

Relation of geology to ground water in Michigan. N. Billings. map Am Water Works Assn J 38:1373-9 D '46

Nebraska

Geology and ground-water resources of Box Butte county, Nebraska. R. C. Cady and O. J. Scherer. maps diags U S Geol S Water-supply Pa 969:1-102, pl 1-9; pa 70c Supt. of doc. '46

Geology and ground-water resources of Scotts Bluff county, Nebraska. L. K. Wenzel and others. maps diags U S Geol S Water-supply Pa 943:1-150, pl 1-12; pa 25c Supt. of doc. '46

Texas

Ground water in the high plains of Texas. W. N. White and others. map U S Geol S Water-supply Pa 889-F:381-420, pl 17-21; pa 25c Supt. of doc. '46

Utah

Geology and ground-water resources of Cedar City and Parowan valleys, Iron county, Utah. H. E. Thomas and G. H. Taylor. diags U S Geol S Water-supply Pa 993: 1-210, pl 1-27 '46

West Virginia

Ground water conditions at Charleston, W.Va. R. M. Jeffords and R. L. Nace. diags Am Water Works Assn J 38:1309-14 N '46

Wisconsin

Ground water studies in Wisconsin. F. C. Foley and others. bibliog map Am Water Works Assn J 39:369-79 Ap '47

Ground water supplies of Wisconsin. H. E. Wirth. Am Water Works Assn J 39:93-100 Ja '47

WATER aeration. See Water purification—Aeration

WATER collectors, Ranney. See Ranney water collectors

WATER companies

Management

Office operation in a small water company. C. M. Hartman. Water & Sewage Works 94: 95-6 Mr '47

WATER conduits

Australian practice favors water pipeline on the desert floor; conduit supplies water to Whyalla. il map Eng N 138:889-91 My 29 '47

Friction coefficients in a large tunnel. G. H. Hickox and others. bibliog il plan diags Am Soc C E Proc 73:451-70 Ap '47; Discussion. 73:973-4, 1122-38, 1307-9, 1450-4 Je, S-N '47

See also
Aqueducts

WATER conservation

Safeguarding Indiana's water resources. C. H. Bechert. Am Water Works Assn J 39: 792-6 Ag '47

Well water conservation at Pan American refining corporation, Texas City refinery. P. Hurd. il diags Pet Refiner 25:132-4 D '46

WATER consumption

Variation in water-consumption rates. E. A. Delisle. Water & Sewage 85:28-31+ Ap '47

See also
Water meters

WATER coolers

Water chilling unit. E. G. Thomsen. Soap & San Chem 22:83 D '46

WATER cooling towers. See Cooling towers

WATER damage insurance. See Insurance, Water damage

WATER distribution

Additions to Springfield's transmission mains. P. C. Karalekas. il N E Water Works Assn J 60:332-43 D '46

Booster pumping on a large closed aqueduct. H. A. Knudsen. plan diags Am Water Works Assn J 39:133-8 F '47

Distribution system maintenance; discussion. Water & Sewage 85:114+ My '47

Effect of the grid on water works pumping practice; abstract. H. R. Lupton. Am Water Works Assn J 39:393-5 Ap '47

Expansion of District of Columbia water system; with cost data. E. A. Schmitt and O. D. Voigt. diags map Am Water Works Assn J 39:291-321 Ap '47

Losses in distribution systems. D. W. Johnson. il Am Water Works Assn J 39:157-67 F '47

Results of the control of water quality in the Baltimore distribution system. E. S. Hopkins and S. E. Edwards. bibliog il Pub Works 78:20-4+ Ja '47

Slide rule speeds pipe studies for water supply systems. B. C. Seal. Eng N 138:938-9 Je 12 '47

Storage on the distribution system. C. B. Burdick. Water & Sewage Works 94:233-6 Jl '47

Toronto water-works extensions; general description of the system with details of some outstanding features. W. Storrie. il 12 pls N E Water Works Assn J 61:1-29; Discussion. 30-3 Mr '47

Transite pipes in tunnel form new feeder main for St Catharines. W. G. McLaughlin. il Water & Sewage 85:13-17+ F '47

Water distribution in Canada. il Water & Sewage 85:16+ Ag '47

Water service that delivered road tar, which entered service pipe through waste orifice. F. J. Reny. diag Water & Sewage Works 94:64 F '47

Water-supply and sewerage facilities at Marathon townsite. S. A. Purvis. il Water & Sewage 84:24-5+ D '46

Water works extension problems of 1946. E. J. Taylor. Am Water Works Assn J 39:57-61; Discussion. N. T. Veatch. 61-4 Ja '47

Will your reservoir refill during minimum demand periods? R. L. Brown. Eng N 138: 1012-13 Je 26 '47

See also

Aqueducts	Pumping stations
Drinking water systems	Water conduits
	Water hammer
Hydrants	Water pipes
Hydraulics	Waterworks

Cost

Concrete pipe water supply line and weir houses, Provo, Utah; unit prices. Eng N 138:466 Mr 20 '47

Distribution system; some basic considerations in its design, maintenance and operation. L. R. Howson. Water & Sewage Works 94:R35-8 Jl '47

Finding the low point on the cost curve. W. E. Howland. diags Am Water Works Assn J 39:630-6 Jl '47

Today's costs of water main extensions. F. J. Reny. il Water & Sewage Works 94: 229-32 Jl '47

Water and sewer extensions, Roanoke Rapids, N.C.; unit prices. Eng N 137:749 N 28 '46

Water lines, Stoneham, Mass.; unit prices. Eng N 138:466 Mr 20 '47

Water pipe lines, Delaware, Ohio; unit prices. Eng N 139:485 O 2 '47

Water storage tank, Bismarck, North Dakota; unit prices. Eng N 139:618 O 30 '47

Watermain, Milwaukee, Wisconsin; unit prices. Eng N 139:485 O 2 '47

Cross connections

Biggest polio program. il Dom Eng 169:104-7 Je '47

How disease flows by back-siphonage in plumbing system. il Dom Eng. 168:114-16+ D '46

Plumbing hazards; cross-connections, plan for control or elimination. F. F. Aldridge. il Dom Eng 170:102-5+ O '47

Seattle water system survey; cross-connections discovered. Eng N 139:68 Jl 10 '47

Standards

Experiences with standards for water services. M. C. Smith. diags Am Water Works Assn J 39:23-31 Ja '47

WATER fennel oil
β-Phellandrene tetrabromide. P. A. Berry and A. K. MacBeth. Chem Soc J p 1039-41 Ag '47

WATER flow
Air entrainment by forced hot water flow in pipes. R. M. Stern and R. M. Towne. Heat & Ven 44:93-4 Ag '47
Analysis of pipe flow formulas in terms of the Darcy function *f*. L. Hudson. tables Am Water Works Assn J 39:568-94 Je '47
Curve for determining flow in components of parallel pipe systems. J. J. Baffa. charts Water & Sewage Works 94:126-9 Ap '47
Erosion of concrete by cavitation and solids in flowing water. W. H. Price. bibliog il Am Concrete Inst J 18:1009-23 My '47
Flow of water in house service pipes; table. Water & Sewage Works 94:R145 Jl '47
Formule pratique pour le calcul de la perte de charge singulière à la traversée d'une grille. L. Escande. Génie Civil 124:119 Mr 15 '47
Heat transmission from fine wires to water; low velocity data and correlation. E. L. Piret, W. James and M. Stacy. bibliog il diags Ind & Eng Chem 39:1098-103 S '47
Hydraulics for the practical water works man. R. W. Angus. il diags Water & Sewage Works 93:261-6, 295-8, 335-8, 426-9, 491-3; 94:14-17, 69-72, 122-5, 215-18, 245-8, 337-40 Jl-S, N '46-F, Ap, Je-Jl, S '47 (to be cont)
Loss of head in pipes and fittings. diags Water & Sewage Works 94:R45-54 Jl '47
Mechanism of countercurrent gas liquid flow through packed towers. F. A. Zenz. bibliog Chem Eng Prog 43:415-28 Ag '47
Steady underground flow; abstract. C. Jaeger. diag Am Water Works Assn J 39:929-30 S '47
Use of radioactive tracer in measuring condenser water flow. S. Karrer and others. il diag Power Pl Eng 50:118-20 D '46
Water flow nomograph. C. J. Major. Chem Ind 59:1062 D '46; Correction. 60:282 F '47

See also
Kutter's formula

WATER fronts
Riverfront development in Cincinnati. il plan Arch Forum 86:13 Ja '47
Riverfront redevelopment for Cincinnati; proposed metropolitan master plan. il diags Arch Rec 101:66-75 F '47

WATER gages
Gage-glass condensate cracks metal by pocketing at drum counterbore. J. A. Keeth. il diags Power 91:532-3 Ag '47

WATER gas. See Gas, Water

WATER hammer
Protective air vessels for rising pipe lines. A. M. Binnie. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 1):15-20; Discussion. 20-3 '45
Water hammer; its study and correction. H. Ryon. il Water & Sewage Works 94:R29-32 Jl '47

WATER heaters
Large volume water heating; how to select and install correct types of systems for specific purposes. M. B. Mackay. Am Gas J 164:37-41+ Ja; 21-6 F; 35-9+ Mr; 20-1, 52 Ap; 42-3+ My; 40-2 Je; 165:39-41+ Jl; 31-3 Ag; 27-9 S; 55-8 O; 31-3 D '46; 166:29-30+ Ja; 32-4+ F; 167:22-4 S; 43-6 N '47 (to be cont)
Performance of an indirect storage type of hot-water heater. A. P. Kratz and W. S. Harris. diags Ill U Eng Exp Sta Bul 366:1-39 '47 (pa 50c)

See also
Electric water heaters
Feed water heaters
Gas water heaters
Hot water supply

Manufacture

Fabrication and welding of oil-fired water heaters. W. R. Persons. il Mach 53:138-9 Ag '47
Shop shots; automatic welding, manufacture of water-heater boilers; Day and night manufacturing co. il Am Mach 91:94-5 Ag 14 '47

Safety measures

Bomb in your basement; hot water system can build up tremendous pressure. E. R. Granniss. il Nat Safety N 56:32-3+ Ag '47

WATER laws and legislation
Basic concepts in ground water law. A. P. Black. bibliog Am Water Works Assn J 39:989-1002 O '47; Abstracts. Eng N 139: 253-4 Ag 21 '47; Water & Sewage Works 94:319-20 S '47
Developing standards for the protection of ground water. R. F. Goudey. Am Water Works Assn J 39:1010-20 O '47
Effect of litigation on water appropriation in California. C. T. Waldo. Am Water Works Assn J 39:231-4 Mr '47
Formulating legislation to protect ground water from pollution. B. E. Doll. Am Water Works Assn J 39:1003-9 O '47; Abstract. Water & Sewage Works 94:320-1 S '47
Legislative protection for Indiana ground waters; restriction use for air conditioning. Am Water Works Assn J 39:527-8 Je '47
Refinery wastes face stricter control in pending anti-pollution legislation. W. F. Bland. il Pet Processing 2:165-7 Mr '47
Where we stand on pollution control. Eng N 137:886-7 D 26 '46

See also
Water rights

Great Britain

Recent water legislation. R. Hetherington and A. Titherley. Engineering 164:139, 162-3 Ag 8-15 '47
Water supply and legislation in Britain. R. C. S. Walters. Water & Sewage Works 94: 336 S '47

WATER leakage

See also
Water pipes—Leakage

WATER level indicators
Hell Gate boiler operator observes water level by television. il Power Pl Eng 51:130 Ap '47
Light eliminates water-level gaging errors. il diag Coal Age 52:108 Ag '47
Television enters utility field; Utiliscope shows water level in boiler remotely located. il Am Gas Assn Mo 29:71+ F '47

See also
Water gages

WATER measurement
Flow meter for measuring input to water-injection wells. E. T. Young and O. L. Patterson. diags Oil & Gas J 46:60-1+ N 1 '47
Hydraulics for the practical water works man; measurement of discharge through pipes. R. W. Angus. diags Water & Sewage Works 94:215-18, 245-8 Je-Jl '47
Operation of well supplies. R. W. Simpson. diag Water & Sewage Works 94:97-9 Mr '47

See also
Flow meters
Stream measurement
Water flow
Water meters
Weirs (measuring)

WATER meters
Economies of water metering; discussion at Canadian section, A.W.W.A. Water & Sewage Works 94:213 Je '47
Flow metering and controlling. C. G. Richardson. il diags Water & Sewage 85:32-6+ Ap '47
Gauge for meter change gears. D. C. Calderwood. il Water & Sewage Works 94:R111 Jl '47
Losses in distribution systems. D. W. Johnson. Am Water Works Assn J 39:165-7 F '47
Metering; practical methods of procedure. E. H. Ruehl. Water & Sewage Works 94: R75-6 Jl '47
Selection of customer service meters. S. F. Newkirk, jr. Am Water Works Assn J 39:195-9 Mr '47; Same. Water & Sewage Works 94:100-1 Mr '47
Water-meter problems; discussion. Water & Sewage 85:30-2+ Jl '47
Water meters earn their keep. G. C. Sopp. Am Water Works Assn J 39:905-12 S '47

WATER meters—*Continued*

Advertising

Industrial advertiser timidly tries a contest; it worked! Pittsburgh Equitable Meter. W. A. Marsteller. il Ptr Ink 219:45+ Je 27 '47

Standards

Tentative standard specifications for cold water meters, fire service type. Am Water Works Assn J 39:173-83 F '47; Same. N E Water Works Assn J 61:sup[4]1-9 S '47

Value of hydrant, valve and meter standardization. G. J. Van Dorp. Am Water Works Assn J 39:470-2 My '47

Testing

Program for routine testing and maintenance of meters. G. L. Williams. Am Water Works Assn J 39:168-72 F '47

WATER pipes

Air entrainment by forced hot water flow in pipes. R. M. Stern and R. M. Towne. Heat & Ven 44:93-4 Ag '47

Main water supply connection made with minimum shutdown. il Eng N 139:186 Ag 7 '47

New 72-in. pipeline to bypass soft bottom of San Francisco bay. N. A. Eckart. maps Eng N 139:49-52 Jl 10 '47

Outline for an on-the-job training program for water department personnel; construction of pipe lines. Pub Works 78:38+ S '47

Pipe-line strainers can reduce maintenance costs. R. E. Cochran. il diags Textile World 97:118-19+ Je '47

Rights of way for pipelines. I. E. Flaa and W. C. Renshaw. Am Water Works Assn J 39:128-32 F '47

Transite pipes in tunnel form new feeder main for St Catharines. W. G. McLaughlin. il Water & Sewage 85:13-17+ F '47

See also

Aqueducts
Hot water heating
Hot water supply
Pipe fittings
Pipe joints
Pipe laying
Pipes
Plumbing
Water distribution
Water hammer
Waterworks

Cleaning

Blowing out service lines. S. H. Davis. il Water & Sewage Works 94:R99 Jl '47

Cleaning and lining cast-iron pipe with shop-built equipment. il Eng N 139:325-7 S 4 '47

Reconditioning of trunk mains in the city of Montreal. F. Y. Dorrance. il diags Water & Sewage 85:74-9+ My '47

Small water mains cleaned and lined in place. il diags Eng N 139:457-9 O 2 '47

Corrosion

Costs of corrosion to the water industry. H. E. Jordan. bibliog Am Water Works Assn J 39:773-8 Ag '47

Graphitic corrosion of cast iron. L. M. Leedom. Am Water Works Assn J 38:1392-7 D '46

See also

Water pipes—Protection

Deposits

Chlorine solves a critical problem; stops slime deposit in pipes. L. A. Jackson and W. A. Mayhan. il Water & Sewage Works 94:R55-8 Jl '47

Growths in pipelines; abstract. R. L. Derby. Eng N 139:253 Ag 21 '47

Tuberculation measurement as an index of corrosion and corrosion control. E. W. Barbee. il diag Am Water Works Assn J 39:220-30 Mr '47; Same. Water & Sewage Works 94:R155-8 Jl '47

Detection

Electronic pipe finding and leak locating. C. R. Fisher. il diags Am Water Works Assn J 38:1330-4 D '46; Same. Water & Sewage Works 94:R101-2 Jl '47

Freezing

Heating cable protects water systems. Elec World 128:116+ Jl 5 '47

How to use welding equipment to thaw frozen water pipes. R. F. Wyer. Elec World 127:55 Ja 4 '47; Same. Rayon 27:673-4 D '46; Same. Dom Eng 169:122+ Ja '47; Same. Paper Ind 28:1491 Ja '47; Same. Ry Mech Eng 121:87 F '47; Same. Coal Age 52:108 My '47; Excerpt (tables). Elec Eng 66:177 F '47

Protecting water pipes from frost. F. J. Reny. Water & Sewage Works 94:R100 Jl '47

Leakage

Electronic pipe finding and leak locating. C. R. Fisher. il diags Am Water Works Assn J 38:1330-4 D '46; Same. Water & Sewage Works 94:R101-2 Jl '47

Losses in distribution systems. D. W. Johnson. il Am Water Works Assn J 39:157-67 F '47; Abstract. Water & Sewage Works 94:24 Ja '47

Underground leakage work in Chicago. J. B. Eddy. Am Water Works Assn J 39:713-21 Ag '47

Lining

Cement linings for cast-iron pipe. T. F. Wolfe. N E Water Works Assn J 60: 389-94 D '46; Abstract. Water & Sewage Works 93:419 N '46

Cleaning and lining cast-iron pipe with shop-built equipment. il Eng N 139:325-7 S 4 '47

Reconditioning of trunk mains in the city of Montreal. F. Y. Dorrance. il diags Water & Sewage 85:74-9+ My '47; Abstract. Water & Sewage Works 94:209 Je '47

Small water mains cleaned and lined in place. il diags Eng N 139:457-9 O 2 '47

Protection

Cathodic protection of pipe lines; Bonita pipe line, featuring anode renewals. E. C. Rogness. il Water & Sewage Works 94:11-13 Ja '47

Controlling pipe line surges by means of air vessels. J. S. Blair. diags Inst Mech Eng J & Proc 153 (War emergency issue no 1): 1-8; Discussion. 8-14 '45

Economics of pipeline protection; with cost data. W. R. Schneider. Am Water Works Assn J 39:143-6 F '47

Protective air vessels for rising pipe lines. A. M. Binnie. bibliog diags Inst Mech Eng J & Proc 153 (War emergency issue no 1): 15-20; Discussion. 20-3 '45

See also

Water pipes—Freezing

Repair

Water service pipe repair unit; methyl chloride forms ice seal during repair operations. il Engineer 182:491-2 N 29 '46; Abstract. Comp Air Mag 52:102 Ap '47

Service pipes

Flow of water in house service pipes; table. Water & Sewage Works 94:R145 Jl '47

Water service that delivered road tar, which entered service pipe through waste orifice. F. J. Reny. diag Water & Sewage Works 94:64 F '47

Standards

Tentative standard specifications for threads for underground service line fittings. diags Am Water Works Assn J 39:1059-66 O '47; Same. N E Water Works Assn J 61:sup 1-6 D '47

Sterilization

Chlorination of mains and the defects of yarn as a jointing material. E. W. Taylor and L. C. Whiskin. diags Water & Sewage 84:28-9+ Je; 25-6+ Ag; 41 N '46; Abstract. Am Water Works Assn J 38:890-1 Jl '46; Correction. 38:1218 O '46

Disinfection of water mains; calking material as source of contamination. A. N. Heller. bibliog il Am Water Works Assn J 38: 1335-41 D '46

Quaternary ammonium germicidal treatment for jute-packed water mains. A. L. Sotier and H. W. Ward. bibliog il Am Water Works Assn J 39:1038-45 O '47

Sterilization of water mains; abstract. E. M. Griffith. Water & Sewage Works 94:23 Ja '47

WATER pipes—*Continued*

Tables, calculations, etc.

Analysis of pipe flow formulas in terms of the Darcy function *f*. L. Hudson. Am Water Works Assn J 39:568-94 Je '47

Comparison of formulas for pipe flow. J. Hinds. bibliog Am Water Works Assn J 38:1226-52 N '46

Curve for determining flow in components of parallel pipe systems. J. J. Baffa. charts Water & Sewage Works 94:126-9 Ap '47

Hot water pipe sizing, copper tubing; chart; reference data. Heat & Ven 44:94a-94b Je '47

How to estimate water demands and pipe sizes for housing units. R. B. Hunter. diags Pub Works 78:22-4 Ap '47

Hydraulic friction chart; data sheet. P. J. Potter. Power 91:355 My '47

Hydraulics for the practical water works man. R. W. Angus. il diags Water & Sewage Works 93:261-6, 295-8, 335-8, 426-9, 491-3; 94:14-17, 69-72, 122-5, 215-18 Jl-S, N '46-F, Ap, Je '47

Loss of head in pipes and fittings. diags Water & Sewage Works 94:R45-54 Jl '47

Slide rule speeds pipe studies for water supply systems. B. C. Seal. Eng N 138:938-9 Je 12 '47

Velocity sizing of water lines. G. R. Adams. chart Pet Refiner 26:136-7 Mr '47

Will your reservoir refill during minimum demand periods? R. L. Brown. Eng N 138: 1012-13 Je 26 '47

Tapping

Tapping a 42-inch concrete main under pressure. M. J. Shelton. il Water & Sewage Works 94:78-9 F '47

Testing

Procedure for flow tests of pipelines. W. W. Wyckoff. diags Am Water Works Assn J 38:1253-60 N '46

WATER pipes, Concrete

Tapping a 42-inch concrete main under pressure. M. J. Shelton. il Water & Sewage Works 94:78-9 F '47

Testing

Tests on concrete water pipe. J. L. Irwin. Am Water Works Assn J 38:1261-2 N '46

WATER pipes, Steel

Additions to Springfield's transmission mains. P. C. Karalekas. il N E Water Works Assn J 60:332-43 D '46

WATER pipes, Wood

Experience regarding wood-stave pipes; abstract. S. Regnall. Am Water Works Assn J 39:396 Ap '47

Wood-stave pipe experience. Elec World 127: 111 Mr 15 '47

WATER pollution

Abatement of stream pollution; report of joint session of the Division of water, sewage and sanitation chemistry and the Division of industrial and engineering chemistry of the American chemical society. il Water & Sewage 85:27+ Jl '47

ASCE sanitary division discusses pollution; abstracts of papers. Eng N 138:97-8 Ja 23 '47

ASCE will make congressional presentation on stream pollution legislation; statement. Civil Eng 17:342 Je '47

Biggest polio program. il Dom Eng 169:104-7 Je '47

Biochemical oxygen demand a new expression for the papermaker. L. E. McGrath. bibliog Paper Tr J 124:45-7 Mr 27 '47; Same cond. Paper Ind 29:1207-8 N '47

Coal industries aid clean-stream program. Eng N 138:956 Je 12 '47

Congress studying stream pollution bills recently introduced. Chem & Eng N 25:581 Mr 3 '47

Control of water pollution. N. J. Howard. il Water & Sewage 85:23-4+ Ja '47

Creation and correction of industrial wastes. S. T. Powell. il Ind & Eng Chem 39:565-8 My '47

Delaware anti-pollution work starts. Eng N 138:423 Mr 20 '47

Developing standards for protection of ground water. R. F. Goudey. Am Water Works Assn J 39:1010-20 O '47; Abstract. Water & Sewage Works 94:321 S '47

Disposal of petroleum refinery wastes. W. B. Hart. bibliog diags Nat Pet N 38 pt 2:R11-14+, R97+, R225+, R292-4+, R371-2+, R467-73, R512-14+, R587-8+ Ja 2, F 6, Mr 6, Ap 3, My 1, Je 5, Jl 3, Ag 7 '46; [cont as] Pet Processing 1:21-2+, 102-3+, 193-4+, 248-50+; 2:31-4, 131+, 193-4+, 282+, 471-2+, 513-14+, 632-4+, 691-2+ S '46-Ap, Je-S '47

Effect of density currents upon raw water quality; Watts Bar reservoir. M. A. Churchill. map Am Water Works Assn J 39:357-60 Ap '47

Effects of coal strip mining upon water supplies. R. H. Snyder. Am Water Works Assn J 39:751-6; Discussion. 756-69 Ag '47

Epidemic of infectious hepatitis apparently due to a water-borne agent; abstract. J. R. Neefe and J. Stokes, jr. Am Water Works Assn J 39:191 F '47

Experience with anabaena in Kenoza lake, Haverhill, Massachusetts. E. S. Chase. N E Water Works Assn J 61:128-34 Je '47

Federal and state legislation for stream pollution control; abstract. W. J. Scott. Water & Sewage Works 94:282-3 Ag '47

Fertilization of lakes by agricultural and urban drainage. C. N. Sawyer. bibliog pl N E Water Works Assn J 61:109-27 Je '47

Formulating legislation to protect ground water from pollution. B. E. Doll. Am Water Works Assn J 39:1003-9 O '47; Abstract. Eng N 137:785 D 12 '46

Gary completes cycle on the Grand Calumet; a review of five years of operating results and accomplishments. W. W. Mathews. bibliog il Water & Sewage Works 93:455-60 D '46

Industrial use of streams. L. L. Hedgepeth. Am Water Works Assn J 39:532-8 Je '47; Same. Water & Sewage Works 94:203-5 Je '47

Industrial waste disposal. G. E. Barnes. bibliog Mech Eng 69:465-70 Je '47

Industrial waste symposium; Pennsylvania sewage works association. Water & Sewage Works 94:376-8 O '47

Influence of wastes on treatment and use of water; with cost data. C. F. Hauck. bibliog Chem Eng Prog 43:481-5; Discussion. 485-6 S '47

Loss of sanitary sewage through storm water overflows. J. E. McKee. bibliog Boston Soc C E J 34:55-80; Discussion. 81-92 Ap '47

Macroscopic pollution; abstract. J. C. Weart and J. C. Klassen. Eng N 139:254 Ag 21 '47

Massachusetts battles pollution. Eng N 138: 958 Je 12 '47

Plea for sound economy in stream pollution abatement. W. J. Eldridge. Water & Sewage Works 93:494 D '46

Polio report; virus lives in water! E. A. Pisczcek. il Dom Eng 170:104-6; Discussion. 106-7+ S '47

Pollution abatement in N.Y. state; abstract. M. M. Cohn. Water & Sewage Works 94: 283-4 Ag '47

Pollution control at a large chemical works. I. F. Harlow and T. J. Powers. flow sheets il map Ind & Eng Chem 39:572-7 My '47

Pollution of rivers; report of the Water pollution research board of the Department of scientific and industrial research, 1939-1945. Engineer 183:500-1 Je 6 '47

Problems and progress in handling stream-pollution abatement in Connecticut. W. J. Scott. N E Water Works Assn J 61:59-63 Mr '47

Problems and progress in handling stream-pollution abatement in Massachusetts. A. D. Weston. N E Water Works Assn J 61:80-7 Mr '47

Problems and progress in handling stream-pollution abatement in New Hampshire. L. W. Trager. N E Water Works Assn J 61: 68-73 Mr '47

Problems and progress in handling stream-pollution abatement in Rhode Island. W. J. Shea. N E Water Works Assn J 61:77-9 Mr '47

Problems and progress in handling stream-pollution abatement in Vermont. E. L. Tracy. N E Water Works Assn J 61:74-6 Mr '47

WATER pollution—*Continued*
Program for a community attack on stream pollution in Allegheny county, Pa. Eng N 138:90-1 Ja 16 '47
Progress of pollution abatement in the Tennessee valley. W. G. Stromquist. Paper Tr J 124:41-2 My 15 '47; Same cond. Paper Ind 29:1360-1 D '47
Public health service and industrial pollution. T. Parran. Ind & Eng Chem 39:560-1 My '47; Abstract. Eng N 138:819 My 15 '47
Refinery wastes face stricter control in pending anti-pollution legislation. W. F. Bland. il Pet Processing 2:165-7 Mr '47
River pollution; effects of chemical works on fisheries. Chem Age (Lond) 57:353-4+ S 13 '47
River reaeration; diffusing compressed air beneath surface of river which has been polluted. A. J. Wiley and others. plan Paper Tr J 124:59-64 Mr 20 '47
$17,000,000 clean up program by Indiana industries polluting Lake Michigan. Water & Sewage Works 93:423 N '46
Standards of stream sanitation. H. W. Streeter. il Water & Sewage 84:61+ O '46; Discussion (Pollution control procedure). M. P. Adams. 84:42 N '46
Start new attack on Potomac pollution. Eng N 139:365 S 11 '47
State responsibility in stream pollution abatement. A. Wolman. bibliog il Ind & Eng Chem 39:561-5 My '47
Stream improvement research. Chem & Eng N 25:1579 Je 2 '47
Stream pollution abatement in New England; symposium. Water & Sewage Works 93:420-2 N '46
Stream pollution abatement program proposes single plant for 100 municipalities; Allegheny County sanitary authority. J. F. Laboon. map Civil Eng 17:121+ Mr '47
Stream pollution abatement standards require economic justification. R. B. Wiley and W. E. Howland. bibliog il Civil Eng 17:539-43+ S '47
Stream pollution bill hearings; Barkley-Taft bill. Oil Paint & Drug Rep 151:3+ Ap 28; 4 My 5 '47
Stream pollution control in Idaho; illustrations. Min Cong J 33:32-3 Jl '47
Stream pollution control in Tennessee. R. P. Farrell. Am Water Works Assn J 39:352-6 Ap '47
Stream-sanitation research is four-fold. il Textile World 97:125+ Jl '47
Treating distillery wastes and abating stream pollution; action by the American distilling company; abstract. C. W. Klassen. Pub Works 78:20 My '47
Water pollution research; report of the Water pollution research board. Engineering 163: 456 My 30 '47
Water problem; government and industry seek to cure stream pollution. map Bsns W p50+ My 10 '47
Water problem is economic, not bureaucratic. E. W. Tinker. Paper Tr J 124:18 Je 19 '47
Water quality in service reservoirs; discussion. Water & Sewage 85:124-9 My '47
Water service that delivered road tar, which entered service pipe through waste orifice. F. J. Reny. diag Water & Sewage Works 94:64 F '47
Water treatment in relation to infectious hepatitis. Water & Sewage 84:28+ D '46
West Virginia pushes pollution control. maps Eng N 138:1025-7 Je 26 '47
Where we stand on pollution control. Eng N 137:886-7 D 26 '46

See also
Algae
Sewage disposal
Trade waste
Water—Bacteriology
Water distribution—Cross connections
Water purification
Water purification, Natural
Water supply—Salt water intrusion

Bibliography
Bibliography on chemical wastes; wastes from the chemical industry in relation to water pollution, 1937 to the present. R. W. Hess. Ind & Eng Chem 39:676-82 My '47

WATER power
Water power resources of the world. Engineering 164:109-10 Ag 1 '47

See also
Hydroelectric plants
Water wheels

Canada
Power and manufacturing in Canada. L. R. Thomson. Ann Am Acad 253:74-80 S '47
Water-power resources of Canada; annual review. Engineer 183:455-6 My 23 '47

China
Power production in the Far East. Engineer 183:343 Ap 18 '47

Great Britain
Electricity generation and fuel utilization. W. Warren. Inst E E J 94 pt 1:135-6 Mr '47

Scotland
Hydro-electric developments in Scotland. J. Henderson. maps Engineering 164:333-5, 357-9 O 3-10 '47; Excerpt. Engineer 184: 272 S 19 '47

WATER purification
Chem. & Met. report on ion exchange. il diags Chem Eng 54:123-30 Jl '47
Comparative study of Swedish and American water treatment practices. H. L. Schein. Am Water Works Assn J 39:547-51 Je '47
Control program insures follow-up on prescribed plant water treatment. D. P. Thornton, jr. il Pet Processing 1:181-4 N '46
Copper sulphate distributing craft. S. S. Anthony. il Water & Sewage Works 94: 343-4 S '47; Same. N E Water Works Assn J 61:253-9 S '47
Elements of water treatment. W. L. Nelson. Oil & Gas J 46:106 Ag 23 '47
Feed-water treatment at Deerfield packing corp. T. Martin. flow sheet il Food Ind 18:1692-4 N '46
Fundamental treatment problems in the Southwest. A. G. Classen. Am Water Works Assn J 38:1367-72 D '46
Keep cooling systems clean. B. F. Heye. il diags Power 91:699-702 O '47
Killing bacteria in water under pressure. M. Luckiesh and others. il diags Gen Elec R 50:16-21 My '47
Modern methods of water treatment; chemical treatment of water for removal of impurities in solution. A. J. R. Walter. flow diags diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):282-7; Discussion. 288-93 '45
Problems in water purification; discussion. Water & Sewage 85:71+ My '47
Purification of a tropical water supply; the Weija waterworks of Accra [Gold Coast] water supply; abstract. J. S. Dunn. Am Water Works Assn J 39:491 My '47
Results of the control of water quality in the Baltimore distribution system. E. S. Hopkins and S. E. Edwards. bibliog il Pub Works 78:20-4+ Ja '47
Shortage engineering; waterworks sustitutes ammonia liquor for ammonium sulfate. H. W. Poston. plan Water & Sewage Works 94:68 F '47
Slime and algae control. Oil & Gas J 45:101 F 8 '47
Treatment plant operating costs. K. V. Hill. Am Water Works Assn J 39:151-6 F '47
Triple sedimentation employed to condition culm laden water at Norristown, Pa. S. L. Zack. il plans Eng N 139:115-17 Jl 24 '47
Water purification plant on trailer. il diag Can Chem & Process Ind 30:96 N '46
Water purification session; abstracts of papers, Canadian section, A.W.W.A. Water & Sewage Works 94:210 Je '47
Water supply activities in Venezuela. M. V. Lugo. Am Water Works Assn J 39:411-15 My '47
Water supply development in the northern republics of South America. G. C. Bunker. bibliog Am Water Works Assn J 39:397-410 My '47
Water-supply practice in Germany. A. E. Gorman. Am Water Works Assn J 38: 1293-6 N '46; Same. il diag N E Water Works Assn J 60:139-45 Je '46

WATER purification—*Continued*

Water system of the city of Philadelphia with augmented facilities. N. B. Jacobs. N E Water Works Assn J 61:151-9 Je '47

Water treatment and filtration plant at Chicago. E. E. R. Tratman. il diags Engineer 183:138-40 F 7 '47

Water treatment in Maine. J. E. Hale. Am Water Works Assn J 39:77-8 Ja '47

Water treatment in Massachusetts. J. A. McCarthy. Am Water Works Assn J 39:79-83 Ja '47

Water works improvements for Philadelphia. E. J. Taylor. map Am Water Works Assn J 39:123-7 F '47

We work while you sleep! story of one waterworks chemist as told to Mr and Mrs John Q. Public. J. P. Millikin. Water & Sewage Works 94:341-2 S '47

Western Pennsylvania's seventh water conference. Chem & Eng N 25:229 Ja 27 '47

William Pitt Mason; pioneer in sanitation chemistry. H. S. van Klooster and J. P. Cloke. bibliog J Chem Educ 24:210-13 My '47

Yuma and the Colorado river. C. G. Ekstrom. Am Water Works Assn J 39:245-52 Mr '47; Abstract. Eng N 138:52 Ja 9 '47

See also

Feed water purification
Filters and filtration
Filtration plants
Sea water—Desalting
Water softening

Aeration

Aeration of water. Oil & Gas J 45:89 D 21 '46

River reaeration; diffusing compressed air beneath surface of river which has been polluted. A. J. Wiley and others. plan Paper Tr J 124:59-64 Mr 20 '47

Chlorination

Amperometric methods in the control of water chlorination. H. C. Marks and others. bibliog il diags Anal Chem 19:200-4 Mr '47

Automatic residual chlorine analyzer. S. C. Gray and D. V. Moses. flow diag il diags Am Water Works Assn J 39:693-700 Jl '47

Bactericidal properties of chlorine dioxide. G. M. Ridenour and R. S. Ingols. Am Water Works Assn J 39:561-7 Je '47

Breakpoint chlorination at Iron Mountain, Mich. J. F. Rubbo. Pub Works 78:58 Jl '47

Break-point chlorination at Plattsburg. F. D. Behan. il Pub Works 78:27-8+ Jl '47

Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46

Chemist in Singapore under the Japanese. J. F. Clark. il diags Chem & Ind p99-102 F 15 '47

Chlorination experiences with surface supplies. S. Jacobson and M. S. Wellington. bibliog Am Water Works Assn J 39:65-9 Ja '47

Chlorination installations in Canada. il Water & Sewage 85:8+ Ag '47

Chlorination of water. Oil & Gas J 45:115 D 14 '46

Chlorine dioxide use in plants on the Niagara border. R. N. Aston. Am Water Works Assn J 39:687-90 Jl '47

Chlorine solves a critical problem; stops slime deposit in pipes. L. A. Jackson and W. A. Mayhan. il Water & Sewage Works 94: R55-8 Jl '47

Contemporary chlorination practices. H. A. Faber. bibliog(34 titles) Am Water Works Assn J 39:200-8 Mr '47; Same. Water & Sewage Works 94:R131-3 Jl '47

Cysticidal effects of chlorine and ozone on cysts of endameba histolytica, together with a comparative study of several encystment media; abstract. J. F. Kessel and others. Am Water Works Assn J 39:1048-9 O '47

Disinfection of water mains; calking material as source of contamination. A. N. Heller. bibliog il Am Water Works Assn J 38:1335-41 D '46

Dynamics of water chlorination; abstract. G. M. Fair and others. Eng N 139:431 S 25 '47

Effect of chlorination on the virus of eastern equine encephalomyelitis in the presence of organic substances; abstract. J. E. Kempf and others. Am Water Works Assn J 39:192 F '47

Emergency water treatment plant for Dickinson, N.D. R. Boehlke. Pub Works 77:25 N '46

Experience with chlorine dioxide treatment. A. G. Davenport. il Water & Sewage Works 93:424-5 N '46

Free-residual chlorination at the New Haven water company. S. Jacobson and M. S. Wellington. map N E Water Works Assn J 60:363-87 bibliog(p387) D '46; Abstract. Water & Sewage Works 93:417 N '46; Discussion. N E Water Works Assn J 60: 387-8 D '46

Free residual chlorination improves water quality. R. J. Faust. Eng N 138:448 Mr 20 '47

How much chlorine for swimming pool water? Power Pl Eng 51:99 Mr; 97-8 My '47

Iron and manganese removal by free residual chlorination. E. R. Mathews. bibliog Am Water Works Assn J 39:680-6 Jl '47

Laboratory method for the study of break-point chlorination. Pub Works 77:32 N '46

Mode of action of chlorine. D. E. Green and P. K. Stumpf. Am Water Works Assn J 38:1301-5 N '46

Modern water chlorination. L. L. Hedgepeth. bibliog Paper Tr J 124:51-4 Je 5 '47

Okinawa water treatment plants. E. W. Campbell. N E Water Works Assn J 61:50-8 Mr '47

Ortho-tolidine titration procedure for measuring chlorine residuals. C. H. Connell. bibliog Am Water Works Assn J 39:209-18; Discussion. N. S. Chamberlin. 218-19 Mr '47

Practical water works operation data from Detroit. Pub Works 78:24-5+ S '47

Results of chlorination of army water supplies. C. C. Spencer. Pub Works 78:31-2 S '47

Review of the progress in break-point chlorination. A. E. Griffin. N E Water Works Assn J 61:145-50 Je '47

Theory of taste and odor reduction by chlorine dioxide. H. A. Faber. Am Water Works Assn J 39:691-2 Jl '47

Use of chlorine dioxide in water treatment; abstract. R. N. Aston. Water & Sewage Works 93:477 D '46

Water treatment in Connecticut. F. O. A. Almquist. bibliog Am Water Works Assn J 39:70-6 Ja '47

Water treatment in New Hampshire. L. W. Trager. Am Water Works Assn J 39:84-6 Ja '47

Water treatment in relation to infectious hepatitis. Water & Sewage 84:28+ D '46

Water treatment practice in Quebec. T. J. Lafrenière. Am Water Works Assn J 39: 797-801 Ag '47; Same. Water & Sewage 85:83-4+ My '47

Why standby chlorinators are necessary. Pub Works 78:37 Ag '47

Coagulation

Activated silica; new chemical engineering tool. R. C. Merrill and H. L. Bolton. bibliog flow diags il Chem Eng Prog 43:sup27-32 Ja '47

Electronic coagulation; new method of coagulating water by use of aluminum plates and electric current. F. E. Stuart, jr. il Pub Works 78:27+ Ap '47

Improving water plant operation with activated silica. H. R. Hay. bibliog Water & Sewage Works 93:353-8, 389-92, 479-82 S-O, D '46

Possibilities of the electronic coagulator for water treatment. C. F. Bonilla. Water & Sewage 85:21-2+ Mr '47

Water treating; coagulation. Oil & Gas J 45:281 D 28 '46

Corrosion control

Chromate corrosion inhibitors in air conditioning waters. M. Darrin. bibliog Pub Works 78:27-8 Je '47

Corrosion control with calgon. O. Rice. il Am Water Works Assn J 39:552-60 Je '47

WATER purification—Corrosion control—*Cont.*
Corrosiveness of water to metals. T. R. Camp. N E Water Works Assn J 60:282-93 S '46; Abstract. Water & Sewage Works 93:417-19 N '46
Costs of corrosion to the water industry. H. E. Jordan. bibliog Am Water Works Assn J 39:773-8 Ag '47
How chlorine kills ammonia in boiler feedwater. Power Pl Eng 51:126+ Je '47
Proper water treatment licks scale and corrosion in air-conditioning systems. W. J. Ryan. il diag Power 91:479-80 Jl '47
Silica removal from boiler feedwater. W. Leaf. Mech Eng 69:156 F '47
Starch prevents scaling in Navy's evaporators. C. J. Lamb. Chem Ind 60:411 Mr '47
Tuberculation measurement as an index of corrosion and corrosion control. E. W. Barbee. il diag Am Water Works Assn J 39: 220-30 Mr '47; Same. Water & Sewage Works 94:R155-8 Jl '47
Twenty-five years of corrective treatment for corrosion; use of lime to control carbon dioxide. E. S. Hopkins. bibliog il diag Pub Works 78:19-21+ Jl '47
Vacuum deaeration rids cold water of dissolved gas; saves pipelines. S. T. Powell. bibliog diags Power 91:403-6 Je '47
Water purification and corrosion control. C. E. Trowbridge. Am Water Works Assn J 38:1380-2 D '46

Demineralization

Demineralized water; abstract. L. B. Porter. Heating-Piping 19:91 Je '47
Water demineralizer. Soap & San Chem 23: 67 Jl '47

Electrolytic treatment

Possibilities of the electronic coagulator for water treatment. C. F. Bonilla. Water & Sewage 85:21-2+ Mr '47
Two-compartment cell softens water electrolytically. L. Streicher. il diags Civil Eng 16:312-13 Jl '46; Same. Water & Sewage 85:18-19+ Ja '47

Filtration

See Filtration plants; Filters and filtration

Fluorine removal

Active magnesia; adsorption of fluoride from aqueous solution. A. C. Zettlemoyer, E. A. Zettlemoyer and W. C. Walker. bibliog Am Chem Soc J 69:1312-15 Je '47
Fluoride removal; treatment plant of Climax molybdenum co. R. Wamsley and W. E. Jones. flow sheet in plan diags Water & Sewage Works 94:272-6 Ag '47

Iron removal

Iron and manganese removal by free residual chlorination. E. R. Mathews. bibliog Am Water Works Assn J 39:680-6 Jl '47
Iron in industrial waters. Chem Age (Lond) 57:161-2, 195 Ag 2-9 '47

Lime treatment

Clinker remover for lime slakers. A. E. Howell. il plan diag Am Water Works Assn J 39:467-9 My '47
Treatment of acid mine water for breaker use in the anthracite region of Pennsylvania. L. H. Johnson. bibliog 5pls U S Bur Mines Information Circ 7382:1-14 '46
Twenty-five years of corrective treatment for corrosion; use of lime to control carbon dioxide. E. S. Hopkins. bibliog il diag Pub Works 78:19-21+ Jl '47
Water purification and corrosion control. C. E. Trowbridge. Am Water Works Assn J 38:1380-2 D '46

Manganese removal

Iron and manganese removal by free residual chlorination. E. R. Mathews. bibliog Am Water Works Assn J 39:680-6 Jl '47

Odor removal

See Water purification—Taste and odor removal

Ozone treatment

Ozone method of water purification; abstract. E. Howlett. Am Water Works Assn J 39: 1047-8 O '47
Treatment of water by ozone; abstract. M. T. B. Whitson. Am Water Works Assn J 39:1048 O '47
Water quality improvement with ozone; with cost data; Philadelphia water supply. V. Hann. il Eng N 139:59-61 Jl 10 '47

Patents

Water and sewage patents (cont). Water & Sewage Works 93:450; 94:26, 148, 218, 304, 432 N '46, Ja, Ap, Je, Ag, N '47

Self purification

See Water purification, Natural

Swimming pool water

How much chlorine for swimming pool water? Power Pl Eng 51:99 Mr; 97-8 My '47
Methods of water sterilization; abstract. D. Cork. Am Water Works Assn J 39:599-600 Je '47
Results of several years' observation of a municipal open-air bath in Vienna; abstract. E. Hofmann. Am Water Works Assn J 39:598-9 Je '47

Taste and odor removal

Chlorine dioxide use in plants on the Niagara border. R. N. Aston. Am Water Works Assn J 39:687-90 Jl '47
Experience with chlorine dioxide treatment. A. G. Davenport. il Water & Sewage Works 93:424-5 N '46
Odor removal at Chicago's South District filtration plant; abstract. J. R. Baylis. Water & Sewage Works 94:178 My '47
Palatability in a water supply. H. N. Lendall. il Water & Sewage 85:20-2+ Ja '47; Abstract. Water & Sewage Works 93:384-6 O '46
Progress in the treatment of water for taste and odor correction. N. J. Howard. Water & Sewage 84:14-15+ N '46
Taste control in Canadian water supplies. il Water & Sewage 85:10+ Ag '47
Theory of taste and odor reduction by chlorine dioxide. H. A. Faber. Am Water Works Assn J 39:691-2 Jl '47
Use of activated carbon in treating open reservoirs. H. E. Bailey and J. Studley. il plan diags N E Water Works Assn J 61:135-44 Je '47; Same. Water & Sewage Works 94:219-22 Je '47
Water quality improvement with ozone; with cost data; Philadelphia water supply. V. Hann. il Eng N 139:59-61 Jl 10 '47

WATER purification, Natural
Factors influencing self-purification of streams and their relations to pollution abatement; abstract. C. J. Velz. Water & Sewage Works 94:56-7 F '47
Natural purification characteristics of a shallow turbulent stream; abstract and discussion. F. W. Kittrell and O. W. Kochtitzky, jr. Water & Sewage Works 94:385-6 O '47

WATER rates
Adjusting rate structures to rising cost levels. L. R. Howson. Am Water Works Assn J 39:819-33 S '47; Correction. 39:1066 O '47; Same. Water & Sewage Works 94: 307-14, 358 S-O '47; Abstract. Eng N 139: 147 Jl 31 '47
Cost of water at stated rates per 1,000 gallons; table. Water & Sewage Works 94: R126 Jl '47
Equitable schedules of water rates. A. P. Learned. Am Water Works Assn J 39:666-72 Jl '47
Methods of fixing public fire protection charges. F. R. Witherspoon. Am Water Works Assn J 39:623-9 Jl '47
Power and water rates as affected by public demand; Spartanburg plant includes recreation park. R. B. Simms. il Water & Sewage Works 94:65-7 F '47
Regulation of water rates in Quebec. A. Larivière. Am Water Works Assn J 39: 913-21 S '47; Same cond. Water & Sewage 85:27+ Ap '47
Relation of water rates to living costs. F. C. Tolles. Am Water Works Assn J 39: 115-18 F '47
Something new in water rates. M. P. Hatcher. Water & Sewage Works 94:157-64 My '47

WATER rates—*Continued*
Water-rate structures in Quebec; functions of Transportation and communication board. A. Lariviere. Water & Sewage 85: 27+ Ap '47
Water rate studies in a small town. P. H. Beauvais. Am Water Works Assn J 38: 1342-6 D '46
Water rates. J. B. Kennedy. N E Water Works Assn J 61:202-5 Je '47

WATER repellents. See Textile fabrics—Water resistance; Waterproofing of textiles

WATER rights
International treaty authorizes flood control structures on lower Rio Grande. L. M. Lawson and R. F. MacGregor. il map Civil Eng 17:117-20 Mr '47
Mexican water treaty. M. G. Glaeser. J Land & Pub Util Econ 22:1-9, 352-62 F, N '46 (to be cont)

WATER sampling
Results of the control of water quality in the Baltimore distribution system. E. S. Hopkins and S. E. Edwards. il Pub Works 78:23-4+ Ja '47

WATER softeners
Improved Permutit hot process water softener. diag Rayon 27:624 N '46
Microbial fouling of zeolite water softeners. W. L. Williams. Am Water Works Assn J 39:779-82 Ag '47

WATER softeners, Domestic
Soft water for the home. C. A. Tyler. il Consumers Res Bul 20:10-15 Jl '47
Softee, a midget water softener. il Consumers Res Bul 20:24-5 O '47
Softeners rented; Culligan co. taps new water-treating market. Bsns W p21 D 28 '46
Water softener. il Mod Plastics 24:152 Jl '47

WATER softening
Effect of water conditioning on metal finishing operations. R. S. Herwig. il diag Iron Age 159:48-52 Mr 27 '47
Feed-water treatment at Deerfield packing corp. T. Martin. flow sheet il Food Ind 18:1692-4 N '46
Fluoride removal; treatment plant of Climax molybdenum co. R. Wamsley and W. E. Jones. flow sheet il plan diags Water & Sewage Works 94:272-6 Ag '47
Lime-soda softener control. W. L. Nelson. Oil & Gas J 46:117-18 S 13 '47
Lime-soda water softening. Oil & Gas J 45: 105 N 9; 323 N 16; 107 N 23 '46
Meter control of water softening process; use of pH indicating recorder at the St Paul filtration plant. R. A. Thuma. il Eng N 138: 384-5 Mr 6 '47
Modern methods of water treatment; chemical treatment of water for removal of impurities in solution. A. J. R. Walter. flow diags diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):282-7; Discussion. 288-93 '45
Modern practices in municipal water softening. S. B. Applebaum. diags Water & Sewage Works 93:485-90 D '46
Quality textile products demand pure, clean and soft water. H. Miedendorp. il Rayon 28:281-3 My '47
Raw-water softening experience in Canada's largest steam plant; Polymer corp. J. E. Lewis. il diag Power 91:150-3 Mr '47
Sodium zeolite water softening. Oil & Gas J 45:97 N 30 '46
Soft water for silk hosiery mill with zeolite water conditioning. R. L. Nessler. il diag Rayon 28:284-6 My '47
Some economic aspects of softening. W. U. Gallaher and H. F. Weckwerth. Am Water Works Assn J 39:147-50 F '47; Abstract. Water & Sewage Works 94:23 Ja '47
Two-compartment cell softens water electrolytically. L. Streicher. il diags Civil Eng 16:312-13 Jl '46; Same. Water & Sewage 85:18-19+ Ja '47
Water conditioning and the big rural market. Dom Eng 169:108+ Ap '47
Water softener. il diag Sci Am 176:41 Ja '47
Water-softening equipment supplied and serviced for rental fee. il Water & Sewage 85:20 Jl '47
Water softening; hot phosphate process. Oil & Gas J 45:121 D 7 '46
Water softening; need for and methods used. C. H. Spaulding. il diag Pub Works 77: 27-30 D '46
Water softening plant; a new development. diag Chem Age (Lond) 55:606-8 N 16 '46
Water test chemistry helps you operate softener better. U. C. Fleming, jr. Power Pl Eng 50:104-5 N; 106 D '46
Water treatment question box; how to remove water hardness. K. M. Herstein and J. S. G. Shotwell. Power 91:128 F '47
Willow Run water softening plant. N. Herda. il Water & Sewage Works 94:334-5 S '47

See also
Water softeners

WATER storage
Economics of water storage. N. G. McDonald. Am Water Works Assn J 39:637-43 Jl '47
Storage on the distribution system. C. B. Burdick. Water & Sewage Works 94:233-6 Jl '47

See also
Reservoirs
Water tanks

WATER supply
American water works association and the Federation of sewage works associations joint meeting, San Francisco, July 21-25. Eng N 139:147+, 251-4 Jl 31, Ag 21 '47
Chemical and bacteriological aspects of water supplies; abstract. G. Carey. Chem & Ind p415 N 16 '46
Geology of water supplies; abstract. H. L. Hawkins. Chem & Ind p415 N 16 '46
Standards of stream sanitation. H. W. Streeter. il Water & Sewage 84:61+ O '46

See also
Aqueducts
Artesian wells
Dams
Feed water
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Filtration plants
Fire service (water supply)
Hot water supply
Hydrants
Hydraulic engineering
Irrigation
Plumbing
Pumping machinery
Pumping stations
Railroads—Water supply
Rain and rainfall
Reservoirs
Rivers
Snow surveys
Water distribution
Waterworks
Wells

Boron content

Boron in Los Angeles water supply under scrutiny because of court action. Eng N 138:518 Ap 3 '47

Bromine content

Bromide content of underground waters; determination and occurrence of traces of bromide in water. G. U. Houghton. bibliog Soc Chem Ind J 65:277-80 S '46
Bromide content of underground waters; observations on the chlorination of water containing free ammonia and naturally occurring bromide. G. U. Houghton. bibliog Soc Chem Ind J 65:324-8 O '46

Conservation

See Water conservation

Fluorine content

Do certain drinking waters favor dental caries? H. Klein. Science 105:4-5 Ja 3 '47
Evanston to experiment with fluorine in water. W. H. Tucker and R. J. Faust. Eng N 138:515 Ap 3 '47
Family and dental disease; caries experience among parents and offspring exposed to drinking water containing fluoride. H. Klein. Pub Health Rep 62:1247-53 Ag 29 '47
Fluorine determination in water, using an electrophotometer. A. R. Todd. Water & Sewage Works 94:369 O '47
How to feed fluorine; Newburgh, N.Y. experiment to determine effect of fluorine in water supply on tooth formation and protection. C. R. Cox. il Eng N 139:67-8 Jl 10 '47
Influence of phosphates on zirconium-alizarin method of fluoride determination. D. M. Taylor and R. E. Frazier. Am Water Works Assn J 39:52-6 Ja '47

WATER supply—Fluorine content—*Continued*
Lactobacillus acidophilus counts in the saliva of children drinking artificially fluorinated and fluorine-free communal waters. S. B. Finn and D. B. Ast. bibliog Science 106:292-3 S 26 '47
Should public water supplies be used for mass medication? adding fluorine to prevent tooth decay. A. Wolman. bibliog Am Water Works Assn J 39:834-41 S '47; Same. Water & Sewage Works 94:327-30 S '47; Abstract. Eng N 139:252 Ag 21 '47; Discussion. Am Water Works Assn J 39:841-3 S '47; Water & Sewage Works 94:330-1 S '47
Water-borne fluorides and dental health; abstract. H. T. Dean. Am Water Works Assn J 39:701-2 Jl '47

See also
Water purification—Fluorine removal

Grading and marking

Numerical rating system for municipal water supplies. O. E. Brownell. Am Water Works Assn J 39:922-8 S '47

Iron content

Iron in industrial waters. Chem Age (Lond) 57:161-2, 195 Ag 2-9 '47

Salt water intrusion

Experimental observations on grouting sands and gravels. A. Machis. il diags Am Soc C E Proc 72:1203-27 N '46; Discussion. 73: 251-2, 387-8, 936-40 F-Mr, Je '47
Geochemical alterations in ground waters of the Los Angeles coastal plain. C. Wilson. Am Water Works Assn J 39:428-9 My '47
Subsurface disposal of inland oil-field brines conserves fresh water supply. O. S. Jones. il Civil Eng 17:60-3 F '47
Water development and salt water intrusion on Pacific islands. F. Ohrt. bibliog maps diags Am Water Works Assn J 39:979-88 O '47

Standards

Laboratory procedures and water standards. M. H. McCrady and J. Archambault. bibliog Am Water Works Assn J 39:734-8 Ag '47; Same. il Water & Sewage 85:24-5+ Ap '47

Arctic regions

Water supply problems of the Arctic. A. B. Cronkwright. il Pub Works 78:18-20 Ag '47

California

Colorado river; the Southwest's greatest natural resource. S. B. Morris. bibliog il maps Am Water Works Assn J 39:945-67 O '47
Effect of litigation on water appropriation in California. C. T. Waldo. Am Water Works Assn J 39:231-4 Mr '47
Water development plans in California. E. Hyatt. map Am Water Works Assn J 39: 430-42 My '47

See also Water, Underground—California

Canada

Chlorination installations in Canada. il Water & Sewage 85:8+ Ag '47
Directory of Canadian water-works systems. Water & Sewage 85:28+ Ag '47
Financial practices in administration of Canadian municipal sanitary works. Water & Sewage 85:4+ Ag '47
Government officials in charge of Canadian public water supply and sewerage undertakings. Water & Sewage 85:26+ Ag '47
Tanks and reservoirs; storage facilities in Canadian systems. il Water & Sewage 85: 14+ Ag '47
Taste control in Canadian water supplies. il Water & Sewage 85:10+ Ag '47
Water distribution in Canada. il Water & Sewage 85:16+ Ag '47
Water filtration plants in Canada. il Water & Sewage 85:5+ Ag '47
Water-works systems; increase in Canada during the past quarter century. il Water & Sewage 85:3+ Ag '47
Well-water systems in Canadian municipalities. il Water & Sewage 85:12+ Ag '47

Connecticut

Problems and progress in handling stream-pollution abatement in Connecticut. W. J. Scott. N E Water Works Assn J 61:59-63 Mr '47
Water treatment in Connecticut. F. O. A. Almquist. bibliog Am Water Works Assn J 39:70-6 Ja '47

Germany

Water supply practice in Germany. A. E. Gorman. Am Water Works Assn J 38: 1289-300 N '46; Same. il diag N E Water Works Assn J 60:132-52 Je '46

Great Britain

Recent water legislation. R. Hetherington and A. Titherley. Engineering 164:139, 162-3 Ag 8-15 '47

Illinois

Municipal water works organization. W. R. Gelston. Am Water Works Assn J 39:787-8 Ag '47
Review of Illinois water development. L. R. Howson. Am Water Works Assn J 39:659-65 Jl '47

Indiana

Safeguarding Indiana's water resources. C. H. Bechert. Am Water Works Assn J 39:792-6 Ag '47

Islands of the Pacific

Water development and salt water intrusion on Pacific islands. F. Ohrt. bibliog maps diags Am Water Works Assn J 39:979-88 O '47

Maine

Activities of the State sanitary water board in Maine. J. E. Hale. N E Water Works Assn J 61:64-7 Mr '47
Water treatment in Maine. J. E. Hale. Am Water Works Assn J 39:77-8 Ja '47

Massachusetts

Extension of Metropolitan district works; what's accomplished and what's ahead. K. R. Kennison. flow diag il Boston Soc C E J 34:151-214 bibliog(p152-4) Jl '47
Problems and progress in handling stream-pollution abatement in Massachusetts. A. D. Weston. N E Water Works Assn J 61: 80-7 Mr '47
Water treatment in Massachusetts. J. A. McCarthy. Am Water Works Assn J 39: 79-83 Ja '47

Minnesota

Survey of unaccounted-for water in Minnesota. Am Water Works Assn J 39:539-42 Je '47

Montana

Municipal water works organization. A. L. Johnson. Am Water Works Assn J 39:783-6 Ag '47

Near East

Water supply in the Middle East campaigns; abstract. F. W. Shotton and others. Am Water Works Assn J 39:499-502 My '47

New England

Stream pollution abatement in New England; symposium. Water & Sewage Works 93:420-2 N '46

New Hampshire

Problems and progress in handling stream-pollution abatement in New Hampshire. L. W. Trager. N E Water Works Assn J 61:68-73 Mr '47
Water treatment in New Hampshire. L. W. Trager. Am Water Works Assn J 39:84-6 Ja '46

New York (state)

Mutual aid program for peacetime; New York state mutual aid program. E. Devendorf. Am Water Works Assn J 39:520-6 Je '47

WATER supply—*Continued*

Okinawa

Geology and water resources of southern Okinawa. D. J. Cederstrom. bibliog il maps Am Assn Pet Geologists Bul 31:1752-83 O '47

Okinawa water treatment plants. E. W. Campbell. N E Water Works Assn J 61: 50-8 Mr '47

Ontario

Extensive program of water and sewage works for Ontario municipalities. A. E. Berry. il Water & Sewage 85:11-14+ Ja '47

Quebec

Regulation of water rates in Quebec. A. Larivière. Am Water Works Assn J 39:913-21 S '47; Same cond. Water & Sewage 85:27+ Ap '47

Water treatment practice in Quebec. T. J. Lafrenière. Am Water Works Assn J 39: 797-801 Ag '47; Same. Water & Sewage 85:83-4+ My '47

Rhode Island

Problems and progress in handling stream-pollution abatement in Rhode Island. W. J. Shea. N E Water Works Assn J 61:77-9 Mr '47

South Africa

South African irrigation and water supply schemes. Engineer 184:146 Ag 15 '47

South America

Water supply development in the northern republics of South America. G. C. Bunker. bibliog Am Water Works Assn J 39:397-410 My '47

Southeastern states

Water resource and watershed management research in the Southeast. J. A. Lieberman. bibliog il Am Water Works Assn J 39:443-54 My '47

Southwestern states

Colorado river; the Southwest's greatest natural resource. S. B. Morris. bibliog il maps Am Water Works Assn J 39:945-67 O '47

Fundamental treatment problems in the Southwest. A. G. Classen. Am Water Works Assn J 38:1367-72 D '46

Tennessee

Stream pollution control in Tennessee. R. P. Farrell. Am Water Works Assn J 39:352-6 Ap '47

United States

Sanitation needs, how much and where; information from inventory by U.S. Public health service. Eng N 139:42-3, 340 Jl 10, S 4 '47

Water and sewage works needs of the United States; with cost tables. Water & Sewage Works 94:294-7 Ag '47; Same, without tables. il Civil Eng 17:479-80+ Ag '47

Water problem; government and industry seek to cure stream pollution. map Bsns W p50+ My 10 '47

Water supply engineering; report of the committee on the Sanitary engineering division for the two years ending Dec. 31, 1946. Am Soc C E Proc 73:497-521 Ap '47

What has happened to water works construction? H. E. Jordan. Am Water Works Assn J 39:607-18 Jl '47

Utah

Utilization of surface-water resources of Sevier Lake basin, Utah. R. R. Woolley. maps diags U S Geol S Water-supply Pa 920:1-393, pl 1-33; pa $2.25 Supt. of doc. '47

See also Water, Underground—Utah

Venezuela

Water supply activities in Venezuela. M. V. Lugo. Am Water Works Assn J 39:411-15 My '47

Vermont

Problems and progress in handling stream-pollution abatement in Vermont. E. L. Tracy. N E Water Works Assn J 61:74-6 Mr '47

West Virginia

West Virginia pushes pollution control. maps Eng N 138:1025-7 Je 26 '47

See also Water, Underground—West Virginia

Western states

More water conservation for the West. K. Markwell. il Eng N 138:291-4 F 20 '47

Snow survey finds South dry, northern areas ok. R. A. Work and P. A. Ewing. il map Elec West 98:72-4 My '47

Wisconsin

See also
Water, Underground—Wisconsin

WATER supply, Rural

Big rural market; how it can be sold. il Dom Eng 169:98-101+ F '47

Sales points for water systems. il Dom Eng 169:110-11+ Ja '47

Water conditioning and the big rural market. Dom Eng 169:108+ Ap '47

Water systems, key to multi-million market. Dom Eng 169:126-8+ Mr '47

WATER supply engineering

Australian practice favors water pipeline on the desert floor; conduit supplies water to Whyalla. il map Eng N 138:889-91 My 29 '47

Construction of water-works structures. J. E. Munroe. N E Water Works Assn J 61: 160-74; Discussion. 174-80 Je '47

Enlargement of the Baltimore water supply system. S. C. Blackburn. map Am Water Works Assn J 39:119-22 F '47

Équipement rationnel d'un puits de captage à haut rendement dans les nappes alluvionnaires. A. Vibert. diag Génie Civil 124:250-2 Jl 1 '47

Expansion of District of Columbia water system; with cost data. E. A. Schmitt and O. D. Voigt. diags map Am Water Works Assn J 39:291-321 Ap '47

Extension of Metropolitan district works; what's accomplished and what's ahead. K. R. Kennison. flow diag il Boston Soc C E J 34:151-214 bibliog(p152-4) Jl '47

Ground water; a neglected natural resource. M. Pirnie and R. W. Sawyer. il maps plans diag Am Water Works Assn J 39:968-78 O '47

More water for St Catharines, Canada. W. G. McLaughlin. il Comp Air Mag 52:196-9 Ag '47

More water for West Point. R. G. Skerrett. il map Comp Air Mag 52:28-32 F '47

Navy-constructed aqueduct supplies Colorado River water to city of San Diego. R. D. Thorson. il Civil Eng 17:372-7+ Jl '47

New West Penn water co. supply. J. T. Campbell. Am Water Works Assn J 39: 770-2 Ag '47

Review of Illinois water development. L. R. Howson. Am Water Works Assn J 39:659-65 Jl '47

Toronto water-works extensions; general description of the system with details of some outstanding features. W. Storrie. il 12 pls N E Water Works Assn J 61:1-29; Discussion. 30-3 Mr '47

Valparaiso, Chile, water shortage hastens plans for new supply system. A. T. Cook. map Eng N 137:731-2 N 28 '46

Water development plans in California. E. Hyatt. map Am Water Works Assn J 39: 430-42 My '47

Water resource and watershed management research in the Southeast. J. A. Lieberman. bibliog il Am Water Works Assn J 39:443-54 My '47

Water supply development in the northern republics of South America. G. C. Bunker. bibliog Am Water Works Assn J 39:397-410 My '47

Water supply engineering; report of the committee on the Sanitary engineering division for the two years ending Dec. 31, 1946. Am Soc C E Proc 73:497-521 Ap '47

Water system of the city of Philadelphia and the proposed supply from upland sources. N. B. Jacobs. Boston Soc C E J 34:32-54 Ap '47

WATER supply engineering—*Continued*
Water works improvements for Philadelphia. E. J. Taylor. map Am Water Works Assn J 39:123-7 F '47

See also
Aqueducts
Dams
Filters and filtration
Hot water supply
Hydraulic engineering
Irrigation
Pipe laying
Plumbing
Pumping stations
Ranney water collectors
Reservoirs
Water distribution
Waterworks
Wells

WATER supply for armies
Diatomite filtration. R. E. Thompson. il Water & Sewage 85:31+ S '47
Okinawa water treatment plants. E. W. Campbell. N E Water Works Assn J 61:50-8 Mr '47
Results of chlorination of army water supplies. C. C. Spencer. Pub Works 78:31-2 S '47
Water supply in the Middle East campaigns; abstract. F. W. Shotton and others. Am Water Works Assn J 39:499-502 My '47
Water supply problems of the Arctic. A. B. Cronkwright. il Pub Works 78:18-20 Ag '47

WATER supply for factories
Carrier controls lake water pumps over seven miles of cable circuit; U.S. sugar corp., Clewiston, Fla. W. A. Derr and others. il diag Elec World 128:66-9 Ag 2 '47
Current trends in the re-use of water. C. F. Hauck. bibliog il plan Blast F & Steel Pl 35:543-8 My '47; Same cond. Pub Works 78:24+ My '47
Effect of water conditioning on metal finishing operations. R. S. Herwig. il diag Iron Age 159:48-52 Mr 27 '47
How shall I handle hard water from a well? diags Power 91:196-8 Mr '47
Induced infiltration supplies most productive well field; use of Ranney water collectors; Wabash River ordnance works. R. C. Kazmann. il diag Civil Eng 16:544-5 D '46
Influence of wastes on treatment and use of water; with cost data. C. F. Hauck. bibliog Chem Eng Prog 43:481-5; Discussion. 485-6 S '47
Is river water cheaper than city water? diags Power 91:488-90+ Jl '47
Modern methods of water treatment; chemical treatment of water for removal of impurities in solution. A. J. R. Walter. flow diags diags Inst Mech Eng J & Proc 153 (War emergency issue no 9):282-7; Discussion. 288-93 '45
Proceedings of the American association of textile chemists and colorists; discussion meeting on process water, Southeastern section, June 7. Am Dyestuff Rep 36:449-50+ Ag 11 '47
River infiltration as a source of ground water supply. R. G. Kazmann. il map diag Am Soc C E Proc 73:837-53 Je '47
Use of reclaimed sewage effluents in Baltimore; abstract. A. Wolman. Water & Sewage Works 94:323 S '47
Water requirements of industry. L. B. Miller. bibliog Paper Tr J 123:39-41 N 7 '46; Same cond. Paper Ind 28:586 Jl '46
Willow Run water softening plant. N. Herda. il Water & Sewage Works 94:334-5 S '47

WATER supply for food factories
Rebuilding a water settling basin for a company processing corn. H. B. McDermid. diags Power Pl Eng 51:90-1 Je '47

WATER supply for laboratories
Simple device for preventing the formation of hard deposits in laboratory stills fed with water partially softened by base-exchange treatment. U. R. Evans. diags Chem & Ind p434-5 D 7 '46

WATER supply for mines
Clarification of washery water in closed circuits; abstract. S. M. Parmley. Min Cong J 33:64 Je '47

WATER supply for paper mills
Biochemical oxygen demand a new expression for the papermaker. L. E. McGrath. bibliog Paper Tr J 124:45-7 Mr 27 '47
Diatomaceous filter aids for paper mill waters and effluents. G. G. Halvorsen. il Paper Tr J 125:37-41 O 30 '47
Hydraulic ram as applied to water systems. diags Pulp & Pa of Can 48:72-3+ F '47
New aqueduct five miles long for Port Alberni paper mill. Paper Tr J 123:18 N 28 '46
Ranney method produces more cool pure water for mills. Paper Tr J 123:34 D 26 '46
Silicates in water processing and fibre retention. Pulp & Pa of Can 48:96-7 S '47
Studies of rosin sizing; use of sulfuric acid. D. Price and D. D. Cameron. bibliog Pulp & Pa of Can (Convention no) 47:142-8 [F] '46; Same. Paper Tr J 123:35-41 D 19 '46
Water requirements of industry. L. B. Miller. bibliog Paper Tr J 123:39-41 N 7 '46; Same cond. Paper Ind 28:586 Jl '46
White water system for cylinder board mill. O. E. S. Hedbring. Paper Tr J 124:39-40 My 15 '47; Same cond. Paper Ind 29:712+ Ag '47

WATER supply for petroleum industry
Chemical cleaning of porous concrete wells; Wood River refinery. G. N. Andrews. Am Water Works Assn J 39:729-33 Ag '47
Control program insures follow-up on prescribed plant water treatment. D. P. Thornton, jr. il Pet Processing 1:181-4 N '46
Floating pump house maintains water supply for 25 years; Wood River refinery of Standard oil co. il Oil & Gas J 46:219 Jl 26 '47
Water settling and emulsion breaking system; Oleum refinery, Union oil company of California. il Pet Refiner 26:114-15 Ag '47
Well water conservation at Pan American refining corporation, Texas City refinery. P. Hurd. il diags Pet Refiner 25:132-4 D '46

WATER supply for plating
Effect of water conditioning on metal finishing operations. R. S. Herwig. il diag Iron Age 159:48-52 Mr 27 '47

WATER supply for power plants
Control program insures follow-up on prescribed plant water treatment. D. P. Thornton, jr. il Pet Processing 1:181-4 N '46
How to control marine growths in circulating water systems. J. G. Dobson. il Power Pl Eng 50:70-5 Ag; chart 86 D '46
Influence of wastes on treatment and use of water; with cost data. C. F. Hauck. bibliog Chem Eng Prog 43:481-5; Discussion. 485-6 S '47
Raw and treated water in TVA hydroelectric plants. H. J. Petersen. il Power Pl Eng 51:124 F '47
Seventh annual water conference, Pittsburgh, Pa. Jan. 6-8. Power Pl Eng 51:114 Mr '47
Water know-how cures cooling-tower headache. G. C. W. Golem. il diags Power 91: 115-17 F '47

See also
Feed water purification

WATER supply for refrigerating plants
Evaporative condenser scale control. R. M. Westcott. bibliog il Refrig Eng 54:15-17+; Discussion. 66+ Jl '47

WATER supply for textile mills
High-temperature water is efficient heat carrier. V. R. Freeman. il Textile World 97:129+ Ja '47
Iron in industrial waters. Chem Age (Lond) 57:161-2, 195 Ag 2-9 '47
Process water treatment for rayon manufacture. L. B. Miller. bibliog il diags Rayon 28:153-7, 236-9 Mr-Ap '47
Quality textile products demand pure, clean and soft water. H. Miedendorp. il Rayon 28:281-3 My '47
Soft water for silk hosiery mill with zeolite water conditioning. R. L. Nessler. il diag Rayon 28:284-6 My '47

WATER tanks
Blowoff tanks and systems. T. W. Reynolds. diags Heat & Ven 44:70-6 O '47
Economics of reservoirs. N. G. McDonald. il Water & Sewage 85:80-2+ My '47; Abstract. Water & Sewage Works 94:210-11 Je '47
Hydraulics for the practical water works man; design of discharge openings in tanks and reservoirs. R. W. Angus. diags Water & Sewage Works 94:69-72 F '47

WATER tanks—*Continued*
Modern boiler, tank and line insulation; Salisbury axle plant. il Power Pl Eng 51:84-6 S '47
Planning capacity for elevated storage tanks. D. H. Maxwell. Am Water Works Assn J 39:644-50 Jl '47
Tanks and reservoirs; storage facilities in Canadian systems. il Water & Sewage 85: 14+ Ag '47
Water tank seams welded in continuous mill. il Iron Age 160:67 O 9 '47

WATER tanks, Aluminum
Aluminum for water works structures; with cost data. J. M. Perryman. il Am Water Works Assn J 38:1327-9 D '46

WATER tanks, Concrete
Leak in prestressed tank located by compressed air. diags Eng N 138:1030 Je 26 '47

WATER tanks, Steel
First steel radical-cone water-tank constructed in Canada. il Water & Sewage 84: 27+ D '46
Maintenance of elevated tanks. J. M. Perryman. il Water & Sewage Works 94:R67-9 Jl '47
Progress in the design of elevated steel tanks. D. A. Leach. il Am Water Works Assn J 39:651-8 Jl '47
Rigid, unique watersphere design gained by use of electric arc-welding process. A. F. Davis. il Welding J 26:512-13 Je '47
Role of algae in corrosion. H. C. Myers. Am Water Works Assn J 39:322-4 Ap '47
750,000-gal. radial-cone water-tank for the city of Hamilton, W. L. McFaul. il Water & Sewage 85:20+ Mr '47

Cathodic protection
Progress report of the committee on cathodic protection of steel tanks and standpipes. N E Water Works Assn J 61:97-104 Mr '47

Painting
Repainting steel water tanks; with notes on repairs. Water & Sewage Works 94:R70-1 Jl '47

WATER tube boilers. See Boilers, Water tube

WATER vapor
Absorption line width in the rotation spectrum of atmospheric water vapor. A. Adel. Phys R 71:806-8 Je 1 '47
Absorption of microwaves by uncondensed water vapor. J. H. Van Vleck. bibliog Phys R 71:425-33 Ap 1 '47
Adsorption of water vapor by untanned hide and various leathers at 100° F. J. R. Kanagy. bibliog il diag J Res Nat Bur Stand 38:119-28 Ja '47
Apparatus for determining the reactivity of calcium carbide and acetylene-water vapor mixtures. G. W. Jones and others. 14 pls U S Bur Mines Rep of Invest 4067:1-15 '47
Apparatus for determining water-vapor permeability of moisture barriers. F. T. Carson and V. Worthington. il diags U S Nat Bur Stand C453:1-18; pa 10c Supt. of doc. '46
Application of the electric hygrometer to the determination of water-vapor permeability at low temperature. J. A. Van den Akker. bibliog diags Paper Tr J 124: 51-6 Je 12 '47; Same cond. Mod Packaging 20:148-51+ My '47; Same cond. Paper Ind 29:108+ Ap '47
Cooling makes warm air sweat; gasified water is lighter than air. diags Coal Age 51:106+ N '46
Direct measurement of the transverse swelling of wool fibres in water vapour. F. L. Warburton. bibliog diag Textile Inst J 38:T65-72 F '47
Factors affecting measurement of water vapor permeability at low temperatures. W. H. Aiken. bibliog Paper Tr J 125:31-5 O 2 '47
Free energy, heat and entropy of sorption of water vapor by proteins and high polymers. M. Dole and A. D. McLaren. bibliog Am Chem Soc J 69:651-7 Mr '47
Influence of water vapor and methane on the heat treatment of steel in a CO:H_2 gas atmosphere. H. M. Heyn. il diag Metal Prog 52:232-7 Ag '47
Influence of water vapor on ozonizer efficiency. C. E. Thorp and W. J. Armstrong. bibliog flow sheet il Ind & Eng Chem 38: 1319-21 D '46
Method for the determination of water vapor permeability at low temperatures; frozen food containers. S. W. Pierce and J. F. Helms. bibliog il diags Paper Tr J 124: 64-6 Ap 17 '47; Same. Mod Packaging 20: 161-4 Ap '47
Sorption of water vapor by high polymers. S. E. Smith. bibliog Am Chem Soc J 69:646-51 Mr '47
Sources of variability in water vapor permeability determinations. M. S. Renner. bibliog diags Paper Tr J 125:49-52 Ag 7 '47
Water absorption of proteins; the effect of free amino groups in casein. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 69:827-31 Ap '47
See also
Humidity

WATER walls. See Furnaces, Boiler

WATER waste
See also
Water conservation

WATER wheels
Laxey pumping wheel; Laxey lead and zinc mine in the Isle of Man. A. Bray. il Can Min J 68:175-6 Mr '47
See also
Turbines

WATERBURY, Connecticut
Miss O'Reilly of Slocum. il Fortune 35:128-31+ F '47

WATERPROOFING
Continuous lining of corrugated steel waterproofs reconstructed tunnel. J. F. Laboon. il Civil Eng 17:536-8 S '47
Integral waterproofing materials for concrete. W. E. Parker. Am Concrete Inst J 19:77-9 S '47
Waterproofing concrete structures. N. J. Kendall. Am Water Works Assn J 39:253-6 Mr '47
Water-repellent coatings from silicon. Chem Ind 60:978+ Je '47
See also
Paper board—Water resistance

WATERPROOFING of textiles
Correlation of water-repellent garment performance and laboratory penetration tests on fabrics. G. A. Slowinske and A. G. Pope. bibliog il diags Am Dyestuff Rep 36: 108-21 Mr 10 '47
Life water repellent and conditioner. Consumers Res Bul 19:25-6 Je '47
New approach to coated fabrics. D. S. Plumb. Am Dyestuff Rep 36:332-4; Discussion. 334 Je 16 '47
New Dutch waterproofing process offered to U.S. firms. For Comm W 26:11 Ja 18 '47
Preparation of substituted acetoxy silanes. H. A. Schuyten, J. W. Weaver and J. D. Reid. bibliog Am Chem Soc J 69:2110-12 S '47
Schiff-bases, for rendering fabrics water repellent; patent. Am Dyestuff Rep 36:338 Je 16 '47
Some chemical aspects of the application of velan PF to cotton fabrics. F. V. Davis. Soc Dyers & Col J 63:260-3 Ag '47
Water repellent compositions; derivatives of behenic acid; British patent. Am Dyestuff Rep 36:395 Jl 14 '47
Water-repellent fabrics; zirconium soaps. Am Dyestuff Rep 35:719 D 30 '46
Water repellent finish, silicon containing fatty amides; patent. Am Dyestuff Rep 36:396 Jl 14 '47
Waterproofing. D. H. Power. il Textile Col 69:33 S '47
Waterproofing textiles; latex modified with pectin solutions; patent. Am Dyestuff Rep 36:614 O 20 '47
Waterproofing textiles; latex, resin compositions; patent. Am Dyestuff Rep 36:466 Ag 25 '47
See also
Cotton fabrics—Water resistance
Textile fabrics—Water resistance

WATERPROOFING of textiles—*Continued*

Testing

Evaluation of various water repellent treatments of twenty-three cotton fabrics. G. Smith and others. bibliog Rayon 28:332-4, 371-3, 423-6 Je-Ag '47

WATERSCHOOT VAN DER GRACHT, Willem Anton Josef Maria van, 1873-1943

Memorial. J. H. F. Umbgrove. por(pl 13) Geol Soc Proc 1946:231-6 bibliog(p233-6) Jl '47

WATERSHEDS

Water resource and watershed management research in the Southeast. J. A. Lieberman. bibliog il Am Water Works Assn J 39:443-54 My '47

Protection

Control of oil lines in watershed areas. D. N. Fischel. Am Water Works Assn J 38: 1285-8 N '46

Forest management for Newark. J. M. Heilman. Am Water Works Assn J 39:87-92 Ja '47

Reforestation on the Quabbin Reservoir project. R. Snow. fold maps N E Water Works Assn J 61:34-47; Discussion. W. R. LaDue. 47-9 Mr '47

Watersheds and reforestation. G. W. Dean. Am Water Works Assn J 39:455-8 My '47

WATERWAYS

ASCE convention, Duluth; abstracts of papers at Waterways session. Civil Eng 17: 447-8 Ag '47

Bridge clearances concern navigation, federal government, railroads, and highways; symposium. il Civil Eng 17:67-73 F '47

See also

Canals
Railroads—Waterways competition
River traffic
Rivers

Germany

See also

Rhine river

South America

Orinoco-Casiquiare-Negro waterway. map Engineering 163:421-3 My 23 '47

United States

Evolving policy on waterway subsidies. C. S. Duncan. Ry Age 122:494-7 Mr 8 '47

I.C.C. issues report on water regulation. Ry Age 122:201-3 Ja 18 '47

See also

Inland waterways corporation
New York state barge canal

WATERWORKS

Arizona sewage and water works meeting, Douglas, April 11-12. Water & Sewage Works 94:165-6 My '47

Construction of water-works structures. J. E. Munroe. N E Water Works Assn J 61: 160-74; Discussion. 174-80 Je '47

Fall meeting, New Jersey, A.W.W.A., Atlantic City, Nov. 7-9. Water & Sewage Works 94:27-8 Ja '47

Illinois section, A.W.W.A. 38th annual meeting, Chicago. Water & Sewage Works 94: 175-7 My '47

Kentucky-Tennessee section (A.W.W.A.) meets in Knoxville. Water & Sewage Works 93:474-8 D '46

Kingston upon Hull water undertaking, 1447-1947. il Engineer 184:384-5 O 24 '47

Maine water utilities association annual meeting, Portland, Feb. 11-12. Water & Sewage Works 94:89-91 Mr '47

Major projects; brief reports on status of construction operations. il Eng N 138:313-14 F 20 '47

Metropolitan water board; works in progress and constructed during 1946. Engineer 183: 15 Ja 3 '47

New Jersey section, A.W.W.A. mid-winter luncheon. Water & Sewage Works 94:102-3 Mr '47

New York state section, A.W.W.A. meeting, Plattsburg, Sept. 4. Eng N 139:361 S 11 '47

Operation of well supplies. R. W. Simpson. diag Water & Sewage Works 94:97-9 Mr '47

Pennsylvania water works operators 20th meeting, State College. Water & Sewage Works 94:365-9 O '47

Rocky Mountain section (A.W.W.A.) meets in romantic Santa Fe. Water & Sewage Works 93:483-4 D '46

Toronto water-works extensions; general description of the system with details of some outstanding features. W. Storrie. il 12 pls N E Water Works Assn J 61:1-29 Mr '47; Abstract. Water & Sewage Works 93:419-20 N '46; Discussion. N E Water Works Assn J 61:30-3 Mr '47

Water and sewage works reference and data section. bibliog il diags Water & Sewage Works 94:R1-276 Jl '47

Water system of the city of Philadelphia with augmented facilities. N. B. Jacobs. N E Water Works Assn J 61:151-9 Je '47

Water treatment and filtration plant at Chicago. E. E. R. Tratman. il diags Engineer 183:88-9, 112-14, 138-40 Ja 24-F 7 '47

Waterworks and sewerage construction; special section. flow sheet il maps diags Eng N 139:41-68 Jl 10 '47

Water works executive's views of 1946. W. R. LaDue. il diags Water & Sewage Works 94:1-10 Ja '47

Water-works systems; increase in Canada during the past quarter century. il Water & Sewage 85:3+ Ag '47

What has happened to water works construction? H. E. Jordan. Am Water Works Assn J 39:607-18 Jl '47

Wisconsin section, A.W.W.A. has silver anniversary; meeting, Green Bay, Nov. 15-17. Water & Sewage Works 94:19-24 Ja '47

See also

Aqueducts
Dams
Filters and filtration
Filtration plants
Hydrants
Pumping stations
Pumps
Reservoirs
Water distribution
Water purification
Water supply engineering

Accidents

Cause and prevention of accidents. H. F. Webb. Am Water Works Assn J 39:459-63 My '47

Accounting

A-B-C of depreciation. J. H. Murdoch, jr. Water & Sewage Works 94:237-44 Jl '47

Office procedure in a small water works. F. G. Gedge. Am Water Works Assn J 39: 543-6 Je '47

Simplified system of accounts for average municipal water works. R. Newsom. Am Water Works Assn J 39:1-22 Ja '47

Bibliography

Abstracts of water works literature. Published in monthly numbers of American water works association journal

Waterworks digest. Published in monthly numbers of Public works

Costs

Improvements to Bachman water purification plant, Dallas, Texas; unit prices. Eng N 137:892 D 26 '46

Index to projects covered. Eng N 138:651+ Ap 17 '47

Modernizing a pumping station saves money; Alpena, Michigan. H. F. Fetters. plan Pub Works 78:19-20 Je '47

Toronto's new filtration plant reduces chemical costs. N. J. Howard. il Water & Sewage 85:18+ F '47

Treatment plant operating costs. K. V. Hill. Am Water Works Assn J 39:151-6 F '47; Abstract. Water & Sewage Works 94:22 Ja '47

Water and sewage works needs of the United States; with cost tables. Water & Sewage Works 94:294-7 Ag '47; Same, without tables. il Civil Eng 17:479-80+ Ag '47

Water and sewage works projects; federal loans made between Oct. 15, 1946 and March 17, 1947 for construction plans; cost estimates; tabulation. Water & Sewage Works 94:135-6 Ap '47

Water and sewage works projects; federal loans made between March 17 and July 1 for construction plants; cost estimates; tabulation. Water & Sewage Works 94:299-300 Ag '47

Damage from air raids

Atomic bombing effects on Japanese water supply systems. il Pub Works 78:25-7 Ag '47

WATERWORKS—*Continued*

Damage from floods

See Waterworks—Flood damage

Directories

Directory of Canadian water-works systems. Water & Sewage 85:28+ Ag '47

Membership directory, committees, constitution and by-laws, American water works association. Am Water Works Assn J 38: 1-228 pt 2 N '46

Employees

Employee training and customer relations. E. E. Jacobson. Am Water Works Assn J 39:464-6 My '47

Indiana retirement fund for public employees. R. Teckemeyer. Am Water Works Assn J 38:1383-4 D '46

Outline for on-the-job training program for water department personnel. il diags Pub Works 78:38-40+ Jl; 38+ S '47

Relations with employees. W. H. Ogden. Am Water Works Assn J 39:42-5 Ja '47

Salaries and wages of water works managers, superintendents, and employees; discussion. Water & Sewage Works 94:21 Ja '47

Selecting, training and rating personnel. S. C. Casteel. Am Water Works Assn J 39:47-51 Ja '47

Significance of legislation forbidding strikes by public employees. W. R. LaDue. Am Water Works Assn J 39:844-54 S '47; Same. Water & Sewage Works 94:353-8 O '47

Training of water works employees with special reference to the Metropolitan water board; abstract. L. C. Whiskin. Am Water Works Assn J 39:807-8 Ag '47

Upgrading the water works industry. J. H. Murdoch, jr. Am Water Works Assn J 39: 863-8 S '47

Equipment

Aluminum for water works structures; with cost data. J. M. Perryman. il Am Water Works Assn J 38:1327-9 D '46

Care of power tools and equipment. D. M. Van Norman. Am Water Works Assn J 39: 515-19 Je '47

Classified index of products used in water-works and sewerage field. Water & Sewage Works 94:R2-12 Jl '47

Clinker remover for lime slakers. A. E. Howell. il plan diag Am Water Works Assn J 39:467-9 My '47

Emergency water treatment plant for Dickinson, N.D. R. Boehlke. Pub Works 77:25 N '46

Flow metering and controlling. C. G. Richardson. il diags Water & Sewage 85: 32-6+ Ap '47

Further extension of Ottawa waterworks may soon be urgently required. C. T. Heeney. il plan Water & Sewage 84:18-20+ D '46

Labor saving through duplicating with modern equipment. W. R. La Due. il plan Water & Sewage Works 94:332-3 S '47

Manufacturers and agents of sewerage and waterworks equipment; addresses; products index. Water & Sewage 85:144+ Ag '47

Negaunee modernizes its waterworks. J. B. Verhoek. il plan Pub Works 78:17-18+ My '47

Progress in automatic control. W. S. Mills. il diags Water & Sewage 85:21-6+ Jl '47

Testing and inspection of materials and equipment; Chicago water works system. H. P. Hagedorn and W. W. DeBerard. il Am Water Works Assn J 39:722-8 Ag '47

Triple sedimentation employed to condition culm laden water at Norristown, Pa. S. I. Zack. il plans Eng N 139:115-17 Jl 24 '47

Waterworks showplace in South Africa; Capetown's Steenbras filtration works. flow plans il Eng N 139:312-14 S 4 '47

Yuma and the Colorado river. C. G. Ekstrom. il Am Water Works Assn J 39:245-52 Mr '47; Abstract. Eng N 138:52 Ja 9 '47

Extension rules

Financing main extensions. D. D. Heffelfinger. Am Water Works Assn J 39:257-61 Mr '47

Water main extension policy; panel discussion. Water & Sewage Works 94:326 S '47

Finance

Adjusting rate structures to rising cost levels. L. R. Howson. Am Water Works Assn J 39:819-33 S '47; Correction. 39:1066 O '47; Same. Water & Sewage Works 94:307-14. 358 S-O '47; Abstract. Eng N 139:147 Jl 31 '47

Extensive program of water and sewage works for Ontario municipalities. A. E. Berry. il Water & Sewage 85:11-14+ Ja '47

Financial practices in administration of Canadian municipal sanitary works. Water & Sewage 85:4+ Ag '47

Financing improvements by revenue or general obligation bonds. W. S. Evatt. Am Water Works Assn J 39:331-6 Ap '47

Financing main extensions. D. D. Heffelfinger. Am Water Works Assn J 39:257-61 Mr '47

Joint administration and collection of water and sewer accounts; discussion. L. N. Thompson and others. bibliog Am Water Works Assn J 38:1347-55 D '46

Legislation for revenue bond financing; Los Angeles bonds for water and power. S. B. Robinson. Am Water Works Assn J 39: 1021-31 O '47

Organization and financing in Indiana. O. K. Jensen. Am Water Works Assn J 39:619-22 Jl '47

Recent revenue bond legislation. L. N. Thompson. Am Water Works Assn J 39: 1032-7 O '47; Abstract. Water & Sewage Works 94:324 S '47

Recent water and sewage works projects; federal loans made since July 1 for construction plans; tabulated by states. Water & Sewage Works 93:448-9 N '46

Water works annual reports. Am Water Works Assn J 39:110-14 Ja '47

See also

Water rates

Flood damage

Flooding of Lea Bridge station. il Engineer 183:261-2 Mr 28 '47

Flooding of the Lea Bridge works of the metropolitan water board of London. F. Wood. il Water & Sewage Works 94:172-4 My '47

Grounds

Power and water rates as affected by public demand; Spartanburg plant includes recreation park. R. B. Simms. il Water & Sewage Works 94:65-7 F '47

Interconnection

Mutual aid program for peacetime; New York state mutual aid program. E. Devendorf. Am Water Works Assn J 39:520-6 Je '47

Maintenance and repair

Preventive maintenance in a water purification plant. E. S. Hopkins and A. A. Bailey. il Pub Works 78:24-5+ Mr '47

Management

Applying business principles to water works operation; abstract. G. E. Arnold. Water & Sewage Works 94:359 O '47

Is joint administration of water and sewage works desirable? L. G. McNeice; W. M. Veitch and others. Water & Sewage 85:64-5+ O; 27-8+ N '47

Organization and financing in Indiana. O. K. Jensen. Am Water Works Assn J. 39:619-22 Jl '47

Practical water works operation data from Detroit. Pub Works 78:24-5+ S '47

Problems in the administration of water-works systems. A. E. Berry. il Water & Sewage 85:17-19+ Mr '47

Value of Public service commission control to municipal water works management; abstract. A. P. Kuranz. Water & Sewage Works 94:359-60 O '47

Water works extension problems of 1946. E. J. Taylor. Am Water Works Assn J 39:57-61; Discussion. N. T. Veatch. 61-4 Ja '47

Municipal ownership

Municipal authorities in Pennsylvania. J. D. Ray. Am Water Works Assn J 38:1356-9; Discussion. 1359-66 D '46

Municipal water works organization; committee report. bibliog Am Water Works Assn J 38:1273-84 N '46

WATERWORKS—Municipal ownership—*Cont.*
Municipal water works organization in Illinois. W. R. Gelston. Am Water Works Assn J 39:787-8 Ag '47
Municipal water works organization in Montana. A. L. Johnson. Am Water Works Assn J 39:783-6 Ag '47

Power

Diesel and gas engine equipment. A. M. Boehm. il Water & Sewage Works 94:379-83 O '47
Diesel engines in municipal usage. R. H. Morse, jr. Water & Sewage Works 94:18 Ja '47

Public relations

Approach to better public relations in the waterworks field. il Water & Sewage 85: 23-4+ F '47
Employee training and customer relations. E. E. Jacobson. Am Water Works Assn J 39:464-6 My '47
Good public relations; water works superintendent's responsibility to his community. N. T. Veatch. Water & Sewage Works 94: 130-2 Ap '47
Power and water rates as affected by public demand; Spartanburg plant includes recreation park. R. B. Simms. il Water & Sewage Works 94:65-7 F '47
Public relations in water and sewage treatment plants. W. A. Sperry. il Water & Sewage Works 94:29-32 Ja '47
Public relations in water utilities; discussion at Canadian section, A.W.W.A. Water & Sewage Works 94:212 Je '47
Public relations in water works; discussion. Water & Sewage 85:42+ S '47
Relations with customers. P. B. Niles. Am Water Works Assn J 39:41-2 Ja '47
Relations with the general public. E. P. Stewart. Am Water Works Assn J 39:45-6 Ja '47
This job of ours. W. R. La Due. Water & Sewage Works 94:sup66A-66B Jl '47
We work while you sleep! story of one waterworks chemist as told to Mr and Mrs John Q. Public. J. P. Millikin. Water & Sewage Works 94:341-2 S '47

Radio communication

Federal communications commission; rules governing stations in the utility radio service. Am Water Works Assn J 38:1398-407 D '46
Radio communication for water works. R. G. Ridgely. Am Water Works Assn J 39: 384 Ap '47

Rating

Numerical rating system for municipal water supplies. O. E. Brownell. Am Water Works Assn J 39:922-8 S '47

Records

Labor saving through duplicating with modern equipment. W. R. La Due. il plan Water & Sewage Works 94:332-3 S '47
Records, their value in water and sewage works. A. E. Clark. Water & Sewage Works 94:25-6 Ja '47
Water works annual report. M. P. Hatcher. Am Water Works Assn J 38:1385-6 D '46

Safety measures

Our oldest public utilities. H. F. Webb. il Nat Safety N 55:22-3+ Ja '47
Safety, an operating problem. H. F. Webb. Am Water Works Assn J 38:1387-91 D '46

Waste

Wastes from waterworks plants; abstracts of papers. P. D. Haney; H. R. Hall; W. W. Aultman. Eng N 139:252-3 Ag 21 '47

WATSON, John Duncan, 1860-1946
Sketch. por Engineer 182:495 N 29 '46

WATSON, Oliver
Topflight craftsman. por Inland Ptr 118:56 Mr '47

WATT, Robert W. 1893-
Sketch. por Nat Underw 51:18 Ja 16 '47

WATT hour meters
Bridge indicates right coil selection. G. N. Burkhart. diag Elec World 127:70+ Ap 26 '47
Compensated transformer loss; method for registering consumption along with copper and core losses. G. B. Schleicher. il diags Elec World 128:95-7 Jl 19 '47
Need expressed for versatile watthour meter. E. C. Goodale. diags Elec World 126:67-8 D 21 '46

Testing

Keeping meter records with business machines. H. W. Bruce. Elec West 97:58-9 D '46
Quality control in production testing of single-phase watthour meters. T. M. Wallis. il Gen Elec R 50:38-41 Ap '47
Watthour meter testing facilities improved. il Elec World News ed 127:28 Ja 11 '47

WATTMETERS
Coaxial load for ultra-high-frequency calorimeter wattmeters. W. R. Rambo. diag Inst Radio Eng Proc 35:827-9 Ag '47
Wide-band wattmeter for wave guide. H. C. Early. diags Inst Radio Eng Proc 34:803-7 O '46

WAVE guides
Broad-band wave-guide admittance matching by use of irises. R. G. Fellers and R. T. Weidner. diags Inst Radio Eng Proc 35: 1080-5 O '47
Conductivity of metallic surfaces at microwave frequencies. E. Maxwell. diags J Ap Phys 18:629-38 Jl '47; Correction. 18:928 O '47
Design of simple broad-band wave-guide-to-coaxial-line junctions. S. B. Cohn. diags Inst Radio Eng Proc 35:920-6 S '47
Electrostatic field of a point charge inside a cylinder, in connection with wave guide theory. C. J. Bouwkamp and N. G. de Bruijn. bibliog J Ap Phys 18:562-77 Je '47; Correction. 19:105 Ja '48
End plate and side wall currents in circular cylinder cavity resonator. J. P. Kinzer and I. G. Wilson. il pl Bell System Tech J 26: 31-79 Ja '47
Equivalent circuit for a plane discontinuity in a cylindrical wave guide. J. W. Miles. bibliog diags Inst Radio Eng Proc 34:728-42 O '46; Discussion. 35:792 Ag '47
Field of a coil between two parallel metal sheets. E. B. Moullin. diags Inst E E J 94 pt 3:78-84 Ja '47
Heating with microwaves; suggested methods of utilizing waveguides. J. Marcum and T. P. Kinn. il diags Electronics 20:82-5 Mr '47
High-speed waveguide switch. D. K. Bishop. il diags Wireless Eng 24:67-70 Mr '47
Mica windows as elements in microwave systems. L. Malter and others. diags RCA R 7:622-33 D '46
Microwave dielectric measurements. T. W. Dakin and C. N. Works. bibliog diags J Ap Phys 18:789-96 S '47
Microwave electronics; wave guides. J. C. Slater. Rs Mod Phys 18:459-67 O '46
Microwave measurements and test equipments. F. J. Gaffney. il diags Inst Radio Eng Proc 34:775-93 O '46
Precision measurement of impedance mismatches in waveguide. A. F. Pomeroy. bibliog il diags Bell System Tech J 26:446-59 Jl '47
Properties of ridge wave guide. S. B. Cohn. diags Inst Radio Eng Proc 35:783-8 Ag '47
Quarter wave coupled wave-guide filters. W. L. Pritchard. bibliog diags J Ap Phys 18: 862-72 O '47
Rectangular waveguide systems; bends, twists, corners and junctions. N. Elson. diags Wireless Eng 24:44-54 F '47
Resonant windows for vacuum seals in rectangular wave guides. M. D. Fiske. il diags R Sci Instr 17:478-83 N '46
Slow transverse magnetic waves in cylindrical guides. G. G. Bruck and E. R. Wicher. J Ap Phys 18:766-9 Ag '47
Standing wave meter; measures power reflections caused by mismatch at junction of waveguide components. H. E. Kallmann. il diags Electronics 20:96-9 Ja '47
Study of a certain type of resonant cavity and its application to a charged particle accelerator. E. S. Akeley. J Ap Phys 17: 1056-60 D '46

WAVE guides—*Continued*
$TM_{0,1}$ mode in circular wave guides with two coaxial dielectrics. S. Frankel. J Ap Phys 18:650-5 Jl '47
Transmission in waveguides; cross-section partly of solid dielectric. A. M. Woodward. bibliog diag Wireless Eng 24:192-6 Jl '47
Wave guides for radar; abstract. M. H. L. Pryce. Inst E E J 93 pt 1:459-60 O '46
Wave theoretical interpretation of propagation of 10-centimeter and 3-centimeter waves in low-level ocean ducts. C. L. Pekeris. bibliog Inst Radio Eng Proc 35: 453-62 My '47
Waveguide data. L. E. Sherbin. diags Electronics 20:122-4 Ja '47
Wide-band directional coupler for wave guide. H. C. Early. diags Inst Radio Eng Proc 34:883-6 N '46
Wide-band wattmeter for wave guide. H. C. Early. diags Inst Radio Eng Proc 34:803-7 O '46
See also
Radio conductors

Bibliography
Radio progress during 1946. Inst Radio Eng Proc 35:416-17 Ap '47

WAVE mechanics
Absorption of microwaves by uncondensed water vapor. J. H. Van Vleck. bibliog Phys R 71:425-33 Ap 1 '47
Application of a variational method to Milne's problem. J. LeCaine. bibliog Phys R 72: 564-6 O 1 '47
Calculation of the coordinate matrix elements for helium. W. Romberg. bibliog Phys R 71:706-11 My 15 '47
Calculation of the interaction between two particles from the asymptotic phase. C. E. Fröberg. Phys R 72:519-20 S 15 '47
Deflection of charged particles in a ferromagnetic medium. G. H. Wannier. diags Phys R 72:304-12 Ag 15 '47
Electromagnetic field in quantized space-time. H. S. Snyder. Phys R 72:68-71 Jl 1 '47
Electron waves in the magnetic dipole field of a neutron. C. L. Critchfield. Phys R 71:258-67 F 15 '47
General condition of Heisenberg for the *S* matrix. S. T. Ma. Phys R 71:195-200 F 1 '47
Heitler theory of radiation damping. J. M. Blatt. bibliog Phys R 72:466-77 S 15 '47
Higher angular momenta and long range interaction in resonance reactions. E. P. Wigner and L. Eisenbud. bibliog Phys R 72:29-41 Jl 1 '47
Interaction of γ-rays with matter and the spectroscopy of γ-radiation. G. D. Latyshev. bibliog diags Rs Mod Phys 19:132-45 Ap '47
Invariant form of quantum equations and the Schroedinger-Heisenberg parallelism. E. M. Corson. Phys R 71:200-8 F 1 '47
Long range tensor forces and the magnetic moment of the deuteron. H. Primakoff. bibliog Phys R 72:118-19 Jl 15 '47
Lower bounds for eigenvalues. R. J. Duffin. Phys R 71:827-8 Je 1 '47
Method for obtaining electronic eigenfunctions and eigenvalues in solids with an application to sodium. F. C. Von der Lage and H. A. Bethe. bibliog diags Phys R 71: 612-22 My 1 '47
Molecular coupling effects. J. G. Valatin. bibliog Phys R 71:458 Ap 1 '47
Momentum operator in wave mechanics. A. Wintner. Phys R 71:547-9 Ap 15 '47
Mutual magnetic interactions of electrons. H. H. Marvin. Phys R 71:102-10 Ja 15 '47
Normalization of characteristic differentials in continuous spectra. A. Wintner. Phys R 72:516-17 S 15 '47
Recurrence formulas for Coulomb wave functions. J. L. Powell. Phys R 72:626-7 O 1 '47
Relativistic wave equations. Harish-Chandra. bibliog Phys R 71:793-805 Je 1 '47
Remarks on Dr Ma's Redundant zeros in the discrete energy spectra in Heisenberg's theory of characteristic matrix. W. Opechowski. Phys R 70:772 N 1 '46
Resonance reactions. E. P. Wigner. Phys R 70:606-18 N 1 '46
Scattering of slow neutrons by bound protons; intermediate energies. P. R. Zilsel and others. Phys R 72:576-80 O 1 '47
Second quantization and representation theory. E. M. Corson. bibliog Phys R 70: 728-48 N 1 '46
Self-energy and interaction energy in Podolsky's generalized electrodynamics. A. E. S. Green. bibliog Phys R 72:628-31 O 1 '47
Stability and spectrum in the wave mechanics of lattices. A. Wintner. bibliog Phys R 72:81-2 Jl 1 '47
Theory of alpha-radioactivity. M. A. Preston. bibliog Phys R 71:865-77 Je 15 '47
Transition from classical to quantum statistics in germanium semiconductors at low temperature. V. A. Johnson and K. Lark-Horovitz. bibliog Phys R 71:374-5 Mr 15 '47
Two applications of the variational method to quantum mechanics. W. Kohn. Phys R 71:635-7 My 1 '47
Two notes on phase-integral methods. W. H. Furry. bibliog Phys R 71:360-71 Mr 15 '47
Unboundedness of quantum-mechanical matrices. A. Wintner. Phys R 71:738-9 My 15 '47
Variational method for asymptotic neutron densities. E. R. Marshak. bibliog Phys R 71:688-93; Discussion. B. Davison. 694-7 My 15 '47
Vector mesotron. J. H. Bartlett. Phys R 72: 219-24 Ag 1 '47
Weinstein's variational method. W. Kohn. bibliog Phys R 71:902-4 Je 15 '47

WAVE meters. See Wavemeters

WAVEMETERS
Method for calibrating microwave wavemeter. L. E. Hunt. diags Inst Radio Eng Proc 35:979-81 S '47
Standing wave meter; measures power reflections caused by mismatch at junction of waveguide components. H. E. Kallmann. il diags Electronics 20:96-9 Ja '47

WAVES
Method for obtaining quantitative information in towing basins. D. H. Jacobs. il diags R Sci Instr 18:523-4 Jl '47
See also
Radio waves
Shock waves
Sound waves

WAXED paper. See Paper, Waxed

WAXES
Aerial oxidation of Scottish shale wax. A. E. J. Pettet and W. S. Greaves. diags Soc Chem Ind J 66:126-30 Ap '47
Colored shoe polishes. M. A. Lesser. bibliog Soap & San Chem 23:116-17+ S '47
Decolorization of petroleum waxes by adsorbent percolation. W. A. Johnson. bibliog diags Pet Processing 2:673-4+ S '47
Details of German chemicals; surface-active agents, synthetic waxes, etc. Chem Age (Lond) 56:614-15 My 10 '47
Determination of saponification value of natural waxes. B. H. Knight. Anal Chem 19: 359 My '47
Determining tack of self polishing wax films; Touch controller. M. Fuld. il diags Soap & San Chem 23:126-7 F '47
Electron microscope studies; bright-drying wax dispersions. D. Schoenholz and C. S. Kimball. il Soap & San Chem 23:131+ Ag '47
Expanding use of petroleum waxes keeps industry busy meeting demand. G. R. McKee. Nat Pet N 39:36 S 10 '47
Hard wax recovery from sugar. Oil Paint & Drug Rep 151:4+ Je 23 '47
Microcrystalline wax, Sunwax 1290. il Chem Ind 60:628 Ap '47
New Fischer techniques for studying oils and waxes. H. M. Bigelow. diag Chem & Eng N 25:2366-7 Ag 18 '47
New wax substitutes. E. G. Thomssen. Soap & San Chem 22:83 D '46
Oil and waxes from coal. C. C. Hall. Engineering 162:448 N 8 '46
Petroleum products in ceramic processing operations. H. T. Van Horn. Am Cer Soc Bul 26:229-31 Ag 15 '47
Pigments can improve solvent type waxes. C. S. Glickman. il Chem Ind 61:223+ Ag '47

WAXES—*Continued*
Production of waxes from California crudes. R. A. David and P. M. Huemmer. flow sheet il Chem Eng Prog 43:174-6 Ap '47
Solvent wax progress; abstract. J. Kahn. Soap & San Chem 22:171 D '46
Tailor-made waxes; Abril corporation plans for plant to be built in New Jersey. Chem Ind 60:766-7 My '47
Wax coating frozen foods. il Food Ind 19: 453+ Ap '47
Wax from British lignite and peat. W. G. Cass. Chem & Eng N 24:3391 D 25 '46
Wax from peat; new Edinburgh company formed. Chem Age (Lond) 56:293 Mr 8 '47
Wax from sugarcane. Bsns W p40-1 Jl 5 '47
Wax from sugarcane, by new process holds promise. Paint Oil & Chem R 110:22+ Jl 10 '47; Chem & Eng N 25:2222-3 Ag 4 '47; Chem Ind 61:210-11 Ag '47
Waxes in industry; abstract. A. H. Woodhead. Paint Oil & Chem R 110:42 Je 12 '47
See also
Paraffin
Petroleum refining—Wax removal

Statistics
Oils, fats and waxes. Published in weekly numbers of Oil, paint and drug reporter
Wax industry matches plastics growth. C. M. Blair. Barron's 27:31 S 1 '47

Testing
Effect of oil on plastic properties of petroleum waxes and development of plasticity tests. W. L. Nelson and L. D. Stewart. Oil & Gas J 46:121 Je 28 '47

WAYNE university, Detroit
Industrial packaging institute. Mod Packaging 21:206 S '47

College of medicine
Wayne university medical center, Detroit. il plans Arch Rec 101:124-9 Je '47

WAYNESBORO, Pennsylvania
Stock exchange alfresco; Leslie A. Bohn, auctioneer. Fortune 35:148+ My '47

WEALTH
See also
Economics
Income
Inheritance and succession

WEATHER
Forecasting the maximum days gas sendout. T. King. Gas Age 99:21-3 Mr 6 '47
See also
Cold
Hot weather
Humidity
Meteorology, Aeronautic
Rain and rainfall
Snow

Business aspects
Eye to weather; government bureau offers climatological service to business. Bsns W p50+ Mr 15 '47
Weather analysis; aid to business planning; applied climatology. W. C. Jacobs. il Dun's R 55:15-18 Mr '47
Weather bureau service to retail businesses. C. B. Carney. il Dom Comm 35:13-16 Mr '47

WEATHER and aviation. See Meteorology, Aeronautic

WEATHER forecasting
Future role of rapid computing in meteorology; abstract. J. von Neumann. Aeronautical Eng R 6:30 Ap '47
See also
Radio meteorographs

WEATHER forecasts
At last someone does something about the weather; Harrisburg railways utilized teletyped weather reports. il map Bus Transportation 26:60-1 Mr '47
Its profitable to watch weather. P. Eastman. Am Bsns 17:22-3+ Ja '47
Meteorological engineering aids highway transportation. C. C. Bates and A. H. Glenn. il diag Civil Eng 17:606-9+ O '47
Weather and electric power systems. J. S. Forrest and others. bibliog il map Inst E E J 93 pt 1:161-76 Ap '46; Discussion. maps 94 pt 1:49-53 Ja '47
Weatherproofed communications; CAA's radio teletype weather information for Alaskan aviation. L. LeKashman. il Aero Digest 53:56+ N '46

WEATHERING
Degradation of untreated cotton fabrics exposed to weather in a sub-tropical climate. J. D. Dean and R. K. Worner. bibliog il Am Dyestuff Rep 36:405-10+ Jl 28 '47
Effect of weathering on insulation resistance of plastics; abstract. L. H. Campbell and others. Product Eng 18:132-3 F '47
Nature provides lab for maintenance studies on hydroelectric plant structures; weathering of concrete in southern California. R. W. Spencer. il Civil Eng 17:132-5+ Mr '47
Weathering machine correlation in the Cleveland club area. il Paint Oil & Chem R 109: 14+ N 28 '46

WEAVER'S knot. See Knots and splices

WEAVING
Automatic weaving; abstract and discussion. F. I. Sharpe. Textile Inst J 38:P41-2 Ja '47
Developments in weaving. A. Glover. Textile Inst J 38:P300-6; Discussion. P306-9 Ag '47
Increased production per man hour in weaving with particular reference to automatic looms. T. Joy. Textile Inst J 38:P434-6; Discussion. P436-41 S '47
Many factors are involved in picker-stick economy. H. E. Wenrich. il Textile World 97:124-5 Ag '47
Shape of box binders can cause much loom trouble. diags Textile World 97:125+ F '47
Slasher solves problem in warping monofilaments. A. Frantz. Textile World 96: 252+ N '46
Some developments in machinery for woven smallwares. W. Holt. il Textile Inst J 38: P381-9 Ag '47
Thoughts on a modern fancy loom. L. Armstrong. Textile Inst J 37:P519-21 N '46
See also
Cotton weaving
Looms
Nylon weaving
Rayon weaving
Textile fabrics
Woolen and worsted weaving

WEBB institute of naval architecture
Webb institute of naval architecture moves to Long Island. S. M. Robinson. il plans Marine Eng 52:56-62 O '47

WEBSTER, Edward M. 1889-
Portrait. Inst Radio Eng Proc 34:827 N '46

WEDDING gowns
Fanfare for fabric; Princess Elizabeth's wedding. Textile Col 69:29+ O '47

WEEDS

Control
Chemical weed killers. L. Southwick. il Chem Ind 60:786-9 My '47
Determination of 2,4-dichlorophenoxyacetic acid and its compounds in commercial herbicides. H. A. Rooney. Anal Chem 19: 475-6 Jl '47
2,4-Dichlorophenoxyacetic acid; effective agent for the control of weed growth. Pub Works 78:22 My '47
Good lawns help sell houses; combination lawn food and weed control compound. il Am Bld 69:148 Je '47
How advertising introduces an entirely new product; weed killer, 2,4-D. E. M. Housman. il Ptr Ink 218:40-1+ Mr 21 '47
Old and new rodenticides and herbicides have their places. L. G. Arrington. Dom Comm 35:37-41 Je '47
Plant hormones with special reference to the selective weedkillers; abstract. E. Holmes. Chem & Ind p323-4 Je 7 '47
Roadside weed spraying. C. W. Magee. il Roads & Bridges 85:128+ Ag '47
Toxicity of 2,4 dichlorophenoxyacetic acid for experimental animals. E. V. Hill and H. Carlisle. bibliog J Ind Hygiene 29:85-95 Mr '47
Use of 2,4-D weed killers on woody weeds in Cuba. K. V. Thimann. Science 106:87 Jl 25 '47

WEEDS—Control—*Continued*
Weed chopper built for pipe line work. O. C. Irvine. il Pet Eng 18:202 Ja '47
See also
Growth inhibiting substances
WEEKLY newspapers. See Newspapers—Weekly newspapers
WEGENER hypothesis. See Continents
WEIGHING
Conveyoflo meter, new development. il Chem Eng Prog 43:sup 18 Ag '47
Positive weight control; electronic device flashes signals to govern adjustment of filling machine; Lipton tea co. il Mod Packaging 20:130-4 Mr '47
Weighing the converted C-46. J. R. Duppstadt. il Aero Digest 54:48+ F '47
See also
Balances
Coal weighing
WEIGHING machines
Continuous weigher. il Chem Eng 54:154+ O '47
Electronic check weigher. il Chem Eng 54: 139-40 Ag '47; Correction. il 54:156 S '47
Electronic weighing machine. il Mod Packaging 20:156 Jl '47
Hy-Tra-Lec weighing machine. G. M. Tracy. diag Mech Eng 69:312 Ap '47
Weighing coal in the power plant. W. G. Hudson. diags Power Pl Eng 51:101-3 S '47
WEIGHT lifting
Body building; physical fitness is a young business with three million paying customers. il Fortune 35:94-101+ F '47
WEIGHTS and measures
Areas and weights of magnesium-alloy rods and bars; data sheet. Mach 53:225 Jl '47
Bus bar weights; table. Power Pl Eng 51:104 F '47
Determining the weight of a spoked fly wheel; data sheet. diag Foundry 75:140 My '47
Factors affecting constancy of analytical weights. A. Craig. Anal Chem 19:72 Ja '47
Formulas for determining the weights of castings; data sheet. diags Foundry 74:135-6 S; 171-2 O; 137-8 N; 167-8 D '46; 75:121-2 Ja; 121-2 F; 151-2 Mr; 175-6 Ap; 139 My '47
International committee on weights and measures meeting, Sèvres and Paris, Oct. 22-29, 1946. Ind Stand 18:42 F '47
Report of the thirty-second National conference on weights and measures, Sept. 26-28, 1946. U S Nat Bur Stand Misc Pub M186:1-126; pa 40c Supt. of doc. '47
Weight of steel tubing; table. W. L. Nelson. Oil & Gas J 45:113 D 14 '46
Weights of magnesium alloy sheets and plates; data sheet. Mach 53:211 Ag '47
Weights per cubic foot of dry chemicals used in water and sewage works; table. Water & Sewage Works 94:R64 Jl '47
See also
Balances
Electric measurements
Gages
Measuring instruments
Metric system
Specific gravity
WEIL'S disease. See Leptospirosis
WEINSTEIN, David Harold
Weinstein's variational method. W. Kohn. bibliog Phys R 71:902-4 Je 15 '47
WEIRS (measuring)
Charts for capacity of 60° and 90° V-notch and rectangular weirs. Water & Sewage Works 94:R272-3 Jl '47
Hydraulics for the practical water works man; flow measurement by use of weirs. R. W. Angus. diags Water & Sewage Works 94:337-40 S '47
Measurement of nonviscous liquids by sharp-edged V-notched weirs; chart. Oil & Gas J 46:151 Je 28 '47
Storm run-off in open sewers and ditches can be accurately measured by weirs. W. B. Hart. bibliog diags Pet Processing 2:31-4 Ja '47
WEISBERG, Tilly
Logical Miss Tilly; Flotill canned foods. por Bsns W p56-7 Mr 1 '47
WEISER, Dean Harry Boyer, 1887-
Sketch. por Chem & Eng N 25:3062 O 20 '47
WELDERS
Health survey of shipyard welders. Safety Eng 94:48-9 S '47
See also
Welding—Hygienic aspects
Training
Welding trade school installs several new machines; Hobart trade school; illustrations with text. Iron Age 159:121 Je 5 '47
WELDING
American welding society, annual meeting, Atlantic City; abstracts of papers. Iron Age 158:59-63 N 28 '46
Causes and prevention of welding defects. F. S. Dever. il Iron Age 159:50-3 Ap 17 '47
Equipment and design; proper evaluation and comparison of riveting, casting, and welding. C. O. Brown. Ind & Eng Chem 39:sup 81A-82A Ag '47
Evolution of Diesel engine block weldment design and fabrication. J. W. Owens. il diags Welding J 26:240-7 Mr '47
Examples of various welding designs and techniques; drawings. Product Eng 18:130-1 Je '47
Expansion and contraction; general theory and basic control procedures. R. B. Aitchison. il diags Welding J 25:1195-202 D '46
Extending use of welding. C. W. Brett. il Textile Inst J 38:P24-6 Ja '47
Few observations on solid phase bonding. G. Durst. diags Metal Prog 51:97-101 Ja '47
Fine silver welded tubing. J. G. Henderson. Product Eng 18:160 Je '47
Fixtures make welders flexible; illustrations with text. E. Reilly. il Am Mach 90:104-7 D 19 '46; 91:74-5 Ja 2; 84-5 Ja 30 '47
Fusion-welded boiler on D.&H. locomotive; construction, inspection, repairs, etc. G. S. Edmonds. il Mech Eng 68:619-21 Jl '46; Discussion. J. G. Adair. 68:1085 D '46
How to clean welds. T. L. Adas. il Iron Age 159:44-6 F 27 '47
How to weld lead pipe. L. S. Bowser. il diag Heating-Piping 19:91-2 S '47
Improved welding techniques increase use of radiant heating. il Civil Eng 17:396 Jl '47
Industry embraces weldments. E. L. Cady. il Sci Am 175:245-8 D '46
Integral bosses for pressure vessels. H. L. Anthony and H. P. Schane. il diags Welding J 26:849-59 O '47
Jigs and fixtures for automatic fusion welding. E. D. Morris and L. J. Berkeley. il diag Welding J 26:332-7 Ap '47
Locomotive boilers; welded construction. J. Partington. il Welding J 26:1183-5 D '46
New equipment. il Iron Age 159:69-74 Ja 23 '47
Nickel and high nickel alloys; joining practices. N. E. Woldman. Materials & Methods 24:1486-7 D '46
Powder welding with a new flame tool; Powder weld co. Steel 119:108 D 30 '46
Production welding of freight cars on A.C.F. assembly lines; illustrations with text. Ry Age 123:188-9 Ag 2 '47
Reducing welding cost with jigs. il diags Sheet Metal Worker 37:33-5 N '46
Ryan welding innovations. W. P. Brotherton. il Welding J 26:323-6 Ap '47
Technical papers presented at the National metal congress sessions of American welding society; abstracts. Steel 121:104+ N 3 '47
Technical progress in metalworking; joining and welding. Steel 120:226+ Ja 6 '47
Temperature chart for soldering, brazing and welding processes; reference book sheet. R. C. Hitchcock. Product Eng 18:171 O '47
34th annual review number. il Am Mach 91: 174-9 Ja 16 '47
Welded brake straps for excavators. W. C. Black. il diags Welding J 26:494-6 Je '47
Welded construction. Mech Eng 68:1082-4 D '46
Welded design simplifies motor construction. il Iron Age 159:63-4 Mr 20 '47
Welding and other fabrication methods for Hastelloy alloys. C. G. Chisholm. il diags Welding J 25:1179-83 D '46
Welding in 1946. H. E. Linsley. bibliog il Iron Age 159:166-71 Ja 2 '47
Welding in old Mexico. F. H. Berry. il Welding J 26:16-18 Ja '47

WELDING—*Continued*

Welding in power stations. M. P. Henzell. il diag Elec R (Lond) 140:907-8 My 30 '47

Welding in the development of jet propulsion engines; abstract. H. E. Lardge. Engineering 164:366 O 17 '47

Welding in the iron foundry. H. E. Schultz. il Foundry 75:78-80+ O '47

Weldments; assemblies or subassemblies made by welding. E. L. Cady. il diags Materials & Methods 25:101-16 F '47

When metal atoms wander. E. L. Cady. il diag Sci Am 177:15-17 Jl '47

Work flow speeds job-shop welding; American welding & manufacturing co. il plan Am Mach 91:147-9 Je 19 '47

See also

Airplanes—Welding operations
Aluminum—Welding
Brazing
Cast iron—Welding
Electric welding
Electric welding, Arc
Hard facing
Magnesium—Welding
Manipulators, Welding
Oxyacetylene welding
Piping (power plants)—Welding
Shipbuilding—Welding operations
Steel—Welding
Steel, Structural—Welding
Steel construction—Welding

Bibliography

Current welding literature. Welding J 26:29, 35 Ja '47 [cont monthly]

Failures

Announcement of final report of Board to investigate design and methods of construction of welded steel merchant vessels. H. F. Johnson. Welding J 26:36-7 Ja '47

Correlated brittle fracture studies of notched bars and simple structures. C. W. MacGregor and others. bibliog il diags Welding J 26:sup50-6 Ja '47; Discussion. W. P. Roop. 26:sup333-4; Reply. sup357 Je '47

Crack sensitivity of chromium-nickel stainless weld metal. R. D. Thomas, jr. il Metal Prog 50:474-9 S '46; Discussion (Chemical composition of austenitic welding electrodes). R. K. Lee. 51:445-7 Mr '47

Design and methods of construction of welded steel merchant vessels; final report of Board of investigation. il plans diags Welding J 26:569-619 bibliog(53 titles, p618-19) Jl '47; Abstract. Marine Eng 52:67-8 S '47

Fatigue tests on some spot-welded joints in aluminum alloy sheet materials. H. J. Grover and L. R. Jackson. bibliog il diags Welding J 26:sup215-32 Ap '47

Field erected pressure vessels. F. L. Plummer. bibliog il diag Welding J 25:1081-9 N '46

Influence of geometrical restraint and temperature on the toughness and mode of rupture of structural steel. A. R. Anderson and A. G. Waggoner. il diags Welding J 25:sup789-801 N '46

Some unusual features encountered in investigating cracked welds in 35/15 magnesium retorts. H. J. Nichols. il Welding J 26:881-4 O '47

Hygienic aspects

Health survey of shipyard welders. Safety Eng 94:48-9 S '47

Portable welding fume exhauster. il Engineer 182:401 N 1 '46

Study of pneumonia in shipyard workers, with special reference to welders. M. F. Collen. bibliog J Ind Hygiene 29:113-22 Mr '47

Patents

Abstracts of current welding patents. V. L. Oldham. Welding J 24:1220+; 25:80+, 178+, 282+, 372+, 480, 668+, 784+, 896+, 1014+, 1168, 1264; 26:86, 169-70, 280, 370, 470+, 554, 658, 744+, 826, 969 D '45-My, Jl '46-O '47

Safety measures

Portable weld fume exhauster has filter and spark arrestor; patent. diag Pet Processing 2:187 Mr '47

Safety-weld coupling on pipe-line maintenance work. J. B. Smith. il diags Oil & Gas J 46:193-4+ S 20 '47

Standards

What changes to improve welding codes and specifications? il diags Product Eng 17:81-4 D '46

Stresses

Atom smasher tank stresses as measured by SR-4 strain gages. T. F. Hengstenberg. il diags Welding J 26:sup363-6 Je '47

Biaxial stresses in rigid vessel simulated in notched tension coupon. G. Brewer. il diags Metal Prog 51:91-6 Ja '47

Control of welding stresses by welding sequence. P. Ffield. bibliog il diags Welding J 25:1109-22 N '46

Directional welding to minimize or eliminate distortion in weldments and control residual stresses. J. Holt. il diags Welding J 26:885-8 O '47

General corrosion and stress corrosion of spot-welded magnesium alloy sheet. W. F. Hess and others. bibliog il diags Welding J 26:sup539-44 S '47

Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup372-432 Jl '47

Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog(92 titles) il diags Welding J 25:sup400-12; 26:sup26-49 Jl '46, Ja '47

Recent trends in concepts of design for welded steel structures. L. Grover. il diags Welding J 25:1091-108 N '46; Discussion. G. M. Boyd. 26:693-5 Ag '47

Redistribution of residual welding stresses by tensile loading along a Unionmelt weld joining two 3-ft. x 12-ft. x 1-in. plates. J. L. Meriam and others. il diags Welding J 25:sup697-9 O '46; Discussion. 26:sup127-8, sup 191-2 F-Mr '47

Residual stresses in welded structures; report of an investigation. W. M. Wilson and C. Hao. il diags Ill U Eng Exp Sta Bul 361:1-78 '46 (pa 75c); Same. Welding J 26:sup 295-320 My '47

Shrinkage and distortion of welded joints. G. E. Claussen. diags Welding J 26:sup519-29 S '47

Some metallurgical aspects of carbon steel spot welding. J. Heuschkel. bibliog il diags Welding J 26:sup560-82 O '47

Stress investigations of flat welded-in heads. H. M. Spring, jr. il diags Mech Eng 69: 482-4 Je '47

Variation of longitudinal residual strain through the thickness of a 1-in. Unionmelt weld. J. L. Meriam and others. diags Welding J 25:sup844-7 D '46

X-ray diffraction study of the effect of residual compression on the fatigue of notched specimens. J. T. Norton and others. bibliog il diag Welding J 25:sup729-35 N '46

Testing

Effect of stress relief heat treatment on the technical properties of structural steels and structural elements. O. Graf. diags Welding J 26:sup517-18 S '47

Failures in guided bend qualification test often due to high-tensile pipe. L. K. Stringham. il diag Welding J 26:784-5 S '47

Magnetic particle inspection of weldments; report of conference. S. L. Henry. il Metal Prog 52:88-90 Jl '47

Refined techniques for magnetic particle inspection of welds presented at Chicago conference, May 8-9, Steel 120:91+ My 26 '47

Strength of welded joints at low temperatures and the selection and treatment of steels suitable for welded structures. O. Graf. bibliog il diags Welding J 26:sup508-17 S '47

Welding quest. W. L. Warner. Welding J 26:sup253-6 Ap '47

X-ray inspection

Inspection of pipe-line welding by radiographic methods. W. W. Offner. il Oil & Gas J 46:180-1 S 20 '47

WELDING—X-ray inspection—*Continued*
Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog(92 titles) il diags Welding J 25:sup400-12; 26: sup26-49 Jl '46, Ja '47
Radiography as a control for welding joints in pipe lines. R. G. Rhoades. Welding J 26:497-8 Je '47
Radiography of spot welds in various sheet gages and dissimilar gage combinations. R. C. McMaster and others. bibliog il Welding J 26:19-29 Ja '47
X-ray examination of butt welds. W. D. Garrick. il diags Engineering 164:404-7 O 24 '47

WELDING, Electric. See Electric welding

WELDING, Oxyacetylene. See Oxyacetylene welding

WELDING, Subaqueous. See Electric welding, Arc—Subaqueous welding

WELDING manipulators. See Manipulators, Welding

WELDING research
Contribution to the study of expansion and contraction. P. Berthet. diags Welding J 26:sup370-1 Jl '47
Effect of welding technique on brittle transition temperature. N. Grossman and P. R. Shepler. bibliog il diags Welding J 26: sup321-31; Discussion. W. P. Roop. 332 Je '47
Flakes in welds. M. Lefevre. bibliog il Welding J 26:sup57-64 Ja '47
Investigation of beams with butt-welded splices under impact. W. J. Krefeld and others. bibliog il diags Welding J 26:sup372-432 Jl '47
Office of naval research. H. G. Bowen. Welding J 26:489-93 Je '47
Pressure welding of light alloys without fusion; work undertaken for Joint committee on recrystallisation welding. R. F. Tylecote. bibliog il diags Welding J 26:sup88-103 F '47
Ship welding research. il Engineer 184:277-8 S 19 '47
Some tests of large welded structures. E. P. DeGarmo and others. il plans diags Welding J 26:sup257-67 My '47
Transverse shrinkage of welds; statistical study. F. Campus. diags Welding J 26: sup485-8 Ag '47

WELDING research council. See Engineering foundation—Welding research council

WELDING rods
Extruded powder metal welding rods. F. C. Kelley and F. E. Fisher. il diags Iron Age 158:68-72 D 19 '46
How to select wear resisting alloys for welding; engineering data sheet. J. A. Cunningham. Machine Design 19:139-42 Ja '47
Welding rod casting machine. il Iron Age 158:55 N 21 '46

WELDING shops
Maintenance weldry. C. E. Hook. Welding J 26:915-17 O '47
Repair procedures in a production weld shop. O. E. Brown and C. R. Causey. il diag Iron Age 159:60-3 Je 19 '47

Equipment
Distribution system for welding current helps to keep floor clear of cables. V. Starr. il Pet Processing 2:418 Je '47

WELFARE work in industry
Employee services; Powell River company. J. F. Flett. il Pulp & Pa of Can 48:55-61 Je '47
How practical personnel men think the labor law will work; welfare funds. W. G. Caples. Factory Management 105:93-4 S '47
This success was built on quality competition, not price; a good product, good labor relations, good distribution, Arnold bakers, inc. C. J. Swan. il Ptr Ink 219:46-7 Ap 25 '47
Welfare at issue; unions demanding insurance plans in new contracts. Bsns W p88+ F 1 '47
Welfare; problem and opportunity. il Coal Age 52:74-7 Je '47
Worker security next big union objective; health and welfare insurance. Factory Management 105:74-8 F '47

See also
Company towns
Day nurseries
Employees' benefit plans
Employment management
Employment systems
Insurance, Group—Employees' insurance
Lunches, Employees'
Medical service, Industrial
Pensions, Industrial
Profit sharing
Recreation
Saving
Unemployment—Relief measures

WELL liners. See Petroleum—Well liners

WELLS
Chemical cleaning of porous concrete wells; Wood River refinery. G. N. Andrews. Am Water Works Assn J 39:729-33 Ag '47
Équipment rationnel d'un puits de captage à haut rendement dans les nappes alluvionnaires. A. Vibert. diag Génie Civil 124: 250-2 Jl 1 '47
Experimental observations on grouting sands and gravels; preventing salt water intrusion in wells. A. Machis. il diags Am Soc C E Proc 72.1203-27 N '46; Discussion. 73: 251-2, 387-8, 936-40 F-Mr, Je '47
Horizontal drilling; new strategy for working underground. il diags Fortune 36:96-101 S '47
Induced infiltration supplies most productive well field; use of Ranney water collectors; Wabash River ordnance works. R. C. Kazmann. il diag Civil Eng 16:544-5 D '46
New water field development at Ambridge, Pa. E. C. Taggart. Am Water Works Assn J 39:750 Ag '47
Operation of well supplies. R. W. Simpson. diag Water & Sewage Works 94:97-9 Mr '47
Review of ground water collection and development methods. J. H. Adamson, jr. bibliog Am Water Works Assn J 39:739-46 Ag '47
Unsafe water wells; abstract. L. T. Watry. Am Water Works Assn J 38:1317 N '46
Useful life of water wells; panel discussion. J. C. Harding and others. Am Water Works Assn J 39:32-40 Ja '47
Vertical relief wells reduce uplift on Sardis and Fort Peck dams. il diags Eng N 139: 246-50 Ag 21 '47
Vertical water velocity in deep wells. C. R. Erickson. diags Am Water Works Assn J 38:1263-9; Discussion 1269-72 N '46
Well cleaning and rehabilitation. H. P. Wenrick. Am Water Works Assn J 39:380-4 Ap '47; Same, Water & Sewage Works 94: R107-8 Jl '47
Well water conservation at Pan American refining corporation, Texas City refinery. P. Hurd. il diags Pet Refiner 25:132-4 D '46
Well-water systems in Canadian municipalities. il Water & Sewage 85:12+ Ag '47

See also
Artesian wells
Gas, Natural
Petroleum—Well drilling
Water, Underground

WELLS, Artesian. See Artesian wells

WELP, George L. 1890-
Personalities in industrial advertising. por Ind Marketing 31:87 N '46

WELSBACH corporation
Bonds offered. Comm & Fin Chr 166:860 S 1 '47

WERLE, Edward C.
Change at New York curb exchange. por Bsns W p72 F 22 '47

WEST
Why the West expands. F. T. Lerchfield. Elec West 98:90-2 Je '47

Economic conditions
New American market. Bsns W p43-52 Ap 12 '47

Industries and resources
Far West; its growth and industrial expansion. Index 27 no 2:23-35 [Je] '47
New American market; the far West. Bsns W p43-52 Ap 12 '47 [reprints 20c]
New American market; the farm West. il Bsns W p65-72 S 27 '47 [reprints 20c]
Trend of postwar western manufacturing. Elec West 97:77 O '46

WEST coast airlines, inc.
Aerial bus line. R. Bloomberg. il Air Transport 5:21-3 Ap '47
Stock offered. Comm & Fin Chr 165:2182 Ap 21 '47

WEST disinfecting company
West Disinfecting. Soap & San Chem 23: 35-7+ S '47

WEST INDIES, British
Federation for the West Indies. Economist 153:447-8 S 13 '47
West Indian conflicts. Economist 153:328 Ag 23 '47
See also
Grenada
Jamaica

WEST INDIES, Netherlands
Economic conditions
News by countries. For Comm W 25:32 D 21 '46; 28:19 S 27 '47

WEST POINT military academy. See United States military academy, West Point

WEST VIRGINIA
See also
Charleston, West Virginia—Industries
Coal mines and mining—West Virginia

WEST VIRGINIA coal and coke corporation
Mechanized mining boosts profit. Barron's 27: 41 Ap 21 '47

WEST VIRGINIA pulp and paper company
Selected stocks. Mag of Wall St 80:486 Ag 2 '47

WEST VIRGINIA water service company
Stock offered. Comm & Fin Chr 164:3193 D 16 '46

WESTERN air lines, inc.
Down to earth; T. C. Drinkwater pulls his Western air lines out of red. Bsns W p31-2 S 13 '47
Files amended registration statement, etc. Comm & Fin Chr 165:380 Ja 20 '47
Major CAB policy test seen in Western's Denver route sale. Aviation N 7:9 Mr 17 '47
Western offered $4.5 million loan. Aviation N 7:6 Je 30 '47
Western-United route deal influences finance program. Aviation N 7:23 Mr 31 '47

WESTERN and southern life insurance company
Western and Southern mutualizes. Spectator (Life ed) 154:27-30 Ja '47

WESTERN electric company
Annual report. Comm & Fin Chr 165:1775 Mr 31 '47

WESTERN gold mines, inc.
Stock offered. Comm & Fin Chr 166:1527 O 13 '47

WESTERN insurance bureau
Annual meeting, French Lick, Ind. Nat Underw 51:3 Je 12; 6 Je 19 '47

WESTERN Maryland railway
Western Maryland hoards cash for 1952 big maturity; railroad's good earnings record should facilitate $45 million refunding. M. Halpern. Barron's 27:31 O 6 '47

WESTERN metal congress
Congress and exposition, 5th, Oakland, Calif. March 22-27. Iron Age 159:75-7+ Ap 10 '47; Steel 120:86-7+ Mr 31 '47
Metal congress features wartime processes. il Chem & Eng N 25:1116-17 Ap 21 '47
Metals show interest demonstrates Pacific Coast's industrialization. E. Walker. il Ind Marketing 32:51+ My '47

WESTERN Pacific railroad
ICC disapproves bond application. Comm & Fin Chr 165:727 F 3 '47

WESTERN petroleum refiners association
Annual meeting, 35th, San Antonio, March 24-26. Oil & Gas J 45:61-2 Mr 29 '47; Nat Pet N 39:9-12 Ap 2 '47; Pet Refiner 26:171-2+ Ap '47; Chem & Eng N 25:1044 Ap 14 '47

WESTERN society for clinical research
Organization meeting, San Francisco, Nov. 1-2. Science 104:542 D 6 '46

WESTERN society of engineers
Annual meeting, 77th, Chicago, June 3. Western Soc E J 51:103-14 S '46
Year book, containing the constitution, by-laws, membership roster, and the administrative and operating organization. Western Soc E J 51:1-81 pt 2 S '46

WESTERN underwriters association
Annual meeting, Asheville, N.C. East Underw 48:1+ Ap 18 '47; Nat Underw 51:1+ Ap 17; 3+ Ap 24 '47
Glimpses of four secretaries. C. M. Cartwright. Nat Underw 51:2+ S 18 '47
Semi-annual meeting, Manchester, Vt. Nat Underw 51:1+ S 18 '47

WESTERN union telegraph company
New profit potentials for communication companies. W. Beecher. Mag of Wall St 80: 321+ Je 21 '47
Public ownership proposed for Western Union. Pub Util 39:167 Ja 30 '47
$60 million future; company will spend that much to modernize and restore earning power. C. F. Horlacher. Barron's 27:22 My 12 '47

WESTINGHOUSE, George, 1846-1914
Interdependence, then and now; Westinghouse's contribution to progress. G. A. Price. por Edison Elec Inst Bul 14:351-2+ O '46
Railroads mark centenary of George Westinghouse's birth. Comp Air Mag 51:303 N '46

WESTINGHOUSE, George, award in engineering education
George Westinghouse award. J Eng Educ 37: 274 N '46
George Westinghouse award, Benjamin Richard Teare, jr. J Eng Educ 38:6-8 S '47

WESTINGHOUSE, George, science writing award
A.A.A.S. announces writing award fund. Ind Marketing 31:118 N '46
$1,000 prize will be presented to James Graham Chesnutt. Science 104:571 D 13 '46
Presentation of 1946 AAAS-George Westinghouse science writers' award. J. B. Conant. Science 105:6 Ja 3 '47

WESTINGHOUSE air brake company
Air brake's future. Bsns W p78-9 Mr 22 '47
Annual report. Comm & Fin Chr 165:1912 Ap 7 '47

WESTINGHOUSE electric corporation
Death by boycott. Bsns W p102-5 Ap 12 '47
Plans to coordinate activities for atomic research; annual report. il Iron Age 159:127 Ap 17 '47
Preferred stock offered. Comm & Fin Chr 164: 3194 D 16 '46

WESTMINSTER abbey
Battle of Britain memorial chapel. il Glass Ind 28:518-19 O '47

WESTMINSTER bank limited
Statement by the chairman. R. E. Beckett. Economist 152:217 F 1 '47

WESTMINSTER paper company, ltd.
Westminster paper company's successful quarter century. il Pulp & Pa of Can 48: 70-1 S '47

WESTVACO chlorine products corporation
Stocks offered. Comm & Fin Chr 166:996 S 8 '47

WETTING
Surface studies of glass; contact angles. L. A. Spitze and D. O. Richards. bibliog il J Ap Phys 18:904-11 O '47

WETTING, Heat of
Méthode de mesure de la chaleur de mouillage des charbons décolorants. M. Pesez and R. Berret. diags Chimie & Ind 58:28-30 Jl '47

WETTING agents
Anti-misting agents for aircraft. J. D. Main-Smith and J. Darge. Chem & Ind p107-8 F 22-Mr 8 '47
Development and industrial application of wetting agents; abstract. A. V. Billinghame. Chem & Ind p453 D 21 '46
N.Y. state experience with anti-stripping compounds. Roads & Sts 90:52 Ap '47
Surface active or wetting agents. Soap & San Chem 23:75 Ja '47

WETTING agents—*Continued*
Use of aerosol OT in dissecting salivary glands of mosquitoes infected with malaria. E. S. Josephson and others. Science 105: 650-1 Je 20 '47
Use of wetting agents in conjunction with acid inhibitors; abstract. P. H. Cardwell and L. H. Eilers. Oil & Gas J 46:124-5 Je 28 '47
Wetter water for fire fighters. P. W. Kearney. Nat Safety N 55:34-5+ F '47
Wetting agents in the modern tannery. P. I. Smith. Soap & San Chem 22:43+ N '46

Testing
Study of the wetting of textile materials; the use of a hydrometer method. I. J. Gruntfest and others. diag Am Dyestuff Rep 36: 225-6+ My 5 '47

WHALE oil
Chilean whale-oil situation. For Comm W 28: 24 Ag 9 '47
Factory heat balance. Chem Age (Lond) 56: 766 Je 14 '47

WHALING
Antarctic whaling in 1946-7. Economist 151: 843 N 23 '46
Holland too, goes a-whaling. For Comm W 26:22 Ja 18 '47
Modern trends in the whaling industry; abstract. T. Andrews. Chem & Ind p398 N 2 '46
Should whaling be increased? Economist 153: 540 S 27 '47
Whaling pact signed by 21 nations. Oil Paint & Drug Rep 150:5 D 9 '46

WHALING vessels
Whale-oil factory ship, Balaena. il Engineering 162:393 O 25 '46

WHARVES
Concrete-filled steel piles support wharf at Long Beach, Calif. R. R. Shoemaker. il diag Eng N 139:328-31 S 4 '47

WHARVES, Concrete
Remodeling Richmond refinery long wharf. il Pet Eng 18:166+ Je '47

WHEAT
Action of some organomercury complexes in the prevention of wheat decay; abstract. G. B. Marini-Bettolo and G. Borzini. Chem Eng 54:288+ Ap '47
Anderson right on big crops; plentiful wheat in sight. Barron's 27:21 Mr 3 '47
Back to wheat surplus. Barron's 26:5 D 23 '46
Bank loans on 1947 wheat. A. G. Brown. Banking 40:60 Ag '47
France's struggle for bread. Economist 153: 644-5 O 18 '47
More wheat and more dust; former grazing land. E. S. Stateler. il Food Ind 19:1191+ S '47
Outside delivery; multiple delivery points for exchanges. Bsns W p38+ Je 21 '47
Postwar adjustment for U.S. agriculture a season closer, with no plans made. Barron's 27:28 Je 9 '47
Pressure for wheat exports grows. Barron's 27:5 Ja 13 '47
Return of drouth to southwestern plains would upset all wheat-export plans. Barron's 27:36 O 13 '47
Threat of smaller corn crop partly offsets continued improvement in wheat outlook. Barron's 27:36 Je 16 '47
Wheat carry-over to be small again. Barron's 27:5 F 3 '47
Wheat fireworks over unless government raids Northwest supply; June exports down. Barron's 27:42 Ap 21 '47
World wheat parley opens in London. Comm & Fin Chr 165:1706 Mr 27 '47
World will rely on U.S. wheat again next year. Barron's 26:5 N 18 '46

Prices
Factors making for lower wheat prices begin to impress grain markets. Barron's 27:28 Ag 4 '47
Major props knocked from under wheat prices. Barron's 26:9 D 9 '46
Seasonal trends of wheat saying, sell; high in February most regular, 41-year study reveals. G. R. Dalenberg. Barron's 27:12 Mr 10 '47
Wheat flood may lower price. Barron's 27: 36-7 Ag 11 '47
Wheat prices likely to stay up rather than go down despite another bumper crop. Barron's 27:36 Ap 28 '47

Statistics
Agricultural department report on winter wheat and rye acreage sown for 1947 crop. Comm & Fin Chr 165:55 Ja 2 '47

Transportation
Getting record wheat crop under cover. Ry Age 122:1265-6 Je 21 '47
Government learns from wheat fiasco; A A R stands pat; car shortage may hamper realistic treatment of exports from huge crop. Barron's 27:35 Ap 28 '47

WHEAT flour. See Flour

WHEAT germ oil
Failure to produce neoplasms in rats by feeding heated wheat-germ oil. C. Hoffman and others. Science 105:336 Mr 28 '47
Vegetable oil concentrates as antioxidants for vitamin A in fish liver oils. L. O. Buxton. bibliog Ind & Eng Chem 39:1171-4 S '47

WHEAT gluten. See Gluten

WHEATSTONE bridge
Bridge indicates right coil selection. G. N. Burkhart. diag Elec World 127:70+ Ap 26 '47
Bridge type electrical computers. W. K. Ergen. diags R Sci Instr 18:564-7 Ag '47
Mobile laboratory measurements stresses in steel trailers under road conditions. J. Parina, jr. il diags Steel 120:88-9+ Mr 10 '47
Remote indication by a Wheatstone bridge system; signaling system for sewage pumping system. I. M. E. Aitken. diags Inst E E J 94 pt 2:194-205 Je '47
Use of electric gaging equipment in machine design. P. E. Nokes and E. G. Carr. il Mech Eng 69:117-19 F '47; Same cond. Machine Design 19:125-6 F '47
Wheatstone bridge network. G. W. Stubbings. Electrician 138:1595-6 Je 13 '47

WHEELBARROWS
Featherweight wheelbarrow formed from magnesium. C. S. Ricker. il diags Am Mach 90:101-3 D 5 '46

WHEELING and Lake Erie railway
Equipment trust offered. Comm & Fin Chr 165:984 F 17 '47
ICC approves acquisition of control by Nickel Plate. Comm & Fin Chr 166:97 Jl 7 '47

WHEELING steel corporation
Bonds offered. Comm & Fin Chr 166:202 Jl 14 '47
Thumbnail appraisal. Mag of Wall St 79:605 Mr 1 '47

WHEELS
Calculations improve shrink fits on large gears and wheels. N. N. Sawin. diags Am Mach 91:142-5 Je 19 '47
Plastics-canvas wheels. il Sci Am 177:230-1 N '47

See also
Airplanes—Wheels
Car wheels
Flywheels
Gearing
Grinding wheels
Pulleys
Tanks, Military—Wheels

WHEELS, Steel
Manganese wheels for cranes. il Mech Handling 34:41 Ja '47; Excerpts. Engineer 182: 475 N 22 '46

Testing
Testing wrought steel wheels. R. L. Kenyon. il diags Ry Mech Eng 121:347-50+ Jl '47

WHEY
Milk sugar whey successfully determined. Oil Paint & Drug Rep 151:70 My 5 '47

WHISKY
Cracking whisky; new process for quick aging. Bsns W p20 Mr 1 '47
Distilling shutdown may end danger of whisky price war. Barron's 27:32 O 13 '47
Much cash needed to build whisky stocks. Barron's 26:7 D 9 '46
New distilling process eliminates aging. Comm & Fin Chr 166:216 Jl 17 '47

WHISKY—*Continued*
Whiskey rebellion; consumers' refusal to pay high cost of libations. il Fortune 35:140-3+ Je '47
Whisky shortage? Bsns W p21 O 18 '47
Whisky spree; Kentucky alone producing more than nation is consuming. Bsns W p26+ Mr 15 '47
See also
Distilling industries
Insurance, Fire—
Whisky risks

Advertising
Leery look at the likker ads. il Adv & Sell 40:38+ Je '47

WHISTLES
Powerful high frequency siren. C. H. Allen and I. Rudnick. bibliog il diags Acoustical Soc Am J 19:857-65 S '47
Relay cuts cost of installing siren. E. A. Roberts. diag Power 91:341 My '47

WHITAKER cable corporation
Stock offered. Comm & Fin Chr 166:1527 O 13 '47

WHITE, Egbert, 1894-
Portrait. Sales Management 58:40 Mr 1 '47

WHITE, Harry D.
Quits International monetary fund. por Comm & Fin Chr 165:1935+ Ap 10 '47

WHITE
Application of I.C.I. color system to development of all-sulfide white television screen. A. E. Hardy. bibliog RCA R 8:554-63 S '47

WHITE metal
White-metal bearings applied to hot-steel rolling mills. J. M. Borland. diags Iron & Steel Inst J 155:593-7 Ap '47

WHITE motor company
Selected stocks. Mag of Wall St 80:540 Ag 16 '47

WHITE shoe cleaners. See Shoe dressings

WHITMAN, Lucilla Mara de Vescovi
Countess Mara expands swank necktie business. por Bsns W p61-2 S 20 '47

WHITMORE, Frank Clifford, 1887-1947
Sketch. por Chem & Eng N 25:1961 Jl 7 '47
Sketch. G. Wendt. por(cover) Chem & Eng N 25:2074 Jl 21 '47

WHITNEY, Courtney
Portrait. Fortune 35:136 Mr '47

WHITNEY, Willis Rodney, 1868-
First award of Industrial research institute medal goes to Willis R. Whitney. pors Chem & Eng N 24:2911-12 N 10 '46

WHOLESALE cooperative associations. See Cooperative associations, Wholesale

WHOLESALE druggists association, Federal. See Federal wholesale druggists association

WHOLESALE druggists association, National. See National wholesale druggists association

WHOLESALE prices. See Prices, Wholesale

WHOLESALE trade
Distributive trades and services growing lustily. J. Albright. Dom Comm 35:3-6 Je '47

Statistics
Fourteen important ratios for 1945 for 24 wholesale trades and for wholesale groceries, by size (tangible net worth) classes; tabulations. R. A. Foulke. Dun's R 54: 13, 54 N '46
Wholesale sales in 1946, Sales Management estimates; ranking of the 201 cities leading in population. Sales Management 58:110 My 10 '47

WHOLESALER (term)
By way of definition. Aesop Glim. Ptr Ink 217:68 O 11; 56+ N 22 '46

WHOLESALERS. See Jobbers

WHOOPING cough
Separation and immunologic evaluation of soluble pertussal antigens. L. Pillemer and others. bibliog Science 106:36-7 Jl 11 '47

WHYALLA, Australia
War born Whyalla is booming key town in Australian industry. J. Loughlin. il Iron Age 159:110-12 Ap 3 '47

Water supply
Australian practice favors water pipeline on the desert floor; conduit supplies water to Whyalla. il map Eng N 138:889-91 My 29 '47

WIBAUT-ARENS reaction
4-*n*-Propyl-picolinic and -pipecolinic acids; limitations of the Wibaut-Arens reaction with α-substituted pyridine derivatives. W. Solomon. Chem Soc J p934-6 O '46

WICHITA, Kansas
Streets
Street system inventory, Wichita, Kansas. E. N. Smith. il Pub Works 78:26-7 F '47

WIDMAN-STOERMER reaction
Cinnoline; further observations on the Widman-Stoermer reaction. J. C. E. Simpson. Chem Soc J p673-5 Ag '46

WIEN bridge
RC audio oscillator. J. T. Goode. il diags Radio N 37:46-7+ Ja '47

WIEN radiation law. See Black body

WIGGINS, Archibald Lee Manning, 1891-
Named Treasury under-secretary. por Comm & Fin Chr 165:49+ Ja 2 '47
Undersecretary of the Treasury. Burroughs Clearing House 31:34+ F '47

WIGHT, Sedgwick North, 1879-
Grondahl and Wight get Henderson medals; Franklin Institute's honors for contributions to art of railway signaling. por Ry Age 122:708+ Ap 5 '47

WIJS number. See Iodine number

WILDCAT drilling. See Petroleum—Prospecting

WILDLIFE
Effects of DDT mosquito larviciding on wildlife; effects of routine airplane larviciding on bird and mammal populations. A. B. Erickson. Pub Health Rep 62:1254-62 Ag 29 '47
Effects of DDT mosquito larviciding on wildlife; effects on surface organisms of the routine hand application of DDT larvicides for mosquito control. C. M. Tarzwell. fold table Pub Health Rep 62: 525-54, pl 1-2 Ap 11 '47
Effects of DDT mosquito larviciding on wildlife; the effects on the plankton population of routine larviciding with DDT. E. L. Bishop. Pub Health Rep 62:1263-8, pl 1 Ag 29 '47

WILEY, Ralph Benjamin, 1884-
Sketch. por(p550) Civil Eng 16:551 D '46

WILLARD, Daniel Everett, 1862-1947
Sketch. bibliog Am J Sci 245:592-4 S '47

WILLARD, Hobart H. 1881-
Sketch. por Chem & Eng N 25:3060 O 20 '47

WILLCOX, Walter Francis, 1861-
Tribute. E. D. Durand. Am Stat Assn J 42: 5-7; Response. 7-10 Mr '47

WILLEMITE
Artificial willemite needles. E. Ingerson and O. F. Tuttle. diag Am J Sci 245:313-19 My '47
Silicate phosphors for cathode-ray tubes. P. N. Campbell. Soc Chem Ind J 66:191-4 Je '47

WILLGERODT'S reaction
Preparation of hydroxyphenylalkanoic acids by the Willgerodt reaction. A. C. Ott, L. A. Mattano and G. H. Coleman. bibliog Am Chem Soc J 68:2633-4 D '46
Studies on the Willgerodt reaction; anomalous synthesis of dithioöxalodimorpholide. F. H. McMillan and J. A. King. bibliog Am Chem Soc J 69:1207-8 My '47
Studies on the Willgerodt reaction; preparation of nuclear-substituted phenylacetic acids and some further extensions of the reaction. J. A. King and F. H. McMillan. bibliog Am Chem Soc J 68:2335-9 N '46
Thiocarbonyls; the Willgerodt reaction with thioacetophenone. E. Campaigne and P. V. Rutan. Am Chem Soc J 69:1211 My '47

WILLIAMS, Albert Nathaniel, 1888-
Portrait. Bsns W p78 Mr 22 '47

WILLIAMS, Clyde, 1893-
President of the AIME, 1947. por Min & Met 28:4-5 Ja '47

WILLIAMS, Howard D.
Sketch. por Sales Management 58:44 F 15 '47

WILLIAMS, Irving
50 years with Rough notes. por Rough Notes 90:17 S '47

WILLIAMS, Richard, 1929-
Quiz kid plans career in chemistry. por Chem & Eng N 25:778 Mr 17 '47

WILLIAMS, Robert R. 1886-
Awarded Perkin medal for synthesis of vitamin B_1. por(cover) Chem & Eng N 25: 160-1 Ja 20 '47
Just Williams! editorial. Chem & Ind p121-2 Mr 15 '47
Perkin medal awarded to R. R. Williams for synthesis of vitamin B_1. por Ind & Eng Chem 39:462-4 Ap '47
Perkin medal given to R. R. Williams. Oil Paint & Drug Rep 151:5+ Ja 20 '47
Sketch. por Chem & Eng N 25:3062 O 20 '47
Wins 1946 Perkin medal. por Oil Paint & Drug Rep 150:7+ D 2 '46

WILLIAMS, Walter Jefferson, 1900-
Portrait. Bsns W p36 Mr 15 '47

WILLIAMS Deacon's bank limited
Statement by the chairman. G. P. Dewhurst. Economist 152:220 F 1 '47

WILLIAMSON, William Rulon, 1889-
Leaving social security post. Nat Underw 51:20 F 13 '47; Same. Nat Underw (Life ed) 51:1+ F 14 '47

WILLOUGHBY, Charles Andrew, 1892-
Portrait. Fortune 35:136 Mr '47

WILLS
Check list for will drafting. M. E. Lefever. Trusts & Estates 85:15-19 Jl '47
Essential factors of a modern will. E. H. Conley. Trusts & Estates 85:139 Ag '47
Experience with a will drafting contest; Trust companies' association of Oregon. M. H. Erz. Trusts & Estates 84:458 Ap '47
How long should a will be; a dialogue on practical drafting hints. L. W. Fischer and B. M. Becker. Trusts & Estates 84:493-6, 587-90 My-Je '47
Pennsylvania's new estates and trusts legislation; Wills act. E. C. S. Highley. bibliog Trusts & Estates 85:73-6 Jl '47
Requirements for drafting wills. H. B. Hoffman. Trusts & Estates 84:395-400 Ap '47
Standard clauses for wills and trusts. J. S. Montgomery, jr. Trusts & Estates 83:461-3 N '46
Standard clauses for wills and trusts; A.B.A. committee report. Trusts & Estates 85:334 O '47
Tax aspects of will draftsmanship. H. L. Shepherd and E. Pruyn. bibliog Trusts & Estates 84:599-606 Je '47
Tax elements for consideration in testamentary trusts. H. S. Koster. Trusts & Estates 84:181-2 F '47
Use of principal for life beneficiaries; drafting and tax considerations; with appendix of forms. J. Trachtman. Trusts & Estates 83:444-58 N '46
Where there's a will. Published in monthly numbers of Trusts and estates

See also
Executors and administrators
Power of appointment
Probate law

WILLYS-OVERLAND motors, inc.
Annual report. Comm & Fin Chr 165:381 Ja 20 '47

WILSON, Carroll Louis, 1900-
Atomic age's first management man. por (cover) Bsns W p8 Ja 11 '47
Portrait. Bsns W p36 Mr 15 '47

WILSON, Charles Edward, 1886-
Mr Wilson at work; General Electric's president. por Fortune 35:120-3+ My '47

WILSON, Charles Erwin, 1890-
Portrait. Bsns W p76 N 16 '46

WILSON, Harold
Portrait. Bsns W p21 O 4 '47

WILSON and company, inc.
Annual report. Comm & Fin Chr 165:727 F 3 '47
Big four in meat packing. R. Colston. Mag of Wall St 80:440 Jl 19 '47

WILSON cloud chamber
Cloud-chamber search for a low mass neutral particle. P. G. Kruger and L. W. Smith. Phys R 72:360-1 S 1 '47
Growth of drops formed in a Wilson cloud chamber. E. O. Barrett and L. S. Germain. il R Sci Instr 18:84-6 F '47
Multiple scattering of electrons in the gas of a Wilson cloud chamber. L. W. Smith and P. G. Kruger. bibliog diag Phys R 72: 357-9 S 1 '47

WINCHES
Adjustable cable puller saves $280 per day. E. W. Templin and I. L. Bateman. il Elec World 126:73-4 N 23 '46
Air-operated winches for motor vessels. diags Engineering 162:583-5 D 20 '46
Aluminum lifeboat handling winch. il Marine Eng 52:61 My '47
New logging winch. il Pulp & Pa of Can 48:118-19 Jl '47
Oil-engine driven trawl winches. il Engineer 183:410 My 9 '47
Special winch equipment on Philippines fishing survey vessels. il Marine Eng 52:104+ Je '47

WINCHES, Electric
Maxspeed cargo-winch drive on the freighter, Angèle Higgins. M. A. Whiting. il diags Marine Eng 52:69-72 Ap '47

WIND instruments
Electrical method of measuring the intonation of cup-mouthpiece instruments. J. C. Webster. diag Acoustical Soc Am J 19:902-6 S '47
Performance of cup-mouthpiece instruments. T. H. Long. bibliog Acoustical Soc Am J 19:892-901 S '47

See also
Clarinet
Saxophone
Trumpet

WIND insurance. See Insurance, Tornado

WIND power
Electric energy from winds. R. G. Kloeffler and E. L. Sitz. Kansas State College Eng Exp Sta [Manhattan] Bul 52:1-32 '46
Générateur éolien d'énergie électrique à axe vertical. G. Deparis. diags Génie Civil 124: 355-6 S 15 '47

WIND pressure
Gusts. W. Tye. Roy Aeronautical Soc J 51: 721-32 S '47
Pressure under cylindrical stack computed by trial and error. G. B. Podger. diags Eng N 138:738 My 1 '47
Simple model tests predict aerodynamic characteristics of bridges. D. B. Steinman. il Civil Eng 17:20-3, 77-9 Ja-F '47; Discussion. D. J. Peery. 17:143-4 Mr '47
Wind-tunnel tests reveal serious inadequacy of present bridge specifications. D. B. Steinman. Civil Eng 17:601-4 O '47

WIND tunnels
Balance for wind tunnel tests. A. B. Asch. il diags Aero Digest 54:68-9+ F '47
Cautionary note regarding some chemicals used for transition indication in wind tunnels. R. C. Pankhurst. bibliog Roy Aeronautical Soc J 51:651-2 Jl '47
Critical review of German research on high-speed airflow. R. Smelt. il diags Roy Aeronautical Soc J 50:899-927; Discussion. 927-34 D '46
Electric equipment at the Langley memorial aeronautical laboratory. C. C. Clymer and W. G. Gardner. il Gen Elec R 50:20-5 F '47
German supersonic wind tunnels in the United States. Engineering 163:102 Ja 31 '47
Investigation in the 7- by 10-foot wind tunnel of ducts for cooling radiators within an airplane wing. T. A. Harris and I. G. Recant. diags U S Nat Advisory Com for Aeronautics 194:249-67 '46
Investigation of the drag of windshields in the 8-foot high-speed wind tunnel. R. G. Robinson and J. B. Delano. bibliog il diags U S Nat Advisory Com for Aeronautics 1942:65-77 '46
Lockheed bump new research aid; wind tunnel throat modification. Aviation N 7:10 Ap 21 '47

WIND tunnels—*Continued*
Low-cost high speed wind tunnel; abstract. O. Franzi. Automotive & Aviation Ind 96: 64 Ja 1 '47
Method of wind tunnel testing through the transonic range; abstract. J. H. Weaver. Aviation W 47:34-5 Ag 25 '47
NACA completes transonic wind tunnel. il Product Eng 17:148 D '46
NACA test lab requires enormous cooling plant. il Refrig Eng 54:342-3+ O '47
NACA twelve foot low turbulence pressure wind tunnel. Franklin Inst J 242:340-2 O '46
150,000 horsepower applied to aeronautical research; Ames aeronautical laboratory of the National advisory committee for aeronautics. J. A. White. il diags Elec Eng 65:Trans 833-8 D '46
Open-circuit wind tunnel. A. Pope. diags Aero Digest 55:74+ Jl '47
Shock-wave oscillations in wind tunnels. H. W. Liepmann and H. Ashkenas. il diags J Aeronautical Sci 14:295-302 My '47
Small tunnel, big answers; under construction at the University of California. il Bsns W p60 Mr 15 '47
Supersonic wind tunnel. Mech Eng 69:604 Jl '47
Supersonic wind tunnel in operation at North American aviation. il Automotive Ind 97: 41 Jl 15 '47
Use of damping screens for the reduction of wind-tunnel turbulence. H. L. Dryden and G. B. Schubauer. bibliog diag J Aeronautical Sci 14:221-8 Ap '47; Abstract. Aeronautical Eng R 6:24 F '47
Wind. tunnel compressor equipment. il diags Engineer 183:376-9 My 2 '47
Wind-tunnel heat leakage decreased ninety percent by insulation. il Eng N 139:602 O 30 '47
Wind-tunnel investigation of an NACA 23012 airfoil with 30-percent-chord venetian-blind flaps. F. M. Rogallo and B. S. Spano. bibliog diags U S Nat Advisory Com for Aeronautics 1942:241-8 '46
Wind tunnel power; Diesel plant at Langley field, Va. il Diesel Power 25:42-3+ O '47
Wind-tunnel tests of four- and six-blade single- and dial-rotating tractor propellers. D. Biermann and E. P. Hartman. il diags U S Nat Advisory Com for Aeronautics 1942: 319-47 '46
Wind-tunnel tests reveal serious inadequacy of present bridge specifications. D. B. Steinman. Civil Eng 17:601-4 O '47
Wind-tunnel turbulence effects; historical account. D. P. Riabouchinsky. bibliog diag J Aeronautical Sci 14:190-2 Mr '47

Models

Pre-test model of tunnel saves research time and money. R. C. Molloy and others. il Aviation 46:57-9 My '47

WINDING machines
Automatic quiller achieves high production. il Textile World 97:118-19 Jl '47
Muschamp Taylor winder requires no yarn tension. il Textile World 97:161 My '47
Sidney heavy-duty coil-winding equipment. il Mach 53:199 F '47
Small cores in warp beams are not unqualified benefit. R. J. Demartini. diags Textile World 97:133+ Ja '47
Toroidal coils; improved winding machine. E. R. Brooke. il diag Elec R (Lond) 141: 319-20 Ag 29 '47

Tension control

Constant tension control systems for surface and mandrel winding. J. E. Jones. il diags Product Eng 17:117-20 D '46
Constant-tension reel drives. E. S. Murrah. il diags Blast F & Steel Pl 35:205-14 F '47
Control tension in worsted warping. Textile World 97:198+ S '47
Controls tension on winder drive of supercalender. J. L. Van Nort. il diag Machine Design 19:112-13 Ap '47

WINDOW displays. See Show windows

WINDOW screens. See Screens, Door and window

WINDOW tax
Window tax. L. M. Angus-Butterworth. Glass Ind 28:415-16 Ag '47

WINDOWLESS construction
Converted an old building to a windowless plant; Chipman knitting mills, Easton, Pa. J. F. Michler. il Factory Management 105: 104-5 Ag '47
Plant to make precision-built products; Diesel equipment division of General motors corporation. il plans diags Eng N 137:801-5 D 12 '46
Sealed compressor house means cleaner air, less noise; Cherokee textile mills. W. L. Bowen. il Factory Management 105:99 O '47
Windowless plants hamper fire fighters. Nat Safety N 55:146 Mr '47

WINDOWS
Plastic partitions and windows; advantages and limitations of transparent acrylic plastic. il diags Arch Forum 87:121-4 O '47
See also
Show windows
Windowless construction

Frost and condensation

See also
Show windows—Frost and condensation

WINDS
Analyzing winds for North Atlantic flight. F. M. Booth. Air Transport 5:36-8+ Ag '47
Effect of wind gradient on glide and climb. B. Etkin. J Aeronautical Sci 14:365-7 Je '47
Gusts. W. Tye. Roy Aeronautical Soc J 51: 721-32 S '47
Wind-speed indicator adapted to use in airplane take-off tests. il Mech Eng 69:860-1 O '47
See also
Insurance, Tornado
Wind pressure

WINDSHIELDS
See also
Airplanes—Windshields
Automobiles—Windshields

WINDSOR, Ontario

Water supply

Water litigation at Windsor; plaintiff in damage suits claims harmful chemicals put in water. Water & Sewage 85:26+ Ap '47; Same. Am Water Works Assn J 39:529-31 Je '47

WINDWARD Islands
See also
Grenada

WINE
La fabrication des produits tartriques à partir des lies de vins hydrolysées. A. Baouman. Génie Civil 123:314-15 N 15 '46
Nutritive value of yeast, beer, wines and spirits. H. J. Bunker. bibliog Chem & Ind p203-5 Ap 19 '47
Wine in vacuum; continuous-thread, rolled-on aluminum cap with special liner. il Mod Packaging 20:155 Mr '47
Wine industry draws publicity dividend from wine color promotions. E. Gidlow. il Sales Management 58:75-6+ F 1 '47
Wine production and exports, Tunisia. For Comm W 28:22 Ag 16 '47
Wine production in Rio Grande do Sul, Brazil. For Comm W 29:18 O 18 '47

Advertising

Glamour and quality appeal prove a successful combination. il Ptr Ink 220:39 Jl 25 '47
Song and laugh; magic recipe for spot radio commercials; Gaston, Chateau Martin's radio voice. il Ptr Ink 219:38-9 Ap 18 '47
Uses 5 media to promote wine drinking with meals. W. D. Sanderson. Ptr Ink 218:53-4 F 21 '47

Analysis

pH of wines; examination of glass and quinhydrone electrode values. J. C. M. Fornachon. bibliog Ind & Eng Chem Anal ed 18: 790-3 D '46

Manufacture

Recovery of fermentation residues as feeds. C. S. Boruff. bibliog flow diag il Ind & Eng Chem 39:602-7 My '47

WINE—Manufacture—*Continued*

By-products

Tartrates from winery pomace. E. K. Metzner. flow sheet il Chem Eng Prog 43:160-2 Ap '47

WINKING
Blink-rate and ease of seeing. M. Luckiesh and others. bibliog Illum Eng 42:584-8 My '47

WINNE, Harry Alonzo, 1888-
Portrait. Bsns W p24 Mr 29 '47

WINNETKA, Illinois

Sewerage

Illinois city constructs combination pier and sewer. R. L. Anderson. il plan diags Pub Works 78:27-8 Ja '47

WINNIPEG, Manitoba

Sewerage

Operating data for Winnipeg sewage-treatment works. il Water & Sewage 84:21-3+ D '46
Ten years' operation of the Greater Winnipeg sewage-treatment plant. W. M. Scott and J. A. MacGillivray. flow diag il plan Water & Sewage 85:60-3+ O '47

Streets

Major thoroughfare plan for Greater Winnipeg. il plans diags Roads & Bridges 85: 64-7+ F; 146+ Ap '47

WINTER
Military communication equipment observed at winter tests. il Elec Eng 66:781-3 Ag '47
Winter fires. il Safety Eng 93:20+ Ja '47
Winter tourist; urge to travel in cold weather spells profit to jobbers. F. C. Sturtevant. Nat Pet N 38:30 D 25 '46

WINTER construction
Build these salamanders for your winter masonry jobs. C. W. Hubertz. diags Brick & Clay Rec 109:25 D '46
Building in cold weather benefits builder and buyer. W. T. Webb. il Dom Comm 35:28-34 F '47
Heater permits winter building and gives workmen comfort. il Brick & Clay Rec 109:30 N '46

WINTER sports
See also
Skis and skiing

WIPING cloths
See also
Dusting cloths

WIRE
New method of wire straightening. G. E. Shubrooks. il Materials & Methods 24:1230 N '46
Solving shipping problems with wire. Factory Management 105:229 Ag '47
Tungsten carbide rolls for wire flattening. E. C. Slick and R. E. White. il Iron Age 160:74-7 O 9 '47
See also
Wire forming machines

Testing

Bend testing of armature binding wire. il Steel 121:92 O 27 '47

WIRE, Aluminum
Wiring goes lightweight. Bsns W p66+ N 9 '46

WIRE, Copper
Carrier and radio frequency resistance for annealed bare copper wire; table. Elec World 127:116 Ap 12 '47
How fast does a wire or rod conduct heat? R. C. Lipley; W. Heidecker. diags Power Pl Eng 50:109-10 D '46

WIRE, Electric. See Electric wire

WIRE, Steel
Fine gauge wire for tires. Blast F & Steel Pl 34:1426 N '46; Same. Iron Age 158:104 N 14 '46; Same. Mech Eng 69:40 Ja '47
Nickel-manganese-chromium steel wire for aircraft control cables. H. C. Boynton. il Materials & Methods 25:91-3 Ap '47
Selecting spring materials. F. P. Zimmerli. Steel 121:78-9+ Ag 11 '47; Materials & Methods 26:74-9 S '47

WIRE association
Annual meeting, 18th, Chicago, Oct. 20-23. Steel 121:47 O 27 '47

WIRE cloth

Advertising

$295 business-paper ad draws $60,000 worth of orders; Hanover wire cloth co. E. B. Frock. Ptr Ink 218:39 Ja 17 '47

WIRE drawing
Electrical methods for diamond-die production. C. G. Peters and others. il diags J Res Nat Bur Stand 38:449-64 My '47
How diamonds draw ultra-fine wire. R. L. Zahour. il diags Am Mach 91:101-8 O 9 '47
New diamond die drilling method revolutionizes industry; small diamond dies used in drawing and shaping hard and fine wire. Franklin Inst J 243:424-8 My '47

WIRE forming machines
High-production die for forming fine wires into ring-shaped parts. L. Segalle. diags Mach 53:182-3 My '47

WIRE products
Wire conveyer belt. Mech Eng 69:677-8 Ag '47

WIRE rope
Bend stress; factors to be considered in the selection of ropes. R. Saxton. Mech Handling 34:313+ Je '47
Deeper drilling resulting in use of heavier-duty wire lines. J. Zaba. Oil & Gas J 46: 95 Jl 19 '47
Lift and elevator ropes. R. Saxton. Mech Handling 34:489+ S '47
Methods of evaluating service expectancy of wire lines. J. Zaba. Oil & Gas J 46:289 Jl 26 '47
Modern rotary drilling; construction methods of wire rope in process of evolution. J. Zaba. Oil & Gas J 46:103 Jl 12 '47
Modern rotary drilling; many factors affect life of wire lines on drilling rigs. J. Zaba. Oil & Gas J 46:103 Jl 5 '47
New uniform terms adopted for wire rope centers or cores. il Roads & Sts 89:78 O '46
Proper care of wire line increases life. E. McDaniel. il Pet Eng 18:88 Ap '47
Right and wrong ways of handling wire rope. il Paper Ind 29:865 S '47
Splicing to save rope. il Roads & Sts 90:99-100+ F '47
Treatment of wire ropes. R. Saxton. Mech Handling 34:85-6 F '47
Utilization and maintenance of wire rope. L. Sanderson. Can Min J 68:26-8, 250-2, 329-32 Ja, Ap-My '47
See also
Cables

Failure

Ontario committees report on safety in hoisting. Eng & Min J 147:76-7+ N '46

Lubrication

Lubricating wire rope. J. A. Rigby. Steel 121: 88+ S 8 '47
Servicing elevator ropes at Carlsbad Caverns. R. L. Parr. il Power Pl Eng 51:92-3 Je '47

Safety measures

Inspection, key to longer rope life. A. Domico. il Eng & Min J 148:92-3 Ag '47
Wire rope. Nat Safety N 55:109 Mr '47
Wire rope. W. I. Lex. il Safety Eng 94:17+ Ag '47

Standards

Report of subcommittees of the committee on the standardization of wire rope and manila cordage. Am Pet Inst Proc 25(4): 268-71 '45
Report of the committee on the standardization of wire rope and manila cordage. Am Pet Inst Proc 26(4):297-304 '46

WIRE rope fastenings
How to attach a wire rope socket. il Paper Ind 29:1024 O '47

WIRED radio. See Radio broadcasting—Wired radio

WISCONSIN
See also
Lead mines and mining—Wisconsin
Water, Underground—Wisconsin
Zinc mines and mining—Wisconsin

WISCONSIN anti-tuberculosis association
W.A.T.A. library. K. G. Mullen. Special Lib 37:327 D '46

WISCONSIN central railway
Discount indicated for new incomes. Barron's 27:32 Je 30 '47
Reorganization. Comm & Fin Chr 165:3329 Je 23 '47

WISCONSIN electric power company
Annual report. Comm & Fin Chr 165:1502 Mr 17 '47
Public utility securities. Comm & Fin Chr 165:3233 Je 19 '47
Revenues likely to grow rapidly. Barron's 27: 35 Ag 11 '47

WISCONSIN river

Power utilization

Wisconsin has river basin project developed by business interests. Pub Util 38:771-3 D 5 '46

WISCONSIN telephone company
Wisconsin phone rate rise kills share-the-credit plan. Barron's 27:34 O 27 '47

WITTICHENITE
Studies of mineral sulpho-salts: wittichenite (klaprothite). E. W. Nuffield. bibliog il Econ Geol 42:147-60 Mr '47

WNEW. See Radio broadcasting stations

WOFATIT
Manufacture of Wofatit; base-exchange resins; uses and properties. N. E. Topp. Chem Age (Lond) 55:809 D 28 '46

WOLFE, Ralph Reed, 1884-1947
Sketch. East Underw 48:27 Ag 15 '47

WOLFF-KISHNER reaction
Simple modification of the Wolff-Kishner reduction. Huang-Minlon. bibliog Am Chem Soc J 68:2487-8 D '46

WOLFNOTE. See Stringed instruments

WOMAN
Women's opportunities and responsibilities. L. M. Young, ed. Ann Am Acad 251:1-185 My '47

See also
Advertising—Women, Appeal to
Insurance, Life—Women as prospects

Diseases

Electrometric studies in women with malignancy of cervix uteri. L. Langman and H. S. Burr. Science 105:209-10 F 21 '47
Gynecological and obstetrical problems of the industrial physician. M. R. Burnell. Ind Med 16:478+ S '47

Employment

Equal pay for women workers. D. S. Brady. Ann Am Acad 251:53-60 My '47
Meeting of experts from the I.L.O. committee on women's work. Int Labour R 54: 201-4 S-O '46
Postwar labor turn-over among women factory workers. C. F. Schloss and E. J. Polinsky. Mo Labor R 64:411-19 Mr '47
Survey gives clues to best working hours for women. Textile World 97:127 Mr '47
Who works and why. H. Kyrk. Ann Am Acad 251:44-52 My '47
Women in labor unions. G. Dickason. Ann Am Acad 251:70-8 My '47
Women in the labor force. F. S. Miller. Ann Am Acad 251:35-43 My '47

Safety aspects

Industrial injuries to women. U S Women's Bur Bul 212:1-17 '47

France

Employment of women in France. Int Labour R 55:549-55 Je '47

Great Britain

Equal pay. Economist 151:740-1 N 9 '46
Royal commission on equal pay. Chem Age (Lond) 55:625-7 N 23 '46
Trend of wages; equal pay. Economist 151: 876-7 N 30 '46
Use of womanpower; Dilemma of equal pay. Economist 152:880-1 Je 7 '47

Equal rights

New rights bill for women. Comm & Fin Chr 165:1172 F 27 '47
Present-day thinking on the woman question. M. P. Bruton. Ann Am Acad 251:10-16 My '47
Victories on the international front. D. Kenyon. Ann Am Acad 251:17-23 My '47

History

Woman's role in society. M. R. Beard. Ann Am Acad 251:1-9 My '47

Occupations

Education and employment opportunities for women. M. W. Zapoleon. Ann Am Acad 251: 165-73 My '47

See also
Housewives
Nurses and nursing
Office workers
Women as aviators
Women as chemists

United States

More of what women want. F. Perkins. Fortune 35:36 F '47
What women want. M. Mead. il Fortune 34: 172-5+ D '46

WOMEN as aviators
Women enter aeronautics; some early aviators. J. Hettich. Aero Digest 53:28, 126+ N '46

WOMEN as bank employees. See Bank employees

WOMEN as bankers
Opportunities unlimited. D. C. Hallberg. Am Inst Banking Bul 29:7-8+ Ja '47

WOMEN as chemists
Women chemists. E. J. Crane. Chem & Eng N 25:394 F 10 '47

WOMEN as public officers
Participation of women in government. F. E. Allen. Ann Am Acad 251:94-103 My '47

WOMEN as purchasers
Courting the women's clubs; industry recognizes potentialities of vast market. il Bsns W p51-2+ Je 28 '47
Hearst study confirms extent of influence of women on buying of consumer goods; percentage of total sales of 175 commodities tabulated. Ptr Ink 221:84+ O 17 '47
How to classify women as factors to be sold. M. B. Ellis. Adv & Sell 40:56+ Jl '47
It's a woman's intuition, plus. M. Fenner. Elec West 98:81-3 Mr '47
Ten stages in selling the thrifty homemaker. M. B. Ellis. Adv & Sell 40:60+ Ag '47
Use the feminine slant, Mr Salesman. H. Kirtland. il Am Gas Assn Mo 29:164-6 Ap '47

WOMEN as safety engineers
Born to protect; experiences of a woman safety engineer with the Layne-Texas company. A. K. Carpenter. il Nat Safety N 54:26-7+ N '46

WOMEN as stockholders
Women's role in corporate ownership. H. Fredman. Management R 36:545-6 O '47

WOMEN in aeronautics

See also
Women as aviators

WOMEN in politics
Participation of women in government. F. E. Allen. Ann Am Acad 251:94-103 My '47
Women as citizens. K. H. Stone. Ann Am Acad 251:79-86 My '47
Women in the political parties. M. J. Fisher. Ann Am Acad 251:87-93 My '47

WOMEN'S apparel
Apparel trade pitches some new curves. il Bsns W p21 S 6 '47
Fine crepes, satins, nylons and brocades in Canadian housecoats. E. F. Mann. il Rayon 28:431 Ag '47

See also
Garters

WOMEN'S apparel shops
California department store for women; Joseph Magnin's, Palo Alto. il plan Arch Rec 101:98-100 F '47
Neiman-Marcus formula. il Bsns W p41-2+ D 21 '46

WOMEN'S apparel shops—*Continued*
Town and country boudoir theme; Blackton's, New York. il plan Arch Rec 101:102-3 F '47

See also
Dress shops

WOMEN'S clubs
Courting the women's clubs; industry recognizes potentialities of vast market. il Bsns W p51-2+ Je 28 '47
Women's impact on public opinion. K. McLaughlin. Ann Am Acad 251:104-12 My '47

WOMEN'S periodicals

See also
Advertising mediums—Women's periodicals

WOMEN'S shops. See Women's apparel shops

WOMRATH'S bookshops and libraries, inc.
Womrath's goal: big stores, nationwide. Bsns W p58 Ja 25 '47

WOOD, Gar, industries. See Gar Wood industries, inc

WOOD, Sidney B. jr
Pay dirt, Budge-Wood service. Fortune 36: 123 Ag '47

WOOD
A.S.M.E. 1947 wood industries conference, Madison, Wis. June 12-13. Mech Eng 69: 709 Ag '47
Chemical engineering materials of construction; review of literature from start of World war II; wood. A. J. Stamm. bibliog(102 ref) Ind & Eng Chem 39:1256-61 O '47
Coefficients of thermal expansion of wood and wood products. R. C. Weatherwax and A. J. Stamm. bibliog il diags A S M E Trans 69: 421-32 My '47
Conductivities and conductances of building materials and insulations; data sheet. P. D. Close. Heating-Piping 19:99-100 F '47; Discussion (Suggests graphs or charts for data on wood heat conductivity). F. A. Wangaard. 19:97 Mr '47
Le Congrès international pour l'exploitation et l'utilisation rationnelle du bois, Paris, 24-29 septembre 1946. P. Razous. Génie Civil 124:89-93 Mr 1 '47
Diffusion in wood. H. K. Burr and A. J. Stamm. bibliog il diags J Phys & Colloid Chem 51:240-61 Ja '47
Dimensional stabilization of wood. A. J. Stamm and H. Tarkow. bibliog J Phys & Colloid Chem 51:493-505 Mr '47
Maceration of woody tissue with acetic acid and sodium chlorite. W. E. Spearin and I. H. Isenberg. Science 105:214 F 21 '47
Pacific Coast pulpwoods. R. S. Hatch and W. F. Holzer. bibliog Paper Ind 29:443-9 Je '47
Swollen, impregnated, and compressed wood samples; X-ray diffraction studies. G. L. Clark and J. A. Howsman. bibliog il Ind & Eng Chem 38:1257-62 D '46

See also
Aspen
Bark peeling
Bridges, Wooden
Cellulose
Douglas fir
Forests and forestry
Hard woods
Holocellulose
Lignin
Lumber
Lumbering
Pine
Plywood
Redwood
Spruce
Wood construction
Wood preservation
Wood pulp

Analysis

Cellulose in wood; TAPPI tentative standard T17m-46. diag Paper Tr J 123:47-8 D 26 '46
Chemical composition of barks. E. F. Kurth. bibliog (84 ref) Chem R 40:33-49 F '47
Chemical composition of western red cedar bark. K. H. Cram and others. Pulp & Pa of Can 48:85-7 S '47
Determination of the relative acidity of wood and adhesive joints. F. A. DeMarco and E. A. Smith. bibliog Ind & Eng Chem Anal ed 18:775-7 D '46
Quantitative isolation of hemicelluloses and the summative analysis of wood. L. E. Wise and E. K. Ratliff. bibliog Anal Chem 19:459-62 Jl '47

Chemistry

Chemically modified wood. E. C. Jahn. Chem Age (Lond) 57:459-60 O 4 '47
Decomposition of methylated sprucewood. F. E. Brauns and J. J. Yirak. bibliog Paper Tr J 125:55-60 S 18 '47
Elementary composition of lignin in northern pine and black spruce woods, and of the isolated Klason and periodate lignins. W. J. Wald, P. F. Ritchie and C. B. Purves. bibliog Am Chem Soc J 69:1371-7 Je '47
Recent advances in the chemistry of wood. F. H. Yorston. bibliog Pulp & Pa of Can (Convention no) 48:296+ [F] '47
Studies on lignin and related compounds; synthesis of 3-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-2-propanone. H. E. Fisher and H. Hibbert. bibliog Am Chem Soc J 69:1208-10 My '47
TAPPI regional meeting, Appleton, Wis. Sept. 3-5. Paper Ind 29:997-8+ O '47

Decay

Storage decay in pulpwood yards and its prevention. Pulp & Pa of Can 48:102+ Ja '47

Joining to metal

Wood-to-metal adhesives. T. D. Perry. bibliog il diags Mech Eng 68:1035-40 D '46

Shrinkage and swelling

Dimensional stabilization of wood. A. J. Stamm and H. Tarkow. bibliog J Phys & Colloid Chem 51:493-505 Mr '47
Swollen, impregnated, and compressed wood samples; X-ray diffraction studies. G. L. Clark and J. A. Howsman. bibliog il Ind & Eng Chem 38:1257-62 D '46
Wood treatment with resin-forming systems; study of size and species limitations. M. A. Millett and A. J. Stamm. Mod Plastics 25:125-7 S '47
Wood treatment with urea resin-forming systems (comparison with phenolic resins for making compreg). M. A. Millett and A. J. Stamm. Mod Plastics 24:159-60+ F '47

Storage

See Wood storage

Strength

Fatigue of wood and glued wood constructions; abstract. W. C. Lewis. Product Eng 17:139 D '46
Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:571-685 My '47; Discussion. 73: 1323-8 O '47

Terminology

Glossary of terms used in describing woods. 13p Yale univ, School of forestry, New Haven '46

Testing

Lightning and 60-cycle power tests on wood-pole line insulation. P. L. Bellaschi. il diag Elec Eng 66:672-7 Jl '47

WOOD, Compressed
Chemical engineering materials of construction; review of literature from start of World war II; wood. A. J. Stamm. Ind & Eng Chem 39:1256-60 O '47
Swollen, impregnated, and compressed wood samples; X-ray diffraction studies. G. L. Clark and J. A. Howsman. bibliog il Ind & Eng Chem 38:1257-62 D '46
Wood treatment with urea resin-forming systems (comparison with phenolic resins for making compreg). M. A. Millett and A. J. Stamm. Mod Plastics 24:159-60+ F '47

WOOD, Laminated
Chemical engineering materials of construction; review of literature from start of World war II; wood. A. J. Stamm. Ind & Eng Chem 39:1256-60 O '47
Coefficients of thermal expansion of wood and wood products. R. C. Weatherwax and A. J. Stamm. bibliog il diags A S M E Trans 69:421-32 My '47
Cutlery handles of birch-plastics laminate; Pakkawood. Sci Am 177:35-6 Jl '47
Dielectric heat used for continuous edge gluing. il Elec World 128:127 Jl 19 '47
Engineering in wood. O. M. Saxton. Western Soc E J 52:43-6 Mr '47

WOOD, Laminated—*Continued*
Low-density rotor blades; densified, laminated hardwood spars and spruce plywood aft covers. G. P. Martin. il Aero Digest 53:91+ N '46
Manufacturing laminated tennis rackets. J. N. Tynan. il Mech Eng 69:735-8 S '47
Prefabricated factory, born of war-time shortage in steel, is built entirely of wood products; Hammondsport (N.Y.) plant for Mercury aircraft, inc. il Arch Forum 87: 117-18 S '47
Problems in the utilization of wood waste. R. S. Aries. Mech Eng 69:121 F '47
Temperature distribution in white-oak laminated timbers heated in a high-frequency electric field. M. E. Dunlap and E. R. Bell. il diag A S M E Trans 69:509-17 Jl '47; Abstract. Elec World 127:132+ F 15 '47; Discussion. A S M E Trans 69:517-18 Jl '47

See also
Plywood

WOOD, Metal clad
Composite materials; metal-covered plywood. il diags Steel 120:76-9+ Je '47
Wood-to-metal adhesives. T. D. Perry. bibliog il diags Mech Eng 68:1035-40 D '46

WOOD carving
Sprayed lead coating to protect ancient carved wood sculpture. il J Chem Educ 24:431 S '47

WOOD construction
Balloon frame; a tribute. C. S. Hill. il Eng N 138:64-5 Ja 9 '47
Building construction and insect prevention. J. J. Davis. il Am Bld 69:90-1+ Ja '47
Full-size timber trusses tested under long-time loads; demonstrate conservatism of recommendation for increase in connector values. R. H. Gloss. il diags Eng N 139: 386-9 S 18 '47
Modern timber construction in Europe. E. G. Stern. (Eng. exp. sta. ser. bul. 45) il diags 24p Virginia polytechnic institute, Blacksburg, Va. '46
Modern variant of stockade construction proposed as low-cost use for second growth timber. il diags Arch Forum 86:176 Ap '47
Prefabricated factory, born of war-time shortage in steel, is built entirely of wood products; Hammondsport (N.Y.) plant for Mercury aircraft, inc. il Arch Forum 87: 117-18 S '47
Timber roundhouse defies earthquakes; structure recently built on Northern Pacific. il diags Ry Age 122:1298-300 Je 28 '47
Use of wood as structural material; abstract. L. J. Markwardt. Civil Eng 17:452 Ag '47

See also
Bridges, Wooden
Log cabins
Plywood

Design

Design of plywood I-beams. H. J. Hansen. bibliog Am Soc C E Proc 72:749-58 Je '46; Discussion. 72:1300-2; 73:85-8, 703-4 N '46, Ja, My '47
Modern European practice promotes economic use of timber structures. E. G. Stern. bibliog il diags Civil Eng 17:193-7 Ap '47
Tests of eccentric split-ring joints yield rational design formula. R. H. Gloss. diags Eng N 138:895-6 My 29 '47

Failures

Lessons taught by wood-truss failures; split-ring connector joints. N. B. Green. il diags Eng N 138:753-5 My 1 '47; Discussion. 139: 205-6 Ag 7 '47

Repair

Small crews use simple scaffolding for repair of big hangars. E. S. Pashley. il Eng N 139:262-3 Ag 21 '47
Traveling scaffold 145 ft. high used in repairing timber airship hangars. il diags Eng N 138:204-7 F 6 '47

Testing

Tests of timber structures from Golden Gate international exposition. il diags Am Soc C E Proc 73:571-685 My '47; Discussion. 73: 1323-8, 1444-7 O-N '47

WOOD containers
Application of wood and fiber to industrial packing. J. A. DeLuca. il diags A S M E Trans 69:163-76 F '47; Discussion. A. M. Spamer. Mech Eng 69:783 S '47
White fir crates; a test of wood for fruit and vegetable shipping containers. R. S. Kurtenacker. il Mod Packaging 20:152-5 My '47

WOOD cutting. See Lumbering

WOOD distillation
Continuous wood distillation gives better, cheaper charcoal. R. S. Aries. il diag Chem Ind 60:968-9 Je '47
New process for wood distillation; abstract. R. S. Aries. Chem Eng 54:238 Ja '47
Novel wood still. Sci Am 177:79 Ag '47
Wood chemicals meet synthetic competition. W. Haynes. bibliog J Chem Educ 24:109-13 Mr '47

WOOD drying
Figuring heat losses for two drying kilns; plant making veneer crates and hampers. Heating-Piping 19:96 Ja '47

See also
Lumber drying

WOOD finishing
Plastics in paints. C. A. Breskin. il Sci Am 177:13-14 Jl '47

See also
Furniture polish
Lacquer and lacquering
Varnish and varnishing

WOOD grinders
Experiments on the grinding of quaking aspen and use of pulp in printing paper. A. Hyttinen and others. Paper Tr J 125: 53-62 S 25 '47; Same cond. Paper Ind 29: 271-4 My '47
History of ring type grinders. J. N. Ramsay diags Pulp & Pa of Can 47:90-2 D '46
Longitudinal grinding of wood. W. H. de Montmorency. bibliog il diags Pulp & Pa of Can (Convention no) 48:197-208 [F] '47; Same cond. Paper Ind 29:436-8 Je '47
Modernization of a groundwood mill. D. Bamford. Pulp & Pa of Can 48:70-3 O '47

See also
Pulpstones

WOOD handling
Grapple-equipped crane transfers pulpwood from river bank into stream. il Paper Ind 29:372 Je '47
How Hoberg handles and stores pulpwood. R. C. Pratt. il map plan Paper Ind 29:214-17 My '47
New attachment for pulpwood conveyor chains. K. F. Wrangell. il Pulp & Pa of Can 48:66-7 Mr '47

See also
Lumber handling

WOOD measurement
Scaling 16-foot pulpwood by stacked measure. A. Bickerstaff. Pulp & Pa of Can 47: 120 N '46

WOOD naval stores export association
Export unit formed. Oil Paint & Drug Rep 152:4 Jl 28 '47

WOOD pavements. See Pavements, Wood

WOOD pipes. See Water pipes, Wood

WOOD preservation
American wood preservers' association 43d annual meeting, Portland, Ore. April 22-24. Ry Age 122:882-5 My 3 '47
Chemical engineering materials of construction; review of literature from start of World war II; wood. A. J. Stamm. Ind & Eng Chem 39:1256-60 O '47
Dimensional stabilization of wood. A. J. Stamm and H. Tarkow. bibliog J Phys & Colloid Chem 51:493-505 Mr '47
High trestle tests construction types; Northern Pacific structure, half creosoted pile bents and half Wolmanized frame bents. il Ry Age 122:308-10 F 8 '47
Petroleum wood preservative. W. L. Nelson. Oil & Gas J 45:93 F 8 '47
Plastics in paints. C. A. Breskin. il Sci Am 177:13-14 Jl '47
Preserving poles; treating with oil mixtures; with cost data. D. L. Lindsley; W. H. Seaman. Elec West 99:58-61 Jl '47

WOOD preservation—*Continued*
La résistance des bois exotiques aux xylophages. A. Bijls. Génie Civil 124:178 My 1 '47
Treated reels reduced cable breakage; Wolman salts preservative. Manuf Rec 115:83 N '46
Use of pentachlorophenol and sodium pentachlorophenate in the preservation of wood; abstract. Chem Eng 54:260 O '47
Wood decay can be controlled. R. R. Hirt. Sci Am 176:221 My '47
Wood preservative; Nuodex copper or zinc napthenate. il Arch Rec 101:136 Ap '47
Wood treating company opens new plant at Baltimore; American lumber and treating company. il Manuf Rec 116:36+ My '47

WOOD products
Cellulose industries of the West. J. E. Lodewick. il Chem & Eng N 25:2696-8 S 22 '47
Chemically modified wood. E. C. Jahn. Chem Age (Lond) 57:459-60 O 4 '47
Coefficients of thermal expansion of wood and wood products. R. C. Weatherwax and A. J. Stamm. bibliog il diags A S M E Trans 69:421-32 My '47
L'exposition du bois, Paris, 14 septembre-6 octobre 1946. P. Razous. il Génie Civil 124:30-4 Ja 15 '47
Problems in the utilization of wood waste. R. S. Aries. Mech Eng 69:120-2+ F '47
Research in wood waste utilization is profitable. A. D. McKellar. il Dom Comm 35: 50-6 Ap '47

See also
Alcohol
Cellulose
Terpenes
Wood pulp

WOOD pulp
Agricultural residue pulps; comparison with typical wood pulps. S. I. Aronovsky and others. bibliog il Paper Tr J 124:49-55 Mr 27 '47; Abstract. Paper Ind 29:277-9 My '47
Approach to a critical study of pulp washing at National container corporation. R. C. Richter. Paper Tr J 124:50-1 Mr 6 '47
Bleaching pulp with mixtures of chlorine dioxide and chlorine. G. P. Vincent. Paper Tr J 124:53-5 Je 26 '47
Chemical consuming industries; Pacific progress references. Chem Eng 54:107-8 S '47
Chemical research again surges upward; cellulose. M. A. Heath. Chem Ind 61:391-2 S '47
Cold alkaline purification of wood cellulose; some effects of bleaching and acid hydrolysis on resistant pentosans. A. Meller. bibliog Paper Tr J 124:104+ F 27 '47
Commercial production of high yield sulphite and sulphate pulps. D. G. Sutherland. Paper Tr J 124:62+ My 29 '47
Contributions of the forest to the pulp and paper industry. N. C. Brown. Paper Ind 28:1344+ D '46
Co-operative research in wood products; New York state college of forestry and group of paper companies. Paper Ind 28:1338+ D '46
Effect of certain variables in the operation of rotary vacuum pulp washers. M. Klein and others. bibliog flow sheet il diags Paper Tr J 124:44-9 Ja 30 '47
Electron microscopic structure of cellulose powder from wood pulp ground in very dry condition. P. H. Hermans. il Am Chem Soc J 68:2730-2 D '46
Experiments on the grinding of quaking aspen and use of pulp in printing paper. A. Hyttinen and others. Paper Tr J 125: 53-62 S 25 '47; Same cond. Paper Ind 29: 271-4 My '47
Hardwoods for newsprint. G. E. Shipman. bibliog Pulp & Pa of Can 47:93-7 D '46
Hemicelluloses, their importance to the pulp and paper industry. L. E. Wise. bibliog Paper Ind 29:825-9+ S '47
How Hoberg handles and stores pulpwood. R. C. Pratt. il map plan Paper Ind 29:214-17 My '47
How the Pulp and paper research institute is aiding the industry. il Pulp & Pa of Can 48:61-6 Ap '47
Influence of oxidation of pulp on wet strength. M. O. Schur and R. M. Levy. bibliog Paper Tr J 124:43-6 My 15 '47
Manufacture of viscose from sugar maple. C. W. Tasker and C. E. Libby. bibliog Paper Tr J 123:139-48 D 5 '46
Nitric acid digestion of wood in Germany; N-Cellulose; abstract. J. Kleine. Paper Ind 29:742 Ag '47
Pacific Coast pulpwoods. R. S. Hatch and W. F. Holzer. bibliog Paper Ind 29:443-9 Je '47
Paper-making milestone; 80 years of newsprint from wood pulp. Comp Air Mag 52: 130 My '47
Progress in alkaline pulping in 1946. S. D. Wells. bibliog(114 ref) Paper Tr J 125:42-7 O 30 '47
Properties of pulps and their behavior in making viscose; abstract. T. Kleinert and others. Paper Ind 28:1366 D '46
Pulp, a price and production problem. O. F. Swanson. Paper Tr J 124:58+ F 27 '47
Pulp plant revamps power by steps; Penobscot chemical fibre company. flow chart diags Power 91:755-7 N '47
Pulps from shavings obtained in barking spruce; abstract. O. Wurz. Paper Ind 29: 134 Ap '47
Pulpwood and mechanization. J. A. Daly. Manuf Rec 116:34+ My '47
Pulpwood for world prosperity. E. Glesinger. Pulp & Pa of Can (Convention no) 48:268+ [F] '47
Pulpwood procurement in the South; and other sections. G. E. Knapp and others. il Paper Ind 28:1348+ D '46
Pulpwood supplies of the United States. H. R. Josephson. Paper Ind 29:584-6 Jl '47
Recent advances in the chemistry of wood. F. H. Yorston. bibliog Pulp & Pa of Can (Convention no) 48:296+ [F] '47
Sodium sulphite woodpulps. H. R. Murdock. Paper Tr J 124:51-2 Ja 23 '47
Some economic aspects of the pulpwood situation. R. Shallcross. Paper Ind 28:1213-14+ N '46
Some facts and thoughts about woodroom equipment. N. P. Wardwell. Paper Tr J 124:82+ My 29 '47; Same cond. diag Paper Ind 29:735-7 Ag '47
Southland paper mills would buy national forest for pulp. Paper Tr J 124:7+ My 22 '47
Storage decay in pulpwood yards and its prevention. Pulp & Pa of Can 48:102+ Ja '47
Sulphite process; its position in chemical and paper fields today. R. Vincent. Paper Tr J 122:136+ F 28 '46; Same cond. Paper Ind 28:1506-7 Ja '47
Sulphite pulps and papers from sawdust and chip mixtures. E. L. Keller and J. N. McGovern. Pulp & Pa of Can 48:72-5 Je '47
Sulphite vs sulphate. E. G. Kirby. Pulp & Pa of Can 48:66-9 O '47
Trends in timber supply of the Carolinas. R. B. Craig and J. W. Cruishank. Paper Ind 29:65-8 Ap '47
Uses of sulphate pulp. A. G. Durgin. Pulp & Pa of Can (Convention no) 48:137-9+ [F] '47
Uses of wood-fiber products in the home. F. M. Coston. il Dom Comm 35:56-61 Mr '47
Washing sulphate pulp with screw presses. G. W. Brumley. flow diag diag Paper Tr J 124:33-4 My 1 '47; Same cond. Paper Ind 29:722 Ag '47
World shortage of pulp. Fortune 36:126-9 O '47

See also
Paper
Paper making
Wood grinders

Analysis
Cellulose in pulp; revision of TAPPI official standard T 201 m-45. diag Paper Tr J 123: 33-4 D 19 '46
Determination of alpha-cellulose in unbleached pulps. P. F. Cundy and M. M. Beck. Paper Ind 28:1800-1 Mr '47; Same cond. Paper Tr J 124:36-7 My 1 '47
Effect of sample preparation on analytical values for alpha-cellulose, copper number, and cuprammonium viscosity. B. L. Browning. Paper Tr J 124:54-5 Ap 10 '47
Quantitative isolation of hemicelluloses and the summative analysis of wood. L. E. Wise and E. K. Ratliff. bibliog Anal Chem 19:459-62 Jl '47

WOOD pulp—*Continued*

Testing

Additional data on the recovery of wet pulp mats from compressive deformation. C. O. Seborg and F. A. Simmonds. il diags Paper Tr J 125:63-7 O 9 '47; Excerpts. Paper Ind 29:275-7 My '47

Comparative studies in the chlorination of woodpulp. O. S. Sprout, jr. and T. W. Toovey. diag Paper Tr J 124:45-54 Mr 13; 55-8 bibliog(p58) Mr 20 '47; Same cond. Paper Ind 29:1352-7 D '47

Cupriethylenediamine disperse viscosity of pulp; TAPPI suggested method T 230 sm-46. bibliog diags Paper Tr J 124:37-41 Ja 2 '47

Drainage characteristics of groundwood pulp; constant pressure filtration. S. A. Collicutt. bibliog diag Pulp & Pa of Can 48:66-78 Ja '47

Improvements in the couching and pressing of sheets for pulp testing. J. d'A. Clark. diags Paper Ind 29:992-4 O '47

Method of evaluating the unbeaten strength of unbleached chemical wood pulp. N. S. Grant and others. Pulp & Pa of Can (Convention no) 48:151-8 [F] '47; Same cond. Paper Ind 29:725-7 Ag '47

Planned career in the paper industry; pulp laboratory. D. C. Yates. Pulp & Pa of Can 47:83-5 D '46

Quantitative treatment of a density distribution pattern on photographic paper as produced by the disturbance of a spotlight galvanometer. G. Beall. il Paper Tr J 124: 35-7 My 8 '47; Same cond. Paper Ind 28: 1801-2 Mr '47

Rapid measurement of an index of fibre length. R. de Montigny and P. Zborowski. diag Pulp & Pa of Can (Convention no) 47: 99-112, 115, 294 [F] '46; Same. Paper Tr J 123:42-8 N 7; 29-34 N 28 '46; Same cond. Paper Ind 28:882+ S '46

Relation between chlorine number and permanganate number of kraft pulps. C. R. Mitchell and F. H. Yorston. Pulp & Pa of Can 48:83-4 Ag '47

Specific gravity (or density) and moisture content of pulpwood; TAPPI tentative standard T 18 m-47. Paper Tr J 125:33-6 Ag 28 '47

Specific surface and electrokinetic potentials of cellulose fibres. S. G. Mason. bibliog Pulp & Pa of Can 48:76-80 S '47

Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47

Use of bleached aspen semichemical pulp in groundwood book paper. J. N. McGovern. bibliog Paper Tr J 123:47-52 N 14 '46

Canada

Canada's part in wood pulp supply. Pulp & Pa of Can 48:56-60 Ja '47

Finland

Output of Finland's forest industries. For Comm W 25:29-30 N 23 '46

Germany

Manufacture of pulp and paper and related products from wood in western Germany. J. N. McGovern and G. K. Dickerman. bibliog Paper Tr J 124:33-44 Ja 9; 43-52 Ja 16 '47

Japan

Pulp and paper industry of Japan. R. J. Seidl. il Paper Ind 29:76-82 Ap '47

Wood-pulp industry of Japan. For Comm W 26:26 Ja 4 '47

Wood pulp supply hits new high; graph. Bsns W p21 Mr 29 '47

Sweden

L'industrie des pâtes de bois en Suède et les possibilités françaises d'importation. M. Gaillon. Chimie & Ind 57:184-6 F '47

Sweden's forest industry in peace and war. G. A. Hall. Pulp & Pa of Can 48:55-6 F '47

WOOD research

Co-operative research in wood products; New York state college of forestry and group of paper companies. Paper Ind 28:1338+ D '46

New research laboratory of the Swedish cellulose company. E. Waldenstrom. il plan Paper Ind 29:534-7+ Jl '47

WOOD saccharification

Production of fodder yeast from wood sugars. E. E. Harris and others. il diags Paper Ind 29:879-81 S '47

Yeast from sulfite liquor; Germans used wood sugars to produce yeast for livestock feeds and for human consumption. il Chem Ind 60:56-7 Ja '47

WOOD storage

Lumber spray-painted before storage. Comp Air Mag 52:180 Jl '47

Storage decay in pulpwood yards and its prevention. Pulp & Pa of Can 48:102+ Ja '47

WOOD tanks. See Tanks, Wood

WOOD waste

Bleaching of Bauer pulp from wood waste. A. J. Corey. Pulp & Pa of Can (Convention no) 48:308+ [F] '47

Chemical composition of barks. E. F. Kurth. bibliog Chem R 40:33-49 F '47

Experiments on the production of insulating board and hardboard from western sawmill and logging waste. S. L. Schwartz and others. Paper Tr J 125:37-42 O 2 '47; Same cond. Paper Ind 29:884+ S '47

Handling of wood chips. il Mech Handling 33: 629-30 O '46

Plastic molding; utilization of wood waste. R. A. Caughey. Mech Eng 69:36 Ja '47

Problems in the utilization of wood waste. R. S. Aries. Mech Eng 69:120-2+ F '47

Research in wood waste utilization is profitable. A. D. McKellar. il Dom Comm 35:50-6 Ap '47

Sulphate pulping of Douglas fir, western hemlock, Pacific silver fir, and western red cedar logging and sawmill waste. M. W. Bray and J. S. Martin. bibliog Paper Tr J 125:40-6 O 16 '47; Excerpts. Paper Ind 29:1204-6 N '47

Utilizing waste wood. A. M. Spamer. il diags Mech Eng 69:783 S '47

Waste-wood utilization by the United States plywood corporation. Mech Eng 69:781 S '47

See also
Bark
Masonite

WOODEN bridges. See Bridges, Wooden

WOODLOTS

Woodlot management. R. G. MacFarlane. Pulp & Pa of Can (Convention no) 48:289-91 [F] '47

WOODS, Harland Clark, 1882-

Sketch. por(p550) Civil Eng 16:551 D '46

WOODWARD, Robert Burns, 1917-

Robert B. Woodward; contribution to organic chemistry. R. L. Demmerle. por(cover) Chem & Eng N 25:2137+ Jl 28 '47

WOODWORK

High-frequency woodwelding speeds construction, helps reduce costs; illustrations with text. Arch Forum 87:128 O '47

Portable welder that cures resin adhesives. il Mod Plastics 24:206-8+ My '47

Stock woodwork helps builders to deliver big values. il Am Bld 69:136-7+ O '47

See also
Cabinet work

WOODWORKING industries

Netherlands

Woodworking products. For Comm W 27:27 My 17 '47

WOODWORKING machinery

Compound eccentric for elliptical adjustment; dovetailing machines designed by Wysong & Miles co. il diags Product Eng 18:96-7 Ag '47

Shaving and incising machines mechanize pole yard operations; Southern California Edison co. F. B. Doolittle. il Elec World 127:112-13 Mr 15 '47

See also
Gluing machines

WOODWORKING machinery—*Continued*

Safety measures

Shaper guards from Europe. N. C. Winkel. il diags Nat Safety N 55:26-7 Je '47
Woodworking hood guard. il Safety Eng 92: 58 O '46

WOODWORKING shops

Applying good management in the pattern shop. G. M. Dexter. il plans Foundry 75: 68-71+ F '47

Equipment

Handling of wood chips. il Mech Handling 33:629-30 O '46
Photocell improves sander-dust burning in veneer plant. diag Power 91:409 Je '47

Safety measures

British Columbia establishes low accident rate records; plants of MacMillan industries ltd. Paper Tr J 125:28+ Jl 24 '47
Safeguards for woodworking. O. M. Nanfeldt. il Nat Safety N 55:32-3+ Ja '47
When the safety committee goes into action, they get the facts; Coos Bay lumber company. E. H. Card. il Nat Safety N 56: 24-5+ S '47

WOOL

Crimp-fineness relationship in Australian wool. W. R. Lang. bibliog Textile Inst J 38:T241-56 Je '47
Dependence of wool quality number on crimp and fineness in Australian wool. W. R. Lang. Textile Inst J 38:T257-70 Je '47
Development of new types of worsted yarns and fabrics from crossbred wools. W. Hardacre. Textile Inst J 38:P167-71; Discussion. P171-2 My '47
Direct measurement of the transverse swelling of wool fibres in water vapour. F. L. Warburton. bibliog diag Textile Inst J 38: T65-72 F '47
Frictional properties of wool and other textile fibres. E. H. Mercer and K. R. Makinson. bibliog diags Textile Inst J 38:T227-40 My '47
Kinetic friction of wool. K. R. Makinson. bibliog Textile Inst J 38:T332-4 S '47
New developments in the chemical modification of wool. M. Harris and A. E. Brown. Am Dyestuff Rep 36:316-19; Discussion. 319 Je 16 '47
Note on the compressibility of wool. C. M. van Wyk. bibliog Textile Inst J 37:T285-92 D '46
Some measurements of the friction of wool and mohair. A. J. P. Martin and R. Mittelmann. bibliog diags Textile Inst J 37:T269-80 D '46
Structure of protein fibers. F. R. Senti. bibliog il diags Am Dyestuff Rep 36:230-7 My 5 '47
Wool; compressibility, with special reference to South African Merino wool; abstract. C. M. van Wyk. Textile Inst J 37:A410-11 O '46
Wool in Australia; portfolio. il Fortune 35: 94-7 Ja '47
Wool; preparing, dyeing and finishing; discussion with I.G. personnel; abstract. Textile Inst J 38:A380-1 S '47

See also

Dyes and dyeing—Wool
Woolen and worsted fabrics

Analysis

Analysis of fabrics, papers and boards containing wool and asbestos; abstract. P. Goldsmid. Paper Ind 28:1656 F '47
Sodium hydroxide method for the determination of vegetable matter in wool. G. C. LeCompte and M. R. Coe, jr. Am Dyestuff Rep 35:509-10 N 4 '46
Study of methods for determining the ash content of wool. G. C. LeCompte and J. L. Parkes. Am Dyestuff Rep 36:571-2 O 6 '47

Chemistry

AATCC research has aided wool chemistry in twenty-five years. N. D. Marius. bibliog il Textile World 96:112-14+ D '46
Combination of wool protein with heavy metal salts as a function of pH. K. S. LaFleur. bibliog il Am Dyestuff Rep 35:383-6+; 36:616-18 Ag 12 '46, O 20 '47

Chlorination

Felt resistant wool by wet chlorination. H. Zimmerman. Am Dyestuff Rep 36:473-5 Ag 25 '47
Recent advances in the commercial production and utilisation of non-felting wool and wool fabrics. H. Phillips. bibliog il Textile Inst J 37:P302-16 Jl '46
Relationship between structure and shrinkage in knitted wool fabrics and garments. W. A. Dutton. il Textile Inst J 37:P212-23; Discussion. P223-5 Jl '46
Technique for examining chlorinated wool after staining with Kiton Red G. E. G. H. Carter and R. Consden. Textile Inst J 37: T227-36 O '46

Damage

Dyeing of wool damaged by exposure to light. Rayon 28:499 S '47
Photo-electric method of estimating wool damage. W. L. Semple. il diag Textile Inst J 37:T260-8 N '46

Felting

Felt resistant wool by wet chlorination. H. Zimmerman. Am Dyestuff Rep 36:473-5 Ag 25 '47
Recent advances in the commercial production and utilisation of non-felting wool and wool fabrics. H. Phillips. bibliog il Textile Inst J 37:P302-16 Jl '46
Unshrinkable non-felting wool in all-wool and rayon mixture materials. A. J. Hall. diag Rayon 28:559-60 O '47 (to be cont)

Moisture content

Photosensitive adsorption of water vapour on wool. N. F. H. Bright and T. Carson. Soc Chem Ind J 65:258 S '46

Prices

New rise in wool prices. Barron's 27:43 S 15 '47
Wool support menaces U.S. position at Geneva. J. Reid. Barron's 27:30 My 26 '47

Testing

Technique for examining chlorinated wool after staining with Kiton Red G. E. G. H. Carter and R. Consden. diag Textile Inst J 37:T227-36 O '46

WOOL, Unshrinkable

Dimensional stability in woolens. D. H. Powers. Rayon 27:654 D '46
Drying is important in shrink-proofing wool; Lanaset process. K. H. Barnard. il diags Textile World 97:102-3+ Ap '47
Junior fashions by Crestlee are all Lanaset-treated and washable. il Rayon 27:579 N '46
Non shrinking wool, treatment with unsaturated hydrocarbon-compounds; U.S. patent. Am Dyestuff Rep 36:37 Ja 27 '47
Recent advances in the commercial production and utilisation of non-felting wool and wool fabrics. H. Phillips. bibliog il Textile Inst J 37:P302-16 Jl '46
Recent developments in the use of halogen treatments; abstract. A. J. Hall. Am Dyestuff Rep 36:394 Jl 14 '47
Shrinkproofing wool; hydantoins. Am Dyestuff Rep 36:419-20 Jl 28 '47
Shrinkproofing wool; permanganate treatment; patent. Am Dyestuff Rep 36:615 O 20 '47
Shrinkproofing wool, peroxide treatment; British patent. Am Dyestuff Rep 36:249 My 5 '47
Unshrinkable non-felting wool in all-wool and rayon mixture materials. A. J. Hall. diag Rayon 28:559-60 O '47 (to be cont)
Unshrinkable wool produced by alcoholic alkali. M. Lipson. bibliog il Textile Inst J 38:P279-83; Discussion. P284-5 Ag '47
Use of polymers to make wool unshrinkable. A. W. Baldwin and others. bibliog Soc Dyers & Col J 62:4-9, 338-45 Ja, N '46; Abstract. Am Dyestuff Rep 35:183 Ap 8 '46

WOOL carbonizing

Effect of scouring and carbonizing on woolen piece goods. Rayon 28:389 Jl '47

WOOL carding

Comparison of Continental and English systems of woollen yarn manufacture. G. Marshall. Textile Inst J 38:P120-2 Mr '47

WOOL carding—*Continued*
Electronic device controls wool-card feed. G. Zellnik. il diag Textile World 97:145+ S '47
Recent research in woollen carding. P. P. Townend. bibliog diags Textile Inst J 37: P480-93 O '46
Some recent trends in woollen carding. R. W. Wright and A. Brearley. bibliog il diags Textile Inst J 38:P319-39 Ag '47

WOOL combing
Improved methods of dabbing on the Noble comb. T. F. Griffin. il Textile Inst J 38: P91-5 Mr '47

WOOL fat
Paints from wool grease. Chem Age (Lond) 56:485-6 Ap 19 '47
Wool wax acids. E. S. Lower. Soap & San Chem 23:94 O '47

WOOL oiling
Apparatus for oiling wool A, 2, 02; U.S. patent. diags Am Dyestuff Rep 36:38 Ja 27 '47

WOOL research
AATCC research has aided wool chemistry in twenty-five years. N. D. Marius. bibliog il Textile World 96:112-14+ D '46
British wool research. W. G. Cass. Chem & Eng N 25:2458+ Ag 25 '47
Kinetic friction of wool. K. R Makinson. bibliog Textile Inst J 38:T332-4 S '47
Mechano-chemical methods for use with animal fibres. J. B. Speakman. bibliog diag Textile Inst J 38:T102-21; Discussion. T121-6 F '47
New developments in the chemical modification of wool. M. Harris and A. E. Brown. Am Dyestuff Rep 36:316-19; Discussion. 319 Je 16 '47
Progress in worsted spinning research. J. G. Martindale. bibliog il Textile Inst J 37: P350-69; Discussion. P369-70 Jl '46
Wool research in Australia. A. F. Barker. Textile Inst J 38:P449-50 S '47
Wool research in Australia. M. Lipson. Textile Inst J 38:P173-5 My '47
Wool research program in Australia; abstract. N. A. Whiffen. il Textile World 97:133+ Je '47

WOOL scouring
Detergency comparator. Am Dyestuff Rep 36:203-4 Ap 21 '47
Effect of scouring and carbonizing on woolen piece goods. Rayon 28:389 Jl '47
Method for recording the strength of scouring. R. E. Hale. Am Dyestuff Rep 36:362-4 Je 30 '47
Wool scouring wastes treated by new chemical process. H. A. Faber and P. F. Howard. flow diag il Water & Sewage Works 93:467-73 D '46

WOOL trade
American wool textile manufacturers faced with threat of wool shortage. Textile Col 68:48+ D '46
Better days are coming for wool. il Textile Col 69:26 O '47
Botany hand picks its markets with selective selling plan. A. B. Ecke. il Sales Management 57:37-9 N 10 '46
Changes in wool fabric distribution. Textile Col 68:38-9 O '46
How many sheep in Ohio? Fortune 36:2 Ag '47
Sales outlook for textile clothing; markets are growing in new America; American wool council analyzes effect of population and income shifts. Sales Management 57: 64+ D 1 '46
Textile economic bureau opposes government interference in wool industry. Comm & Fin Chr 164:3269 D 19 '46
Wool support; bill would let CCC sell stockpile at market price. Bsns W p50-1 Je 7 '47
Wool trade refuses to seize opportunity and merchandise clip on free basis; Robertson bill pending. Barron's 27:28 My 5 '47
World woolsack. Economist 152:465-6 Mr 29 '47
World's wool. Economist 151:758-60 N 9 '46

Statistics
Graphics speed up and spark up American wool council annual report. A. B. Ecke. il map Sales Management 58:107-8+ Mr 15 '47

Germany
U.S. pushes interzone trade; joint agreement for wool textile industry. Bsns W p105 N 9 '46

Great Britain
Decline in Empire wool stocks. Economist 153:497-8 S 20 '47
Marketing of British wool. O. Mombert. Textile Inst J 37:P498-505 O '46
Prosperity for wool; comments on Wool working party report. Economist 152:680-1 My 3 '47
Slow recovery in wool textiles. Economist 153:257-8 Ag 9 '47
Wool in transition; wool textile supplies. Economist 152:865-6 My 31 '47
Wool stocks and top prices. Economist 152: 730-1 My 10 '47

Japan
Japan's postwar wool industry under military authority. W. Weinstein. For Comm W 29:6-7+ N 1 '47

United States
First test of postwar farm-aid sentiment may come on further wool price support. Barron's 27:5 Ja 13 '47
Lamzee divey? decline of sheep raising and wool growing in this country. S. J. Pauley. Textile Col 69:54+ Ap '47
Senators vote new wool growers-subsidy; one dissenter fears effect on all crops. Barron's 27:27 Ap 7 '47
Trouble with U.S. wool. Fortune 35:92-3 Ja '47
Western wool industry? Bsns W p28+ S 6 '47
Wool import fees; House committee urges 50 per cent tax. Bsns W p54 Ap 19 '47
Wool paradox. Bsns W p22 Mr 22 '47

Uruguay
Increased activity in Uruguay's wool industry. For Comm W 26:26 Mr 29 '47

WOOLEN and worsted fabrics
Carpet-beetle control unsolved wool problem. H. N. Mitchell. Textile World 96:170+ N '46
Causes of change of handle of woolen fabrics. A. N. Patterson. Rayon 28:292 My '47
Development of new types of worsted yarns and fabrics from crossbred wools. W. Hardacre. Textile Inst J 38:P167-71; Discussion. P171-2 My '47
Effect of scouring and carbonizing on woolen piece goods. Rayon 28:389 Jl '47
Junior fashions by Crestlee are all Lanaset-treated and washable. il Rayon 27:579 N '46
Physical properties of fibres and textile performances. A. B. D. Cassie. bibliog Textile Inst J 37:P154-67 Jl '46
Radiant energy reflectance of men's wear colors; abstract. H. F. Greenler and F. J. O'Neil. Am Dyestuff Rep 36:335 Je 16 '47
Raising of textile fabrics. C. S. Whewell. and others. Textile Inst J 37:P198-9 Jl '46

See also
Men's suits
Woolen and worsted weaving

Defects
Eliminating pick troubles reduces mill's mending costs. E. P. Schremp. il Textile World 97:123+ Jl '47
Fewer worsted fabric defects can now be allowed. F. H. Brook. il Textile World 97: 114-15+ Je '47

Protection
Resistance of treated felt gasket materials to fungus attack. S. Berk. il Am Dyestuff Rep 36:541-3 S 22 '47

Rayon mixtures
See Rayon fabrics—Wool mixtures

Shrinkage
Friction between keratin surfaces as affected by some shrinkproofing treatments. M. Lipson and P. Howard. bibliog Am Dyestuff Rep 36:470-2+ Ag 25 '47
Proof or resistant; fair trade practices for wool shrinkage control agents. il Chem Ind 61:379-80 S '47

WOOLEN and worsted fabrics—Shrinkage—Continued
Recent advances in the commercial production and utilisation of non-felting wool and wool fabrics. H. Phillips. bibliog il Textile Inst J 37:P302-16 Jl '46
Relationship between structure and shrinkage in knitted wool fabrics and garments. W. A. Dutton. il Textile Inst J 37:P212-23; Discussion. P223-5 Jl '46
Resin treatment of fabric for shrink prevention and permanent starching; Koloc and Kandar. G. R. Vila. il Mod Plastics 24:118-20 Ap '47
Shrinkproofing wool; vinyl or butadiene polymers. Am Dyestuff Rep 36:336 Je 16 '47
Textile resins; including melamine treatment of wool. W. H. Jaeger. Am Dyestuff Rep 36:352-4 Je 30 '47
Unshrinkable non-felting wool in all-wool and rayon mixture materials. A. J. Hall. diag Rayon 28:559-60 O '47 (to be cont)
Use of enzymes in production of shrink-resistant wool fabrics; abstract. C. S. Jones. Am Dyestuff Rep 36:580 O 6 '47

WOOLEN and worsted finishing
Developments in woollen and worsted cloth finishing. J. C. Schofield. Textile Inst J 37:P568-73 D '46
Friction between keratin surfaces as affected by some shrinkproofing treatments. M. Lipson and P. Howard. bibliog Am Dyestuff Rep 36:470-2+ Ag 25 '47
Textile resins; including melamine treatment of wool. W. H. Jaeger. Am Dyestuff Rep 36:352-4 Je 30 '47
Twenty-five years progress in woolen and worsted dyeing and finishing machinery. W. Von Bergen. bibliog il diags Am Dyestuff Rep 35:662-8 D 2 '46
Unshrinkable wool produced by alcoholic alkali. M. Lipson. bibliog il Textile Inst J 38:P279-83; Discussion. P284-5 Ag '47

See also
Fulling

WOOLEN and worsted machinery
Cleaner wool roping produced by fiber conditioner. il diag Textile World 97:125-6 Ap '47
Control tension in worsted warping. Textile World 97:198+ S '47
Twenty-five years progress in woolen and worsted dyeing and finishing machinery. W. Von Bergen. bibliog il diags Am Dyestuff Rep 35:662-8 D 2 '46
Worsted machinery in French spinning systems; abstract. G. F. Bliss. diag Textile World 97:133 Je '47

See also
Fulling mills

Standards
Standardisation of textile machinery. A. Poncelet. Textile Inst J 38:P225-34 Jl '47

WOOLEN and worsted manufacture
Developments in woollen and worsted yarn manufacture. P. P. Townend. bibliog Textile Inst J 37:P337-47; Discussion. P347-9 Jl '46
Wool flow chart. Textile World 97:101-10 Ag '47

See also
Dyes and dyeing—Wool
Fulling
Wool carding
Woolen and worsted machinery
Woolen and worsted mills
Woolen and worsted spinning

WOOLEN and worsted mills
Three new plants for woolen and worsted; Deering-Milliken group. il Textile World 97:224 Ag '47

Electric equipment
Electronic device controls wool-card feed. G. Zellnik. il diag Textile World 97:145+ S '47
Wool textile industry; new reasons for encouraging electric drive. il Elec R (Lond) 141:85-8 Jl 18 '47

Employees
For goodwill Forstmann Woolen gives union shop voluntarily. Bsns W p 104+ Je 7 '47
Labor-relations school set up by Botany mills. il Textile World 97:111 Je '47
Wage structure in woolen and worsted industry, April 1946. Mo Labor R 64:461-8 Mr '47
Woolen-mill efficiency raised by spare hands. G. Zellnik. il Textile World 97:141 F '47

Equipment
Grapple speeds wool handling. A. M. Stevens. il Textile World 97:137 Jl '47
Ionotron static eliminator. il Rayon 28:508 S '47
Method for recording the strength of scouring solution in continuous cloth scouring. R. E. Hale. Am Dyestuff Rep 36:362-4 Je 30 '47

See also
Fulling mills
Woolen and worsted machinery

Waste
Wool scouring wastes treated by new chemical process. H. A. Faber and P. F. Howard. flow diag il Water & Sewage Works 93:467-73 D '46

WOOLEN and worsted spinning
Denkendorf reports disclose advanced German technology. diags Textile World 97:133+ Mr '47
Progress in worsted spinning research. J. G. Martindale. bibliog il Textile Inst J 37: P350-69; Discussion. P369-70 Jl '46
Spinning of worsted yarns on the American system. R. J. McConnell. il Rayon 28:135-6, 217-18 Mr-Ap '47; Same. Textile World 97: 110-12 Mr '47

WOOLEN and worsted weaving
Eliminating pick troubles reduces mill's mending costs. E. P. Schremp. il Textile World 97:123+ Jl '47
Fewer worsted fabric defects can now be allowed. F. H. Brook. il Textile World 97: 114-15+ Je '47
Loomfixers' manual; wool section (cont). E. P. Schremp. diags Textile World 96:151 D '46; 97:222+ Ja '47
Pencil stripe in worsted requires clean-cut weave. R. B. Sendren. Textile World 97:137+ Ja '47
Wool yarn weaving, with particular reference to the controlling of warp tension. E. J. Poole. bibliog il diags Textile Inst J 38: P286-98; Discussion. P298-9 Ag '47

WOOLEN and worsted yarn
Carpet yarns. S. Kershaw. Textile Inst J 38: P431-3 S '47
Developments in woollen and worsted yarn manufacture. P. P. Townend. bibliog Textile Inst J 37:P337-47; Discussion. P347-9 Jl '46
Short wool fibers cause pilling on garment. Textile World 97:192 S '47

WOOLWORTH, F. W., company
Annual report. Comm & Fin Chr 165:1912 Ap 7 '47

WOOLWORTH, F. W., company, London
Statement by the chairman. W. L. Stephenson. Economist 152:301 F 15 '47

WORCESTER foundation for experimental biology
Beneficiary of research grants. Science 106: 312 O 3 '47

WORDS
Use plain words, not fancy ones. Personnel J 26:38-9 Je '47

WORK assignment. See Trade agreements—Work assignment clauses

WORK clothes
Reeves mill employees wear functional clothing. il Textile World 97:159 S '47

WORK simplification. See Efficiency, Industrial; Labor saving devices

WORKBENCHES
Details of a pattern cutter's bench. H. R. Dampman. diags Sheet Metal Worker 38: 56+ Ag '47

WORKERS' education. See Education of workers

WORKHOUSES
The House; workhouse conditions. Economist 152:573-4 Ap 19 '47

WORKING papers, Accountants'. See Accountants—Working papers

WORKMEN'S compensation
American association of industrial physicians and surgeons; workmen's compensation committee report. Ind Med 16:493-4 O '47
Aviation workmen's compensation. K. R. Thompson. Weekly Underw 156:770-3 Mr 15 '47
Compensation statutes provisions analyzed by U.S. Chamber of commerce. Weekly Underw 155:1563 D 28 '46
Handicaps to rehabilitation; defects in compensation laws and their administration. B. E. Kuechle. East Underw 48:34 Ja 3 '47
Hit workmen's compensation laws. L. B. Schwellenbach and others. Nat Underw 50: 27 D 5 '46
Law suits involving injuries to employes. L. T. Parker. Am Gas J 166:41-3 Mr '47
Legal developments respecting occupational health. T. C. Waters. Ind Med 16:88 F '47
New decisions affect laws applying to mills. L. T. Parker. Textile World 97:139+ Ag '47
State labor legislation in 1946. A. Acee. Mo Labor R 63:760-2 N '46
State workmen's compensation legislation in 1947. A. Acee. Mo Labor R 65:415-18 O '47
Trend is to broaden compensation benefits; bills introduced in states. East Underw 48: 30+ F 7 '47
Workmen's compensation and the protection of seamen. U S Bur Labor Statistics Bul 869:1-93; pa 20c Supt. of doc. '46

See also
Accidents, Industrial
Employers' liability
Insurance, Workmen's compensation

Medical care
Aspect of a code of ethics for workmen's compensation medical practitioners. W. L. Daily. Ind Med 15:654+ N '46

California
California lags in compensation benefits' liberality. P. Scharrenberg. East Underw 47: 37 D 20 '46
Corrects misimpression California lags in benefits liberality. R. Fondiller. East Underw 47:32 D 27 '46

Idaho
Step-children entitled to compensation as dependents of step-father though living with and supported by father. Weekly Underw 156:366 F 1 '47

Iowa
Iowa's occupational disease law. Ind Med 16: 422+ Ag '47

Kentucky
Compensation law reverts to optional status; Court of appeals finds 1946 act invalid. Weekly Underw 156:1627 Je 14 '47; Same abr. Nat Underw 51:20 Je 5 '47

Michigan
State supreme court takes stand against deaths from heart disease. East Underw 48:33 Ja 3 '47

Minnesota
Liberalized Minnesota law effective on July 1. Weekly Underw 156:1416 My 24 '47

New Jersey
Decision on employes' injuries resulting from horseplay. East Underw 48:33 Ja 3 '47
Injuries sustained in personal quarrel with co-employee upon failure to obey foreman not compensable. Weekly Underw 156:134 Ja 4 '47

New York (state)
Compensation bills signed by Dewey. East Underw 48:45 Mr 21 '47
Dewey approves silicosis bill. East Underw 48:28 Ap 4 '47; Nat Underw 51:34 Ap 3 '47
1947 occupational disease legislation; other advances. M. Donlon. East Underw 48:28 Jl 18 '47
Reports on 1946 work in compensation rating. H. D. Sayer. East Underw 48:29+ Ja 31 '47
State fund program of Insurance federation of New York. E. H. Hunt. East Underw 47:30 D 20 '46

See also Insurance, Workmen's compensation—New York (state)

Pennsylvania
Governor vetoes bill to retain occupational disease liability. Nat Underw 51:21 Jl 17 '47

Rhode Island
To revamp compensation laws. Weekly Underw 157:1029+ O 25 '47

South Carolina
Scar over eyebrow width of lead in pencil not serious head or facial disfigurement. Weekly Underw 155:1579 D 28 '46

Washington (state)
Fund law extension ruled unconstitutional; sought to bring under act employes of all charitable and non-profit institutions. Nat Underw 51:28 Ja 16 '47

West Virginia
Charleston chamber of commerce praises compensation statute. East Underw 48:28 Jl 11 '47

Wisconsin
Compensation liberalized; Governor approves new act. Weekly Underw 157:490 Ag 30 '47

WORKMEN'S compensation insurance. See Insurance, Workmen's compensation

WORKSHOPS, Home
Get down to earth, America; some veterans need both a house and office or shop; structures for both living and working. il plans Am Bld 69:134-5 O '47

WORLD commerce corporation
Beating world dollar shortage; corporation set up by U.S., British, Canadian financiers. Bsns W p 106+ S 27 '47
International trading company to invest in new industries in foreign countries. Comm & Fin Chr 166:1260+ S 29 '47
New officials. Comm & Fin Chr 166:1726 O 27 '47

WORLD engineering conference
American stake in world engineering. F. B. Turck. Mech Eng 69:142-4 F '47; Excerpts. Refrig Eng 53:209-10+ Mr '47; Chem Eng Prog 43:sup21-3 Mr '47

WORLD federation of trade unions
World federation of trade unions and the International trade secretariats. Int Labour R 55:315-19 Mr-Ap '47

WORLD food bank. See Food supply

WORLD food council
Food Commission's proposals. H. M. Bratter. Comm & Fin Chr 165:597+ Ja 30 '47
World food council to succeed IEFC. Oil Paint & Drug Rep 152:5 S 29 '47

WORLD food preparatory commission. See Food and agriculture organization of the United nations

WORLD health organization
Progress toward a World health organization. pls Pub Health Rep 62:225-48 F 14 '47

WORLD trade reference library. See New Orleans—International house—Library

WORLD war, 1939-1945

See also
Reconstruction (World war, 1939-1945)

Aerial operations
Effects of strategic bombing on the German war economy, by Overall economic effects division, the U.S. strategic bombing survey; Review by E. Despres. R Econ Stat 28:253-6 N '46; Reply. P. A. Baran and J. K. Galbraith. 29:132-4 My '47
Operational flying; naval air operations. F. M. A. Torrens-Spence. Roy Aeronautical Soc J 51:831-43; Discussion. 844 O '47

Casualties
$187-million burial; first shipment of coffins to bring back war dead. Bsns W p22+ My 17 '47

Claims
Cash for damaged chattels. Economist 153: 82-3 Jl 12 '47
Philippine war damage commission off to flying start. For Comm W 25:47 N 9 '46

WORLD war, 1939-1945—Claims—*Continued*
La réparation des dommages de guerre. Perraud-Charmantier. Chimie & Ind 58:86-92 Jl '47
War damage value payments. Economist 153: 297 Ag 16 '47

Economic aspects
War, radar, and the radio industry; case study of impact of war on American industry. A. A. Bright, jr. and J. Exter. Harvard Bsns R 25 no2:255-72 [Ja] '47

Information service
Empirical approach to economic intelligence in World war II; analyzing markings and serial numbers obtained from captured German equipment. R. Ruggles and H. Brodie. Am Stat Assn J 42:72-91 Mr '47

Labor problems
Wartime handling of labor disputes. E. E. Witte. Harvard Bsns R 25 no2:169-89 [Ja] '47

Language (new words, slang, etc.)
Wartime words and their meanings; definitions of nearly six hundred code names, abbreviations, slang, and technical terms added to language of electronics during war years. C. DeVore. Electronics 20:108-13 (Buyers' guide) Mid-Je '47

Lend-lease operations
Lend-lease report shows return to United States exceeds $10,000,000,000. For Comm W 26:39 Ja 25 '47
Russia agrees to lend-lease settlement. Comm & Fin Chr 165:2250 Ap 24 '47
South Africa settles U.S. lend-lease account. Comm & Fin Chr 165:1438 Mr 13 '47

Medical and sanitary affairs
Bacillary dysentery and chronic ulcerative colitis in World war II. J. Felsen and W. Wolarsky. Science 105:213 F 21 '47
Bataan and its aftermath; effect of malnutrition and unsanitary conditions. S. A. Goldblith. Tech R 49:22-4 N '46

Naval operations
Royal dockyards during the war. Engineering 162:461 N 15 '46

Peace
Favor separate peace with Japan if Russia can't agree; Gallup poll. Iron Age 160:119 Ag 7 '47
Peace-making must not be deferred. W. F. George. Comm & Fin Chr 166:1019 S 11 '47
Peace making; the first round. Economist 151:939-40 D 14 '46
Peace with Japan. E. Bevin. Economist 153: 53-4 Jl 12 '47; Same. Iron Age 160:88+ Jl 24 '47
Postponement in the Pacific; expediting a peace treaty with Japan. map Economist 152:318-19 Mr 8 '47
Smaller powers and Germany; views on the German treaty. Economist 152:228-9 F 8 '47

Petroleum supply
Petroleum exploration and production in western Pacific during World war II. L. W. Stach. maps diags Am Assn Pet Geologists Bul 31:1384-403 Ag '47

Prices
Wholesale prices and industrial stock prices during and immediately after the two world wars. L. H. Bean. R Econ Stat 29:199-200 Ag '47

Psychological aspects
Military psychology in war and peace. W. V. Bingham. bibliog Science 106:155-60 Ag 22 '47

Science and the war
Scientist in war time. E. Appleton. diags Inst Mech Eng J & Proc 154:Proc 303-16, pl 1-4 D '46; Same cond. Engineer 180:417-19, 432-3, 454-5 N 23-D 7 '45
Utilization of chemists and chemical engineers in World war II. Chem & Eng N 25: 2206-8 Ag 4 '47

Shipping
British ship-repairing, 1939-1945. L. Edwards. Engineering 163:282, 306-7 Ap 11-18 '47
Shipping losses in the second World war. Engineering 164:37-8 Jl 11 '47

War criminals
Farbenindustrie officials indicted as war criminals. Rubber Age 61:211 My '47
Nürnberg confusion. Fortune 34:120-1+ D '46
Nürnberg defended. H. Wechsler. Fortune 35: 29+ Ap '47
Nürnberg trial; abstract. F. Biddle. Science 106:118 Ag 8 '47
What case against the German bankers? A. J. Warner. Comm & Fin Chr 165:4+ Ja 2 '47

Women's work
Educational implications of women's military training. D. Schaffter. Ann Am Acad 251: 157-64 My '47

Canada
How the Pulp and paper research institute aided Canada's war effort. il Pulp & Pa of Can 48:55-60 Ap '47

Germany
Effects of strategic bombing on the German war economy, by Overall economic effects division, the U.S. strategic bombing survey; Review by E. Despres. R Econ Stat 28:253-6 N '46; Reply. P. A. Baran and J. K. Galbraith. 29:132-4 My '47
Empirical approach to economic intelligence in World war II; analyzing markings and serial numbers obtained from captured German equipment. R. Ruggles and H. Brodie. Am Stat Assn J 42:72-91 Mr '47

Great Britain
Rejecting outcome of war; abandonment of balance of continental power policy brought Britain actual defeat. W. Chamberlain. Comm & Fin Chr 166:518+ Ag 7 '47

Hawaiian Islands
Civil liberties in the atomic age; threat of military control R. E. Cushman. Ann Am Acad 249:54-65 Ja '47

Japan
Nipponese nightmare; aircraft industry in war; underground factories. S. P. Johnston. il Tech R 49:398-400+ My '47

Pacific ocean
Stepping stones to victory; Herculean efforts in engineering construction; work of seabees in the Pacific area. W. M. Angas. il Tech R 49:337-40+ Ap '47

Philippine Islands
Bataan and its aftermath; effect of malnutrition and unsanitary conditions. S. A. Goldblith. Tech R 49:22-4 N '46
Chemical warfare on Bataan and Corregidor. A. F. Torrisi. Chem & Eng N 25:2557-8 S 8 '47

United States
Fortune survey; how do veterans feel toward business and industry? Fortune 34:6 D '46
Official appraisal of the war economy and its administration; review of United States at war; development and administration of the war program by the federal government, by War records section, Bureau of the budget. L. Gordon. R Econ Stat 29:183-8 Ag '47
Survey shows disillusionment over American participation in World war II is growing. Iron Age 160:99 O 23 '47
Truman proclaims hostilities' end; text of proclamation. Comm & Fin Chr 165:9+ Ja 2 '47; Same. Fed Res Bul 33:26-35 Ja '47

See also
War measures

WORM gearing. See Gearing, Worm

WORMS, Intestinal and parasitic
Sewage treatment to destroy infantile paralysis virus and remove eggs of intestinal parasites; South Africa studies sand filtration. Pub Works 78:25 F '47
Use of trisodium phosphate in microscopical technic. H. J. Van Cleave and J. A. Ross. Science 106:194 Ag 29 '47

WORSHIPFUL company of glass sellers. See Glass sellers company

WORSHIPFUL company of glaziers. See Glaziers company, London

WORTHINGTON pump and machinery corporation
Investment audit. H. S. Coffin. il Mag of Wall St 80:437-8+ Jl 19 '47

WORTHITE
Acetic acid vs. materials of chemical plant construction; Worthite. W. E. Pratt. Chem Eng 53:205+ D '46
Sodium chloride versus construction materials. W. E. Pratt. Chem Eng 54:211-12+ O '47
Sulphur dioxide vs. materials of chemical plant construction; Worthite. W. E. Pratt. Chem Eng 54:221-2 Jl '47

WOUNDS
Apparatus for the determination of the tensile strength of healing wounds. J. Charney and others. diag Science 105:396-8 Ap 11 '47
Treatment of infected war wounds with a nitrofuran. N. C. McCullough. bibliog Ind Med 16:128+ Mr '47

WOW meter. See Phonograph

WRAPPING
Half a loaf; halves separately wrapped. il Mod Packaging 20:120-1 Ap '47
Wrapping half-loaves. il Food Ind 19:458 Ap '47

WRAPPING machines
Combined printing and wrapping machinery; abstract. J. A. Cuckson. diags Product Eng 17:140-1 D '46
Innovations in butter; heat-sealed wraps and further streamlining of packaging operations. il Mod Packaging 20:136-8 Jl '47
Long-lived chips; Dan Dee kodachromed carton for potato chips; pliofilm overwrap. il Mod Packaging 20:98-100 F '47
Oranges wrapped in pliofilm by aid of vacuum. Comp Air Mag 52:203 Ag '47

WRAPPING materials
Freezer wraps; need for better locker papers. D. C. McCoy and others. il Mod Packaging 20:188-92 Mr '47
New ways of using food wraps. J. V. Ziemba. il Food Ind 19:456-8 Ap '47
Pliofilm overwrapper for medicine carton. il Mod Packaging 20:100 F '47
Prepackaging of produce. N. Allen. il Food Ind 19:51 Ja '47
Study of frozen food wrapping materials. D. C. McCoy and others. il Refrig Eng 52: 531-4+ D '46
Vinyl sheet for fruit packaging. il Mod Plastics 24:126 F '47
Zipper bread wrap that recloses. il Mod Packaging 20:135 Ja '47

See also
Cellophane
Wrapping paper

WRAPPING paper
Resin-treated papers provide wet strength to wrappers. J. V. Ziemba. il Food Ind 19:612-13 My '47
Study of frozen food wrapping materials. D. C. McCoy and others. il Refrig Eng 52: 531-4+ D '46

See also
Paper, Waxed

Testing
Moisture equilibrium; sorption isotherms offer graphic method of finding relationship between moisture level and equilibrium relative humidity. W. A. Funk. il diag Mod Packaging 20:135-8+ F '47
Moldable paper products. H. R. Alley. diags Paper Ind 28:262+ My '46; Same. Paper Tr J 122:120+ Je 20 '46; Same. Pulp & Pa of Can 48:68-71 Mr '47

WRECKING

See also
Chimneys—Wrecking
Ships—Demolition

WRENCHES
Impact wrench. il Sci Am 177:133 S '47
Split-barrel wrench does difficult job. H. W. Shepard. diags Am Mach 91:136 My 22 '47

Rating
Lever-lock or toggle-lock plier-wrench. il Consumers Res Bul 20:34 O '47

WRIGLEY, William, jr., company
Profits may rise as sugar shortage ends. Barron's 27:35 O 6 '47

WRINCH, Dorothy, 1894-
Sketch. por(cover) Chem & Eng N 25:361 F 10 '47

WRIST
Fractures of the lower end of the radius and ulna commonly classified as Colles' fractures. W. Johnson and others. il Ind Med 15:685-8 D '46

WRISTPINS
Case hardening wrist pins with induction heat. T. E. Lloyd. il Iron Age 159:54-6 Ja 30 '47

WROUGHT iron
How to set up carbide milling jobs; 10-step setup procedure. H. A. Frommelt. il Am Mach 91:87-9 Ap 24 '47
How to use carbide cutters for milling. H. A. Frommelt. il Iron Age 159:48-50 F 20 '47
Welded wrought iron channels used to cover spalled concrete spandrels. il Steel 119:84 D 30 '46; Same. Civil Eng 17:197 Ap '47
Wrought iron used effectively in marine-pier fire walls. il diag Ry Age 123:15-16 Jl 5 '47

WYATT, Wilson Watkins, 1905-
Black-ribbon job; Wyatt exits. Arch Forum 86:10 Ja '47
Housing mess; how the building boys blew in Mr Wyatt's housing program. il Fortune 35:80-5+ Ja '47
Housing shift; end of Wyatt regime. Bsns W p17-18 D 14 '46
Wyatt, housing agency chief, resigns; building industry controls remain. Eng N 137: 771 D 12 '46
Wyatt resigns, Krooth succeeds him as housing head. Comm & Fin Chr 164:3135 D 12 '46

WYMAN, Hans
H. Wyman makes big businesses; millionaire Czech refugee's industrial comeback in the new world. por Fortune 35:94-7+ Ap '47

WYOMING

See also
Sulfur mines and mining—Wyoming

X

X RAY and electron diffraction, American society for. See American society for X-ray and electron diffraction

X RAY apparatus
High temperature X-ray diffraction apparatus. L. S. Birks and H. Friedman. bibliog il diag R Sci Instr 18:576-80 Ag '47
High-temperature X-ray diffraction apparatus; furnace for use with Geiger-counter X-ray spectrometer. A. Van Valkenburg, jr. and H. F. McMurdie. bibliog il diags J Res Nat Bur Stand 38:415-18 Ap '47; Same. Am Cer Soc Bul 26:139-42 My 15 '47
High temperature X-ray diffraction camera. L. F. Connell, jr. il diag R Sci Instr 18: 367 My '47
Microsecond measurement of the phosphorescence of X-ray fluorescent screens. F. Marshall. bibliog il diag J Ap Phys 18: 512-18 Je '47
Photographic measurement of radiation quality and quantity. J. Kieffer and R. M. Seideman. bibliog Science 104:596-600 D 20 '46
Physical properties of calcium tungstate X-ray screens. J. W. Coltman and others. diags J Ap Phys 18:530-44 Je '47
Picatinny uncloaks betatron. il Chem & Eng N 24:3182 D 10 '46
Rapid chemical comparisons by X-ray photometer. il diag Chem Eng Prog 43:sup 16 Ag '47; Chem Age (Lond) 57:291+ Ag 30 '47
Simple technique for the X-ray determination of fiber-axes in electro-deposited metals. M. R. J. Wyllie. diags R Sci Instr 18:425-9 Je '47

X RAY apparatus—*Continued*
X-ray diffraction camera for microtechniques. F. G. Chesley. il diag R Sci Instr 18:422-4 Je '47
X-ray flicker photometer. C. D. Moriarty. bibliog il diags Gen Elec R 50:39-42 F '47
X-ray model kit permits planning of most efficient layout. il Sci Am 176:77 F '47
X-ray photometer. T. C. Michel and T. A. Rich. il diags Gen Elec R 50:45-8 F '47
X-ray photometer is a valuable instrument for chemical analyses. R. H. Munch. il Ind & Eng Chem 38:sup81-2 D '46
X-ray uses allyl resin. il Mod Plastics 24: 200-1 Je '47
See also
Electron accelerator
Metals—X ray inspection
X ray tubes

Transportation

X-ray tables packed to protect delicate mechanism and ease handling. D. R. Goodall. il Mod Packaging 20:123 My '47

X RAY inspection. See Metals—X ray inspection

X RAY tubes
High-intensity source of long-wavelength X rays. T. H. Rogers. bibliog il diags Inst Radio Eng Proc 35:236-41 Mr '47
One-millionth-second radiography and its applications. C. M. Slack and D. C. Dickson, jr. bibliog il diags Inst Radio Eng Proc 35: 600-6 Je '47

Manufacture

Operations in the production of electronic tube components. il diags Mach 53:160-4 F '47

X RAYS
Configuration of starch in the starch-iodine complex; Fourier projections from X-ray diagrams. R. E. Rundle. bibliog il Am Chem Soc J 69:1769-72 Jl '47
High resolving power, curved-crystal focusing spectrometer for short wave-length X-rays and gamma-rays. J. W. M. DuMond. bibliog il diags R Sci Instr 18:626-38 S '47
Microscopic and X-ray investigation of some steatite bodies. M. D. Rigterink. bibliog il Am Cer Soc J 30:214-18 Jl 1 '47
New refinement technique for X-ray structure analysis. A. D. Booth. bibliog J Chem Phys 15:415-16 Je '47
Range-momentum measurements of particles emitted in nuclear disintegrations induced by 100-Mev X-rays. G. S. Klaiber and others. bibliog il diags Phys R 71:649-56 My 15 '47
X-ray irradiation of gems causes color change. il Electronics 20:138 Ag '47
X-ray storage properties of the infra-red storage phosphor and application to radiography. O. E. Berg and H. F. Kaiser. bibliog il diags J Ap Phys 18:343-7 Ap '47; Excerpts. Elec Eng 66:703 Jl '47
X-ray wave-length standards. E. A. Wood. Phys R 72:436-7 S 1 '47
X-rays associated with U^{234}. R. L. Macklin and G B. Knight. Phys R 72:435 S 1 '47
See also
Crystallography—X ray studies
Diagnosis, Radioscopic
Metals—X ray inspection
Radiography
Welding—X ray inspection
X ray apparatus
X ray tubes

Absorption

Method for controlling scattered radiation in obtaining X-ray absorption data by photographic means. H. E. Seemann and L. L. MacGillivray. diags R Sci Instr 17:539-42 D '46
New differential X-ray absorption method for elementary chemical analysis. A. Engström. diag R Sci Instr 18:681-2 S '47
Random-absorption effect in diffraction of X-rays from coarse powders. Z. W. Wilchinsky. Phys R 72:511 S 15 '47
Secondary structure in the *K* absorption limit of germanium tetrachloride. C. H. Shaw. bibliog Phys R 70:643-5 N 1 '46
Theory of the fine structure of X-ray absorption limits in polyatomic molecules. E. M. Corson. bibliog Phys R 70:645-52 N 1 '46
X-ray absorption structure of $GeCl_4$ and $AsCl_3$. S. T. Stephenson. bibliog Phys R 71:84-7 Ja 15 '47

Diffraction

Active magnesia; X-ray versus nitrogen adsorption surface areas. A. C. Zettlemoyer and W. C. Walker. bibliog J Phys & Colloid Chem 51:763-7 My '47
Apparatus and techniques for practical chemical identification by X-ray diffraction. C. S. Smith and R. L. Barrett. bibliog il J Ap Phys 18:177-91 F '47
Approximation for adsorption displacement in X-ray diffraction by highly absorbing cylindrical samples. Z. W. Wilchinsky. diags J Ap Phys 18:260-1 F '47
Charts for computation of *d*-values in X-ray diffraction chemical analysis. O. E. Brown. J Ap Phys 18:191-3 F '47
Composition and diffraction effects in X-ray microradiographs. R. Smoluchowski and others. bibliog il diags J Ap Phys 17:864-70 N '46
Determination of the size of submicroscopic particles by X-rays. A. Guinier. bibliog 4pls U S Bur Mines Information Circ 7391: 1-17 '46
Determination of X-ray diffraction line widths. C. G. Shull. bibliog Phys R 70:679-84 N 1 '46
High temperature X-ray diffraction apparatus. L. S. Birks and H. Friedman. bibliog il diag R Sci Instr 18:576-80 Ag '47
High-temperature X-ray diffraction apparatus; furnace for use with Geiger-counter X-ray spectrometer. A. Van Valkenburg, jr. and H. F. McMurdie. bibliog il diags J Res Nat Bur Stand 38:415-18 Ap '47; Same. Am Cer Soc Bul 26:139-42 My 15 '47; Abstract. Iron Age 160:51+ Jl 10 '47
High temperature X-ray diffraction camera. F. G. Chesley. il diag R Sci Instr 17:558 D '46
Identification and estimation of the montmorillonite group of minerals, with special reference to soil clays. D. M. C. MacEwan. bibliog Soc Chem Ind J 65:298-304, pl 3-4 O '46
Identification of organic compounds by use of chromium target X-ray diffraction powder patterns. F. W. Matthews and J. H. Michell. bibliog il Ind & Eng Chem Anal ed 18:662-5 N '46
Measurement of X-ray powder diffraction films with automatic correction for shrinkage. G. Hägg. il R Sci Instr 18:371-2 My '47
Metallurgical applications of the X-ray diffraction spectrometer. J. L. Abbott. bibliog il Iron Age 159:50-3 F 13; 57-61 F 20; 56-9 F 27 '47
Method of correcting low angle X-ray diffraction curves for the study of small particle sizes. J. W. M. DuMond. diags Phys R 72:83-4 Jl 1 '47
Nondestructive measurement of residual and enforced stresses by means of X-ray diffraction. G. Sachs and others. bibliog(92 titles) il diags Welding J 25:sup400-12; 26: sup26-49 Jl '46, Ja '47
Non-ionic detergents as association colloids giving long X-ray spacings in aqueous solution. J. W. McBain and S. S. Marsden, jr. J Chem Phys 15:211-12 Ap '47
Polymorphism of triolein. R. H. Ferguson and E. S. Lutton. bibliog pl Am Chem Soc J 69:1445-8 Je '47
Preparation and X-ray diffraction studies of a new cobalt carbide. L. J. E. Hofer and W. C. Peebles. bibliog il Am Chem Soc J 69:893-9 Ap '47
Quantitative analysis with the X-ray spectrometer. J. C. Redmond. Anal Chem 19: 773-7 O '47
Random-absorption effect in diffraction of X-rays from coarse powders. Z. W. Wilchinsky. Phys R 72:511 S 15 '47
Recent advances in the physics and chemistry of rubber; structure of long chain polymers as revealed by X-rays. G. A. Jeffrey. bibliog il Rubber Age 61:329-31 Je '47

X RAYS—Diffraction—*Continued*
Stress analysis by X-ray diffraction. H. R. Isenburger. il Mach 53:167-8 Jl '47
Structure for soap micelles as indicated by a previously unrecognized X-ray diffraction band. R. W. Mattoon, R. S. Stearns and W. D. Harkins. diag J Chem Phys 15:209-10 Ap '47
Structure-optical studies; X-ray diffraction by addition compounds of halogens with hydrophilic organic polymers. C. D. West. J Chem Phys 15:689 S '47
Study of high-polymer structure by X-ray-diffraction methods. C. W. Bunn. pl diags Chem Soc J p297-305; Discussion. 305-6 F '47
System of microstresses in cold-worked metal. N. M. Blachman. bibliog Phys R 70:698-704 N 1 '46
Tabulation of X-ray diffraction powder data for chemical analysis. F. W. Matthews and A. O. McIntosh. bibliog Can Chem & Process Ind 31:63-4+ Ja '47
Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47
X-ray diffraction analyses of synthetic unsaturated monacid diglycerides. B. F. Daubert and E. S. Lutton. bibliog Am Chem Soc J 69:1449-51 Je '47
X-ray diffraction as a gage for measuring cold work produced in milling. F. Zankl and others. bibliog il diags A S M E Trans 69:307-17 My '47; Same cond. Iron Age 159: 44-50 Ja 23 '47; Discussion. A S M E Trans 69:317-18 My '47
X-ray diffraction data for compounds in systems Li_2O-SiO_2 and BaO-SiO_2. A. E. Austin. Am Cer Soc J 30:218-20 Jl 1 '47
X ray diffraction investigation of pectinic and pectic acids. K. J. Palmer and others. bibliog il J Phys & Colloid Chem 51:710-20 My '47
X-ray diffraction patterns for the identification of crystalline constituents of explosives. A. M. Soldate and R. M. Noyes. bibliog Anal Chem 19:442-4 Jl '47
X-ray diffraction studies in the system Fe_2O_3-Cr_2O_3. W. O. Milligan and L. Merten. bibliog J Phys & Colloid Chem 51:521-8 Mr '47
X-ray diffraction studies in the system NiO-Al_2O_3. W. O. Milligan and L. Merten. bibliog il J Phys Chem 50:465-70 N '46
X-ray diffraction studies of chrome-steel slags. G. P. Chatterjee and S. S. Sidhu. diag J Ap Phys 18:519-21 Je '47
X-ray diffraction studies of color variation of iron oxide pigments. H. Birnbaum and others. il J Ap Phys 18:27-9 Ja '47
X ray diffraction study of manganese dioxide. W. F. Cole and others. bibliog il Electrochem Soc Trans 92 (preprint 2):11-32 '47
X-ray diffraction study of the effect of residual compression on the fatigue of notched specimens. J. T. Norton and others. bibliog il diag Welding J 25:sup729-35 N '46
X-ray diffraction study of the silver-magnesium alloy system. H. R. Letner and S. S. Sidhu. bibliog il J Ap Phys 18:833-7 S '47
X-ray investigation of glycerides; diffraction analyses of synthetic diacid diglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 68:2603-5 D '46
X-ray investigation of glycerides; diffraction analyses of synthetic triacid triglycerides. S. S. Sidhu and B. F. Daubert. bibliog Am Chem Soc J 69:1451-3 Je '47
X-ray method for measuring the thickness of thin crystalline films. A. Eisenstein. bibliog diags J Ap Phys 17:874-8 N '46
X-ray method of measuring Poisson's ratio. R. F. Hanstock and E. H. Lloyd. il diags Engineering 163:68-70 Ja 17 '47

Industrial applications

Les applications industrielles des rayons X. P. Bastien. il Génie Civil 124:149-51 Ap 15 '47
Determination of the size of submicroscopic particles by X-rays. A. Guinier. bibliog 4pls U S Bur Mines Information Circ 7391:1-17 '46
Determines coal ash without burning; General Electric X-ray photometer. Heat & Ven 44:88 S '47
Gage for moving materials; Measuray. il Blast F & Steel Pl 34:1564+ D '46
X-ray brings oil fields to the laboratory for study on how to increase yield of crude. il Nat Pet N 39:52 My 14 '47; Same. Pet Eng 18:53 Je '47; Same. Elec Eng 66:656 Jl '47; Same. Electronics 20:132 Jl '47
X-ray contributions to the evolution of man-made fibres; abstract. W. T. Astbury. Chem & Ind p244 My 3 '47

See also
Metals—X ray inspection

Measurement

Absolute sensitivity of a graphite ionization chamber. M. Lax. Phys R 72:61-7 Jl 1 '47
Conversion factor for *kX* units to Angström units. E. A. Wood. J Ap Phys 18:929-30 O '47
Electronic X-ray counter. Mech Eng 69:241-2 Mr '47
Photomultiplier X-ray detector. F. Marshall and others. bibliog il diags R Sci Instr 18: 504-13 Jl '47

Physiological effect

Chemical production of mutations. C. Auerbach, J. M. Robson and J. G. Carr. bibliog Science 105:243-7 Mr 7 '47
Effects of X-radiation on thymus nucleic acid. B. Taylor and others. bibliog Science 105:263-4 Mr 7 '47
Electron micrographs of X-ray-treated escherichia coli cells. A. Eisenstark and G. L. Clark. bibliog il Science 105:553-5 My 23 '47
Lethal effect of X-rays on marine microplankton organisms. K. Bonham and others. Science 106:245-6 S 12 '47
Theory of radiation-induced lethals in drosophila. U. Fano. Science 106:87-8 Jl 25 '47

Protection

Blocking the X-rays; National bureau of standards studies use of concrete as barrier. il Nat Safety N 56:26-7+ Ag '47; Abstract. Mech Eng 69:668-9 Ag '47
Concrete against X-rays. il Sci Am 177:168-70 O '47
Relative thickness of lead, concrete, and steel required for protection against narrow beams of X-rays. G. Singer and others. bibliog diag J Res Nat Bur Stand 38:665-72 Je '47
Wall thicknesses for X-ray protection. Elec World 127:66+ Ja 4 '47
X-ray protection. Elec Eng 66:982 O '47

Scattering

Simple method of obtaining a particle mass distribution by inverting the X-ray intensity scattered at small angles. L. C. Roess. J Chem Phys 14:695-7 N '46
X-ray scattering at small angles by finely-divided solids; exact theory for random distributions of spheroidal particles. L. C. Roess and C. G. Shull. bibliog J Ap Phys 18:308-13 Mr '47
X-ray scattering at small angles by finely-divided solids; general approximate theory and applications. C. G. Shull and L. C. Roess. bibliog il diag J Ap Phys 18:295-307 Mr '47
X-ray scattering at very small angles. W. W. Beeman and P. Kaesberg. Phys R 72: 512 S 15 '47

X RAYS in dentistry
Dental X-ray holder. il Mod Plastics 25:170 S '47
Improved film-monitoring technic for the evaluation of X-ray exposure; abstract. R. M. Seideman. Ind Med 16:469+ S '47

XANTHENE
Photochemical reactions in sunlight; reactions with phensanthraquinone, 9-arylxanthens, and diphenyl triketone. A. Schönberg and A. Mustafa. Chem Soc J p997-1000 Ag '47

XANTHINE
Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R. A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47

XANTHOPTERIN
Chemistry of the pteridines. M. Gates. Chem R 41:63-95 bibliog(115 ref, p93-5) Ag '47

XENON
Isotopes
Isotopic composition of normal krypton and xenon. M. Lounsbury and others. bibliog Phys R 72:517-18 S 15 '47

XENOTIME
Nuclei of pleochroic haloes. C. O. Hutton. bibliog Am J Sci 245:154-7 Mr '47

XYLENE
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47
Phthalic anhydride manufacture from orthoxylene. I. E. Levine. flow diags il Chem Eng Prog 43:163-71 Ap '47
Plate efficiencies of benzene-toluene-xylene systems in distillation. M. Nord. bibliog Am Inst Chem Eng Trans 42:863-81 O-D '46
Preparation of bis(trifluoromethyl) benzenes. E. T. McBee and others. il diag Ind & Eng Chem 39:298-301 Mr '47
Production of bis(trifluoromethyl)benzene. R. L. Murray, W. S. Beanblossom and B. H. Wojcik. diags Ind & Eng Chem 39:302-5 Mr '47
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments at atmospheric pressures. E. A. Coulson and others. bibliog diag Soc Chem Ind J 65:396-8 D '46
Production of toluene by the cracking of solvent naphtha and xyloles in hydrogen; experiments in metal reaction tubes, and with increase of pressure above atmospheric. E. A. Coulson and R. Handley. diag Soc Chem Ind J 65:398-402 D '46
Rate of corrosion of lead by hydrocarbon solutions of organic acids. D. Turnbull and D. R. Frey. bibliog diags J Phys & Colloid Chem 51:681-704 My '47
Second wind for phthalic; offerings of o-xylene by two major companies. il Chem Ind 60:763-4 My '47; Abstract. Pet Processing 2:490-1 Jl '47

XYLENOL
Oxidation of organic compounds in liquid hydrogen fluoride. J. H. Simons and R. E. McArthur. Ind & Eng Chem 39:364-7 Mr '47

XYLIDINE
First data on xylidines is presented at ACS. Pet Processing 2:739 O '47

XYLITOL
1,5-Anhydro-xylitol. H. G. Fletcher, jr. and C. S. Hudson. bibliog Am Chem Soc J 69: 921-4 Ap '47
Dibenzylidene-xylitol and its reaction with tetraacetyl-D-glucosyl bromide; dibenzylidene-L-fucitol. M. L. Wolfrom, W. J. Burke and E. A. Metcalf. bibliog Am Chem Soc J 69:1667-8 Jl '47

XYLOFURANOSE
Trityl derivatives of xylofuranose: 2-acetyl 3 : 5-ditrityl and 2-methyl 3 : 5-ditrityl methylxylofuranoside. R. J. McIlroy. Chem Soc J p850 Je '47

XYLOPYRANOSIDOXANTHINE
Application of the Hofmann reaction to the synthesis of heterocyclic compounds; the synthesis of 9-*d*-xylopyranosidoxanthine. R. A. Baxter and F. S. Spring. Chem Soc J p378-81 Mr '47

XYLOSE
Chemical and microbiological differentiation of enantiomorphs of galactose and xylose. J. W. Appling, E. K. Ratliff and L. E. Wise. bibliog Anal Chem 19:496-7 Jl '47
Lead tetraacetate oxidations in the sugar group; crystalline 2,4,3,5-diethylidene-*aldehydo*-L-xylose and several of its derivatives. R. C. Hockett and F. C. Schaefer. bibliog Am Chem Soc J 69:849-51 Ap '47
Reactions of β-methylarabinoside; 3 : 4-acetone β-methylarabinopyranoside; 3 : 4-dimethyl arabinose; conversion of arabinose into xylose. J. Honeyman. Chem Soc J p990-3 N '46

Analysis
Identification and determination of D-xylose. L. E. Wise and E. K. Ratliff. Anal Chem 19:694-5 S '47

XYLOSE phosphates
Synthesis of maltose-1-phosphate and D-xylose-1-phosphate. W. R. Meagher and W. Z. Hassid. bibliog Am Chem Soc J 68:2135-7 N '46

XYLYL mercaptan
Estimation of sulfur compounds in air. B. Feiner and others. bibliog J Ind Hygiene 28:276-7 N '46

Y

YACHT clubs
See also
Malibu quarterdeck club

YACHTS and yachting
Businessman starts yacht-brokerage service; H. Morton Jones. Esns W p22 D 21 '46
Diesel yacht Haida built at Bath iron works. Marine Eng 52:77 S '47
Good yachting weather. il Fortune 36:88-95, 148-50+ Jl '47
Morgan yacht Corsair to become cruise ship. il Marine Eng 51:97-8 D '46

YAKIMA valley
Homesteads for veterans in Yakima valley. Mo Labor R 64:609 Ap '47

YALE and Towne manufacturing company
Stocks selling below current net assets. Mag of Wall St 80:704 S 27 '47

YALE university
Science and the humanities. Mech Eng 69: 845-6 O '47

School of fine arts
Everett Victor Meeks; arbiter of the arts. Arch Forum 86:74-6+ Je '47

YAMS. See Sweet potatoes

YANT, William Parks, 1893-
Pittsburgh award presented to Yant. pors Chem & Eng N 25:98+ Ja 13 '47

YARN
American viscose corp. achievements in development of vinyon yarns. Rayon 28:179 Ap '47
Carbide and carbon corp. produce new type vinyl yarn; vinyon type N. Rayon 28:178 Ap '47
Engineering textile tension. E. J. Saxl. diag Rayon 28:465-7, 539-41, 588-90 S-N '47
Knitting yarns require skillful preparation. R. M. McNeal. Textile World 97:116-17+ Mr '47
Monofilament techniques may be applied to Plexon. il Textile World 97:143 Ja '47
New rayons and old fibres; a suggested line of development in the production of fine yarns. A. Johnson. Textile Inst J 37:P403-11 Jl '46
Wholesale rug and yarn showrooms; James Lees & sons co, Chicago. il plan Arch Rec 101:104-7 My '47
Yarns for special purposes; effect of filament size. D. Finlayson. Textile Inst J 37:P168-80 Jl '46
See also
Cotton yarn
Nylon yarn
Rayon yarn
Woolen and worsted yarn

Standards
Knitting mills tighten their technical standards. C. M. Bowden. il Textile World 96: 129+ D '46

Strength
Estimation of fibre quality. J. L. Spencer-Smith. bibliog Textile Inst J 38:P257-72 Ag '47

Tables, calculations, etc.
Winder production aided by slide-rule calipers. il Textile World 97:154+ O '47

Testing
Modification of the Moscrop yarn tester. J. G. Martindale and B. Hogley. il diags Textile Inst J 37:T281-4 D '46

YARNALL, D. Robert, 1878-
Portrait. Mech Eng 69:55 Ja '47
YEARBOOKS (statistical, historical, etc.)
Associated Press news annual, 1946. v2. D. Mackenzie. 560p $5 Rinehart & co, 232 Madison av, New York 16 '47
YEASTS
Apparatus for continuous yeast culture. J. G. B. Castor and T. J. B. Stier. bibliog diag Science 106:43-4 Jl 11 '47
Constitution of yeast ribonucleic acid; further studies on the nature of the carbohydrate radicals. G. R. Barker, K. R. Farrar and J. M. Gulland. Chem Soc J p21-4 Ja '47
Constitution of yeast ribonucleic acid; synthesis of uridine-2′ phosphate. J. M. Gulland and H. Smith. Chem Soc J p338-42 Mr '47
Edible yeasts produced from sulphite liquors; abstract. H. J. Bunker. Food Ind 18:1801 N '46
Food yeast from timber waste. Chem Age (Lond) 57:497-8 O 11 '47
Hexosediphosphoric acid in living yeast. H. Suomalainen and E. Arhimo. bibliog Science 105:17-18 Ja 3 '47
Highly polymerized desoxypentose nucleic acid from yeast. E. Chargaff and S. Zamenhof. Am Chem Soc J 69:975-6 Ap '47
Isolation and characterization of vitamin Bc from liver and yeast; occurrence of an acid-labile chick antianemia factor in liver. J. J. Pfeiffner and others. bibliog il Am Chem Soc J 69:1476-87 Je '47
Nonrespiratory variant of saccharomyces cerevisiae. R. Whelton and H. J. Phaff. Science 105:44-5 Ja 10 '47
Nutritive value of yeast, beer, wines and spirits. H. J. Bunker. bibliog Chem & Ind p203-5 Ap 19 '47
Preparation of highly purified mustard gas and its action on yeast. V. du Vigneaud and C. M. Stevens. bibliog Am Chem Soc J 69:1808-9 Jl '47
Production of fodder yeast from wood sugars. E. E. Harris and others. il diags Paper Ind 29:879-81 S '47
Report from Germany, nutritional yeast; conversion of lyes of sulphite-cellulose factories. O. Goy. Paper Tr J 125:24 Ag 7 '47
Vitamin B_6 group; extraction procedures for the microbiological determination of vitamin B_6. J. C. Rabinowitz and E. E. Snell. bibliog Anal Chem 19:277-80 Ap '47
Wood yeast made from salvaged waste of paper mill. il Sci Am 176:160 Ap '47
Yeast autolysate; a culture medium for hemophilus influenzae. E. Neter. bibliog Science 106:350-2 O 10 '47
Yeast from sulfite liquor; Germans used wood sugars to produce yeast for livestock feeds and for human consumption. il Chem Ind 60:56-7 Ja '47
Yeast machine makes and dates 85 packages per minute. il Mod Packaging 20:95 N '46
Yeast output for food in Germany described; Waldhof process. Oil Paint & Drug Rep 150:60 D 2 '46
Yeast waste treated at Crystal Lake, Ill. il Water & Sewage Works 94:194 My '47

Advertising

Fleischmann's yeast FTC charges augmented. Oil Paint & Drug Rep 151:50 F 24 '47
YELLOTT, John Ingle
Portrait. Fortune 35:253 Ap '47
YELLOW
Reason for yellow. Inland Ptr 119:43-5 S '47
YELLOW fever
Yellow fever vaccine inactivation studies. H. W. Burruss and M. V. Hargett. bibliog Pub Health Rep 62:940-56 Je 27 '47
YELLOW river, China
Training the Yellow river. Engineer 182: 424-5 N 8 '46
YEMEN, Arabia
Prince of Yemen welcomed in U.S.; commercial relationships explored. For Comm W 28:13 Jl 26 '47
YERKES observatory
Yerkes observatory of the University of Chicago; 50th anniversary issue. il(cover) Science 106:196-220 S 5 '47

Spectroscopic laboratory

Spectroscopic laboratory at Yerkes observatory. G. Herzberg. Science 106:215-16 S 5 '47
YOE, John Howe, 1892-
Sketch. por Chem & Eng N 25:3062 O 20 '47
YORK corporation
Preferred stock offered. Comm & Fin Chr 165:1111 F 24 '47
YORK industries, inc.
Auction bonanza. il Bsns W p20-1 Ag 2 '47
YOUNG, Robert Ralph, 1897-
I told you so; Robert Young's Pere Marquette coach trains win back traffic. Bsns W p28+ D 7 '46
Mr Young and his C.&O. por Fortune 35:96-103+ My '47
What's Young getting? New York Central 1929-1946 record. Bsns W p66-8+ F 8 '47
Young buys into Central, but 2½% isn't control. Bsns W p74+ Ja 18 '47
Young follows up. Bsns W p22+ N 30 '46
Young launches new organization; Federation for railway progress aims to implement national transportation policy. W. J. Taft. Ry Age 122:445-7 Mr 1 '47
YOUNG men's Christian association

Railroad department

Railroad Y.M.C.A. commemorates seventy-fifth anniversary. Ry Age 122:894-7+ My 3 '47
YOUTH
America's young people want honest, informative advertising; AFA contest essays. Ptr Ink 219:44 Je 20 '47
Importance of youth market shown in three studies. Ptr Ink 219:78+ Ap 25 '47
Selling the youth market. il Bsns W p56+ O 4 '47

See also
Advertising—Youth,
Appeal to
YTTERBIUM
Neutron induced activities in lutecium, ytterbium, and dysprosium. M. G. Inghram and others. Phys R 71:270 F 15 '47
YTTRIUM
Angular distribution of gamma rays in Na^{24}, Co^{60}, Y^{88}. W. M. Good. bibliog Phys R 70:978-9 D 1 '46
Place of yttrium and the application of ferricyanide precipitation in the rare-earth group; the purification of erbium. J. K. Marsh. Chem Soc J p 118-22 Ja '47
Relation of yttrium to the lanthanons; a study of molecular volumes. J. K. Marsh. Chem Soc J p 1084-6 Ag '47
YUCCA
New uses for desert plants. F. Kutnewsky. il Comp Air Mag 52:121-3 My '47
YUGOSLAVIA

Economic policy

Private enterprises nationalized. For Comm W 25:21+ D 28 '46
YUKON territory

See also
Gold mines and mining—Yukon territory
YUMA, Arizona

Water supply

Yuma and the Colorado river. C. G. Ekstrom. il Am Water Works Assn J 39:245-52 Mr '47; Abstract. Eng N 138:52 Ja 9 '47

Z

ZALINSKI, Edmund L. G.
Sketch. East Underw 48:12 Ap 4 '47
ZANZIBAR

Economic policy

Ten-year program authorized for the social and economic development of the Protectorate. For Comm W 25:38 D 28 '46

ZECKENDORF, William
Real estate dynamo. por Bsns W p28+ Ag 16 '47

ZEEMAN effect
Magnetic fields of astronomical bodies. H. W. Babcock. Phys R 72:83 Jl 1 '47
Stark and Zeeman effects in the inversion spectrum of ammonia. D. K. Coles and W. E. Good. Phys R 70:979 D 1 '46

ZEIN
Zein solutions as association—dissociation systems. B. L. Scallet. bibliog Am Chem Soc J 69:1602-8 Jl '47

ZEISS, Carl, firm, Jena
Recent and unusual German lens designs. E. K. Kaprelian. il Opt Soc Am J 37:466-71 Je '47

ZEOLITES
Microbial fouling of zeolite water softeners. W. L. Williams. Am Water Works Assn J 39:779-82 Ag '47
New applications for boiler feedwater treatment equipment. D. J. Saunders. flow diag diag Paper Tr J 125:47-9 Jl 17 '47
Sodium zeolite water softening. Oil & Gas J 45:97 N 30 '46
Soft water for silk hosiery mill with zeolite water conditioning. R. L. Nessler. il diag Rayon 28:284-6 My '47

ZETA potential. See Potential, Electric

ZICRAL. See Aluminum alloys

ZIMMERMAN, Rufus Eicher, 1886-
Sketch. H. J. Heine. por Metal Prog 52:80-2 Jl '47

ZIMRING, O. David
Pattern of American urban transit today is much in power of one man; how Zimring attacks his job. por Mass Transportation 43:310-13 Ag '47

ZINC
Chemical engineering materials of construction; review of literature from start of World war II; lead, tin, zinc, and their alloys. G. O. Hiers. bibliog(77 ref) il Ind & Eng Chem 39:1224-8 O '47
DeHaas-van Alphen effect in a single crystal of zinc. J. A. Marcus. Phys R 71:559 Ap 15 '47
Digest of specifications for zinc and zinc alloys; tabulations; engineering file facts. R. S. Burpo, jr., comp. Materials & Methods 25:117 Ja '47
Internal friction of zinc single crystals. I. H. Swift and J. E. Richardson. bibliog J Ap Phys 18:417-25 Ap '47
Photovoltaic effect; the spectral sensitivities of cadmium, zinc and silver electrodes; the effect of *p*H and oxygen. J. M. Blocher, jr. and A. B. Garrett. bibliog Am Chem Soc J 69:1594-8 Jl '47
Ruben cell, a new alkaline primary dry cell battery. M. Friedman and C. E. McCauley. il diags Electrochem Soc Trans 92 (preprint 6):81-100 '47
Some experiences with the protection of bare pipe lines using zinc; cathodic protection of gas line, with cost data. F. A. Brownie. Gas Age 98:19-21+ N 28 '46
See also
American zinc institute
Zinc metallurgy

Analysis
Routine control of brass plating processes; polarographic, electrochemical, and chemical analysis of plating solutions and deposits. H. E. Zentler-Gordon and E. R. Roberts. bibliog diag Electrochem Soc Trans 90 (preprint 2):9-22 '46; Same cond. Metal Finishing 45:66-9 Ap '47
Simple chemical tests to aid prospectors; testing water, soil and vegetation for zinc. P. Leach. il Eng & Min J 148:78-9 O '47
Simultaneous determination of lead and zinc in atmospheric samples; a polarographic method utilizing a double internal standard. A. S. Landry. bibliog J Ind Hygiene 29:168-74 My '47
Spectrographic analysis of zinc and lead. J. Morris. Can Chem & Process Ind 31:665-6+ Jl '47

Metallography
Fractographic structures in zinc. C. A. Zapffe. il Metal Prog 51:428-31 Mr '47

Prices
Surprise end of non-ferrous metal subsidies may bring higher zinc price, more imports. Barron's 27:36 Ag 18 '47
Zinc at New York, monthly, 1929-1946; tabulation. Iron Age 159:242 Ja 2 '47

Protection
Chemically generated film aids in corrosion control; Iridite. il Steel 120:101-2+ Je 2 '47
Chromate finishes to protect zinc surfaces. G. Black. il Materials & Methods 25:113-16 Ap '47
Increasing the corrosion resistance of zinc plated steel. J. E. Stareck and W. S. Cibulskis. Steel 121:88+ Jl 28 '47

ZINC, Powdered
Effect of zinc on tuberculosis and silicosis. W. E. Ballard. Safety Eng 94:60-2 Jl '47

ZINC alloys
Analysis of surface quality of zinc base die castings. A. W. Sundwick. il Steel 121:94-5+ S 15 '47; Same abr. Am Mach 91:127, 129, 131 S 25 '47
Casting fastening hardware with dies and metal molds; J. Edwards Ogden corp. H. Chase. il diag Steel 121:94-6+ Ag 18 '47
Chemical engineering materials of construction; review of literature from start of World war II; lead, tin, zinc, and their alloys. G. O. Hiers. bibliog(77 ref) il Ind & Eng Chem 39:1224-8 O '47
Digest of specifications for zinc and zinc alloys; tabulations; engineering file facts. R. S. Burpo, jr., comp. Materials & Methods 25:117 Ja '47
Drawing and forming with zinc alloy dies. S. Menton. il Steel 120:92-3+ My 26; 104-5+ Je 2; 80-1+ Je 9; 94-6+ Je 16 '47; Same (pt 3). Foundry 75:76-9+ Je '47
Electroplating zinc base die castings. C. F. Nixon. Metal Finishing 45:58-60 Mr '47; Same cond. Mach 53:180-2 Mr '47
Forming dies; new zinc-base alloy, Kirksite A. il Automobile Eng 37:139-40 Ap '47
High production of carburetor die-castings; Ford motor co. H. Chase. il Mach 53:158-63 Jl '47
Industrial plating of zinc base die castings. C. Temple. il Metal Finishing 45:82-3 Jl '47
1,000,000 pounds of small die castings for automobile hardware items produced each month in Ternstedt plant. H. Chase. il Steel 119:56-8+ D 23 '46
Plated zinc base die castings. E. J. Roehl. il Metal Finishing 45:63-7 O '47
Requirements for die-casting alloys; reference book sheet. A. W. Sundwick. Am Mach 91:143 O 23 '47
Solid and slush type zinc alloy permanent mold castings. H. Chase. il Iron Age 159: 53-63 My 29 '47
Zinc-alloy die foundry. il Engineer 182:440 N 15 '46
Zinc alloy tools for blanking, piercing and forming sheet metal; abstract. J. W. Sladden and H. S. Walker. Materials & Methods 26:126 Jl '47
See also
Brass

Analysis
Spectrographic analysis of zinc-base alloys. R. W. Smith and J. E. Hoagbin. il diags Anal Chem 19:86-92 F '47

ZINC beryllium silicate
Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47

ZINC chloride
Acylation studies in the thiophene and furan series; zinc chloride catalyst. H. D. Hartough and A. I. Kosak. bibliog Am Chem Soc J 69:1012-13 My '47
Length changes of activated carbon rods caused by adsorption of vapors. R. S. Haines and R. McIntosh. diags J Chem Phys 15:28-38 Ja '47

ZINC chloride—*Continued*
Some e.m.f. and conductance measurements in concentrated solutions of zinc and calcium chlorides. R. A. Robinson and R. O. Farrelly. bibliog J Phys & Colloid Chem 51:704-8 My '47
Study of equilibrium reactions in the Leclanché dry cell. H. F. McMurdie and others. Electrochem Soc Trans 90 (preprint 31):383-401 '46

ZINC chromate
Influence of zinc chromate on the solubility of lead chromate; abstract. Paint Oil & Chem R 109:48 D 12 '46

ZINC coating
Bosch process. il Chem & Eng N 24:3356-7 D 25 '46
New flux makes easier the soldering of zinc-coated parts. il Materials & Methods 26: 78-9 Jl '47
Non-corrosive coat; Anozinc. Sci Am 176:264 Je '47

ZINC compounds
Physical and chemical properties of organometallic compounds; oxidation of zinc alkyls. C. H. Bamford and D. M. Newitt. Chem Soc J p688-95 Ag '46
Zinc pigments shortages. M. L. Havey. Oil Paint & Drug Rep 151:7+ My 5 '47

ZINC industry and trade
Industry viewpoint of metal subsidies, tariffs and stockpiling. O. W. Bilharz; W. C. Page. Min Cong J 32:66-7 O '46
New records for zinc consumption foreseen. il Steel 120:78-9 F 3 '47
Surprise end of non-ferrous metal subsidies may bring higher zinc price, more imports. Barron's 27:36 Ag 18 '47
World economic problems of copper, lead and zinc. J. Douglas. Min Cong J 32:60 O '46
See also
Eagle-Picher company

Statistics
Zinc, 1946. C. R. Ince. Eng & Min J 148:73-4 F '47

Germany
German zinc smelting processes data. Oil Paint & Drug Rep 150:67 D 30 '46

Great Britain
Zinc development. Chem Age (Lond) 56:568 My 3 '47

United States
Zinc; annual review and forecast. R. B. Paul. il Min Cong J 33:76-8 F '47
Zinc subsidy problem. Barron's 27:37 Jl 14 '47

ZINC metallurgy
Flotation concentrates as a source of sulphur. W. W. Duecker and E. W. Eddy. il Min Cong J 32:85-9 O '46
German zinc smelting processes data. Oil Paint & Drug Rep 150:67 D 30 '46
St Joe's Balmat mill; Edwards division of the St Joseph lead co. J. Casale. il diag Eng & Min J 147:56-62 N '46
St Joseph lead enterprise; Compania minera Aguilar, S.A.; milling practice. W. L. Lew. flow sheet Min & Met 28:409-11 Ag '47
St Joseph lead enterprise; milling practice at the Balmat and Edwards mills. J. J. Burns. flow sheet il Min & Met 28:395-7 Ag '47
St Joseph lead enterprise; zinc plant. C. Smith. il Min & Met 28:382 Ag '47
Zinc metallurgy; review of 1946. W. M. Peirce. Min & Met 28:66 F '47

Electrometallurgy
St Joseph lead enterprise; Josephtown electrothermic zinc smelter. H. K. Najarian and others. il Min & Met 28:398-405 Ag '47

ZINC mines and mining

Alaska
Exploration of Sedanka zinc deposit, Sedanka island, Alaska. B. S. Webber and others. 4pls U S Bur Mines Rep of Invest 3967: 1-15, pl 1-4 '46

Argentina
St Joseph lead enterprise; Compania minera Aguilar, S.A. D. B. McGilvra and others. il plan Min & Met 28:406-11 Ag '47

Arizona
Aravaipa lead-zinc deposits, Graham county. T. C. Denton. 7pls U S Bur Mines Rep of Invest 4007:1-14 '47
Examination of zinc-lead mines in the Wallapai mining district, Mohave county, Ariz. P. S. Haury. 17pls U S Bur Mines Rep of Invest 4101:1-43 '47
Exploration of the Mohawk zinc prospect, Pima county, Ariz. P. S. Haury. 8pls U S Bur Mines Rep of Invest 3958:1-10 '46
Exploration of the Reward (Vekol) zinc deposit, Pinal county, Arizona. T. C. Denton and P. S. Haury. U S Bur Mines Rep of Invest 3975:1-42, pl 1-16 '46

Colorado
Bureau inspects old shafts with portable headframe; Leadville area in Colorado. N. Ebbley, jr. il Eng & Min J 148:93-4 Je '47
Exploration of the Jewell tunnel zinc property, Chaffee county, Colorado. E. W. Ames. 3pls U S Bur Mines Rep of Invest 3933:1-12 '46

Idaho
Little Pittsburgh lead zinc mine, Shoshone county, Idaho. J. A. Merdlick. U S Bur Mines Rep of Invest 3999:1-8, pl 1-7 Ja '47

Illinois
Exploration of the Gray and Bautsch lead and zinc deposits, Jo Daviess county, Ill. P. Zinner and F. C. Lincoln. bibliog 5pls U S Bur Mines Rep of Invest 3947:1-28 '46

Kansas-Oklahoma-Missouri district
Analysis of man-power efficiency in drilling procedures in the Tri-state mining district. J. D. Forrester and J. A. Fuller. bibliog Mo U Sch Mines & Met Bul tech ser v 17 no 1:1-54 '46
St Joseph lead enterprise; Tri-state operations. R. Blake. il Min & Met 28:383-6 Ag '47
Summarized statistics of production of lead and zinc in the Tri-state (Missouri-Kansas-Oklahoma) mining district. A. J. Martin. bibliog 15pls U S Bur Mines Information Circ 7383:1-67 '46

Missouri
Alice zinc mine, Ozark county, Mo. A. B. Needham and K. L. Kreamalmyer. 4pls U S Bur Mines Rep of Invest 4056:1-17 '47
Exploration of O'Jack mining co. zinc and lead deposits, Jasper county, Missouri. L. C. Brichta. U S Bur Mines Rep of Invest 3970:1-39, pl 1-2 '46
Pearl lead-zinc deposits, Jasper county, Mo. H. J. Ballinger. pl U S Bur Mines Rep of Invest 4107:1-16 '47
Winchester zinc deposit, Newton county, Mo. H. J. Ballinger. 5pls U S Bur Mines Rep of Invest 4085:1-82 '47

Nevada
Argentina zinc-lead mine, Clark county, Nev. R. W. Geehan. 8pls U S Bur Mines Rep of Invest 4103:1-8 '47
Sultan zinc-lead mine, Clark county, Nev. R. W. Geehan. 8pls U S Bur Mines Rep of Invest 4119:1-8 '47

New Mexico
Peerless lead-zinc mine, Grant county. J. H. Soulé. 6pls U S Bur Mines Rep of Invest 4044:1-8 '47
Steeple Rock zinc-lead district, Grant county, N. Mex. P. L. Russell. 8pls U S Bur Mines Rep of Invest 4073:1-12 '47

New York
Diamond drilling blast holes, Balmat mine, St Lawrence county, N.Y. M. Mosier. pl U S Bur Mines Information Circ 7408:1-6 '47
Porosity and ore deposition at Edwards and Balmat, New York. J. S. Brown. bibliog diags Geol Soc Bul 58:505-46, pl 1-10 Je '47
St Joseph lead enterprise; geology and exploration at the Edwards and Balmat mines, N.Y.; mining practice, J. S. Brown; M. G. Jones. il maps plans diags Min & Met 28:387-94 Ag '47

ZINC mines and mining—*Continued*

Ontario

Zinc-lead mines in the Grenville formation. W. M. Bonham. maps Can Min J 68:477-80 Jl '47

Quebec

Zinc-lead mines in the Grenville formation. W. M. Bonham. maps Can Min J 68:477-80 Jl '47

Sardinia

Starting over in Sardinia. M. Marsh. il map Eng & Min J 148:95 O '47

Texas

Exploration of Silver Eagle zinc deposit, Hudspeth county, Texas. W. E. Dennis. 4pls U S Bur Mines Rep of Invest 3962: 1-4 '46

San Antonio canyon lead-zinc deposits, Presidio county, Texas. W. E. Dennis. 2pls U S Bur Mines Rep of Invest 4074:1-12 '47

United States

Production costs under premium price plan. J. L. Maury. Eng & Eng Min J 148:86-7 Jl '47

Utah

Ophir Hill consolidated lead-zinc mine, Tooele county, Utah. F. L. Wideman. 13pls U S Bur Mines Rep of Invest 4072:1-13 '47

Washington (state)

Anderson zinc-lead prospect, Stevens county. S. H. Lorain and R. M. Gammell. 4pls U S Bur Mines Rep of Invest 4043:1-5 '47

Farmer zinc-lead prospect, Stevens county. G. C. Reed and R. M. Gammell. 3pls U S Bur Mines Rep of Invest 4036:1-7 '47

Wisconsin

Coughlin and Galena Level zinc mines area, Lafayette county. M. H. Berliner. 2pls U S Bur Mines Rep of Invest 4047:1-10 '47

Crow Branch lead-zinc diggings and vicinity, Grant county. F. C. Lincoln. pl U S Bur Mines Rep of Invest 4027:1-5 '47

Exploration of the Defense zinc property, Iowa county, Wisconsin. F. C. Lincoln. pl U S Bur Mines Rep of Invest 3948:1-7 '46

Last Chance zinc mine, Grant county. F. C. Lincoln. pl U S Bur Mines Rep of Invest 4028:1-5 '47

Winskell-Andrews-Lyne zinc deposits, Lafayette county, Wis. M. O. Renwick and P. Zinner. 2pls U S Bur Mines Rep of Invest 4090:1-5 '47

Zinc deposits of the Tennyson district, Grant county, Wis. G. A. Apell. 2pls U S Bur Mines Rep of Invest 4083:1-13 '47

ZINC ores

Biogeochemical prospecting for copper and zinc. H. V. Warren and C. H. Howatson. Geol Soc Bul 58:803-20 bibliog(p818-20) S '47

Fluorite and zinc on the Eva Tanguay property, Crittenden county, Ky. X. B. Starnes. 2 maps U S Bur Mines Rep of Invest 4055: 1-16 '47

Fluorite and zinc on the J. J. Shelby and H. McGuire properties, Pope county, Ill. O. M. Bishop. map U S Bur Mines Rep of Invest 4048:1-9 '47

Foreign ore reserves of copper, lead, and zinc. W. P. Shea. Eng & Min J 148:53-8 Ja '47

Movement of mineralizing solutions in the Picher field, Oklahoma-Kansas. R. E. Stoiber. il map Econ Geol 41:800-12 D '46

Porosity and ore deposition at Edwards and Balmat, New York. J. S. Brown. bibliog diags Geol Soc Bul 58:505-46, pl 1-10 Je '47

ZINC oxides

Comparison of optical and electron microscopy of pigments. D. L. Tilleard. and N. D. P. Smith. Soc Chem Ind J 65:261-4, pl 1-2 S '46

Heterogeneity of catalyst surfaces for chemisorption; zinc oxide. H. S. Taylor and S. C. Liang. bibliog Am Chem Soc J 69:1306-12 Je '47

Low-lead, bright opaque glazes at cones 08 to 06. R. R. Danielson. bibliog Am Cer Soc J 30:245-9 Ag 1 '47

Market outlook for zinc pigments. M. L. Havey. Paint Oil & Chem R 110:43 My 1 '47

Moulages d'articles en caoutchouc à partir du latex. A. Jarrijon. bibliog Chimie & Ind 57:549-50 Je '47

ZINC plating

Bright zinc plating cuts costs at Philco plant. C. W. Smith. il Iron Age 160:46-50 Jl 10 '47

Increasing the corrosion resistance of zinc plated steel. J. E. Stareck and W. S. Cibulskis. Steel 121:88+ Jl 28 '47

New zinc-base finish for steel parts. J. A. Williams. il Materials & Methods 25:94-6 Mr '47

Progress in zinc plating; abstract. W. F. Coxon. Materials & Methods 26:118 S '47

Surface texture study of electroplated zinc; with photomicrographs. R. L. Lunt. Metal Finishing 45:68-9 Ag '47

ZINC silicates

Causes of early loss of light output of fluorescent lamps. G. Meister and R. Nagy. bibliog il Opt Soc Am J 36:696-701 D '46

Fluorescence of silicate phosphors. K. H. Butler. bibliog diag Opt Soc Am J 37:566-71 Jl '47

Luminescence of $(Zn, Be)_2SiO_4$:Mn and other manganese-activated phosphors. J. H. Schulman. bibliog diags J Ap Phys 17:902-8 N '46

Thermal and X-ray analyses of some common phosphors. R. Nagy and Chung Kwai Lui. diag Opt Soc Am J 37:37-41 Ja '47

See also

Willemite

ZINC sulfide

Application of I.C.I. color system to development of all-sulfide white television screen. A. E. Hardy. bibliog RCA R 8:554-63 S '47

Optical scattering by dielectric powders of uniform particle size. J. R. DeVore and A. H. Pfund. bibliog Opt Soc Am J 37:826-32 O '47

Practical methods of making and using multilayer filters. M. Banning. bibliog diags Opt Soc Am J 37:792-7 O '47

Sulfur bond in vulcanizates; mineral sulfide as index of disulfide cross bonding. C. M. Hull, S. R. Olsen, and W. G. France. bibliog Ind & Eng Chem 38:1282-8 D '46

ZINC yellow. See Zinc chromate

ZINCILATE

New anticorrosive finish gives 20 years protection. il Iron Age 159:76+ My 22 '47

ZINN, Walter Henry, 1906-

Portrait. Bsns W p34 Mr 22 '47

ZION national monument, Utah

Zion national monument. H. E. Gregory and N. C. Williams. bibliog il map fold map(pl 1) Geol Soc Bul 58:211-44, pl 1-9 Mr '47

ZIONISM

Divided Zion. Economist 152:3-4 Ja 4 '47

What road to Zion? in U.N. showdown, U.S. must define its attitude toward a historic Jewish movement. J. McDonald. il Fortune 36:116-19+ S '47

ZIPPERS. See Fastenings

ZIRCON

Characteristics of zircon porcelain. R. Russell, jr. and W. C. Mohr. Am Cer Soc J 30:32-5 Ja 1 '47

Nuclei of pleochroic haloes. C. O. Hutton. bibliog Am J Sci 245:154-7 Mr '47

ZIRCONIA. See Zirconium oxide

ZIRCONIUM

Electrolytic valve action of zirconium. W. R. Carmody. bibliog diag Electrochem Soc Trans 91 (preprint 9):147-56 '47

Lamp filament to atomic pile. Chem & Eng N 25:236 Ja 27 '47

Recent developments in rare metals. J. W. Marden and others. diags Steel 120:93-4+ Ap 7 '47

Recent developments on the preparation of zirconium. W. C. Lilliendahl and H. C. Rentschler. bibliog diags Electrochem Soc Trans 91 (preprint 16):237-46 '47

Slow neutron velocity spectrometer studies; Au, In, Ta, W, Pt, Zr. W. W. Havens jr. and others. Phys R 71:165-73 F 1 '47

ZIRCONIUM—*Continued*
Technology of zirconium and titanium and their compounds; abstract. E. Wainer. Am Cer Soc J 30 (Cer A):90 Ap 1 '47
Titanium and zirconium; two metals of the future. W. J. Kroll and A. W. Schlechten. Materials & Methods 25:129 F '47
Zirconium and its applications. W. M. Raynor. il Min & Met 28:284-5 Je '47
Zirconium and thorium electrodes in discharge lamps. H. C. Rentschler and others. il Electrochem Soc Trans 91 (preprint 21): 311-17 '47

Analysis

Zirconium determination in presence of interfering elements. C. A. Kumins. Anal Chem 19:376-7 Je '47

ZIRCONIUM alloys
Magnesium-cerium-zirconium alloys; properties at elevated temperatures. A. J. Murphy and R. J. M. Payne. il Engineering 163: 485-7 Je 6 '47
Magnesium-zirconium alloys offer outstanding properties; abstract. C. J. P. Ball. Materials & Methods 26:123-4 S '47

ZIRCONIUM hydride
Observations on the stability of the barium-hydrogen and zirconium-hydrogen systems. W. C. Schumb, E. F. Sewell and A. S. Eisenstein. bibliog diags Am Chem Soc J 69:2029-33 Ag '47

ZIRCONIUM oxide
Development of zirconia resistant to thermal shock. C. E. Curtis. bibliog diag Am Cer Soc J 30:180-96 Je 1 '47
Improvements in microscope illumination. J. R. Benford. il diags Opt Soc Am J 37:642-7 Ag '47

ZLIN, Czechoslovakia
They planned it that way. J. Pokorny and E. Hird. il plans Arch Rec 102:68-75 Ag '47

ZONING laws
Protecting your airport investment; zoning regulations and procedures, with special reference to New York state. J. C. Federick. plan Pub Works 78:24-6+ Jl '47
Streamlined zoning law basis for master plan. Eng N 138:513 Ap 3 '47

ZONITE products corporation
Securities disturbing investors. E. A. Barnes. Mag of Wall St 80:344 Je 21 '47

ZOOLOGICAL specimens
Method for reclaiming dried zoological specimens. H. J. Van Cleave and J. A. Ross. Science 105:318 Mr 21 '47
Use of trisodium phosphate in microscopical technic. H. J. Van Cleave and J. A. Ross. Science 106:194 Ag 29 '47

ZOOLOGY

Nomenclature

International rules of zoological nomenclature; articles 19 and 20. B. E. Blackwelder and others. Science 106:315-16 O 3 '47
International trust for zoological nomenclature. Science 105:384-5 Ap 11 '47
Words often used incorrectly. Science 106:11 Jl 4 '47

See also Nomenclator animalium generum et subgenerum

ZUCKOR, Adolph, 1873-
Portrait. Fortune 35:93 Je '47

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